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Nata

Client: NT

LumCAT: 2-3211-A

Luminaire: 92.70.121.00

Report No: 20260403-B013

Ballast type: DC

Test No: 20260403-C013

Voltage(V): 35.640

LampCAT: CITIZEN CLU038

Current(A): 0.711

Lamp flux(lm): 3670.0

Power (W): 25.340

Number of Lamps: 1

PF: 0.000

Length(mm): 65

Width(mm): 65

Phm Type: C

Height(mm): 34

Photometric Results

Lumens(lm): 3362.82, Efficiency(%): 91.63% , Luminous Efficacy(lm/W): 132.71

Central intensity(cd): 10961.090, Maximum intensity(cd): 10961.090

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=25.2

[C90/270]Total=25.2

Field angle(10%Imax): [C0/180]Total=66.4

[C90/270]Total=66.4

Maximum s/h(1/2): C0_180=0.42 C90_270=0.42

Maximum s/h(1/4): C0_180=0.43 C90_270=0.43

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.63%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.310%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	10961.092	0.000	0	0.00%	0.00%
1.0	10919.768	10.470	10.47	0.29%	0.31%
2.0	10799.049	31.173	41.642	0.85%	1.24%
3.0	10614.667	51.215	92.857	1.40%	2.76%
4.0	10318.375	70.070	162.927	1.91%	4.84%
5.0	9979.921	87.322	250.249	2.38%	7.44%
6.0	9534.277	102.552	352.801	2.79%	10.49%
7.0	8981.654	114.928	467.729	3.13%	13.91%
8.0	8420.011	124.540	592.27	3.39%	17.61%
9.0	7780.860	131.299	723.569	3.58%	21.52%
10.0	7091.471	134.589	858.158	3.67%	25.52%
11.0	6435.853	135.166	993.324	3.68%	29.54%
12.0	5820.825	133.983	1127.307	3.65%	33.52%
13.0	5202.546	130.820	1258.126	3.56%	37.41%
14.0	4595.698	125.417	1383.543	3.42%	41.14%
15.0	4041.712	118.578	1502.121	3.23%	44.67%
16.0	3510.065	110.655	1612.776	3.02%	47.96%
17.0	3062.324	102.350	1715.126	2.79%	51.00%
18.0	2650.662	94.195	1809.32	2.57%	53.80%
19.0	2254.355	85.337	1894.658	2.33%	56.34%
20.0	1976.942	77.444	1972.102	2.11%	58.64%
21.0	1781.956	72.178	2044.28	1.97%	60.79%
22.0	1662.034	69.208	2113.489	1.89%	62.85%
23.0	1532.127	67.022	2180.511	1.83%	64.84%
24.0	1434.754	64.867	2245.378	1.77%	66.77%
25.0	1361.054	63.571	2308.948	1.73%	68.66%
26.0	1307.480	62.991	2371.939	1.72%	70.53%
27.0	1261.080	62.840	2434.78	1.71%	72.40%
28.0	1228.955	63.042	2497.822	1.72%	74.28%
29.0	1203.164	63.631	2561.453	1.73%	76.17%
30.0	1178.171	64.296	2625.749	1.75%	78.08%
31.0	1157.708	65.004	2690.753	1.77%	80.01%
32.0	1134.897	65.680	2756.433	1.79%	81.97%
33.0	1105.886	66.014	2822.448	1.80%	83.93%
34.0	1064.426	65.680	2888.128	1.79%	85.88%
35.0	1002.714	64.198	2952.325	1.75%	87.79%
36.0	924.891	61.375	3013.701	1.67%	89.62%
37.0	829.019	57.203	3070.903	1.56%	91.32%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	729.077	52.007	3122.91	1.42%	92.87%
39.0	625.737	46.243	3169.154	1.26%	94.24%
40.0	511.824	39.674	3208.828	1.08%	95.42%
41.0	409.826	32.820	3241.648	0.89%	96.40%
42.0	322.848	26.619	3268.267	0.73%	97.19%
43.0	245.413	21.050	3289.317	0.57%	97.81%
44.0	152.247	15.009	3304.326	0.41%	98.26%
45.0	81.105	8.968	3313.294	0.24%	98.53%
46.0	52.766	5.235	3318.529	0.14%	98.68%
47.0	36.436	3.548	3322.077	0.10%	98.79%
48.0	29.063	2.648	3324.725	0.07%	98.87%
49.0	23.315	2.151	3326.876	0.06%	98.93%
50.0	18.900	1.760	3328.636	0.05%	98.98%
51.0	15.879	1.471	3330.107	0.04%	99.03%
52.0	13.970	1.281	3331.388	0.03%	99.07%
53.0	12.890	1.168	3332.557	0.03%	99.10%
54.0	12.240	1.108	3333.664	0.03%	99.13%
55.0	11.705	1.069	3334.733	0.03%	99.16%
56.0	11.159	1.033	3335.766	0.03%	99.20%
57.0	10.750	1.002	3336.768	0.03%	99.23%
58.0	10.341	0.975	3337.743	0.03%	99.25%
59.0	9.943	0.948	3338.692	0.03%	99.28%
60.0	9.597	0.923	3339.615	0.03%	99.31%
61.0	9.314	0.902	3340.517	0.02%	99.34%
62.0	9.041	0.884	3341.402	0.02%	99.36%
63.0	8.810	0.868	3342.27	0.02%	99.39%
64.0	8.600	0.854	3343.124	0.02%	99.41%
65.0	8.391	0.841	3343.965	0.02%	99.44%
66.0	8.202	0.828	3344.793	0.02%	99.46%
67.0	8.065	0.818	3345.611	0.02%	99.49%
68.0	7.929	0.810	3346.421	0.02%	99.51%
69.0	7.824	0.804	3347.225	0.02%	99.54%
70.0	7.719	0.798	3348.023	0.02%	99.56%
71.0	7.614	0.793	3348.815	0.02%	99.58%
72.0	7.541	0.788	3349.603	0.02%	99.61%
73.0	7.447	0.784	3350.387	0.02%	99.63%
74.0	7.363	0.779	3351.166	0.02%	99.65%
75.0	7.300	0.775	3351.94	0.02%	99.68%

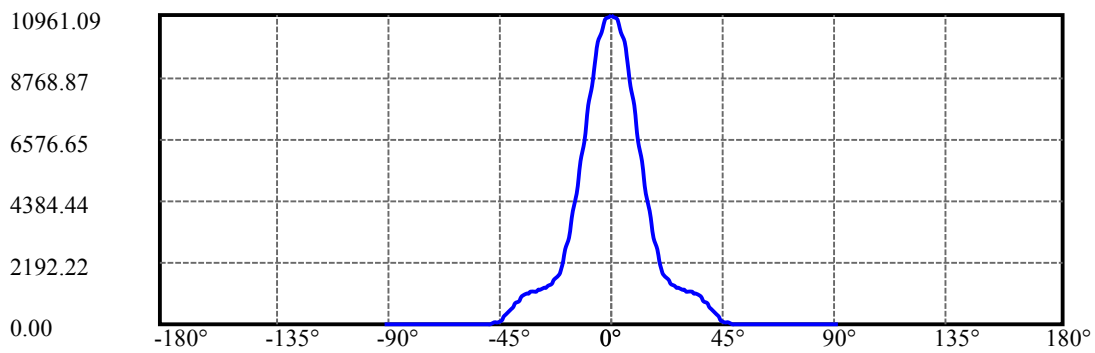
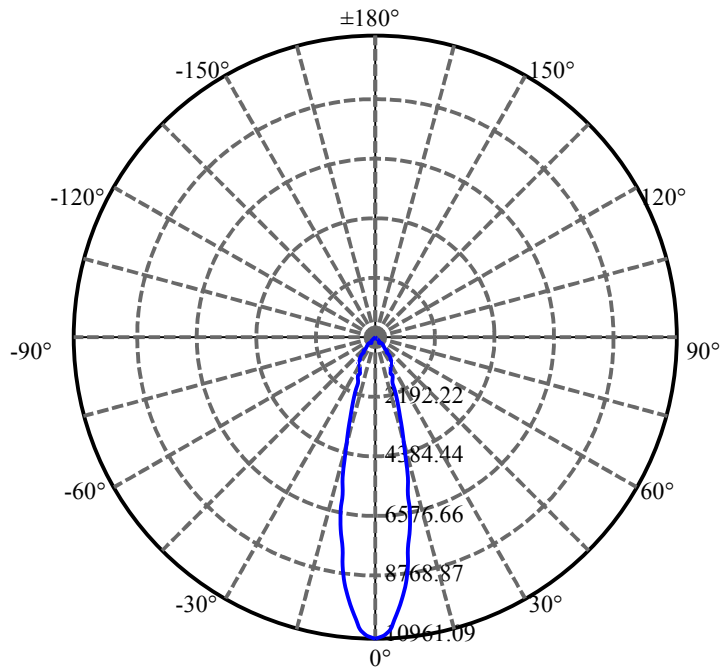
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.216	0.771	3352.711	0.02%	99.70%
77.0	7.111	0.764	3353.475	0.02%	99.72%
78.0	7.038	0.757	3354.232	0.02%	99.74%
79.0	6.975	0.753	3354.985	0.02%	99.77%
80.0	6.901	0.748	3355.733	0.02%	99.79%
81.0	6.807	0.741	3356.475	0.02%	99.81%
82.0	6.744	0.735	3357.209	0.02%	99.83%
83.0	6.660	0.729	3357.938	0.02%	99.85%
84.0	6.587	0.722	3358.66	0.02%	99.88%
85.0	6.503	0.714	3359.374	0.02%	99.90%
86.0	6.419	0.706	3360.08	0.02%	99.92%
87.0	6.324	0.697	3360.778	0.02%	99.94%
88.0	6.261	0.689	3361.467	0.02%	99.96%
89.0	6.178	0.682	3362.149	0.02%	99.98%
90.0	6.094	0.673	3362.822	0.02%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2625.75	71.55%	78.08%
0-40	3208.83	87.43%	95.42%
0-60	3339.61	91.00%	99.31%
0-90	3362.15	91.61%	99.98%
0-120	3362.15	91.61%	99.98%
0-180	3362.82	91.63%	100.00%
60-90	22.53	0.61%	0.67%
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%
0-30.99	2690.26	73.30%	80.00%

ZONAL LUMEN SUMMARY

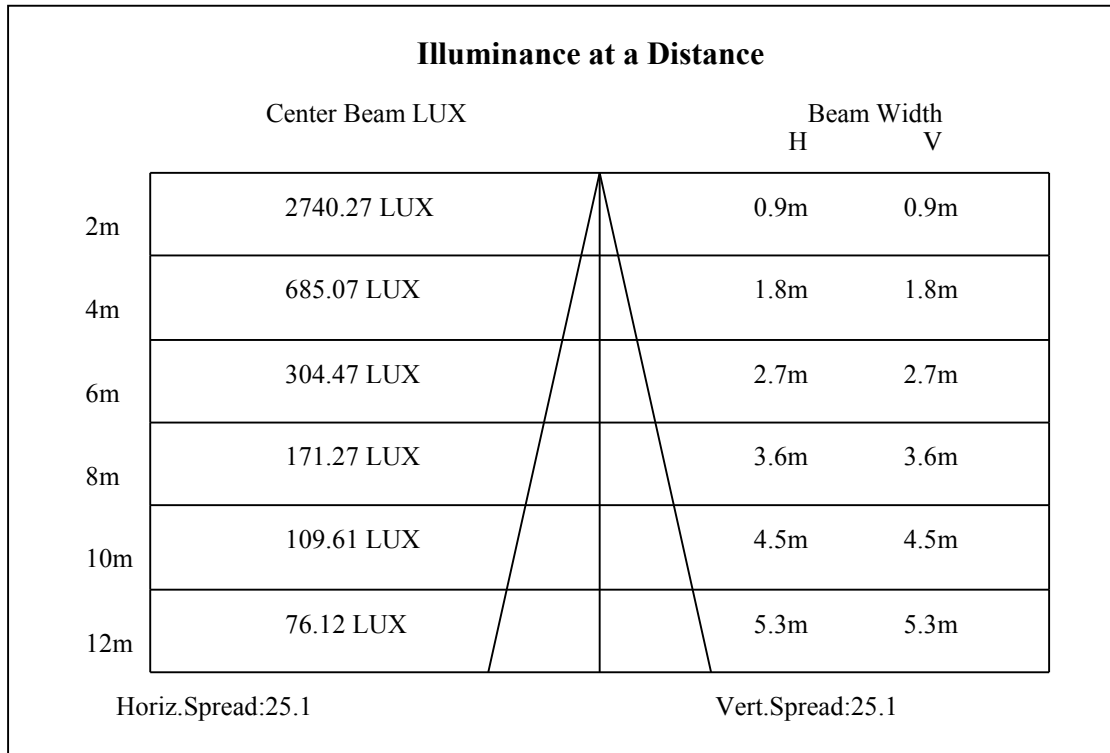
0-10	858.16
10-20	1113.94
20-30	653.65
30-40	583.08
40-50	119.81
50-60	10.98
60-70	8.41
70-80	7.71
80-90	6.42
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

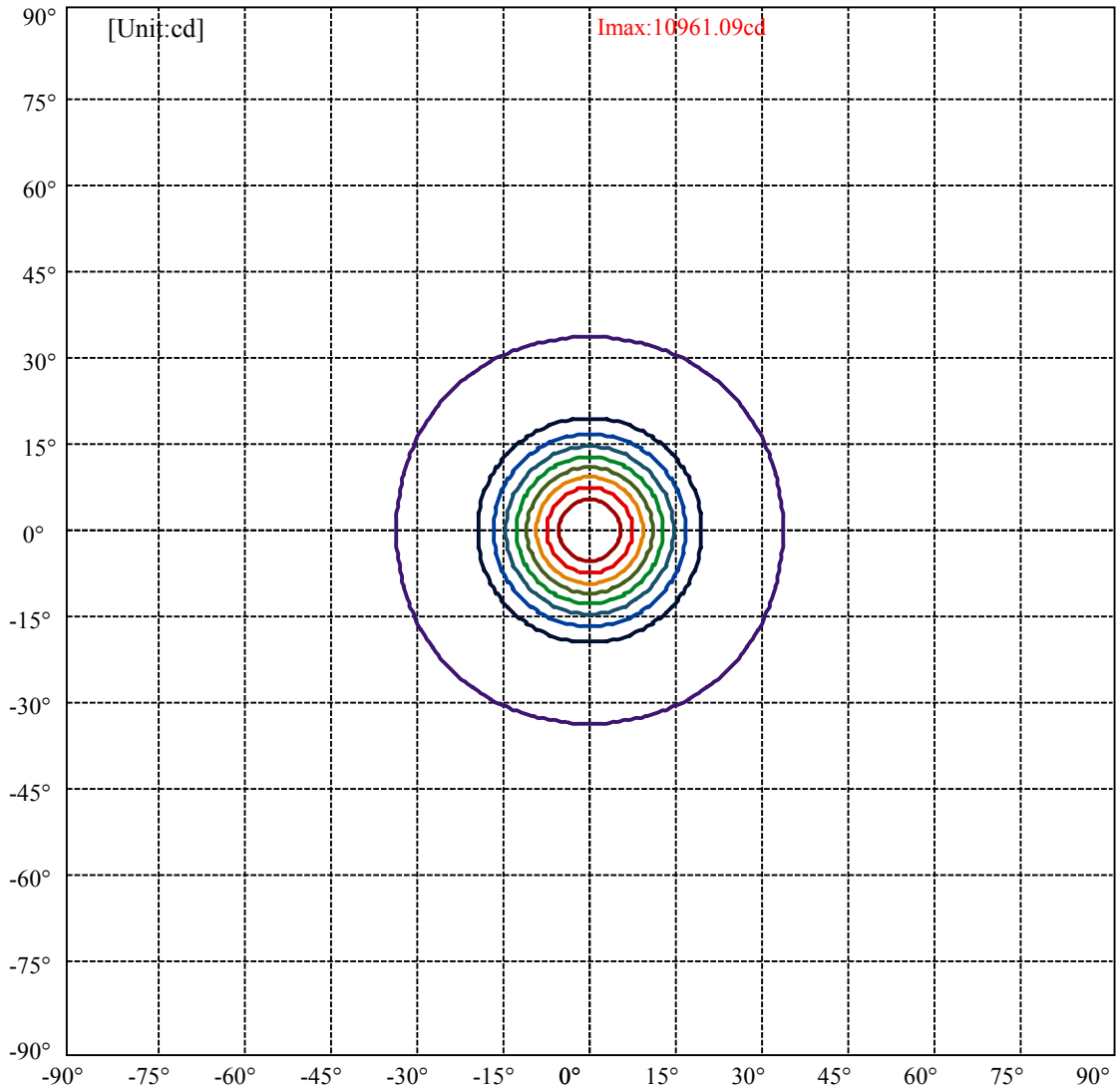


C90/C270: —————

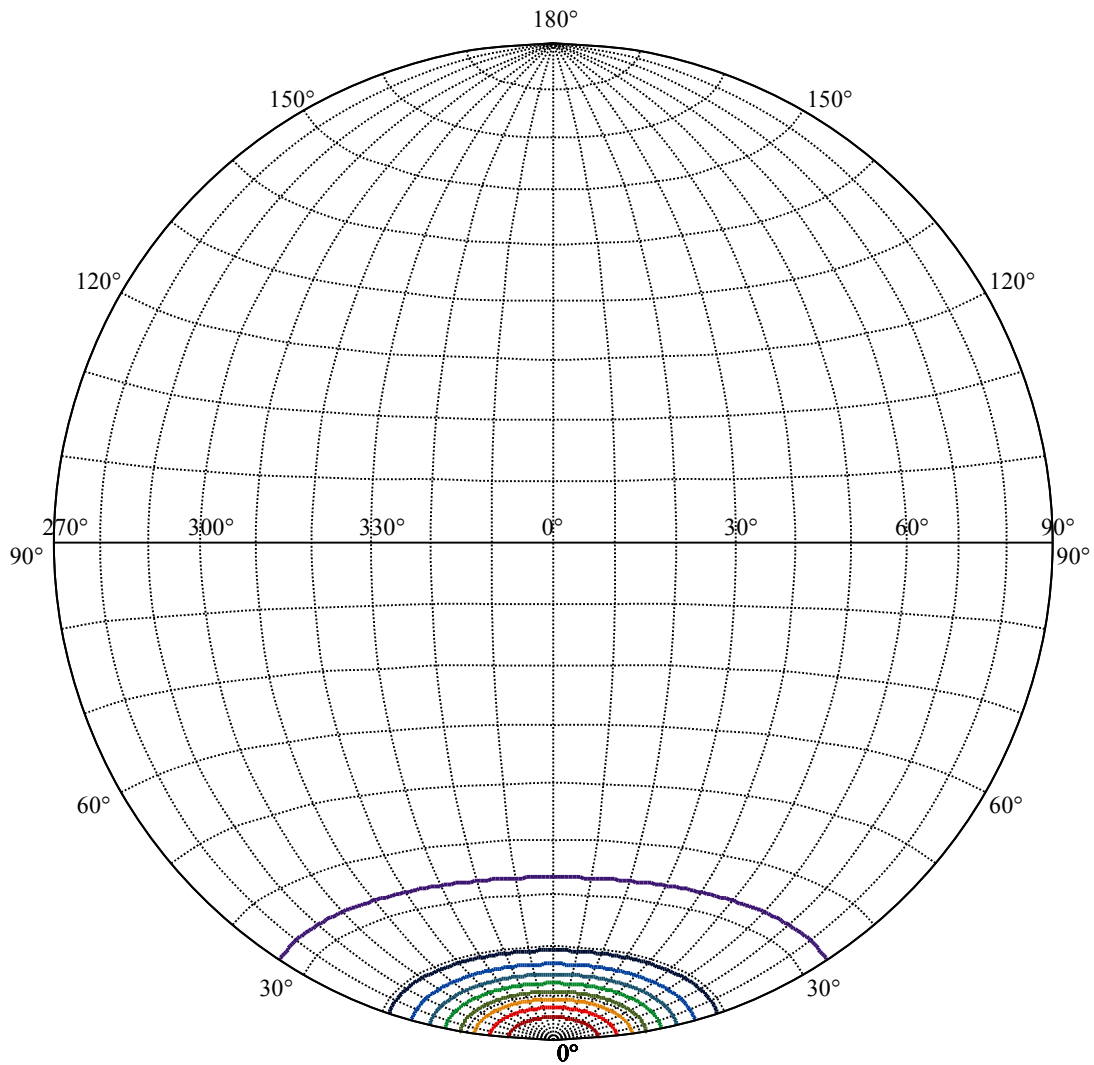
Field angle(10%Imax):C90/270Left:33.2 Right:33.2

Beam Angle(50%Imax):C90/270Left:12.6 Right:12.6





(10%Imax) 1096.11	—
(20%Imax) 2192.22	—
(30%Imax) 3288.33	—
(40%Imax) 4384.44	—
(50%Imax) 5480.55	—
(60%Imax) 6576.65	—
(70%Imax) 7672.76	—
(80%Imax) 8768.87	—
(90%Imax) 9864.98	—



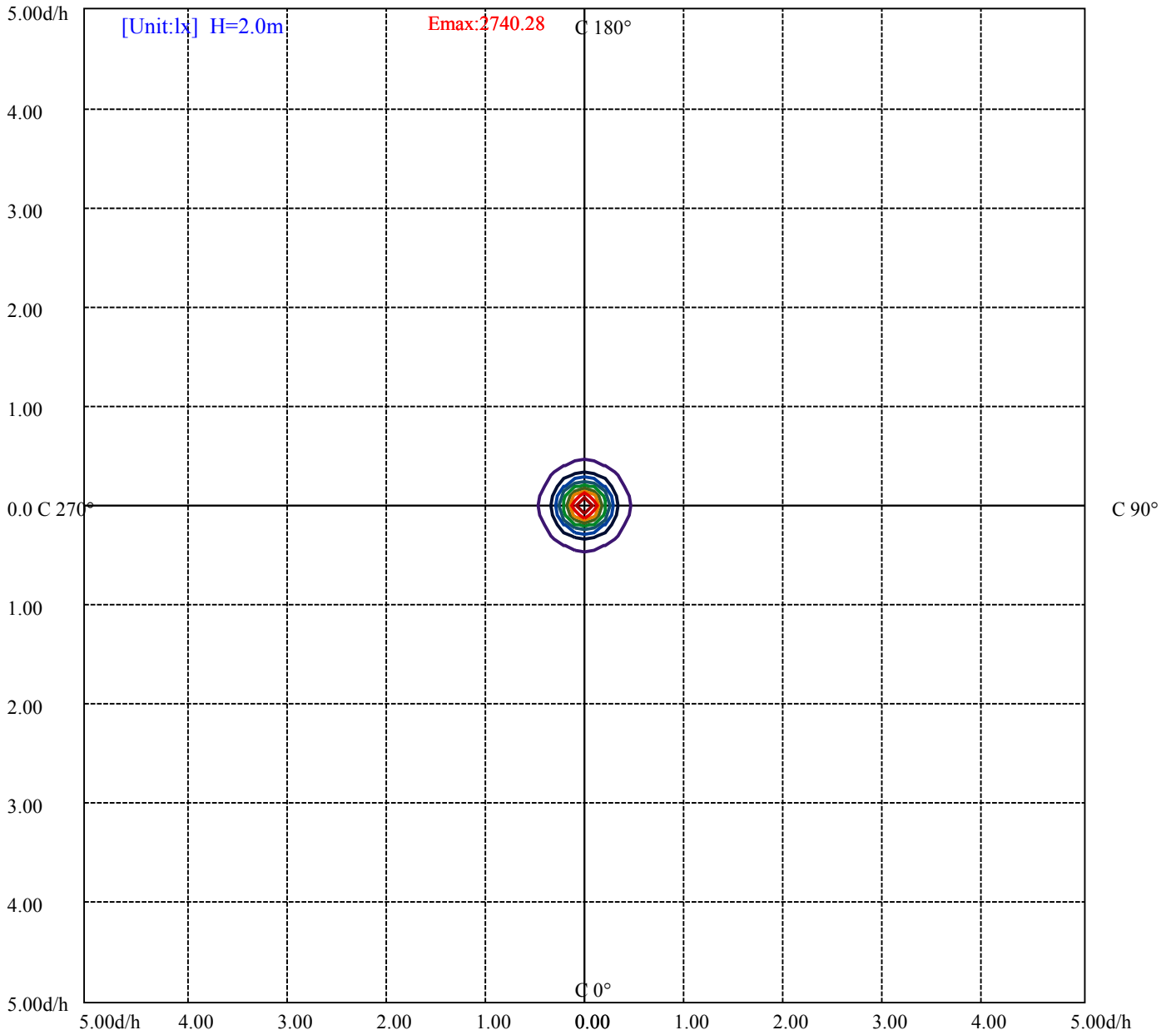
House

[Unit:cd]

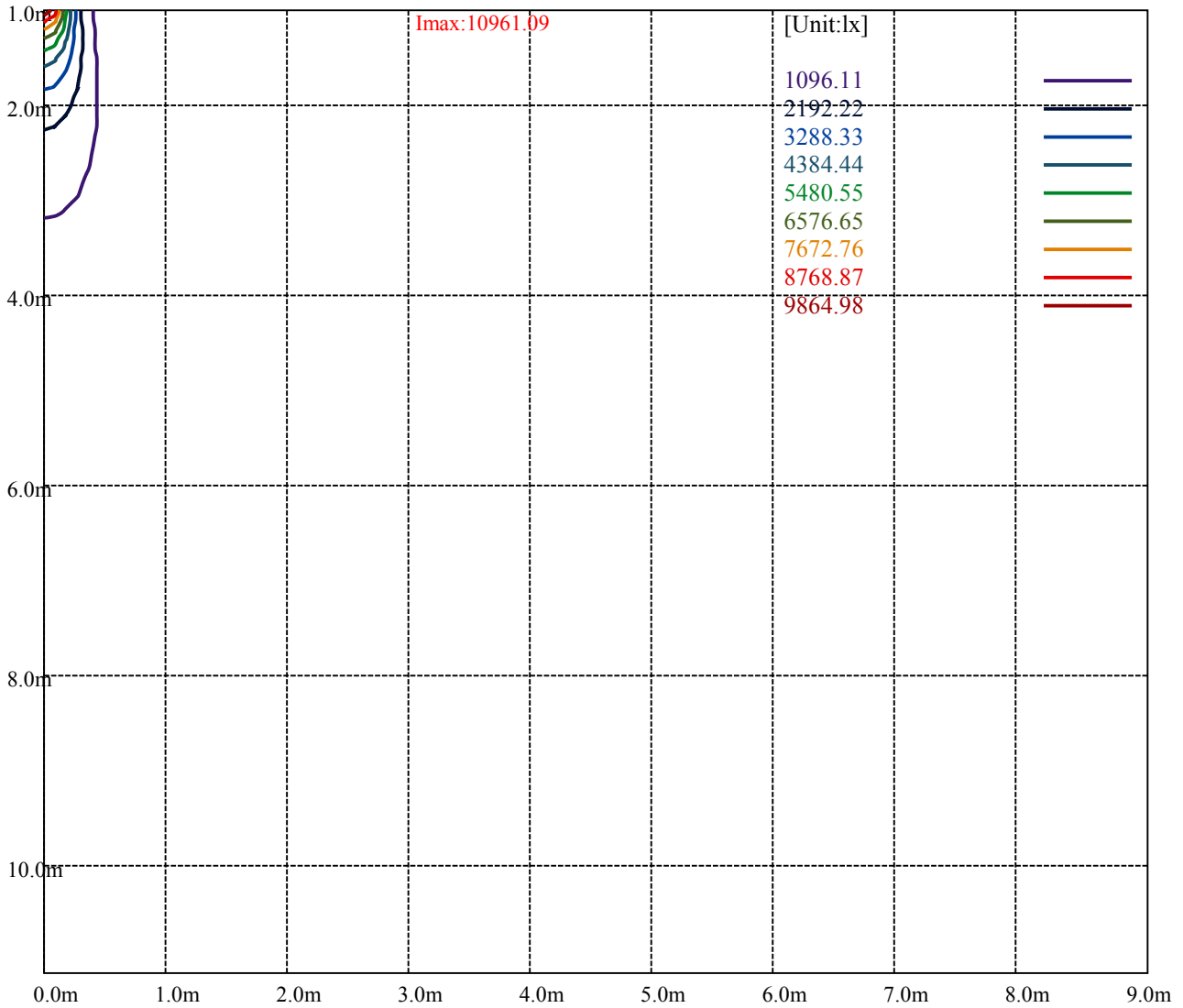
Road

Imax:10961.09

(10%Imax)	1096.11	—
(20%Imax)	2192.22	—
(30%Imax)	3288.33	—
(40%Imax)	4384.44	—
(50%Imax)	5480.55	—
(60%Imax)	6576.65	—
(70%Imax)	7672.76	—
(80%Imax)	8768.87	—
(90%Imax)	9864.98	—



- (10%Emax) 274.0275
- (20%Emax) 548.055
- (30%Emax) 822.0825
- (40%Emax) 1096.108
- (50%Emax) 1370.135
- (60%Emax) 1644.162
- (70%Emax) 1918.19
- (80%Emax) 2192.218
- (90%Emax) 2466.245



Luminance Table

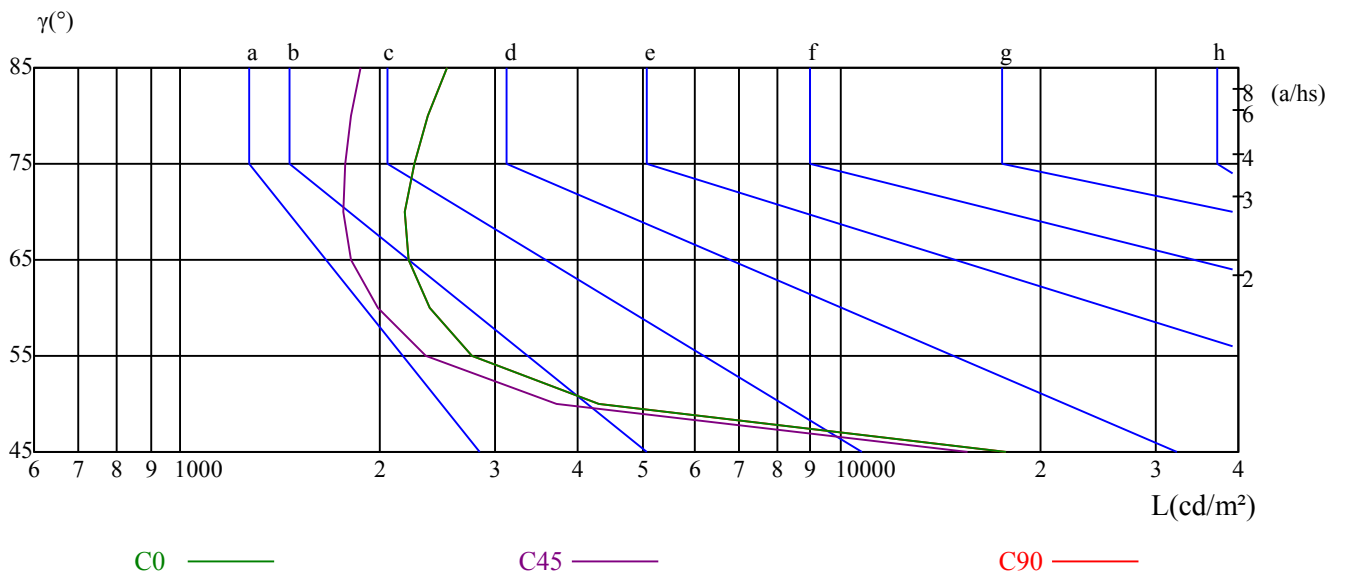
γ	45	50	55	60	65	70	75	80	85
C0	17824	4287	2765	2383	2215	2192	2261	2371	2530
C45	15605	3699	2349	1991	1817	1762	1775	1811	1868
C90	17824	4287	2765	2383	2215	2192	2261	2371	2530

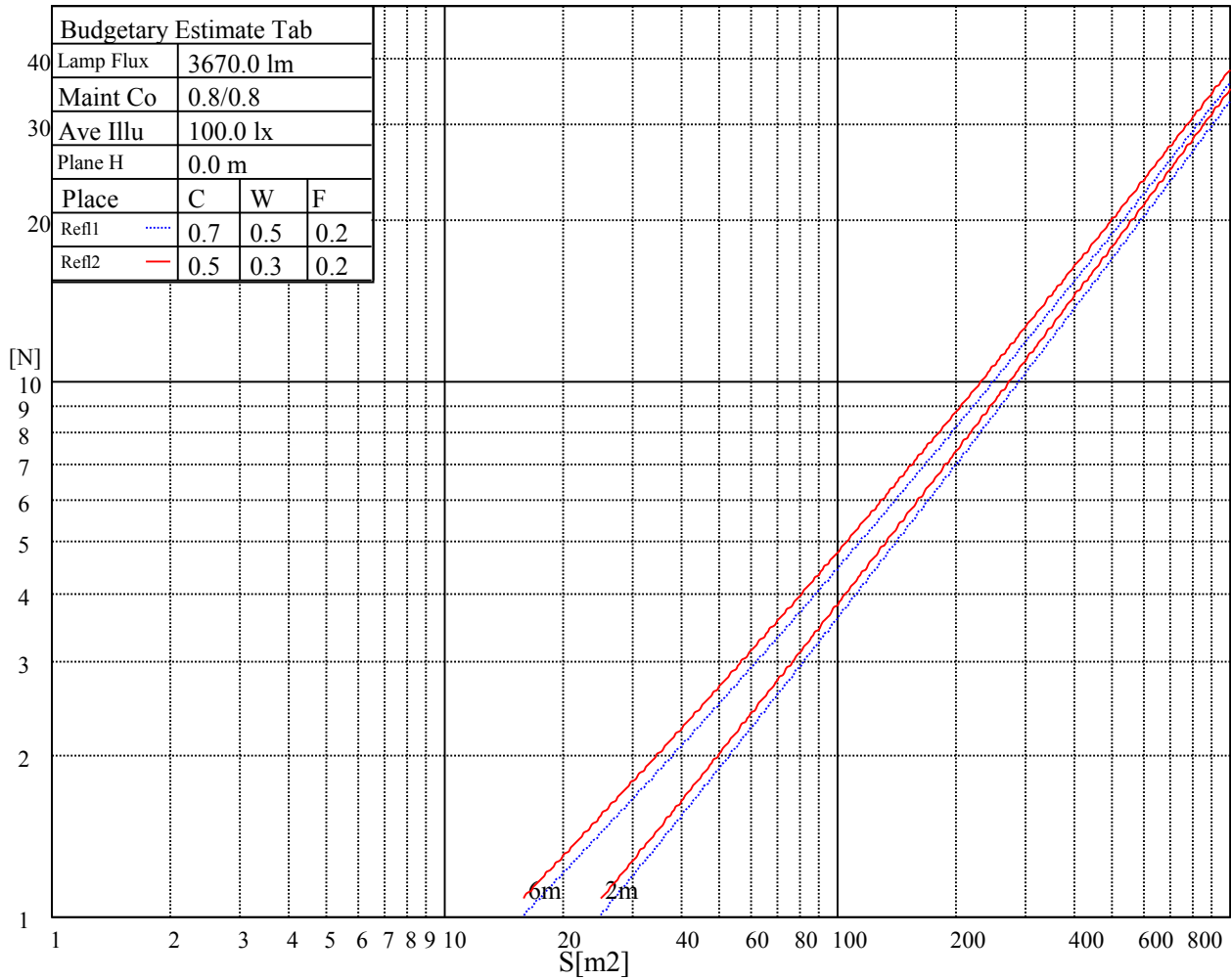
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4699	4699	4699	6676	6676	6676	17659	17659	17659

Glare Table

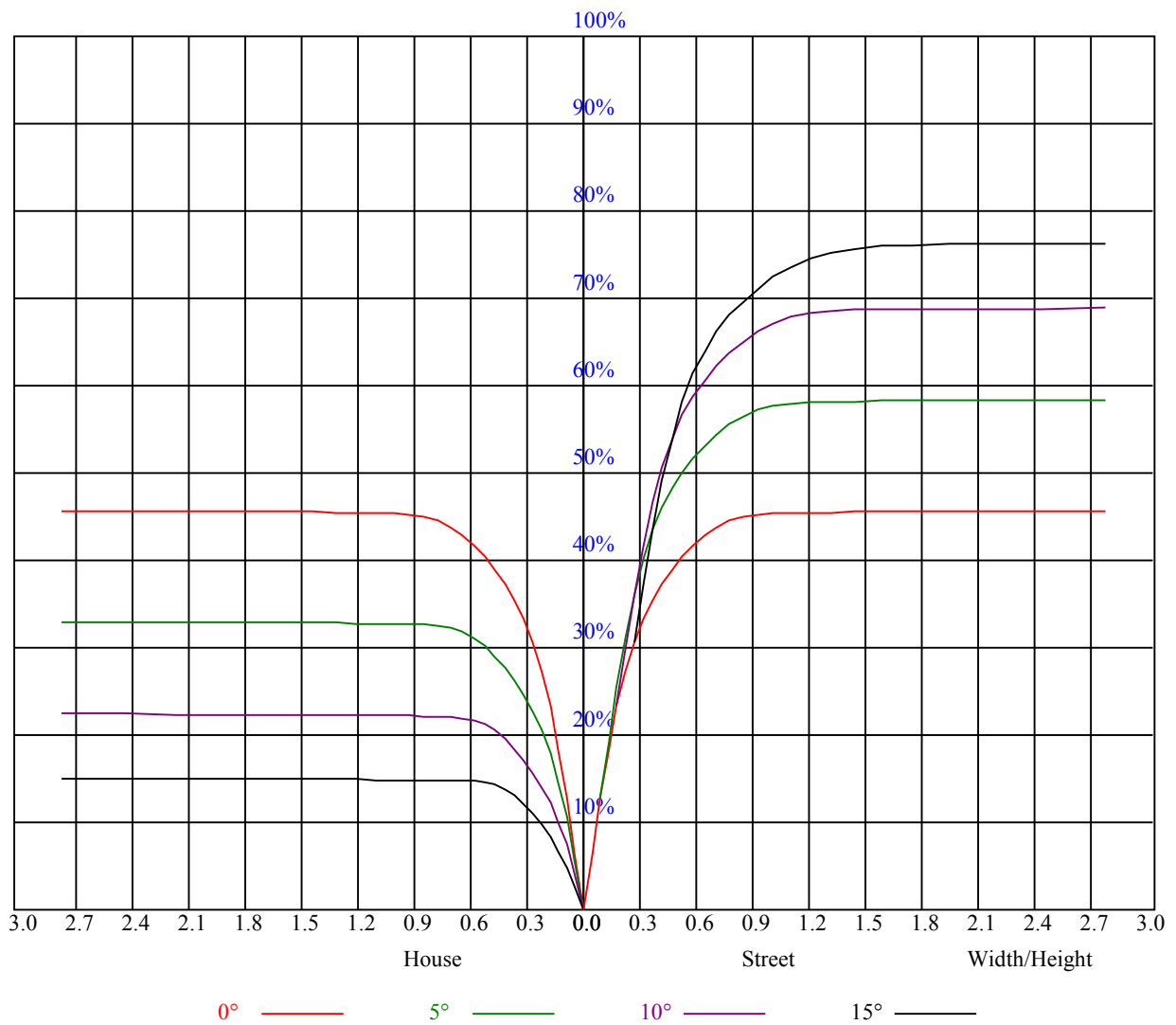
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

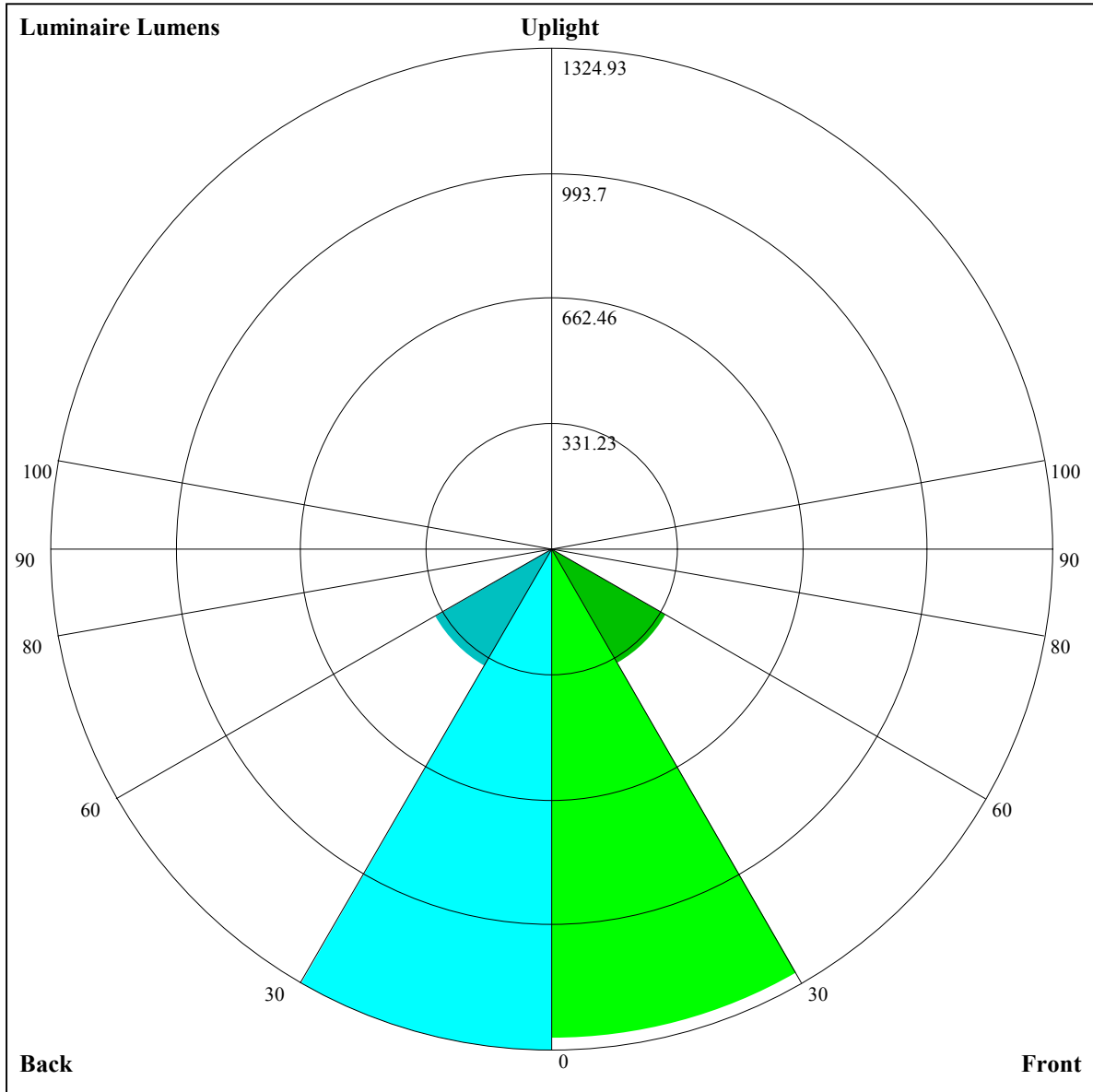
Luminance Limiting Curve





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	1.09	1.09	1.09	1.07	1.07	1.07	1.02	1.02	1.02	0.97	0.97	0.97	0.94	0.94	0.94	0.92
1	1.02	1.00	0.98	1.00	0.99	0.97	0.97	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
2	0.96	0.93	0.90	0.95	0.92	0.89	0.92	0.89	0.87	0.89	0.87	0.86	0.87	0.85	0.84	0.82
3	0.91	0.87	0.84	0.90	0.86	0.83	0.87	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.78
4	0.86	0.82	0.79	0.85	0.81	0.78	0.83	0.80	0.77	0.82	0.79	0.76	0.80	0.77	0.75	0.74
5	0.82	0.77	0.74	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
6	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.67
7	0.75	0.70	0.67	0.74	0.70	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.64
8	0.71	0.67	0.63	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.62
9	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.59
10	0.66	0.61	0.58	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.57





Luminaire Lumens:

FL=1293.71,FM=347.59,FH=8.1,FVH=3.56

BL=1324.93,BM=359.8,BH=8.11,BVH=3.55

UL=0,UH=0

BUG Rating:B3-U0-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	10993.40	10916.20	10780.28	10598.20	10238.25	9881.65	9442.82	8807.65	8248.84
45.0	10935.50	10996.75	10985.84	10870.89	10698.05	10476.54	10092.25	9688.66	9216.28
90.0	11005.98	10993.40	10882.64	10724.06	10488.28	10196.29	9702.09	9239.77	8709.49
135.0	10909.49	10981.65	11001.79	10914.52	10767.69	10545.34	10255.87	9789.35	9343.81
180.0	10993.40	10976.61	10891.03	10741.68	10468.15	10144.27	9801.94	9329.55	8672.57
225.0	10935.50	10814.68	10584.78	10311.24	9969.75	9535.96	8905.82	8330.23	7715.20
270.0	11005.98	10917.88	10777.76	10566.32	10207.20	9826.27	9380.73	8727.94	8128.86
315.0	10909.49	10760.98	10488.28	10190.42	9709.64	9233.06	8692.70	7940.07	7325.04
360.0	10993.40	10916.20	10780.28	10598.20	10238.25	9881.65	9442.82	8807.65	8248.84
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	7492.85	6845.94	6225.04	5625.95	5041.97	4359.82	3851.35	3384.00	2965.31
45.0	8557.62	7980.35	7196.67	6581.64	5974.16	5383.47	4801.16	4127.40	3618.09
90.0	8138.93	7363.64	6726.80	6105.06	5513.52	4791.93	4249.06	3606.35	3150.74
135.0	8837.02	8122.99	7508.80	6897.12	6128.55	5534.50	4964.78	4293.53	3782.55
180.0	8086.91	7294.84	6660.51	6058.07	5335.64	4769.28	4233.12	3734.72	3175.91
225.0	6921.46	6304.75	5709.02	5000.86	4438.69	3915.12	3323.58	2890.63	2519.77
270.0	7511.31	6882.02	6103.38	5491.71	4918.63	4360.66	3712.07	3243.04	2826.02
315.0	6700.79	5937.24	5356.62	4806.20	4269.20	3650.82	3198.57	2800.85	2460.20
360.0	7492.85	6845.94	6225.04	5625.95	5041.97	4359.82	3851.35	3384.00	2965.31
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2518.09	2224.42	1848.52	1650.76	1620.22	1492.93	1415.99	1354.40	1298.86
45.0	3158.29	2748.83	2335.18	2068.36	1863.63	1672.32	1554.85	1448.29	1383.69
90.0	2742.12	2315.04	1869.50	1644.30	1644.30	1491.25	1399.04	1330.66	1273.69
135.0	3310.16	2893.15	2463.55	2179.11	1946.69	1767.14	1601.84	1500.32	1420.61
180.0	2767.29	2430.83	2154.78	1880.41	1712.60	1592.61	1491.09	1399.63	1345.93
225.0	2216.87	1669.39	1669.39	1608.72	1502.92	1409.11	1353.48	1303.98	1263.62
270.0	2378.81	2088.49	1809.93	1647.15	1522.13	1423.12	1325.79	1260.35	1215.04
315.0	2113.67	1664.69	1664.69	1576.84	1483.79	1408.52	1335.94	1290.80	1258.42
360.0	2518.09	2224.42	1848.52	1650.76	1620.22	1492.93	1415.99	1354.40	1298.86
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1267.06	1237.19	1214.28	1190.12	1171.66	1151.69	1129.29	1076.26	1006.87
45.0	1332.50	1285.52	1258.67	1233.50	1215.88	1193.22	1173.08	1154.62	1123.58
90.0	1218.90	1187.35	1159.99	1135.24	1113.18	1091.70	1070.38	1044.12	1000.83
135.0	1342.57	1294.75	1258.67	1222.59	1200.77	1174.76	1155.46	1136.17	1110.99
180.0	1288.87	1257.83	1227.62	1202.45	1183.99	1165.53	1142.88	1111.83	1056.46
225.0	1237.10	1212.69	1194.65	1176.27	1157.31	1132.31	1082.72	1018.61	919.19
270.0	1176.44	1152.95	1128.61	1102.60	1080.79	1062.33	1039.67	985.14	918.85
315.0	1225.19	1203.37	1182.82	1162.60	1138.10	1107.64	1053.60	988.66	884.95
360.0	1267.06	1237.19	1214.28	1190.12	1171.66	1151.69	1129.29	1076.26	1006.87
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	922.12	806.25	702.63	596.32	467.86	368.09	271.02	164.37	95.82
45.0	1053.94	978.42	887.81	761.95	664.62	528.69	427.16	427.16	310.12
90.0	915.16	833.94	743.91	649.09	528.44	431.61	337.38	250.21	153.38
135.0	1055.62	990.17	902.07	807.26	706.57	563.93	459.89	433.04	306.59
180.0	986.81	868.51	775.37	671.33	560.57	433.04	433.04	313.30	129.97
225.0	826.89	725.03	620.99	515.35	386.89	290.23	185.35	117.05	68.30
270.0	846.69	740.13	644.48	557.22	460.73	436.39	320.18	166.89	105.64
315.0	791.90	689.70	555.37	447.38	318.93	226.63	148.76	91.29	48.16
360.0	922.12	806.25	702.63	596.32	467.86	368.09	271.02	164.37	95.82

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	54.20	34.82	28.95	23.75	18.79	14.85	12.33	11.83	11.50
45.0	134.58	77.11	45.48	35.74	29.62	24.08	19.21	15.86	14.18
90.0	94.56	59.57	40.86	35.66	28.28	23.07	19.05	15.86	14.68
135.0	149.86	91.71	48.92	35.58	29.53	23.91	18.63	14.77	12.75
180.0	76.77	45.64	32.64	27.27	21.56	15.69	12.59	11.58	11.08
225.0	40.78	35.16	28.95	21.90	17.54	15.10	14.35	13.59	13.01
270.0	62.51	47.49	40.78	34.07	26.43	21.48	18.38	16.36	14.52
315.0	35.58	30.63	24.92	18.54	14.77	13.01	12.50	11.91	11.41
360.0	54.20	34.82	28.95	23.75	18.79	14.85	12.33	11.83	11.50
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	10.99	10.66	10.32	10.15	9.98	9.73	9.48	9.40	9.15
45.0	13.59	12.92	12.17	11.66	10.99	10.49	10.15	9.73	9.40
90.0	13.59	12.75	11.91	11.41	10.82	10.32	9.73	9.40	9.15
135.0	12.17	11.75	11.33	10.82	10.49	10.15	9.57	9.31	9.06
180.0	10.74	10.40	10.07	9.90	9.65	9.48	9.31	9.23	9.06
225.0	12.33	11.83	11.16	10.74	10.49	9.90	9.65	9.23	8.89
270.0	13.68	12.84	12.25	11.66	10.99	10.40	10.07	9.65	9.23
315.0	10.82	10.49	10.07	9.65	9.31	9.06	8.81	8.56	8.39
360.0	10.99	10.66	10.32	10.15	9.98	9.73	9.48	9.40	9.15
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	9.06	8.89	8.73	8.56	8.39	8.22	8.05	7.89	7.72
45.0	9.06	8.81	8.47	8.22	8.05	7.89	7.80	7.64	7.55
90.0	8.89	8.56	8.39	8.22	8.05	7.97	7.89	7.89	7.80
135.0	8.81	8.56	8.39	8.14	7.97	7.89	7.80	7.64	7.55
180.0	8.89	8.73	8.56	8.47	8.31	8.22	8.05	7.97	7.80
225.0	8.56	8.39	8.14	7.89	7.80	7.64	7.55	7.47	7.38
270.0	8.98	8.81	8.56	8.31	8.22	8.05	7.97	7.89	7.80
315.0	8.22	8.05	7.89	7.80	7.72	7.55	7.47	7.38	7.30
360.0	9.06	8.89	8.73	8.56	8.39	8.22	8.05	7.89	7.72
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.64	7.47	7.38	7.30	7.13	7.05	6.96	6.96	6.88
45.0	7.47	7.47	7.38	7.38	7.22	7.13	7.05	6.96	6.88
90.0	7.80	7.72	7.72	7.64	7.64	7.55	7.47	7.47	7.38
135.0	7.47	7.38	7.30	7.22	7.13	7.05	6.96	6.88	6.80
180.0	7.72	7.55	7.38	7.30	7.22	7.05	7.05	6.88	6.80
225.0	7.30	7.22	7.22	7.05	7.05	6.96	6.80	6.80	6.71
270.0	7.72	7.64	7.55	7.55	7.47	7.38	7.30	7.22	7.13
315.0	7.22	7.13	6.96	6.96	6.88	6.71	6.71	6.63	6.63
360.0	7.64	7.47	7.38	7.30	7.13	7.05	6.96	6.96	6.88
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.80	6.71	6.71	6.71	6.63	6.46	6.54	6.46	6.21
45.0	6.80	6.80	6.71	6.71	6.63	6.46	6.38	6.29	6.21
90.0	7.22	7.05	6.96	6.80	6.63	6.46	6.29	6.29	6.21
135.0	6.71	6.63	6.63	6.54	6.46	6.46	6.38	6.29	6.21
180.0	6.80	6.71	6.63	6.63	6.54	6.46	6.38	6.29	6.29
225.0	6.63	6.63	6.46	6.38	6.38	6.38	6.21	6.21	6.13
270.0	6.96	6.88	6.71	6.54	6.46	6.38	6.21	6.13	6.13
315.0	6.54	6.54	6.46	6.38	6.29	6.29	6.21	6.13	6.04
360.0	6.80	6.71	6.71	6.71	6.63	6.46	6.54	6.46	6.21

Intensity data(cd)

C/ γ ($^{\circ}$)	90.0
0.0	6.13
45.0	6.13
90.0	6.13
135.0	6.13
180.0	6.04
225.0	6.13
270.0	6.04
315.0	6.04
360.0	6.13