

DATE: 29 March 2026
DESIGNER: B Cartledge
PROJECT No: SOL1300 001 A
PROJECT NAME: Pilch Lane, Huyton



Pilch lane, Huyton
REVISION A' SOLAR POWERED LIGHTING CALCULATION
Lighting Complies with BS5489-1 :2020
GRID 1 : Lighting Category P5
GRID 2 : Lighting Category P5
GRID 3 : Lighting Category P2
GRID 3 : Undefined (Contribution Light from Public Street Lighting)
GRID 3 : Lighting Category P6 (Parking Bays)
~~~  
P4 : Eav 5.00 to 7.50 ~~ Emin 1.00 Lux  
~~  
P5 Eav 3.00 to 4.50 ~~ Emin 0.60 Lux  
~~~  
P6 Eav 2.00 to 3.00 ~~ Emin 0.40 Lux
~~~~~

## **Outdoor Lighting Report**

**PREPARED BY:** Cencode Limited  
Independant Lighting Design & Consultancy  
cencode.com

## Layout Report

### General Data

Dimensions in Metres Angles in Degrees

### Calculation Grids

| ID | Grid Name | X         | Y         | X' Length | Y' Length | X' Spacing | Y' Spacing |
|----|-----------|-----------|-----------|-----------|-----------|------------|------------|
| 1  | Grid 1    | 341831.96 | 391147.25 | 20.55     | 26.66     | 1.47       | 1.48       |
| 2  | Grid 2    | 341820.32 | 391110.41 | 18.00     | 15.71     | 1.50       | 1.43       |
| 3  | Grid 3    | 341882.34 | 391100.31 | 9.25      | 21.54     | 1.32       | 1.44       |
| 4  | Grid 4    | 341892.29 | 391117.32 | 15.78     | 13.25     | 1.43       | 1.47       |
| 5  | Grid 5    | 341879.02 | 391094.79 | 6.42      | 20.05     | 1.28       | 1.43       |

### Luminares

#### Luminaire A Data



|                      |                       |
|----------------------|-----------------------|
| Supplier             | Prolectric            |
| Type                 | RS10-T2/10W/4000K     |
| Lamp(s)              |                       |
| Lamp Flux (klm)      | 1.78                  |
| File Name            | RS10 T2 10W 4000K.IES |
| Maintenance Factor   | 0.81                  |
| Imax70,80,90(cd/klm) | 292.3, 39.8, 0.0      |
| No. in Project       | 3                     |

#### Luminaire B Data

|                      |                                                                       |
|----------------------|-----------------------------------------------------------------------|
| Supplier             |                                                                       |
| Type                 | BGP291 DW52                                                           |
| Lamp(s)              | LED-HB 5.2S 740                                                       |
| Lamp Flux (klm)      | 2.40                                                                  |
| File Name            | LumiStreet Gen2 Micro_BGP291_DW52_2<br>400_10LED_5.2S_CLO_L90_740.ies |
| Maintenance Factor   | 0.85                                                                  |
| Imax70,80,90(cd/klm) | 639.6, 45.2, 0.0                                                      |
| No. in Project       | 5                                                                     |

#### Luminaire D Data



|                      |                       |
|----------------------|-----------------------|
| Supplier             | Prolectric            |
| Type                 | RS20-T2/20W/4000K     |
| Lamp(s)              |                       |
| Lamp Flux (klm)      | 3.50                  |
| File Name            | RS20 T2 20W 4000K.IES |
| Maintenance Factor   | 1.00                  |
| Imax70,80,90(cd/klm) | 297.1, 41.4, 0.0      |
| No. in Project       | 1                     |

### Layout

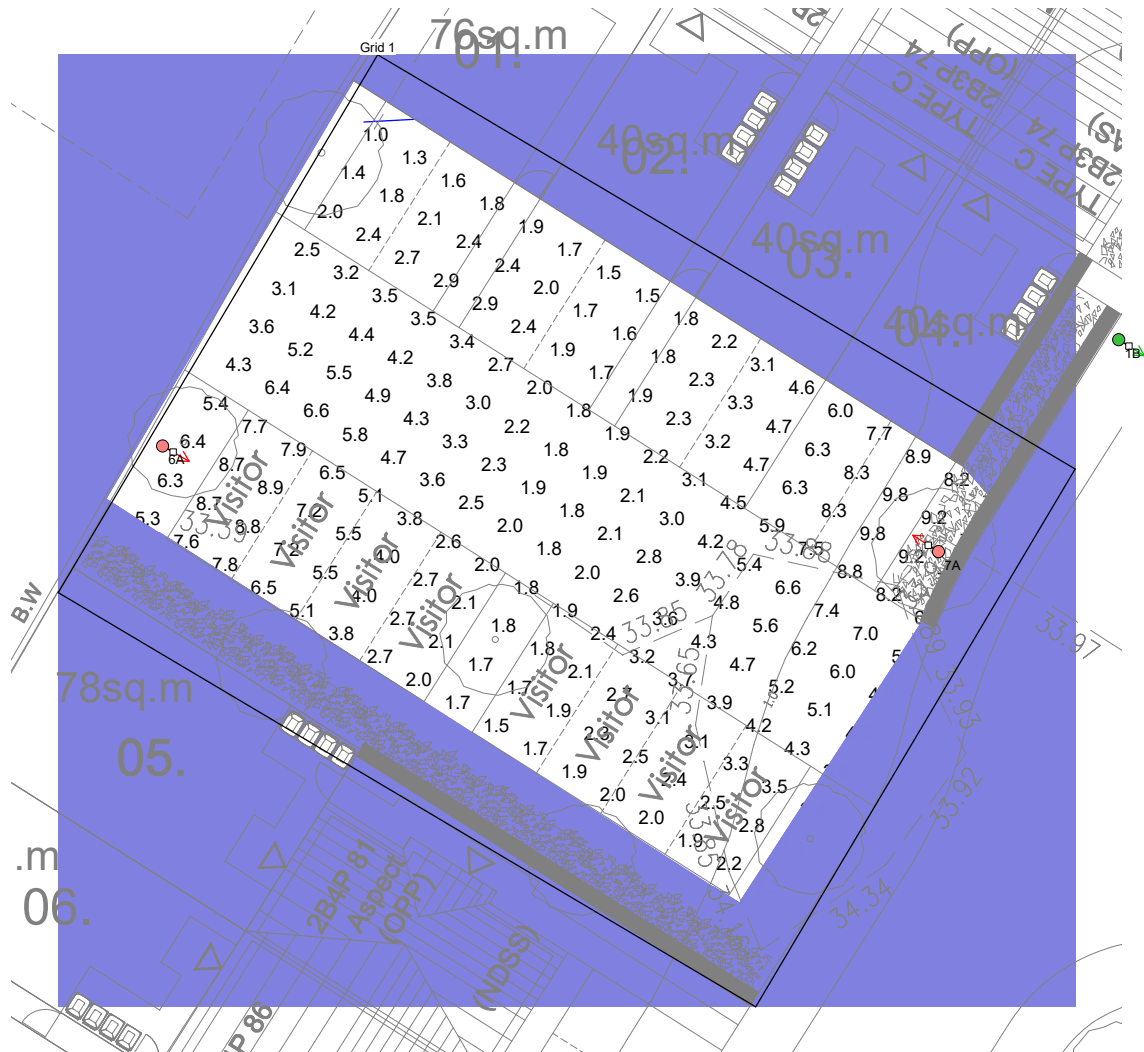
| ID | Type | X         | Y         | Height | Angle  | Tilt  | Cant | Out-reach | Target X | Target Y | Target Z |
|----|------|-----------|-----------|--------|--------|-------|------|-----------|----------|----------|----------|
| 1  | B    | 341843.88 | 391169.17 | 6.00   | 328.00 | 0.00  | 0.00 | 0.40      |          |          |          |
| 2  | B    | 341835.90 | 391136.63 | 6.00   | 150.00 | 0.00  | 0.00 | 0.40      |          |          |          |
| 4  | B    | 341873.64 | 391141.15 | 6.00   | 236.00 | 0.00  | 0.00 | 0.40      |          |          |          |
| 5  | B    | 341850.61 | 391145.21 | 6.00   | 57.00  | 0.00  | 0.00 | 0.40      |          |          |          |
| 6  | B    | 341864.00 | 391129.15 | 6.00   | 326.00 | 0.00  | 0.00 | 0.40      |          |          |          |
| 6  | A    | 341812.47 | 391165.68 | 6.00   | 330.00 | 22.00 | 0.00 | 0.40      |          |          |          |

### Layout Continued

| ID | Type | X         | Y         | Height | Angle  | Tilt  | Cant | Out-reach | Target X | Target Y | Target Z |
|----|------|-----------|-----------|--------|--------|-------|------|-----------|----------|----------|----------|
| 7  | A    | 341837.96 | 391162.21 | 6.00   | 148.00 | 22.00 | 0.00 | 0.40      |          |          |          |
| 8  | A    | 341814.85 | 391113.16 | 6.00   | 59.00  | 22.00 | 0.00 | 0.40      |          |          |          |
| 9  | D    | 341879.36 | 391112.34 | 6.00   | 236.00 | 22.00 | 0.00 | 0.40      |          |          |          |

## Horizontal Illuminance (lux)

Grid 1

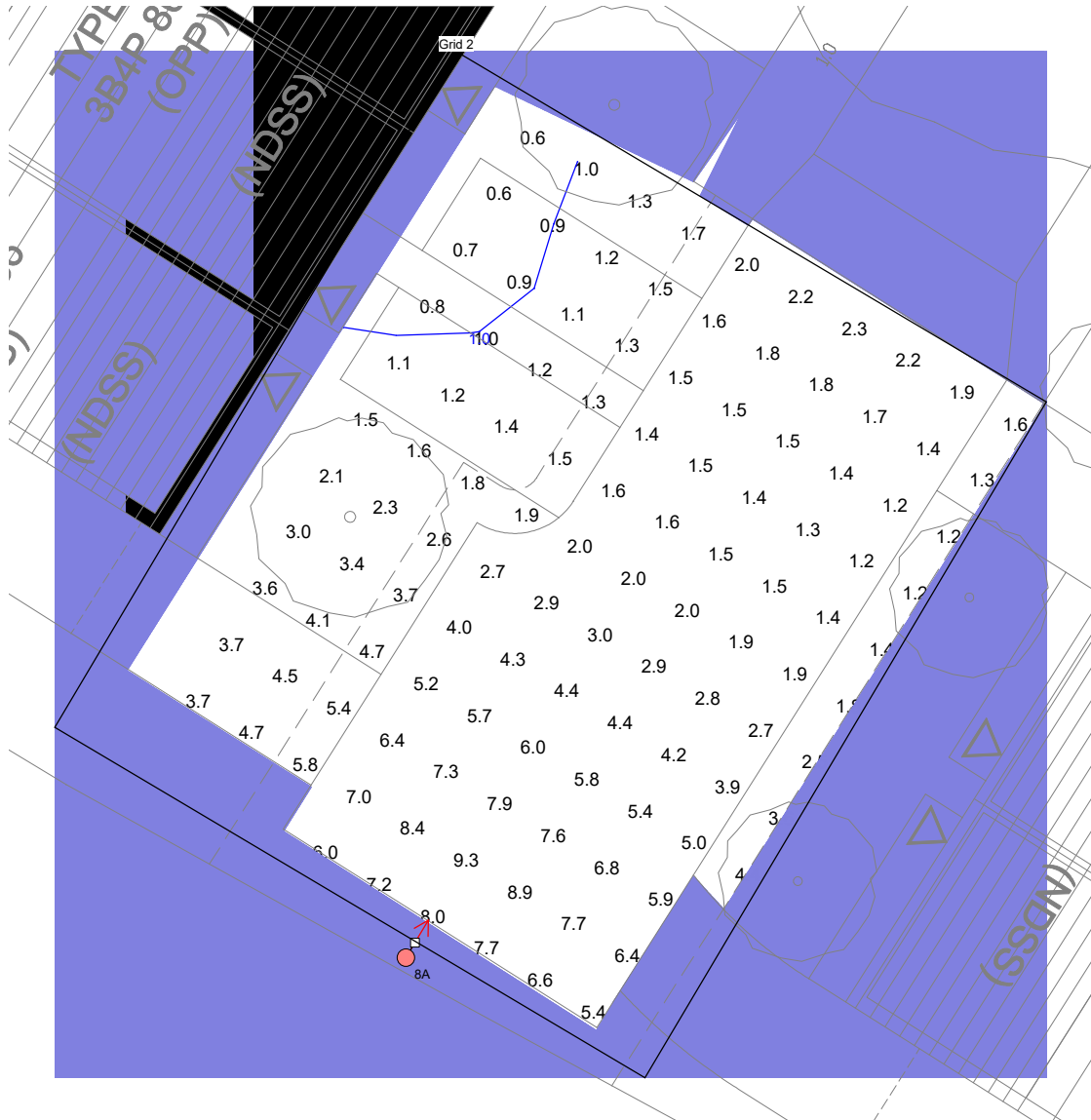


### Results

|           |      |
|-----------|------|
| Eav       | 4.01 |
| Emin      | 1.02 |
| Emax      | 9.79 |
| Emin/Emax | 0.10 |
| Emin/Eav  | 0.25 |
|           |      |

## Horizontal Illuminance (lux)

Grid 2

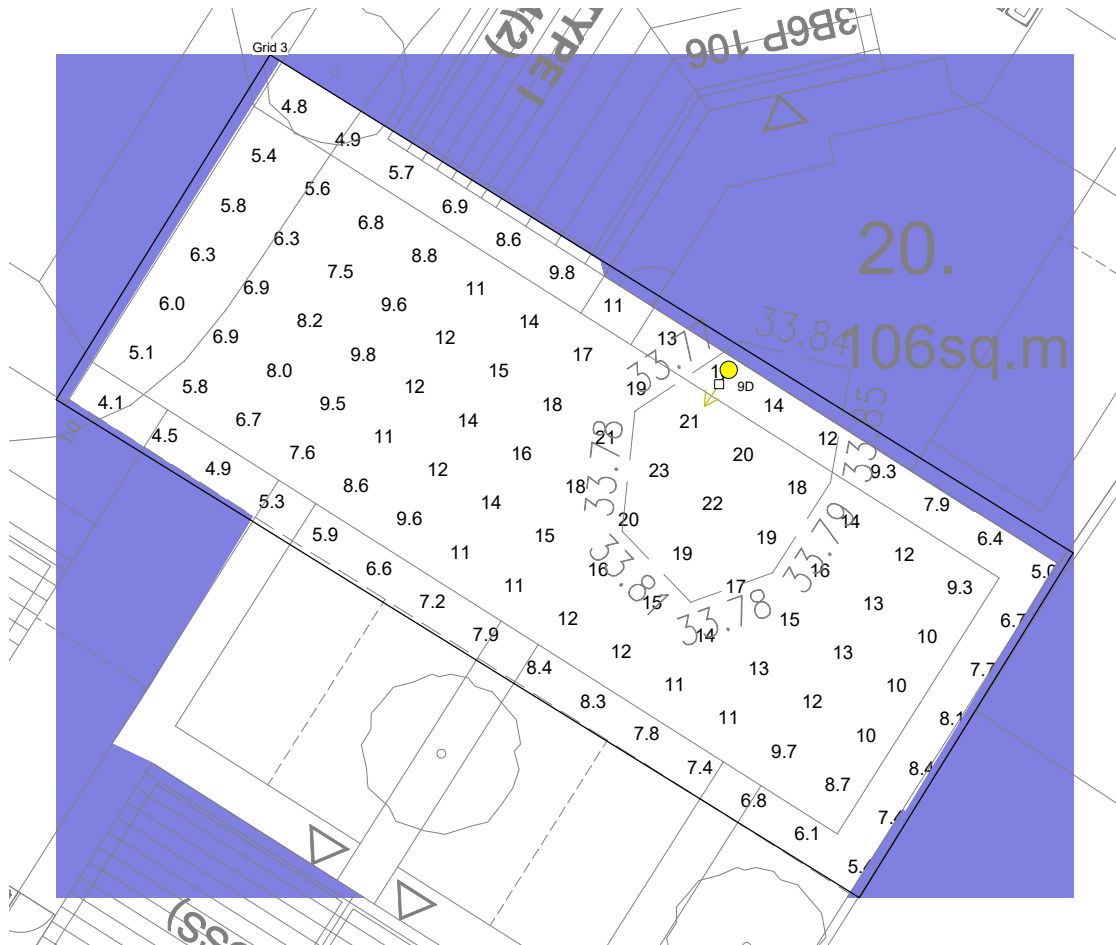


### Results

|           |      |
|-----------|------|
| Eav       | 3.17 |
| Emin      | 0.61 |
| Emax      | 9.25 |
| Emin/Emax | 0.07 |
| Emin/Eav  | 0.19 |
|           |      |

## Horizontal Illuminance (lux)

Grid 3

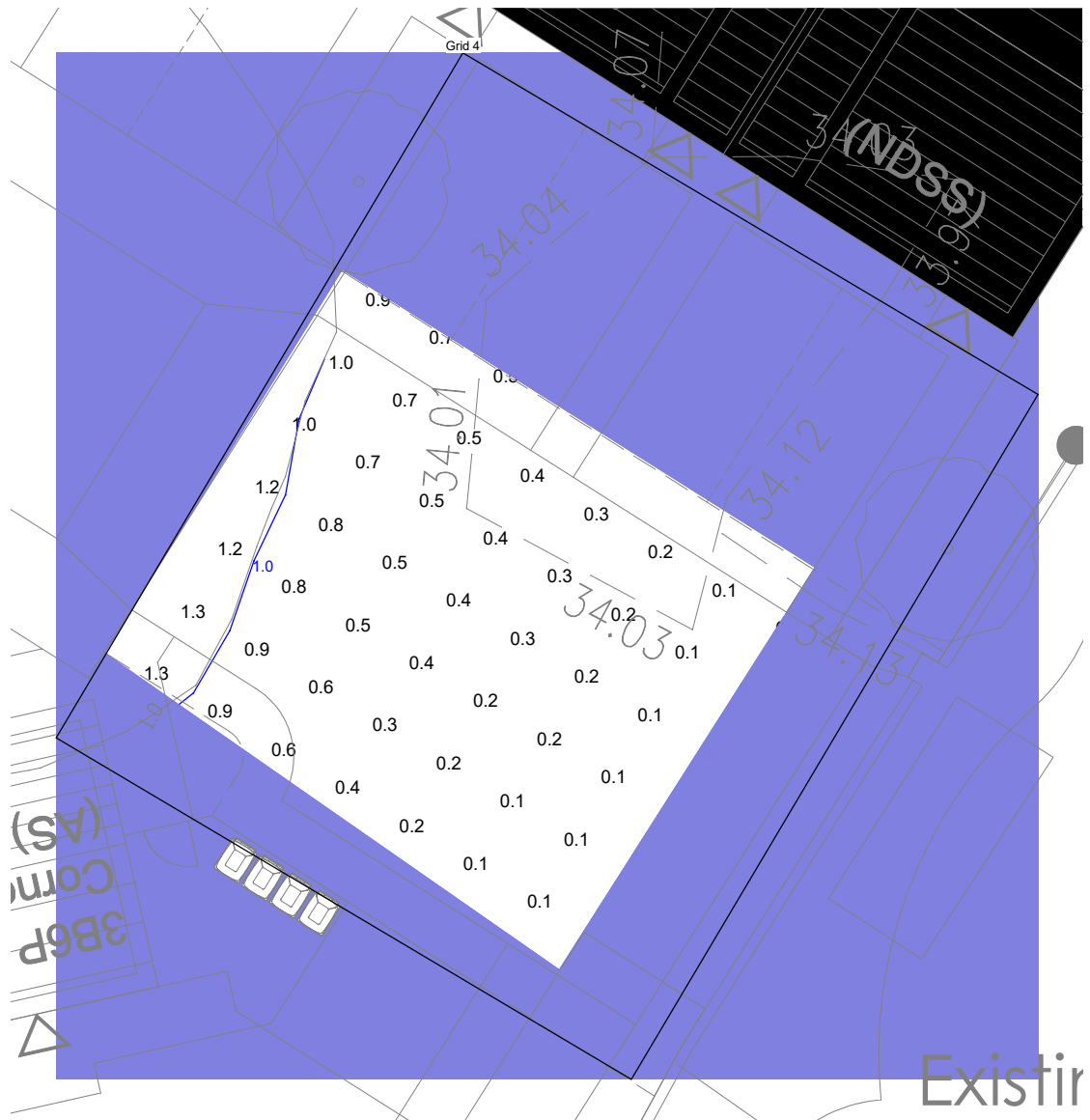


### Results

|           |       |
|-----------|-------|
| Eav       | 10.76 |
| Emin      | 4.08  |
| Emax      | 23.01 |
| Emin/Emax | 0.18  |
| Emin/Eav  | 0.38  |
|           |       |

## Horizontal Illuminance (lux)

Grid 4

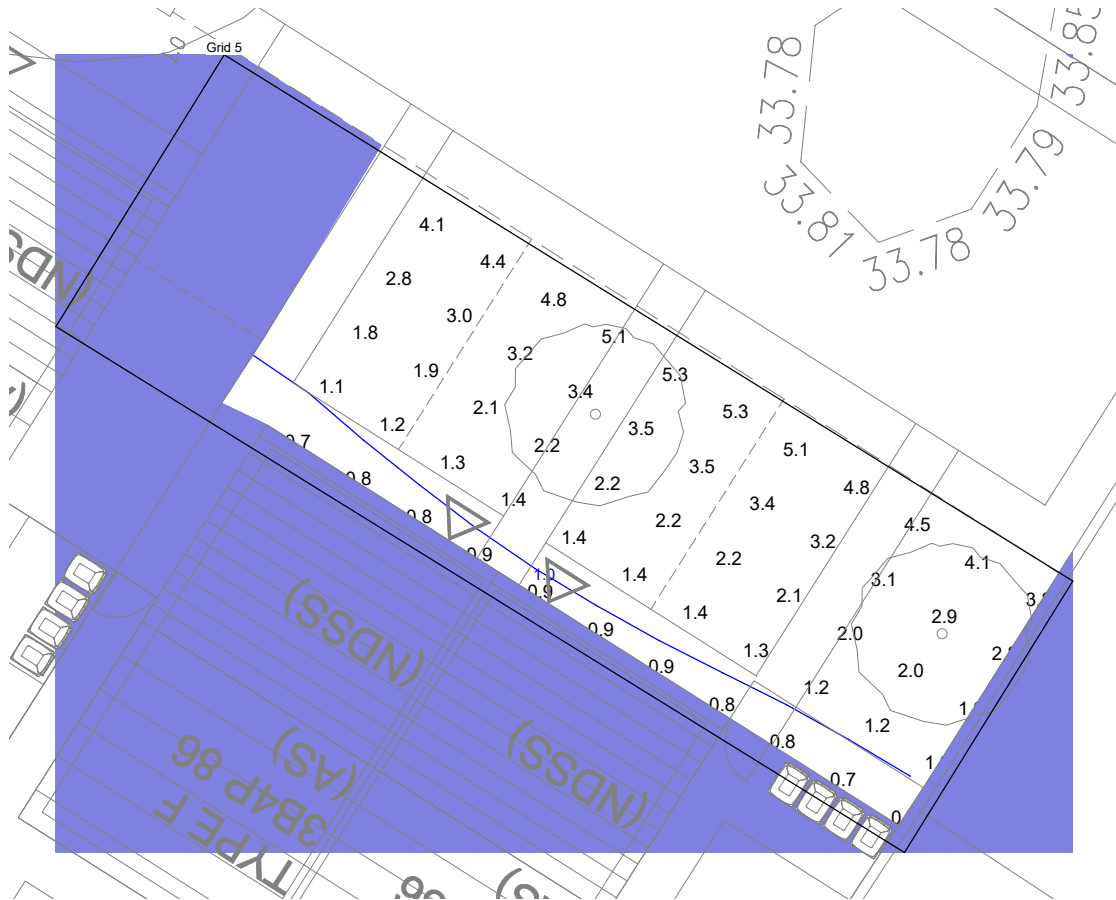


### Results

|           |      |
|-----------|------|
| Eav       | 0.48 |
| Emin      | 0.08 |
| Emax      | 1.31 |
| Emin/Emax | 0.06 |
| Emin/Eav  | 0.17 |
|           |      |

## Horizontal Illuminance (lux)

Grid 5



### Results

|           |      |
|-----------|------|
| Eav       | 2.39 |
| Emin      | 0.72 |
| Emax      | 5.30 |
| Emin/Emax | 0.14 |
| Emin/Eav  | 0.30 |
|           |      |