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Nata

Client:

LumCAT: 2-1120-A3

Luminaire: 99.02.73.172+92.76.365.00

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: 1.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 71

Width(mm): 71

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1745.60, Efficiency(%): 85.15% , Luminous Efficacy(lm/W): 114.54

Central intensity(cd): 10420.730, Maximum intensity(cd): 10420.730

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=17.0

[C90/270]Total=17.0

Field angle(10%Imax): [C0/180]Total=34.8

[C90/270]Total=34.8

Maximum s/h(1/2): C0_180=0.29 C90_270=0.29

Maximum s/h(1/4): C0_180=0.28 C90_270=0.28

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 85.15%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.607%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	10420.734	0.000	0	.000%	.000%
1.0	10373.625	9.950	9.95	.485%	.570%
2.0	10198.477	29.527	39.477	1.440%	2.262%
3.0	9853.664	47.958	87.435	2.339%	5.009%
4.0	9335.883	64.234	151.668	3.133%	8.689%
5.0	8577.211	77.061	228.73	3.759%	13.103%
6.0	7726.359	85.680	314.409	4.179%	18.012%
7.0	6702.680	89.561	403.97	4.369%	23.142%
8.0	5677.172	88.600	492.57	4.322%	28.218%
9.0	4664.742	83.816	576.386	4.089%	33.019%
10.0	3697.102	75.672	652.057	3.691%	37.354%
11.0	2955.797	66.476	718.534	3.243%	41.163%
12.0	2420.930	58.775	777.309	2.867%	44.530%
13.0	1959.398	51.983	829.292	2.536%	47.508%
14.0	1631.461	45.963	875.255	2.242%	50.141%
15.0	1394.142	41.537	916.792	2.026%	52.520%
16.0	1200.684	38.021	954.813	1.855%	54.698%
17.0	1085.491	35.602	990.415	1.737%	56.738%
18.0	983.820	34.118	1024.534	1.664%	58.692%
19.0	905.034	32.862	1057.396	1.603%	60.575%
20.0	844.952	32.030	1089.426	1.562%	62.410%
21.0	803.159	31.647	1121.073	1.544%	64.223%
22.0	770.667	31.627	1152.699	1.543%	66.035%
23.0	745.270	31.808	1184.508	1.552%	67.857%
24.0	723.797	32.119	1216.627	1.567%	69.697%
25.0	704.355	32.473	1249.1	1.584%	71.557%
26.0	687.073	32.845	1281.945	1.602%	73.439%
27.0	669.382	33.186	1315.131	1.619%	75.340%
28.0	651.867	33.451	1348.582	1.632%	77.256%
29.0	635.266	33.675	1382.257	1.643%	79.185%
30.0	620.620	33.909	1416.166	1.654%	81.128%
31.0	605.468	34.120	1450.286	1.664%	83.082%
32.0	589.767	34.242	1484.528	1.670%	85.044%
33.0	563.766	33.984	1518.511	1.658%	86.991%
34.0	518.217	32.744	1551.255	1.597%	88.867%
35.0	466.601	30.585	1581.84	1.492%	90.619%
36.0	408.973	27.878	1609.719	1.360%	92.216%
37.0	346.458	24.638	1634.357	1.202%	93.627%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	283.964	21.043	1655.399	1.026%	94.833%
39.0	231.863	17.607	1673.006	.859%	95.841%
40.0	158.337	13.609	1686.615	.664%	96.621%
41.0	108.717	9.510	1696.124	.464%	97.166%
42.0	60.574	6.151	1702.275	.300%	97.518%
43.0	28.997	3.318	1705.593	.162%	97.708%
44.0	19.448	1.828	1707.421	.089%	97.813%
45.0	16.088	1.366	1708.787	.067%	97.891%
46.0	12.994	1.137	1709.924	.055%	97.956%
47.0	11.447	0.972	1710.896	.047%	98.012%
48.0	10.624	0.892	1711.789	.044%	98.063%
49.0	9.802	0.839	1712.627	.041%	98.111%
50.0	9.499	0.805	1713.432	.039%	98.157%
51.0	9.274	0.794	1714.226	.039%	98.203%
52.0	9.120	0.789	1715.016	.039%	98.248%
53.0	8.979	0.787	1715.803	.038%	98.293%
54.0	8.838	0.785	1716.588	.038%	98.338%
55.0	8.712	0.783	1717.372	.038%	98.383%
56.0	8.606	0.783	1718.154	.038%	98.428%
57.0	8.501	0.782	1718.936	.038%	98.473%
58.0	8.395	0.781	1719.718	.038%	98.517%
59.0	8.304	0.781	1720.498	.038%	98.562%
60.0	8.255	0.782	1721.281	.038%	98.607%
61.0	8.163	0.783	1722.064	.038%	98.652%
62.0	8.100	0.784	1722.848	.038%	98.697%
63.0	8.072	0.787	1723.634	.038%	98.742%
64.0	8.009	0.789	1724.423	.038%	98.787%
65.0	7.966	0.791	1725.214	.039%	98.832%
66.0	7.917	0.792	1726.007	.039%	98.878%
67.0	7.868	0.794	1726.8	.039%	98.923%
68.0	7.854	0.796	1727.597	.039%	98.969%
69.0	7.819	0.800	1728.396	.039%	99.015%
70.0	7.791	0.802	1729.198	.039%	99.060%
71.0	7.770	0.804	1730.002	.039%	99.107%
72.0	7.734	0.806	1730.808	.039%	99.153%
73.0	7.713	0.808	1731.616	.039%	99.199%
74.0	7.699	0.810	1732.426	.040%	99.245%
75.0	7.685	0.813	1733.239	.040%	99.292%

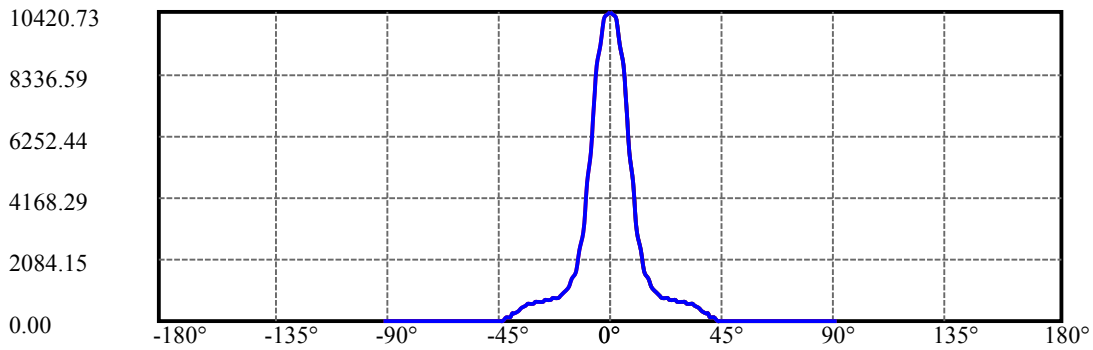
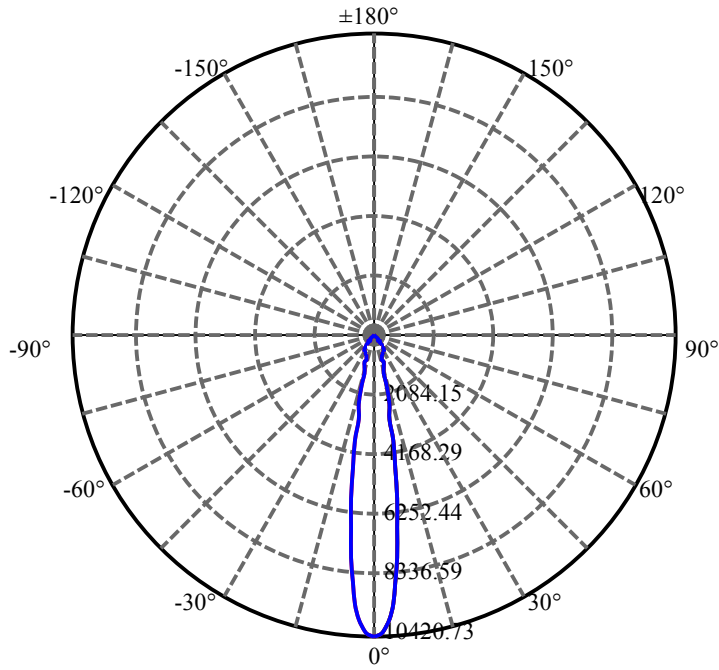
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.678	0.816	1734.055	.040%	99.339%
77.0	7.657	0.818	1734.872	.040%	99.386%
78.0	7.643	0.819	1735.691	.040%	99.432%
79.0	7.629	0.821	1736.512	.040%	99.479%
80.0	7.615	0.822	1737.334	.040%	99.527%
81.0	7.601	0.823	1738.157	.040%	99.574%
82.0	7.615	0.825	1738.982	.040%	99.621%
83.0	7.601	0.827	1739.809	.040%	99.668%
84.0	7.594	0.828	1740.637	.040%	99.716%
85.0	7.594	0.829	1741.466	.040%	99.763%
86.0	7.594	0.830	1742.296	.040%	99.811%
87.0	7.545	0.828	1743.124	.040%	99.858%
88.0	7.523	0.825	1743.95	.040%	99.906%
89.0	7.523	0.825	1744.774	.040%	99.953%
90.0	7.516	0.825	1745.599	.040%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1416.17	69.08%	81.13%
0-40	1686.61	82.27%	96.62%
0-60	1721.28	83.96%	98.61%
0-90	1744.77	85.11%	99.95%
0-120	1744.77	85.11%	99.95%
0-180	1745.60	85.15%	100.00%
60-90	24.28	1.18%	1.39%
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%
0-29.42	1396.48	68.12%	80.00%

ZONAL LUMEN SUMMARY

0-10	652.06
10-20	437.37
20-30	326.74
30-40	270.45
40-50	26.82
50-60	7.85
60-70	7.92
70-80	8.14
80-90	7.44
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



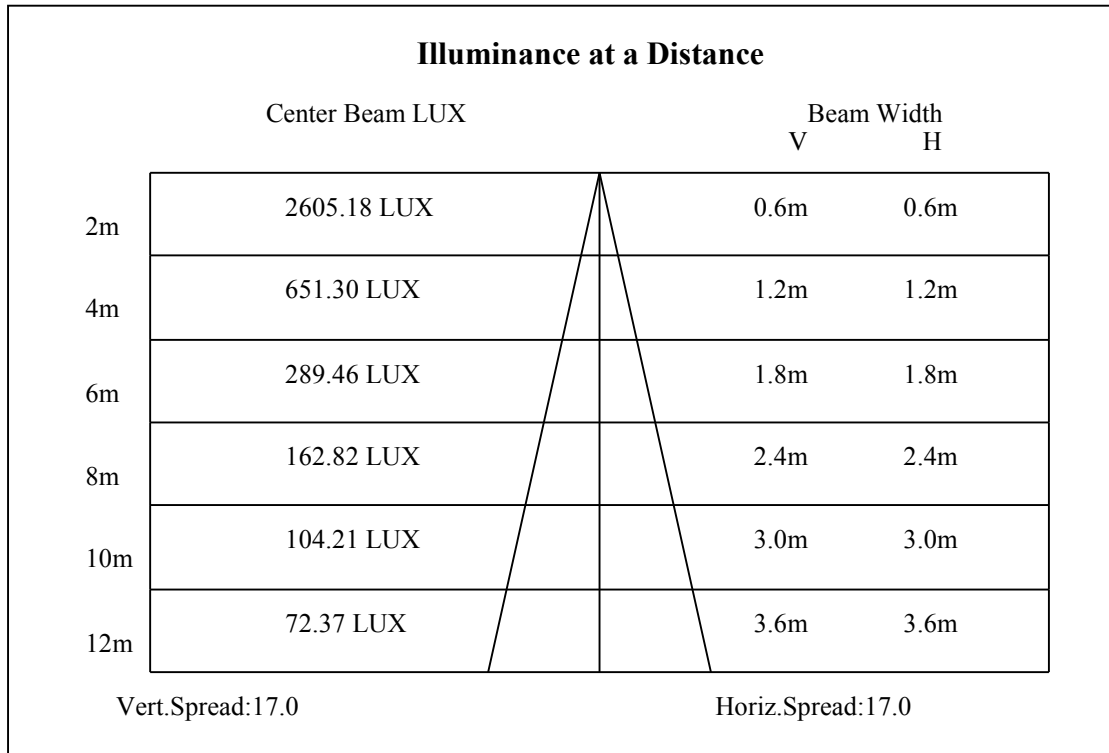
C0(Max): —————

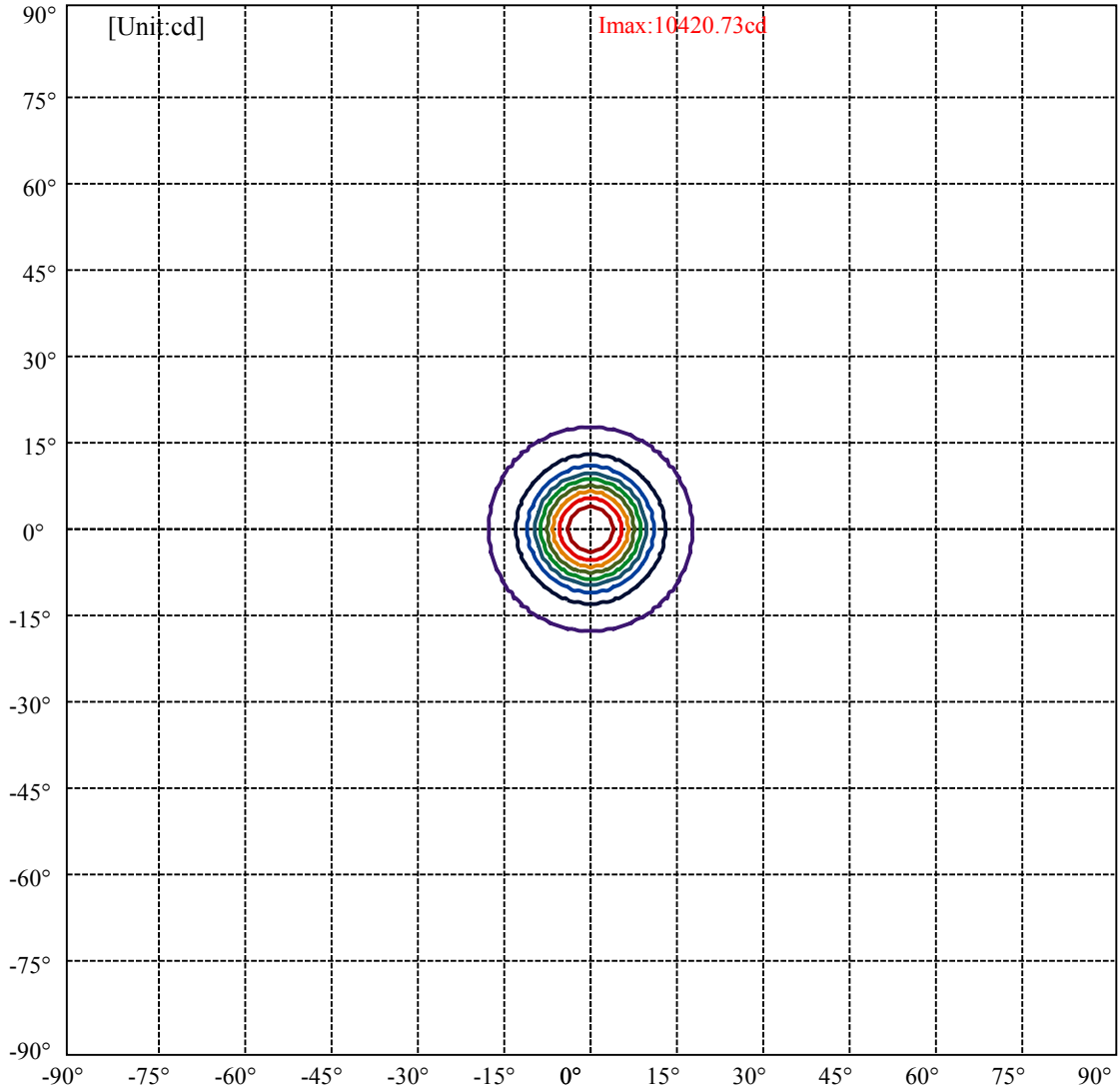
C0/C180: —————

C90/C270: —————

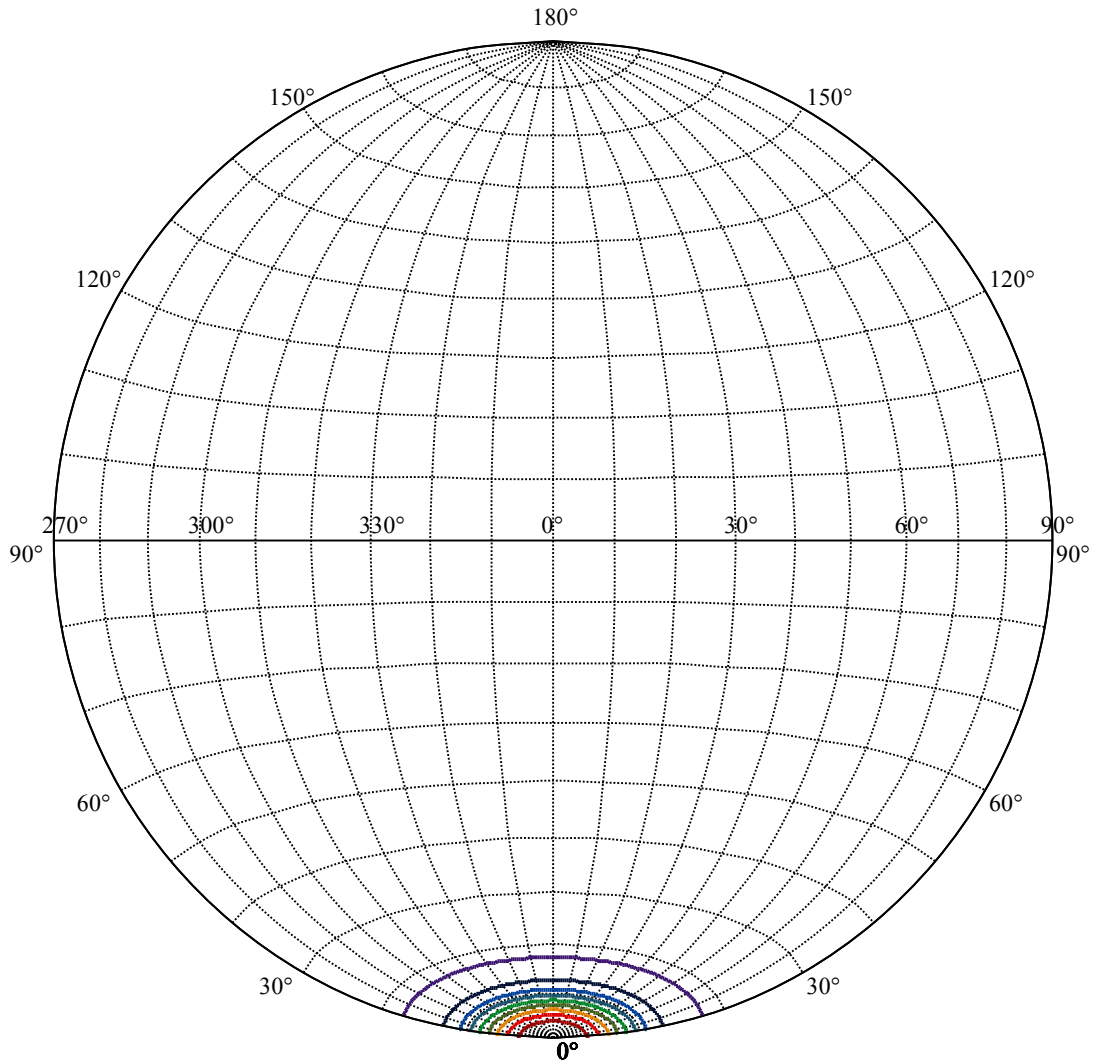
Field angle(10%Imax):C0/180Left:17.4 Right:17.4
:C90/270Left:17.4 Right:17.4

Beam Angle(50%Imax):C0/180Left:8.5 Right:8.5
:C90/270Left:8.5 Right:8.5





(10%Imax) 1042.07	—
(20%Imax) 2084.15	—
(30%Imax) 3126.22	—
(40%Imax) 4168.29	—
(50%Imax) 5210.37	—
(60%Imax) 6252.44	—
(70%Imax) 7294.51	—
(80%Imax) 8336.59	—
(90%Imax) 9378.66	—



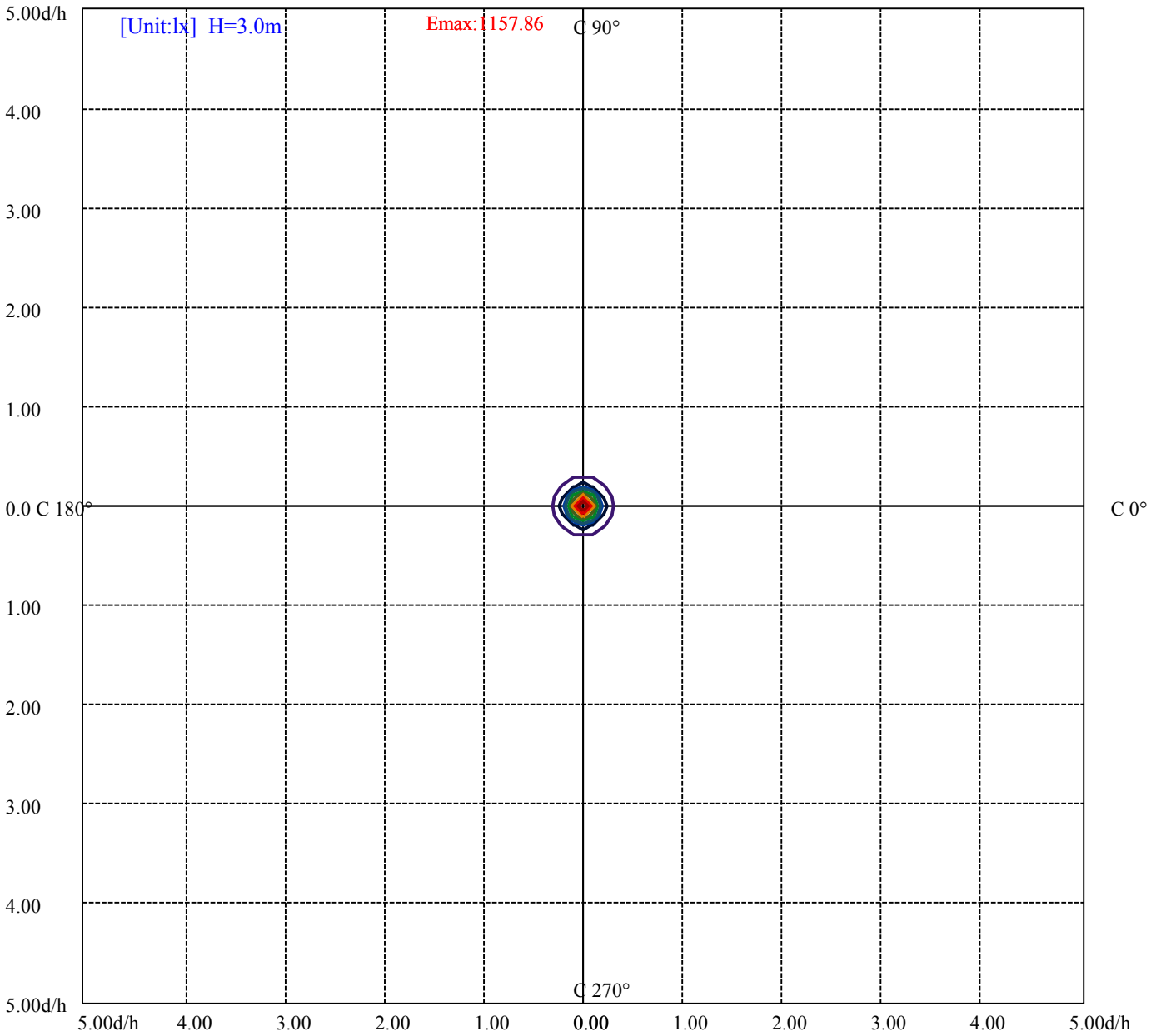
House

[Unit:cd]

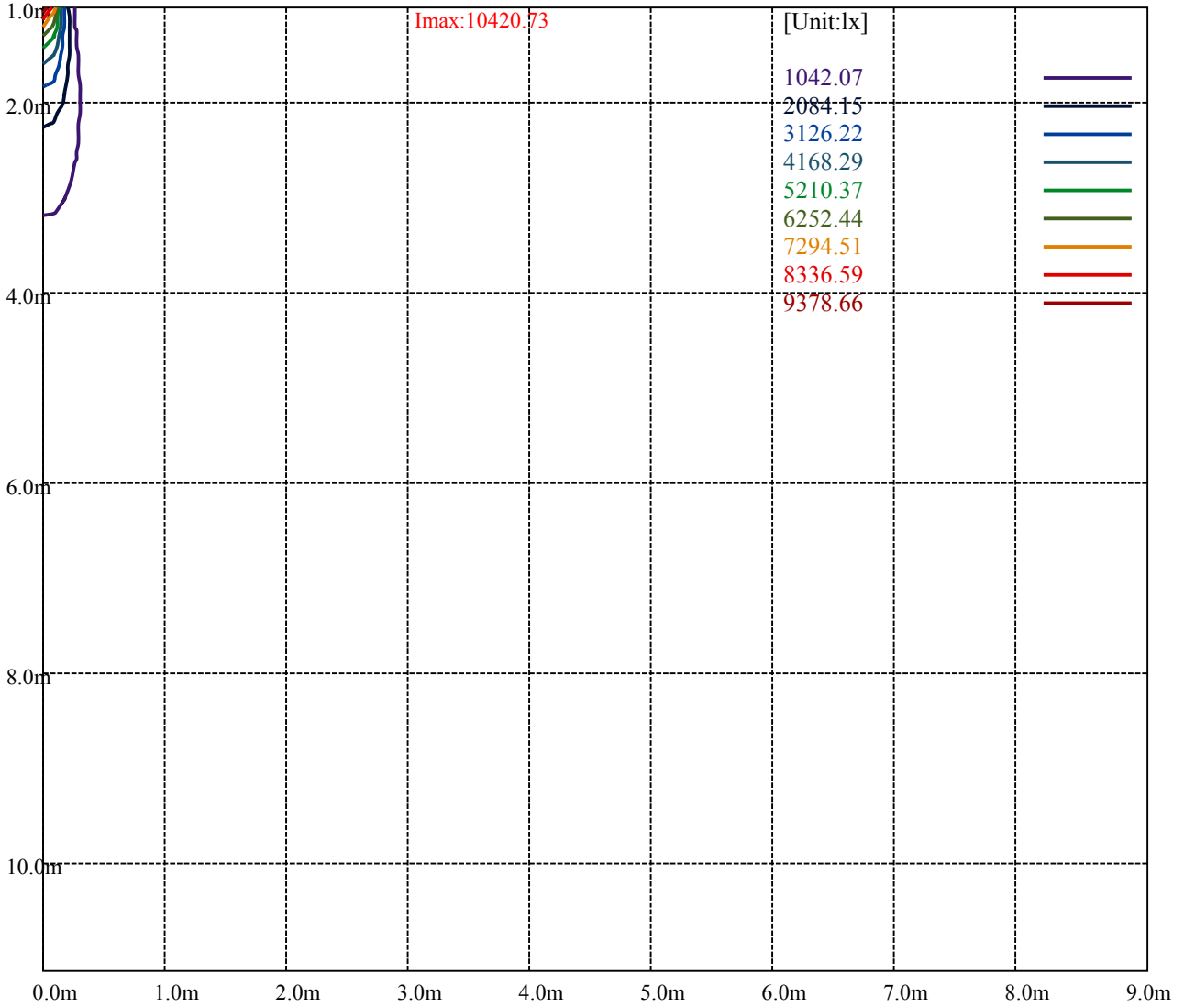
Road

Imax:10420.73

(10%Imax) 1042.07	—
(20%Imax) 2084.15	—
(30%Imax) 3126.22	—
(40%Imax) 4168.29	—
(50%Imax) 5210.37	—
(60%Imax) 6252.44	—
(70%Imax) 7294.51	—
(80%Imax) 8336.59	—
(90%Imax) 9378.66	—



(10%Emax) 115.7856	—
(20%Emax) 231.5722	—
(30%Emax) 347.3578	—
(40%Emax) 463.1433	—
(50%Emax) 578.9289	—
(60%Emax) 694.7156	—
(70%Emax) 810.5011	—
(80%Emax) 926.2867	—
(90%Emax) 1042.072	—



Luminance Table

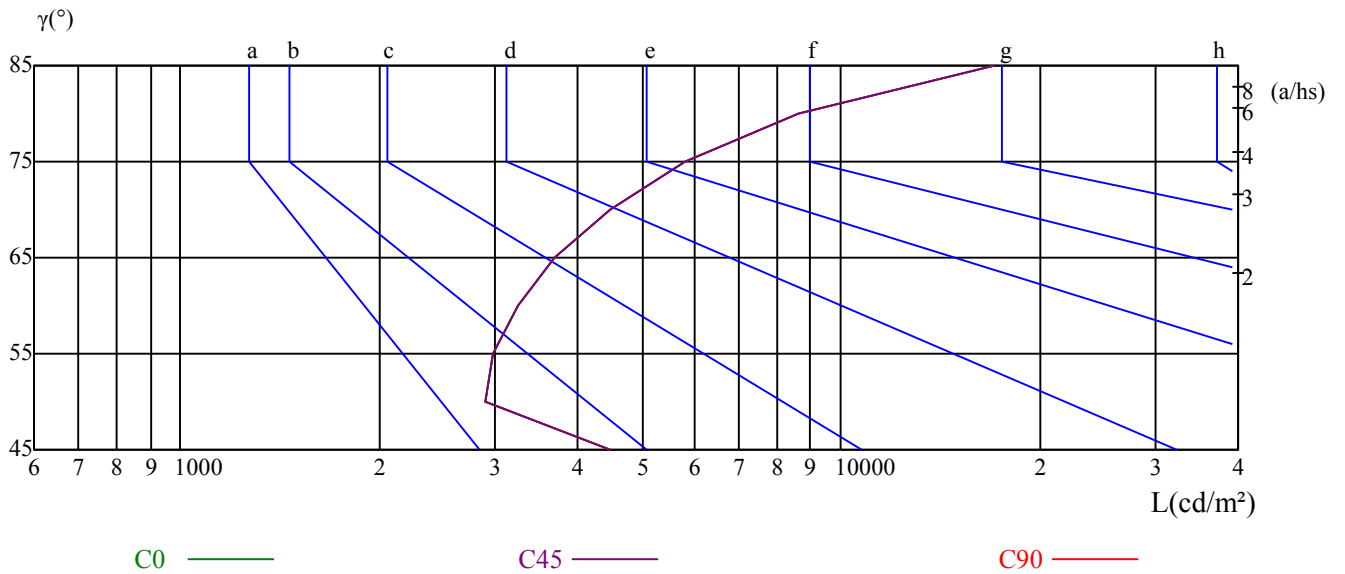
γ	45	50	55	60	65	70	75	80	85
C0	4463	2899	2979	3238	3698	4468	5825	8602	17091
C45	4463	2899	2979	3238	3698	4468	5825	8602	17091
C90	4463	2899	2979	3238	3698	4468	5825	8602	17091

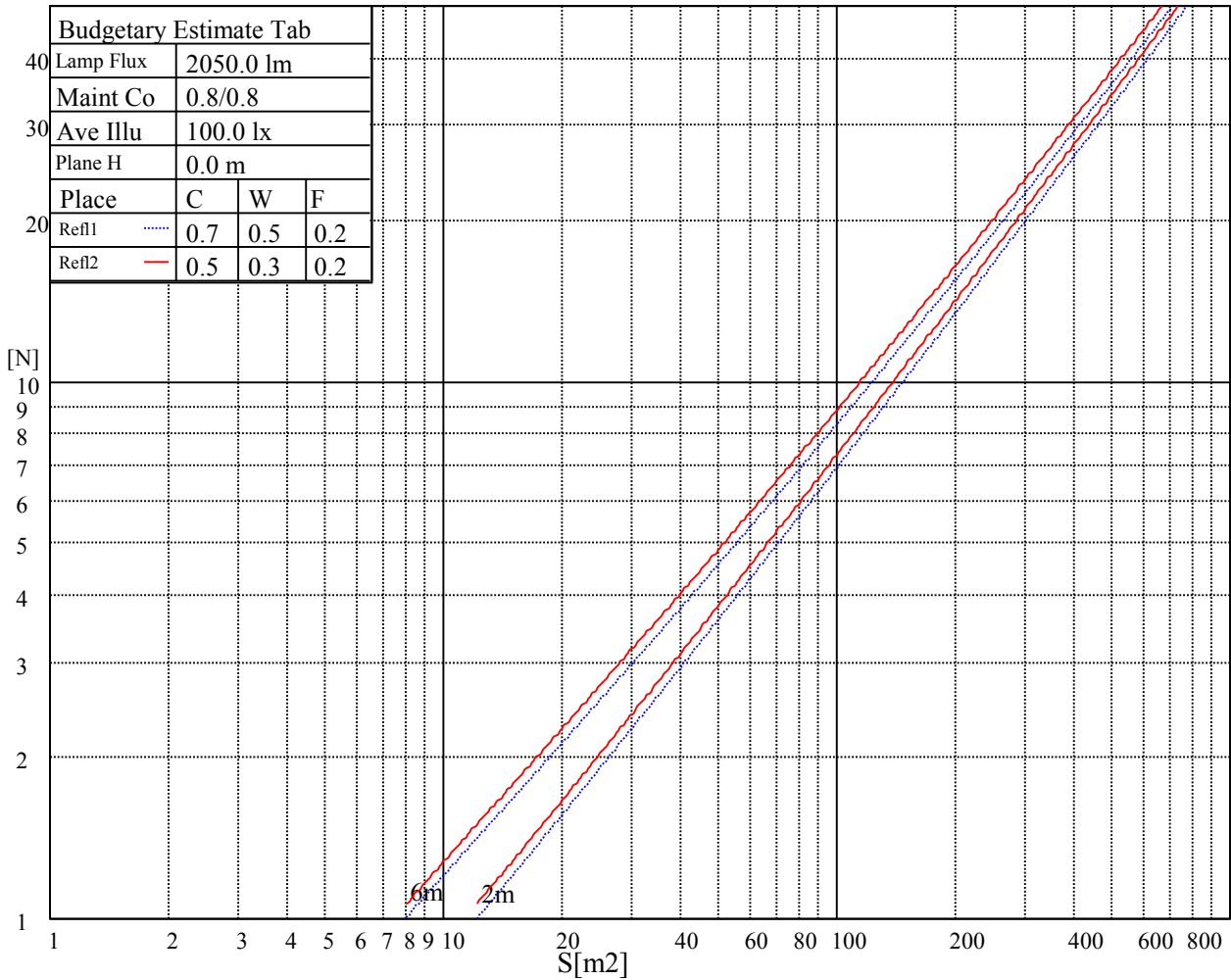
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3698	3698	3698	5825	5825	5825	17091	17091	17091

Glare Table

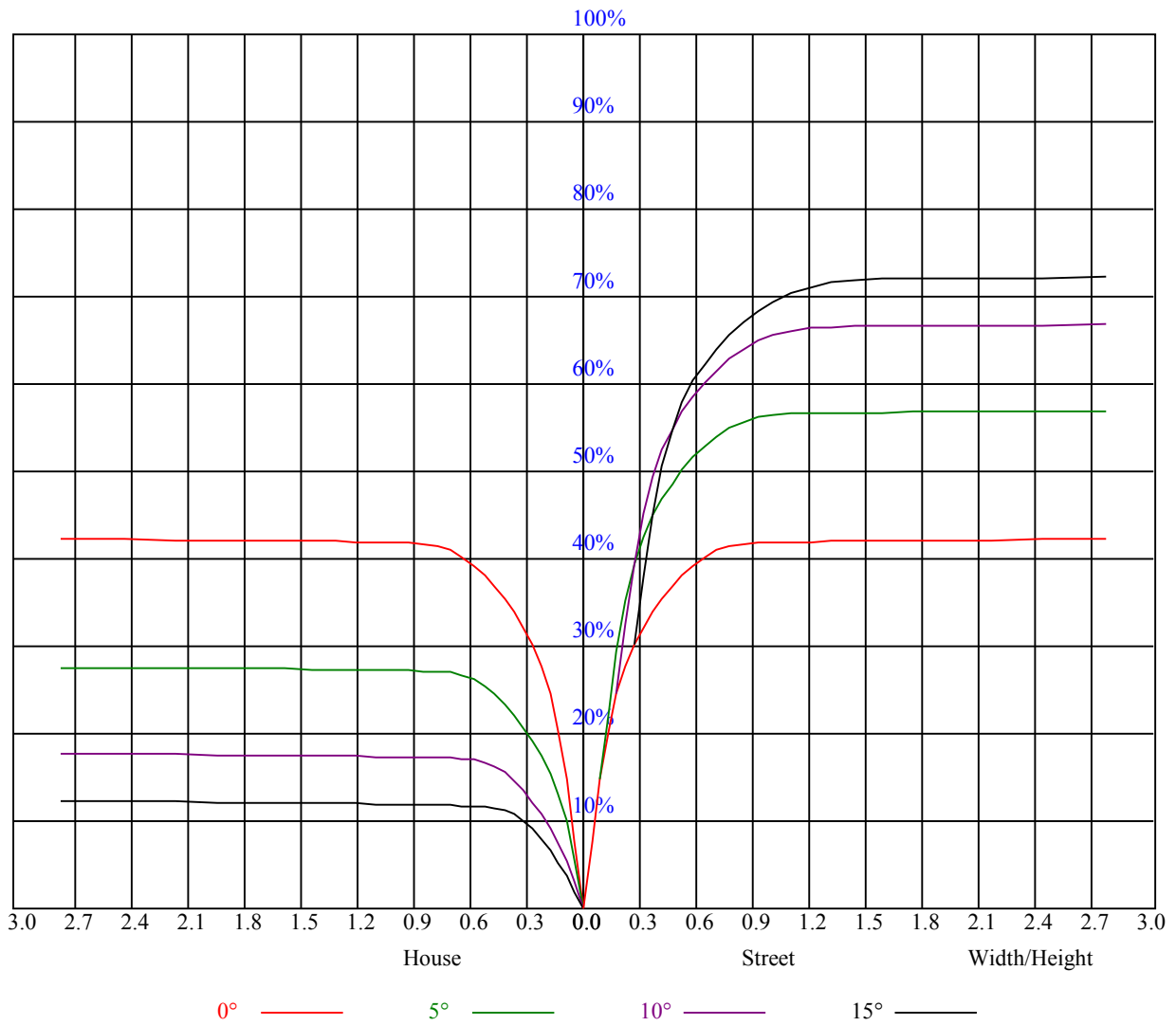
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

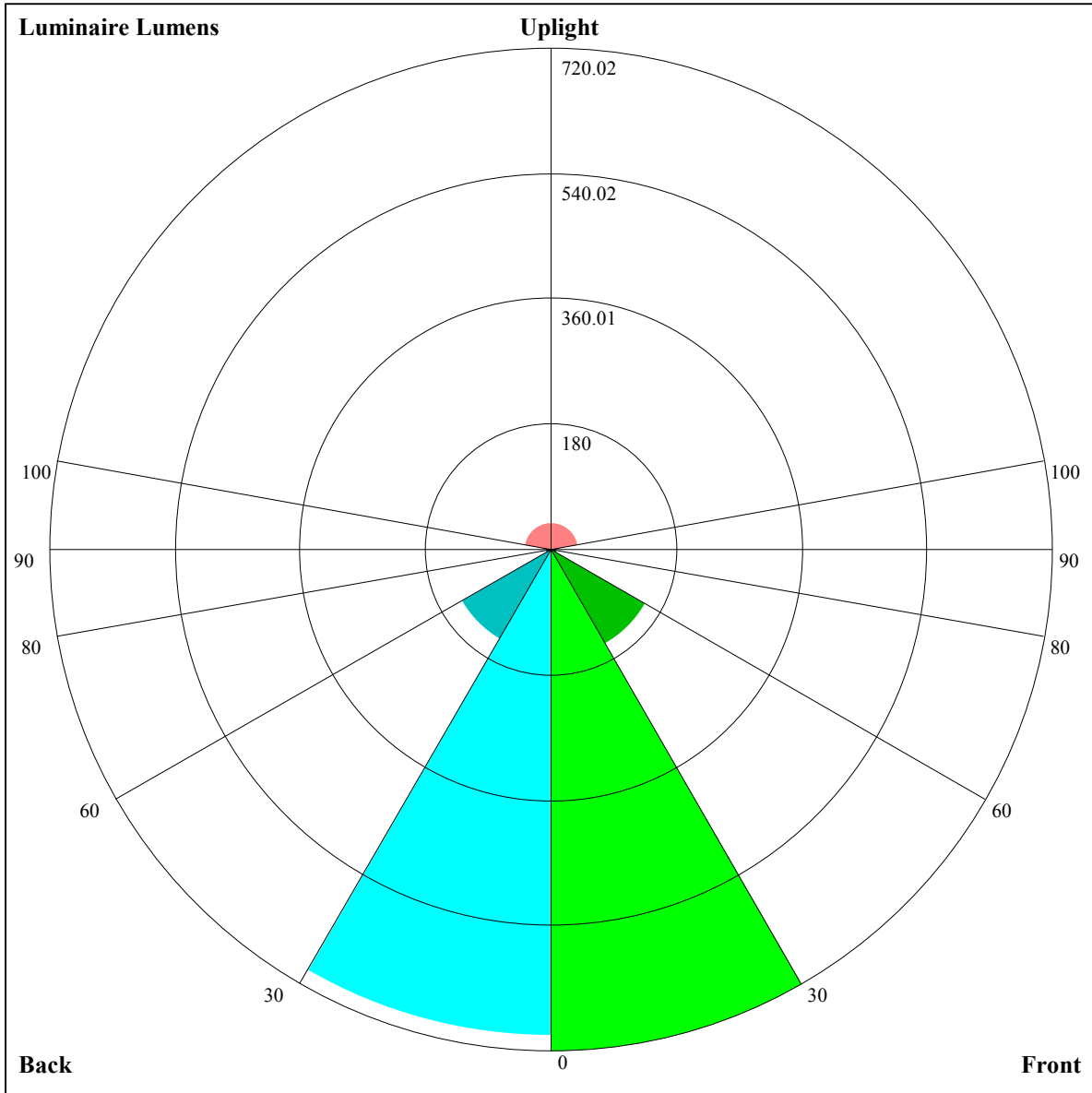
Luminance Limiting Curve





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	1.01	1.01	1.01	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.85
1	0.95	0.93	0.92	0.93	0.92	0.90	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.83	0.81
2	0.90	0.87	0.85	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.80	0.81	0.80	0.79	0.77
3	0.86	0.82	0.79	0.84	0.81	0.79	0.82	0.80	0.78	0.80	0.78	0.76	0.79	0.77	0.75	0.74
4	0.82	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.74	0.77	0.75	0.73	0.76	0.74	0.72	0.71
5	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.73	0.71	0.69	0.68
6	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.67	0.65
7	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.63
8	0.69	0.65	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.61
9	0.67	0.63	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.59
10	0.65	0.61	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.57





Luminaire Lumens:

FL=720.02,FM=155.39,FH=8.01,FVH=4.13

BL=698.01,BM=148.49,BH=8.04,BVH=4.13

UL=8.2,UH=39.03

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	10401.19	10369.13	10191.38	9815.06	9300.38	8540.44	7638.19	6752.81	5821.31
45.0	10427.06	10437.75	10310.06	10077.19	9681.75	8946.56	8214.19	7335.56	6273.56
90.0	10437.75	10369.69	10189.69	9825.19	9325.69	8579.81	7631.44	6678.00	5572.13
135.0	10416.94	10393.31	10262.25	10031.06	9563.63	8881.31	8214.75	7079.63	6109.88
180.0	10401.19	10334.25	10192.50	9852.75	9270.00	8565.75	7725.94	6531.19	5532.75
225.0	10427.06	10337.06	10089.56	9644.63	9036.56	8120.81	7215.75	6143.06	5041.13
270.0	10437.75	10412.44	10233.00	9942.75	9464.06	8697.38	7738.88	6820.31	5745.38
315.0	10416.94	10335.38	10119.38	9640.69	9045.00	8285.63	7431.75	6280.88	5321.25
360.0	10401.19	10369.13	10191.38	9815.06	9300.38	8540.44	7638.19	6752.81	5821.31
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4661.44	3830.06	3141.00	2596.50	2072.25	1757.81	1519.31	1293.19	1155.38
45.0	5204.25	4293.56	3390.75	2764.13	2232.56	1842.19	1575.56	1367.44	1200.94
90.0	4611.94	3628.69	2856.38	2344.50	1913.63	1592.44	1378.13	1113.86	1057.95
135.0	5144.63	3999.94	3211.31	2597.06	2040.75	1712.25	1454.06	1237.50	1100.25
180.0	4548.94	3458.81	2781.00	2268.56	1839.38	1522.69	1315.13	1120.16	1019.25
225.0	4094.44	3193.88	2514.38	2065.50	1723.50	1414.69	1121.51	1106.89	984.71
270.0	4660.31	3776.06	2976.75	2435.06	1972.69	1634.63	1415.25	1245.38	1085.63
315.0	4392.00	3395.81	2774.81	2296.13	1880.44	1575.00	1374.19	1121.06	1079.83
360.0	4661.44	3830.06	3141.00	2596.50	2072.25	1757.81	1519.31	1293.19	1155.38
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1042.88	947.25	879.19	835.31	797.06	768.94	744.75	725.06	708.75
45.0	1078.31	982.13	894.38	843.19	802.13	765.56	740.25	720.00	699.75
90.0	965.25	894.38	843.58	795.38	765.34	742.28	719.16	703.52	688.22
135.0	993.94	906.19	846.56	807.75	771.75	747.00	723.94	704.81	687.94
180.0	921.04	851.51	806.51	768.49	740.14	720.68	703.86	683.10	666.34
225.0	910.13	853.82	801.45	769.44	744.36	722.19	704.93	685.80	667.29
270.0	987.19	914.06	849.94	811.69	783.00	756.00	732.38	711.56	693.00
315.0	971.83	890.94	838.01	794.03	761.57	739.52	721.13	700.99	685.29
360.0	1042.88	947.25	879.19	835.31	797.06	768.94	744.75	725.06	708.75
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	690.75	672.19	655.31	640.13	618.75	604.69	589.50	541.69	495.56
45.0	679.50	664.31	646.88	631.13	615.38	600.19	585.56	554.06	501.75
90.0	670.44	652.44	635.40	617.74	603.23	587.70	556.71	513.84	459.06
135.0	669.38	650.81	635.63	619.31	603.56	591.19	573.75	528.19	479.81
180.0	650.64	633.60	620.44	608.96	595.58	584.61	555.53	501.24	457.43
225.0	652.16	637.37	620.10	608.34	596.64	568.69	530.33	481.05	425.36
270.0	673.31	655.88	636.19	621.00	606.38	591.19	559.69	516.38	455.63
315.0	668.87	648.34	632.19	618.36	604.24	589.89	559.07	509.29	458.21
360.0	690.75	672.19	655.31	640.13	618.75	604.69	589.50	541.69	495.56
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	450.00	379.13	309.94	287.44	179.83	125.61	73.35	33.64	19.58
45.0	450.56	395.44	321.75	284.06	201.32	146.64	82.91	44.61	21.09
90.0	398.08	341.10	283.67	211.28	157.33	107.49	59.68	25.99	17.49
135.0	424.13	361.13	294.19	288.00	175.39	123.13	71.44	33.30	20.53
180.0	395.89	324.51	271.86	207.62	141.86	99.73	58.67	24.98	19.91
225.0	354.43	295.03	227.42	164.03	114.30	70.71	35.10	21.38	18.96
270.0	401.63	342.56	289.13	206.21	150.81	100.41	49.84	25.43	19.41
315.0	397.07	332.78	273.77	206.27	145.86	96.02	53.61	22.67	18.62
360.0	450.00	379.13	309.94	287.44	179.83	125.61	73.35	33.64	19.58

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	15.98	12.60	11.08	10.52	9.68	9.45	9.23	9.06	8.94
45.0	16.43	12.94	10.80	10.18	9.73	9.45	9.23	9.11	8.94
90.0	14.85	11.98	10.91	10.24	9.68	9.51	9.28	9.11	9.00
135.0	17.21	13.89	12.21	11.36	10.07	9.68	9.51	9.28	9.17
180.0	17.10	13.84	11.98	10.97	9.79	9.51	9.34	9.17	9.06
225.0	15.41	12.88	11.76	10.63	9.90	9.56	9.28	9.17	8.94
270.0	16.54	13.61	11.81	10.80	9.90	9.51	9.23	9.11	8.94
315.0	15.19	12.21	11.03	10.29	9.68	9.34	9.11	8.94	8.83
360.0	15.98	12.60	11.08	10.52	9.68	9.45	9.23	9.06	8.94
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.78	8.66	8.55	8.44	8.33	8.21	8.16	8.10	8.04
45.0	8.78	8.72	8.61	8.49	8.44	8.33	8.27	8.16	8.10
90.0	8.83	8.72	8.61	8.49	8.44	8.33	8.27	8.16	8.10
135.0	9.06	8.89	8.78	8.66	8.55	8.44	8.38	8.27	8.21
180.0	8.89	8.78	8.66	8.61	8.44	8.38	8.33	8.27	8.21
225.0	8.83	8.72	8.61	8.49	8.38	8.33	8.27	8.16	8.10
270.0	8.83	8.66	8.55	8.44	8.33	8.27	8.21	8.10	8.04
315.0	8.72	8.55	8.49	8.38	8.27	8.16	8.16	8.10	7.99
360.0	8.78	8.66	8.55	8.44	8.33	8.21	8.16	8.10	8.04
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.99	7.93	7.93	7.88	7.82	7.82	7.76	7.76	7.71
45.0	8.10	7.99	7.99	7.93	7.88	7.88	7.82	7.82	7.82
90.0	8.10	7.99	7.93	7.93	7.88	7.88	7.82	7.82	7.76
135.0	8.16	8.10	8.04	7.99	7.93	7.88	7.88	7.82	7.82
180.0	8.16	8.10	8.04	7.99	7.93	7.93	7.88	7.82	7.82
225.0	8.10	8.04	7.99	7.93	7.88	7.88	7.82	7.82	7.76
270.0	7.99	7.99	7.93	7.88	7.82	7.82	7.82	7.76	7.76
315.0	7.99	7.93	7.88	7.82	7.82	7.76	7.76	7.71	7.71
360.0	7.99	7.93	7.93	7.88	7.82	7.82	7.76	7.76	7.71
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.71	7.71	7.71	7.65	7.65	7.65	7.65	7.65	7.65
45.0	7.76	7.76	7.71	7.71	7.71	7.71	7.71	7.65	7.65
90.0	7.71	7.71	7.71	7.65	7.65	7.59	7.59	7.59	7.59
135.0	7.82	7.71	7.71	7.71	7.71	7.71	7.65	7.65	7.59
180.0	7.76	7.76	7.71	7.71	7.71	7.65	7.65	7.65	7.65
225.0	7.71	7.71	7.71	7.71	7.71	7.71	7.65	7.65	7.59
270.0	7.71	7.71	7.71	7.71	7.65	7.65	7.65	7.59	7.59
315.0	7.71	7.65	7.65	7.65	7.65	7.59	7.59	7.59	7.59
360.0	7.71	7.71	7.71	7.65	7.65	7.65	7.65	7.65	7.65
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	7.59	7.59	7.59	7.59	7.59	7.71	7.54	7.54	7.54
45.0	7.65	7.71	7.65	7.71	7.65	7.54	7.54	7.48	7.54
90.0	7.59	7.59	7.54	7.54	7.54	7.54	7.54	7.48	7.54
135.0	7.59	7.59	7.59	7.59	7.59	7.54	7.54	7.59	7.54
180.0	7.59	7.59	7.59	7.54	7.54	7.59	7.54	7.59	7.54
225.0	7.59	7.65	7.71	7.71	7.65	7.59	7.54	7.48	7.54
270.0	7.59	7.59	7.59	7.54	7.59	7.59	7.59	7.54	7.48
315.0	7.59	7.59	7.54	7.54	7.59	7.65	7.54	7.48	7.48
360.0	7.59	7.59	7.59	7.59	7.59	7.71	7.54	7.54	7.54

Intensity data(cd)

C/γ(°)	90.0
0.0	7.54
45.0	7.54
90.0	7.48
135.0	7.48
180.0	7.54
225.0	7.48
270.0	7.54
315.0	7.54
360.0	7.54