



NATA LIGHTING CO.,LTD.
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Nata

Client: NT

LumCAT: 1-1900-A

Luminaire: 92.70.481.00

Report No: 20260416-B012

Ballast type: DC

Test No: 20260416-C012

Voltage(V): 35.250

LampCAT: CITIZEN CLU028

Current(A): 0.365

Lamp flux(lm): 1624.7

Power (W): 12.860

Number of Lamps: 1

PF: 0.000

Length(mm): 50

Width(mm): 50

Phm Type: C

Height(mm): 22

Photometric Results

Lumens(lm): 1485.85, Efficiency(%): 91.46% , Luminous Efficacy(lm/W): 115.54

Central intensity(cd): 2684.014, Maximum intensity(cd): 2684.014

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=36.8

[C90/270]Total=36.8

Field angle(10%Imax): [C0/180]Total=83.0

[C90/270]Total=83.0

Maximum s/h(1/2): C0_180=0.60 C90_270=0.60

Maximum s/h(1/4): C0_180=0.62 C90_270=0.62

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.46%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.334%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2026/4/16
Humidity(%): 60.0%

Operator: 杨泽全
Distance(m): 9.16

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2684.014	0.000	0	0.00%	0.00%
1.0	2680.029	2.567	2.567	0.16%	0.17%
2.0	2665.660	7.673	10.239	0.47%	0.69%
3.0	2642.376	12.695	22.934	0.78%	1.54%
4.0	2606.821	17.571	40.505	1.08%	2.73%
5.0	2556.163	22.211	62.716	1.37%	4.22%
6.0	2494.912	26.545	89.261	1.63%	6.01%
7.0	2422.439	30.522	119.783	1.88%	8.06%
8.0	2335.701	34.053	153.836	2.10%	10.35%
9.0	2253.369	37.192	191.028	2.29%	12.86%
10.0	2158.031	39.922	230.949	2.46%	15.54%
11.0	2072.657	42.273	273.222	2.60%	18.39%
12.0	1938.838	43.851	317.074	2.70%	21.34%
13.0	1869.301	45.193	362.267	2.78%	24.38%
14.0	1740.118	46.200	408.467	2.84%	27.49%
15.0	1667.613	46.783	455.25	2.88%	30.64%
16.0	1582.564	47.624	502.874	2.93%	33.84%
17.0	1479.382	47.683	550.557	2.93%	37.05%
18.0	1377.866	47.110	597.667	2.90%	40.22%
19.0	1277.935	46.205	643.872	2.84%	43.33%
20.0	1178.423	44.958	688.83	2.77%	46.36%
21.0	1088.507	43.530	732.36	2.68%	49.29%
22.0	996.778	41.905	774.265	2.58%	52.11%
23.0	919.133	40.201	814.466	2.47%	54.81%
24.0	848.841	38.654	853.12	2.38%	57.42%
25.0	790.517	37.275	890.395	2.29%	59.92%
26.0	740.026	36.129	926.524	2.22%	62.36%
27.0	694.854	35.105	961.629	2.16%	64.72%
28.0	658.575	34.266	995.895	2.11%	67.03%
29.0	626.125	33.611	1029.506	2.07%	69.29%
30.0	599.977	33.105	1062.61	2.04%	71.52%
31.0	576.201	32.731	1095.342	2.01%	73.72%
32.0	556.504	32.451	1127.792	2.00%	75.90%
33.0	538.884	32.271	1160.063	1.99%	78.07%
34.0	522.312	32.115	1192.178	1.98%	80.24%
35.0	504.378	31.885	1224.063	1.96%	82.38%
36.0	482.688	31.428	1255.491	1.93%	84.50%
37.0	456.310	30.625	1286.116	1.89%	86.56%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	426.408	29.464	1315.58	1.81%	88.54%
39.0	389.060	27.834	1343.414	1.71%	90.41%
40.0	344.506	25.584	1368.998	1.57%	92.14%
41.0	301.714	23.012	1392.01	1.42%	93.68%
42.0	237.484	19.590	1411.6	1.21%	95.00%
43.0	188.137	15.766	1427.366	0.97%	96.06%
44.0	145.094	12.577	1439.943	0.77%	96.91%
45.0	102.103	9.500	1449.443	0.58%	97.55%
46.0	70.114	6.735	1456.178	0.41%	98.00%
47.0	46.064	4.621	1460.799	0.28%	98.31%
48.0	32.041	3.157	1463.957	0.19%	98.53%
49.0	23.252	2.271	1466.227	0.14%	98.68%
50.0	18.879	1.757	1467.984	0.11%	98.80%
51.0	15.690	1.463	1469.446	0.09%	98.90%
52.0	12.859	1.225	1470.671	0.08%	98.98%
53.0	10.394	1.011	1471.683	0.06%	99.05%
54.0	8.558	0.835	1472.518	0.05%	99.10%
55.0	7.352	0.710	1473.229	0.04%	99.15%
56.0	6.555	0.628	1473.857	0.04%	99.19%
57.0	5.978	0.573	1474.43	0.04%	99.23%
58.0	5.559	0.534	1474.964	0.03%	99.27%
59.0	5.244	0.505	1475.469	0.03%	99.30%
60.0	4.950	0.482	1475.95	0.03%	99.33%
61.0	4.720	0.461	1476.412	0.03%	99.36%
62.0	4.468	0.443	1476.854	0.03%	99.39%
63.0	4.300	0.426	1477.281	0.03%	99.42%
64.0	4.122	0.413	1477.694	0.03%	99.45%
65.0	3.975	0.401	1478.095	0.02%	99.48%
66.0	3.818	0.389	1478.484	0.02%	99.50%
67.0	3.692	0.378	1478.861	0.02%	99.53%
68.0	3.597	0.369	1479.23	0.02%	99.55%
69.0	3.493	0.362	1479.592	0.02%	99.58%
70.0	3.430	0.356	1479.948	0.02%	99.60%
71.0	3.325	0.349	1480.297	0.02%	99.63%
72.0	3.251	0.342	1480.639	0.02%	99.65%
73.0	3.178	0.336	1480.975	0.02%	99.67%
74.0	3.115	0.331	1481.306	0.02%	99.69%
75.0	3.052	0.326	1481.632	0.02%	99.72%

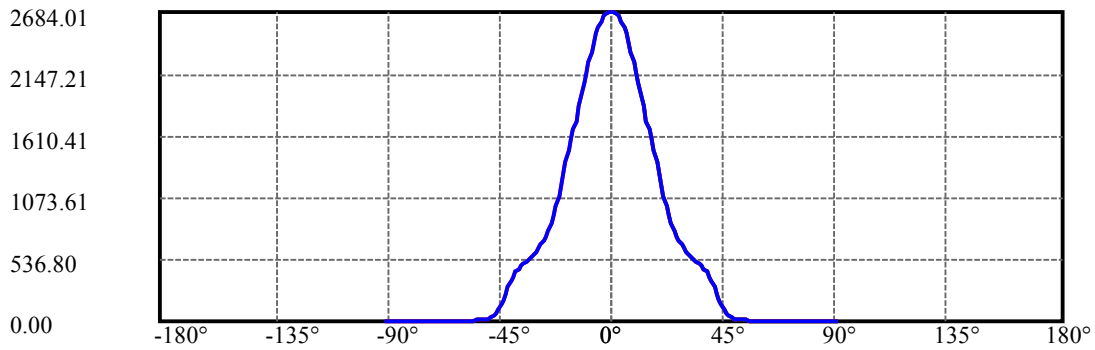
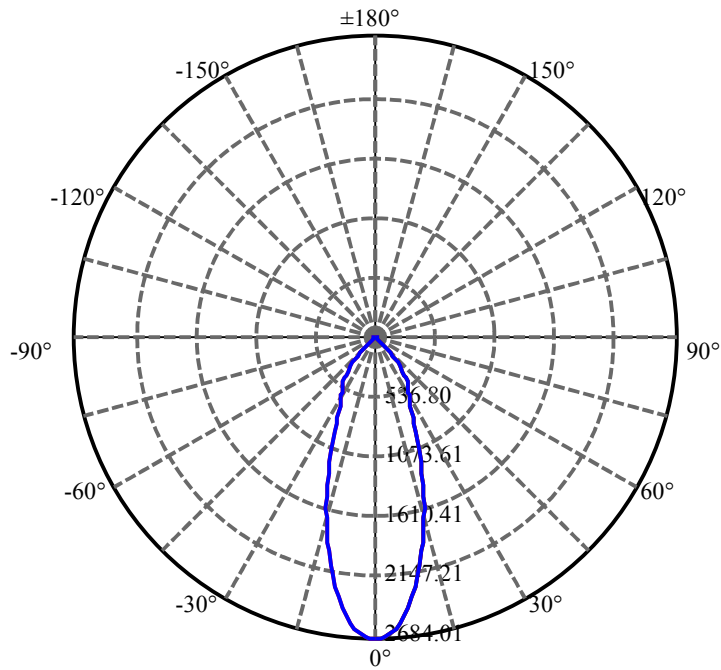
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.010	0.322	1481.953	0.02%	99.74%
77.0	2.937	0.317	1482.27	0.02%	99.76%
78.0	2.874	0.311	1482.581	0.02%	99.78%
79.0	2.821	0.306	1482.887	0.02%	99.80%
80.0	2.748	0.300	1483.188	0.02%	99.82%
81.0	2.716	0.296	1483.483	0.02%	99.84%
82.0	2.643	0.291	1483.774	0.02%	99.86%
83.0	2.601	0.285	1484.059	0.02%	99.88%
84.0	2.486	0.277	1484.336	0.02%	99.90%
85.0	2.402	0.267	1484.603	0.02%	99.92%
86.0	2.339	0.259	1484.862	0.02%	99.93%
87.0	2.307	0.254	1485.116	0.02%	99.95%
88.0	2.286	0.252	1485.368	0.02%	99.97%
89.0	2.182	0.245	1485.613	0.02%	99.98%
90.0	2.171	0.239	1485.851	0.01%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1062.61	65.41%	71.52%
0-40	1369.00	84.26%	92.14%
0-60	1475.95	90.85%	99.33%
0-90	1485.61	91.44%	99.98%
0-120	1485.61	91.44%	99.98%
0-180	1485.85	91.46%	100.00%
60-90	9.66	0.59%	0.65%
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%
0-33.89	1188.68	73.16%	80.00%

ZONAL LUMEN SUMMARY

0-10	230.95
10-20	457.88
20-30	373.78
30-40	306.39
40-50	98.99
50-60	7.97
60-70	4.00
70-80	3.24
80-90	2.43
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: —————

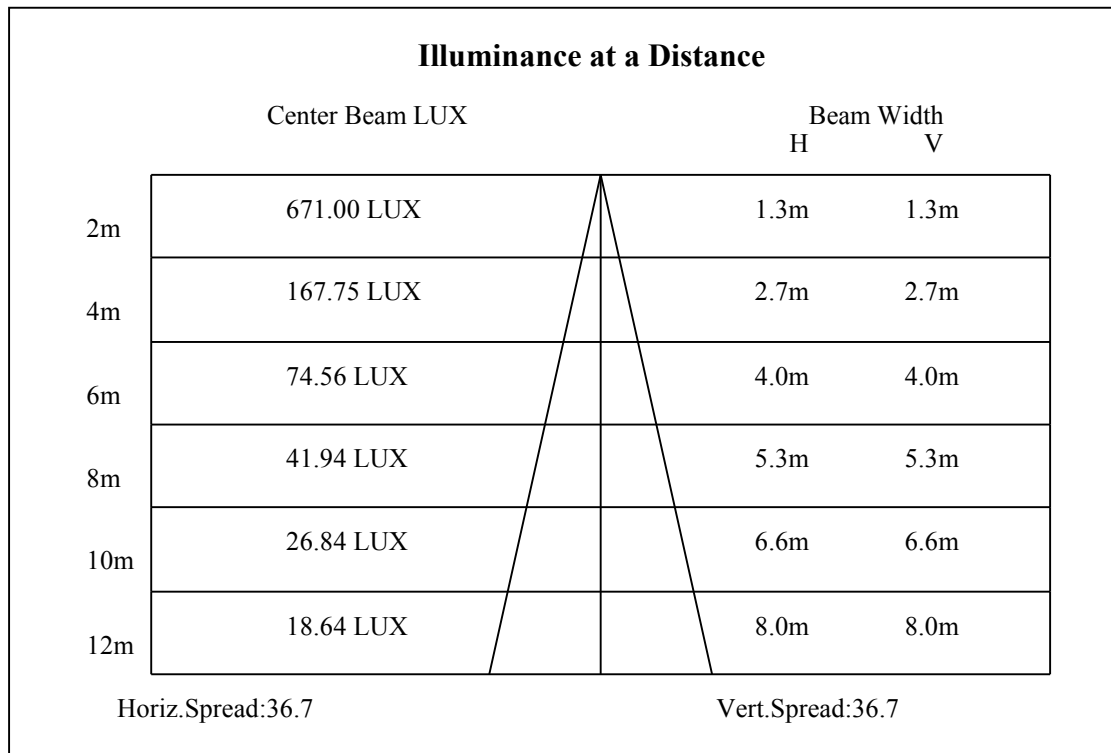
C90/C270: —————

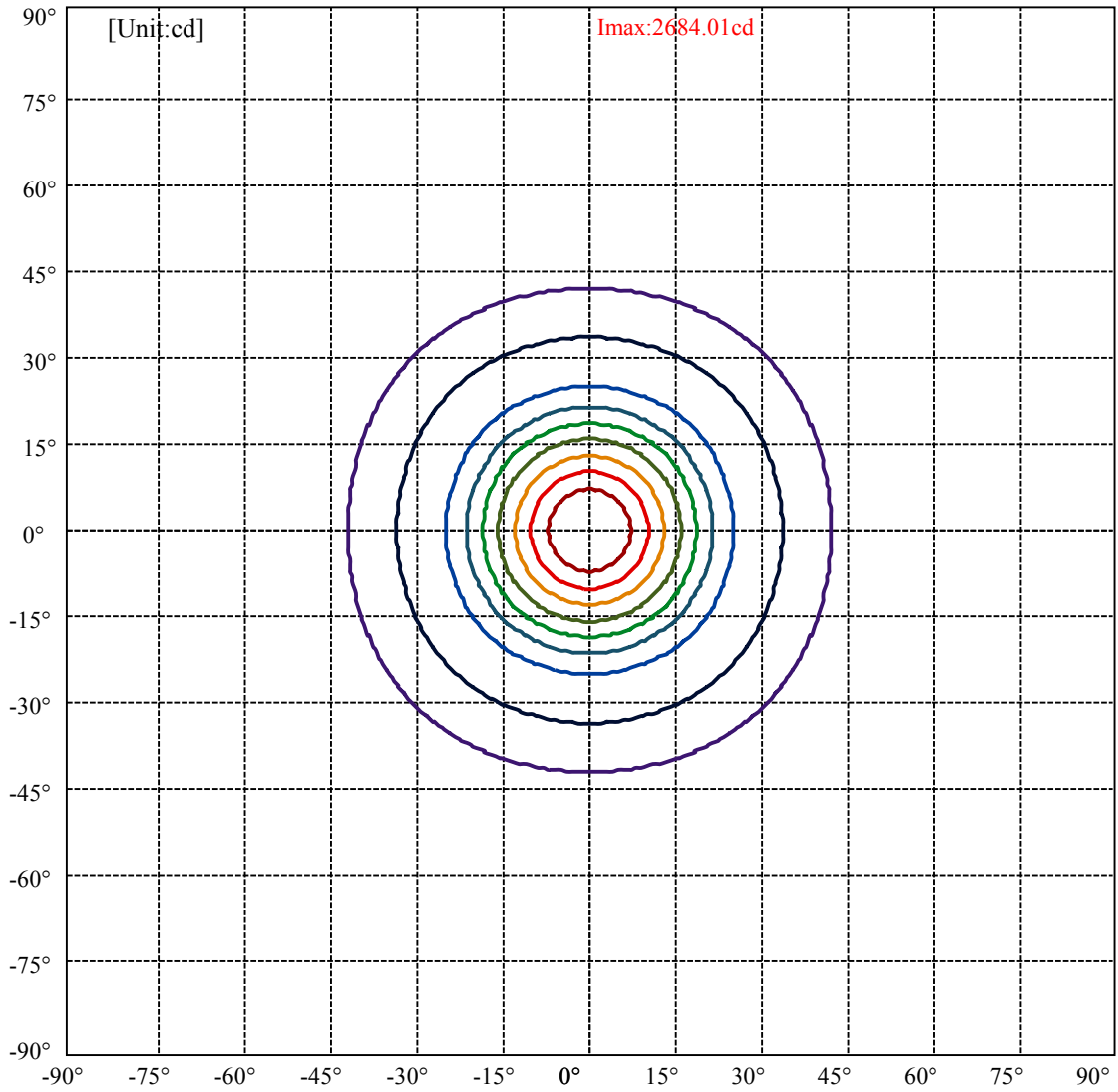
Field angle(10%Imax):C0/180Left:41.5 Right:41.5

:C90/270Left:41.5 Right:41.5

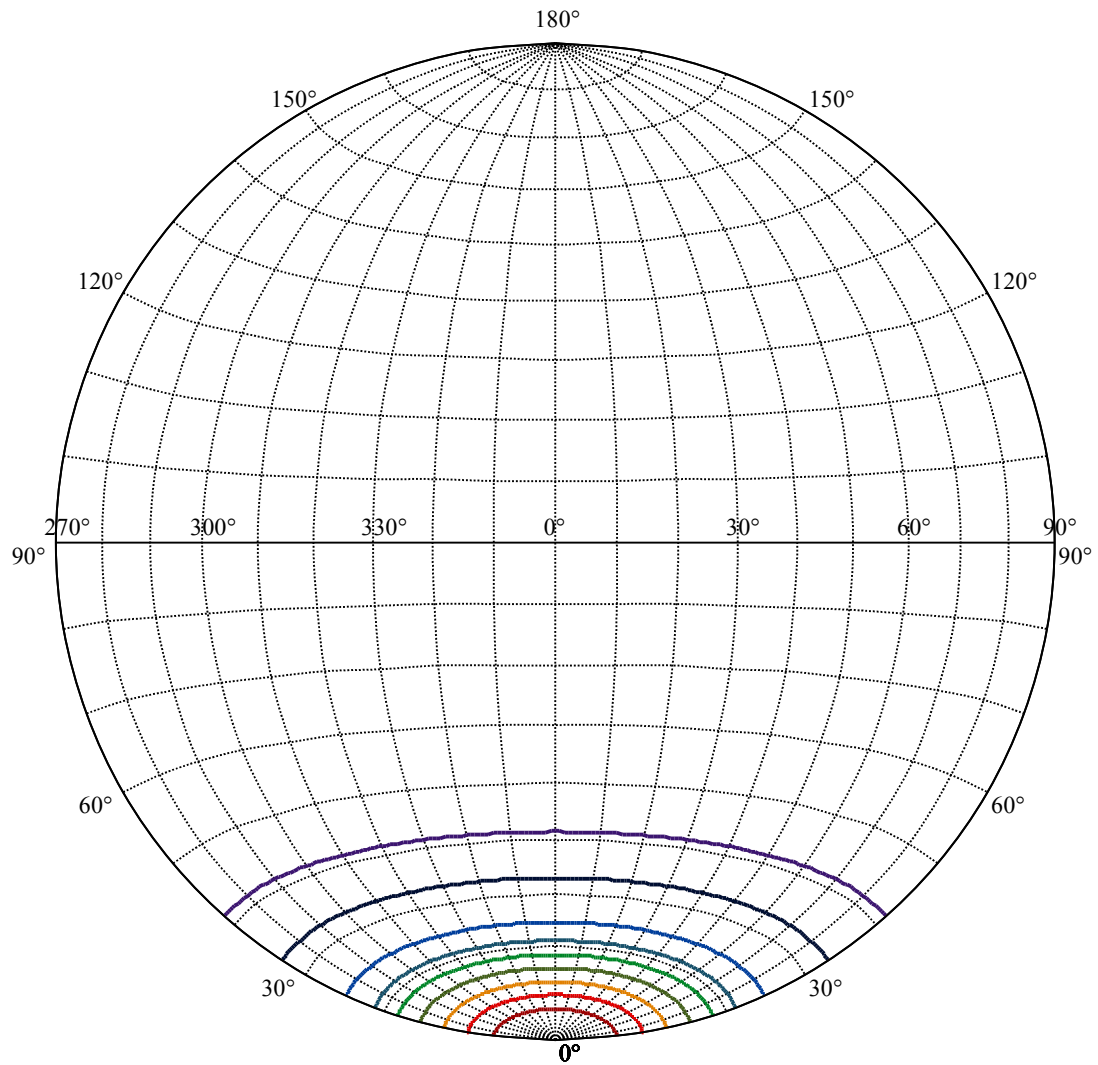
Beam Angle(50%Imax):C0/180Left:18.4 Right:18.4

:C90/270Left:18.4 Right:18.4





(10%Imax) 268.401	—
(20%Imax) 536.803	—
(30%Imax) 805.204	—
(40%Imax) 1073.61	—
(50%Imax) 1342.01	—
(60%Imax) 1610.41	—
(70%Imax) 1878.81	—
(80%Imax) 2147.21	—
(90%Imax) 2415.61	—



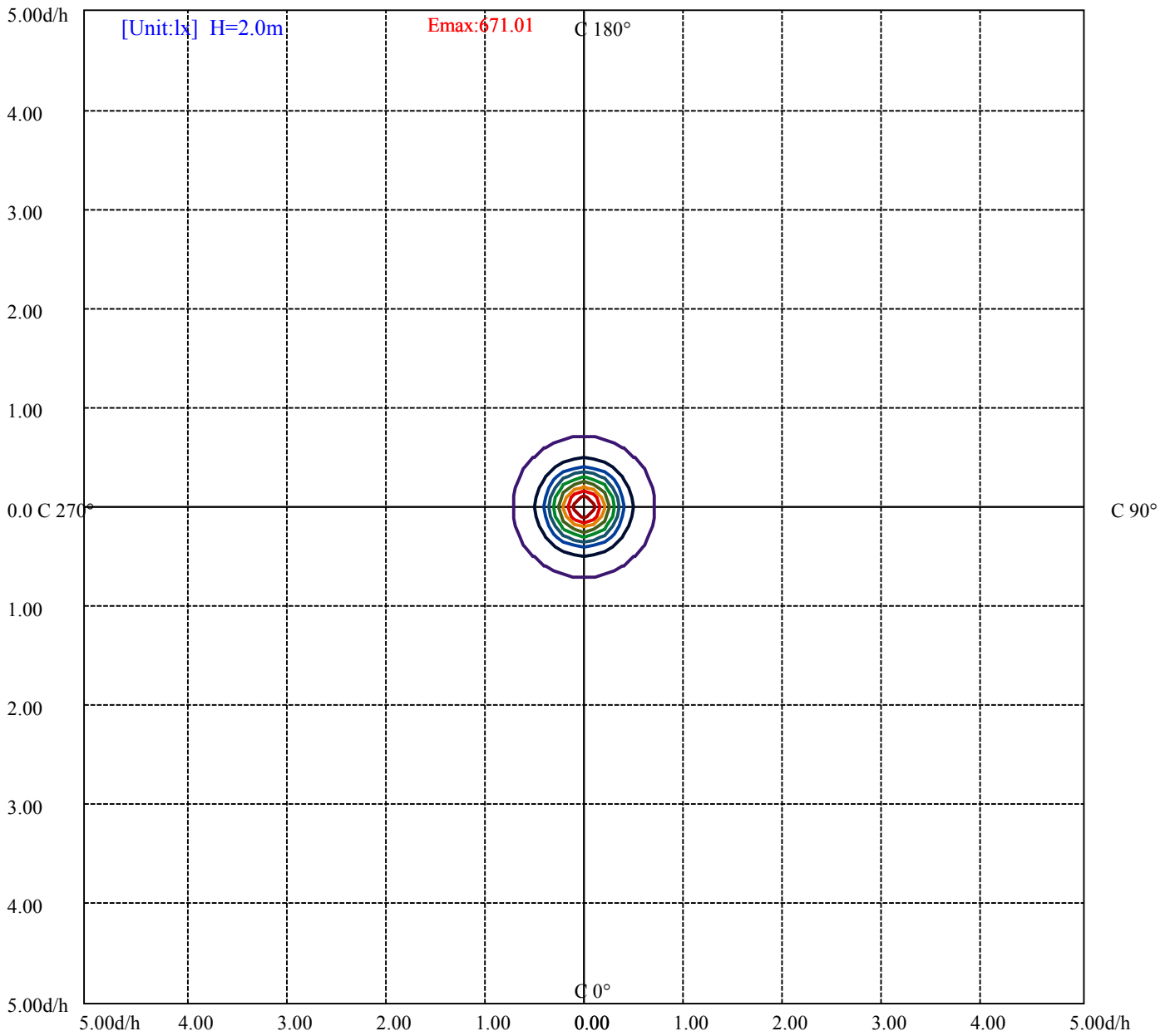
House

[Unit:cd]

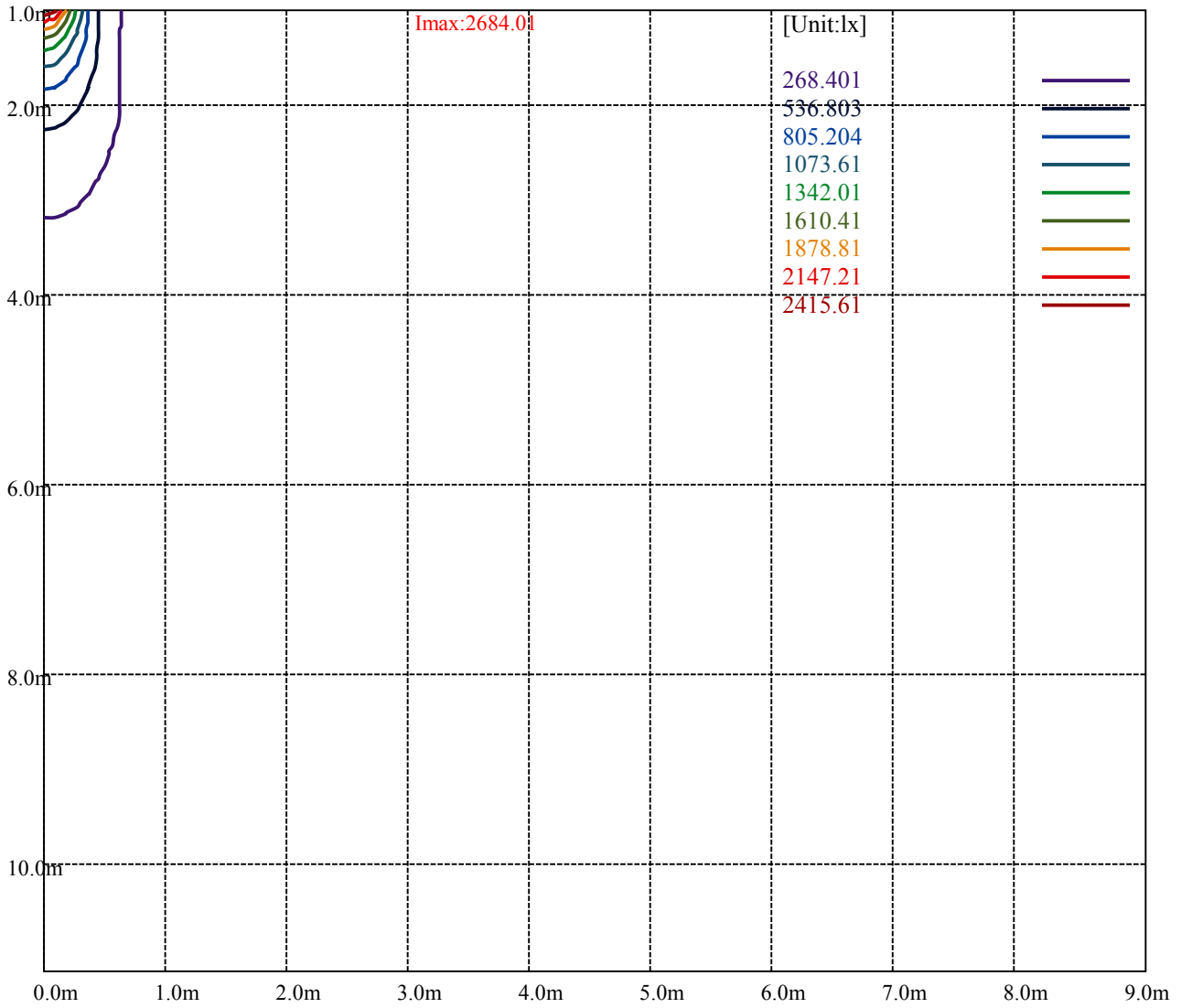
Road

Imax:2684.01

- (10%Imax) 268.401
- (20%Imax) 536.803
- (30%Imax) 805.204
- (40%Imax) 1073.61
- (50%Imax) 1342.01
- (60%Imax) 1610.41
- (70%Imax) 1878.81
- (80%Imax) 2147.21
- (90%Imax) 2415.61



- (10%Emax) 67.10025
- (20%Emax) 134.2007
- (30%Emax) 201.301
- (40%Emax) 268.4025
- (50%Emax) 335.5025
- (60%Emax) 402.6025
- (70%Emax) 469.7025
- (80%Emax) 536.8025
- (90%Emax) 603.9025



Luminance Table

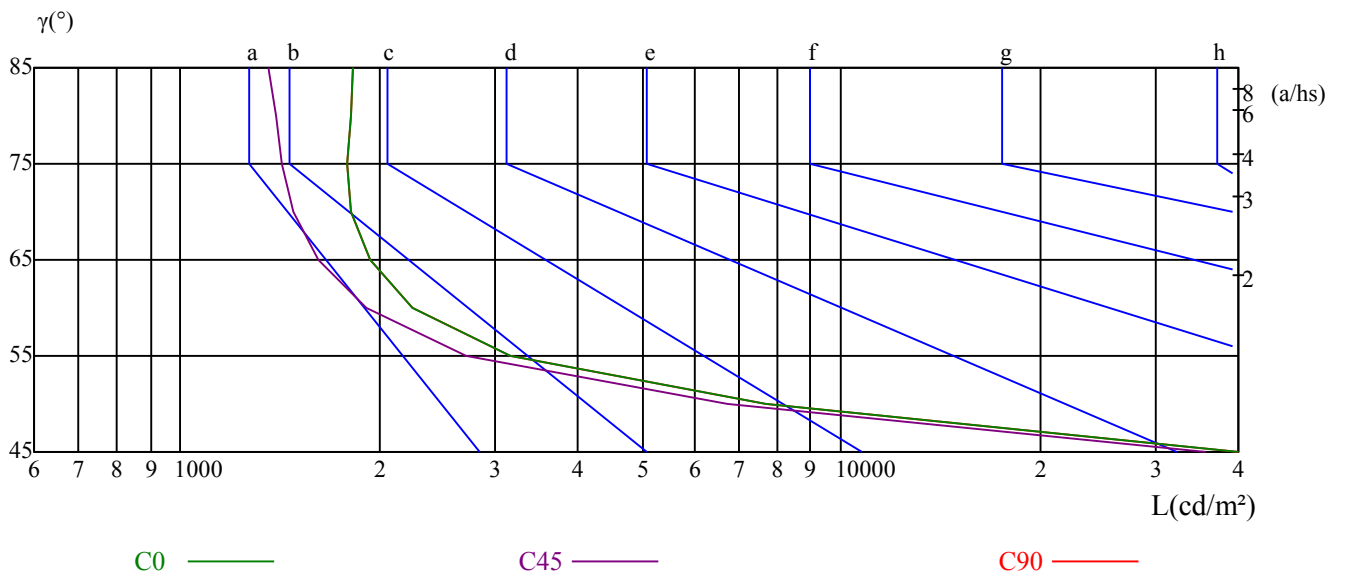
γ	45	50	55	60	65	70	75	80	85
C0	40110	7707	3149	2248	1936	1816	1785	1811	1828
C45	35604	6746	2715	1906	1612	1480	1420	1398	1359
C90	40110	7707	3149	2248	1936	1816	1785	1811	1828

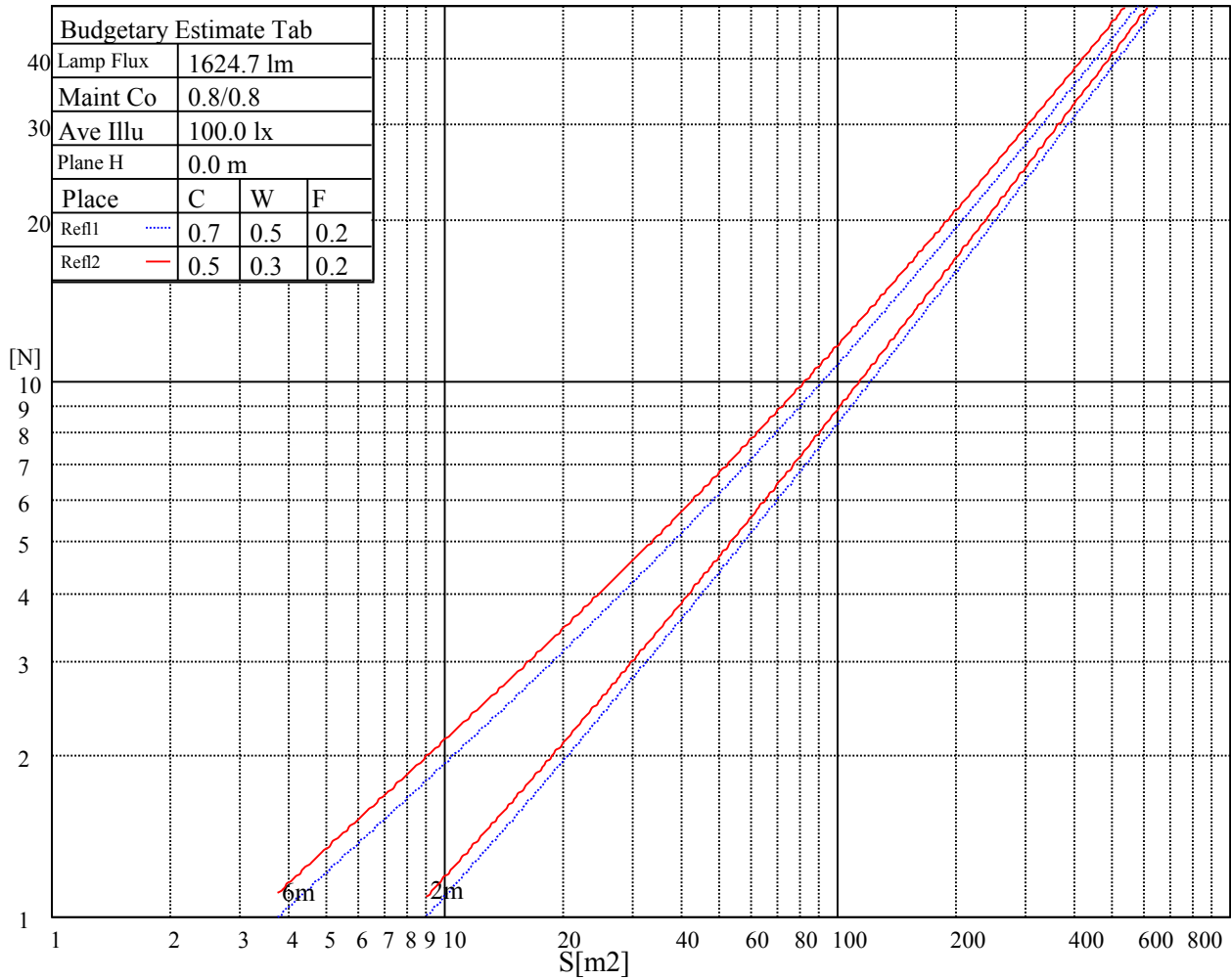
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3762	3762	3762	4717	4717	4717	11023	11023	11023

Glare Table

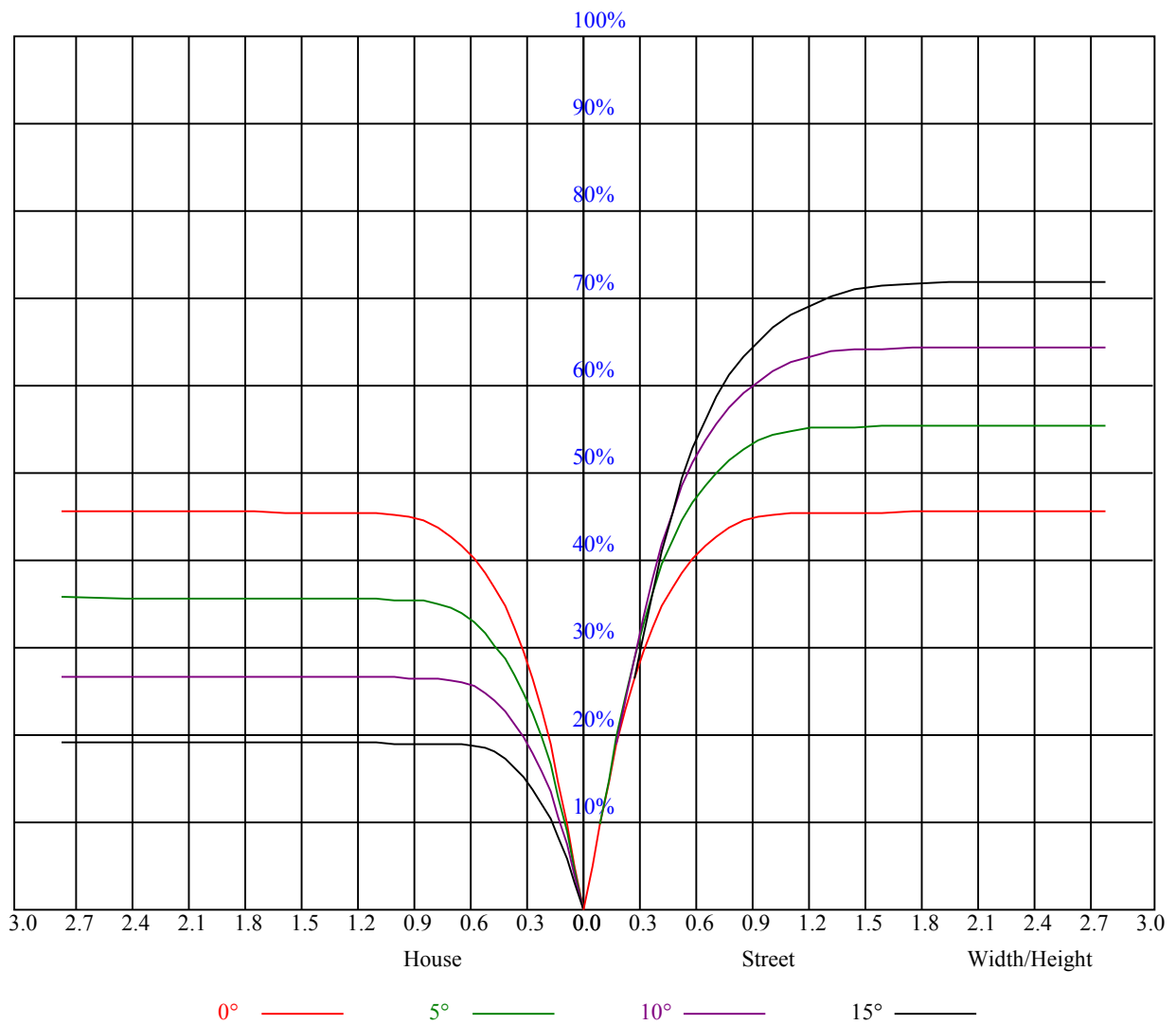
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

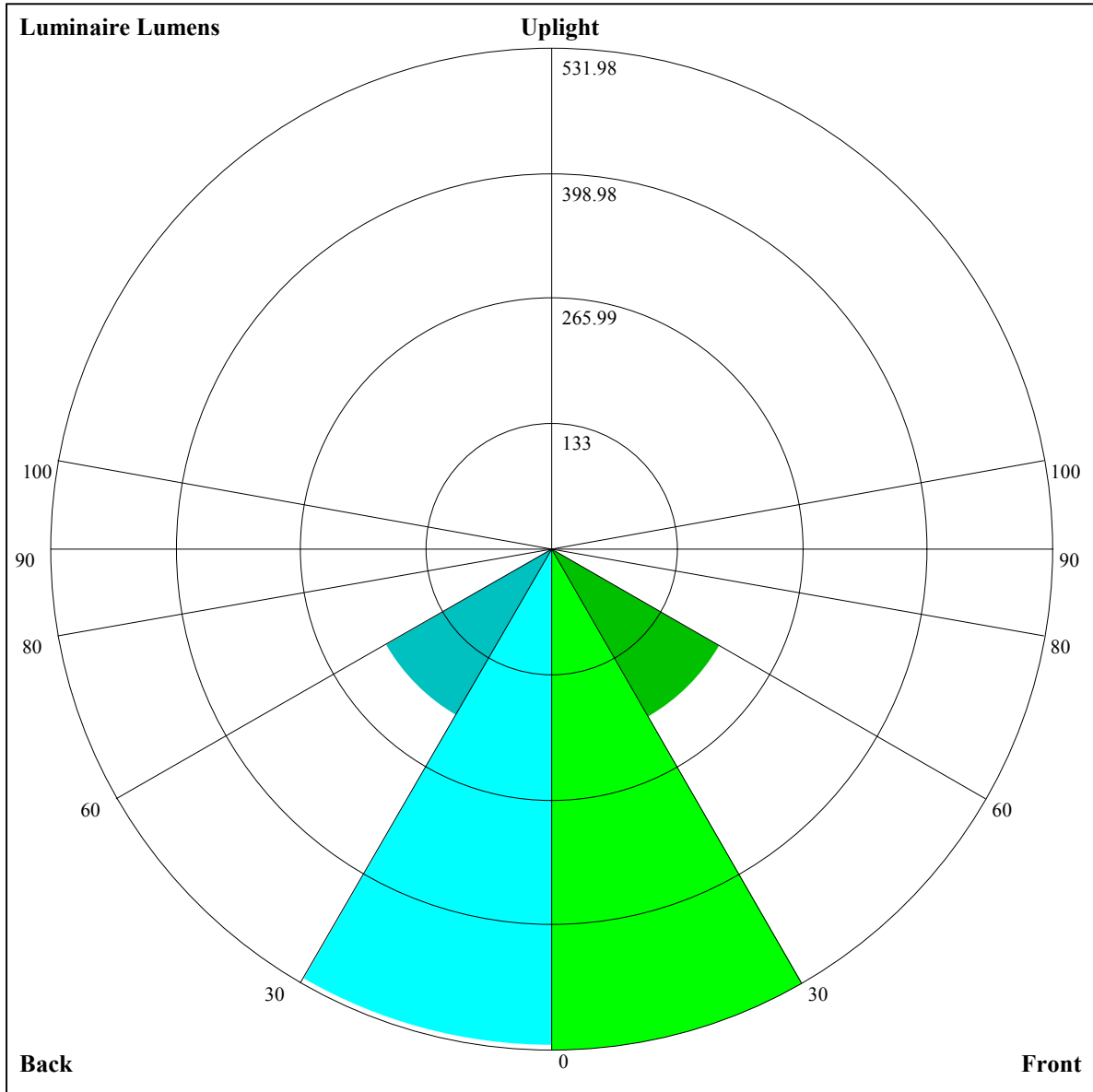
Luminance Limiting Curve





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	1.06	1.06	1.06	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.01	0.99	0.97	1.00	0.98	0.96	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86
2	0.95	0.91	0.88	0.93	0.90	0.87	0.90	0.88	0.85	0.88	0.85	0.83	0.85	0.83	0.82	0.80
3	0.89	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.78	0.76	0.75
4	0.83	0.78	0.75	0.82	0.78	0.74	0.80	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.70
5	0.78	0.73	0.69	0.77	0.73	0.69	0.76	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.67	0.66
6	0.74	0.69	0.65	0.73	0.68	0.65	0.72	0.67	0.64	0.71	0.67	0.64	0.69	0.66	0.63	0.62
7	0.70	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.59
8	0.66	0.61	0.57	0.66	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.55
9	0.63	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.52
10	0.60	0.55	0.51	0.59	0.54	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.51	0.50





Luminaire Lumens:

FL=531.98,FM=206.64,FH=3.65,FVH=1.33

BL=526.92,BM=204.5,BH=3.66,BVH=1.34

UL=0,UH=0

BUG Rating:B2-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	2696.81	2690.94	2681.71	2655.70	2624.65	2569.27	2515.57	2429.99	2355.31
45.0	2679.19	2689.26	2693.45	2690.10	2673.32	2639.75	2600.32	2551.65	2474.46
90.0	2683.38	2690.94	2690.94	2673.32	2643.95	2605.35	2547.46	2478.66	2403.14
135.0	2675.83	2685.90	2689.26	2685.90	2673.32	2649.82	2613.74	2544.10	2473.62
180.0	2696.81	2695.13	2684.22	2662.41	2622.13	2573.47	2513.90	2438.38	2338.53
225.0	2679.19	2659.89	2618.78	2575.15	2524.80	2456.84	2356.15	2278.96	2190.86
270.0	2685.06	2669.96	2648.98	2615.42	2566.76	2510.54	2443.41	2369.58	2263.86
315.0	2675.83	2658.21	2617.94	2581.02	2525.64	2444.25	2368.74	2288.19	2185.82
360.0	2696.81	2690.94	2681.71	2655.70	2624.65	2569.27	2515.57	2429.99	2355.31
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2276.44	2175.76	2093.53	2009.62	1914.81	1653.86	1653.86	1608.72	1521.63
45.0	2403.14	2322.59	2236.17	2133.80	2049.06	1967.67	1877.05	1759.58	1661.41
90.0	2320.91	2221.90	2135.48	2046.54	1954.25	1666.53	1666.53	1640.52	1514.58
135.0	2400.62	2298.26	2215.19	2110.31	2022.21	1934.95	1844.33	1729.38	1634.56
180.0	2256.31	2154.78	2070.87	1985.29	1877.05	1785.60	1692.46	1596.81	1476.82
225.0	2084.30	1992.00	1903.06	1666.37	1666.37	1597.98	1479.00	1380.58	1285.27
270.0	2179.95	2096.05	2007.94	1893.83	1805.73	1693.30	1595.97	1504.51	1387.04
315.0	2105.28	2002.91	1919.00	1664.94	1664.94	1621.06	1531.70	1440.41	1353.73
360.0	2276.44	2175.76	2093.53	2009.62	1914.81	1653.86	1653.86	1608.72	1521.63
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1406.76	1316.65	1225.27	1136.25	1031.28	955.60	871.36	814.56	763.62
45.0	1559.05	1438.23	1338.38	1243.56	1127.78	1038.84	940.67	869.35	808.09
90.0	1414.56	1316.65	1199.18	1105.54	993.78	915.24	844.09	783.76	730.40
135.0	1536.40	1439.90	1320.76	1226.78	1137.84	1034.64	961.64	894.52	822.36
180.0	1377.81	1281.32	1192.38	1086.66	1003.59	930.60	853.40	801.38	756.07
225.0	1168.72	1078.69	990.51	912.22	846.36	773.61	724.69	684.08	642.30
270.0	1293.91	1199.93	1092.53	1009.47	932.28	863.47	805.58	744.33	703.21
315.0	1265.72	1152.11	1068.37	987.57	901.31	841.07	789.30	732.16	694.15
360.0	1406.76	1316.65	1225.27	1136.25	1031.28	955.60	871.36	814.56	763.62
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	710.09	674.77	645.15	613.18	592.12	572.82	555.54	534.23	519.46
45.0	753.56	707.41	664.62	634.41	609.24	585.74	563.93	548.83	534.56
90.0	677.03	640.12	611.08	585.49	555.87	537.08	522.65	503.94	490.34
135.0	771.18	728.38	683.91	650.35	622.66	593.30	574.84	558.06	542.11
180.0	704.05	670.49	631.05	605.04	584.07	565.61	544.63	529.53	515.26
225.0	615.53	593.04	568.80	551.60	531.04	514.93	502.09	486.48	458.38
270.0	666.29	628.54	602.53	578.19	555.54	540.44	520.30	505.20	488.41
315.0	661.09	625.85	601.85	581.55	559.06	542.11	527.09	512.24	486.48
360.0	710.09	674.77	645.15	613.18	592.12	572.82	555.54	534.23	519.46
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	501.59	475.49	431.53	390.75	335.87	291.57	245.17	188.62	144.74
45.0	516.94	503.52	475.83	446.46	428.00	428.00	311.88	266.48	222.27
90.0	473.06	454.60	425.74	382.11	343.34	301.72	257.93	204.31	161.77
135.0	521.14	507.71	482.54	454.01	428.00	428.00	300.21	252.98	205.74
180.0	496.81	464.08	429.68	429.68	379.17	285.53	239.72	183.17	138.28
225.0	427.16	391.59	353.07	299.88	256.33	213.04	170.83	121.24	85.75
270.0	466.60	429.68	429.68	384.12	308.44	250.54	206.24	164.20	124.60
315.0	458.21	423.81	383.20	325.47	276.89	215.30	167.90	124.10	77.61
360.0	501.59	475.49	431.53	390.75	335.87	291.57	245.17	188.62	144.74

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	104.80	69.31	37.84	25.00	19.80	16.78	13.34	10.82	8.73
45.0	166.80	125.44	89.02	58.06	32.97	24.58	21.31	17.87	14.35
90.0	122.17	86.09	51.27	34.65	26.60	22.91	18.38	15.44	12.33
135.0	147.93	105.13	70.23	45.81	27.69	22.23	18.96	15.61	12.33
180.0	96.83	57.06	35.91	25.51	21.73	17.45	14.52	11.83	9.40
225.0	50.51	33.56	25.84	21.82	18.29	15.35	12.67	10.07	8.47
270.0	77.03	51.69	35.07	26.26	22.99	18.54	15.61	13.09	10.91
315.0	50.76	32.64	23.33	19.21	15.94	13.17	10.74	8.14	6.63
360.0	104.80	69.31	37.84	25.00	19.80	16.78	13.34	10.82	8.73
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	6.80	5.79	5.37	5.03	4.87	4.61	4.45	4.28	4.11
45.0	11.91	9.57	8.14	7.30	6.54	6.13	5.62	5.29	5.03
90.0	10.40	8.89	7.72	7.05	6.38	5.96	5.54	5.29	4.87
135.0	9.98	8.14	6.80	5.87	5.54	5.20	5.03	4.78	4.45
180.0	7.30	6.21	5.79	5.45	5.20	5.03	4.78	4.61	4.45
225.0	7.55	7.13	6.46	5.96	5.62	5.20	4.95	4.70	4.45
270.0	8.89	7.89	7.13	6.46	5.79	5.45	5.12	4.78	4.53
315.0	5.62	5.20	5.03	4.70	4.53	4.36	4.11	4.03	3.86
360.0	6.80	5.79	5.37	5.03	4.87	4.61	4.45	4.28	4.11
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.03	3.86	3.78	3.69	3.61	3.52	3.44	3.36	3.27
45.0	4.78	4.53	4.36	4.11	3.94	3.86	3.69	3.61	3.52
90.0	4.70	4.45	4.20	4.03	3.86	3.69	3.61	3.61	3.44
135.0	4.28	4.20	4.03	3.86	3.69	3.61	3.44	3.36	3.27
180.0	4.28	4.11	3.94	3.86	3.69	3.61	3.52	3.44	3.36
225.0	4.28	4.11	3.94	3.69	3.61	3.52	3.44	3.36	3.27
270.0	4.36	4.11	4.03	3.86	3.78	3.69	3.61	3.52	3.44
315.0	3.69	3.61	3.52	3.44	3.36	3.27	3.19	3.19	3.02
360.0	4.03	3.86	3.78	3.69	3.61	3.52	3.44	3.36	3.27
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	3.27	3.10	3.10	3.02	3.02	2.94	2.85	2.85	2.68
45.0	3.44	3.36	3.27	3.19	3.19	3.10	3.02	2.94	2.94
90.0	3.36	3.27	3.27	3.19	3.10	3.02	3.02	2.94	2.85
135.0	3.19	3.10	3.02	2.94	2.85	2.85	2.77	2.77	2.68
180.0	3.19	3.19	3.10	3.02	3.02	2.94	2.85	2.85	2.77
225.0	3.19	3.10	3.02	2.94	2.94	2.85	2.77	2.68	2.68
270.0	3.36	3.36	3.27	3.27	3.19	3.10	3.02	2.94	2.85
315.0	3.02	2.94	2.85	2.85	2.77	2.68	2.68	2.60	2.52
360.0	3.27	3.10	3.10	3.02	3.02	2.94	2.85	2.85	2.68
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.68	2.60	2.60	2.52	2.43	2.35	2.35	2.27	2.27
45.0	2.85	2.77	2.68	2.60	2.52	2.43	2.35	2.35	2.27
90.0	2.85	2.77	2.68	2.52	2.43	2.35	2.27	2.27	2.18
135.0	2.68	2.60	2.60	2.52	2.43	2.43	2.35	2.35	2.27
180.0	2.68	2.68	2.68	2.60	2.43	2.43	2.43	2.43	2.27
225.0	2.60	2.60	2.52	2.35	2.35	2.27	2.27	2.18	2.10
270.0	2.85	2.68	2.60	2.52	2.35	2.27	2.27	2.27	2.10
315.0	2.52	2.43	2.43	2.27	2.27	2.18	2.18	2.18	2.01
360.0	2.68	2.60	2.60	2.52	2.43	2.35	2.35	2.27	2.27

Intensity data(cd)

C/γ(°)	90.0
0.0	2.27
45.0	2.18
90.0	2.18
135.0	2.35
180.0	2.10
225.0	2.10
270.0	2.10
315.0	2.10
360.0	2.27