



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86 571 85021543 Fax:+86 571 87977635
Address:Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

Client: NT

LumCAT: 1-1896-A

Luminaire: 92.70.481.00

Report No: 20260330-B013

Ballast type: DC

Test No: 20260416-C013

Voltage(V): 35.220

LampCAT: CITIZEN CLU028

Current(A): 0.365

Lamp flux(lm): 1624.7

Power (W): 12.850

Number of Lamps: 1

PF: 0.000

Length(mm): 50

Width(mm): 50

Phm Type: C

Height(mm): 22

Photometric Results

Lumens(lm): 1481.31, Efficiency(%): 91.18% , Luminous Efficacy(lm/W): 115.28

Central intensity(cd): 2670.589, Maximum intensity(cd): 2670.589

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=36.6

[C90/270]Total=36.6

Field angle(10%Imax): [C0/180]Total=83.4

[C90/270]Total=83.4

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

Maximum s/h(1/4): C0_180=0.61 C90_270=0.61

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.18%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.327%

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	2670.589	0.000	0	0.00%	0.00%
1.0	2662.094	2.552	2.552	0.16%	0.17%
2.0	2642.901	7.614	10.166	0.47%	0.69%
3.0	2614.897	12.575	22.741	0.77%	1.54%
4.0	2576.091	17.376	40.117	1.07%	2.71%
5.0	2529.104	21.962	62.079	1.35%	4.19%
6.0	2472.572	26.285	88.364	1.62%	5.97%
7.0	2407.440	30.290	118.654	1.86%	8.01%
8.0	2332.240	33.921	152.575	2.09%	10.30%
9.0	2251.166	37.146	189.721	2.29%	12.81%
10.0	2162.331	39.941	229.662	2.46%	15.50%
11.0	2072.657	42.316	271.978	2.60%	18.36%
12.0	1952.882	44.005	315.983	2.71%	21.33%
13.0	1845.409	45.076	361.059	2.77%	24.37%
14.0	1754.235	46.075	407.134	2.84%	27.48%
15.0	1675.427	47.084	454.218	2.90%	30.66%
16.0	1579.544	47.694	501.913	2.94%	33.88%
17.0	1472.690	47.531	549.444	2.93%	37.09%
18.0	1364.945	46.786	596.23	2.88%	40.25%
19.0	1263.157	45.724	641.954	2.81%	43.34%
20.0	1164.127	44.426	686.38	2.73%	46.34%
21.0	1065.769	42.819	729.199	2.64%	49.23%
22.0	974.878	41.008	770.206	2.52%	51.99%
23.0	896.573	39.268	809.474	2.42%	54.65%
24.0	820.649	37.545	847.019	2.31%	57.18%
25.0	763.845	36.028	883.047	2.22%	59.61%
26.0	716.764	34.950	917.997	2.15%	61.97%
27.0	672.115	33.979	951.976	2.09%	64.27%
28.0	639.392	33.205	985.181	2.04%	66.51%
29.0	609.375	32.671	1017.852	2.01%	68.71%
30.0	585.577	32.263	1050.115	1.99%	70.89%
31.0	564.139	31.995	1082.11	1.97%	73.05%
32.0	547.505	31.847	1113.958	1.96%	75.20%
33.0	531.080	31.776	1145.733	1.96%	77.35%
34.0	515.547	31.674	1177.407	1.95%	79.48%
35.0	498.431	31.490	1208.898	1.94%	81.61%
36.0	477.454	31.072	1239.97	1.91%	83.71%
37.0	450.605	30.268	1270.238	1.86%	85.75%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	421.510	29.110	1299.348	1.79%	87.72%
39.0	385.494	27.545	1326.893	1.70%	89.58%
40.0	351.942	25.719	1352.612	1.58%	91.31%
41.0	300.172	23.221	1375.834	1.43%	92.88%
42.0	250.920	20.022	1395.856	1.23%	94.23%
43.0	205.789	16.918	1412.774	1.04%	95.37%
44.0	165.829	14.026	1426.8	0.86%	96.32%
45.0	126.121	11.220	1438.02	0.69%	97.08%
46.0	92.453	8.548	1446.568	0.53%	97.65%
47.0	62.185	6.150	1452.718	0.38%	98.07%
48.0	42.897	4.248	1456.966	0.26%	98.36%
49.0	29.734	2.983	1459.949	0.18%	98.56%
50.0	22.665	2.185	1462.133	0.13%	98.71%
51.0	18.742	1.752	1463.885	0.11%	98.82%
52.0	15.638	1.475	1465.36	0.09%	98.92%
53.0	12.984	1.245	1466.606	0.08%	99.01%
54.0	10.488	1.035	1467.64	0.06%	99.08%
55.0	8.621	0.853	1468.493	0.05%	99.13%
56.0	7.174	0.714	1469.207	0.04%	99.18%
57.0	6.209	0.612	1469.819	0.04%	99.22%
58.0	5.569	0.545	1470.363	0.03%	99.26%
59.0	5.181	0.503	1470.866	0.03%	99.29%
60.0	4.867	0.475	1471.341	0.03%	99.33%
61.0	4.615	0.452	1471.793	0.03%	99.36%
62.0	4.405	0.435	1472.228	0.03%	99.39%
63.0	4.195	0.418	1472.646	0.03%	99.42%
64.0	4.048	0.405	1473.051	0.02%	99.44%
65.0	3.933	0.395	1473.446	0.02%	99.47%
66.0	3.797	0.386	1473.831	0.02%	99.50%
67.0	3.692	0.377	1474.208	0.02%	99.52%
68.0	3.608	0.370	1474.578	0.02%	99.55%
69.0	3.535	0.364	1474.942	0.02%	99.57%
70.0	3.451	0.359	1475.301	0.02%	99.59%
71.0	3.367	0.352	1475.653	0.02%	99.62%
72.0	3.325	0.348	1476.001	0.02%	99.64%
73.0	3.262	0.344	1476.345	0.02%	99.66%
74.0	3.199	0.340	1476.685	0.02%	99.69%
75.0	3.136	0.335	1477.02	0.02%	99.71%

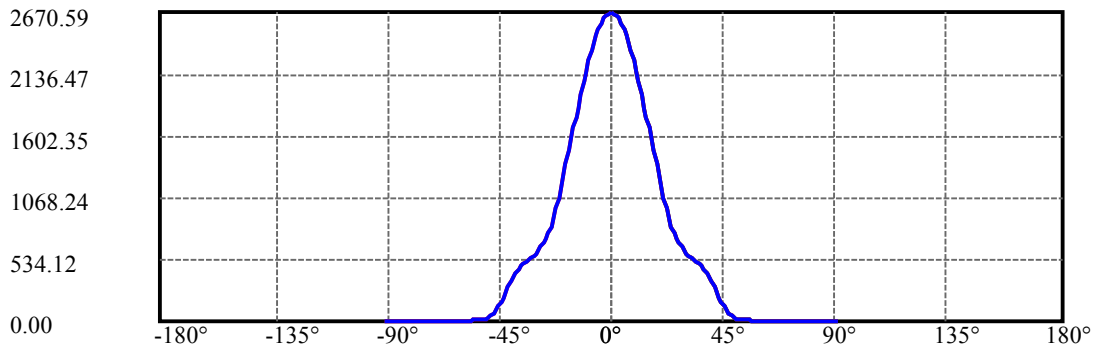
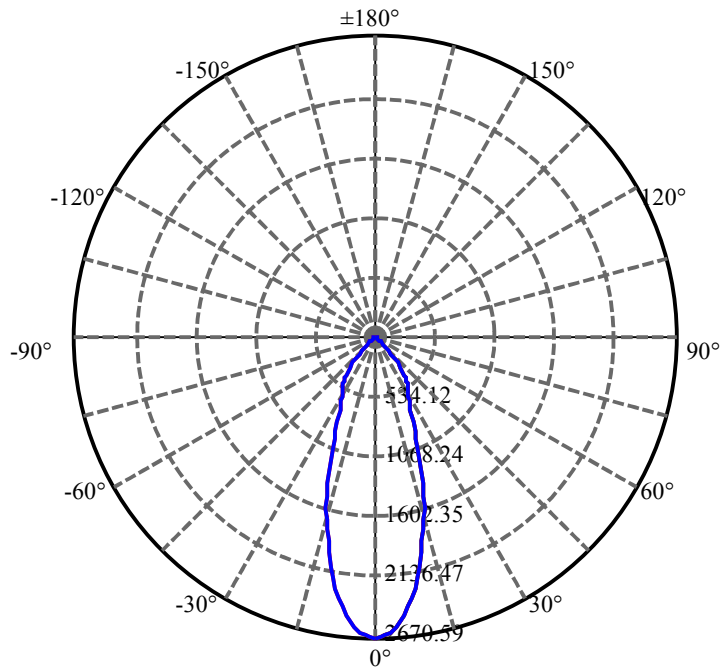
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.084	0.330	1477.35	0.02%	99.73%
77.0	3.021	0.325	1477.675	0.02%	99.75%
78.0	2.958	0.320	1477.995	0.02%	99.78%
79.0	2.884	0.314	1478.309	0.02%	99.80%
80.0	2.821	0.308	1478.617	0.02%	99.82%
81.0	2.769	0.302	1478.919	0.02%	99.84%
82.0	2.716	0.297	1479.217	0.02%	99.86%
83.0	2.654	0.292	1479.509	0.02%	99.88%
84.0	2.538	0.283	1479.791	0.02%	99.90%
85.0	2.433	0.271	1480.063	0.02%	99.92%
86.0	2.370	0.263	1480.325	0.02%	99.93%
87.0	2.339	0.258	1480.583	0.02%	99.95%
88.0	2.255	0.252	1480.835	0.02%	99.97%
89.0	2.161	0.242	1481.077	0.01%	99.98%
90.0	2.119	0.235	1481.311	0.01%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1050.12	64.64%	70.89%
0-40	1352.61	83.26%	91.31%
0-60	1471.34	90.56%	99.33%
0-90	1481.08	91.16%	99.98%
0-120	1481.08	91.16%	99.98%
0-180	1481.31	91.18%	100.00%
60-90	9.74	0.60%	0.66%
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%
0-34.24	1185.05	72.94%	80.00%

ZONAL LUMEN SUMMARY

0-10	229.66
10-20	456.72
20-30	363.74
30-40	302.50
40-50	109.52
50-60	9.21
60-70	3.96
70-80	3.32
80-90	2.46
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: —————

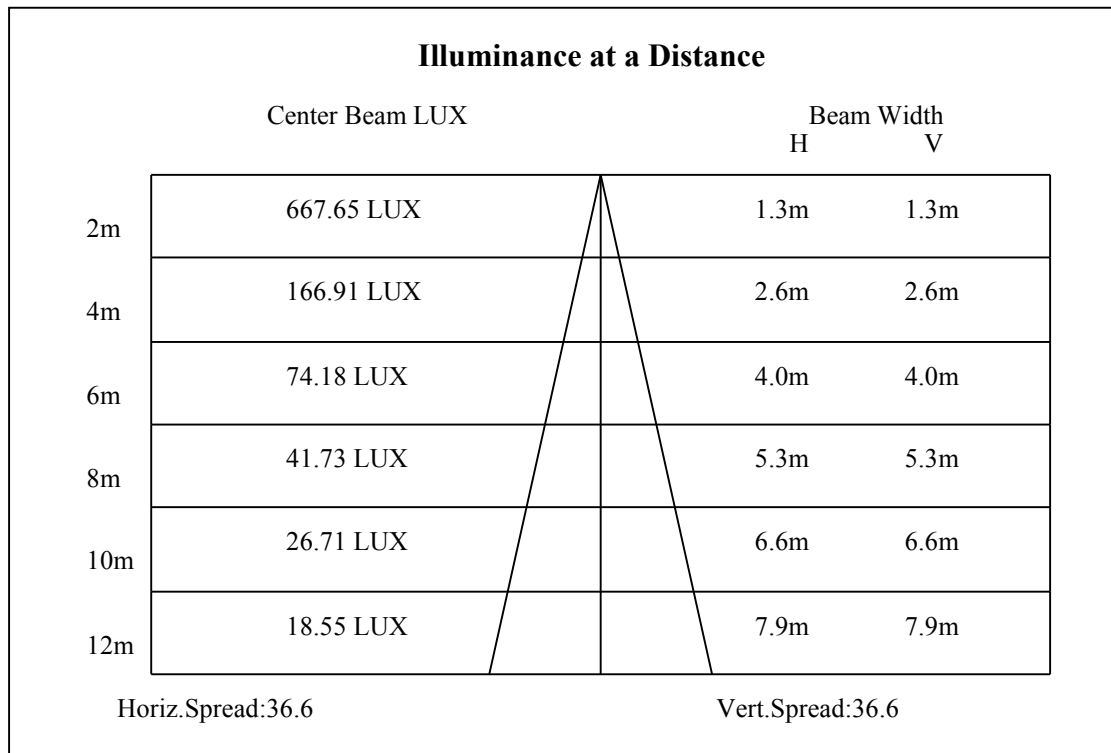
C90/C270: —————

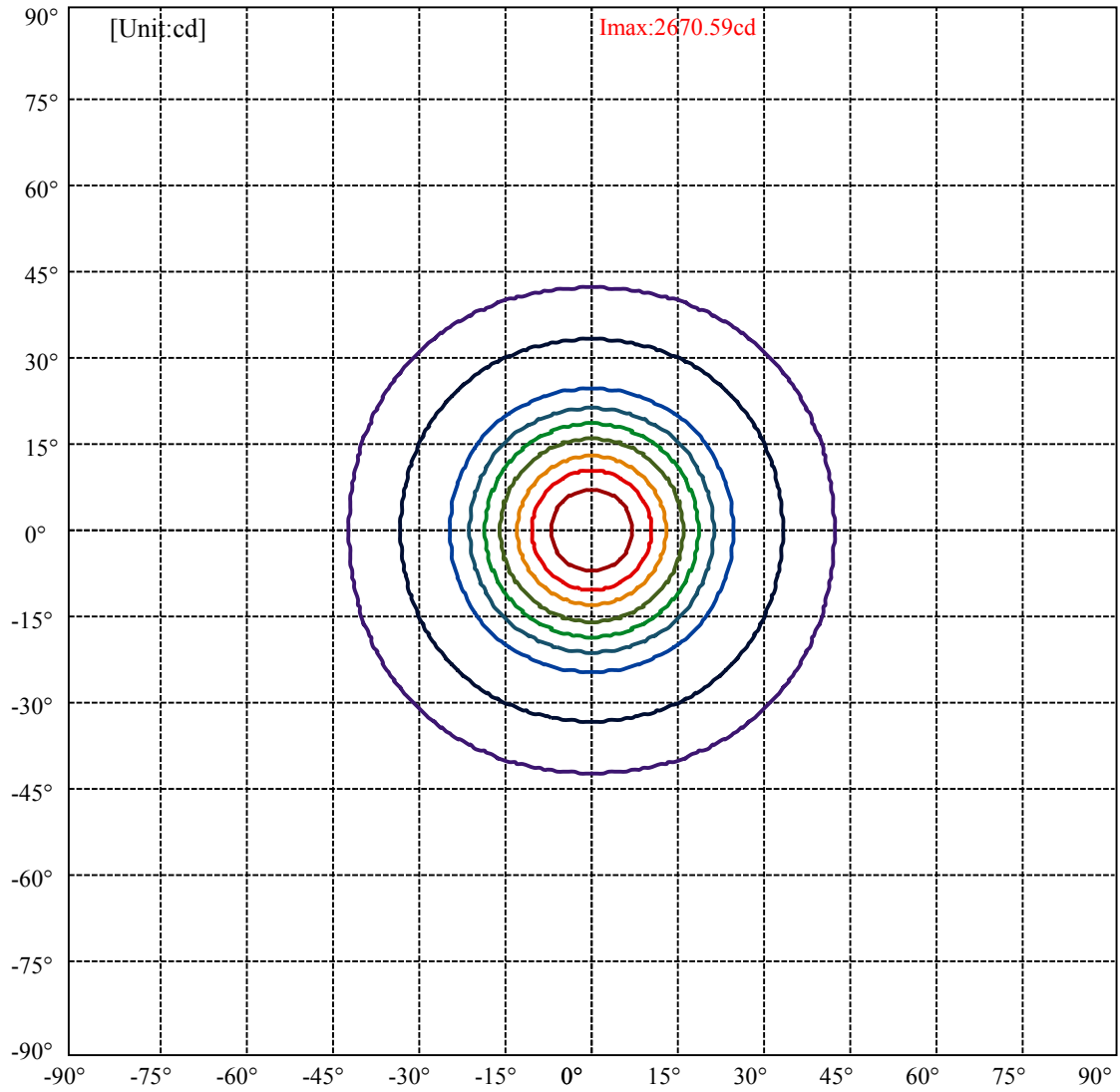
Field angle(10%Imax):C0/180Left:41.7 Right:41.7

:C90/270Left:41.7 Right:41.7

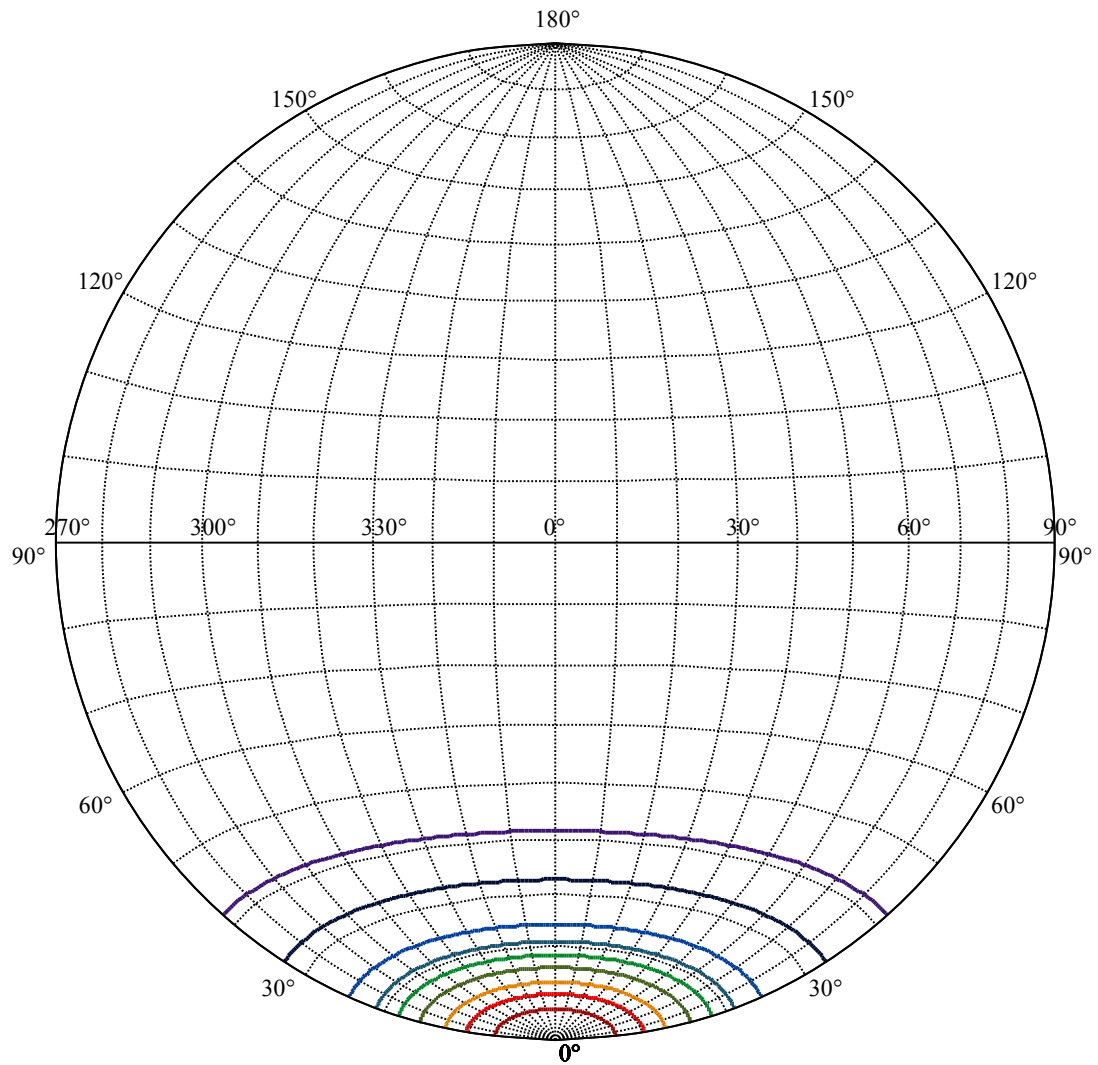
Beam Angle(50%Imax):C0/180Left:18.3 Right:18.3

:C90/270Left:18.3 Right:18.3





(10%Imax) 267.059	—
(20%Imax) 534.118	—
(30%Imax) 801.177	—
(40%Imax) 1068.24	—
(50%Imax) 1335.29	—
(60%Imax) 1602.35	—
(70%Imax) 1869.41	—
(80%Imax) 2136.47	—
(90%Imax) 2403.53	—



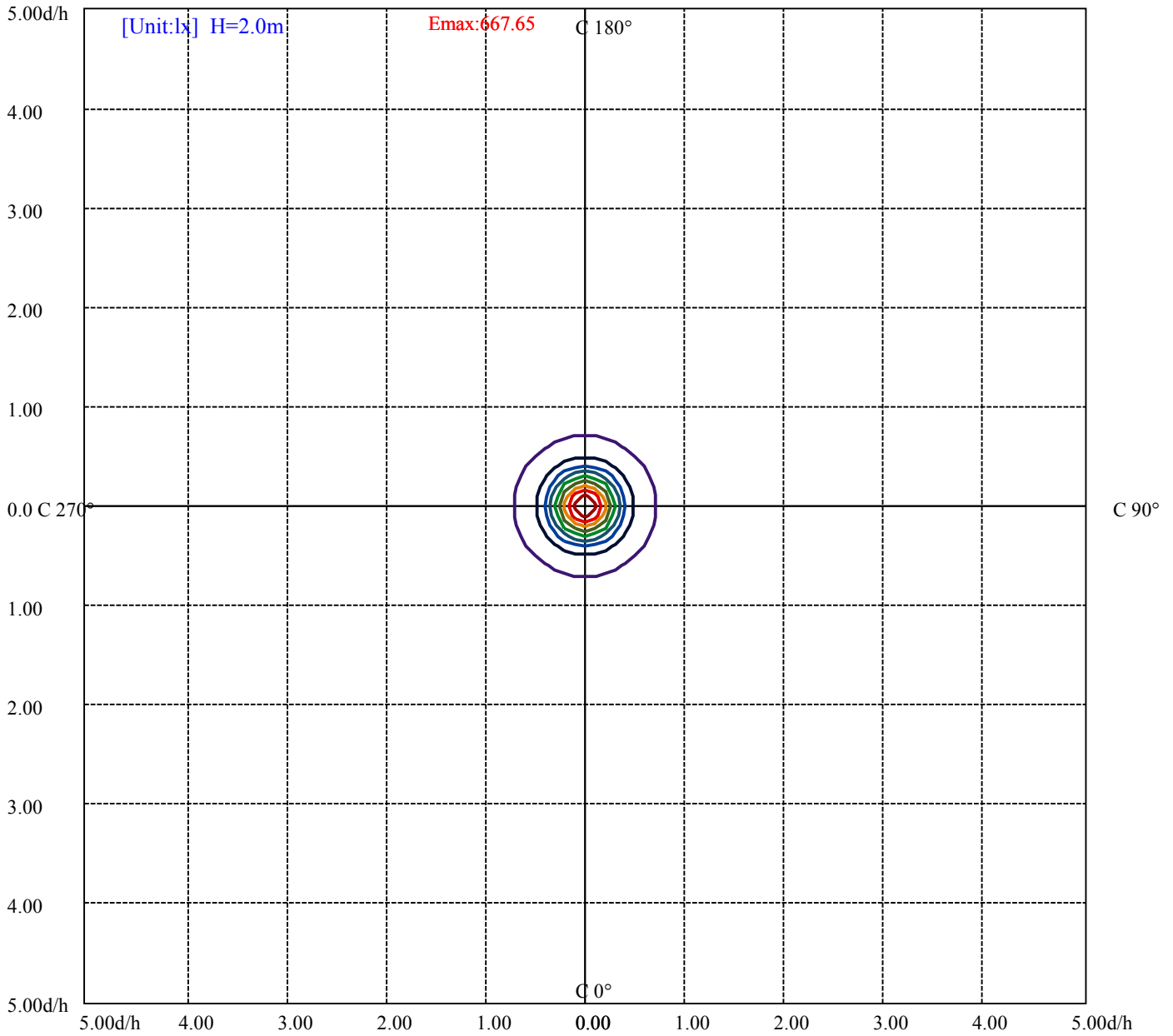
House

[Unit:cd]

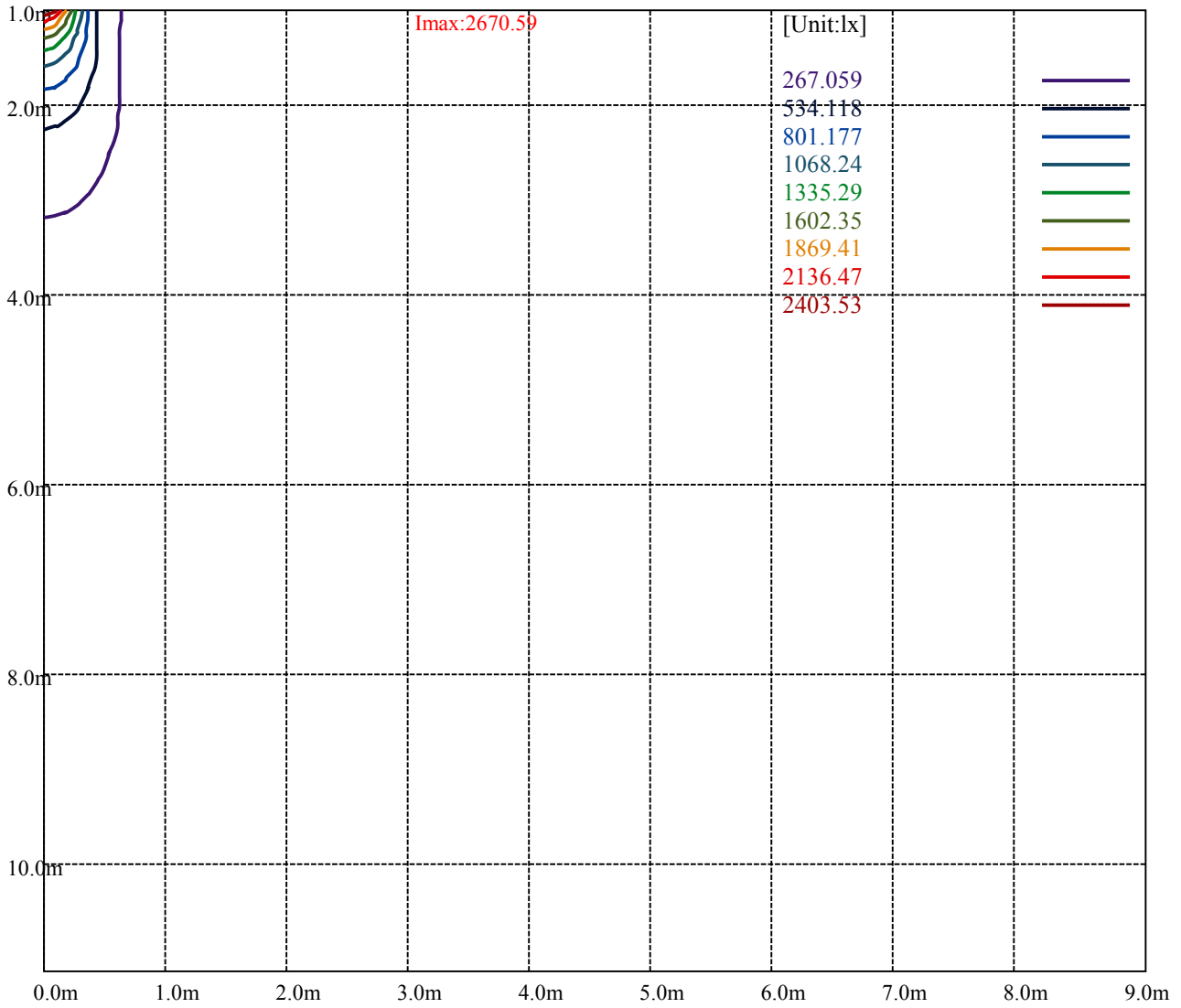
Road

Imax:2670.59

- (10%Imax) 267.059
- (20%Imax) 534.118
- (30%Imax) 801.177
- (40%Imax) 1068.24
- (50%Imax) 1335.29
- (60%Imax) 1602.35
- (70%Imax) 1869.41
- (80%Imax) 2136.47
- (90%Imax) 2403.53



- (10%Emax) 66.76475
- (20%Emax) 133.5295
- (30%Emax) 200.294
- (40%Emax) 267.06
- (50%Emax) 333.8225
- (60%Emax) 400.5875
- (70%Emax) 467.3525
- (80%Emax) 534.1175
- (90%Emax) 600.8825



Luminance Table

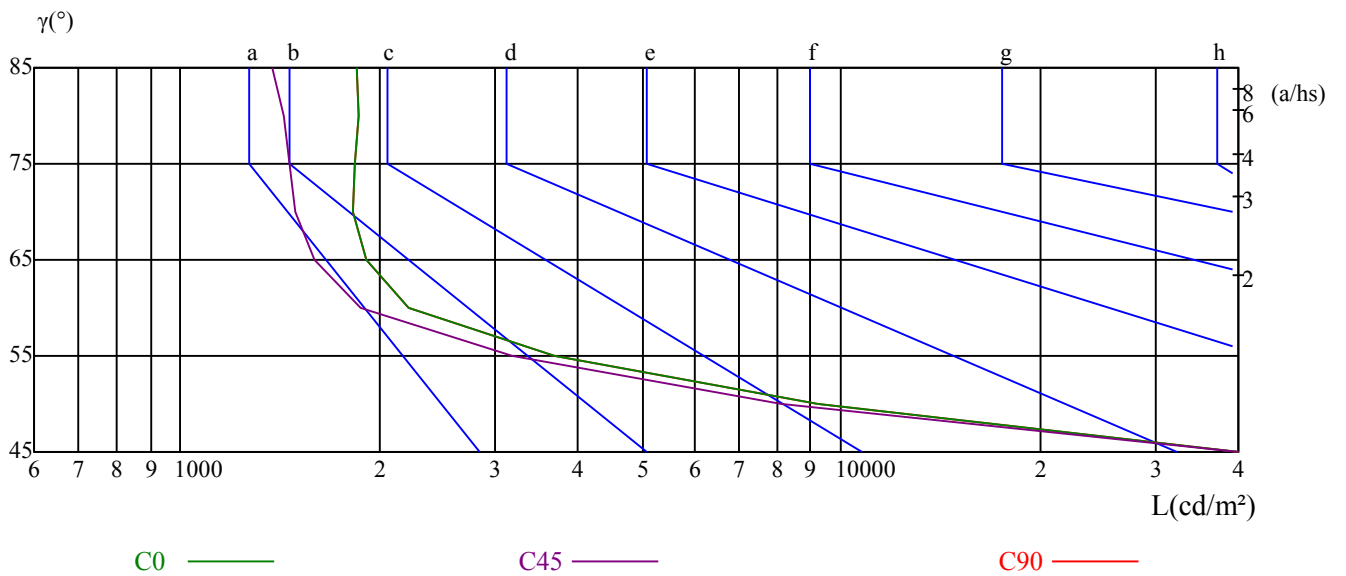
γ	45	50	55	60	65	70	75	80	85
C0	49545	9252	3692	2209	1915	1827	1834	1859	1852
C45	43979	8099	3183	1874	1595	1489	1459	1435	1377
C90	49545	9252	3692	2209	1915	1827	1834	1859	1852

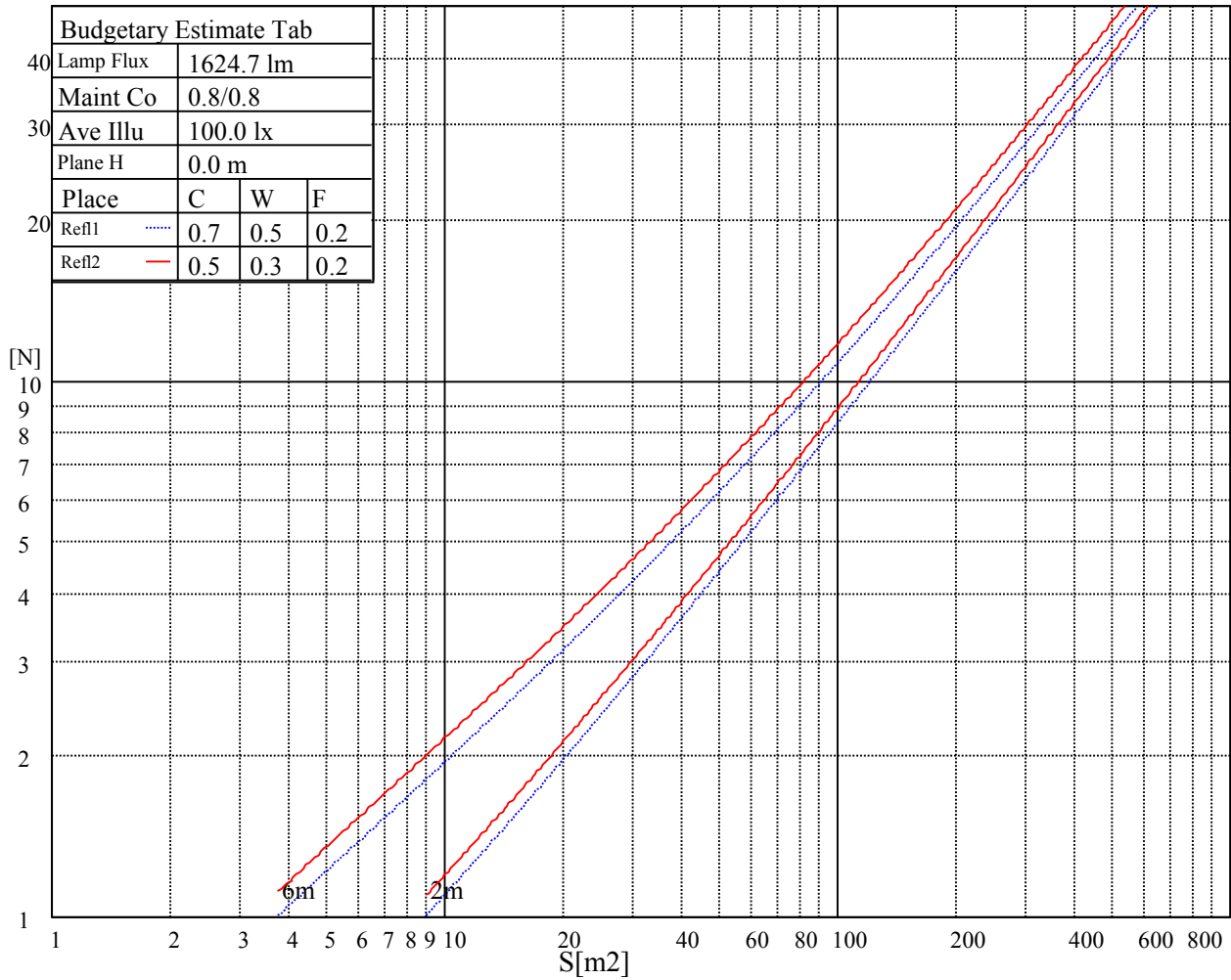
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3723	3723	3723	4847	4847	4847	11167	11167	11167

Glare Table

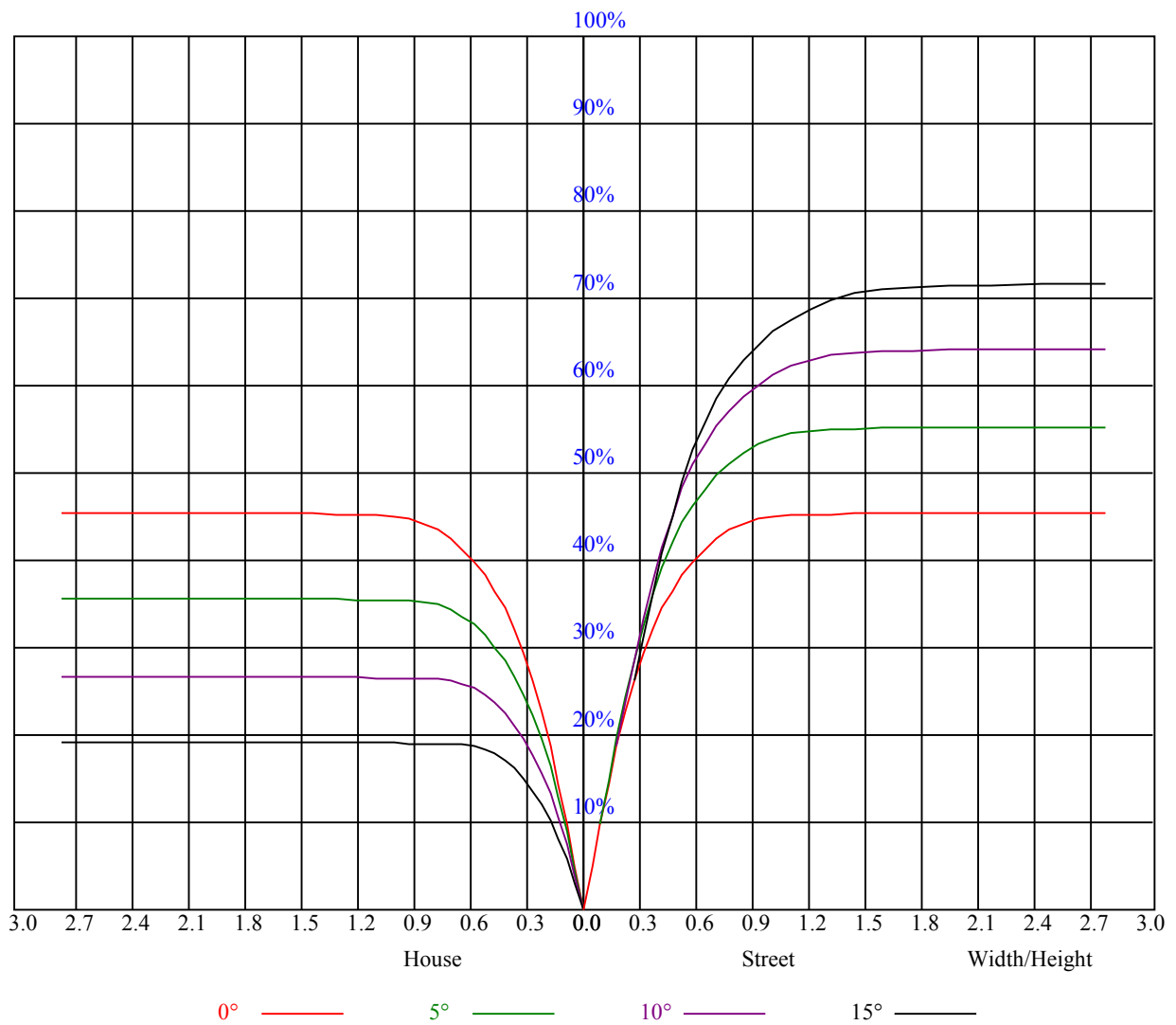
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

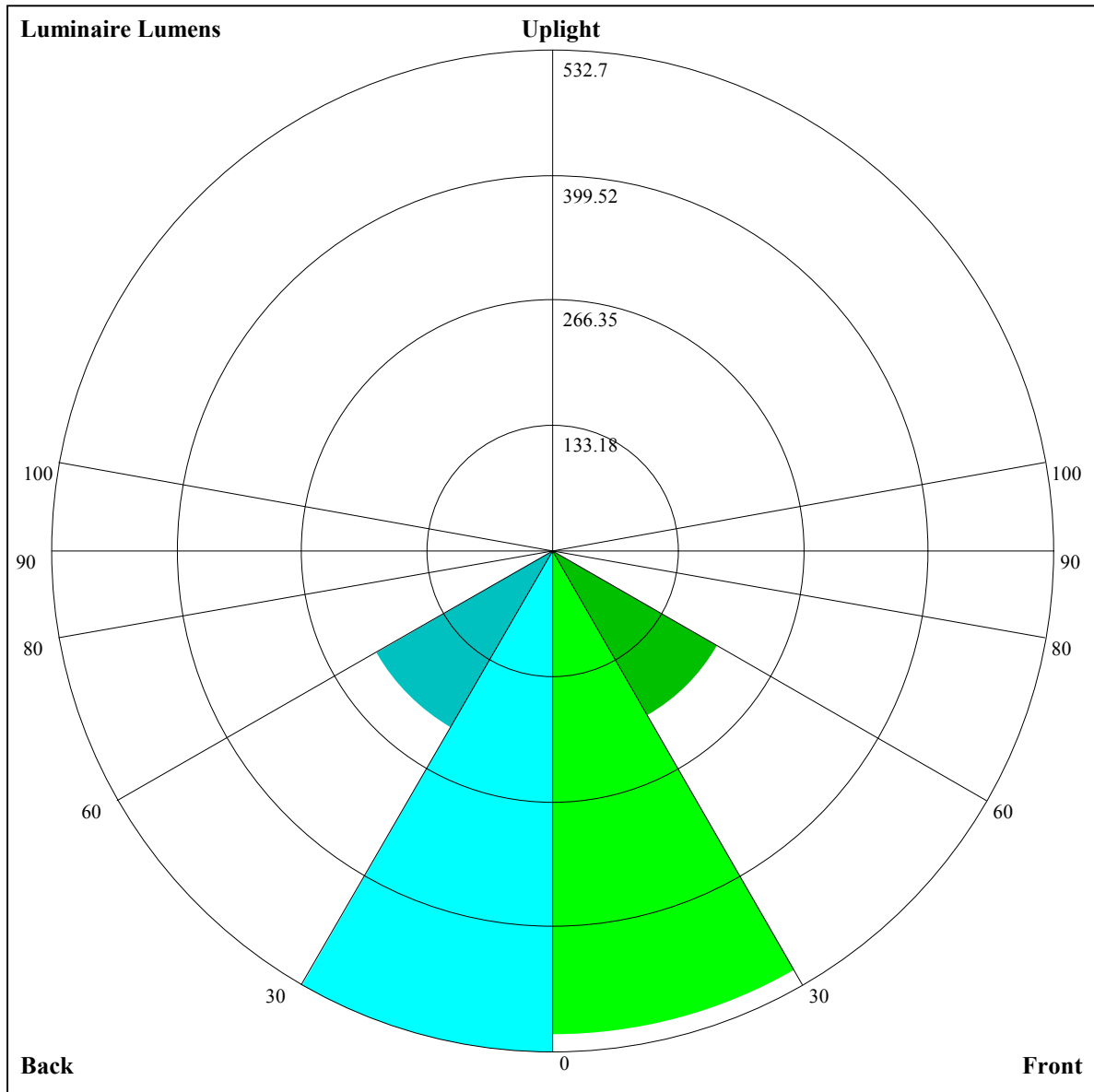
Luminance Limiting Curve





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	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.01	0.99	0.97	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.91	0.90	0.89	0.88	0.87	0.85
2	0.94	0.91	0.88	0.93	0.90	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.81	0.80
3	0.88	0.84	0.80	0.87	0.83	0.80	0.85	0.81	0.79	0.82	0.80	0.77	0.80	0.78	0.76	0.75
4	0.83	0.78	0.74	0.82	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.71	0.70
5	0.78	0.73	0.69	0.77	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.69	0.67	0.66
6	0.73	0.68	0.64	0.73	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.62
7	0.69	0.64	0.60	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.58
8	0.66	0.60	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.55
9	0.62	0.57	0.54	0.62	0.57	0.54	0.61	0.57	0.53	0.60	0.56	0.53	0.60	0.56	0.53	0.52
10	0.59	0.54	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.58	0.53	0.51	0.57	0.53	0.50	0.49





Luminaire Lumens:

FL=515.15,FM=203.11,FH=3.67,FVH=1.35

BL=532.7,BM=217.47,BH=3.69,BVH=1.36

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	2686.74	2668.28	2638.92	2604.51	2549.98	2499.63	2445.93	2362.03	2293.22
45.0	2668.28	2675.83	2674.16	2654.86	2630.52	2593.61	2532.35	2481.17	2411.53
90.0	2674.99	2675.83	2660.73	2637.24	2602.84	2560.88	2502.15	2445.09	2379.65
135.0	2652.34	2672.48	2682.55	2680.03	2659.89	2631.36	2595.28	2552.49	2485.37
180.0	2686.74	2686.74	2676.67	2657.37	2628.01	2581.02	2534.87	2476.98	2394.75
225.0	2668.28	2641.43	2610.39	2569.27	2526.48	2472.78	2397.27	2326.79	2249.59
270.0	2674.99	2654.86	2629.69	2591.93	2538.23	2490.40	2436.70	2373.77	2285.67
315.0	2652.34	2621.29	2570.11	2523.96	2472.78	2403.14	2336.02	2241.20	2158.14
360.0	2686.74	2668.28	2638.92	2604.51	2549.98	2499.63	2445.93	2362.03	2293.22
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2191.70	2104.44	2016.34	1927.40	1670.06	1670.06	1624.83	1530.27	1409.87
45.0	2343.57	2268.05	2184.15	2081.78	1990.32	1895.51	1800.70	1680.71	1578.35
90.0	2307.49	2205.96	2122.06	2033.12	1939.14	1670.39	1670.39	1620.72	1497.46
135.0	2421.60	2335.18	2256.31	2150.58	2067.52	1978.58	1886.28	1767.97	1671.48
180.0	2324.27	2243.72	2139.68	2052.41	1941.66	1849.36	1753.71	1659.74	1541.43
225.0	2143.03	2055.77	1950.89	1799.02	1665.61	1642.79	1547.72	1449.13	1348.11
270.0	2205.96	2121.22	2032.28	1923.20	1833.42	1741.13	1626.17	1528.84	1432.35
315.0	2071.71	1964.31	1879.57	1655.54	1655.54	1586.07	1493.60	1398.96	1302.47
360.0	2191.70	2104.44	2016.34	1927.40	1670.06	1670.06	1624.83	1530.27	1409.87
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1314.21	1220.74	1128.03	1023.31	940.92	870.52	796.94	748.77	706.23
45.0	1476.82	1372.78	1250.28	1151.27	1036.32	949.06	871.86	789.64	735.94
90.0	1396.19	1266.30	1169.48	1074.50	987.15	884.20	813.13	754.73	705.56
135.0	1574.15	1475.98	1377.81	1254.47	1158.82	1070.72	964.16	892.00	826.55
180.0	1442.42	1340.90	1246.08	1130.29	1044.71	959.96	870.18	809.77	756.07
225.0	1223.09	1125.93	1035.14	951.66	856.00	794.84	741.81	697.84	657.57
270.0	1308.17	1210.00	1095.05	1007.79	925.56	852.56	775.37	724.19	684.75
315.0	1184.50	1092.62	1011.15	932.86	849.54	790.73	731.74	693.82	661.43
360.0	1314.21	1220.74	1128.03	1023.31	940.92	870.52	796.94	748.77	706.23
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	664.20	634.75	611.17	585.66	567.45	550.67	535.57	518.12	499.57
45.0	690.63	653.71	613.43	589.94	568.12	549.67	530.37	516.10	502.68
90.0	657.57	625.26	599.51	577.52	553.86	539.01	521.73	508.22	496.89
135.0	756.91	711.60	668.81	638.61	614.27	593.30	571.48	557.22	541.28
180.0	702.37	667.97	631.89	605.88	586.58	568.96	551.34	536.24	523.65
225.0	628.54	597.41	574.84	555.71	535.49	520.89	508.80	496.72	473.48
270.0	649.51	620.15	590.78	565.61	542.95	527.01	512.75	497.64	480.86
315.0	627.19	604.29	584.57	565.69	544.38	530.54	516.61	494.12	469.03
360.0	664.20	634.75	611.17	585.66	567.45	550.67	535.57	518.12	499.57
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	475.16	435.81	399.73	359.54	308.44	266.48	224.28	172.59	134.17
45.0	485.90	466.60	438.91	423.81	423.81	324.80	277.14	239.13	200.20
90.0	476.92	453.59	424.56	382.86	346.70	309.19	270.01	220.76	181.49
135.0	527.01	509.39	489.25	461.56	429.68	429.68	339.40	286.37	243.24
180.0	508.55	491.77	455.69	425.49	425.49	334.87	291.91	247.19	194.07
225.0	448.56	419.02	384.79	338.89	299.38	259.27	209.43	171.50	135.93
270.0	458.21	423.81	423.81	379.17	313.14	263.38	223.36	185.60	148.43
315.0	439.33	404.84	355.34	312.63	268.92	213.71	171.84	123.17	89.11
360.0	475.16	435.81	399.73	359.54	308.44	266.48	224.28	172.59	134.17

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	98.42	67.80	39.77	28.19	22.65	19.72	15.86	13.26	10.91
45.0	153.04	117.89	85.42	58.73	35.41	25.76	22.15	18.96	15.27
90.0	144.40	109.41	71.15	47.24	33.14	24.42	21.40	17.37	14.60
135.0	199.44	147.51	109.25	77.03	46.06	30.88	22.65	19.55	16.61
180.0	153.30	115.79	75.01	49.34	32.72	22.07	19.21	16.28	13.51
225.0	93.72	65.95	39.52	27.60	22.99	19.97	17.03	13.76	11.41
270.0	105.22	74.42	50.09	32.14	25.09	21.98	17.87	15.19	12.75
315.0	61.42	40.86	27.27	22.91	19.80	16.53	13.76	10.74	8.81
360.0	98.42	67.80	39.77	28.19	22.65	19.72	15.86	13.26	10.91
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.56	6.96	5.71	5.29	5.12	4.87	4.61	4.45	4.28
45.0	12.84	10.15	8.39	7.13	6.13	5.62	5.29	4.95	4.70
90.0	12.33	10.15	8.14	6.96	6.29	5.71	5.29	5.03	4.70
135.0	13.09	10.74	8.73	6.71	5.54	4.95	4.70	4.45	4.28
180.0	10.57	8.64	6.96	5.79	5.12	4.95	4.70	4.45	4.28
225.0	9.48	7.97	6.80	6.21	5.62	5.12	4.78	4.53	4.36
270.0	10.07	8.39	7.22	6.46	5.87	5.54	5.12	4.87	4.61
315.0	6.96	5.96	5.45	5.12	4.87	4.70	4.45	4.20	4.03
360.0	8.56	6.96	5.71	5.29	5.12	4.87	4.61	4.45	4.28
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.03	3.94	3.86	3.69	3.52	3.52	3.44	3.36	3.27
45.0	4.53	4.36	4.20	3.94	3.86	3.78	3.69	3.61	3.52
90.0	4.45	4.28	4.20	4.11	4.03	3.94	3.78	3.69	3.61
135.0	4.03	3.86	3.78	3.69	3.61	3.52	3.44	3.36	3.19
180.0	4.11	4.03	3.86	3.78	3.69	3.61	3.52	3.44	3.36
225.0	4.20	4.03	3.94	3.78	3.69	3.61	3.52	3.52	3.44
270.0	4.36	4.20	4.03	3.86	3.69	3.61	3.61	3.52	3.44
315.0	3.86	3.69	3.61	3.52	3.44	3.27	3.27	3.10	3.10
360.0	4.03	3.94	3.86	3.69	3.52	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	3.19	3.10	3.02	3.02	2.94	2.85	2.85	2.77
45.0	3.44	3.36	3.36	3.27	3.19	3.19	3.10	3.02	2.94
90.0	3.61	3.52	3.44	3.44	3.36	3.27	3.19	3.10	3.02
135.0	3.19	3.10	3.10	3.02	2.94	2.94	2.85	2.77	2.68
180.0	3.36	3.27	3.19	3.10	3.10	3.02	2.94	2.85	2.85
225.0	3.36	3.36	3.27	3.27	3.19	3.10	3.02	2.94	2.85
270.0	3.36	3.36	3.27	3.19	3.10	3.02	3.02	2.94	2.85
315.0	3.02	2.94	2.85	2.77	2.77	2.68	2.68	2.60	2.60
360.0	3.27	3.19	3.10	3.02	3.02	2.94	2.85	2.85	2.77
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.68	2.68	2.68	2.60	2.43	2.43	2.35	2.27	2.18
45.0	2.85	2.77	2.77	2.68	2.60	2.43	2.35	2.27	2.18
90.0	2.94	2.85	2.77	2.68	2.52	2.35	2.35	2.43	2.18
135.0	2.68	2.68	2.60	2.52	2.43	2.35	2.35	2.27	2.18
180.0	2.77	2.68	2.68	2.52	2.43	2.43	2.35	2.35	2.27
225.0	2.85	2.77	2.60	2.43	2.35	2.35	2.43	2.18	2.10
270.0	2.77	2.77	2.68	2.52	2.35	2.35	2.27	2.18	2.10
315.0	2.60	2.52	2.43	2.35	2.35	2.27	2.27	2.10	2.10
360.0	2.68	2.68	2.68	2.60	2.43	2.43	2.35	2.27	2.18

Intensity data(cd)

C/γ(°)	90.0
0.0	2.10
45.0	2.10
90.0	2.18
135.0	2.18
180.0	2.18
225.0	2.10
270.0	2.10
315.0	2.01
360.0	2.10