

Installation : Randles Road

Project number : NA
Customer : MJ Quinn
Processed by : Dale Farrimond
Date : 13.06.2025

Project description:

Project description:

Calculation based on standard reflectance Values- Ceiling 0.7, Walls 0.5 and Floor 0.2.
For external calculation reflectance will be based on environment.

Calculations are based on empty rooms. In real world conditions with furniture/machinery present inside the room/area may result in lower lux levels than stated within this document.

If the design area dimensions, floor to ceiling or mounting heights have been issued from a third party and we are unable to verify drawings/plans or dimensions cannot accept responsibility for the accuracy of the information issued.

PLEASE NOTE: IT IS THE RESONSIBILITY OF THE CONTRACTOR/INSTALLER TO CHECK ALL ROOM/EXTERIOR AREA DIMENSIONS ON-SITE PRIOR TO INSTALLATION. IF IN DOUBT, ASK.

Lighting calculations are designed to CIBSE guidelines where applicable and/or client requirements, all stated lux values are for overall averages across the room reference plane.

If dimmable luminaires have been specified, then it is the responsibility of the contractor to establish the dimming protocol needed and how this is to be used.

Emergency lighting design conforms to BS5266/EN1838 where applicable, if included as part of this design document.

Please note that 'high risk areas' and 'points of emphasis' such as locations of fire fighting equipment also require emergency lighting, these locations are to be confirmed by contractor.

Please note that the emergency lighting calculation are produced using the emergency lighting calculation facility within this program, this ensures that the results are as near to real life simulation as possible.

The following values are based on precise calculations performed on calibrated lamps and luminaires, and their configurations, whereby gradual, unavoidable deviations can occur in practice. All guarantee claims are excluded for the specified data.

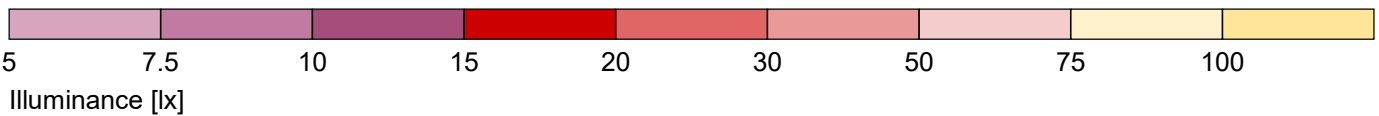
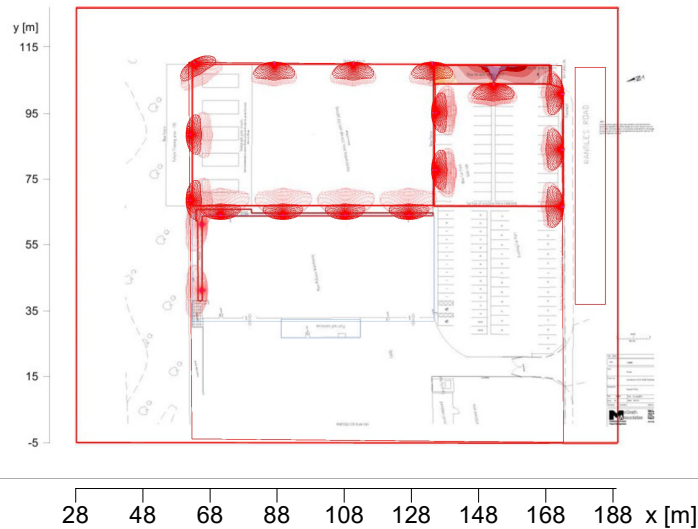
This exclusion of liability applies irrespective of the legal grounds for both damages and consequential damages suffered by users and third parties.

Object :
Installation : Randles Road
Project number : NA
Date : 13.06.2025

1 Exterior 1

1.1 Summary, Exterior 1

1.1.1 Result overview, Access Road



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Height (phot centre) [m]:	7.97 m
Maintenance factor	0.80
Total luminous flux	384000 lm
Total power	3163.2 W
Total power per area (20809.25 m²)	0.15 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	49 lx
Minimum illuminance	E_{min}	7 lx
Maximum illuminance	E_{max}	116 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:6.7 (0.15)
Diversity U_d	E_{min}/E_{max}	1:15.9 (0.06)

Type No. \Make

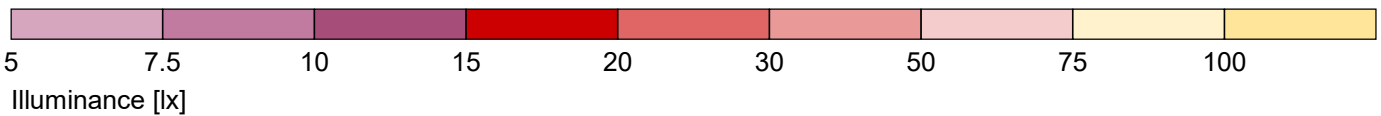
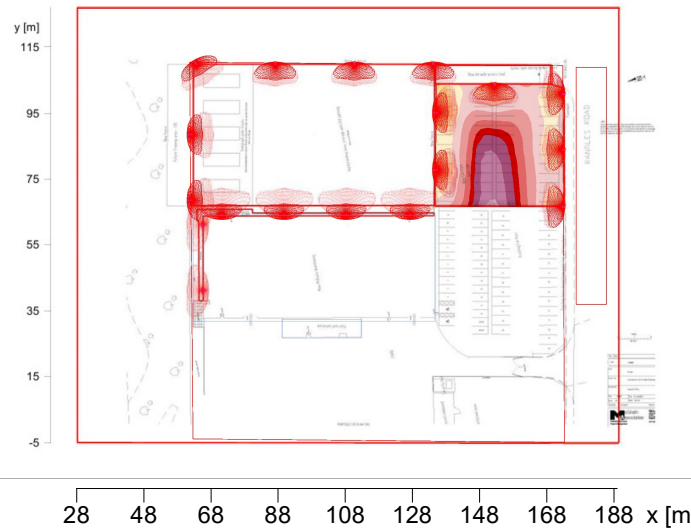
2	16 x	Order No.	: QFLOOD-200CW/AS
		Luminaire name	:
		Equipment	: 1 x 197.7 W / 24000 lm

PHOTONIC.
LIGHTING SOLUTIONS

Object :
Installation : Randles Road
Project number : NA
Date : 13.06.2025

1.1 Summary, Exterior 1

1.1.3 Result overview, New Car Park



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Height (phot centre) [m]:	7.97 m
Maintenance factor	0.80
Total luminous flux	384000 lm
Total power	3163.2 W
Total power per area (20809.25 m²)	0.15 W/m²

Illuminance

Average illuminance	$\bar{E}_m$	55 lx
Minimum illuminance	E_{min}	7 lx
Maximum illuminance	E_{max}	130 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:7.58 (0.13)
Diversity U_d	E_{min}/E_{max}	1:18 (0.06)

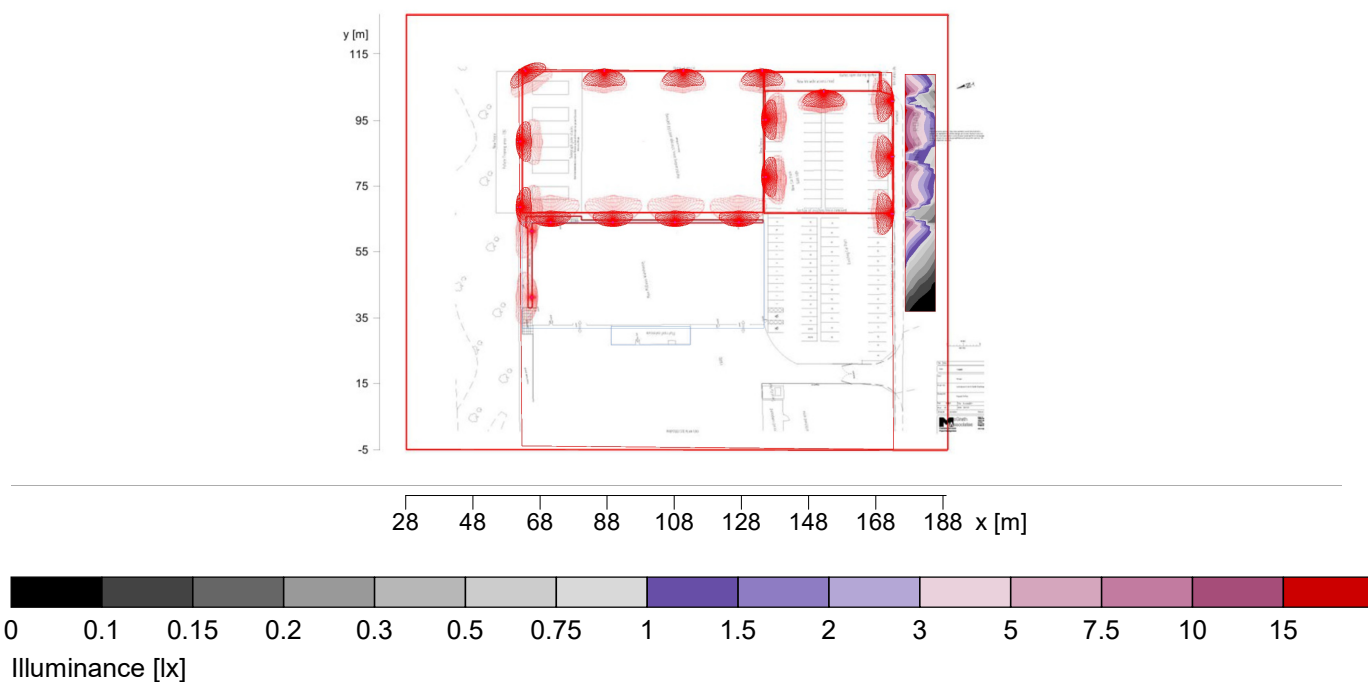
Type No. \Make

2	16 x	Order No.	: QFLOOD-200CW/AS
		Luminaire name	:
		Equipment	: 1 x 197.7 W / 24000 lm

Object :
Installation : Randles Road
Project number : NA
Date : 13.06.2025

1.1 Summary, Exterior 1

1.1.4 Result overview, Road Spill



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Height (phot centre) [m]:	7.97 m
Maintenance factor	0.80

Total luminous flux	384000 lm
Total power	3163.2 W
Total power per area (20809.25 m ²)	0.15 W/m ²

Illuminance

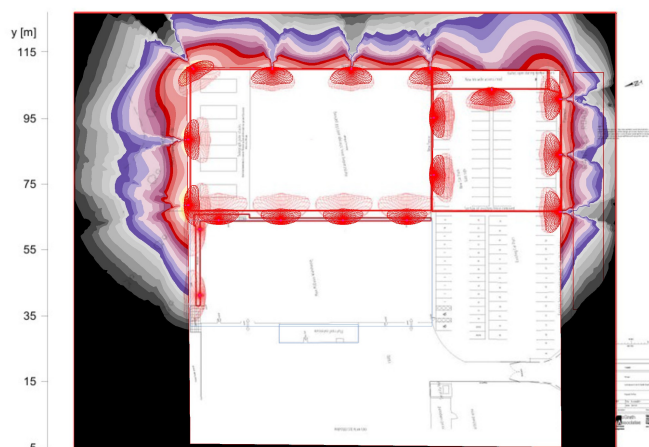
Average illuminance	$\bar{E}_m$	2.7 lx
Minimum illuminance	E_{min}	0.1 lx
Maximum illuminance	E_{max}	17.1 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:48.1 (0.02)
Diversity U_d	E_{min}/E_{max}	1:308 (0)

Type No. \Make

2	16 x	Order No.	: QFLOOD-200CW/AS
		Luminaire name	:
		Equipment	: 1 x 197.7 W / 24000 lm

1.1 Summary, Exterior 1

1.1.5 Result overview, Overall Spill



28 48 68 88 108 128 148 168 188 x [m]



0 0.1 0.15 0.2 0.3 0.5 0.75 1 1.5 2 3 5 7.5 10 15 20 30 50 75 100

Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Height (phot centre) [m]:	7.97 m
Maintenance factor	0.80
Total luminous flux	384000 lm
Total power	3163.2 W
Total power per area (20809.25 m ²)	0.15 W/m ² (2.62 W/m ² /100lx)

Illuminance

Average illuminance	$\bar{E}_m$	6 lx
Minimum illuminance	E_{min}	0 lx
Maximum illuminance	E_{max}	127 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:--- (---)
Diversity U_d	E_{min}/E_{max}	1:--- (---)

Type No. \Make

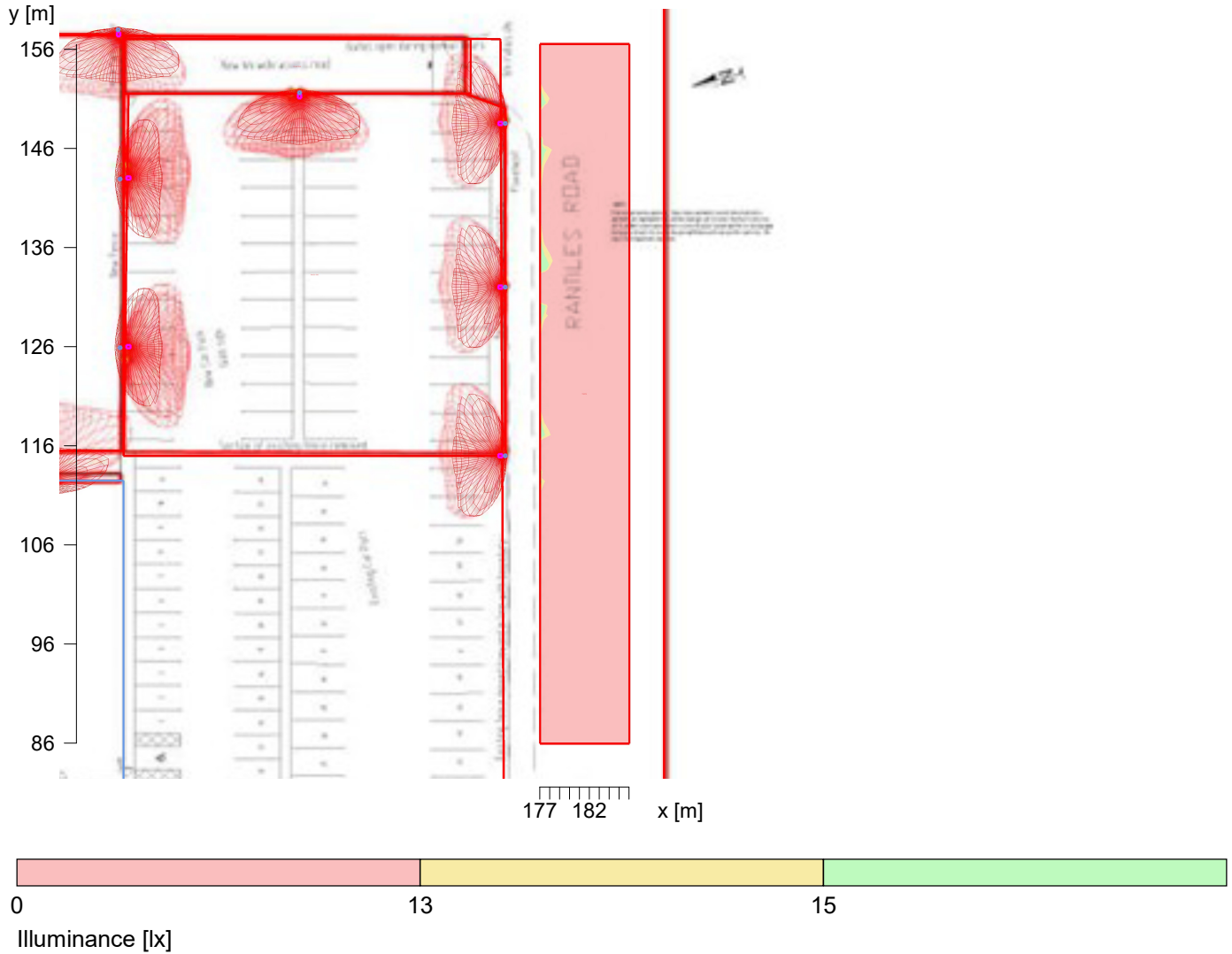
2	16 x	Order No.	: QFLOOD-200CW/AS
		Luminaire name	:
		Equipment	: 1 x 197.7 W / 24000 lm



1 Exterior 1

1.2 Calculation results, Exterior 1

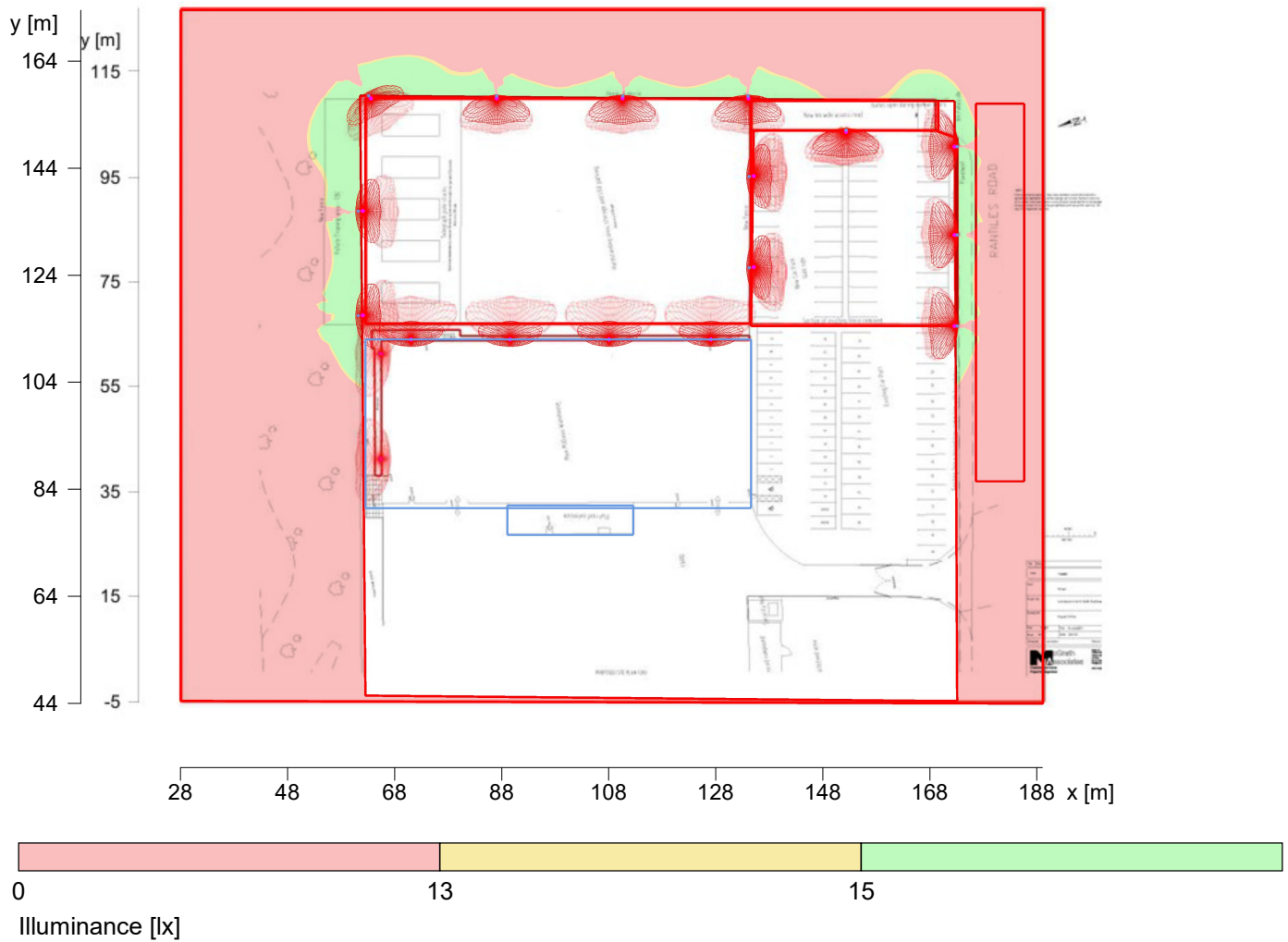
1.2.1 Boundary line, Road Spill (E)



Height reference plane		: 0.00 m
Average illuminance	$\bar{E}_m$	: 2.7 lx
Minimum illuminance	E_{min}	: 0.1 lx
Maximum illuminance	E_{max}	: 17.1 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	: 1 : 48.12 (0.02)

1.2 Calculation results, Exterior 1

1.2.2 Boundary line, Overall Spill (E)



Height reference plane		: 0.00 m
Average illuminance	$\bar{E}_m$	: 6 lx
Minimum illuminance	E_{min}	: 0 lx
Maximum illuminance	E_{max}	: 127 lx
Uniformity U_0	$E_{min}/\bar{E}_m$	: ---