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Nata

Client:

LumCAT: 4-2275-M

Luminaire: 92.70.131.00

Report No:

Voltage(V): 34.9800

Test No: GC2019082206

Current(A): 0.3980

LampCAT: TRIDONIC SLE 13MM G7

Power (W): 13.9200

Lamp flux(lm): 1702.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 100

Width(mm): 100

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1566.28, Efficiency(%): 92.03% , Luminous Efficacy(lm/W): 112.52

Central intensity(cd): 8088.047, Maximum intensity(cd): 8088.047

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=19.6

[C90/270]Total=19.6

Field angle(10%Imax): [C0/180]Total=39.2

[C90/270]Total=39.2

Maximum s/h(1/2): C0_180=0.33 C90_270=0.33

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(%): 92.03%

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: 2019/8/22
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	8088.047	0.000	0	.000%	.000%
1.0	8028.492	7.711	7.711	.453%	.492%
2.0	7883.016	22.838	30.549	1.342%	1.950%
3.0	7628.133	37.098	67.647	2.180%	4.319%
4.0	7295.063	49.953	117.599	2.935%	7.508%
5.0	6912.141	61.119	178.718	3.591%	11.410%
6.0	6418.898	70.058	248.776	4.116%	15.883%
7.0	5808.797	75.897	324.673	4.459%	20.729%
8.0	5224.148	78.961	403.634	4.639%	25.770%
9.0	4547.320	79.192	482.826	4.653%	30.826%
10.0	3877.875	76.245	559.071	4.480%	35.694%
11.0	3294.984	71.672	630.743	4.211%	40.270%
12.0	2735.578	65.923	696.666	3.873%	44.479%
13.0	2259.492	59.279	755.945	3.483%	48.264%
14.0	1873.969	52.908	808.853	3.109%	51.642%
15.0	1561.852	47.168	856.021	2.771%	54.653%
16.0	1273.296	41.543	897.564	2.441%	57.305%
17.0	1135.406	37.510	935.074	2.204%	59.700%
18.0	980.705	34.890	969.964	2.050%	61.928%
19.0	865.884	32.127	1002.091	1.888%	63.979%
20.0	774.197	30.018	1032.109	1.764%	65.895%
21.0	702.267	28.351	1060.46	1.666%	67.706%
22.0	653.048	27.236	1087.696	1.600%	69.444%
23.0	620.768	26.728	1114.424	1.570%	71.151%
24.0	598.219	26.651	1141.075	1.566%	72.852%
25.0	582.026	26.836	1167.911	1.577%	74.566%
26.0	569.988	27.193	1195.105	1.598%	76.302%
27.0	559.259	27.627	1222.732	1.623%	78.066%
28.0	551.138	28.113	1250.845	1.652%	79.861%
29.0	542.292	28.607	1279.452	1.681%	81.687%
30.0	533.285	29.040	1308.492	1.706%	83.541%
31.0	525.122	29.454	1337.946	1.731%	85.422%
32.0	516.860	29.852	1367.798	1.754%	87.328%
33.0	506.728	30.155	1397.953	1.772%	89.253%
34.0	478.441	29.814	1427.767	1.752%	91.156%
35.0	417.945	27.838	1455.606	1.636%	92.934%
36.0	338.597	24.088	1479.694	1.415%	94.472%
37.0	261.893	19.585	1499.279	1.151%	95.722%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	174.403	14.563	1513.842	.856%	96.652%
39.0	92.067	9.095	1522.937	.534%	97.233%
40.0	36.956	4.500	1527.437	.264%	97.520%
41.0	19.083	1.996	1529.433	.117%	97.647%
42.0	15.209	1.246	1530.678	.073%	97.727%
43.0	12.375	1.022	1531.7	.060%	97.792%
44.0	10.603	0.867	1532.567	.051%	97.847%
45.0	9.612	0.777	1533.344	.046%	97.897%
46.0	9.260	0.738	1534.082	.043%	97.944%
47.0	9.000	0.726	1534.809	.043%	97.990%
48.0	8.803	0.720	1535.528	.042%	98.036%
49.0	8.627	0.716	1536.244	.042%	98.082%
50.0	8.466	0.713	1536.957	.042%	98.128%
51.0	8.346	0.711	1537.668	.042%	98.173%
52.0	8.205	0.710	1538.378	.042%	98.218%
53.0	8.093	0.709	1539.087	.042%	98.264%
54.0	7.980	0.708	1539.796	.042%	98.309%
55.0	7.896	0.709	1540.504	.042%	98.354%
56.0	7.798	0.709	1541.214	.042%	98.399%
57.0	7.720	0.710	1541.923	.042%	98.445%
58.0	7.636	0.710	1542.633	.042%	98.490%
59.0	7.552	0.710	1543.343	.042%	98.535%
60.0	7.516	0.712	1544.055	.042%	98.581%
61.0	7.446	0.714	1544.769	.042%	98.626%
62.0	7.411	0.716	1545.485	.042%	98.672%
63.0	7.369	0.719	1546.204	.042%	98.718%
64.0	7.320	0.721	1546.925	.042%	98.764%
65.0	7.298	0.723	1547.648	.043%	98.810%
66.0	7.256	0.726	1548.374	.043%	98.857%
67.0	7.228	0.728	1549.103	.043%	98.903%
68.0	7.186	0.730	1549.833	.043%	98.950%
69.0	7.172	0.732	1550.565	.043%	98.996%
70.0	7.144	0.735	1551.3	.043%	99.043%
71.0	7.109	0.737	1552.037	.043%	99.090%
72.0	7.088	0.738	1552.775	.043%	99.138%
73.0	7.066	0.740	1553.515	.043%	99.185%
74.0	7.045	0.742	1554.257	.044%	99.232%
75.0	7.038	0.744	1555.001	.044%	99.280%

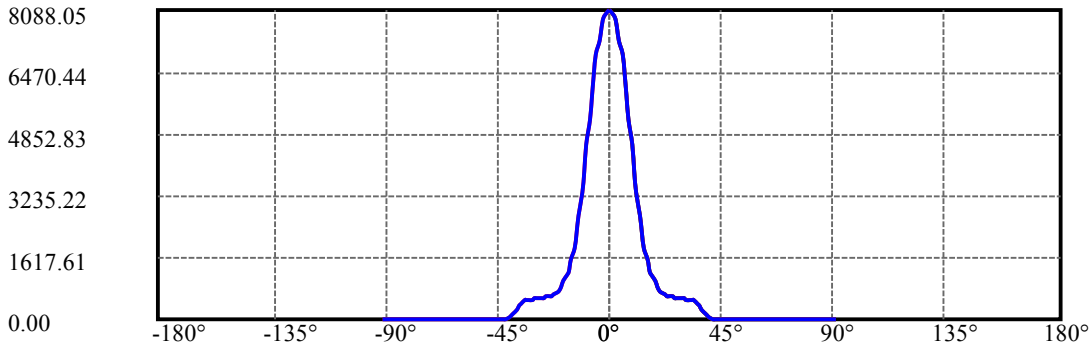
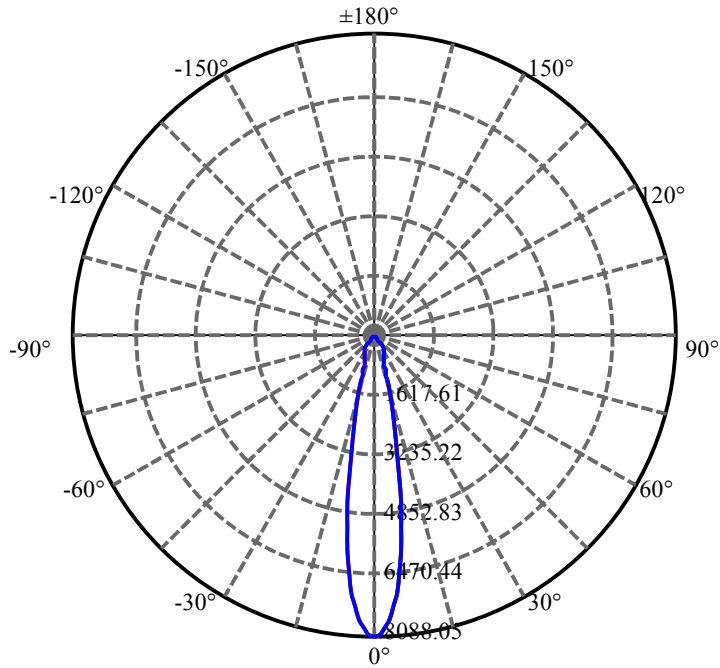
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.010	0.746	1555.747	.044%	99.327%
77.0	7.010	0.747	1556.495	.044%	99.375%
78.0	6.982	0.749	1557.244	.044%	99.423%
79.0	6.968	0.750	1557.993	.044%	99.471%
80.0	6.954	0.751	1558.744	.044%	99.519%
81.0	6.954	0.752	1559.496	.044%	99.567%
82.0	6.926	0.753	1560.248	.044%	99.615%
83.0	6.926	0.753	1561.001	.044%	99.663%
84.0	6.919	0.754	1561.756	.044%	99.711%
85.0	6.919	0.755	1562.511	.044%	99.759%
86.0	6.898	0.755	1563.266	.044%	99.807%
87.0	6.898	0.755	1564.021	.044%	99.856%
88.0	6.884	0.755	1564.776	.044%	99.904%
89.0	6.870	0.754	1565.53	.044%	99.952%
90.0	6.870	0.753	1566.283	.044%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1308.49	76.88%	83.54%
0-40	1527.44	89.74%	97.52%
0-60	1544.06	90.72%	98.58%
0-90	1565.53	91.98%	99.95%
0-120	1565.53	91.98%	99.95%
0-180	1566.28	92.03%	100.00%
60-90	22.19	1.30%	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%
0-28.08	1253.03	73.62%	80.00%

ZONAL LUMEN SUMMARY

0-10	559.07
10-20	473.04
20-30	276.38
30-40	218.94
40-50	9.52
50-60	7.10
60-70	7.25
70-80	7.44
80-90	6.79
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



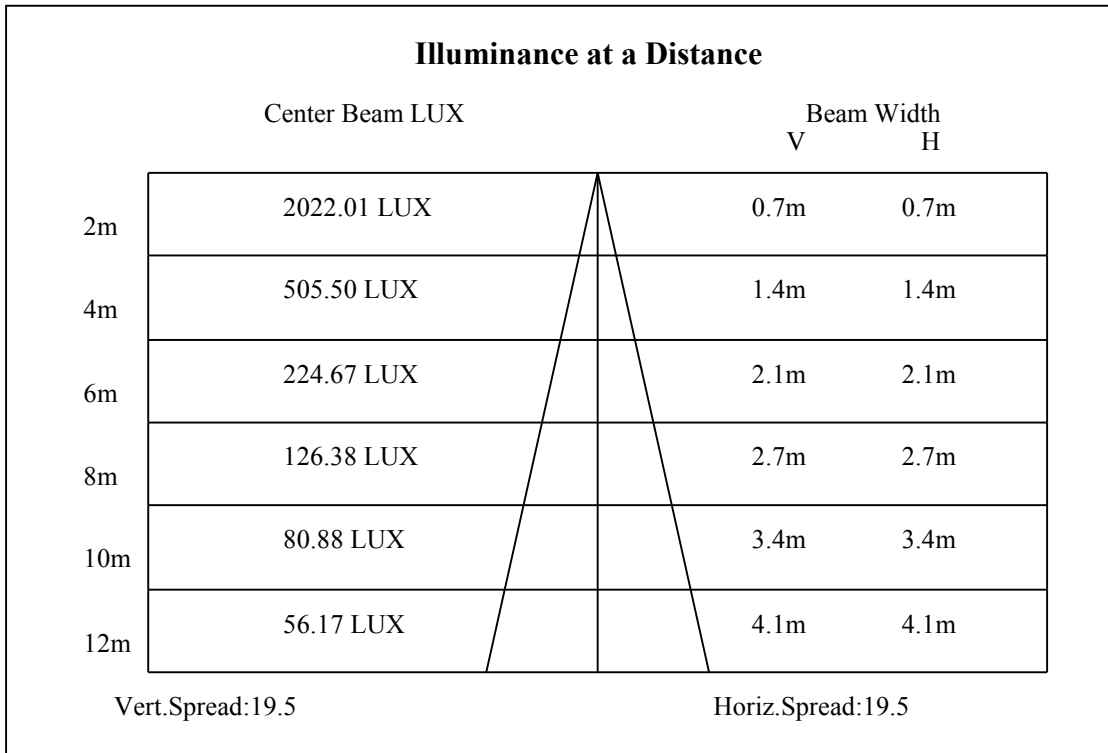
C0(Max): —————

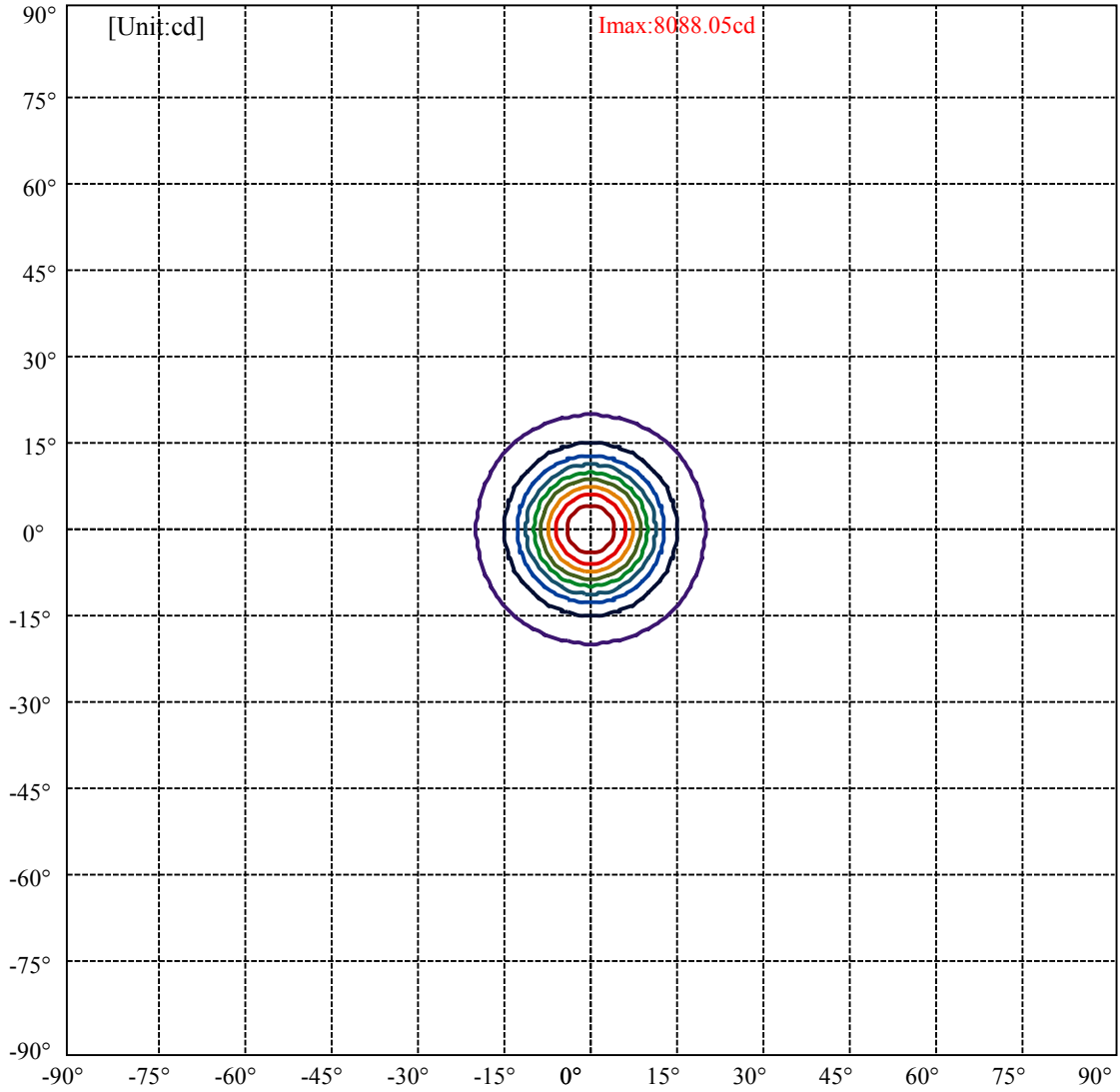
C0/C180: —————

C90/C270: —————

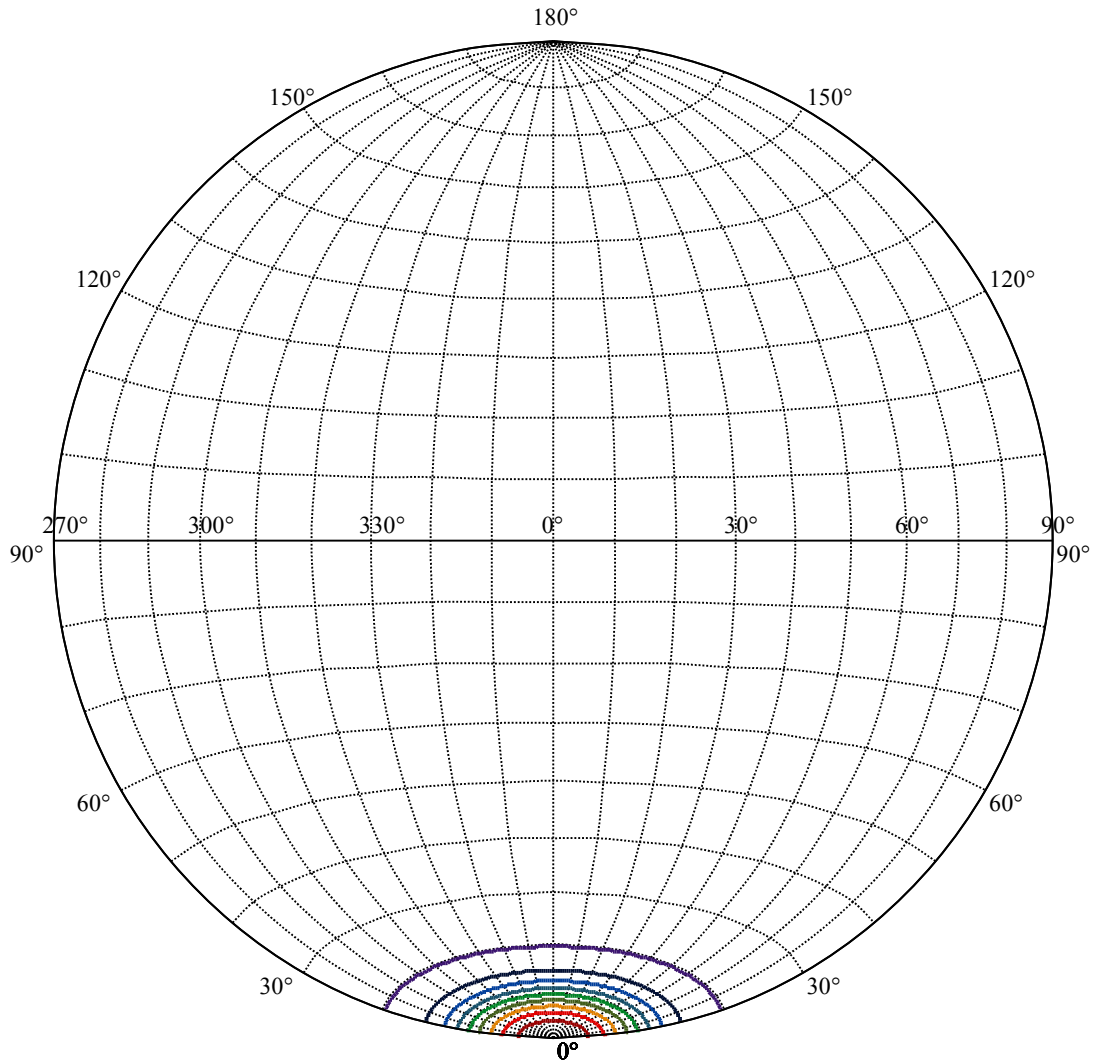
Field angle(10%Imax):C0/180Left:19.6 Right:19.6
:C90/270Left:19.6 Right:19.6

Beam Angle(50%Imax):C0/180Left:9.8 Right:9.8
:C90/270Left:9.8 Right:9.8





(10%Imax) 808.805	—
(20%Imax) 1617.61	—
(30%Imax) 2426.41	—
(40%Imax) 3235.22	—
(50%Imax) 4044.02	—
(60%Imax) 4852.83	—
(70%Imax) 5661.63	—
(80%Imax) 6470.44	—
(90%Imax) 7279.24	—



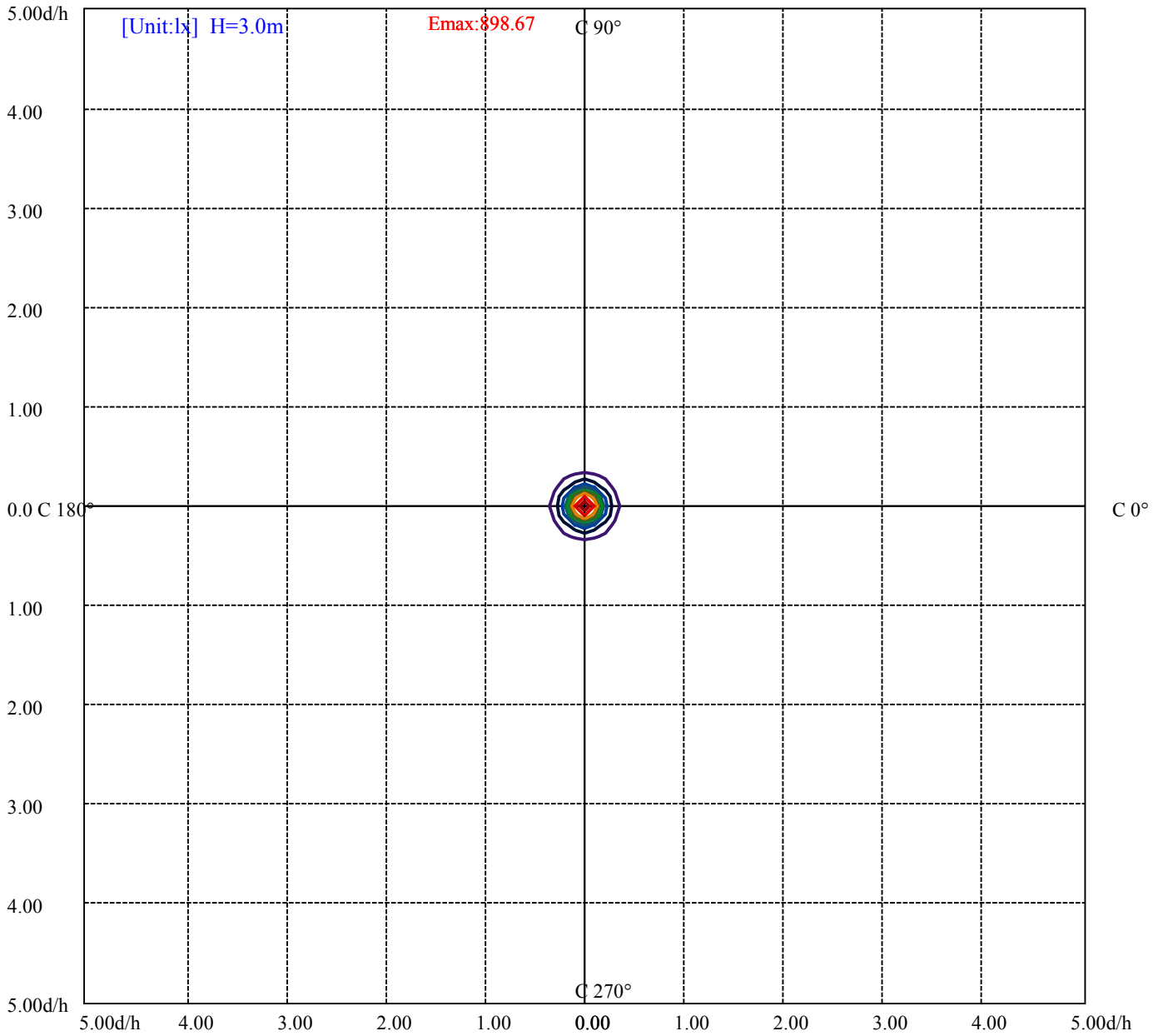
House

[Unit:cd]

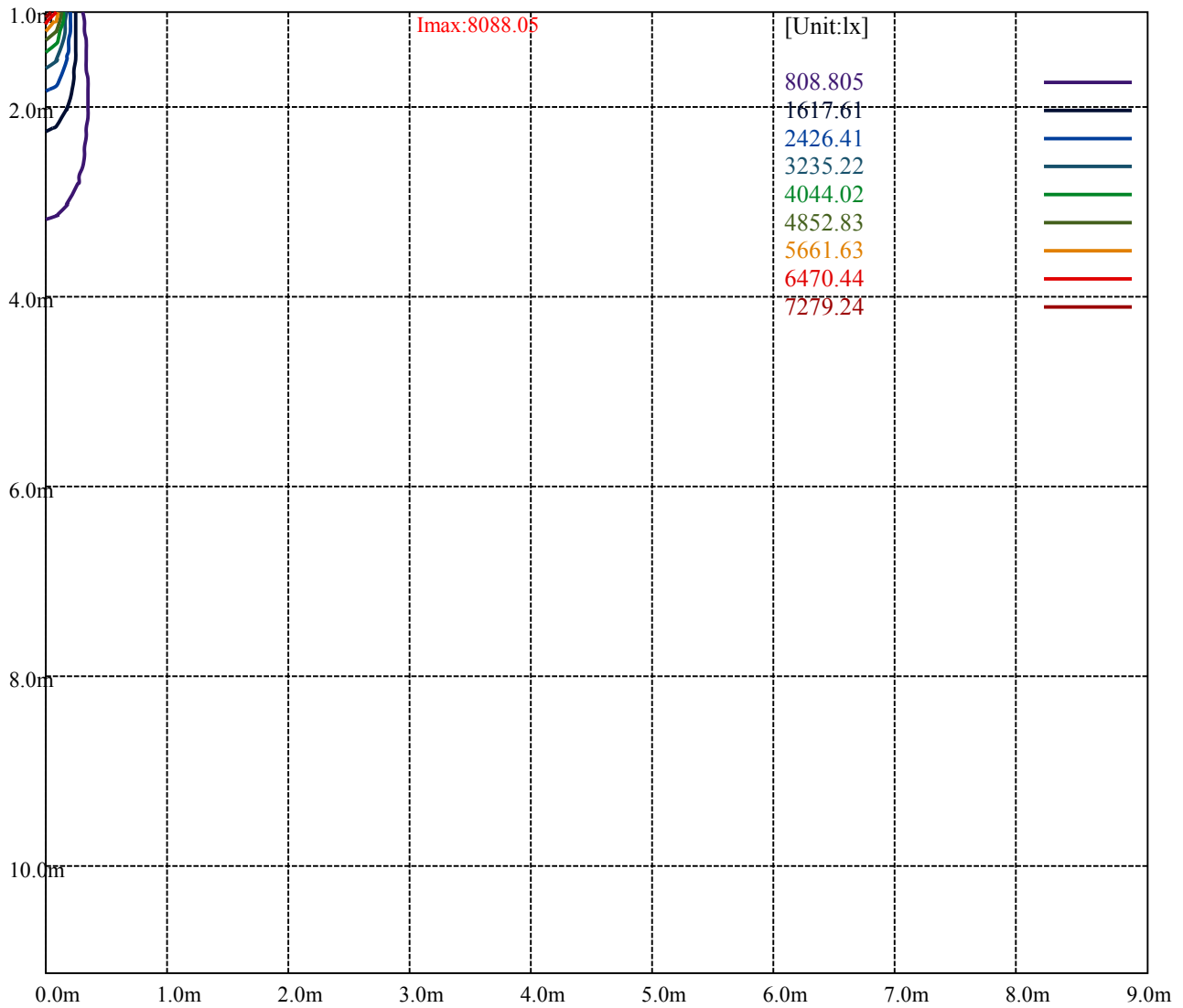
Road

Imax:8088.05

(10%Imax) 808.805	—
(20%Imax) 1617.61	—
(30%Imax) 2426.41	—
(40%Imax) 3235.22	—
(50%Imax) 4044.02	—
(60%Imax) 4852.83	—
(70%Imax) 5661.63	—
(80%Imax) 6470.44	—
(90%Imax) 7279.24	—



- (10%Emax) 89.86711
- (20%Emax) 179.7344
- (30%Emax) 269.6011
- (40%Emax) 359.4689
- (50%Emax) 449.3356
- (60%Emax) 539.2022
- (70%Emax) 629.07
- (80%Emax) 718.9367
- (90%Emax) 808.8033



Luminance Table

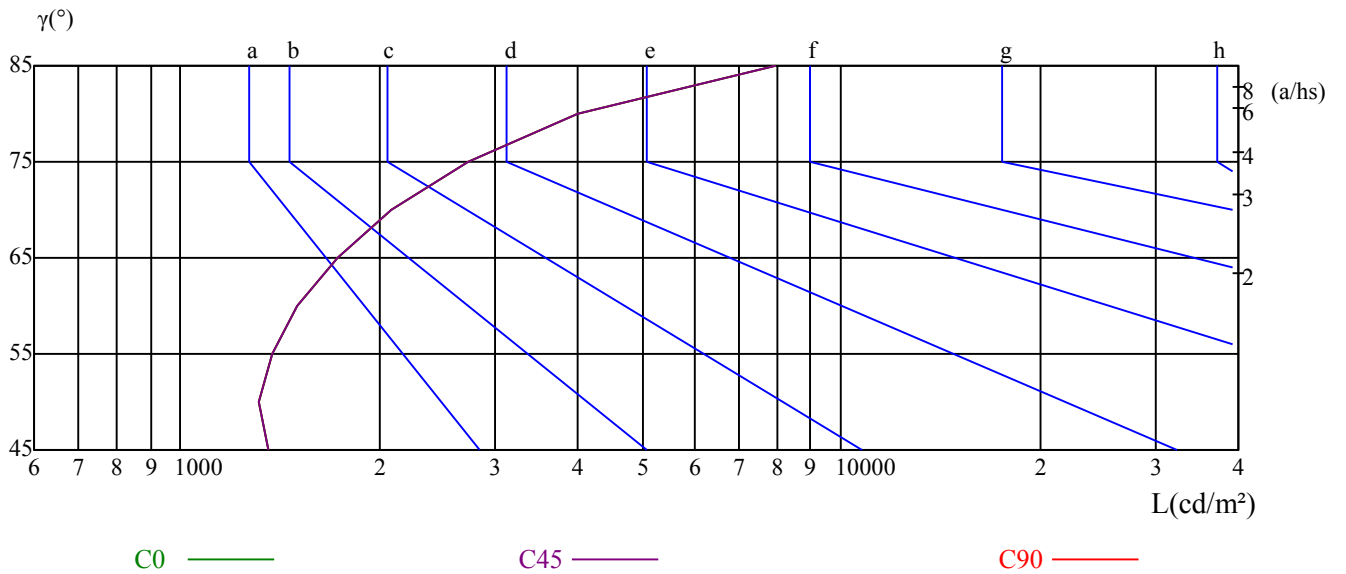
γ	45	50	55	60	65	70	75	80	85
C0	1359	1317	1377	1503	1727	2089	2719	4005	7938
C45	1359	1317	1377	1503	1727	2089	2719	4005	7938
C90	1359	1317	1377	1503	1727	2089	2719	4005	7938

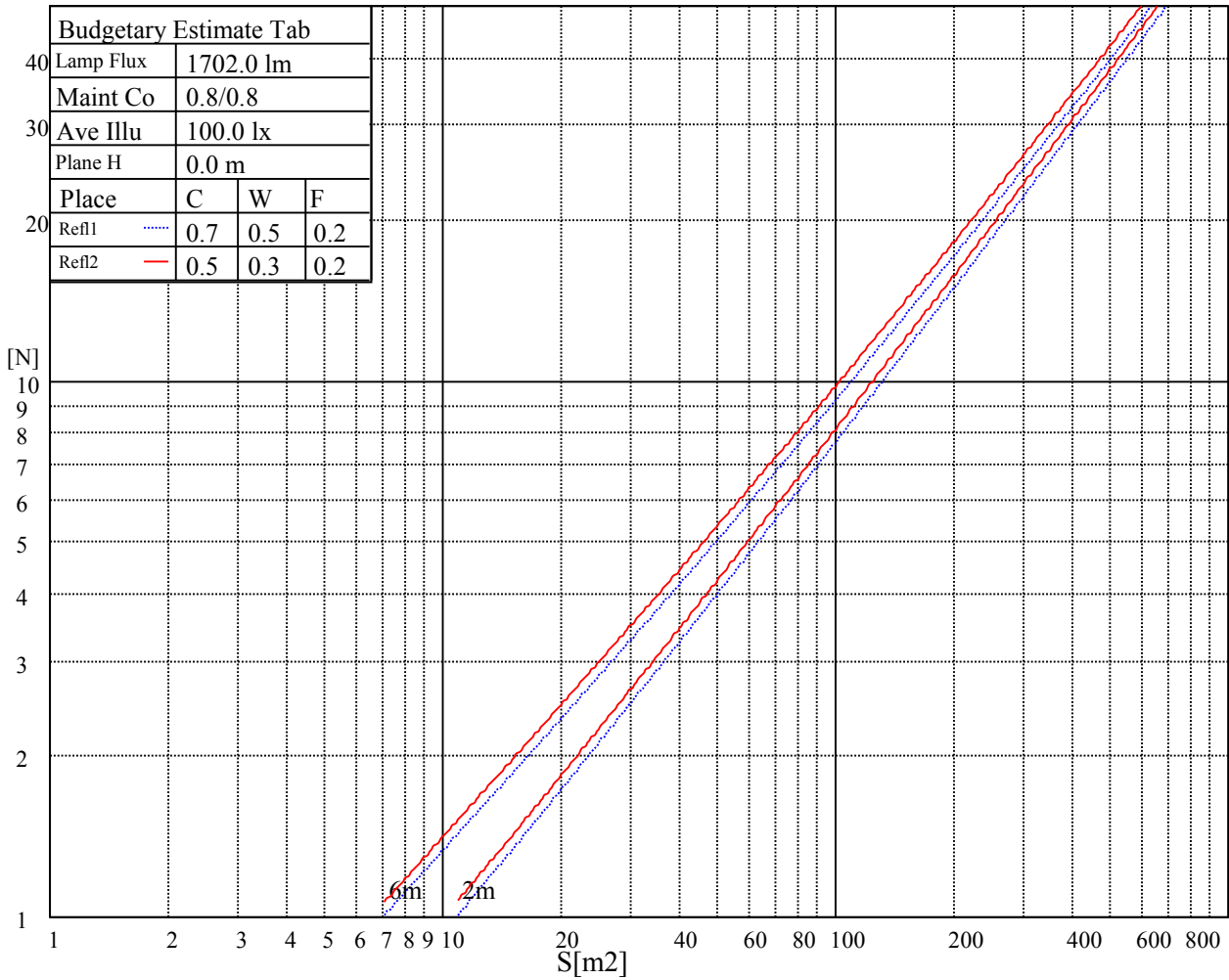
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1727	1727	1727	2719	2719	2719	7938	7938	7938

Glare Table

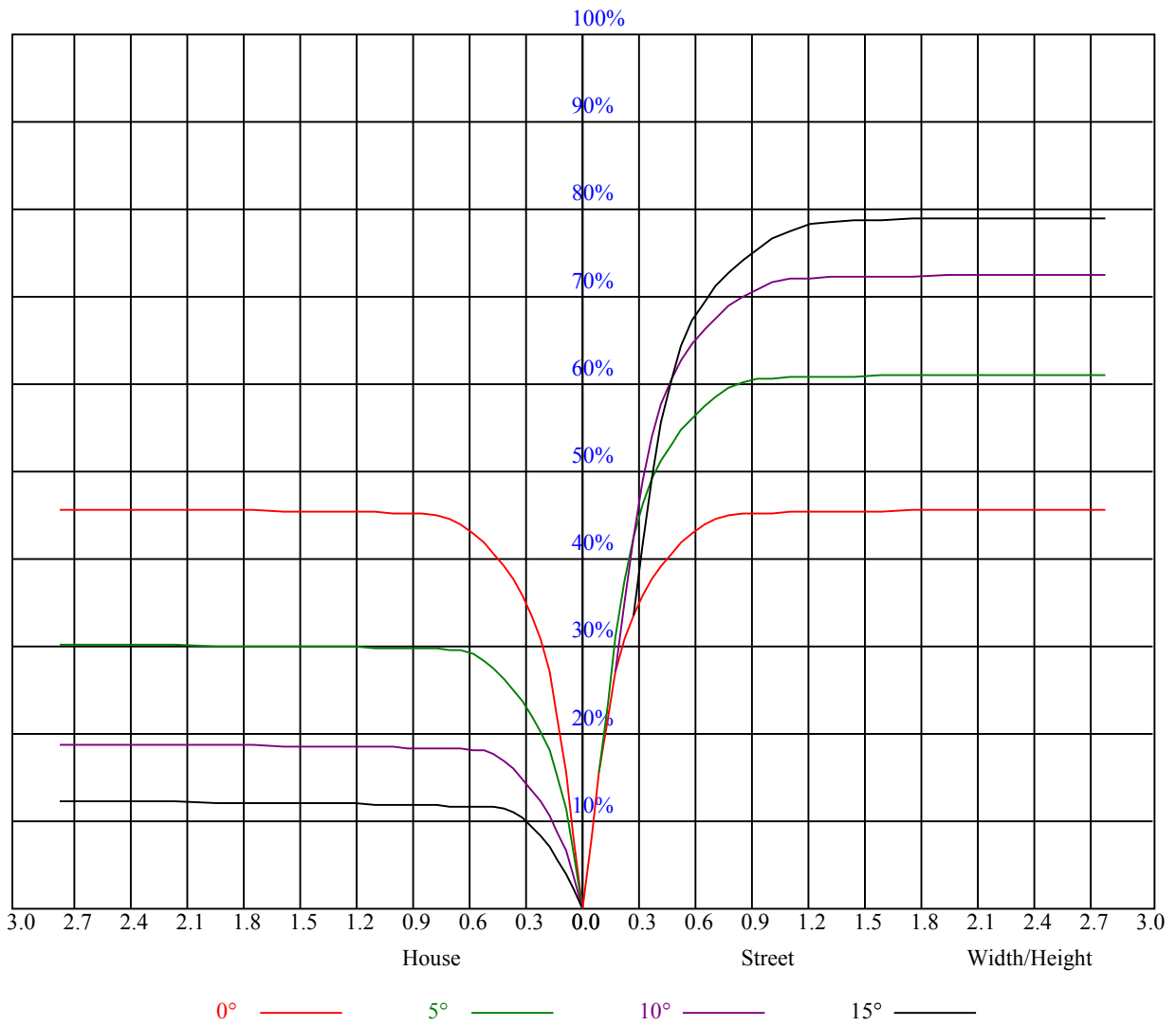
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

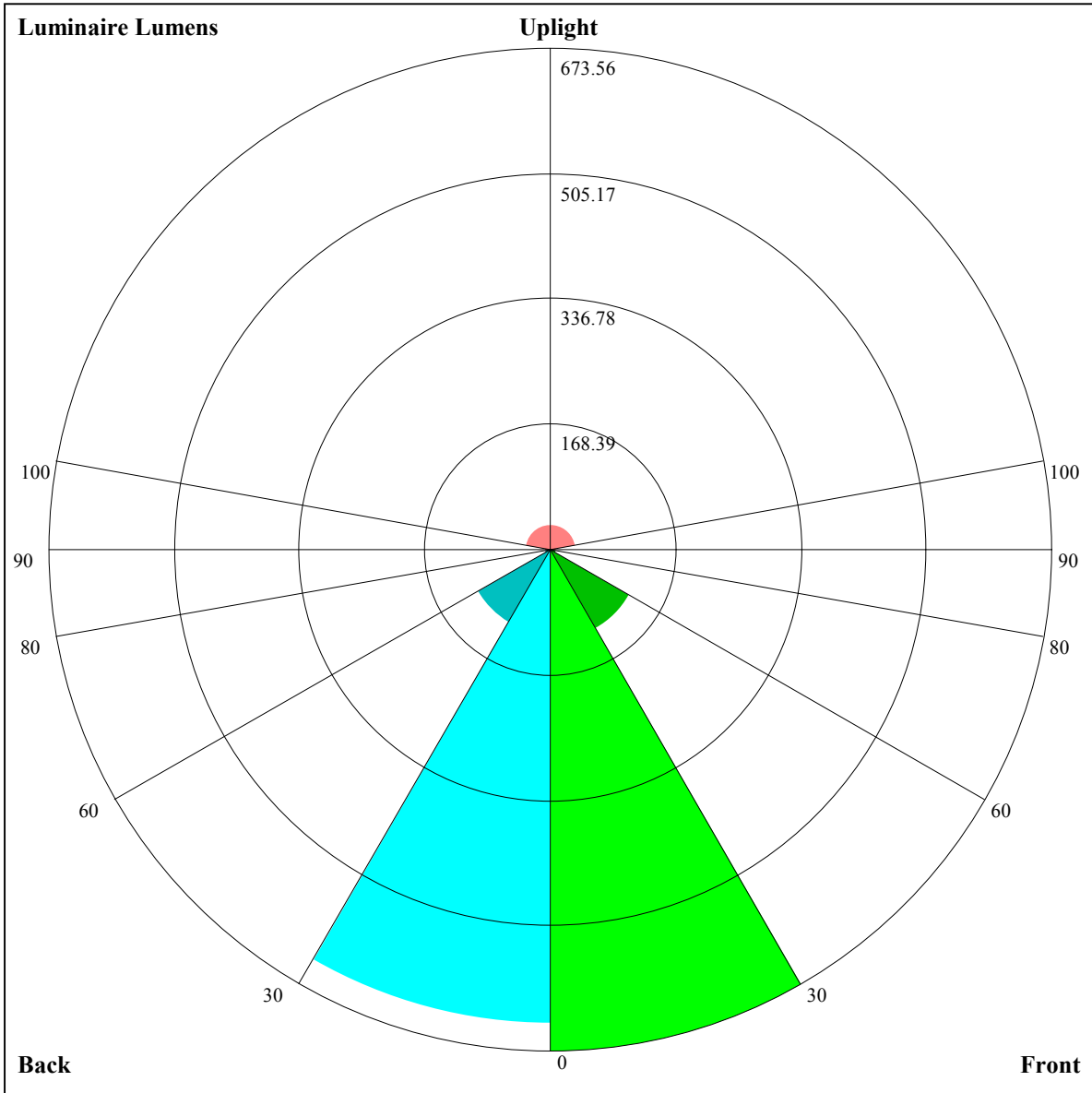
Luminance Limiting Curve





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	1.10	1.10	1.10	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.03	1.01	0.99	1.01	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88
2	0.98	0.95	0.92	0.96	0.93	0.91	0.93	0.91	0.89	0.90	0.89	0.87	0.88	0.87	0.85	0.84
3	0.93	0.89	0.86	0.92	0.88	0.85	0.89	0.86	0.84	0.87	0.85	0.83	0.85	0.83	0.82	0.80
4	0.89	0.85	0.81	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.77
5	0.85	0.81	0.78	0.84	0.80	0.77	0.83	0.79	0.77	0.81	0.78	0.76	0.80	0.77	0.75	0.74
6	0.81	0.77	0.74	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.73	0.77	0.75	0.72	0.71
7	0.78	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.69
8	0.76	0.71	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.73	0.70	0.68	0.67
9	0.73	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.71	0.68	0.65	0.65
10	0.71	0.67	0.64	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.69	0.66	0.63	0.63





Luminaire Lumens:

FL=673.56,FM=122.71,FH=7.35,FVH=3.77

BL=636.31,BM=112.64,BH=7.35,BVH=3.77

UL=7.5,UH=35.67

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	8100.56	8085.38	7999.31	7766.44	7489.13	7155.56	6644.81	6155.44	5614.31
45.0	8062.88	8094.38	8034.19	7885.69	7657.31	7354.69	6873.19	6386.63	5848.88
90.0	8094.38	8060.06	7945.31	7700.06	7358.63	6971.06	6497.44	5805.00	5202.56
135.0	8094.38	8080.31	7976.25	7747.88	7458.75	7036.88	6531.75	5970.94	5372.44
180.0	8100.56	7985.81	7814.25	7515.56	7097.06	6729.19	6233.06	5501.81	4876.88
225.0	8062.88	7898.06	7650.56	7312.50	6914.81	6477.19	5979.94	5257.69	4642.31
270.0	8094.38	8035.31	7837.88	7547.06	7223.63	6797.81	6285.38	5751.56	5176.69
315.0	8094.38	7988.63	7806.38	7549.88	7161.19	6774.75	6305.63	5641.31	5059.13
360.0	8100.56	8085.38	7999.31	7766.44	7489.13	7155.56	6644.81	6155.44	5614.31
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4871.81	4265.44	3678.75	3069.56	2521.69	2095.88	1711.69	1430.44	1231.88
45.0	5121.00	4497.75	3870.00	3219.75	2654.44	2220.19	1807.31	1491.75	1285.31
90.0	4577.63	3784.50	3204.56	2701.13	2222.44	1817.44	1524.38	1213.88	1106.94
135.0	4617.00	3999.94	3380.06	2696.63	2251.69	1886.06	1553.63	1292.63	1117.69
180.0	4257.00	3497.63	2935.69	2449.69	2048.63	1656.56	1415.25	1092.54	1040.46
225.0	4043.25	3322.69	2791.69	2327.63	1947.94	1591.31	1369.69	1105.76	1022.40
270.0	4435.88	3859.88	3316.50	2748.38	2250.00	1890.00	1576.69	1331.44	1158.75
315.0	4455.00	3795.19	3182.63	2671.88	2179.13	1834.31	1536.19	1227.94	1119.83
360.0	4871.81	4265.44	3678.75	3069.56	2521.69	2095.88	1711.69	1430.44	1231.88
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1048.50	918.00	810.56	733.50	682.31	641.81	613.13	595.69	582.19
45.0	1094.63	961.88	838.69	741.38	684.56	637.31	606.94	587.81	573.19
90.0	956.87	820.35	745.59	676.69	627.69	605.31	584.78	568.07	558.73
135.0	964.69	848.25	760.50	692.44	642.38	612.00	590.63	576.56	565.31
180.0	909.11	814.05	730.69	668.53	630.34	602.44	584.27	569.08	557.61
225.0	896.74	805.22	722.42	664.48	631.13	606.43	590.68	577.18	566.27
270.0	1004.63	900.56	805.50	726.19	673.88	634.50	609.75	593.44	581.63
315.0	970.48	858.77	779.63	714.94	652.11	626.34	605.59	588.38	574.99
360.0	1048.50	918.00	810.56	733.50	682.31	641.81	613.13	595.69	582.19
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	568.69	560.25	552.94	543.94	535.50	528.19	519.75	509.63	466.88
45.0	560.25	551.25	543.94	535.50	527.06	521.44	513.00	504.56	473.06
90.0	549.68	541.13	533.14	525.54	518.06	510.92	502.65	476.27	419.91
135.0	552.94	545.63	538.31	528.19	520.88	513.56	505.69	479.81	423.00
180.0	549.39	542.19	531.28	523.24	515.93	505.74	495.17	452.25	376.71
225.0	557.94	550.35	538.03	529.76	521.10	510.53	489.15	430.71	345.04
270.0	569.81	561.94	554.06	542.81	533.25	524.25	515.81	487.13	424.13
315.0	565.37	556.37	546.64	537.30	529.20	520.26	512.61	487.18	414.84
360.0	568.69	560.25	552.94	543.94	535.50	528.19	519.75	509.63	466.88
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	385.88	304.88	241.14	119.87	56.31	21.21	15.86	13.61	11.25
45.0	403.31	331.88	287.44	145.97	75.88	27.34	16.48	14.06	11.70
90.0	341.72	251.33	169.48	97.43	28.80	17.61	15.24	11.93	10.24
135.0	354.94	291.38	172.58	106.14	33.69	17.49	15.53	12.15	10.29
180.0	291.77	212.01	124.99	58.11	19.69	16.54	13.73	11.14	9.73
225.0	254.81	176.01	92.48	37.69	19.18	16.31	13.28	11.03	9.62
270.0	348.19	284.63	155.03	94.73	31.78	18.96	16.48	12.99	11.36
315.0	328.16	243.06	152.10	76.61	30.32	17.21	15.08	12.09	10.63
360.0	385.88	304.88	241.14	119.87	56.31	21.21	15.86	13.61	11.25

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	9.62	9.34	9.11	8.83	8.66	8.49	8.38	8.21	8.10
45.0	10.24	9.28	9.06	8.83	8.66	8.49	8.38	8.27	8.10
90.0	9.39	9.11	8.89	8.78	8.61	8.44	8.33	8.21	8.10
135.0	9.45	9.17	8.94	8.78	8.61	8.44	8.33	8.16	8.10
180.0	9.28	9.06	8.78	8.66	8.49	8.38	8.21	8.10	7.99
225.0	9.39	9.17	8.83	8.72	8.55	8.38	8.27	8.10	7.99
270.0	9.96	9.68	9.39	9.11	8.89	8.72	8.61	8.44	8.33
315.0	9.56	9.28	9.00	8.72	8.55	8.38	8.27	8.16	8.04
360.0	9.62	9.34	9.11	8.83	8.66	8.49	8.38	8.21	8.10
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	7.99	7.93	7.82	7.71	7.65	7.54	7.48	7.43	7.43
45.0	7.99	7.93	7.82	7.76	7.65	7.59	7.54	7.48	7.43
90.0	7.99	7.88	7.82	7.71	7.59	7.54	7.54	7.48	7.43
135.0	7.99	7.93	7.82	7.76	7.71	7.59	7.54	7.48	7.43
180.0	7.93	7.82	7.76	7.65	7.59	7.54	7.54	7.43	7.43
225.0	7.88	7.76	7.71	7.65	7.54	7.48	7.48	7.37	7.37
270.0	8.21	8.10	7.93	7.88	7.76	7.65	7.59	7.48	7.43
315.0	7.88	7.82	7.71	7.65	7.59	7.48	7.43	7.43	7.37
360.0	7.99	7.93	7.82	7.71	7.65	7.54	7.48	7.43	7.43
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.37	7.31	7.31	7.26	7.20	7.20	7.14	7.14	7.14
45.0	7.43	7.37	7.31	7.31	7.26	7.20	7.20	7.14	7.14
90.0	7.37	7.31	7.31	7.26	7.26	7.20	7.14	7.14	7.09
135.0	7.43	7.37	7.37	7.31	7.26	7.20	7.20	7.20	7.14
180.0	7.37	7.31	7.31	7.26	7.20	7.20	7.20	7.14	7.09
225.0	7.31	7.31	7.26	7.20	7.20	7.14	7.14	7.14	7.09
270.0	7.37	7.31	7.31	7.26	7.26	7.20	7.20	7.14	7.09
315.0	7.31	7.26	7.20	7.20	7.20	7.14	7.14	7.09	7.09
360.0	7.37	7.31	7.31	7.26	7.20	7.20	7.14	7.14	7.14
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.09	7.09	7.03	7.03	7.03	7.03	7.03	6.98	6.98
45.0	7.09	7.09	7.09	7.03	7.03	7.03	6.98	6.98	6.98
90.0	7.09	7.09	7.03	7.03	6.98	6.98	6.98	6.98	6.98
135.0	7.14	7.09	7.09	7.09	7.03	7.03	6.98	6.98	6.98
180.0	7.09	7.03	7.03	7.03	7.03	7.03	6.98	6.98	6.92
225.0	7.09	7.03	7.03	7.03	6.98	6.98	6.98	6.98	6.92
270.0	7.09	7.09	7.03	7.03	7.03	7.03	6.98	6.98	6.98
315.0	7.03	7.03	7.03	7.03	6.98	6.98	6.98	6.92	6.92
360.0	7.09	7.09	7.03	7.03	7.03	7.03	7.03	6.98	6.98
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.98	6.98	6.92	6.92	6.92	6.92	6.92	6.92	6.92
45.0	6.98	6.92	6.92	6.92	6.92	6.92	6.92	6.92	6.86
90.0	6.92	6.92	6.92	6.92	6.92	6.86	6.86	6.86	6.86
135.0	6.98	6.92	6.98	6.92	6.92	6.92	6.86	6.86	6.86
180.0	6.98	6.92	6.92	6.92	6.92	6.92	6.92	6.86	6.86
225.0	6.92	6.92	6.92	6.92	6.92	6.86	6.92	6.86	6.86
270.0	6.98	6.92	6.92	6.92	6.92	6.92	6.92	6.92	6.86
315.0	6.92	6.92	6.92	6.92	6.92	6.86	6.86	6.86	6.86
360.0	6.98	6.98	6.92	6.92	6.92	6.92	6.92	6.92	6.92

Intensity data(cd)

C/ γ (°)	90.0
0.0	6.86
45.0	6.92
90.0	6.86
135.0	6.86
180.0	6.86
225.0	6.86
270.0	6.86
315.0	6.86
360.0	6.86