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Nata

Client:

LumCAT: 4-2273-M

Luminaire: 92.70.131.00

Report No:

Voltage(V): 33.9600

Test No: GC2019082601

Current(A): 0.4470

LampCAT: TRIDONIC SLE 15MM G7

Power (W): 15.1800

Lamp flux(lm): 2050.0

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): 1768.28, Efficiency(%): 86.26% , Luminous Efficacy(lm/W): 116.49

Central intensity(cd): 20978.440, Maximum intensity(cd): 20978.440

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=11.0

[C90/270]Total=11.0

Field angle(10%Imax): [C0/180]Total=23.2

[C90/270]Total=23.2

Maximum s/h(1/2): C0_180=0.19 C90_270=0.19

Maximum s/h(1/4): C0_180=0.20 C90_270=0.20

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.26%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.566%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	20978.438	0.000	0	.000%	.000%
1.0	20669.766	19.928	19.928	.972%	1.127%
2.0	19425.938	57.549	77.477	2.807%	4.381%
3.0	17471.250	88.246	165.723	4.305%	9.372%
4.0	14925.797	108.443	274.166	5.290%	15.505%
5.0	11543.414	113.869	388.035	5.555%	21.944%
6.0	9491.484	110.544	498.579	5.392%	28.196%
7.0	7256.250	103.953	602.532	5.071%	34.075%
8.0	5400.703	90.583	693.116	4.419%	39.197%
9.0	4129.031	77.233	770.349	3.767%	43.565%
10.0	3158.367	65.948	836.297	3.217%	47.294%
11.0	2483.578	56.375	892.672	2.750%	50.483%
12.0	1889.578	47.805	940.477	2.332%	53.186%
13.0	1404.816	39.096	979.573	1.907%	55.397%
14.0	1136.707	32.531	1012.104	1.587%	57.237%
15.0	1004.379	29.394	1041.498	1.434%	58.899%
16.0	897.729	27.871	1069.369	1.360%	60.475%
17.0	828.225	26.878	1096.247	1.311%	61.995%
18.0	779.266	26.504	1122.751	1.293%	63.494%
19.0	751.050	26.624	1149.375	1.299%	65.000%
20.0	729.598	27.100	1176.475	1.322%	66.532%
21.0	709.952	27.642	1204.118	1.348%	68.096%
22.0	695.088	28.235	1232.352	1.377%	69.692%
23.0	680.759	28.869	1261.221	1.408%	71.325%
24.0	666.963	29.466	1290.687	1.437%	72.991%
25.0	655.847	30.078	1320.765	1.467%	74.692%
26.0	645.096	30.709	1351.474	1.498%	76.429%
27.0	635.681	31.335	1382.809	1.529%	78.201%
28.0	627.427	31.979	1414.788	1.560%	80.009%
29.0	618.047	32.585	1447.373	1.590%	81.852%
30.0	607.296	33.084	1480.457	1.614%	83.723%
31.0	598.964	33.568	1514.025	1.637%	85.621%
32.0	589.191	34.039	1548.065	1.660%	87.546%
33.0	568.659	34.111	1582.175	1.664%	89.476%
34.0	519.736	32.938	1615.113	1.607%	91.338%
35.0	447.806	30.048	1645.162	1.466%	93.038%
36.0	356.484	25.609	1670.771	1.249%	94.486%
37.0	283.704	20.879	1691.65	1.019%	95.667%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	192.284	15.888	1707.538	.775%	96.565%
39.0	101.377	10.023	1717.561	.489%	97.132%
40.0	49.634	5.267	1722.828	.257%	97.430%
41.0	25.875	2.689	1725.517	.131%	97.582%
42.0	20.138	1.672	1727.188	.082%	97.676%
43.0	17.002	1.376	1728.564	.067%	97.754%
44.0	13.127	1.137	1729.701	.055%	97.818%
45.0	11.046	0.929	1730.63	.045%	97.871%
46.0	10.716	0.851	1731.481	.042%	97.919%
47.0	10.463	0.842	1732.324	.041%	97.967%
48.0	10.202	0.835	1733.159	.041%	98.014%
49.0	9.984	0.829	1733.988	.040%	98.061%
50.0	9.809	0.825	1734.813	.040%	98.108%
51.0	9.605	0.821	1735.635	.040%	98.154%
52.0	9.429	0.817	1736.451	.040%	98.200%
53.0	9.274	0.814	1737.265	.040%	98.246%
54.0	9.127	0.811	1738.076	.040%	98.292%
55.0	8.993	0.809	1738.885	.039%	98.338%
56.0	8.888	0.808	1739.693	.039%	98.383%
57.0	8.761	0.807	1740.5	.039%	98.429%
58.0	8.677	0.806	1741.306	.039%	98.475%
59.0	8.585	0.807	1742.113	.039%	98.520%
60.0	8.508	0.808	1742.921	.039%	98.566%
61.0	8.438	0.809	1743.729	.039%	98.612%
62.0	8.374	0.810	1744.539	.040%	98.658%
63.0	8.325	0.812	1745.351	.040%	98.703%
64.0	8.276	0.815	1746.166	.040%	98.750%
65.0	8.241	0.817	1746.983	.040%	98.796%
66.0	8.191	0.820	1747.803	.040%	98.842%
67.0	8.142	0.821	1748.625	.040%	98.889%
68.0	8.114	0.823	1749.448	.040%	98.935%
69.0	8.079	0.826	1750.274	.040%	98.982%
70.0	8.058	0.829	1751.103	.040%	99.029%
71.0	8.037	0.832	1751.935	.041%	99.076%
72.0	8.030	0.835	1752.77	.041%	99.123%
73.0	8.009	0.839	1753.609	.041%	99.170%
74.0	7.995	0.841	1754.45	.041%	99.218%
75.0	7.980	0.844	1755.294	.041%	99.266%

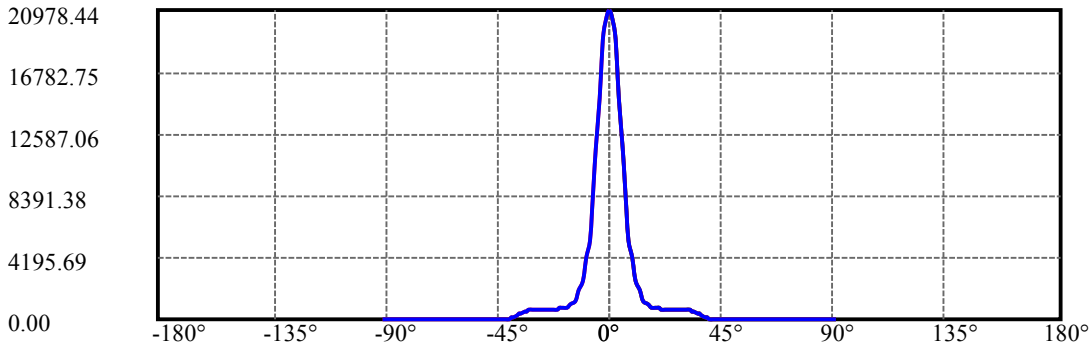
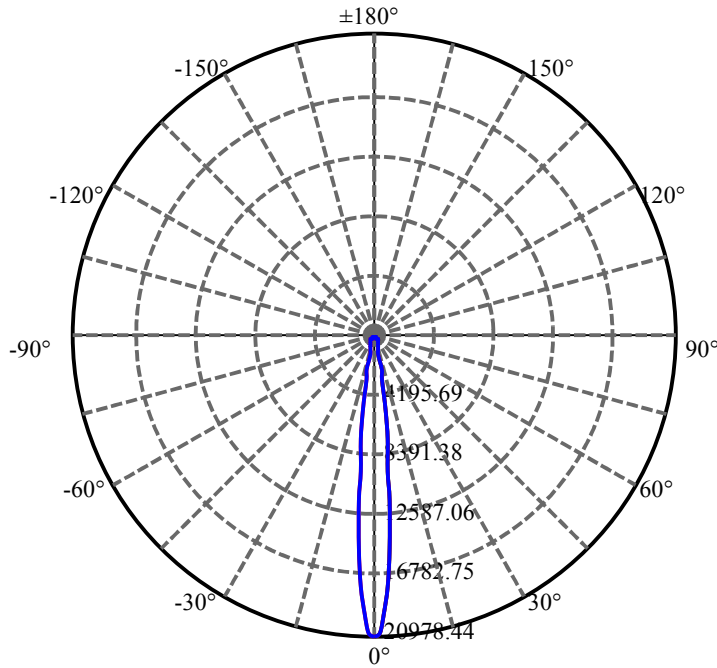
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.980	0.847	1756.142	.041%	99.314%
77.0	7.995	0.852	1756.993	.042%	99.362%
78.0	8.058	0.859	1757.853	.042%	99.410%
79.0	8.121	0.869	1758.722	.042%	99.460%
80.0	8.128	0.876	1759.598	.043%	99.509%
81.0	8.093	0.877	1760.475	.043%	99.559%
82.0	8.065	0.876	1761.351	.043%	99.608%
83.0	8.009	0.874	1762.225	.043%	99.658%
84.0	8.002	0.872	1763.097	.043%	99.707%
85.0	7.980	0.872	1763.969	.043%	99.756%
86.0	7.931	0.870	1764.839	.042%	99.806%
87.0	7.903	0.867	1765.706	.042%	99.855%
88.0	7.826	0.862	1766.567	.042%	99.903%
89.0	7.791	0.856	1767.423	.042%	99.952%
90.0	7.784	0.854	1768.277	.042%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1480.46	72.22%	83.72%
0-40	1722.83	84.04%	97.43%
0-60	1742.92	85.02%	98.57%
0-90	1767.42	86.22%	99.95%
0-120	1767.42	86.22%	99.95%
0-180	1768.28	86.26%	100.00%
60-90	25.31	1.23%	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%
0-27.99	1414.62	69.01%	80.00%

ZONAL LUMEN SUMMARY

0-10	836.30
10-20	340.18
20-30	303.98
30-40	242.37
40-50	11.99
50-60	8.11
60-70	8.18
70-80	8.49
80-90	7.83
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



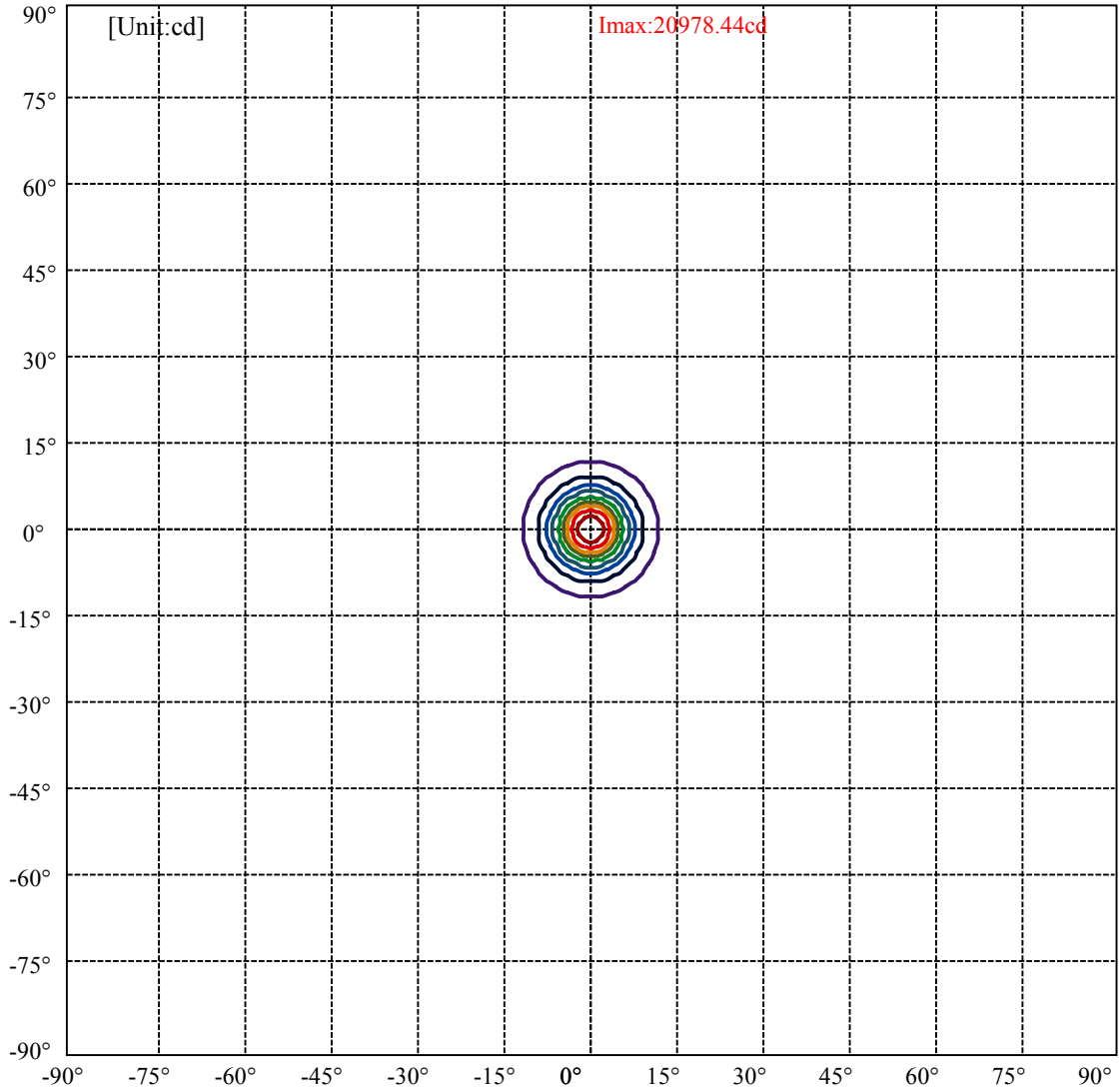
C0(Max): —————

C0/C180: —————

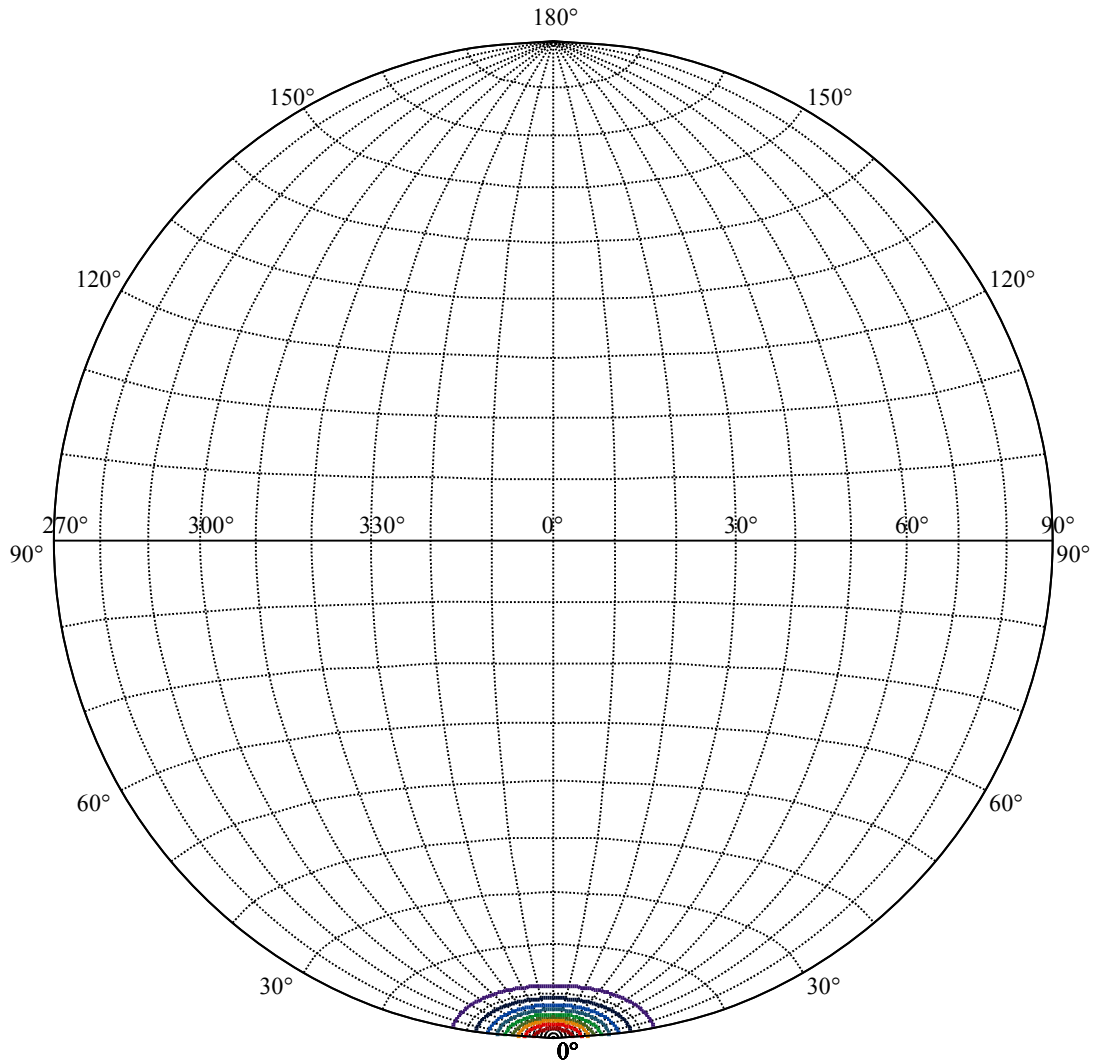
C90/C270: —————

Field angle(10%Imax):C0/180Left:11.6 Right:11.6
:C90/270Left:11.6 Right:11.6

Beam Angle(50%Imax):C0/180Left:5.5 Right:5.5
:C90/270Left:5.5 Right:5.5



(10%Imax) 2097.84	—
(20%Imax) 4195.69	—
(30%Imax) 6293.53	—
(40%Imax) 8391.38	—
(50%Imax) 10489.2	—
(60%Imax) 12587.1	—
(70%Imax) 14684.9	—
(80%Imax) 16782.8	—
(90%Imax) 18880.6	—



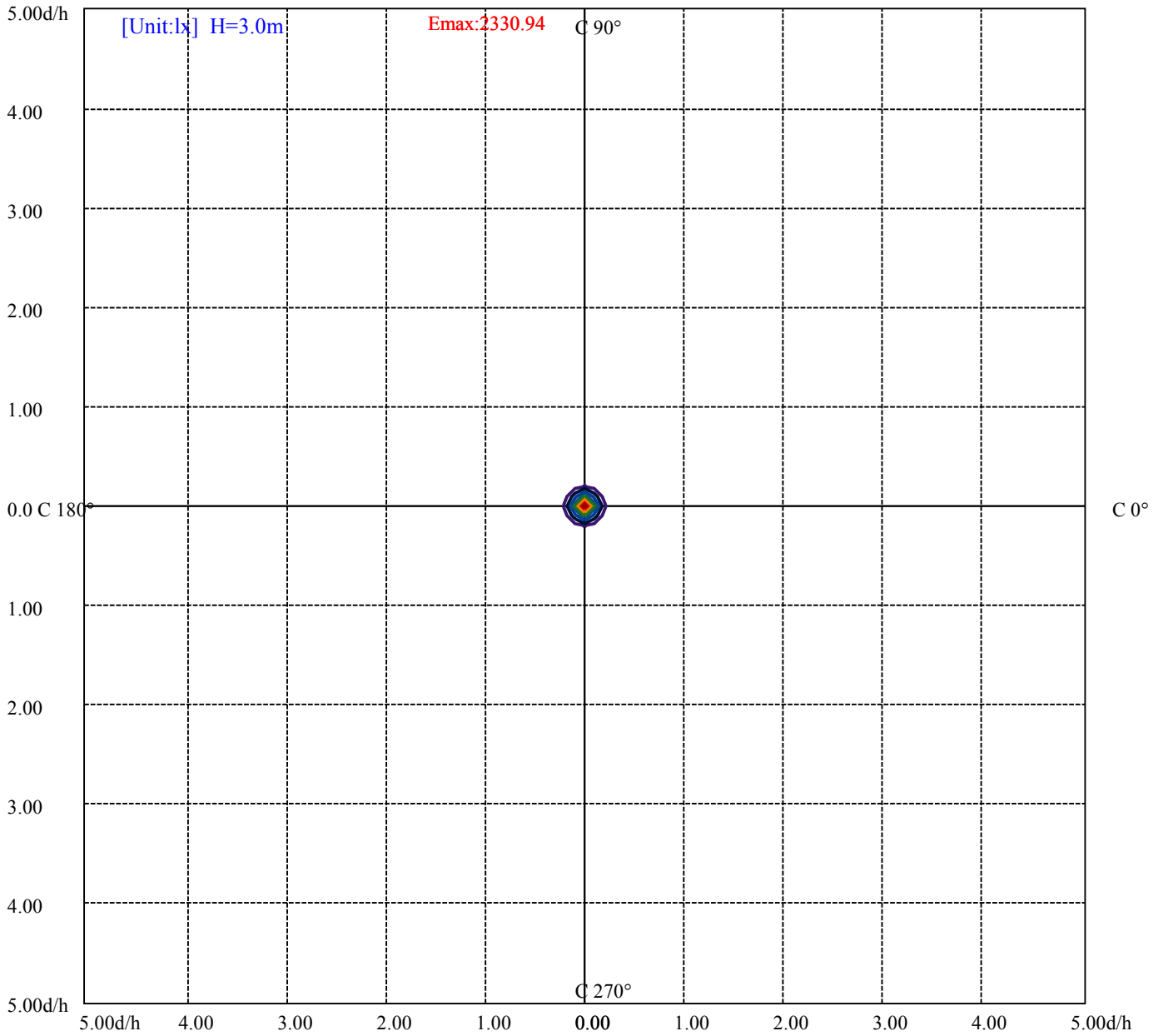
House

[Unit:cd]

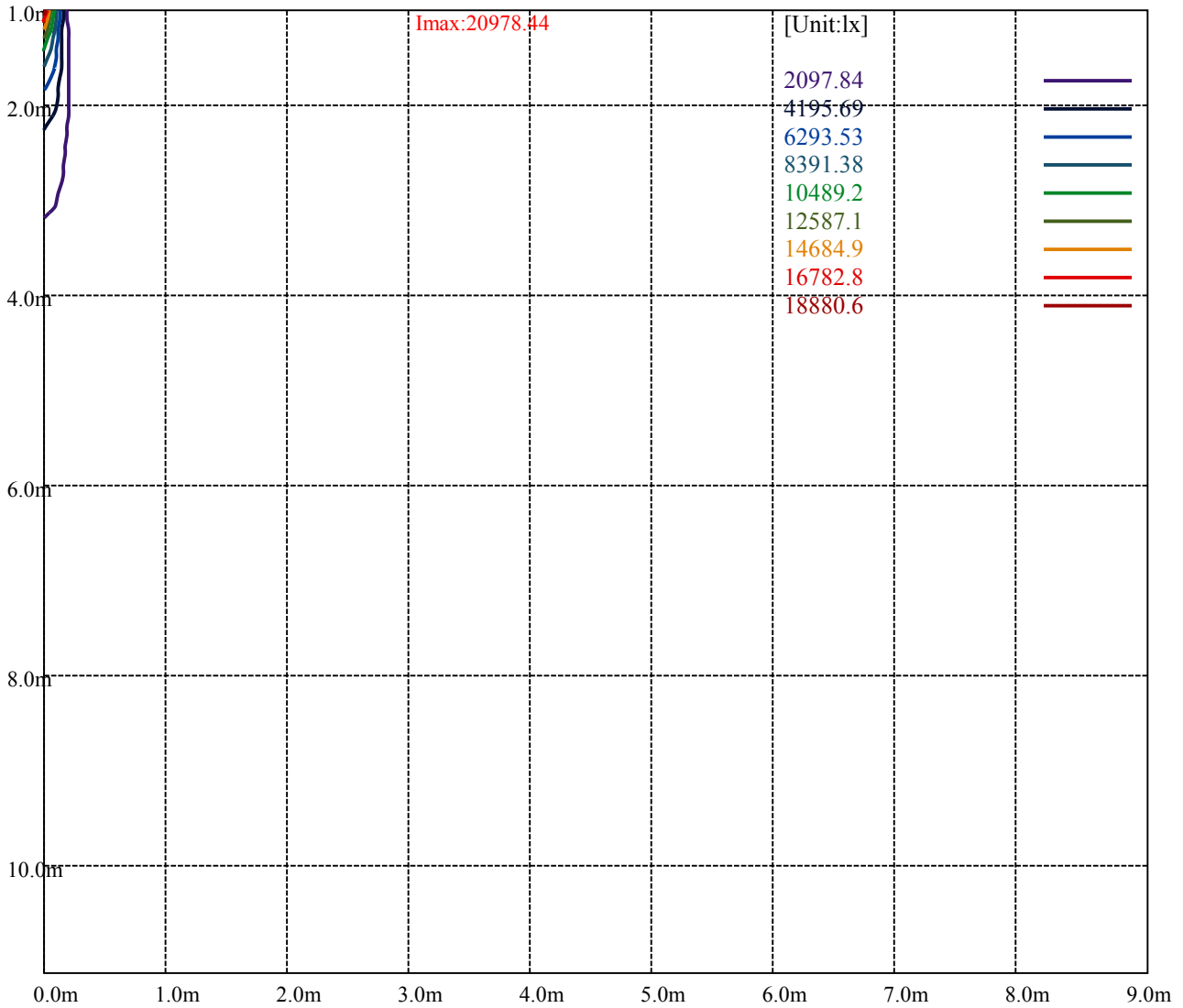
Road

Imax:20978.44

(10%Imax) 2097.84	—
(20%Imax) 4195.69	—
(30%Imax) 6293.53	—
(40%Imax) 8391.38	—
(50%Imax) 10489.2	—
(60%Imax) 12587.1	—
(70%Imax) 14684.9	—
(80%Imax) 16782.8	—
(90%Imax) 18880.6	—



- (10%Emax) 233.0933
- (20%Emax) 466.1867
- (30%Emax) 699.28
- (40%Emax) 932.3734
- (50%Emax) 1165.467
- (60%Emax) 1398.556
- (70%Emax) 1631.656
- (80%Emax) 1864.744
- (90%Emax) 2097.844



Luminance Table

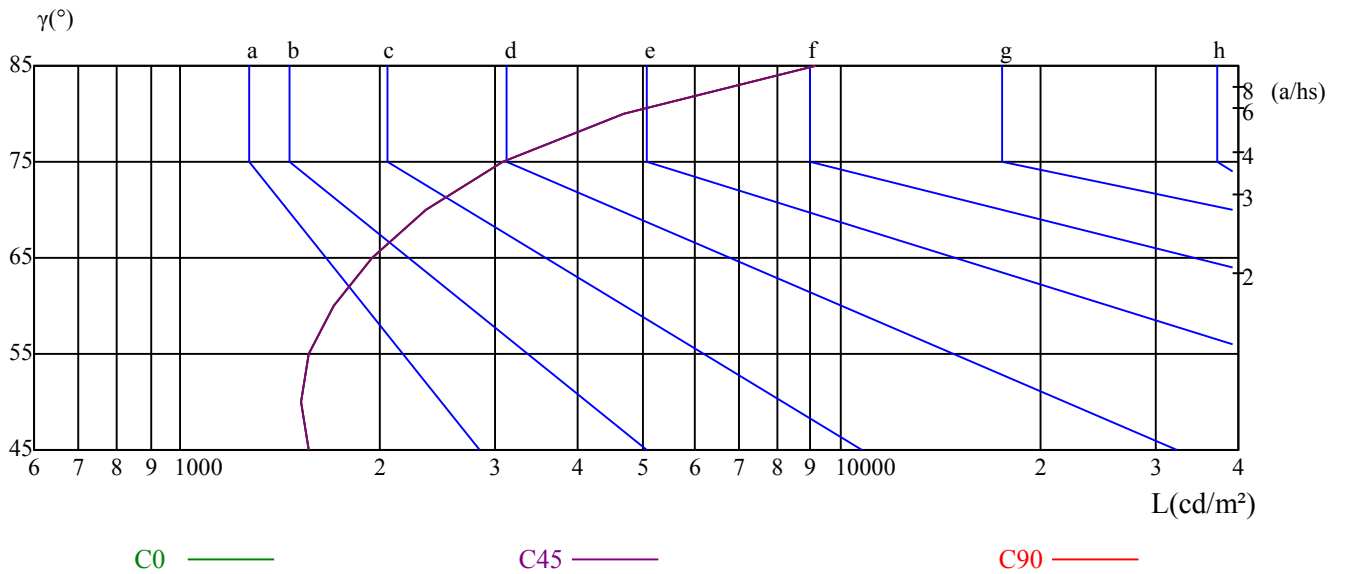
γ	45	50	55	60	65	70	75	80	85
C0	1562	1526	1568	1702	1950	2356	3083	4681	9157
C45	1562	1526	1568	1702	1950	2356	3083	4681	9157
C90	1562	1526	1568	1702	1950	2356	3083	4681	9157

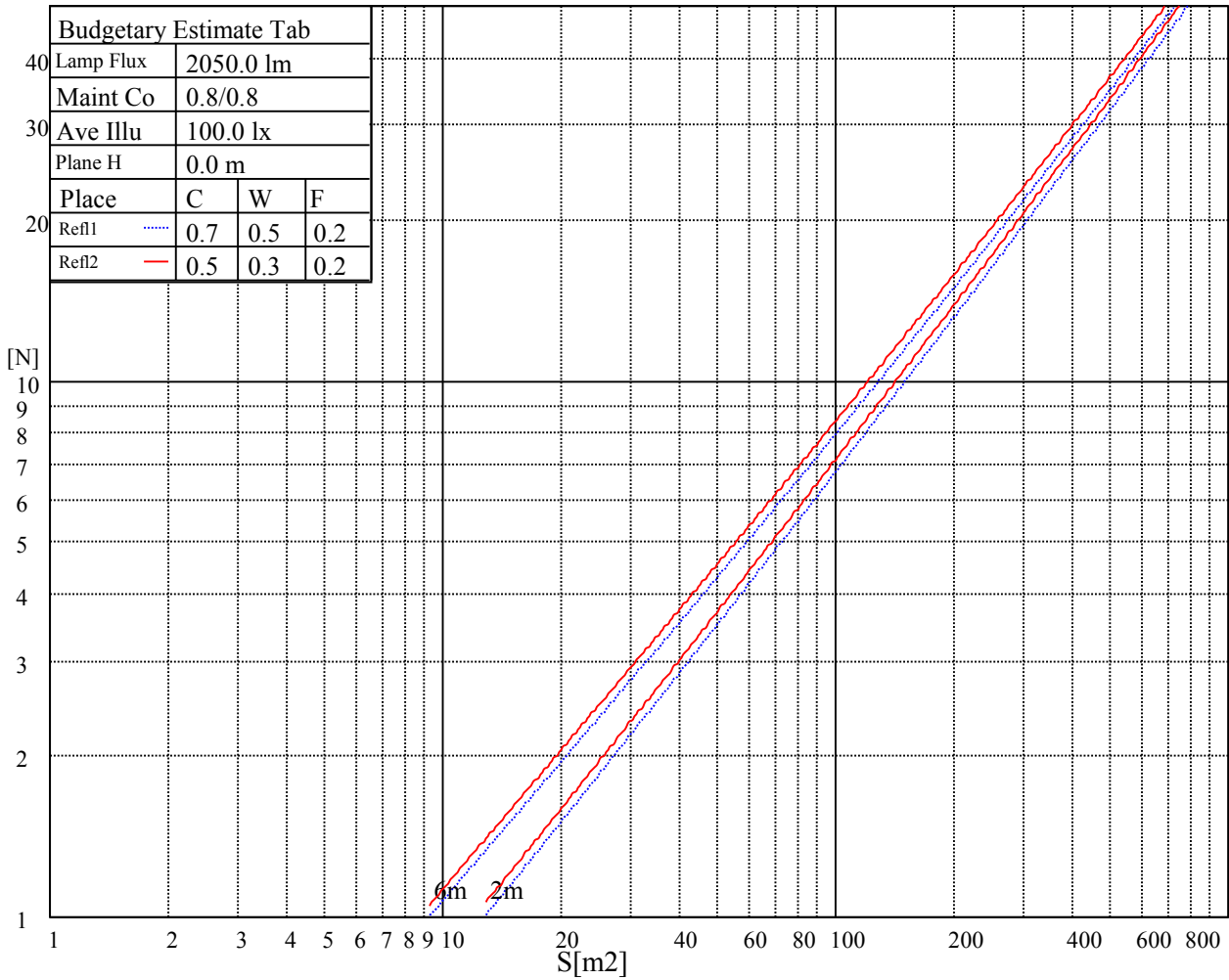
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1950	1950	1950	3083	3083	3083	9157	9157	9157

Glare Table

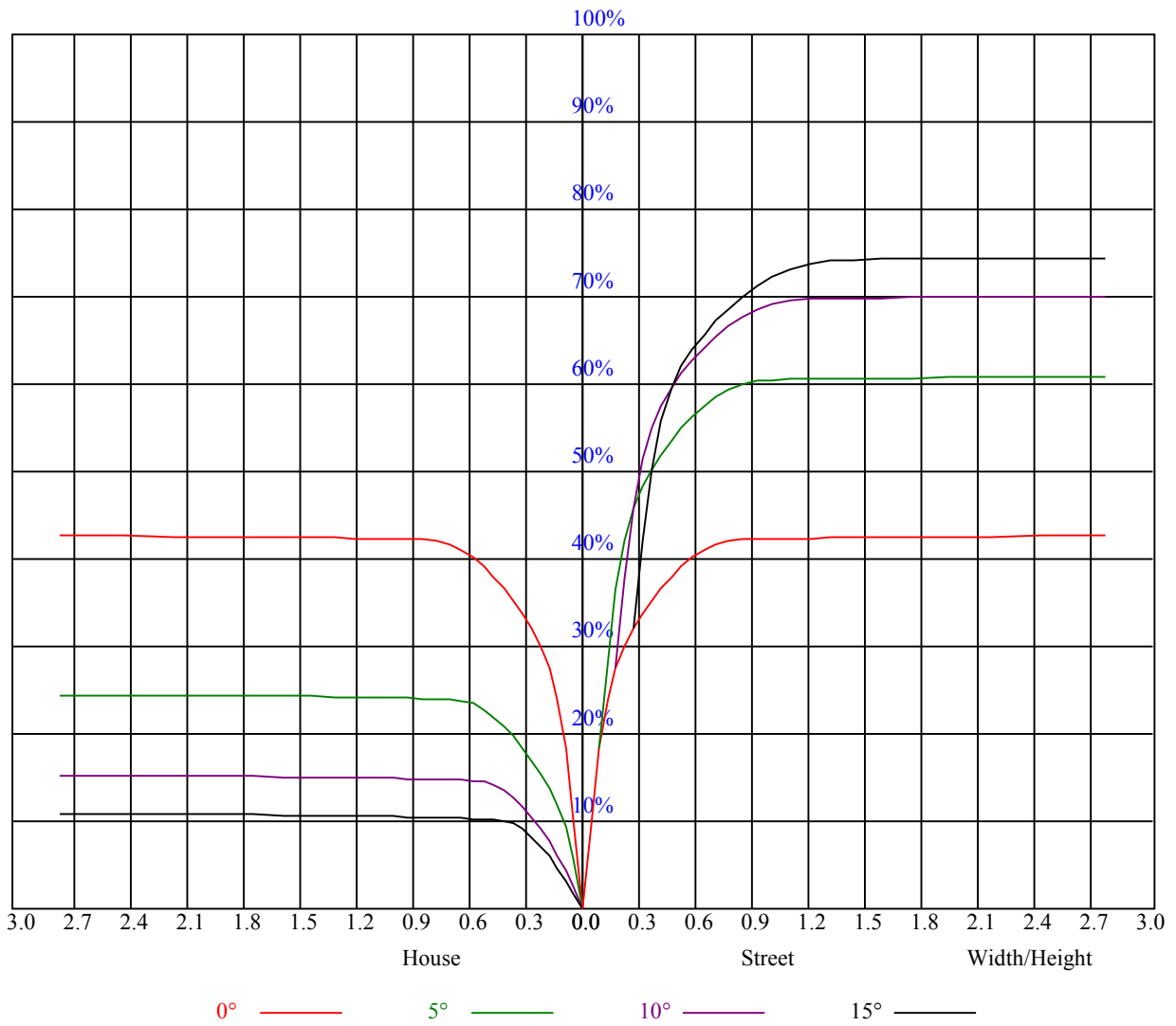
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

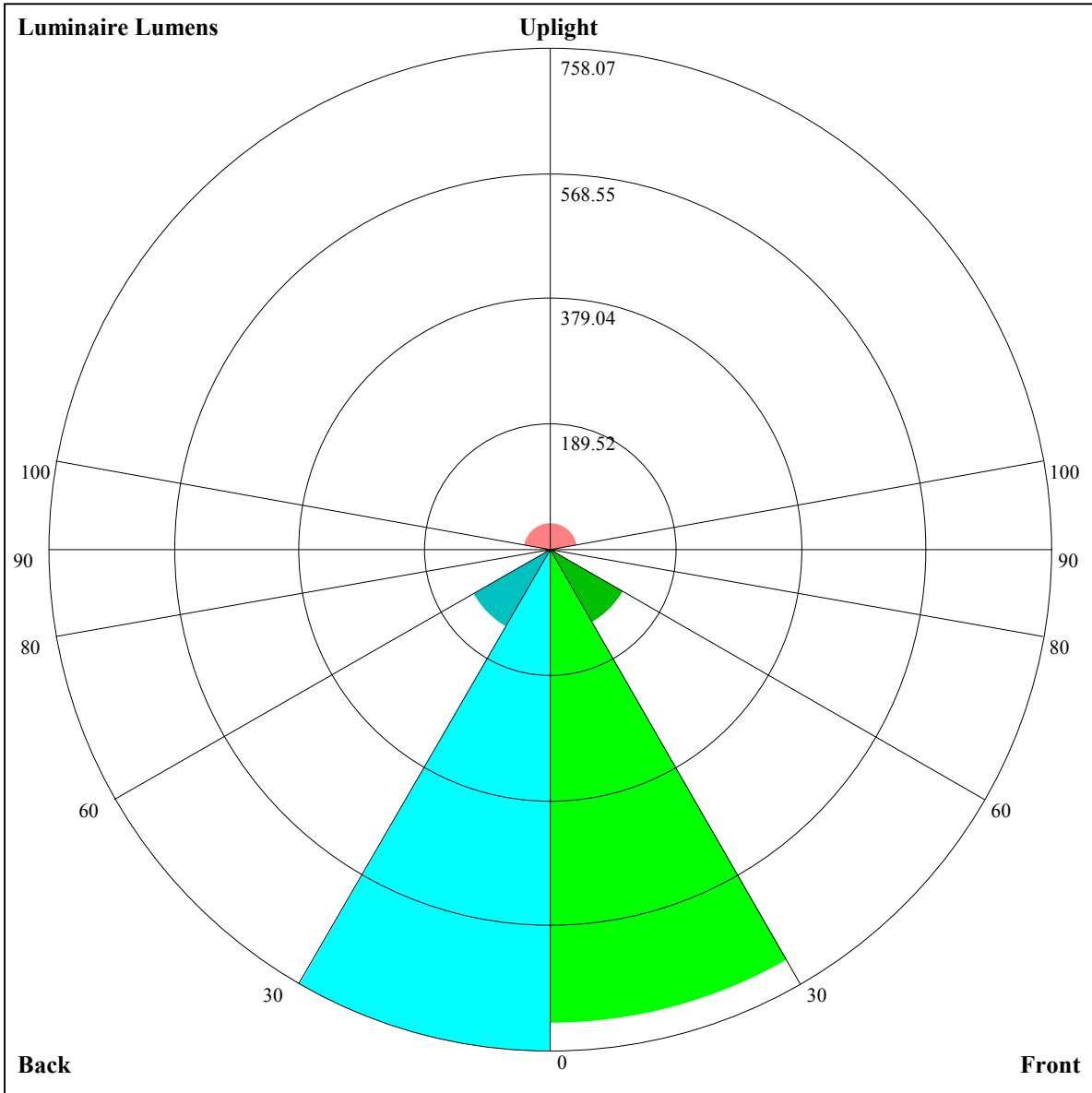
Luminance Limiting Curve





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	1.03	1.03	1.03	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.86
1	0.97	0.95	0.94	0.95	0.93	0.92	0.92	0.90	0.89	0.88	0.87	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	0.81	0.79
3	0.88	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.81	0.79	0.78	0.76
4	0.84	0.81	0.78	0.83	0.80	0.77	0.82	0.79	0.77	0.80	0.78	0.76	0.78	0.77	0.75	0.74
5	0.81	0.77	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.71
6	0.78	0.74	0.72	0.78	0.74	0.71	0.76	0.73	0.71	0.75	0.73	0.71	0.74	0.72	0.70	0.69
7	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.72	0.70	0.68	0.67
8	0.73	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.71	0.68	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	0.69	0.67	0.65	0.69	0.66	0.64	0.64
10	0.69	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.62





Luminaire Lumens:

FL=715.47,FM=126.52,FH=8.32,FVH=4.31

BL=758.07,BM=136.53,BH=8.35,BVH=4.37

UL=8.49,UH=40.41

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	21031.88	20688.75	19006.88	16841.25	14293.13	10822.50	8313.75	6361.88	4775.63
45.0	20958.75	21048.75	20396.25	18804.38	16436.25	13128.75	10378.13	7813.13	5720.63
90.0	21048.75	20992.50	20199.38	18123.75	15716.25	10975.50	9642.94	7298.44	5425.31
135.0	20874.38	21076.88	20598.75	19243.13	17251.88	14225.63	11576.25	9050.63	6772.50
180.0	21031.88	20896.88	19890.00	17988.75	15918.75	11185.31	10562.63	8028.00	5847.19
225.0	20958.75	20205.00	18506.25	16335.00	13972.50	10743.75	8776.13	6670.69	5040.00
270.0	21048.75	20553.75	18866.25	16953.75	14658.75	11396.25	9005.63	7065.00	5321.25
315.0	20874.38	19895.63	17943.75	15480.00	11158.88	9869.63	7676.44	5762.25	4303.13
360.0	21031.88	20688.75	19006.88	16841.25	14293.13	10822.50	8313.75	6361.88	4775.63

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3566.25	2925.00	2045.25	1582.31	1233.00	1026.00	912.38	834.19	787.50
45.0	4275.00	3273.75	2868.75	1809.00	1406.81	1133.44	975.94	868.50	803.81
90.0	4156.88	3078.56	2279.81	1741.50	1256.06	1075.16	941.96	858.04	799.54
135.0	5101.88	3948.75	3043.13	2851.88	1702.69	1404.00	1119.38	960.75	879.19
180.0	4644.00	3476.25	2599.88	2012.06	1608.75	1109.76	1091.42	966.60	879.19
225.0	3939.19	2965.50	2255.06	1796.06	1467.00	1104.81	1039.33	932.34	849.15
270.0	4016.25	3110.63	2919.38	1841.06	1457.44	1223.44	1044.00	923.06	843.19
315.0	3332.81	2488.50	1857.38	1482.75	1106.78	1017.06	910.63	838.35	784.24
360.0	3566.25	2925.00	2045.25	1582.31	1233.00	1026.00	912.38	834.19	787.50

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	759.38	741.38	725.06	712.13	696.94	675.56	662.63	653.06	644.06
45.0	765.56	740.81	720.56	707.63	692.44	676.69	661.50	649.69	636.75
90.0	760.78	739.80	721.80	699.53	683.89	670.16	657.90	646.48	637.26
135.0	805.50	766.13	741.94	717.75	702.00	689.06	673.88	663.75	651.94
180.0	803.14	761.40	734.63	711.51	696.94	683.38	669.66	658.13	646.71
225.0	794.19	763.31	739.41	714.66	698.57	687.04	671.18	659.59	649.97
270.0	793.69	759.94	736.31	717.19	702.56	690.19	676.13	664.88	654.19
315.0	751.89	735.64	717.08	699.24	687.38	673.99	662.85	651.21	639.90
360.0	759.38	741.38	725.06	712.13	696.94	675.56	662.63	653.06	644.06

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	634.50	628.31	618.19	607.50	596.81	587.25	554.06	482.63	402.19
45.0	628.88	622.13	614.25	604.13	594.56	585.00	570.38	524.25	435.94
90.0	629.72	619.82	611.94	600.13	591.08	580.89	561.09	506.03	437.68
135.0	640.69	631.69	624.38	610.88	601.88	592.31	582.19	554.63	497.25
180.0	637.37	627.98	619.03	606.32	599.68	591.58	580.61	552.15	495.56
225.0	640.52	633.94	622.74	613.63	606.09	595.63	578.03	529.20	458.16
270.0	642.94	632.81	623.25	614.25	606.38	597.38	585.56	541.13	465.75
315.0	630.84	622.74	610.59	601.54	595.24	583.48	537.36	467.89	389.93
360.0	634.50	628.31	618.19	607.50	596.81	587.25	554.06	482.63	402.19

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	308.25	287.44	133.76	64.97	29.98	24.58	20.48	17.66	11.36
45.0	354.94	290.25	183.15	95.06	45.45	23.96	20.19	17.10	13.56
90.0	342.17	259.14	179.55	91.69	38.98	22.56	19.86	17.27	13.44
135.0	420.19	342.00	289.69	156.21	87.13	35.55	21.43	18.34	15.81
180.0	407.64	327.04	244.91	145.97	77.46	30.38	20.48	16.65	14.01
225.0	359.04	272.59	188.21	95.40	43.03	24.30	20.93	17.27	11.93
270.0	375.75	288.00	189.90	107.72	49.50	23.06	19.07	15.86	13.78
315.0	283.89	203.18	129.09	54.00	25.54	22.61	18.68	15.86	11.14
360.0	308.25	287.44	133.76	64.97	29.98	24.58	20.48	17.66	11.36

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	10.91	10.63	10.41	10.13	9.90	9.73	9.56	9.34	9.23
45.0	10.97	10.69	10.46	10.24	10.01	9.90	9.68	9.51	9.34
90.0	10.97	10.69	10.41	10.18	9.96	9.79	9.62	9.45	9.28
135.0	11.08	10.69	10.46	10.18	9.96	9.79	9.56	9.39	9.28
180.0	11.08	10.69	10.41	10.13	9.96	9.73	9.56	9.39	9.23
225.0	11.36	11.03	10.74	10.46	10.18	10.01	9.73	9.56	9.39
270.0	11.19	10.86	10.58	10.29	10.07	9.90	9.68	9.51	9.34
315.0	10.80	10.46	10.24	10.01	9.84	9.62	9.45	9.28	9.11
360.0	10.91	10.63	10.41	10.13	9.90	9.73	9.56	9.34	9.23

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.06	8.94	8.83	8.72	8.61	8.55	8.44	8.38	8.33
45.0	9.28	9.11	9.00	8.83	8.78	8.66	8.61	8.49	8.44
90.0	9.11	9.00	8.89	8.78	8.72	8.61	8.49	8.44	8.33
135.0	9.11	9.00	8.89	8.78	8.72	8.61	8.49	8.44	8.38
180.0	9.06	8.94	8.83	8.72	8.61	8.55	8.49	8.38	8.38
225.0	9.23	9.06	8.94	8.83	8.72	8.61	8.55	8.49	8.44
270.0	9.17	9.06	8.94	8.78	8.72	8.61	8.55	8.49	8.38
315.0	9.00	8.83	8.78	8.66	8.55	8.49	8.44	8.38	8.33
360.0	9.06	8.94	8.83	8.72	8.61	8.55	8.44	8.38	8.33

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.27	8.21	8.21	8.16	8.10	8.04	8.04	8.04	7.99
45.0	8.44	8.38	8.33	8.27	8.21	8.16	8.16	8.10	8.10
90.0	8.33	8.27	8.21	8.16	8.10	8.10	8.04	8.04	7.99
135.0	8.33	8.27	8.21	8.21	8.16	8.10	8.04	8.04	8.04
180.0	8.27	8.21	8.21	8.16	8.10	8.10	8.04	8.04	7.99
225.0	8.38	8.33	8.27	8.21	8.21	8.16	8.16	8.10	8.16
270.0	8.33	8.33	8.27	8.21	8.16	8.16	8.10	8.04	8.04
315.0	8.27	8.21	8.21	8.16	8.10	8.10	8.04	8.04	7.99
360.0	8.27	8.21	8.21	8.16	8.10	8.04	8.04	8.04	7.99

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.99	7.99	7.93	7.93	7.93	7.93	7.99	7.99	8.04
45.0	8.10	8.04	8.04	8.04	7.99	7.99	8.04	8.04	7.99
90.0	7.99	7.99	7.93	7.93	7.93	7.88	7.88	7.88	7.88
135.0	8.04	7.99	7.99	7.93	7.93	7.93	7.93	7.93	7.93
180.0	7.99	7.99	7.99	7.93	7.93	7.93	7.99	8.10	8.27
225.0	8.10	8.10	8.16	8.16	8.21	8.38	8.61	8.83	8.83
270.0	8.04	7.99	7.99	7.99	7.99	7.99	7.99	8.10	8.10
315.0	7.99	7.99	7.93	7.93	7.93	7.93	8.04	8.10	7.99
360.0	7.99	7.99	7.93	7.93	7.93	7.93	7.99	7.99	8.04

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	7.99	7.99	7.93	7.93	7.88	7.88	7.82	7.82	7.82
45.0	7.99	7.99	8.04	8.04	7.93	7.82	7.82	7.76	7.76
90.0	7.88	7.88	7.88	7.88	7.88	7.88	7.88	7.76	7.76
135.0	7.88	7.88	7.88	7.88	7.88	7.88	7.88	7.88	7.82
180.0	8.33	8.33	8.16	8.10	8.04	8.04	8.04	7.99	7.76
225.0	8.61	8.49	8.33	8.33	8.38	8.16	8.04	7.82	7.82
270.0	8.10	8.04	7.99	7.99	7.99	7.93	7.93	7.82	7.82
315.0	7.99	7.93	7.88	7.88	7.88	7.88	7.82	7.76	7.76
360.0	7.99	7.99	7.93	7.93	7.88	7.88	7.82	7.82	7.82

Intensity data(cd)

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