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Nata

Client:

LumCAT: 3-2033-M

Luminaire: 92.70.131.00

Report No:

Voltage(V): 34.0200

Test No: GC20190823010

Current(A): 0.4480

LampCAT: TRIDONIC SLE 15MM G7

Power (W): 15.2400

Lamp flux(lm): 2050.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 79

Width(mm): 79

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1829.95, Efficiency(%): 89.27% , Luminous Efficacy(lm/W): 120.08

Central intensity(cd): 13175.860, Maximum intensity(cd): 13175.860

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=15.6

[C90/270]Total=15.6

Field angle(10%Imax): [C0/180]Total=31.2

[C90/270]Total=31.2

Maximum s/h(1/2): C0_180=0.27 C90_270=0.27

Maximum s/h(1/4): C0_180=0.27 C90_270=0.27

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.27%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.581%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/8/23
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	13175.859	0.000	0	.000%	.000%
1.0	13061.250	12.554	12.554	.612%	.686%
2.0	12652.734	36.907	49.461	1.800%	2.703%
3.0	11766.656	58.403	107.864	2.849%	5.894%
4.0	11128.641	76.638	184.502	3.738%	10.082%
5.0	10086.961	91.268	275.771	4.452%	15.070%
6.0	8786.461	99.185	374.955	4.838%	20.490%
7.0	7499.461	101.086	476.042	4.931%	26.014%
8.0	6319.055	98.896	574.938	4.824%	31.418%
9.0	5130.914	92.796	667.734	4.527%	36.489%
10.0	4034.531	82.944	750.678	4.046%	41.022%
11.0	3186.492	72.153	822.831	3.520%	44.965%
12.0	2651.695	63.820	886.651	3.113%	48.452%
13.0	1996.594	55.163	941.814	2.691%	51.467%
14.0	1674.070	46.984	988.798	2.292%	54.034%
15.0	1442.953	42.792	1031.59	2.087%	56.373%
16.0	1225.336	39.098	1070.688	1.907%	58.509%
17.0	1118.784	36.504	1107.192	1.781%	60.504%
18.0	1025.515	35.355	1142.547	1.725%	62.436%
19.0	939.417	34.186	1176.733	1.668%	64.304%
20.0	875.981	33.227	1209.96	1.621%	66.120%
21.0	825.680	32.675	1242.635	1.594%	67.906%
22.0	783.759	32.342	1274.977	1.578%	69.673%
23.0	751.078	32.205	1307.182	1.571%	71.433%
24.0	724.359	32.258	1339.441	1.574%	73.196%
25.0	703.378	32.464	1371.904	1.584%	74.970%
26.0	686.524	32.809	1404.713	1.600%	76.763%
27.0	670.507	33.200	1437.913	1.620%	78.577%
28.0	656.325	33.593	1471.506	1.639%	80.412%
29.0	645.237	34.053	1505.558	1.661%	82.273%
30.0	633.966	34.538	1540.097	1.685%	84.161%
31.0	621.323	34.933	1575.03	1.704%	86.070%
32.0	597.234	34.910	1609.94	1.703%	87.977%
33.0	550.139	33.802	1643.742	1.649%	89.825%
34.0	487.652	31.407	1675.148	1.532%	91.541%
35.0	416.658	28.085	1703.233	1.370%	93.076%
36.0	344.974	24.251	1727.484	1.183%	94.401%
37.0	270.900	20.086	1747.57	.980%	95.498%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	198.654	15.673	1763.243	.765%	96.355%
39.0	127.055	11.117	1774.36	.542%	96.962%
40.0	71.051	6.909	1781.269	.337%	97.340%
41.0	34.186	3.747	1785.017	.183%	97.545%
42.0	21.101	2.009	1787.026	.098%	97.655%
43.0	17.824	1.442	1788.467	.070%	97.733%
44.0	14.977	1.238	1789.705	.060%	97.801%
45.0	13.226	1.084	1790.789	.053%	97.860%
46.0	11.827	0.980	1791.769	.048%	97.914%
47.0	11.419	0.925	1792.694	.045%	97.964%
48.0	11.109	0.911	1793.604	.044%	98.014%
49.0	10.814	0.900	1794.505	.044%	98.063%
50.0	10.561	0.891	1795.396	.043%	98.112%
51.0	10.343	0.884	1796.28	.043%	98.160%
52.0	10.139	0.879	1797.159	.043%	98.208%
53.0	9.914	0.872	1798.031	.043%	98.256%
54.0	9.710	0.865	1798.896	.042%	98.303%
55.0	9.513	0.858	1799.754	.042%	98.350%
56.0	9.352	0.852	1800.607	.042%	98.397%
57.0	9.211	0.849	1801.456	.041%	98.443%
58.0	9.077	0.846	1802.301	.041%	98.489%
59.0	8.972	0.844	1803.145	.041%	98.535%
60.0	8.873	0.843	1803.988	.041%	98.581%
61.0	8.775	0.842	1804.83	.041%	98.627%
62.0	8.712	0.843	1805.673	.041%	98.674%
63.0	8.641	0.844	1806.517	.041%	98.720%
64.0	8.571	0.845	1807.362	.041%	98.766%
65.0	8.501	0.845	1808.207	.041%	98.812%
66.0	8.480	0.847	1809.054	.041%	98.858%
67.0	8.416	0.850	1809.903	.041%	98.905%
68.0	8.381	0.851	1810.754	.042%	98.951%
69.0	8.360	0.854	1811.608	.042%	98.998%
70.0	8.332	0.857	1812.466	.042%	99.045%
71.0	8.290	0.859	1813.325	.042%	99.092%
72.0	8.262	0.861	1814.185	.042%	99.139%
73.0	8.234	0.863	1815.048	.042%	99.186%
74.0	8.205	0.864	1815.912	.042%	99.233%
75.0	8.191	0.866	1816.779	.042%	99.280%

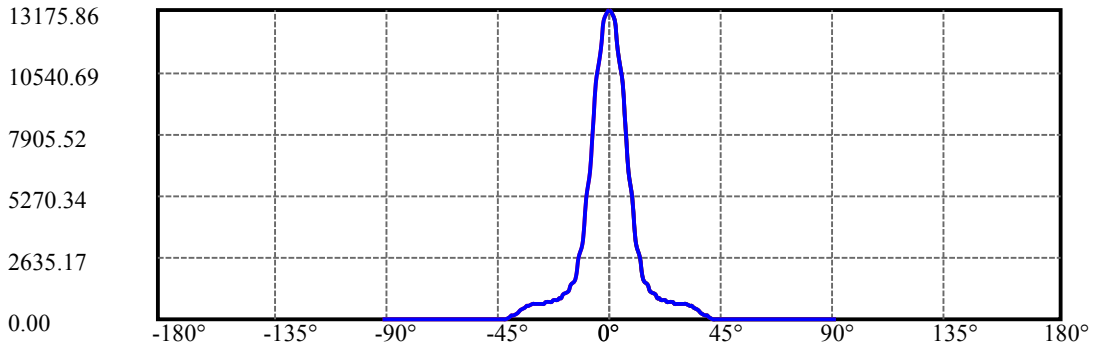
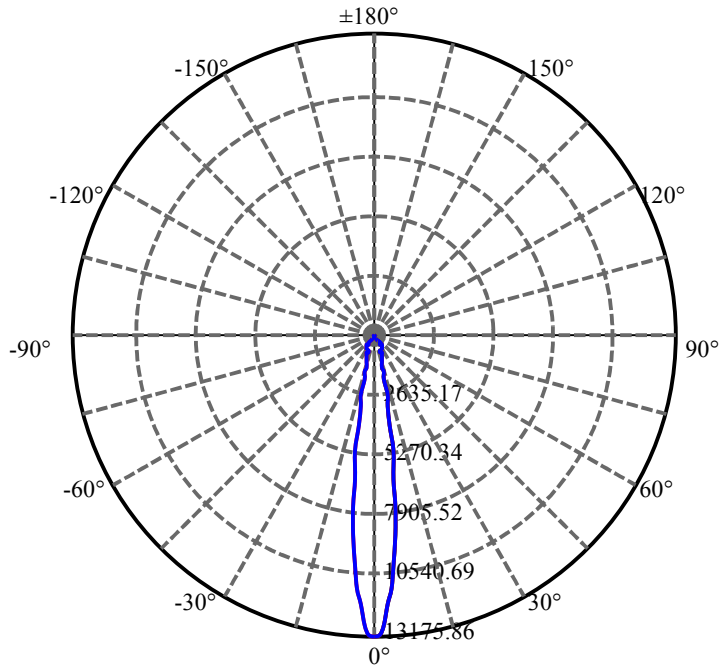
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.177	0.869	1817.647	.042%	99.328%
77.0	8.156	0.871	1818.518	.042%	99.375%
78.0	8.142	0.872	1819.391	.043%	99.423%
79.0	8.135	0.875	1820.265	.043%	99.471%
80.0	8.128	0.877	1821.142	.043%	99.519%
81.0	8.114	0.878	1822.02	.043%	99.567%
82.0	8.114	0.880	1822.9	.043%	99.615%
83.0	8.093	0.881	1823.782	.043%	99.663%
84.0	8.100	0.882	1824.664	.043%	99.711%
85.0	8.121	0.885	1825.549	.043%	99.760%
86.0	8.044	0.884	1826.433	.043%	99.808%
87.0	8.023	0.879	1827.312	.043%	99.856%
88.0	8.030	0.879	1828.191	.043%	99.904%
89.0	8.002	0.879	1829.07	.043%	99.952%
90.0	7.995	0.877	1829.947	.043%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1540.10	75.13%	84.16%
0-40	1781.27	86.89%	97.34%
0-60	1803.99	88.00%	98.58%
0-90	1829.07	89.22%	99.95%
0-120	1829.07	89.22%	99.95%
0-180	1829.95	89.27%	100.00%
60-90	25.92	1.26%	1.42%
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%
0-27.78	1463.96	71.41%	80.00%

ZONAL LUMEN SUMMARY

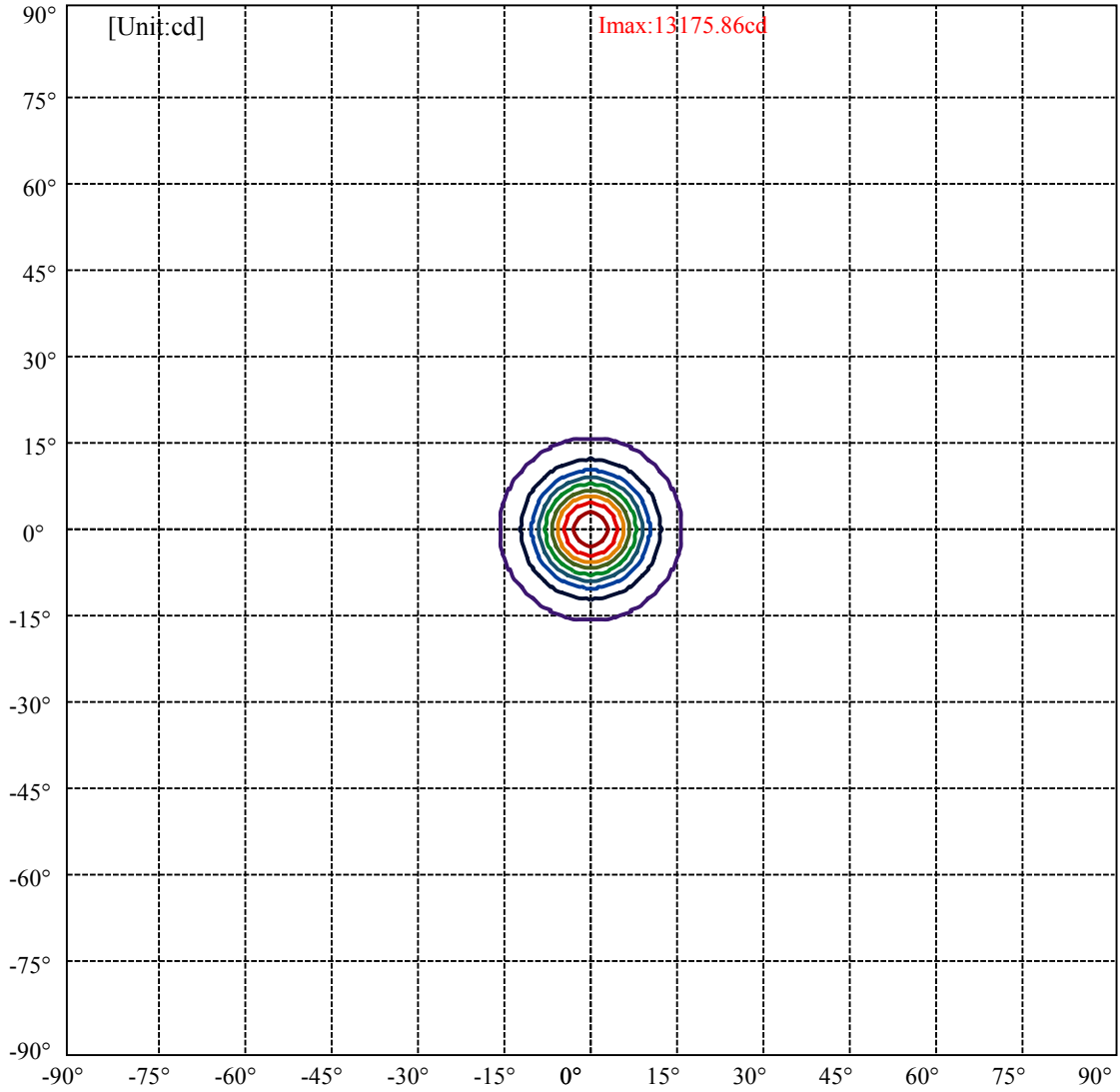
0-10	750.68
10-20	459.28
20-30	330.14
30-40	241.17
40-50	14.13
50-60	8.59
60-70	8.48
70-80	8.68
80-90	7.93
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



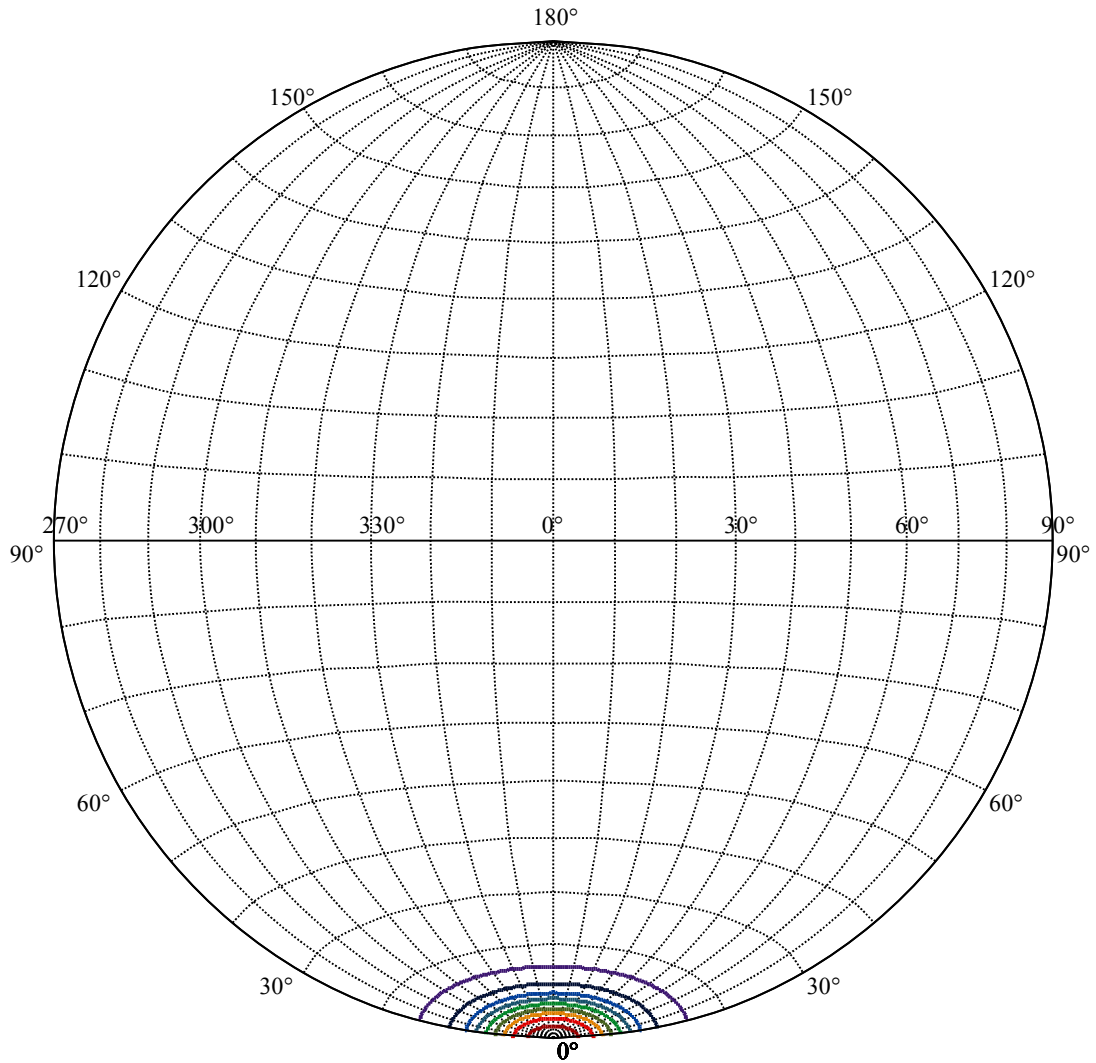
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:15.6 Right:15.6
:C90/270Left:15.6 Right:15.6

Beam Angle(50%Imax):C0/180Left:7.8 Right:7.8
:C90/270Left:7.8 Right:7.8



(10%Imax) 1317.59	—
(20%Imax) 2635.17	—
(30%Imax) 3952.76	—
(40%Imax) 5270.34	—
(50%Imax) 6587.93	—
(60%Imax) 7905.52	—
(70%Imax) 9223.1	—
(80%Imax) 10540.7	—
(90%Imax) 11858.3	—



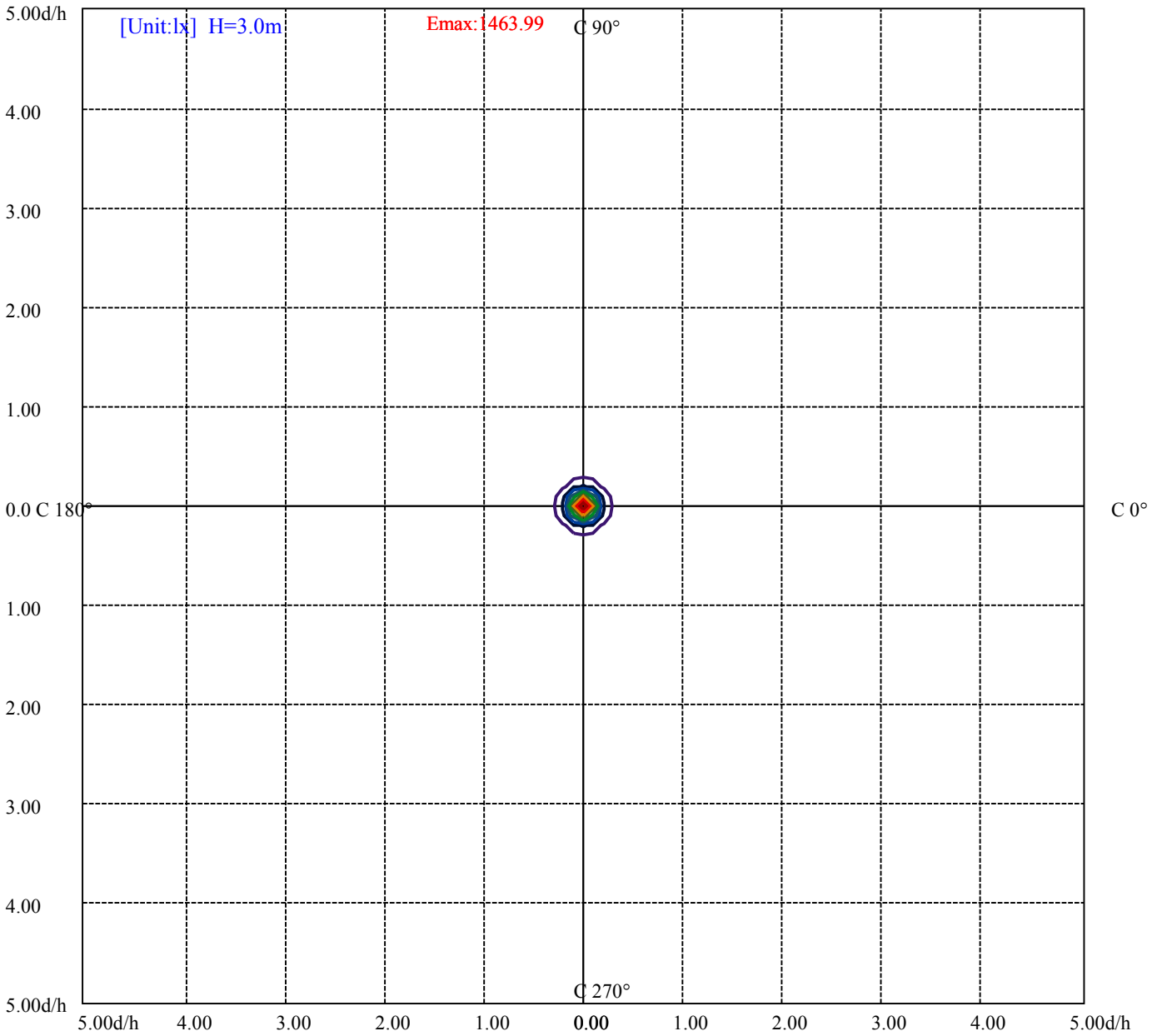
House

[Unit:cd]

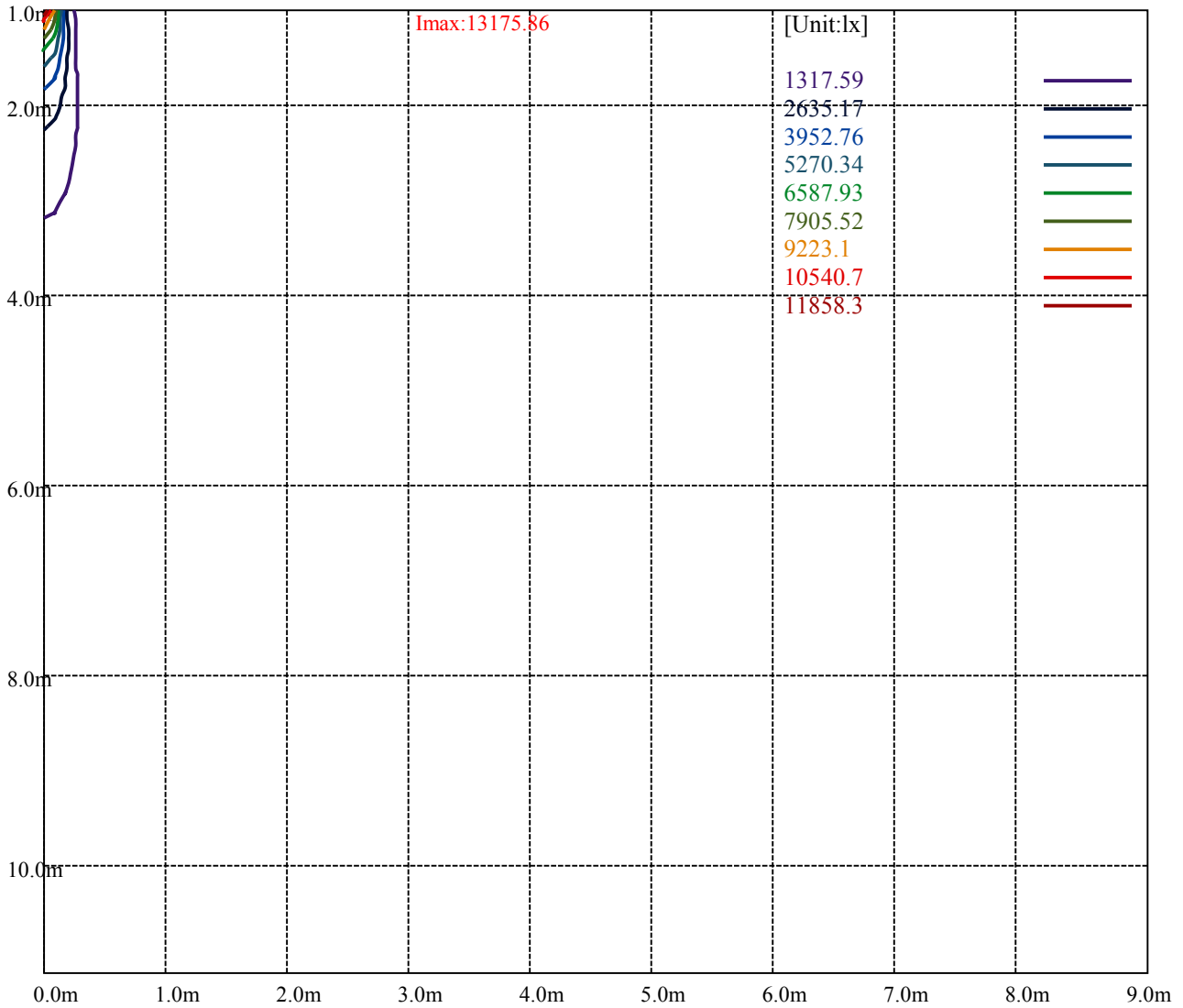
Road

Imax:13175.86

(10%Imax)	1317.59	—
(20%Imax)	2635.17	—
(30%Imax)	3952.76	—
(40%Imax)	5270.34	—
(50%Imax)	6587.93	—
(60%Imax)	7905.52	—
(70%Imax)	9223.1	—
(80%Imax)	10540.7	—
(90%Imax)	11858.3	—



(10%Emax) 146.3978	—
(20%Emax) 292.7967	—
(30%Emax) 439.1945	—
(40%Emax) 585.5933	—
(50%Emax) 731.9911	—
(60%Emax) 878.3889	—
(70%Emax) 1024.788	—
(80%Emax) 1171.189	—
(90%Emax) 1317.589	—



Luminance Table

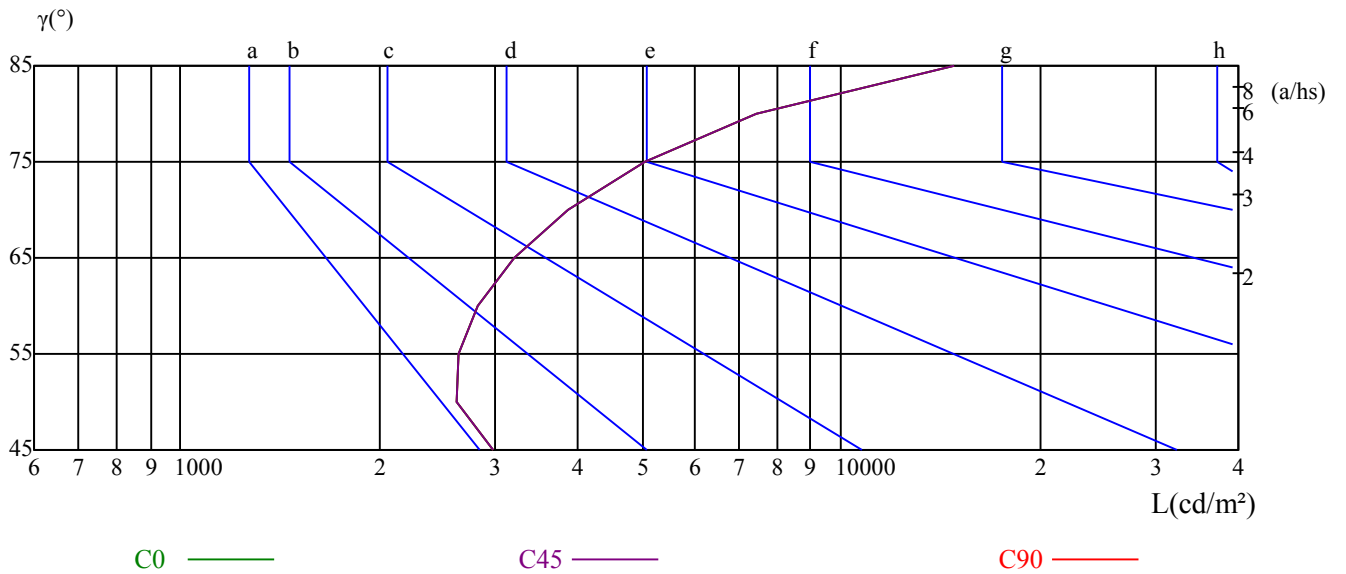
γ	45	50	55	60	65	70	75	80	85
C0	2974	2613	2638	2822	3199	3874	5033	7443	14817
C45	2974	2613	2638	2822	3199	3874	5033	7443	14817
C90	2974	2613	2638	2822	3199	3874	5033	7443	14817

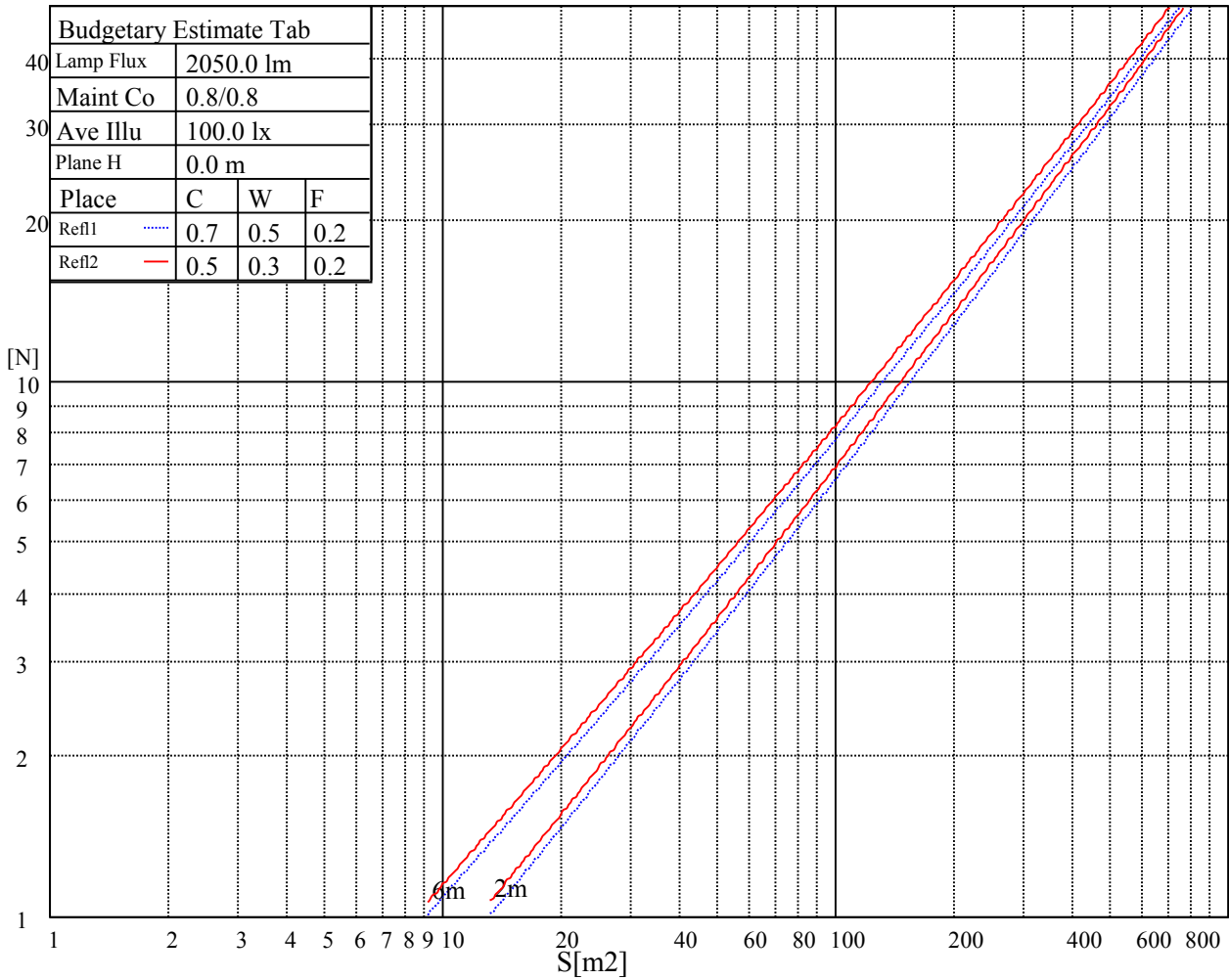
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3199	3199	3199	5033	5033	5033	14817	14817	14817

Glare Table

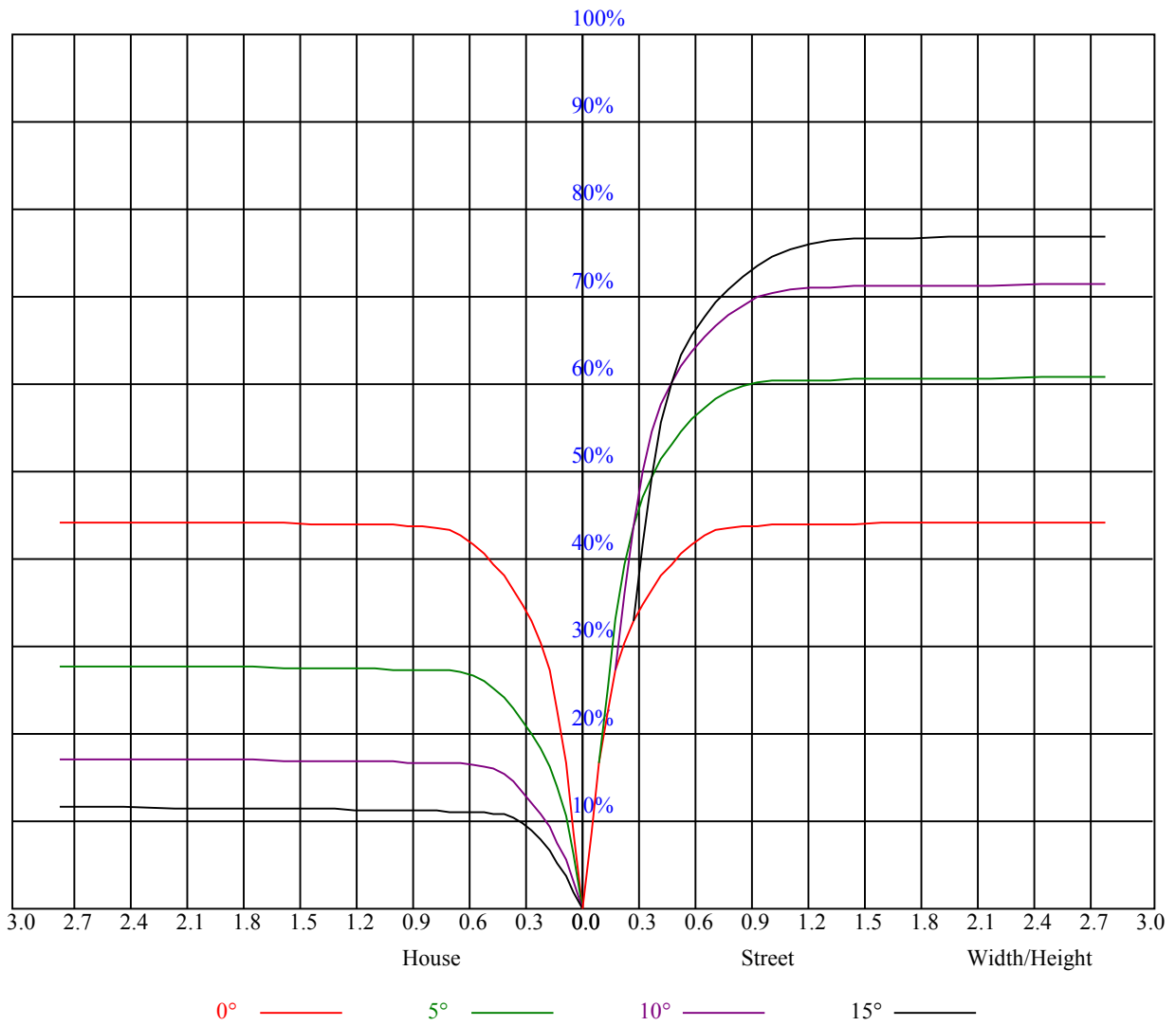
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

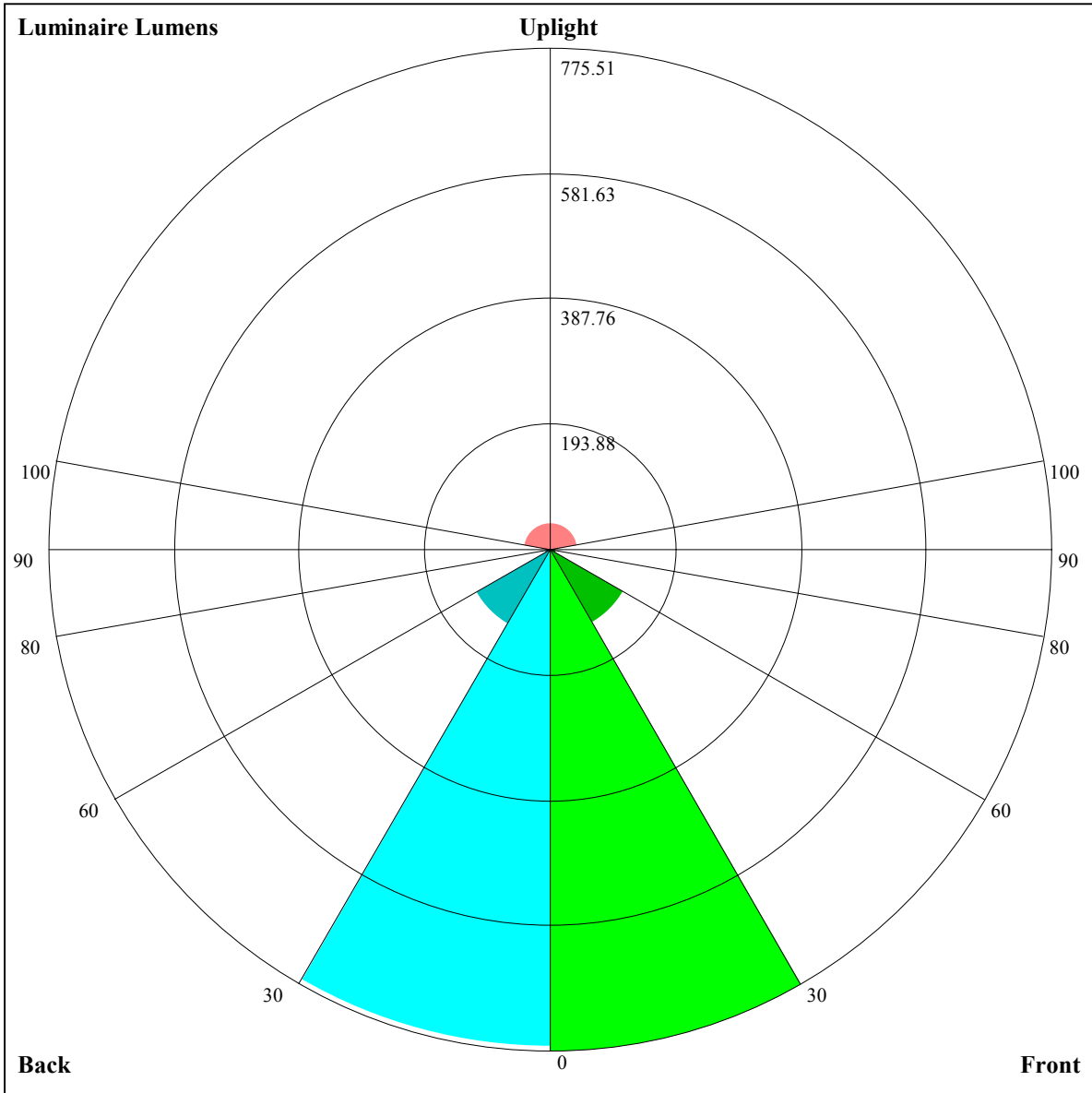
Luminance Limiting Curve





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	1.06	1.06	1.06	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	1.00	0.98	0.97	0.98	0.97	0.95	0.95	0.93	0.92	0.91	0.90	0.89	0.88	0.88	0.87	0.85
2	0.95	0.92	0.90	0.93	0.91	0.89	0.91	0.89	0.87	0.88	0.86	0.85	0.86	0.84	0.83	0.82
3	0.90	0.87	0.84	0.89	0.86	0.83	0.87	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.80	0.79
4	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.80	0.78	0.81	0.78	0.77	0.76
5	0.83	0.79	0.76	0.82	0.79	0.76	0.81	0.78	0.75	0.79	0.77	0.75	0.78	0.76	0.74	0.73
6	0.80	0.76	0.73	0.79	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.70
7	0.77	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
8	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.72	0.69	0.67	0.66
9	0.72	0.68	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.70	0.67	0.65	0.64
10	0.70	0.66	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62





Luminaire Lumens:

FL=775.51,FM=130.26,FH=8.58,FVH=4.41

BL=768.99,BM=132.66,BH=8.56,BVH=4.39

UL=8.72,UH=41.51

BUG Rating:B2-U2-G0

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	13185.00	13095.00	12684.38	12088.13	11193.75	10181.25	8915.63	7576.88	6418.13
45.0	13151.25	13111.88	12746.25	12195.00	11463.75	10305.00	9225.00	8038.13	6710.63
90.0	13156.88	12926.25	12408.75	11214.56	10752.19	9701.44	8218.13	7007.63	5859.00
135.0	13207.50	13095.00	12706.88	12031.88	11221.88	10248.75	8842.50	7616.25	6446.25
180.0	13190.63	13038.75	12594.38	11207.81	10970.44	9942.75	8649.56	7322.06	6186.38
225.0	13151.25	12965.63	12476.25	11146.50	10776.38	9686.81	8380.13	7072.31	5953.50
270.0	13156.88	13179.38	12909.38	12403.13	11553.75	10591.88	9326.25	7987.50	6789.38
315.0	13207.50	13078.13	12695.63	11846.25	11097.00	10037.81	8734.50	7374.94	6189.19
360.0	13185.00	13095.00	12684.38	12088.13	11193.75	10181.25	8915.63	7576.88	6418.13
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5197.50	4072.50	3200.63	2919.38	1937.81	1633.50	1411.31	1231.31	1102.50
45.0	5495.63	4488.75	3470.63	2913.75	2170.69	1769.63	1502.44	1300.50	1148.63
90.0	4563.56	3647.25	2892.38	2277.00	1856.81	1589.06	1363.50	1119.38	1080.34
135.0	5130.00	4162.50	3313.13	2953.13	2069.44	1755.56	1541.25	1323.56	1177.31
180.0	5142.38	3976.88	3197.81	2586.38	2048.63	1738.69	1500.75	1299.38	1119.04
225.0	4784.06	3749.63	2984.63	2338.31	1938.38	1618.88	1382.63	1118.48	1105.54
270.0	5653.13	4353.75	3448.13	2874.38	2120.06	1731.38	1491.19	1289.81	1158.75
315.0	5081.06	3825.00	2984.63	2351.25	1830.94	1555.88	1350.56	1120.28	1058.18
360.0	5197.50	4072.50	3200.63	2919.38	1937.81	1633.50	1411.31	1231.31	1102.50
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1013.63	932.63	867.94	822.38	780.75	752.06	726.19	705.94	692.44
45.0	1054.69	957.94	878.63	828.56	786.94	746.44	722.81	704.81	687.94
90.0	989.89	906.19	844.76	801.68	763.31	736.48	712.69	694.07	676.35
135.0	1083.94	973.13	903.38	849.94	800.44	762.19	731.81	707.63	689.06
180.0	1045.07	953.78	889.54	831.49	785.42	752.12	722.03	699.47	682.59
225.0	994.44	926.16	869.85	817.99	776.31	746.78	718.48	700.99	684.79
270.0	1047.94	961.88	898.88	842.06	802.13	764.44	737.44	711.00	694.13
315.0	974.53	903.66	854.89	811.35	774.79	748.13	723.43	703.13	684.90
360.0	1013.63	932.63	867.94	822.38	780.75	752.06	726.19	705.94	692.44
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	677.25	662.63	652.50	641.81	627.75	605.81	559.69	495.00	424.69
45.0	670.50	658.69	646.31	634.50	622.69	601.31	565.88	501.19	428.63
90.0	662.46	647.66	636.64	625.11	608.63	569.59	518.40	452.59	380.87
135.0	674.44	655.88	645.19	634.50	621.00	604.13	571.50	511.31	438.75
180.0	665.83	650.08	639.06	628.59	615.15	601.71	562.50	494.72	431.61
225.0	666.39	655.99	644.12	630.51	621.39	599.91	537.98	484.82	420.86
270.0	676.69	664.31	653.06	642.94	630.56	616.50	560.81	501.75	434.81
315.0	670.50	655.37	645.02	633.77	623.42	578.93	524.36	459.84	373.05
360.0	677.25	662.63	652.50	641.81	627.75	605.81	559.69	495.00	424.69
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	355.50	291.94	201.49	128.59	69.53	32.63	21.09	18.23	15.81
45.0	369.56	294.19	207.11	145.13	91.86	43.09	21.99	19.74	16.26
90.0	311.79	235.52	163.07	103.39	49.44	24.19	20.03	16.48	14.34
135.0	377.44	290.81	244.63	143.61	82.18	39.83	21.26	17.89	14.68
180.0	365.23	278.72	219.26	150.19	81.11	41.91	21.43	17.33	15.13
225.0	331.93	260.94	194.29	113.06	68.91	32.29	20.93	17.38	14.46
270.0	347.06	292.50	201.49	140.51	74.64	35.49	21.83	18.56	15.02
315.0	301.28	222.58	157.89	91.97	50.74	24.08	20.25	16.99	14.12
360.0	355.50	291.94	201.49	128.59	69.53	32.63	21.09	18.23	15.81

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	13.67	11.98	11.59	11.25	10.91	10.63	10.41	10.18	9.90
45.0	13.95	12.32	11.81	11.48	11.19	10.91	10.69	10.46	10.24
90.0	13.16	12.04	11.64	11.36	11.03	10.80	10.58	10.35	10.13
135.0	12.99	11.87	11.53	11.19	10.86	10.58	10.41	10.18	9.96
180.0	13.28	11.70	11.25	10.97	10.69	10.46	10.24	10.01	9.84
225.0	12.54	11.42	11.08	10.80	10.52	10.29	10.07	9.90	9.68
270.0	13.28	11.76	11.25	10.97	10.69	10.41	10.18	10.01	9.79
315.0	12.94	11.53	11.19	10.86	10.63	10.41	10.18	10.01	9.79
360.0	13.67	11.98	11.59	11.25	10.91	10.63	10.41	10.18	9.90
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.73	9.56	9.39	9.23	9.17	9.00	8.89	8.83	8.78
45.0	10.01	9.79	9.56	9.45	9.28	9.11	9.00	8.89	8.83
90.0	9.84	9.56	9.39	9.23	9.06	8.94	8.83	8.78	8.72
135.0	9.79	9.56	9.39	9.28	9.11	9.00	8.89	8.83	8.72
180.0	9.68	9.45	9.34	9.17	9.06	9.00	8.89	8.78	8.72
225.0	9.51	9.34	9.23	9.06	8.94	8.89	8.78	8.66	8.61
270.0	9.56	9.45	9.28	9.17	9.00	8.94	8.89	8.72	8.66
315.0	9.56	9.39	9.23	9.11	9.00	8.89	8.83	8.72	8.66
360.0	9.73	9.56	9.39	9.23	9.17	9.00	8.89	8.83	8.78
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.66	8.61	8.49	8.49	8.44	8.38	8.38	8.33	8.27
45.0	8.72	8.61	8.55	8.49	8.49	8.44	8.38	8.38	8.33
90.0	8.66	8.55	8.49	8.44	8.38	8.33	8.33	8.27	8.27
135.0	8.66	8.61	8.55	8.55	8.44	8.44	8.44	8.38	8.38
180.0	8.66	8.61	8.49	8.49	8.38	8.38	8.38	8.33	8.27
225.0	8.55	8.49	8.44	8.38	8.38	8.33	8.27	8.27	8.21
270.0	8.61	8.55	8.49	8.49	8.38	8.38	8.33	8.33	8.27
315.0	8.61	8.55	8.49	8.49	8.44	8.38	8.38	8.38	8.33
360.0	8.66	8.61	8.49	8.49	8.44	8.38	8.38	8.33	8.27
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.27	8.21	8.21	8.16	8.16	8.16	8.10	8.10	8.10
45.0	8.27	8.21	8.21	8.21	8.16	8.16	8.16	8.10	8.10
90.0	8.21	8.21	8.16	8.16	8.16	8.10	8.10	8.10	8.10
135.0	8.33	8.27	8.27	8.27	8.27	8.21	8.21	8.21	8.21
180.0	8.21	8.21	8.21	8.16	8.16	8.10	8.10	8.10	8.04
225.0	8.21	8.21	8.16	8.16	8.10	8.10	8.10	8.10	8.10
270.0	8.27	8.21	8.16	8.16	8.16	8.16	8.10	8.10	8.10
315.0	8.33	8.33	8.27	8.27	8.27	8.27	8.27	8.27	8.27
360.0	8.27	8.21	8.21	8.16	8.16	8.16	8.10	8.10	8.10
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.10	8.10	8.10	8.04	8.04	8.04	8.04	8.04	7.99
45.0	8.10	8.10	8.04	8.04	8.04	8.04	8.04	8.04	7.99
90.0	8.10	8.04	8.04	8.04	8.04	7.99	7.99	8.04	7.99
135.0	8.16	8.16	8.16	8.16	8.10	8.10	8.04	8.04	7.99
180.0	8.10	8.10	8.04	8.04	8.04	7.99	7.99	7.99	8.04
225.0	8.04	8.04	8.04	8.04	8.04	7.99	7.99	7.99	7.99
270.0	8.04	8.10	8.04	8.04	8.04	8.04	8.04	8.04	8.04
315.0	8.27	8.27	8.27	8.38	8.61	8.16	8.04	8.04	7.99
360.0	8.10	8.10	8.10	8.04	8.04	8.04	8.04	8.04	7.99

Intensity data(cd)

C/ γ (°)	90.0
0.0	8.04
45.0	7.99
90.0	7.99
135.0	7.99
180.0	7.99
225.0	7.99
270.0	7.99
315.0	7.99
360.0	8.04