



NATA LIGHTING CO.,LTD.
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Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Client:

LumCAT: LM01D03024AE

Luminaire:

Report No: nt0100

Voltage(V): 34.9300

Test No: GC2019122011

Current(A): 0.1970

LampCAT: LUMINUS CXM-6-AC40

Power (W): 6.8800

Lamp flux(lm): 861.0

PF: 1.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 764.11, Efficiency(%): 88.75% , Luminous Efficacy(lm/W): 111.06

Central intensity(cd): 2575.406, Maximum intensity(cd): 2575.406

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=25.4

[C90/270]Total=25.4

Field angle(10%Imax): [C0/180]Total=51.6

[C90/270]Total=51.6

Maximum s/h(1/2): C0_180=0.43 C90_270=0.43

Maximum s/h(1/4): C0_180=0.44 C90_270=0.44

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 88.75%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 94.949%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/12/20
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2575.406	0.000	0	.000%	.000%
1.0	2566.828	2.460	2.46	.286%	.322%
2.0	2538.703	7.328	9.788	.851%	1.281%
3.0	2499.188	12.049	21.837	1.399%	2.858%
4.0	2447.789	16.559	38.396	1.923%	5.025%
5.0	2369.883	20.725	59.122	2.407%	7.737%
6.0	2277.422	24.423	83.545	2.837%	10.934%
7.0	2165.695	27.578	111.123	3.203%	14.543%
8.0	2033.719	30.054	141.177	3.491%	18.476%
9.0	1885.922	31.767	172.944	3.689%	22.633%
10.0	1731.586	32.737	205.681	3.802%	26.918%
11.0	1570.922	32.999	238.68	3.833%	31.236%
12.0	1400.681	32.484	271.164	3.773%	35.488%
13.0	1246.254	31.412	302.576	3.648%	39.599%
14.0	1106.423	30.114	332.69	3.498%	43.540%
15.0	986.077	28.727	361.417	3.336%	47.299%
16.0	875.630	27.279	388.696	3.168%	50.869%
17.0	768.853	25.609	414.305	2.974%	54.221%
18.0	675.429	23.813	438.118	2.766%	57.337%
19.0	601.889	22.223	460.341	2.581%	60.246%
20.0	528.483	20.689	481.03	2.403%	62.953%
21.0	465.054	19.078	500.108	2.216%	65.450%
22.0	412.952	17.644	517.752	2.049%	67.759%
23.0	363.227	16.286	534.038	1.892%	69.890%
24.0	320.681	14.953	548.991	1.737%	71.847%
25.0	284.688	13.765	562.756	1.599%	73.649%
26.0	251.227	12.650	575.406	1.469%	75.304%
27.0	226.470	11.687	587.093	1.357%	76.834%
28.0	197.466	10.733	597.826	1.247%	78.238%
29.0	175.205	9.750	607.576	1.132%	79.514%
30.0	156.607	8.959	616.535	1.041%	80.687%
31.0	140.273	8.262	624.797	.960%	81.768%
32.0	125.227	7.606	632.403	.883%	82.764%
33.0	112.662	7.008	639.411	.814%	83.681%
34.0	101.630	6.485	645.896	.753%	84.530%
35.0	91.659	6.003	651.899	.697%	85.315%
36.0	82.470	5.544	657.444	.644%	86.041%
37.0	75.382	5.148	662.592	.598%	86.714%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	68.505	4.803	667.395	.558%	87.343%
39.0	62.107	4.458	671.853	.518%	87.926%
40.0	57.157	4.160	676.012	.483%	88.471%
41.0	52.411	3.902	679.914	.453%	88.981%
42.0	47.791	3.641	683.554	.423%	89.458%
43.0	44.191	3.407	686.962	.396%	89.904%
44.0	41.133	3.220	690.182	.374%	90.325%
45.0	38.067	3.044	693.226	.354%	90.724%
46.0	35.585	2.880	696.106	.335%	91.101%
47.0	33.279	2.739	698.845	.318%	91.459%
48.0	31.212	2.607	701.452	.303%	91.800%
49.0	29.313	2.485	703.938	.289%	92.125%
50.0	27.408	2.365	706.303	.275%	92.435%
51.0	25.784	2.250	708.553	.261%	92.729%
52.0	24.546	2.160	710.713	.251%	93.012%
53.0	23.252	2.079	712.792	.241%	93.284%
54.0	22.078	1.998	714.79	.232%	93.546%
55.0	21.171	1.931	716.721	.224%	93.798%
56.0	20.180	1.869	718.589	.217%	94.043%
57.0	19.336	1.807	720.396	.210%	94.279%
58.0	18.577	1.753	722.149	.204%	94.509%
59.0	17.888	1.705	723.854	.198%	94.732%
60.0	17.177	1.657	725.51	.192%	94.949%
61.0	16.608	1.612	727.123	.187%	95.160%
62.0	16.088	1.575	728.698	.183%	95.366%
63.0	15.525	1.537	730.236	.179%	95.567%
64.0	14.998	1.498	731.733	.174%	95.763%
65.0	14.498	1.460	733.193	.170%	95.954%
66.0	14.077	1.426	734.619	.166%	96.141%
67.0	13.648	1.394	736.013	.162%	96.323%
68.0	13.254	1.363	737.376	.158%	96.502%
69.0	12.832	1.331	738.706	.155%	96.676%
70.0	12.495	1.301	740.007	.151%	96.846%
71.0	12.129	1.273	741.28	.148%	97.012%
72.0	11.805	1.245	742.524	.145%	97.175%
73.0	11.552	1.221	743.746	.142%	97.335%
74.0	11.391	1.206	744.952	.140%	97.493%
75.0	11.313	1.200	746.151	.139%	97.650%

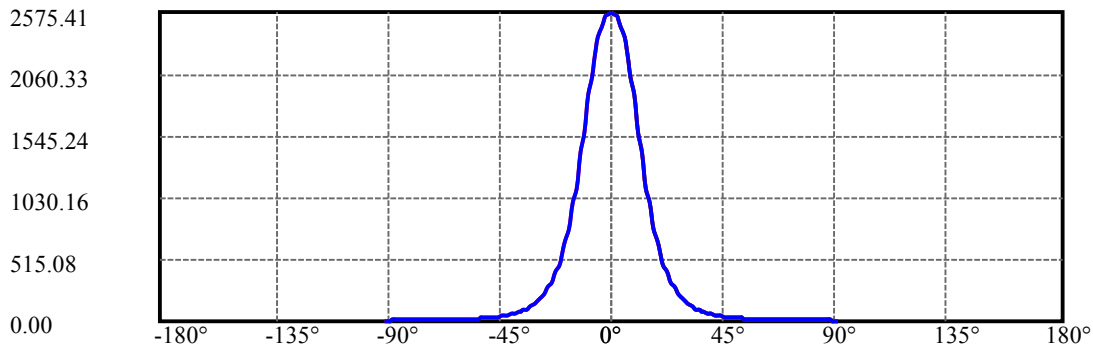
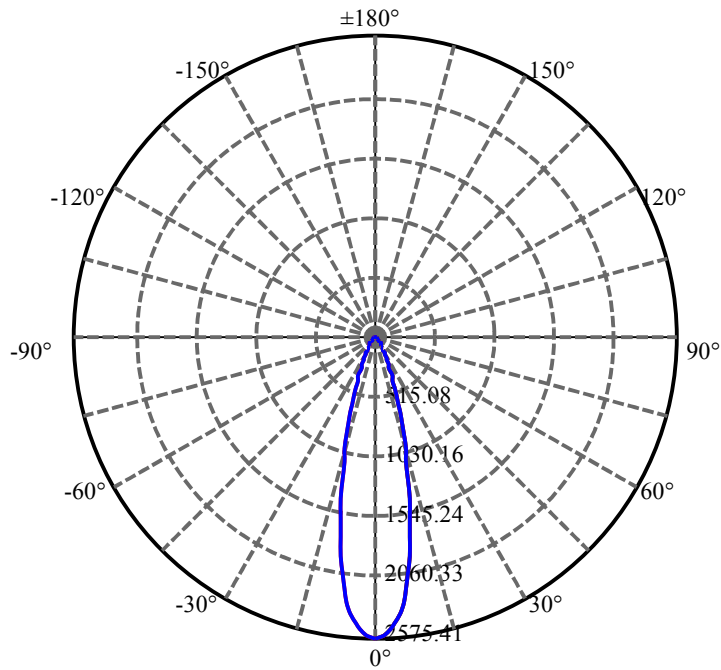
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	11.391	1.205	747.357	.140%	97.808%
77.0	11.573	1.224	748.581	.142%	97.968%
78.0	11.862	1.255	749.835	.146%	98.132%
79.0	12.213	1.294	751.129	.150%	98.301%
80.0	12.600	1.338	752.467	.155%	98.477%
81.0	12.916	1.380	753.847	.160%	98.657%
82.0	13.170	1.415	755.261	.164%	98.842%
83.0	13.226	1.435	756.696	.167%	99.030%
84.0	12.966	1.427	758.123	.166%	99.217%
85.0	11.728	1.348	759.471	.157%	99.393%
86.0	10.751	1.229	760.699	.143%	99.554%
87.0	9.464	1.106	761.806	.128%	99.699%
88.0	7.432	0.926	762.731	.107%	99.820%
89.0	6.209	0.748	763.479	.087%	99.918%
90.0	5.259	0.629	764.108	.073%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	616.54	71.61%	80.69%
0-40	676.01	78.51%	88.47%
0-60	725.51	84.26%	94.95%
0-90	763.48	88.67%	99.92%
0-120	763.48	88.67%	99.92%
0-180	764.11	88.75%	100.00%
60-90	39.63	4.60%	5.19%
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%
0-29.41	611.29	71.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	205.68
10-20	275.35
20-30	135.51
30-40	59.48
40-50	30.29
50-60	19.21
60-70	14.50
70-80	12.46
80-90	11.01
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: —————

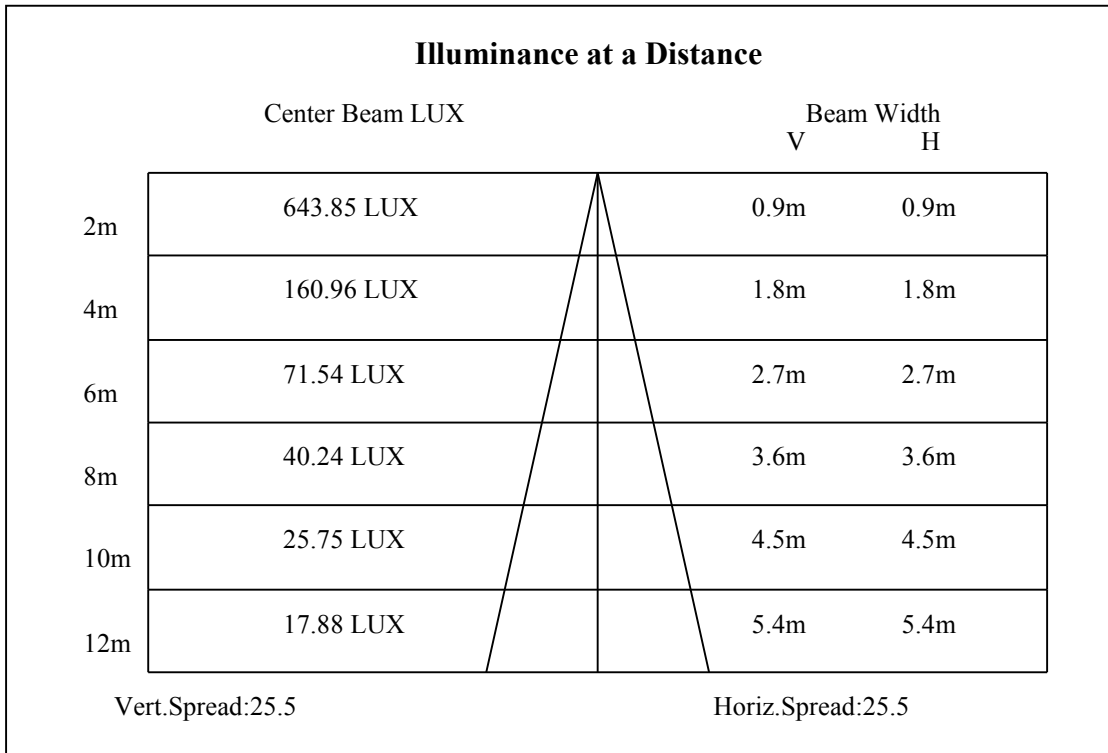
C90/C270: —————

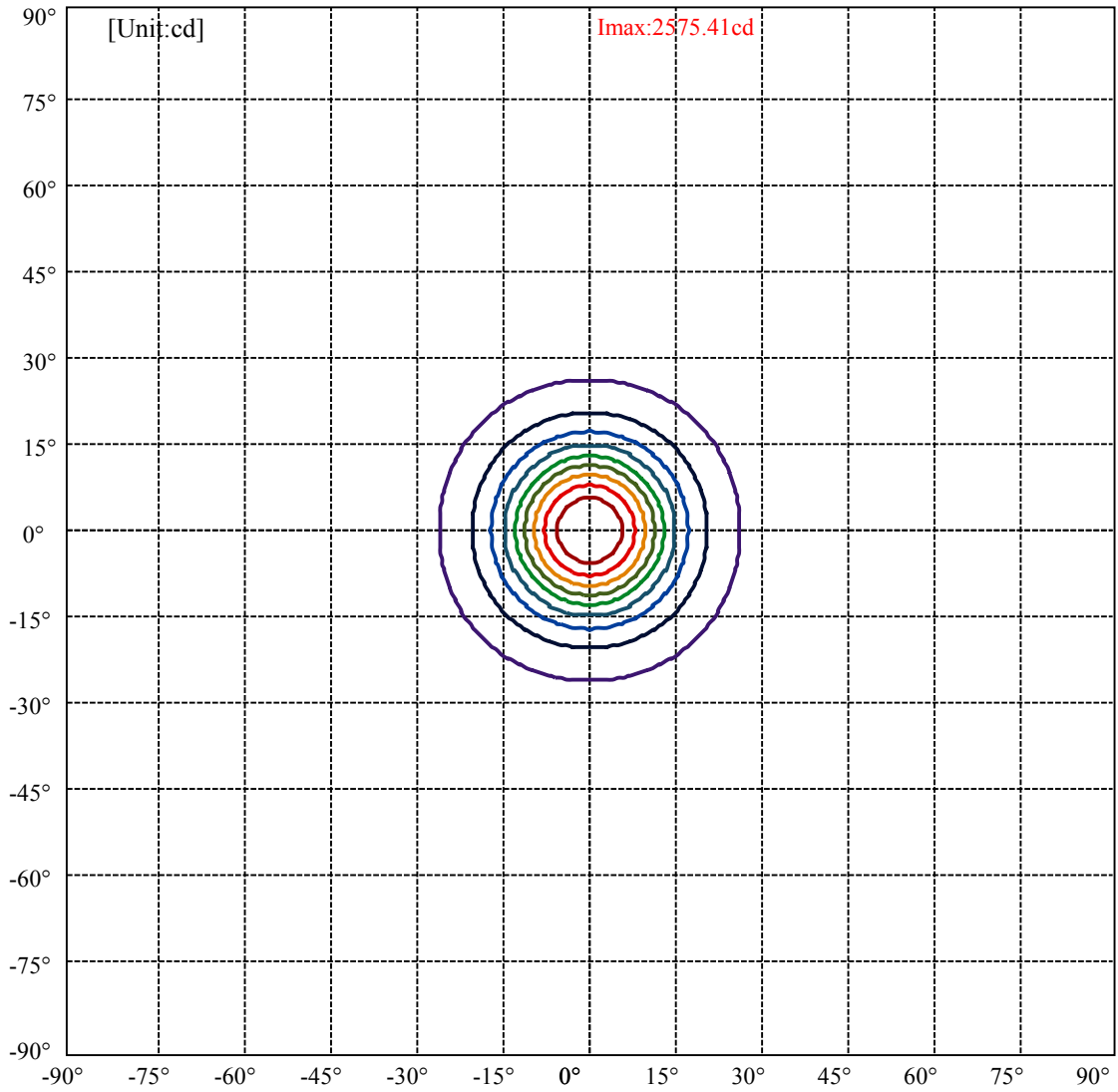
Field angle(10%Imax):C0/180Left:25.8 Right:25.8

:C90/270Left:25.8 Right:25.8

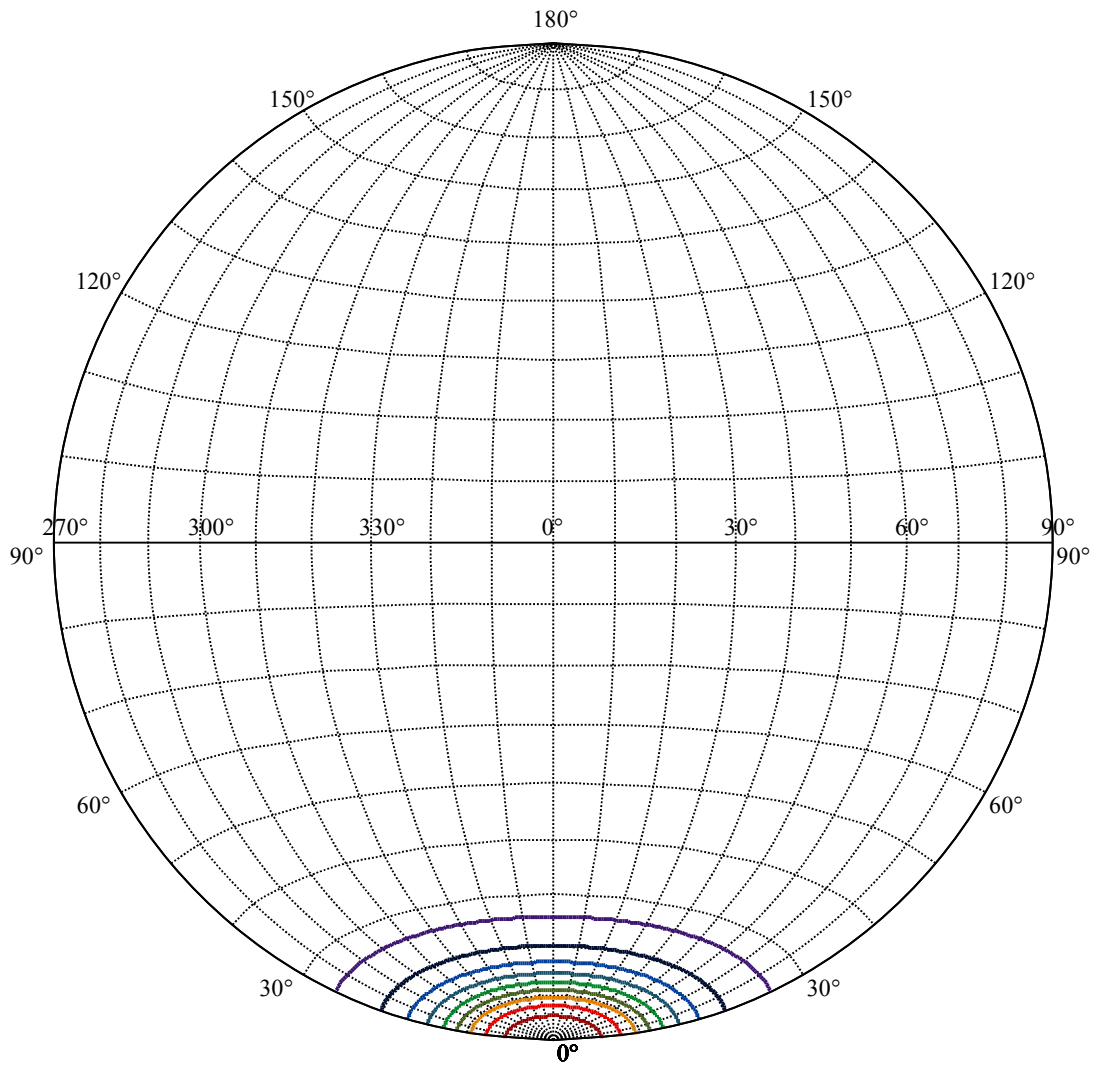
Beam Angle(50%Imax):C0/180Left:12.7 Right:12.7

:C90/270Left:12.7 Right:12.7





(10%Imax) 257.541	—
(20%Imax) 515.081	—
(30%Imax) 772.622	—
(40%Imax) 1030.16	—
(50%Imax) 1287.7	—
(60%Imax) 1545.24	—
(70%Imax) 1802.78	—
(80%Imax) 2060.33	—
(90%Imax) 2317.87	—



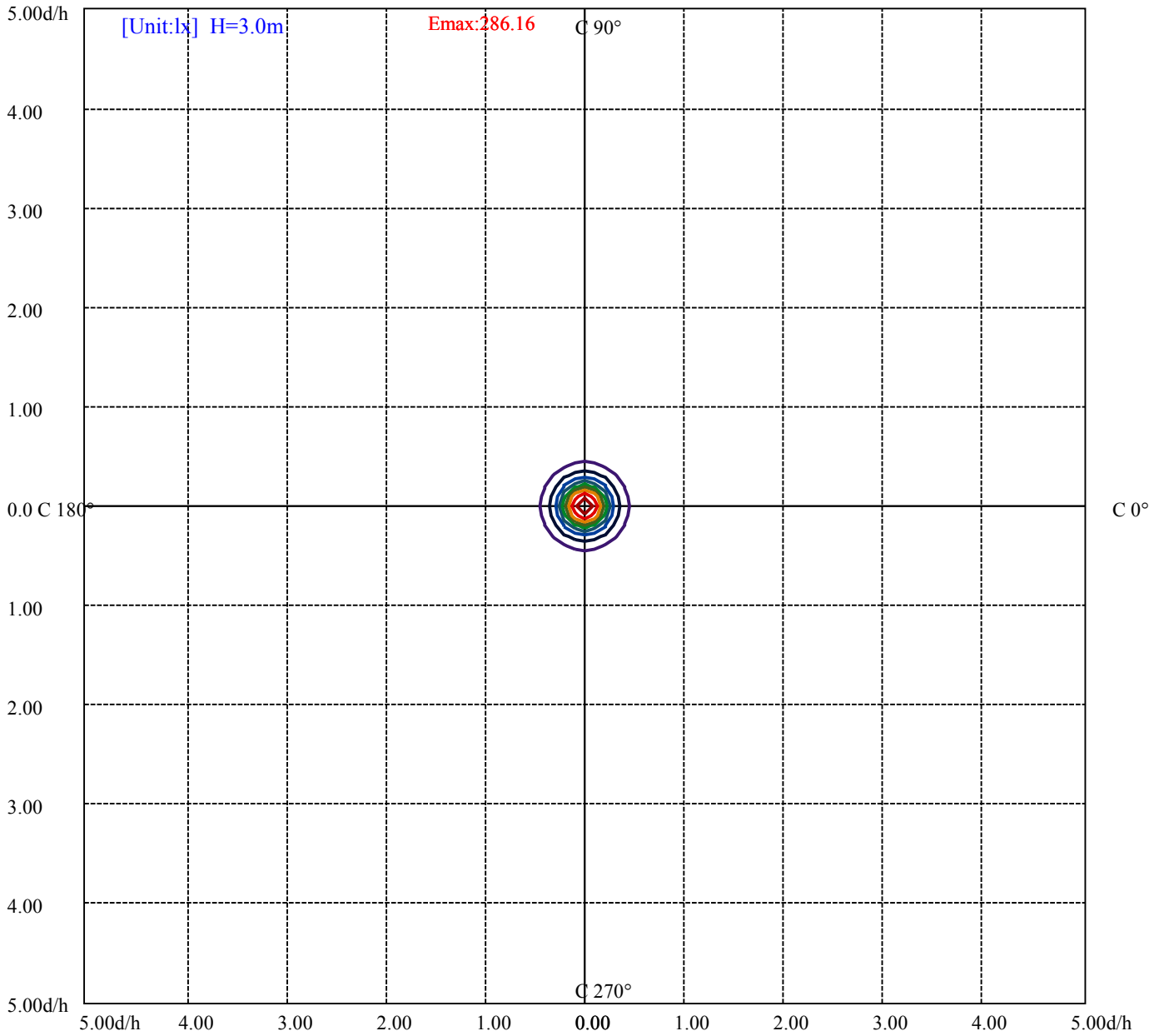
House

[Unit:cd]

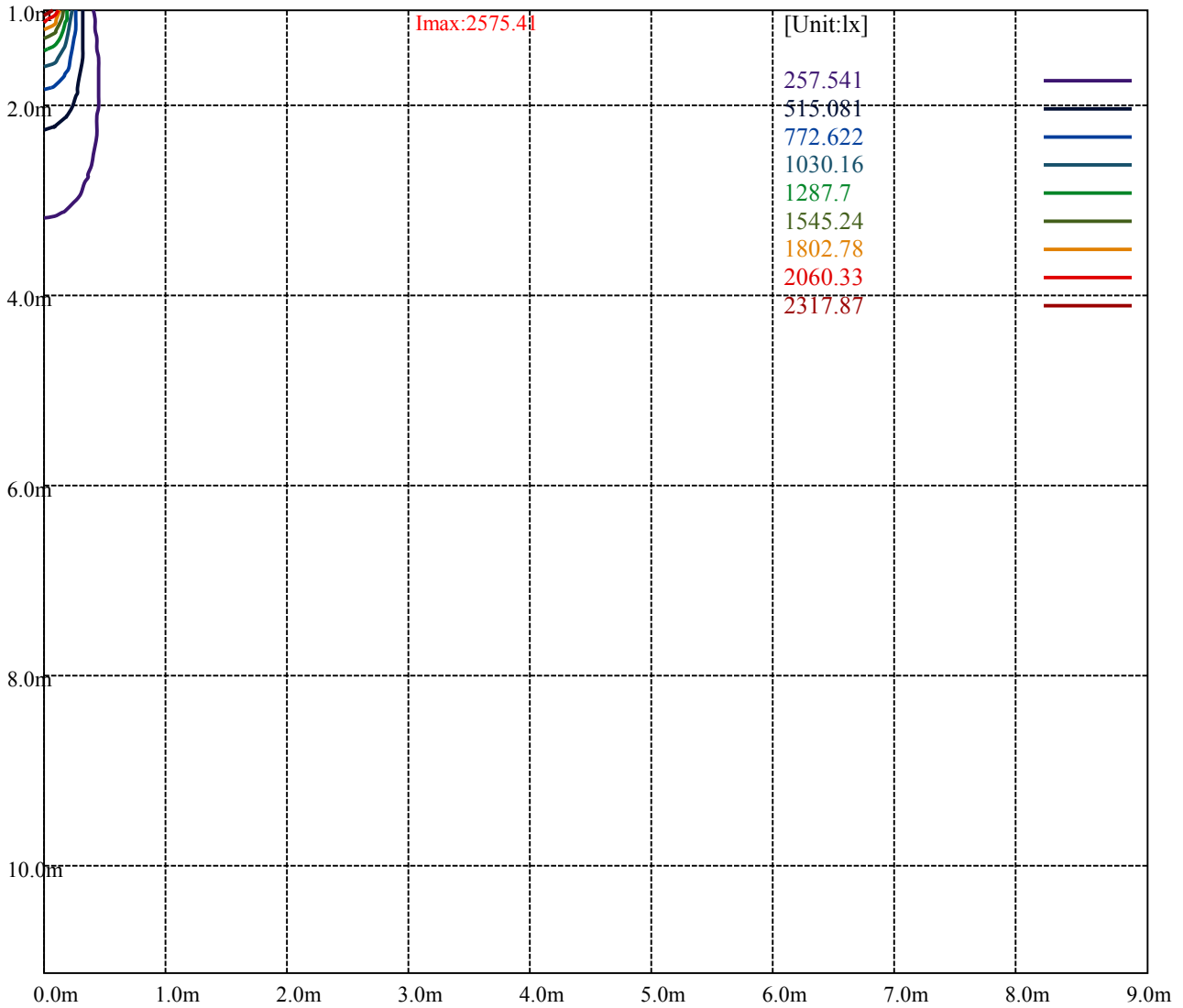
Road

Imax:2575.41

(10%Imax) 257.541	—
(20%Imax) 515.081	—
(30%Imax) 772.622	—
(40%Imax) 1030.16	—
(50%Imax) 1287.7	—
(60%Imax) 1545.24	—
(70%Imax) 1802.78	—
(80%Imax) 2060.33	—
(90%Imax) 2317.87	—



(10%Emax) 28.61567	—
(20%Emax) 57.23122	—
(30%Emax) 85.84689	—
(40%Emax) 114.4622	—
(50%Emax) 143.0778	—
(60%Emax) 171.6933	—
(70%Emax) 200.3089	—
(80%Emax) 228.9245	—
(90%Emax) 257.54	—



Luminance Table

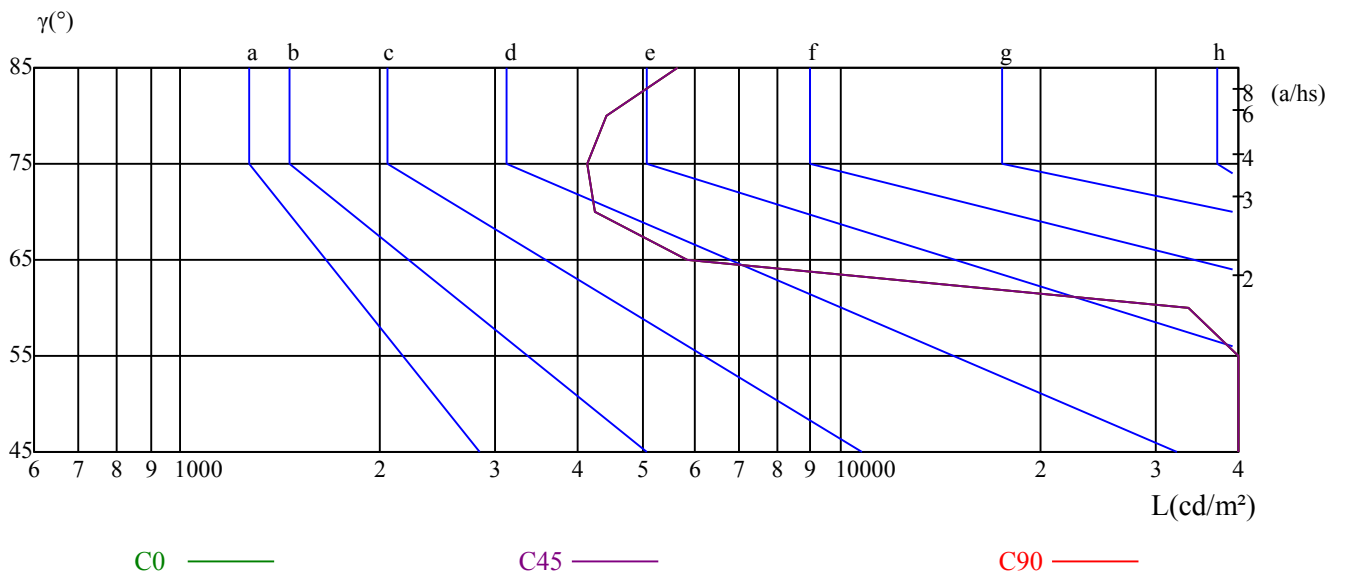
γ	45	50	55	60	65	70	75	80	85
C0	46650	52836	53885	33658	5848	4245	4131	4405	5640
C45	46650	52836	53885	33658	5848	4245	4131	4405	5640
C90	46650	52836	53885	33658	5848	4245	4131	4405	5640

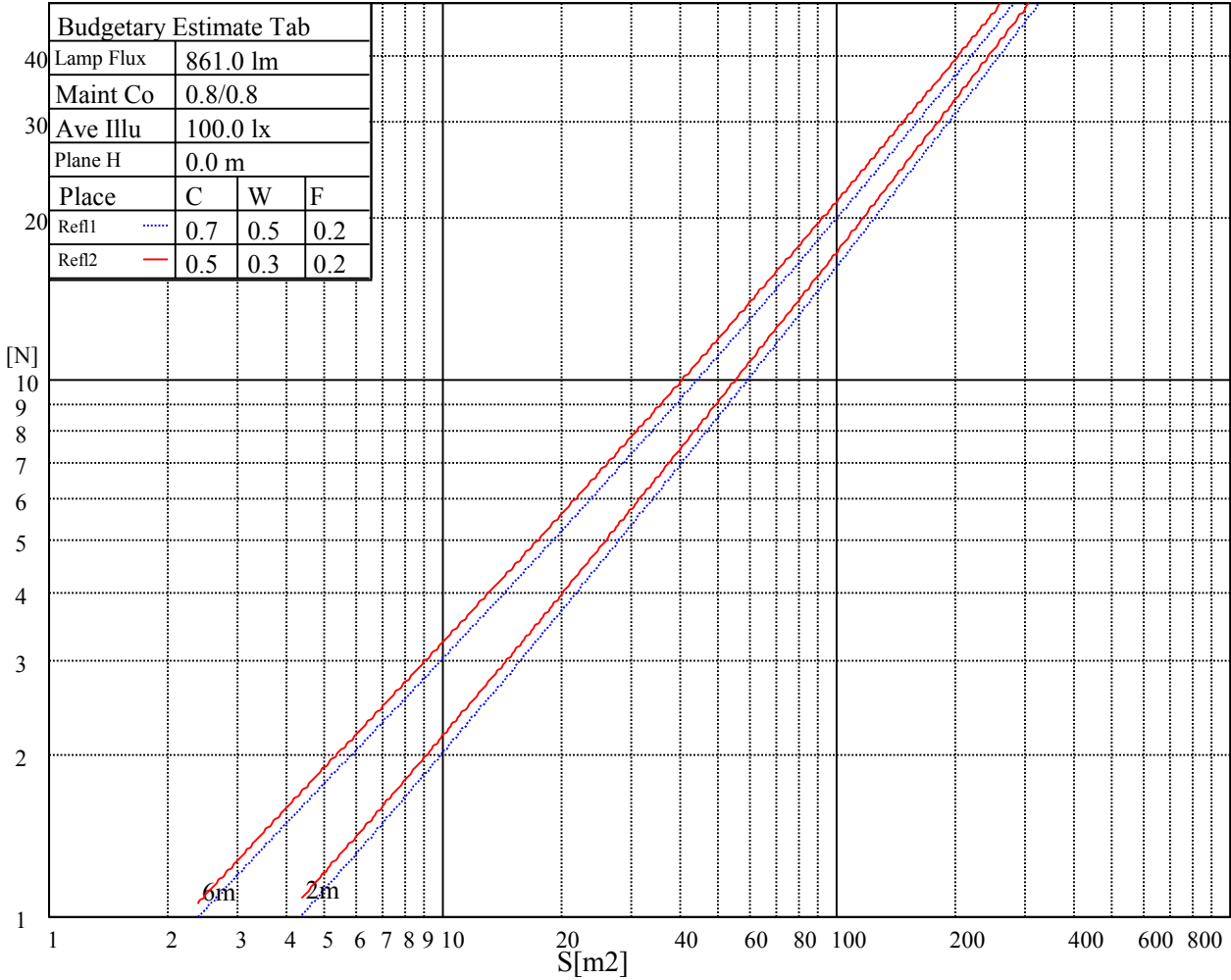
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5848	5848	5848	4131	4131	4131	5640	5640	5640

Glare Table

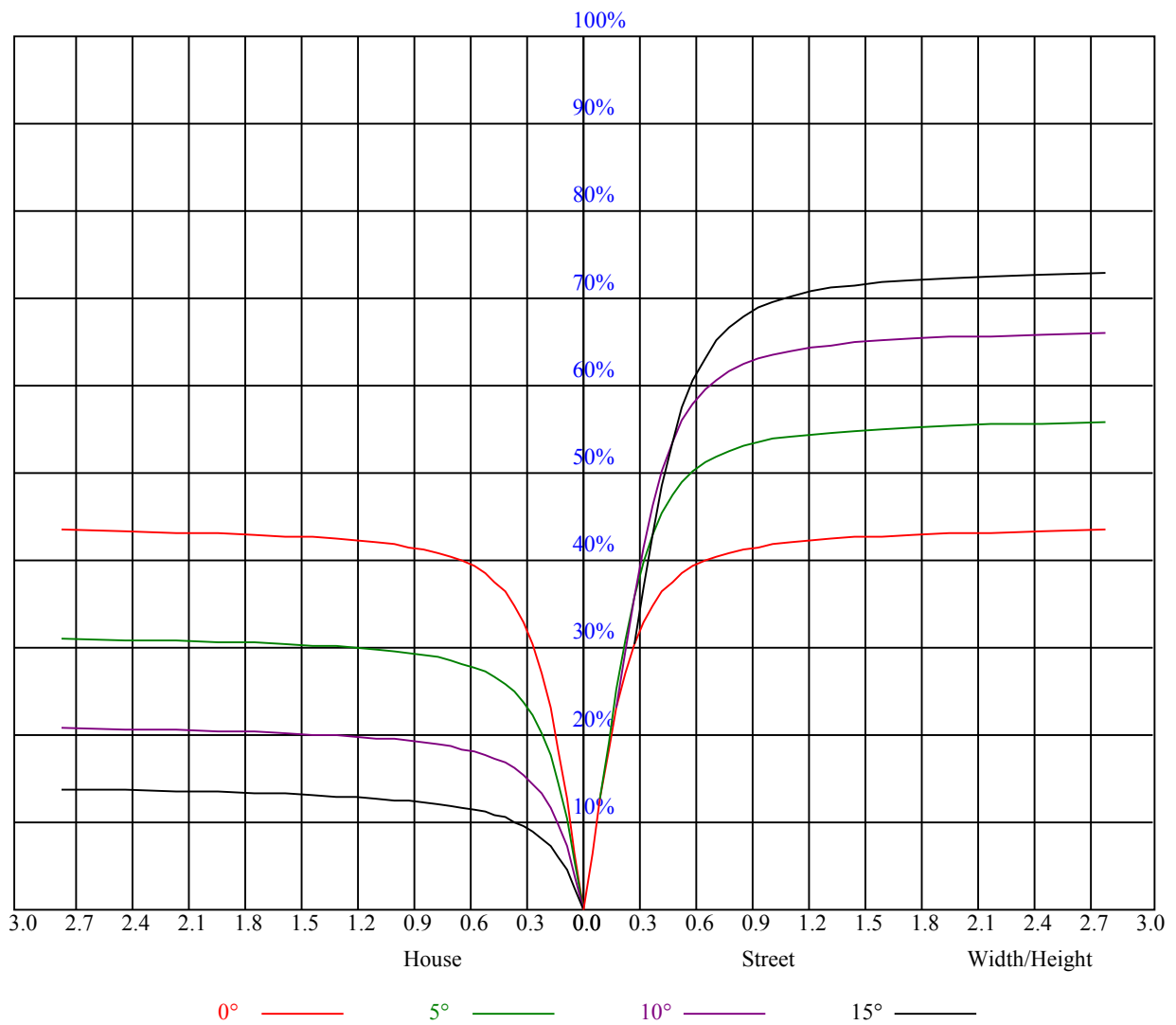
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

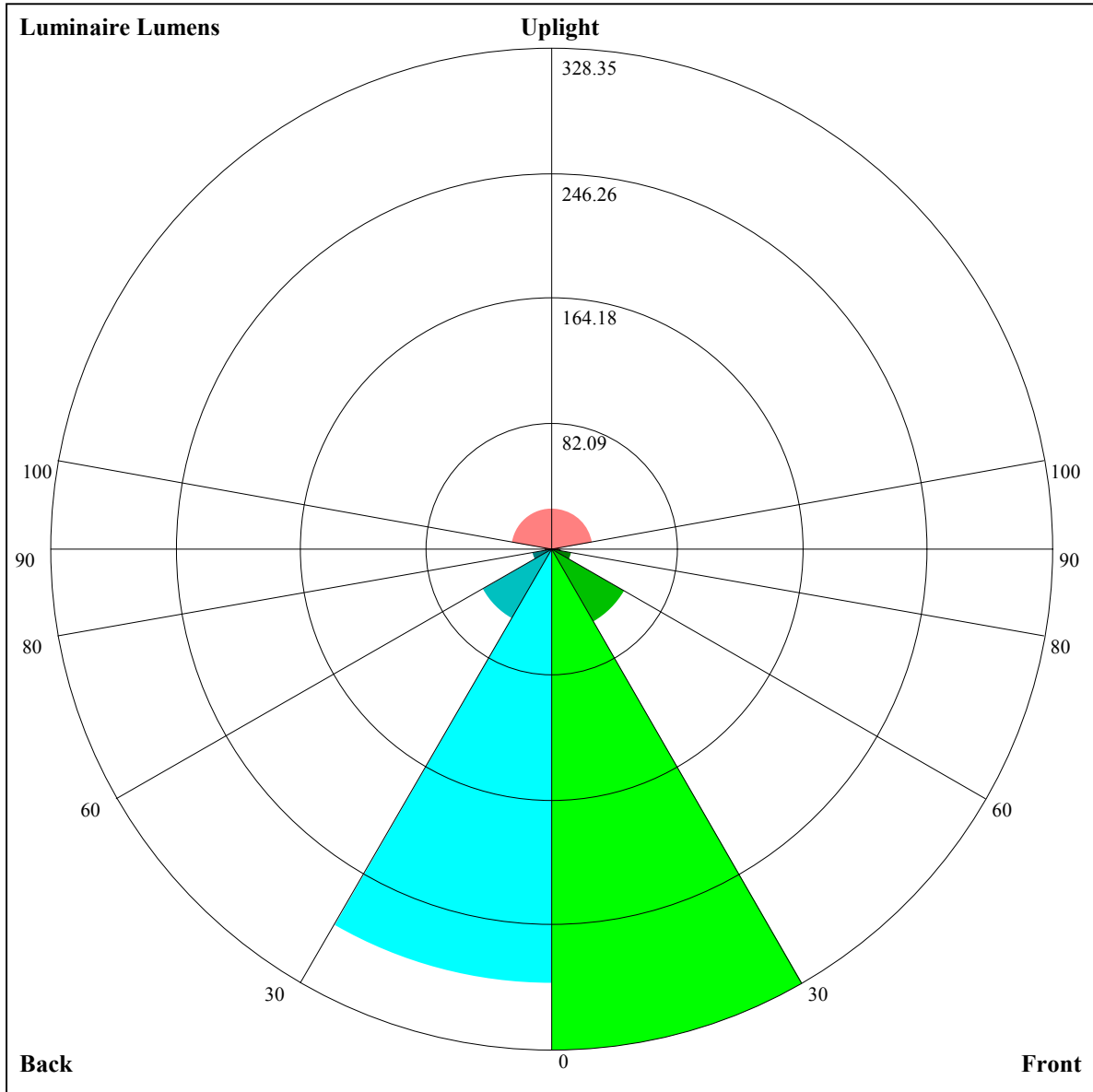
Luminance Limiting Curve





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	1.06	1.06	1.06	1.03	1.03	1.03	0.99	0.99	0.99	0.94	0.94	0.94	0.91	0.91	0.91	0.89
1	0.98	0.96	0.94	0.96	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.87	0.86	0.85	0.84	0.83
2	0.92	0.88	0.85	0.90	0.87	0.84	0.87	0.85	0.83	0.85	0.83	0.81	0.82	0.81	0.79	0.78
3	0.87	0.82	0.79	0.85	0.82	0.79	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
4	0.82	0.78	0.74	0.81	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.72	0.76	0.73	0.71	0.70
5	0.78	0.74	0.70	0.77	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.67
6	0.75	0.70	0.67	0.74	0.70	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.70	0.67	0.65	0.64
7	0.72	0.67	0.64	0.71	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.61
8	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.66	0.63	0.60	0.59
9	0.66	0.62	0.59	0.66	0.61	0.59	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.57
10	0.64	0.59	0.57	0.63	0.59	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.62	0.58	0.56	0.55





Luminaire Lumens:

FL=328.35,FM=54.89,FH=13.52,FVH=6.14

BL=284.95,BM=52.26,BH=13.27,BVH=5.13

UL=5.74,UH=27.31

BUG Rating:B1-U2-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	2566.13	2583.00	2584.13	2571.75	2549.25	2490.19	2431.69	2368.13	2257.88
45.0	2574.56	2584.69	2581.31	2565.00	2536.31	2495.81	2407.50	2329.31	2248.88
90.0	2579.63	2568.38	2540.81	2502.56	2453.63	2375.44	2289.38	2169.00	2026.13
135.0	2581.31	2564.44	2525.63	2481.19	2425.50	2331.00	2233.13	2113.31	1959.75
180.0	2566.13	2535.19	2480.63	2407.50	2331.56	2226.38	2110.50	1957.50	1787.06
225.0	2574.56	2544.19	2491.31	2430.56	2344.50	2251.69	2129.63	1986.19	1841.06
270.0	2579.63	2575.69	2546.44	2507.06	2455.31	2370.38	2280.38	2172.38	2048.63
315.0	2581.31	2579.06	2559.38	2527.88	2486.25	2418.19	2337.19	2229.75	2100.38
360.0	2566.13	2583.00	2584.13	2571.75	2549.25	2490.19	2431.69	2368.13	2257.88
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2135.81	2026.13	1853.44	1710.56	1565.44	1382.06	1242.00	1111.50	963.56
45.0	2099.25	1964.25	1834.31	1642.50	1470.94	1342.69	1168.31	1044.56	931.50
90.0	1883.81	1715.63	1541.81	1387.69	1098.11	1065.38	944.38	838.91	734.12
135.0	1798.88	1647.00	1470.38	1316.25	1151.44	1005.19	891.00	782.44	685.69
180.0	1634.06	1460.81	1294.31	1120.50	1027.58	902.70	794.19	711.39	636.92
225.0	1692.00	1499.63	1348.31	1118.70	1054.97	926.10	825.13	735.53	638.33
270.0	1875.94	1730.25	1582.31	1414.13	1252.69	1116.56	974.81	849.38	750.94
315.0	1967.63	1809.00	1642.50	1495.13	1348.88	1110.71	1048.78	931.33	809.78
360.0	2135.81	2026.13	1853.44	1710.56	1565.44	1382.06	1242.00	1111.50	963.56
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	858.94	768.38	668.25	595.13	530.44	457.88	406.13	360.56	316.69
45.0	807.19	720.00	644.06	559.13	491.63	441.56	378.00	334.69	296.44
90.0	640.80	567.79	494.83	429.92	378.00	326.42	286.03	246.60	212.63
135.0	609.19	541.69	469.13	415.69	365.63	317.25	284.63	247.89	221.29
180.0	553.22	494.78	443.81	388.13	349.14	314.89	281.42	251.89	228.09
225.0	572.85	514.86	457.37	407.14	366.98	327.66	293.91	267.30	239.79
270.0	655.88	582.75	504.56	449.44	400.50	352.69	310.50	285.75	247.50
315.0	705.38	624.88	545.85	475.88	421.31	367.48	324.84	282.83	247.39
360.0	858.94	768.38	668.25	595.13	530.44	457.88	406.13	360.56	316.69
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	285.75	245.42	216.45	195.13	174.83	156.99	142.76	128.36	115.31
45.0	287.44	222.92	197.44	172.74	151.82	135.62	120.32	108.39	96.75
90.0	186.41	163.91	139.50	123.41	109.24	94.39	83.93	74.93	66.71
135.0	193.11	173.42	155.64	137.70	121.73	109.80	97.93	87.19	79.09
180.0	204.19	185.12	165.38	147.94	134.49	121.22	109.80	100.46	92.14
225.0	217.41	195.24	176.40	160.65	146.14	129.99	118.35	107.94	96.69
270.0	216.51	195.53	176.68	157.44	140.79	127.24	113.51	101.31	91.52
315.0	220.95	198.17	174.15	157.84	143.16	126.56	114.69	104.46	95.06
360.0	285.75	245.42	216.45	195.13	174.83	156.99	142.76	128.36	115.31
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	103.84	93.71	82.86	75.60	69.24	61.93	55.24	50.57	46.35
45.0	85.95	77.91	71.04	63.56	58.05	52.76	46.91	42.86	39.60
90.0	59.51	54.51	49.33	44.66	41.01	37.74	35.21	32.96	31.11
135.0	71.38	65.48	59.79	54.90	50.85	47.14	43.20	40.67	38.42
180.0	83.08	76.56	70.37	63.79	58.89	54.45	50.01	45.84	42.58
225.0	88.65	81.45	74.19	67.61	62.61	57.49	53.33	49.22	45.45
270.0	82.24	74.93	68.12	62.10	57.26	53.16	48.49	45.34	42.58
315.0	85.11	78.53	72.34	64.63	59.34	54.62	49.95	46.07	42.98
360.0	103.84	93.71	82.86	75.60	69.24	61.93	55.24	50.57	46.35

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	42.08	39.15	36.11	33.36	30.49	28.07	26.33	25.09	23.51
45.0	36.34	33.41	31.39	29.36	27.68	25.99	24.36	23.34	21.99
90.0	29.59	28.13	26.49	25.31	24.19	22.78	21.71	20.76	19.80
135.0	35.72	33.98	32.40	30.71	29.08	27.73	26.38	25.26	24.02
180.0	39.43	36.96	34.37	32.06	30.09	28.13	26.33	24.98	23.79
225.0	42.19	38.81	35.72	33.36	31.33	28.69	27.00	25.43	23.91
270.0	39.38	36.96	34.93	33.02	30.88	28.91	26.83	25.59	24.24
315.0	39.83	37.29	34.82	32.51	30.77	28.97	27.34	25.93	24.75
360.0	42.08	39.15	36.11	33.36	30.49	28.07	26.33	25.09	23.51
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	22.50	21.60	20.53	19.86	19.13	18.34	17.61	17.04	16.43
45.0	20.81	20.08	19.29	18.45	17.83	17.16	16.48	15.98	15.58
90.0	18.96	18.28	17.44	16.93	16.31	15.75	15.24	14.96	14.63
135.0	23.01	22.05	21.04	20.08	19.35	18.79	17.89	17.33	16.88
180.0	22.50	21.60	20.70	19.74	18.96	18.17	17.49	16.82	16.26
225.0	22.44	21.43	20.31	19.35	18.51	17.83	17.21	16.54	15.81
270.0	23.01	21.88	20.76	19.86	19.01	18.28	17.44	16.82	16.31
315.0	23.40	22.44	21.38	20.42	19.52	18.79	18.06	17.38	16.82
360.0	22.50	21.60	20.53	19.86	19.13	18.34	17.61	17.04	16.43
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	15.98	15.41	14.85	14.46	13.89	13.50	13.16	12.88	12.43
45.0	15.08	14.57	14.23	13.78	13.39	13.05	12.71	12.43	12.15
90.0	14.23	13.84	13.39	13.11	12.77	12.43	12.09	11.87	11.64
135.0	16.09	15.47	14.96	14.40	13.89	13.56	12.94	12.49	12.04
180.0	15.64	15.13	14.57	14.06	13.61	13.22	12.77	12.49	12.15
225.0	15.24	14.68	14.18	13.84	13.50	12.99	12.60	12.32	11.98
270.0	15.69	15.13	14.63	14.29	13.84	13.44	13.05	12.60	12.15
315.0	16.26	15.75	15.19	14.68	14.29	13.84	13.33	12.88	12.49
360.0	15.98	15.41	14.85	14.46	13.89	13.50	13.16	12.88	12.43
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	12.15	11.93	12.15	12.60	13.22	13.95	14.85	15.58	16.31
45.0	11.87	11.64	11.53	11.64	11.93	12.26	12.77	13.44	13.89
90.0	11.48	11.31	11.08	10.97	10.91	10.91	10.86	10.91	11.03
135.0	11.53	11.14	10.80	10.41	10.18	10.01	9.90	9.90	9.84
180.0	11.81	11.53	11.31	11.19	11.48	12.09	12.99	13.67	14.40
225.0	11.76	11.64	11.59	11.59	11.70	11.87	12.26	12.94	13.89
270.0	11.81	11.53	11.31	11.03	10.86	10.80	10.74	10.80	10.97
315.0	12.04	11.70	11.36	11.08	10.86	10.69	10.52	10.46	10.46
360.0	12.15	11.93	12.15	12.60	13.22	13.95	14.85	15.58	16.31
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	16.99	17.61	17.94	18.00	17.72	17.04	15.69	9.56	8.04
45.0	14.40	15.08	15.58	15.86	15.92	14.96	13.33	9.17	7.14
90.0	11.08	11.08	11.08	10.97	10.69	10.01	8.44	6.75	6.36
135.0	10.01	10.07	9.96	9.73	9.22	8.72	7.31	6.69	6.53
180.0	14.85	14.96	14.68	13.16	9.06	7.03	6.81	6.75	4.33
225.0	14.46	14.91	14.91	13.75	9.79	8.16	6.92	6.53	4.73
270.0	10.97	10.86	10.80	11.48	10.97	10.07	8.04	6.47	6.13
315.0	10.58	10.80	10.86	10.80	10.46	10.01	9.17	7.54	6.41
360.0	16.99	17.61	17.94	18.00	17.72	17.04	15.69	9.56	8.04

Intensity data(cd)

C/ γ (°)	90.0
0.0	6.64
45.0	6.47
90.0	6.13
135.0	4.50
180.0	3.66
225.0	3.66
270.0	4.84
315.0	6.19
360.0	6.64