

**DATE:** 16 June 2025  
**DESIGNER:** Declan Doyle  
**PROJECT No:** KE/RE/CKR/01 rev 1  
**PROJECT NAME:** Crodaun Kildare residential phase 2



Lighting to IS EN 13201-2: 2015

Residential Lighting to class P3, Walkway lighting to class C4  
Main road lighting to class P2, Entrance lighting to class C3  
Dimming to U14 regime, 3000k colour temp.

- A) Philips Lumistreet Eco BGS010 DW, 4.00klm, 26w clo
- B) Philips Lumistreet micro BGP291 DX51, 2.20klm, 15w clo
- C) Philips Lumistreet micro BGP291 DRXN1, 1.20klm, 8w clo
- D) Philips Citysoul mini BGP530 T35 S, 5.00klm, 30w clo
- E) Philips Lumistreet mini BGP292 DW10, 8.50klm, 48w clo  
c/w nema 7 pin socket

6m columns estate/8m columns main road

## **Outdoor Lighting Report**

**NOTE: PLEASE SEE PHASE 2 LIGHTING LAYOUT  
FOR LIST OF LUMINAIRES COVERED IN PHASE 1**

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## 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  | Estate 2                 | 74.33  | 200.52 | 380.39    | 129.84    | 1.52       | 1.49       |
| 2  | Walkways                 | 74.33  | 200.43 | 385.39    | 129.93    | 1.54       | 1.49       |
| 3  | Entrance 1               | 252.30 | 205.83 | 40.30     | 18.51     | 1.49       | 1.42       |
| 4  | Entrance 1 conflict zone | 259.46 | 208.58 | 23.94     | 14.57     | 1.50       | 1.46       |
| 5  | Entrance 2               | 330.22 | 195.44 | 143.54    | 32.70     | 1.50       | 1.49       |
| 6  | Entrance 2 conflict zone | 429.68 | 233.45 | 31.11     | 24.49     | 1.48       | 1.44       |

### Luminaires

#### Luminaire A Data

|                      |                                           |
|----------------------|-------------------------------------------|
| Supplier             |                                           |
| Type                 | LumiStreet gen2 Eco                       |
| Lamp(s)              | LED40 L95@100kh /730 T25                  |
| Lamp Flux (klm)      | 4.00                                      |
| File Name            | BGS010 T25 FP LED40 L95@100kh-730 D W.ies |
| Maintenance Factor   | 0.76                                      |
| Imax70,80,90(cd/klm) | 682.8, 25.9, 0.0                          |
| No. in Project       | 41                                        |



#### Luminaire C Data

|                    |                                                                   |
|--------------------|-------------------------------------------------------------------|
| Supplier           | Philips                                                           |
| Type               | BGP291 DRXN1                                                      |
| Lamp(s)            | LED-HB 5.2S 730                                                   |
| Lamp Flux (klm)    | 1.20                                                              |
| File Name          | LumiStreet Gen2 Micro_BGP291_DRXN1_1200_6LED_5.2S_CLO_L90_730.ies |
| Maintenance Factor | 0.76                                                              |
| Lum. Int. Class    | G3                                                                |
| No. in Project     | 21                                                                |



#### Luminaire E Data

|                    |                                                                  |
|--------------------|------------------------------------------------------------------|
| Supplier           | Philips                                                          |
| Type               | BGP292 DW10                                                      |
| Lamp(s)            | LED-HB 5.2S 730                                                  |
| Lamp Flux (klm)    | 6.50                                                             |
| File Name          | LumiStreet Gen2 Mini_BGP292_DW10_6500_40LED_5.2S_CLO_L90_730.ies |
| Maintenance Factor | 0.84                                                             |
| Lum. Int. Class    | G2                                                               |
| No. in Project     | 12                                                               |

#### Luminaire B Data

|                    |                                                                   |
|--------------------|-------------------------------------------------------------------|
| Supplier           | Philips                                                           |
| Type               | BGP291 DX51                                                       |
| Lamp(s)            | LED-HB 5.2S 730                                                   |
| Lamp Flux (klm)    | 2.20                                                              |
| File Name          | LumiStreet Gen2 Micro_BGP291_DX51_2200_10LED_5.2S_CLO_L90_730.ies |
| Maintenance Factor | 0.76                                                              |
| Lum. Int. Class    | G4                                                                |
| No. in Project     | 58                                                                |



#### Luminaire D Data

|                      |                              |
|----------------------|------------------------------|
| Supplier             | Philips                      |
| Type                 | BGP530 T35 S GRN50/- NO      |
| Lamp(s)              | GRN50/830/-                  |
| LampFlux(klm)/Colour | 5.00 -/                      |
| File Name            | BGP530 T35 1xGRN50_830 S.Idt |
| Maintenance Factor   | 0.76                         |
| Lum. Int. Class      | G3                           |
| No. in Project       | 2                            |



**Layout**

| ID  | Type | X      | Y      | Height | Angle  | Tilt | Cant | Out-reach | Target X | Target Y | Target Z |
|-----|------|--------|--------|--------|--------|------|------|-----------|----------|----------|----------|
| 29  | A    | 415.10 | 345.70 | 6.00   | 270.00 | 5.00 | 0.00 | 0.00      |          |          |          |
| 30  | A    | 439.50 | 345.78 | 6.00   | 271.00 | 5.00 | 0.00 | 0.00      |          |          |          |
| 34  | A    | 396.29 | 331.62 | 6.00   | 91.00  | 5.00 | 0.00 | 0.00      |          |          |          |
| 36  | A    | 347.83 | 345.74 | 6.00   | 270.00 | 5.00 | 0.00 | 0.00      |          |          |          |
| 37  | A    | 376.56 | 345.76 | 6.00   | 270.00 | 5.00 | 0.00 | 0.00      |          |          |          |
| 38  | A    | 318.96 | 345.72 | 6.00   | 270.00 | 5.00 | 0.00 | 0.00      |          |          |          |
| 39  | A    | 290.14 | 345.68 | 6.00   | 269.00 | 5.00 | 0.00 | 0.00      |          |          |          |
| 68  | A    | 250.79 | 345.76 | 6.00   | 270.00 | 5.00 | 0.00 | 0.00      |          |          |          |
| 69  | A    | 221.98 | 345.72 | 6.00   | 269.00 | 5.00 | 0.00 | 0.00      |          |          |          |
| 70  | A    | 193.15 | 345.78 | 6.00   | 270.00 | 5.00 | 0.00 | 0.00      |          |          |          |
| 71  | A    | 164.34 | 345.80 | 6.00   | 270.00 | 5.00 | 0.00 | 0.00      |          |          |          |
| 72  | A    | 139.06 | 344.58 | 6.00   | 33.00  | 5.00 | 0.00 | 0.00      |          |          |          |
| 74  | B    | 251.92 | 329.68 | 6.00   | 89.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 113 | B    | 180.16 | 335.83 | 6.00   | 89.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 114 | B    | 227.91 | 329.68 | 6.00   | 90.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 77  | B    | 161.42 | 323.31 | 6.00   | 179.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 78  | A    | 385.50 | 317.86 | 6.00   | 179.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 80  | A    | 266.27 | 335.93 | 6.00   | 0.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 81  | B    | 286.53 | 329.74 | 6.00   | 89.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 82  | B    | 305.38 | 329.69 | 6.00   | 89.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 83  | B    | 345.65 | 335.53 | 6.00   | 89.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 84  | A    | 322.74 | 333.09 | 6.00   | 180.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 85  | B    | 364.82 | 323.11 | 6.00   | 359.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 86  | B    | 199.76 | 325.22 | 6.00   | 1.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 87  | A    | 140.82 | 324.03 | 6.00   | 359.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 88  | A    | 414.85 | 330.13 | 6.00   | 90.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 89  | B    | 123.22 | 348.05 | 6.00   | 335.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 90  | C    | 134.84 | 328.63 | 6.00   | 14.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 91  | C    | 116.21 | 333.34 | 6.00   | 332.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 92  | B    | 211.88 | 319.48 | 6.00   | 181.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 93  | A    | 275.81 | 346.43 | 6.00   | 180.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 32  | B    | 161.41 | 306.32 | 6.00   | 181.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 33  | A    | 140.59 | 296.66 | 6.00   | 359.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 34  | B    | 155.09 | 287.99 | 6.00   | 181.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 35  | B    | 162.61 | 278.71 | 6.00   | 270.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 36  | B    | 179.30 | 278.64 | 6.00   | 271.00 | 0.00 | 0.00 | 0.00      |          |          |          |

**Layout Continued**

| ID | Type | X      | Y      | Height | Angle  | Tilt | Cant | Out-reach | Target X | Target Y | Target Z |
|----|------|--------|--------|--------|--------|------|------|-----------|----------|----------|----------|
| 37 | B    | 196.07 | 278.78 | 6.00   | 270.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 38 | A    | 140.60 | 270.51 | 6.00   | 0.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 39 | A    | 159.79 | 259.03 | 6.00   | 91.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 40 | A    | 204.75 | 259.20 | 6.00   | 91.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 41 | A    | 181.00 | 259.16 | 6.00   | 91.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 42 | B    | 200.16 | 305.26 | 6.00   | 0.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 43 | B    | 203.50 | 285.03 | 6.00   | 0.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 44 | B    | 221.06 | 291.05 | 6.00   | 270.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 45 | B    | 239.93 | 290.95 | 6.00   | 270.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 46 | B    | 254.80 | 291.00 | 6.00   | 270.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 47 | B    | 222.51 | 270.74 | 6.00   | 91.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 48 | B    | 242.31 | 270.61 | 6.00   | 91.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 49 | B    | 259.78 | 270.67 | 6.00   | 91.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 50 | B    | 263.06 | 319.39 | 6.00   | 1.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 51 | B    | 263.14 | 301.24 | 6.00   | 0.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 52 | B    | 284.08 | 290.98 | 6.00   | 268.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 53 | B    | 307.72 | 291.06 | 6.00   | 270.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 54 | B    | 297.19 | 291.11 | 6.00   | 270.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 55 | B    | 285.36 | 270.61 | 6.00   | 91.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 56 | B    | 305.97 | 270.66 | 6.00   | 90.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 57 | A    | 266.55 | 287.23 | 6.00   | 0.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 58 | A    | 274.22 | 275.97 | 6.00   | 180.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 59 | B    | 261.20 | 260.61 | 6.00   | 359.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 60 | B    | 279.56 | 264.74 | 6.00   | 181.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 61 | A    | 266.66 | 248.39 | 6.00   | 0.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 62 | A    | 274.21 | 231.19 | 6.00   | 180.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 63 | B    | 314.44 | 319.46 | 6.00   | 0.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 64 | B    | 314.40 | 301.78 | 6.00   | 0.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 65 | B    | 323.16 | 284.56 | 6.00   | 180.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 66 | A    | 323.20 | 258.43 | 6.00   | 90.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 67 | A    | 343.45 | 258.49 | 6.00   | 90.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 68 | A    | 374.24 | 266.50 | 6.00   | 118.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 69 | B    | 329.85 | 278.85 | 6.00   | 269.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 70 | B    | 346.47 | 279.01 | 6.00   | 269.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 71 | B    | 363.12 | 278.77 | 6.00   | 269.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 72 | A    | 384.87 | 281.53 | 6.00   | 179.00 | 0.00 | 0.00 | 0.00      |          |          |          |

**Layout Continued**

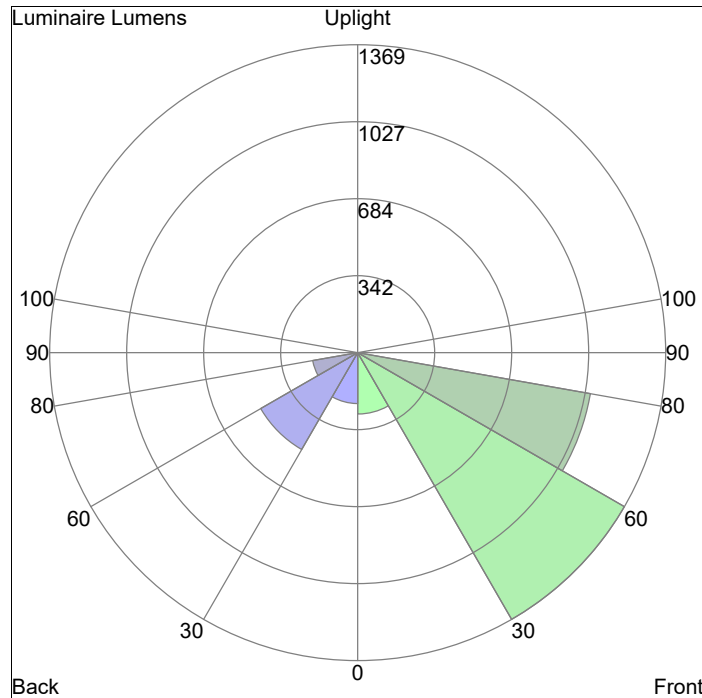
| ID  | Type | X      | Y      | Height | Angle  | Tilt | Cant | Out-reach | Target X | Target Y | Target Z |
|-----|------|--------|--------|--------|--------|------|------|-----------|----------|----------|----------|
| 73  | B    | 369.42 | 284.72 | 6.00   | 359.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 74  | A    | 393.15 | 288.50 | 6.00   | 89.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 75  | A    | 393.66 | 306.71 | 6.00   | 269.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 76  | B    | 365.19 | 305.25 | 6.00   | 1.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 77  | A    | 405.06 | 317.26 | 6.00   | 339.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 78  | B    | 422.50 | 295.20 | 6.00   | 140.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 79  | B    | 428.62 | 304.66 | 6.00   | 159.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 80  | A    | 428.34 | 318.90 | 6.00   | 172.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 81  | A    | 425.68 | 284.43 | 6.00   | 229.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 82  | A    | 415.83 | 274.62 | 6.00   | 48.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 83  | A    | 426.02 | 260.98 | 6.00   | 19.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 84  | A    | 440.84 | 268.39 | 6.00   | 205.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 85  | B    | 212.06 | 296.66 | 6.00   | 180.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 86  | D    | 127.57 | 311.33 | 6.00   | 0.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 87  | D    | 93.25  | 245.45 | 6.00   | 0.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 88  | C    | 103.67 | 299.32 | 6.00   | 156.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 89  | B    | 97.54  | 276.85 | 6.00   | 172.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 90  | C    | 108.18 | 284.06 | 6.00   | 81.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 91  | C    | 117.55 | 273.24 | 6.00   | 352.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 92  | C    | 127.94 | 261.46 | 6.00   | 77.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 93  | B    | 116.55 | 245.24 | 6.00   | 258.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 94  | B    | 132.98 | 242.11 | 6.00   | 259.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 95  | C    | 79.30  | 237.30 | 6.00   | 343.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 96  | C    | 141.24 | 247.40 | 6.00   | 351.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 97  | B    | 154.11 | 240.10 | 6.00   | 265.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 98  | B    | 166.63 | 239.22 | 6.00   | 264.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 99  | B    | 187.27 | 238.18 | 6.00   | 266.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 100 | B    | 204.30 | 236.98 | 6.00   | 265.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 101 | B    | 220.27 | 236.56 | 6.00   | 270.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 102 | B    | 232.88 | 236.54 | 6.00   | 270.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 103 | C    | 211.43 | 245.33 | 6.00   | 0.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 104 | C    | 228.74 | 254.81 | 6.00   | 91.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 105 | C    | 240.83 | 260.17 | 6.00   | 180.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 106 | C    | 254.79 | 238.71 | 6.00   | 304.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 107 | C    | 285.03 | 238.70 | 6.00   | 234.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 108 | B    | 303.52 | 236.59 | 6.00   | 270.00 | 0.00 | 0.00 | 0.00      |          |          |          |

**Layout Continued**

| ID  | Type | X      | Y      | Height | Angle  | Tilt | Cant | Out-reach | Target X | Target Y | Target Z |
|-----|------|--------|--------|--------|--------|------|------|-----------|----------|----------|----------|
| 109 | B    | 320.49 | 236.55 | 6.00   | 270.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 110 | C    | 299.87 | 260.48 | 6.00   | 0.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 111 | C    | 311.07 | 257.39 | 6.00   | 91.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 112 | C    | 327.60 | 245.76 | 6.00   | 7.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 113 | C    | 362.61 | 248.30 | 6.00   | 9.00   | 0.00 | 0.00 | 0.00      |          |          |          |
| 114 | B    | 337.53 | 238.62 | 6.00   | 278.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 115 | B    | 354.21 | 241.13 | 6.00   | 279.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 116 | B    | 401.95 | 272.83 | 6.00   | 147.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 117 | C    | 84.54  | 257.25 | 6.00   | 347.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 118 | C    | 452.03 | 299.84 | 6.00   | 354.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 119 | C    | 450.10 | 278.95 | 6.00   | 354.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 120 | C    | 130.31 | 280.17 | 6.00   | 80.00  | 0.00 | 0.00 | 0.00      |          |          |          |
| 121 | E    | 253.24 | 224.01 | 8.00   | 268.00 | 5.00 | 0.00 | 2.00      |          |          |          |
| 122 | E    | 283.08 | 205.52 | 8.00   | 90.00  | 5.00 | 0.00 | 2.00      |          |          |          |
| 123 | A    | 277.27 | 222.35 | 6.00   | 217.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 124 | A    | 264.35 | 222.66 | 6.00   | 316.00 | 0.00 | 0.00 | 0.00      |          |          |          |
| 125 | E    | 335.51 | 207.46 | 8.00   | 101.00 | 5.00 | 0.00 | 2.00      |          |          |          |
| 126 | E    | 369.84 | 213.48 | 8.00   | 107.00 | 5.00 | 0.00 | 2.00      |          |          |          |
| 127 | E    | 402.67 | 222.41 | 8.00   | 109.00 | 5.00 | 0.00 | 2.00      |          |          |          |
| 128 | E    | 437.02 | 233.75 | 8.00   | 111.00 | 5.00 | 0.00 | 2.00      |          |          |          |
| 129 | E    | 459.32 | 242.89 | 8.00   | 114.00 | 5.00 | 0.00 | 2.00      |          |          |          |
| 130 | E    | 347.55 | 228.85 | 8.00   | 281.00 | 5.00 | 0.00 | 2.00      |          |          |          |
| 131 | E    | 381.48 | 234.96 | 8.00   | 282.00 | 5.00 | 0.00 | 2.00      |          |          |          |
| 132 | E    | 409.03 | 243.34 | 8.00   | 290.00 | 5.00 | 0.00 | 2.00      |          |          |          |
| 133 | E    | 425.76 | 257.83 | 8.00   | 292.00 | 5.00 | 0.00 | 2.00      |          |          |          |
| 134 | E    | 448.07 | 265.54 | 8.00   | 292.00 | 5.00 | 0.00 | 2.00      |          |          |          |

## Luminaire Classification System (LCS) Graphs

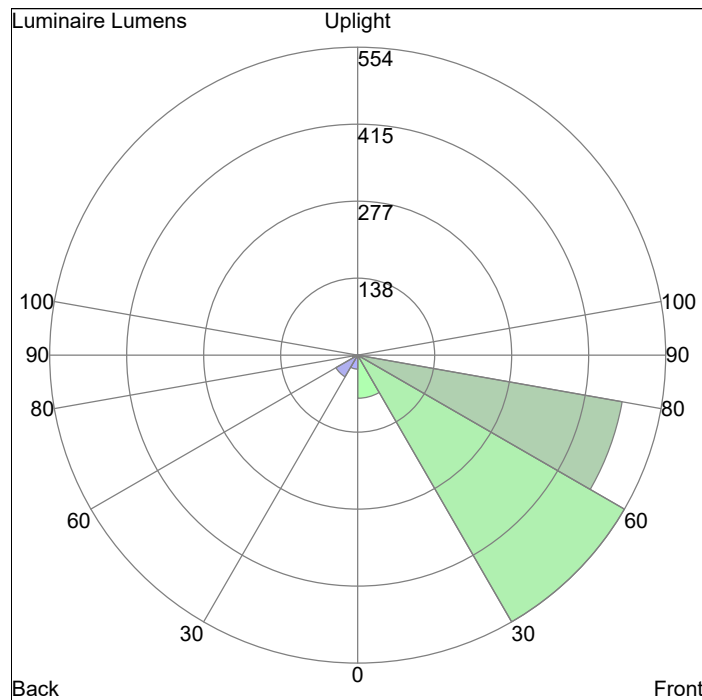
### Luminaire A LumiStreet gen2 Eco



| LCS   | Lumens | %Lamp | %Lum  |
|-------|--------|-------|-------|
| FL    | 273.2  | 6.8   | 7.5   |
| FM    | 1368.8 | 34.2  | 37.6  |
| FH    | 1050.6 | 26.3  | 28.9  |
| FVH   | 12.6   | 0.3   | 0.3   |
| BL    | 226.5  | 5.7   | 6.2   |
| BM    | 497.1  | 12.4  | 13.7  |
| BH    | 202.6  | 5.1   | 5.6   |
| BVH   | 8.5    | 0.2   | 0.2   |
| UL    | 0.0    | 0.0   | 0.0   |
| UH    | 0.0    | 0.0   | 0.0   |
| Total | 3640.1 | 91.0  | 100.0 |

BUG rating=B1-U0-G1

### Luminaire B BGP291 DX51

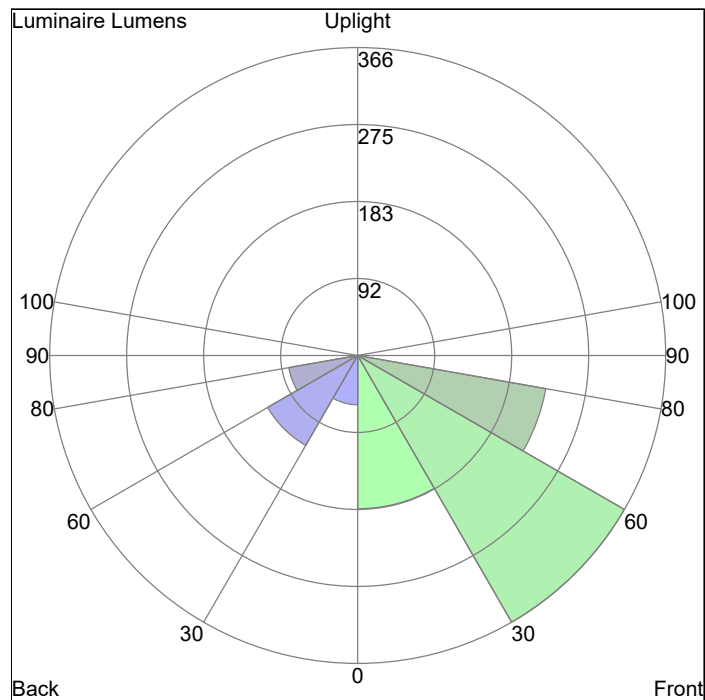


| LCS   | Lumens | %Lamp | %Lum  |
|-------|--------|-------|-------|
| FL    | 77.7   | 3.5   | 6.5   |
| FM    | 553.5  | 25.2  | 46.2  |
| FH    | 482.7  | 21.9  | 40.3  |
| FVH   | 3.0    | 0.1   | 0.3   |
| BL    | 25.2   | 1.1   | 2.1   |
| BM    | 45.1   | 2.0   | 3.8   |
| BH    | 9.3    | 0.4   | 0.8   |
| BVH   | 0.3    | 0.0   | 0.0   |
| UL    | 0.0    | 0.0   | 0.0   |
| UH    | 0.0    | 0.0   | 0.0   |
| Total | 1197.1 | 54.4  | 100.0 |

BUG rating=B0-U0-G0

## Luminaire Classification System (LCS) Graphs Continued

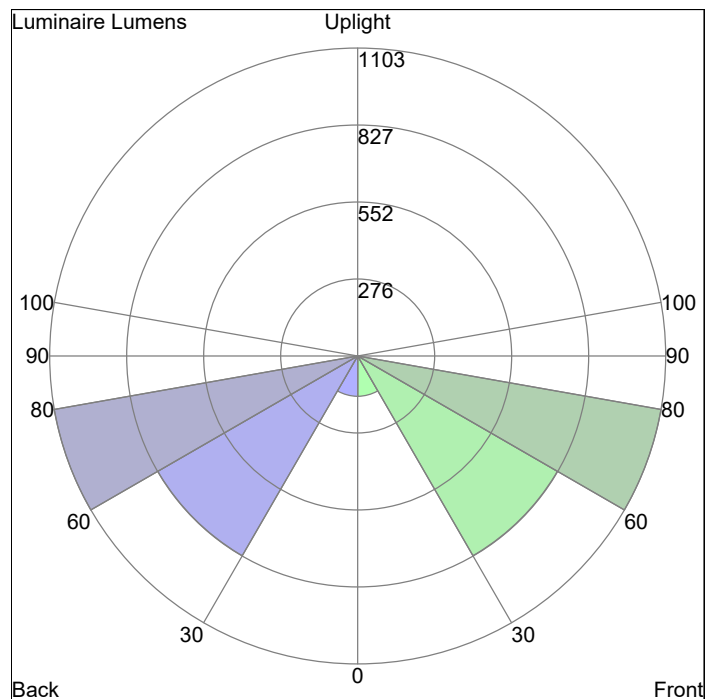
### Luminaire C BGP291 DRXN1



| LCS   | Lumens | %Lamp | %Lum  |
|-------|--------|-------|-------|
| FL    | 182.2  | 15.2  | 17.4  |
| FM    | 366.1  | 30.5  | 35.0  |
| FH    | 227.1  | 18.9  | 21.7  |
| FVH   | 2.8    | 0.2   | 0.3   |
| BL    | 58.7   | 4.9   | 5.6   |
| BM    | 123.5  | 10.3  | 11.8  |
| BH    | 83.0   | 6.9   | 7.9   |
| BVH   | 1.7    | 0.1   | 0.2   |
| UL    | 0.0    | 0.0   | 0.0   |
| UH    | 0.0    | 0.0   | 0.0   |
| Total | 1044.9 | 87.1  | 100.0 |

BUG rating=B1-U0-G0

### Luminaire D BGP530 T35 S GRN50/- NO

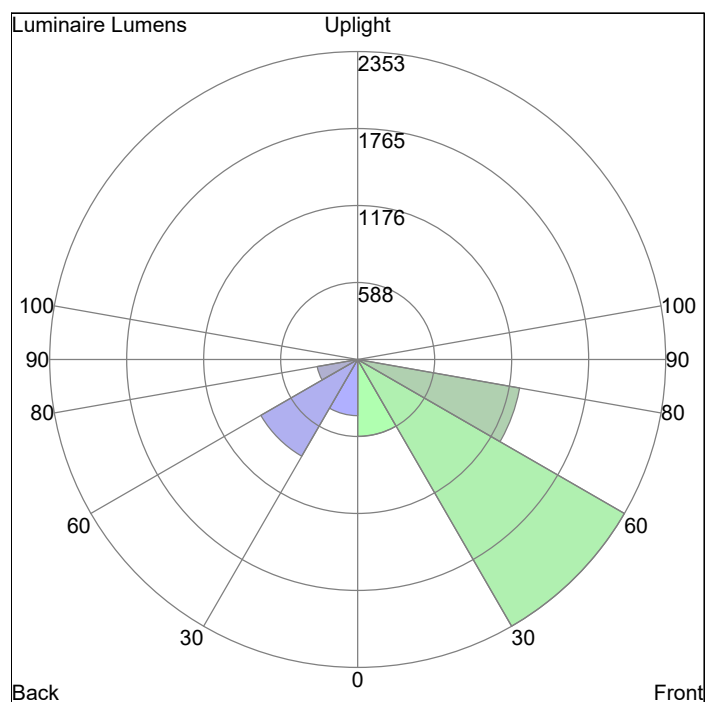


| LCS   | Lumens | %Lamp | %Lum  |
|-------|--------|-------|-------|
| FL    | 144.5  | 2.9   | 3.5   |
| FM    | 825.9  | 16.5  | 19.8  |
| FH    | 1103.1 | 22.1  | 26.4  |
| FVH   | 12.3   | 0.2   | 0.3   |
| BL    | 144.5  | 2.9   | 3.5   |
| BM    | 825.9  | 16.5  | 19.8  |
| BH    | 1103.1 | 22.1  | 26.4  |
| BVH   | 12.3   | 0.2   | 0.3   |
| UL    | 0.0    | 0.0   | 0.0   |
| UH    | 0.0    | 0.0   | 0.0   |
| Total | 4172.0 | 83.4  | 100.0 |

BUG rating=B3-U0-G1

## Luminaire Classification System (LCS) Graphs Continued

### Luminaire E BGP292 DW10



| LCS   | Lumens | %Lamp | %Lum  |
|-------|--------|-------|-------|
| FL    | 587.6  | 9.0   | 10.1  |
| FM    | 2352.7 | 36.2  | 40.5  |
| FH    | 1256.3 | 19.3  | 21.6  |
| FVH   | 12.2   | 0.2   | 0.2   |
| BL    | 429.6  | 6.6   | 7.4   |
| BM    | 853.5  | 13.1  | 14.7  |
| BH    | 312.9  | 4.8   | 5.4   |
| BVH   | 3.9    | 0.1   | 0.1   |
| UL    | 0.0    | 0.0   | 0.0   |
| UH    | 0.0    | 0.0   | 0.0   |
| Total | 5809.3 | 89.4  | 100.0 |

BUG rating=B2-U0-G1

**Horizontal Illuminance (lux)**

## Estate 2

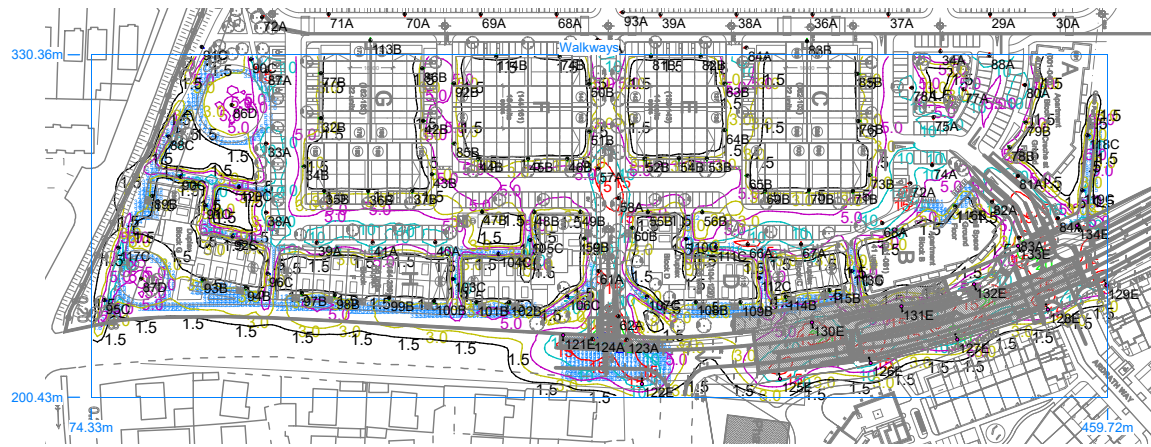


## Results

|                       |       |
|-----------------------|-------|
| Eav                   | 8.69  |
| Emin                  | 1.58  |
| E <sub>max</sub>      | 26.18 |
| Emin/E <sub>max</sub> | 0.06  |
| Emin/Eav              | 0.18  |
| E <sub>max</sub> /Eav | 3.01  |

## Horizontal Illuminance (lux)

### Walkways

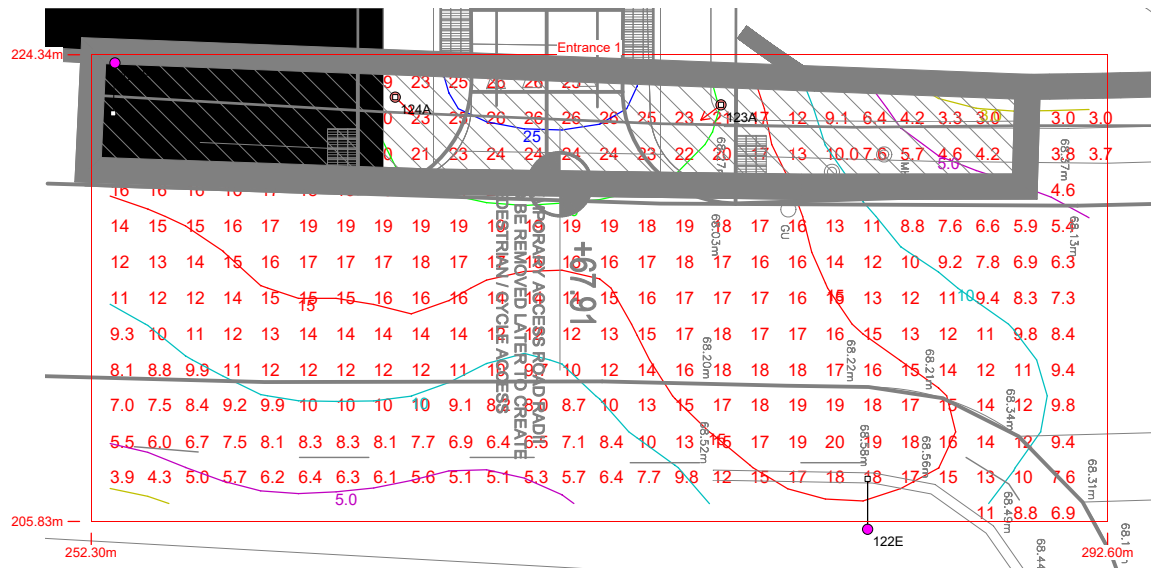


### Results

|           |       |
|-----------|-------|
| Eav       | 6.92  |
| Emin      | 1.51  |
| Emax      | 26.37 |
| Emin/Emax | 0.06  |
| Emin/Eav  | 0.22  |
| Emax/Eav  | 3.81  |

## Horizontal Illuminance (lux)

Entrance 1

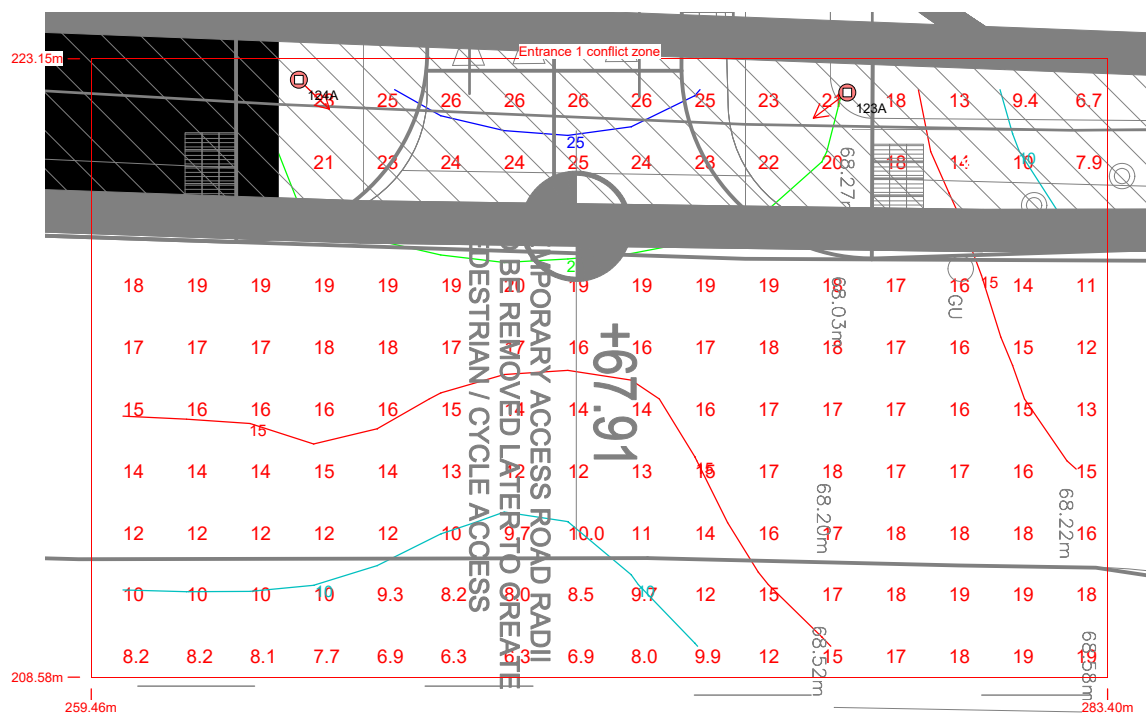


### Results

|           |       |
|-----------|-------|
| Eav       | 13.54 |
| Emin      | 2.93  |
| Emax      | 26.40 |
| Emin/Emax | 0.11  |
| Emin/Eav  | 0.22  |
| Emax/Eav  | 1.95  |

**Horizontal Illuminance (lux)**

Entrance 1 conflict zone

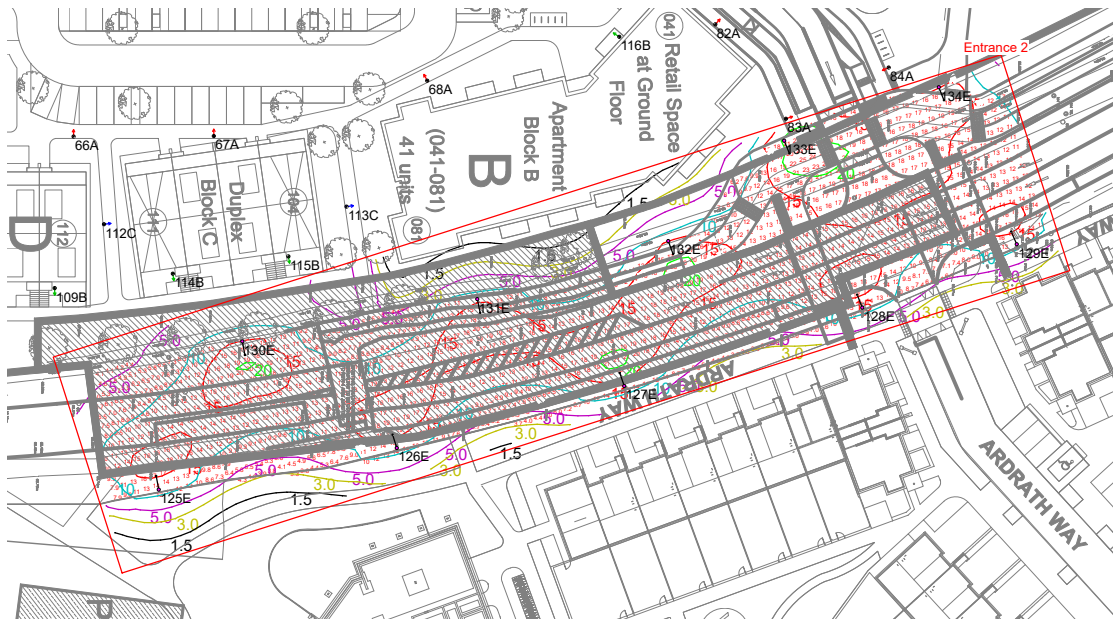


## Results

|           |       |
|-----------|-------|
| Eav       | 15.96 |
| Emin      | 6.31  |
| Emax      | 26.33 |
| Emin/Emax | 0.24  |
| Emin/Eav  | 0.40  |
| Emax/Eav  | 1.65  |

## Horizontal Illuminance (lux)

Entrance 2



### Results

|           |       |
|-----------|-------|
| Eav       | 13.21 |
| Emin      | 3.30  |
| Emax      | 24.59 |
| Emin/Emax | 0.13  |
| Emin/Eav  | 0.25  |
| Emax/Eav  | 1.86  |

