DATE: **23 June 2026**

DESIGNER: **Declan Doyle**

PROJECT No: **KE/RE/BAB/01 - Rev 6**

PROJECT NAME: **Ballincollig Apartments**

JODA APPROVED 24/06/26

Lighting to BS5489:1-2020

Estate lighting to class P3 - 3000k, walkways to class P4 - 3000k
Entrance (conflict zone) lighting to class C3 - 3000k
Old Fort road to class P2 - 3000k

Dimming to U14 regime

A) Philips Lumistreet eco BGS010 DW 4.00klm, 26w CLO
B) Philips Lumistreet micro BGP291 DRXN1 1.20klm, 8w CLO
C) Philips Lumistreet mini BGP292 DM10 9.00klm, 51w CLO
D) Philips Lumistreet mini BGP292 DM10 BL1 9.00klm, 51w CLO
E) Philips Lumistreet micro BGP291 DX51 2.00klm, 12w CLO
c/w nema 7 pin socket & photocell

Public Lighting Report

PREPARED BY:

Declan Doyle MILP
Lighting Design Manager
Kellihers Electrical
M50 Business Park, Ballymount Road Upper, Dublin 12
declan.doyle@rexel.ie
Tel: +353 (0)1 4566717 Mob: +353 (0)86 8552936
www.astrotek.ie | www.kellihers.com |www.rexel.ie

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 - Roadway	76.52	289.51	232.32	126.22	2.04	1.71
2	Grid 2	210.00	311.15	25.88	16.03	1.44	1.46
3	Grid 3	91.09	345.89	139.39	42.86	1.50	1.48
4	Car park east	235.04	323.84	72.65	32.08	1.48	1.46
5	Old Fort road	97.05	306.91	119.13	30.63	1.49	1.46
6	Old fort road east	232.87	298.50	24.44	18.68	1.44	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	16



Luminaire B 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	11



Luminaire C Data

Supplier	Philips
Type	BGP292 DM10
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	9.00
File Name	LumiStreet Gen2 Mini_BGP292_DM10_9000_40LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	534.0, 55.4, 0.0
No. in Project	6

Luminaire D Data

Supplier	
Type	BGP292 DM10 BL1
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	9.00
File Name	LumiStreet Gen2 Mini_BGP292_DM10 BL1_9000_40LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.84
Lum. Int. Class	G3
No. in Project	1



Luminaire E Data

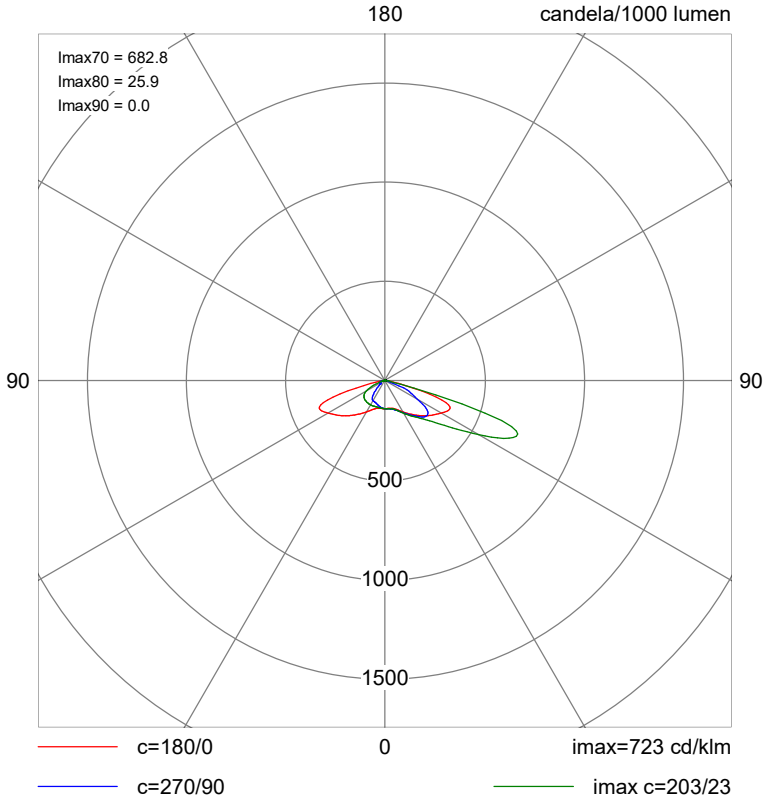
Supplier	Philips
Type	BGP291 DX51
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	2.00
File Name	LumiStreet Gen2 Micro_BGP291_DX51_2000_10LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.76
Lum. Int. Class	G4
No. in Project	2

Layout

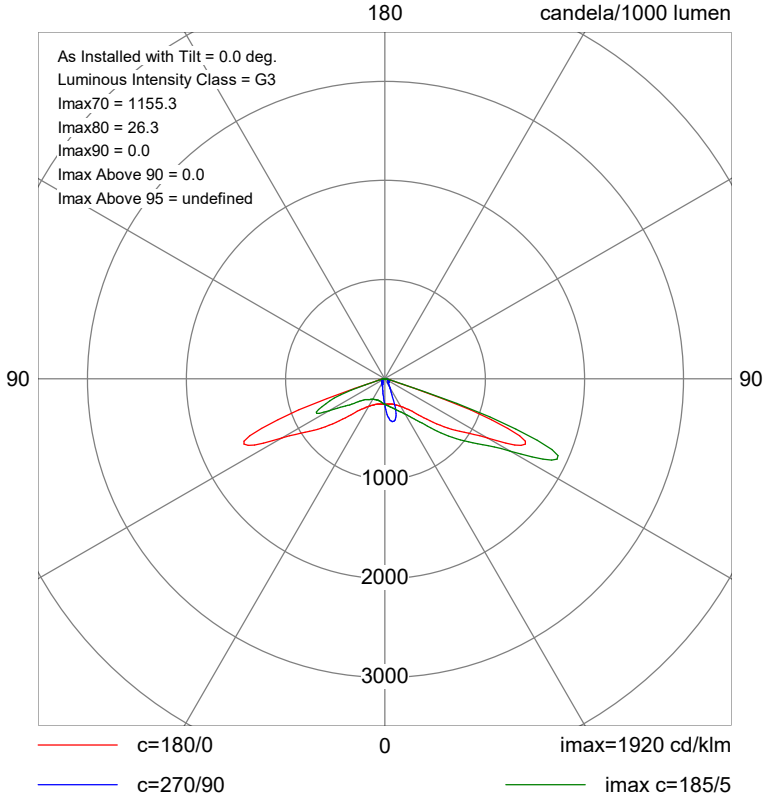
ID /Mast	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1/1	A	264.28	340.78	8.00	2.00	5.00	0.00	1.00			
2/1	A	264.28	340.78	8.00	182.00	5.00	0.00	1.00			
3/2	A	232.82	339.52	8.00	4.00	0.00	0.00	1.00			
4/2	A	232.82	339.52	8.00	184.00	0.00	0.00	1.00			
5	A	258.45	356.91	6.00	271.00	0.00	0.00	0.00			
6	A	278.59	357.78	6.00	271.00	0.00	0.00	0.00			
7	A	298.29	358.39	6.00	271.00	0.00	0.00	0.00			
8/3	A	278.14	343.76	6.00	271.00	0.00	0.00	1.00			
9	C	219.85	325.90	10.00	243.00	5.00	0.00	2.00			
10/3	A	278.14	343.76	6.00	91.00	0.00	0.00	1.00			
11	A	226.47	363.51	6.00	352.00	0.00	0.00	0.00			
12	C	238.39	317.39	10.00	253.00	5.00	0.00	2.00			
13	C	193.50	315.90	8.00	77.00	5.00	0.00	2.00			
14	C	244.32	294.19	10.00	70.00	5.00	0.00	2.00			
15	A	228.02	385.63	6.00	20.00	0.00	0.00	0.00			
16	A	208.78	387.55	6.00	91.00	5.00	0.00	0.00			
17	A	156.10	387.55	6.00	90.00	0.00	0.00	0.00			
18	A	184.03	399.99	6.00	271.00	0.00	0.00	0.00			
19	B	128.65	387.49	6.00	89.00	0.00	0.00	0.00			
20	E	172.68	380.75	6.00	0.00	0.00	0.00	0.00			
21	E	193.30	380.98	6.00	180.00	0.00	0.00	0.00			
23	B	97.00	379.24	6.00	327.00	0.00	0.00	0.00			
24	B	109.75	387.05	6.00	87.00	0.00	0.00	0.00			
25	B	106.91	366.95	6.00	181.00	0.00	0.00	0.00			
26	B	129.96	368.11	6.00	0.00	0.00	0.00	0.00			
27	B	150.10	366.95	6.00	180.00	0.00	0.00	0.00			
28	B	139.77	352.55	6.00	270.00	0.00	0.00	0.00			
29	B	172.63	362.80	6.00	359.00	0.00	0.00	0.00			
30	B	193.39	362.26	6.00	180.00	0.00	0.00	0.00			
32	B	222.30	349.62	6.00	90.00	0.00	0.00	0.00			
33	A	230.80	293.50	6.00	181.00	0.00	0.00	0.00			
34	D	183.83	334.22	10.00	263.00	0.00	0.00	2.00			
35	C	142.94	329.63	10.00	282.00	0.00	0.00	2.00			
36	C	112.14	322.37	10.00	290.00	0.00	0.00	2.00			
35	A	240.75	322.38	6.00	91.00	0.00	0.00	0.00			
36	B	183.46	349.34	6.00	89.00	0.00	0.00	0.00			

Polar Diagrams

Luminaire A LumiStreet gen2 Eco



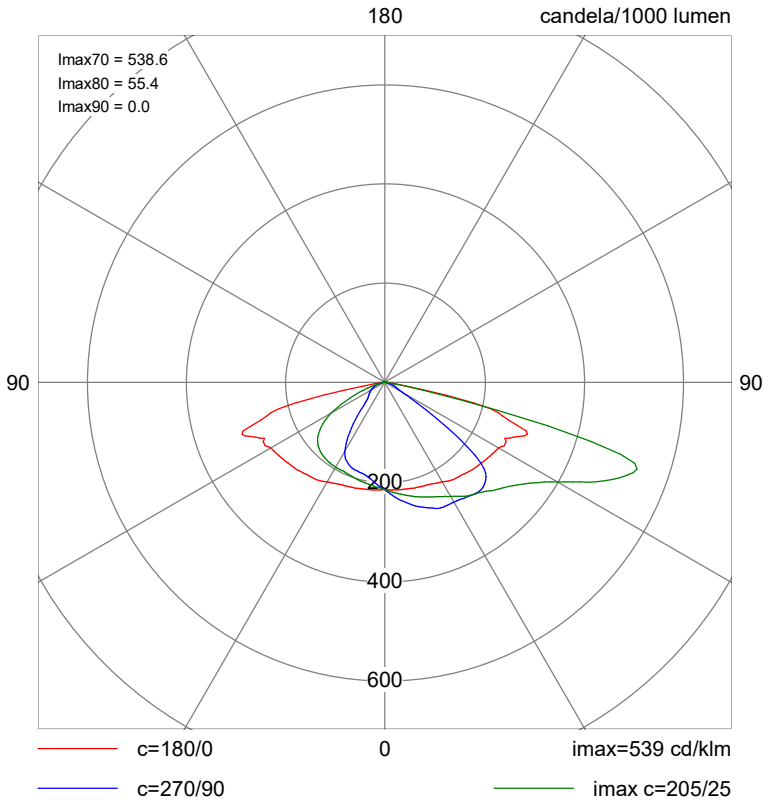
Luminaire B BGP291 DRXN1



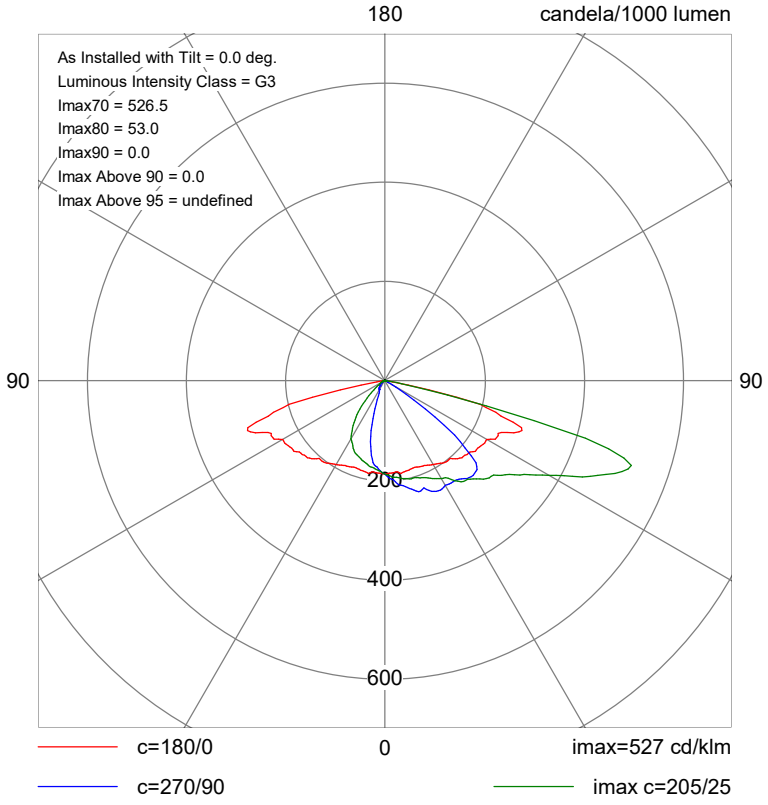
9750480142

Polar Diagrams Continued

Luminaire C BGP292 DM10



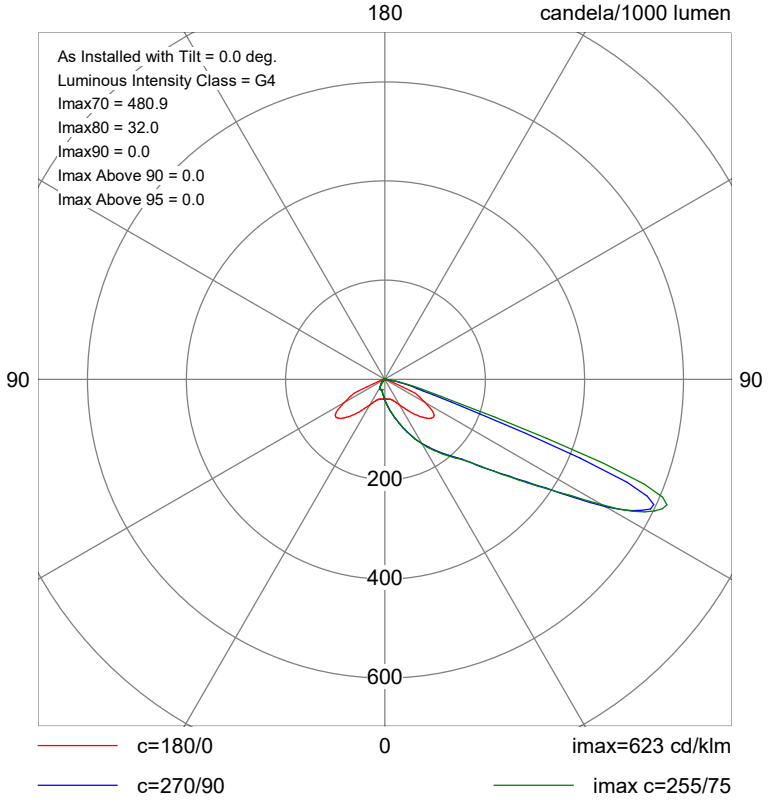
Luminaire D BGP292 DM10 BL1



9750480142

Polar Diagrams Continued

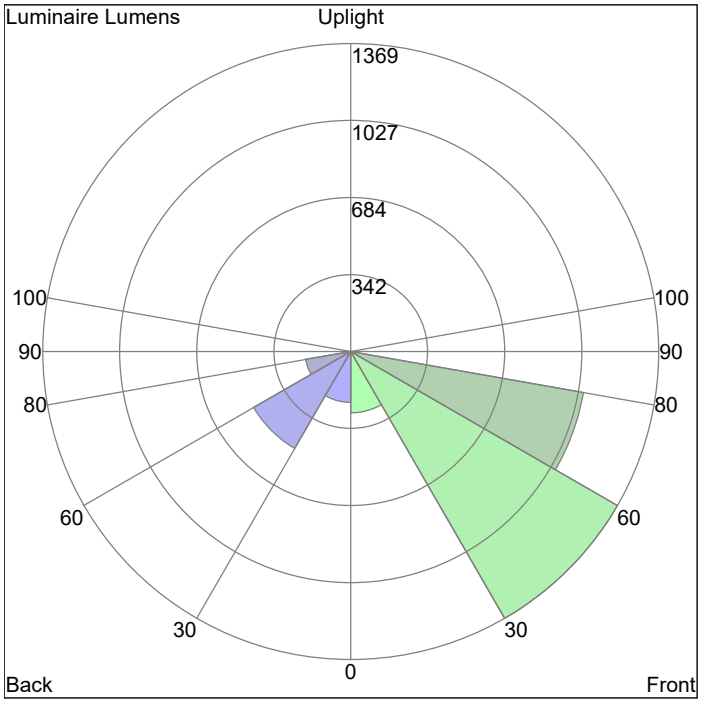
Luminaire E BGP291 DX51



9750480142

Luminaire Classification System (LCS) Graphs

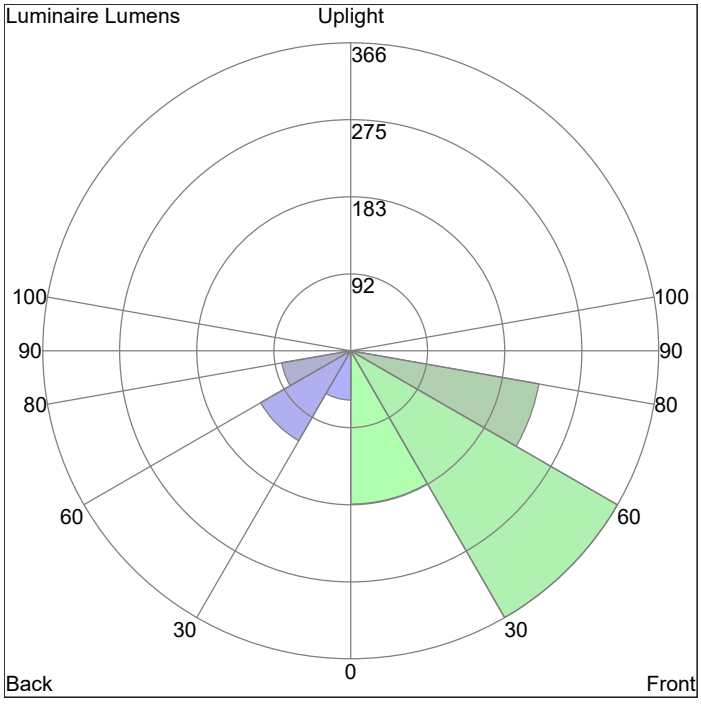
Luminaire A LumiStreet gen2 Eco



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 DRXN1



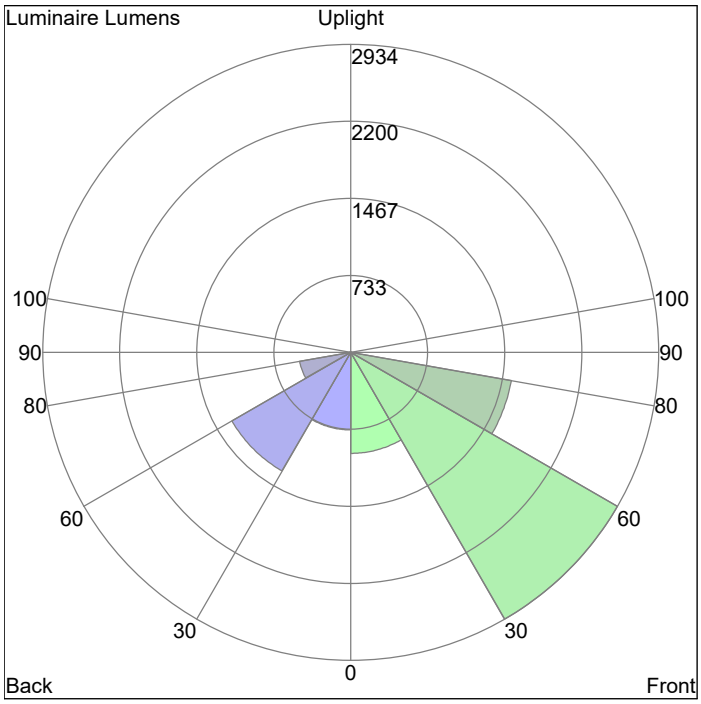
LCS	Lumens	%Lamp	%Lum
FL	182.2	15.2	17.4
FM	366.1	30.5	35.0
FH	227.1	18.9	21.7
FVH	2.8	0.2	0.3
BL	58.7	4.9	5.6
BM	123.5	10.3	11.8
BH	83.0	6.9	7.9
BVH	1.7	0.1	0.2
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	1044.9	87.1	100.0

BUG rating=B1-U0-G0

9750480142

Luminaire Classification System (LCS) Graphs Continued

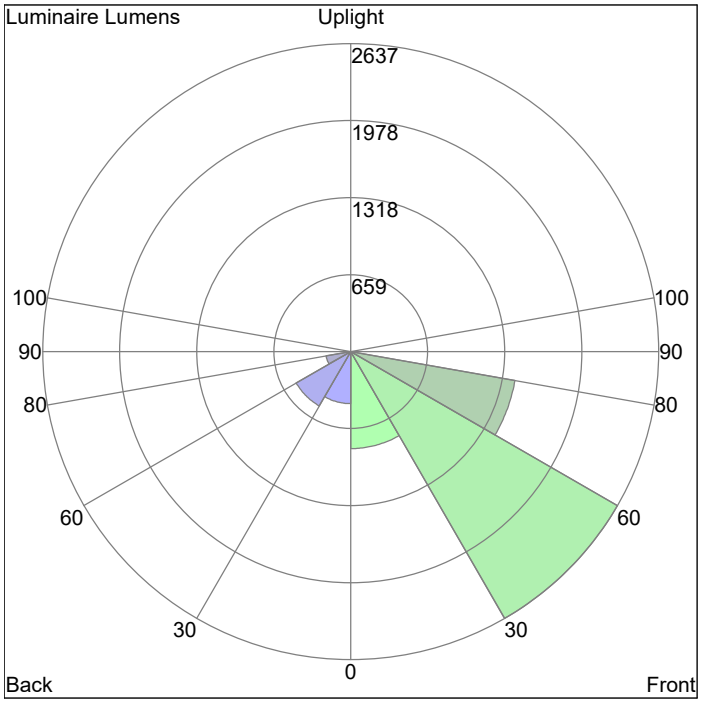
Luminaire C BGP292 DM10



LCS	Lumens	%Lamp	%Lum
FL	963.3	10.7	12.0
FM	2933.5	32.6	36.6
FH	1553.4	17.3	19.4
FVH	12.9	0.1	0.2
BL	739.6	8.2	9.2
BM	1305.2	14.5	16.3
BH	492.6	5.5	6.2
BVH	9.2	0.1	0.1
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	8009.5	89.0	100.0

BUG rating=B3-U0-G1

Luminaire D BGP292 DM10 BL1



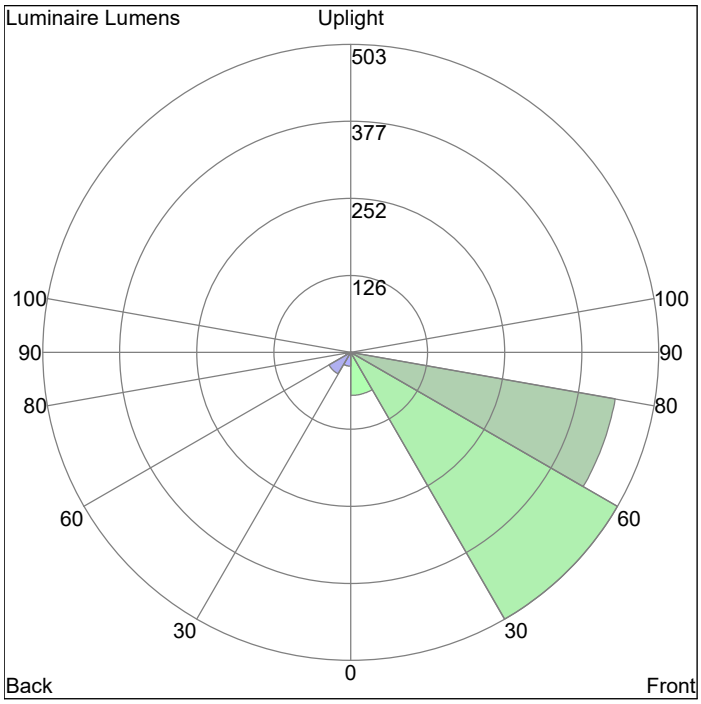
LCS	Lumens	%Lamp	%Lum
FL	831.3	9.2	13.6
FM	2637.0	29.3	43.2
FH	1428.4	15.9	23.4
FVH	8.7	0.1	0.1
BL	446.3	5.0	7.3
BM	538.2	6.0	8.8
BH	213.1	2.4	3.5
BVH	1.3	0.0	0.0
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	6104.0	67.8	100.0

BUG rating=B2-U0-G1

9750480142

Luminaire Classification System (LCS) Graphs Continued

Luminaire E BGP291 DX51



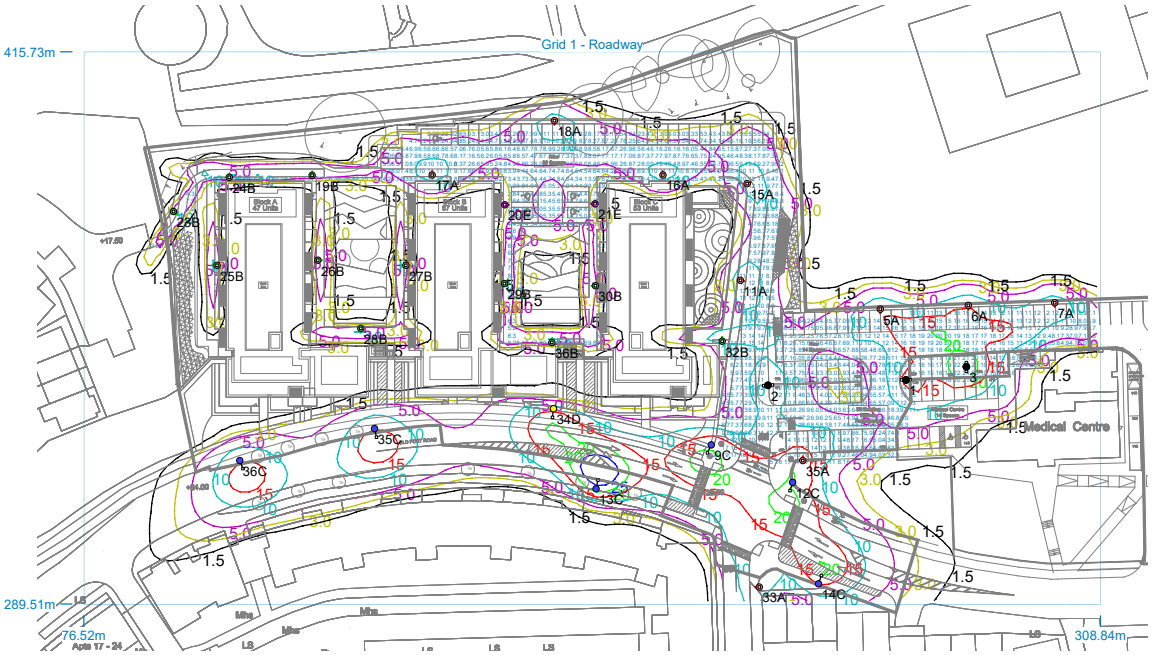
LCS	Lumens	%Lamp	%Lum
FL	70.6	3.5	6.5
FM	503.2	25.2	46.2
FH	438.8	21.9	40.3
FVH	2.7	0.1	0.3
BL	22.9	1.1	2.1
BM	41.0	2.0	3.8
BH	8.4	0.4	0.8
BVH	0.3	0.0	0.0
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	1088.2	54.4	100.0

BUG rating=B0-U0-G0

9750480142

Horizontal Illuminance (lux)

Grid 1 - Roadway



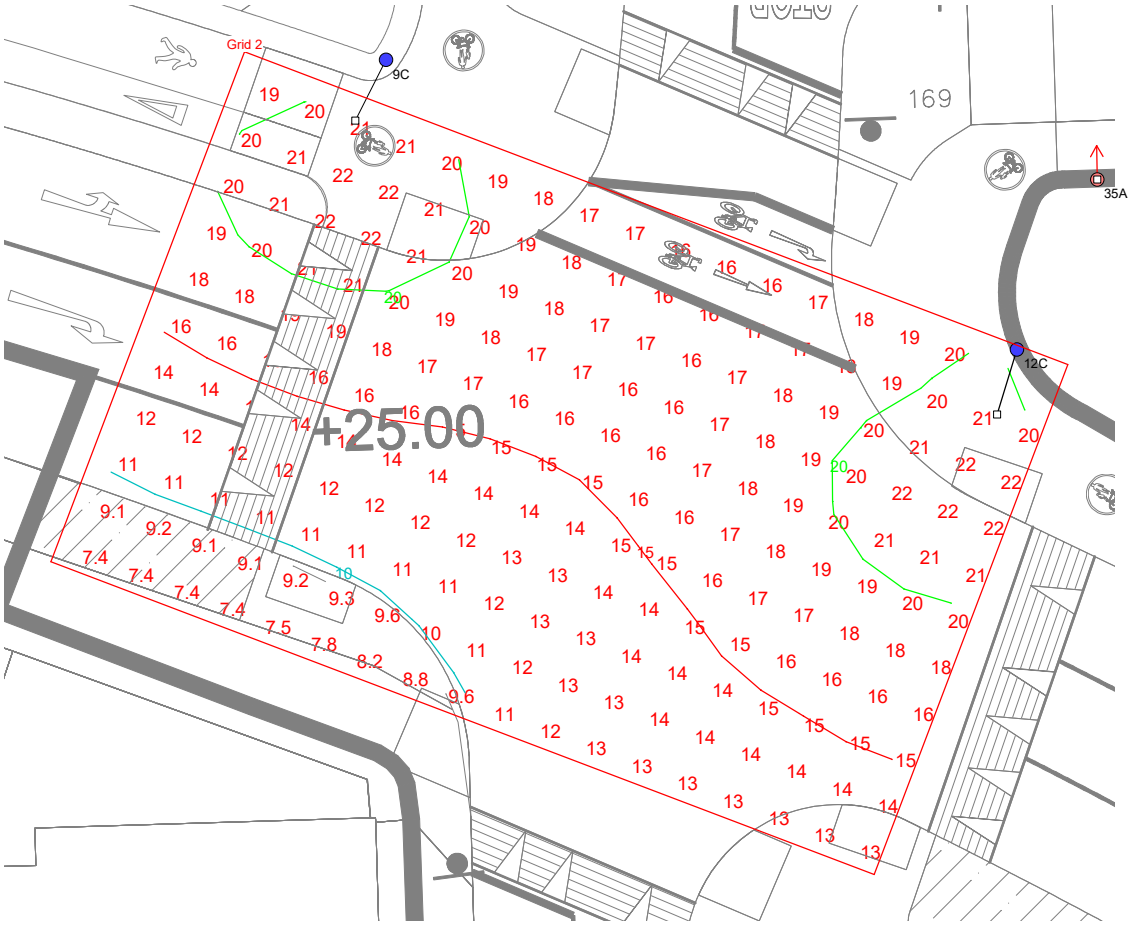
Results

Eav	8.51
Emin	1.75
Emax	24.14
Emin/Emax	0.07
Emin/Eav	0.21
Emax/Eav	2.84

9750480142

Horizontal Illuminance (lux)

Grid 2



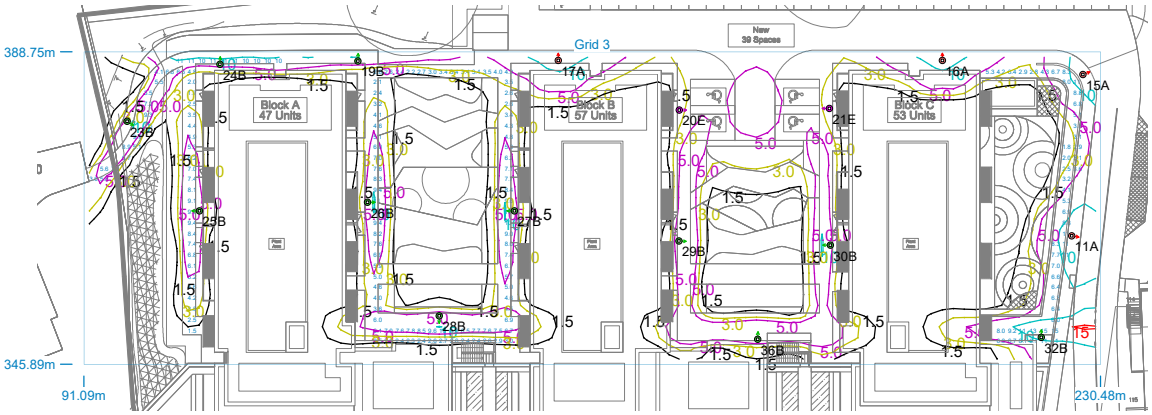
Results

Eav	15.83
Emin	7.37
Emax	22.16
Emin/Emax	0.33
Emin/Eav	0.47
Emax/Eav	1.40

9750480142

Horizontal Illuminance (lux)

Grid 3



Results

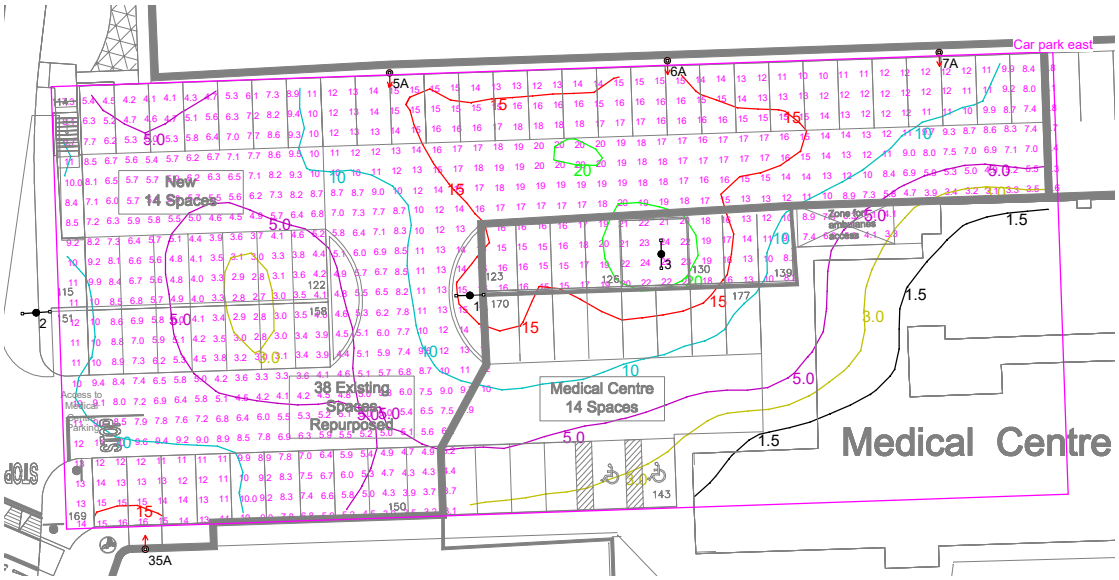
Eav	6.22
Emin	1.49
Emax	14.99
Emin/Emax	0.10
Emin/Eav	0.24
Emax/Eav	2.41

DATE: 23 June 2026 DESIGNER: Declan Doyle

PROJECT No: KE/RE/BAB/01 - RPROJECT NAME: Ballincollig Apartments

Horizontal Illuminance (lux)

Car park east



Results

Eav	10.21
Emin	2.73
Emax	24.83
Emin/Emax	0.11
Emin/Eav	0.27
Emax/Eav	2.43

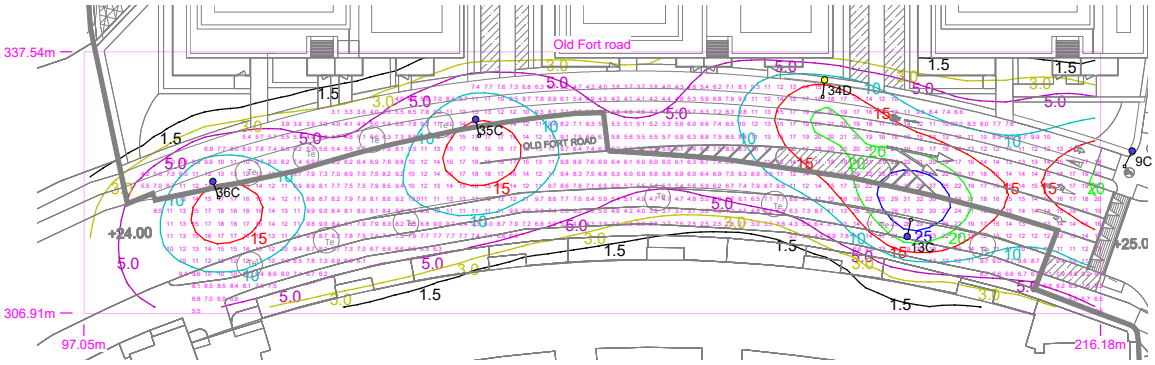
9750480142

DATE: 23 June 2026 DESIGNER: Declan Doyle

PROJECT No: KE/RE/BAB/01 - RPROJECT NAME: Ballincollig Apartments

Horizontal Illuminance (lux)

Old Fort road



Results

Eav	11.09
Emin	2.49
Emax	31.57
Emin/Emax	0.08
Emin/Eav	0.22
Emax/Eav	2.85

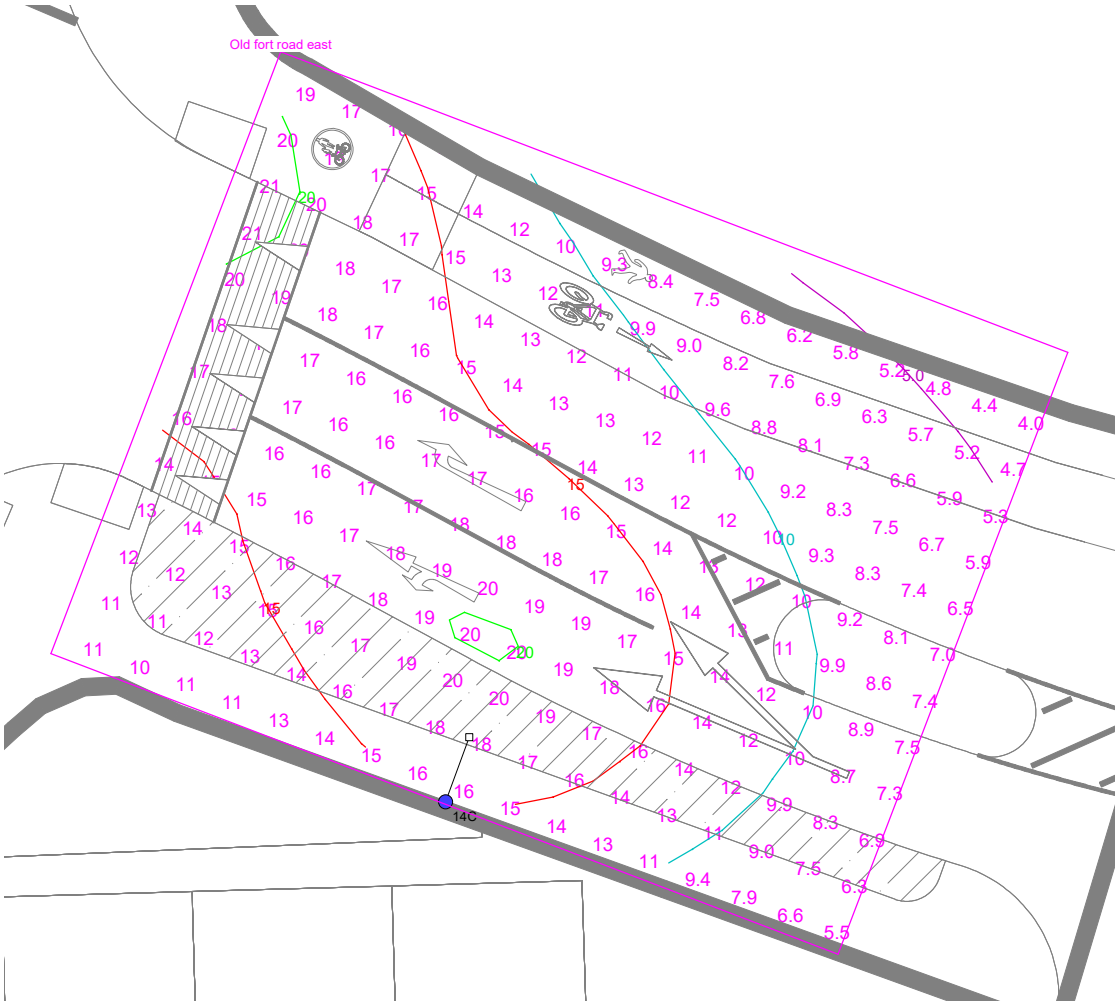
9750480142

DATE: 23 June 2026 DESIGNER: Declan Doyle

PROJECT No: KE/RE/BAB/01 - RPROJECT NAME: Ballincollig Apartments

Horizontal Illuminance (lux)

Old fort road east



Results

Eav	13.19
Emin	4.03
Emax	21.29
Emin/Emax	0.19
Emin/Eav	0.31
Emax/Eav	1.61

9750480142