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Nata

LumCAT: 1-1008-M	
Luminaire: BJB 47.360.1020	
Report No: 210720-B001	Voltage(V): 36.4500
Test No: 210720-C001	Current(A): 0.5110
LampCAT: Fortimo LED SLM 1204 G7N	Power (W): 18.6250
Lamp flux(lm): 2455.6	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 570	Width(mm): 45
Phm Type: C	Height(mm): 20

Photometric Results

Lumens(lm): 1803.98
Efficiency(%): 73.46%
Lumens(lm)/Power(W): 96.86
Central intensity(cd): 13920.580
Maximum intensity(cd): 13920.580
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=17.0
 [C90/270]Total=17.0
Field angle(10%Imax): [C0/180]Total=38.1
 [C90/270]Total=38.1
Maximum s/h(1/2): C0_180=0.29 C90_270=0.29
Maximum s/h(1/4): C0_180=0.33 C90_270=0.33
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 73.46%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.572%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	13920.581	0.000	0	.000%	.000%
1.0	13739.878	13.235	13.235	.539%	.734%
2.0	13016.770	38.404	51.639	1.564%	2.862%
3.0	12263.709	60.463	112.101	2.462%	6.214%
4.0	11448.000	79.371	191.472	3.232%	10.614%
5.0	10477.322	94.322	285.794	3.841%	15.842%
6.0	9371.588	104.311	390.105	4.248%	21.625%
7.0	8414.002	110.395	500.5	4.496%	27.744%
8.0	7417.673	113.304	613.804	4.614%	34.025%
9.0	6497.002	112.771	726.575	4.592%	40.276%
10.0	5716.533	110.528	837.103	4.501%	46.403%
11.0	4993.720	107.017	944.12	4.358%	52.335%
12.0	4395.923	102.642	1046.763	4.180%	58.025%
13.0	3809.798	97.381	1144.144	3.966%	63.423%
14.0	3288.572	90.859	1235.002	3.700%	68.460%
15.0	2890.392	84.828	1319.83	3.454%	73.162%
16.0	2515.036	79.205	1399.035	3.225%	77.553%
17.0	2106.225	71.965	1471	2.931%	81.542%
18.0	1703.109	62.808	1533.808	2.558%	85.024%
19.0	1404.373	54.064	1587.871	2.202%	88.020%
20.0	1104.905	45.927	1633.798	1.870%	90.566%
21.0	842.625	37.397	1671.195	1.523%	92.639%
22.0	618.462	29.361	1700.556	1.196%	94.267%
23.0	416.545	21.717	1722.273	.884%	95.471%
24.0	238.852	14.329	1736.602	.584%	96.265%
25.0	140.407	8.624	1745.226	.351%	96.743%
26.0	59.330	4.715	1749.941	.192%	97.004%
27.0	31.177	2.214	1752.155	.090%	97.127%
28.0	21.874	1.343	1753.498	.055%	97.202%
29.0	18.225	1.049	1754.547	.043%	97.260%
30.0	16.228	0.930	1755.478	.038%	97.311%
31.0	14.927	0.867	1756.345	.035%	97.359%
32.0	13.859	0.825	1757.169	.034%	97.405%
33.0	13.050	0.793	1757.962	.032%	97.449%
34.0	12.361	0.769	1758.731	.031%	97.492%
35.0	11.728	0.748	1759.479	.030%	97.533%
36.0	11.264	0.732	1760.211	.030%	97.574%
37.0	10.905	0.723	1760.934	.029%	97.614%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	10.575	0.717	1761.651	.029%	97.654%
39.0	10.259	0.711	1762.362	.029%	97.693%
40.0	10.055	0.708	1763.071	.029%	97.732%
41.0	9.872	0.710	1763.78	.029%	97.772%
42.0	9.703	0.711	1764.492	.029%	97.811%
43.0	9.563	0.714	1765.205	.029%	97.851%
44.0	9.450	0.718	1765.923	.029%	97.890%
45.0	9.352	0.723	1766.645	.029%	97.930%
46.0	9.260	0.728	1767.373	.030%	97.971%
47.0	9.190	0.734	1768.107	.030%	98.011%
48.0	9.120	0.740	1768.847	.030%	98.052%
49.0	9.049	0.746	1769.593	.030%	98.094%
50.0	8.986	0.752	1770.345	.031%	98.136%
51.0	8.944	0.759	1771.104	.031%	98.178%
52.0	8.880	0.765	1771.869	.031%	98.220%
53.0	8.838	0.771	1772.639	.031%	98.263%
54.0	8.796	0.777	1773.417	.032%	98.306%
55.0	8.768	0.784	1774.201	.032%	98.349%
56.0	8.740	0.791	1774.992	.032%	98.393%
57.0	8.684	0.797	1775.788	.032%	98.437%
58.0	8.663	0.802	1776.591	.033%	98.482%
59.0	8.627	0.808	1777.399	.033%	98.527%
60.0	8.599	0.814	1778.213	.033%	98.572%
61.0	8.571	0.819	1779.032	.033%	98.617%
62.0	8.536	0.824	1779.856	.034%	98.663%
63.0	8.515	0.829	1780.686	.034%	98.709%
64.0	8.487	0.834	1781.52	.034%	98.755%
65.0	8.480	0.840	1782.36	.034%	98.802%
66.0	8.459	0.845	1783.205	.034%	98.848%
67.0	8.445	0.850	1784.055	.035%	98.895%
68.0	8.409	0.854	1784.908	.035%	98.943%
69.0	8.395	0.857	1785.766	.035%	98.990%
70.0	8.388	0.862	1786.628	.035%	99.038%
71.0	8.360	0.866	1787.493	.035%	99.086%
72.0	8.346	0.869	1788.362	.035%	99.134%
73.0	8.339	0.873	1789.235	.036%	99.183%
74.0	8.318	0.876	1790.11	.036%	99.231%
75.0	8.318	0.879	1790.989	.036%	99.280%

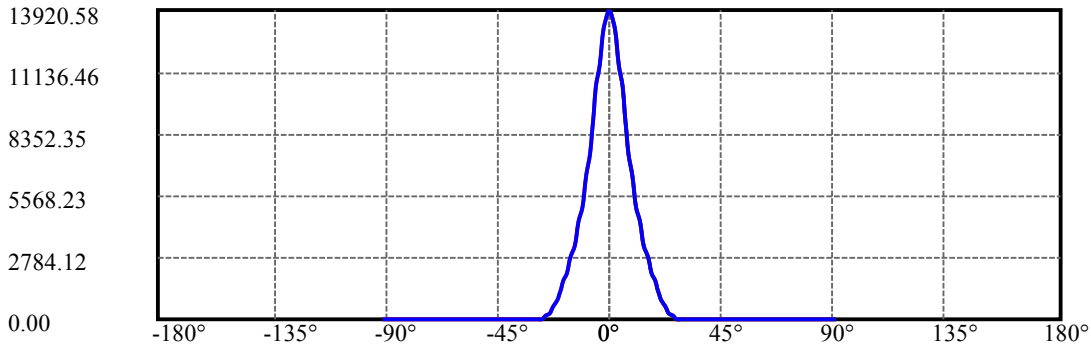
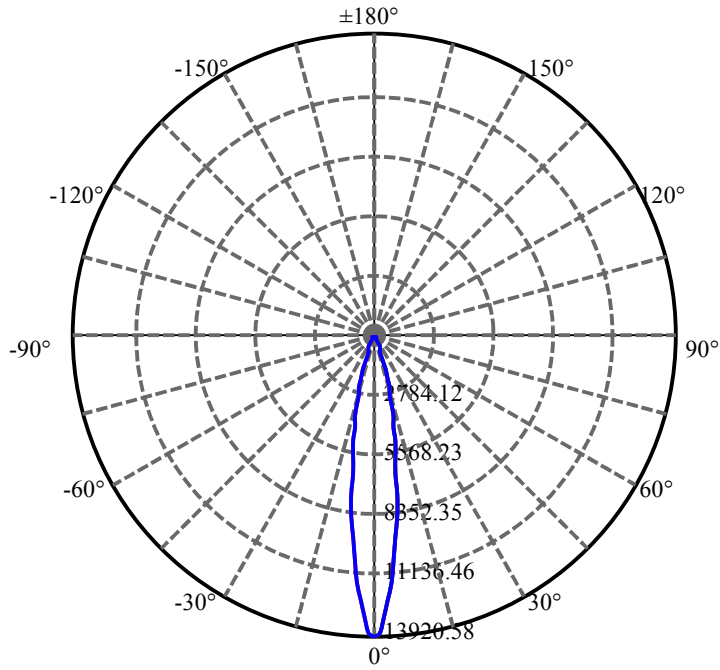
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.283	0.881	1791.87	.036%	99.329%
77.0	8.255	0.882	1792.752	.036%	99.378%
78.0	8.213	0.882	1793.634	.036%	99.426%
79.0	8.135	0.878	1794.512	.036%	99.475%
80.0	8.100	0.875	1795.387	.036%	99.524%
81.0	8.037	0.873	1796.26	.036%	99.572%
82.0	7.973	0.868	1797.128	.035%	99.620%
83.0	7.938	0.865	1797.993	.035%	99.668%
84.0	7.917	0.864	1798.857	.035%	99.716%
85.0	7.861	0.861	1799.718	.035%	99.764%
86.0	7.833	0.858	1800.576	.035%	99.811%
87.0	7.784	0.855	1801.431	.035%	99.859%
88.0	7.763	0.852	1802.282	.035%	99.906%
89.0	7.734	0.849	1803.132	.035%	99.953%
90.0	7.741	0.849	1803.98	.035%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1755.48	71.49%	97.31%
0-40	1763.07	71.80%	97.73%
0-60	1778.21	72.41%	98.57%
0-90	1803.13	73.43%	99.95%
0-120	1803.13	73.43%	99.95%
0-180	1803.98	73.46%	100.00%
60-90	25.73	1.05%	1.43%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-16.61	1443.18	58.77%	80.00%

ZONAL LUMEN SUMMARY

0-10	837.10
10-20	796.70
20-30	121.68
30-40	7.59
40-50	7.27
50-60	7.87
60-70	8.41
70-80	8.76
80-90	7.74
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



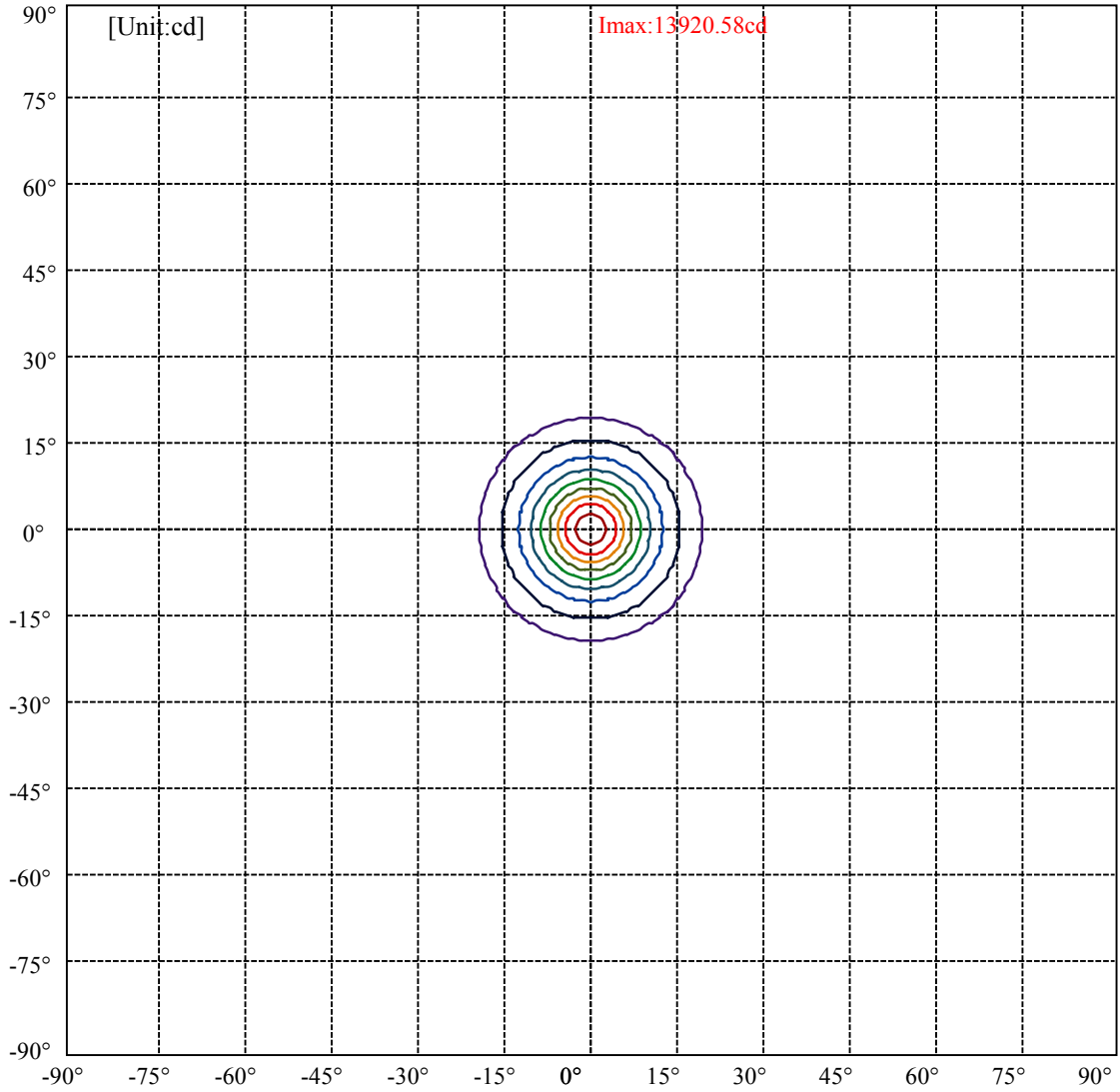
C0(Max): —————

C0/C180: —————

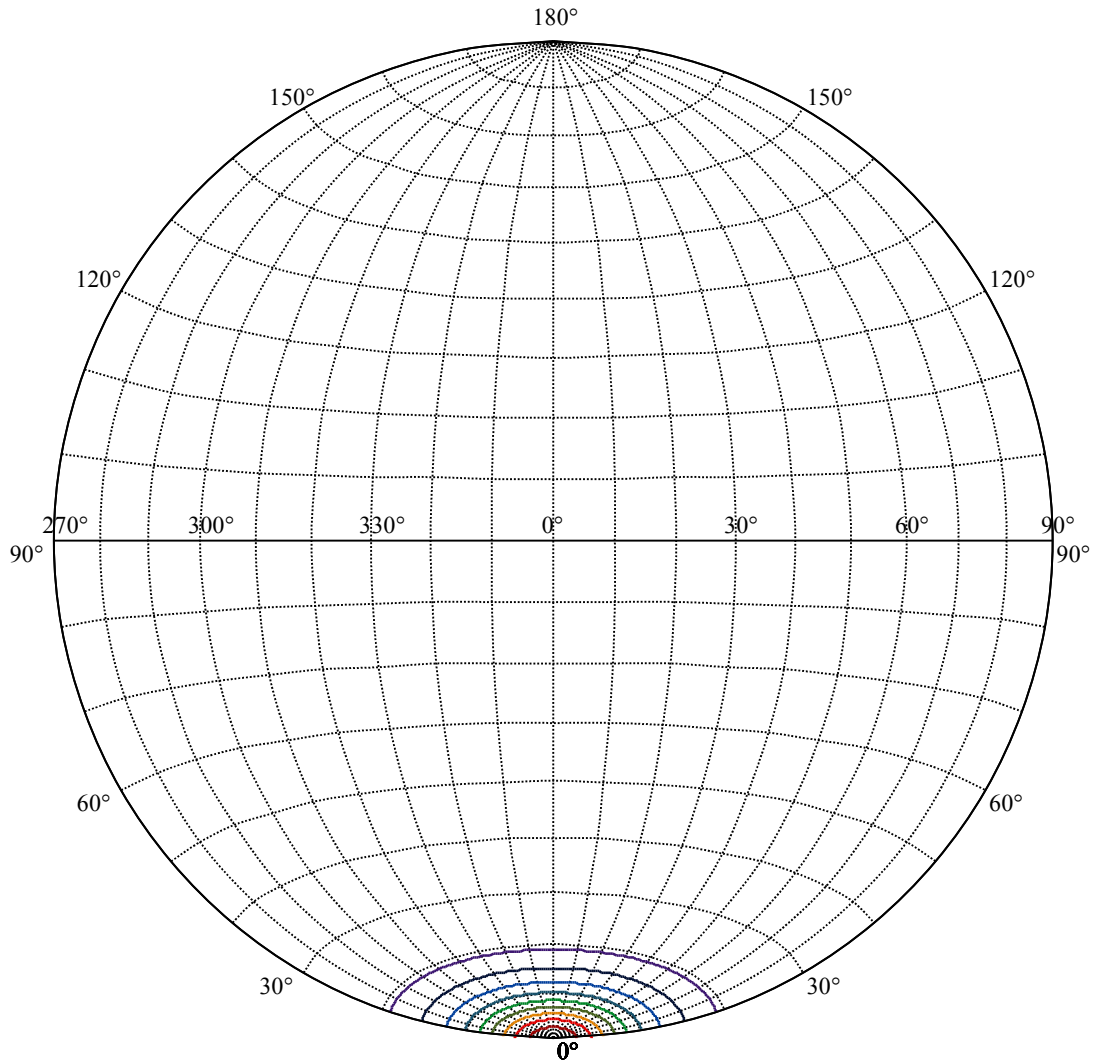
C90/C270: —————

Field angle(10%Imax):C0/180Left:19.0 Right:19.0
:C90/270Left:19.0 Right:19.0

Beam Angle(50%Imax):C0/180Left:8.5 Right:8.5
:C90/270Left:8.5 Right:8.5



(10%Imax) 1392.06	—
(20%Imax) 2784.12	—
(30%Imax) 4176.17	—
(40%Imax) 5568.23	—
(50%Imax) 6960.29	—
(60%Imax) 8352.35	—
(70%Imax) 9744.41	—
(80%Imax) 11136.5	—
(90%Imax) 12528.5	—



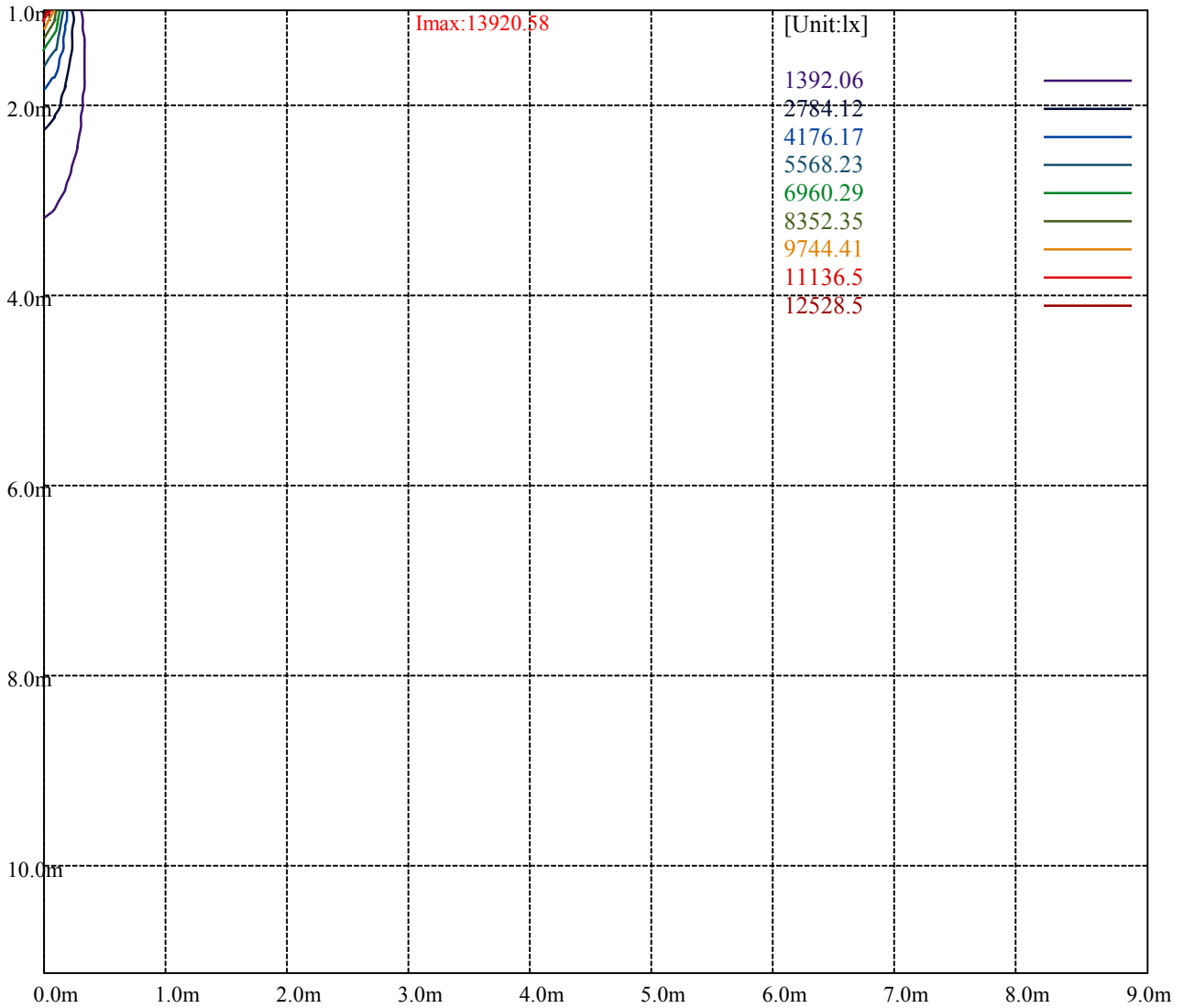
House

[Unit:cd]

Road

Imax:13920.58

(10%Imax)	1392.06	—
(20%Imax)	2784.12	—
(30%Imax)	4176.17	—
(40%Imax)	5568.23	—
(50%Imax)	6960.29	—
(60%Imax)	8352.35	—
(70%Imax)	9744.41	—
(80%Imax)	11136.5	—
(90%Imax)	12528.5	—



Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	357	356	365	379	401	430	471	517	578
C45	385	388	402	422	453	495	553	622	721
C90	498	523	568	632	728	872	1108	1517	2510

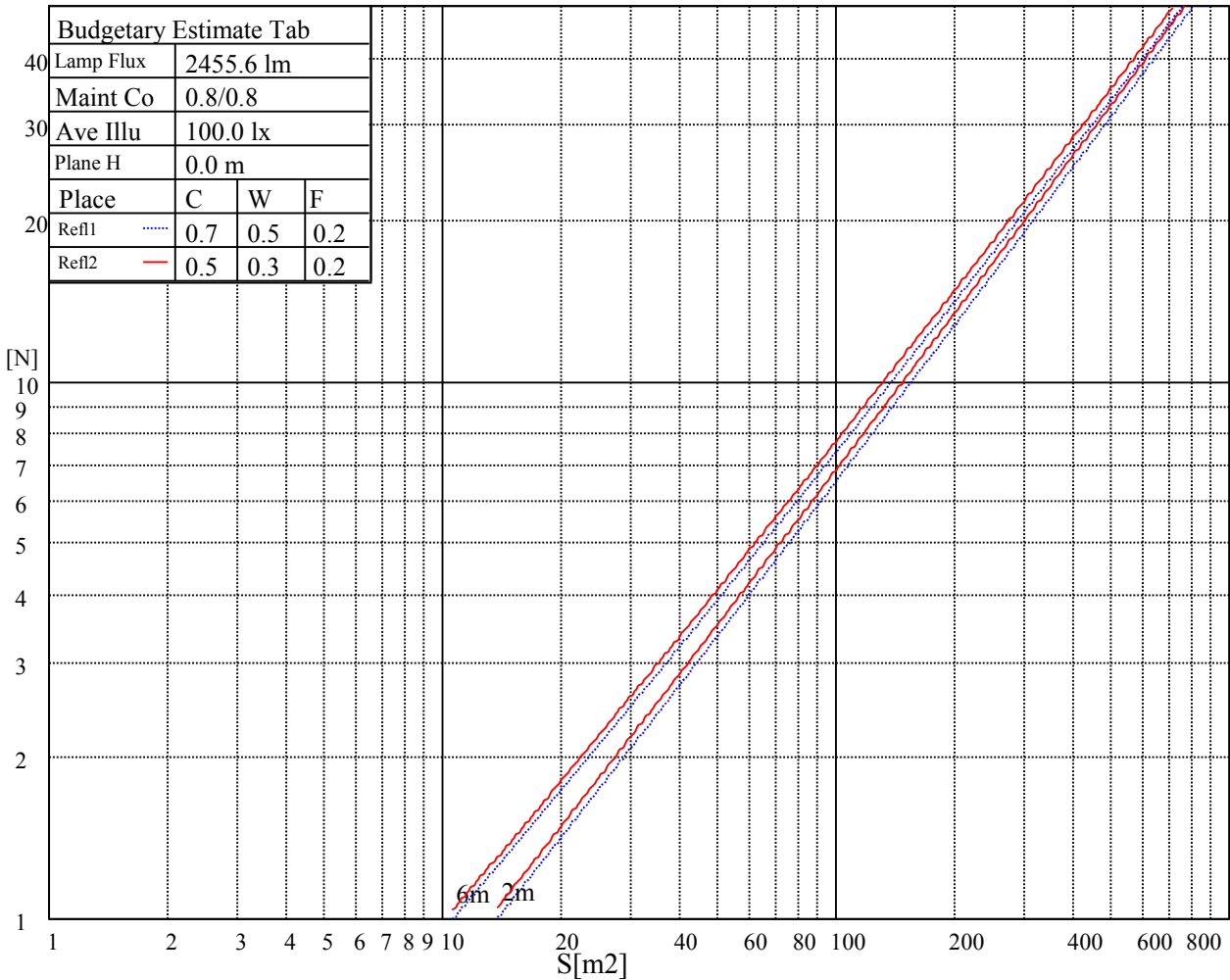
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
782	782	782	1253	1253	1253	3516	3516	3516

Glare Table

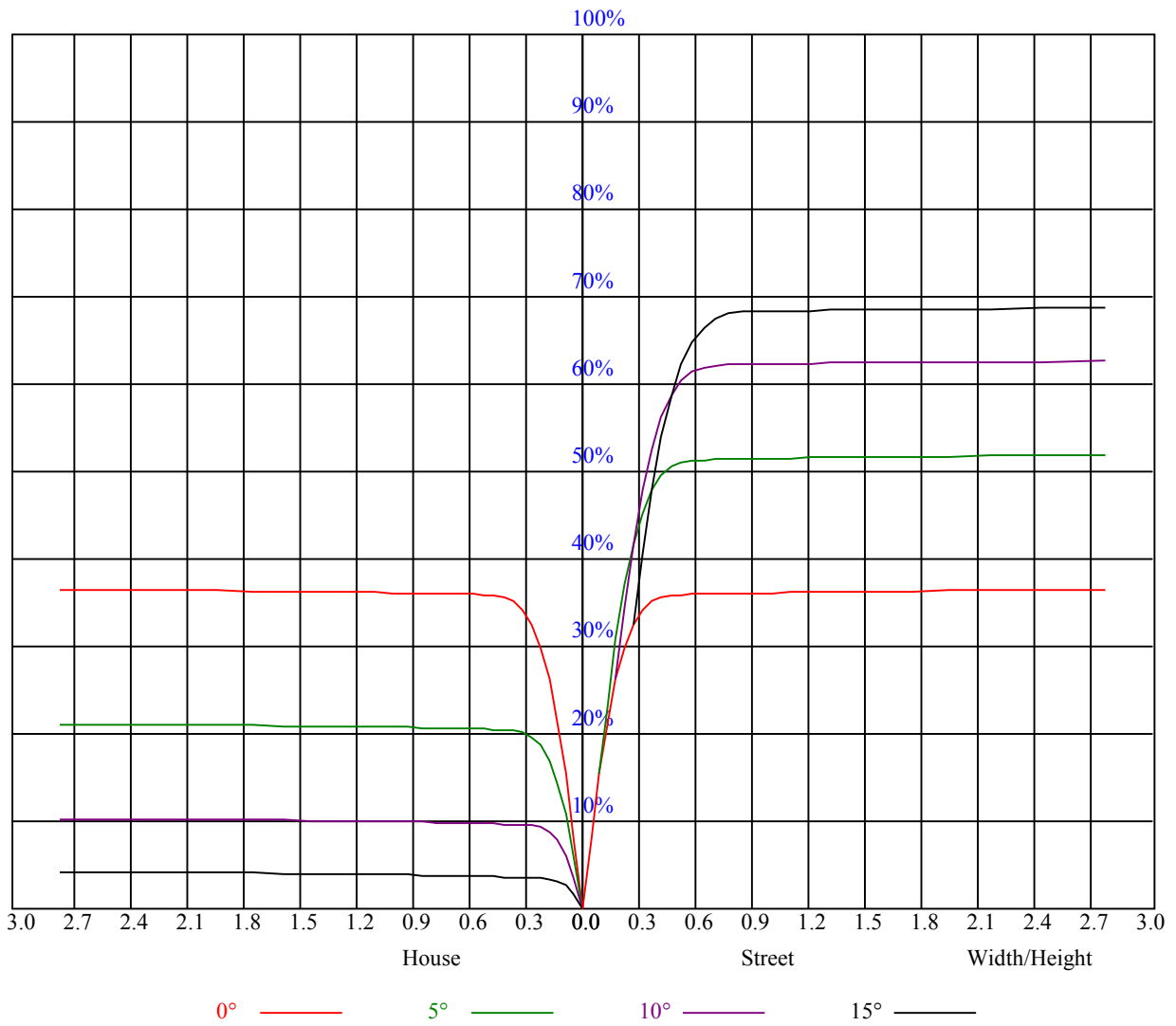
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	0.87	0.87	0.87	0.85	0.85	0.85	0.82	0.82	0.82	0.78	0.78	0.78	0.75	0.75	0.75	0.73
1	0.83	0.82	0.80	0.81	0.80	0.79	0.79	0.78	0.77	0.76	0.75	0.74	0.73	0.73	0.72	0.71
2	0.80	0.77	0.76	0.78	0.76	0.75	0.76	0.75	0.73	0.74	0.73	0.72	0.72	0.71	0.70	0.69
3	0.77	0.74	0.72	0.76	0.73	0.72	0.74	0.72	0.71	0.72	0.71	0.69	0.71	0.69	0.68	0.68
4	0.74	0.71	0.69	0.73	0.71	0.69	0.72	0.70	0.68	0.71	0.69	0.67	0.69	0.68	0.67	0.66
5	0.72	0.69	0.67	0.71	0.69	0.67	0.70	0.68	0.66	0.69	0.67	0.66	0.68	0.67	0.65	0.64
6	0.70	0.67	0.65	0.69	0.67	0.65	0.69	0.66	0.65	0.68	0.66	0.64	0.67	0.65	0.64	0.63
7	0.68	0.65	0.64	0.68	0.65	0.63	0.67	0.65	0.63	0.66	0.64	0.63	0.66	0.64	0.63	0.62
8	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.63	0.62	0.65	0.63	0.61	0.64	0.63	0.61	0.61
9	0.65	0.62	0.61	0.65	0.62	0.61	0.64	0.62	0.60	0.64	0.62	0.60	0.63	0.61	0.60	0.60
10	0.64	0.61	0.59	0.63	0.61	0.59	0.63	0.61	0.59	0.63	0.61	0.59	0.62	0.60	0.59	0.58



Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	13685.74	14040.11	14011.99	13556.36	12808.24	11930.74	10833.86	9883.24	8915.74
45.0	14113.24	13966.99	13291.99	12498.86	11643.86	10653.86	9556.99	8550.11	7498.24
90.0	13938.86	13477.61	12571.99	11155.50	10805.06	9751.50	8634.94	7665.19	6678.00
135.0	13944.49	13488.86	12560.74	11683.24	10811.36	9759.49	8651.36	7695.11	6721.99
180.0	13685.74	12982.61	11146.50	11032.88	10112.06	9034.31	7922.25	6999.19	6103.13
225.0	14113.24	13876.99	13213.24	12256.99	11181.94	10366.88	9257.06	8293.50	7250.06
270.0	13938.86	14040.11	13640.74	12976.99	12110.74	11205.11	10046.36	9095.74	8133.86
315.0	13944.49	14045.74	13696.99	12948.86	12110.74	11116.69	10069.88	9129.94	8040.38
360.0	13685.74	14040.11	14011.99	13556.36	12808.24	11930.74	10833.86	9883.24	8915.74
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	7711.99	6840.11	6058.24	5298.86	4606.99	4038.86	3465.11	3020.74	2868.86
45.0	6530.74	5771.36	5034.49	4432.61	3830.74	3296.36	2885.74	2673.56	2113.31
90.0	5913.56	5173.31	4506.19	3964.50	3476.81	2949.19	2571.19	2219.63	1816.88
135.0	5872.61	5203.24	4522.61	3971.36	3431.36	2953.24	2851.99	2235.94	1869.75
180.0	5401.69	4704.75	4069.13	3572.44	3085.88	2646.00	2296.69	1961.44	1584.00
225.0	6422.06	5610.38	4894.88	4312.13	3717.00	3196.69	2793.38	2416.50	1981.69
270.0	6997.61	6210.11	5433.86	4809.49	4173.86	3650.74	3133.24	2874.49	2365.88
315.0	7125.75	6219.00	5430.38	4806.00	4155.75	3577.50	3125.81	2718.00	2249.44
360.0	7711.99	6840.11	6058.24	5298.86	4606.99	4038.86	3465.11	3020.74	2868.86
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2178.56	1850.06	1520.44	1208.81	947.81	710.44	449.44	297.00	148.28
45.0	1758.38	1473.75	1158.19	866.81	636.75	434.25	290.81	112.33	47.42
90.0	1521.56	1097.27	907.54	670.16	464.63	256.16	134.72	56.08	25.31
135.0	1544.63	1262.81	964.13	690.75	478.69	324.00	132.69	55.74	27.39
180.0	1094.63	1029.71	748.97	504.11	324.84	158.57	70.93	33.98	21.49
225.0	1677.38	1283.06	1083.04	803.64	583.20	370.46	201.43	95.85	43.31
270.0	1933.31	1628.44	1343.25	1007.44	763.88	549.00	324.00	303.75	84.49
315.0	1916.44	1609.88	1113.69	989.27	747.90	529.48	306.79	168.53	76.95
360.0	2178.56	1850.06	1520.44	1208.81	947.81	710.44	449.44	297.00	148.28
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	58.22	31.33	23.29	19.18	17.10	15.75	14.51	13.61	12.77
45.0	26.55	19.80	17.55	15.75	14.57	13.61	12.94	12.26	11.70
90.0	20.19	17.33	15.58	14.57	13.61	12.66	12.15	11.64	11.08
135.0	19.91	16.93	15.47	14.23	13.22	12.54	11.98	11.36	10.97
180.0	18.06	15.86	14.40	13.56	12.77	11.93	11.53	11.08	10.63
225.0	29.19	21.60	18.45	16.88	15.58	14.40	13.44	12.71	11.98
270.0	39.43	26.55	20.87	18.00	16.37	15.13	14.06	13.22	12.49
315.0	37.86	25.59	20.19	17.66	16.20	14.85	13.78	12.99	12.21
360.0	58.22	31.33	23.29	19.18	17.10	15.75	14.51	13.61	12.77
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	12.04	11.59	11.08	10.69	10.35	10.13	9.90	9.73	9.56
45.0	11.25	10.91	10.58	10.29	10.07	9.90	9.73	9.56	9.51
90.0	10.80	10.52	10.24	10.01	9.84	9.68	9.62	9.45	9.34
135.0	10.63	10.35	10.13	9.84	9.73	9.56	9.45	9.34	9.23
180.0	10.41	10.18	9.96	9.73	9.62	9.45	9.34	9.23	9.11
225.0	11.48	11.08	10.74	10.41	10.18	10.01	9.79	9.62	9.51
270.0	11.87	11.42	11.03	10.63	10.41	10.18	9.96	9.84	9.73
315.0	11.64	11.19	10.86	10.46	10.24	10.07	9.84	9.73	9.62
360.0	12.04	11.59	11.08	10.69	10.35	10.13	9.90	9.73	9.56

Intensity data(cd)

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	9.39	9.28	9.17	9.11	9.00	8.94	8.89	8.83	8.78
45.0	9.34	9.28	9.23	9.11	9.06	9.00	8.94	8.89	8.83
90.0	9.28	9.23	9.11	9.06	9.06	9.00	8.94	8.89	8.83
135.0	9.17	9.06	9.06	8.94	8.89	8.83	8.83	8.72	8.72
180.0	9.06	9.00	8.89	8.89	8.83	8.72	8.72	8.66	8.61
225.0	9.45	9.34	9.28	9.23	9.11	9.06	9.00	8.94	8.89
270.0	9.62	9.51	9.45	9.39	9.28	9.23	9.17	9.11	9.11
315.0	9.51	9.39	9.34	9.23	9.17	9.11	9.06	9.00	8.94
360.0	9.39	9.28	9.17	9.11	9.00	8.94	8.89	8.83	8.78
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.72	8.66	8.66	8.61	8.55	8.49	8.49	8.44	8.38
45.0	8.78	8.78	8.72	8.66	8.66	8.61	8.61	8.55	8.49
90.0	8.83	8.78	8.78	8.72	8.72	8.66	8.66	8.61	8.61
135.0	8.66	8.66	8.61	8.55	8.55	8.55	8.49	8.49	8.49
180.0	8.55	8.55	8.49	8.44	8.44	8.38	8.38	8.38	8.33
225.0	8.89	8.83	8.83	8.78	8.72	8.72	8.66	8.61	8.61
270.0	9.06	9.00	9.00	8.94	8.94	8.89	8.83	8.83	8.78
315.0	8.89	8.89	8.83	8.78	8.72	8.72	8.66	8.66	8.61
360.0	8.72	8.66	8.66	8.61	8.55	8.49	8.49	8.44	8.38
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.33	8.33	8.33	8.27	8.27	8.21	8.16	8.16	8.16
45.0	8.49	8.44	8.44	8.44	8.38	8.38	8.33	8.33	8.33
90.0	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.61
135.0	8.44	8.38	8.38	8.38	8.33	8.33	8.33	8.27	8.21
180.0	8.33	8.27	8.27	8.21	8.21	8.16	8.16	8.16	8.10
225.0	8.61	8.55	8.55	8.49	8.49	8.44	8.44	8.44	8.38
270.0	8.78	8.78	8.78	8.78	8.78	8.72	8.72	8.72	8.72
315.0	8.55	8.55	8.49	8.49	8.49	8.44	8.44	8.44	8.38
360.0	8.33	8.33	8.33	8.27	8.27	8.21	8.16	8.16	8.16
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.16	8.16	8.10	8.10	8.10	8.04	8.04	7.99	7.99
45.0	8.33	8.33	8.27	8.27	8.21	8.21	8.21	8.16	8.16
90.0	8.61	8.61	8.61	8.55	8.55	8.44	8.27	7.99	7.88
135.0	8.21	8.16	8.16	8.16	8.16	8.10	8.04	8.04	7.99
180.0	8.10	8.10	8.04	8.04	7.99	7.99	7.99	7.93	7.93
225.0	8.33	8.33	8.33	8.33	8.27	8.27	8.27	8.27	8.27
270.0	8.72	8.72	8.72	8.78	8.72	8.72	8.66	8.55	8.44
315.0	8.33	8.33	8.33	8.33	8.27	8.27	8.21	8.16	8.16
360.0	8.16	8.16	8.10	8.10	8.10	8.04	8.04	7.99	7.99
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	7.93	7.93	7.93	7.93	7.93	7.88	7.82	7.82	7.76
45.0	8.04	8.04	8.04	7.99	7.88	7.82	7.82	7.76	7.76
90.0	7.88	7.88	7.82	7.88	7.76	7.76	7.71	7.71	7.71
135.0	7.99	7.93	7.88	7.82	7.82	7.76	7.76	7.71	7.71
180.0	7.93	7.93	7.93	7.93	7.82	7.76	7.76	7.76	7.76
225.0	8.16	8.10	8.04	7.99	7.99	7.99	7.82	7.82	7.76
270.0	8.27	7.93	7.88	7.88	7.88	7.88	7.82	7.76	7.71
315.0	8.10	8.04	7.99	7.93	7.82	7.82	7.76	7.76	7.71
360.0	7.93	7.93	7.93	7.93	7.93	7.88	7.82	7.82	7.76

Intensity data(cd)

C/γ(°)	90.0
0.0	7.76
45.0	7.76
90.0	7.71
135.0	7.71
180.0	7.76
225.0	7.82
270.0	7.71
315.0	7.71
360.0	7.76