

**DATE:** 9 March 2022  
**DESIGNER:** Aidan Drennan  
**PROJECT No:** D20004  
**PROJECT NAME:** SDH at Central Mental Hospital, Dundrum, Dublin 14



In Accordance with:

Guidance Notes for Planners, Engineers, Architects, and  
Developers (Bat Conservation Ireland, 2010)

Bats and Lighting in the UK – Bats and the Built Environment  
Series (Institute of Lighting Professionals, September 2018).

Lighting to BS5489:1:2020

Main Spine Road Lighting to Class P3, Secondary Roads/Walkways to Class P4

Thurn Plurio/Urbis Schreder were selected for Calculation Purposes & Thus form  
the basis of this report. All Luminaires to be selected in line with Public  
Procurement Guidelines

Luminaire Performance Details(Lumen Output/Colour Temp etc) on Pages 2-3

## **Public Lighting Report**

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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	Grid 1	-29.08	-218.02	350.91	338.72	1.50	1.50
2	Grid 2	-252.40	-23.66	185.96	234.01	1.50	1.50
3	Grid 3	-239.13	7.71	166.52	28.36	1.49	1.49
4	Grid 4	-34.74	-116.67	30.79	153.65	1.47	1.49
5	Grid 5	-34.06	-200.60	25.00	90.31	1.47	1.48
6	Grid 6	16.62	-156.61	56.35	54.10	1.48	1.46
7	Grid 7	-26.51	-20.52	170.31	58.59	1.49	1.46
8	Grid 8	-5.41	-106.76	192.20	16.08	1.49	1.46
9	Grid 9	59.27	-74.47	46.86	76.80	1.46	1.48
10	Grid 10	140.01	20.49	96.81	119.63	1.49	1.50
11	Grid 11	172.60	-55.57	54.20	88.52	1.46	1.48
12	Grid 12	82.27	-169.26	177.52	83.12	1.49	1.48

### Luminaires

#### Luminaire A Data



Supplier	
Type	Plurio Indirect - 24 x Warm white 2200K LE D 250mA - EWC Opti
Lamp(s)	LEDs
LampFlux(klm)/Colour	1.40 2200/70
File Name	PLI24L25EWC722G1U1_DC.LDT
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	269.8, 78.0, 7.1
No. in Project	59

#### Luminaire B Data



Supplier	
Type	Plurio Indirect - 24 x Warm white 2200K LE D 350mA - EWC Opti
Lamp(s)	LEDs
LampFlux(klm)/Colour	2.00 2200/70
File Name	PLI24L35EWC722G1U1_DC.LDT
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	269.8, 78.0, 7.1
No. in Project	18

#### Luminaire C Data



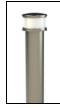
Supplier	
Type	Plurio Indirect - 24 x Warm white 2200K LE D 700mA - EWC Opti
Lamp(s)	LEDs
LampFlux(klm)/Colour	4.36 2200/70
File Name	PLI24L70EWC722G1U1_DC.LDT
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	269.8, 78.0, 7.1
No. in Project	26

#### Luminaire D Data



Supplier	
Type	Plurio Indirect - 24 x Warm white 2200K LE D 250mA - EWC Opti
Lamp(s)	LEDs
LampFlux(klm)/Colour	1.20 2200/70
File Name	PLI24L25EWC722G1U1_DC.LDT
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	269.8, 78.0, 7.1
No. in Project	40

## Luminaires



### Luminaire E Data

Supplier	Urbis Schreder
Type	PHAROS 0 Symmetrical 8 LEDs 350mA NW Cylindrical, PC, Frosted
Lamp(s)	8 LEDs NW
Lamp Flux (klm)	0.65
File Name	PHAROS 0 8 LEDs 350mA NW 356004 Cylindrical PC Frosted Symmetrical TF.Idt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	152.8, 98.8, 58.0
No. in Project	105

**Layout**

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	-188.45	190.43	4.00	213.00	0.00	0.00	0.00			
2	A	-178.51	172.80	4.00	213.00	0.00	0.00	0.00			
3	A	-168.51	154.97	4.00	213.00	0.00	0.00	0.00			
4	A	-155.42	140.34	4.00	228.00	0.00	0.00	0.00			
5	A	-140.87	126.17	4.00	213.00	0.00	0.00	0.00			
6	A	-129.39	109.61	4.00	213.00	0.00	0.00	0.00			
7	A	-119.14	92.24	4.00	202.00	0.00	0.00	0.00			
8	B	-201.50	162.73	4.00	308.00	0.00	0.00	0.00			
9	A	-181.00	155.89	4.00	234.00	0.00	0.00	0.00			
10	A	-162.36	146.50	4.00	220.00	0.00	0.00	0.00			
11	A	-154.85	124.43	4.00	213.00	0.00	0.00	0.00			
12	A	-146.67	108.57	4.00	213.00	0.00	0.00	0.00			
13	A	-135.50	94.13	4.00	213.00	0.00	0.00	0.00			
14	A	-123.37	81.32	4.00	213.00	0.00	0.00	0.00			
15	A	-113.01	68.58	4.00	232.00	0.00	0.00	0.00			
16	A	-97.18	61.95	4.00	246.00	0.00	0.00	0.00			
17	A	-80.48	50.89	4.00	222.00	0.00	0.00	0.00			
18	A	-66.79	37.06	4.00	213.00	0.00	0.00	0.00			
19	D	-222.06	49.22	4.00	178.00	0.00	0.00	0.00			
20	C	-187.25	28.97	6.00	270.00	0.00	0.00	0.00			
21	C	-227.38	13.45	6.00	93.00	0.00	0.00	0.00			
22	C	-210.74	28.44	6.00	270.00	0.00	0.00	0.00			
23	A	-108.67	92.45	6.00	291.00	0.00	0.00	0.00			
24	A	-88.19	98.91	6.00	287.00	0.00	0.00	0.00			
25	C	-169.31	17.52	6.00	88.00	0.00	0.00	0.00			
26	C	-150.40	29.65	6.00	270.00	0.00	0.00	0.00			
27	C	-132.01	30.02	6.00	270.00	0.00	0.00	0.00			
28	B	-112.91	29.13	6.00	270.00	0.00	0.00	0.00			
29	C	-96.37	31.17	6.00	270.00	0.00	0.00	0.00			
30	B	-78.99	30.01	6.00	270.00	0.00	0.00	0.00			
31	D	-225.24	31.54	4.00	185.00	0.00	0.00	0.00			
32	A	-101.59	75.84	4.00	252.00	0.00	0.00	0.00			
33	A	-79.81	62.39	6.00	243.00	0.00	0.00	0.00			
34	A	-65.26	52.31	6.00	246.00	0.00	0.00	0.00			
35	B	-62.18	28.32	6.00	225.00	0.00	0.00	0.00			
36	B	-64.16	17.09	6.00	90.00	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	D	-218.72	68.15	6.00	170.00	0.00	0.00	0.00			
38	D	-215.45	86.81	6.00	165.00	0.00	0.00	0.00			
39	D	-212.07	106.42	6.00	130.00	0.00	0.00	0.00			
40	A	-98.15	109.27	6.00	291.00	0.00	0.00	0.00			
41	E	-209.96	135.30	1.00	0.00	0.00	0.00	0.00			
42	A	-164.15	139.74	4.00	176.00	0.00	0.00	0.00			
43	E	-194.01	150.19	1.00	80.00	0.00	0.00	0.00			
44	E	-207.01	147.02	1.00	337.00	0.00	0.00	0.00			
45	C	122.29	125.66	6.00	145.00	0.00	0.00	0.00			
46	C	143.56	133.83	6.00	105.00	0.00	0.00	0.00			
47	C	165.73	140.89	6.00	103.00	0.00	0.00	0.00			
48	C	194.20	149.57	6.00	102.00	0.00	0.00	0.00			
49	C	187.63	143.98	6.00	197.00	0.00	0.00	0.00			
50	A	186.52	125.51	6.00	18.00	0.00	0.00	0.00			
51	A	191.56	108.99	6.00	14.00	0.00	0.00	0.00			
52	C	198.49	87.30	6.00	18.00	0.00	0.00	0.00			
53	A	201.96	72.42	6.00	339.00	0.00	0.00	0.00			
54	A	194.22	51.39	6.00	329.00	0.00	0.00	0.00			
55	C	182.42	37.63	6.00	131.00	0.00	0.00	0.00			
56	C	160.29	30.39	6.00	102.00	0.00	0.00	0.00			
57	B	139.31	26.84	6.00	22.00	0.00	0.00	0.00			
58	C	126.03	108.45	6.00	208.00	0.00	0.00	0.00			
59	A	123.35	84.81	6.00	349.00	0.00	0.00	0.00			
60	A	126.82	65.83	4.00	23.00	0.00	0.00	0.00			
61	A	134.69	47.89	4.00	39.00	0.00	0.00	0.00			
62	A	147.11	3.12	4.00	25.00	0.00	0.00	0.00			
63	A	153.11	-16.56	4.00	13.00	0.00	0.00	0.00			
64	C	145.78	-43.71	4.00	284.00	0.00	0.00	0.00			
65	B	129.10	-48.76	4.00	289.00	0.00	0.00	0.00			
66	C	111.64	-54.53	4.00	285.00	0.00	0.00	0.00			
67	A	170.68	-53.16	6.00	188.00	0.00	0.00	0.00			
68	A	159.57	-36.52	6.00	16.00	0.00	0.00	0.00			
69	C	85.85	-58.40	6.00	308.00	0.00	0.00	0.00			
70	C	-44.48	11.84	6.00	203.00	0.00	0.00	0.00			
71	B	-37.24	-22.99	6.00	205.00	0.00	0.00	0.00			
72	C	-34.09	-41.48	6.00	185.00	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	C	-28.00	-62.22	6.00	222.00	0.00	0.00	0.00			
74	B	-21.97	-81.00	6.00	195.00	0.00	0.00	0.00			
75	B	-29.91	-105.46	6.00	285.00	0.00	0.00	0.00			
76	A	-38.38	-117.49	6.00	190.00	0.00	0.00	0.00			
77	C	-46.40	-139.21	6.00	17.00	0.00	0.00	0.00			
78	B	-42.16	-155.65	6.00	16.00	0.00	0.00	0.00			
79	B	-38.11	-171.81	6.00	16.00	0.00	0.00	0.00			
80	B	-33.39	-190.54	6.00	21.00	0.00	0.00	0.00			
81	B	27.53	-87.84	4.00	285.00	0.00	0.00	0.00			
82	A	69.95	-138.74	6.00	177.00	0.00	0.00	0.00			
83	A	69.52	-127.97	4.00	172.00	0.00	0.00	0.00			
84	A	69.09	-117.43	6.00	174.00	0.00	0.00	0.00			
85	A	68.49	-104.76	6.00	182.00	0.00	0.00	0.00			
86	A	67.90	-93.12	6.00	175.00	0.00	0.00	0.00			
87	C	6.07	-94.13	4.00	284.00	0.00	0.00	0.00			
88	D	76.66	-66.80	4.00	0.00	0.00	0.00	0.00			
89	C	48.30	-80.53	4.00	284.00	0.00	0.00	0.00			
90	D	64.54	-62.41	4.00	320.00	0.00	0.00	0.00			
91	D	70.83	-46.84	4.00	9.00	0.00	0.00	0.00			
92	D	63.00	-22.92	4.00	2.00	0.00	0.00	0.00			
93	D	61.84	-2.22	4.00	348.00	0.00	0.00	0.00			
94	A	49.20	5.97	4.00	87.00	0.00	0.00	0.00			
95	D	30.27	7.31	3.00	73.00	0.00	0.00	0.00			
96	D	-44.62	24.35	3.00	73.00	0.00	0.00	0.00			
97	D	-28.07	20.67	3.00	73.00	0.00	0.00	0.00			
98	D	13.46	10.84	3.00	73.00	0.00	0.00	0.00			
99	D	-3.07	14.95	3.00	73.00	0.00	0.00	0.00			
100	D	-15.09	17.57	3.00	73.00	0.00	0.00	0.00			
101	A	-29.24	36.17	4.00	286.00	0.00	0.00	0.00			
102	A	-10.46	42.25	4.00	287.00	0.00	0.00	0.00			
103	A	10.02	48.49	4.00	287.00	0.00	0.00	0.00			
104	A	29.22	54.69	4.00	287.00	0.00	0.00	0.00			
105	A	48.13	60.68	4.00	287.00	0.00	0.00	0.00			
106	A	67.79	66.84	4.00	287.00	0.00	0.00	0.00			
107	A	86.31	72.84	4.00	283.00	0.00	0.00	0.00			
108	A	105.60	79.00	4.00	297.00	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	A	9.68	33.82	3.00	231.00	0.00	0.00	0.00			
110	A	23.21	22.02	3.00	228.00	0.00	0.00	0.00			
111	B	75.26	-80.18	4.00	123.00	0.00	0.00	0.00			
112	B	-17.13	-184.41	4.00	195.00	0.00	0.00	0.00			
113	A	-55.27	37.90	4.00	215.00	0.00	0.00	0.00			
114	A	7.28	-121.21	6.00	190.00	0.00	0.00	0.00			
115	A	13.39	-139.92	6.00	205.00	0.00	0.00	0.00			
116	A	19.62	-160.01	6.00	201.00	0.00	0.00	0.00			
117	A	25.28	-178.07	6.00	180.00	0.00	0.00	0.00			
118	A	70.34	-150.36	6.00	182.00	0.00	0.00	0.00			
119	A	72.81	-164.77	6.00	181.00	0.00	0.00	0.00			
120	E	29.29	-106.83	1.00	112.00	0.00	0.00	0.00			
121	E	15.32	-111.09	1.00	99.00	0.00	0.00	0.00			
122	E	20.65	-103.97	1.00	304.00	0.00	0.00	0.00			
123	E	47.27	-101.13	1.00	81.00	0.00	0.00	0.00			
124	E	24.22	-153.10	1.00	130.00	0.00	0.00	0.00			
125	E	34.52	-142.81	1.00	121.00	0.00	0.00	0.00			
126	E	40.21	-124.80	1.00	152.00	0.00	0.00	0.00			
127	E	41.74	-117.26	1.00	193.00	0.00	0.00	0.00			
128	E	55.29	-139.18	1.00	272.00	0.00	0.00	0.00			
129	E	10.96	-116.56	1.00	238.00	0.00	0.00	0.00			
130	E	20.36	-129.11	1.00	236.00	0.00	0.00	0.00			
131	E	27.88	-135.16	1.00	247.00	0.00	0.00	0.00			
132	D	63.82	-43.37	4.00	353.00	0.00	0.00	0.00			
133	E	41.65	-130.75	1.00	246.00	0.00	0.00	0.00			
134	E	30.07	-147.34	1.00	123.00	0.00	0.00	0.00			
135	E	32.90	-98.87	1.00	226.00	0.00	0.00	0.00			
136	E	55.67	-97.81	1.00	139.00	0.00	0.00	0.00			
137	E	179.07	-56.90	1.00	286.00	0.00	0.00	0.00			
138	E	185.53	-54.65	1.00	289.00	0.00	0.00	0.00			
139	E	198.68	-50.63	1.00	295.00	0.00	0.00	0.00			
140	E	218.64	-49.00	1.00	195.00	0.00	0.00	0.00			
141	E	213.34	-46.07	1.00	292.00	0.00	0.00	0.00			
142	E	219.24	-56.88	1.00	193.00	0.00	0.00	0.00			
143	E	171.24	-111.01	1.00	80.00	0.00	0.00	0.00			
144	D	82.67	-84.27	4.00	300.00	0.00	0.00	0.00			

**Layout Continued**

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
145	D	99.99	-78.65	4.00	295.00	0.00	0.00	0.00			
146	D	115.53	-73.73	4.00	295.00	0.00	0.00	0.00			
147	E	194.41	-110.15	1.00	88.00	0.00	0.00	0.00			
148	E	202.66	-109.97	1.00	84.00	0.00	0.00	0.00			
149	E	216.77	-109.62	1.00	97.00	0.00	0.00	0.00			
150	E	223.17	-93.72	1.00	181.00	0.00	0.00	0.00			
151	E	222.41	-85.68	1.00	196.00	0.00	0.00	0.00			
152	E	220.97	-69.82	1.00	188.00	0.00	0.00	0.00			
156	D	152.66	-113.19	4.00	111.00	0.00	0.00	0.00			
157	E	221.62	-77.71	1.00	169.00	0.00	0.00	0.00			
158	E	224.26	-101.78	1.00	194.00	0.00	0.00	0.00			
159	E	186.45	-110.54	1.00	87.00	0.00	0.00	0.00			
160	E	163.49	-111.35	1.00	95.00	0.00	0.00	0.00			
175	E	105.55	-68.93	1.00	185.00	0.00	0.00	0.00			
176	D	63.93	13.21	3.00	295.00	0.00	0.00	0.00			
177	D	83.66	19.42	3.00	295.00	0.00	0.00	0.00			
178	D	109.28	27.52	3.00	295.00	0.00	0.00	0.00			
179	D	122.25	31.54	3.00	295.00	0.00	0.00	0.00			
180	D	79.55	26.98	3.00	182.00	0.00	0.00	0.00			
181	D	74.63	42.54	3.00	176.00	0.00	0.00	0.00			
182	D	71.75	55.63	3.00	198.00	0.00	0.00	0.00			
166	E	170.89	-7.19	1.00	0.00	0.00	0.00	0.00			
184	D	79.78	-7.13	4.00	16.00	0.00	0.00	0.00			
185	D	85.12	-24.06	4.00	15.00	0.00	0.00	0.00			
186	D	74.77	8.26	4.00	9.00	0.00	0.00	0.00			
187	D	91.08	-42.70	4.00	20.00	0.00	0.00	0.00			
188	E	161.71	-1.95	1.00	295.00	0.00	0.00	0.00			
189	E	169.42	0.16	1.00	290.00	0.00	0.00	0.00			
190	E	176.90	2.22	1.00	289.00	0.00	0.00	0.00			
191	E	191.05	6.17	1.00	287.00	0.00	0.00	0.00			
192	E	199.08	8.43	1.00	357.00	0.00	0.00	0.00			
193	E	196.03	24.75	1.00	0.00	0.00	0.00	0.00			
194	E	195.55	33.57	1.00	20.00	0.00	0.00	0.00			
197	E	-194.93	128.16	1.00	275.00	0.00	0.00	0.00			
199	E	-183.66	131.31	1.00	299.00	0.00	0.00	0.00			
200	E	-174.53	137.47	1.00	314.00	0.00	0.00	0.00			



**Layout Continued**

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
183	E	-200.07	122.22	1.00	95.00	0.00	0.00	0.00			
184	E	-188.43	125.33	1.00	111.00	0.00	0.00	0.00			
185	E	-176.49	130.18	1.00	108.00	0.00	0.00	0.00			
210	E	-207.28	127.60	1.00	163.00	0.00	0.00	0.00			
211	E	-204.23	139.66	1.00	165.00	0.00	0.00	0.00			
212	E	-200.89	151.10	1.00	149.00	0.00	0.00	0.00			
213	E	-79.29	64.43	1.00	112.00	0.00	0.00	0.00			
214	E	-69.59	67.54	1.00	105.00	0.00	0.00	0.00			
215	E	-59.76	70.79	1.00	102.00	0.00	0.00	0.00			
216	E	-51.75	73.37	1.00	114.00	0.00	0.00	0.00			
219	E	-88.84	37.48	1.00	243.00	0.00	0.00	0.00			
220	E	-97.15	43.65	1.00	238.00	0.00	0.00	0.00			
221	E	-104.32	48.79	1.00	238.00	0.00	0.00	0.00			
222	E	-117.60	54.65	1.00	306.00	0.00	0.00	0.00			
223	E	43.41	-111.18	1.00	156.00	0.00	0.00	0.00			
224	E	48.13	-140.81	1.00	99.00	0.00	0.00	0.00			
225	E	39.83	-103.47	1.00	95.00	0.00	0.00	0.00			
226	E	205.92	-48.22	1.00	295.00	0.00	0.00	0.00			
227	E	219.97	-64.11	1.00	182.00	0.00	0.00	0.00			
228	E	191.56	-52.75	1.00	295.00	0.00	0.00	0.00			
229	E	225.12	-108.17	1.00	185.00	0.00	0.00	0.00			
230	E	210.11	-109.79	1.00	89.00	0.00	0.00	0.00			
231	E	179.18	-110.82	1.00	88.00	0.00	0.00	0.00			
214	D	129.91	-69.00	4.00	295.00	0.00	0.00	0.00			
215	D	147.68	-63.21	4.00	295.00	0.00	0.00	0.00			
216	D	161.95	-58.95	4.00	295.00	0.00	0.00	0.00			
217	D	140.57	-116.88	4.00	102.00	0.00	0.00	0.00			
218	D	149.76	-102.85	4.00	94.00	0.00	0.00	0.00			
219	D	141.36	-76.48	4.00	315.00	0.00	0.00	0.00			
220	D	145.50	-89.60	4.00	14.00	0.00	0.00	0.00			
221	E	134.90	-105.28	1.00	208.00	0.00	0.00	0.00			
222	E	132.28	-97.07	1.00	185.00	0.00	0.00	0.00			
223	E	129.56	-88.93	1.00	184.00	0.00	0.00	0.00			
224	E	127.57	-82.03	1.00	170.00	0.00	0.00	0.00			
225	E	183.87	4.26	1.00	295.00	0.00	0.00	0.00			
226	E	197.13	16.41	1.00	15.00	0.00	0.00	0.00			

**Layout Continued**

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
228	E	-207.14	123.47	1.00	330.00	0.00	0.00	0.00			
232	E	-213.52	121.45	1.00	325.00	0.00	0.00	0.00			
233	E	-109.36	52.41	1.00	244.00	0.00	0.00	0.00			
234	E	33.81	-131.55	1.00	317.00	0.00	0.00	0.00			
235	E	40.49	-140.45	1.00	109.00	0.00	0.00	0.00			
236	E	16.11	-121.86	1.00	234.00	0.00	0.00	0.00			
237	D	96.00	23.29	3.00	295.00	0.00	0.00	0.00			
238	E	-64.86	69.09	1.00	92.00	0.00	0.00	0.00			
244	B	-21.10	-115.33	6.00	108.00	0.00	0.00	0.00			
226	E	47.12	-134.22	1.00	242.00	0.00	0.00	0.00			
227	C	-44.89	-6.01	6.00	206.00	0.00	0.00	0.00			
228	B	-13.68	-99.41	6.00	235.00	0.00	0.00	0.00			
229	E	196.73	-0.89	1.00	200.00	0.00	0.00	0.00			
230	E	214.54	-27.40	1.00	294.00	0.00	0.00	0.00			
231	E	178.23	-30.84	1.00	0.00	0.00	0.00	0.00			
232	E	203.68	-23.00	1.00	199.00	0.00	0.00	0.00			
233	E	168.13	-17.81	1.00	102.00	0.00	0.00	0.00			
234	E	175.26	-39.63	1.00	277.00	0.00	0.00	0.00			
235	E	181.92	-11.33	1.00	290.00	0.00	0.00	0.00			
236	E	206.60	-5.76	1.00	106.00	0.00	0.00	0.00			
237	E	190.16	-36.95	1.00	101.00	0.00	0.00	0.00			
238	E	198.02	-7.41	1.00	283.00	0.00	0.00	0.00			
239	E	205.81	-30.90	1.00	278.00	0.00	0.00	0.00			
240	E	181.79	-38.48	1.00	288.00	0.00	0.00	0.00			
241	E	174.33	-14.93	1.00	276.00	0.00	0.00	0.00			
242	E	209.00	-38.59	1.00	200.00	0.00	0.00	0.00			
243	E	183.22	-46.82	1.00	0.00	0.00	0.00	0.00			
244	E	201.59	1.41	1.00	23.00	0.00	0.00	0.00			
245	E	200.91	-14.05	1.00	203.00	0.00	0.00	0.00			
246	E	197.75	-34.74	1.00	97.00	0.00	0.00	0.00			
247	E	175.85	-23.29	1.00	0.00	0.00	0.00	0.00			
248	E	189.68	-9.11	1.00	291.00	0.00	0.00	0.00			

## Horizontal Illuminance (lux)

Grid 1



### Results

Eav	6.78
Emin	0.96
E <sub>max</sub>	42.13
E <sub>min</sub> /E <sub>max</sub>	0.02
E <sub>min</sub> /E <sub>av</sub>	0.14

# Horizontal Illuminance (lux)

Grid 2

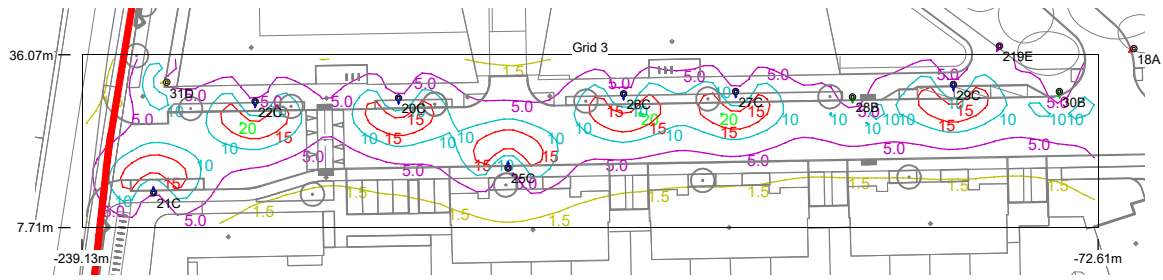


## Results

Eav	7.12
Emin	1.39
Emax	27.52
Emin/Emax	0.05
Emin/Eav	0.20

## Horizontal Illuminance (lux)

Grid 3

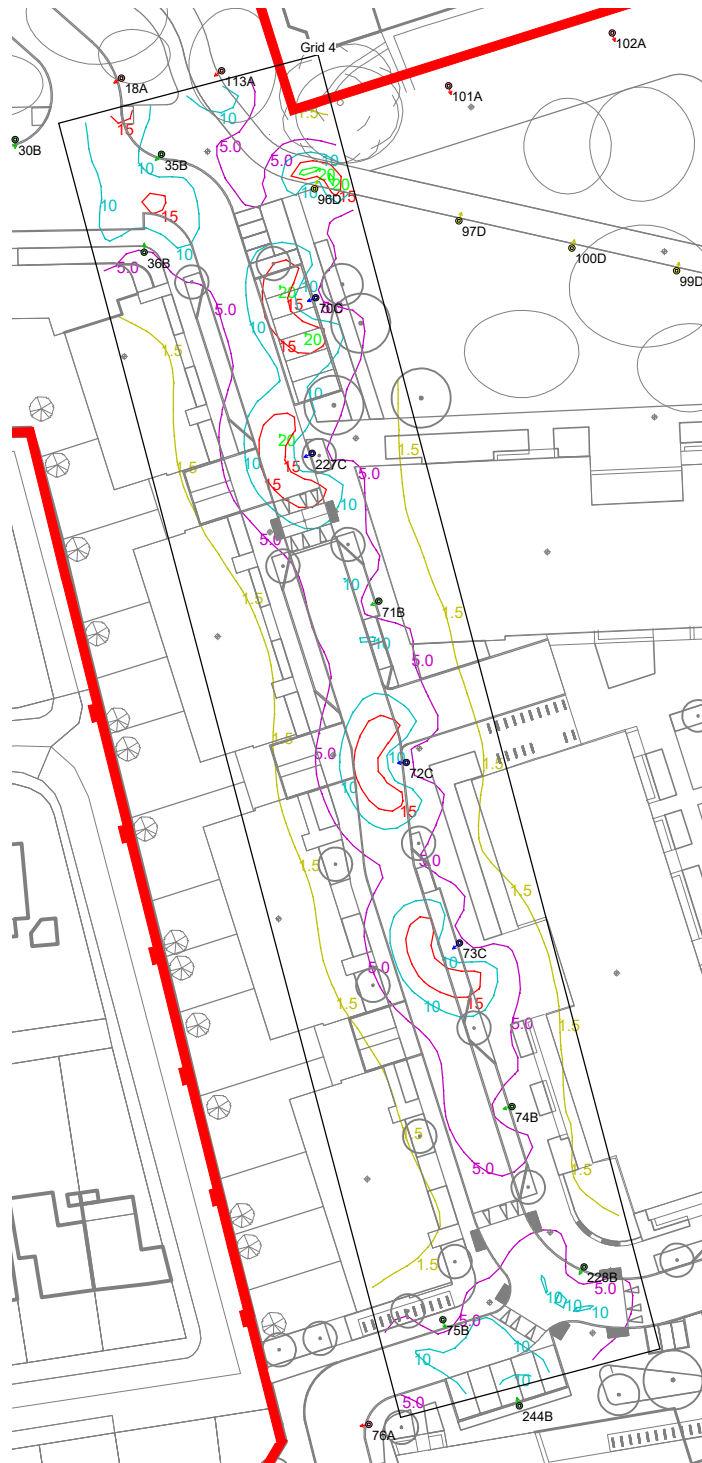


### Results

Eav	8.22
Emin	1.78
Emax	20.60
Emin/Emax	0.09
Emin/Eav	0.22

## Horizontal Illuminance (lux)

Grid 4



### Results

Eav	8.39
Emin	1.88
Emax	22.19
Emin/Emax	0.08
Emin/Eav	0.22

## Horizontal Illuminance (lux)

Grid 5

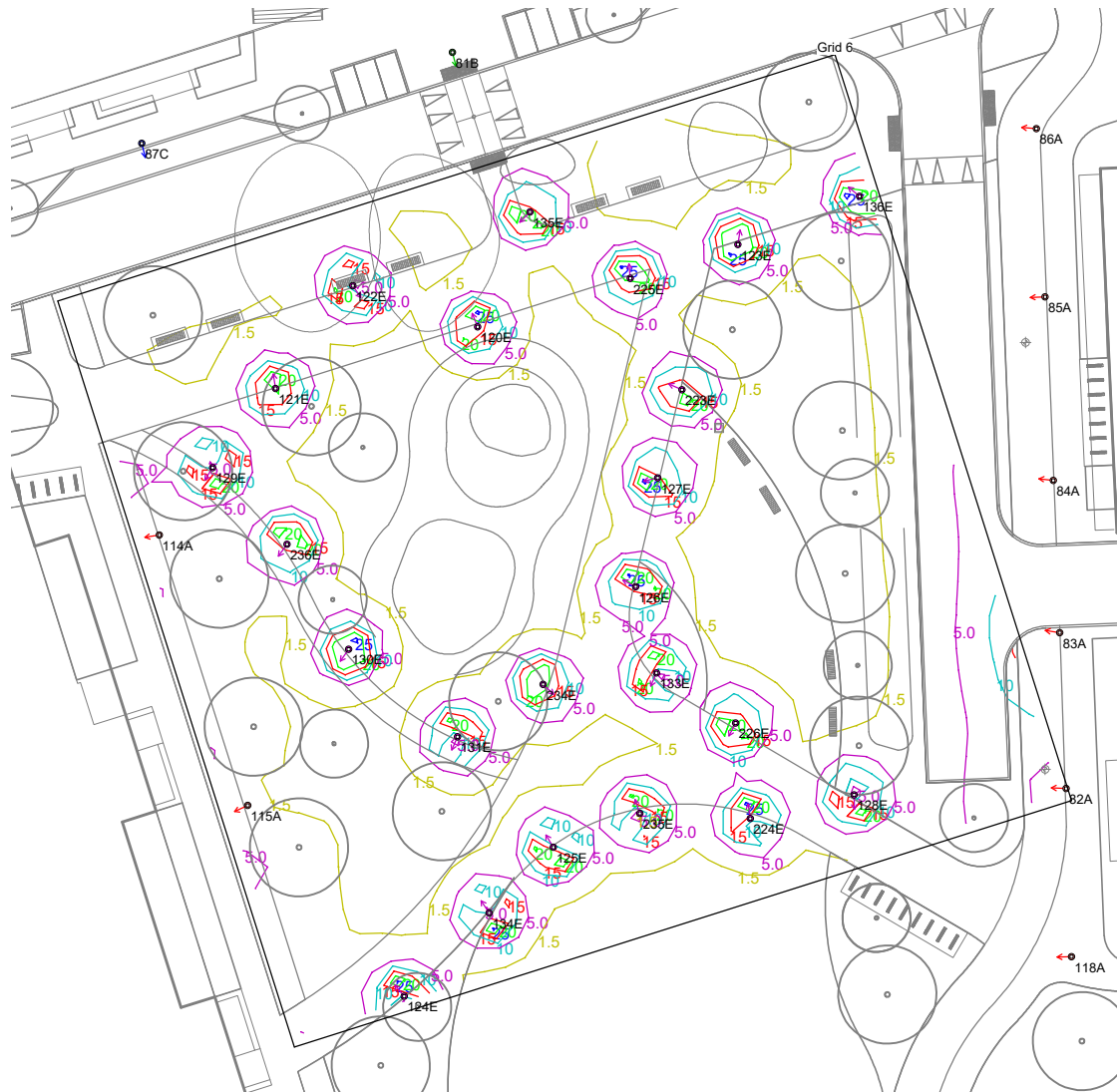


### Results

Eav	6.35
Emin	1.47
E <sub>max</sub>	20.38
E <sub>min</sub> /E <sub>max</sub>	0.07
E <sub>min</sub> /E <sub>av</sub>	0.23

## Horizontal Illuminance (lux)

Grid 6



### Results

Eav	5.38
Emin	1.06
Emax	26.48
Emin/Emax	0.04
Emin/Eav	0.20



## Horizontal Illuminance (lux)

Grid 7

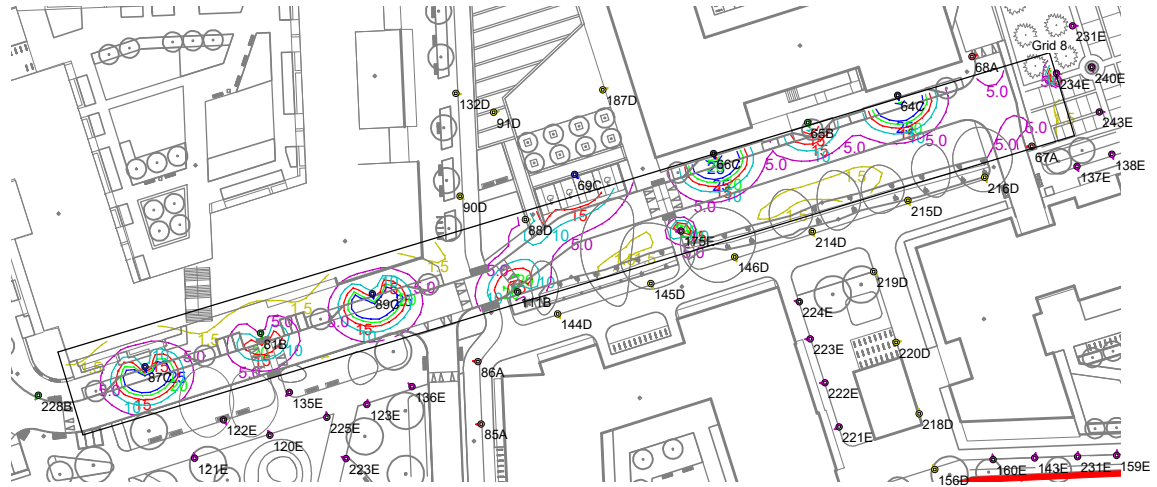


### Results

Eav	6.71
Emin	1.32
Emax	24.27
Emin/Emax	0.05
Emin/Eav	0.20

## Horizontal Illuminance (lux)

Grid 8

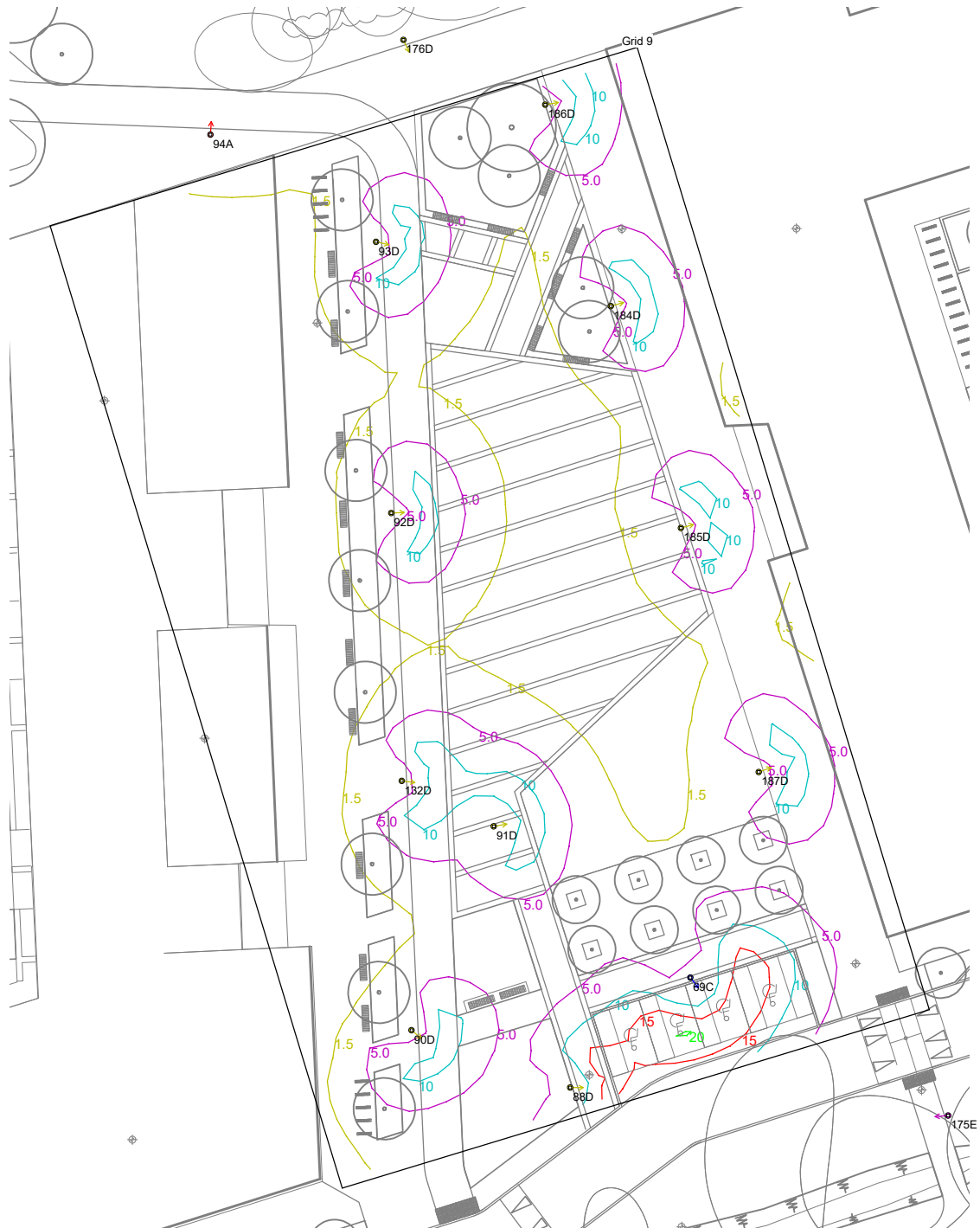


### Results

Eav	8.48
Emin	1.81
E <sub>max</sub>	42.07
E <sub>min</sub> /E <sub>max</sub>	0.04
E <sub>min</sub> /E <sub>av</sub>	0.21

## Horizontal Illuminance (lux)

Grid 9



### Results

Eav	6.80
Emin	1.41
Emax	20.46
Emin/Emax	0.07
Emin/Eav	0.21

## Horizontal Illuminance (lux)

Grid 10



### Results

Eav	7.50
Emin	1.54
Emax	22.30
Emin/Emax	0.07
Emin/Eav	0.20

## Horizontal Illuminance (lux)

Grid 11

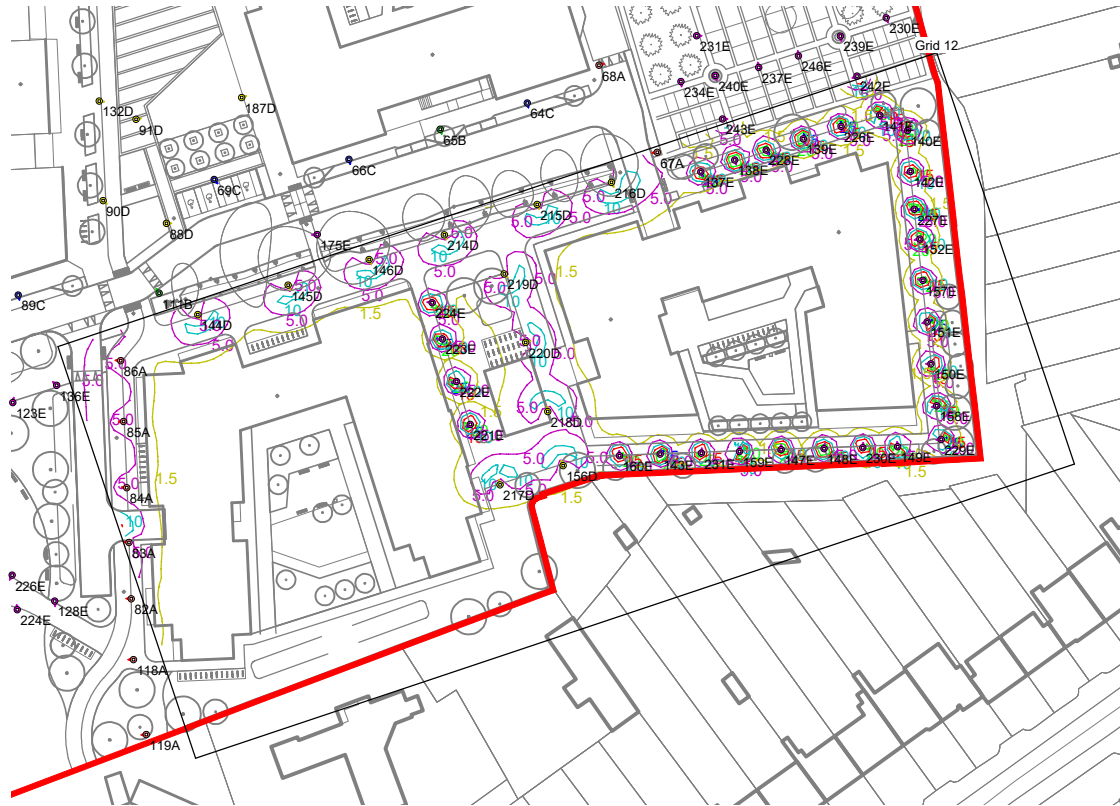


### Results

Eav	8.07
Emin	1.17
Emax	26.47
Emin/Emax	0.04
Emin/Eav	0.15

## Horizontal Illuminance (lux)

Grid 12



### Results

Eav	6.85
Emin	1.35
Emax	26.14
Emin/Emax	0.05
Emin/Eav	0.20