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Nata

Client:

LumCAT: 3-2040-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): 1831.82, Efficiency(%): 89.36% , Luminous Efficacy(lm/W): 120.20

Central intensity(cd): 7958.110, Maximum intensity(cd): 7958.110

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=21.4

[C90/270]Total=21.4

Field angle(10%Imax): [C0/180]Total=48.2

[C90/270]Total=48.2

Maximum s/h(1/2): C0_180=0.36 C90_270=0.36

Maximum s/h(1/4): C0_180=0.38 C90_270=0.38

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.36%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.552%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7958.109	0.000	0	.000%	.000%
1.0	7903.758	7.590	7.59	.370%	.414%
2.0	7721.648	22.427	30.017	1.094%	1.639%
3.0	7415.719	36.204	66.22	1.766%	3.615%
4.0	7075.266	48.506	114.726	2.366%	6.263%
5.0	6704.859	59.281	174.008	2.892%	9.499%
6.0	6224.977	67.950	241.957	3.315%	13.209%
7.0	5764.570	74.419	316.376	3.630%	17.271%
8.0	5315.836	79.300	395.677	3.868%	21.600%
9.0	4806.141	82.033	477.71	4.002%	26.078%
10.0	4295.320	82.365	560.075	4.018%	30.575%
11.0	3847.922	81.368	641.442	3.969%	35.017%
12.0	3386.953	79.088	720.53	3.858%	39.334%
13.0	2915.086	74.789	795.319	3.648%	43.417%
14.0	2549.672	69.948	865.268	3.412%	47.235%
15.0	2199.938	65.205	930.472	3.181%	50.795%
16.0	1911.516	60.244	990.717	2.939%	54.084%
17.0	1648.406	55.438	1046.154	2.704%	57.110%
18.0	1438.453	50.896	1097.05	2.483%	59.888%
19.0	1254.101	46.845	1143.895	2.285%	62.446%
20.0	1121.738	43.484	1187.379	2.121%	64.820%
21.0	1020.537	41.136	1228.515	2.007%	67.065%
22.0	928.863	39.174	1267.689	1.911%	69.204%
23.0	862.777	37.593	1305.283	1.834%	71.256%
24.0	799.355	36.340	1341.623	1.773%	73.240%
25.0	750.136	35.232	1376.855	1.719%	75.163%
26.0	715.099	34.587	1411.442	1.687%	77.051%
27.0	687.881	34.324	1445.766	1.674%	78.925%
28.0	664.678	34.244	1480.01	1.670%	80.794%
29.0	650.208	34.401	1514.411	1.678%	82.672%
30.0	637.313	34.763	1549.174	1.696%	84.570%
31.0	619.545	34.977	1584.15	1.706%	86.479%
32.0	586.533	34.553	1618.703	1.685%	88.366%
33.0	537.848	33.125	1651.828	1.616%	90.174%
34.0	470.327	30.510	1682.338	1.488%	91.840%
35.0	395.262	26.882	1709.22	1.311%	93.307%
36.0	324.872	22.929	1732.149	1.118%	94.559%
37.0	261.865	19.136	1751.285	.933%	95.603%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	186.363	14.961	1766.247	.730%	96.420%
39.0	114.124	10.256	1776.503	.500%	96.980%
40.0	60.469	6.089	1782.592	.297%	97.313%
41.0	31.641	3.280	1785.872	.160%	97.492%
42.0	21.783	1.941	1787.813	.095%	97.598%
43.0	18.105	1.478	1789.291	.072%	97.678%
44.0	15.483	1.268	1790.559	.062%	97.747%
45.0	13.746	1.123	1791.682	.055%	97.809%
46.0	12.375	1.022	1792.703	.050%	97.864%
47.0	11.876	0.965	1793.668	.047%	97.917%
48.0	11.552	0.947	1794.615	.046%	97.969%
49.0	11.215	0.935	1795.55	.046%	98.020%
50.0	10.920	0.923	1796.473	.045%	98.070%
51.0	10.680	0.914	1797.387	.045%	98.120%
52.0	10.448	0.907	1798.293	.044%	98.170%
53.0	10.216	0.899	1799.192	.044%	98.219%
54.0	9.984	0.890	1800.083	.043%	98.267%
55.0	9.766	0.882	1800.964	.043%	98.315%
56.0	9.577	0.874	1801.838	.043%	98.363%
57.0	9.380	0.867	1802.705	.042%	98.410%
58.0	9.260	0.862	1803.567	.042%	98.458%
59.0	9.162	0.861	1804.428	.042%	98.505%
60.0	9.063	0.861	1805.289	.042%	98.552%
61.0	8.986	0.861	1806.151	.042%	98.599%
62.0	8.916	0.863	1807.013	.042%	98.646%
63.0	8.859	0.864	1807.878	.042%	98.693%
64.0	8.775	0.865	1808.743	.042%	98.740%
65.0	8.712	0.865	1809.608	.042%	98.787%
66.0	8.684	0.868	1810.476	.042%	98.835%
67.0	8.641	0.871	1811.347	.042%	98.882%
68.0	8.606	0.874	1812.221	.043%	98.930%
69.0	8.564	0.876	1813.097	.043%	98.978%
70.0	8.522	0.878	1813.975	.043%	99.026%
71.0	8.480	0.879	1814.853	.043%	99.074%
72.0	8.459	0.881	1815.734	.043%	99.122%
73.0	8.430	0.883	1816.617	.043%	99.170%
74.0	8.395	0.885	1817.502	.043%	99.218%
75.0	8.395	0.887	1818.389	.043%	99.267%

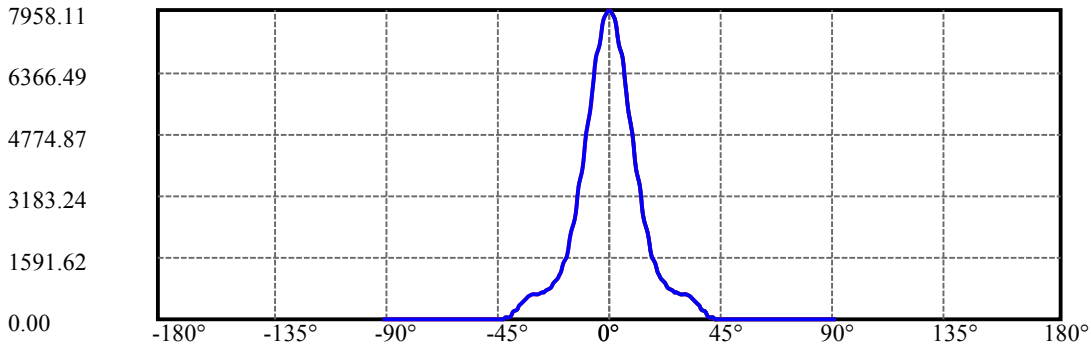
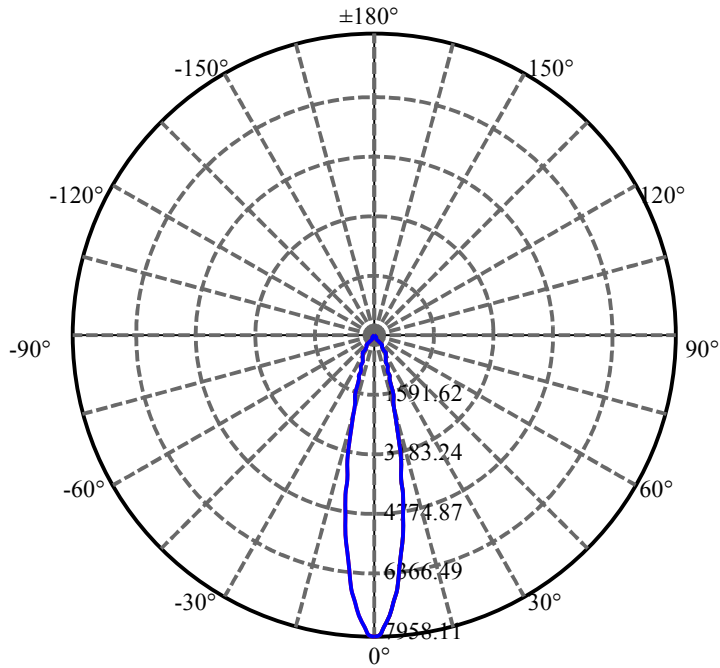
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.360	0.889	1819.278	.043%	99.315%
77.0	8.339	0.890	1820.169	.043%	99.364%
78.0	8.318	0.892	1821.06	.043%	99.413%
79.0	8.297	0.893	1821.953	.044%	99.461%
80.0	8.283	0.894	1822.847	.044%	99.510%
81.0	8.276	0.895	1823.742	.044%	99.559%
82.0	8.269	0.897	1824.64	.044%	99.608%
83.0	8.255	0.898	1825.538	.044%	99.657%
84.0	8.248	0.899	1826.437	.044%	99.706%
85.0	8.234	0.900	1827.336	.044%	99.755%
86.0	8.227	0.900	1828.236	.044%	99.804%
87.0	8.198	0.899	1829.135	.044%	99.853%
88.0	8.170	0.897	1830.032	.044%	99.902%
89.0	8.163	0.895	1830.927	.044%	99.951%
90.0	8.163	0.895	1831.822	.044%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1549.17	75.57%	84.57%
0-40	1782.59	86.96%	97.31%
0-60	1805.29	88.06%	98.55%
0-90	1830.93	89.31%	99.95%
0-120	1830.93	89.31%	99.95%
0-180	1831.82	89.36%	100.00%
60-90	26.50	1.29%	1.45%
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%
0-27.58	1465.46	71.49%	80.00%

ZONAL LUMEN SUMMARY

0-10	560.07
10-20	627.30
20-30	361.79
30-40	233.42
40-50	13.88
50-60	8.82
60-70	8.69
70-80	8.87
80-90	8.08
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: —————

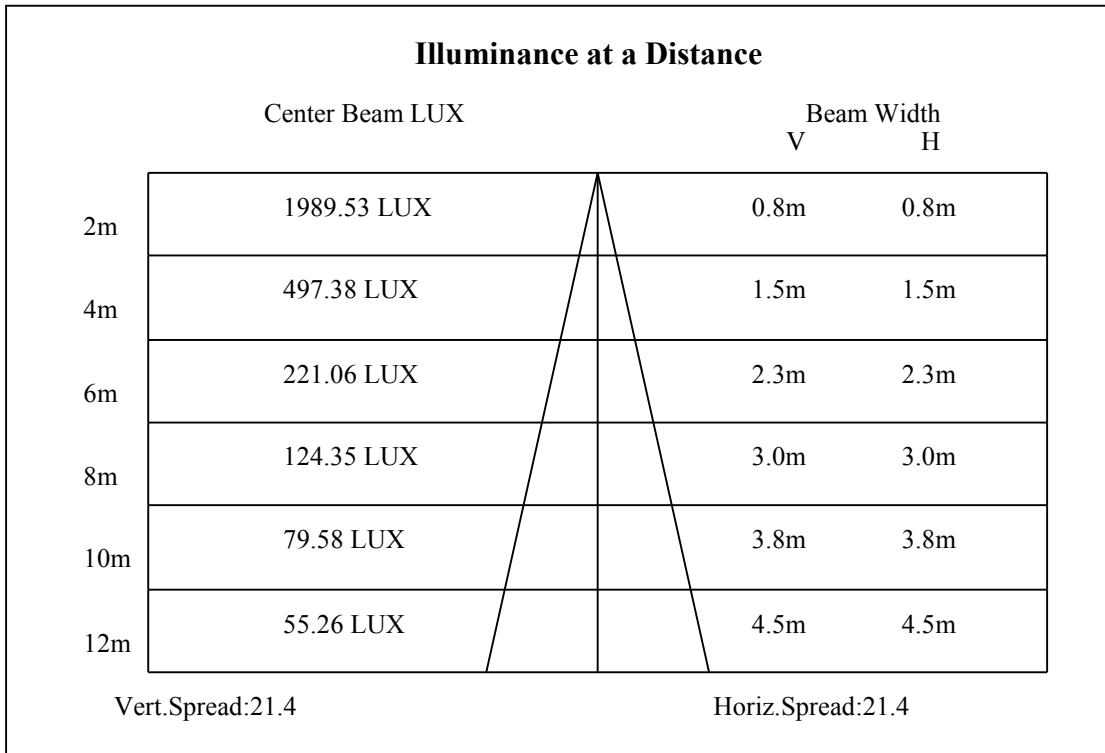
C90/C270: —————

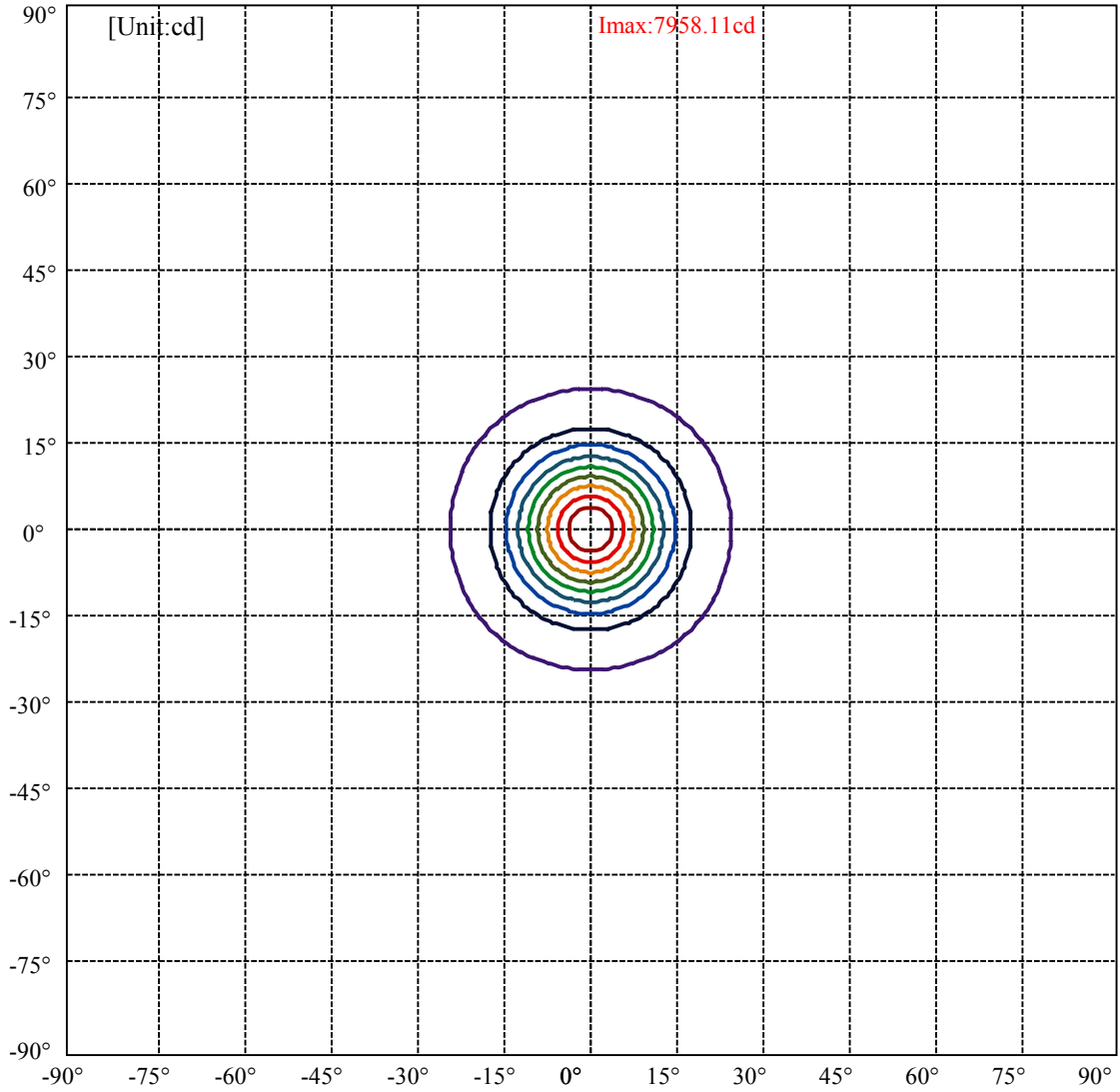
Field angle(10%Imax):C0/180Left:24.1 Right:24.1

:C90/270Left:24.1 Right:24.1

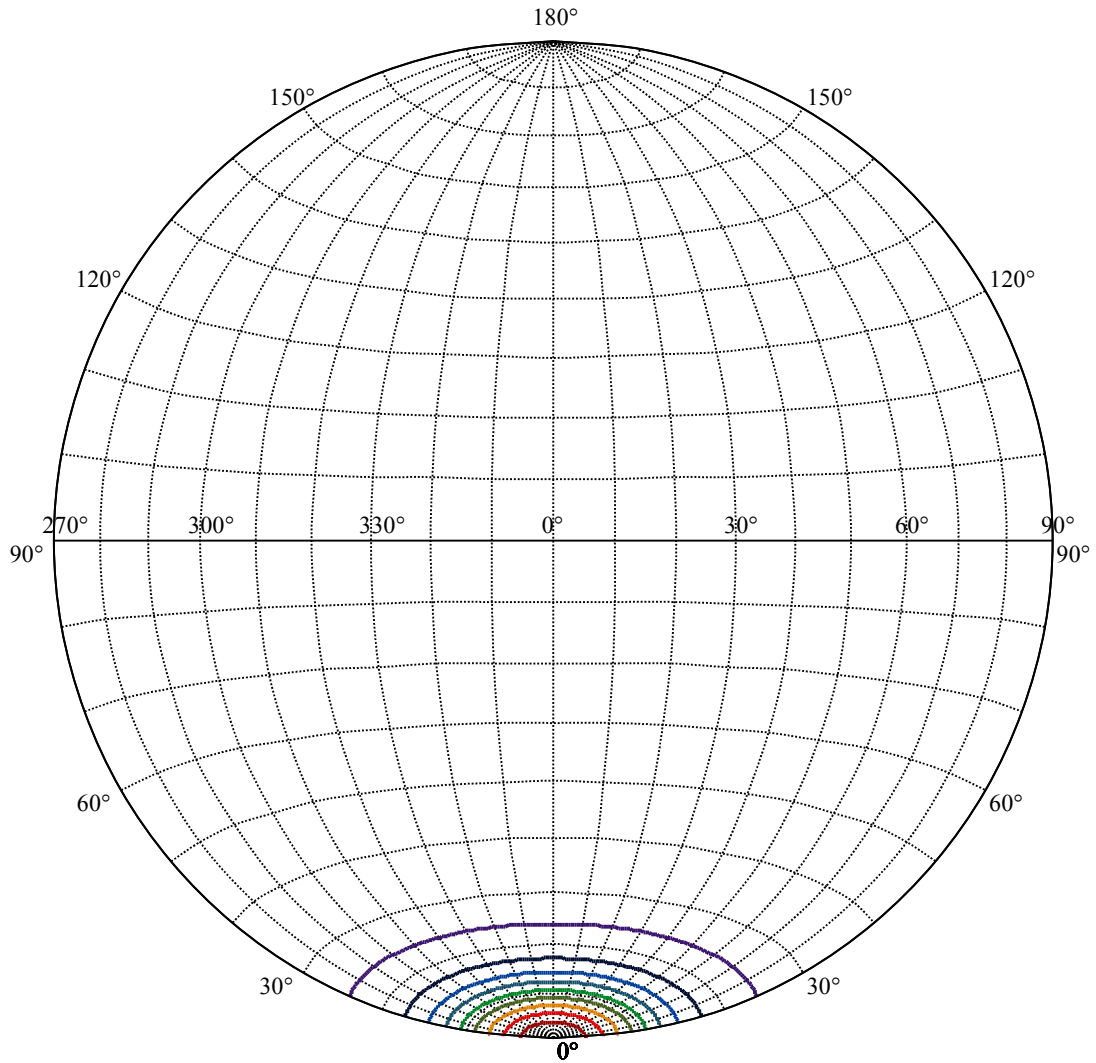
Beam Angle(50%Imax):C0/180Left:10.7 Right:10.7

:C90/270Left:10.7 Right:10.7





(10%Imax) 795.811	—
(20%Imax) 1591.62	—
(30%Imax) 2387.43	—
(40%Imax) 3183.24	—
(50%Imax) 3979.05	—
(60%Imax) 4774.87	—
(70%Imax) 5570.68	—
(80%Imax) 6366.49	—
(90%Imax) 7162.3	—



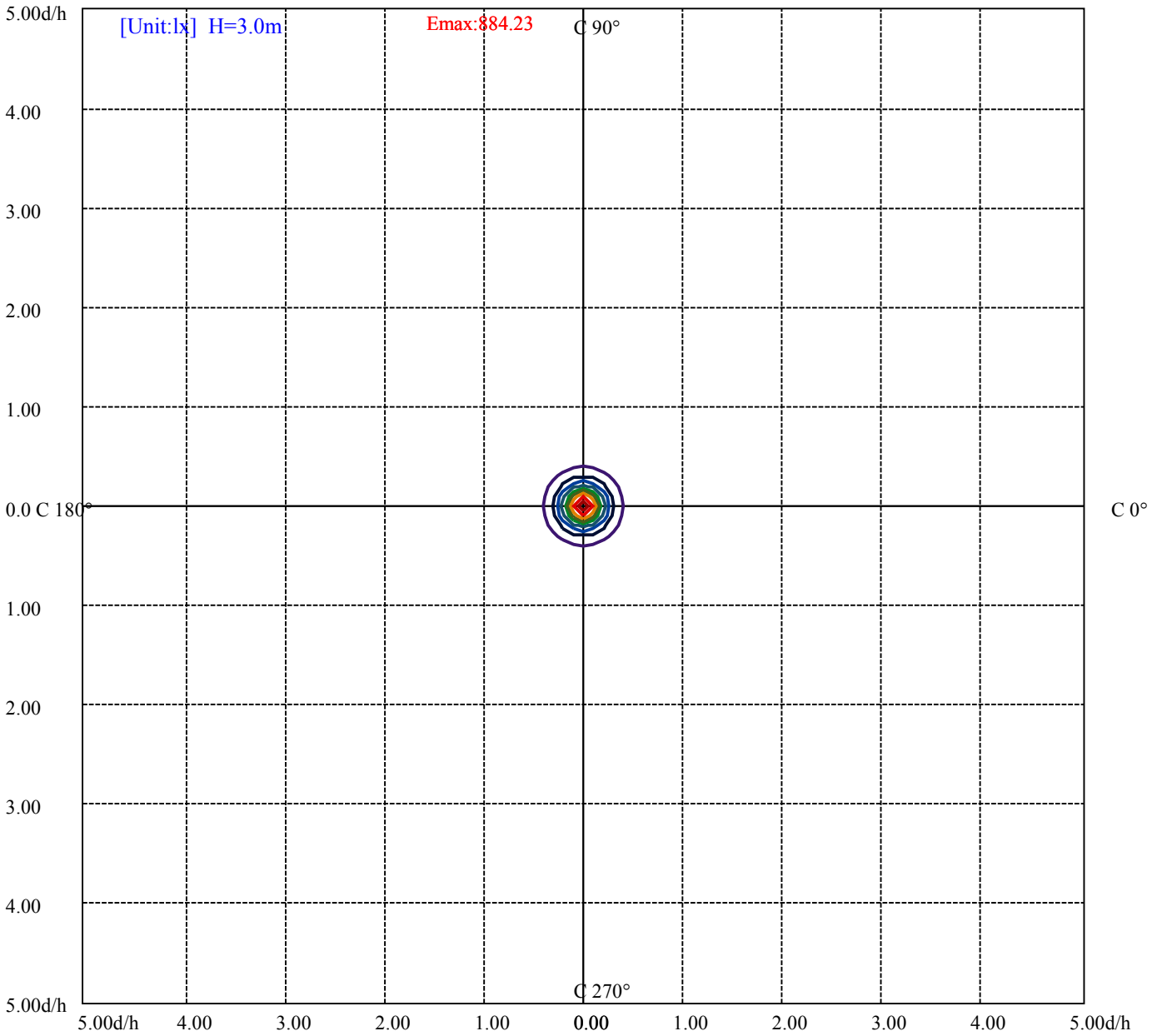
House

[Unit:cd]

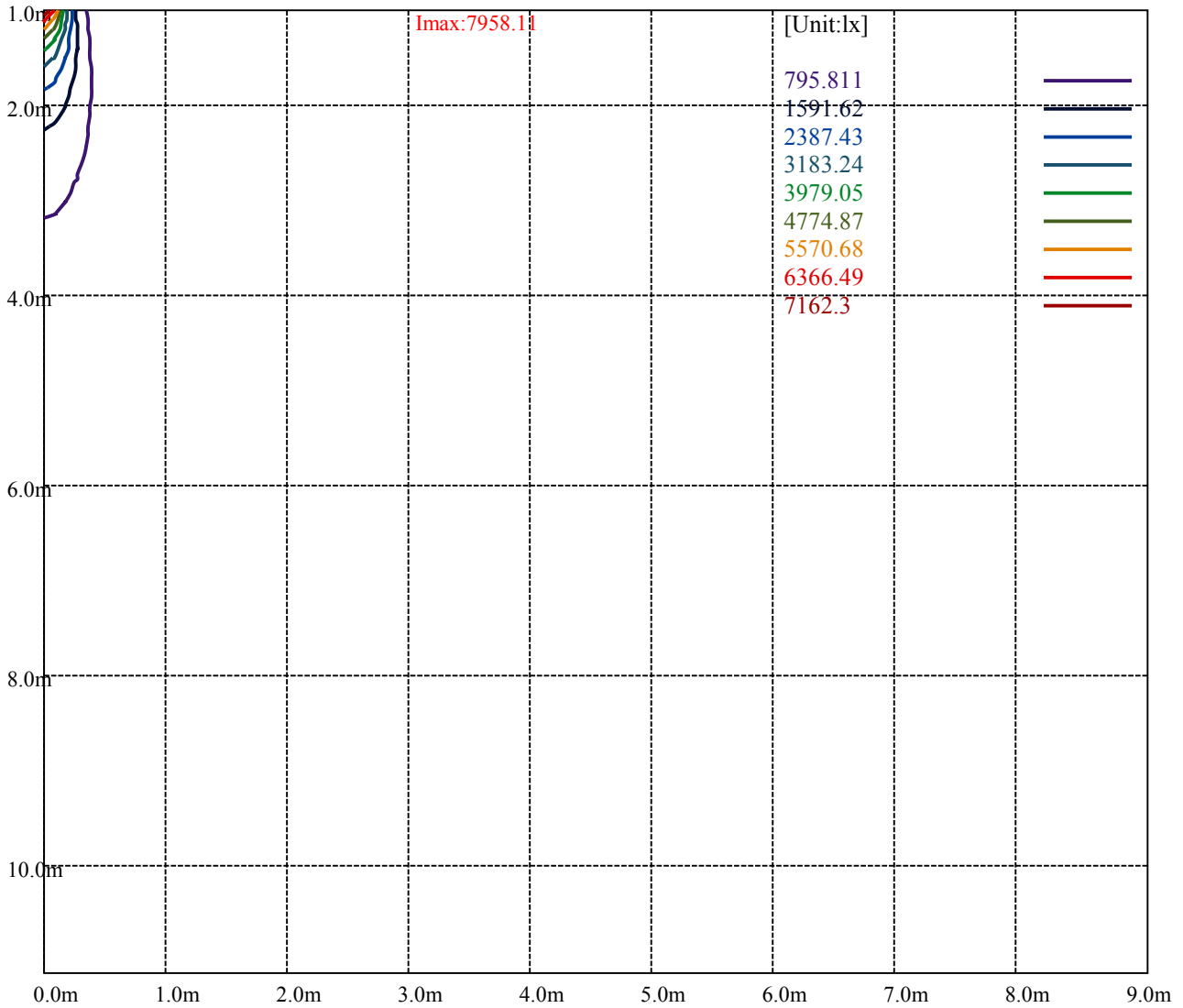
Road

Imax:7958.11

(10%Imax) 795.811	—
(20%Imax) 1591.62	—
(30%Imax) 2387.43	—
(40%Imax) 3183.24	—
(50%Imax) 3979.05	—
(60%Imax) 4774.87	—
(70%Imax) 5570.68	—
(80%Imax) 6366.49	—
(90%Imax) 7162.3	—



(10%Emax) 88.42333	—
(20%Emax) 176.8467	—
(30%Emax) 265.27	—
(40%Emax) 353.6933	—
(50%Emax) 442.1167	—
(60%Emax) 530.54	—
(70%Emax) 618.9633	—
(80%Emax) 707.3867	—
(90%Emax) 795.81	—



Luminance Table

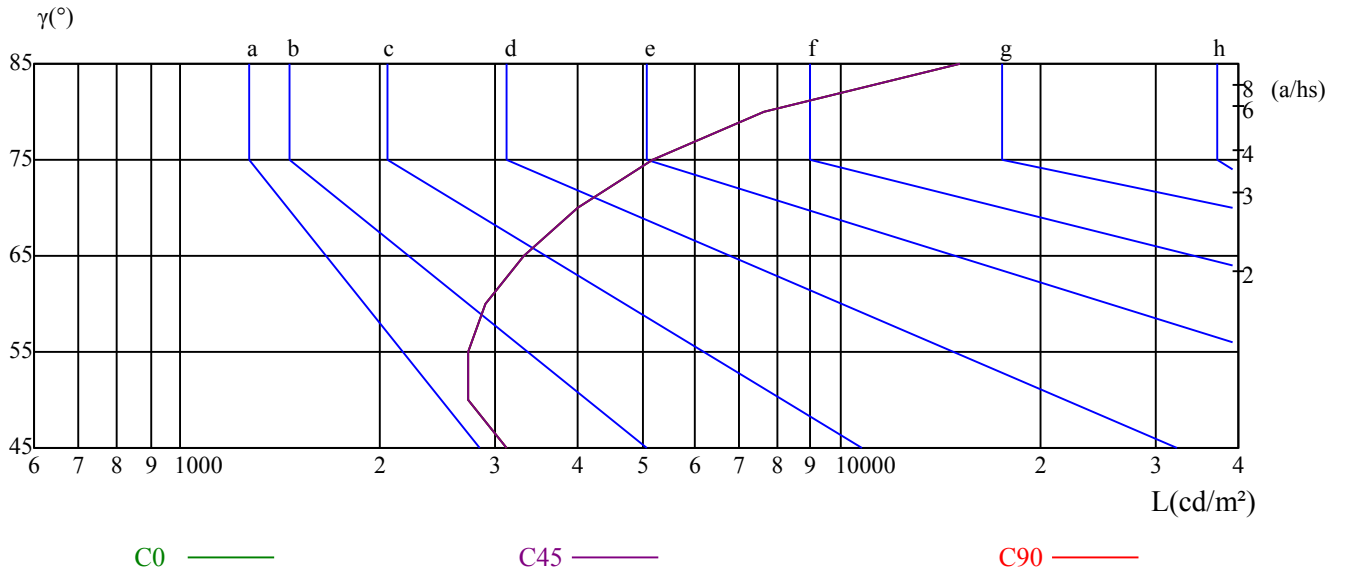
γ	45	50	55	60	65	70	75	80	85
C0	3115	2722	2728	2904	3303	3992	5197	7643	15137
C45	3115	2722	2728	2904	3303	3992	5197	7643	15137
C90	3115	2722	2728	2904	3303	3992	5197	7643	15137

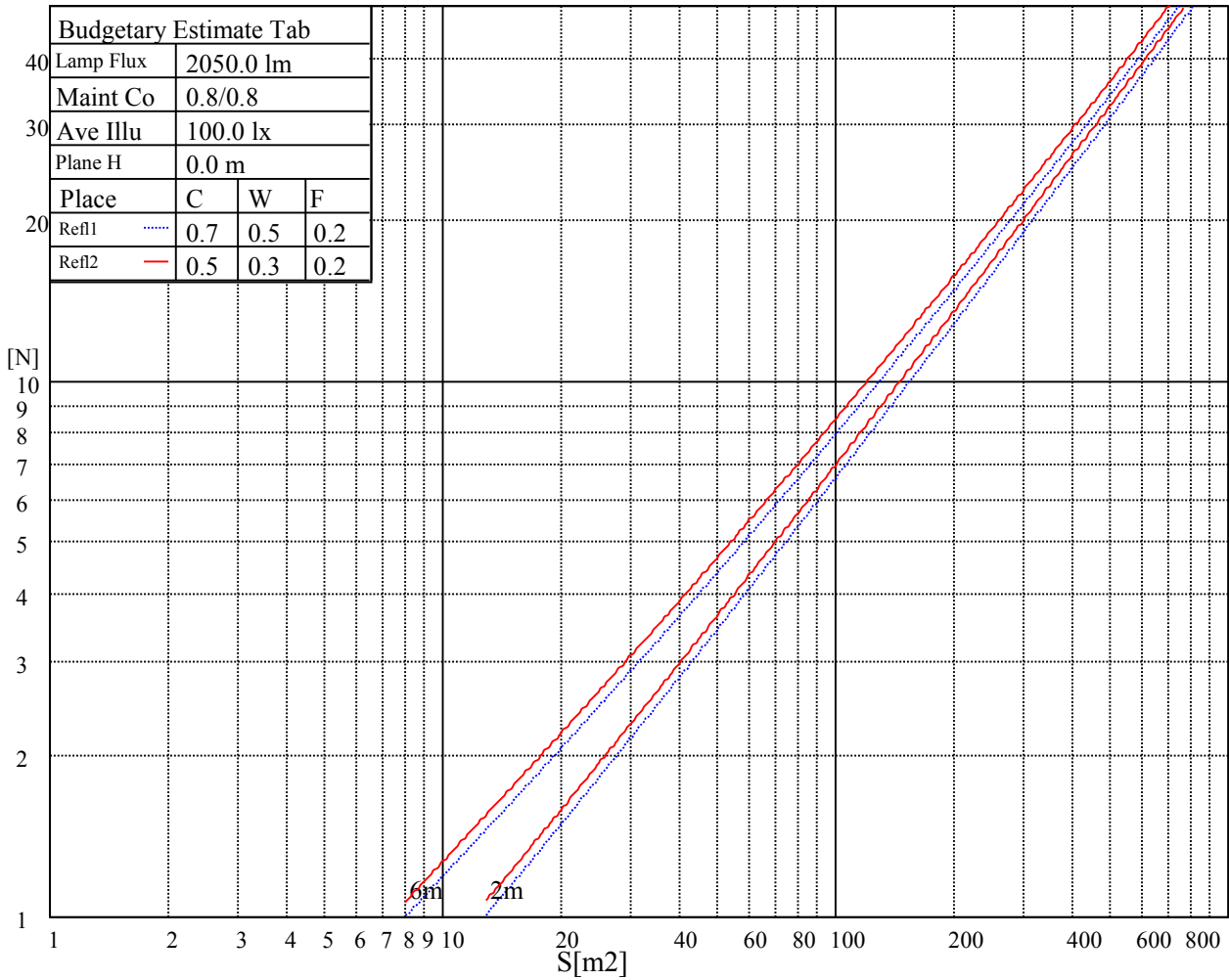
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3303	3303	3303	5197	5197	5197	15137	15137	15137

Glare Table

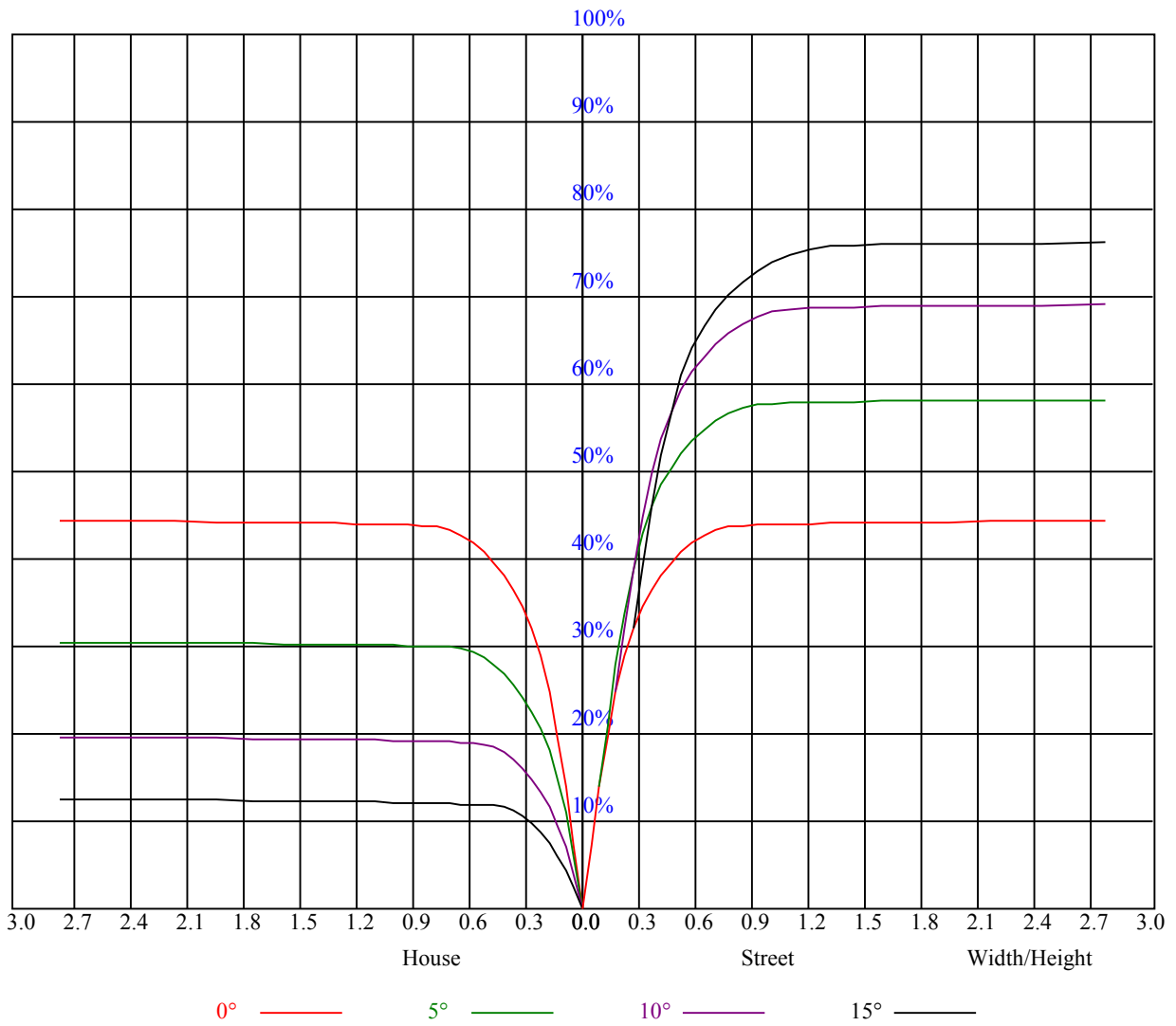
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

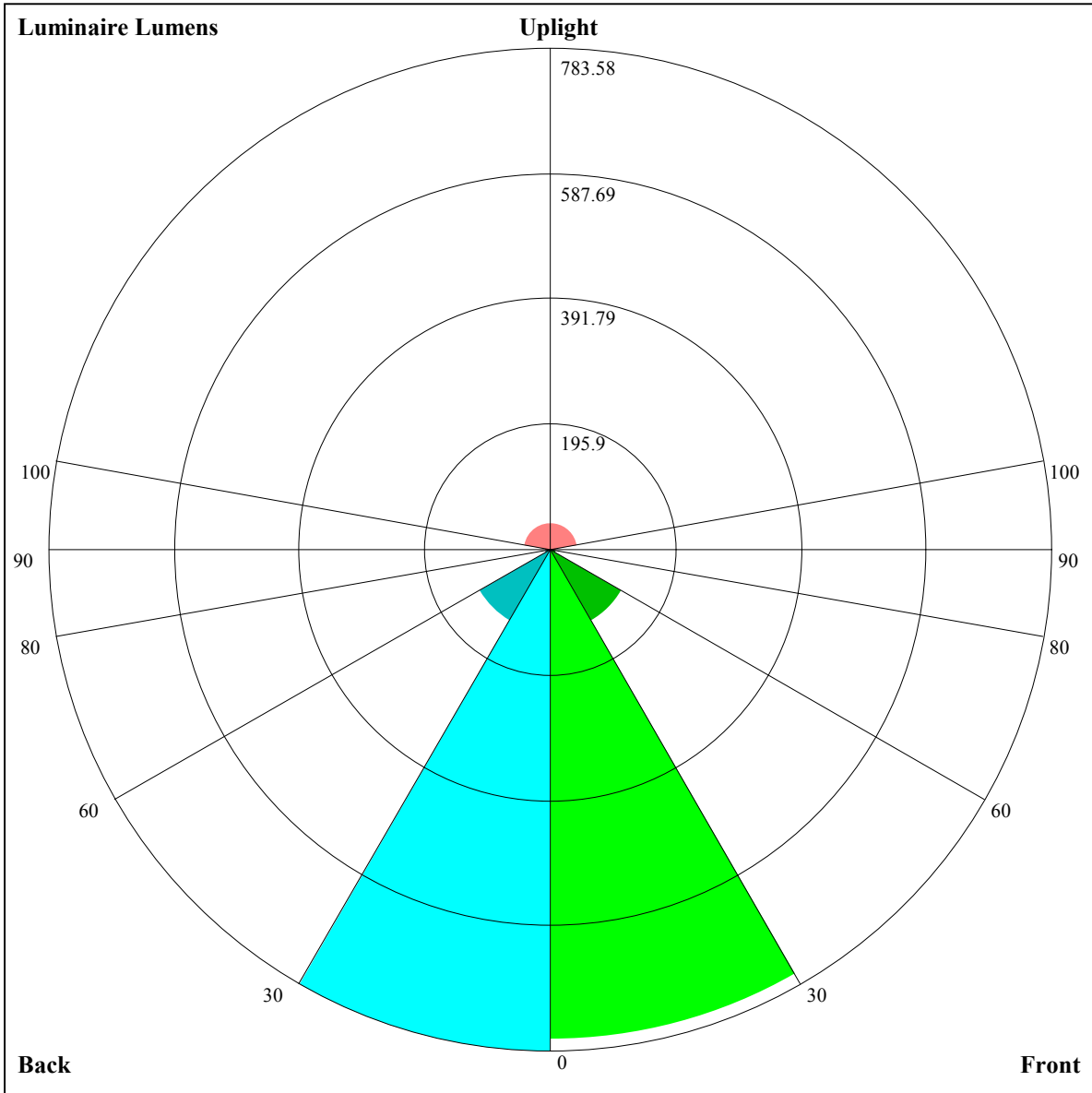
Luminance Limiting Curve





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





Luminaire Lumens:

FL=765.88,FM=127.41,FH=8.77,FVH=4.48

BL=783.58,BM=129.26,BH=8.79,BVH=4.49

UL=8.91,UH=42.38

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	7975.13	7846.31	7597.69	7274.25	6936.75	6552.56	6039.00	5600.81	5156.44
45.0	7975.69	7980.75	7840.13	7606.69	7270.88	6922.69	6492.38	6009.75	5561.44
90.0	7999.31	7999.31	7871.63	7518.94	7237.69	6886.13	6333.19	5952.38	5493.94
135.0	7882.31	8017.88	7968.94	7811.44	7461.56	7133.06	6765.75	6246.00	5802.75
180.0	7975.13	7977.38	7846.88	7570.69	7214.63	6855.19	6409.13	5913.00	5455.13
225.0	7975.69	7841.25	7605.00	7228.69	6873.19	6474.94	5946.75	5503.50	5055.75
270.0	7999.31	7864.88	7603.31	7310.25	6924.94	6538.50	6069.94	5586.75	5144.63
315.0	7882.31	7702.31	7439.63	7004.81	6682.50	6275.81	5743.69	5304.38	4856.63
360.0	7975.13	7846.31	7597.69	7274.25	6936.75	6552.56	6039.00	5600.81	5156.44
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4594.50	4146.19	3706.31	3231.00	2792.25	2441.25	2098.69	1838.25	1591.31
45.0	5056.31	4544.44	4090.50	3655.13	3137.63	2753.44	2394.56	2075.63	1792.13
90.0	4978.69	4458.38	4006.69	3522.38	3061.13	2674.13	2290.50	1996.88	1711.69
135.0	5354.44	4783.50	4313.25	3859.31	3311.44	2900.25	2503.13	2149.31	1839.94
180.0	4992.75	4417.31	3965.06	3528.56	3011.63	2631.38	2292.75	1964.81	1689.19
225.0	4485.94	4036.50	3600.56	3080.81	2698.88	2359.13	1998.56	1780.31	1545.75
270.0	4638.38	4131.00	3688.88	3266.44	2769.75	2417.63	2111.63	1814.63	1567.69
315.0	4348.13	3845.25	3412.13	2952.00	2538.00	2220.19	1909.69	1672.31	1449.56
360.0	4594.50	4146.19	3706.31	3231.00	2792.25	2441.25	2098.69	1838.25	1591.31
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1389.38	1243.13	1109.81	1001.81	924.19	860.63	795.38	752.63	716.06
45.0	1573.31	1362.38	1203.75	1090.69	983.81	905.63	837.00	781.88	735.75
90.0	1471.50	1296.00	1110.99	1033.54	936.00	866.25	802.13	750.09	713.81
135.0	1603.13	1378.13	1212.75	1095.19	984.38	906.75	834.75	776.81	736.88
180.0	1482.75	1289.81	1120.11	1029.88	927.84	868.95	804.77	746.16	713.98
225.0	1331.44	1117.13	1090.35	975.49	901.63	839.53	780.86	734.34	703.18
270.0	1387.13	1224.00	1093.50	999.00	911.81	848.81	784.69	743.06	709.31
315.0	1269.00	1122.24	1032.64	938.70	861.24	805.67	755.27	716.12	691.82
360.0	1389.38	1243.13	1109.81	1001.81	924.19	860.63	795.38	752.63	716.06
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	691.88	670.50	657.00	644.63	628.31	593.44	540.56	470.81	395.44
45.0	697.50	672.19	656.44	642.94	627.19	605.81	565.31	497.25	419.63
90.0	684.06	659.14	644.79	631.63	617.12	595.41	547.65	482.46	408.77
135.0	703.69	672.75	655.31	640.69	626.06	613.13	582.75	524.25	451.13
180.0	685.07	660.49	645.58	632.70	619.09	586.86	537.08	472.61	401.96
225.0	680.79	660.88	646.43	633.54	606.21	552.60	494.04	422.44	345.54
270.0	686.25	665.44	652.50	640.13	623.25	583.88	532.69	464.06	390.94
315.0	673.82	656.04	643.61	632.25	609.13	561.15	502.71	428.74	348.69
360.0	691.88	670.50	657.00	644.63	628.31	593.44	540.56	470.81	395.44
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	313.31	286.31	171.06	112.39	51.53	24.98	20.81	17.33	14.79
45.0	354.38	289.69	203.91	136.69	83.25	37.24	22.56	19.52	15.92
90.0	341.27	264.83	199.07	133.43	75.43	36.34	22.95	19.07	15.98
135.0	383.63	306.00	286.88	160.76	97.09	53.44	25.59	21.04	17.89
180.0	334.69	256.39	190.58	122.12	64.97	30.99	21.94	18.79	16.31
225.0	275.18	198.39	136.07	73.01	32.23	23.01	20.42	16.65	14.57
270.0	318.94	292.50	168.08	100.52	46.91	24.69	20.81	17.33	15.02
315.0	277.59	200.81	135.28	74.08	32.34	22.44	19.18	15.13	13.39
360.0	313.31	286.31	171.06	112.39	51.53	24.98	20.81	17.33	14.79

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	13.44	12.04	11.70	11.36	10.97	10.69	10.46	10.18	10.01
45.0	14.23	12.54	12.15	11.81	11.53	11.19	10.97	10.74	10.52
90.0	14.12	12.21	11.87	11.53	11.19	10.86	10.63	10.41	10.18
135.0	15.24	13.44	12.09	11.70	11.31	11.03	10.80	10.58	10.35
180.0	14.23	12.49	12.09	11.76	11.48	11.14	10.91	10.69	10.52
225.0	12.77	12.21	11.81	11.53	11.19	10.91	10.63	10.41	10.13
270.0	13.67	12.32	11.93	11.64	11.31	11.03	10.74	10.52	10.18
315.0	12.26	11.76	11.36	11.08	10.74	10.52	10.29	10.07	9.84
360.0	13.44	12.04	11.70	11.36	10.97	10.69	10.46	10.18	10.01
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.79	9.56	9.39	9.28	9.17	9.11	9.00	8.94	8.83
45.0	10.24	10.01	9.73	9.51	9.39	9.23	9.11	9.06	9.00
90.0	10.01	9.79	9.62	9.45	9.34	9.23	9.11	9.06	9.00
135.0	10.13	9.90	9.68	9.51	9.34	9.28	9.17	9.11	9.00
180.0	10.24	10.01	9.79	9.45	9.34	9.23	9.11	9.00	8.94
225.0	9.90	9.68	9.56	9.34	9.23	9.11	9.06	8.94	8.89
270.0	9.96	9.73	9.56	9.34	9.23	9.11	9.00	8.94	8.89
315.0	9.62	9.45	9.28	9.17	9.06	9.00	8.94	8.83	8.78
360.0	9.79	9.56	9.39	9.28	9.17	9.11	9.00	8.94	8.83
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.78	8.72	8.66	8.61	8.61	8.55	8.49	8.49	8.44
45.0	8.94	8.83	8.78	8.78	8.72	8.66	8.61	8.55	8.55
90.0	8.94	8.78	8.72	8.72	8.66	8.61	8.61	8.55	8.49
135.0	8.94	8.89	8.83	8.78	8.72	8.66	8.66	8.61	8.55
180.0	8.89	8.83	8.72	8.66	8.66	8.61	8.55	8.49	8.49
225.0	8.83	8.78	8.72	8.66	8.61	8.61	8.55	8.49	8.44
270.0	8.83	8.72	8.66	8.66	8.61	8.61	8.55	8.49	8.44
315.0	8.72	8.66	8.61	8.61	8.55	8.55	8.49	8.49	8.44
360.0	8.78	8.72	8.66	8.61	8.61	8.55	8.49	8.49	8.44
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.44	8.38	8.33	8.33	8.33	8.27	8.27	8.27	8.27
45.0	8.49	8.49	8.44	8.44	8.38	8.38	8.33	8.33	8.27
90.0	8.44	8.44	8.38	8.38	8.33	8.33	8.33	8.27	8.27
135.0	8.55	8.49	8.49	8.49	8.44	8.44	8.38	8.38	8.33
180.0	8.44	8.44	8.38	8.38	8.33	8.33	8.33	8.27	8.27
225.0	8.44	8.38	8.38	8.38	8.33	8.33	8.33	8.27	8.27
270.0	8.44	8.38	8.38	8.38	8.38	8.33	8.27	8.27	8.27
315.0	8.44	8.44	8.38	8.38	8.38	8.33	8.33	8.33	8.33
360.0	8.44	8.38	8.33	8.33	8.33	8.27	8.27	8.27	8.27
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.21	8.21	8.21	8.21	8.21	8.21	8.16	8.16	8.16
45.0	8.27	8.27	8.27	8.21	8.21	8.21	8.21	8.21	8.16
90.0	8.27	8.21	8.21	8.21	8.21	8.21	8.16	8.21	8.16
135.0	8.38	8.38	8.33	8.33	8.38	8.38	8.27	8.16	8.16
180.0	8.27	8.21	8.21	8.21	8.21	8.21	8.21	8.16	8.16
225.0	8.27	8.27	8.21	8.27	8.21	8.21	8.21	8.16	8.16
270.0	8.27	8.27	8.27	8.27	8.21	8.21	8.21	8.16	8.21
315.0	8.27	8.33	8.33	8.27	8.21	8.16	8.16	8.16	8.16
360.0	8.21	8.21	8.21	8.21	8.21	8.21	8.16	8.16	8.16

Intensity data(cd)

C/γ(°)	90.0
0.0	8.16
45.0	8.21
90.0	8.16
135.0	8.16
180.0	8.16
225.0	8.16
270.0	8.16
315.0	8.16
360.0	8.16