

DATE: 26 June 2022
DESIGNER: Declan Doyle
PROJECT No: KE/RE/KBC/01
PROJECT NAME: Kilbarry Cork site lighting



Lighting to BS5489:1 - 2020
Estate Lighting To Class P3, Spine/Main road lighting To Class P2
Conflict zone lighting to class C3
Dimming To U14 Regime, 3000k colour temp.
A) Cree Energy Uno TRSA-02-150 6L 3.66klm, 28w CLO
B) Cree Energy Uno TRSA-02-200 6L 3.88klm, 28w CLO
C) Cree Energy Uno TRSA-02-075 6L 2.83klm, 21w CLO
D) Cree Energy Uno TRMA-02-150 11L 8.02klm, 53w CLO
C/W Nema 7 Pin Socket & photocell
6m Columns - Estate, 8m Columns - Spine & Main Road

Outdoor Lighting Report

NOTE: THE OUTREACHES SHOWN IN THE LUMINAIRE TABLE ARE INDICATIVE ONLY AND ARE FOR CALCULATION PURPOSES TO SHOW THE ACTUAL POSITION OF THE OPTIC IN RELATION TO THE COLUMN.

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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 1	1558.73	698.23	247.00	226.96	1.50	1.49
2	Estate 2	1787.05	792.25	293.14	267.82	1.50	1.50
3	Spine road 6	1846.86	818.75	222.37	17.99	1.49	1.12
4	Old Whitechurch road 2	1506.46	875.88	17.77	175.70	1.48	1.49
5	Old Whitechurch road 1	1519.55	799.39	18.20	77.74	1.40	1.50
6	Spine road 1	1536.81	806.50	85.44	31.95	1.50	1.45
7	Spine road 2	1628.76	773.20	14.24	69.74	1.42	1.48
8	Spine road 4	1670.37	756.39	162.69	14.23	1.49	1.42
9	Spine road 5	1815.00	817.47	35.85	17.06	1.49	1.42
10	Spine road 3	1625.12	766.09	46.02	18.17	1.48	1.40
11	Main entrance	1519.83	812.00	15.18	25.92	1.38	1.44
12	Creche	1595.64	778.43	28.45	21.67	1.50	1.44

Luminaires

Luminaire A Data



Supplier	Cree Lighting
Type	TRSA-02-150-4L30828W
Lamp(s)	8Du4L28W3K
Lamp Flux (klm)	3.66
File Name	TRSA-02-150-4L-308 28W-481-QL21-S03.1 ES
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	476.2, 35.8, 0.0
No. in Project	38

Luminaire B Data



Supplier	Cree Lighting
Type	TRSA-02-200-4L30828W
Lamp(s)	8lu4L28W3K
Lamp Flux (klm)	3.88
File Name	TRSA-02-200-4L-308 28W-1408-QL20-S05 .IES
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	462.5, 41.7, 0.0
No. in Project	60

Luminaire C Data



Supplier	Cree Lighting
Type	TRSA-02-075-6L30821W
Lamp(s)	12lu6L21W3K
Lamp Flux (klm)	2.83
File Name	TRSA-02-075-6L-308 21W-1088-QL20-R1 8.IES
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	418.0, 31.4, 0.0
No. in Project	23

Luminaire D Data



Supplier	Cree Lighting
Type	TRMA-02-15011L30853W
Lamp(s)	24D11L53W30K
Lamp Flux (klm)	8.02
File Name	TRMA-02-150-11L-308 53W-1038-QL21-R 02.IES
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	442.8, 32.9, 0.0
No. in Project	31

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	C	1919.01	1082.18	6.00	90.00	0.00	0.00	0.40			
2	C	1902.60	1082.29	6.00	90.00	0.00	0.00	0.40			
3	C	1885.10	1082.24	6.00	90.00	0.00	0.00	0.40			
4	C	1947.22	1082.29	6.00	90.00	0.00	0.00	0.40			
5	C	1965.88	1082.29	6.00	90.00	0.00	0.00	0.40			
6	C	1928.06	1065.59	6.00	359.00	0.00	0.00	0.40			
7	C	1927.69	1039.86	6.00	0.00	0.00	0.00	0.40			
8	C	1934.35	1025.04	6.00	180.00	0.00	0.00	0.40			
9	C	1927.72	995.43	6.00	0.00	0.00	0.00	0.40			
10	C	1934.47	980.25	6.00	179.00	0.00	0.00	0.40			
11	C	1927.66	965.34	6.00	0.00	0.00	0.00	0.40			
12	B	1922.30	951.50	6.00	90.00	0.00	0.00	0.40			
13	B	1900.03	962.73	6.00	270.00	0.00	0.00	0.40			
14	B	1879.89	951.54	6.00	90.00	0.00	0.00	0.40			
15	B	1862.60	964.78	6.00	1.00	0.00	0.00	0.40			
16	B	1872.30	979.36	6.00	181.00	0.00	0.00	0.40			
17	B	1872.20	994.32	6.00	180.00	0.00	0.00	0.40			
18	B	1862.28	1009.38	6.00	2.00	0.00	0.00	0.40			
19	A	1872.20	1024.62	6.00	177.00	0.00	0.00	0.40			
20	A	1872.26	1054.74	6.00	179.00	0.00	0.00	0.40			
21	A	1857.24	1054.77	6.00	0.00	0.00	0.00	0.40			
22	B	1872.76	1069.59	6.00	179.00	0.00	0.00	0.40			
23	B	1867.78	1090.00	6.00	269.00	0.00	0.00	0.40			
24	B	1905.83	895.76	6.00	180.00	0.00	0.00	0.40			
25	B	1896.25	878.45	6.00	178.00	0.00	0.00	0.40			
26	C	1891.31	859.73	6.00	179.00	0.00	0.00	0.40			
27	C	1887.11	846.51	6.00	187.00	0.00	0.00	0.40			
28	C	1876.30	839.77	6.00	90.00	0.00	0.00	0.40			
29	C	1860.78	839.82	6.00	90.00	0.00	0.00	0.40			
30	C	1824.51	841.75	6.00	90.00	0.00	0.00	0.40			
31	C	1809.99	841.75	6.00	90.00	0.00	0.00	0.40			
32	B	1832.96	839.65	6.00	3.00	0.00	0.00	0.40			
33	B	1843.11	859.30	6.00	180.00	0.00	0.00	0.40			
34	B	1835.76	872.89	6.00	0.00	0.00	0.00	0.40			
35	B	1842.13	889.39	6.00	203.00	0.00	0.00	0.40			
36	A	1856.74	892.33	6.00	90.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
37	A	1883.57	900.07	6.00	270.00	0.00	0.00	0.40			
38	B	1836.93	906.51	6.00	204.00	0.00	0.00	0.40			
39	B	1826.62	931.22	6.00	207.00	0.00	0.00	0.40			
40	A	1822.41	916.83	6.00	21.00	0.00	0.00	0.40			
41	A	1798.45	831.76	6.00	164.00	0.00	0.00	0.40			
42	A	1791.60	848.66	6.00	23.00	0.00	0.00	0.40			
43	B	1783.11	869.60	6.00	24.00	0.00	0.00	0.40			
44	B	1773.46	893.02	6.00	23.00	0.00	0.00	0.40			
45	B	1785.46	884.28	6.00	202.00	0.00	0.00	0.40			
46	B	1795.25	861.38	6.00	203.00	0.00	0.00	0.40			
47	A	1781.09	820.47	6.00	112.00	0.00	0.00	0.40			
48	A	1797.27	933.34	6.00	294.00	0.00	0.00	0.40			
49	A	1781.87	927.92	6.00	292.00	0.00	0.00	0.40			
50	A	1760.48	919.12	6.00	290.00	0.00	0.00	0.40			
51	B	1775.28	907.70	6.00	201.00	0.00	0.00	0.40			
52	B	1749.12	911.16	6.00	294.00	0.00	0.00	0.40			
53	B	1833.27	935.53	6.00	115.00	0.00	0.00	0.40			
54	B	1835.59	951.48	6.00	90.00	0.00	0.00	0.40			
55	B	1817.23	949.00	6.00	180.00	0.00	0.00	0.40			
56	B	1816.99	965.31	6.00	180.00	0.00	0.00	0.40			
57	B	1808.27	979.54	6.00	0.00	0.00	0.00	0.40			
58	B	1808.98	996.64	6.00	0.00	0.00	0.00	0.40			
59	B	1807.46	1017.75	6.00	0.00	0.00	0.00	0.40			
60	B	1819.27	1030.07	6.00	180.00	0.00	0.00	0.40			
61	B	1808.23	1041.74	6.00	0.00	0.00	0.00	0.40			
62	B	1819.27	1053.27	6.00	180.00	0.00	0.00	0.40			
63	B	1813.97	1066.19	6.00	269.00	0.00	0.00	0.40			
64	A	1749.84	971.67	6.00	113.00	0.00	0.00	0.40			
65	A	1725.69	970.01	6.00	290.00	0.00	0.00	0.40			
66	B	1759.08	985.53	6.00	0.00	0.00	0.00	0.40			
67	B	1777.10	1000.63	6.00	179.00	0.00	0.00	0.40			
68	B	1756.92	1001.06	6.00	1.00	0.00	0.00	0.40			
69	B	1767.49	1014.17	6.00	270.00	0.00	0.00	0.40			
70	A	1854.78	951.49	6.00	90.00	0.00	0.00	0.40			
71	A	1771.19	923.68	6.00	293.00	0.00	0.00	0.40			
72	A	1758.85	811.28	6.00	112.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
73	A	1736.89	801.95	6.00	112.00	0.00	0.00	0.40			
74	A	1714.63	792.62	6.00	112.00	0.00	0.00	0.40			
75	A	1692.27	783.37	6.00	112.00	0.00	0.00	0.40			
76	A	1670.45	774.21	6.00	112.00	0.00	0.00	0.40			
77	A	1648.09	776.73	6.00	38.00	0.00	0.00	0.40			
78	A	1639.02	797.56	6.00	19.00	0.00	0.00	0.40			
79	A	1634.90	819.22	6.00	290.00	0.00	0.00	0.40			
80	B	1642.28	834.50	6.00	290.00	0.00	0.00	0.40			
81	B	1655.73	821.91	6.00	112.00	0.00	0.00	0.40			
82	A	1678.34	833.67	6.00	112.00	0.00	0.00	0.40			
83	C	1706.68	845.78	6.00	112.00	0.00	0.00	0.40			
84	C	1729.21	855.46	6.00	112.00	0.00	0.00	0.40			
85	A	1732.51	871.99	6.00	204.00	0.00	0.00	0.40			
86	A	1726.47	886.66	6.00	201.00	0.00	0.00	0.40			
87	A	1709.76	894.47	6.00	295.00	0.00	0.00	0.40			
88	A	1691.32	886.62	6.00	293.00	0.00	0.00	0.40			
89	B	1731.68	903.85	6.00	291.00	0.00	0.00	0.40			
90	B	1722.44	902.98	6.00	204.00	0.00	0.00	0.40			
91	B	1708.42	911.53	6.00	22.00	0.00	0.00	0.40			
92	B	1711.80	926.33	6.00	206.00	0.00	0.00	0.40			
93	B	1698.65	934.23	6.00	23.00	0.00	0.00	0.40			
94	B	1702.21	950.59	6.00	200.00	0.00	0.00	0.40			
95	A	1708.38	962.57	6.00	293.00	0.00	0.00	0.40			
96	A	1679.65	951.72	6.00	291.00	0.00	0.00	0.40			
97	A	1657.08	944.03	6.00	291.00	0.00	0.00	0.40			
98	A	1634.81	934.44	6.00	293.00	0.00	0.00	0.40			
99	A	1610.95	924.33	6.00	292.00	0.00	0.00	0.40			
100	A	1588.64	915.00	6.00	291.00	0.00	0.00	0.40			
101	B	1581.00	897.42	6.00	23.00	0.00	0.00	0.40			
102	B	1585.82	885.88	6.00	24.00	0.00	0.00	0.40			
103	B	1597.75	879.80	6.00	205.00	0.00	0.00	0.40			
104	B	1595.32	865.48	6.00	24.00	0.00	0.00	0.40			
105	B	1621.36	883.49	6.00	112.00	0.00	0.00	0.40			
106	C	1632.12	876.90	6.00	203.00	0.00	0.00	0.40			
107	C	1608.25	883.93	6.00	290.00	0.00	0.00	0.40			
108	A	1676.13	883.15	6.00	291.00	0.00	0.00	0.40			

Layout Continued

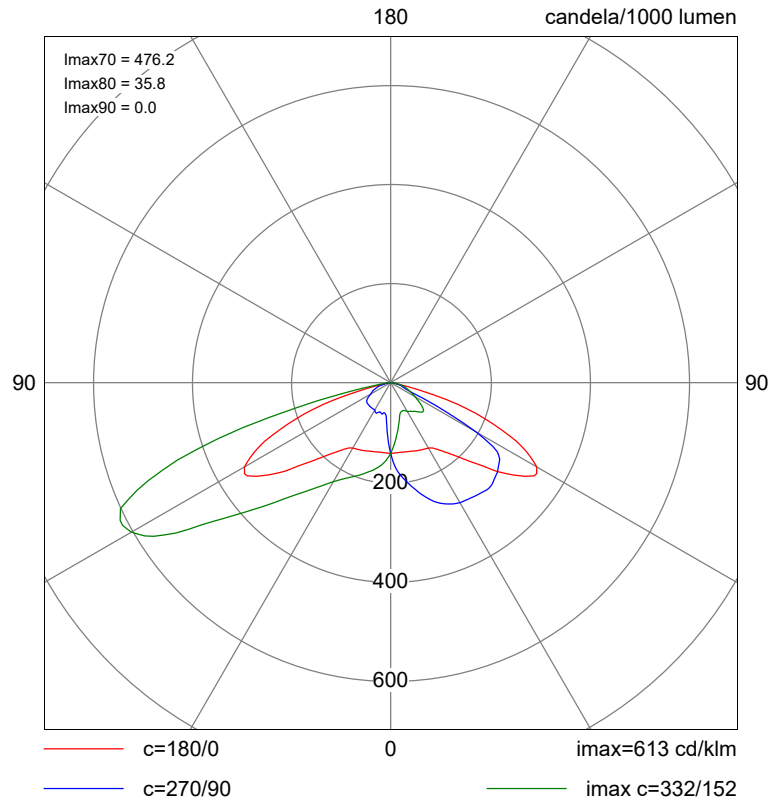
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
109	C	1671.01	854.11	6.00	25.00	0.00	0.00	0.40			
110	B	1665.11	866.91	6.00	112.00	0.00	0.00	0.40			
111	B	1645.40	870.17	6.00	290.00	0.00	0.00	0.40			
112	B	1632.43	853.85	6.00	112.00	0.00	0.00	0.40			
113	B	1608.99	855.27	6.00	290.00	0.00	0.00	0.40			
114	B	1569.88	881.53	6.00	283.00	0.00	0.00	0.40			
115	B	1556.83	867.40	6.00	55.00	0.00	0.00	0.40			
116	C	1560.22	885.07	6.00	112.00	0.00	0.00	0.40			
117	B	1595.57	789.96	6.00	22.00	0.00	0.00	0.40			
118	B	1607.24	804.54	6.00	293.00	0.00	0.00	0.40			
119	B	1613.89	788.80	6.00	112.00	0.00	0.00	0.40			
120	A	1742.68	854.82	6.00	204.00	0.00	0.00	0.40			
121	A	1741.95	831.57	6.00	24.00	0.00	0.00	0.40			
122	D	1529.94	833.48	8.00	279.00	0.00	0.00	0.40			
123	D	1559.53	840.60	8.00	279.00	0.00	0.00	0.40			
124	D	1589.36	847.71	8.00	279.00	0.00	0.00	0.40			
125	D	1612.67	838.46	8.00	208.00	5.00	0.00	0.40			
126	D	1624.12	810.95	8.00	202.00	0.00	0.00	0.40			
127	D	1636.37	782.59	8.00	199.00	0.00	0.00	0.40			
128	D	1651.78	766.93	8.00	252.00	0.00	0.00	0.40			
129	D	1677.91	771.12	8.00	291.00	0.00	0.00	0.40			
130	D	1706.07	783.10	8.00	291.00	0.00	0.00	0.40			
131	D	1733.29	794.24	8.00	291.00	0.00	0.00	0.40			
132	D	1761.18	805.90	8.00	291.00	0.00	0.00	0.40			
133	D	1789.33	817.77	8.00	291.00	0.00	0.00	0.40			
134	D	1817.80	829.05	8.00	284.00	0.00	0.00	0.40			
135	D	1840.39	824.98	8.00	90.00	0.00	0.00	0.40			
136	D	1863.29	828.29	8.00	261.00	0.00	0.00	0.40			
137	D	1892.50	820.48	8.00	250.00	0.00	0.00	0.40			
138	D	1921.66	812.75	8.00	258.00	0.00	0.00	0.40			
139	D	1951.31	805.32	8.00	257.00	0.00	0.00	0.40			
140	D	1981.00	797.85	8.00	258.00	0.00	0.00	0.40			
141	D	2010.65	790.39	8.00	256.00	0.00	0.00	0.40			
142	D	2038.91	785.27	8.00	257.00	0.00	0.00	0.40			
143	D	2064.54	776.59	8.00	253.00	0.00	0.00	0.40			
144	D	1530.06	815.26	8.00	188.00	0.00	0.00	0.40			

Layout Continued

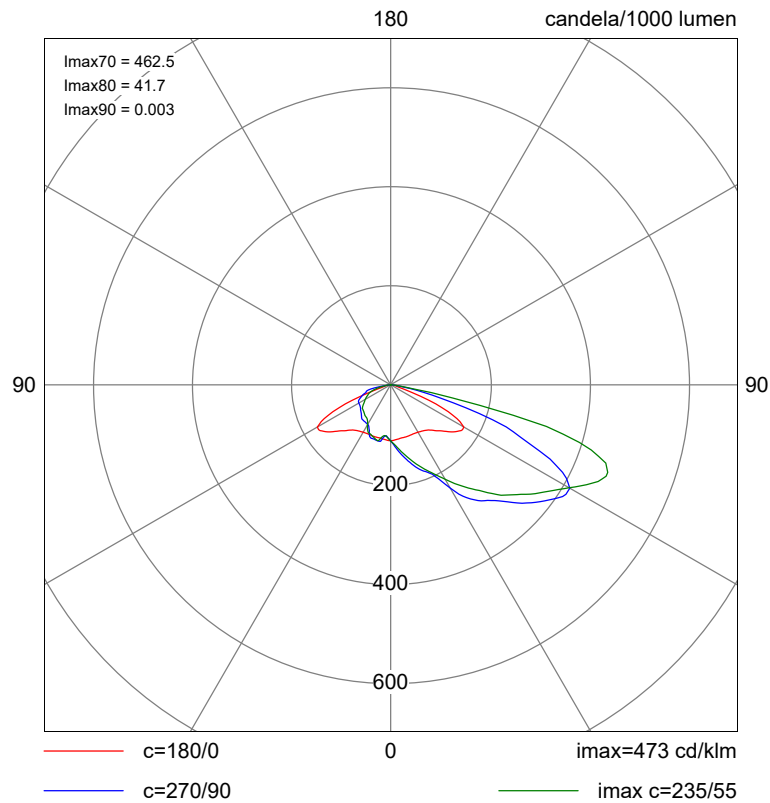
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
145	D	1523.42	848.86	8.00	188.00	0.00	0.00	0.40			
146	D	1522.70	877.51	8.00	173.00	0.00	0.00	0.40			
147	D	1534.36	908.74	8.00	163.00	0.00	0.00	0.40			
148	D	1544.39	935.57	8.00	157.00	0.00	0.00	0.40			
149	D	1555.19	960.18	8.00	163.00	0.00	0.00	0.40			
150	D	1567.28	985.83	8.00	154.00	0.00	0.00	0.40			
151	D	1580.21	1012.49	8.00	159.00	0.00	0.00	0.40			
152	D	1591.01	1038.45	8.00	160.00	0.00	0.00	0.40			

Polar Diagrams

Luminaire A TRSA-02-150-4L30828W

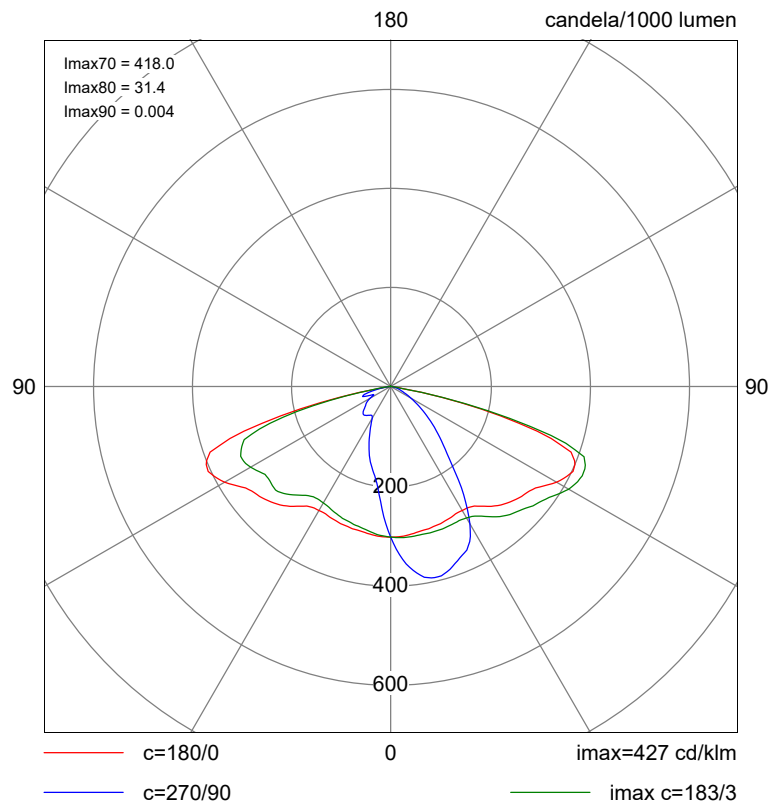


Luminaire B TRSA-02-200-4L30828W

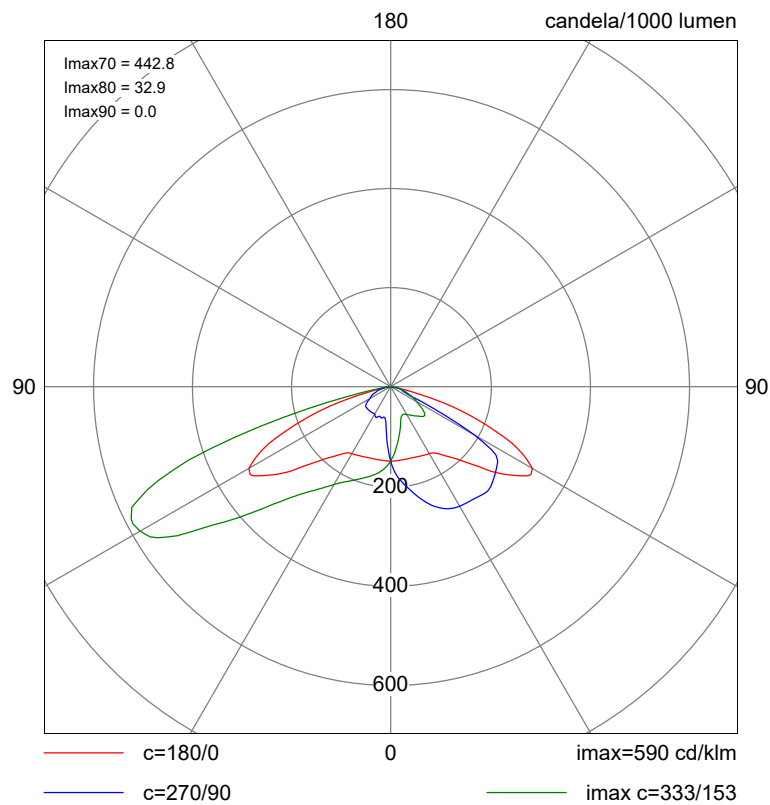


Polar Diagrams Continued

Luminaire C TRSA-02-075-6L30821W



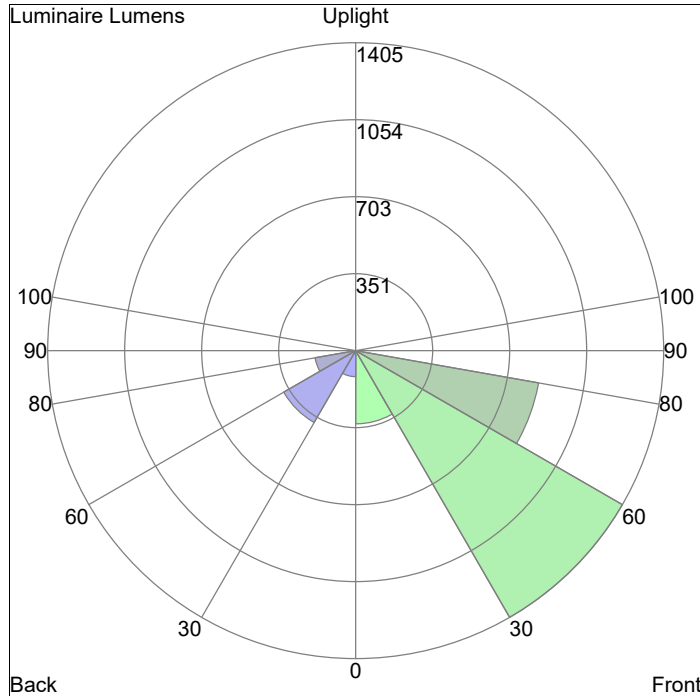
Luminaire D TRMA-02-15011L30853W





Luminaire Classification System (LCS) Graphs

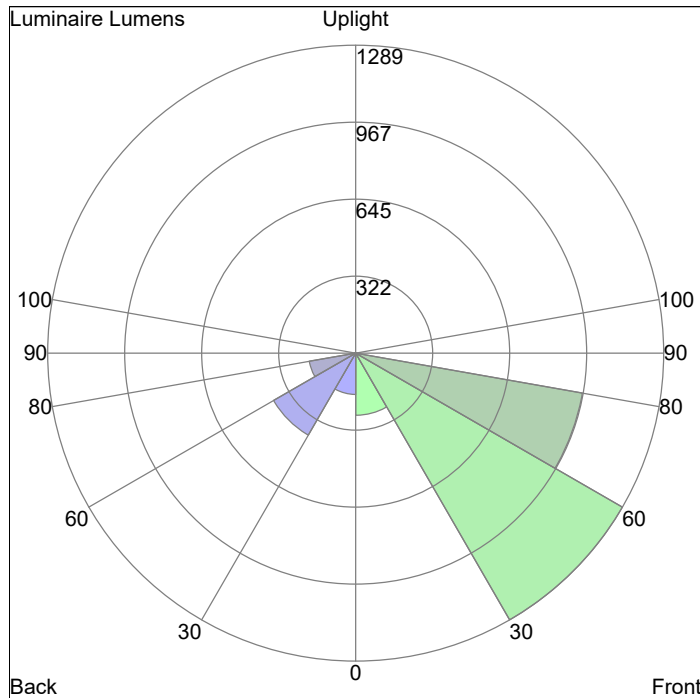
Luminaire A TRSA-02-150-4L30828W



LCS	Lumens	%Lamp	%Lum
FL	334.3	9.1	10.2
FM	1405.5	38.4	42.7
FH	847.6	23.1	25.8
FVH	10.1	0.3	0.3
BL	119.2	3.3	3.6
BM	378.8	10.3	11.5
BH	188.0	5.1	5.7
BVH	5.8	0.2	0.2
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	3289.1	89.8	100.0

BUG rating=B1-U0-G1

Luminaire B TRSA-02-200-4L30828W

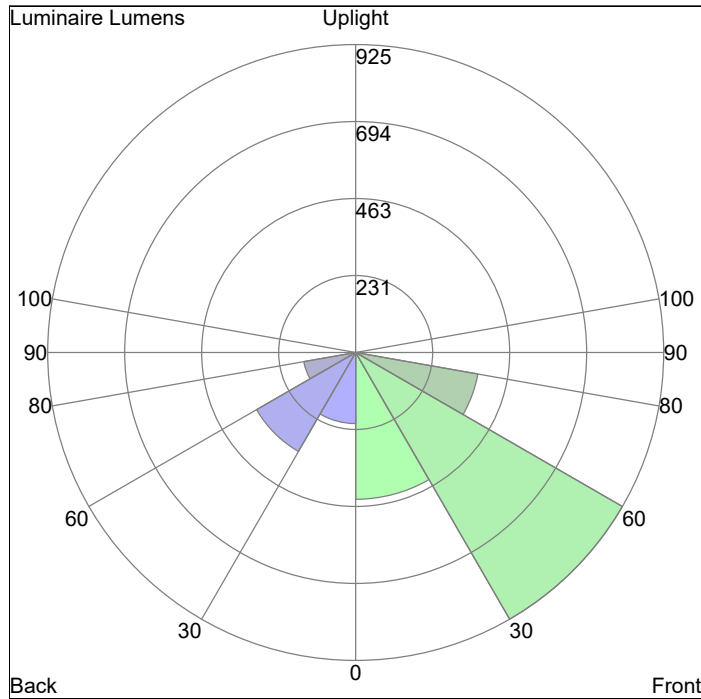


LCS	Lumens	%Lamp	%Lum
FL	260.4	6.7	7.9
FM	1289.3	33.2	39.1
FH	963.8	24.8	29.2
FVH	13.1	0.3	0.4
BL	173.3	4.5	5.3
BM	396.3	10.2	12.0
BH	196.7	5.1	6.0
BVH	5.9	0.2	0.2
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	3299.0	85.0	100.0

BUG rating=B1-U1-G1

Luminaire Classification System (LCS) Graphs Continued

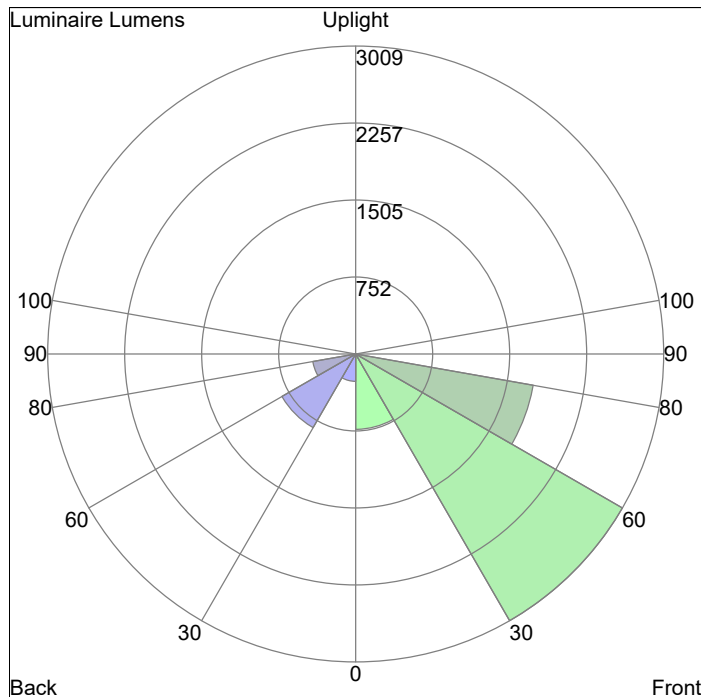
Luminaire C TRSA-02-075-6L30821W



LCS	Lumens	%Lamp	%Lum
FL	441.1	15.6	17.9
FM	925.2	32.7	37.6
FH	372.7	13.2	15.1
FVH	5.4	0.2	0.2
BL	213.7	7.5	8.7
BM	343.5	12.1	13.9
BH	158.0	5.6	6.4
BVH	4.5	0.2	0.2
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	2463.8	87.0	100.0

BUG rating=B1-U1-G1

Luminaire D TRMA-02-15011L30853W



LCS	Lumens	%Lamp	%Lum
FL	736.9	9.2	10.4
FM	3009.4	37.5	42.5
FH	1761.5	22.0	24.9
FVH	24.8	0.3	0.4
BL	268.2	3.3	3.8
BM	831.2	10.4	11.7
BH	425.0	5.3	6.0
BVH	18.6	0.2	0.3
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	7075.3	88.2	100.0

BUG rating=B2-U0-G1

Horizontal Illuminance (lux)

Estate 1



Results

Eav	8.85
Emin	1.79
Emax	24.80
Emin/Emax	0.07
Emin/Eav	0.20
Emax/Eav	2.80

Horizontal Illuminance (lux)

Estate 2

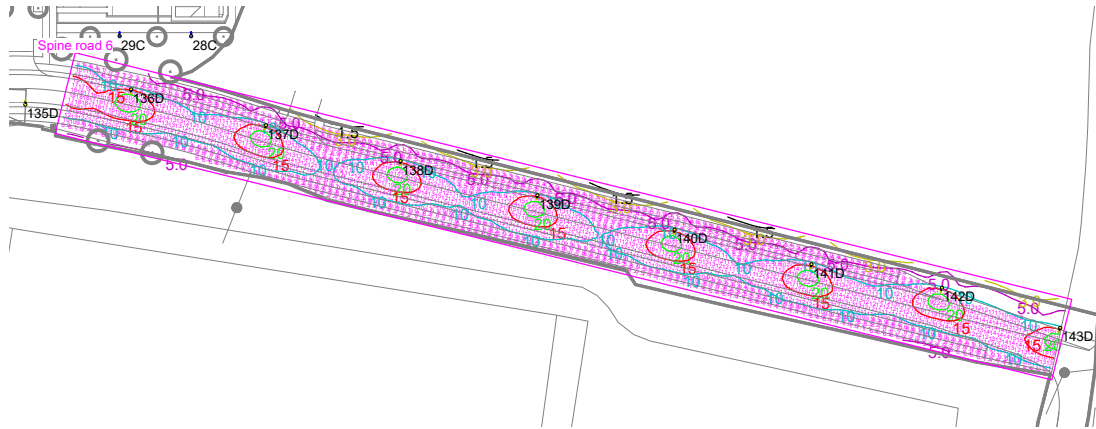


Results

Eav	8.90
Emin	1.74
Emax	25.08
Emin/Emax	0.07
Emin/Eav	0.20
Emax/Eav	2.82

Horizontal Illuminance (lux)

Spine road 6

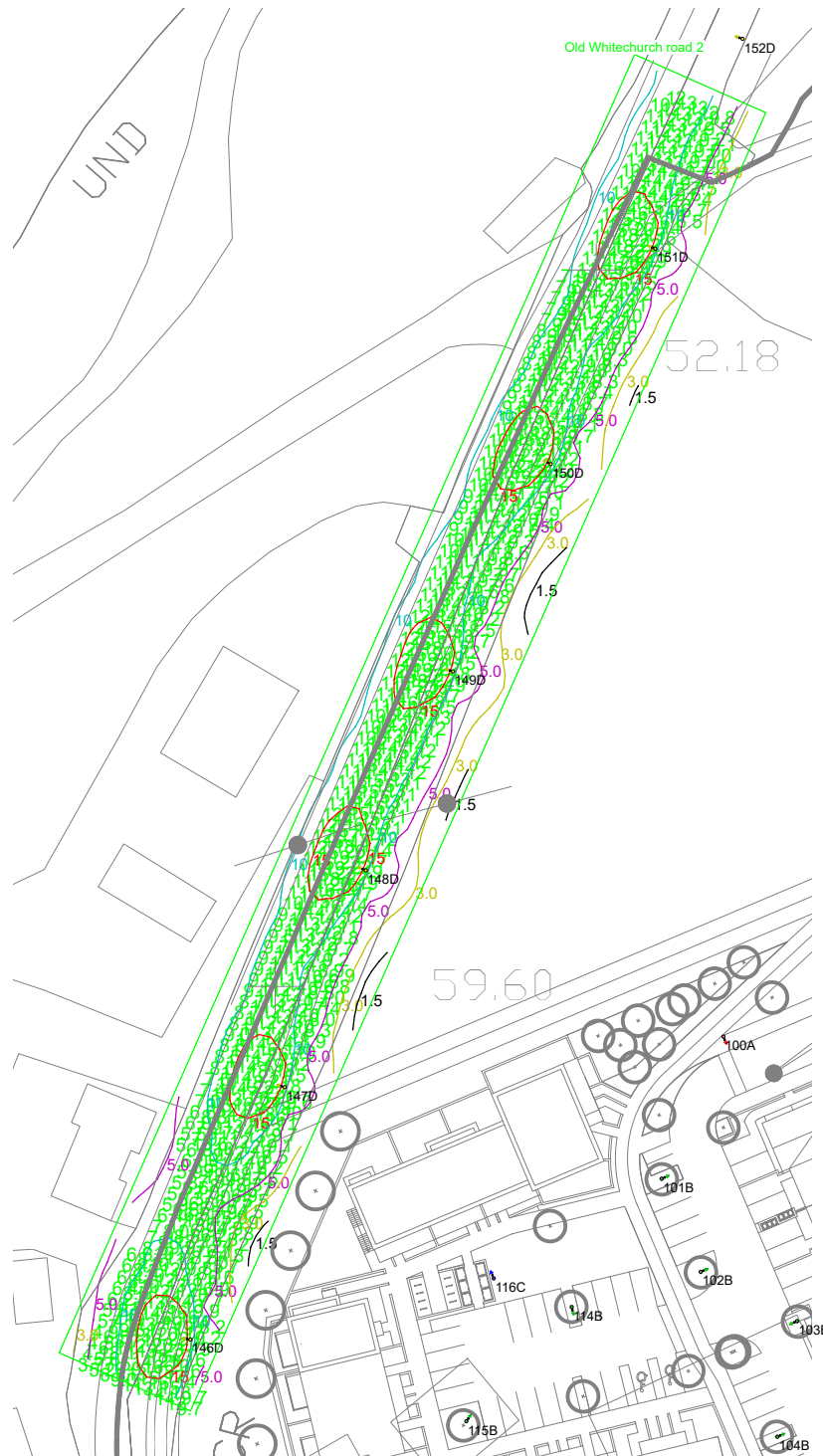


Results

Eav	10.64
Emin	2.33
Emax	23.28
Emin/Emax	0.10
Emin/Eav	0.22
Emax/Eav	2.19

Horizontal Illuminance (lux)

Old Whitechurch road 2

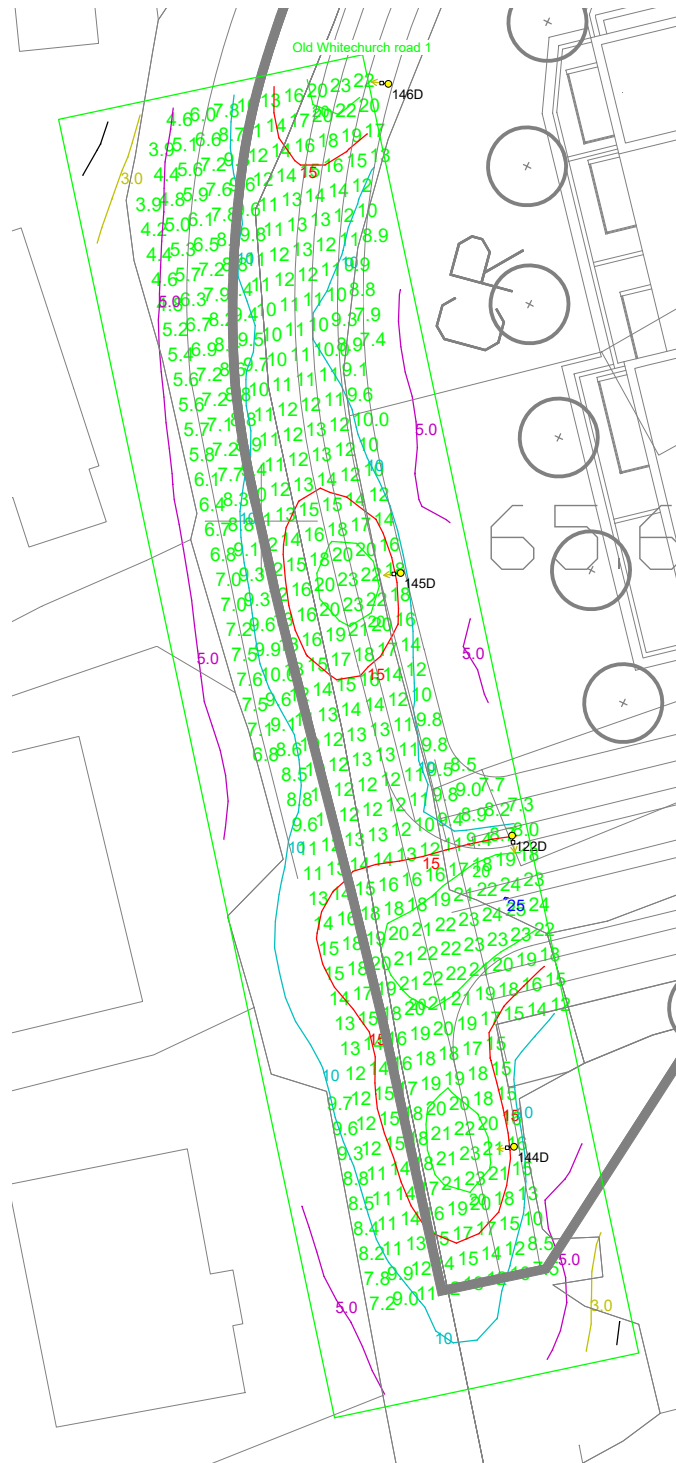


Results

Eav	12.21
Emin	3.66
Emax	22.77
Emin/Emax	0.16
Emin/Eav	0.30
Emax/Eav	1.86

Horizontal Illuminance (lux)

Old Whitechurch road 1

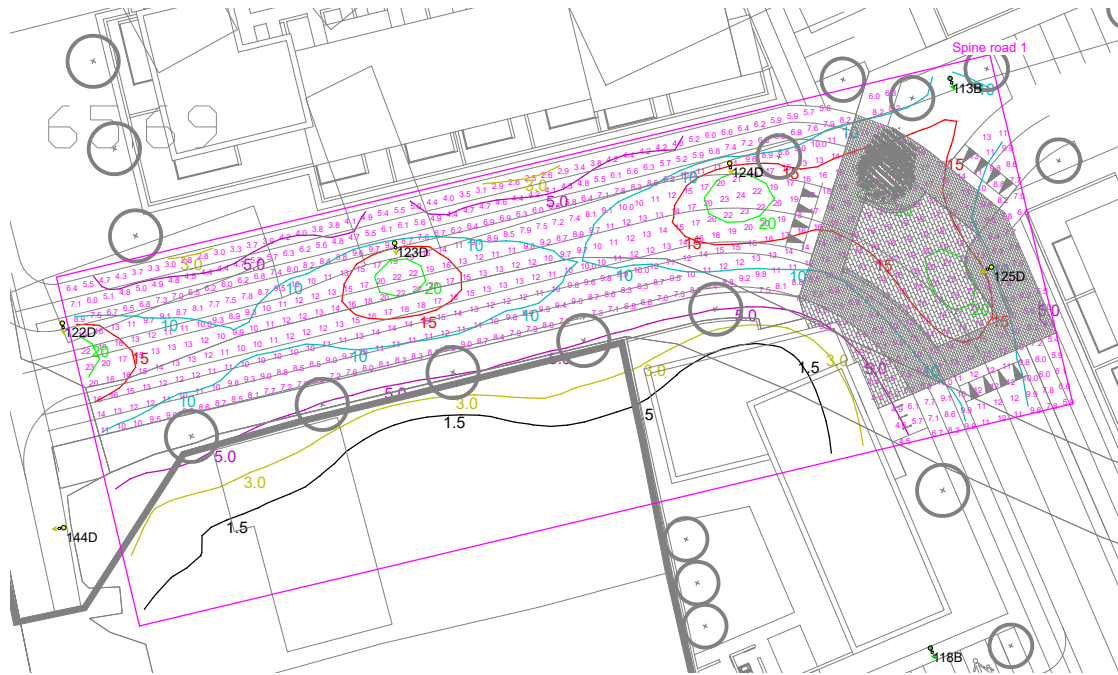


Results

Eav	13.16
Emin	3.86
Emax	25.07
Emin/Emax	0.15
Emin/Eav	0.29
Emax/Eav	1.91

Horizontal Illuminance (lux)

Spine road 1

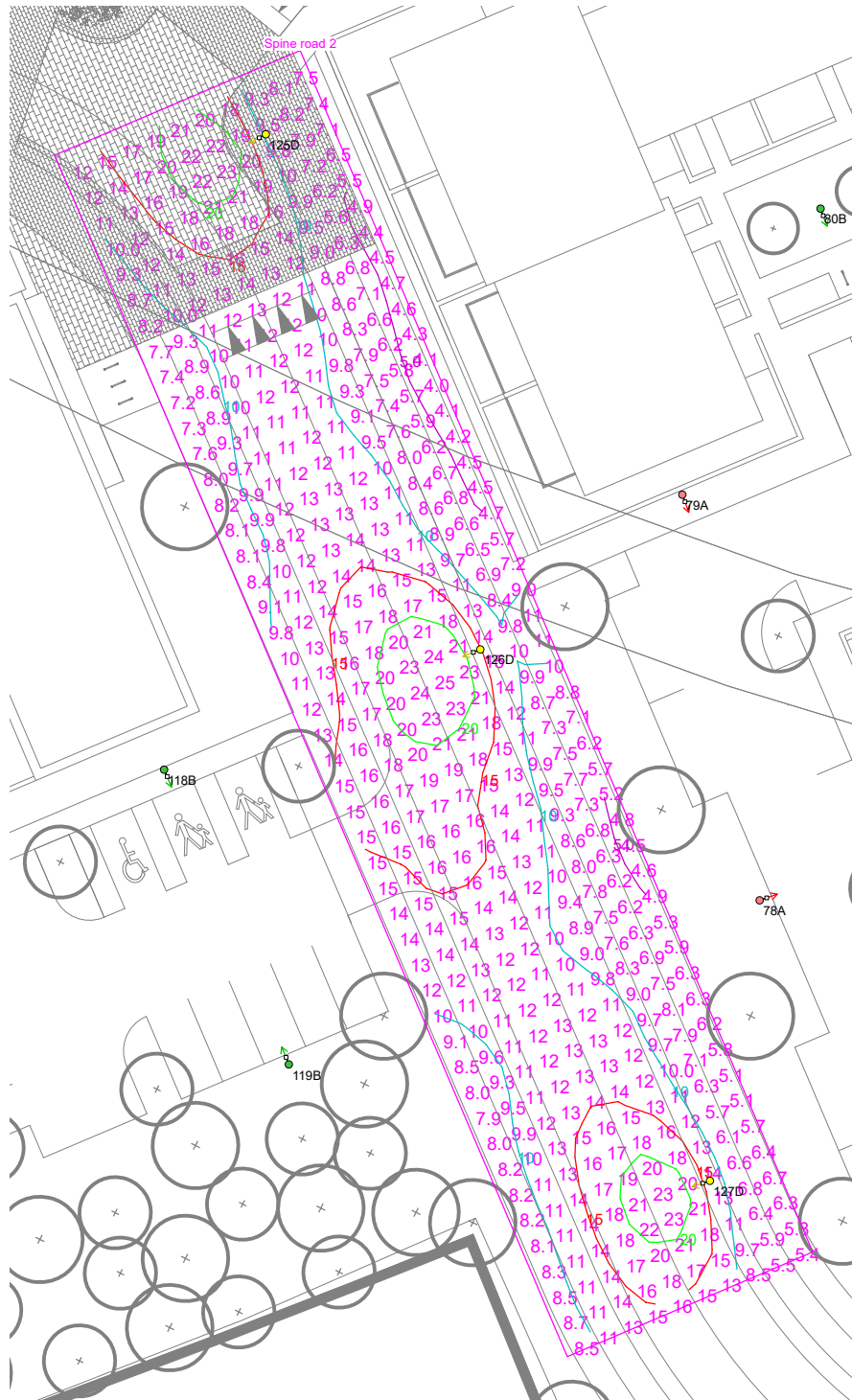


Results

Eav	11.07
Emin	2.51
Emax	23.76
Emin/Emax	0.11
Emin/Eav	0.23
Emax/Eav	2.15

Horizontal Illuminance (lux)

Spine road 2

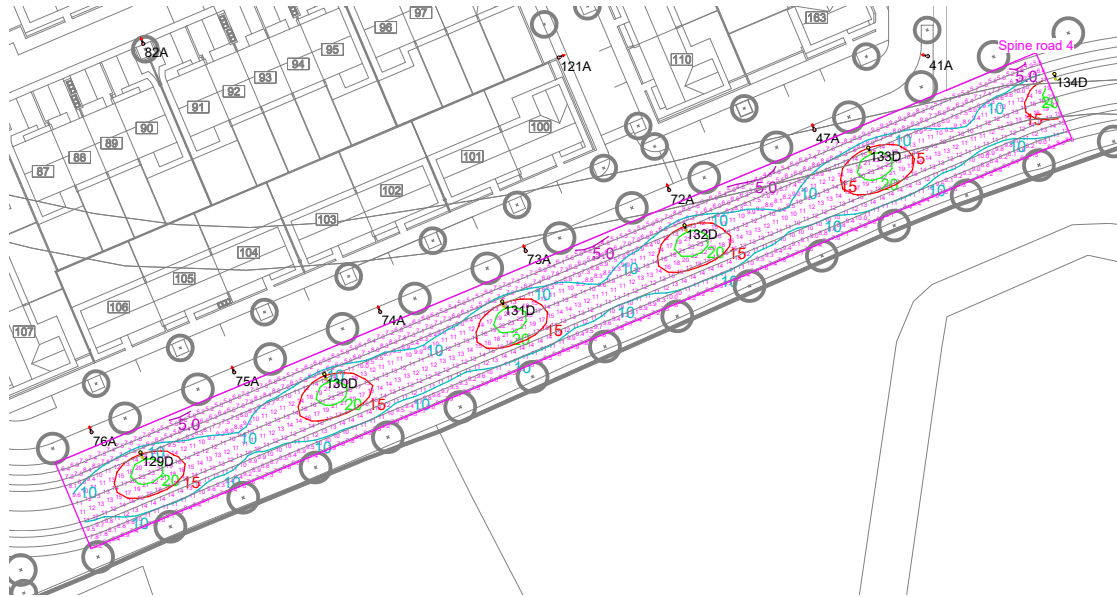


Results

Eav	11.91
Emin	3.99
Emax	24.85
Emin/Emax	0.16
Emin/Eav	0.33
Emax/Eav	2.09

Horizontal Illuminance (lux)

Spine road 4

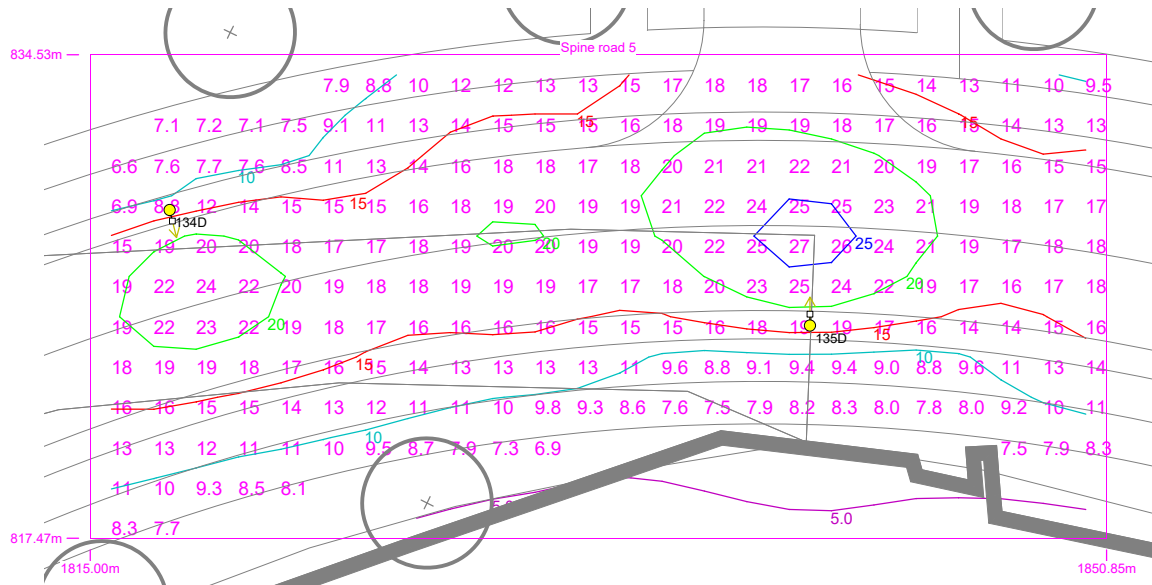


Results

Eav	10.96
Emin	4.27
E _{max}	23.72
E _{min} /E _{max}	0.18
E _{min} /E _{av}	0.39
E _{max} /E _{av}	2.16

Horizontal Illuminance (lux)

Spine road 5

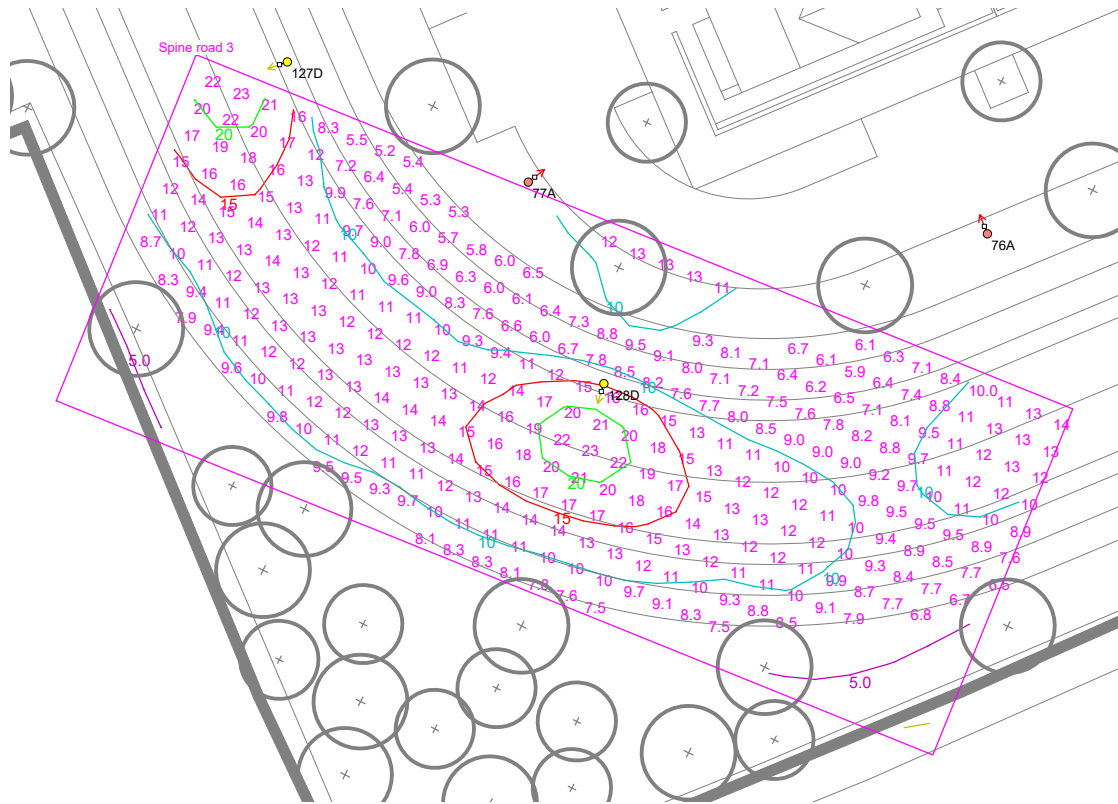


Results

Eav	15.11
Emin	6.55
Emax	26.59
Emin/Emax	0.25
Emin/Eav	0.43
Emax/Eav	1.76

Horizontal Illuminance (lux)

Spine road 3

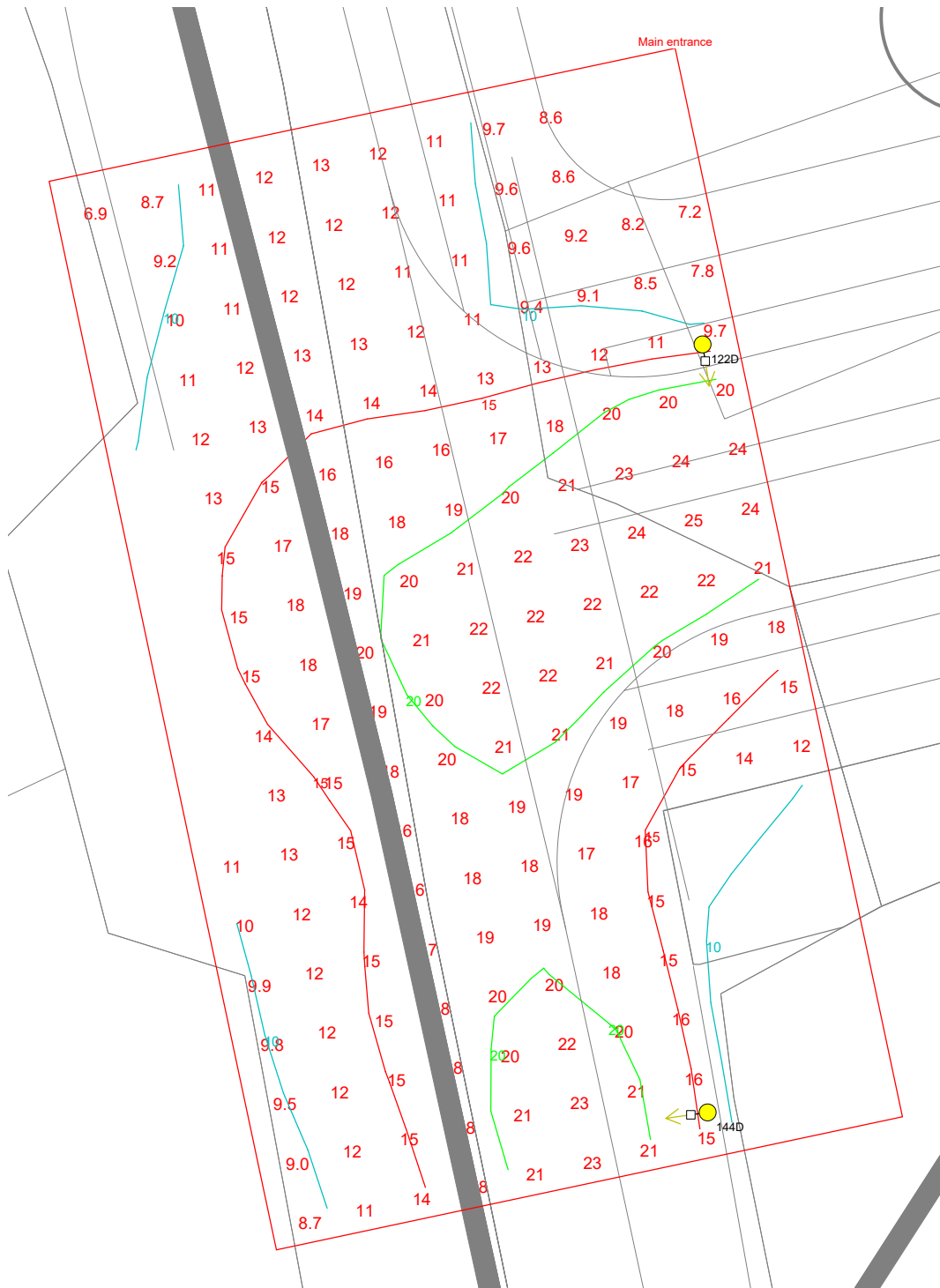


Results

Eav	11.29
Emin	5.23
Emax	23.10
Emin/Emax	0.23
Emin/Eav	0.46
Emax/Eav	2.05

Horizontal Illuminance (lux)

Main entrance

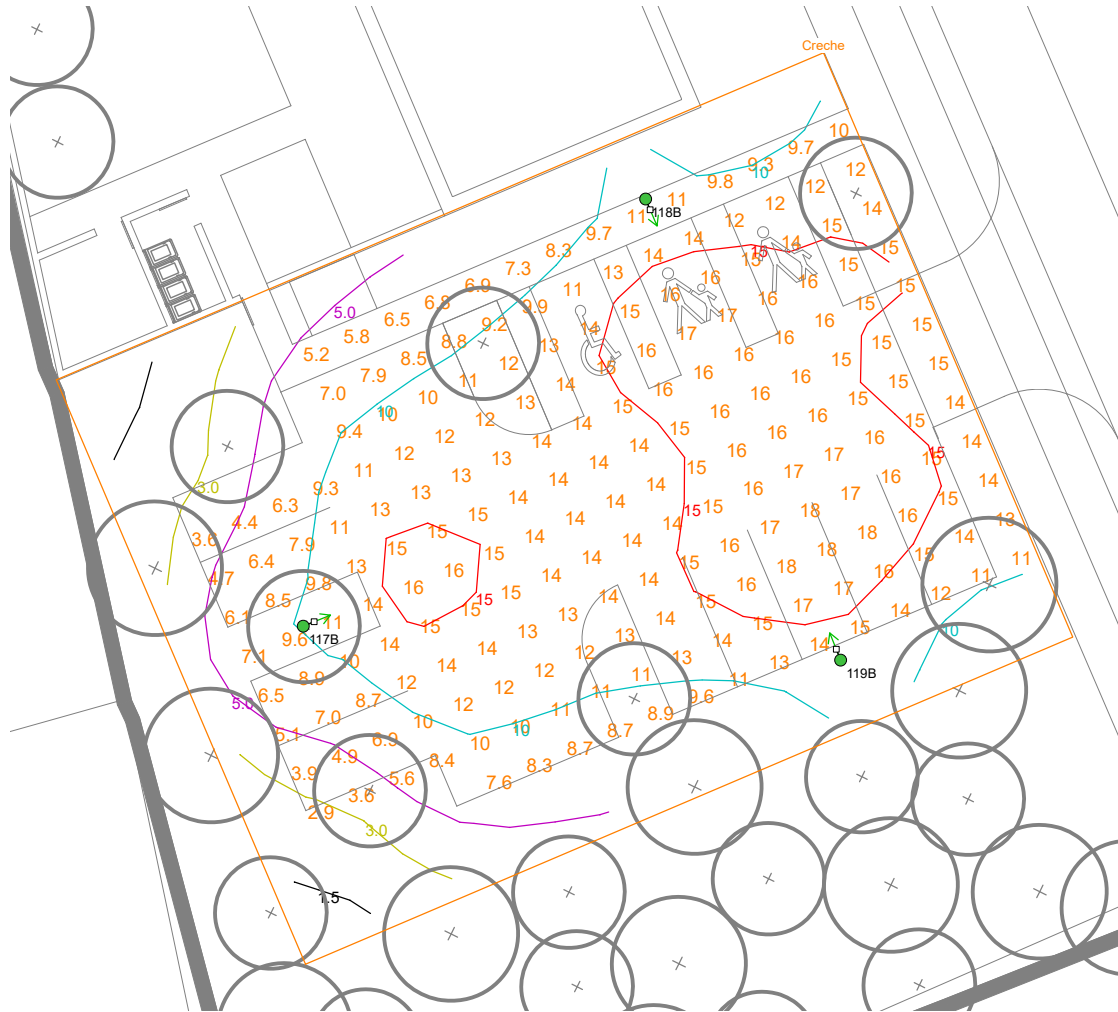


Results

Eav	15.73
Emin	6.92
Emax	24.85
Emin/Emax	0.28
Emin/Eav	0.44
Emax/Eav	1.58

Horizontal Illuminance (lux)

Creche



Results

Eav	12.49
Emin	2.87
Emax	18.35
Emin/Emax	0.16
Emin/Eav	0.23
Emax/Eav	1.47