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Nata

Client:

LumCAT: 3-2115-N

Luminaire: 92.70.131.00

Report No:

Voltage(V): 34.9800

Test No: GC2019082206

Current(A): 0.3980

LampCAT: TRIDONIC SLE 15MM G7

Power (W): 13.9200

Lamp flux(lm): 1700.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 81

Width(mm): 81

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1516.27, Efficiency(%): 89.19% , Luminous Efficacy(lm/W): 108.93

Central intensity(cd): 8477.016, Maximum intensity(cd): 8477.016

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=16.6

[C90/270]Total=16.6

Field angle(10%Imax): [C0/180]Total=46.2

[C90/270]Total=46.2

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(%): 89.19%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.767%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/8/22
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	8477.016	0.000	0	.000%	.000%
1.0	8393.836	8.072	8.072	.475%	.532%
2.0	8113.711	23.693	31.766	1.394%	2.095%
3.0	7678.969	37.771	69.536	2.222%	4.586%
4.0	7156.055	49.658	119.194	2.921%	7.861%
5.0	6449.203	58.529	177.723	3.443%	11.721%
6.0	5752.617	64.124	241.847	3.772%	15.950%
7.0	5088.164	67.289	309.135	3.958%	20.388%
8.0	4433.414	68.144	377.28	4.008%	24.882%
9.0	3874.781	67.333	444.613	3.961%	29.323%
10.0	3407.906	65.906	510.519	3.877%	33.669%
11.0	2991.938	63.948	574.466	3.762%	37.887%
12.0	2660.484	61.789	636.255	3.635%	41.962%
13.0	2354.766	59.518	695.774	3.501%	45.887%
14.0	2079.000	56.752	752.526	3.338%	49.630%
15.0	1865.180	54.147	806.673	3.185%	53.201%
16.0	1676.883	51.901	858.574	3.053%	56.624%
17.0	1496.109	49.412	907.986	2.907%	59.883%
18.0	1350.042	46.927	954.913	2.760%	62.978%
19.0	1231.516	44.914	999.827	2.642%	65.940%
20.0	1122.434	43.084	1042.911	2.534%	68.781%
21.0	1018.793	41.116	1084.027	2.419%	71.493%
22.0	942.328	39.410	1123.436	2.318%	74.092%
23.0	855.267	37.718	1161.154	2.219%	76.580%
24.0	779.449	35.741	1196.895	2.102%	78.937%
25.0	715.261	33.986	1230.882	1.999%	81.178%
26.0	648.148	32.183	1263.065	1.893%	83.301%
27.0	583.959	30.144	1293.209	1.773%	85.289%
28.0	521.655	27.992	1321.201	1.647%	87.135%
29.0	450.675	25.439	1346.64	1.496%	88.813%
30.0	385.896	22.587	1369.227	1.329%	90.302%
31.0	314.726	19.497	1388.724	1.147%	91.588%
32.0	249.279	16.158	1404.882	.950%	92.654%
33.0	190.209	12.947	1417.83	.762%	93.508%
34.0	140.548	10.010	1427.839	.589%	94.168%
35.0	95.463	7.330	1435.169	.431%	94.651%
36.0	67.254	5.181	1440.35	.305%	94.993%
37.0	50.562	3.842	1444.192	.226%	95.246%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	42.223	3.097	1447.289	.182%	95.451%
39.0	36.232	2.678	1449.967	.158%	95.627%
40.0	32.351	2.392	1452.359	.141%	95.785%
41.0	29.032	2.186	1454.545	.129%	95.929%
42.0	26.058	2.002	1456.547	.118%	96.061%
43.0	23.850	1.849	1458.395	.109%	96.183%
44.0	22.092	1.734	1460.129	.102%	96.298%
45.0	20.566	1.639	1461.769	.096%	96.406%
46.0	19.427	1.564	1463.333	.092%	96.509%
47.0	18.429	1.506	1464.838	.089%	96.608%
48.0	17.620	1.457	1466.296	.086%	96.704%
49.0	16.966	1.420	1467.716	.084%	96.798%
50.0	16.383	1.390	1469.106	.082%	96.890%
51.0	15.870	1.365	1470.471	.080%	96.980%
52.0	15.504	1.346	1471.817	.079%	97.068%
53.0	15.173	1.334	1473.152	.078%	97.156%
54.0	14.871	1.324	1474.476	.078%	97.244%
55.0	14.681	1.319	1475.795	.078%	97.331%
56.0	14.505	1.319	1477.114	.078%	97.418%
57.0	14.365	1.320	1478.434	.078%	97.505%
58.0	14.245	1.323	1479.757	.078%	97.592%
59.0	14.147	1.327	1481.084	.078%	97.680%
60.0	14.063	1.333	1482.417	.078%	97.767%
61.0	13.964	1.337	1483.755	.079%	97.856%
62.0	13.866	1.341	1485.096	.079%	97.944%
63.0	13.795	1.345	1486.441	.079%	98.033%
64.0	13.584	1.344	1487.784	.079%	98.121%
65.0	13.423	1.337	1489.121	.079%	98.210%
66.0	13.064	1.322	1490.442	.078%	98.297%
67.0	12.769	1.299	1491.741	.076%	98.382%
68.0	12.333	1.272	1493.013	.075%	98.466%
69.0	11.876	1.235	1494.248	.073%	98.548%
70.0	11.524	1.202	1495.45	.071%	98.627%
71.0	11.208	1.175	1496.625	.069%	98.704%
72.0	10.997	1.155	1497.779	.068%	98.781%
73.0	10.849	1.142	1498.922	.067%	98.856%
74.0	10.793	1.138	1500.059	.067%	98.931%
75.0	10.758	1.139	1501.198	.067%	99.006%

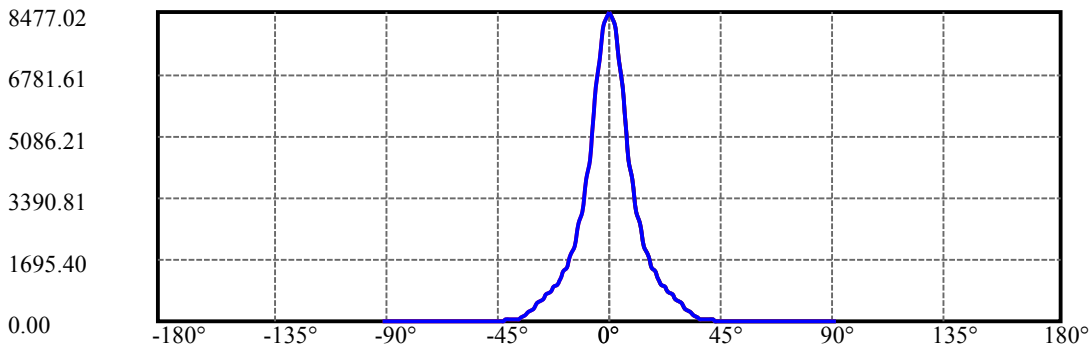
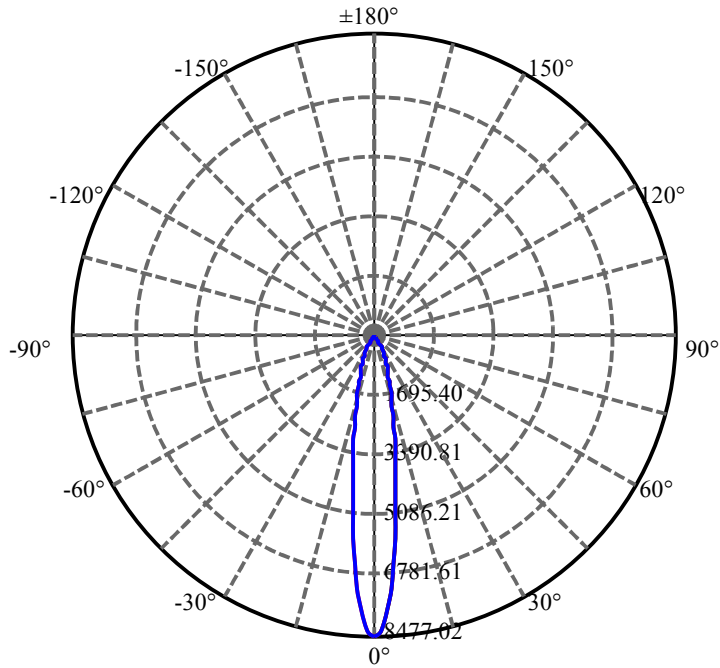
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	10.814	1.145	1502.343	.067%	99.082%
77.0	10.849	1.155	1503.498	.068%	99.158%
78.0	10.723	1.155	1504.653	.068%	99.234%
79.0	10.596	1.145	1505.798	.067%	99.309%
80.0	10.448	1.135	1506.933	.067%	99.384%
81.0	10.230	1.118	1508.051	.066%	99.458%
82.0	9.633	1.077	1509.128	.063%	99.529%
83.0	8.873	1.006	1510.134	.059%	99.595%
84.0	8.670	0.956	1511.09	.056%	99.658%
85.0	8.522	0.938	1512.028	.055%	99.720%
86.0	8.163	0.912	1512.94	.054%	99.780%
87.0	7.847	0.876	1513.817	.052%	99.838%
88.0	7.495	0.840	1514.657	.049%	99.894%
89.0	7.341	0.813	1515.47	.048%	99.947%
90.0	7.228	0.799	1516.269	.047%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1369.23	80.54%	90.30%
0-40	1452.36	85.43%	95.79%
0-60	1482.42	87.20%	97.77%
0-90	1515.47	89.15%	99.95%
0-120	1515.47	89.15%	99.95%
0-180	1516.27	89.19%	100.00%
60-90	34.39	2.02%	2.27%
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%
0-24.47	1213.02	71.35%	80.00%

ZONAL LUMEN SUMMARY

0-10	510.52
10-20	532.39
20-30	326.32
30-40	83.13
40-50	16.75
50-60	13.31
60-70	13.03
70-80	11.48
80-90	8.54
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



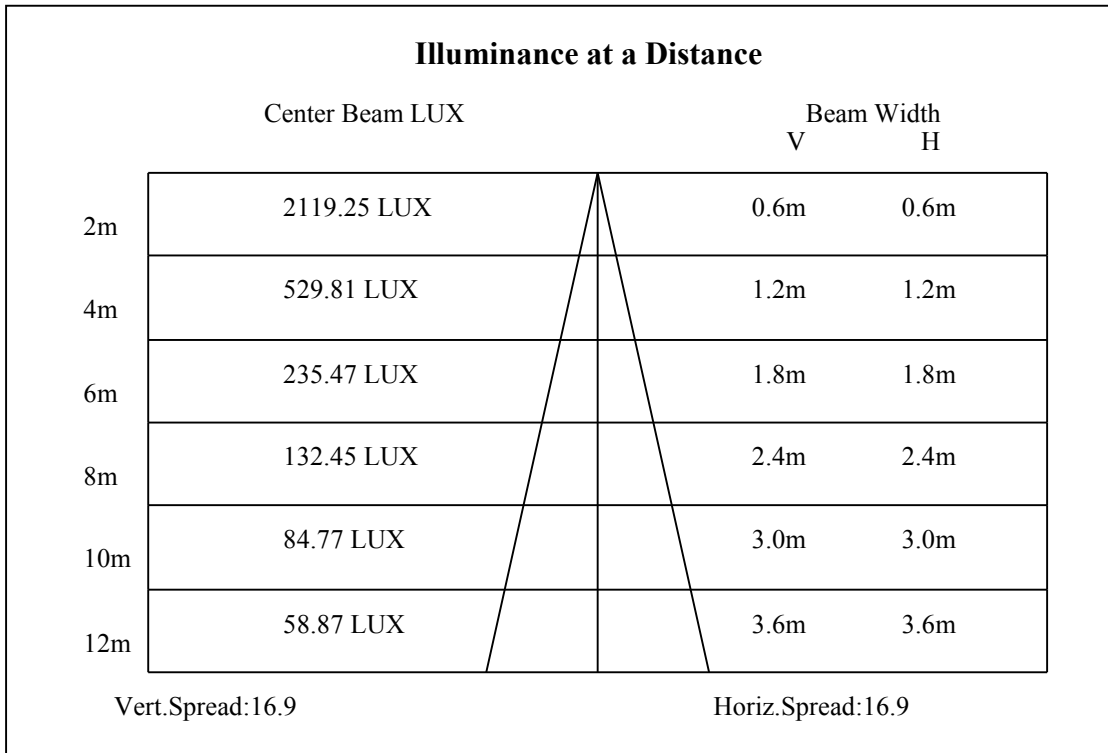
C0(Max): —————

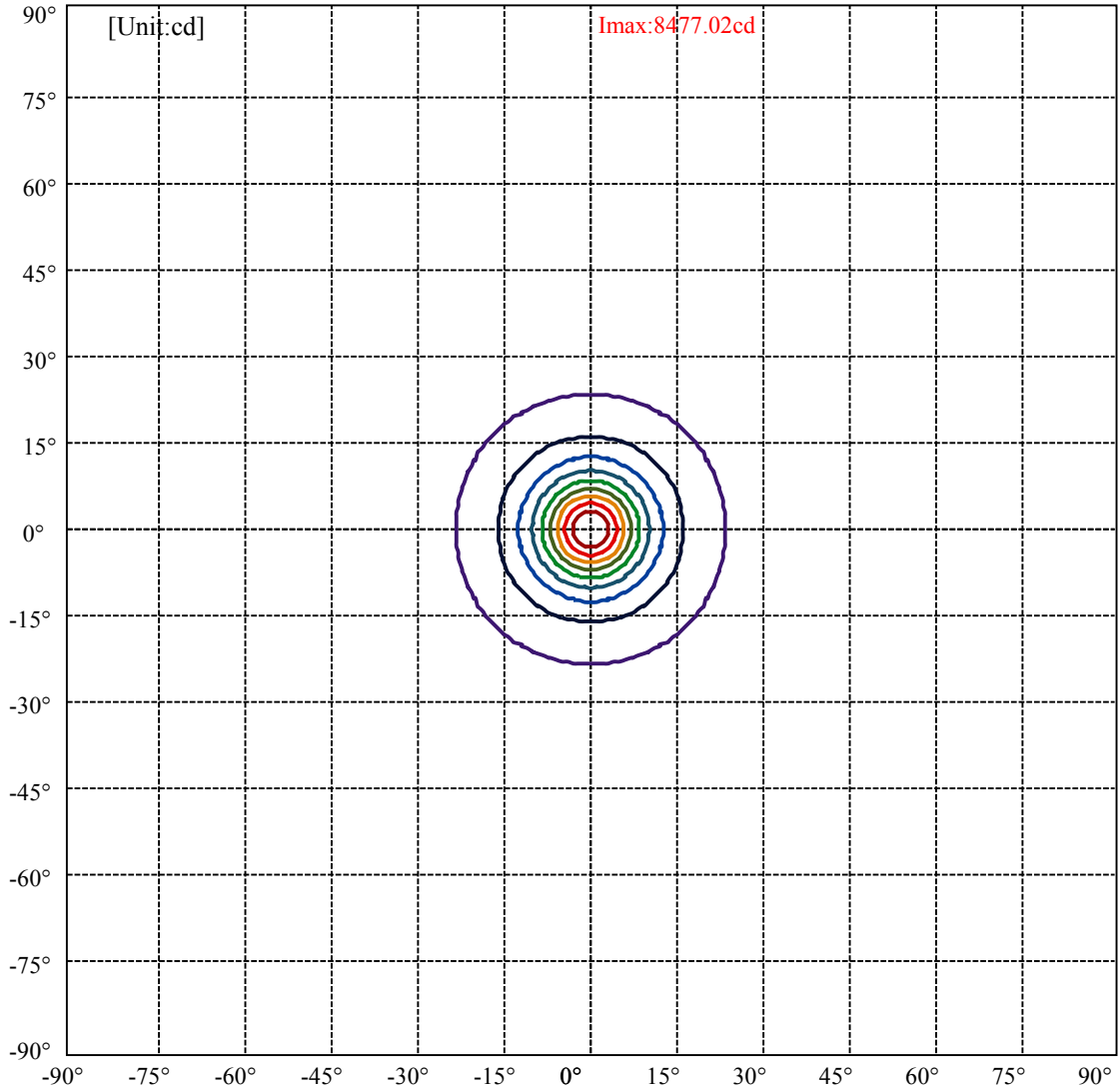
C0/C180: —————

C90/C270: —————

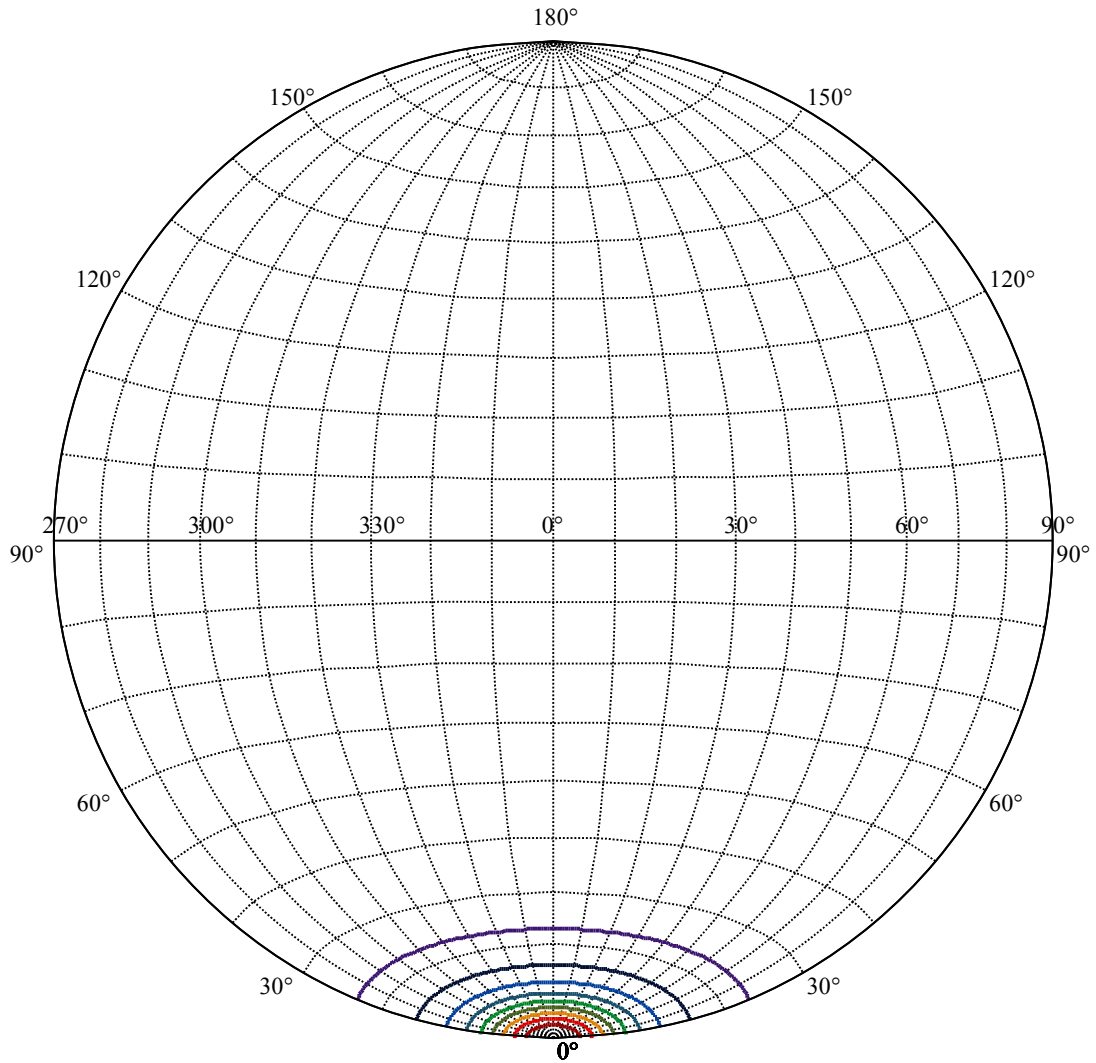
Field angle(10%Imax):C0/180Left:23.1 Right:23.1
:C90/270Left:23.1 Right:23.1

Beam Angle(50%Imax):C0/180Left:8.3 Right:8.3
:C90/270Left:8.3 Right:8.3





(10%Imax) 847.702	—
(20%Imax) 1695.4	—
(30%Imax) 2543.1	—
(40%Imax) 3390.81	—
(50%Imax) 4238.51	—
(60%Imax) 5086.21	—
(70%Imax) 5933.91	—
(80%Imax) 6781.61	—
(90%Imax) 7629.31	—



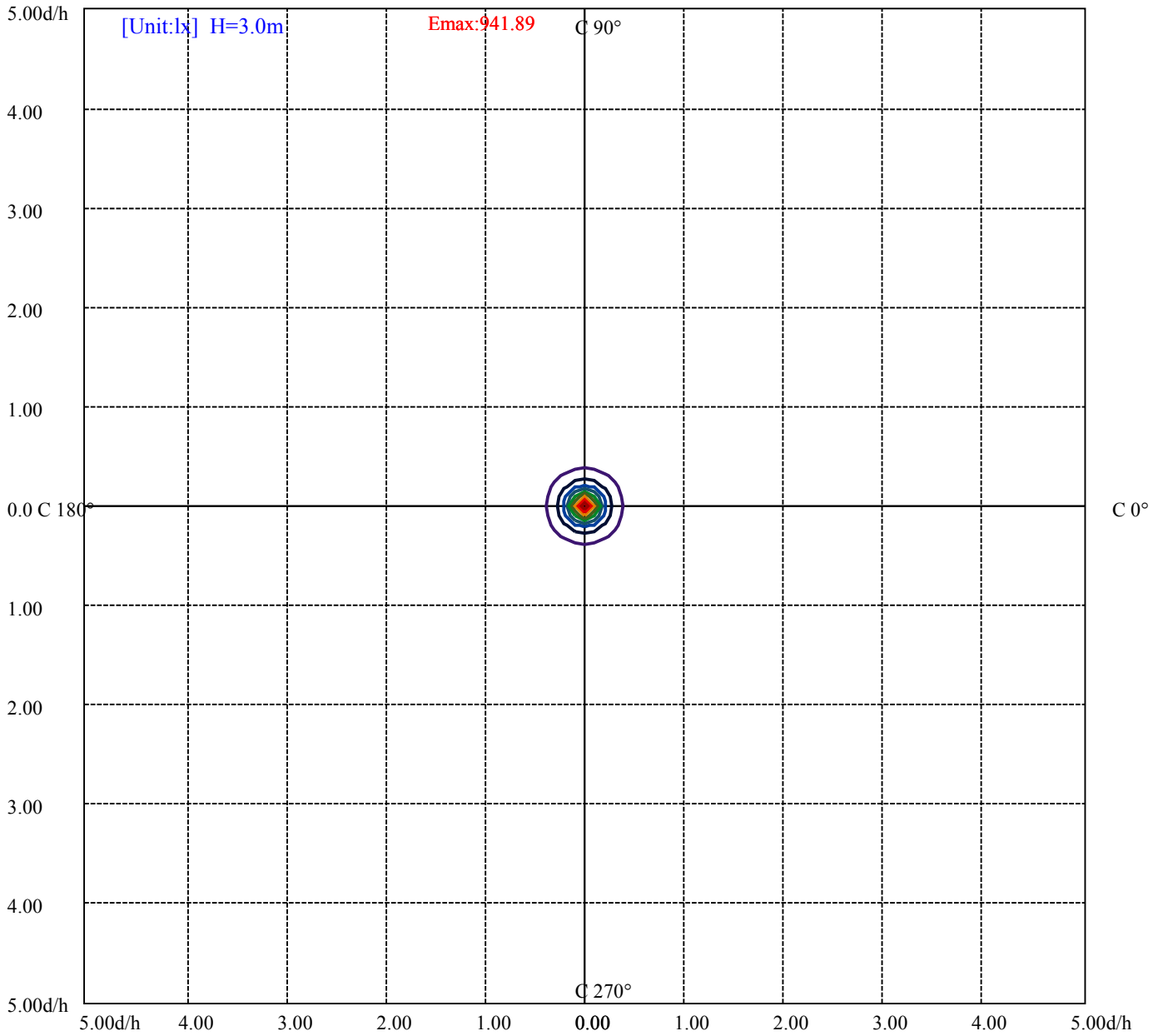
House

[Unit:cd]

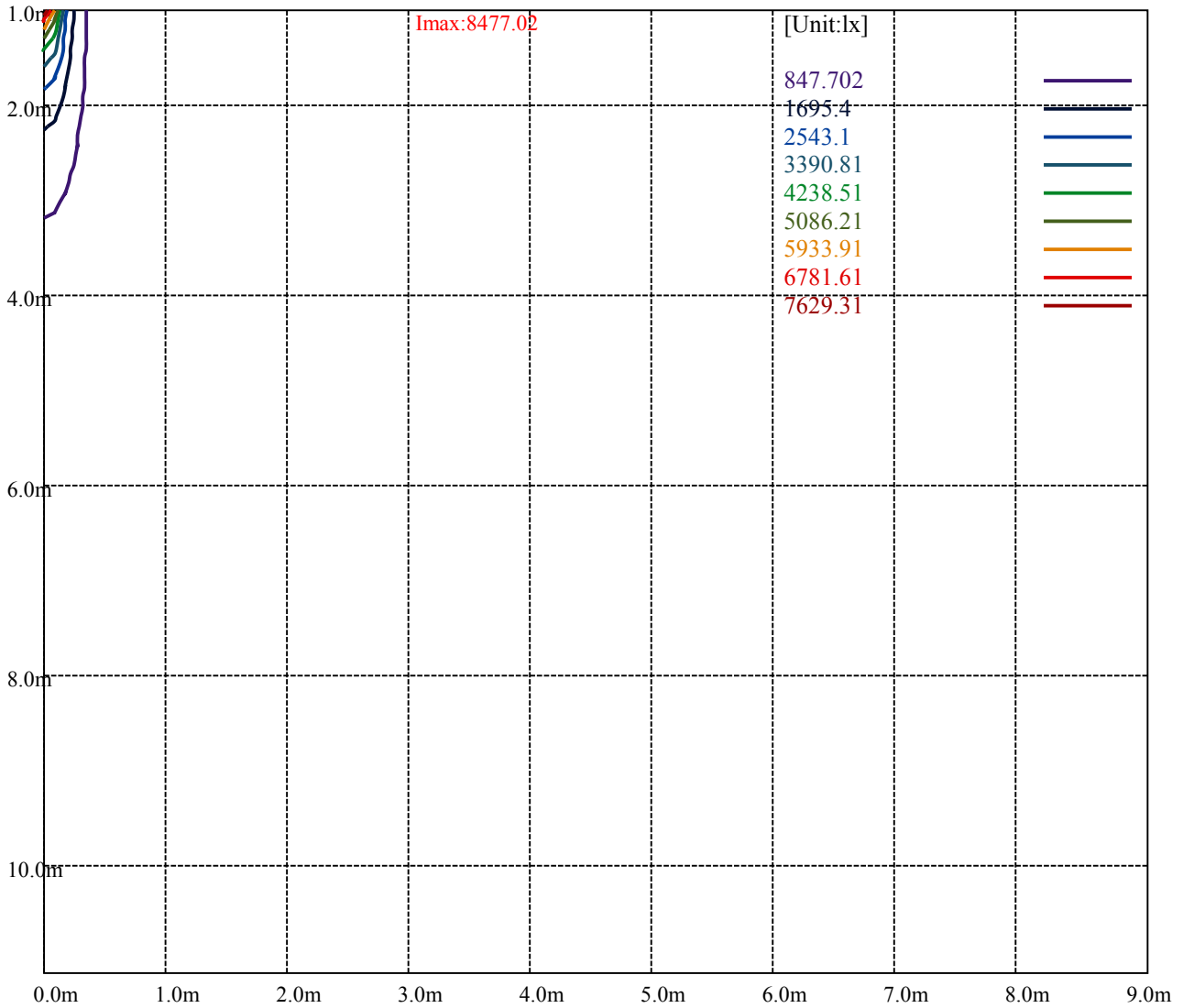
Road

Imax:8477.02

(10%Imax) 847.702	—
(20%Imax) 1695.4	—
(30%Imax) 2543.1	—
(40%Imax) 3390.81	—
(50%Imax) 4238.51	—
(60%Imax) 5086.21	—
(70%Imax) 5933.91	—
(80%Imax) 6781.61	—
(90%Imax) 7629.31	—



(10%E _{max}) 94.18889	—
(20%E _{max}) 188.3778	—
(30%E _{max}) 282.5667	—
(40%E _{max}) 376.7556	—
(50%E _{max}) 470.9445	—
(60%E _{max}) 565.1334	—
(70%E _{max}) 659.3222	—
(80%E _{max}) 753.5111	—
(90%E _{max}) 847.7	—



Luminance Table

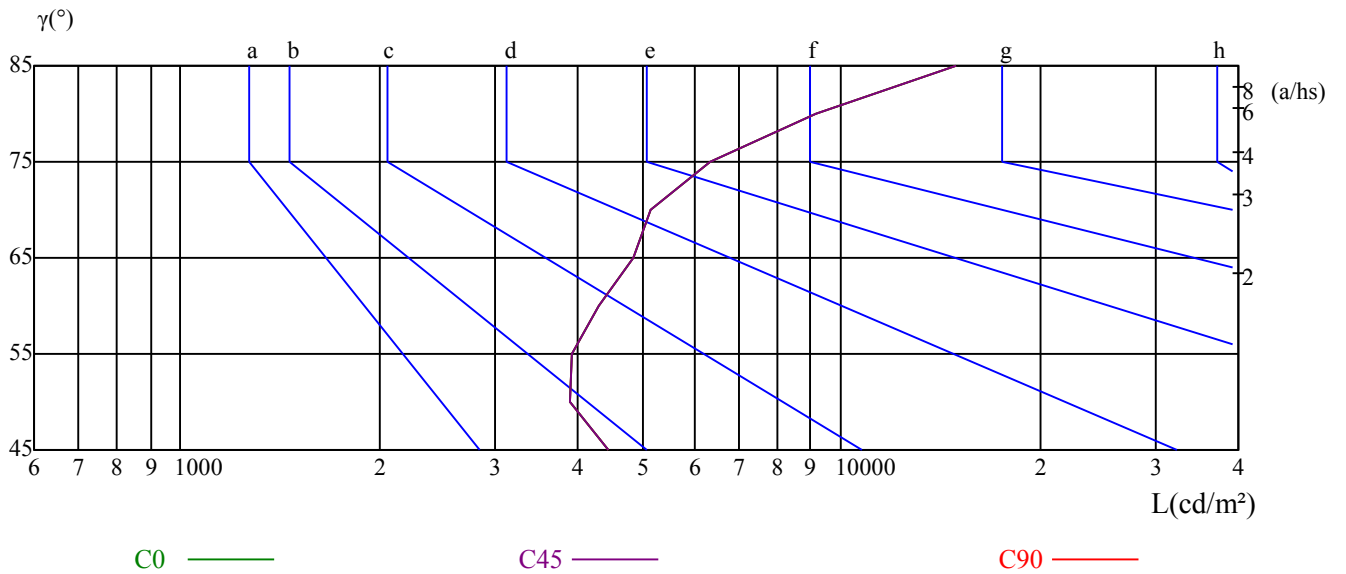
γ	45	50	55	60	65	70	75	80	85
C0	4444	3894	3911	4297	4853	5148	6351	9194	14940
C45	4444	3894	3911	4297	4853	5148	6351	9194	14940
C90	4444	3894	3911	4297	4853	5148	6351	9194	14940

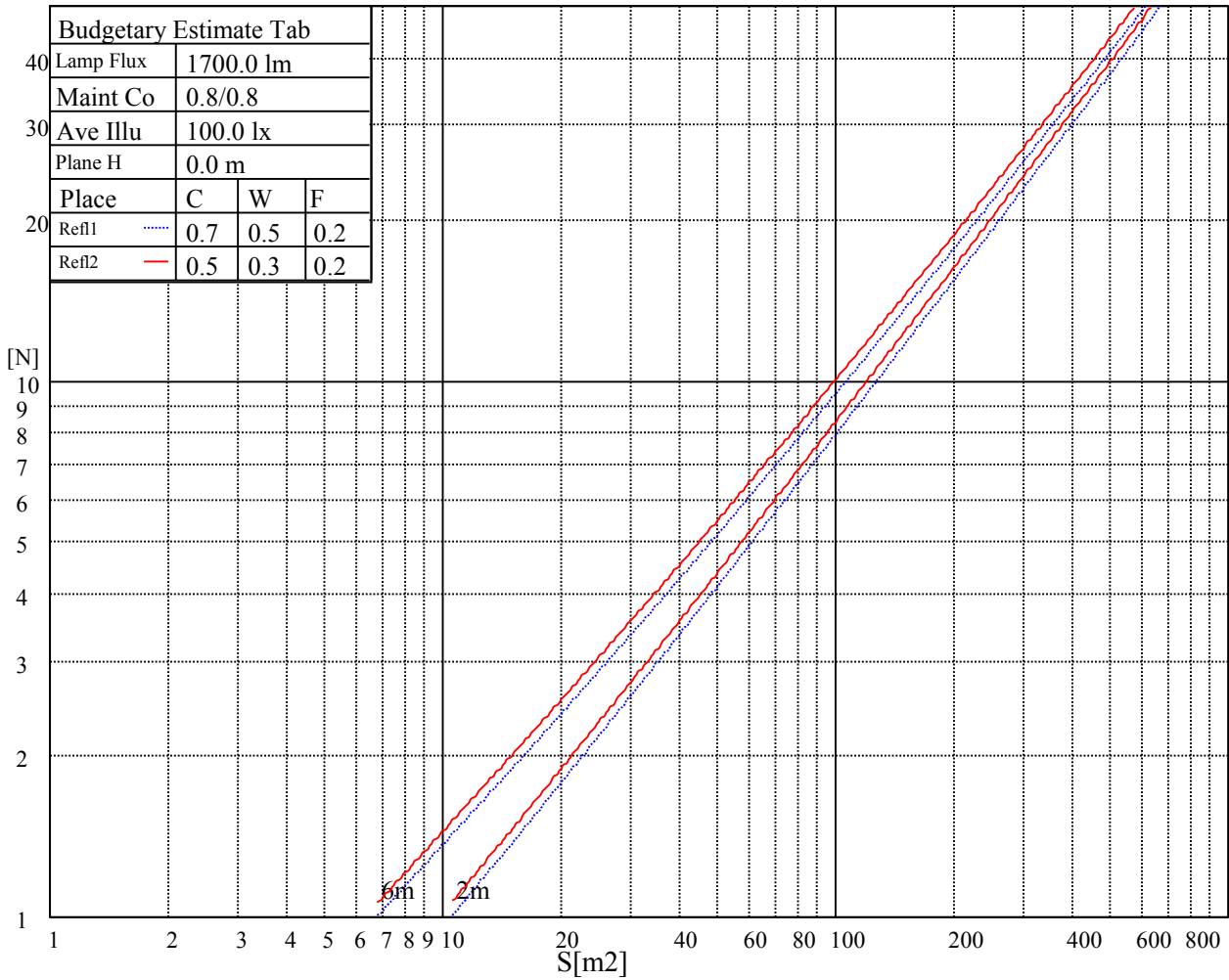
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4853	4853	4853	6351	6351	6351	14940	14940	14940

Glare Table

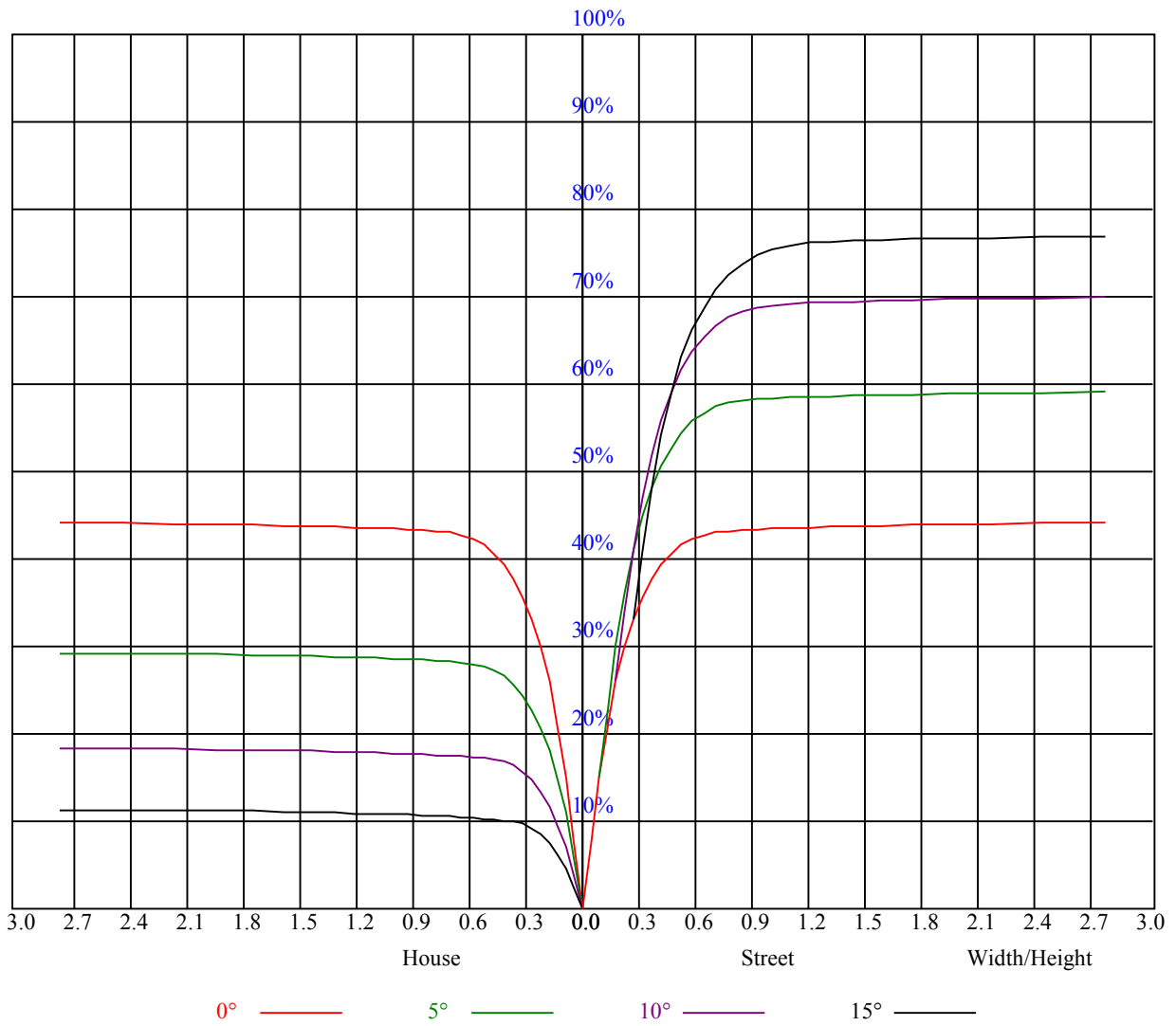
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

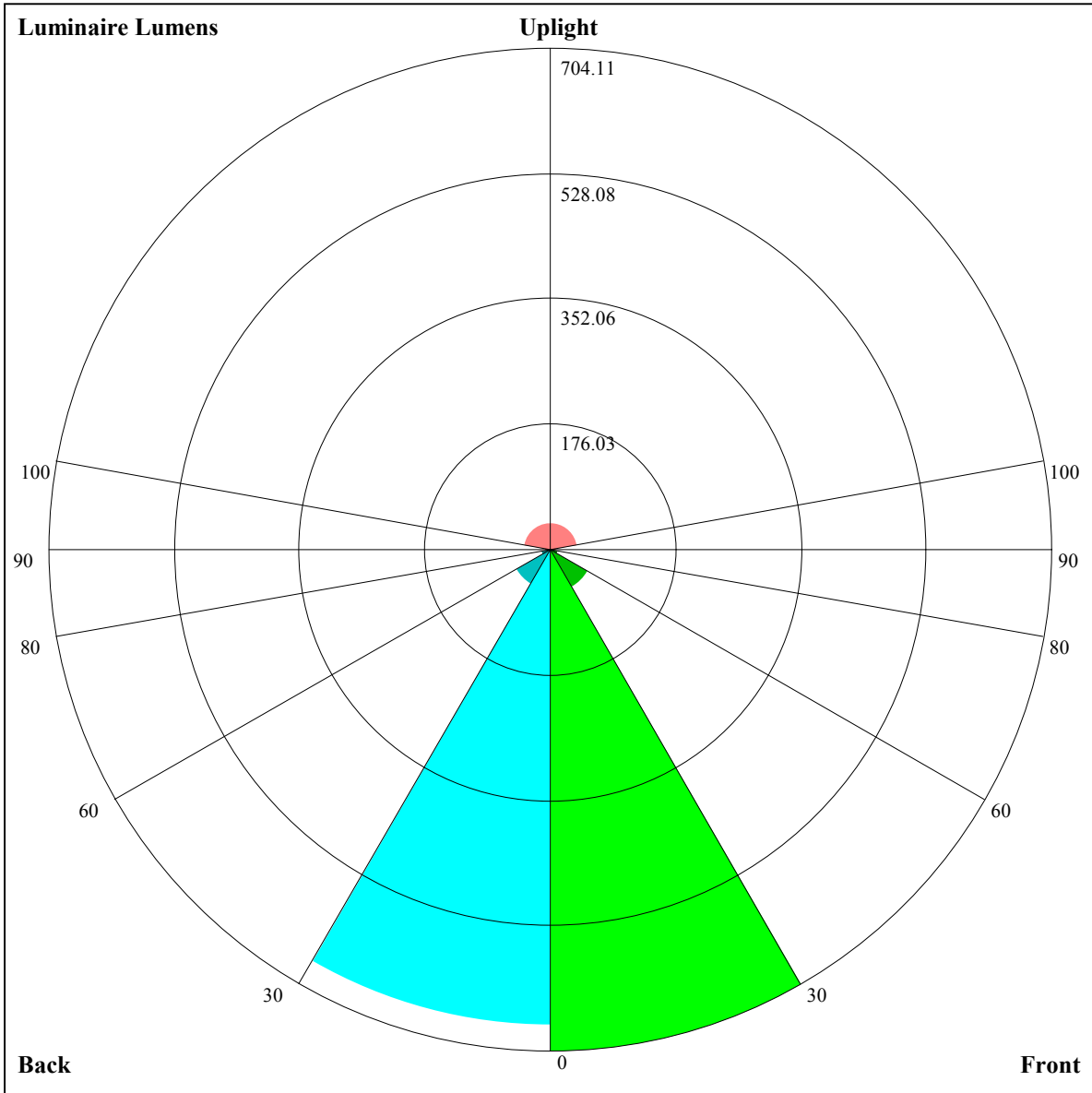
Luminance Limiting Curve





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	0.96	0.98	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85
2	0.95	0.92	0.89	0.93	0.90	0.88	0.90	0.88	0.86	0.88	0.86	0.84	0.85	0.84	0.83	0.81
3	0.90	0.86	0.84	0.89	0.86	0.83	0.87	0.84	0.82	0.84	0.82	0.80	0.83	0.81	0.79	0.78
4	0.86	0.82	0.79	0.85	0.81	0.79	0.83	0.80	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.75
5	0.82	0.78	0.75	0.82	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.72
6	0.79	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.75	0.73	0.71	0.70
7	0.76	0.72	0.70	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.67
8	0.74	0.70	0.67	0.73	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
9	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.63
10	0.69	0.65	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.61





Luminaire Lumens:

FL=704.11,FM=59.74,FH=12.19,FVH=4.63

BL=669.22,BM=55.55,BH=12.47,BVH=4.7

UL=7.89,UH=37.53

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	8546.06	8559.00	8394.75	8095.50	7596.56	6828.19	5989.50	5261.63	4534.88
45.0	8370.00	8605.69	8717.63	8670.38	8508.94	8084.25	7510.50	6773.06	5984.44
90.0	8535.94	8722.69	8752.50	8651.81	8401.50	7874.44	7116.75	6339.38	5464.69
135.0	8456.06	8587.69	8566.88	8390.81	8024.63	7314.75	6617.81	5873.63	5092.31
180.0	8546.06	8407.69	8057.25	7457.63	6788.25	5990.06	5215.50	4592.81	3993.19
225.0	8370.00	7891.31	7269.19	6465.94	5729.63	4966.31	4393.13	3819.38	3345.19
270.0	8535.94	8205.19	7512.75	6796.69	6031.13	5209.88	4505.63	3972.94	3472.88
315.0	8456.06	8171.44	7638.75	6903.00	6167.81	5325.75	4672.13	4072.50	3579.75
360.0	8546.06	8559.00	8394.75	8095.50	7596.56	6828.19	5989.50	5261.63	4534.88
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3946.50	3503.81	3083.63	2750.63	2424.38	2147.06	1930.50	1741.50	1540.13
45.0	5072.63	4437.00	3888.56	3367.69	2924.44	2584.69	2264.63	1989.00	1776.38
90.0	4768.31	4098.38	3552.75	3143.81	2754.56	2415.38	2162.81	1937.81	1712.25
135.0	4431.94	3931.31	3436.88	3056.06	2679.19	2356.31	2106.00	1871.44	1666.69
180.0	3546.00	3117.38	2751.19	2476.13	2233.69	1973.25	1783.13	1618.31	1428.75
225.0	2977.88	2616.19	2316.38	2081.25	1878.19	1656.00	1498.50	1364.06	1232.44
270.0	3048.75	2726.44	2406.94	2166.19	1926.00	1726.31	1567.69	1431.00	1289.81
315.0	3206.25	2832.75	2499.19	2242.13	2017.69	1773.00	1608.19	1461.94	1322.44
360.0	3946.50	3503.81	3083.63	2750.63	2424.38	2147.06	1930.50	1741.50	1540.13
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1402.88	1284.19	1155.38	1067.06	986.06	902.81	815.63	739.69	679.50
45.0	1589.63	1430.44	1281.94	1156.50	1066.50	981.00	878.63	806.63	734.63
90.0	1548.00	1407.94	1272.38	1118.53	1065.71	971.61	904.61	834.24	745.88
135.0	1510.31	1374.75	1222.88	1117.69	1035.56	935.44	861.19	788.63	720.00
180.0	1319.06	1113.75	1092.09	993.43	916.82	830.64	748.97	689.85	643.11
225.0	1119.32	1028.53	930.49	835.43	758.64	679.39	625.61	567.11	497.64
270.0	1193.06	1105.31	1007.44	932.06	855.56	774.56	699.75	650.25	583.31
315.0	1118.08	1107.23	1016.89	929.64	853.76	766.69	701.21	645.69	581.12
360.0	1402.88	1284.19	1155.38	1067.06	986.06	902.81	815.63	739.69	679.50
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	626.06	559.69	483.19	415.13	340.31	290.25	199.46	141.69	87.24
45.0	662.63	629.44	590.06	527.63	455.63	393.19	320.63	287.44	185.01
90.0	696.99	643.11	572.23	509.57	438.92	347.01	287.78	223.59	141.75
135.0	662.63	615.94	547.31	477.00	401.06	333.56	290.81	182.93	133.54
180.0	582.08	504.17	422.33	353.59	286.20	213.92	149.96	101.19	62.32
225.0	430.76	365.91	290.76	233.94	180.56	123.75	88.14	65.19	54.11
270.0	499.50	416.25	347.63	287.44	196.93	147.43	88.20	60.30	50.12
315.0	511.03	438.75	351.90	282.88	218.19	145.13	96.69	62.04	49.61
360.0	626.06	559.69	483.19	415.13	340.31	290.25	199.46	141.69	87.24
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	54.45	45.62	38.76	33.75	30.26	27.11	24.19	22.22	20.70
45.0	124.54	80.83	59.18	49.61	43.09	38.36	32.91	29.42	26.55
90.0	97.54	63.11	50.74	42.98	37.86	33.41	29.87	26.72	24.19
135.0	81.34	56.31	48.88	40.50	36.17	32.06	28.01	25.48	23.51
180.0	49.84	43.26	37.97	32.96	29.48	26.44	24.30	22.33	20.93
225.0	46.35	41.12	36.28	32.06	29.25	26.44	24.75	22.89	21.38
270.0	42.81	38.25	34.14	29.98	27.17	25.09	22.89	21.60	20.42
315.0	41.18	36.00	31.84	28.01	25.54	23.34	21.54	20.14	19.07
360.0	54.45	45.62	38.76	33.75	30.26	27.11	24.19	22.22	20.70

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	19.41	18.11	17.33	16.54	15.86	15.36	14.85	14.51	14.23
45.0	23.68	22.11	20.53	19.29	18.28	17.61	16.82	16.31	15.75
90.0	22.33	20.87	19.46	18.51	17.78	16.99	16.37	15.92	15.47
135.0	21.54	20.31	19.24	18.23	17.44	16.82	16.14	15.69	15.24
180.0	19.69	18.62	17.72	17.10	16.48	15.98	15.53	15.24	14.96
225.0	20.36	19.46	18.51	17.83	17.33	16.71	16.37	16.03	15.75
270.0	19.41	18.62	18.00	17.44	16.99	16.48	16.09	15.81	15.64
315.0	18.11	17.33	16.65	16.03	15.58	15.13	14.79	14.51	14.34
360.0	19.41	18.11	17.33	16.54	15.86	15.36	14.85	14.51	14.23
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	13.95	13.84	13.73	13.61	13.50	13.44	13.39	13.28	13.28
45.0	15.30	14.96	14.68	14.46	14.29	14.12	14.01	13.89	13.78
90.0	14.96	14.68	14.40	14.23	14.06	13.89	13.84	13.73	13.61
135.0	14.91	14.63	14.40	14.23	14.12	14.01	13.95	13.89	13.84
180.0	14.74	14.63	14.57	14.40	14.29	14.18	14.06	14.06	13.89
225.0	15.53	15.41	15.24	15.19	15.08	14.96	14.79	14.74	14.57
270.0	15.41	15.24	15.08	14.91	14.79	14.74	14.63	14.46	14.29
315.0	14.18	14.06	13.95	13.89	13.84	13.84	13.84	13.67	13.67
360.0	13.95	13.84	13.73	13.61	13.50	13.44	13.39	13.28	13.28
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	13.16	13.22	13.22	12.83	12.54	12.09	11.64	11.19	10.97
45.0	14.12	13.61	13.73	13.50	13.33	13.11	12.32	12.04	11.42
90.0	13.67	13.50	13.67	13.33	13.22	12.71	12.15	11.76	11.31
135.0	13.78	13.73	13.84	13.50	13.22	12.60	12.26	11.76	11.42
180.0	13.84	13.73	13.39	12.99	12.43	12.09	11.59	11.31	10.97
225.0	14.18	14.01	13.22	12.99	12.60	12.21	11.81	11.53	11.36
270.0	13.89	13.56	13.28	12.88	12.60	12.21	11.87	11.59	11.36
315.0	13.73	13.33	13.05	12.49	12.21	11.64	11.36	11.03	10.86
360.0	13.16	13.22	13.22	12.83	12.54	12.09	11.64	11.19	10.97
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	10.58	10.35	10.18	9.96	9.84	9.62	9.45	9.28	9.11
45.0	11.25	10.80	10.63	10.41	10.18	10.07	9.84	9.68	9.51
90.0	10.91	10.58	10.35	10.18	9.96	9.79	9.62	9.45	9.23
135.0	10.91	10.69	10.46	10.29	10.13	9.96	9.73	9.56	9.39
180.0	10.69	10.52	10.35	10.13	10.01	10.01	10.13	10.13	9.96
225.0	11.48	11.53	11.64	11.93	12.77	13.11	12.83	13.89	14.18
270.0	11.48	11.81	12.38	12.99	13.56	14.12	13.78	12.09	11.48
315.0	10.69	10.52	10.35	10.18	10.07	10.13	10.41	10.69	10.74
360.0	10.58	10.35	10.18	9.96	9.84	9.62	9.45	9.28	9.11
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.89	8.78	8.61	8.44	8.33	8.16	8.04	7.59	7.37
45.0	9.28	9.06	8.89	8.66	8.44	8.27	8.04	7.88	7.71
90.0	9.06	8.89	8.66	8.49	8.27	8.10	7.88	7.65	7.54
135.0	9.17	9.00	8.83	8.66	8.38	8.16	7.82	7.59	7.48
180.0	9.90	9.51	8.83	8.72	8.55	7.82	7.48	7.31	7.09
225.0	14.01	11.64	9.06	8.94	8.89	7.76	7.48	7.31	7.31
270.0	11.08	10.41	9.23	8.66	8.61	8.55	7.59	7.26	7.14
315.0	10.46	9.79	8.89	8.78	8.72	8.49	8.44	7.37	7.09
360.0	8.89	8.78	8.61	8.44	8.33	8.16	8.04	7.59	7.37

Intensity data(cd)

C/γ(°)	90.0
0.0	7.20
45.0	7.48
90.0	7.37
135.0	7.26
180.0	7.03
225.0	7.31
270.0	7.14
315.0	7.03
360.0	7.20