

**DATE:** 8 March 2022  
**DESIGNER:** DKPI  
**PROJECT No:** M88  
**PROJECT NAME:** Bessborough - phase 1 - Meadows

**LIGHTING  
REALITY**

Calculations for main feeder road comply with Cat P3 ( Eav of 7.5 Lux & Emin of 1.5 Lux.)  
Calculations for inner estate roads and footpaths comply with Cat P4 ( Eav of 5 Lux & Emin of 1 Lux.)  
Junction at feeder road complies with Cat P2 & C3 class.  
Fittings used;  
A7 to A15 = upgraded to Philips BGP307 LED 28W on new 6 mtr columns- 3000K  
A1 to A6 = new Philips BGP307 LED 28W on existing 6 mtr columns- 3000K  
C16 to C33 = Philips BGP760 LED 19W on 4.5 mtr column 3000K  
Columns, cabling and ducting all to latest Local Authority Standards and Guidelines.

## **2 of 3 ESTATE**

**Public Lighting design for above mentioned project :  
Public lighting for estate roads and pedestrian pathways  
for this development has been designed to comply with  
EN13201-2015 and according to the Public Lighting - Local  
Authority Guidelines.  
Maintanance factor is taken as 0.80, all fittings to be LED and  
have CLO function. Colour to be 3000K, with Nema socket,  
dimming to dim to U15 satisfying energy saving during low  
traffic hrs.**

**PREPARED BY:** Ben van Deventer  
DKP International  
CBG House  
Kenmare  
Co Kerry  
Design Software from:  
Lighting Reality Ltd

## Layout Report

### General Data

Dimensions in Metres Angles in Degrees  
Grid Origin 1151.1m x 136.3m  
Area 179.0m x 185.3m  
Sample Spacing 0.88m x 1.00m

### Luminaires

#### Luminaire A Data

Supplier	
Type	BGP307 T25 DM50 LED40/740 NO
Lamp(s)	LED40-4S/740
Lamp Flux (klm)	4.00
File Name	ofmt1_bgp307t25xled40-4s740dm50.ies
Maintenance Factor	0.80
Imax70,80,90(cd/klm)	889.0, 63.6, 0.0
No. in Project	15

#### Luminaire C Data

Supplier	
Type	BGP760 T25 DS50 LED27/740 NO
Lamp(s)	LED27-4S/740
Lamp Flux (klm)	2.70
File Name	ofmt1_bgp760t25xled27-4s740ds50.ies
Maintenance Factor	0.80
Lum. Int. Class	G6
No. in Project	21

### Layout

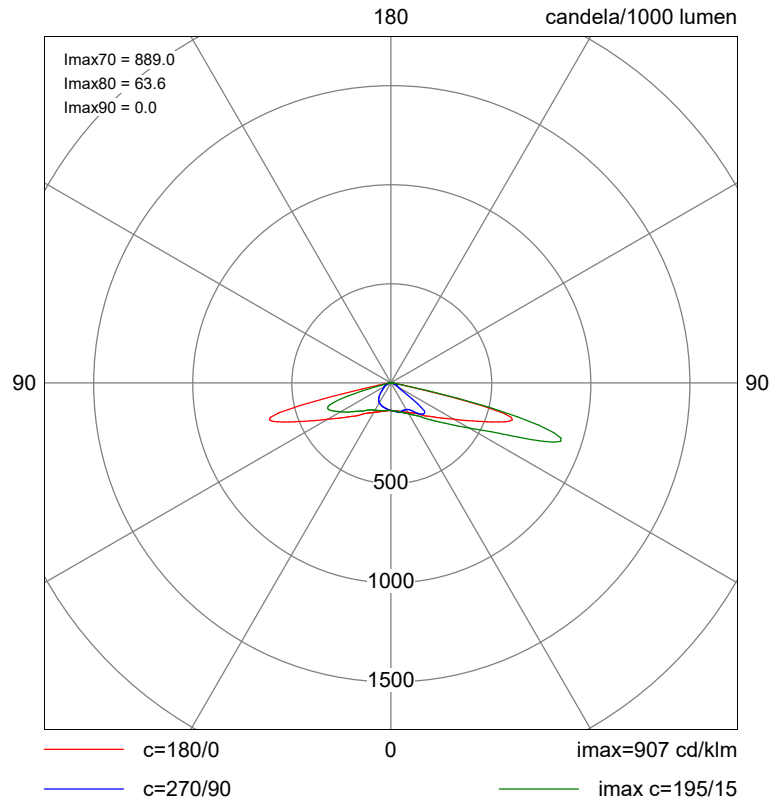
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	1186.09	284.01	6.00	89.00	0.00	0.00	0.50			
2	A	1219.62	281.88	6.00	89.00	0.00	0.00	0.50			
3	A	1257.54	280.26	6.00	89.00	0.00	0.00	0.50			
4	A	1285.38	262.70	6.00	17.00	0.00	0.00	0.50			
6	A	1308.25	207.63	6.00	221.00	0.00	0.00	0.50			
5	A	1301.27	232.30	6.00	198.00	0.00	0.00	0.50			
16	C	1307.09	250.72	4.50	118.00	0.00	0.00	0.00			
8	A	1170.25	289.99	6.00	358.00	5.00	0.00	1.00			
7	A	1166.95	309.11	6.00	16.00	5.00	0.00	1.00			
9	A	1167.54	264.01	6.00	357.00	5.00	0.00	1.00			
10	A	1167.59	242.84	6.00	6.00	5.00	0.00	1.00			
11	A	1171.17	216.69	6.00	12.00	5.00	0.00	1.00			
12	A	1176.09	190.71	6.00	26.00	5.00	0.00	1.00			
13	A	1191.25	168.75	6.00	47.00	5.00	0.00	1.00			
14	A	1221.29	159.03	6.00	83.00	5.00	0.00	1.00			
15	A	1251.35	156.38	6.00	76.00	5.00	0.00	1.00			
17	C	1210.18	255.78	4.50	271.00	0.00	0.00	0.00			
18	C	1229.93	270.79	4.50	183.00	0.00	0.00	0.00			
19	C	1253.85	250.18	4.50	94.00	0.00	0.00	0.00			
20	C	1227.25	225.99	4.50	94.00	0.00	0.00	0.00			

**Layout Continued**

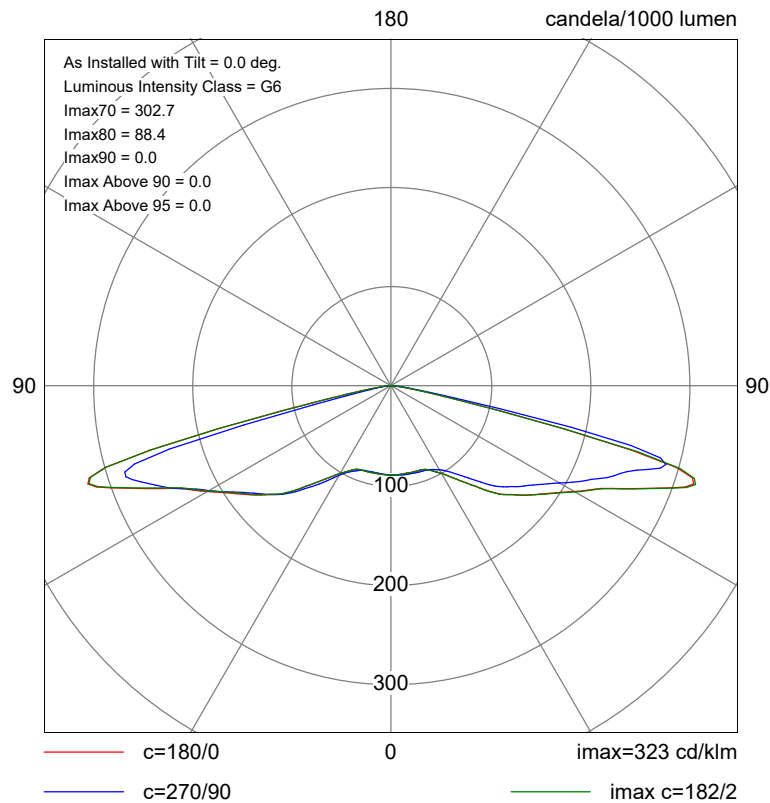
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
21	C	1199.19	225.93	4.50	92.00	0.00	0.00	0.00			
22	C	1274.21	235.89	4.50	270.00	0.00	0.00	0.00			
23	C	1292.28	180.70	4.50	105.00	0.00	0.00	0.00			
24	C	1274.23	174.47	4.50	107.00	0.00	0.00	0.00			
25	C	1254.83	169.81	4.50	99.00	0.00	0.00	0.00			
26	C	1233.06	169.60	4.50	91.00	0.00	0.00	0.00			
27	C	1230.00	256.63	4.50	183.00	0.00	0.00	0.00			
28	C	1253.14	237.81	4.50	94.00	0.00	0.00	0.00			
29	C	1187.66	216.73	4.50	94.00	0.00	0.00	0.00			
30	C	1188.91	195.67	4.50	94.00	0.00	0.00	0.00			
31	C	1319.04	265.92	4.50	94.00	0.00	0.00	0.00			
32	C	1210.56	173.85	4.50	94.00	0.00	0.00	0.00			
33	C	1284.73	247.05	4.50	94.00	0.00	0.00	0.00			
34	C	1307.32	190.10	4.50	94.00	0.00	0.00	0.00			
33	C	1184.56	234.37	4.50	94.00	0.00	0.00	0.00			
36	C	1184.81	234.28	6.00	0.00	0.00	0.00	1.00			

## Polar Diagrams

### Luminaire A BGP307 T25 DM50 LED40/740 NO

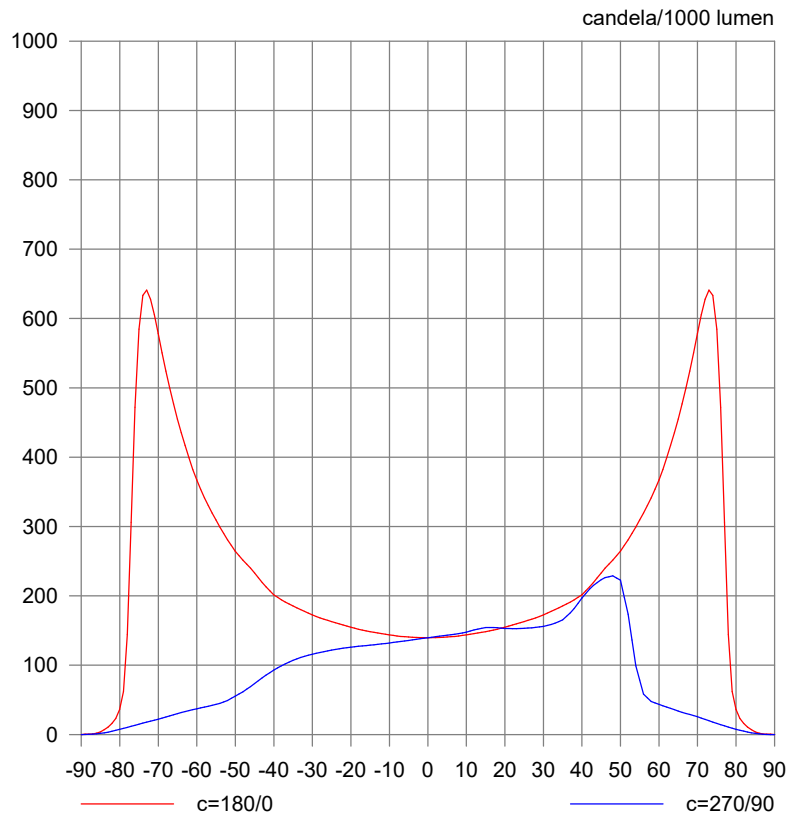


### Luminaire C BGP760 T25 DS50 LED27/740 NO

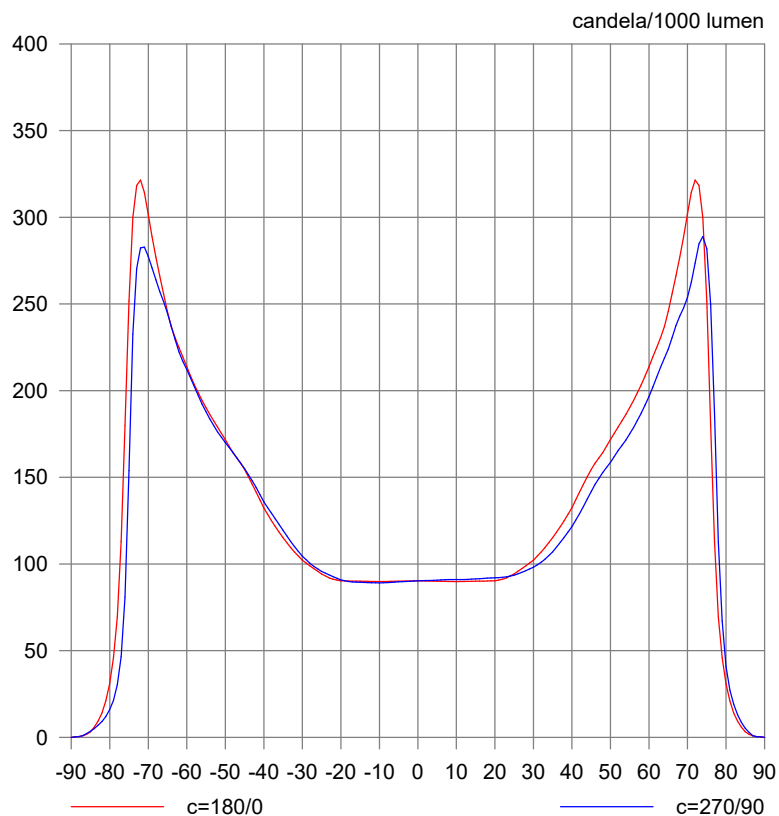


## Cartesian Diagrams

### Luminaire A BGP307 T25 DM50 LED40/740 NO

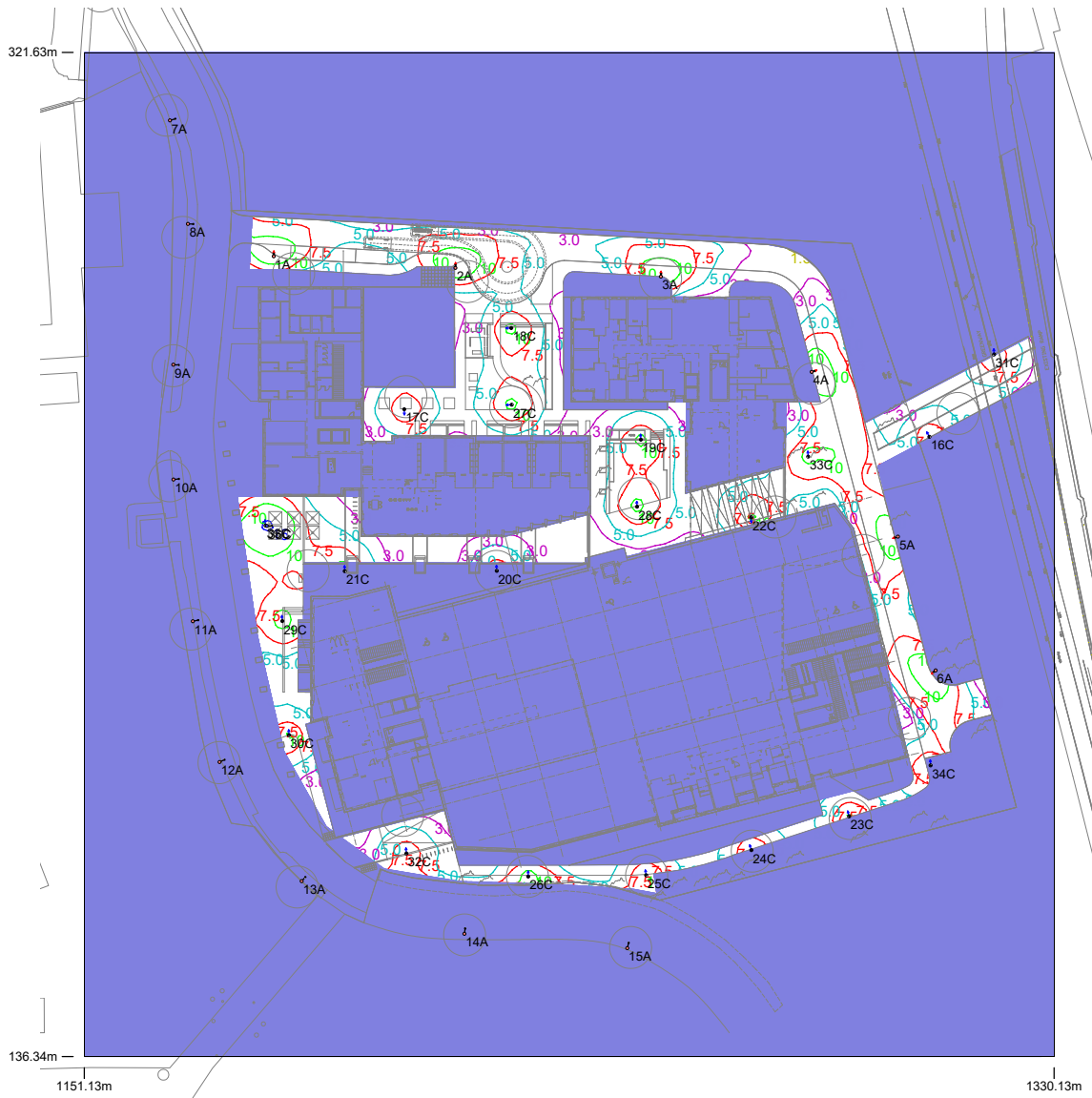


### Luminaire C BGP760 T25 DS50 LED27/740 NO



## Horizontal Illuminance (lux)

ESTATE



### Results

Eav	6.09
Emin	1.54
Emax	15.75
Emin/Emax	0.10
Emin/Eav	0.25