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## Nata

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Client: NT

LumCAT: 3-3207-A

Luminaire: 92.70.121.00

Report No: 20260325-B005

Ballast type: DC

Test No: 20260325-C005

Voltage(V): 35.600

LampCAT: CITIZEN CLU038

Current(A): 0.711

Lamp flux(lm): 3692.0

Power (W): 25.310

Number of Lamps: 1

PF: 0.000

Length(mm): 65

Width(mm): 65

Phm Type: C

Height(mm): 34

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## Photometric Results

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Lumens(lm): 3318.50, Efficiency(%): 89.88% , Luminous Efficacy(lm/W): 131.11

Central intensity(cd): 9875.772, Maximum intensity(cd): 9875.772

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=27.4

[C90/270]Total=27.4

Field angle(10%Imax): [C0/180]Total=67.6

[C90/270]Total=67.6

Maximum s/h(1/2): C0\_180=0.46 C90\_270=0.46

Maximum s/h(1/4): C0\_180=0.47 C90\_270=0.47

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.88%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 99.304%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9875.773	0.000	0	0.00%	0.00%
1.0	9840.638	9.434	9.434	0.26%	0.28%
2.0	9743.936	28.110	37.544	0.76%	1.13%
3.0	9594.270	46.251	83.794	1.25%	2.53%
4.0	9375.381	63.497	147.292	1.72%	4.44%
5.0	9104.261	79.498	226.79	2.15%	6.83%
6.0	8735.181	93.751	320.541	2.54%	9.66%
7.0	8318.380	105.851	426.392	2.87%	12.85%
8.0	7856.585	115.761	542.153	3.14%	16.34%
9.0	7379.057	123.477	665.63	3.34%	20.06%
10.0	6844.893	128.722	794.352	3.49%	23.94%
11.0	6291.536	131.260	925.611	3.56%	27.89%
12.0	5788.521	132.052	1057.664	3.58%	31.87%
13.0	5275.544	131.303	1188.966	3.56%	35.83%
14.0	4764.244	128.508	1317.475	3.48%	39.70%
15.0	4269.515	124.019	1441.494	3.36%	43.44%
16.0	3828.277	118.655	1560.149	3.21%	47.01%
17.0	3382.319	112.288	1672.438	3.04%	50.40%
18.0	3019.427	105.551	1777.989	2.86%	53.58%
19.0	2670.485	98.993	1876.982	2.68%	56.56%
20.0	2361.607	92.101	1969.083	2.49%	59.34%
21.0	2067.916	85.056	2054.139	2.30%	61.90%
22.0	1849.143	78.715	2132.854	2.13%	64.27%
23.0	1726.232	75.021	2207.875	2.03%	66.53%
24.0	1598.811	72.697	2280.572	1.97%	68.72%
25.0	1494.191	70.328	2350.9	1.90%	70.84%
26.0	1407.149	68.486	2419.386	1.85%	72.91%
27.0	1338.494	67.173	2486.559	1.82%	74.93%
28.0	1278.847	66.266	2552.825	1.79%	76.93%
29.0	1239.191	65.879	2618.704	1.78%	78.91%
30.0	1198.277	65.811	2684.515	1.78%	80.90%
31.0	1157.016	65.544	2750.059	1.78%	82.87%
32.0	1108.309	64.899	2814.958	1.76%	84.83%
33.0	1047.394	63.508	2878.466	1.72%	86.74%
34.0	970.599	61.070	2939.536	1.65%	88.58%
35.0	878.617	57.430	2996.966	1.56%	90.31%
36.0	784.842	52.965	3049.931	1.43%	91.91%
37.0	675.650	47.633	3097.564	1.29%	93.34%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	572.299	41.655	3139.219	1.13%	94.60%
39.0	469.242	35.551	3174.77	0.96%	95.67%
40.0	383.365	29.736	3204.506	0.81%	96.56%
41.0	293.617	24.107	3228.613	0.65%	97.29%
42.0	220.777	18.689	3247.301	0.51%	97.85%
43.0	121.432	12.676	3259.978	0.34%	98.24%
44.0	77.927	7.524	3267.502	0.20%	98.46%
45.0	50.354	4.930	3272.432	0.13%	98.61%
46.0	38.104	3.459	3275.892	0.09%	98.72%
47.0	30.783	2.740	3278.631	0.07%	98.80%
48.0	25.423	2.272	3280.903	0.06%	98.87%
49.0	20.567	1.889	3282.792	0.05%	98.92%
50.0	17.264	1.577	3284.369	0.04%	98.97%
51.0	15.323	1.379	3285.748	0.04%	99.01%
52.0	14.128	1.264	3287.012	0.03%	99.05%
53.0	13.310	1.194	3288.205	0.03%	99.09%
54.0	12.586	1.141	3289.347	0.03%	99.12%
55.0	11.957	1.096	3290.442	0.03%	99.15%
56.0	11.390	1.055	3291.497	0.03%	99.19%
57.0	10.876	1.018	3292.515	0.03%	99.22%
58.0	10.425	0.985	3293.5	0.03%	99.25%
59.0	10.027	0.956	3294.457	0.03%	99.28%
60.0	9.681	0.931	3295.388	0.03%	99.30%
61.0	9.314	0.906	3296.294	0.02%	99.33%
62.0	9.072	0.886	3297.18	0.02%	99.36%
63.0	8.810	0.870	3298.05	0.02%	99.38%
64.0	8.611	0.855	3298.905	0.02%	99.41%
65.0	8.401	0.842	3299.746	0.02%	99.43%
66.0	8.212	0.829	3300.575	0.02%	99.46%
67.0	8.065	0.818	3301.394	0.02%	99.48%
68.0	7.887	0.808	3302.202	0.02%	99.51%
69.0	7.793	0.800	3303.002	0.02%	99.53%
70.0	7.698	0.796	3303.797	0.02%	99.56%
71.0	7.583	0.790	3304.587	0.02%	99.58%
72.0	7.499	0.784	3305.371	0.02%	99.60%
73.0	7.405	0.779	3306.151	0.02%	99.63%
74.0	7.321	0.774	3306.925	0.02%	99.65%
75.0	7.226	0.769	3307.694	0.02%	99.67%

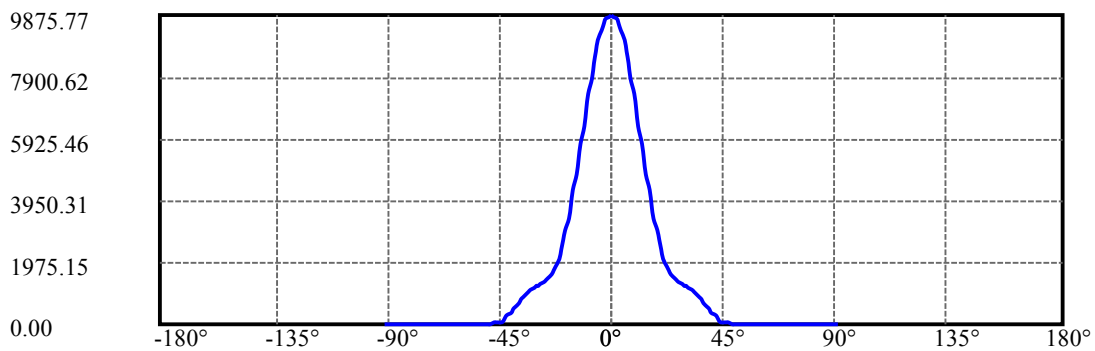
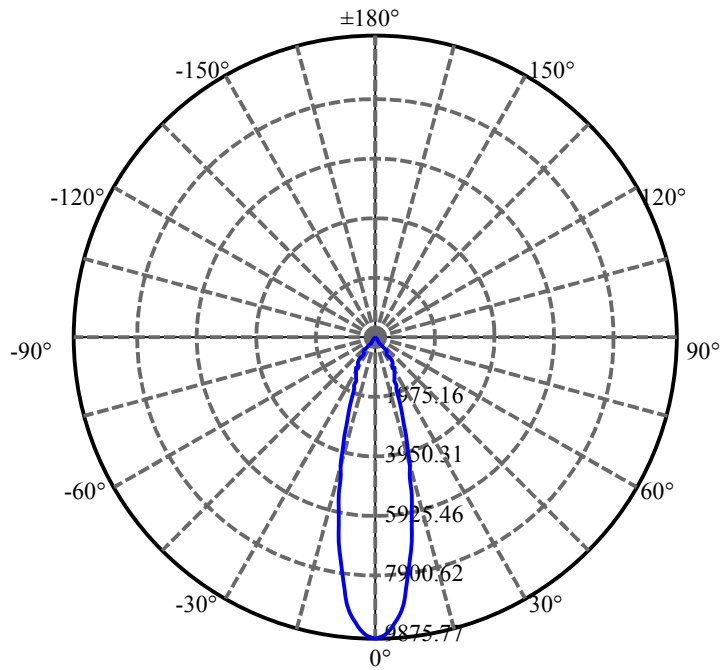
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.163	0.764	3308.457	0.02%	99.70%
77.0	7.101	0.760	3309.218	0.02%	99.72%
78.0	7.027	0.756	3309.974	0.02%	99.74%
79.0	6.943	0.751	3310.725	0.02%	99.77%
80.0	6.870	0.745	3311.47	0.02%	99.79%
81.0	6.796	0.739	3312.209	0.02%	99.81%
82.0	6.702	0.732	3312.941	0.02%	99.83%
83.0	6.639	0.725	3313.666	0.02%	99.85%
84.0	6.545	0.718	3314.384	0.02%	99.88%
85.0	6.440	0.709	3315.093	0.02%	99.90%
86.0	6.335	0.698	3315.791	0.02%	99.92%
87.0	6.261	0.689	3316.48	0.02%	99.94%
88.0	6.167	0.681	3317.161	0.02%	99.96%
89.0	6.125	0.674	3317.835	0.02%	99.98%
90.0	6.010	0.665	3318.5	0.02%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2684.51	72.71%	80.90%
0-40	3204.51	86.80%	96.56%
0-60	3295.39	89.26%	99.30%
0-90	3317.83	89.87%	99.98%
0-120	3317.83	89.87%	99.98%
0-180	3318.50	89.88%	100.00%
60-90	22.45	0.61%	0.68%
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%
0-29.55	2654.80	71.91%	80.00%

ZONAL LUMEN SUMMARY

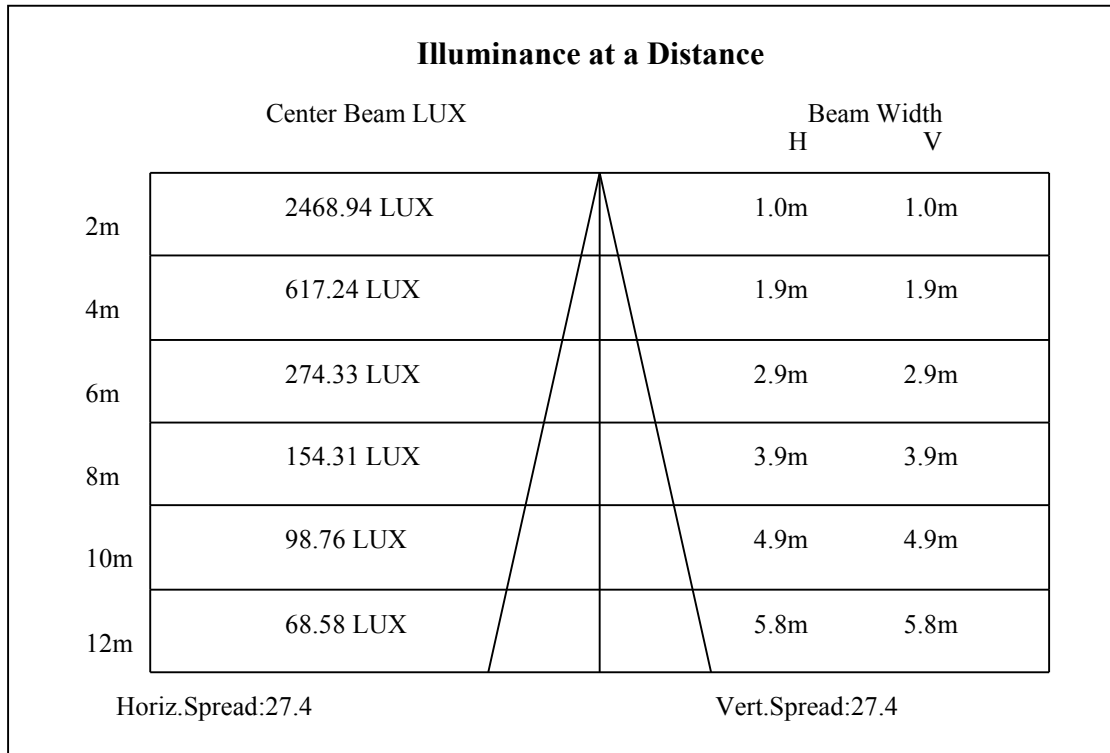
0-10	794.35
10-20	1174.73
20-30	715.43
30-40	519.99
40-50	79.86
50-60	11.02
60-70	8.41
70-80	7.67
80-90	6.37
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

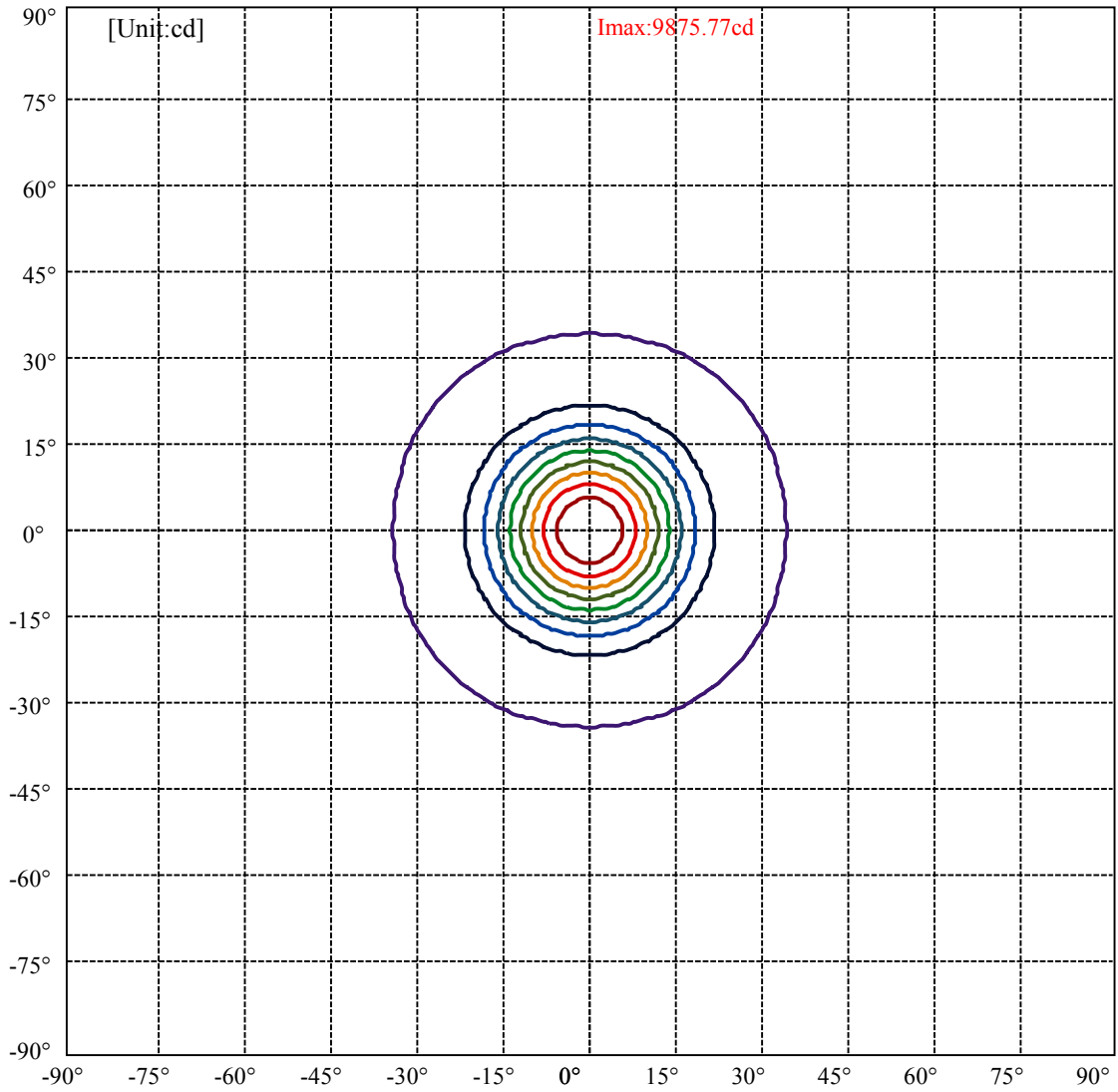


C90/C270: —————

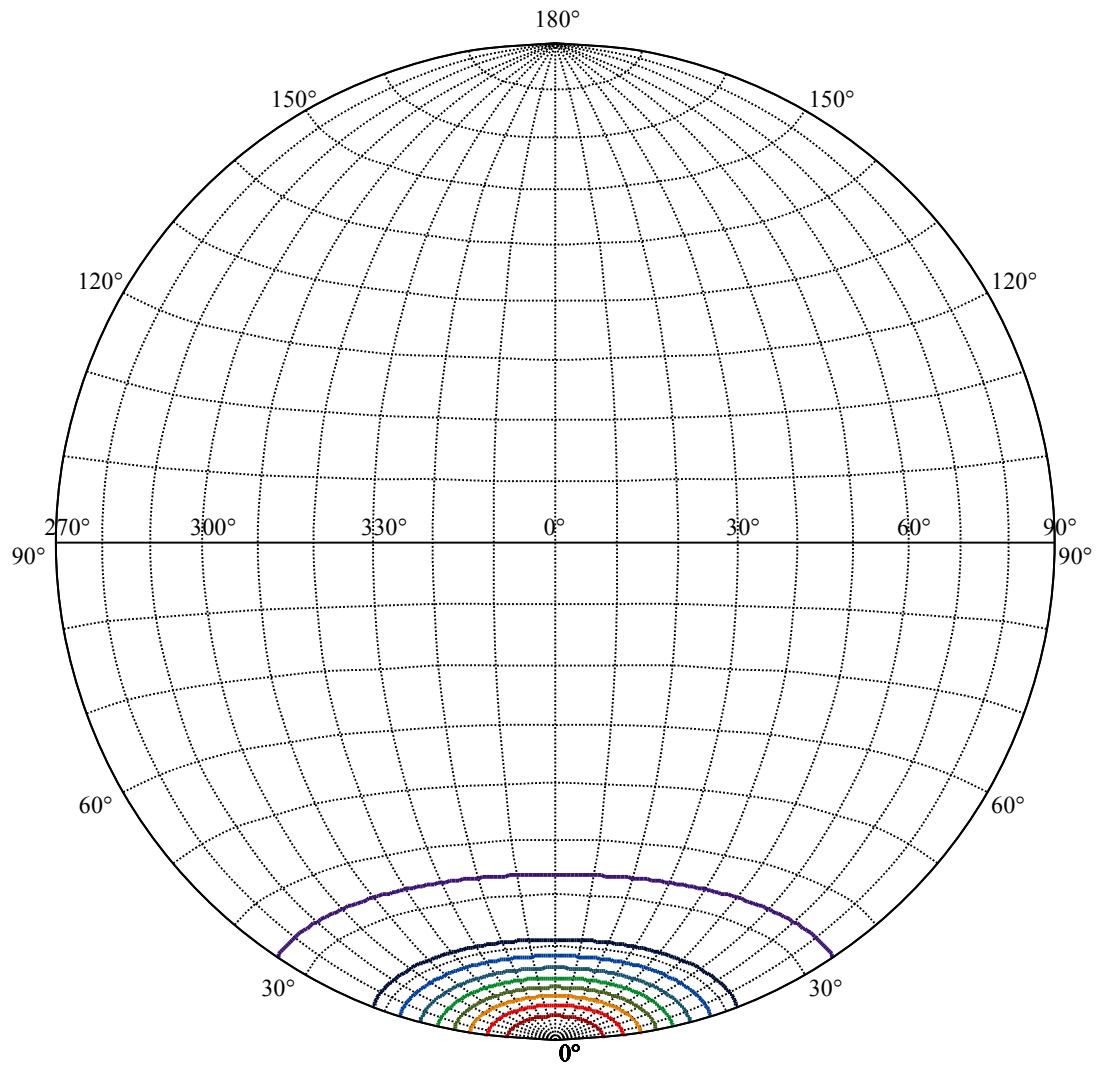
Field angle(10%Imax):C90/270Left:33.8 Right:33.8

Beam Angle(50%Imax):C90/270Left:13.7 Right:13.7





(10%Imax) 987.577	—
(20%Imax) 1975.15	—
(30%Imax) 2962.73	—
(40%Imax) 3950.31	—
(50%Imax) 4937.89	—
(60%Imax) 5925.46	—
(70%Imax) 6913.04	—
(80%Imax) 7900.62	—
(90%Imax) 8888.2	—



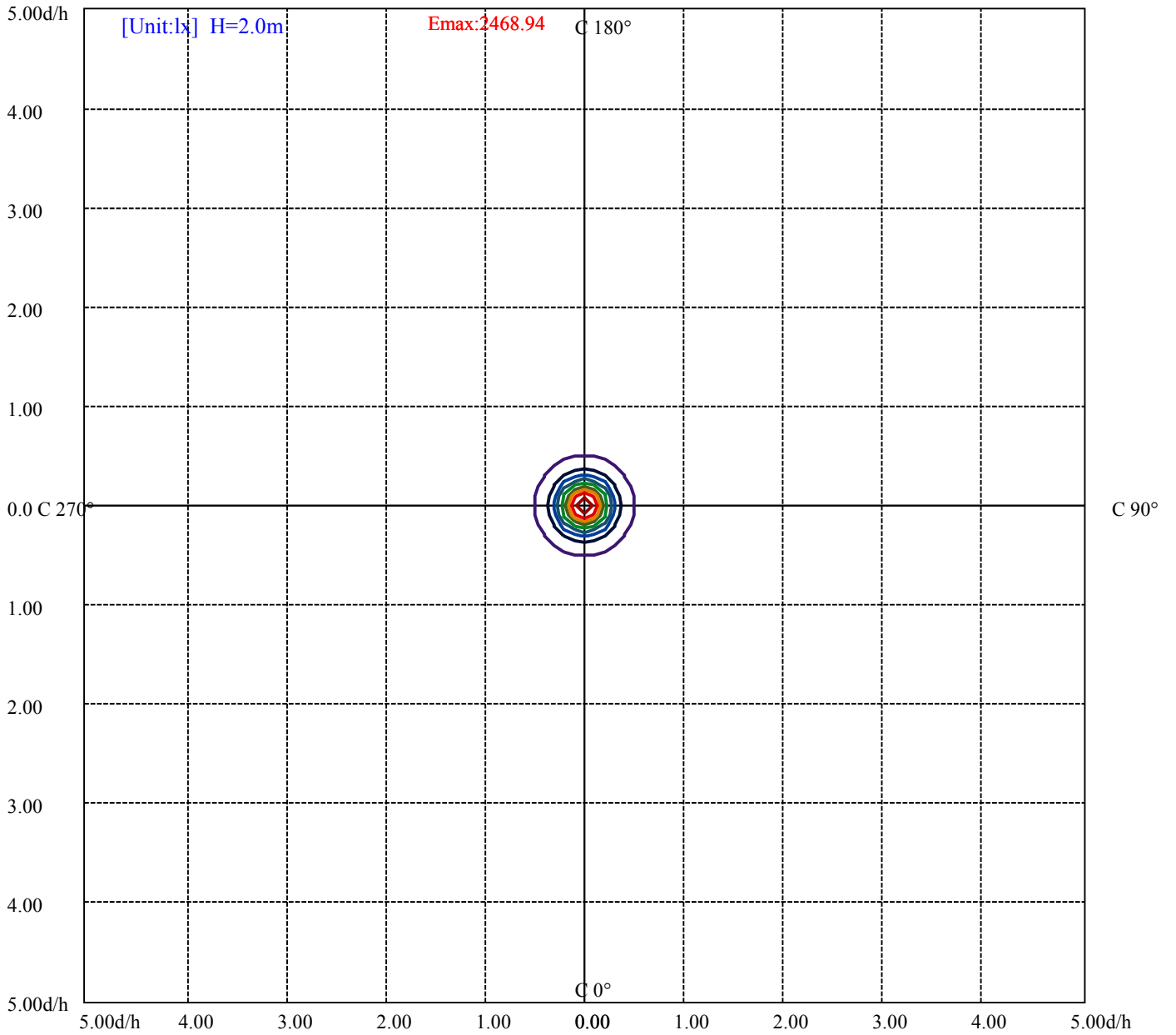
House

[Unit:cd]

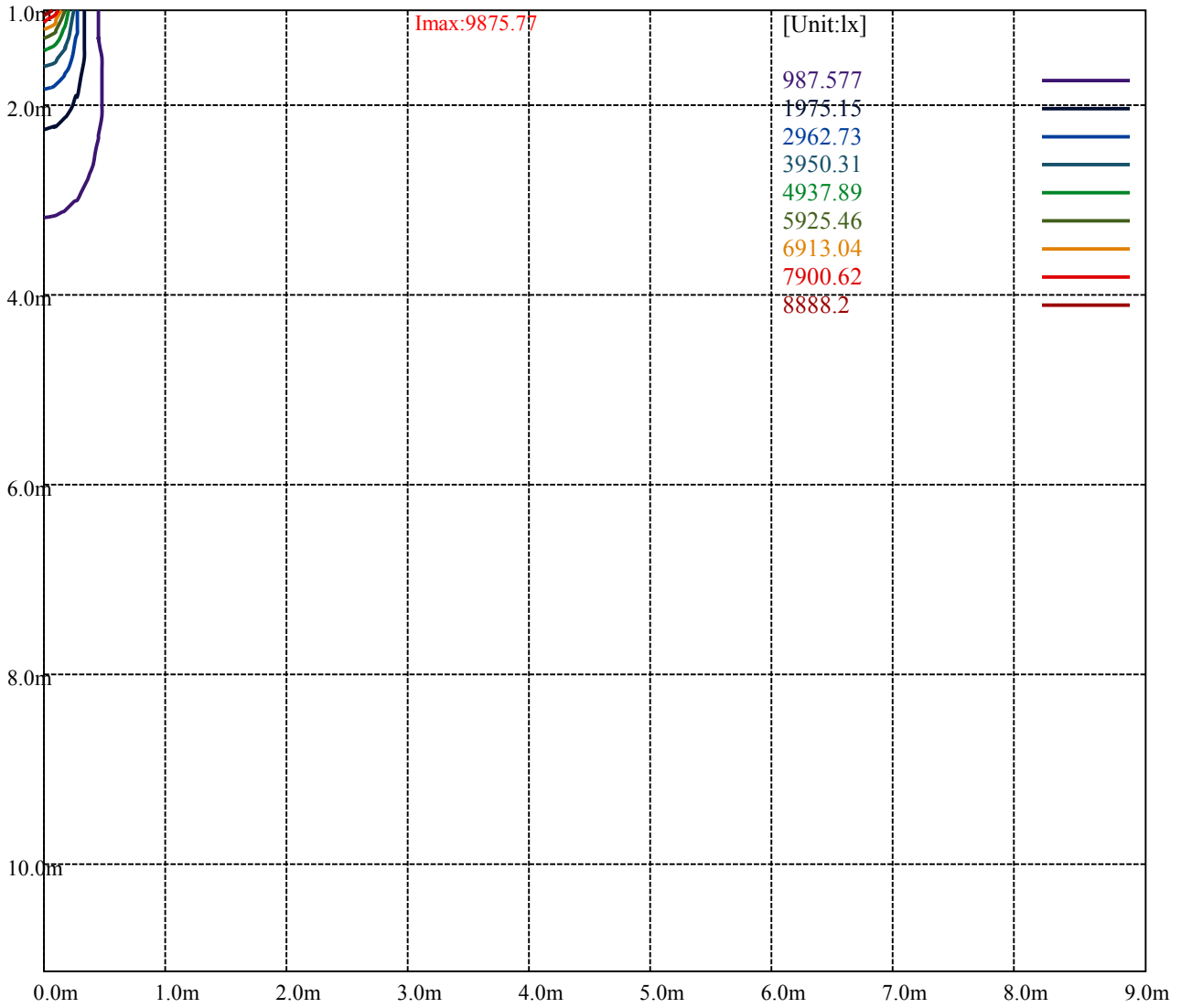
Road

**Imax:9875.77**

(10%Imax) 987.577	—
(20%Imax) 1975.15	—
(30%Imax) 2962.73	—
(40%Imax) 3950.31	—
(50%Imax) 4937.89	—
(60%Imax) 5925.46	—
(70%Imax) 6913.04	—
(80%Imax) 7900.62	—
(90%Imax) 8888.2	—



(10%Emax) 246.8943	—
(20%Emax) 493.7875	—
(30%Emax) 740.6825	—
(40%Emax) 987.5775	—
(50%Emax) 1234.47	—
(60%Emax) 1481.365	—
(70%Emax) 1728.26	—
(80%Emax) 1975.152	—
(90%Emax) 2222.048	—



Luminance Table

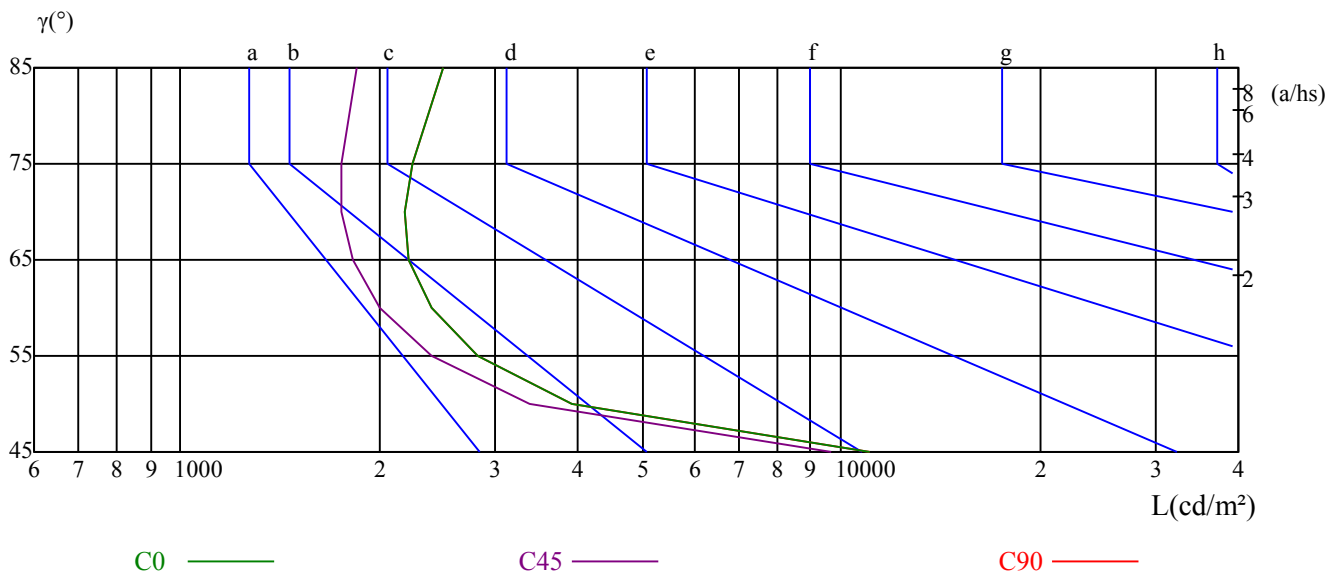
$\gamma$	45	50	55	60	65	70	75	80	85
C0	11066	3916	2824	2404	2218	2186	2239	2361	2506
C45	9688	3378	2399	2009	1819	1757	1757	1802	1850
C90	11066	3916	2824	2404	2218	2186	2239	2361	2506

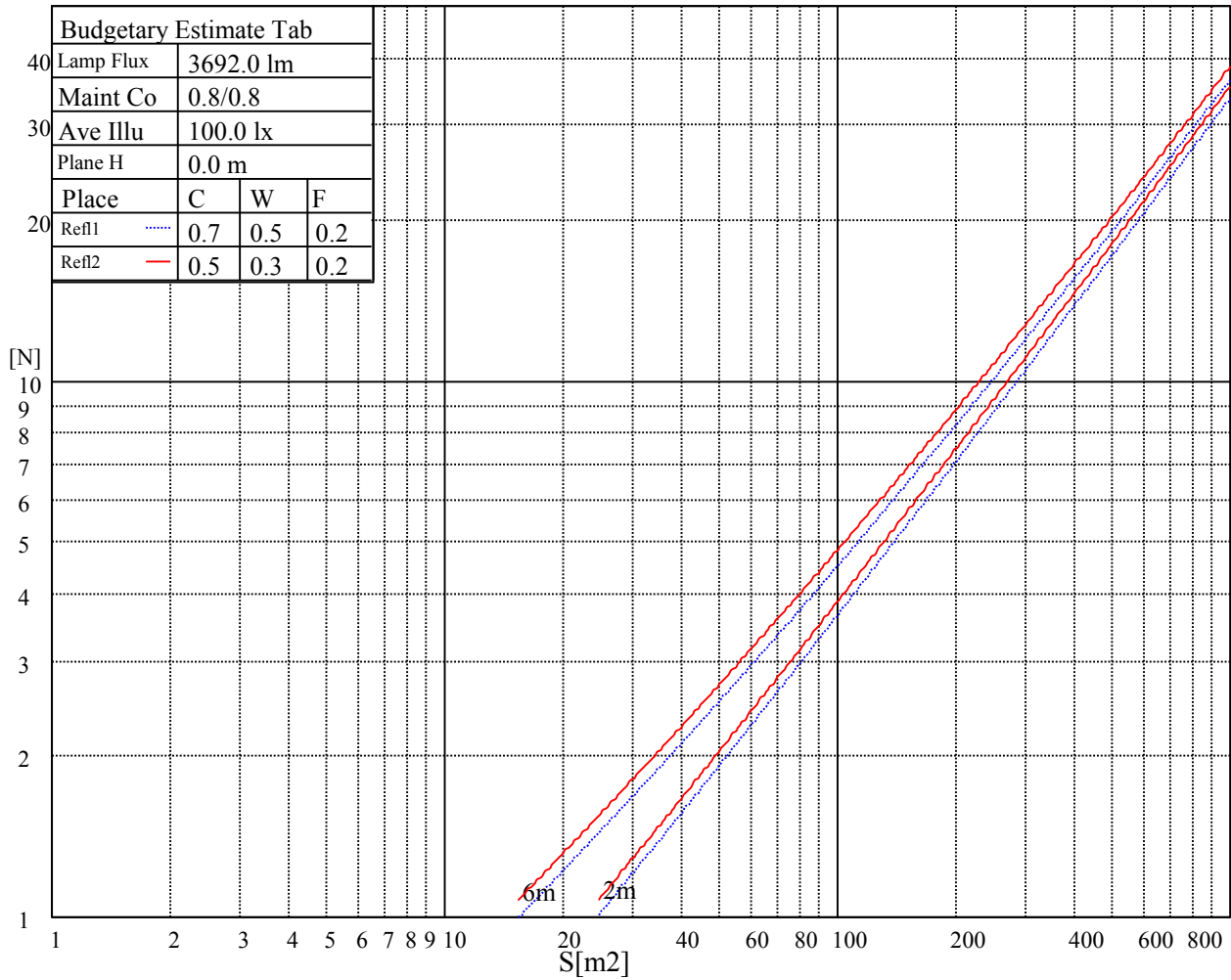
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4705	4705	4705	6608	6608	6608	17488	17488	17488

Glare Table

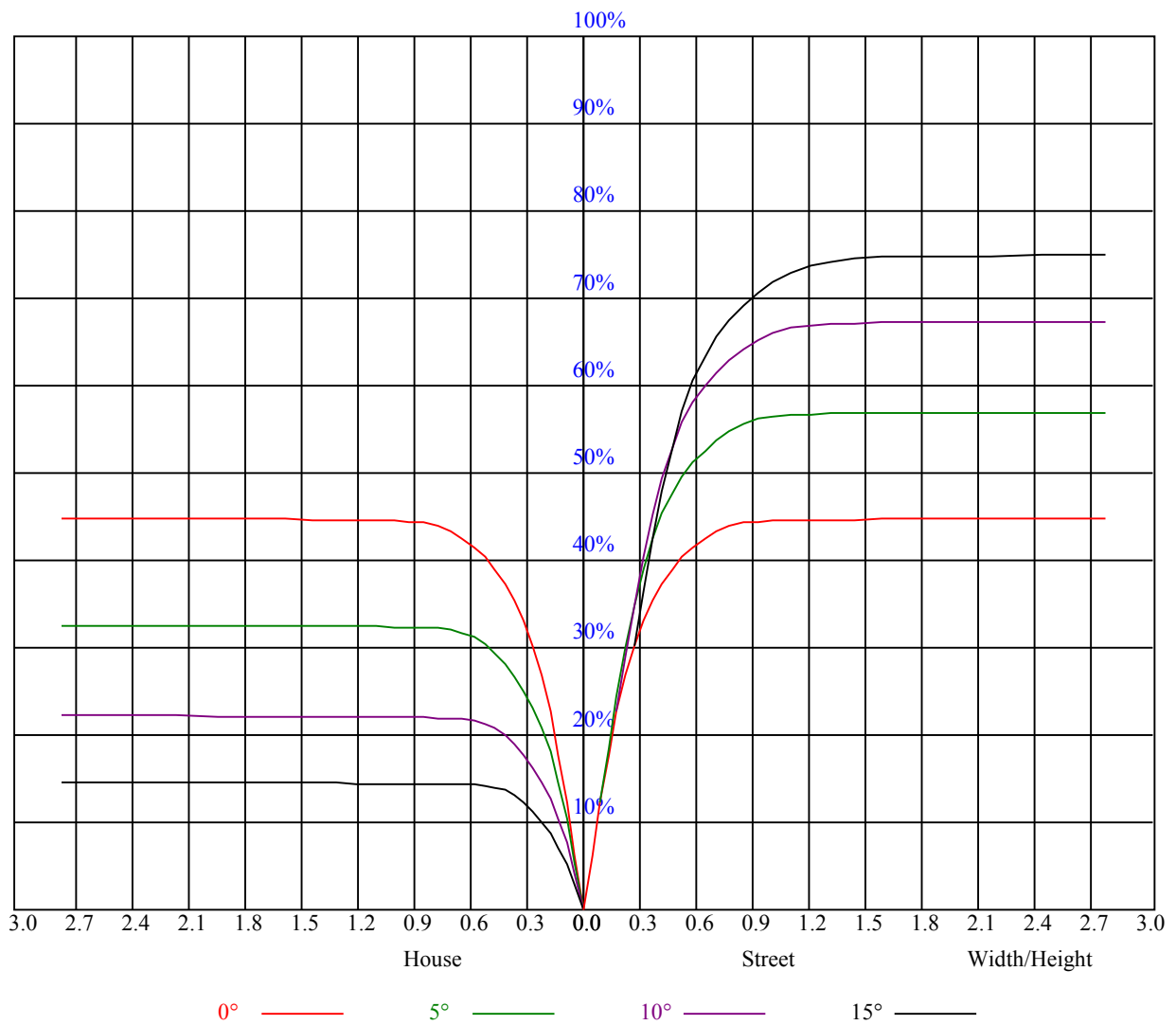
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

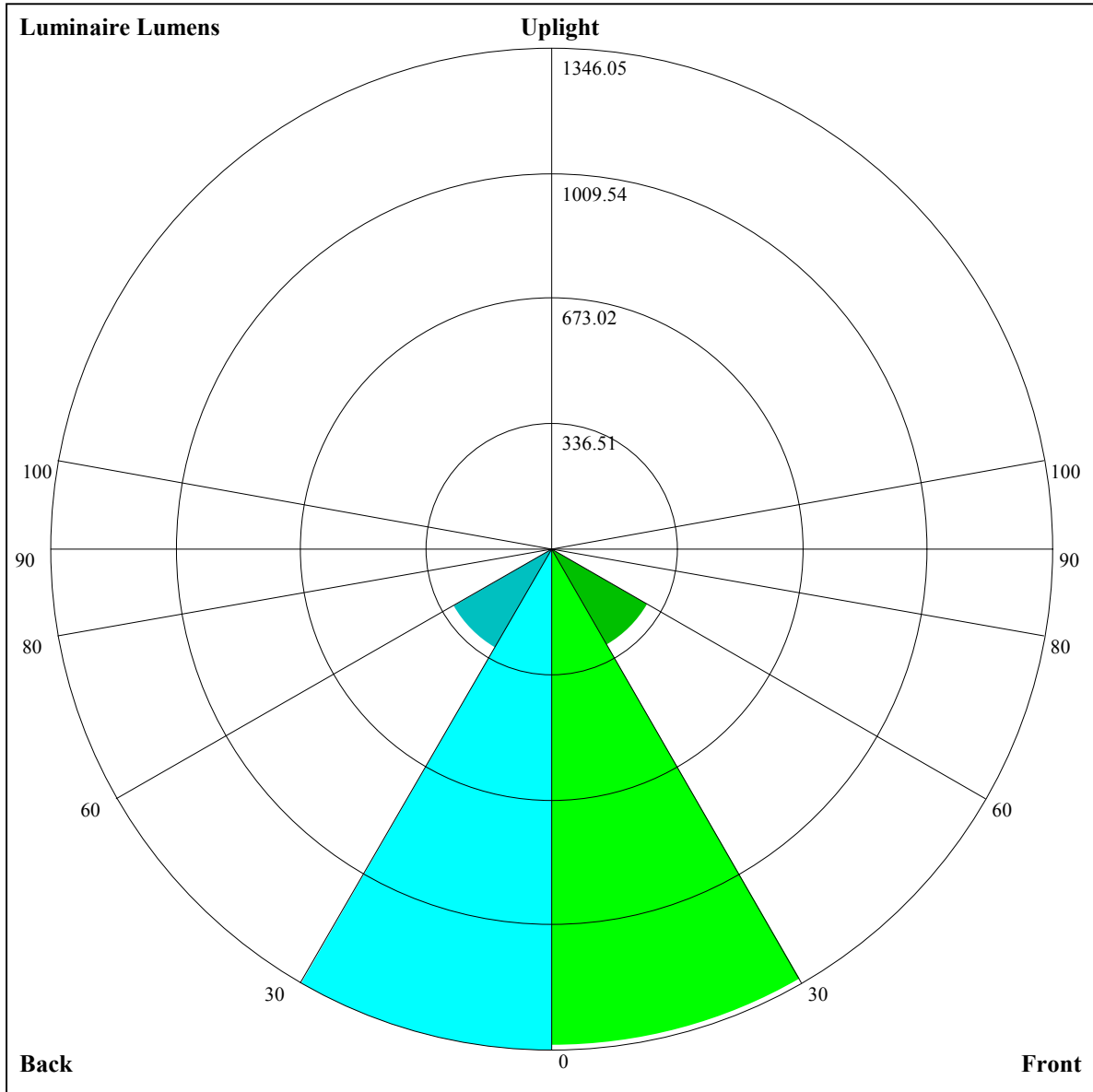
Luminance Limiting Curve





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	1.07	1.07	1.07	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.00	0.98	0.97	0.98	0.97	0.95	0.95	0.93	0.92	0.92	0.90	0.89	0.89	0.88	0.87	0.85
2	0.95	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	0.89	0.86	0.82	0.88	0.85	0.82	0.86	0.83	0.81	0.84	0.81	0.79	0.82	0.80	0.78	0.77
4	0.85	0.81	0.77	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.77	0.75	0.79	0.76	0.74	0.73
5	0.81	0.76	0.73	0.80	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
6	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.66
7	0.73	0.69	0.66	0.73	0.69	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.63
8	0.70	0.66	0.63	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.61
9	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.65	0.62	0.59	0.58
10	0.65	0.60	0.57	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.62	0.59	0.57	0.56





Luminaire Lumens:

FL=1332.25,FM=299.2,FH=8.11,FVH=3.53

BL=1346.05,BM=306.29,BH=8.16,BVH=3.51

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	9901.78	9854.80	9754.95	9558.61	9342.97	9070.28	8633.97	8237.10	7790.72
45.0	9843.89	9889.20	9888.36	9801.94	9675.24	9494.00	9254.03	8871.42	8508.11
90.0	9900.11	9890.04	9793.55	9655.10	9469.67	9227.18	8842.90	8466.16	8048.31
135.0	9857.31	9901.78	9899.27	9831.30	9670.20	9480.58	9250.68	8862.19	8489.65
180.0	9901.78	9868.22	9787.67	9657.62	9426.88	9171.81	8864.71	8493.85	7962.73
225.0	9843.89	9747.40	9556.93	9349.68	9095.45	8768.22	8268.98	7816.73	7202.54
270.0	9900.11	9857.31	9729.78	9568.68	9362.27	9021.61	8683.47	8170.81	7716.88
315.0	9857.31	9716.35	9540.99	9331.23	8960.36	8600.41	8082.71	7628.78	7133.74
360.0	9901.78	9854.80	9754.95	9558.61	9342.97	9070.28	8633.97	8237.10	7790.72
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	7320.85	6714.21	6223.36	5738.39	5131.75	4669.43	4223.05	3789.26	3311.84
45.0	7985.38	7522.22	7042.28	6436.48	5952.35	5459.82	4857.38	4389.19	3940.29
90.0	7595.22	6973.48	6480.95	5985.91	5364.17	4884.23	4296.89	3854.71	3436.86
135.0	8080.19	7626.26	7031.37	6538.85	6040.45	5433.81	4950.51	4478.96	3920.15
180.0	7493.69	6995.29	6373.55	5879.35	5400.25	4806.20	4347.23	3915.12	3421.75
225.0	6697.43	6194.83	5572.25	5087.28	4619.09	4175.23	3651.66	3270.72	2916.64
270.0	7226.87	6720.08	6079.04	5582.32	5094.83	4624.96	4176.90	3655.01	3270.72
315.0	6632.82	6012.76	5529.46	5059.59	4601.47	4060.28	3652.49	3273.24	2840.29
360.0	7320.85	6714.21	6223.36	5738.39	5131.75	4669.43	4223.05	3789.26	3311.84
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2962.79	2648.14	2315.04	2089.33	1666.62	1666.62	1580.36	1486.14	1394.01
45.0	3519.08	3142.35	2734.57	2460.20	2220.23	1972.70	1804.89	1672.32	1541.43
90.0	3064.32	2648.14	2366.22	2120.38	1667.20	1667.20	1568.78	1461.38	1372.70
135.0	3510.69	3143.19	2727.02	2445.09	2197.57	1993.68	1778.88	1651.35	1541.43
180.0	3054.25	2727.85	2450.97	2148.07	1948.37	1777.20	1647.15	1518.78	1437.39
225.0	2597.80	2262.18	2036.47	1663.85	1663.85	1556.03	1469.61	1382.09	1326.88
270.0	2910.77	2514.73	2252.11	1965.15	1778.04	1629.53	1483.53	1396.27	1319.08
315.0	2535.71	2277.28	2010.46	1651.26	1651.26	1546.88	1457.27	1385.20	1324.28
360.0	2962.79	2648.14	2315.04	2089.33	1666.62	1666.62	1580.36	1486.14	1394.01
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1333.76	1287.53	1249.44	1208.41	1180.30	1140.53	1081.21	982.62	891.83
45.0	1454.17	1367.75	1318.24	1275.45	1241.05	1204.97	1165.53	1107.64	1034.64
90.0	1286.69	1234.75	1192.47	1145.81	1114.35	1056.20	1002.42	930.01	828.90
135.0	1454.17	1371.10	1323.28	1277.13	1235.17	1207.49	1161.34	1109.32	1040.51
180.0	1370.26	1308.17	1267.06	1221.75	1193.22	1156.30	1089.18	1009.47	920.53
225.0	1285.69	1237.10	1207.82	1172.16	1105.29	1036.65	958.12	873.21	784.52
270.0	1257.83	1197.42	1160.50	1123.58	1089.18	1032.12	968.35	887.81	782.08
315.0	1265.38	1226.95	1194.73	1161.92	1097.57	1032.21	953.00	864.73	745.92
360.0	1333.76	1287.53	1249.44	1208.41	1180.30	1140.53	1081.21	982.62	891.83
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	795.43	669.82	566.28	440.42	345.10	255.24	175.03	95.65	57.31
45.0	930.60	834.11	728.38	629.38	501.84	428.00	428.00	204.98	138.36
90.0	740.80	649.93	558.56	442.18	354.59	271.18	194.07	134.67	80.55
135.0	959.12	844.17	735.10	629.38	525.33	443.11	443.11	206.58	136.85
180.0	837.46	735.94	605.04	506.03	431.36	431.36	190.89	120.32	69.89
225.0	664.28	565.86	467.52	348.46	259.18	162.69	101.11	60.41	39.60
270.0	703.21	585.74	496.81	432.20	432.20	212.03	142.22	90.70	61.75
315.0	647.84	519.63	420.70	325.89	217.32	145.32	91.79	58.15	39.10
360.0	795.43	669.82	566.28	440.42	345.10	255.24	175.03	95.65	57.31

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	37.51	31.72	24.92	19.72	15.52	12.67	11.41	10.91	10.32
45.0	72.75	45.98	37.42	31.72	24.67	19.89	16.53	15.19	14.10
90.0	60.83	45.39	38.60	32.39	25.93	22.32	19.89	17.79	16.61
135.0	77.44	50.51	37.84	32.64	26.93	20.72	17.12	15.69	14.60
180.0	39.94	33.23	27.10	21.98	17.54	13.59	12.50	11.75	11.33
225.0	35.16	29.70	24.42	18.96	16.19	15.27	14.43	13.42	12.84
270.0	44.81	39.52	33.73	28.02	22.57	19.38	17.45	15.61	14.68
315.0	34.40	28.78	22.23	17.96	15.19	14.26	13.26	12.67	12.00
360.0	37.51	31.72	24.92	19.72	15.52	12.67	11.41	10.91	10.32
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.98	9.65	9.31	9.15	8.98	8.73	8.64	8.47	8.47
45.0	13.34	12.75	12.00	11.33	10.74	10.32	9.90	9.40	9.15
90.0	15.61	14.68	13.68	12.92	12.42	11.75	11.08	10.57	10.24
135.0	13.68	13.09	12.50	11.66	11.08	10.74	10.24	9.65	9.40
180.0	10.66	10.32	9.98	9.65	9.40	9.15	9.06	8.81	8.64
225.0	12.25	11.41	10.99	10.66	9.98	9.57	9.31	9.06	8.73
270.0	13.76	13.01	12.33	11.75	11.24	10.74	10.24	9.82	9.57
315.0	11.41	10.74	10.32	9.90	9.57	9.23	8.98	8.73	8.39
360.0	9.98	9.65	9.31	9.15	8.98	8.73	8.64	8.47	8.47
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.31	8.22	8.22	8.14	7.97	7.89	7.80	7.72	7.64
45.0	8.89	8.56	8.31	8.22	8.05	7.80	7.72	7.64	7.55
90.0	9.73	9.40	9.06	8.81	8.56	8.31	8.14	8.05	7.89
135.0	9.06	8.73	8.56	8.31	8.14	7.89	7.72	7.64	7.47
180.0	8.56	8.47	8.31	8.14	8.05	7.89	7.89	7.80	7.64
225.0	8.56	8.39	8.05	7.89	7.80	7.64	7.55	7.47	7.38
270.0	9.15	8.98	8.81	8.47	8.31	8.14	8.05	7.89	7.80
315.0	8.22	8.14	7.89	7.72	7.64	7.55	7.47	7.38	7.30
360.0	8.31	8.22	8.22	8.14	7.97	7.89	7.80	7.72	7.64
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.47	7.47	7.38	7.30	7.22	7.13	7.05	6.96	6.88
45.0	7.47	7.38	7.30	7.22	7.13	7.05	6.96	6.96	6.88
90.0	7.89	7.72	7.64	7.55	7.55	7.47	7.38	7.30	7.13
135.0	7.38	7.30	7.22	7.13	7.05	6.96	6.88	6.80	6.71
180.0	7.55	7.38	7.38	7.22	7.13	7.05	7.05	6.88	6.88
225.0	7.30	7.22	7.13	6.96	6.88	6.88	6.80	6.63	6.63
270.0	7.72	7.72	7.55	7.55	7.47	7.47	7.38	7.30	7.22
315.0	7.22	7.05	6.96	6.88	6.88	6.80	6.71	6.71	6.63
360.0	7.47	7.47	7.38	7.30	7.22	7.13	7.05	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	6.46	6.38	6.46
45.0	6.80	6.71	6.71	6.54	6.54	6.46	6.38	6.29	6.21
90.0	7.13	6.96	6.88	6.71	6.54	6.29	6.21	6.04	5.96
135.0	6.63	6.63	6.54	6.46	6.38	6.38	6.29	6.29	6.21
180.0	6.80	6.71	6.63	6.63	6.46	6.38	6.38	6.29	6.29
225.0	6.54	6.46	6.46	6.38	6.29	6.29	6.21	6.04	5.96
270.0	7.13	6.96	6.80	6.63	6.38	6.21	6.04	5.96	5.96
315.0	6.54	6.46	6.38	6.29	6.29	6.21	6.13	6.04	5.96
360.0	6.80	6.71	6.71	6.71	6.63	6.46	6.46	6.38	6.46

Intensity data(cd)

C/γ(°)	90.0
0.0	6.04
45.0	6.13
90.0	5.96
135.0	6.13
180.0	5.96
225.0	5.96
270.0	5.96
315.0	5.96
360.0	6.04