

# Phase 2 Unit 02 – Symmetry Park, Merseyside External Lighting Planning Statement

14<sup>th</sup> July 2023

Ref: 3995-HAN-PL-02-RP-E-64-01-External-Lighting-Planning-Statement Rev 2 230714

## 1.0 Introduction

This Lighting Design report has been commissioned and prepared in support of a planning application for the installation of exterior lighting to Unit 02, Symmetry Park, Merseyside

The Lighting strategy will aim to deliver the following objectives:

- Create a safe, secure and accessible environment for all users of the proposed facility
- Minimise the impact on the existing environment through the use of good design principles
- Maintain conditions favourable to the local wildlife by building an understanding of their needs and incorporating the necessary measures into the design
- Adopt a holistically sustainable approach to selection and specification of the lighting
- Adopt a controls approach that will allow lighting levels to be modified to suit specific use and unused zones to be switched off in the event that they are not being fully utilised

## 1.1 Planning Conditions

Outline Planning Permission

Planning Application No: 20/00494/HYB

**Condition 61.** Prior to the occupation of each phase of development approved as part of any subsequent reserved matters application details of all external lighting within the curtilage of each building shall be submitted to and approved in writing by the Local Planning Authority. The agreed details shall be implemented in full before each building is first occupied and maintained thereafter.

REASON: To ensure the lightning proposed is acceptable and is not detrimental to the amenity of nearby residential properties.

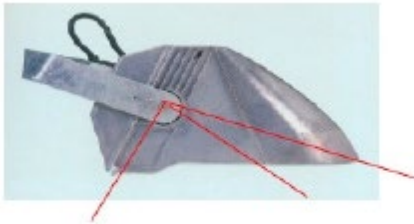
## 2.0 Design Standards and Legislation

The lighting design will comply with the following key standards where applicable:

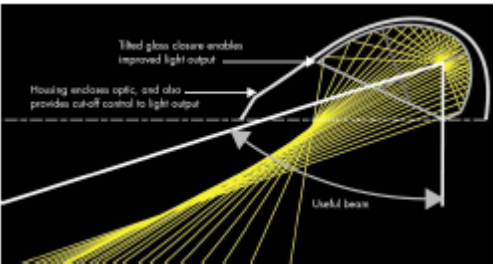
- Building Regulations
- CIBSE lighting guides and recommendations
- ILE lighting guides and recommendations
- British Standards guides and recommendations
- CIE Standards guides and recommendations
- BREEAM recommendations for lighting control and light pollution minimisation
- Lighting design limits set by the ILE/CIE for the environmental lighting zones E1 - E4 where appropriate
- Bats and Lighting in the UK

3.0 Lighting Scheme

The design of the development will seek to minimise the impact on climate change and incorporate measures to enable it to cope with anticipated changes in temperature and weather as outlined below.



Champion 3272 Adjustable Beam & Optional baffle



| Key Impact Appraisal |                                                                                                                                                                                                                                                                               |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Security and Safety  | The floodlighting will provide secure and safe use of the facility for staff, visitors and vehicles                                                                                                                                                                           |
| Adjacent Development | Tight illumination control and compliance with 'Dark Skies' recommendations will minimize any impact on the adjacent development and existing amenities<br>These measures will ensure that the increase in levels of illumination at the site boundaries is kept to a minimum |
| Wildlife and Ecology | The design of the flood lighting will take full consideration of the advice provided by the Ecology Consultants and adopt the methods of mitigation listed in Section 4.0                                                                                                     |
| Carbon Emissions     | Luminaires, controls and lamps will be selected to provide energy efficient solutions to minimise carbon emissions                                                                                                                                                            |

## 4.0 Ecological Considerations

Lighting should be designed to minimise disturbance to wildlife by avoiding potentially suitable foraging habitats and movement corridors such as tree lines, hedgerows and areas of open water where feasible

A combination of the following measures should also be used:

- Avoid unnecessary lighting especially around the boundary of the development
- Use low level and/or hooded lamps, baffles and shields where necessary to ensure spill is minimised
- Use low intensity lighting where possible
- Use movement sensors over the night time period to ensure lighting is only on when required

The following measures will be taken to ensure mitigation of lighting impacts on wildlife:

- Lighting will be positioned to avoid sensitive areas
- LED lamps will be utilized throughout
- Lighting will only be directed where it is required and baffles or louvers will be added to minimise light spill
- Lighting columns will be kept to minimum height
- All lighting will be computer modelled to predict light spill and patterns
- Asymmetric beams will be used on all floodlights
- Controlled zoning of illuminated areas will minimise light usage

5.0 Lamps, Maintenance and Control

The luminaires will be selected using LED Lamp sources throughout to achieve the optimum balance between efficiency, life expectancy, aesthetics and control requirements for each lighting situation

Lighting control strategies will make use of time and zone setting control systems to minimise the energy use and improve lamp life whilst ensuring a safe and secure environment

| Lamp Data Lamp Type                       | Colour Appearance                       | Colour Rendering Index Ra (sun=100)                                  | Efficiency (lumens/watt) | Rated Life (hours)                                                 |
|-------------------------------------------|-----------------------------------------|----------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------|
| Light-Emitting Diodes LED (in array form) | White (also blue, amber, green and red) | 70 White Good (although colour varies between manufacturing batches) | 85 – 100 High            | 50,000–70,000 (but can be limited by driver life to 20,000–50,000) |

6.0 Lighting Designs

6.1 Development External Lighting Detailed Design Proposals

External lighting designs have been prepared for the Development Phase 2 Access Road & Unit 02 Developments Works

The proposed luminaire types, locations, mounting heights and controls along with the computer-generated lighting design calculation results for the minimum average illumination levels, uniformity and light spillage onto the adjoining areas are detailed on the following External Lighting Design Drawings

6.1.1 Unit 02

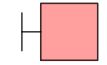
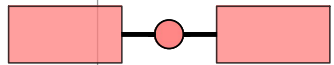
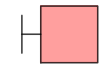
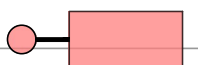
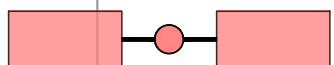
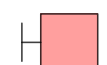
- i) 3995-HAN-PL-02-DR-E-64 21 – Rev2 : Dated 14/07/2023 : Site Plan – Unit 02 – External Lighting Design Strategy
- ii) 3995-HAN-PL-02-DR-E-64 31 – Rev2 : Dated 14/07/2023 : Site Plan – Unit 02 – External Lighting Design Layout
- iii) 3995-HAN-PL-02-DR-E-64 41 – Rev2 : Dated 14/07/2023 : Site Plan – Unit 02 – External Lighting Design Illumination Plots
- iv) 3995-HAN-PL-02-DR-E-64 51 – Rev2 : Dated 14/07/03/2023 : Site Plan – Unit 02 – External Lighting Control Strategy
- v) 3995-HAN-PL-02-DR-E-64 61 – Rev2 : Dated 14/07/2023 : Site Plan – Unit 01 – External Lighting Controls Layout

6.1.2 Luminaire and Photometric Datasheets

Luminaire and Photometric Datasheets are included at the back of this report for the following luminaires:

- |                  |   |                             |
|------------------|---|-----------------------------|
| i) Type AW       | – | DSX2.2.LA364.FW.CA          |
| ii) Type B2      | – | DSX0.1.LA154.AY.CA          |
| iii) Type BW     | – | DSX0.1.LA154.AY.CA          |
| iv) Type C1      | – | DSX2.2.LA304.FW.CA          |
| v) Type C1BLS    | – | DSX2.2.LA304.FW.BLS.CA      |
| vi) Type D1BLC   | – | DSX0.1.LA104.BLC.CA         |
| vii) Type E1     | – | DSX2.2.LA304.AY.CA          |
| viii) Type E1BLC | – | DSX2.2.LA304.BLC.CA         |
| ix) Type F2      | – | DSX0.1.LA154.FW.CA          |
| x) Type G        | – | DBD.1.LA024.DO.NR.W014.CA   |
| xi) Type H       | – | DWL.1.LA024.HN.W011.CA      |
| xii) Type RW1    | – | VMX.2.LA074.V2.X2L2.W042.CA |



| Unit 02 Schedule   |                                                                                   |       |          |                             |                                                      |                      |                 |                       |
|--------------------|-----------------------------------------------------------------------------------|-------|----------|-----------------------------|------------------------------------------------------|----------------------|-----------------|-----------------------|
|                    | Symbol                                                                            | Label | Quantity | Catalogue Number            | Description                                          | Fitting Lumen Output | Fitting Wattage | Fitting Lumens / Watt |
|                    |  | AW    | 9        | DSX2.2.LA364.FW.CA          | Wall Mounted @ 8.0m 0° Tilt                          | 40,787               | 328             | 124                   |
|                    |  | B1    | 1        | DSX0.1.LA134.AY             | Column Mounted @ 8m 0° Tilt                          | 13,145               | 107             | 123                   |
|                    |  | B2    | 3        | DSX0.1.LA134.AY             | Twin Column Mounted @ 8.0m 0° Tilt                   | 13,145               | 214             | 61                    |
|                    |  | BW    | 1        | DSX0.1.LA154.AY.CA          | Wall Mounted @ 8.0m 0° Tilt                          | 15,476               | 133             | 116                   |
|                    |  | C1    | 2        | DSX2.2.LA304.FW.CA          | Column Mounted @ 8.0m 0° Tilt                        | 33,388               | 282             | 118                   |
|                    |  | C1BLS | 4        | DSX2.2.LA304.FW.BLS.CA      | Column Mounted @ 8.0m 0° Tilt c/w Back Light Shield  | 26,068               | 282             | 92                    |
|                    |  | D1BLC | 2        | DSX0.1.LA104.BLC.CA         | Column Mounted @ 8.0m 0° Tilt c/w Back Light Control | 7,936                | 81              | 98                    |
|                    |  | E1    | 2        | DSX2.2.LA304.AY.CA          | Column Mounted @ 8.0m 0° Tilt                        | 32,433               | 282             | 115                   |
|                    |  | E1BLC | 1        | DSX2.2.LA304.BLC.CA         | Column Mounted @ 8.0m 0° Tilt c/w Back Light Control | 27,312               | 282             | 97                    |
|                    |  | F2    | 4        | DSX0.1.LA154.FW.CA          | Twin Column Mounted @ 8.0m 0° Tilt                   | 15,916               | 266             | 60                    |
|                    |  | G     | 2        | DBD.1.LA024.DONR.W014.CA    | Bollard @ 10m                                        | 1,530                | 14              | 109                   |
|                    |  | H     | 17       | DWL.1.LA034.AY.W018         | Wall Mounted @ 4.0m On Elevations                    | 2,384                | 18.0            | 132                   |
|                    |  | RW1   | 6        | VMX.2.LA074.V2.X2L2.W042.CA | Phase 2 Column Mounted @ 8.0m 0° Tilt                | 6,822                | 42              | 162                   |
| Installation Total |                                                                                   |       |          |                             |                                                      | 821,489              | 7,932.0         | 104                   |

This drawing was produced in AutoCAD. DO NOT change manually.



DSX2 - Series  
Wall & Column Mounted  
LED Amenity Luminaire



DSX1 - Series  
Column Mounted  
LED Amenity Luminaire



DSX0 - Series  
Wall & Column Mounted  
LED Amenity Luminaire



VMX - Series  
Column Mounted  
LED Road Lighting Luminaire



DBD - Series  
Free Standing  
LED Illuminated Bollard



DWL - Series  
Wall Mounted  
LED Amenity Luminaire

|    |                                               |      |          |
|----|-----------------------------------------------|------|----------|
| 14 | UPDATED TO INCORPORATE UMC SITE PLAN REV P02. | TRF  | JW       |
| 2  | 07                                            |      |          |
| 23 |                                               |      |          |
| 1  | 17 FOR APPROVALS                              | TRF  | JW       |
| 1  | 03                                            |      |          |
| 28 |                                               |      |          |
| 28 | DESCRIPTION                                   | DATE | DESIGNED |



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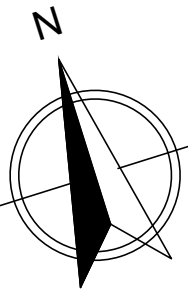
M34 3SH

Tel: +44 (0)161 337 2200

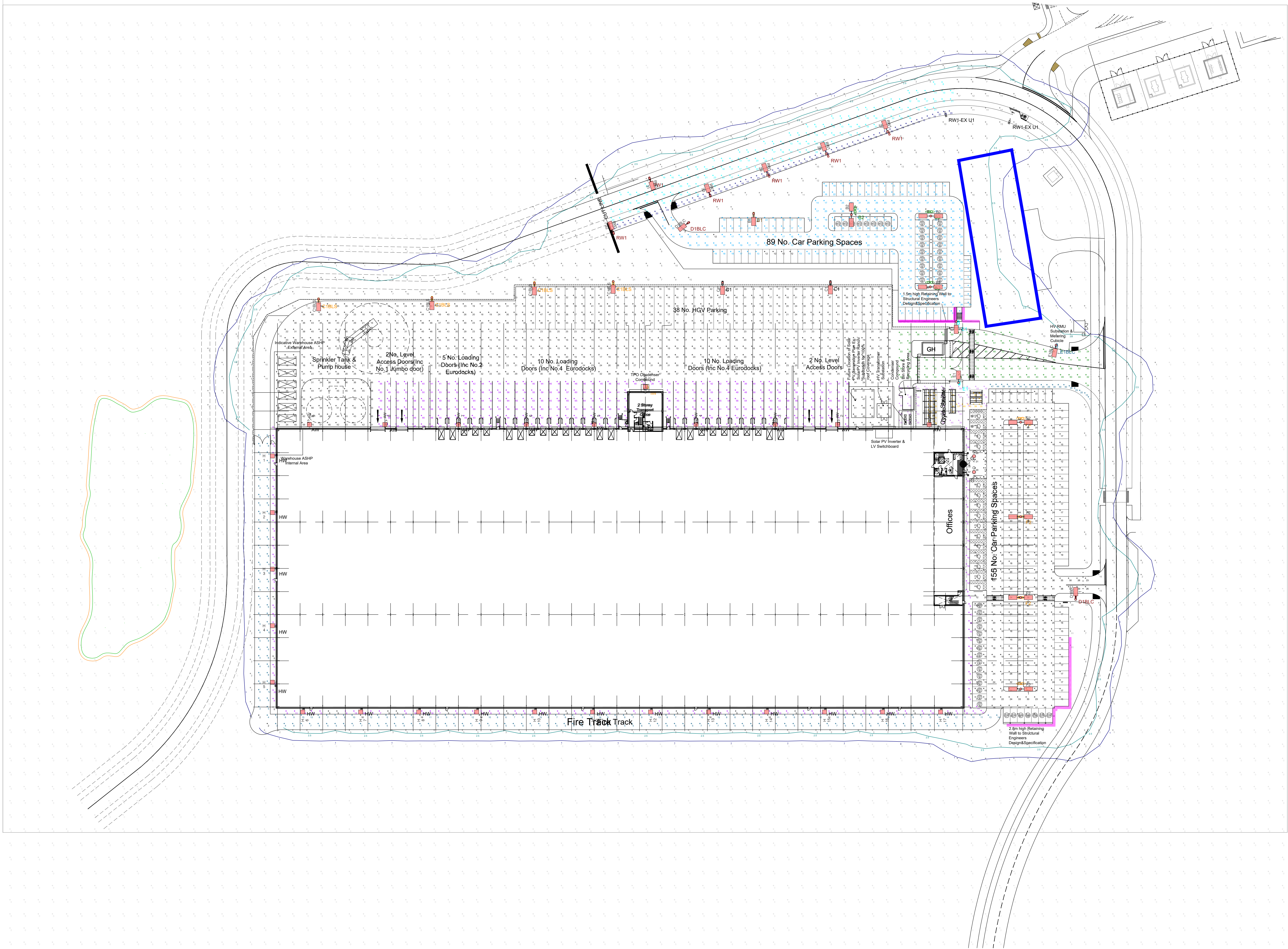
Email: info@hannan-uk.com

Web: [www.hannan-uk.com](http://www.hannan-uk.com)

|                                                                                                                                                                                          |                                                        |                                   |                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------|---------------------|
| Client                                                                                                                                                                                   | TRITAX SYMMETRY<br>A TRITAX BIG BOX COMPANY            |                                   |                     |
| Project                                                                                                                                                                                  | Symmetry Park<br>Merseyside                            |                                   |                     |
| Design Stage                                                                                                                                                                             | Planning                                               |                                   |                     |
| Drawing Title                                                                                                                                                                            | Site Plan - Unit 02<br>External Lighting Design Layout |                                   |                     |
| Scale                                                                                                                                                                                    | 1:500                                                  | Page Size                         | A0L                 |
| Drawn                                                                                                                                                                                    | FOR APPROVALS                                          |                                   |                     |
| Project - Original - Version                                                                                                                                                             | 3995 - HAN - PL                                        | Level - File Name - Date Modified | 02 - DR - E - 64 31 |
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| Unit 02 Statistics                |        |                   |                   |                       |                          |                              |                         |
|-----------------------------------|--------|-------------------|-------------------|-----------------------|--------------------------|------------------------------|-------------------------|
| Description                       | Symbol | Average Lux Level | Minimum Lux Level | Uniformity (Min / Av) | Design Criteria (Av Lux) | Design Criteria (Uniformity) | Design Compliance Check |
| Staff Car Park No 1               | +      | 22 Lux            | 11 Lux            | 50%                   | 20 Lux                   | 40%                          | Satisfactory            |
| Staff Car Park No 2               | +      | 25 Lux            | 12 Lux            | 48%                   | 20 Lux                   | 40%                          | Satisfactory            |
| Circulation Area                  | +      | 52 Lux            | 35 Lux            | 67%                   | 20 Lux                   | 40%                          | Satisfactory            |
| Cycle Racks                       | +      | 56 Lux            | 35 Lux            | 63%                   | 20 Lux                   | 40%                          | Satisfactory            |
| Main Office Entrance              | +      | 50 Lux            | 32 Lux            | 64%                   | 50 Lux                   | 40%                          | Satisfactory            |
| Gatehouse / Service Yard Entrance | +      | 55 Lux            | 23 Lux            | 42%                   | 50 Lux                   | 40%                          | Satisfactory            |
| Loading Bay                       | +      | 54 Lux            | 26 Lux            | 48%                   | 50 Lux                   | 40%                          | Satisfactory            |
| Pedestrian Path East Gate         | +      | 30 Lux            | 11 Lux            | 37%                   | 10 Lux                   | 40%                          | Satisfactory            |
| Pedestrian Path / Cycle Way       | +      | 19 Lux            | 12 Lux            | 63%                   | 10 Lux                   | 40%                          | Satisfactory            |
| Perimeter Walkway                 | +      | 11 Lux            | 5 Lux             | 45%                   | 10 Lux                   | 40%                          | Satisfactory            |
| Service Yard                      | +      | 28 Lux            | 11 Lux            | 39%                   | 25 Lux                   | 40%                          | Satisfactory            |
| Phase 2 Access Road               | +      | 16 Lux            | 5 Lux             | 31%                   | M4                       | 25%                          | Satisfactory            |
| Spill                             | +      | 1 Lux             | 0 Lux             | 0%                    |                          |                              | Satisfactory            |



|    |                                                |     |
|----|------------------------------------------------|-----|
| 14 | UPDATED TO INCORPORATE UMC SITE PLAN REV. 005. | TRF |
| 13 |                                                |     |
| 12 | FOR APPROVALS                                  | TRF |
| 11 |                                                |     |
| 10 |                                                |     |
| 9  | Description                                    |     |
| 8  |                                                |     |
| 7  |                                                |     |
| 6  |                                                |     |
| 5  |                                                |     |
| 4  |                                                |     |
| 3  |                                                |     |
| 2  |                                                |     |
| 1  |                                                |     |



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Client



**TRITAX SYMMETRY**  
A TRITAX BIG BOX COMPANY

Project

Symmetry Park  
Merseyside

Design Stage

Planning

Drawing Title

Site Plan - Unit 02  
External Lighting Design Illumination Plots

Scale

1:500

Page Size

A0L

**FOR APPROVALS**

Project / Client / Volume

3995 - HAN - PL

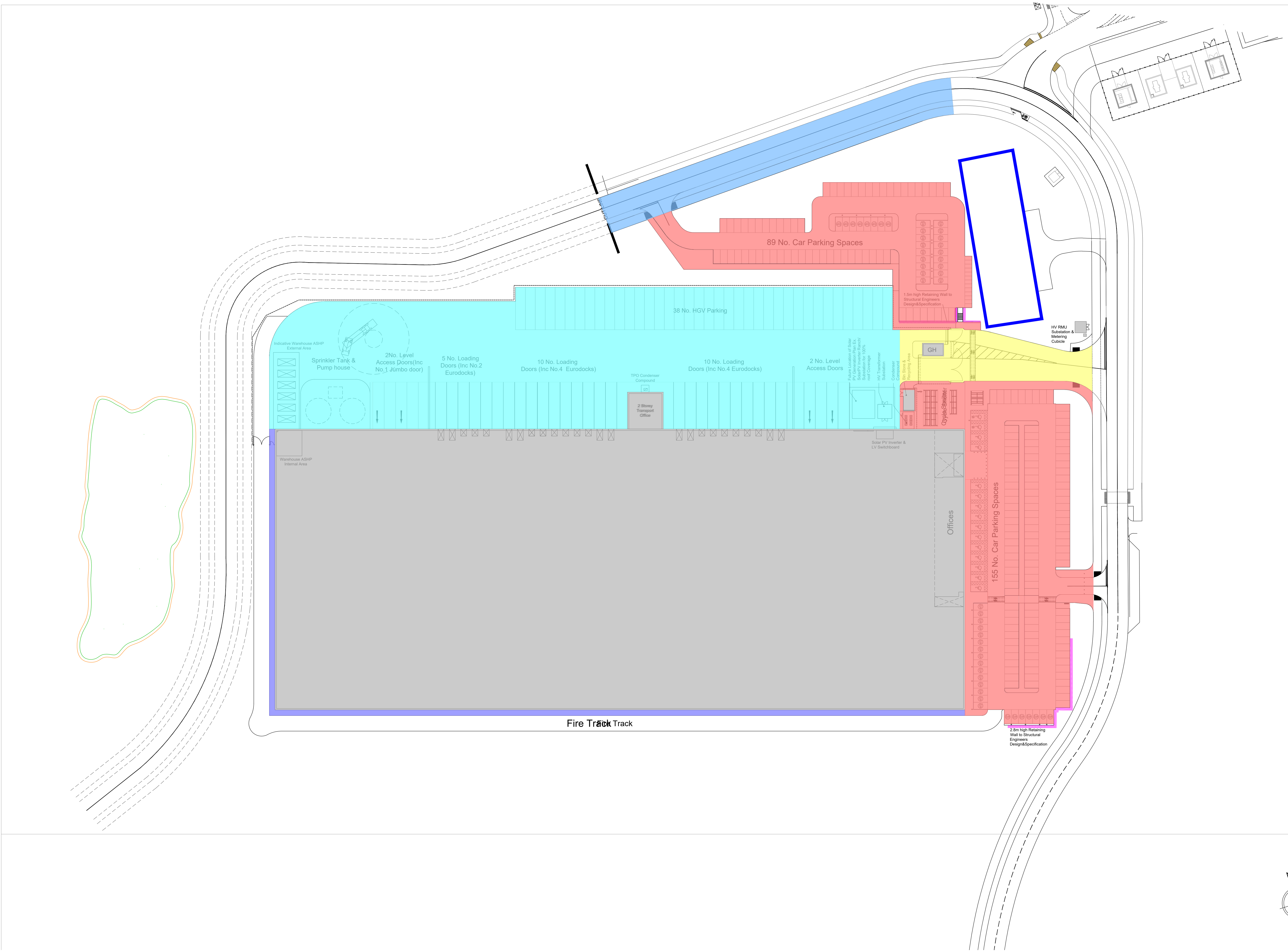
Draw / Rev / Date / Number

02 - DR - E - 641

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### Legend - External Lighting - Control Zones

| Key                                                                                 | Control Zone                                       |
|-------------------------------------------------------------------------------------|----------------------------------------------------|
|  | Zone 1a - Building Rear Access / Circulation Route |
|  | Zone 1b - Building Side Access / Circulation Route |
|  | Zone 2a - Staff Car Park 1                         |
|  | Zone 2b - Staff Car Park 2                         |
|  | Zone 3 - HGV Main Access / Gatehouse               |
|  | Zone 4 - Service Yard                              |
|  | Zone 5 - Site Landlord's Phase 2 Access Road       |



**External Lighting Controls Description:-**

- Unit 02
  - Phone/Control Unit to Automatically Switch Unit 02 External Lighting ON
  - Phone/Control Unit to Automatically Switch Unit 02 External Lighting OFF
  - Phone/Control Unit to Automatically Switch Unit 02 External Lighting OFF
  - Interface To Unit 02 Intruder Alarm System To Automatically Enable Unit 02 External Lighting OFF When The Intruder Alarm System Is In Unit 02 External Lighting OFF
  - Interface To Unit 02 Intruder Alarm SET Time And External Switching System To Enable Unit 02 External Lighting ON
  - Interface To Unit 02 Intruder Alarm System To Automatically Enable Unit 02 External Lighting ON When The Intruder Alarm System Is In Unit 02 External Lighting ON
  - Interface To Unit 02 Intruder Alarm System To Enable Unit 02 External Lighting When Unit 02 Intruder Alarm Is RESET Then Will Operate As Described
  - Time Control To Automatically DIM The Lighting Levels Within Control Unit 02 Zones To Carful Levels Between 25.00hrs And 07.00hrs Due To Security Reasons
  - Time Control To Automatically DIM The Lighting Levels Within Control Unit 02 Zones To Carful Levels Between 25.00hrs And 07.00hrs Due To Security Reasons
  - Sensor Control To Automatically Enable Sensor Activation Within Unit 02 Control Zones 1 to 5 Will Automatically RAISE The Associated Control Section Alarm Levels To Occupancy Levels Over A Period Of 2 Seconds
  - Sensor Control To Automatically Enable Sensor Activation Within Unit 02 Control Zones 1 to 5 Will Automatically RAISE The Associated Control Section Alarm Levels Over A Period Of 2 Seconds
  - The Last Activation On The Associated Motion Detectors
  - Sensor Control To Automatically DIM Back Down To The Carful Levels Over A Period Of 2 Seconds



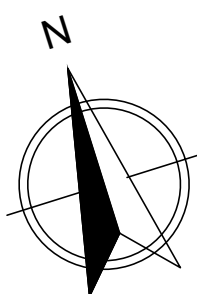
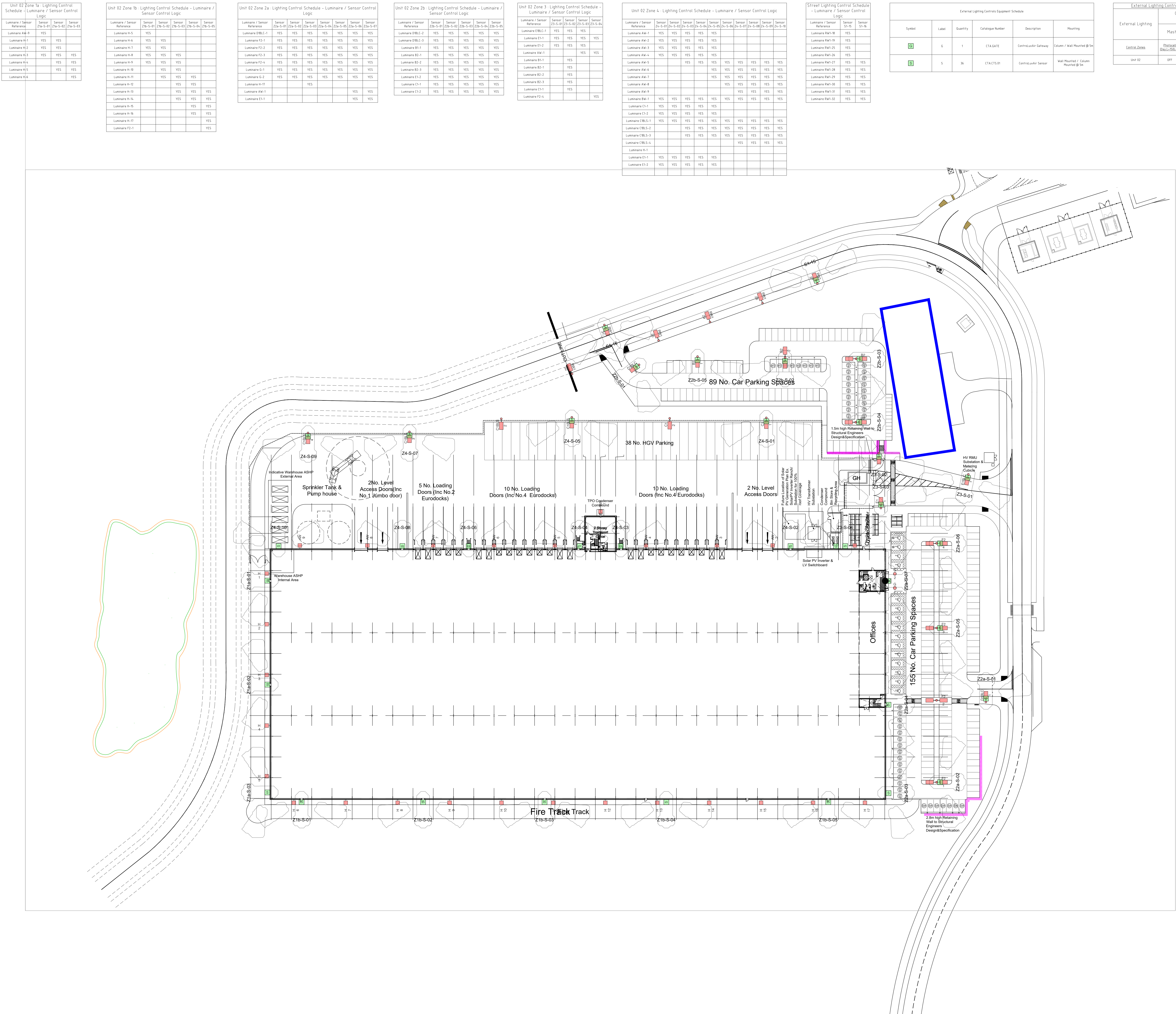
Integrated Wireless Controller



Gateway  
Wall / Column Mounted



Motion Sensor  
Wall / Column Mounted



|      |                |                                               |      |
|------|----------------|-----------------------------------------------|------|
| 2    | 14<br>07<br>23 | UPDATED TO INCORPORATE UMC SITE PLAN REV P05. | TRF  |
| 1    | 17<br>03<br>23 | FOR APPROVALS                                 | TRF  |
| 2024 | 2024           | Description                                   | (mm) |



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Client

 TRITAX SYMMETRY  
A TRITAX BIG BOX COMPANY

Project

Symmetry Park  
Merseyside

|              |          |
|--------------|----------|
| Design Stage | Planning |
|--------------|----------|

Drawing Title

Site Plan - Unit 02

External Lighting Controls Layout

|       |           |
|-------|-----------|
| Scale | Page Size |
| 1:500 | A0L       |

|                                                  |                                                          |
|--------------------------------------------------|----------------------------------------------------------|
| FOR APPROVALS                                    |                                                          |
| Project : Originator : Volume<br>3995 - HAN - PL | Level : File Type : Role : Number<br>02 - DR - E - 64 61 |

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Product image may not represent the final configuration stated above.



## PRODUCT SPECIFICATION DSX2 HOLOPHANE WEBSITE

### DSX2.2.LA364.FW.C9.TZ01.CA

Holophane D-Series 2 luminaire. Single-piece die-cast aluminium housing conforming to EN1706 AC-46500, with integral heat sink fins to optimise thermal management. LED light engine modules are IP66 with individual PMMA lenses. Housing sealed to IP65 via hinged access door (two captive fixing screws). Installation via bespoke Holophane mounting feature for quick and easy installation. International Dark-Sky Association Approved (colour temperatures 3000K or warmer are approved under the IDA).  
This specific SKU includes:

- Series 2
- LED light engine producing c.36,000 lumen with a nominal 4000K colour temperature
- Forward throw light distribution
- Metallic Silver (RAL9006)
- Complete with 4-Pin Zhaga Socket - 'Top' (suitable photocell/node available from Holophane or supplied by others) with weather proof locking top
- Wireless lighting node for use with Holophane Controlux Air System. (Includes subscription package for two years (Europe))

### HAWA.AU.GV9

Holophane D-Series wall bracket .  
• Bracket galvanised and painted metallic silver (RAL9006)  
Please note that it is the responsibility of the installing contractor to confirm that the bracket offered within this quotation suits the application.

## PERFORMANCE

|                                  |                 |
|----------------------------------|-----------------|
| Drive Current from Driver:       | 1,050mA         |
| Power:                           | 328W            |
| Fitting Current:                 | 1.47A           |
| Power Factor:                    | 0.98            |
| Fitting Inrush:                  | 22A - 0.135ms   |
| Number of Drivers:               | 2               |
| 2x Driver 1 Inrush:              | 11.2A - 0.135ms |
| Max Drivers per 16A Type B MCB:  | 15              |
| Max Fittings per 16A Type B MCB: | 7               |
| Total Number of LEDs:            | 50              |
| Minimum Dim Level:               | 7 %             |
| Optical Risk Group:              | 1               |



15Kg<sub>2</sub>



0.1M



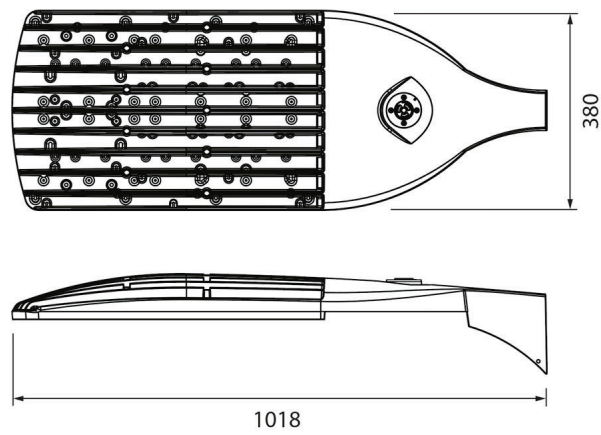
42 0328 0000 100\*



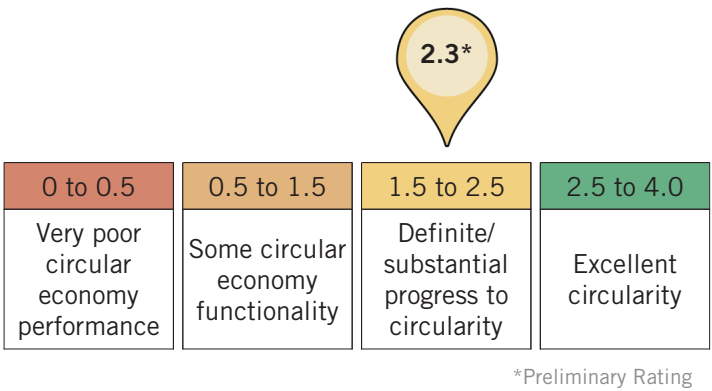
[Installation Guide](#)

\*Generic UMSUG code based on product wattage and some or all of product family being included within Elexon data base.

## DIMENSIONS



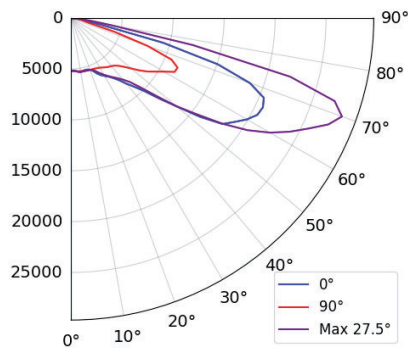
## CIBSE TM66 - CEAM RATING



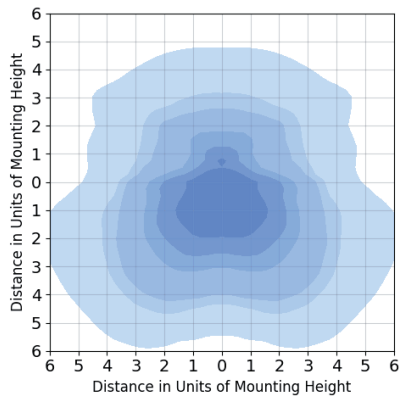
## PHOTOMETRY



Polar Plot

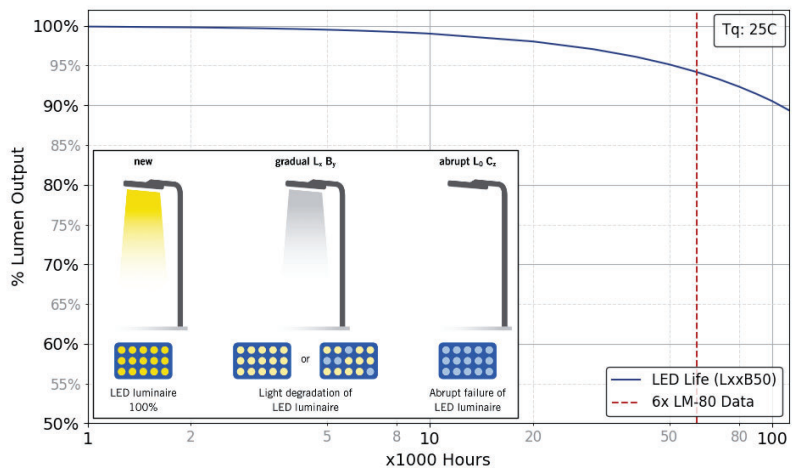


Isoilluminance Plot



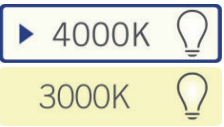
|           |                                                                  |
|-----------|------------------------------------------------------------------|
| Lumens:   | 40,789                                                           |
| CCT:      | 4000K                                                            |
| CRI:      | 70                                                               |
| IES File: | DSX2.2.LA364.FW                                                  |
| G-Class:  | G*2<br>Imax @ ≥ 70°: 693<br>Imax @ ≥ 80°: 118<br>Imax @ ≥ 90°: 0 |

## LLMF GRAPH



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on.

## COLOUR TEMPERATURES



## COLOURS

### Selected Colour

**C9** Metallic Silver (RAL9006)

### Standard Colours Available

**C1** Smooth White (RAL9016)

**C4** Smooth Graphite (RAL7011)

**C6** Smooth Grey (RAL7035)

**C7** Textured Black (RAL9005)

**C9** Metallic Silver (RAL9006)

### Custom Colour Available

**RAL\*\*\*\*** Customer specified colour

\*Choosing a custom colour may increase the cost and lead time.

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

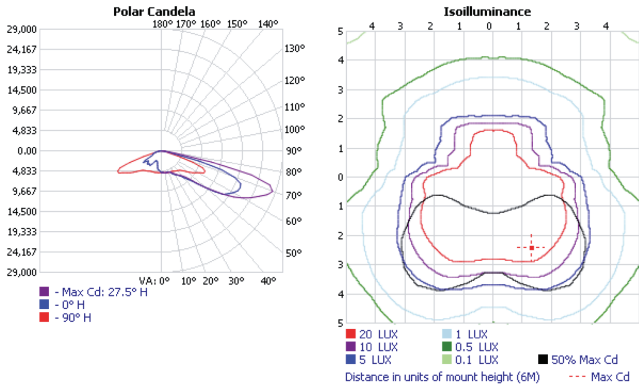
OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX2.2.LA364.FW  
Manufacturer: HOLOPHANE EUROPE LIMITED  
Test #: ISF 34057P17  
Test Lab: ACUITY BRANDS LIGHTING - CONYERS LAB - SCALED PHOTOMETRY  
Test Date: 3/21/2017  
Catalog: DSX2.2.LA364.FW  
Description: D-Series 2 Luminaire  
Lamp Catalog: LA364  
Lamp: LED C.36000LM-4000K  
Lamp Output: Total luminaire Lumens: 40788.8, absolute photometry \*  
Input Wattage: 328  
Luminous Opening: Rectangle (L: 0.46M, W: 0.33M)  
Max Cd: 28,265.5 at Horizontal: 27.5°, Vertical: 70°  
Roadway Class: SHORT, TYPE IV



No  
Photo  
Available

Type AW

OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX2.2.LA364.FW



| Zonal Lumen Summary |          |             |
|---------------------|----------|-------------|
| Zone                | Lumens   | % Luminaire |
| 0-30                | 4,007.7  | 9.8%        |
| 0-40                | 7,209.7  | 17.7%       |
| 0-60                | 20,372.9 | 49.9%       |
| 60-90               | 20,415.9 | 50.1%       |
| 70-100              | 8,552.3  | 21%         |
| 90-120              | 0.000    | 0%          |
| 0-90                | 40,788.8 | 100%        |
| 90-180              | 0.000    | 0%          |
| 0-180               | 40,788.8 | 100%        |

| Lumens Per Zone |          |         |                     |
|-----------------|----------|---------|---------------------|
| Zone            | Lumens   | % Total | Zone Lumens % Total |
| 0-10            | 485.3    | 1.2%    | 90-100 0.000 0%     |
| 10-20           | 1,370.5  | 3.4%    | 100-110 0.000 0%    |
| 20-30           | 2,151.9  | 5.3%    | 110-120 0.000 0%    |
| 30-40           | 3,201.9  | 7.9%    | 120-130 0.000 0%    |
| 40-50           | 4,816.3  | 11.8%   | 130-140 0.000 0%    |
| 50-60           | 8,346.9  | 20.5%   | 140-150 0.000 0%    |
| 60-70           | 11,863.6 | 29.1%   | 150-160 0.000 0%    |
| 70-80           | 7,541.9  | 18.5%   | 160-170 0.000 0%    |
| 80-90           | 1,010.4  | 2.5%    | 170-180 0.000 0%    |

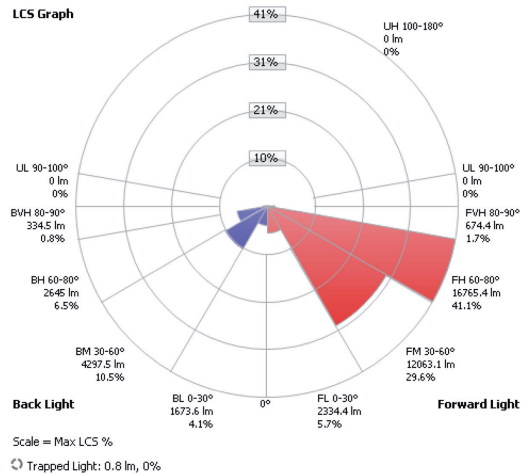
| Roadway Summary        |                |        |
|------------------------|----------------|--------|
| Distribution:          | TYPE IV, SHORT |        |
| Max Cd, 90 Deg Vert:   | 0.000          |        |
| Max Cd, 80 to <90 Deg: | 4,828.8        |        |
|                        | Lumens         | % Lamp |
| Downward Street Side:  | 31,837.4       | 78.1%  |
| Downward House Side:   | 8,950.6        | 21.9%  |
| Downward Total:        | 40,788.0       | 100%   |
| Upward Street Side:    | 0.000          | 0%     |
| Upward House Side:     | 0.000          | 0%     |
| Upward Total:          | 0.000          | 0%     |
| Total Lumens:          | 40,788.0       | 100%   |

| LCS Table         |              |          |
|-------------------|--------------|----------|
| BUG Rating        | B4 - U0 - G5 |          |
| Forward Light     | Lumens       | Lumens % |
| Low(0-30):        | 2,334.4      | 5.7%     |
| Medium(30-60):    | 12,063.1     | 29.6%    |
| High(60-80):      | 16,765.4     | 41.1%    |
| Very High(80-90): | 674.4        | 1.7%     |
| Back Light        |              |          |
| Low(0-30):        | 1,673.6      | 4.1%     |
| Medium(30-60):    | 4,297.5      | 10.5%    |
| High(60-80):      | 2,645.0      | 6.5%     |
| Very High(80-90): | 334.5        | 0.8%     |
| Uplight           |              |          |
| Low(90-100):      | 0.000        | 0%       |
| High(100-180):    | 0.000        | 0%       |
| Trapped Light:    | 0.8          | 0%       |

\*Test based on absolute photometry where lamp lumens=lumens total.  
\*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

Visual Photometric Tool 1.2.46 copyright 2023, Acuity Brands Lighting.  
This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.

Type AW



| Candela Table - Type C |       | 0     | 15    | 25    | 35    | 45    | 55    | 65    | 75    | 85    | 90   | 105  | 115  | 125  | 135  | 145  | 155  | 165  | 175  | 180  |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| 0                      | 5191  | 5191  | 5191  | 5191  | 5191  | 5191  | 5191  | 5191  | 5191  | 5191  | 5191 | 5191 | 5191 | 5191 | 5191 | 5191 | 5191 | 5191 | 5191 | 5191 |
| 5                      | 5215  | 5244  | 5230  | 5211  | 5191  | 5186  | 5199  | 5222  | 5229  | 5234  | 5223 | 5100 | 4966 | 4913 | 4873 | 4832 | 4812 | 4800 | 4788 |      |
| 10                     | 5374  | 5402  | 5381  | 5332  | 5275  | 5223  | 5182  | 5206  | 5271  | 5290  | 5067 | 4908 | 4769 | 4681 | 4650 | 4650 | 4650 | 4640 | 4611 |      |
| 15                     | 5280  | 5335  | 5368  | 5332  | 5344  | 5295  | 5232  | 5220  | 5299  | 5371  | 5050 | 4822 | 4671 | 4544 | 4233 | 3916 | 3715 | 3607 | 3580 |      |
| 20                     | 5393  | 5383  | 5381  | 5450  | 5464  | 5481  | 5364  | 5299  | 5345  | 5419  | 4993 | 4753 | 4287 | 3638 | 3171 | 2907 | 2802 | 2775 | 2758 |      |
| 25                     | 5997  | 5927  | 5803  | 5656  | 5666  | 5721  | 5652  | 5443  | 5421  | 5471  | 4975 | 4438 | 3477 | 2931 | 2653 | 2613 | 2656 | 2684 | 2672 |      |
| 30                     | 6555  | 6543  | 6445  | 6304  | 6001  | 5939  | 5949  | 5615  | 5546  | 5618  | 4993 | 3804 | 3022 | 2704 | 2699 | 2591 | 2571 | 2629 | 2625 |      |
| 35                     | 7176  | 7152  | 7084  | 6970  | 6679  | 6239  | 6030  | 5831  | 5779  | 5896  | 4794 | 3271 | 2914 | 2687 | 2601 | 3044 | 3528 | 3858 | 3859 |      |
| 40                     | 8395  | 8069  | 7926  | 7677  | 7389  | 6835  | 6425  | 6148  | 6006  | 6152  | 4184 | 2982 | 2785 | 2469 | 2713 | 3247 | 3926 | 4365 | 4367 |      |
| 45                     | 10128 | 10052 | 9788  | 9326  | 8885  | 8269  | 7451  | 6872  | 6572  | 6634  | 3638 | 2780 | 2636 | 2344 | 2649 | 3329 | 4033 | 4462 | 4474 |      |
| 50                     | 13465 | 13774 | 13707 | 12475 | 11089 | 10001 | 8954  | 7833  | 7736  | 7703  | 3096 | 2687 | 2444 | 2409 | 3044 | 4082 | 4431 | 4262 | 4190 |      |
| 55                     | 18143 | 18925 | 18455 | 16911 | 15361 | 13494 | 11488 | 9410  | 9503  | 9148  | 2673 | 2679 | 2413 | 2758 | 3607 | 4156 | 4309 | 4331 | 4271 |      |
| 60                     | 19905 | 21661 | 22901 | 21141 | 19873 | 18333 | 15022 | 11705 | 11899 | 10515 | 2409 | 2881 | 2550 | 3217 | 4516 | 5299 | 5277 | 4784 | 4482 |      |
| 65                     | 20750 | 23713 | 25781 | 24559 | 23976 | 23794 | 19058 | 13608 | 13965 | 11518 | 2111 | 2564 | 2612 | 3562 | 4781 | 3466 | 2500 | 2306 | 2257 |      |
| 70                     | 18653 | 23639 | 28017 | 27260 | 26519 | 24605 | 17633 | 10955 | 10097 | 7971  | 1917 | 1977 | 2272 | 3391 | 2608 | 2178 | 2179 | 2085 | 2042 |      |
| 75                     | 9316  | 14630 | 20954 | 22409 | 19771 | 15509 | 7729  | 4923  | 2329  | 1826  | 1414 | 1416 | 2059 | 2069 | 1675 | 1670 | 1611 | 1541 | 1500 |      |
| 80                     | 1455  | 2196  | 3835  | 4829  | 3945  | 3900  | 3682  | 3290  | 1563  | 1035  | 1048 | 1129 | 1701 | 1270 | 1239 | 1162 | 1033 | 927  | 909  |      |
| 85                     | 407   | 621   | 841   | 1047  | 1393  | 1404  | 1438  | 1555  | 1012  | 491   | 577  | 899  | 872  | 717  | 693  | 628  | 479  | 309  | 355  |      |
| 90                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 95                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 100                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 105                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 110                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 115                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 120                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 125                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 130                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 135                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 140                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 145                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 150                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 155                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 160                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 165                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 170                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 175                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 180                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |



Product image may not represent the final configuration stated above.



## PRODUCT SPECIFICATION DSX0 HOLOPHANE WEBSITE

### DSX0.1.LA154.AY.C9.TZ01.CA

Holophane D-Series 0 luminaire. Single-piece die-cast aluminium housing conforming to EN1706 AC-46500, with integral heat sink fins to optimise thermal management. LED light engine modules are IP66 with individual PMMA lenses. Housing sealed to IP65 via hinged access door (two captive fixing screws). Installation via bespoke Holophane mounting feature for quick and easy installation. International Dark-Sky Association Approved (colour temperatures 3000K or warmer are approved under the IDA).  
This specific SKU includes:

- Series 1
- LED light engine producing c.15,000 lm with a nominal 4000°K colour temperature
- Asymmetric light distribution
- Metallic Silver (RAL9006)
- Complete with 4-Pin Zhaga Socket - 'Top' (suitable photocell/node available from Holophane or supplied by others) with weather proof locking top
- Wireless lighting node for use with Holophane Controlux Air System. (Includes subscription package for two years (Europe))

### DSX1B.8.2A.LMZ.GV9

Holophane tubular base compartment column for use with DSX1 Luminaires. 8 metre, Twin head, For light & medium area wind zones (compliant to EN40).  
• Bracket galvanised and painted metallic silver (RAL9006)  
• Direct embedment

## PERFORMANCE

|                                  |                 |
|----------------------------------|-----------------|
| Drive Current from Driver:       | 1,020mA         |
| Power:                           | 133W            |
| Fitting Current:                 | 0.6A            |
| Power Factor:                    | 0.98            |
| Fitting Inrush:                  | 11A - 0.135ms   |
| Number of Drivers:               | 1               |
| 1x Driver 1 Inrush:              | 11.2A - 0.135ms |
| Max Drivers per 16A Type B MCB:  | 15              |
| Max Fittings per 16A Type B MCB: | 15              |
| Total Number of LEDs:            | 20              |
| Minimum Dim Level:               | 7 %             |
| Optical Risk Group:              | 1               |



8Kg<sub>2</sub>

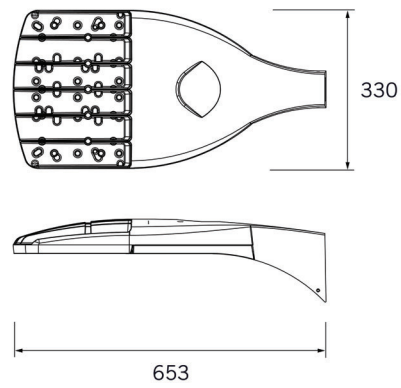


0.09M

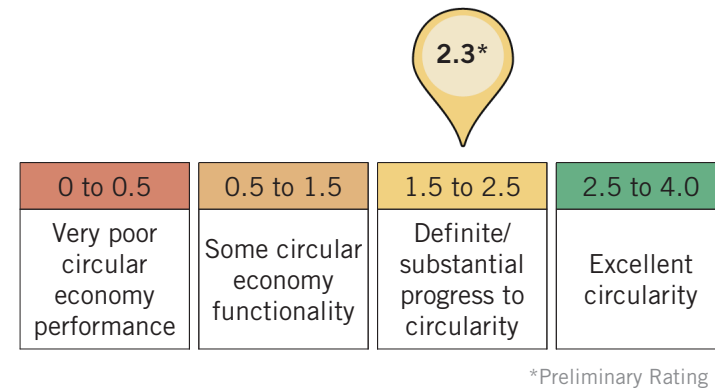


[Installation Guide](#)

## DIMENSIONS



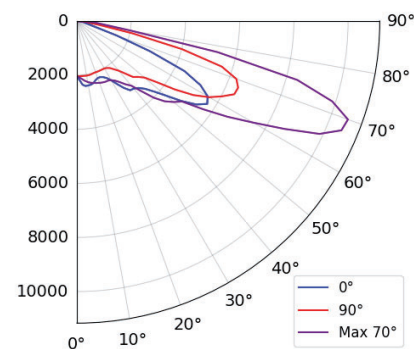
## CIBSE TM66 - CEAM RATING



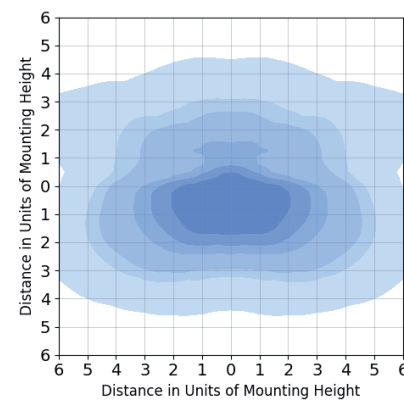
## PHOTOMETRY



Polar Plot

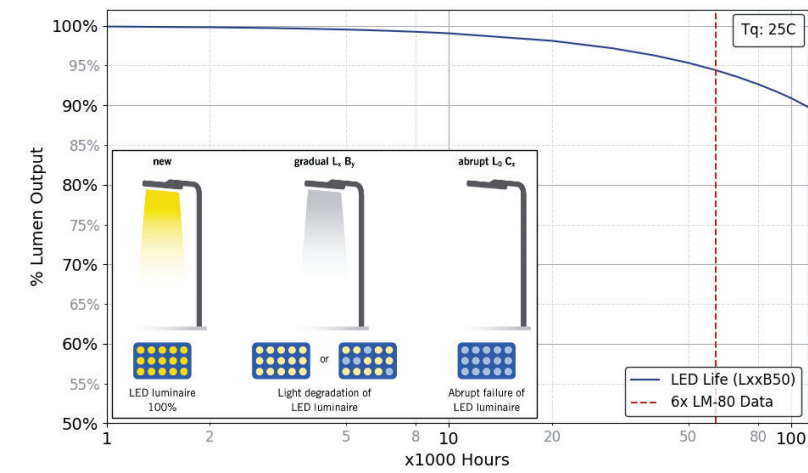


Isoilluminance Plot



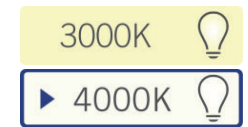
|           |                                                                  |
|-----------|------------------------------------------------------------------|
| Lumens:   | 15,509                                                           |
| CCT:      | 4000K                                                            |
| CRI:      | 70                                                               |
| IES File: | DSX0.1.LA154.AY                                                  |
| G-Class:  | G*2<br>Imax @ ≥ 70°: 687<br>Imax @ ≥ 80°: 127<br>Imax @ ≥ 90°: 0 |

## LLMF GRAPH



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on.

## COLOUR TEMPERATURES



## COLOURS

### Selected Colour

C9 Metallic Silver (RAL9006)

### Standard Colours Available

C1 Smooth White (RAL9016)

C4 Smooth Graphite (RAL7011)

C6 Smooth Grey (RAL7035)

C7 Textured Black (RAL9005)

C9 Metallic Silver (RAL9006)

### Custom Colour Available

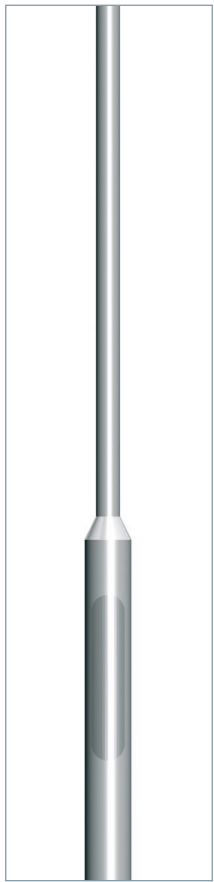
RAL\*\*\*\* Customer specified colour

\*Choosing a custom colour may increase the cost and lead time.

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

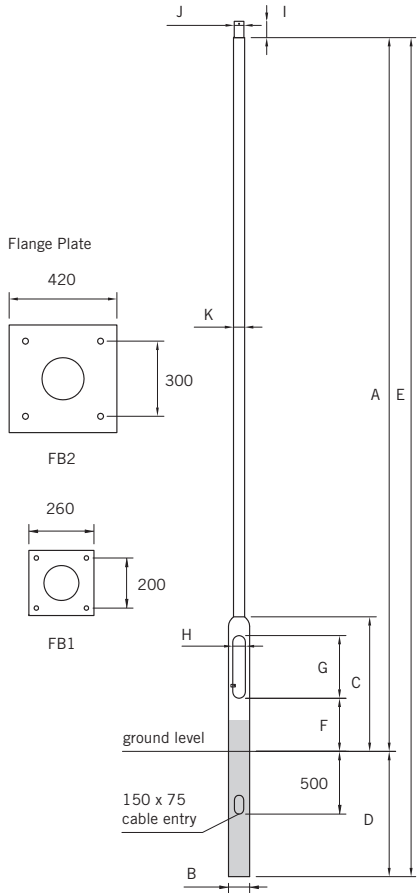
The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

> DATASHEET  
**DSX1B.8.2A.LMZ.GV9**



**Holophane products that are suitable**

CityMax  
Denver Elite pole  
D-Series  
Factor  
Factor small  
V-Max



|                      | Nominal Height | Base Diameter* | Base Height | Planting Depth | Overall Length | Door to Ground | Door Opening Length | Door Opening Width | Spigot Length* | Spigot Diameter* | Shaft Diameter* | Weight kg* | Bending Moment (ULS) Nm |
|----------------------|----------------|----------------|-------------|----------------|----------------|----------------|---------------------|--------------------|----------------|------------------|-----------------|------------|-------------------------|
| description          | A              | B              | C           | D              | E              | F              | G                   | H                  | I              | J                | K               |            |                         |
| 2.5m standard duty   | 2500           | 140            | 1075        | 800            | 3300           | 400            | 500                 | 100                | -              | -                | 76              | 27         | 2100                    |
| 3m standard duty     | 3000           | 140            | 1075        | 800            | 3800           | 400            | 500                 | 100                | -              | -                | 76              | 30         | 4666                    |
| 3.5m standard duty   | 3500           | 140            | 1075        | 800            | 4300           | 400            | 500                 | 100                | -              | -                | 76              | 32         | 2100                    |
| 4m standard duty     | 4000           | 140            | 1075        | 800            | 4800           | 400            | 500                 | 100                | -              | -                | 76              | 34         | 6484                    |
| 4.5m standard duty   | 4500           | 140            | 1075        | 800            | 5300           | 400            | 500                 | 100                | -              | -                | 76              | 37         | 5108                    |
| 5m standard duty     | 5000           | 140            | 1075        | 800            | 5800           | 400            | 500                 | 100                | -              | -                | 76              | 39         | 6149                    |
| 5.5m standard duty   | 5500           | 140            | 1075        | 1000           | 6500           | 400            | 500                 | 100                | -              | -                | 76              | 44         | 6003                    |
| 6m standard duty     | 6000           | 140            | 1075        | 1000           | 7000           | 400            | 500                 | 100                | -              | -                | 76              | 46         | 5999                    |
| 6m heavy duty        | 5700           | 168            | 1200        | 1000           | 6700           | 400            | 600                 | 115                | 130            | 76               | 89              | 71         | 10404                   |
| 8m standard duty     | 7700           | 168            | 1200        | 1200           | 8900           | 400            | 600                 | 115                | 130            | 76               | 89              | 89         | 10072                   |
| 8m heavy duty        | 7700           | 168            | 1300        | 1200           | 9000           | 500            | 600                 | 115                | 250            | 101              | 114             | 107        | 15699                   |
| 8m extra heavy duty  | 7700           | 194            | 1300        | 1200           | 9000           | 500            | 600                 | 115                | 250            | 127              | 140             | 136        | 18973                   |
| 10m standard duty    | 9700           | 168            | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 250            | 101              | 114             | 150        | 18067                   |
| 10m heavy duty       | 9700           | 194            | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 250            | 127              | 140             | 168        | 23193                   |
| 10m extra heavy duty | 9700           | 194            | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 250            | 152              | 168             | 220        | 28317                   |
| 12m standard duty    | 11700          | 194            | 1300        | 1700           | 13400          | 500            | 600                 | 115                | 250            | 127              | 140             | 213        | 26251                   |
| 12m heavy duty       | 11700          | 194            | 1300        | 1700           | 13400          | 500            | 600                 | 115                | 250            | 127              | 168             | 260        | 40390                   |

\* Exclusion TBC

2.5-6m std Poles  
8-12m std Poles  
Flange Plate FB1  
Bolts M18 x 400  
Flange Plate FB2  
Bolts M24 x 820



F +44 (0)1908 367 618

Flange Plate and Anchor Bolt information will be confirmed at time of order due to the necessity in ensuring the correct plate and Anchor Bolts are supplied.  
Column type to be confirmed at time of order as this is based on luminaire weight, windage and geographical location.  
Info@holophane.co.uk

F Intl +44 (0)1908 363 789

Holophane Europe Limited  
Bond Avenue, Milton Keynes  
Buckinghamshire MK1 1JG  
United Kingdom

stepped steel - CityMax Large only  
post top

|             | Nominal Height | Base Diameter | Base Height | Planting Depth | Overall Length | Door to Ground | Door Opening Length | Door Opening Width | Spigot Length | Spigot Diameter | Shaft Diameter | Weight kg | Bending Moment (ULS) Nm |
|-------------|----------------|---------------|-------------|----------------|----------------|----------------|---------------------|--------------------|---------------|-----------------|----------------|-----------|-------------------------|
| description | A              | B             | C           | D              | E              | F              | G                   | H                  | I             | J               | K              |           |                         |
| 6m          | 6000           | 140           | 1075        | 1000           | 7000           | 400            | 500                 | 115                | -             | -               | -              | 46        | 5999                    |
| 8m          | 7700           | 168           | 1300        | 1200           | 9000           | 500            | 600                 | 115                | 100           | 76              | 114            | 107       | 15699                   |
| 10m         | 9700           | 168           | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 100           | 76              | 114            | 150       | 18067                   |
| 12m         | 11700          | 194           | 1300        | 1700           | 13400          | 500            | 600                 | 115                | 100           | 76              | 140            | 168       | 26251                   |
| 15m         | 14700          | 194           | 1200        | 2000           | 17000          | 400            | 600                 | 115                | 100           | 76              | 168            | 306       | 40300                   |

twin head

|             | Nominal Height | Base Diameter | Base Height | Planting Depth | Overall Length | Door to Ground | Door Opening Length | Door Opening Width | Spigot Length | Spigot Diameter | Shaft Diameter | Weight kg | Bending Moment (ULS) Nm |
|-------------|----------------|---------------|-------------|----------------|----------------|----------------|---------------------|--------------------|---------------|-----------------|----------------|-----------|-------------------------|
| description | A              | B             | C           | D              | E              | F              | G                   | H                  | I             | J               | K              |           |                         |
| 8m          | 7400           | 194           | 1200        | 1200           | 8800           | 400            | 600                 | 115                | 200           | 127             | 139.7          | 125       | 22610                   |
| 10m         | 9400           | 194           | 1200        | 1500           | 11100          | 400            | 600                 | 115                | 200           | 152.4           | 168.3          | 208       | 39131                   |
| 12m         | 11400          | 194           | 2500        | 1700           | 13300          | 1000           | 600                 | 115                | 200           | 152.4           | 168.3          | 295       | 41585                   |

**Note:** For Terrain Category 2 locations LMZ, HVZ & HEZ

<https://www.holophane.co.uk/>



T +44 (0)1908 649 292

F +44 (0)1908 367 618

F Intl +44 (0)1908 363 789

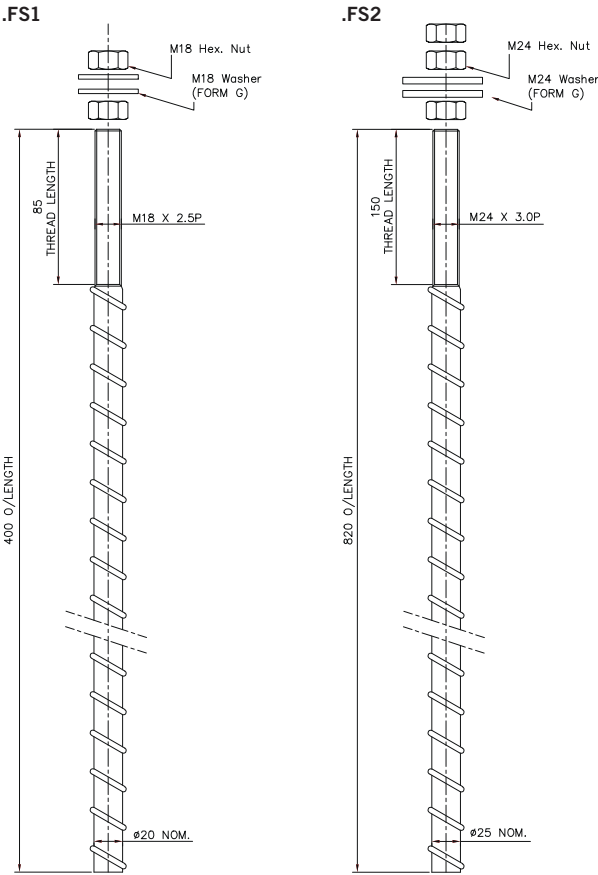
E info@holophane.co.uk

Holophane Europe Limited  
Bond Avenue, Milton Keynes  
Buckinghamshire MK1 1JG  
United Kingdom

For columns supplied with optional flange base Holophane offers two types of foundation bolts.

**Note:** The material used for the bolts is Fe E500 grade steel, with yield strength 500 N/mm2 and minimum UTS 550 N/mm2.

- HEL.FS1    M18 Bolts (FS1) x 400 mm long  
HEL.FS2    M24 Bolts (FS2) x 820 mm long



OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX0.1.LA154.AY

Manufacturer: HOLOPHANE EUROPE LIMITED  
Test #: ISF 33813-SUM21001  
Test Lab: HOLOPHANE EUROPE LIMITED PHOTOMETRIC LAB  
Test Date: 08/01/2021  
Catalog: DSX0.1.LA154.AY  
Description: D-Series 0 Area luminaire  
Lamp Catalog: LA154  
Lamp: LED C.15000 Lumens  
Lamp Output: Total luminaire Lumens: 15477.3, absolute photometry \*  
Input Wattage: 133  
Luminous Opening: Rectangle (L: 0.33M, W: 0.33M)  
Max Cd: 10,635.7 at Horizontal: 70°, Vertical: 70°  
Roadway Class: MEDIUM, TYPE III

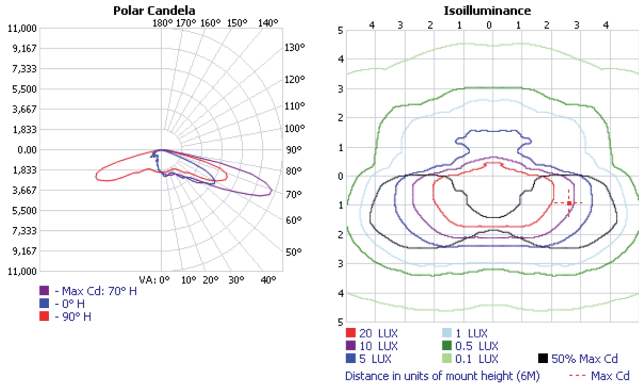
AcuityBrands

No  
Photo  
Available

Types B2 & BW

OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX0.1.LA154.AY

AcuityBrands



| Zonal Lumen Summary |          |             |
|---------------------|----------|-------------|
| Zone                | Lumens   | % Luminaire |
| 0-30                | 1,599.6  | 10.3%       |
| 0-40                | 2,831.9  | 18.3%       |
| 0-60                | 7,994.0  | 51.7%       |
| 60-90               | 7,483.3  | 48.3%       |
| 70-100              | 3,037.4  | 19.6%       |
| 90-120              | 0.000    | 0%          |
| 0-90                | 15,477.3 | 100%        |
| 90-180              | 0.000    | 0%          |
| 0-180               | 15,477.3 | 100%        |

| Lumens Per Zone |         |         |                     |
|-----------------|---------|---------|---------------------|
| Zone            | Lumens  | % Total | Zone Lumens % Total |
| 0-10            | 200.7   | 1.3%    | 90-100 0.000 0%     |
| 10-20           | 561.0   | 3.6%    | 100-110 0.000 0%    |
| 20-30           | 838.0   | 5.4%    | 110-120 0.000 0%    |
| 30-40           | 1,232.2 | 8.0%    | 120-130 0.000 0%    |
| 40-50           | 1,956.4 | 12.6%   | 130-140 0.000 0%    |
| 50-60           | 3,205.7 | 20.7%   | 140-150 0.000 0%    |
| 60-70           | 4,445.9 | 28.7%   | 150-160 0.000 0%    |
| 70-80           | 2,615.6 | 16.9%   | 160-170 0.000 0%    |
| 80-90           | 421.8   | 2.7%    | 170-180 0.000 0%    |

| Roadway Summary        |                  |        |
|------------------------|------------------|--------|
| Distribution:          | TYPE III, MEDIUM |        |
| Max Cd, 90 Deg Vert:   | 0.000            |        |
| Max Cd, 80 to <90 Deg: | 1,968.5          |        |
|                        | Lumens           | % Lamp |
| Downward Street Side:  | 12,049.3         | 77.9%  |
| Downward House Side:   | 3,428.0          | 22.1%  |
| Downward Total:        | 15,477.3         | 100%   |
| Upward Street Side:    | 0.000            | 0%     |
| Upward House Side:     | 0.000            | 0%     |
| Upward Total:          | 0.000            | 0%     |
| Total Lumens:          | 15,477.3         | 100%   |

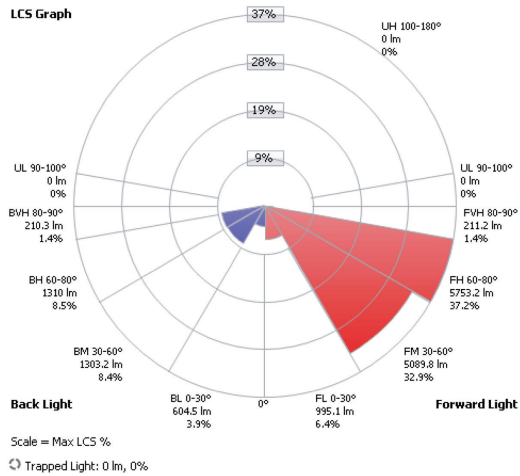
| LCS Table         |                 |  |
|-------------------|-----------------|--|
| BUG Rating        | B3 - U0 - G3    |  |
| Forward Light     | Lumens Lumens % |  |
| Low(0-30):        | 995.1 6.4%      |  |
| Medium(30-60):    | 5,089.8 32.9%   |  |
| High(60-80):      | 5,753.2 37.2%   |  |
| Very High(80-90): | 211.2 1.4%      |  |
| Back Light        |                 |  |
| Low(0-30):        | 604.5 3.9%      |  |
| Medium(30-60):    | 1,303.2 8.4%    |  |
| High(60-80):      | 1,310.0 8.5%    |  |
| Very High(80-90): | 210.3 1.4%      |  |
| Uplight           |                 |  |
| Low(90-100):      | 0.000 0%        |  |
| High(100-180):    | 0.000 0%        |  |
| Trapped Light:    | 0.0 0%          |  |

\*Test based on absolute photometry where lamp lumens=lumens total.  
\*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

Visual Photometric Tool 1.2.46 copyright 2023, Acuity Brands Lighting.  
This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.

AcuityBrands.

Types B2 & BW



| Candela Table - Type C |      | 0    | 15   | 25   | 35   | 45   | 55    | 65    | 75   | 85   | 90   | 105  | 115  | 125  | 135  | 145  | 155  | 165  | 175  | 180  |
|------------------------|------|------|------|------|------|------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0                      | 2043 | 2043 | 2043 | 2043 | 2043 | 2043 | 2043  | 2043  | 2043 | 2043 | 2043 | 2043 | 2043 | 2043 | 2043 | 2043 | 2043 | 2043 | 2043 | 2043 |
| 5                      | 2362 | 2357 | 2349 | 2314 | 2282 | 2237 | 2182  | 2123  | 2066 | 2041 | 1986 | 1966 | 1951 | 1938 | 1931 | 1925 | 1927 | 1920 | 1920 | 1920 |
| 10                     | 2417 | 2425 | 2425 | 2424 | 2420 | 2393 | 2334  | 2233  | 2107 | 2050 | 1955 | 1929 | 1910 | 1879 | 1815 | 1738 | 1681 | 1648 | 1646 | 1646 |
| 15                     | 2370 | 2388 | 2408 | 2416 | 2427 | 2435 | 2410  | 2310  | 2132 | 2036 | 1907 | 1864 | 1727 | 1526 | 1445 | 1461 | 1481 | 1483 | 1488 | 1488 |
| 20                     | 2241 | 2269 | 2307 | 2366 | 2425 | 2450 | 2462  | 2359  | 2138 | 2012 | 1848 | 1662 | 1389 | 1306 | 1191 | 1069 | 997  | 967  | 967  | 968  |
| 25                     | 2286 | 2323 | 2354 | 2380 | 2433 | 2456 | 2471  | 2418  | 2161 | 2017 | 1766 | 1389 | 1119 | 977  | 935  | 981  | 1088 | 1120 | 1132 | 1132 |
| 30                     | 2530 | 2538 | 2560 | 2595 | 2578 | 2579 | 2535  | 2479  | 2186 | 2025 | 1663 | 1170 | 997  | 1105 | 994  | 754  | 688  | 668  | 665  | 665  |
| 35                     | 3019 | 3020 | 3012 | 3001 | 2953 | 2858 | 2806  | 2682  | 2328 | 2121 | 1538 | 1213 | 1134 | 852  | 710  | 628  | 614  | 612  | 609  | 609  |
| 40                     | 3258 | 3385 | 3546 | 3588 | 3528 | 3437 | 3233  | 3029  | 2698 | 2397 | 1454 | 1334 | 880  | 678  | 614  | 615  | 632  | 641  | 641  | 641  |
| 45                     | 3538 | 3647 | 3947 | 4374 | 4524 | 4711 | 4262  | 3841  | 3398 | 2923 | 1461 | 1115 | 746  | 638  | 645  | 674  | 729  | 865  | 890  | 890  |
| 50                     | 4290 | 4305 | 4412 | 4662 | 4996 | 5862 | 5503  | 4339  | 3846 | 3250 | 1241 | 989  | 721  | 665  | 727  | 984  | 894  | 804  | 788  | 788  |
| 55                     | 5380 | 5433 | 5821 | 6149 | 5958 | 6795 | 5964  | 5541  | 5357 | 4408 | 1080 | 913  | 750  | 862  | 1140 | 1028 | 1114 | 1155 | 1165 | 1165 |
| 60                     | 5566 | 5932 | 6899 | 8250 | 8072 | 7706 | 7608  | 7406  | 7176 | 5629 | 1015 | 977  | 1149 | 1527 | 1361 | 1564 | 1063 | 749  | 700  | 700  |
| 65                     | 4373 | 4782 | 6235 | 8535 | 9514 | 9495 | 9783  | 9543  | 8741 | 6402 | 988  | 1380 | 1739 | 1809 | 1553 | 926  | 784  | 793  | 776  | 776  |
| 70                     | 1552 | 1966 | 3243 | 6359 | 8450 | 9238 | 10333 | 10230 | 9005 | 6257 | 1225 | 1776 | 1862 | 1311 | 813  | 822  | 851  | 759  | 719  | 719  |
| 75                     | 447  | 608  | 834  | 1832 | 4290 | 6846 | 8081  | 7884  | 5980 | 4008 | 1422 | 1544 | 1461 | 804  | 665  | 574  | 517  | 463  | 442  | 442  |
| 80                     | 252  | 325  | 390  | 551  | 860  | 1427 | 1899  | 1748  | 993  | 860  | 1174 | 1492 | 946  | 483  | 391  | 354  | 321  | 273  | 262  | 262  |
| 85                     | 140  | 191  | 241  | 289  | 328  | 409  | 612   | 584   | 375  | 323  | 770  | 1135 | 475  | 248  | 203  | 191  | 151  | 98   | 98   | 98   |
| 90                     | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 95                     | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 100                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 105                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 110                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 115                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 120                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 125                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 130                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 135                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 140                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 145                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 150                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 155                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 160                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 165                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 170                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 175                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 180                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |



Product image may not represent the final configuration stated above.



## PRODUCT SPECIFICATION

[www.holophane.co.uk](#) **DSX2 HOLOPHANE WEBSITE**

### DSX2.2.LA304.FW.C9.TZ01.CA

Holophane D-Series 2 luminaire. Single-piece die-cast aluminium housing conforming to EN1706 AC-46500, with integral heat sink fins to optimise thermal management. LED light engine modules are IP66 with individual PMMA lenses. Housing sealed to IP65 via hinged access door (two captive fixing screws). Installation via bespoke Holophane mounting feature for quick and easy installation. International Dark-Sky Association Approved (colour temperatures 3000K or warmer are approved under the IDA).

This specific SKU includes:

- Series 2
- LED light engine producing c.30,000 lumen with a nominal 4000K colour temperature
- Forward throw light distribution
- Metallic Silver (RAL9006)
- Complete with 4-Pin Zhaga Socket - 'Top' (suitable photocell/node available from Holophane or supplied by others) with weather proof locking top
- Wireless lighting node for use with Holophane Controlux Air System. (Includes subscription package for two years (Europe))

### DSX2B.8.1A.LMZ.GV9

Holophane tubular base compartment column for use with DSX2 Luminaires. 8 metre, Single head, For light & medium area wind zones (compliant to EN40).

- Bracket galvanised and painted metallic silver (RAL9006)
- Direct embedment

## PERFORMANCE

|                                  |                 |
|----------------------------------|-----------------|
| Drive Current from Driver:       | 1,050mA         |
| Power:                           | 282W            |
| Fitting Current:                 | 1.26A           |
| Power Factor:                    | 0.97            |
| Fitting Inrush:                  | 22A - 0.135ms   |
| Number of Drivers:               | 2               |
| 2x Driver 1 Inrush:              | 11.2A - 0.135ms |
| Max Drivers per 16A Type B MCB:  | 15              |
| Max Fittings per 16A Type B MCB: | 7               |
| Total Number of LEDs:            | 20              |
| Minimum Dim Level:               | 7 %             |
| Optical Risk Group:              | 1               |



15Kg<sub>2</sub>



0.1M



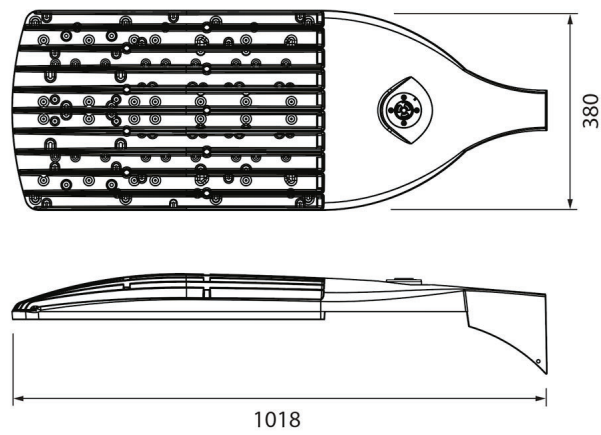
42 0282 0000 100\*



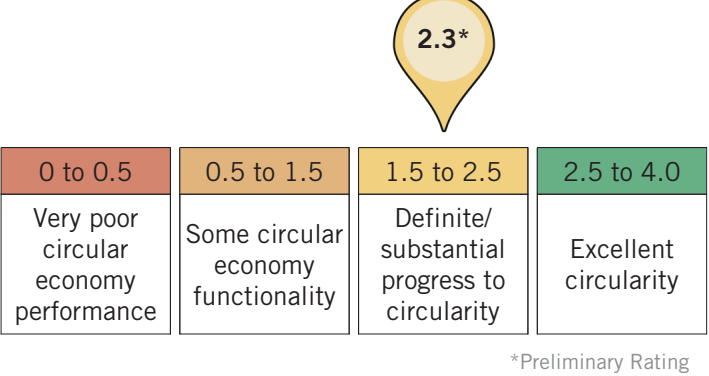
[Installation Guide](#)

\*Generic UMSUG code based on product wattage and some or all of product family being included within Elexon data base.

## DIMENSIONS



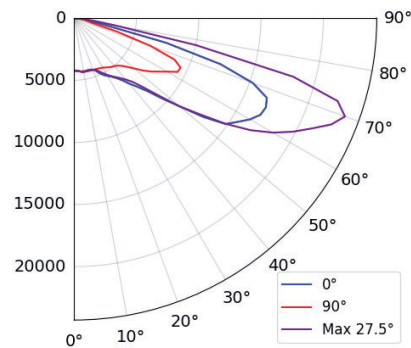
## CIBSE TM66 - CEAM RATING



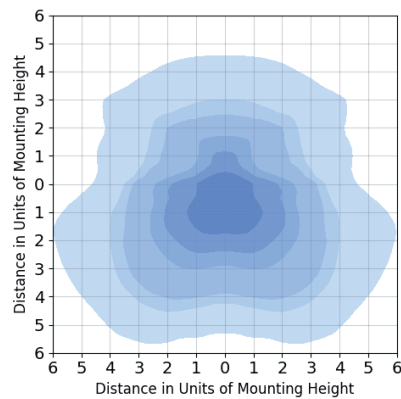
## PHOTOMETRY



Polar Plot

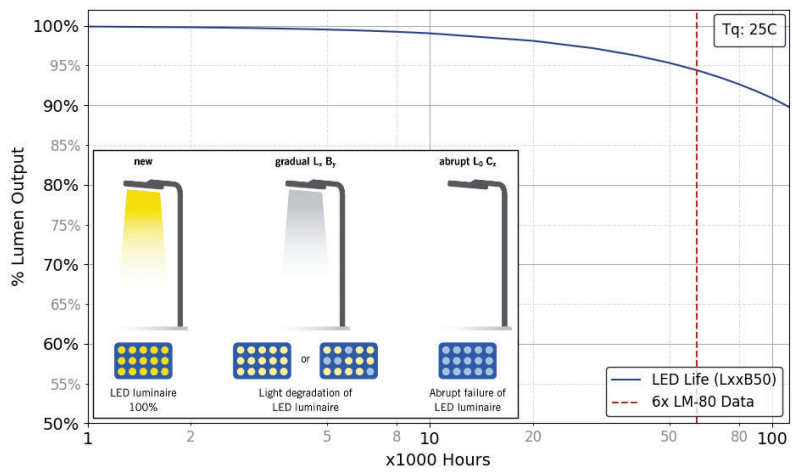


Isoilluminance Plot



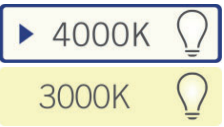
|           |                                                                  |
|-----------|------------------------------------------------------------------|
| Lumens:   | 33,390                                                           |
| CCT:      | 4000K                                                            |
| CRI:      | 70                                                               |
| IES File: | DSX2.2.LA304.FW                                                  |
| G-Class:  | G*2<br>Imax @ ≥ 70°: 693<br>Imax @ ≥ 80°: 118<br>Imax @ ≥ 90°: 0 |

## LLMF GRAPH



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on.

## COLOUR TEMPERATURES



## COLOURS

### Selected Colour

**C9** Metallic Silver (RAL9006)

### Standard Colours Available

**C1** Smooth White (RAL9016)

**C4** Smooth Graphite (RAL7011)

**C6** Smooth Grey (RAL7035)

**C7** Textured Black (RAL9005)

**C9** Metallic Silver (RAL9006)

### Custom Colour Available

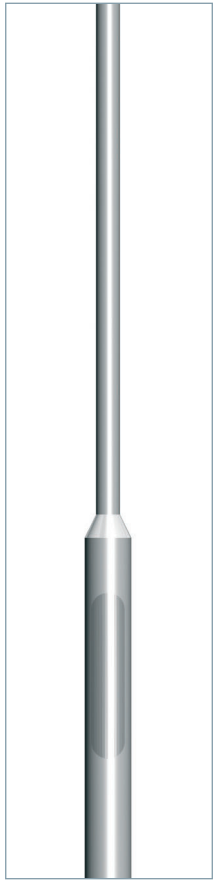
**RAL \*\*\*\*** Customer specified colour

\*Choosing a custom colour may increase the cost and lead time.

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

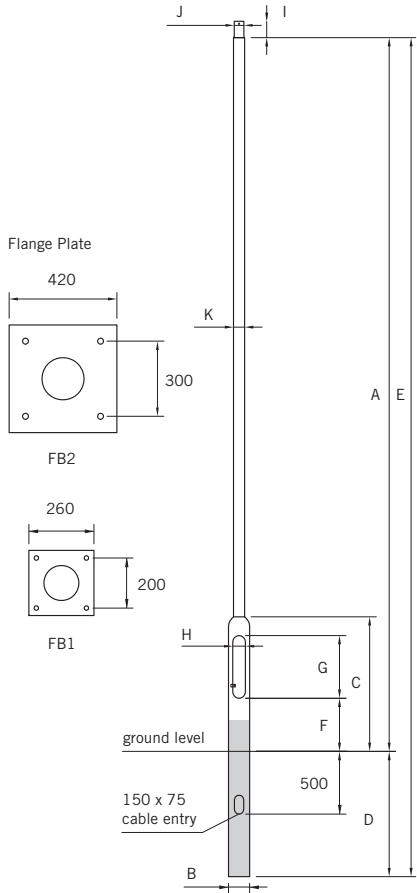
The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

> DATASHEET  
**DSX2B.8.1A.LMZ.GV9**



**Holophane products that are suitable**

CityMax  
Denver Elite pole  
D-Series  
Factor  
Factor small  
V-Max



|                      | Nominal Height | Base Diameter* | Base Height | Planting Depth | Overall Length | Door to Ground | Door Opening Length | Door Opening Width | Spigot Length* | Spigot Diameter* | Shaft Diameter* | Weight kg* | Bending Moment (ULS) Nm |
|----------------------|----------------|----------------|-------------|----------------|----------------|----------------|---------------------|--------------------|----------------|------------------|-----------------|------------|-------------------------|
| description          | A              | B              | C           | D              | E              | F              | G                   | H                  | I              | J                | K               |            |                         |
| 2.5m standard duty   | 2500           | 140            | 1075        | 800            | 3300           | 400            | 500                 | 100                | -              | -                | 76              | 27         | 2100                    |
| 3m standard duty     | 3000           | 140            | 1075        | 800            | 3800           | 400            | 500                 | 100                | -              | -                | 76              | 30         | 4666                    |
| 3.5m standard duty   | 3500           | 140            | 1075        | 800            | 4300           | 400            | 500                 | 100                | -              | -                | 76              | 32         | 2100                    |
| 4m standard duty     | 4000           | 140            | 1075        | 800            | 4800           | 400            | 500                 | 100                | -              | -                | 76              | 34         | 6484                    |
| 4.5m standard duty   | 4500           | 140            | 1075        | 800            | 5300           | 400            | 500                 | 100                | -              | -                | 76              | 37         | 5108                    |
| 5m standard duty     | 5000           | 140            | 1075        | 800            | 5800           | 400            | 500                 | 100                | -              | -                | 76              | 39         | 6149                    |
| 5.5m standard duty   | 5500           | 140            | 1075        | 1000           | 6500           | 400            | 500                 | 100                | -              | -                | 76              | 44         | 6003                    |
| 6m standard duty     | 6000           | 140            | 1075        | 1000           | 7000           | 400            | 500                 | 100                | -              | -                | 76              | 46         | 5999                    |
| 6m heavy duty        | 5700           | 168            | 1200        | 1000           | 6700           | 400            | 600                 | 115                | 130            | 76               | 89              | 71         | 10404                   |
| 8m standard duty     | 7700           | 168            | 1200        | 1200           | 8900           | 400            | 600                 | 115                | 130            | 76               | 89              | 89         | 10072                   |
| 8m heavy duty        | 7700           | 168            | 1300        | 1200           | 9000           | 500            | 600                 | 115                | 250            | 101              | 114             | 107        | 15699                   |
| 8m extra heavy duty  | 7700           | 194            | 1300        | 1200           | 9000           | 500            | 600                 | 115                | 250            | 127              | 140             | 136        | 18973                   |
| 10m standard duty    | 9700           | 168            | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 250            | 101              | 114             | 150        | 18067                   |
| 10m heavy duty       | 9700           | 194            | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 250            | 127              | 140             | 168        | 23193                   |
| 10m extra heavy duty | 9700           | 194            | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 250            | 152              | 168             | 220        | 28317                   |
| 12m standard duty    | 11700          | 194            | 1300        | 1700           | 13400          | 500            | 600                 | 115                | 250            | 127              | 140             | 213        | 26251                   |
| 12m heavy duty       | 11700          | 194            | 1300        | 1700           | 13400          | 500            | 600                 | 115                | 250            | 127              | 168             | 260        | 40390                   |

\* Exclusion TBC

2.5-6m std Poles  
8-12m std Poles  
Flange Plate FB1  
Flange Plate FB2  
Bolts M18 x 400  
Bolts M24 x 820



F +44 (0)1908 367 618

Flange Plate and Anchor Bolt information will be confirmed at time of order due to the necessity in ensuring the correct plate and Anchor Bolts are supplied.  
Column type to be confirmed at time of order as this is based on luminaire weight, windage and geographical location.  
Info@holophane.co.uk

Holophane Europe Limited  
Bond Avenue, Milton Keynes  
Buckinghamshire MK1 1JG  
United Kingdom

stepped steel - CityMax Large only  
post top

|             | Nominal Height | Base Diameter | Base Height | Planting Depth | Overall Length | Door to Ground | Door Opening Length | Door Opening Width | Spigot Length | Spigot Diameter | Shaft Diameter | Weight kg | Bending Moment (ULS) Nm |
|-------------|----------------|---------------|-------------|----------------|----------------|----------------|---------------------|--------------------|---------------|-----------------|----------------|-----------|-------------------------|
| description | A              | B             | C           | D              | E              | F              | G                   | H                  | I             | J               | K              |           |                         |
| 6m          | 6000           | 140           | 1075        | 1000           | 7000           | 400            | 500                 | 115                | -             | -               | -              | 46        | 5999                    |
| 8m          | 7700           | 168           | 1300        | 1200           | 9000           | 500            | 600                 | 115                | 100           | 76              | 114            | 107       | 15699                   |
| 10m         | 9700           | 168           | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 100           | 76              | 114            | 150       | 18067                   |
| 12m         | 11700          | 194           | 1300        | 1700           | 13400          | 500            | 600                 | 115                | 100           | 76              | 140            | 168       | 26251                   |
| 15m         | 14700          | 194           | 1200        | 2000           | 17000          | 400            | 600                 | 115                | 100           | 76              | 168            | 306       | 40300                   |

twin head

|             | Nominal Height | Base Diameter | Base Height | Planting Depth | Overall Length | Door to Ground | Door Opening Length | Door Opening Width | Spigot Length | Spigot Diameter | Shaft Diameter | Weight kg | Bending Moment (ULS) Nm |
|-------------|----------------|---------------|-------------|----------------|----------------|----------------|---------------------|--------------------|---------------|-----------------|----------------|-----------|-------------------------|
| description | A              | B             | C           | D              | E              | F              | G                   | H                  | I             | J               | K              |           |                         |
| 8m          | 7400           | 194           | 1200        | 1200           | 8800           | 400            | 600                 | 115                | 200           | 127             | 139.7          | 125       | 22610                   |
| 10m         | 9400           | 194           | 1200        | 1500           | 11100          | 400            | 600                 | 115                | 200           | 152.4           | 168.3          | 208       | 39131                   |
| 12m         | 11400          | 194           | 2500        | 1700           | 13300          | 1000           | 600                 | 115                | 200           | 152.4           | 168.3          | 295       | 41585                   |

**Note:** For Terrain Category 2 locations LMZ, HVZ & HEZ

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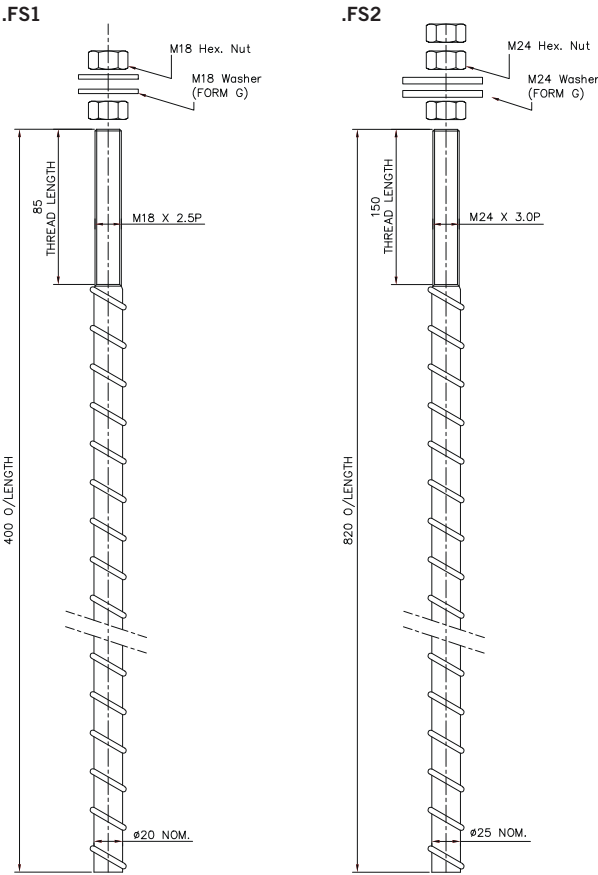
E info@holophane.co.uk

Holophane Europe Limited  
Bond Avenue, Milton Keynes  
Buckinghamshire MK1 1JG  
United Kingdom

For columns supplied with optional flange base Holophane offers two types of foundation bolts.

**Note:** The material used for the bolts is Fe E500 grade steel, with yield strength 500 N/mm2 and minimum UTS 550 N/mm2.

- HEL.FS1    M18 Bolts (FS1) x 400 mm long  
HEL.FS2    M24 Bolts (FS2) x 820 mm long

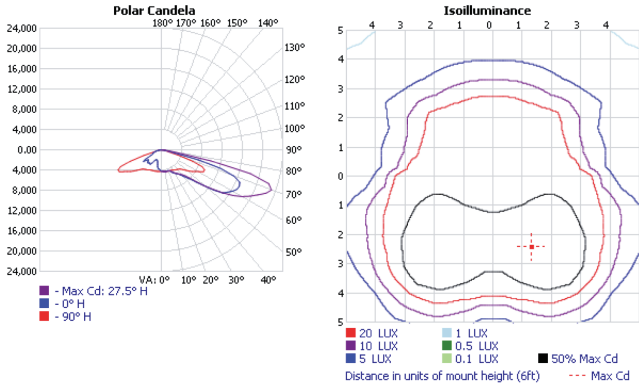


OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX2.2.LA304.FW  
Manufacturer: HOLOPHANE EUROPE LIMITED  
Test #: ISF 34057P11  
Test Lab: ACUITY BRANDS LIGHTING - CONYERS LAB - SCALED PHOTOMETRY  
Test Date: 3/21/2017  
Catalog: DSX2.2.LA304.FW  
Description: D-Series 2 Luminaire  
Lamp Catalog: LA304  
Lamp: LED C.30000LM-4000K  
Lamp Output: Total luminaire Lumens: 33389.6, absolute photometry \*  
Input Wattage: 282  
Luminous Opening: Rectangle (L: 0.46M, W: 0.33M)  
Max Cd: 23,138.0 at Horizontal: 27.5°, Vertical: 70°  
Roadway Class: SHORT, TYPE IV



No  
Photo  
Available

Type C1



\*Test based on absolute photometry where lamp lumens=lumens total.  
\*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

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OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX2.2.LA304.FW

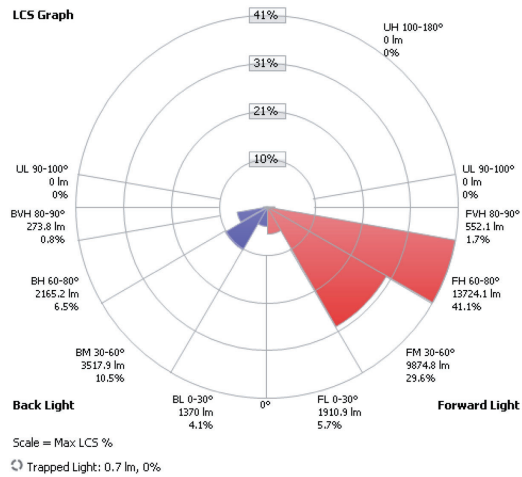


| Zonal Lumen Summary |          |             |
|---------------------|----------|-------------|
| Zone                | Lumens   | % Luminaire |
| 0-30                | 3,280.7  | 9.8%        |
| 0-40                | 5,901.8  | 17.7%       |
| 0-60                | 16,677.2 | 49.9%       |
| 60-90               | 16,712.4 | 50.1%       |
| 70-100              | 7,000.9  | 21%         |
| 90-120              | 0.000    | 0%          |
| 0-90                | 33,389.6 | 100%        |
| 90-180              | 0.000    | 0%          |
| 0-180               | 33,389.6 | 100%        |

| Roadway Summary        |                |        |
|------------------------|----------------|--------|
| Distribution:          | TYPE IV, SHORT |        |
| Max Cd, 90 Deg Vert:   | 0.000          |        |
| Max Cd, 80 to <90 Deg: | 3,952.8        |        |
|                        | Lumens         | % Lamp |
| Downward Street Side:  | 26,061.9       | 78.1%  |
| Downward House Side:   | 7,326.9        | 21.9%  |
| Downward Total:        | 33,388.8       | 100%   |
| Upward Street Side:    | 0.000          | 0%     |
| Upward House Side:     | 0.000          | 0%     |
| Upward Total:          | 0.000          | 0%     |
| Total Lumens:          | 33,388.8       | 100%   |

| Lumens Per Zone |         |         |                     |
|-----------------|---------|---------|---------------------|
| Zone            | Lumens  | % Total | Zone Lumens % Total |
| 0-10            | 397.3   | 1.2%    | 90-100 0.000 0%     |
| 10-20           | 1,121.9 | 3.4%    | 100-110 0.000 0%    |
| 20-30           | 1,761.6 | 5.3%    | 110-120 0.000 0%    |
| 30-40           | 2,621.1 | 7.9%    | 120-130 0.000 0%    |
| 40-50           | 3,942.6 | 11.8%   | 130-140 0.000 0%    |
| 50-60           | 6,832.8 | 20.5%   | 140-150 0.000 0%    |
| 60-70           | 9,711.5 | 29.1%   | 150-160 0.000 0%    |
| 70-80           | 6,173.8 | 18.5%   | 160-170 0.000 0%    |
| 80-90           | 827.1   | 2.5%    | 170-180 0.000 0%    |

| LCS Table         |              |          |
|-------------------|--------------|----------|
| BUG Rating        | B3 - U0 - G5 |          |
| Forward Light     | Lumens       | Lumens % |
| Low(0-30):        | 1,910.9      | 5.7%     |
| Medium(30-60):    | 9,874.8      | 29.6%    |
| High(60-80):      | 13,724.1     | 41.1%    |
| Very High(80-90): | 552.1        | 1.7%     |
| Back Light        |              |          |
| Low(0-30):        | 1,370.0      | 4.1%     |
| Medium(30-60):    | 3,517.9      | 10.5%    |
| High(60-80):      | 2,165.2      | 6.5%     |
| Very High(80-90): | 273.8        | 0.8%     |
| Uplight           |              |          |
| Low(90-100):      | 0.000        | 0%       |
| High(100-180):    | 0.000        | 0%       |
| Trapped Light:    | 0.7          | 0%       |



Type C1

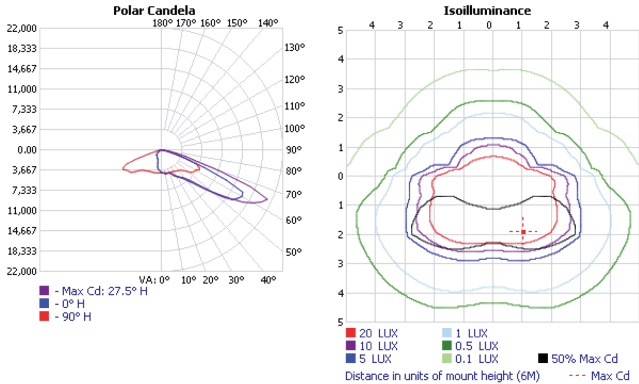
| Candela Table - Type C |       |       |       |       |       |       |       |       |       |      |      |      |      |      |      |      |      |      |      |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|
|                        | 0     | 15    | 25    | 35    | 45    | 55    | 65    | 75    | 85    | 90   | 105  | 115  | 125  | 135  | 145  | 155  | 165  | 175  | 180  |
| 0                      | 4249  | 4249  | 4249  | 4249  | 4249  | 4249  | 4249  | 4249  | 4249  | 4249 | 4249 | 4249 | 4249 | 4249 | 4249 | 4249 | 4249 | 4249 | 4249 |
| 5                      | 4269  | 4293  | 4281  | 4266  | 4249  | 4245  | 4256  | 4274  | 4280  | 4284 | 4276 | 4175 | 4065 | 4022 | 3989 | 3956 | 3939 | 3929 | 3919 |
| 10                     | 4399  | 4422  | 4405  | 4364  | 4318  | 4276  | 4242  | 4262  | 4315  | 4331 | 4148 | 4017 | 3904 | 3832 | 3807 | 3807 | 3807 | 3798 | 3774 |
| 15                     | 4322  | 4367  | 4394  | 4364  | 4374  | 4335  | 4283  | 4273  | 4338  | 4397 | 4134 | 3947 | 3824 | 3720 | 3465 | 3205 | 3041 | 2953 | 2930 |
| 20                     | 4415  | 4407  | 4405  | 4461  | 4473  | 4487  | 4391  | 4338  | 4376  | 4436 | 4088 | 3891 | 3509 | 2978 | 2596 | 2380 | 2294 | 2271 | 2257 |
| 25                     | 4909  | 4852  | 4751  | 4630  | 4638  | 4683  | 4627  | 4456  | 4437  | 4478 | 4072 | 3633 | 2846 | 2399 | 2172 | 2139 | 2174 | 2197 | 2187 |
| 30                     | 5366  | 5356  | 5276  | 5161  | 4912  | 4862  | 4870  | 4596  | 4540  | 4599 | 4088 | 3114 | 2474 | 2214 | 2210 | 2121 | 2104 | 2152 | 2149 |
| 35                     | 5874  | 5855  | 5799  | 5706  | 5467  | 5107  | 4936  | 4773  | 4731  | 4827 | 3925 | 2677 | 2385 | 2200 | 2130 | 2492 | 2888 | 3158 | 3159 |
| 40                     | 6872  | 6605  | 6488  | 6285  | 6049  | 5595  | 5259  | 5033  | 4916  | 5036 | 3425 | 2441 | 2280 | 2021 | 2221 | 2658 | 3214 | 3574 | 3575 |
| 45                     | 8290  | 8229  | 8012  | 7634  | 7273  | 6769  | 6099  | 5626  | 5380  | 5431 | 2978 | 2276 | 2158 | 1919 | 2169 | 2725 | 3301 | 3652 | 3662 |
| 50                     | 11023 | 11275 | 11221 | 10212 | 9077  | 8187  | 7330  | 6412  | 6332  | 6306 | 2534 | 2200 | 2000 | 1972 | 2492 | 3342 | 3627 | 3489 | 3430 |
| 55                     | 14852 | 15492 | 15107 | 13843 | 12575 | 11046 | 9404  | 7703  | 7779  | 7488 | 2189 | 2193 | 1975 | 2257 | 2953 | 3402 | 3527 | 3545 | 3496 |
| 60                     | 16294 | 17731 | 18747 | 17306 | 16268 | 15008 | 12297 | 9581  | 9740  | 8608 | 1972 | 2358 | 2087 | 2634 | 3697 | 4338 | 4319 | 3916 | 3669 |
| 65                     | 16985 | 19411 | 21104 | 20104 | 19626 | 19477 | 15600 | 11139 | 11431 | 9428 | 1728 | 2099 | 2138 | 2916 | 3913 | 2837 | 2047 | 1888 | 1847 |
| 70                     | 15269 | 19351 | 22934 | 22315 | 21708 | 20142 | 14435 | 8968  | 8265  | 6525 | 1569 | 1618 | 1860 | 2776 | 2135 | 1783 | 1784 | 1707 | 1672 |
| 75                     | 7626  | 11976 | 17153 | 18344 | 16185 | 12696 | 6327  | 4030  | 1906  | 1495 | 1157 | 1159 | 1686 | 1694 | 1371 | 1367 | 1319 | 1261 | 1228 |
| 80                     | 1191  | 1798  | 3139  | 3953  | 3229  | 3193  | 3014  | 2693  | 1280  | 847  | 858  | 924  | 1392 | 1039 | 1014 | 951  | 846  | 759  | 744  |
| 85                     | 333   | 508   | 688   | 857   | 1141  | 1149  | 1177  | 1273  | 829   | 402  | 472  | 736  | 714  | 587  | 567  | 514  | 392  | 253  | 291  |
| 90                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 95                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 100                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 105                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 110                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 115                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 120                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 125                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 130                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 135                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 140                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 145                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 150                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 155                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 160                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 165                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 170                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 175                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 180                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX2.2.LA304.FW.BLS  
Manufacturer: HOLOPHANE EUROPE LIMITED  
Test #: ISF 34067P11  
Test Lab: ACUITY BRANDS LIGHTING - CONYERS LAB - SCALED PHOTOMETRY  
Test Date: 21 Mar 2017  
Catalog: DSX2.2.LA304.FW.BLS  
Description: D-Series 2 Luminaire with Back Light Shield  
Lamp Catalog: LA304  
Lamp: LED C.30000LM-4000K  
Lamp Output: Total luminaire Lumens: 26069.8, absolute photometry \*  
Input Wattage: 282  
Luminous Opening: Rectangle (L: 0.46M, W: 0.33M)  
Max Cd: 21,154.6 at Horizontal: 27.5°, Vertical: 65°  
Roadway Class: VERY SHORT, TYPE III



No  
Photo  
Available

## Type C1BLS



\*Test based on absolute photometry where lamp lumens=lumens total.  
\*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

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OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX2.2.LA304.FW.BLS



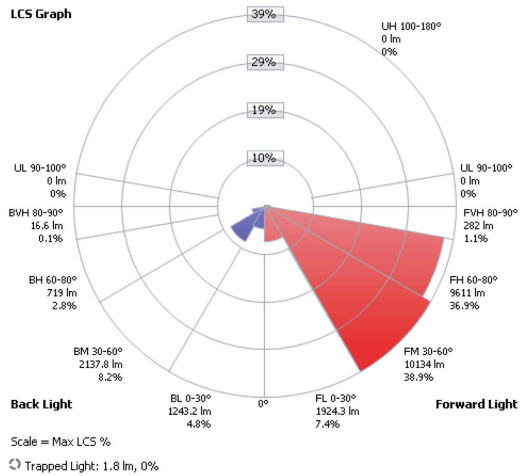
| Zonal Lumen Summary |          |             |
|---------------------|----------|-------------|
| Zone                | Lumens   | % Luminaire |
| 0-30                | 3,167.3  | 12.1%       |
| 0-40                | 5,600.7  | 21.5%       |
| 0-60                | 15,442.5 | 59.2%       |
| 60-90               | 10,627.2 | 40.8%       |
| 70-100              | 3,046.2  | 11.7%       |
| 90-120              | 0.000    | 0%          |
| 0-90                | 26,069.8 | 100%        |
| 90-180              | 0.000    | 0%          |
| 0-180               | 26,069.8 | 100%        |

| Roadway Summary                    |          |         |
|------------------------------------|----------|---------|
| Distribution: TYPE III, VERY SHORT |          |         |
| Max Cd, 90 Deg Vert:               |          | 0.000   |
| Max Cd, 80 to <90 Deg:             |          | 2,036.8 |
|                                    |          | Lumens  |
| Downward Street Side:              | 21,951.4 | 84.2%   |
| Downward House Side:               | 4,116.6  | 15.8%   |
| Downward Total:                    | 26,068.0 | 100%    |
| Upward Street Side:                | 0.000    | 0%      |
| Upward House Side:                 | 0.000    | 0%      |
| Upward Total:                      | 0.000    | 0%      |
| Total Lumens:                      | 26,068.0 | 100%    |

| Lumens Per Zone |         |         |         |        |         |
|-----------------|---------|---------|---------|--------|---------|
| Zone            | Lumens  | % Total | Zone    | Lumens | % Total |
| 0-10            | 386.7   | 1.5%    | 90-100  | 0.000  | 0%      |
| 10-20           | 1,084.5 | 4.2%    | 100-110 | 0.000  | 0%      |
| 20-30           | 1,696.1 | 6.5%    | 110-120 | 0.000  | 0%      |
| 30-40           | 2,433.5 | 9.3%    | 120-130 | 0.000  | 0%      |
| 40-50           | 3,655.0 | 14.0%   | 130-140 | 0.000  | 0%      |
| 50-60           | 6,186.8 | 23.7%   | 140-150 | 0.000  | 0%      |
| 60-70           | 7,581.1 | 29.1%   | 150-160 | 0.000  | 0%      |
| 70-80           | 2,746.6 | 10.5%   | 160-170 | 0.000  | 0%      |
| 80-90           | 299.6   | 1.1%    | 170-180 | 0.000  | 0%      |

| LCS Table         |          |              |       |
|-------------------|----------|--------------|-------|
| BUG Rating        |          | B3 - U0 - G4 |       |
| Forward Light     | Lumens   | Lumens       | %     |
| Low(0-30):        | 1,924.3  |              | 7.4%  |
| Medium(30-60):    | 10,134.0 |              | 38.9% |
| High(60-80):      | 9,611.0  |              | 36.9% |
| Very High(80-90): | 282.0    |              | 1.1%  |
| Back Light        |          |              |       |
| Low(0-30):        | 1,243.2  |              | 4.8%  |
| Medium(30-60):    | 2,137.8  |              | 8.2%  |
| High(60-80):      | 719.0    |              | 2.8%  |
| Very High(80-90): | 16.6     |              | 0.1%  |
| Uplight           |          |              |       |
| Low(90-100):      | 0.000    |              | 0%    |
| High(100-180):    | 0.000    |              | 0%    |
| Trapped Light:    | 1.8      |              | 0%    |

Type C1BLS



**Candela Table - Type C**

|     | 0     | 15    | 25    | 35    | 45    | 55    | 65    | 75   | 85   | 90   | 105  | 115  | 125  | 135  | 145  | 155  | 165  | 175  | 180  |
|-----|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0   | 4161  | 4161  | 4161  | 4161  | 4161  | 4161  | 4161  | 4161 | 4161 | 4161 | 4161 | 4161 | 4161 | 4161 | 4161 | 4161 | 4161 | 4161 | 4161 |
| 5   | 4215  | 4238  | 4225  | 4210  | 4189  | 4175  | 4178  | 4190 | 4197 | 4192 | 4144 | 4006 | 3922 | 3870 | 3818 | 3777 | 3756 | 3745 | 3736 |
| 10  | 4397  | 4416  | 4388  | 4335  | 4283  | 4228  | 4186  | 4192 | 4234 | 4241 | 4001 | 3835 | 3714 | 3635 | 3597 | 3589 | 3579 | 3569 | 3554 |
| 15  | 4362  | 4399  | 4414  | 4383  | 4381  | 4312  | 4245  | 4214 | 4256 | 4305 | 3956 | 3751 | 3599 | 3472 | 3179 | 2877 | 2719 | 2607 | 2583 |
| 20  | 4491  | 4495  | 4470  | 4498  | 4506  | 4509  | 4366  | 4293 | 4300 | 4346 | 3899 | 3652 | 3234 | 2655 | 2222 | 1979 | 1870 | 1837 | 1822 |
| 25  | 5136  | 5065  | 4937  | 4734  | 4690  | 4711  | 4619  | 4416 | 4357 | 4388 | 3867 | 3357 | 2512 | 2017 | 1735 | 1669 | 1691 | 1722 | 1724 |
| 30  | 5633  | 5610  | 5526  | 5353  | 5019  | 4895  | 4869  | 4543 | 4456 | 4502 | 3859 | 2801 | 2111 | 1766 | 1742 | 1627 | 1587 | 1551 | 1549 |
| 35  | 6195  | 6153  | 6054  | 5935  | 5647  | 5152  | 4914  | 4703 | 4619 | 4696 | 3631 | 2351 | 1941 | 1731 | 1531 | 1388 | 1318 | 1304 | 1301 |
| 40  | 7317  | 7030  | 6866  | 6594  | 6256  | 5688  | 5235  | 4964 | 4804 | 4897 | 3138 | 2048 | 1849 | 1502 | 1357 | 1304 | 1301 | 1318 | 1313 |
| 45  | 8927  | 8796  | 8555  | 8128  | 7682  | 7063  | 6144  | 5591 | 5270 | 5276 | 2652 | 1874 | 1686 | 1313 | 1292 | 1341 | 1309 | 1278 | 1261 |
| 50  | 11872 | 12072 | 11813 | 10617 | 9366  | 8369  | 7302  | 6363 | 6220 | 6138 | 1909 | 1753 | 1452 | 1211 | 1261 | 1205 | 1045 | 982  | 972  |
| 55  | 15717 | 16213 | 15939 | 14432 | 12974 | 11325 | 9372  | 7498 | 7383 | 7012 | 1311 | 1179 | 1125 | 1155 | 1079 | 916  | 718  | 641  | 635  |
| 60  | 16855 | 18439 | 19483 | 17983 | 16853 | 14982 | 11221 | 8389 | 8365 | 7335 | 1035 | 1038 | 1039 | 966  | 615  | 576  | 569  | 552  | 549  |
| 65  | 12926 | 16785 | 20924 | 20558 | 18710 | 17119 | 12798 | 8987 | 9240 | 7580 | 924  | 980  | 881  | 480  | 497  | 528  | 525  | 500  | 497  |
| 70  | 4890  | 6589  | 10249 | 14252 | 17757 | 15999 | 11311 | 6919 | 6293 | 4956 | 902  | 736  | 367  | 357  | 392  | 419  | 393  | 358  | 348  |
| 75  | 2187  | 3218  | 4220  | 5152  | 5369  | 7877  | 4617  | 2972 | 1326 | 997  | 565  | 274  | 237  | 244  | 244  | 239  | 225  | 188  | 180  |
| 80  | 947   | 1291  | 1705  | 1872  | 2037  | 1965  | 1888  | 1724 | 799  | 506  | 197  | 118  | 97   | 73   | 48   | 25   | 18   | 14   | 14   |
| 85  | 232   | 251   | 299   | 339   | 399   | 393   | 494   | 450  | 250  | 101  | 17   | 11   | 10   | 8    | 8    | 6    | 3    | 0    | 0    |
| 90  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 95  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 100 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 105 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 110 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 115 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 120 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 125 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 130 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 135 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 140 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 145 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 150 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 155 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 160 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 165 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 170 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 175 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 180 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |



Product image may not represent the final configuration stated above.



## PRODUCT SPECIFICATION

[DSX0 HOLOPHANE WEBSITE](#)

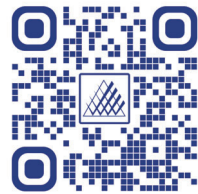
### DSX0.1.LA104.BLC.C9.TZ01.CA

Holophane D-Series 0 luminaire. Single-piece die-cast aluminium housing conforming to EN1706 AC-46500, with integral heat sink fins to optimise thermal management. LED light engine modules are IP66 with individual PMMA lenses. Housing sealed to IP65 via hinged access door (two captive fixing screws). Installation via bespoke Holophane mounting feature for quick and easy installation. International Dark-Sky Association Approved (colour temperatures 3000K or warmer are approved under the IDA).  
This specific SKU includes:

- Series 1
- LED light engine producing c.10,000 lm with a nominal 4000°K colour temperature
- Long & narrow distribution with extreme backlight cut-off
- Metallic Silver (RAL9006)
- Complete with 4-Pin Zhaga Socket - 'Top' (suitable photocell/node available from Holophane or supplied by others) with weather proof locking top
- Wireless lighting node for use with Holophane Controlux Air System. (Includes subscription package for two years (Europe))

### DSX1B.8.1A.LMZ.GV9

Holophane tubular base compartment column for use with DSX1 Luminaires. 8 metre, Single head, For light & medium area wind zones (compliant to EN40).  
• Bracket galvanised and painted metallic silver (RAL9006)  
• Direct embedment



Product Website

## PERFORMANCE

|                                  |               |
|----------------------------------|---------------|
| Drive Current from Driver:       | 575mA         |
| Power:                           | 81W           |
| Fitting Current:                 | 0.36A         |
| Power Factor:                    | 0.97          |
| Fitting Inrush:                  | 9A - 0.13ms   |
| Number of Drivers:               | 1             |
| 1x Driver 1 Inrush:              | 9.6A - 0.13ms |
| Max Drivers per 16A Type B MCB:  | 31            |
| Max Fittings per 16A Type B MCB: | 31            |
| Total Number of LEDs:            | 20            |
| Minimum Dim Level:               | 9 %           |
| Optical Risk Group:              | 1             |



8Kg<sub>2</sub>

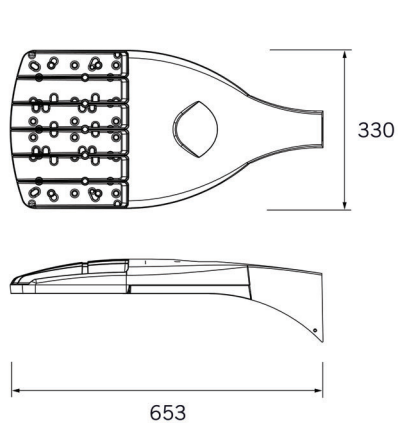


0.09M

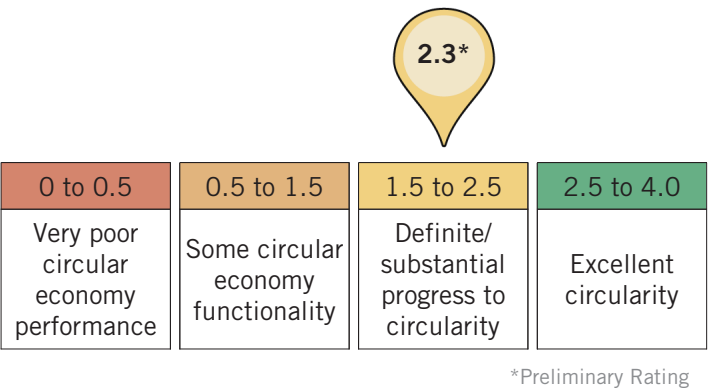


[Installation Guide](#)

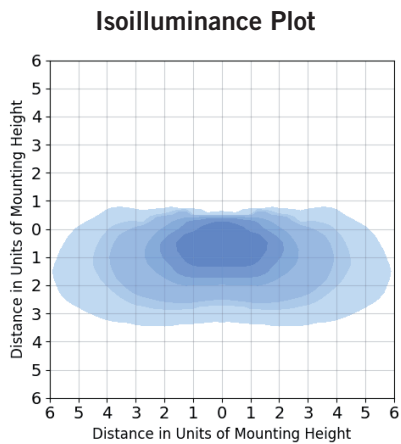
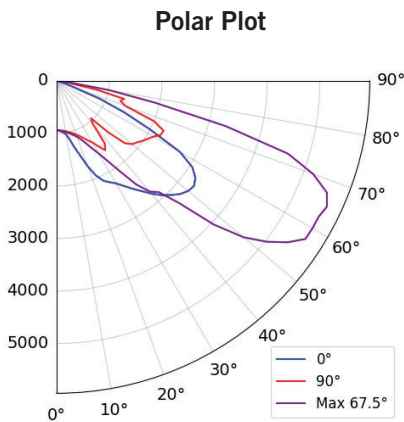
## DIMENSIONS



## CIBSE TM66 - CEAM RATING

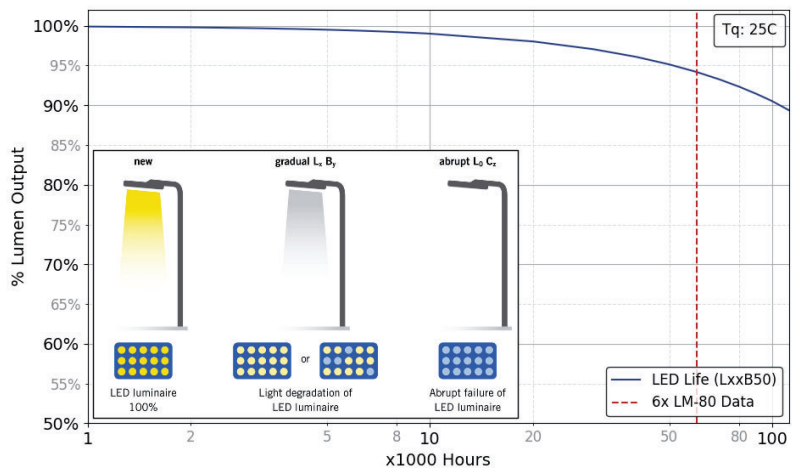


## PHOTOMETRY



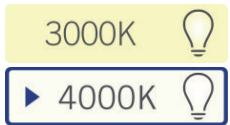
|           |                                                                  |
|-----------|------------------------------------------------------------------|
| Lumens:   | 7,954                                                            |
| CCT:      | 4000K                                                            |
| CRI:      | 70                                                               |
| IES File: | DSX0.1.LA104.BLC                                                 |
| G-Class:  | G*2<br>Imax @ ≥ 70°: 654<br>Imax @ ≥ 80°: 128<br>Imax @ ≥ 90°: 0 |

## LLMF GRAPH



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on.

## COLOUR TEMPERATURES



## COLOURS

### Selected Colour

C9 Metallic Silver (RAL9006)

### Standard Colours Available

C1 Smooth White (RAL9016)

C4 Smooth Graphite (RAL7011)

C6 Smooth Grey (RAL7035)

C7 Textured Black (RAL9005)

C9 Metallic Silver (RAL9006)

### Custom Colour Available

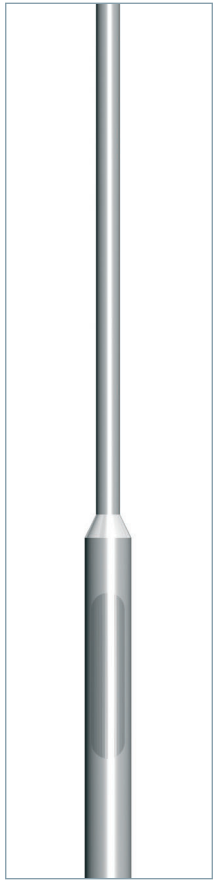
RAL\*\*\*\* Customer specified colour

\*Choosing a custom colour may increase the cost and lead time.

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

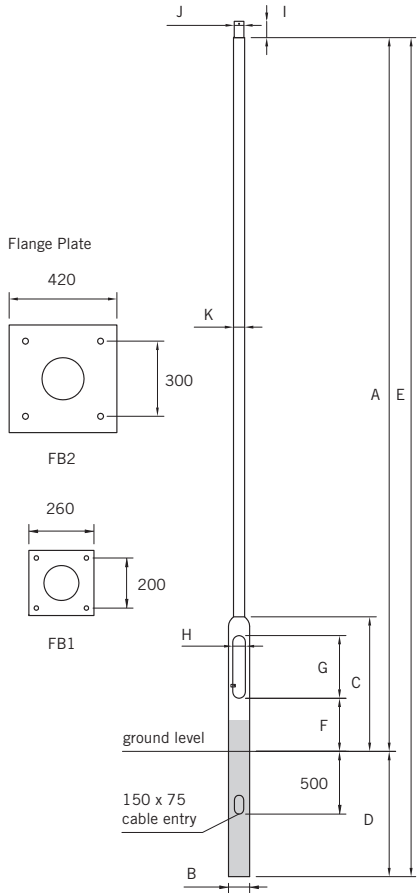
The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

> DATASHEET  
**DSX1B.8.1A.LMZ.GV9**



**Holophane products that are suitable**

CityMax  
Denver Elite pole  
D-Series  
Factor  
Factor small  
V-Max



|                      | Nominal Height | Base Diameter* | Base Height | Planting Depth | Overall Length | Door to Ground | Door Opening Length | Door Opening Width | Spigot Length* | Spigot Diameter* | Shaft Diameter* | Weight kg* | Bending Moment (ULS) Nm |
|----------------------|----------------|----------------|-------------|----------------|----------------|----------------|---------------------|--------------------|----------------|------------------|-----------------|------------|-------------------------|
| description          | A              | B              | C           | D              | E              | F              | G                   | H                  | I              | J                | K               |            |                         |
| 2.5m standard duty   | 2500           | 140            | 1075        | 800            | 3300           | 400            | 500                 | 100                | -              | -                | 76              | 27         | 2100                    |
| 3m standard duty     | 3000           | 140            | 1075        | 800            | 3800           | 400            | 500                 | 100                | -              | -                | 76              | 30         | 4666                    |
| 3.5m standard duty   | 3500           | 140            | 1075        | 800            | 4300           | 400            | 500                 | 100                | -              | -                | 76              | 32         | 2100                    |
| 4m standard duty     | 4000           | 140            | 1075        | 800            | 4800           | 400            | 500                 | 100                | -              | -                | 76              | 34         | 6484                    |
| 4.5m standard duty   | 4500           | 140            | 1075        | 800            | 5300           | 400            | 500                 | 100                | -              | -                | 76              | 37         | 5108                    |
| 5m standard duty     | 5000           | 140            | 1075        | 800            | 5800           | 400            | 500                 | 100                | -              | -                | 76              | 39         | 6149                    |
| 5.5m standard duty   | 5500           | 140            | 1075        | 1000           | 6500           | 400            | 500                 | 100                | -              | -                | 76              | 44         | 6003                    |
| 6m standard duty     | 6000           | 140            | 1075        | 1000           | 7000           | 400            | 500                 | 100                | -              | -                | 76              | 46         | 5999                    |
| 6m heavy duty        | 5700           | 168            | 1200        | 1000           | 6700           | 400            | 600                 | 115                | 130            | 76               | 89              | 71         | 10404                   |
| 8m standard duty     | 7700           | 168            | 1200        | 1200           | 8900           | 400            | 600                 | 115                | 130            | 76               | 89              | 89         | 10072                   |
| 8m heavy duty        | 7700           | 168            | 1300        | 1200           | 9000           | 500            | 600                 | 115                | 250            | 101              | 114             | 107        | 15699                   |
| 8m extra heavy duty  | 7700           | 194            | 1300        | 1200           | 9000           | 500            | 600                 | 115                | 250            | 127              | 140             | 136        | 18973                   |
| 10m standard duty    | 9700           | 168            | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 250            | 101              | 114             | 150        | 18067                   |
| 10m heavy duty       | 9700           | 194            | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 250            | 127              | 140             | 168        | 23193                   |
| 10m extra heavy duty | 9700           | 194            | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 250            | 152              | 168             | 220        | 28317                   |
| 12m standard duty    | 11700          | 194            | 1300        | 1700           | 13400          | 500            | 600                 | 115                | 250            | 127              | 140             | 213        | 26251                   |
| 12m heavy duty       | 11700          | 194            | 1300        | 1700           | 13400          | 500            | 600                 | 115                | 250            | 127              | 168             | 260        | 40390                   |

\* Exclusion TBC

2.5-6m std Poles  
8-12m std Poles  
<https://www.holophane.co.uk/>



Flange Plate FB1  
Flange Plate FB2

Bolts M18 x 400  
Bolts M24 x 820

F +44 (0)1908 367 618

Flange Plate and Anchor Bolt information will be confirmed at time of order due to the necessity in ensuring the correct plate and Anchor Bolts are supplied.  
Column type to be confirmed at time of order as this is based on luminaire weight, windage and geographical location.  
Info@holophane.co.uk

F Intl +44 (0)1908 363 789

Holophane Europe Limited  
Bond Avenue, Milton Keynes  
Buckinghamshire MK1 1JG  
United Kingdom

## stepped steel - CityMax Large only

### post top

|             | Nominal Height | Base Diameter | Base Height | Planting Depth | Overall Length | Door to Ground | Door Opening Length | Door Opening Width | Spigot Length | Spigot Diameter | Shaft Diameter | Weight kg | Bending Moment (ULS) Nm |
|-------------|----------------|---------------|-------------|----------------|----------------|----------------|---------------------|--------------------|---------------|-----------------|----------------|-----------|-------------------------|
| description | A              | B             | C           | D              | E              | F              | G                   | H                  | I             | J               | K              |           |                         |
| 6m          | 6000           | 140           | 1075        | 1000           | 7000           | 400            | 500                 | 115                | -             | -               | -              | 46        | 5999                    |
| 8m          | 7700           | 168           | 1300        | 1200           | 9000           | 500            | 600                 | 115                | 100           | 76              | 114            | 107       | 15699                   |
| 10m         | 9700           | 168           | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 100           | 76              | 114            | 150       | 18067                   |
| 12m         | 11700          | 194           | 1300        | 1700           | 13400          | 500            | 600                 | 115                | 100           | 76              | 140            | 168       | 26251                   |
| 15m         | 14700          | 194           | 1200        | 2000           | 17000          | 400            | 600                 | 115                | 100           | 76              | 168            | 306       | 40300                   |

### twin head

|             | Nominal Height | Base Diameter | Base Height | Planting Depth | Overall Length | Door to Ground | Door Opening Length | Door Opening Width | Spigot Length | Spigot Diameter | Shaft Diameter | Weight kg | Bending Moment (ULS) Nm |
|-------------|----------------|---------------|-------------|----------------|----------------|----------------|---------------------|--------------------|---------------|-----------------|----------------|-----------|-------------------------|
| description | A              | B             | C           | D              | E              | F              | G                   | H                  | I             | J               | K              |           |                         |
| 8m          | 7400           | 194           | 1200        | 1200           | 8800           | 400            | 600                 | 115                | 200           | 127             | 139.7          | 125       | 22610                   |
| 10m         | 9400           | 194           | 1200        | 1500           | 11100          | 400            | 600                 | 115                | 200           | 152.4           | 168.3          | 208       | 39131                   |
| 12m         | 11400          | 194           | 2500        | 1700           | 13300          | 1000           | 600                 | 115                | 200           | 152.4           | 168.3          | 295       | 41585                   |

**Note:** For Terrain Category 2 locations LMZ, HVZ & HEZ

<https://www.holophane.co.uk/>



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F +44 (0)1908 367 618

F Intl +44 (0)1908 363 789

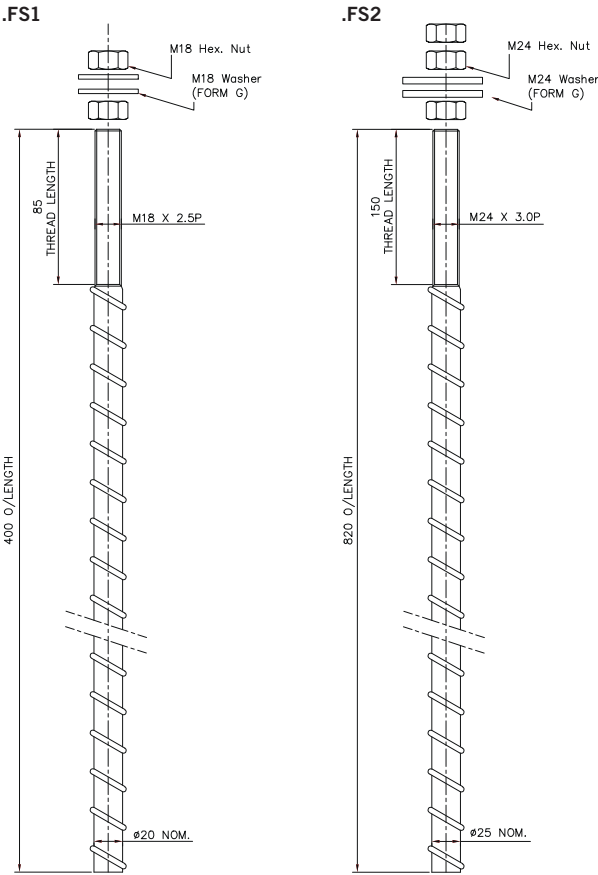
E info@holophane.co.uk

Holophane Europe Limited  
Bond Avenue, Milton Keynes  
Buckinghamshire MK1 1JG  
United Kingdom

For columns supplied with optional flange base Holophane offers two types of foundation bolts.

**Note:** The material used for the bolts is Fe E500 grade steel, with yield strength 500 N/mm2 and minimum UTS 550 N/mm2.

- HEL.FS1    M18 Bolts (FS1) x 400 mm long  
HEL.FS2    M24 Bolts (FS2) x 820 mm long



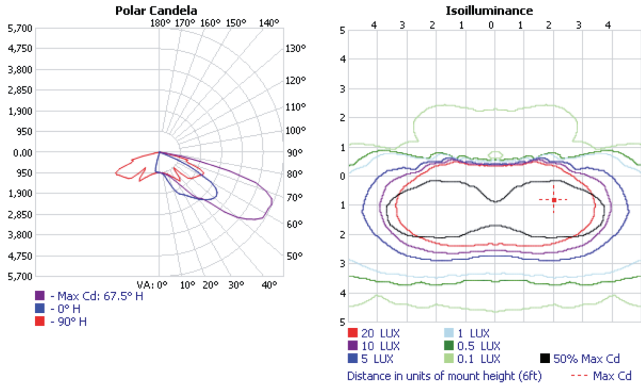
OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX0.1.LA104.BLC

Manufacturer: HOLOPHANE EUROPE LIMITED  
Test #: ISF 33923-SUM210015  
Test Lab: HOLOPHANE EUROPE LIMITED PHOTOMETRIC LAB  
Test Date: 03/11/2021  
Catalog: DSX0.1.LA104.BLC  
Description: D-Series 0 Area luminaire  
Lamp Catalog: LA104  
Lamp: LED C.10000 Lumens  
Lamp Output: Total luminaire Lumens: 7935.9, absolute photometry \*  
Input Wattage: 81  
Luminous Opening: Rectangle (L: 0.15M, W: 0.19M)  
Max Cd: 5,664.7 at Horizontal: 67.5°, Vertical: 65°  
Roadway Class: SHORT, TYPE III

AcuityBrands

No  
Photo  
Available

Type D1BLC



\*Test based on absolute photometry where lamp lumens=lumens total.  
\*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

Visual Photometric Tool 1.2.46 copyright 2023, Acuity Brands Lighting.  
This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.

OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX0.1.LA104.BLC

AcuityBrands

**Zonal Lumen Summary**

| Zone   | Lumens  | % Luminaire |
|--------|---------|-------------|
| 0-30   | 899.1   | 11.3%       |
| 0-40   | 1,782.9 | 22.5%       |
| 0-60   | 5,183.5 | 65.3%       |
| 60-90  | 2,752.4 | 34.7%       |
| 70-100 | 845.6   | 10.7%       |
| 90-120 | 0.000   | 0%          |
| 0-90   | 7,935.9 | 100%        |
| 90-180 | 0.000   | 0%          |
| 0-180  | 7,935.9 | 100%        |

**Roadway Summary**

|                        |                 |
|------------------------|-----------------|
| Distribution:          | TYPE III, SHORT |
| Max Cd, 90 Deg Vert:   | 0.000           |
| Max Cd, 80 to <90 Deg: | 1,019.3         |
|                        | Lumens % Lamp   |
| Downward Street Side:  | 7,121.5 89.7%   |
| Downward House Side:   | 814.0 10.3%     |
| Downward Total:        | 7,935.6 100%    |
| Upward Street Side:    | 0.000 0%        |
| Upward House Side:     | 0.000 0%        |
| Upward Total:          | 0.000 0%        |
| Total Lumens:          | 7,935.6 100%    |

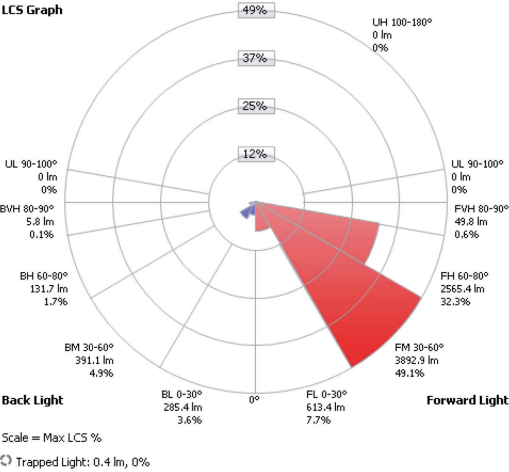
**Lumens Per Zone**

| Zone  | Lumens  | % Total | Zone    | Lumens | % Total |
|-------|---------|---------|---------|--------|---------|
| 0-10  | 91.2    | 1.1%    | 90-100  | 0.000  | 0%      |
| 10-20 | 287.8   | 3.6%    | 100-110 | 0.000  | 0%      |
| 20-30 | 520.1   | 6.6%    | 110-120 | 0.000  | 0%      |
| 30-40 | 883.9   | 11.1%   | 120-130 | 0.000  | 0%      |
| 40-50 | 1,382.3 | 17.4%   | 130-140 | 0.000  | 0%      |
| 50-60 | 2,018.3 | 25.4%   | 140-150 | 0.000  | 0%      |
| 60-70 | 1,906.9 | 24.0%   | 150-160 | 0.000  | 0%      |
| 70-80 | 789.6   | 10.0%   | 160-170 | 0.000  | 0%      |
| 80-90 | 55.9    | 0.7%    | 170-180 | 0.000  | 0%      |

**LCS Table**

| BUG Rating            | B1 - U0 - G2    |
|-----------------------|-----------------|
| <b>Forward Light</b>  | Lumens Lumens % |
| Low(0-30):            | 613.4 7.7%      |
| Medium(30-60):        | 3,892.9 49.1%   |
| High(60-80):          | 2,565.4 32.3%   |
| Very High(80-90):     | 49.8 0.6%       |
| <b>Back Light</b>     |                 |
| Low(0-30):            | 285.4 3.6%      |
| Medium(30-60):        | 391.1 4.9%      |
| High(60-80):          | 131.7 1.7%      |
| Very High(80-90):     | 5.8 0.1%        |
| <b>Uplight</b>        |                 |
| Low(90-100):          | 0.000 0%        |
| High(100-180):        | 0.000 0%        |
| <b>Trapped Light:</b> | 0.4 0%          |

Type D1BLC



**Candela Table - Type C**

|     | 0    | 15   | 25   | 35   | 45   | 55   | 65   | 75   | 85   | 90   | 105  | 115  | 125 | 135 | 145 | 155 | 165 | 175 | 180 |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|
| 0   | 938  | 938  | 938  | 938  | 938  | 938  | 938  | 938  | 938  | 938  | 938  | 938  | 938 | 938 | 938 | 938 | 938 | 938 | 938 |
| 5   | 965  | 967  | 966  | 963  | 959  | 958  | 953  | 949  | 946  | 947  | 940  | 938  | 932 | 930 | 928 | 926 | 922 | 924 | 924 |
| 10  | 1038 | 1035 | 1028 | 1018 | 1011 | 1000 | 987  | 981  | 973  | 971  | 960  | 953  | 942 | 937 | 930 | 926 | 920 | 918 | 917 |
| 15  | 1310 | 1276 | 1238 | 1170 | 1113 | 1074 | 1047 | 1035 | 1022 | 1019 | 1000 | 988  | 971 | 953 | 917 | 856 | 777 | 731 | 707 |
| 20  | 1735 | 1682 | 1620 | 1514 | 1369 | 1235 | 1146 | 1110 | 1094 | 1086 | 1060 | 1041 | 994 | 813 | 495 | 251 | 139 | 95  | 83  |
| 25  | 2096 | 2093 | 2069 | 1989 | 1808 | 1561 | 1338 | 1244 | 1208 | 1197 | 1158 | 1100 | 778 | 290 | 53  | 21  | 14  | 14  | 14  |
| 30  | 2253 | 2289 | 2322 | 2380 | 2341 | 2070 | 1672 | 1430 | 1370 | 1352 | 1304 | 1004 | 310 | 31  | 12  | 6   | 3   | 2   | 3   |
| 35  | 2505 | 2555 | 2624 | 2695 | 2785 | 2747 | 2277 | 1763 | 1624 | 1613 | 1513 | 696  | 52  | 9   | 3   | 1   | 1   | 0   | 1   |
| 40  | 2803 | 2906 | 3024 | 3168 | 3291 | 3404 | 2950 | 2189 | 1352 | 1075 | 1081 | 290  | 11  | 4   | 2   | 1   | 1   | 1   | 1   |
| 45  | 3073 | 3251 | 3477 | 3739 | 3916 | 3504 | 3288 | 2928 | 1565 | 1380 | 1137 | 116  | 5   | 4   | 2   | 2   | 1   | 1   | 2   |
| 50  | 3261 | 3490 | 3863 | 4339 | 4549 | 4266 | 4765 | 3877 | 2045 | 1874 | 1180 | 36   | 5   | 4   | 3   | 3   | 2   | 3   | 3   |
| 55  | 3219 | 3490 | 3998 | 4726 | 5160 | 5104 | 5425 | 4623 | 2431 | 1990 | 809  | 10   | 6   | 5   | 5   | 4   | 5   | 6   | 6   |
| 60  | 2704 | 3091 | 3801 | 4776 | 5543 | 5513 | 5624 | 4893 | 2690 | 2121 | 393  | 8    | 7   | 7   | 9   | 8   | 6   | 6   | 7   |
| 65  | 1421 | 1731 | 2657 | 4144 | 5145 | 5083 | 5612 | 5296 | 3144 | 2243 | 65   | 8    | 8   | 13  | 12  | 8   | 6   | 6   | 6   |
| 70  | 320  | 526  | 1192 | 2143 | 3357 | 4415 | 5168 | 4507 | 2220 | 1388 | 15   | 9    | 15  | 15  | 11  | 7   | 4   | 4   | 4   |
| 75  | 61   | 79   | 179  | 487  | 1309 | 2537 | 3302 | 2959 | 1952 | 1329 | 16   | 11   | 13  | 12  | 7   | 3   | 2   | 2   | 2   |
| 80  | 26   | 26   | 29   | 32   | 69   | 428  | 913  | 1016 | 526  | 270  | 9    | 10   | 7   | 6   | 4   | 2   | 1   | 1   | 0   |
| 85  | 7    | 7    | 8    | 10   | 14   | 24   | 66   | 156  | 162  | 101  | 7    | 7    | 5   | 4   | 3   | 2   | 1   | 0   | 0   |
| 90  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 95  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 100 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 105 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 110 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 115 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 120 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 125 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 130 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 135 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 140 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 145 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 150 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 155 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 160 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 165 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 170 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 175 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 180 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |



Product image may not represent the final configuration stated above.



## PRODUCT SPECIFICATION

[DSX2 HOLOPHANE WEBSITE](#)

### DSX2.2.LA304.AY.C9.TZ01.CA

Holophane D-Series 2 luminaire. Single-piece die-cast aluminium housing conforming to EN1706 AC-46500, with integral heat sink fins to optimise thermal management. LED light engine modules are IP66 with individual PMMA lenses. Housing sealed to IP65 via hinged access door (two captive fixing screws). Installation via bespoke Holophane mounting feature for quick and easy installation. International Dark-Sky Association Approved (colour temperatures 3000K or warmer are approved under the IDA).

This specific SKU includes:

- Series 2
- LED light engine producing c.30,000 lumen with a nominal 4000K colour temperature
- Asymmetric light distribution
- Metallic Silver (RAL9006)
- Complete with 4-Pin Zhaga Socket - 'Top' (suitable photocell/node available from Holophane or supplied by others) with weather proof locking top
- Wireless lighting node for use with Holophane Controlux Air System. (Includes subscription package for two years (Europe))

### DSX2B.8.1A.LMZ.GV9

Holophane tubular base compartment column for use with DSX2 Luminaires. 8 metre, Single head, For light & medium area wind zones (compliant to EN40).

- Bracket galvanised and painted metallic silver (RAL9006)
- Direct embedment

## PERFORMANCE

|                                  |                 |
|----------------------------------|-----------------|
| Drive Current from Driver:       | 1,050mA         |
| Power:                           | 282W            |
| Fitting Current:                 | 1.26A           |
| Power Factor:                    | 0.97            |
| Fitting Inrush:                  | 22A - 0.135ms   |
| Number of Drivers:               | 2               |
| 2x Driver 1 Inrush:              | 11.2A - 0.135ms |
| Max Drivers per 16A Type B MCB:  | 15              |
| Max Fittings per 16A Type B MCB: | 7               |
| Total Number of LEDs:            | 20              |
| Minimum Dim Level:               | 7 %             |
| Optical Risk Group:              | 1               |



15Kg<sub>2</sub>



0.1M



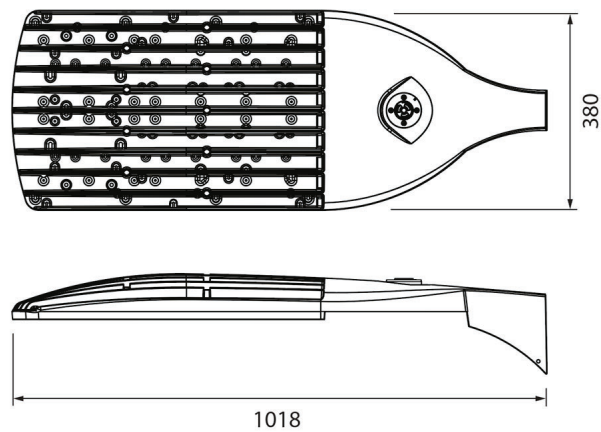
42 0282 0000 100\*



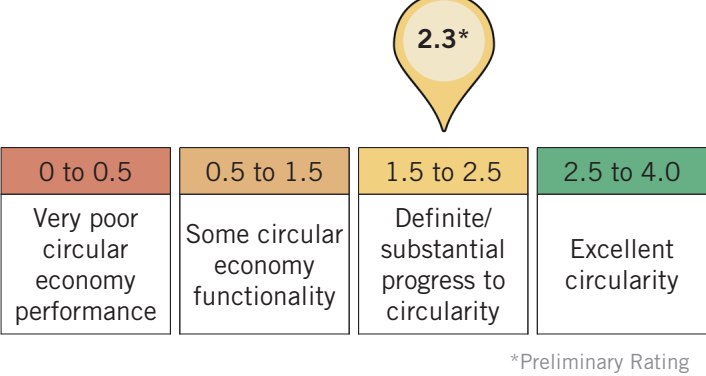
[Installation Guide](#)

\*Generic UMSUG code based on product wattage and some or all of product family being included within Elexon data base.

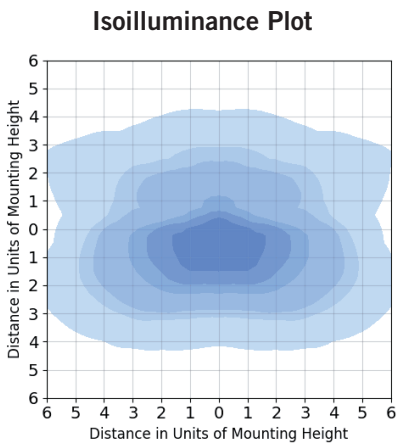
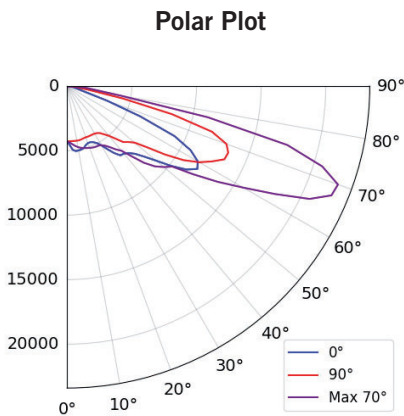
## DIMENSIONS



## CIBSE TM66 - CEAM RATING

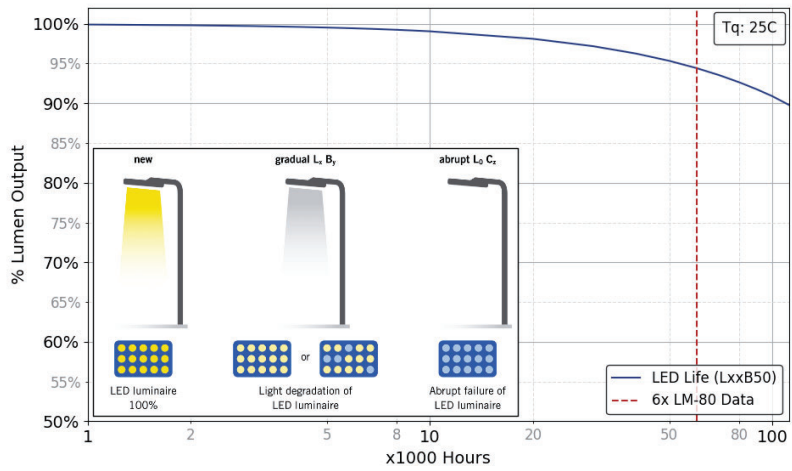


## PHOTOMETRY



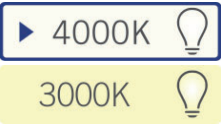
|           |                                                                  |
|-----------|------------------------------------------------------------------|
| Lumens:   | 32,435                                                           |
| CCT:      | 4000K                                                            |
| CRI:      | 70                                                               |
| IES File: | DSX2.2.LA304.AY                                                  |
| G-Class:  | G*2<br>Imax @ ≥ 70°: 687<br>Imax @ ≥ 80°: 127<br>Imax @ ≥ 90°: 0 |

## LLMF GRAPH



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on.

## COLOUR TEMPERATURES

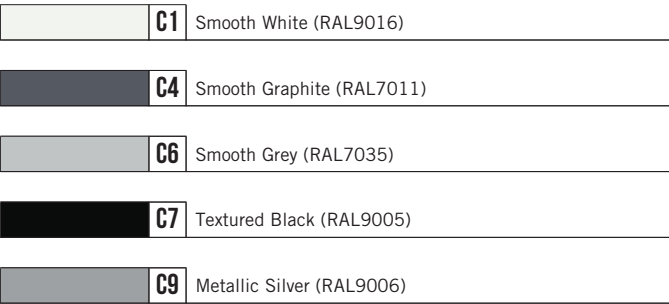


## COLOURS

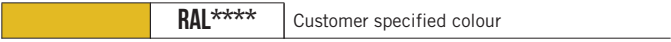
### Selected Colour



### Standard Colours Available



### Custom Colour Available



\*Choosing a custom colour may increase the cost and lead time.

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

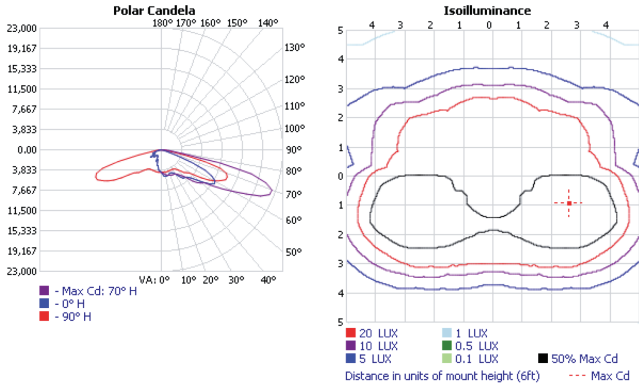


OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX2.2.LA304.AY  
Manufacturer: HOLOPHANE EUROPE LIMITED  
Test #: ISF 33813P11  
Test Lab: ACUTY BRANDS LIGHTING - CONYERS LAB - SCALED PHOTOMETRY  
Test Date: 3/13/2017  
Catalog: DSX2.2.LA304.AY  
Description: D-Series 2 Luminaire  
Lamp Catalog: LA304  
Lamp: LED C.30000LM-4000K  
Lamp Output: Total luminaire Lumens: 32434.9, absolute photometry \*  
Input Wattage: 282  
Luminous Opening: Rectangle (L: 0.46M, W: 0.33M)  
Max Cd: 22,288.7 at Horizontal: 70°, Vertical: 70°  
Roadway Class: MEDIUM, TYPE III



No  
Photo  
Available

Type E1



\*Test based on absolute photometry where lamp lumens=lumens total.  
\*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

Visual Photometric Tool 1.2.46 copyright 2023, Acuity Brands Lighting.  
This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.

OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX2.2.LA304.AY

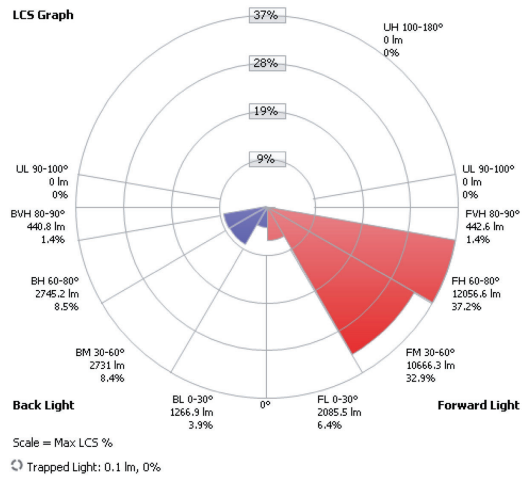


| Zonal Lumen Summary |          |             |
|---------------------|----------|-------------|
| Zone                | Lumens   | % Luminaire |
| 0-30                | 3,352.2  | 10.3%       |
| 0-40                | 5,934.6  | 18.3%       |
| 0-60                | 16,752.7 | 51.7%       |
| 60-90               | 15,682.2 | 48.3%       |
| 70-100              | 6,365.2  | 19.6%       |
| 90-120              | 0.000    | 0%          |
| 0-90                | 32,434.9 | 100%        |
| 90-180              | 0.000    | 0%          |
| 0-180               | 32,434.9 | 100%        |

| Roadway Summary        |                  |        |
|------------------------|------------------|--------|
| Distribution:          | TYPE III, MEDIUM |        |
| Max Cd, 90 Deg Vert:   | 0.000            |        |
| Max Cd, 80 to <90 Deg: | 4,125.2          |        |
|                        | Lumens           | % Lamp |
| Downward Street Side:  | 25,251.0         | 77.9%  |
| Downward House Side:   | 7,183.8          | 22.1%  |
| Downward Total:        | 32,434.8         | 100%   |
| Upward Street Side:    | 0.000            | 0%     |
| Upward House Side:     | 0.000            | 0%     |
| Upward Total:          | 0.000            | 0%     |
| Total Lumens:          | 32,434.8         | 100%   |

| Lumens Per Zone |         |         |                     |
|-----------------|---------|---------|---------------------|
| Zone            | Lumens  | % Total | Zone Lumens % Total |
| 0-10            | 420.6   | 1.3%    | 90-100 0.000 0%     |
| 10-20           | 1,175.6 | 3.6%    | 100-110 0.000 0%    |
| 20-30           | 1,756.1 | 5.4%    | 110-120 0.000 0%    |
| 30-40           | 2,582.4 | 8.0%    | 120-130 0.000 0%    |
| 40-50           | 4,100.0 | 12.6%   | 130-140 0.000 0%    |
| 50-60           | 6,718.1 | 20.7%   | 140-150 0.000 0%    |
| 60-70           | 9,317.0 | 28.7%   | 150-160 0.000 0%    |
| 70-80           | 5,481.3 | 16.9%   | 160-170 0.000 0%    |
| 80-90           | 883.9   | 2.7%    | 170-180 0.000 0%    |

| LCS Table         |              |          |
|-------------------|--------------|----------|
| BUG Rating        | B4 - U0 - G5 |          |
| Forward Light     | Lumens       | Lumens % |
| Low(0-30):        | 2,085.5      | 6.4%     |
| Medium(30-60):    | 10,666.3     | 32.9%    |
| High(60-80):      | 12,056.6     | 37.2%    |
| Very High(80-90): | 442.6        | 1.4%     |
| Back Light        |              |          |
| Low(0-30):        | 1,266.9      | 3.9%     |
| Medium(30-60):    | 2,731.0      | 8.4%     |
| High(60-80):      | 2,745.2      | 8.5%     |
| Very High(80-90): | 440.8        | 1.4%     |
| Uplight           |              |          |
| Low(90-100):      | 0.000        | 0%       |
| High(100-180):    | 0.000        | 0%       |
| Trapped Light:    | 0.1          | 0%       |



Type E1

| Candela Table - Type C |       | 0     | 15    | 25    | 35    | 45    | 55    | 65    | 75    | 85    | 90   | 105  | 115  | 125  | 135  | 145  | 155  | 165  | 175  | 180  |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| 0                      | 4280  | 4280  | 4280  | 4280  | 4280  | 4280  | 4280  | 4280  | 4280  | 4280  | 4280 | 4280 | 4280 | 4280 | 4280 | 4280 | 4280 | 4280 | 4280 | 4280 |
| 5                      | 4950  | 4939  | 4922  | 4849  | 4782  | 4689  | 4573  | 4448  | 4330  | 4276  | 4161 | 4120 | 4089 | 4062 | 4047 | 4034 | 4039 | 4024 | 4024 | 4024 |
| 10                     | 5065  | 5082  | 5083  | 5079  | 5072  | 5014  | 4892  | 4679  | 4417  | 4296  | 4098 | 4043 | 4003 | 3938 | 3804 | 3641 | 3522 | 3455 | 3450 | 3450 |
| 15                     | 4966  | 5005  | 5047  | 5062  | 5087  | 5104  | 5051  | 4841  | 4469  | 4267  | 3996 | 3905 | 3620 | 3198 | 3029 | 3062 | 3104 | 3108 | 3118 | 3118 |
| 20                     | 4697  | 4755  | 4834  | 4959  | 5083  | 5135  | 5159  | 4944  | 4480  | 4217  | 3872 | 3483 | 2910 | 2737 | 2495 | 2240 | 2089 | 2027 | 2030 | 2030 |
| 25                     | 4792  | 4867  | 4933  | 4988  | 5098  | 5146  | 5179  | 5066  | 4528  | 4227  | 3702 | 2910 | 2344 | 2047 | 1960 | 2056 | 2281 | 2347 | 2372 | 2372 |
| 30                     | 5301  | 5318  | 5365  | 5439  | 5403  | 5405  | 5312  | 5196  | 4581  | 4243  | 3485 | 2451 | 2090 | 2315 | 2083 | 1580 | 1443 | 1399 | 1393 | 1393 |
| 35                     | 6327  | 6329  | 6313  | 6289  | 6189  | 5989  | 5881  | 5620  | 4878  | 4444  | 3224 | 2542 | 2377 | 1786 | 1488 | 1315 | 1288 | 1282 | 1277 | 1277 |
| 40                     | 6827  | 7093  | 7431  | 7519  | 7393  | 7203  | 6775  | 6349  | 5653  | 5024  | 3046 | 2795 | 1844 | 1421 | 1286 | 1289 | 1325 | 1343 | 1343 | 1343 |
| 45                     | 7414  | 7643  | 8272  | 9166  | 9480  | 9872  | 8932  | 8048  | 7121  | 6126  | 3062 | 2336 | 1564 | 1337 | 1351 | 1413 | 1528 | 1813 | 1866 | 1866 |
| 50                     | 8991  | 9021  | 9247  | 9770  | 10470 | 12285 | 11533 | 9093  | 8061  | 6810  | 2601 | 2074 | 1510 | 1393 | 1523 | 2061 | 1874 | 1685 | 1652 | 1652 |
| 55                     | 11274 | 11386 | 12198 | 12887 | 12487 | 14239 | 12499 | 11612 | 11227 | 9238  | 2263 | 1913 | 1572 | 1806 | 2388 | 2155 | 2335 | 2420 | 2442 | 2442 |
| 60                     | 11665 | 12431 | 14459 | 17290 | 16149 | 15943 | 15520 | 15037 | 11796 | 2127  | 2047 | 2409 | 3200 | 2851 | 3277 | 2227 | 1571 | 1466 |      |      |
| 65                     | 9164  | 10022 | 13065 | 17886 | 19939 | 19898 | 20502 | 19998 | 18317 | 13417 | 2069 | 2891 | 3644 | 3791 | 3254 | 1940 | 1643 | 1663 | 1626 |      |
| 70                     | 3253  | 4120  | 6797  | 13326 | 17709 | 19359 | 21654 | 21439 | 18871 | 13112 | 2567 | 3721 | 3903 | 2747 | 1704 | 1723 | 1784 | 1591 | 1507 |      |
| 75                     | 936   | 1275  | 1748  | 3839  | 8991  | 14346 | 16935 | 16523 | 12532 | 8399  | 2979 | 3235 | 3062 | 1685 | 1393 | 1204 | 1083 | 970  | 926  |      |
| 80                     | 528   | 682   | 816   | 1154  | 1803  | 2992  | 3980  | 3663  | 2080  | 1803  | 2460 | 3128 | 1983 | 1011 | 819  | 742  | 673  | 572  | 548  |      |
| 85                     | 294   | 400   | 504   | 606   | 687   | 857   | 1283  | 1223  | 786   | 676   | 1613 | 2379 | 995  | 519  | 425  | 400  | 316  | 205  | 205  |      |
| 90                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 95                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 100                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 105                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 110                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 115                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 120                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 125                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 130                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 135                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 140                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 145                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 150                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 155                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 160                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 165                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 170                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 175                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 180                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |



Product image may not represent the final configuration stated above.



## PRODUCT SPECIFICATION

[www.holophane.co.uk](#) **DSX2 HOLOPHANE WEBSITE**

### DSX2.2.LA304.BLC.C9.TZ01.CA

Holophane D-Series 2 luminaire. Single-piece die-cast aluminium housing conforming to EN1706 AC-46500, with integral heat sink fins to optimise thermal management. LED light engine modules are IP66 with individual PMMA lenses. Housing sealed to IP65 via hinged access door (two captive fixing screws). Installation via bespoke Holophane mounting feature for quick and easy installation. International Dark-Sky Association Approved (colour temperatures 3000K or warmer are approved under the IDA).

This specific SKU includes:

- Series 2
- LED light engine producing c.30,000 lumen with a nominal 4000K colour temperature
- Long & narrow distribution with extreme backlight cut-off
- Metallic Silver (RAL9006)
- Complete with 4-Pin Zhaga Socket - 'Top' (suitable photocell/node available from Holophane or supplied by others) with weather proof locking top
- Wireless lighting node for use with Holophane Controlux Air System. (Includes subscription package for two years (Europe))

### DSX2B.8.1A.LMZ.GV9

Holophane tubular base compartment column for use with DSX2 Luminaires. 8 metre, Single head, For light & medium area wind zones (compliant to EN40).

- Bracket galvanised and painted metallic silver (RAL9006)
- Direct embedment

## PERFORMANCE

|                                  |                 |
|----------------------------------|-----------------|
| Drive Current from Driver:       | 1,050mA         |
| Power:                           | 282W            |
| Fitting Current:                 | 1.26A           |
| Power Factor:                    | 0.97            |
| Fitting Inrush:                  | 22A - 0.135ms   |
| Number of Drivers:               | 2               |
| 2x Driver 1 Inrush:              | 11.2A - 0.135ms |
| Max Drivers per 16A Type B MCB:  | 15              |
| Max Fittings per 16A Type B MCB: | 7               |
| Total Number of LEDs:            | 20              |
| Minimum Dim Level:               | 7 %             |
| Optical Risk Group:              | 1               |



15Kg<sub>2</sub>



0.1M



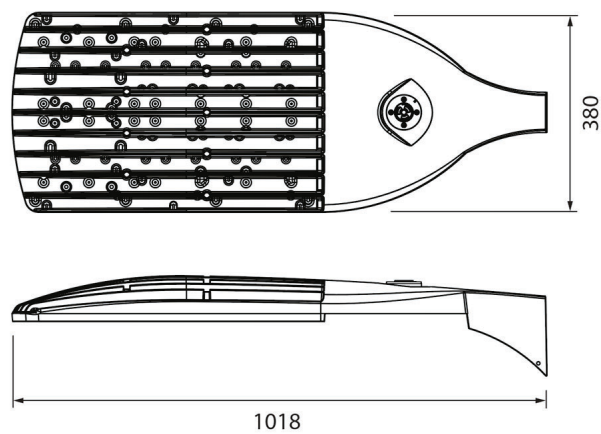
42 0282 0000 100\*



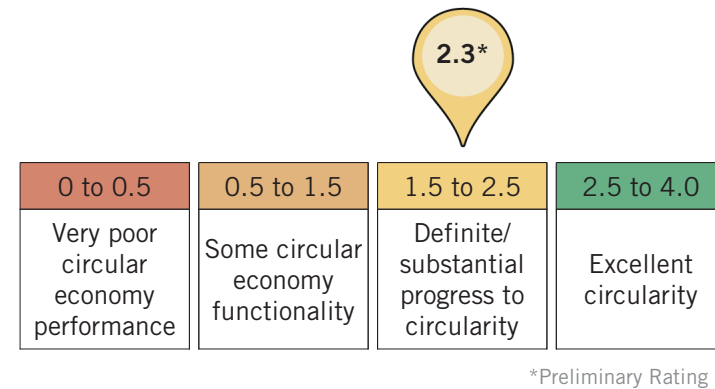
[Installation Guide](#)

\*Generic UMSUG code based on product wattage and some or all of product family being included within Elexon data base.

## DIMENSIONS



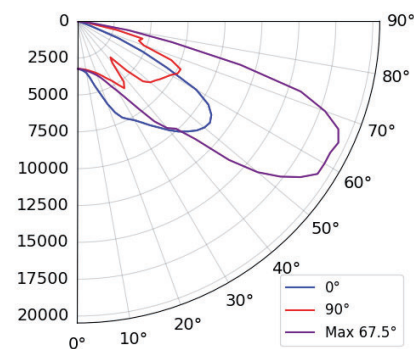
## CIBSE TM66 - CEAM RATING



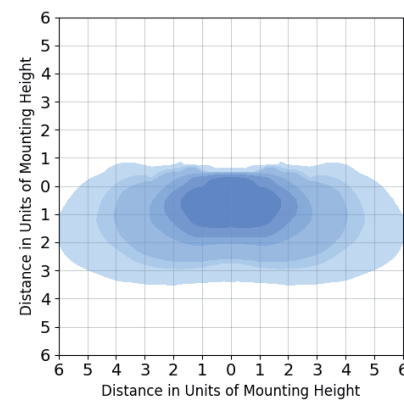
## PHOTOMETRY



Polar Plot

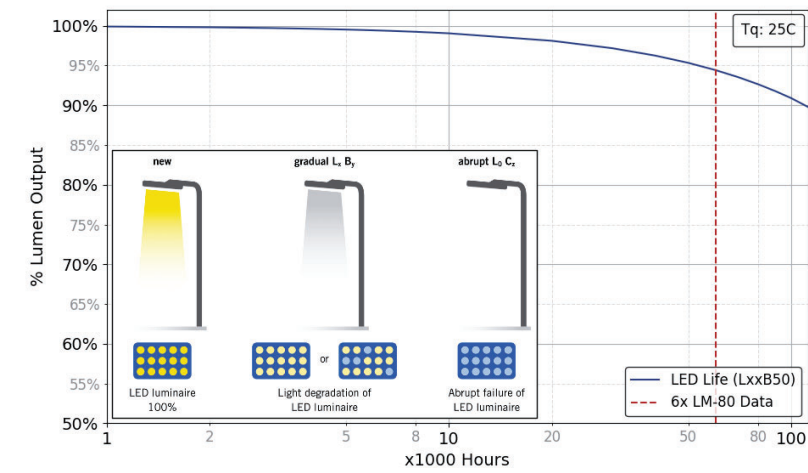


Isoilluminance Plot



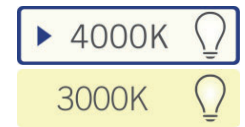
|           |                                                                  |
|-----------|------------------------------------------------------------------|
| Lumens:   | 27,376                                                           |
| CCT:      | 4000K                                                            |
| CRI:      | 70                                                               |
| IES File: | DSX2.2.LA304.BLC                                                 |
| G-Class:  | G*2<br>Imax @ ≥ 70°: 654<br>Imax @ ≥ 80°: 128<br>Imax @ ≥ 90°: 0 |

## LLMF GRAPH



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on.

## COLOUR TEMPERATURES



## COLOURS

### Selected Colour

C9 Metallic Silver (RAL9006)

### Standard Colours Available

C1 Smooth White (RAL9016)

C4 Smooth Graphite (RAL7011)

C6 Smooth Grey (RAL7035)

C7 Textured Black (RAL9005)

C9 Metallic Silver (RAL9006)

### Custom Colour Available

RAL \*\*\*\* Customer specified colour

\*Choosing a custom colour may increase the cost and lead time.

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX2.2.LA304.BLC

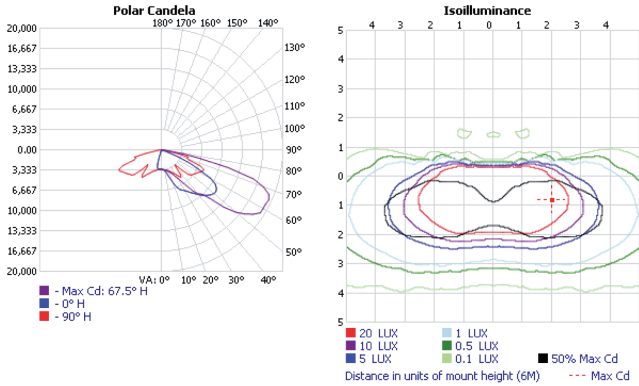
Manufacturer: HOLOPHANE EUROPE LIMITED  
Test #: ISF 33923-SUM210015  
Test Lab: HOLOPHANE EUROPE LIMITED PHOTOMETRIC LAB  
Test Date: 03/11/2021  
Catalog: DSX2.2.LA304.BLC  
Description: D-Series 2 Area luminaire  
Lamp Catalog: LA304  
Lamp: LED C.30000 Lumens  
Lamp Output: Total luminaire Lumens: 27313.8, absolute photometry \*  
Input Wattage: 282  
Luminous Opening: Rectangle (L: 0.3M, W: 0.41M)  
Max Cd: 19,496.7 at Horizontal: 67.5°, Vertical: 65°  
Roadway Class: SHORT, TYPE III



No  
Photo  
Available

Type E1BLC

OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DSX2.2.LA304.BLC



| Zonal Lumen Summary |          |             |
|---------------------|----------|-------------|
| Zone                | Lumens   | % Luminaire |
| 0-30                | 3,094.3  | 11.3%       |
| 0-40                | 6,136.4  | 22.5%       |
| 0-60                | 17,840.6 | 65.3%       |
| 60-90               | 9,473.3  | 34.7%       |
| 70-100              | 2,910.3  | 10.7%       |
| 90-120              | 0.000    | 0%          |
| 0-90                | 27,313.8 | 100%        |
| 90-180              | 0.000    | 0%          |
| 0-180               | 27,313.8 | 100%        |

| Lumens Per Zone |         |         |                     |
|-----------------|---------|---------|---------------------|
| Zone            | Lumens  | % Total | Zone Lumens % Total |
| 0-10            | 313.7   | 1.1%    | 90-100 0.000 0%     |
| 10-20           | 990.7   | 3.6%    | 100-110 0.000 0%    |
| 20-30           | 1,789.9 | 6.6%    | 110-120 0.000 0%    |
| 30-40           | 3,042.1 | 11.1%   | 120-130 0.000 0%    |
| 40-50           | 4,757.6 | 17.4%   | 130-140 0.000 0%    |
| 50-60           | 6,946.6 | 25.4%   | 140-150 0.000 0%    |
| 60-70           | 6,563.0 | 24.0%   | 150-160 0.000 0%    |
| 70-80           | 2,717.8 | 10.0%   | 160-170 0.000 0%    |
| 80-90           | 192.5   | 0.7%    | 170-180 0.000 0%    |

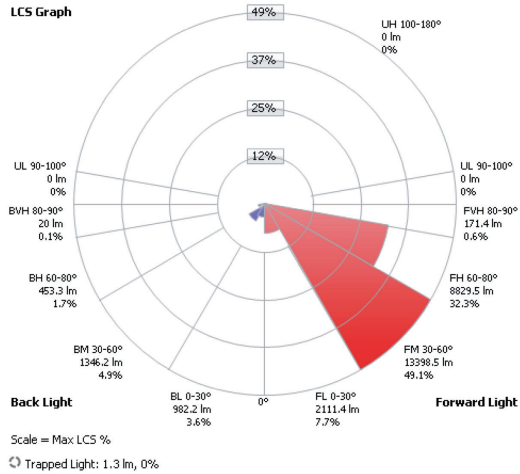
| Roadway Summary        |                 |        |
|------------------------|-----------------|--------|
| Distribution:          | TYPE III, SHORT |        |
| Max Cd, 90 Deg Vert:   | 0.000           |        |
| Max Cd, 80 to <90 Deg: | 3,508.2         |        |
|                        | Lumens          | % Lamp |
| Downward Street Side:  | 24,510.8        | 89.7%  |
| Downward House Side:   | 2,801.7         | 10.3%  |
| Downward Total:        | 27,312.5        | 100%   |
| Upward Street Side:    | 0.000           | 0%     |
| Upward House Side:     | 0.000           | 0%     |
| Upward Total:          | 0.000           | 0%     |
| Total Lumens:          | 27,312.5        | 100%   |

| LCS Table         |              |          |
|-------------------|--------------|----------|
| BUG Rating        | B2 - U0 - G4 |          |
| Forward Light     | Lumens       | Lumens % |
| Low(0-30):        | 2,111.4      | 7.7%     |
| Medium(30-60):    | 13,398.6     | 49.1%    |
| High(60-80):      | 8,829.5      | 32.3%    |
| Very High(80-90): | 171.4        | 0.6%     |
| Back Light        |              |          |
| Low(0-30):        | 982.2        | 3.6%     |
| Medium(30-60):    | 1,346.2      | 4.9%     |
| High(60-80):      | 453.3        | 1.7%     |
| Very High(80-90): | 20.0         | 0.1%     |
| Uplight           |              |          |
| Low(90-100):      | 0.000        | 0%       |
| High(100-180):    | 0.000        | 0%       |
| Trapped Light:    | 1.3          | 0%       |

\*Test based on absolute photometry where lamp lumens=lumens total.  
\*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

Visual Photometric Tool 1.2.46 copyright 2023, Acuity Brands Lighting.  
This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.

Type E1BLC



| Candela Table - Type C |       | 0     | 15    | 25    | 35    | 45    | 55    | 65    | 75    | 85   | 90   | 105  | 115  | 125  | 135  | 145  | 155  | 165  | 175  | 180  |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|
| 0                      | 3229  | 3229  | 3229  | 3229  | 3229  | 3229  | 3229  | 3229  | 3229  | 3229 | 3229 | 3229 | 3229 | 3229 | 3229 | 3229 | 3229 | 3229 | 3229 | 3229 |
| 5                      | 3321  | 3328  | 3324  | 3314  | 3300  | 3298  | 3278  | 3268  | 3257  | 3259 | 3236 | 3229 | 3208 | 3201 | 3193 | 3188 | 3174 | 3179 | 3181 |      |
| 10                     | 3572  | 3561  | 3536  | 3503  | 3480  | 3441  | 3397  | 3377  | 3349  | 3342 | 3303 | 3278 | 3243 | 3225 | 3202 | 3186 | 3165 | 3160 | 3156 |      |
| 15                     | 4509  | 4392  | 4261  | 4028  | 3830  | 3696  | 3604  | 3561  | 3519  | 3508 | 3443 | 3400 | 3342 | 3278 | 3155 | 2946 | 2675 | 2516 | 2433 |      |
| 20                     | 5973  | 5789  | 5577  | 5209  | 4711  | 4251  | 3945  | 3819  | 3766  | 3738 | 3650 | 3582 | 3420 | 2797 | 1705 | 865  | 477  | 325  | 285  |      |
| 25                     | 7214  | 7202  | 7122  | 6847  | 6224  | 5372  | 4605  | 4283  | 4159  | 4120 | 3986 | 3788 | 2677 | 999  | 184  | 72   | 50   | 50   | 48   |      |
| 30                     | 7754  | 7879  | 7992  | 8191  | 8056  | 7124  | 5754  | 4923  | 4714  | 4654 | 4488 | 3455 | 1068 | 106  | 42   | 21   | 9    | 7    | 9    |      |
| 35                     | 8622  | 8795  | 9032  | 9276  | 9584  | 9453  | 7839  | 6069  | 5589  | 5551 | 5207 | 2394 | 180  | 32   | 11   | 4    | 2    | 0    | 2    |      |
| 40                     | 9646  | 10003 | 10408 | 10903 | 11327 | 11716 | 10153 | 7533  | 4654  | 3699 | 3720 | 997  | 39   | 14   | 7    | 4    | 4    | 2    | 2    |      |
| 45                     | 10576 | 11189 | 11966 | 12869 | 13478 | 12059 | 11317 | 10079 | 5388  | 4750 | 3915 | 400  | 16   | 12   | 7    | 7    | 4    | 4    | 5    |      |
| 50                     | 11223 | 12013 | 13295 | 14935 | 15656 | 14684 | 16399 | 13345 | 7038  | 6449 | 4062 | 126  | 18   | 14   | 11   | 9    | 7    | 11   | 11   |      |
| 55                     | 11078 | 12013 | 13760 | 16264 | 17760 | 17566 | 18673 | 15911 | 8367  | 6850 | 2783 | 35   | 19   | 16   | 16   | 14   | 16   | 21   | 19   |      |
| 60                     | 9308  | 10638 | 13083 | 16438 | 19078 | 18973 | 19355 | 16841 | 9259  | 7299 | 1351 | 28   | 23   | 25   | 32   | 28   | 21   | 21   | 23   |      |
| 65                     | 4891  | 5957  | 9145  | 14263 | 17707 | 17495 | 19316 | 18227 | 10822 | 7720 | 223  | 28   | 28   | 46   | 42   | 28   | 19   | 19   | 19   |      |
| 70                     | 1102  | 1811  | 4102  | 7377  | 11554 | 15196 | 17789 | 15511 | 7642  | 4778 | 53   | 32   | 51   | 53   | 39   | 23   | 14   | 14   | 14   |      |
| 75                     | 210   | 272   | 615   | 1676  | 4505  | 8732  | 11366 | 10183 | 6718  | 4573 | 57   | 39   | 46   | 41   | 25   | 11   | 7    | 5    | 5    |      |
| 80                     | 90    | 90    | 99    | 111   | 239   | 1475  | 3142  | 3496  | 1811  | 930  | 32   | 35   | 25   | 21   | 14   | 7    | 4    | 2    | 0    |      |
| 85                     | 23    | 25    | 28    | 35    | 50    | 81    | 226   | 538   | 559   | 347  | 25   | 23   | 18   | 14   | 11   | 7    | 2    | 0    | 0    |      |
| 90                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 95                     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 100                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 105                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 110                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 115                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 120                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 125                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 130                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 135                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 140                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 145                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 150                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 155                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 160                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 165                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 170                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 175                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |
| 180                    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |      |



Product image may not represent the final configuration stated above.



## PRODUCT SPECIFICATION

[www.holophane.co.uk](#) **DSX0 HOLOPHANE WEBSITE**

### DSX0.1.LA154.FW.C9.TZ01.CA

Holophane D-Series 0 luminaire. Single-piece die-cast aluminium housing conforming to EN1706 AC-46500, with integral heat sink fins to optimise thermal management. LED light engine modules are IP66 with individual PMMA lenses. Housing sealed to IP65 via hinged access door (two captive fixing screws). Installation via bespoke Holophane mounting feature for quick and easy installation. International Dark-Sky Association Approved (colour temperatures 3000K or warmer are approved under the IDA).

This specific SKU includes:

- Series 1
- LED light engine producing c.15,000 lm with a nominal 4000°K colour temperature
- Forward throw light distribution
- Metallic Silver (RAL9006)
- Complete with 4-Pin Zhaga Socket - 'Top' (suitable photocell/node available from Holophane or supplied by others) with weather proof locking top
- Wireless lighting node for use with Holophane Controlux Air System. (Includes subscription package for two years (Europe))

### DSX1B.8.2A.LMZ.GV9

Holophane tubular base compartment column for use with DSX1 Luminaires. 8 metre, Twin head, For light & medium area wind zones (compliant to EN40).

- Bracket galvanised and painted metallic silver (RAL9006)
- Direct embedment



Product Website

## PERFORMANCE

|                                  |                 |
|----------------------------------|-----------------|
| Drive Current from Driver:       | 1,020mA         |
| Power:                           | 133W            |
| Fitting Current:                 | 0.6A            |
| Power Factor:                    | 0.98            |
| Fitting Inrush:                  | 11A - 0.135ms   |
| Number of Drivers:               | 1               |
| 1x Driver 1 Inrush:              | 11.2A - 0.135ms |
| Max Drivers per 16A Type B MCB:  | 15              |
| Max Fittings per 16A Type B MCB: | 15              |
| Total Number of LEDs:            | 20              |
| Minimum Dim Level:               | 7 %             |
| Optical Risk Group:              | 1               |



8Kg<sub>2</sub>

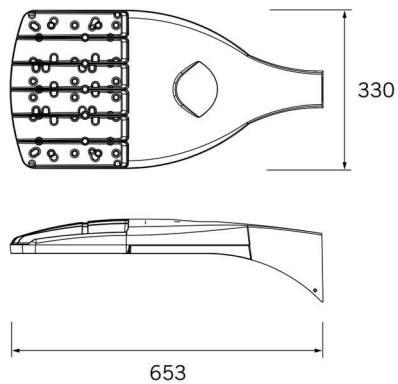


0.09M

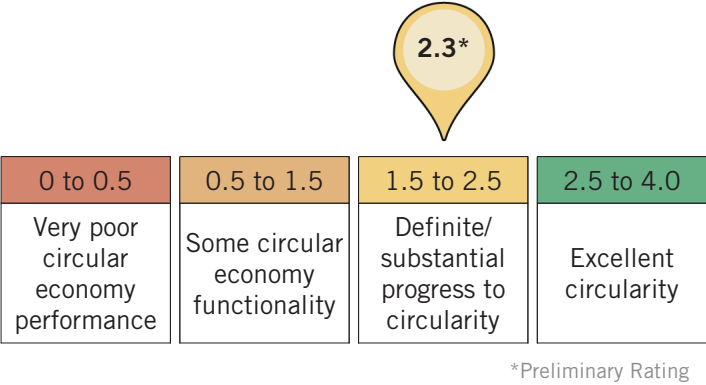


[Installation Guide](#)

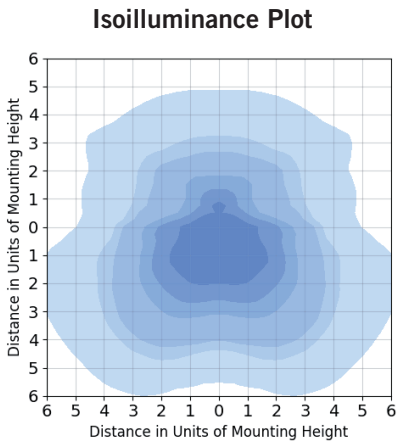
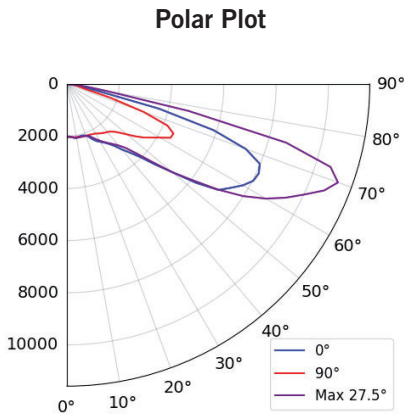
## DIMENSIONS



## CIBSE TM66 - CEAM RATING

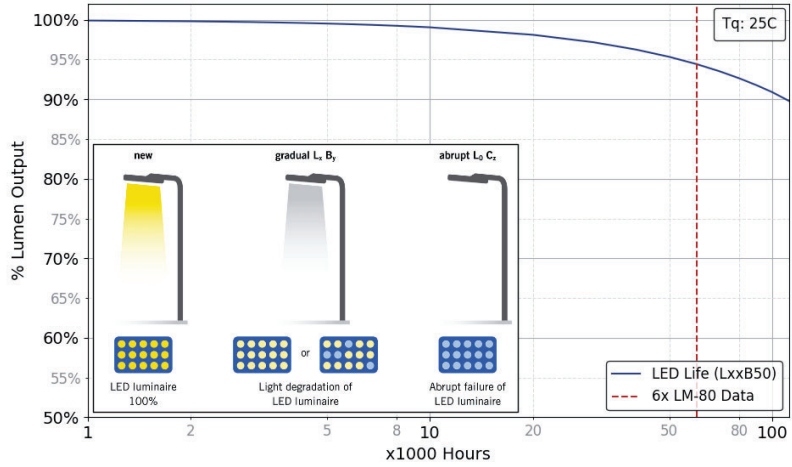


## PHOTOMETRY

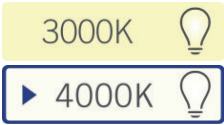


|           |                                                                  |
|-----------|------------------------------------------------------------------|
| Lumens:   | 15,965                                                           |
| CCT:      | 4000K                                                            |
| CRI:      | 70                                                               |
| IES File: | DSX0.1.LA154.FW                                                  |
| G-Class:  | G*2<br>Imax @ ≥ 70°: 693<br>Imax @ ≥ 80°: 118<br>Imax @ ≥ 90°: 0 |

## LLMF GRAPH



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on.



## COLOURS

### Selected Colour

C9 Metallic Silver (RAL9006)

### Standard Colours Available

C1 Smooth White (RAL9016)

C4 Smooth Graphite (RAL7011)

C6 Smooth Grey (RAL7035)

C7 Textured Black (RAL9005)

C9 Metallic Silver (RAL9006)

### Custom Colour Available

RAL\*\*\*\* Customer specified colour

\*Choosing a custom colour may increase the cost and lead time.

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

**OUTDOOR PHOTOMETRIC REPORT**  
CATALOG: DSX0.1.LA154.FW

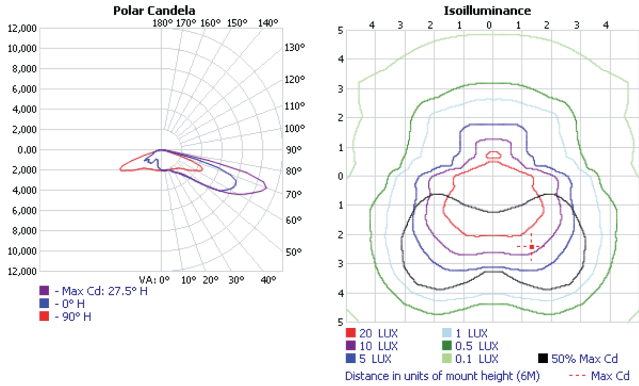
Manufacturer: HOLOPHANE EUROPE LIMITED  
Test #: ISF 34057-SUM21001  
Test Lab: HOLOPHANE EUROPE LIMITED PHOTOMETRIC LAB  
Test Date: 08/01/2021  
Catalog: DSX0.1.LA154.FW  
Description: D-Series 0 Area luminaire  
Lamp Catalog: LA154  
Lamp: LED C.15000 Lumens  
Lamp Output: Total luminaire Lumens: 15916.8, **absolute photometry \***  
Input Wattage: 133  
Luminous Opening: Rectangle (L: 0.33M, W: 0.33M)  
Max Cd: 11,029.9 at Horizontal: 27.5°, Vertical: 70°  
Roadway Class: SHORT, TYPE IV



No  
Photo  
Available

Type F2

**OUTDOOR PHOTOMETRIC REPORT**  
CATALOG: DSX0.1.LA154.FW



| Zonal Lumen Summary |          |             |
|---------------------|----------|-------------|
| Zone                | Lumens   | % Luminaire |
| 0-30                | 1,563.9  | 9.8%        |
| 0-40                | 2,813.4  | 17.7%       |
| 0-60                | 7,950.0  | 49.9%       |
| 60-90               | 7,966.8  | 50.1%       |
| 70-100              | 3,337.3  | 21%         |
| 90-120              | 0.000    | 0%          |
| 0-90                | 15,916.8 | 100%        |
| 90-180              | 0.000    | 0%          |
| 0-180               | 15,916.8 | 100%        |

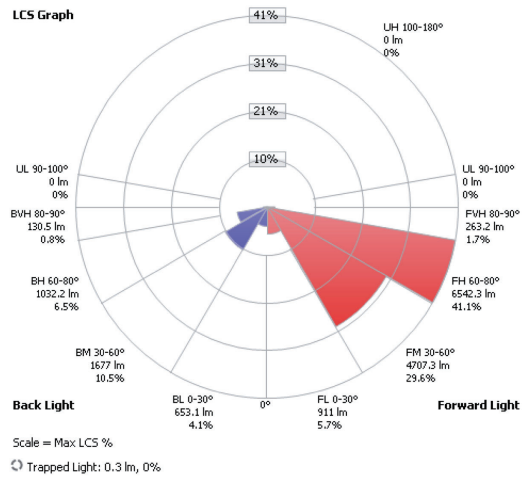
| Lumens Per Zone |         |         |                     |
|-----------------|---------|---------|---------------------|
| Zone            | Lumens  | % Total | Zone Lumens % Total |
| 0-10            | 189.4   | 1.2%    | 90-100 0.000 0%     |
| 10-20           | 534.8   | 3.4%    | 100-110 0.000 0%    |
| 20-30           | 839.7   | 5.3%    | 110-120 0.000 0%    |
| 30-40           | 1,249.5 | 7.9%    | 120-130 0.000 0%    |
| 40-50           | 1,879.5 | 11.8%   | 130-140 0.000 0%    |
| 50-60           | 3,257.2 | 20.5%   | 140-150 0.000 0%    |
| 60-70           | 4,629.5 | 29.1%   | 150-160 0.000 0%    |
| 70-80           | 2,943.1 | 18.5%   | 160-170 0.000 0%    |
| 80-90           | 394.3   | 2.5%    | 170-180 0.000 0%    |

| Roadway Summary        |                |        |
|------------------------|----------------|--------|
| Distribution:          | TYPE IV, SHORT |        |
| Max Cd, 90 Deg Vert:   | 0.000          |        |
| Max Cd, 80 to <90 Deg: | 1,884.3        |        |
|                        | Lumens         | % Lamp |
| Downward Street Side:  | 12,423.8       | 78.1%  |
| Downward House Side:   | 3,492.7        | 21.9%  |
| Downward Total:        | 15,916.5       | 100%   |
| Upward Street Side:    | 0.000          | 0%     |
| Upward House Side:     | 0.000          | 0%     |
| Upward Total:          | 0.000          | 0%     |
| Total Lumens:          | 15,916.5       | 100%   |

| LCS Table         |              |          |
|-------------------|--------------|----------|
| BUG Rating        | B3 - U0 - G3 |          |
| Forward Light     | Lumens       | Lumens % |
| Low(0-30):        | 911.0        | 5.7%     |
| Medium(30-60):    | 4,707.3      | 29.6%    |
| High(60-80):      | 6,542.3      | 41.1%    |
| Very High(80-90): | 263.2        | 1.7%     |
| Back Light        |              |          |
| Low(0-30):        | 653.1        | 4.1%     |
| Medium(30-60):    | 1,677.0      | 10.5%    |
| High(60-80):      | 1,032.2      | 6.5%     |
| Very High(80-90): | 130.5        | 0.8%     |
| Uplight           |              |          |
| Low(90-100):      | 0.000        | 0%       |
| High(100-180):    | 0.000        | 0%       |
| Trapped Light:    | 0.3          | 0%       |

\*Test based on absolute photometry where lamp lumens=lumens total.  
\*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

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This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.



Type F2

Candela Table - Type C

|     | 0    | 15   | 25    | 35    | 45    | 55   | 65   | 75   | 85   | 90   | 105  | 115  | 125  | 135  | 145  | 155  | 165  | 175  | 180  |
|-----|------|------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0   | 2026 | 2026 | 2026  | 2026  | 2026  | 2026 | 2026 | 2026 | 2026 | 2026 | 2026 | 2026 | 2026 | 2026 | 2026 | 2026 | 2026 | 2026 | 2026 |
| 5   | 2035 | 2046 | 2041  | 2034  | 2026  | 2024 | 2029 | 2038 | 2040 | 2042 | 2038 | 1990 | 1938 | 1917 | 1902 | 1886 | 1878 | 1873 | 1868 |
| 10  | 2097 | 2108 | 2100  | 2080  | 2058  | 2038 | 2022 | 2032 | 2057 | 2064 | 1977 | 1915 | 1861 | 1827 | 1815 | 1815 | 1815 | 1811 | 1799 |
| 15  | 2060 | 2082 | 2095  | 2080  | 2085  | 2066 | 2042 | 2037 | 2068 | 2096 | 1971 | 1882 | 1823 | 1773 | 1652 | 1528 | 1450 | 1408 | 1397 |
| 20  | 2105 | 2101 | 2100  | 2127  | 2132  | 2139 | 2093 | 2068 | 2086 | 2115 | 1949 | 1855 | 1673 | 1420 | 1237 | 1134 | 1093 | 1083 | 1076 |
| 25  | 2340 | 2313 | 2265  | 2207  | 2211  | 2232 | 2206 | 2124 | 2115 | 2135 | 1941 | 1732 | 1357 | 1144 | 1035 | 1020 | 1037 | 1047 | 1043 |
| 30  | 2558 | 2553 | 2515  | 2460  | 2342  | 2318 | 2322 | 2191 | 2164 | 2192 | 1949 | 1485 | 1179 | 1055 | 1053 | 1011 | 1003 | 1026 | 1025 |
| 35  | 2800 | 2791 | 2764  | 2720  | 2606  | 2435 | 2353 | 2275 | 2255 | 2301 | 1871 | 1276 | 1137 | 1049 | 1015 | 1188 | 1377 | 1505 | 1506 |
| 40  | 3276 | 3149 | 3093  | 2996  | 2883  | 2667 | 2507 | 2399 | 2344 | 2401 | 1633 | 1164 | 1087 | 964  | 1059 | 1267 | 1532 | 1704 | 1704 |
| 45  | 3952 | 3923 | 3819  | 3639  | 3467  | 3227 | 2907 | 2682 | 2565 | 2589 | 1420 | 1085 | 1029 | 915  | 1034 | 1299 | 1574 | 1741 | 1746 |
| 50  | 5254 | 5375 | 5349  | 4868  | 4327  | 3903 | 3494 | 3057 | 3019 | 3006 | 1208 | 1049 | 954  | 940  | 1188 | 1593 | 1729 | 1663 | 1635 |
| 55  | 7080 | 7385 | 7202  | 6599  | 5994  | 5266 | 4483 | 3672 | 3708 | 3570 | 1043 | 1045 | 941  | 1076 | 1408 | 1622 | 1681 | 1690 | 1667 |
| 60  | 7768 | 8453 | 8937  | 8250  | 7755  | 7154 | 5862 | 4567 | 4643 | 4103 | 940  | 1124 | 995  | 1256 | 1762 | 2068 | 2059 | 1867 | 1749 |
| 65  | 8097 | 9253 | 10060 | 9584  | 9356  | 9285 | 7437 | 5310 | 5449 | 4494 | 824  | 1000 | 1019 | 1390 | 1866 | 1353 | 976  | 900  | 881  |
| 70  | 7279 | 9225 | 10933 | 10638 | 10348 | 9602 | 6881 | 4275 | 3940 | 3110 | 748  | 771  | 887  | 1323 | 1018 | 850  | 850  | 814  | 797  |
| 75  | 3635 | 5709 | 8177  | 8745  | 7715  | 6052 | 3016 | 1921 | 909  | 712  | 552  | 552  | 804  | 808  | 654  | 652  | 629  | 601  | 585  |
| 80  | 568  | 857  | 1497  | 1884  | 1539  | 1522 | 1437 | 1284 | 610  | 404  | 409  | 441  | 664  | 496  | 483  | 453  | 403  | 362  | 355  |
| 85  | 159  | 242  | 328   | 408   | 544   | 548  | 561  | 607  | 395  | 192  | 225  | 351  | 340  | 280  | 271  | 245  | 187  | 121  | 139  |
| 90  | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 95  | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 100 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 105 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 110 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 115 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 120 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 125 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 130 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 135 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 140 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 145 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 150 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 155 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 160 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 165 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 170 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 175 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 180 | 0    | 0    | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

> DATASHEET - EXTERNAL - DBD

DBD.1.LA024.DO.NR.H100.C9.W014.CA



Product image may not represent the final configuration stated above.



PRODUCT SPECIFICATION

[www.dbd.holophane.com](#)

Holophane Denver iD: Bollard luminaire. Extruded marine grade aluminium body with die-cast aluminium top and base secured by stainless steel nuts and sealed to IP65. The optical arrangement consists of individual opitcal modules with a patented transition zone to minimise glare. Suitable for flange base mounting (bolts available as an accessory). This specific SKU includes:

- Series 1
- LED light engine producing c.2,000 lm with a nominal 4000°K colour temperature
- Double sided
- Long and Narrow light distribution
- 1 metre high
- Metallic Silver (RAL9006)
- 14W
- Wireless lighting node for use with Holophane Controlux Air System. (Includes subscription package for two years (Europe))



Product Website

PERFORMANCE

|                                  |              |
|----------------------------------|--------------|
| Drive Current from Driver:       | 425mA        |
| Power:                           | 14W          |
| Fitting Current:                 | 0.06A        |
| Power Factor:                    | 0.96         |
| Fitting Inrush:                  | 18A - 0.32ms |
| Number of Drivers:               | 1            |
| 1x Driver 1 Inrush:              | 18A - 0.32ms |
| Max Drivers per 16A Type B MCB:  | 23           |
| Max Fittings per 16A Type B MCB: | 23           |
| Total Number of LEDs:            | 10           |
| Minimum Dim Level:               | 12 %         |
| THDi:                            | 8.2          |
| SVM:                             | 0.07         |
| Pst LM:                          | 0.05         |
| Optical Risk Group:              | 1            |

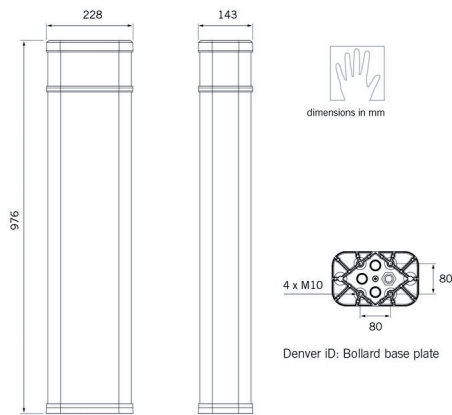


9.5Kg

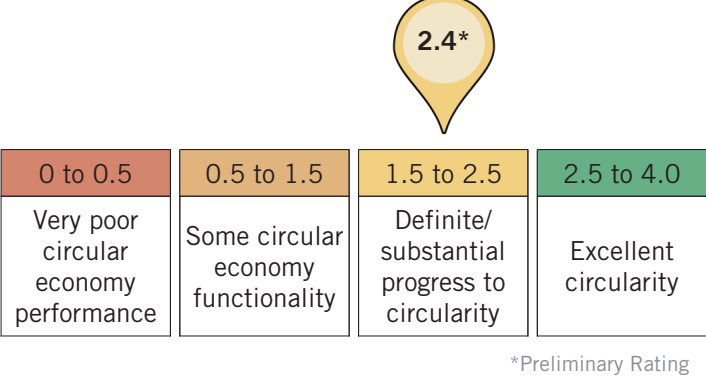


[Installation Guide](#)

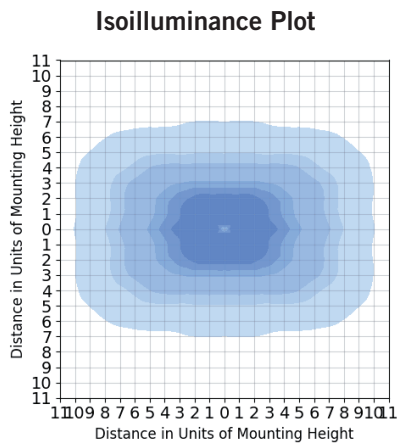
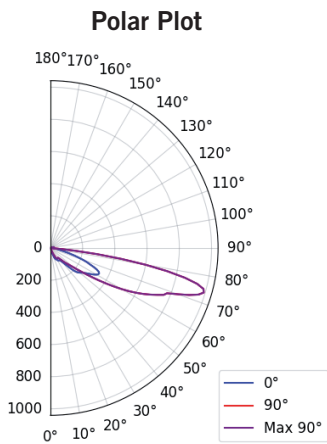
## DIMENSIONS



## CIBSE TM66 - CEAM RATING

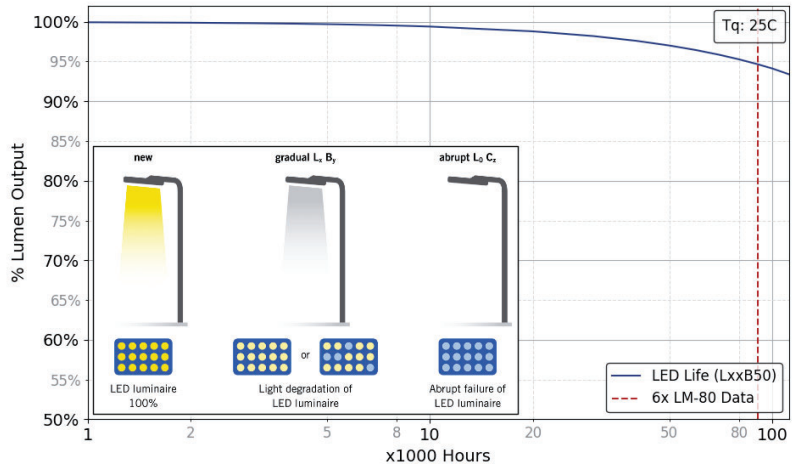


## PHOTOMETRY



|           |                        |
|-----------|------------------------|
| Lumens:   | 1,530                  |
| CCT:      | 4000K                  |
| CRI:      | 70                     |
| IES File: | DBD.1.LA024.DO.NR.W014 |

## LLMF GRAPH



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on.

## COLOUR TEMPERATURES

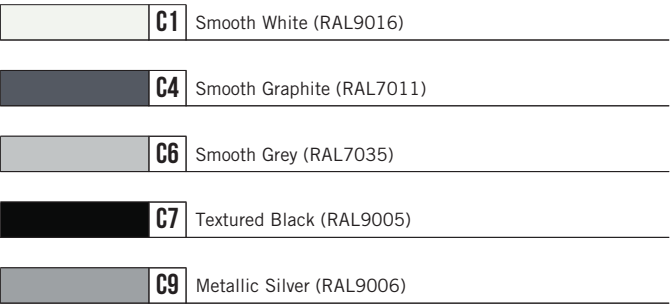


## COLOURS

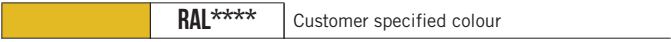
### Selected Colour



### Standard Colours Available



### Custom Colour Available



\*Choosing a custom colour may increase the cost and lead time.

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.



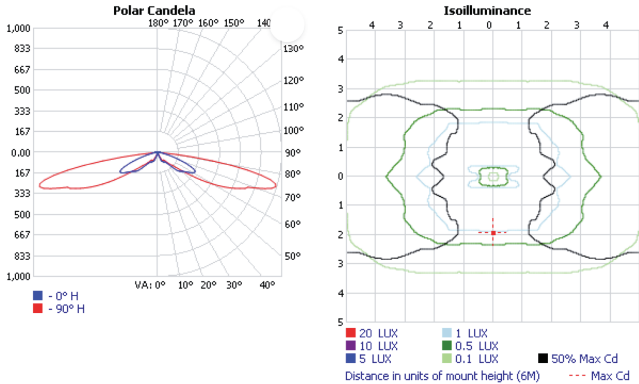
OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DBD.1.LA024.DO.NR.W014

Manufacturer: HOLOPHANE EUROPE LIMITED  
Test #: B21018 - SUM20025  
Test Lab: HOLOPHANE EUROPE LIMITED PHOTOMETRIC LAB  
Test Date: 21 May 2021  
Catalog: DBD.1.LA024.DO.NR.W014  
Description: Denver ID Bollard  
Lamp Catalog: LA024  
Lamp: LED C.2,000 Lumens  
Lamp Output: Total luminaire Lumens: 1529.7, absolute photometry \*  
Input Wattage: 14  
Luminous Opening: Rectangle w/Luminous Sides (L: 0.14M, W: 0.23M, H: 0.12M)  
Max Cd: 991.0 at Horizontal: 90°, Vertical: 73.75°  
Roadway Class: MEDIUM, TYPE IV

AcuityBrands

No  
Photo  
Available

Type G



\*Test based on absolute photometry where lamp lumens=lumens total.  
\*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

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This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.

OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DBD.1.LA024.DO.NR.W014

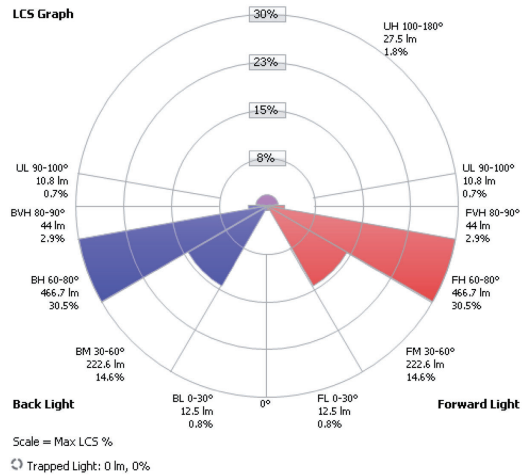
AcuityBrands

| Zonal Lumen Summary |         |             |
|---------------------|---------|-------------|
| Zone                | Lumens  | % Luminaire |
| 0-30                | 25.1    | 1.6%        |
| 0-40                | 77.9    | 5.1%        |
| 0-60                | 470.4   | 30.8%       |
| 60-90               | 1,020.9 | 66.7%       |
| 70-100              | 558.7   | 36.5%       |
| 90-120              | 30.5    | 2%          |
| 0-90                | 1,491.4 | 97.5%       |
| 90-180              | 38.3    | 2.5%        |
| 0-180               | 1,529.7 | 100%        |

| Roadway Summary        |                 |        |
|------------------------|-----------------|--------|
| Distribution:          | TYPE IV, MEDIUM |        |
| Max Cd, 90 Deg Vert:   | 11.0            |        |
| Max Cd, 80 to <90 Deg: | 599.9           |        |
|                        | Lumens          | % Lamp |
| Downward Street Side:  | 745.8           | 48.8%  |
| Downward House Side:   | 745.8           | 48.8%  |
| Downward Total:        | 1,491.6         | 97.5%  |
| Upward Street Side:    | 19.1            | 1.3%   |
| Upward House Side:     | 19.1            | 1.3%   |
| Upward Total:          | 38.3            | 2.5%   |
| Total Lumens:          | 1,529.9         | 100%   |

| Lumens Per Zone |        |         |
|-----------------|--------|---------|
| Zone            | Lumens | % Total |
| 0-10            | 0.2    | 0.0%    |
| 10-20           | 3.5    | 0.2%    |
| 20-30           | 21.3   | 1.4%    |
| 30-40           | 52.9   | 3.5%    |
| 40-50           | 119.2  | 7.8%    |
| 50-60           | 273.3  | 17.9%   |
| 60-70           | 473.1  | 30.9%   |
| 70-80           | 459.7  | 30.1%   |
| 80-90           | 88.2   | 5.8%    |

| LCS Table         |              |          |
|-------------------|--------------|----------|
| BUG Rating        | B1 - U2 - G1 |          |
| Forward Light     | Lumens       | Lumens % |
| Low(0-30):        | 12.5         | 0.8%     |
| Medium(30-60):    | 222.6        | 14.6%    |
| High(60-80):      | 466.7        | 30.5%    |
| Very High(80-90): | 44.0         | 2.9%     |
| Back Light        |              |          |
| Low(0-30):        | 12.5         | 0.8%     |
| Medium(30-60):    | 222.6        | 14.6%    |
| High(60-80):      | 466.7        | 30.5%    |
| Very High(80-90): | 44.0         | 2.9%     |
| Uplight           |              |          |
| Low(90-100):      | 10.8         | 0.7%     |
| High(100-180):    | 27.5         | 1.8%     |
| Trapped Light:    | 0.000        | 0%       |



Type G

| Candela Table - Type C |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |  |
|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|--|
|                        | 0   | 5   | 10  | 15  | 20  | 25  | 30  | 35  | 40  | 45  | 50  | 55  | 60  | 65  | 70  | 75  | 80  | 85  | 90  |    |    |    |    |    |    |    |    |    |  |
| 0                      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |  |
| 5                      | 1   | 1   | 1   | 0   | 0   | 0   | 1   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |  |
| 10                     | 7   | 8   | 8   | 7   | 7   | 7   | 7   | 6   | 5   | 5   | 5   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  |  |
| 15                     | 14  | 13  | 13  | 13  | 13  | 13  | 13  | 12  | 11  | 12  | 11  | 10  | 10  | 10  | 9   | 9   | 8   | 8   | 8   | 8  | 8  | 8  | 8  | 8  | 8  | 8  | 8  | 8  |  |
| 20                     | 40  | 39  | 37  | 34  | 32  | 28  | 23  | 20  | 18  | 18  | 16  | 15  | 14  | 13  | 13  | 12  | 12  | 12  | 12  | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |  |
| 25                     | 75  | 75  | 74  | 73  | 73  | 71  | 65  | 58  | 46  | 34  | 25  | 22  | 23  | 20  | 20  | 20  | 22  | 25  | 31  | 33 |    |    |    |    |    |    |    |    |  |
| 30                     | 87  | 87  | 87  | 87  | 86  | 86  | 88  | 87  | 81  | 71  | 58  | 42  | 33  | 32  | 32  | 32  | 32  | 54  | 75  | 71 |    |    |    |    |    |    |    |    |  |
| 35                     | 94  | 95  | 96  | 97  | 98  | 99  | 99  | 98  | 98  | 98  | 93  | 82  | 58  | 47  | 45  | 49  | 72  | 85  | 77  |    |    |    |    |    |    |    |    |    |  |
| 40                     | 110 | 110 | 110 | 111 | 113 | 116 | 117 | 118 | 120 | 118 | 115 | 119 | 102 | 76  | 69  | 79  | 82  | 81  | 84  |    |    |    |    |    |    |    |    |    |  |
| 45                     | 183 | 183 | 180 | 174 | 163 | 154 | 151 | 151 | 157 | 146 | 149 | 157 | 141 | 135 | 114 | 105 | 108 | 122 | 128 |    |    |    |    |    |    |    |    |    |  |
| 50                     | 239 | 241 | 245 | 250 | 255 | 261 | 253 | 244 | 240 | 218 | 212 | 215 | 190 | 195 | 179 | 157 | 162 | 177 | 186 |    |    |    |    |    |    |    |    |    |  |
| 55                     | 274 | 277 | 282 | 287 | 292 | 310 | 320 | 324 | 347 | 329 | 327 | 343 | 317 | 277 | 256 | 254 | 257 | 290 | 318 |    |    |    |    |    |    |    |    |    |  |
| 60                     | 331 | 336 | 342 | 344 | 347 | 370 | 386 | 401 | 431 | 415 | 429 | 449 | 464 | 457 | 388 | 365 | 378 | 450 | 511 |    |    |    |    |    |    |    |    |    |  |
| 65                     | 319 | 326 | 336 | 347 | 370 | 421 | 466 | 503 | 550 | 519 | 530 | 538 | 553 | 611 | 562 | 499 | 500 | 597 | 686 |    |    |    |    |    |    |    |    |    |  |
| 70                     | 215 | 221 | 231 | 246 | 269 | 326 | 399 | 497 | 620 | 632 | 682 | 691 | 672 | 694 | 648 | 625 | 617 | 726 | 841 |    |    |    |    |    |    |    |    |    |  |
| 75                     | 108 | 111 | 120 | 132 | 147 | 182 | 221 | 295 | 389 | 458 | 596 | 693 | 729 | 788 | 696 | 659 | 690 | 820 | 984 |    |    |    |    |    |    |    |    |    |  |
| 80                     | 48  | 49  | 53  | 58  | 63  | 71  | 83  | 116 | 167 | 231 | 321 | 377 | 434 | 539 | 524 | 467 | 437 | 497 | 600 |    |    |    |    |    |    |    |    |    |  |
| 85                     | 18  | 19  | 20  | 22  | 24  | 24  | 25  | 25  | 27  | 34  | 54  | 70  | 78  | 87  | 77  | 69  | 58  | 43  | 44  |    |    |    |    |    |    |    |    |    |  |
| 90                     | 3   | 4   | 4   | 4   | 5   | 5   | 6   | 7   | 8   | 8   | 9   | 10  | 10  | 11  | 9   | 9   | 9   | 6   | 5   |    |    |    |    |    |    |    |    |    |  |
| 95                     | 7   | 7   | 7   | 8   | 8   | 9   | 9   | 10  | 11  | 11  | 12  | 12  | 12  | 12  | 11  | 11  | 10  | 9   | 8   |    |    |    |    |    |    |    |    |    |  |
| 100                    | 11  | 11  | 11  | 11  | 12  | 12  | 13  | 13  | 14  | 14  | 14  | 14  | 14  | 14  | 13  | 12  | 11  | 11  | 11  |    |    |    |    |    |    |    |    |    |  |
| 105                    | 22  | 22  | 26  | 26  | 24  | 22  | 23  | 22  | 26  | 27  | 26  | 22  | 23  | 22  | 26  | 28  | 26  | 22  | 23  |    |    |    |    |    |    |    |    |    |  |
| 110                    | 2   | 2   | 2   | 2   | 3   | 4   | 3   | 3   | 4   | 3   | 4   | 4   | 4   | 3   | 2   | 2   | 2   | 1   | 2   |    |    |    |    |    |    |    |    |    |  |
| 115                    | 3   | 2   | 2   | 2   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |    |    |    |    |    |    |    |    |    |  |
| 120                    | 4   | 3   | 3   | 3   | 3   | 3   | 3   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 3   | 3   | 4   | 4   | 4   |    |    |    |    |    |    |    |    |    |  |
| 125                    | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 3   |    |    |    |    |    |    |    |    |    |  |
| 130                    | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   |    |    |    |    |    |    |    |    |    |  |
| 135                    | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 3   | 3   |    |    |    |    |    |    |    |    |    |  |
| 140                    | 4   | 4   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   |    |    |    |    |    |    |    |    |    |  |
| 145                    | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 3   | 3   | 3   | 3   | 3   |    |    |    |    |    |    |    |    |    |  |
| 150                    | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 2   | 2   | 2   |    |    |    |    |    |    |    |    |    |  |
| 155                    | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |    |    |    |    |    |    |    |    |    |  |
| 160                    | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 1   |    |    |    |    |    |    |    |    |    |  |
| 165                    | 1   | 1   | 1   | 1   | 1   | 2   | 1   | 1   | 2   | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 1   | 1   | 1   |    |    |    |    |    |    |    |    |    |  |
| 170                    | 1   | 1   | 1   | 0   | 1   | 1   | 1   | 1   | 1   | 1   | 0   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 0   |    |    |    |    |    |    |    |    |    |  |
| 175                    | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 1   | 1   | 1   | 0   | 0   | 0   |    |    |    |    |    |    |    |    |    |  |
| 180                    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |    |    |    |    |    |    |    |    |    |  |



Product image may not represent the final configuration stated above.

## PRODUCT SPECIFICATION DWL HOLOPHANE WEBSITE

Holophane Denver iD: Wall consists of a 2-part body and a removable LED module manufactured from LM6 marine grade die-cast aluminum with integrated thermal management properties. The LED module optical arrangement consists of LEDs with individual PMMA optical lenses surrounded by a patented white Transition Zone to reduce perceived glare. This is sealed behind high-transparency 'hydrophilic' glass. Both luminaire body and LED module are sealed to IP65 and rated IK10. Drivers and LED are mounted separately from each other to promote low operating temperatures and long system life. Mounting of the luminaire is facilitated by mounting the back casting of luminaire to suitable surface. Cable entry and termination to the luminaire is a via an 2 x IP65 M20 cable gland. International Dark-Sky Association Approved (colour temperatures 3000K or warmer are approved under the IDA).

This specific SKU includes:

- Series 1
- LED light engine producing c.2,000 lm with a nominal 4000°K colour temperature
- High beam long and narrow distribution
- Metallic Silver (RAL9006)
- 11W
- Complete with 4-Pin Zhaga Socket - 'Top' (suitable photocell/node available from Holophane or supplied by others) with weather proof locking top
- Wireless lighting node for use with Holophane Controlux Air System. (Includes subscription package for two years (Europe))



Product Website

## PERFORMANCE

|                                  |              |
|----------------------------------|--------------|
| Drive Current from Driver:       | 360mA        |
| Power:                           | 10.3W        |
| Fitting Current:                 | 0.05A        |
| Power Factor:                    | 0.97         |
| Fitting Inrush:                  | 18A - 0.32ms |
| Number of Drivers:               | 1            |
| 1x Driver 1 Inrush:              | 18A - 0.32ms |
| Max Drivers per 16A Type B MCB:  | 23           |
| Max Fittings per 16A Type B MCB: | 23           |
| Total Number of LEDs:            | 8            |
| Minimum Dim Level:               | 19 %         |
| THDi:                            | 8.5          |
| SVM:                             | 0.07         |
| Pst LM:                          | 0.12         |
| Optical Risk Group:              | 1            |

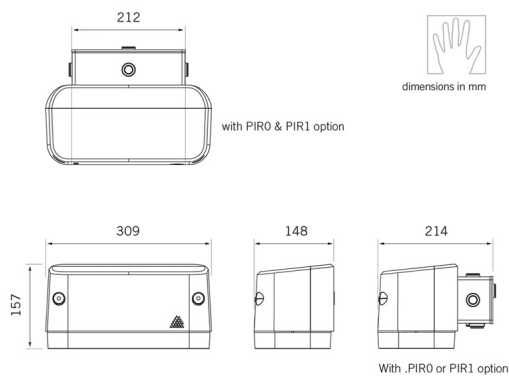


6.5Kg



Installation Guide

## DIMENSIONS



## CIBSE TM66 - CEAM RATING

|                                        |                                     |                                              |                       |
|----------------------------------------|-------------------------------------|----------------------------------------------|-----------------------|
| 0 to 0.5                               | 0.5 to 1.5                          | 1.5 to 2.5                                   | 2.5 to 4.0            |
| Very poor circular economy performance | Some circular economy functionality | Definite/substantial progress to circularity | Excellent circularity |

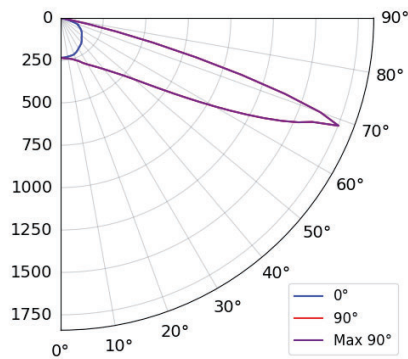
\*Preliminary Rating

2.6\*

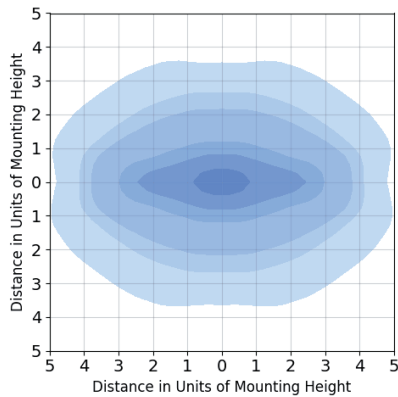
## PHOTOMETRY

↓ IES FILE

Polar Plot

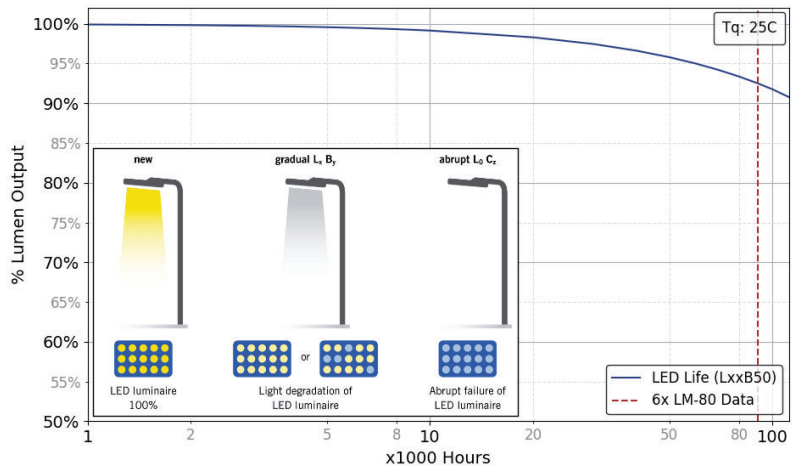


Isoilluminance Plot



|                  |                                                                  |
|------------------|------------------------------------------------------------------|
| <b>Lumens:</b>   | 1,497                                                            |
| <b>CCT:</b>      | 4000K                                                            |
| <b>CRI:</b>      | 70                                                               |
| <b>IES File:</b> | DWL.1.LA024.HN.W011                                              |
| <b>G-Class:</b>  | G*3<br>Imax @ ≥ 70°: 1085<br>Imax @ ≥ 80°: 44<br>Imax @ ≥ 90°: 0 |

## LLMF GRAPH



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on.

## COLOUR TEMPERATURES

2700K

3000K

▶ 4000K

## COLOURS

### Selected Colour

C9 Metallic Silver (RAL9006)

### Standard Colours Available

C1 Smooth White (RAL9016)

C4 Smooth Graphite (RAL7011)

C6 Smooth Grey (RAL7035)

C7 Textured Black (RAL9005)

C9 Metallic Silver (RAL9006)

### Custom Colour Available

RAL \*\*\*\* Customer specified colour

\*Choosing a custom colour may increase the cost and lead time.

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

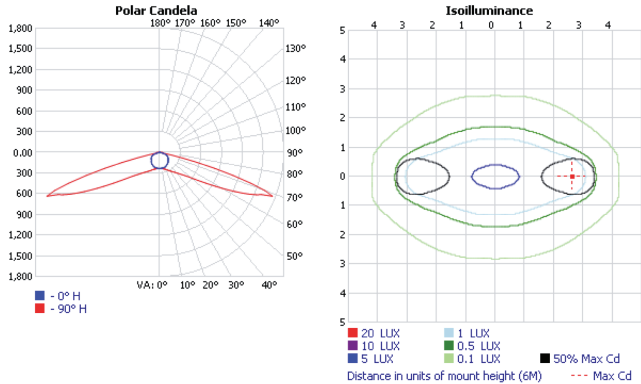
OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DWL.1.LA024.HN.W011

Manufacturer: HOLOPHANE EUROPE LIMITED  
Test #: B20193 - SUM20025  
Test Lab: HOLOPHANE EUROPE LIMITED PHOTOMETRIC LAB  
Test Date: 25 Nov 2020  
Catalog: DWL.1.LA024.HN.W011  
Description: Denver ID Wall  
Lamp Catalog: LA024  
Lamp: LED C.2,000 Lumens  
Lamp Output: Total luminaire Lumens: 1496.9, absolute photometry \*  
Input Wattage: 10.3  
Luminous Opening: Rectangle (L: 0.15M, W: 0.31M)  
Max Cd: 1,753.1 at Horizontal: 90°, Vertical: 68.75°  
Roadway Class: MEDIUM, TYPE I



No  
Photo  
Available

Type H



\*Test based on absolute photometry where lamp lumens=lumens total.  
\*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

Visual Photometric Tool 1.2.46 copyright 2023, Acuity Brands Lighting.  
This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.

OUTDOOR PHOTOMETRIC REPORT  
CATALOG: DWL.1.LA024.HN.W011

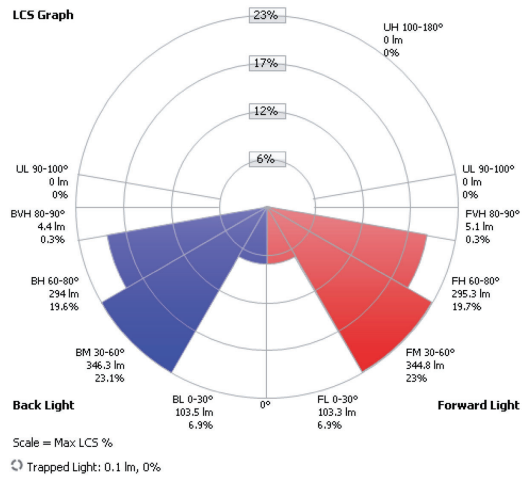


| Zonal Lumen Summary |         |             |
|---------------------|---------|-------------|
| Zone                | Lumens  | % Luminaire |
| 0-30                | 206.9   | 13.8%       |
| 0-40                | 374.5   | 25%         |
| 0-60                | 898.0   | 60%         |
| 60-90               | 598.9   | 40%         |
| 70-100              | 210.7   | 14.1%       |
| 90-120              | 0.000   | 0%          |
| 0-90                | 1,497.0 | 100%        |
| 90-180              | 0.000   | 0%          |
| 0-180               | 1,497.0 | 100%        |

| Roadway Summary        |                |        |
|------------------------|----------------|--------|
| Distribution:          | TYPE I, MEDIUM |        |
| Max Cd, 90 Deg Vert:   | 0.000          |        |
| Max Cd, 80 to <90 Deg: | 65.4           |        |
|                        | Lumens         | % Lamp |
| Downward Street Side:  | 748.5          | 50%    |
| Downward House Side:   | 748.3          | 50%    |
| Downward Total:        | 1,496.8        | 100%   |
| Upward Street Side:    | 0.000          | 0%     |
| Upward House Side:     | 0.000          | 0%     |
| Upward Total:          | 0.000          | 0%     |
| Total Lumens:          | 1,496.8        | 100%   |

| Lumens Per Zone |        |         |                     |
|-----------------|--------|---------|---------------------|
| Zone            | Lumens | % Total | Zone Lumens % Total |
| 0-10            | 22.5   | 1.5%    | 90-100 0.000 0%     |
| 10-20           | 68.0   | 4.5%    | 100-110 0.000 0%    |
| 20-30           | 116.3  | 7.8%    | 110-120 0.000 0%    |
| 30-40           | 167.6  | 11.2%   | 120-130 0.000 0%    |
| 40-50           | 222.8  | 14.9%   | 130-140 0.000 0%    |
| 50-60           | 300.8  | 20.1%   | 140-150 0.000 0%    |
| 60-70           | 388.2  | 25.9%   | 150-160 0.000 0%    |
| 70-80           | 201.1  | 13.4%   | 160-170 0.000 0%    |
| 80-90           | 9.6    | 0.6%    | 170-180 0.000 0%    |

| LCS Table         |                 |  |
|-------------------|-----------------|--|
| BUG Rating        | B1 - U0 - G1    |  |
| Forward Light     | Lumens Lumens % |  |
| Low(0-30):        | 103.3 6.9%      |  |
| Medium(30-60):    | 344.8 23%       |  |
| High(60-80):      | 295.3 19.7%     |  |
| Very High(80-90): | 5.1 0.3%        |  |
| Back Light        |                 |  |
| Low(0-30):        | 103.5 6.9%      |  |
| Medium(30-60):    | 346.3 23.1%     |  |
| High(60-80):      | 294.0 19.6%     |  |
| Very High(80-90): | 4.4 0.3%        |  |
| Uplight           |                 |  |
| Low(90-100):      | 0.000 0%        |  |
| High(100-180):    | 0.000 0%        |  |
| Trapped Light:    | 0.1 0%          |  |



Type H

Candela Table - Type C

|     | 0   | 10  | 20  | 30  | 40  | 50  | 60  | 70  | 80   | 90   | 100  | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| 0   | 236 | 236 | 236 | 236 | 236 | 236 | 236 | 236 | 236  | 236  | 236  | 236 | 236 | 236 | 236 | 236 | 236 | 236 | 236 |
| 5   | 233 | 234 | 234 | 234 | 235 | 235 | 236 | 237 | 238  | 239  | 238  | 237 | 237 | 236 | 236 | 235 | 235 | 235 | 235 |
| 10  | 231 | 231 | 232 | 233 | 233 | 235 | 237 | 239 | 240  | 242  | 243  | 242 | 241 | 239 | 237 | 235 | 233 | 232 | 232 |
| 15  | 230 | 230 | 231 | 234 | 236 | 240 | 243 | 246 | 249  | 251  | 249  | 247 | 243 | 239 | 236 | 233 | 231 | 230 | 230 |
| 20  | 227 | 228 | 231 | 235 | 239 | 245 | 252 | 258 | 263  | 265  | 263  | 258 | 252 | 245 | 240 | 235 | 231 | 228 | 228 |
| 25  | 219 | 221 | 228 | 234 | 241 | 252 | 264 | 276 | 285  | 288  | 285  | 276 | 265 | 254 | 243 | 235 | 229 | 222 | 220 |
| 30  | 207 | 212 | 222 | 230 | 243 | 259 | 278 | 297 | 311  | 316  | 311  | 299 | 281 | 263 | 246 | 232 | 224 | 214 | 210 |
| 35  | 198 | 203 | 213 | 226 | 245 | 268 | 294 | 320 | 340  | 348  | 341  | 324 | 298 | 272 | 249 | 229 | 216 | 205 | 200 |
| 40  | 188 | 193 | 205 | 223 | 247 | 276 | 310 | 349 | 379  | 394  | 381  | 353 | 314 | 281 | 250 | 226 | 207 | 193 | 187 |
| 45  | 173 | 178 | 193 | 214 | 243 | 280 | 326 | 382 | 434  | 459  | 436  | 386 | 329 | 282 | 245 | 217 | 193 | 176 | 170 |
| 50  | 160 | 167 | 185 | 208 | 238 | 284 | 349 | 431 | 520  | 562  | 521  | 433 | 351 | 284 | 239 | 208 | 183 | 165 | 158 |
| 55  | 150 | 157 | 174 | 198 | 229 | 284 | 369 | 490 | 650  | 742  | 652  | 493 | 369 | 285 | 231 | 198 | 173 | 155 | 149 |
| 60  | 136 | 142 | 158 | 181 | 212 | 271 | 372 | 546 | 837  | 1040 | 843  | 550 | 374 | 276 | 217 | 182 | 158 | 142 | 137 |
| 65  | 118 | 123 | 137 | 156 | 185 | 241 | 341 | 556 | 1019 | 1435 | 1039 | 564 | 344 | 251 | 192 | 160 | 139 | 123 | 118 |
| 70  | 100 | 105 | 118 | 134 | 159 | 205 | 287 | 496 | 1079 | 1624 | 1099 | 499 | 287 | 207 | 159 | 132 | 116 | 100 | 95  |
| 75  | 43  | 46  | 66  | 84  | 104 | 130 | 176 | 272 | 512  | 563  | 498  | 262 | 166 | 120 | 94  | 75  | 58  | 38  | 35  |
| 80  | 7   | 8   | 13  | 21  | 24  | 28  | 47  | 63  | 45   | 0    | 38   | 55  | 40  | 23  | 18  | 15  | 9   | 6   | 6   |
| 85  | 5   | 5   | 4   | 4   | 3   | 4   | 6   | 12  | 21   | 33   | 22   | 12  | 5   | 3   | 3   | 3   | 4   | 4   | 4   |
| 90  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 95  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 100 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 105 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 110 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 115 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 120 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 125 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 130 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 135 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 140 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 145 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 150 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 155 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 160 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 165 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 170 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 175 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 180 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |

> DATASHEET

VMX.2.LA074.V2.X2L2.PT1.C9.TZ01.W042



Product image may not represent the final configuration stated above.



## PRODUCT SPECIFICATION

[www.holophane.co.uk](#) VMX HOLOPHANE WEBSITE

### VMX.2.LA074.V2.X2L2.PT1.C9.TZ01.W042

Holophane V-Max LED street light. Ultra-low profile design and patented modular chevron light engine concept. High pressure die cast LM6 aluminium housing ((EN AC-44100) (AL.Si12)) sealed to IP66 with a close cell gasket and single M5 stainless steel fastener that also allows access to the gear cover for electrical termination. Metal core LED boards are mounted directly to aluminium ((EN AC-44100)(AL.Si12)) chevron to aid heat dissipation. This specific SKU includes:

- Series 2
- LED light engine producing c.7,000 lm with a nominal 4000K colour temperature
- 2 LED chevrons
- X2L2 optical setting
- 60/76mm post top mounting only
- Metallic Silver (RAL9006)
- Complete with 4-Pin Zhaga Socket - 'Top' (suitable photocell/node available from Holophane or supplied by others) with weather proof locking top
- 42W. If not supplied with factory fitted flying lead, only use flex cable diameter from 6mm to 10mm.

### VMXB.8.1S.LMZ.SA60.GV9

Holophane tubular base compartment column for use with V-Max Luminaires. 8 metre, Single head short bracket (300mm outreach). For light & medium area wind zones (compliant to EN40).

- Side arm bracket suitable for 60mm entry
- Bracket galvanised and painted metallic silver (RAL9006)
- Direct embedment

## PERFORMANCE

|                                  |               |
|----------------------------------|---------------|
| Drive Current from Driver:       | 421mA         |
| Power:                           | 42W           |
| Fitting Current:                 | 0.19A         |
| Fitting Inrush:                  | 9A - 0.13ms   |
| Number of Drivers:               | 1             |
| 1x Driver 1 Inrush:              | 9.6A - 0.13ms |
| Max Drivers per 16A Type B MCB:  | 31            |
| Max Fittings per 16A Type B MCB: | 31            |
| Total Number of LEDs:            | 16            |
| Minimum Dim Level:               | 13 %          |
| THDi:                            | 12.9          |
| Optical Risk Group:              | 1             |



8Kg<sub>2</sub>



0.037M



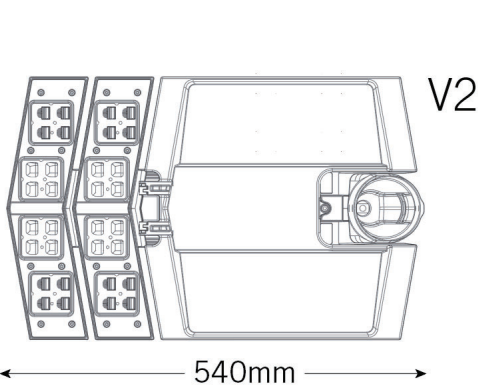
42 0042 0000 100\*



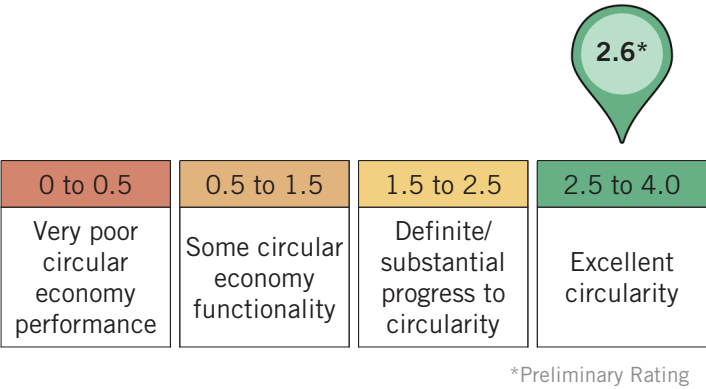
[Installation Guide](#)

\*Generic UMSUG code based on product wattage and some or all of product family being included within Elexon data base.

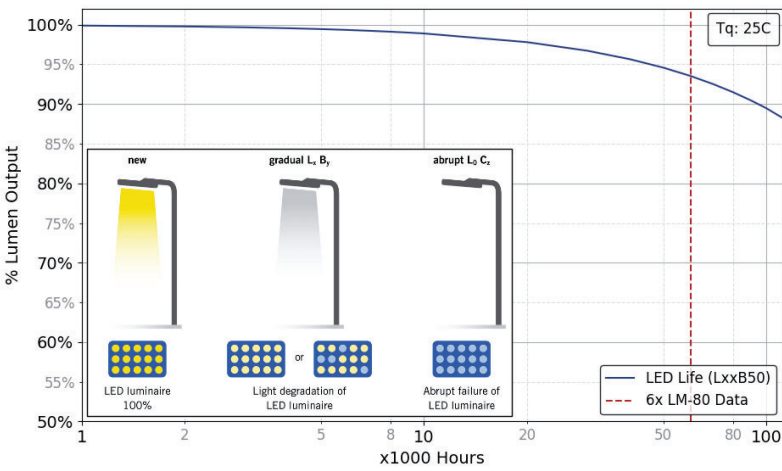
DIMENSIONS



CIBSE TM66 - CEAM RATING



LLMF GRAPH



For reference purposes, the graph extrapolates beyond the recommend 6x LM-80 data in TM-21, which our calculations are based on.

COLOUR TEMPERATURES

- AMBER
- 3000K
- 4000K

COLOURS

Selected Colour

C9 Metallic Silver (RAL9006)

Standard Colours Available

- C1 Smooth White (RAL9016)
- C3 Green (RAL6013)
- C4 Smooth Graphite (RAL7011)
- C6 Smooth Grey (RAL7035)
- C7 Textured Black (RAL9005)
- C9 Metallic Silver (RAL9006)

Custom Colour Available

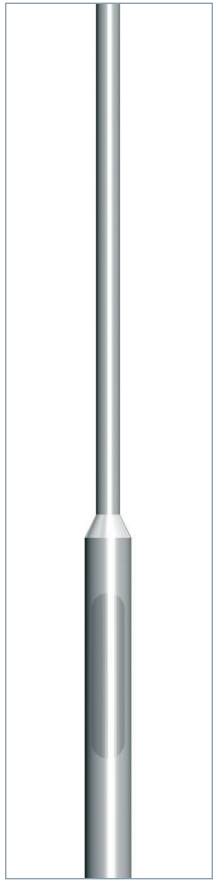
RAL\*\*\*\* Customer specified colour

\*Choosing a custom colour may increase the cost and lead time.

Lumen data is considered to be representative of the configuration shown, and may vary, with a tolerance on flux of +/- 7% (typical of LED manufacturer's data) and luminaire power of +/- 5%.

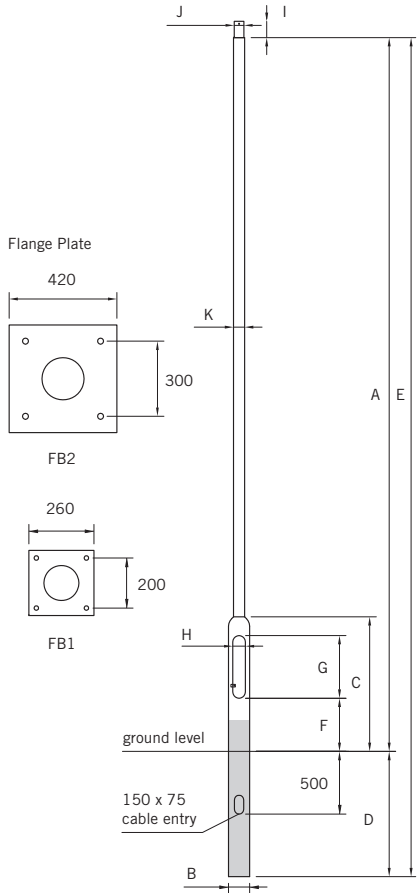
The specifications of the Holophane luminaires represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue, Datasheets and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.

> DATASHEET  
**VMXB.8.1S.LMZ.SA60.GV9**



**Holophane products that are suitable**

CityMax  
Denver Elite pole  
D-Series  
Factor  
Factor small  
V-Max



|                      | Nominal Height | Base Diameter* | Base Height | Planting Depth | Overall Length | Door to Ground | Door Opening Length | Door Opening Width | Spigot Length* | Spigot Diameter* | Shaft Diameter* | Weight kg* | Bending Moment (ULS) Nm |
|----------------------|----------------|----------------|-------------|----------------|----------------|----------------|---------------------|--------------------|----------------|------------------|-----------------|------------|-------------------------|
| description          | A              | B              | C           | D              | E              | F              | G                   | H                  | I              | J                | K               |            |                         |
| 2.5m standard duty   | 2500           | 140            | 1075        | 800            | 3300           | 400            | 500                 | 100                | -              | -                | 76              | 27         | 2100                    |
| 3m standard duty     | 3000           | 140            | 1075        | 800            | 3800           | 400            | 500                 | 100                | -              | -                | 76              | 30         | 4666                    |
| 3.5m standard duty   | 3500           | 140            | 1075        | 800            | 4300           | 400            | 500                 | 100                | -              | -                | 76              | 32         | 2100                    |
| 4m standard duty     | 4000           | 140            | 1075        | 800            | 4800           | 400            | 500                 | 100                | -              | -                | 76              | 34         | 6484                    |
| 4.5m standard duty   | 4500           | 140            | 1075        | 800            | 5300           | 400            | 500                 | 100                | -              | -                | 76              | 37         | 5108                    |
| 5m standard duty     | 5000           | 140            | 1075        | 800            | 5800           | 400            | 500                 | 100                | -              | -                | 76              | 39         | 6149                    |
| 5.5m standard duty   | 5500           | 140            | 1075        | 1000           | 6500           | 400            | 500                 | 100                | -              | -                | 76              | 44         | 6003                    |
| 6m standard duty     | 6000           | 140            | 1075        | 1000           | 7000           | 400            | 500                 | 100                | -              | -                | 76              | 46         | 5999                    |
| 6m heavy duty        | 5700           | 168            | 1200        | 1000           | 6700           | 400            | 600                 | 115                | 130            | 76               | 89              | 71         | 10404                   |
| 8m standard duty     | 7700           | 168            | 1200        | 1200           | 8900           | 400            | 600                 | 115                | 130            | 76               | 89              | 89         | 10072                   |
| 8m heavy duty        | 7700           | 168            | 1300        | 1200           | 9000           | 500            | 600                 | 115                | 250            | 101              | 114             | 107        | 15699                   |
| 8m extra heavy duty  | 7700           | 194            | 1300        | 1200           | 9000           | 500            | 600                 | 115                | 250            | 127              | 140             | 136        | 18973                   |
| 10m standard duty    | 9700           | 168            | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 250            | 101              | 114             | 150        | 18067                   |
| 10m heavy duty       | 9700           | 194            | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 250            | 127              | 140             | 168        | 23193                   |
| 10m extra heavy duty | 9700           | 194            | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 250            | 152              | 168             | 220        | 28317                   |
| 12m standard duty    | 11700          | 194            | 1300        | 1700           | 13400          | 500            | 600                 | 115                | 250            | 127              | 140             | 213        | 26251                   |
| 12m heavy duty       | 11700          | 194            | 1300        | 1700           | 13400          | 500            | 600                 | 115                | 250            | 127              | 168             | 260        | 40390                   |

\* Exclusion TBC

2.5-6m std Poles  
8-12m std Poles  
<https://www.holophane.co.uk/>

Flange Plate FB1  
Flange Plate FB2

Bolts M18 x 400  
Bolts M24 x 820

F +44 (0)1908 367 618

Flange Plate and Anchor Bolt information will be confirmed at time of order due to the necessity in ensuring

the correct plate and Anchor Bolts are supplied.

Column type to be confirmed at time of order as this is based on luminaire weight, windage and

geographical location. Info@holophane.co.uk

F Intl +44 (0)1908 363 789

F +44 (0)1908 367 618

Holophane Europe Limited  
Bond Avenue, Milton Keynes  
Buckinghamshire MK1 1JG  
United Kingdom

stepped steel - CityMax Large only  
post top

|             | Nominal Height | Base Diameter | Base Height | Planting Depth | Overall Length | Door to Ground | Door Opening Length | Door Opening Width | Spigot Length | Spigot Diameter | Shaft Diameter | Weight kg | Bending Moment (ULS) Nm |
|-------------|----------------|---------------|-------------|----------------|----------------|----------------|---------------------|--------------------|---------------|-----------------|----------------|-----------|-------------------------|
| description | A              | B             | C           | D              | E              | F              | G                   | H                  | I             | J               | K              |           |                         |
| 6m          | 6000           | 140           | 1075        | 1000           | 7000           | 400            | 500                 | 115                | -             | -               | -              | 46        | 5999                    |
| 8m          | 7700           | 168           | 1300        | 1200           | 9000           | 500            | 600                 | 115                | 100           | 76              | 114            | 107       | 15699                   |
| 10m         | 9700           | 168           | 1300        | 1500           | 11200          | 500            | 600                 | 115                | 100           | 76              | 114            | 150       | 18067                   |
| 12m         | 11700          | 194           | 1300        | 1700           | 13400          | 500            | 600                 | 115                | 100           | 76              | 140            | 168       | 26251                   |
| 15m         | 14700          | 194           | 1200        | 2000           | 17000          | 400            | 600                 | 115                | 100           | 76              | 168            | 306       | 40300                   |

twin head

|             | Nominal Height | Base Diameter | Base Height | Planting Depth | Overall Length | Door to Ground | Door Opening Length | Door Opening Width | Spigot Length | Spigot Diameter | Shaft Diameter | Weight kg | Bending Moment (ULS) Nm |
|-------------|----------------|---------------|-------------|----------------|----------------|----------------|---------------------|--------------------|---------------|-----------------|----------------|-----------|-------------------------|
| description | A              | B             | C           | D              | E              | F              | G                   | H                  | I             | J               | K              |           |                         |
| 8m          | 7400           | 194           | 1200        | 1200           | 8800           | 400            | 600                 | 115                | 200           | 127             | 139.7          | 125       | 22610                   |
| 10m         | 9400           | 194           | 1200        | 1500           | 11100          | 400            | 600                 | 115                | 200           | 152.4           | 168.3          | 208       | 39131                   |
| 12m         | 11400          | 194           | 2500        | 1700           | 13300          | 1000           | 600                 | 115                | 200           | 152.4           | 168.3          | 295       | 41585                   |

**Note:** For Terrain Category 2 locations LMZ, HVZ & HEZ

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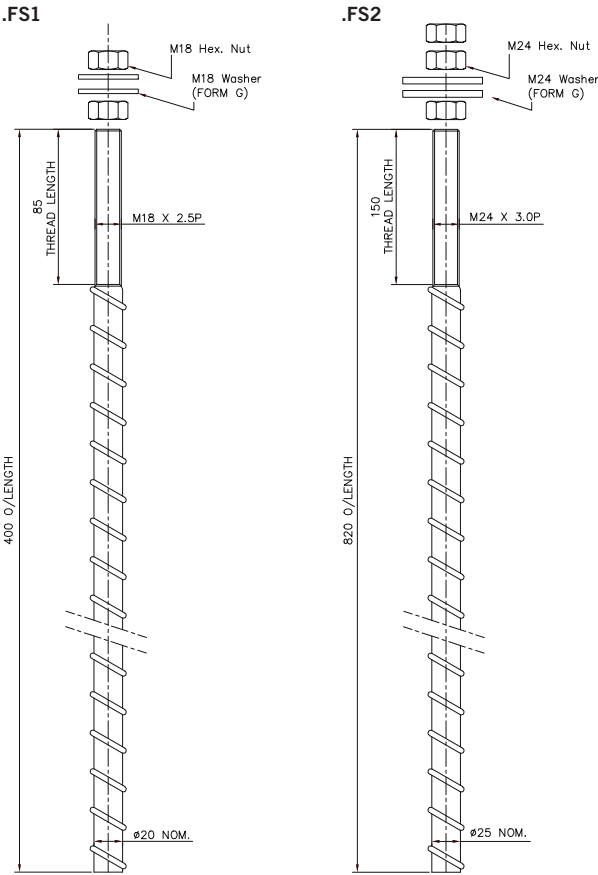
E info@holophane.co.uk

Holophane Europe Limited  
Bond Avenue, Milton Keynes  
Buckinghamshire MK1 1JG  
United Kingdom

For columns supplied with optional flange base Holophane offers two types of foundation bolts.

**Note:** The material used for the bolts is Fe E500 grade steel, with yield strength 500 N/mm2 and minimum UTS 550 N/mm2.

- HEL.FS1    M18 Bolts (FS1) x 400 mm long  
HEL.FS2    M24 Bolts (FS2) x 820 mm long



OUTDOOR PHOTOMETRIC REPORT  
CATALOG: VMX.2.LA074.V2.X2L2.W042

Manufacturer: HOLOPHANE EUROPE LIMITED  
Test #: B14013 - SUM19038  
Test Lab: HOLOPHANE EUROPE LIMITED PHOTOMETRIC LAB  
Test Date: 4 Sep 2019  
Catalog: VMX.2.LA074.V2.X2L2.W042  
Description: V-Max Streetlighting luminaire with a Type III - Short distribution  
Lamp Catalog: LA074  
Lamp: LED C.7000 Lumens  
Lamp Output: Total luminaire Lumens: 6821.8, absolute photometry \*  
Input Wattage: 42  
Luminous Opening: Rectangle (L: 0.34M, W: 0.2M)  
Max Cd: 5,081.9 at Horizontal: 60°, Vertical: 67.5°  
Roadway Class: SHORT, TYPE III



No  
Photo  
Available

Type RW1

OUTDOOR PHOTOMETRIC REPORT  
CATALOG: VMX.2.LA074.V2.X2L2.W042



Zonal Lumen Summary

| Zone   | Lumens  | % Luminaire |
|--------|---------|-------------|
| 0-30   | 1,026.3 | 15%         |
| 0-40   | 1,897.2 | 27.8%       |
| 0-60   | 4,511.4 | 66.1%       |
| 60-90  | 2,310.5 | 33.9%       |
| 70-100 | 905.8   | 13.3%       |
| 90-120 | 0.000   | 0%          |
| 0-90   | 6,821.8 | 100%        |
| 90-180 | 0.000   | 0%          |
| 0-180  | 6,821.8 | 100%        |

Roadway Summary

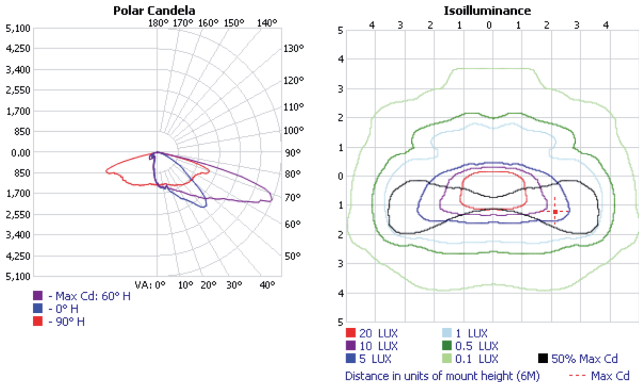
|                        |                 |
|------------------------|-----------------|
| Distribution:          | TYPE III, SHORT |
| Max Cd, 90 Deg Vert:   | 0.000           |
| Max Cd, 80 to <90 Deg: | 459.6           |
|                        | Lumens % Lamp   |
| Downward Street Side:  | 5,395.5 79.1%   |
| Downward House Side:   | 1,427.0 20.9%   |
| Downward Total:        | 6,822.4 100%    |
| Upward Street Side:    | 0.000 0%        |
| Upward House Side:     | 0.000 0%        |
| Upward Total:          | 0.000 0%        |
| Total Lumens:          | 6,822.4 100%    |

Lumens Per Zone

| Zone  | Lumens  | % Total | Zone    | Lumens | % Total |
|-------|---------|---------|---------|--------|---------|
| 0-10  | 122.6   | 1.8%    | 90-100  | 0.000  | 0%      |
| 10-20 | 336.8   | 4.9%    | 100-110 | 0.000  | 0%      |
| 20-30 | 566.8   | 8.3%    | 110-120 | 0.000  | 0%      |
| 30-40 | 870.9   | 12.8%   | 120-130 | 0.000  | 0%      |
| 40-50 | 1,245.2 | 18.3%   | 130-140 | 0.000  | 0%      |
| 50-60 | 1,369.0 | 20.1%   | 140-150 | 0.000  | 0%      |
| 60-70 | 1,404.7 | 20.6%   | 150-160 | 0.000  | 0%      |
| 70-80 | 834.2   | 12.2%   | 160-170 | 0.000  | 0%      |
| 80-90 | 71.6    | 1.0%    | 170-180 | 0.000  | 0%      |

LCS Table

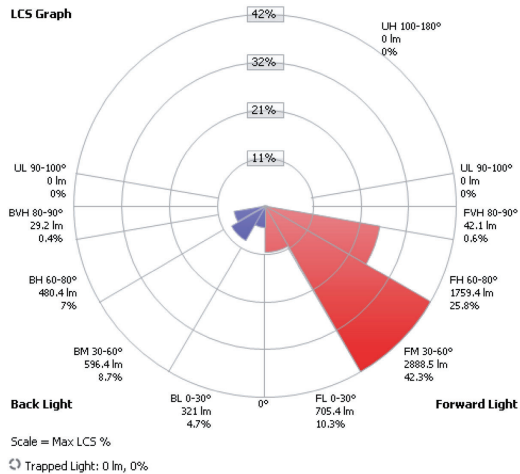
| BUG Rating        | B1 - U0 - G1 | Lumens | Lumens % |
|-------------------|--------------|--------|----------|
| Forward Light     |              |        |          |
| Low(0-30):        | 705.4        | 10.3%  |          |
| Medium(30-60):    | 2,888.5      | 42.3%  |          |
| High(60-80):      | 1,759.4      | 25.8%  |          |
| Very High(80-90): | 42.1         | 0.6%   |          |
| Back Light        |              |        |          |
| Low(0-30):        | 321.0        | 4.7%   |          |
| Medium(30-60):    | 596.4        | 8.7%   |          |
| High(60-80):      | 480.4        | 7%     |          |
| Very High(80-90): | 29.2         | 0.4%   |          |
| Uplight           |              |        |          |
| Low(90-100):      | 0.000        | 0%     |          |
| High(100-180):    | 0.000        | 0%     |          |
| Trapped Light:    | 0.000        | 0%     |          |



\*Test based on absolute photometry where lamp lumens=lumens total.  
\*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

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This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.

Type RW1



Candela Table - Type C

|     | 0    | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  | 130  | 140  | 150  | 160  | 170  | 180  |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0   | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 | 1272 |
| 5   | 1449 | 1451 | 1447 | 1443 | 1436 | 1424 | 1412 | 1392 | 1370 | 1342 | 1313 | 1280 | 1246 | 1212 | 1179 | 1151 | 1131 | 1117 | 1115 |
| 10  | 1517 | 1518 | 1513 | 1506 | 1499 | 1489 | 1474 | 1448 | 1407 | 1357 | 1292 | 1212 | 1124 | 1038 | 961  | 900  | 858  | 832  | 823  |
| 15  | 1398 | 1400 | 1400 | 1402 | 1407 | 1412 | 1413 | 1405 | 1376 | 1324 | 1241 | 1121 | 981  | 852  | 753  | 685  | 641  | 614  | 607  |
| 20  | 1758 | 1753 | 1735 | 1705 | 1667 | 1629 | 1592 | 1556 | 1505 | 1408 | 1256 | 1048 | 836  | 682  | 581  | 494  | 433  | 400  | 390  |
| 25  | 1996 | 1990 | 1959 | 1905 | 1835 | 1764 | 1703 | 1657 | 1608 | 1482 | 1268 | 977  | 704  | 524  | 397  | 319  | 280  | 260  | 255  |
| 30  | 2239 | 2241 | 2225 | 2173 | 2082 | 1966 | 1862 | 1792 | 1734 | 1561 | 1273 | 901  | 577  | 370  | 282  | 247  | 231  | 221  | 216  |
| 35  | 2524 | 2521 | 2490 | 2445 | 2356 | 2220 | 2068 | 1938 | 1859 | 1635 | 1258 | 818  | 462  | 282  | 228  | 208  | 200  | 208  | 213  |
| 40  | 2934 | 2956 | 2955 | 2841 | 2676 | 2527 | 2323 | 2121 | 1994 | 1700 | 1208 | 727  | 412  | 244  | 201  | 225  | 280  | 295  | 300  |
| 45  | 2799 | 2891 | 3065 | 3207 | 3141 | 2898 | 2659 | 2380 | 2157 | 1763 | 1116 | 637  | 374  | 232  | 249  | 350  | 360  | 321  | 297  |
| 50  | 2034 | 2207 | 2609 | 3086 | 3450 | 3333 | 2931 | 2575 | 2288 | 1788 | 1003 | 553  | 333  | 239  | 395  | 429  | 345  | 272  | 229  |
| 55  | 1313 | 1394 | 1613 | 2347 | 3257 | 3782 | 3309 | 2692 | 2322 | 1764 | 909  | 474  | 312  | 350  | 519  | 411  | 357  | 339  | 296  |
| 60  | 960  | 1063 | 1312 | 1696 | 2505 | 3768 | 4027 | 3049 | 2486 | 1850 | 915  | 447  | 424  | 576  | 505  | 388  | 397  | 315  | 242  |
| 65  | 538  | 611  | 785  | 1276 | 1702 | 3187 | 4653 | 3619 | 2727 | 1975 | 972  | 414  | 571  | 589  | 399  | 336  | 307  | 231  | 180  |
| 70  | 333  | 381  | 495  | 726  | 1214 | 2421 | 4905 | 4393 | 3239 | 2267 | 1165 | 512  | 693  | 470  | 298  | 272  | 244  | 244  | 226  |
| 75  | 197  | 235  | 332  | 447  | 532  | 851  | 2761 | 2712 | 2243 | 1435 | 833  | 456  | 477  | 286  | 205  | 169  | 247  | 220  | 206  |
| 80  | 74   | 92   | 146  | 238  | 279  | 264  | 348  | 460  | 279  | 169  | 172  | 232  | 250  | 148  | 117  | 104  | 152  | 122  | 108  |
| 85  | 17   | 24   | 35   | 72   | 81   | 78   | 88   | 96   | 59   | 36   | 33   | 55   | 66   | 62   | 28   | 33   | 41   | 21   | 19   |
| 90  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 95  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 100 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 105 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 110 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 115 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 120 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 125 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 130 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 135 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 140 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 145 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 150 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 155 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 160 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 165 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 170 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 175 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 180 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

## CONTROLUX AIR GATEWAY

The Controlux Gateway is a state-of-the-art network interface device which synchronizes Controlux outdoor lighting controllers and the lighting management software (CityManager or similar third-party software).

The Gateway has an in-built radio module for wireless network configuration, commissioning, and maintenance. It can reliably communicate with a large number of devices spread across large distances. In-built smart monitoring tools notify users about the status of the luminaires and the network (via CityManager or other software).

Several Internet connectivity options offer robustness and flexibility to the end-customer. Furthermore, it supports the industry-standard protocols allowing for an easy integration with other systems and networks.

The Gateway encloses advanced industrial components for optimized performance worldwide.

### specifications

#### hardware

##### integrated product

- In-built power supply, 2.4 GHz wireless network communication, server communication (SIM-card, Ethernet, Wi-Fi). SIM-card provided by Twilight with worldwide coverage, or by customer himself (requires 1GB monthly data subscription)

##### input voltage

- Universal 85 – 264 VAC, 50/60 Hz

##### power consumption

- <8W (average)

##### processor

- High-performance industrial grade dual-core ARM Cortex-A9 CPU, 1 GHz

##### data storage

- Micro SD-card

##### real-time clock

- Battery-backed RTC

##### electrical protection

- Class II: overload, short circuit, and overtemperature protection

##### electrical safety

- Galvanic isolation between high-voltage and low-voltage terminals

##### operating conditions

- 20 °C to +60 °C, 20% to 90%, Rh non-condensing

##### antenna

- Integrated internally for 2.4 GHz wireless and Wi-Fi

##### connectors

- 1x Ethernet port (10/100, RJ45)
- 1x USB 2.0 connector (high speed)
- 1x micro SD-card slot (max. 32 GB)
- 1x push insert for a standard SIM-card bay (25 mm x 15 mm)
- 2-pin power connector
- 2x uFL antenna connector (2.4 GHz wireless, Wi-Fi)
- 1x SMA-F antenna connector (2G/3G modem)

##### product mounting options

- Pole mounting, wall mounting, or inside the cabinet

##### housing

- IP65, fireproof (UL94VO) housing

##### dimension

- 230 mm x 130 mm x 90 mm

##### manufacturing

- ISO 9001: 2008, Made in Europe

##### certification

- RoHS, CE, EN301489-1/3, EN61547, EN55015, EN300328, EN60950
- RF Transceiver compliant with US (FCC), Canadian (IC), European (ETSI), and Japanese (Telec) standards



Controlux Air Gateway

### specifications (continued)

#### internet communication

##### server communication

- 2G GSM/ GPRS/ EDGE quad-band,
- 3G six-band UMTS/ HSPA
- Additional Ports: Ethernet and WiFi

##### network security

- 128 AES, WebSocket (with SSL) and VPN
- Multilayer security with end-to-end encryption
- Dual protection for messages between devices and Gateway
- Certificate-based secure WebSocket and VPN connection

##### functions

- Real-time monitoring of devices and network
- Several Internet connectivity options (Ethernet, Wi-Fi and GSM) and automatic connectivity selection
- Automatic recovery for mobile connection
- SNTP time-sync between Gateway and devices
- Regular logging of the system operation (selectable time interval)
- Real-time connection between Gateway and DigiHub
- Remote debugging of Gateway and devices
- Over-the-air update for Gateway and devices (software and firmware)
- Local intelligence for reliability and faster response time

##### over-the-air update

- Configurations and software can be updated remotely, ensuring an up-to-date network infrastructure

##### remote monitoring

- CityManager (or third-party software) enables remote management, monitoring, control, and configuration of luminaires on individual and group level.

#### wireless communication

##### wireless network

- 2.4 GHz IEEE 802.15.4
- Self-forming, self-healing, user-configurable wireless network
- +10 dBm max. receiver sensitivity
- Up to 1 km open field range
- Up to 250 kbps RF data rate

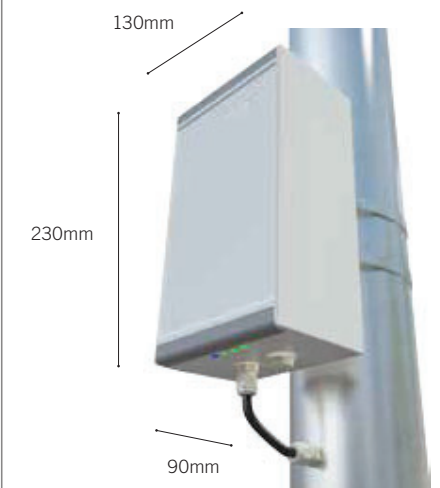
##### device to gateway ratio

- 200:1

##### product compatibility

- Plug-and-play compatibility with Controlux Air enabled luminaires and motion sensors

### Model X (External Wireless Motion Sensor)



## EXTERNAL WIRELESS MOTION SENSOR

The Controlux Air standalone motion sensor is a revolutionary integrated wireless motion sensor for the presence-based monitoring and control of outdoor lighting. The product is compatible with both conventional and new luminaires (such as LED).

The motion sensor delivers on-demand dynamic lighting, making the lights adjust their brightness based on the presence of pedestrians, bicycles, and cars. As a result, the lights automatically dim down during the off-peak hours when there is nobody in the vicinity. Upon detection of the human presence, all lights in the surrounding area return to the brightness levels previously defined by the user. Dynamic lighting reduces energy consumption by up to 80% without compromising public safety and citizen comfort.

The in-built monitoring tools notify users (via CityManager) about the lighting-related faults such as a luminaire or driver failure. This greatly reduces the need for expensive visual inspections and enables a reduction of operation and maintenance costs.

### features

- Revolutionary outdoor motion sensor with an in-built wireless lighting controller
- On-demand dynamic lighting thanks to advanced human detection technology
- Heatmaps to track occupancy levels and traffic intensity in the area
- Plug-and-play installation
- Universal lamp compatibility
- Energy Monitoring
- In-built real-time clock with a back-up battery, AstroClock
- Fully controllable through Controlux Air CityManager
- Open interfaces for third-party compatibility
- Fail-proof: three-level back-up system



### specifications

#### Product

- Motion detection sensors, wireless communication, and lighting control integrated into one product for a simple plug-and-play installation. Includes a 5,5 m pre-connected power and control cable.

#### Motion detection

- Detects pedestrians, cyclists, and cars (range: 4-120 km/h)
- Range: up to 15 m on each side, 9 m in front, 3 m behind
- Angle: >270 ° (depends on pole diameter)
- Triggering of 1-10 neighboring lamps upon detection (user-configurable)

#### Input voltage

- 230 VAC (PR150868) or 115 VAC (PR151116), 50/60 Hz (normal power grid)

#### Power consumption

- <3W

#### DALI loads

- Max.3

#### Dimming control

- 1-10 V or DALI (isolated for safety)

#### Surge protection

- 110 joules (6 Ka), 12 kV combination wave

#### Controller

- ARM Cortex-M3 CPU

#### Electrical protection

- Class II: overload, short circuit, and overtemperature protection

#### Electrical safety

- Galvanic isolation between high-voltage and low-voltage terminals

#### Operating conditions

- -20 °C to +70 °C ambient, 20% to 90%, Rh non-condensing

#### Product mounting

- On the pole. Recommended mounting height 5 m above the ground

#### Housing

- IP65, weatherproof and fireproof

#### Antenna

- Integrated Internally

#### Dimensions

- 100 mm x 125 mm x 95 mm
- ± 10° adjustable mounting plate to accommodate for pole tilts

#### Product compatibility

- Direct wireless communication with Controlux Air node and Gateway, communication with CityManager—through Gateway
- Compatibility with conventional (PLL, HID, HPS) and new (LED) luminaires

#### wireless communication

- 2.4 GHz IEEE 802.15.4 self-forming, self-healing wireless network
- +10 dBm max. transmit power, -98 dBm max. receiver sensitivity
- Up to 1 km open field range
- Up to 250 kbps microcontroller RF data rate
- 32-bit microcontroller, 64 kB Flash and 16 kB RAM

#### network security

- 128 AES
- Multi-layer security with end-to-end encryption

#### over-the-air update

- Configurations and software can be updated remotely, ensuring an up-to-date network infrastructure

#### server communication

- via Gateway

#### device to gateway ratio

- 200:1

#### remote monitoring

- Via CityManager or similar third-party management software. CityManager enables remote management, monitoring, control, and configuration of lamps on individual and group level.

#### safety mode

- Auto-safe: in a case of Gateway failure, all lamps go back to the highest pre-programmed level of brightness. In a case of the controller failure, the lamp goes back to the 100% brightness.

#### certification

- RoHS, CE, EN301489-1/3, EN61547, EN55015, EN300328, EN60950, EN550121-5
- RF transceiver compliant with US (FCC), Canadian (IC), European (ETSI), and Japanese (Telec) standards

#### manufacturing

- ISO 9001:2008, Made in Europe

#### lamp switching capacity

- 2400 VA (Relay), 16A max. current

#### astroclock

- Battery-backed real-time clock; AstroClock feature
- Able to switch on/off the lamps at sunset/sunrise and adjust them seasonally (Summer-Winter time).
- Eliminates the need for conventional photocell

### External Wireless Motion Sensor



## UNIVERSAL INTERFACE DEVICE

The Universal Interface Device enables the user to use a switch as an override device.

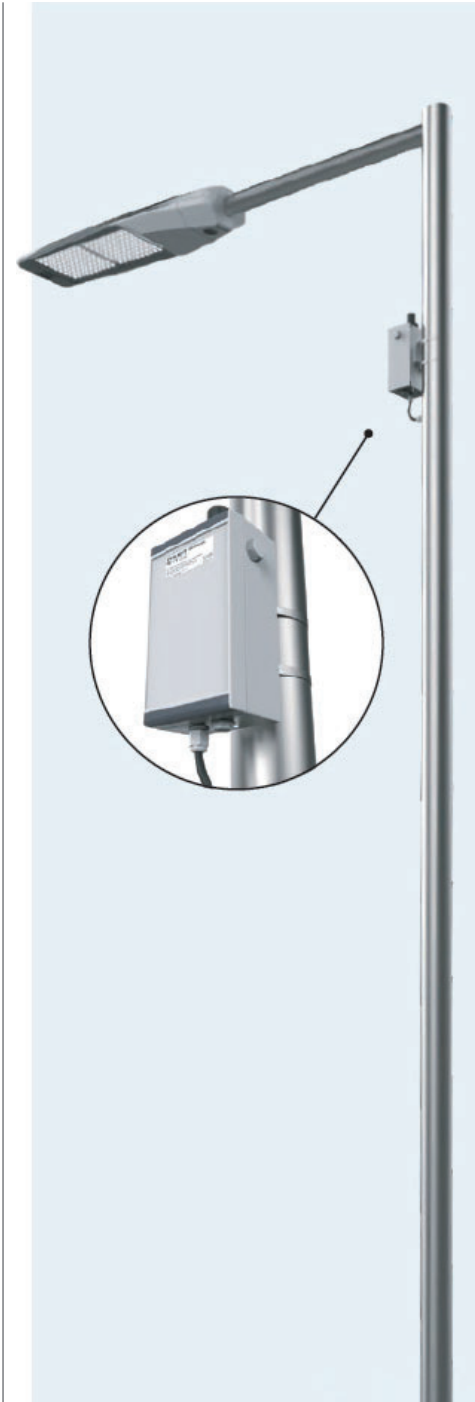
The Universal Interface Device supports seamless communication with other Controlux devices/products, such as Motion Sensor and Gateway, and can be managed remotely via Controlux Air CityManager.

The CTA.UID can fit into several user applications where an override of a standard lighting profile is desired, such as emergency conditions or a temporary change of the lighting levels.

The override switch (**supplied by others**) can be installed remotely as far as there is a valid and safe electrical connection to the CTA.UID.

### features

- Override commands issued via the Controlux Air wireless network
- Remote management and control via CityManager and third-party software
- Advanced dimming and adaptive lighting schedules
- Able to interface with third party systems
- Automatic failure and status reports via CityManager
- Plug-and-play installation



### specifications

#### product

- In-built wireless communication, lighting control, and external sensor interface
- Model B: 5.5 m pre-connected power cable for ease of installation

#### input voltage

- 230 VAC (Model A PR151083 - Model B PR161195) or
- 115 VAC (Model A PR151115 - Model B PR161196), 50/60 Hz (normal power grid)

#### wireless control

- Remote on/off/dimming
- Grouped Scheduling

#### power consumption

- <2W

#### surge protection

- 110 joules (6 Ka)
- 12 kV combination wave

#### controller

- ARM Cortex-M3 CPU

#### electrical safety

- Galvanic isolation between high-voltage and low-voltage terminals

#### operating conditions

- -20 °C to +70 °C ambient
- 20% to 90%, Rh non-condensing

#### housing

- IP65

#### antenna

- External antenna

#### dimensions

- 230mm x 130 mm x 90 mm

#### product compatibility

- Direct wireless communication with Controlux Air and Gateway, communication with CityManager—through Gateway

#### external sensor integration

- I<sup>2</sup>C interface to connect third-party external sensors

#### wireless communication

- 2.4 GHz IEEE 802.15.4 self-forming, self-healing wireless network
- +10 dBm max. transmit power, -98 dBm max. receiver sensitivity
- Up to 1 km open field range
- Up to 250 kbps microcontroller RF data rate
- 32-bit microcontroller, 64 kB Flash and 16 kB RAM

#### network security

- 128 AES
- Multi-layer security with end-to-end encryption

#### over-the-air update

- Configurations and software can be updated remotely, ensuring an up-to-date network infrastructure

#### device to gateway ratio remote monitoring

- 200:1

#### safety mode

- Via CityManager or similar third-party management software. CityManager enables remote management, monitoring, control, and configuration of lamps on individual and group level.

#### certification

- Auto-safe: in a case of Gateway failure, all lamps go back to the highest pre-programmed level of brightness. In a case of the controller failure, the lamp goes back to the 100% brightness.
- RoHS, CE, EN301489-1/3, EN61547, EN55015, EN300328, EN60950, EN550121-5
- RF transceiver compliant with US (FCC), Canadian (IC), European (ETSI), and Japanese (Telec) standards

#### manufacturing

- ISO 9001:2008, Made in Europe

