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Nata

Client:

LumCAT: 3-2116-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): 80

Width(mm): 80

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1486.73, Efficiency(%): 87.45% , Luminous Efficacy(lm/W): 106.81

Central intensity(cd): 5202.984, Maximum intensity(cd): 5202.984

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=26.4

[C90/270]Total=26.4

Field angle(10%Imax): [C0/180]Total=56.0

[C90/270]Total=56.0

Maximum s/h(1/2): C0_180=0.45 C90_270=0.45

Maximum s/h(1/4): C0_180=0.45 C90_270=0.45

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 87.45%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.565%

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	5202.984	0.000	0	.000%	.000%
1.0	5190.469	4.973	4.973	.293%	.334%
2.0	5143.008	14.832	19.805	.872%	1.332%
3.0	5062.289	24.408	44.212	1.436%	2.974%
4.0	4958.367	33.542	77.755	1.973%	5.230%
5.0	4805.789	42.005	119.76	2.471%	8.055%
6.0	4635.211	49.615	169.375	2.919%	11.392%
7.0	4421.672	56.216	225.59	3.307%	15.174%
8.0	4175.578	61.529	287.119	3.619%	19.312%
9.0	3894.961	65.407	352.527	3.847%	23.712%
10.0	3597.188	67.801	420.328	3.988%	28.272%
11.0	3272.414	68.641	488.969	4.038%	32.889%
12.0	2965.711	68.192	557.161	4.011%	37.476%
13.0	2661.117	66.776	623.937	3.928%	41.967%
14.0	2335.992	63.963	687.9	3.763%	46.269%
15.0	2079.492	60.618	748.518	3.566%	50.347%
16.0	1834.805	57.355	805.873	3.374%	54.204%
17.0	1610.719	53.656	859.529	3.156%	57.813%
18.0	1407.952	49.771	909.3	2.928%	61.161%
19.0	1277.030	46.713	956.013	2.748%	64.303%
20.0	1124.501	43.955	999.968	2.586%	67.260%
21.0	1018.181	41.144	1041.112	2.420%	70.027%
22.0	934.109	39.232	1080.344	2.308%	72.666%
23.0	852.694	37.492	1117.836	2.205%	75.188%
24.0	784.097	35.786	1153.622	2.105%	77.595%
25.0	720.977	34.222	1187.844	2.013%	79.896%
26.0	654.652	32.472	1220.316	1.910%	82.081%
27.0	587.222	30.383	1250.699	1.787%	84.124%
28.0	521.416	28.068	1278.767	1.651%	86.012%
29.0	442.484	25.218	1303.986	1.483%	87.708%
30.0	372.628	22.008	1325.993	1.295%	89.189%
31.0	296.149	18.611	1344.604	1.095%	90.440%
32.0	222.708	14.865	1359.469	.874%	91.440%
33.0	172.336	11.638	1371.107	.685%	92.223%
34.0	118.554	8.803	1379.91	.518%	92.815%
35.0	87.659	6.404	1386.315	.377%	93.246%
36.0	64.561	4.847	1391.161	.285%	93.572%
37.0	53.923	3.864	1395.026	.227%	93.832%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	49.514	3.453	1398.478	.203%	94.064%
39.0	45.830	3.254	1401.733	.191%	94.283%
40.0	43.298	3.108	1404.841	.183%	94.492%
41.0	41.238	3.010	1407.851	.177%	94.695%
42.0	39.157	2.921	1410.772	.172%	94.891%
43.0	37.491	2.839	1413.611	.167%	95.082%
44.0	35.909	2.770	1416.382	.163%	95.268%
45.0	34.200	2.694	1419.076	.158%	95.450%
46.0	32.808	2.621	1421.697	.154%	95.626%
47.0	31.268	2.548	1424.245	.150%	95.797%
48.0	29.798	2.469	1426.714	.145%	95.963%
49.0	28.427	2.391	1429.105	.141%	96.124%
50.0	27.014	2.312	1431.416	.136%	96.280%
51.0	25.608	2.226	1433.643	.131%	96.429%
52.0	24.391	2.146	1435.788	.126%	96.574%
53.0	23.084	2.065	1437.853	.121%	96.713%
54.0	21.860	1.981	1439.834	.117%	96.846%
55.0	20.925	1.910	1441.744	.112%	96.974%
56.0	20.046	1.851	1443.596	.109%	97.099%
57.0	19.252	1.797	1445.392	.106%	97.220%
58.0	18.577	1.749	1447.142	.103%	97.337%
59.0	18.028	1.711	1448.853	.101%	97.452%
60.0	17.430	1.675	1450.528	.099%	97.565%
61.0	16.889	1.638	1452.166	.096%	97.675%
62.0	16.390	1.604	1453.769	.094%	97.783%
63.0	15.884	1.570	1455.339	.092%	97.889%
64.0	15.539	1.542	1456.881	.091%	97.992%
65.0	14.745	1.499	1458.38	.088%	98.093%
66.0	13.767	1.423	1459.802	.084%	98.189%
67.0	12.853	1.339	1461.141	.079%	98.279%
68.0	12.002	1.259	1462.4	.074%	98.364%
69.0	11.461	1.197	1463.597	.070%	98.444%
70.0	11.257	1.167	1464.764	.069%	98.523%
71.0	11.095	1.155	1465.919	.068%	98.600%
72.0	11.060	1.152	1467.071	.068%	98.678%
73.0	11.088	1.158	1468.229	.068%	98.756%
74.0	11.201	1.172	1469.401	.069%	98.834%
75.0	11.334	1.191	1470.592	.070%	98.915%

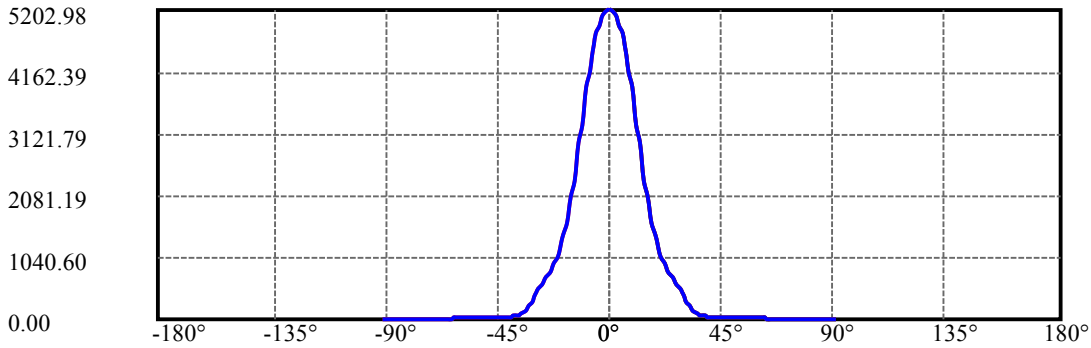
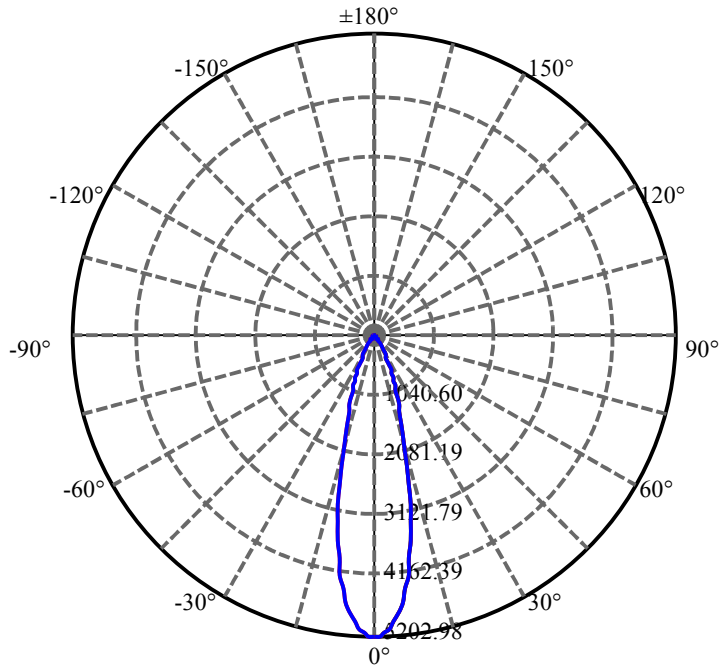
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	11.658	1.221	1471.812	.072%	98.997%
77.0	11.841	1.253	1473.065	.074%	99.081%
78.0	11.995	1.276	1474.341	.075%	99.167%
79.0	11.770	1.277	1475.618	.075%	99.253%
80.0	11.651	1.263	1476.881	.074%	99.338%
81.0	11.250	1.238	1478.119	.073%	99.421%
82.0	10.434	1.176	1479.295	.069%	99.500%
83.0	9.577	1.088	1480.383	.064%	99.573%
84.0	9.098	1.017	1481.4	.060%	99.642%
85.0	8.866	0.980	1482.381	.058%	99.708%
86.0	8.592	0.954	1483.335	.056%	99.772%
87.0	8.156	0.917	1484.251	.054%	99.833%
88.0	7.657	0.866	1485.118	.051%	99.892%
89.0	7.298	0.820	1485.937	.048%	99.947%
90.0	7.137	0.791	1486.729	.047%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1325.99	78.00%	89.19%
0-40	1404.84	82.64%	94.49%
0-60	1450.53	85.33%	97.57%
0-90	1485.94	87.41%	99.95%
0-120	1485.94	87.41%	99.95%
0-180	1486.73	87.45%	100.00%
60-90	37.08	2.18%	2.49%
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%
0-25.05	1189.38	69.96%	80.00%

ZONAL LUMEN SUMMARY

0-10	420.33
10-20	579.64
20-30	326.03
30-40	78.85
40-50	26.58
50-60	19.11
60-70	14.24
70-80	12.12
80-90	9.06
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: —————

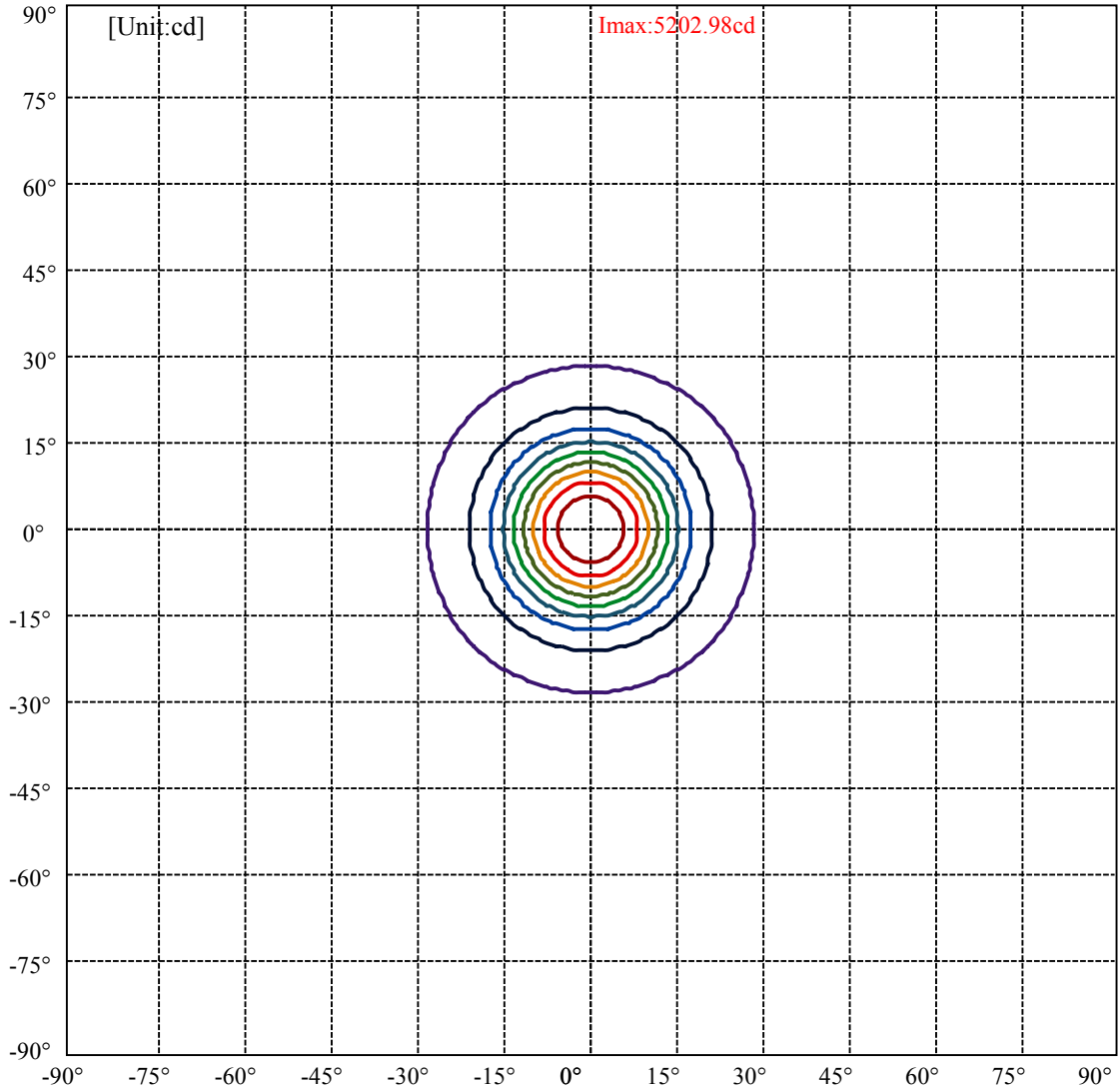
C90/C270: —————

Field angle(10%Imax):C0/180Left:28.0 Right:28.0

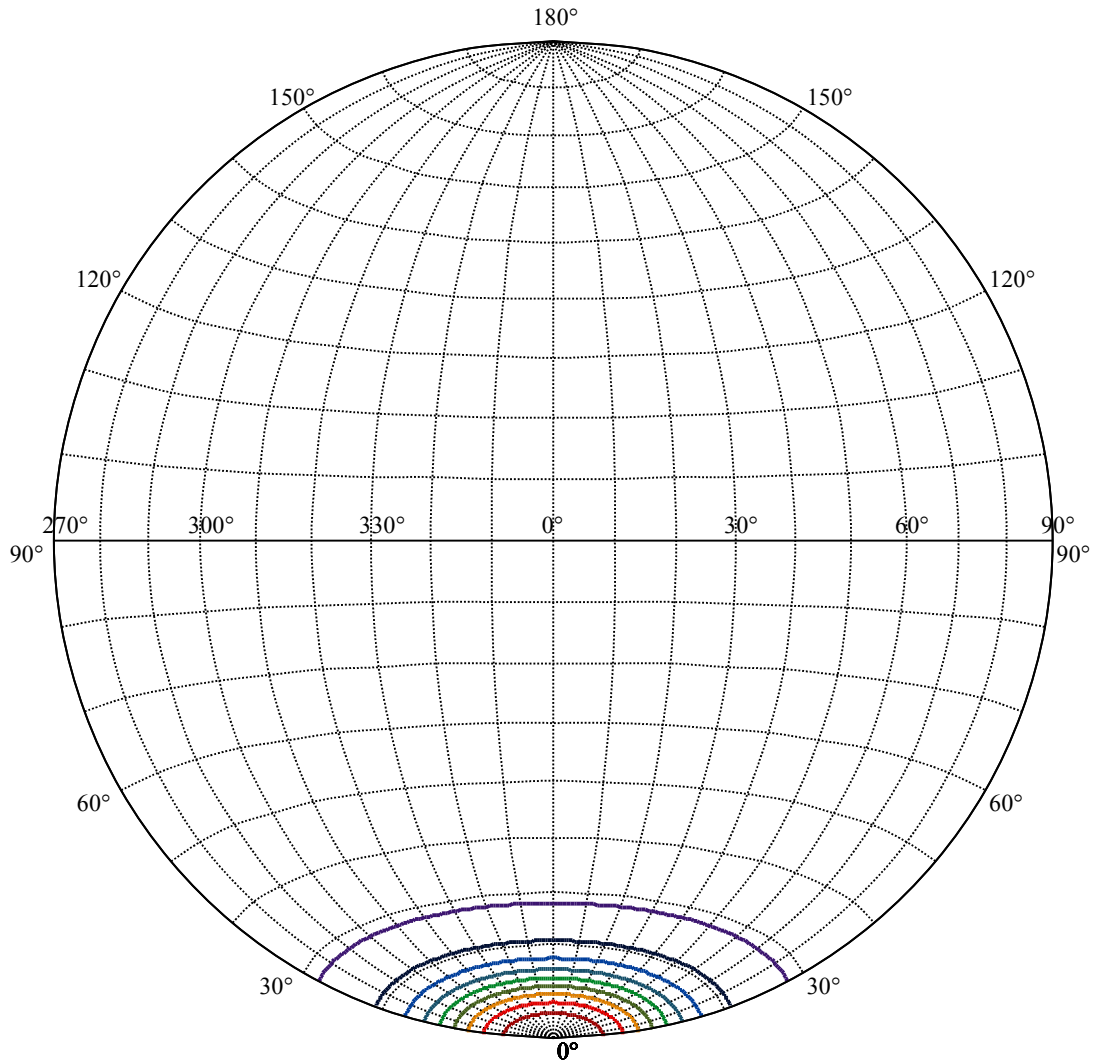
:C90/270Left:28.0 Right:28.0

Beam Angle(50%Imax):C0/180Left:13.2 Right:13.2

:C90/270Left:13.2 Right:13.2



(10%Imax) 520.298	—
(20%Imax) 1040.6	—
(30%Imax) 1560.9	—
(40%Imax) 2081.19	—
(50%Imax) 2601.49	—
(60%Imax) 3121.79	—
(70%Imax) 3642.09	—
(80%Imax) 4162.39	—
(90%Imax) 4682.69	—



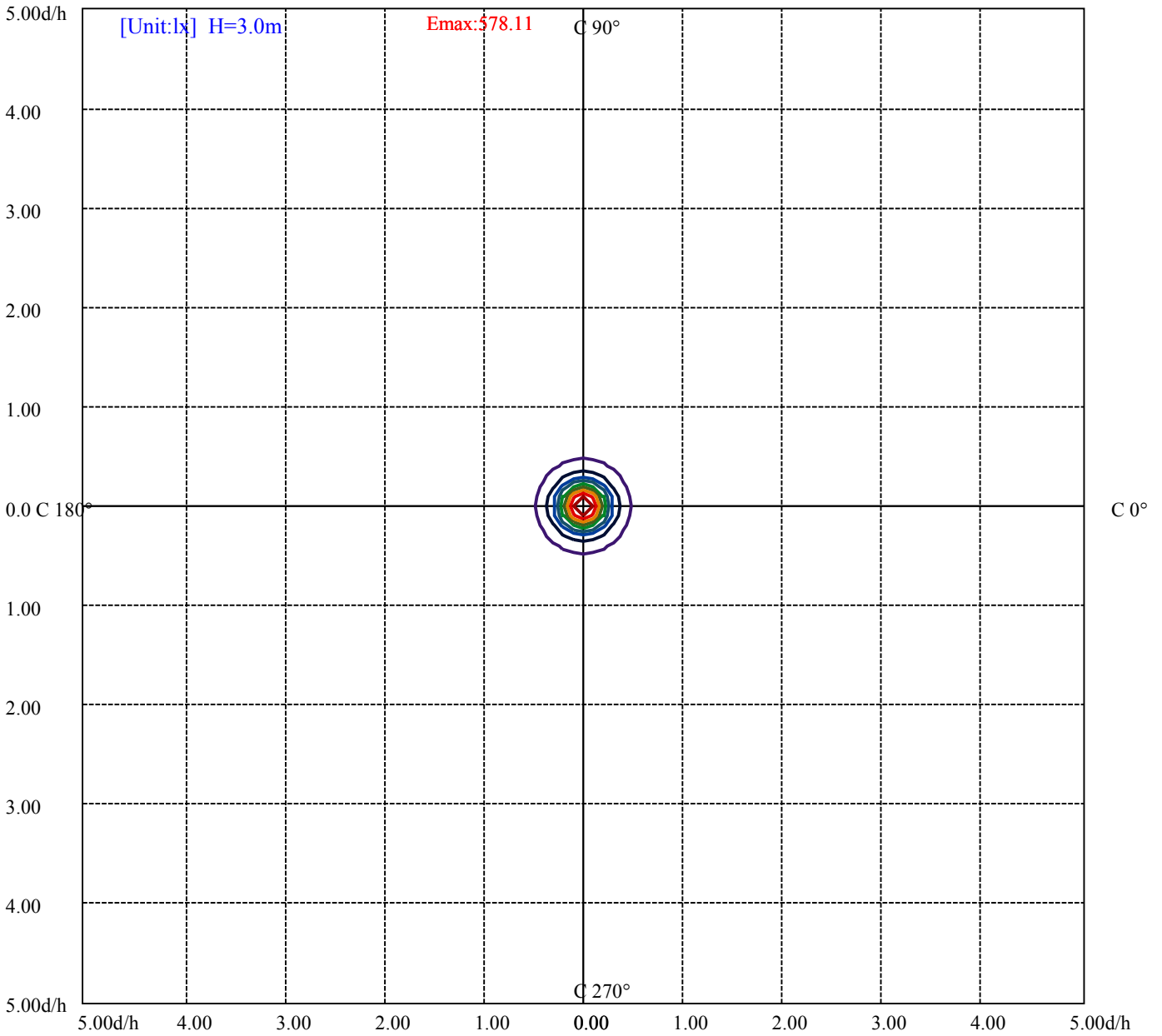
House

[Unit:cd]

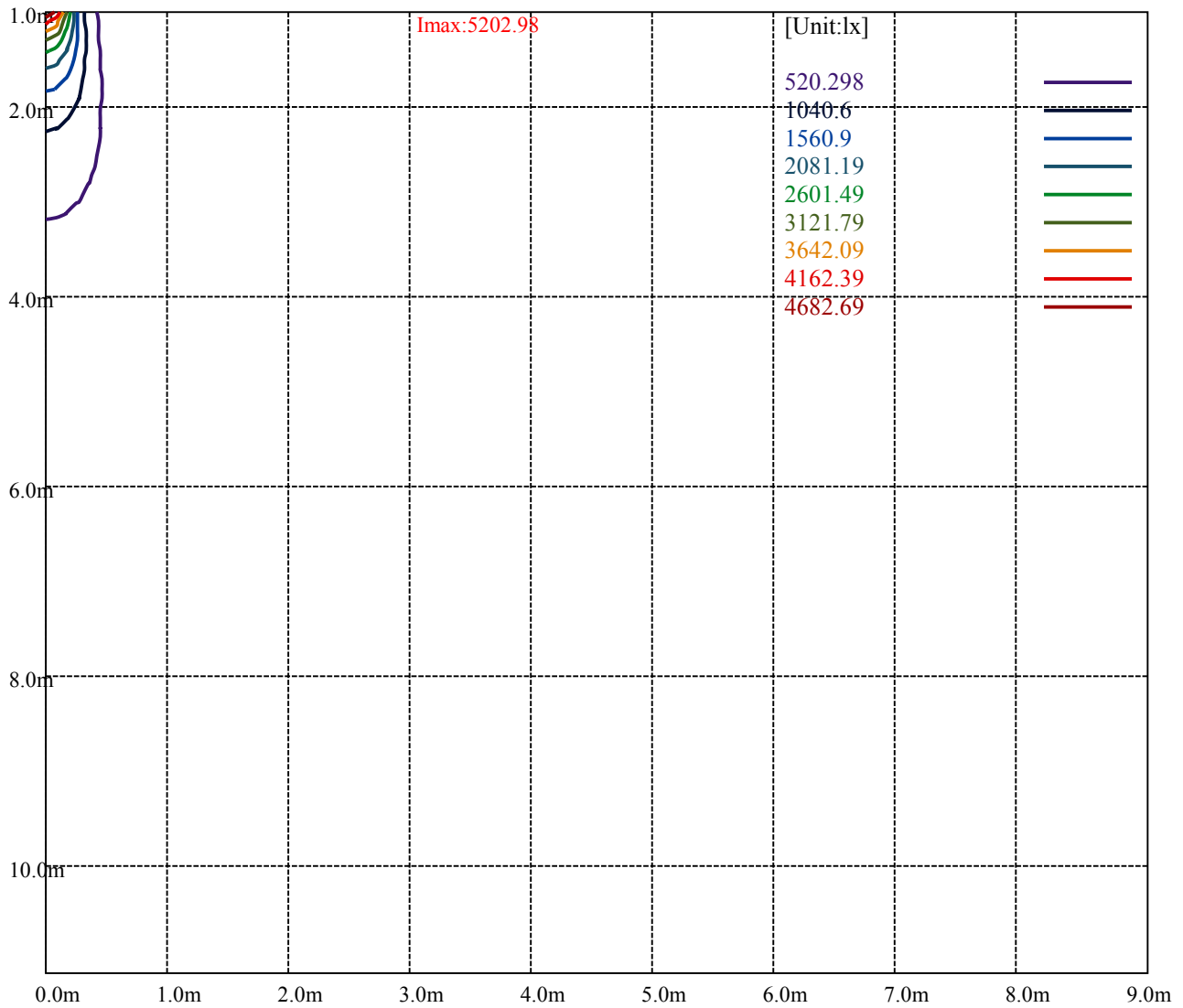
Road

Imax:5202.98

(10%Imax) 520.298	—
(20%Imax) 1040.6	—
(30%Imax) 1560.9	—
(40%Imax) 2081.19	—
(50%Imax) 2601.49	—
(60%Imax) 3121.79	—
(70%Imax) 3642.09	—
(80%Imax) 4162.39	—
(90%Imax) 4682.69	—



(10%Emax) 57.81089	—
(20%Emax) 115.6222	—
(30%Emax) 173.4322	—
(40%Emax) 231.2433	—
(50%Emax) 289.0544	—
(60%Emax) 346.8656	—
(70%Emax) 404.6767	—
(80%Emax) 462.4878	—
(90%Emax) 520.2978	—



Luminance Table

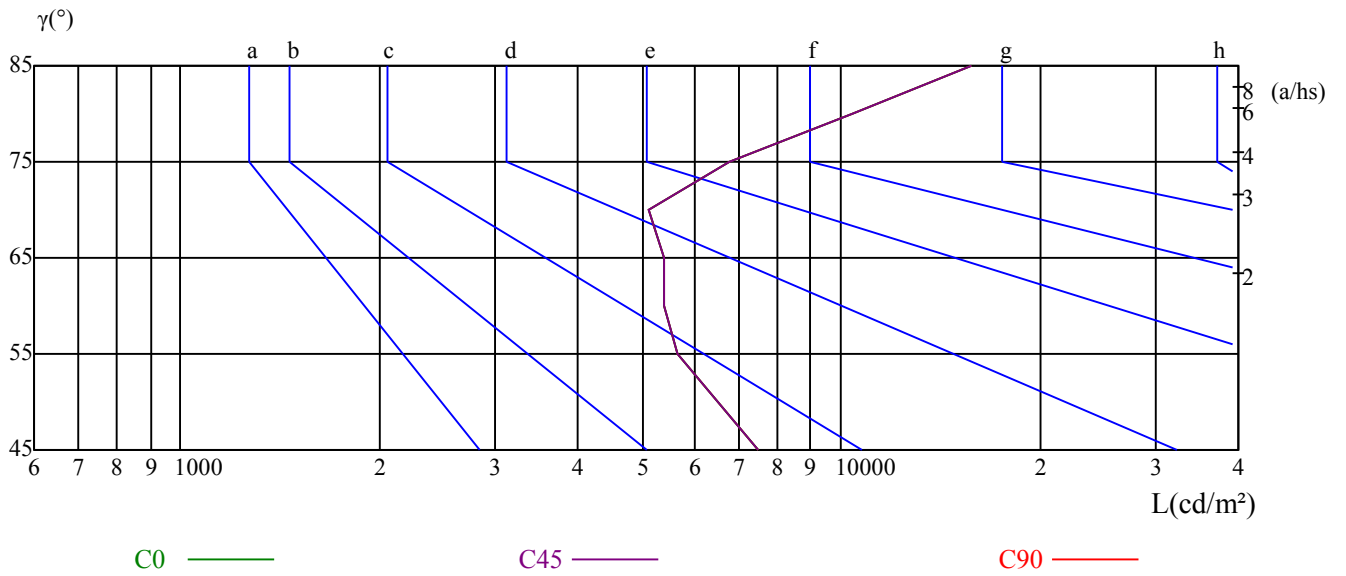
γ	45	50	55	60	65	70	75	80	85
C0	7501	6518	5658	5406	5411	5104	6792	10405	15777
C45	7501	6518	5658	5406	5411	5104	6792	10405	15777
C90	7501	6518	5658	5406	5411	5104	6792	10405	15777

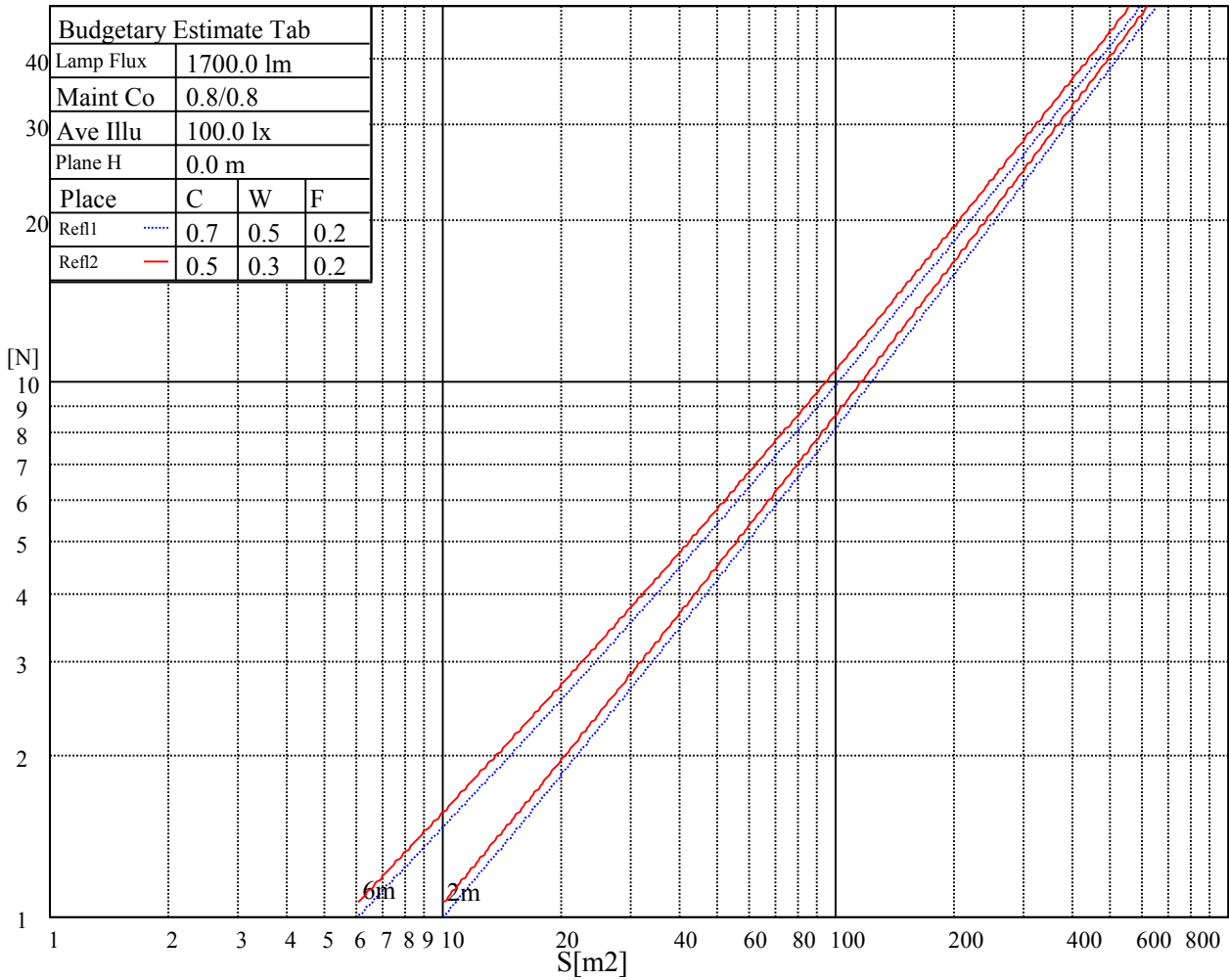
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5411	5411	5411	6792	6792	6792	15777	15777	15777

Glare Table

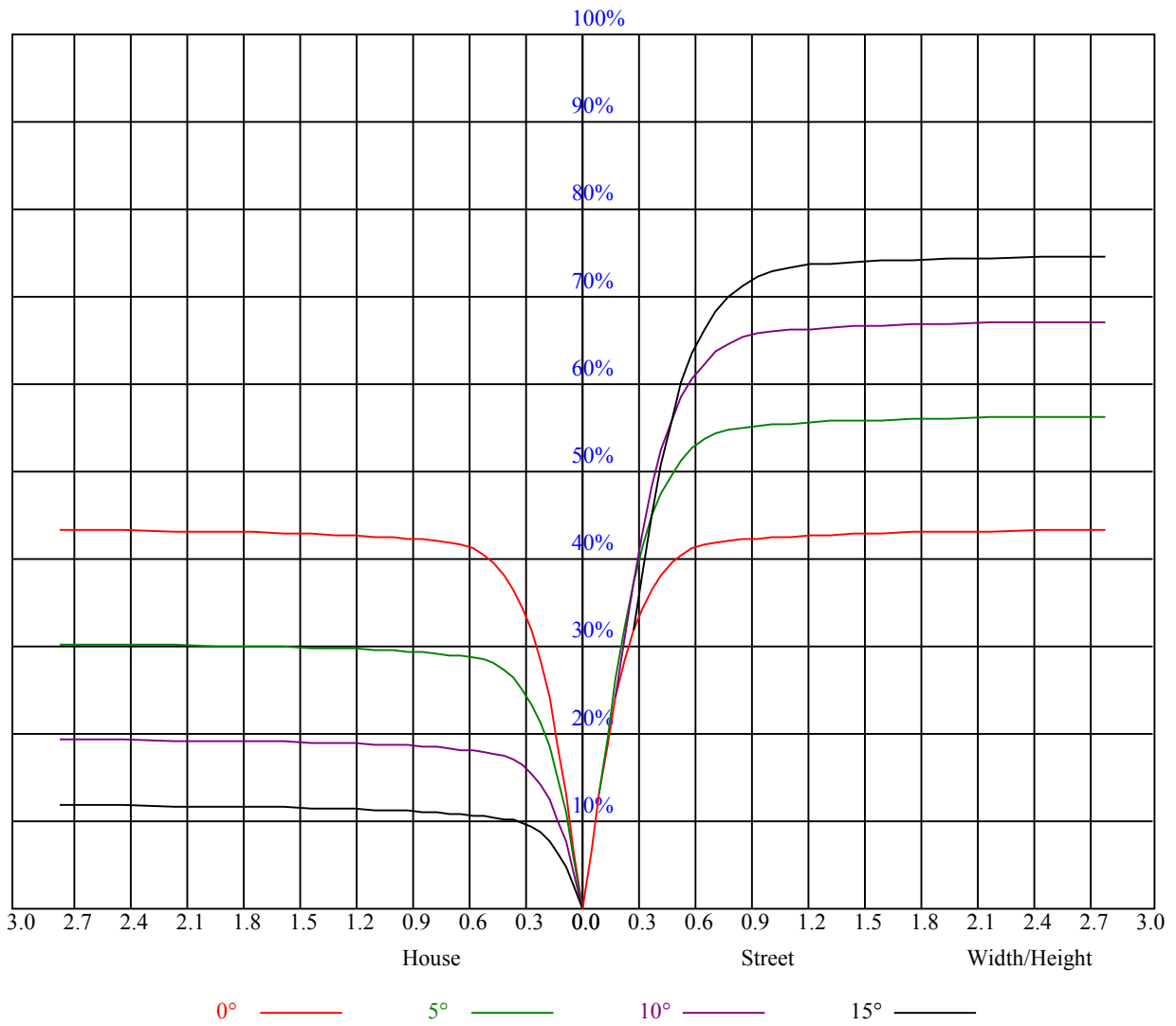
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

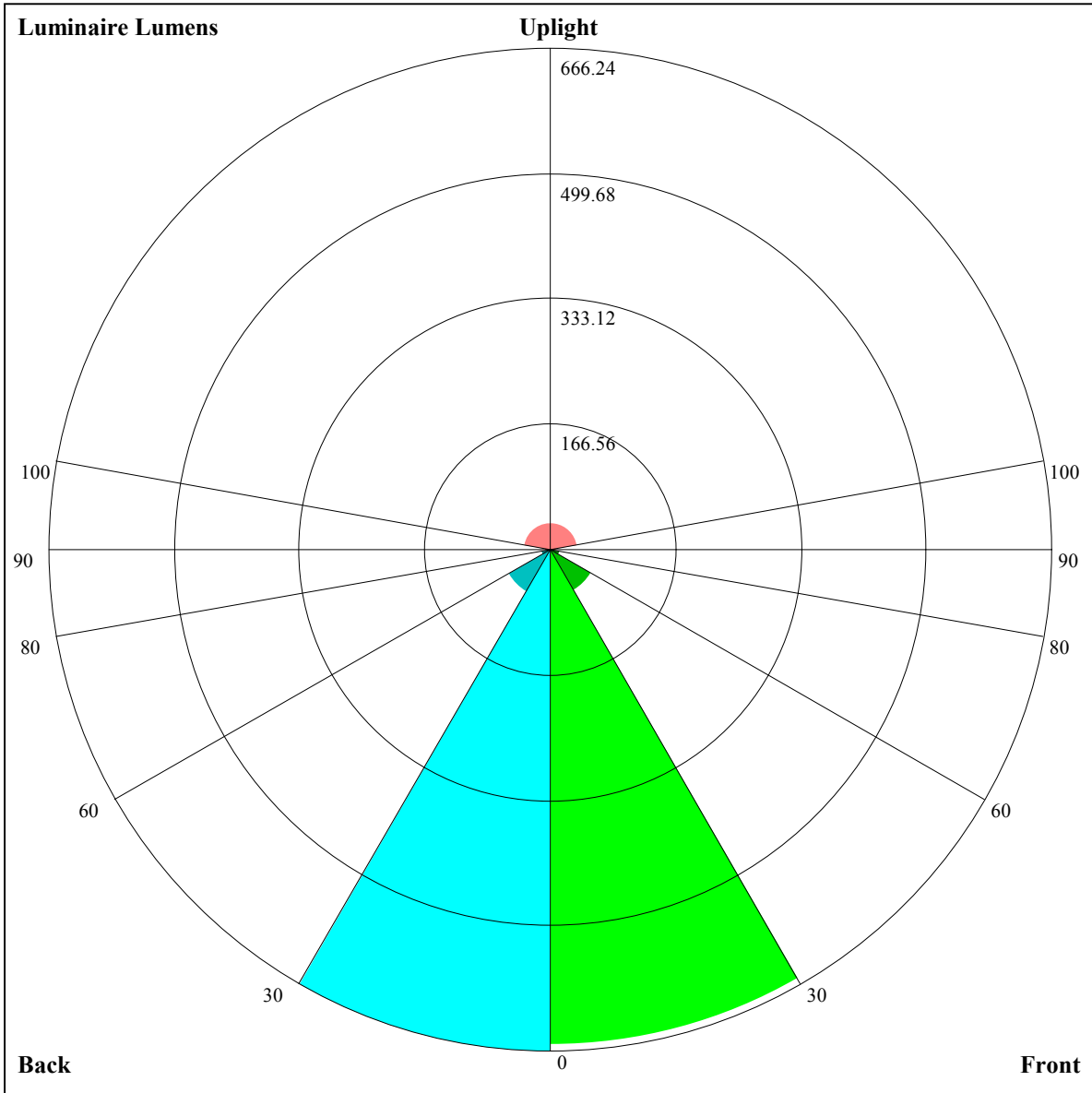
Luminance Limiting Curve





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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.87
1	0.98	0.96	0.94	0.96	0.94	0.92	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83
2	0.92	0.89	0.87	0.91	0.88	0.86	0.88	0.86	0.84	0.85	0.84	0.82	0.83	0.82	0.80	0.79
3	0.87	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.80	0.78	0.77	0.75
4	0.83	0.79	0.76	0.82	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.72
5	0.80	0.76	0.73	0.79	0.75	0.72	0.78	0.74	0.72	0.76	0.73	0.71	0.75	0.72	0.70	0.69
6	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.70	0.68	0.72	0.70	0.68	0.67
7	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.64
8	0.71	0.67	0.64	0.70	0.66	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.62
9	0.68	0.64	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.60
10	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.64	0.61	0.59	0.58





Luminaire Lumens:

FL=657.11,FM=62.65,FH=12.91,FVH=4.72

BL=666.24,BM=64.6,BH=13.68,BVH=5.12

UL=7.79,UH=37.05

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	5205.94	5185.13	5135.06	5062.50	4945.50	4784.63	4611.94	4391.44	4168.13
45.0	5200.88	5226.75	5221.13	5182.31	5125.50	5022.56	4903.88	4752.00	4542.19
90.0	5216.63	5245.31	5245.88	5208.75	5148.00	5038.88	4925.25	4752.56	4536.56
135.0	5188.50	5228.44	5233.50	5205.38	5150.25	5055.75	4947.75	4800.38	4595.06
180.0	5205.94	5195.81	5155.31	5074.88	4988.81	4863.38	4682.25	4464.56	4241.81
225.0	5200.88	5145.75	5057.44	4928.06	4783.50	4578.19	4370.63	4100.63	3793.50
270.0	5216.63	5163.19	5061.94	4943.81	4790.25	4555.13	4337.44	4087.69	3778.31
315.0	5188.50	5133.38	5033.81	4892.63	4735.13	4547.81	4302.56	4024.13	3749.06
360.0	5205.94	5185.13	5135.06	5062.50	4945.50	4784.63	4611.94	4391.44	4168.13
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3874.50	3552.19	3245.63	2943.00	2565.56	2286.56	2028.94	1748.81	1553.63
45.0	4293.56	4042.13	3722.63	3421.13	3079.69	2733.19	2435.06	2133.56	1852.88
90.0	4317.19	4030.88	3680.44	3424.50	3116.81	2697.19	2442.38	2167.31	1897.31
135.0	4364.44	4155.19	3816.00	3487.50	3222.00	2841.19	2548.13	2269.13	1946.25
180.0	3950.44	3623.63	3324.94	2992.50	2700.56	2383.31	2093.06	1866.94	1658.81
225.0	3496.50	3155.06	2810.81	2513.81	2234.25	1928.25	1715.63	1521.00	1340.44
270.0	3452.63	3146.63	2808.00	2505.94	2196.56	1914.19	1697.63	1480.50	1301.06
315.0	3410.44	3071.81	2770.88	2437.31	2173.50	1904.06	1675.13	1491.19	1335.38
360.0	3874.50	3552.19	3245.63	2943.00	2565.56	2286.56	2028.94	1748.81	1553.63
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1384.31	1242.00	1097.44	1001.81	927.56	849.94	797.06	748.13	681.75
45.0	1650.38	1464.75	1270.13	1151.44	1051.88	948.38	872.44	809.44	744.19
90.0	1654.31	1465.31	1284.75	1120.28	1027.63	933.92	847.24	775.52	721.69
135.0	1739.81	1544.63	1329.75	1204.31	1092.94	986.63	892.69	824.63	757.13
180.0	1436.06	1282.50	1115.49	1030.11	943.54	865.29	785.42	731.76	678.49
225.0	1111.22	1087.37	975.71	897.24	826.09	756.11	712.41	644.57	559.13
270.0	1173.38	1064.25	946.69	864.00	793.69	729.56	673.88	613.13	542.25
315.0	1114.14	1065.43	976.05	876.26	809.55	751.73	691.65	620.66	552.60
360.0	1384.31	1242.00	1097.44	1001.81	927.56	849.94	797.06	748.13	681.75
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	607.50	539.44	454.50	376.88	289.69	207.06	146.14	95.01	61.03
45.0	686.25	623.25	547.88	477.56	396.00	315.56	289.13	174.77	128.87
90.0	668.08	601.99	543.43	467.10	395.61	317.48	244.97	186.24	131.63
135.0	702.56	644.63	569.25	497.25	414.56	335.25	291.94	194.46	136.41
180.0	598.56	537.69	457.48	363.77	301.50	229.11	157.22	115.03	77.63
225.0	496.86	424.52	322.99	261.34	199.86	125.10	86.46	64.07	57.32
270.0	464.06	396.00	321.19	288.00	184.56	126.39	86.46	60.81	55.24
315.0	473.91	403.82	323.16	249.13	187.43	125.72	76.39	58.05	53.16
360.0	607.50	539.44	454.50	376.88	289.69	207.06	146.14	95.01	61.03
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	55.35	50.12	45.51	43.20	41.23	39.49	37.97	36.73	35.16
45.0	76.84	59.18	54.11	48.26	45.34	43.26	40.78	39.04	37.74
90.0	80.44	61.20	56.42	50.85	46.97	44.49	41.79	39.94	38.31
135.0	94.39	66.38	57.99	53.04	48.99	45.73	42.98	41.06	39.09
180.0	59.74	55.18	50.46	46.13	44.04	41.91	39.88	38.03	36.51
225.0	51.53	47.93	45.11	42.75	40.84	39.04	37.58	35.89	34.09
270.0	50.46	46.80	43.88	41.85	40.28	38.70	36.56	35.16	33.69
315.0	47.76	44.61	42.64	40.56	38.70	37.29	35.72	34.09	32.68
360.0	55.35	50.12	45.51	43.20	41.23	39.49	37.97	36.73	35.16

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	33.58	32.29	30.66	29.14	27.45	25.88	24.58	23.34	21.83
45.0	35.94	34.48	33.08	31.44	30.09	28.74	27.17	26.04	24.58
90.0	36.34	34.82	33.24	31.67	30.38	28.91	27.45	26.16	24.86
135.0	37.29	35.61	33.86	32.34	30.77	29.31	27.84	26.44	24.75
180.0	34.82	33.41	31.89	30.49	29.31	27.79	26.27	24.86	23.29
225.0	32.68	31.39	29.81	28.58	27.34	25.82	24.53	23.34	22.33
270.0	31.84	30.71	29.36	27.96	26.61	25.48	24.19	23.18	22.11
315.0	31.11	29.76	28.24	26.78	25.48	24.19	22.84	21.77	20.93
360.0	33.58	32.29	30.66	29.14	27.45	25.88	24.58	23.34	21.83
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	20.81	20.08	19.24	18.68	17.94	17.21	16.59	16.09	15.30
45.0	23.06	21.94	20.87	19.97	19.24	18.51	17.72	17.21	16.71
90.0	23.34	22.28	21.38	20.36	19.41	18.73	17.94	17.27	16.82
135.0	23.40	22.22	20.98	20.08	19.29	18.56	17.89	17.27	16.76
180.0	21.83	20.76	19.74	19.01	18.28	17.83	17.44	16.88	16.54
225.0	21.26	20.36	19.69	18.90	18.39	18.06	17.61	17.10	16.71
270.0	21.21	20.48	19.74	18.96	18.45	18.11	17.61	17.10	16.59
315.0	19.97	19.29	18.73	18.06	17.61	17.21	16.65	16.20	15.69
360.0	20.81	20.08	19.24	18.68	17.94	17.21	16.59	16.09	15.30
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	14.74	15.13	15.19	13.44	11.53	11.08	10.91	10.80	10.58
45.0	16.26	15.92	15.53	15.02	13.95	12.26	11.31	11.03	10.86
90.0	16.31	15.81	15.36	14.96	14.29	12.60	11.48	11.19	10.97
135.0	16.31	15.75	15.24	14.85	14.29	12.71	11.59	11.14	10.86
180.0	15.98	15.53	15.13	14.29	12.77	11.87	11.48	11.31	11.14
225.0	16.20	15.92	14.34	12.83	12.15	11.98	11.81	11.70	11.70
270.0	16.14	15.58	14.12	12.88	12.32	12.15	11.98	11.81	11.76
315.0	15.13	14.68	13.05	11.87	11.53	11.36	11.14	11.08	10.91
360.0	14.74	15.13	15.19	13.44	11.53	11.08	10.91	10.80	10.58
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	10.46	10.29	10.24	10.07	9.90	9.73	9.68	9.56	9.51
45.0	10.63	10.52	10.35	10.24	10.07	9.90	9.68	9.51	9.34
90.0	10.80	10.58	10.46	10.29	10.13	9.90	9.73	9.56	9.39
135.0	10.74	10.58	10.41	10.24	10.18	10.01	9.84	9.73	9.62
180.0	10.91	10.80	10.63	10.86	11.93	12.66	13.44	12.66	11.59
225.0	12.09	12.66	13.44	14.34	15.58	16.54	16.93	17.38	17.44
270.0	12.15	12.77	13.73	14.46	15.08	15.47	16.20	15.47	16.48
315.0	10.69	10.52	10.35	10.18	10.41	10.52	10.46	10.29	9.84
360.0	10.46	10.29	10.24	10.07	9.90	9.73	9.68	9.56	9.51
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	9.73	9.56	9.17	9.00	8.78	8.38	7.48	7.31	7.26
45.0	9.17	9.06	9.00	8.89	8.78	8.55	8.16	7.76	7.54
90.0	9.17	9.00	8.89	8.72	8.61	8.33	7.99	7.54	7.31
135.0	9.68	9.68	9.45	9.17	9.06	8.89	8.66	8.44	7.59
180.0	11.59	11.64	10.80	9.06	8.83	8.66	8.49	8.38	7.43
225.0	16.20	13.39	10.63	10.13	9.96	9.79	9.62	7.54	7.20
270.0	14.91	11.70	9.39	8.78	8.21	7.76	7.59	7.14	7.09
315.0	9.56	9.45	9.28	9.06	8.72	8.38	7.26	7.14	6.98
360.0	9.73	9.56	9.17	9.00	8.78	8.38	7.48	7.31	7.26

Intensity data(cd)

C/γ(°)	90.0
0.0	6.98
45.0	7.37
90.0	7.14
135.0	7.37
180.0	7.09
225.0	7.14
270.0	7.03
315.0	6.98
360.0	6.98