

DATE: 7 December 2022
DESIGNER: Declan Doyle
PROJECT No: KE/RE/FPN/01 rev 3
PROJECT NAME: Finlay Park Naas lighting



Lighting to BS5489:1 - 2020

Courtyard Lighting To Class P4, Main road lighting to class P2
Dimming To U14 Regime, 3000k colour temp.

Main road to 4000k colour temp. to match existing

- A) Philips Mini Luma NW R6 40LED 11.00klm, 64w CLO
- B) Cree Energy Due TRMA-02-150-11L 7.36klm, 40w CLO
- C) Cree Urban Minimal UMNA-2-ABS-5L 5.79klm, 40w CLO
- D) Cree Energy Uno TRSA-02-125-6L 2.83KLM, 21w CLO
- E) Cree Urban Minimal UMNA-2-150-5L 5.79klm, 22w CLO
C/W Nema 7 Pin Socket & photocell

6m Columns - courtyard/8m columns main road

Outdoor Lighting Report

ORDERING CODES:

- 1) 11no. TRMA 3 150 11L 407 + A SV VMC N U 10/VMP11KAO-0012/ CLO 100,000 hours @80%.
- 2) 7no. UMNA 3 ABS 5L 307 + A BK VMC S U 06/ CLO 100,000 hours @80%.
- 3) 6no. TRSA 3 150 6L 308 + A SV VMC N U 06/VMP10FAO-0012/ CLO 100,000 hours @80%.
- 2) 9no. UMNA 3 ABS 3L 307 + A BK VMC S U 06/ CLO 100,000 hours @80%.

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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	Site	34.99	-193.14	284.71	258.80	1.50	1.50
2	Inner plaza 1	144.10	-41.42	86.05	50.21	1.48	1.48
3	Inner plaza 2	150.11	-91.05	76.21	49.99	1.49	1.47
4	Cycleroute/walkway	130.44	7.51	121.58	16.20	1.48	1.47
5	East walkway	229.06	-27.15	6.63	46.21	1.33	1.49
6	South plaza	101.21	-112.36	124.21	25.92	1.50	1.44
7	West plaza	137.03	-87.75	12.61	95.36	1.40	1.49

Luminaires

EXISTING FITTINGS



Luminaire A Data

Supplier	Philips
Type	BGP703 DS50
Lamp(s)	LED-HB 5.2S 740
Lamp Flux (klm)	11.00
File Name	Luma Gen2 Mini_BGP703_DS50_11000_4 0LED_5.2S_CLO_L90_740.ies
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	302.7, 88.5, 0.0
No. in Project	9

Luminaire B Data



Supplier	Cree Lighting
Type	TRMA-02-15011L40740W
Lamp(s)	24D11L40W40K
Lamp Flux (klm)	7.36
File Name	TRMA-02-150-11L-407 40W-1038-QL21-R 02.IES
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	442.8, 32.9, 0.0
No. in Project	11

Luminaire C Data

Supplier	
Type	Urban Minimal optica ABS 5L 3K
Lamp(s)	140Luxeon 40W 3K
LampFlux(klm)/Colour	5.79 3000/70
File Name	UMNA-2-ABS-5L-3K-5LR01201.LDT
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	391.0, 45.6, 0.0
No. in Project	7

Luminaire D Data



Supplier	Cree Lighting
Type	TRSA-02-125-6L30821W
Lamp(s)	12lu6L21W3K
Lamp Flux (klm)	2.83
File Name	TRSA-02-125-6L-308 21W-1088-QL20-R1 9.IES
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	325.2, 20.7, 0.0
No. in Project	6

Luminaires

Luminaire E Data

Supplier	
Type	Urban Minimal ottica 150 3L 3K
Lamp(s)	140Luxeon 22W 3K
LampFlux(klm)/Colour	3.64 3000/70
File Name	UMNA-2-150-3L-3K-3LR01203.LDT
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	398.1, 108.1, 0.9
No. in Project	9



Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	127.39	8.68	8.00	187.00	0.00	0.00	0.00			
2	A	129.13	-14.72	8.00	182.00	0.00	0.00	0.00			
3	A	127.90	-34.60	8.00	172.00	0.00	0.00	0.00			
4	A	123.90	-52.24	8.00	167.00	0.00	0.00	0.00			
5	A	117.00	-69.52	8.00	159.00	0.00	0.00	0.00			
6	A	110.11	-82.13	8.00	153.00	0.00	0.00	0.00			
7	A	101.58	-95.62	8.00	159.00	0.00	0.00	0.00			
8	A	66.99	-98.13	8.00	51.00	0.00	0.00	0.00			
9	A	67.09	-122.00	8.00	330.00	0.00	0.00	0.00			
10	B	112.19	-119.48	8.00	60.00	0.00	0.00	0.00			
11	B	147.31	-124.42	8.00	104.00	0.00	0.00	0.00			
12	B	191.47	-120.70	8.00	79.00	0.00	0.00	0.00			
13	B	227.69	-127.39	8.00	75.00	0.00	0.00	0.00			
14	B	239.08	-95.13	8.00	170.00	0.00	0.00	0.00			
15	B	243.90	-61.12	8.00	174.00	0.00	0.00	0.00			
16	B	246.84	-35.36	8.00	173.00	0.00	0.00	0.00			
17	B	230.73	-45.11	8.00	85.00	0.00	0.00	0.00			
18	C	166.33	-5.65	6.00	187.00	0.00	0.00	0.00			
19	C	168.94	-26.88	6.00	187.00	0.00	0.00	0.00			
20	C	187.69	-13.44	6.00	187.00	0.00	0.00	0.00			
21	E	202.74	-16.62	6.00	9.00	0.00	0.00	0.00			
22	C	202.45	-43.78	6.00	187.00	0.00	0.00	0.00			
23	C	181.44	-47.87	6.00	173.00	0.00	0.00	0.00			
24	E	197.48	-68.91	6.00	0.00	0.00	0.00	0.00			
25	C	177.88	-66.62	6.00	173.00	0.00	0.00	0.00			
26	E	137.43	-74.40	6.00	11.00	0.00	0.00	0.00			
27	B	175.69	-104.21	8.00	270.00	0.00	0.00	0.00			
28	B	201.42	-107.38	8.00	259.00	0.00	0.00	0.00			
29	C	153.59	-53.22	6.00	188.00	0.00	0.00	0.00			
30	E	140.75	-102.99	6.00	99.00	0.00	0.00	0.00			
31	D	158.70	10.35	6.00	96.00	0.00	0.00	0.00			
32	D	180.16	13.19	6.00	96.00	0.00	0.00	0.00			
33	D	202.16	15.89	6.00	96.00	0.00	0.00	0.00			
34	D	222.86	18.18	6.00	96.00	0.00	0.00	0.00			
35	D	238.23	22.94	6.00	58.00	0.00	0.00	0.00			
36	D	227.37	-4.61	6.00	9.00	0.00	0.00	0.00			

**EXISTING FITTINGS
 FOR CALCULATION
 PURPOSES ONLY**

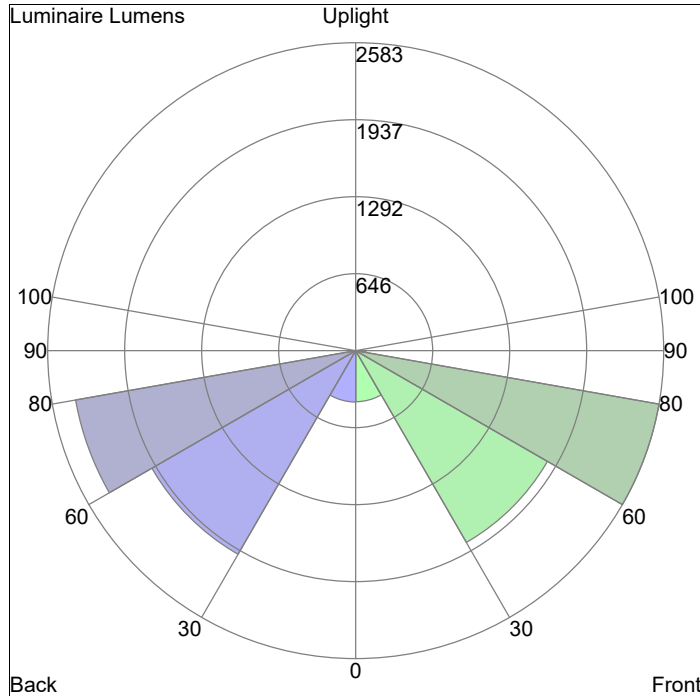


Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
37	E	213.48	-100.08	6.00	264.00	0.00	0.00	0.00			
38	B	152.31	-108.36	8.00	281.00	0.00	0.00	0.00			
39	E	156.26	-92.75	6.00	264.00	0.00	0.00	0.00			
40	E	118.51	-101.55	6.00	100.00	0.00	0.00	0.00			
41	E	188.25	-97.70	6.00	264.00	0.00	0.00	0.00			
42	E	134.01	-55.50	6.00	8.00	0.00	0.00	0.00			

Luminaire Classification System (LCS) Graphs

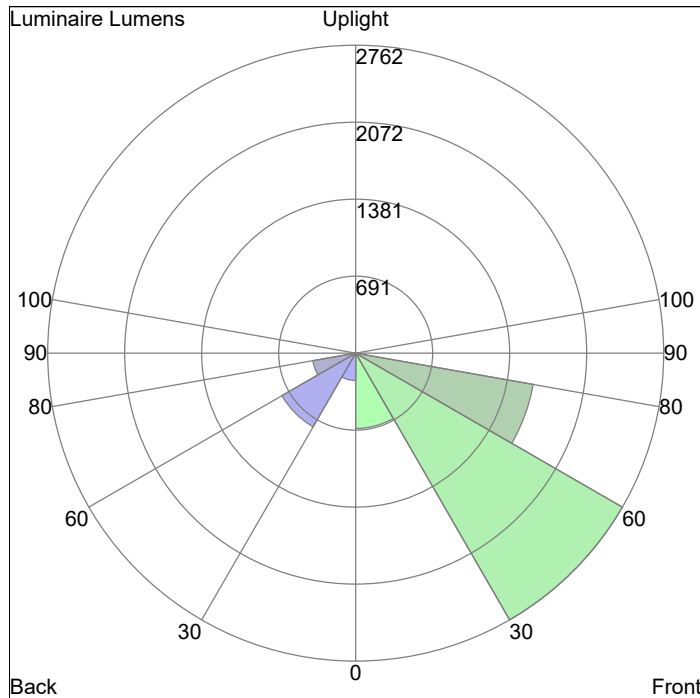
Luminaire A BGP703 DS50



LCS	Lumens	%Lamp	%Lum
FL	428.9	3.9	4.4
FM	1857.9	16.9	19.0
FH	2583.0	23.5	26.4
FVH	86.7	0.8	0.9
BL	431.2	3.9	4.4
BM	1972.8	17.9	20.2
BH	2383.9	21.7	24.4
BVH	42.1	0.4	0.4
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	9787.1	89.0	100.0

BUG rating=B3-U0-G2

Luminaire B TRMA-02-15011L40740W

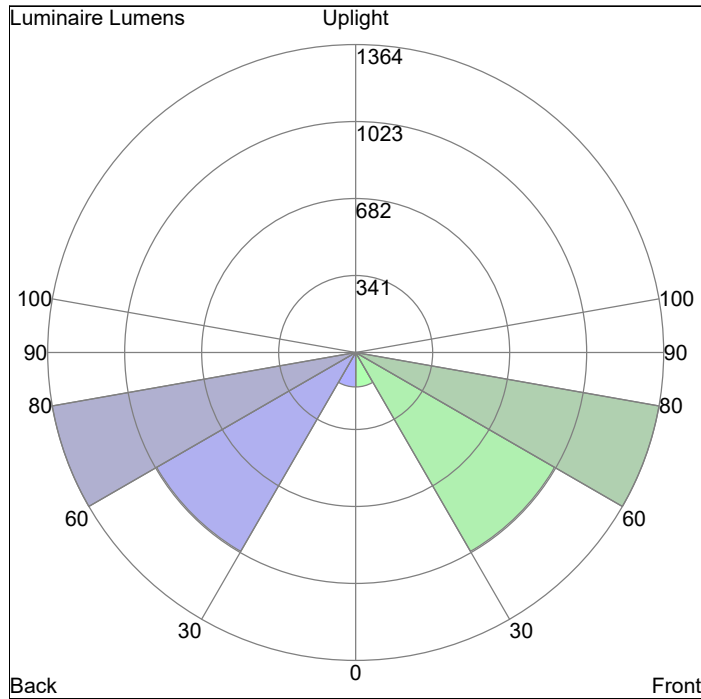


LCS	Lumens	%Lamp	%Lum
FL	676.4	9.2	10.4
FM	2762.4	37.5	42.5
FH	1616.9	22.0	24.9
FVH	22.8	0.3	0.4
BL	246.2	3.3	3.8
BM	763.0	10.4	11.7
BH	390.2	5.3	6.0
BVH	17.0	0.2	0.3
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	6494.7	88.2	100.0

BUG rating=B2-U0-G1

Luminaire Classification System (LCS) Graphs Continued

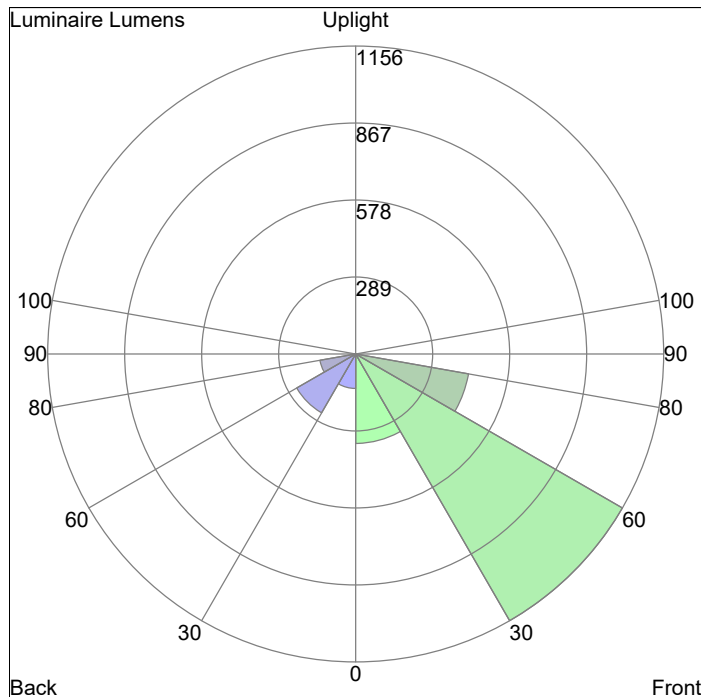
Luminaire C Urban Minimal ottica ABS 5L 3K



LCS	Lumens	%Lamp	%Lum
FL	152.9	2.6	3.0
FM	1016.9	17.6	19.9
FH	1363.5	23.6	26.7
FVH	18.5	0.3	0.4
BL	152.9	2.6	3.0
BM	1016.9	17.6	19.9
BH	1363.5	23.6	26.7
BVH	18.5	0.3	0.4
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	5103.7	88.2	100.0

BUG rating=B3-U0-G3

Luminaire D TRSA-02-125-6L30821W

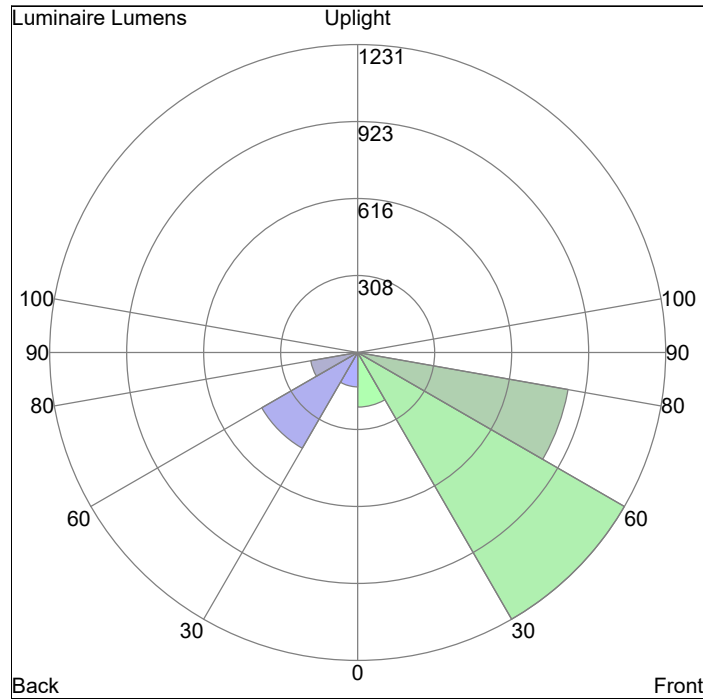


LCS	Lumens	%Lamp	%Lum
FL	335.9	11.9	13.7
FM	1155.9	40.8	47.2
FH	430.2	15.2	17.6
FVH	5.2	0.2	0.2
BL	129.6	4.6	5.3
BM	255.2	9.0	10.4
BH	135.9	4.8	5.5
BVH	2.8	0.1	0.1
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	2450.8	86.5	100.0

BUG rating=B1-U1-G1

Luminaire Classification System (LCS) Graphs Continued

Luminaire E Urban Minimal ottica 150 3L 3K



LCS	Lumens	%Lamp	%Lum
FL	218.5	6.0	7.0
FM	1231.3	33.8	39.6
FH	854.2	23.5	27.5
FVH	22.8	0.6	0.7
BL	137.7	3.8	4.4
BM	442.5	12.2	14.2
BH	190.2	5.2	6.1
BVH	9.9	0.3	0.3
UL	0.2	0.0	0.0
UH	0.0	0.0	0.0
Total	3107.4	85.4	100.0

BUG rating=B1-U1-G1

Horizontal Illuminance (lux)

Site

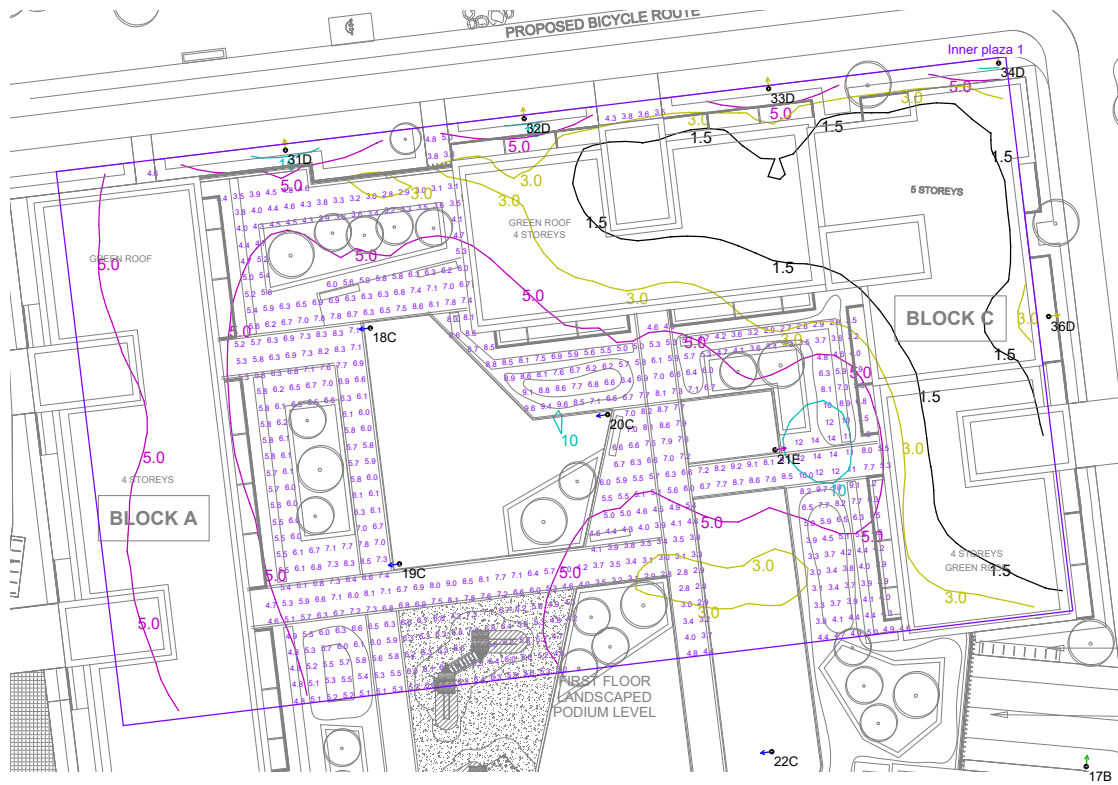


Results

Eav	12.96
Emin	2.55
Emax	27.22
Emin/Emax	0.09
Emin/Eav	0.20
Emax/Eav	2.10

Horizontal Illuminance (lux)

Inner plaza 1

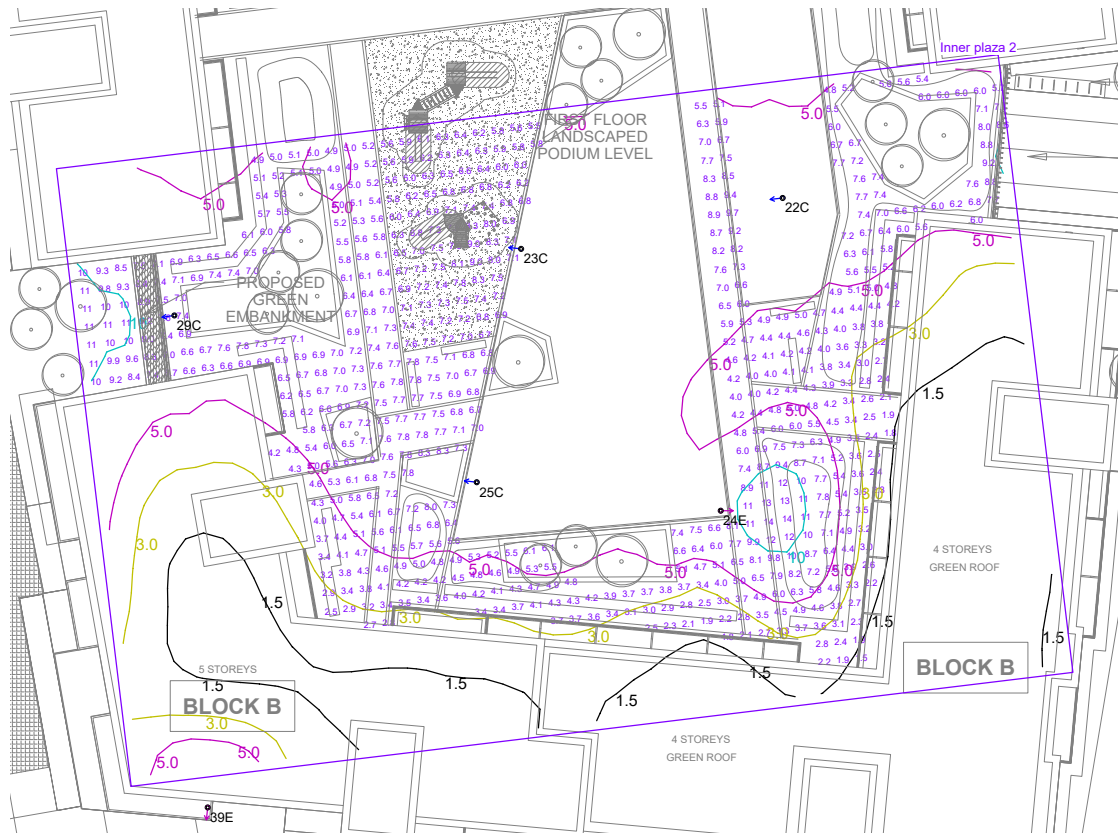


Results

Eav	5.97
Emin	2.53
Emax	14.03
Emin/Emax	0.18
Emin/Eav	0.42
Emax/Eav	2.35

Horizontal Illuminance (lux)

Inner plaza 2

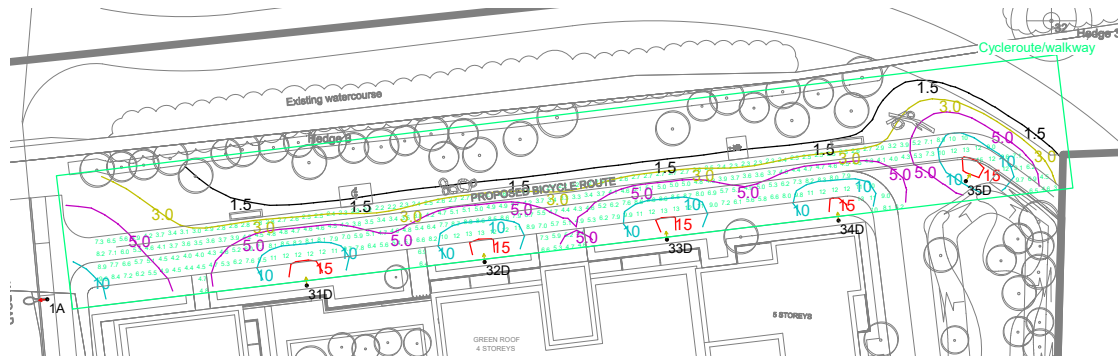


Results

Eav	6.09
Emin	1.52
Emax	13.72
Emin/Emax	0.11
Emin/Eav	0.25
Emax/Eav	2.25

Horizontal Illuminance (lux)

Cycleroute/walkway

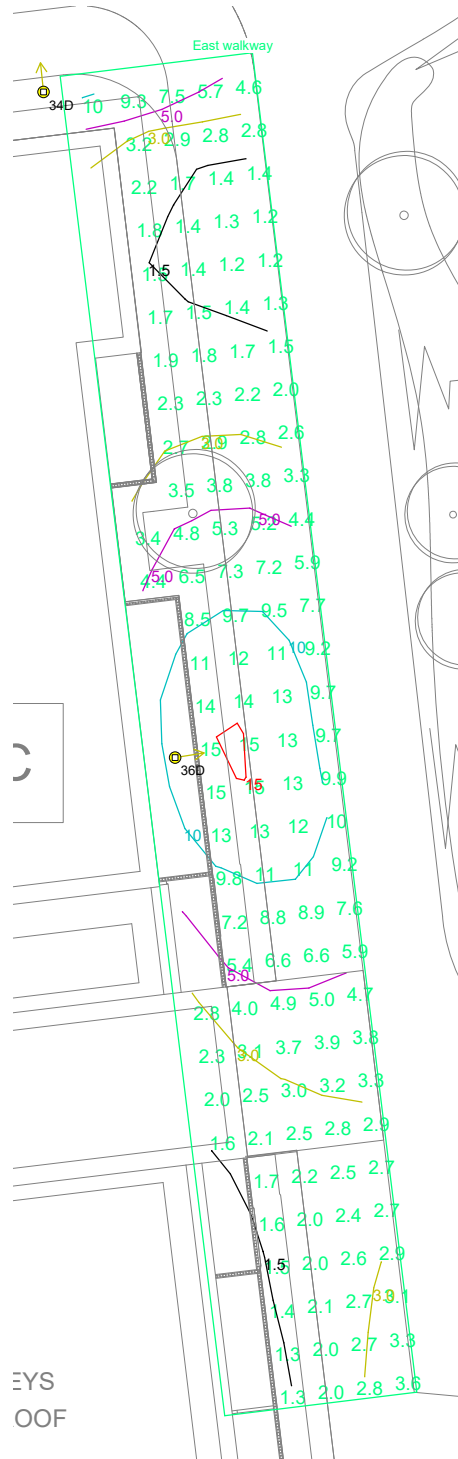


Results

Eav	5.90
Emin	2.16
Emax	14.63
Emin/Emax	0.15
Emin/Eav	0.37
Emax/Eav	2.48

Horizontal Illuminance (lux)

East walkway

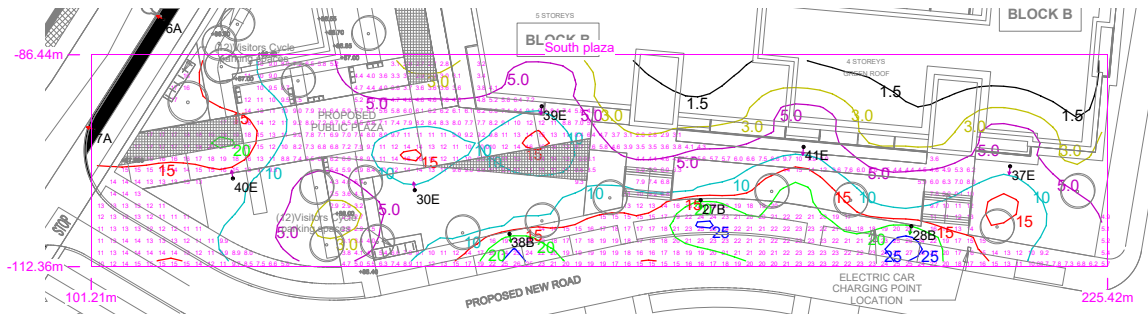


Results

Eav	5.11
Emin	1.17
Emax	15.24
Emin/Emax	0.08
Emin/Eav	0.23
Emax/Eav	2.98

Horizontal Illuminance (lux)

South plaza

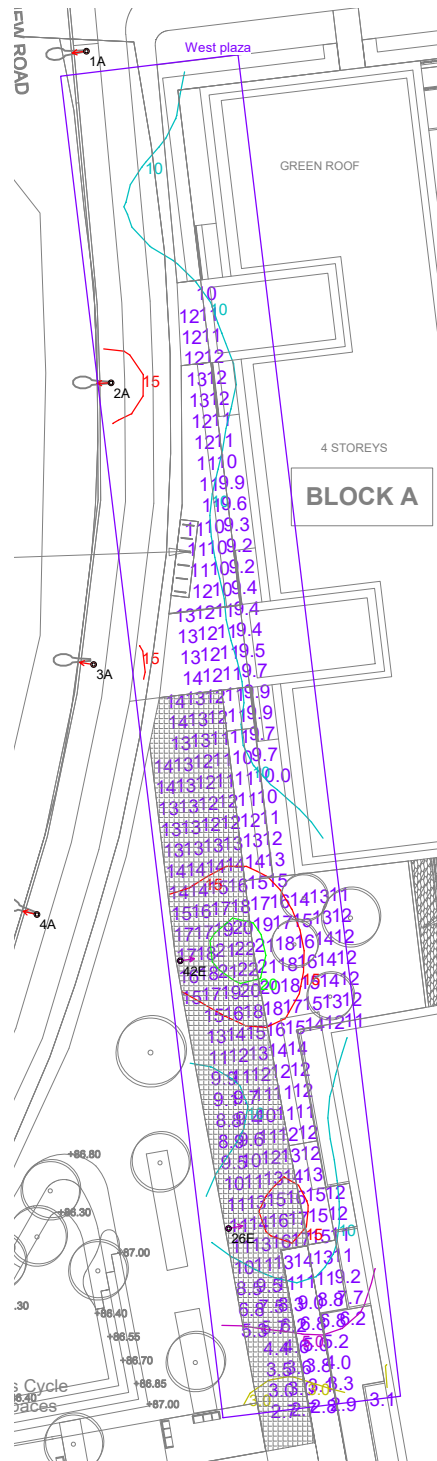


Results

Eav	12.51
Emin	2.52
E _{max}	27.17
E _{min} /E _{max}	0.09
E _{min} /E _{av}	0.20
E _{max} /E _{av}	2.17

Horizontal Illuminance (lux)

West plaza



Results

Eav	12.13
Emin	2.65
Emax	22.47
Emin/Emax	0.12
Emin/Eav	0.22
Emax/Eav	1.85