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Nata

Client:

LumCAT: 4-2275-M

Luminaire: 92.70.131.00

Report No:

Voltage(V): 34.0200

Test No: GC2019082601

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): 100

Width(mm): 100

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1778.33, Efficiency(%): 86.75% , Luminous Efficacy(lm/W): 116.69

Central intensity(cd): 8447.203, Maximum intensity(cd): 8447.203

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=20.6

[C90/270]Total=20.6

Field angle(10%Imax): [C0/180]Total=41.4

[C90/270]Total=41.4

Maximum s/h(1/2): C0_180=0.35 C90_270=0.35

Maximum s/h(1/4): C0_180=0.35 C90_270=0.35

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.75%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.554%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8447.203	0.000	0	.000%	.000%
1.0	8403.680	8.063	8.063	.393%	.453%
2.0	8268.961	23.930	31.993	1.167%	1.799%
3.0	8034.750	38.993	70.986	1.902%	3.992%
4.0	7741.547	52.808	123.794	2.576%	6.961%
5.0	7349.625	64.921	188.716	3.167%	10.612%
6.0	6856.594	74.657	263.373	3.642%	14.810%
7.0	6296.133	81.639	345.012	3.982%	19.401%
8.0	5724.844	86.032	431.044	4.197%	24.239%
9.0	5060.250	87.407	518.451	4.264%	29.154%
10.0	4382.930	85.457	603.909	4.169%	33.959%
11.0	3798.984	81.754	685.663	3.988%	38.557%
12.0	3233.672	76.877	762.54	3.750%	42.879%
13.0	2677.570	70.152	832.691	3.422%	46.824%
14.0	2241.563	62.964	895.656	3.071%	50.365%
15.0	1888.945	56.705	952.361	2.766%	53.554%
16.0	1587.375	50.938	1003.299	2.485%	56.418%
17.0	1322.810	45.319	1048.618	2.211%	58.966%
18.0	1149.223	40.758	1089.377	1.988%	61.258%
19.0	1020.867	37.755	1127.132	1.842%	63.381%
20.0	908.346	35.310	1162.442	1.722%	65.367%
21.0	823.493	33.255	1195.697	1.622%	67.237%
22.0	761.027	31.842	1227.538	1.553%	69.028%
23.0	718.952	31.054	1258.592	1.515%	70.774%
24.0	691.966	30.848	1289.44	1.505%	72.508%
25.0	672.434	31.023	1320.463	1.513%	74.253%
26.0	658.216	31.410	1351.874	1.532%	76.019%
27.0	645.560	31.897	1383.771	1.556%	77.813%
28.0	634.022	32.396	1416.167	1.580%	79.635%
29.0	623.517	32.901	1449.068	1.605%	81.485%
30.0	614.074	33.415	1482.483	1.630%	83.364%
31.0	603.471	33.883	1516.365	1.653%	85.269%
32.0	592.313	34.258	1550.623	1.671%	87.195%
33.0	571.289	34.280	1584.903	1.672%	89.123%
34.0	523.329	33.126	1618.029	1.616%	90.986%
35.0	455.913	30.412	1648.441	1.483%	92.696%
36.0	375.933	26.486	1674.927	1.292%	94.185%
37.0	290.566	21.737	1696.665	1.060%	95.408%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	212.091	16.778	1713.443	.818%	96.351%
39.0	128.327	11.619	1725.062	.567%	97.004%
40.0	60.778	6.595	1731.657	.322%	97.375%
41.0	30.234	3.241	1734.898	.158%	97.558%
42.0	18.633	1.775	1736.674	.087%	97.657%
43.0	15.054	1.248	1737.922	.061%	97.728%
44.0	12.797	1.051	1738.973	.051%	97.787%
45.0	11.658	0.940	1739.913	.046%	97.840%
46.0	11.166	0.893	1740.805	.044%	97.890%
47.0	10.814	0.874	1741.679	.043%	97.939%
48.0	10.554	0.864	1742.543	.042%	97.987%
49.0	10.294	0.856	1743.399	.042%	98.036%
50.0	10.090	0.850	1744.249	.041%	98.083%
51.0	9.907	0.846	1745.095	.041%	98.131%
52.0	9.745	0.843	1745.938	.041%	98.178%
53.0	9.577	0.840	1746.779	.041%	98.226%
54.0	9.436	0.838	1747.617	.041%	98.273%
55.0	9.288	0.836	1748.453	.041%	98.320%
56.0	9.162	0.834	1749.286	.041%	98.367%
57.0	9.063	0.833	1750.12	.041%	98.414%
58.0	8.944	0.833	1750.952	.041%	98.460%
59.0	8.845	0.832	1751.784	.041%	98.507%
60.0	8.768	0.832	1752.616	.041%	98.554%
61.0	8.691	0.833	1753.449	.041%	98.601%
62.0	8.641	0.835	1754.285	.041%	98.648%
63.0	8.578	0.837	1755.122	.041%	98.695%
64.0	8.515	0.839	1755.961	.041%	98.742%
65.0	8.459	0.840	1756.801	.041%	98.789%
66.0	8.416	0.842	1757.643	.041%	98.837%
67.0	8.374	0.844	1758.487	.041%	98.884%
68.0	8.332	0.846	1759.333	.041%	98.932%
69.0	8.304	0.849	1760.182	.041%	98.979%
70.0	8.262	0.851	1761.033	.042%	99.027%
71.0	8.234	0.853	1761.885	.042%	99.075%
72.0	8.205	0.855	1762.74	.042%	99.123%
73.0	8.163	0.856	1763.596	.042%	99.171%
74.0	8.149	0.858	1764.454	.042%	99.220%
75.0	8.121	0.860	1765.313	.042%	99.268%

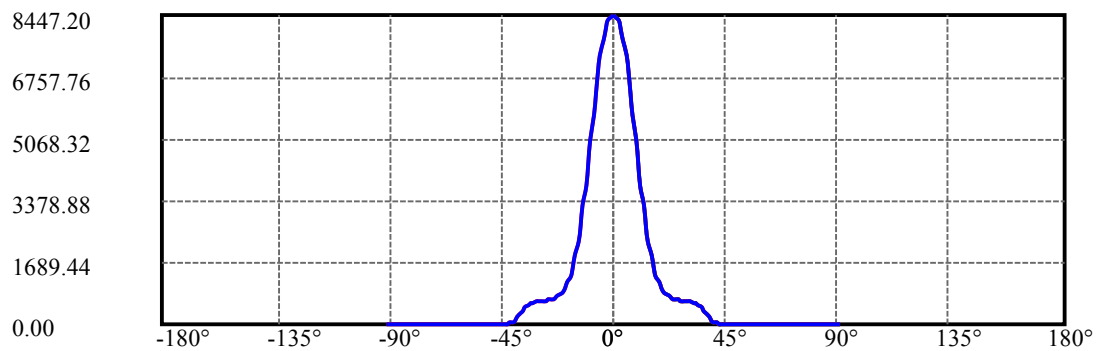
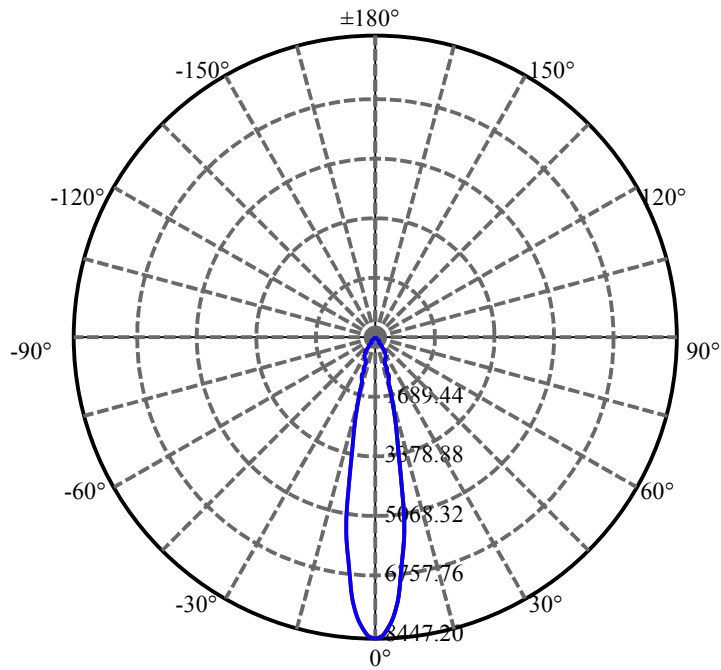
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.107	0.861	1766.175	.042%	99.316%
77.0	8.072	0.863	1767.037	.042%	99.365%
78.0	8.058	0.863	1767.901	.042%	99.413%
79.0	8.065	0.866	1768.767	.042%	99.462%
80.0	8.044	0.868	1769.636	.042%	99.511%
81.0	8.037	0.870	1770.505	.042%	99.560%
82.0	8.023	0.871	1771.376	.042%	99.609%
83.0	8.023	0.872	1772.248	.043%	99.658%
84.0	8.002	0.873	1773.121	.043%	99.707%
85.0	7.966	0.872	1773.993	.043%	99.756%
86.0	7.952	0.870	1774.863	.042%	99.805%
87.0	7.924	0.869	1775.732	.042%	99.854%
88.0	7.910	0.867	1776.599	.042%	99.903%
89.0	7.903	0.867	1777.466	.042%	99.951%
90.0	7.896	0.866	1778.332	.042%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1482.48	72.32%	83.36%
0-40	1731.66	84.47%	97.38%
0-60	1752.62	85.49%	98.55%
0-90	1777.47	86.71%	99.95%
0-120	1777.47	86.71%	99.95%
0-180	1778.33	86.75%	100.00%
60-90	25.68	1.25%	1.44%
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%
0-28.20	1422.67	69.40%	80.00%

ZONAL LUMEN SUMMARY

0-10	603.91
10-20	558.53
20-30	320.04
30-40	249.17
40-50	12.59
50-60	8.37
60-70	8.42
70-80	8.60
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: —————

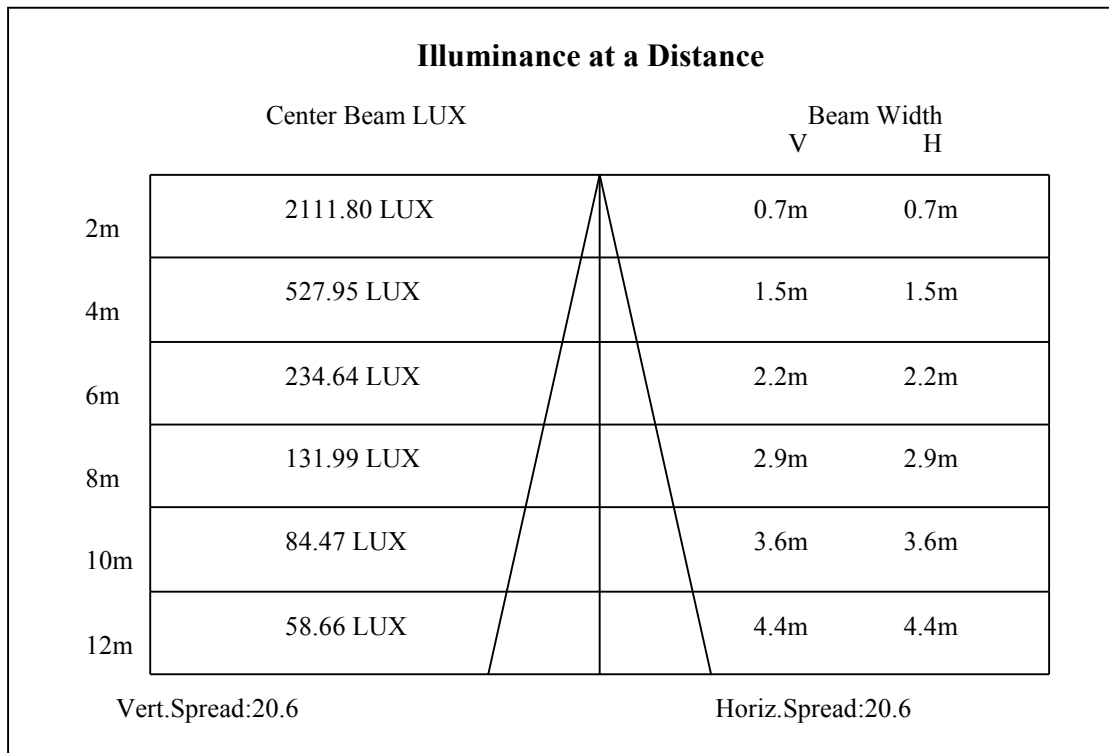
C90/C270: —————

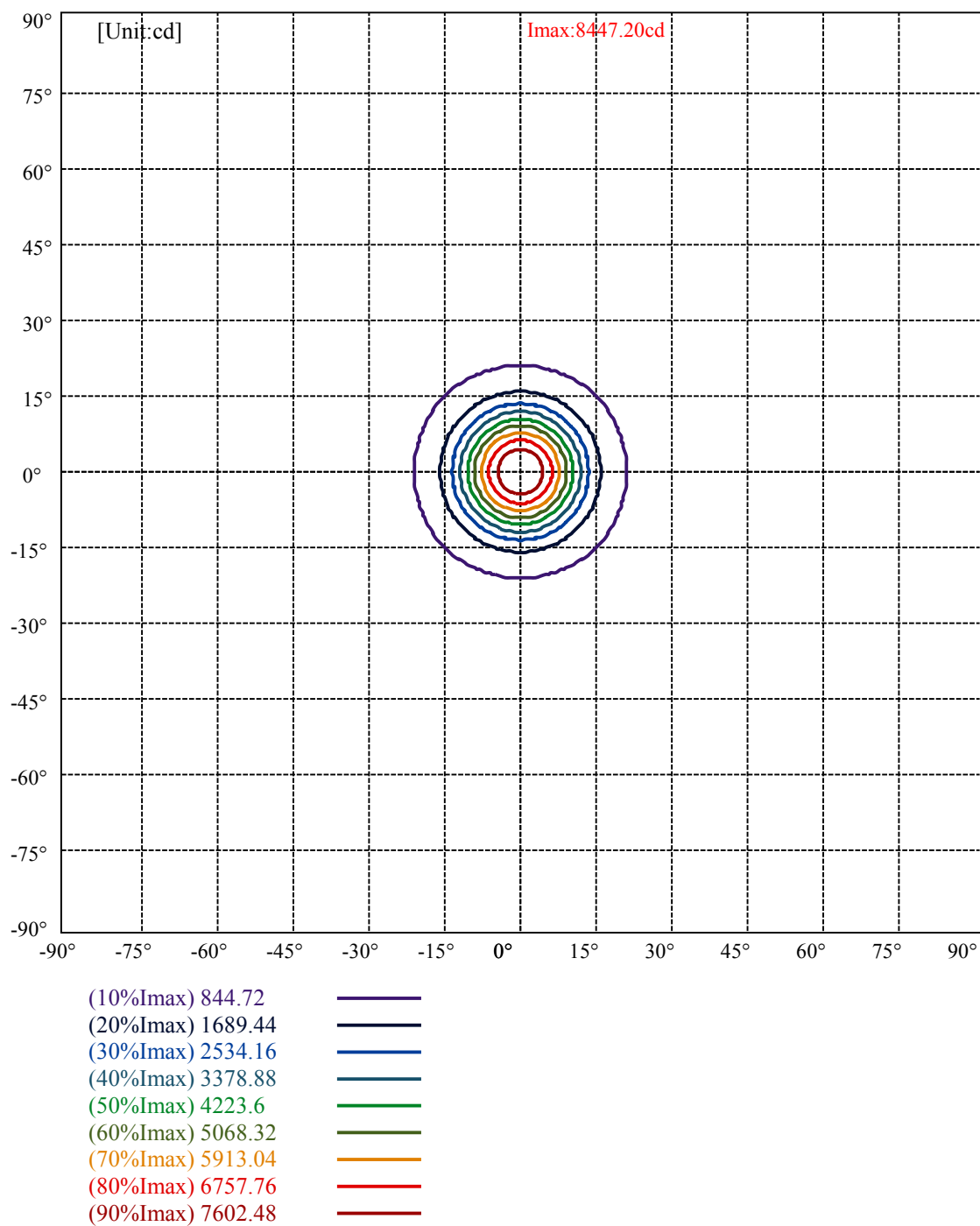
Field angle(10%Imax):C0/180Left:20.7 Right:20.7

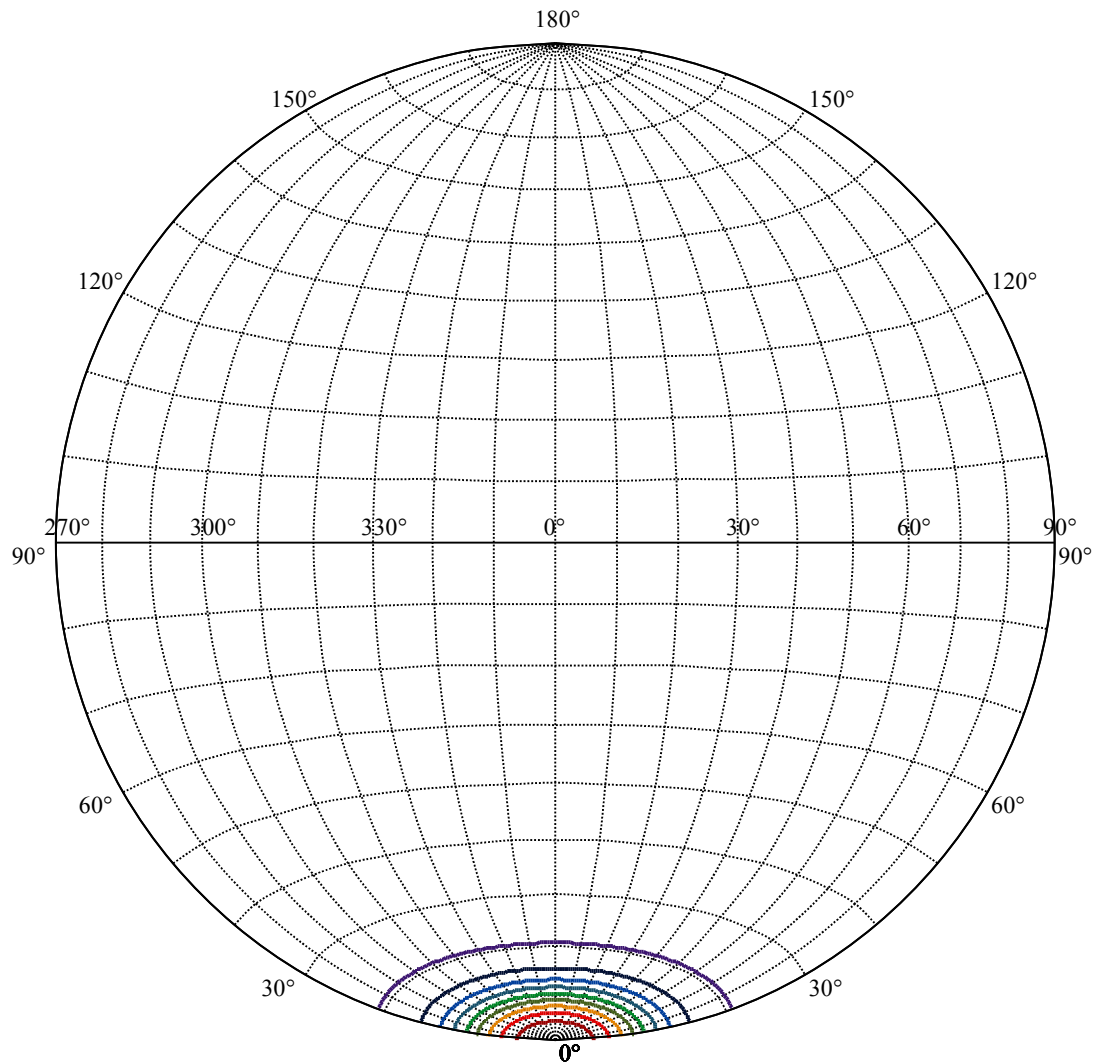
:C90/270Left:20.7 Right:20.7

Beam Angle(50%Imax):C0/180Left:10.3 Right:10.3

:C90/270Left:10.3 Right:10.3







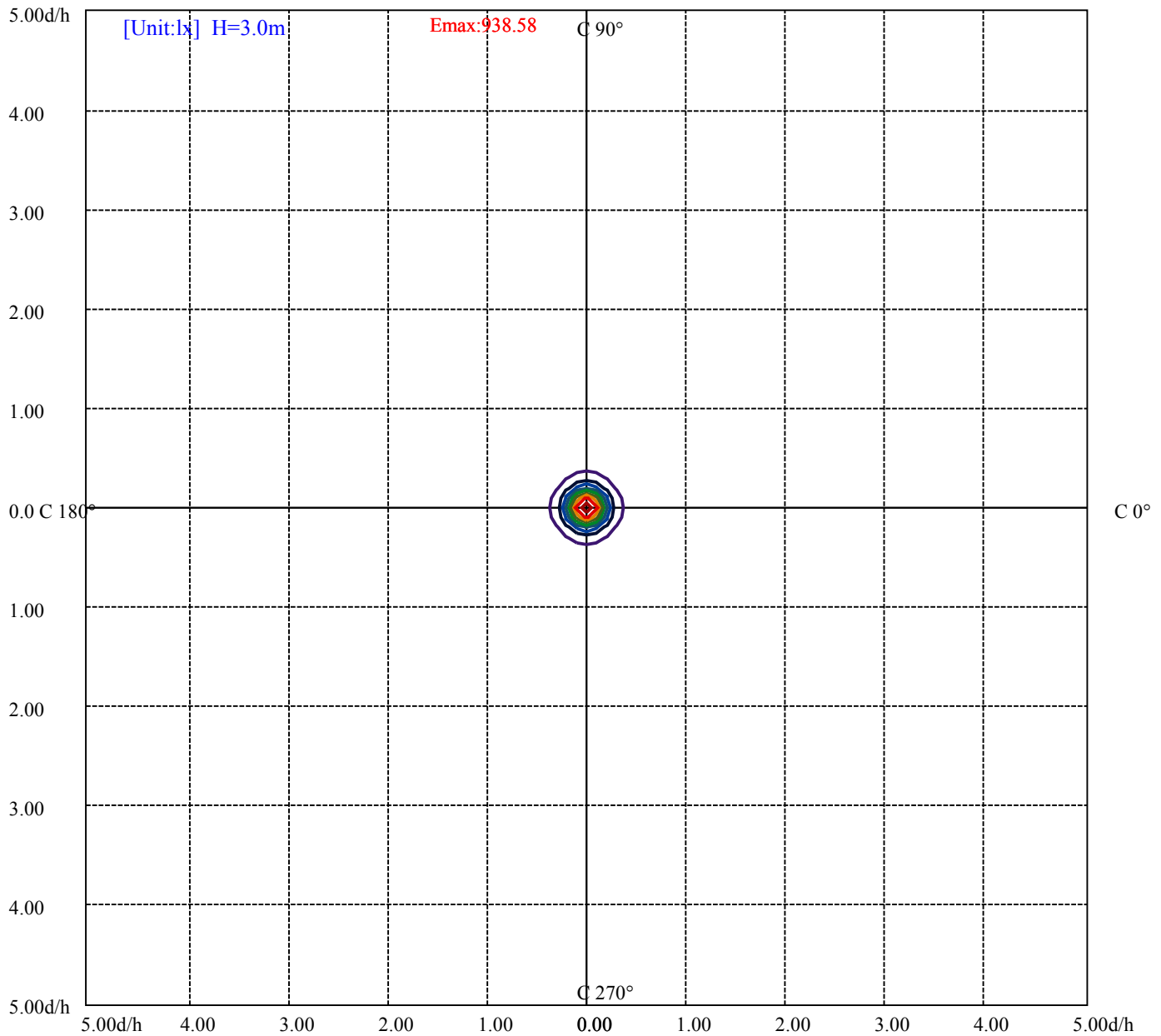
House

[Unit:cd]

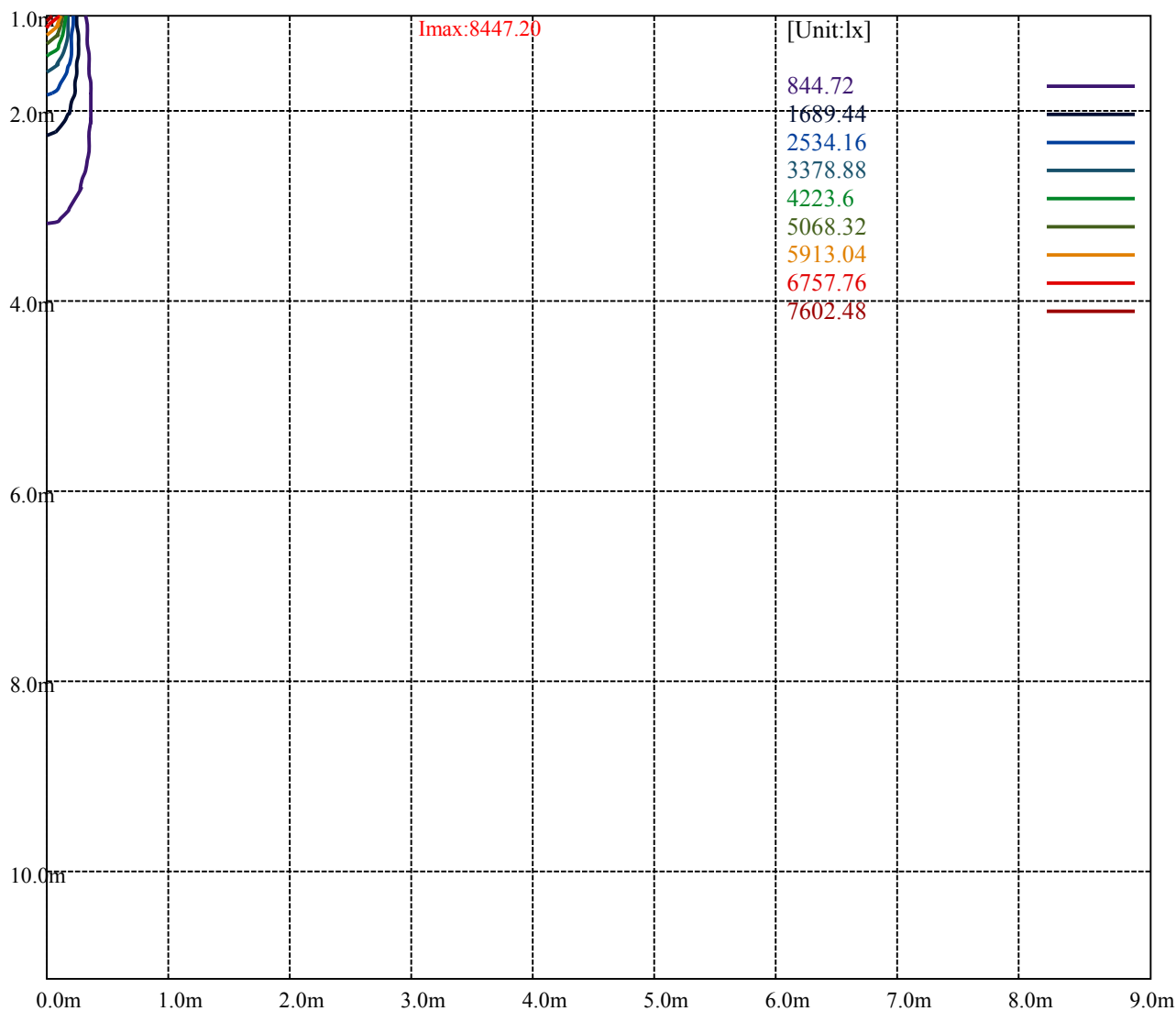
Road

Imax:8447.20

(10%Imax)	844.72	—
(20%Imax)	1689.44	—
(30%Imax)	2534.16	—
(40%Imax)	3378.88	—
(50%Imax)	4223.6	—
(60%Imax)	5068.32	—
(70%Imax)	5913.04	—
(80%Imax)	6757.76	—
(90%Imax)	7602.48	—



(10%Emax) 93.85777	—
(20%Emax) 187.7155	—
(30%Emax) 281.5733	—
(40%Emax) 375.4311	—
(50%Emax) 469.2889	—
(60%Emax) 563.1467	—
(70%Emax) 657.0045	—
(80%Emax) 750.8622	—
(90%Emax) 844.72	—



Luminance Table

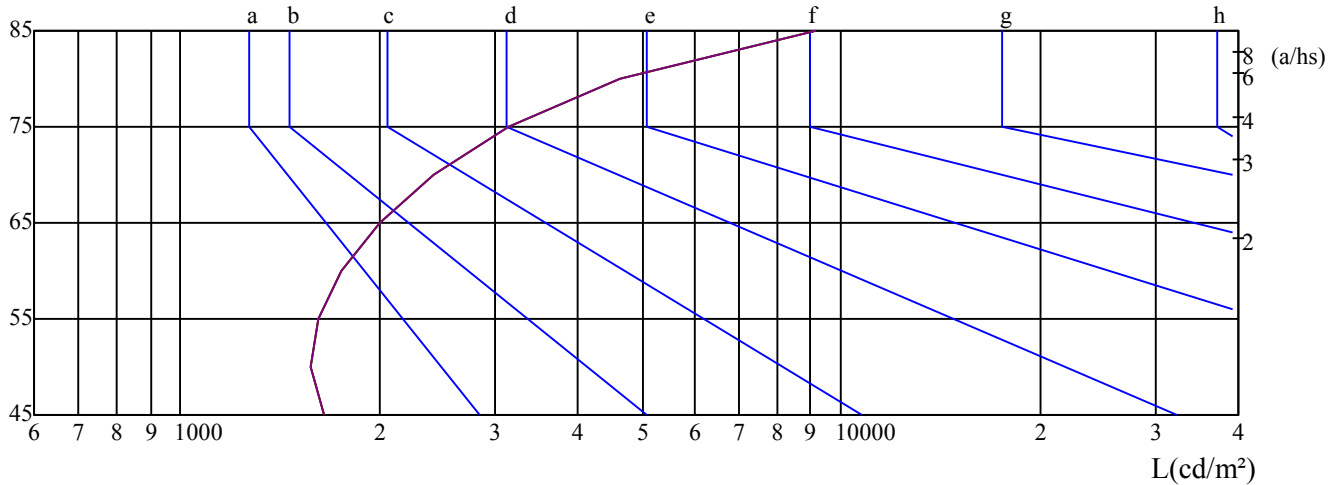
γ	45	50	55	60	65	70	75	80	85
C0	1649	1570	1619	1754	2001	2416	3138	4632	9140
C45	1649	1570	1619	1754	2001	2416	3138	4632	9140
C90	1649	1570	1619	1754	2001	2416	3138	4632	9140

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2001	2001	2001	3138	3138	3138	9140	9140	9140

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

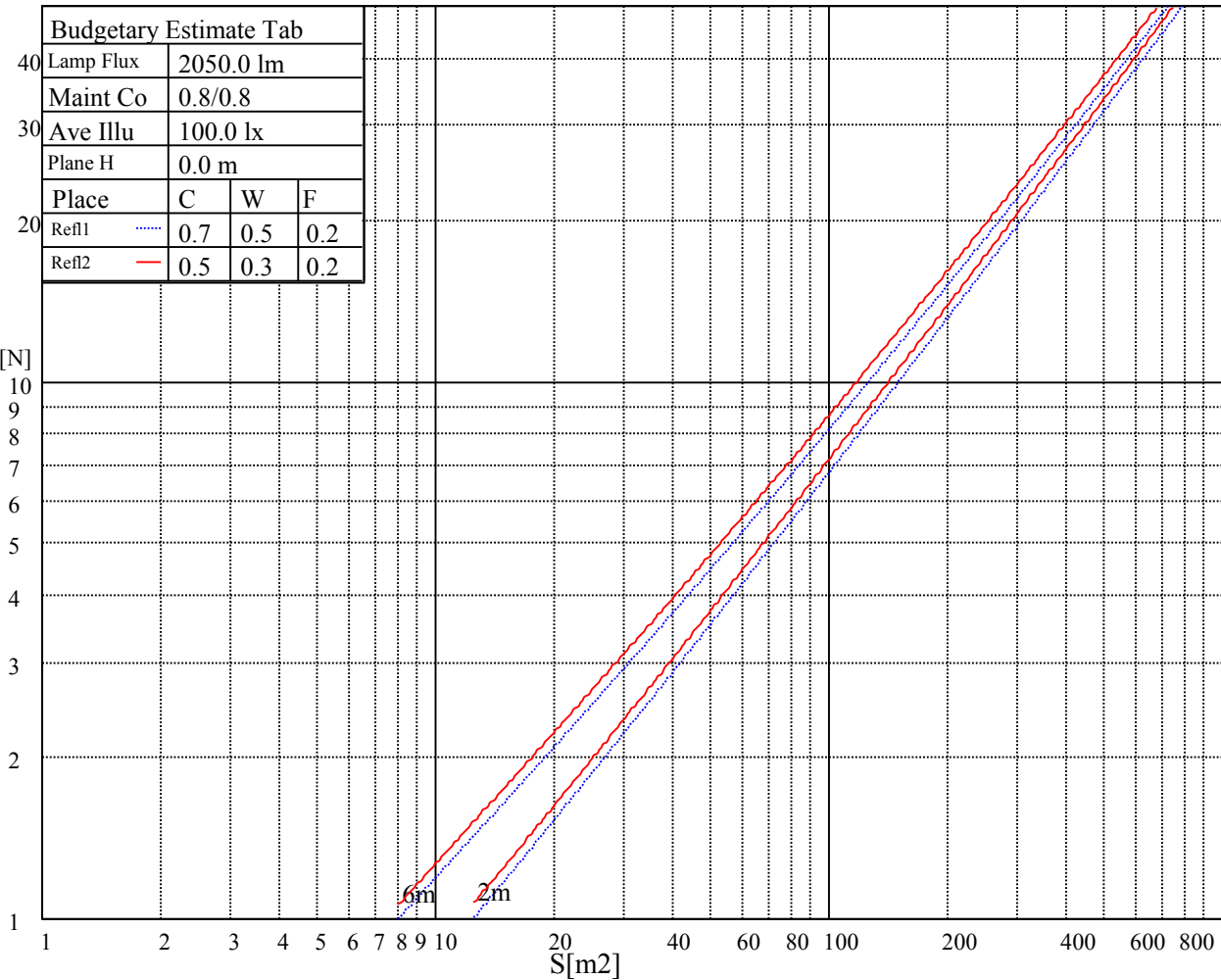
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

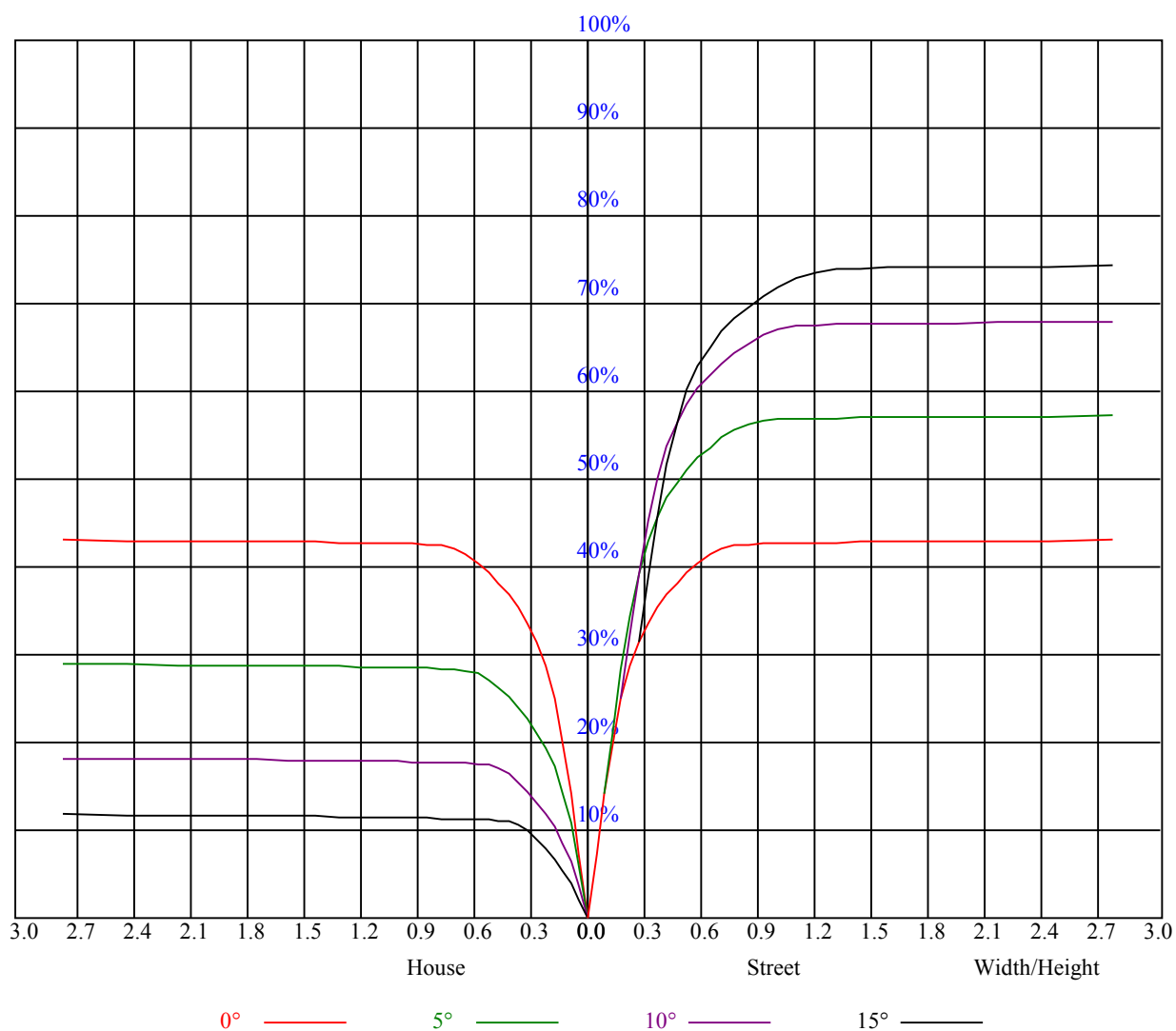
C0 ———

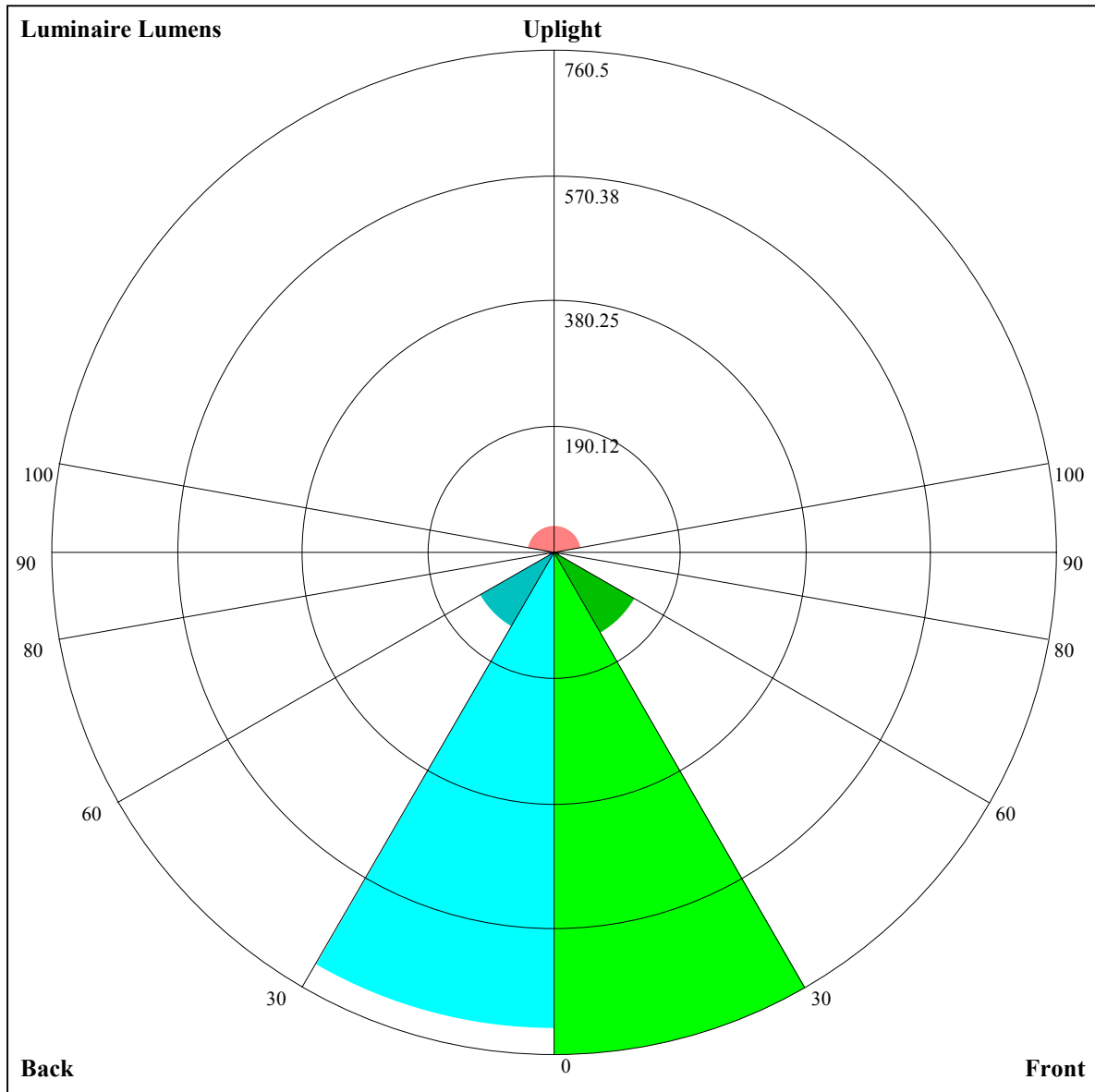
C45 ———

C90 ———



RHOC	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	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89	0.87
1	0.97	0.95	0.94	0.95	0.94	0.92	0.92	0.90	0.89	0.89	0.88	0.87	0.86	0.85	0.84	0.83
2	0.92	0.89	0.86	0.90	0.88	0.86	0.88	0.86	0.84	0.85	0.83	0.82	0.83	0.81	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	0.77	0.74	0.72	0.76	0.73	0.71	0.75	0.72	0.71	0.70
6	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.72	0.70	0.68	0.67
7	0.74	0.69	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.68	0.65	0.64
8	0.71	0.67	0.64	0.70	0.67	0.64	0.70	0.66	0.64	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	0.62	0.67	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.60
10	0.66	0.62	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.58





Luminaire Lumens:

FL=760.5,FM=140.95,FH=8.52,FVH=4.35

BL=722.51,BM=128.99,BH=8.49,BVH=4.34

UL=8.62,UH=41

BUG Rating:B2-U2-G0

Intensity data(cd)									Appendix Page: 17 Total:19
C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	8465.63	8524.69	8456.06	8278.31	8033.63	7656.75	7195.50	6695.44	6064.88
45.0	8383.50	8487.56	8503.31	8431.31	8215.88	7900.88	7545.38	7056.00	6528.94
90.0	8457.75	8463.38	8408.25	8251.88	7995.38	7661.81	7243.31	6635.25	6080.63
135.0	8480.81	8433.56	8334.00	8142.19	7909.31	7541.44	7072.88	6594.75	6064.31
180.0	8465.63	8346.38	8127.00	7834.50	7499.25	7092.00	6493.50	5952.94	5367.94
225.0	8383.50	8192.81	7939.13	7483.50	7142.63	6667.31	6009.19	5432.63	4844.25
270.0	8460.00	8379.00	8159.06	7899.75	7532.44	7074.00	6572.81	5973.19	5404.50
315.0	8480.81	8402.06	8224.88	7956.56	7603.88	7202.81	6720.19	6028.88	5443.31
360.0	8465.63	8524.69	8456.06	8278.31	8033.63	7656.75	7195.50	6695.44	6064.88
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5388.75	4689.56	4090.50	3520.13	2939.63	2430.56	2041.31	1758.38	1419.19
45.0	5879.25	5189.63	4554.56	3933.56	3231.00	2739.38	2318.06	1872.00	1580.06
90.0	5466.94	4691.81	4082.63	3502.69	2912.63	2406.38	1995.75	1695.94	1445.63
135.0	5355.00	4747.50	4138.31	3561.19	2908.13	2453.06	2071.69	1704.94	1472.63
180.0	4699.69	4033.13	3473.44	2907.00	2417.63	2049.19	1718.44	1480.50	1206.56
225.0	4108.50	3552.75	3033.56	2467.69	2133.56	1787.06	1513.69	1311.19	1112.18
270.0	4740.19	4068.56	3504.38	2984.63	2407.50	2030.06	1729.69	1428.19	1237.50
315.0	4843.69	4090.50	3514.50	2992.50	2470.50	2036.81	1722.94	1447.88	1108.74
360.0	5388.75	4689.56	4090.50	3520.13	2939.63	2430.56	2041.31	1758.38	1419.19
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1235.25	1103.63	936.56	847.69	793.13	738.00	707.63	690.19	670.50
45.0	1350.00	1145.25	997.88	892.69	798.19	737.44	704.81	681.75	665.44
90.0	1088.89	1055.76	943.14	840.71	768.21	724.78	696.54	673.09	657.68
135.0	1271.81	1086.75	962.44	869.06	789.19	735.19	699.19	675.56	660.94
180.0	1088.38	971.49	876.94	785.64	734.12	701.21	673.43	657.84	645.24
225.0	997.31	907.37	831.99	760.33	721.97	695.31	677.03	659.19	648.90
270.0	1087.31	956.81	862.31	805.50	746.44	712.69	689.63	673.31	660.94
315.0	1074.83	939.88	855.51	786.32	736.99	707.01	687.49	668.53	656.10
360.0	1235.25	1103.63	936.56	847.69	793.13	738.00	707.63	690.19	670.50
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	657.56	647.44	636.19	625.50	617.63	606.94	599.06	580.50	509.63
45.0	650.25	639.56	630.56	622.69	611.44	603.00	595.69	582.19	547.88
90.0	644.51	631.18	620.72	610.65	600.92	590.51	582.53	558.68	501.02
135.0	645.75	633.94	624.38	614.25	601.31	592.31	583.31	545.06	482.06
180.0	633.66	622.35	611.89	600.98	591.58	579.54	548.10	486.06	401.63
225.0	639.73	627.69	615.54	606.21	594.62	576.34	524.53	441.28	358.54
270.0	648.00	636.75	626.06	617.63	605.25	595.13	569.81	502.31	420.19
315.0	645.02	633.26	622.80	614.70	605.03	594.73	567.28	490.56	426.38
360.0	657.56	647.44	636.19	625.50	617.63	606.94	599.06	580.50	509.63
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	438.19	357.19	291.38	162.84	90.45	32.85	20.59	16.82	14.01
45.0	487.69	403.88	312.19	289.13	134.83	68.18	23.74	18.84	15.13
90.0	419.91	330.47	246.04	158.74	82.97	32.29	20.08	15.98	13.39
135.0	418.50	313.88	292.50	145.13	71.83	29.19	20.31	15.86	13.44
180.0	310.16	228.54	153.62	73.74	30.77	21.21	16.37	13.61	11.59
225.0	261.28	170.21	98.04	41.34	21.94	18.56	15.02	12.71	11.53
270.0	336.94	292.50	144.23	76.11	27.68	19.52	16.20	13.33	11.64
315.0	334.80	227.87	158.74	79.59	25.76	20.08	16.76	13.28	11.64
360.0	438.19	357.19	291.38	162.84	90.45	32.85	20.59	16.82	14.01

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	12.26	11.64	11.25	10.97	10.69	10.41	10.18	10.01	9.79
45.0	12.88	11.70	11.42	11.14	10.80	10.58	10.35	10.18	9.96
90.0	11.81	11.36	11.03	10.74	10.41	10.24	10.07	9.84	9.68
135.0	11.42	11.08	10.80	10.46	10.18	10.01	9.84	9.68	9.51
180.0	11.19	10.91	10.52	10.29	10.13	9.96	9.79	9.68	9.56
225.0	11.19	10.80	10.41	10.18	9.96	9.79	9.62	9.51	9.34
270.0	11.19	10.86	10.46	10.24	10.01	9.79	9.62	9.45	9.28
315.0	11.31	10.97	10.63	10.41	10.18	9.96	9.79	9.62	9.51
360.0	12.26	11.64	11.25	10.97	10.69	10.41	10.18	10.01	9.79
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.62	9.51	9.34	9.23	9.11	8.94	8.89	8.78	8.72
45.0	9.84	9.68	9.51	9.39	9.23	9.17	9.06	8.94	8.89
90.0	9.56	9.39	9.23	9.11	9.00	8.89	8.83	8.78	8.66
135.0	9.39	9.23	9.17	9.06	8.94	8.83	8.78	8.72	8.66
180.0	9.34	9.23	9.11	8.94	8.83	8.78	8.66	8.61	8.55
225.0	9.23	9.06	8.94	8.89	8.78	8.66	8.61	8.55	8.55
270.0	9.17	9.06	8.94	8.89	8.78	8.72	8.66	8.55	8.55
315.0	9.34	9.17	9.06	9.00	8.89	8.78	8.66	8.61	8.55
360.0	9.62	9.51	9.34	9.23	9.11	8.94	8.89	8.78	8.72
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.66	8.55	8.49	8.44	8.44	8.38	8.33	8.27	8.21
45.0	8.83	8.72	8.66	8.61	8.55	8.49	8.49	8.44	8.38
90.0	8.61	8.55	8.49	8.49	8.38	8.38	8.33	8.27	8.27
135.0	8.61	8.55	8.49	8.44	8.38	8.33	8.33	8.27	8.27
180.0	8.49	8.44	8.38	8.33	8.33	8.27	8.21	8.21	8.16
225.0	8.49	8.44	8.38	8.38	8.33	8.33	8.27	8.27	8.27
270.0	8.44	8.44	8.38	8.33	8.27	8.27	8.27	8.21	8.16
315.0	8.49	8.44	8.38	8.33	8.33	8.21	8.21	8.16	8.16
360.0	8.66	8.55	8.49	8.44	8.44	8.38	8.33	8.27	8.21
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.21	8.16	8.16	8.10	8.10	8.04	8.04	8.04	7.99
45.0	8.33	8.33	8.27	8.27	8.21	8.21	8.16	8.21	8.16
90.0	8.21	8.16	8.16	8.16	8.10	8.10	8.04	8.04	8.04
135.0	8.21	8.16	8.10	8.10	8.10	8.04	8.04	8.04	7.99
180.0	8.16	8.10	8.10	8.04	8.04	7.99	7.99	7.99	7.99
225.0	8.27	8.21	8.21	8.16	8.16	8.16	8.16	8.16	8.16
270.0	8.16	8.10	8.10	8.10	8.10	8.04	8.04	8.04	8.04
315.0	8.10	8.10	8.10	8.04	8.04	7.99	7.99	7.99	7.99
360.0	8.21	8.16	8.16	8.10	8.10	8.04	8.04	8.04	7.99
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	7.99	7.93	7.93	7.93	7.88	7.93	7.88
45.0	8.16	8.16	8.16	8.16	8.16	8.16	7.99	7.93	7.93
90.0	7.99	7.99	7.99	7.99	7.93	7.93	7.93	7.88	7.93
135.0	8.04	7.99	7.99	7.99	7.93	7.93	7.93	7.93	7.88
180.0	7.99	7.99	7.93	7.93	7.93	7.88	7.88	7.88	7.88
225.0	8.16	8.16	8.21	8.10	7.99	7.93	7.93	7.93	7.93
270.0	7.99	7.99	7.99	7.99	7.93	7.93	7.93	7.93	7.93
315.0	7.99	7.93	7.93	7.93	7.93	7.93	7.93	7.88	7.88
360.0	7.99	7.99	7.99	7.93	7.93	7.93	7.88	7.93	7.88

Intensity data(cd)

Appendix Page: 19 Total:19

C/ $\gamma(^{\circ})$	90.0
0.0	7.93
45.0	7.93
90.0	7.88
135.0	7.88
180.0	7.88
225.0	7.93
270.0	7.88
315.0	7.88
360.0	7.93