



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NATA

Client:

LumCAT: 1449-E

Luminaire: 92.70.043.00

Report No: GC20200115118

Voltage(V): 34.8000

Test No: GC20200115118

Current(A): 0.1970

LampCAT: LUMINUS CXM-6-AC40

Power (W): 6.8600

Lamp flux(lm): 850.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 761.54, Efficiency(%): 89.59% , Luminous Efficacy(lm/W): 111.01

Central intensity(cd): 4182.258, Maximum intensity(cd): 4182.258

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=15.4

[C90/270]Total=15.4

Field angle(10%Imax): [C0/180]Total=36.4

[C90/270]Total=36.4

Maximum s/h(1/2): C0_180=0.26 C90_270=0.26

Maximum s/h(1/4): C0_180=0.27 C90_270=0.27

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.59%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.454%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4182.258	0.000	0	.000%	.000%
1.0	4128.469	3.977	3.977	.468%	.522%
2.0	3966.469	11.619	15.595	1.367%	2.048%
3.0	3715.453	18.373	33.968	2.161%	4.460%
4.0	3408.539	23.846	57.814	2.805%	7.592%
5.0	3063.164	27.841	85.655	3.275%	11.248%
6.0	2686.430	30.216	115.871	3.555%	15.215%
7.0	2320.102	31.075	146.946	3.656%	19.296%
8.0	1982.320	30.792	177.738	3.623%	23.339%
9.0	1613.138	29.139	206.877	3.428%	27.166%
10.0	1310.569	26.458	233.335	3.113%	30.640%
11.0	1090.491	23.992	257.327	2.823%	33.790%
12.0	895.641	21.711	279.038	2.554%	36.641%
13.0	724.029	19.221	298.26	2.261%	39.165%
14.0	614.798	17.137	315.396	2.016%	41.416%
15.0	541.659	15.876	331.273	1.868%	43.501%
16.0	488.341	15.092	346.365	1.776%	45.482%
17.0	450.598	14.622	360.987	1.720%	47.402%
18.0	423.415	14.411	375.398	1.695%	49.295%
19.0	402.314	14.366	389.764	1.690%	51.181%
20.0	385.320	14.416	404.179	1.696%	53.074%
21.0	370.793	14.519	418.698	1.708%	54.981%
22.0	358.523	14.656	433.354	1.724%	56.905%
23.0	348.420	14.834	448.188	1.745%	58.853%
24.0	338.681	15.022	463.21	1.767%	60.826%
25.0	328.774	15.176	478.387	1.785%	62.819%
26.0	320.625	15.329	493.716	1.803%	64.832%
27.0	313.165	15.506	509.222	1.824%	66.868%
28.0	305.909	15.674	524.895	1.844%	68.926%
29.0	299.517	15.840	540.735	1.863%	71.006%
30.0	293.070	16.000	556.735	1.882%	73.107%
31.0	286.151	16.119	572.854	1.896%	75.223%
32.0	278.803	16.185	589.039	1.904%	77.349%
33.0	273.959	16.285	605.323	1.916%	79.487%
34.0	267.820	16.396	621.719	1.929%	81.640%
35.0	259.903	16.389	638.108	1.928%	83.792%
36.0	248.871	16.199	654.308	1.906%	85.919%
37.0	232.066	15.685	669.993	1.845%	87.979%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	209.630	14.743	684.737	1.734%	89.915%
39.0	179.473	13.281	698.018	1.562%	91.659%
40.0	147.466	11.402	709.42	1.341%	93.156%
41.0	116.691	9.407	718.827	1.107%	94.392%
42.0	84.973	7.327	726.153	.862%	95.354%
43.0	55.610	5.208	731.361	.613%	96.038%
44.0	37.371	3.509	734.87	.413%	96.498%
45.0	25.601	2.420	737.291	.285%	96.816%
46.0	20.595	1.807	739.097	.213%	97.053%
47.0	18.260	1.545	740.642	.182%	97.256%
48.0	16.179	1.392	742.035	.164%	97.439%
49.0	14.084	1.243	743.277	.146%	97.602%
50.0	10.997	1.046	744.323	.123%	97.740%
51.0	8.430	0.822	745.145	.097%	97.848%
52.0	7.073	0.665	745.81	.078%	97.935%
53.0	6.455	0.588	746.399	.069%	98.012%
54.0	5.977	0.548	746.947	.064%	98.084%
55.0	5.562	0.515	747.462	.061%	98.152%
56.0	5.280	0.490	747.952	.058%	98.216%
57.0	5.055	0.473	748.424	.056%	98.278%
58.0	4.845	0.458	748.882	.054%	98.338%
59.0	4.704	0.446	749.328	.053%	98.397%
60.0	4.528	0.436	749.765	.051%	98.454%
61.0	4.352	0.424	750.188	.050%	98.510%
62.0	4.247	0.414	750.603	.049%	98.564%
63.0	4.127	0.407	751.01	.048%	98.618%
64.0	4.057	0.402	751.412	.047%	98.670%
65.0	4.015	0.399	751.811	.047%	98.723%
66.0	3.987	0.399	752.21	.047%	98.775%
67.0	3.923	0.398	752.608	.047%	98.828%
68.0	3.916	0.397	753.005	.047%	98.880%
69.0	3.881	0.398	753.403	.047%	98.932%
70.0	3.846	0.397	753.8	.047%	98.984%
71.0	3.832	0.397	754.197	.047%	99.036%
72.0	3.804	0.397	754.594	.047%	99.088%
73.0	3.769	0.396	754.99	.047%	99.140%
74.0	3.748	0.395	755.385	.046%	99.192%
75.0	3.713	0.394	755.779	.046%	99.244%

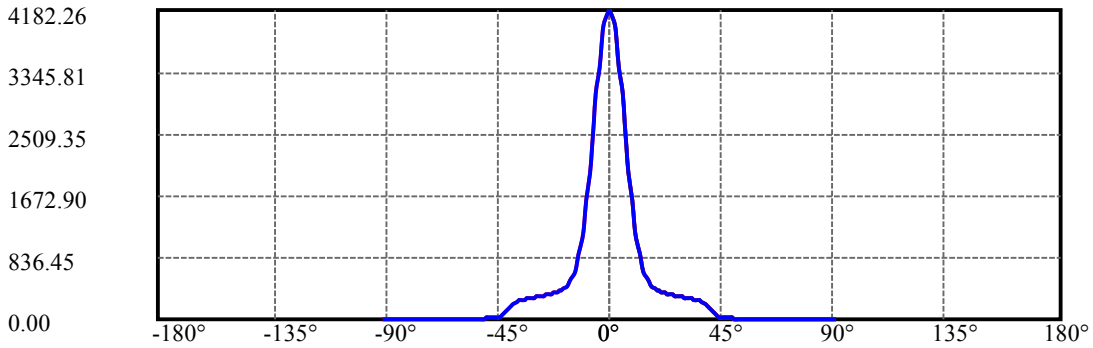
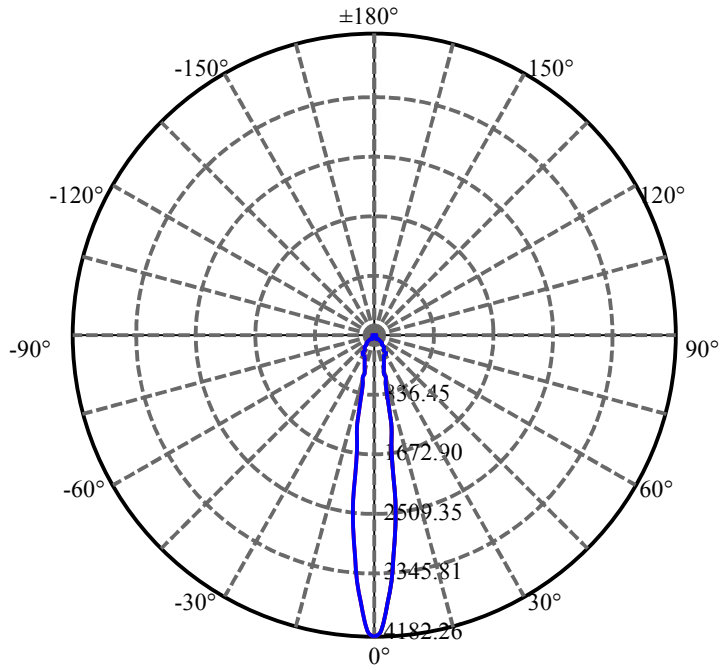
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.705	0.394	756.173	.046%	99.296%
77.0	3.691	0.394	756.567	.046%	99.347%
78.0	3.684	0.395	756.962	.046%	99.399%
79.0	3.705	0.397	757.359	.047%	99.451%
80.0	3.705	0.400	757.759	.047%	99.504%
81.0	3.656	0.398	758.157	.047%	99.556%
82.0	3.628	0.395	758.552	.046%	99.608%
83.0	3.642	0.395	758.947	.046%	99.660%
84.0	3.593	0.394	759.341	.046%	99.712%
85.0	3.523	0.388	759.73	.046%	99.763%
86.0	3.417	0.379	760.109	.045%	99.813%
87.0	3.277	0.366	760.475	.043%	99.861%
88.0	3.234	0.357	760.832	.042%	99.907%
89.0	3.220	0.354	761.186	.042%	99.954%
90.0	3.178	0.351	761.537	.041%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	556.73	65.50%	73.11%
0-40	709.42	83.46%	93.16%
0-60	749.76	88.21%	98.45%
0-90	761.19	89.55%	99.95%
0-120	761.19	89.55%	99.95%
0-180	761.54	89.59%	100.00%
60-90	11.86	1.39%	1.56%
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%
0-33.24	609.23	71.67%	80.00%

ZONAL LUMEN SUMMARY

0-10	233.34
10-20	170.84
20-30	152.56
30-40	152.69
40-50	34.90
50-60	5.44
60-70	4.04
70-80	3.96
80-90	3.43
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



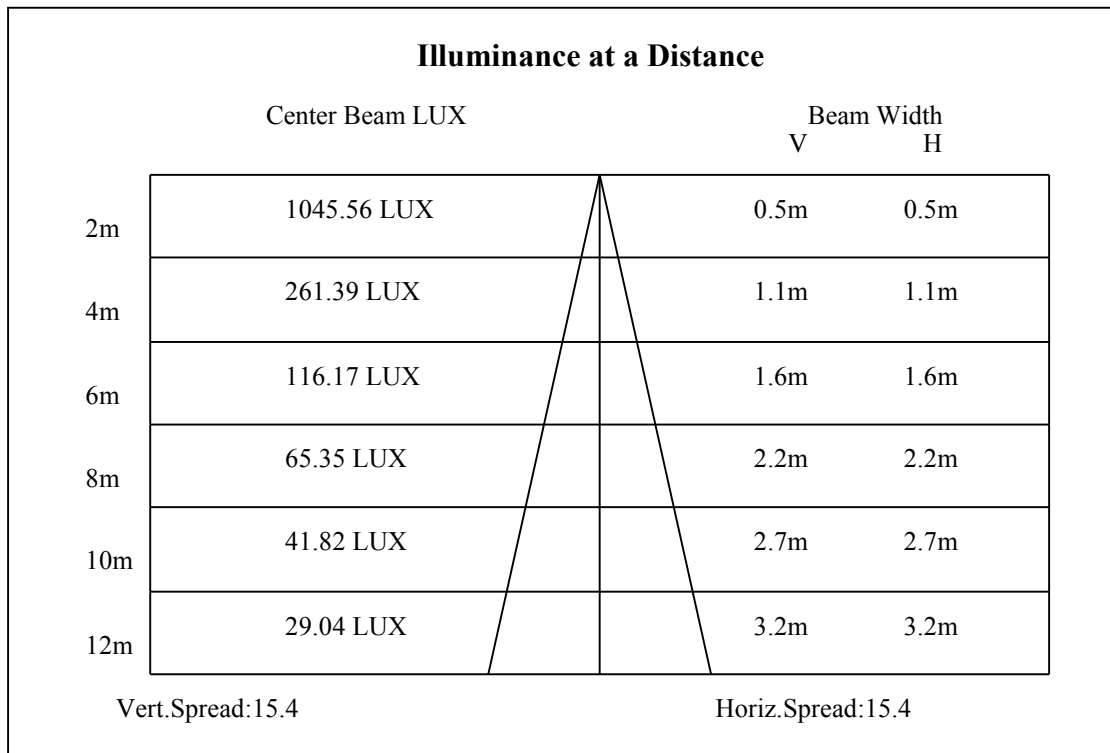
C0(Max): —————

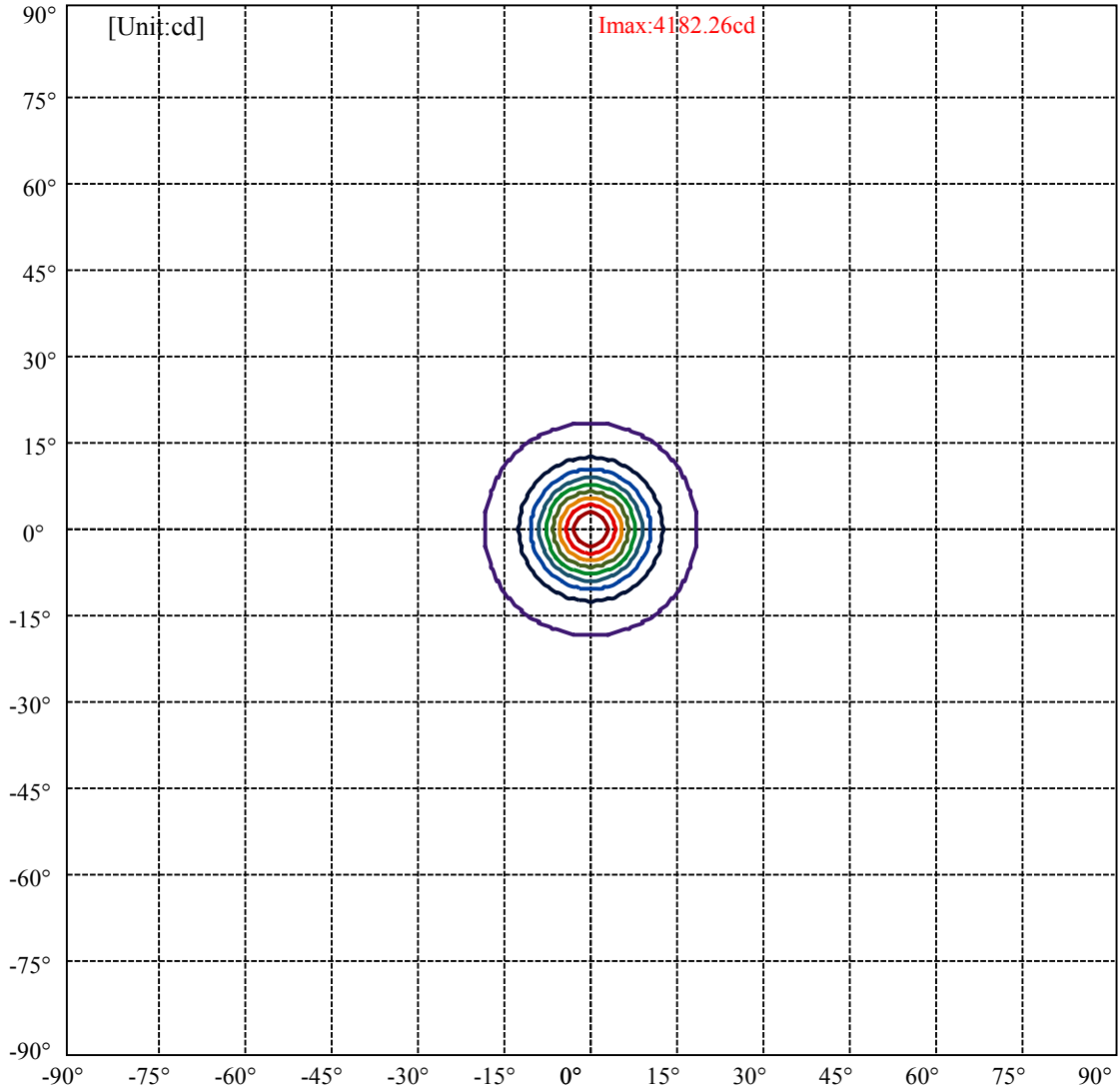
C0/C180: —————

C90/C270: —————

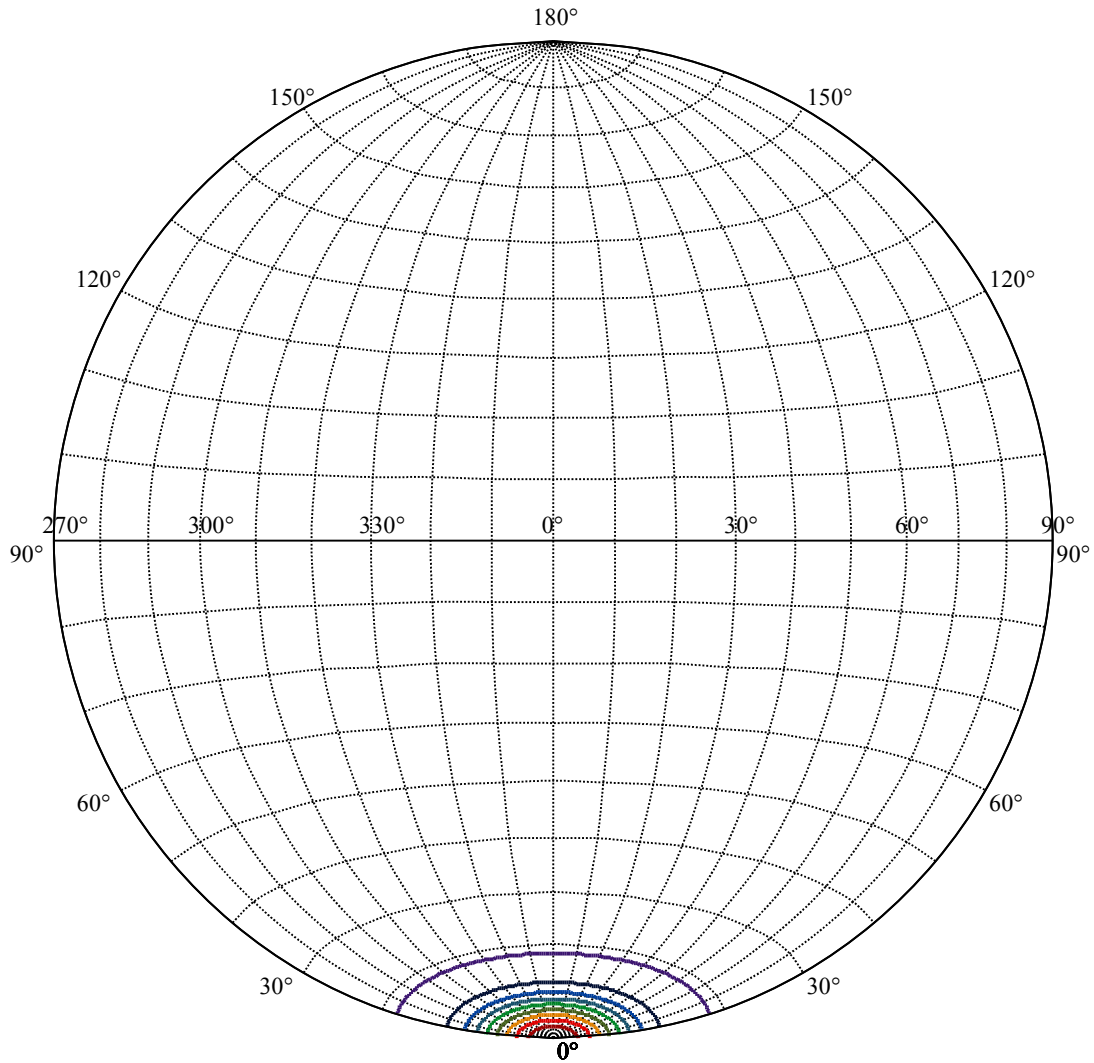
Field angle(10%Imax):C0/180Left:18.2 Right:18.2
:C90/270Left:18.2 Right:18.2

Beam Angle(50%Imax):C0/180Left:7.7 Right:7.7
:C90/270Left:7.7 Right:7.7





(10%Imax) 418.226	—
(20%Imax) 836.452	—
(30%Imax) 1254.68	—
(40%Imax) 1672.9	—
(50%Imax) 2091.13	—
(60%Imax) 2509.35	—
(70%Imax) 2927.58	—
(80%Imax) 3345.81	—
(90%Imax) 3764.03	—



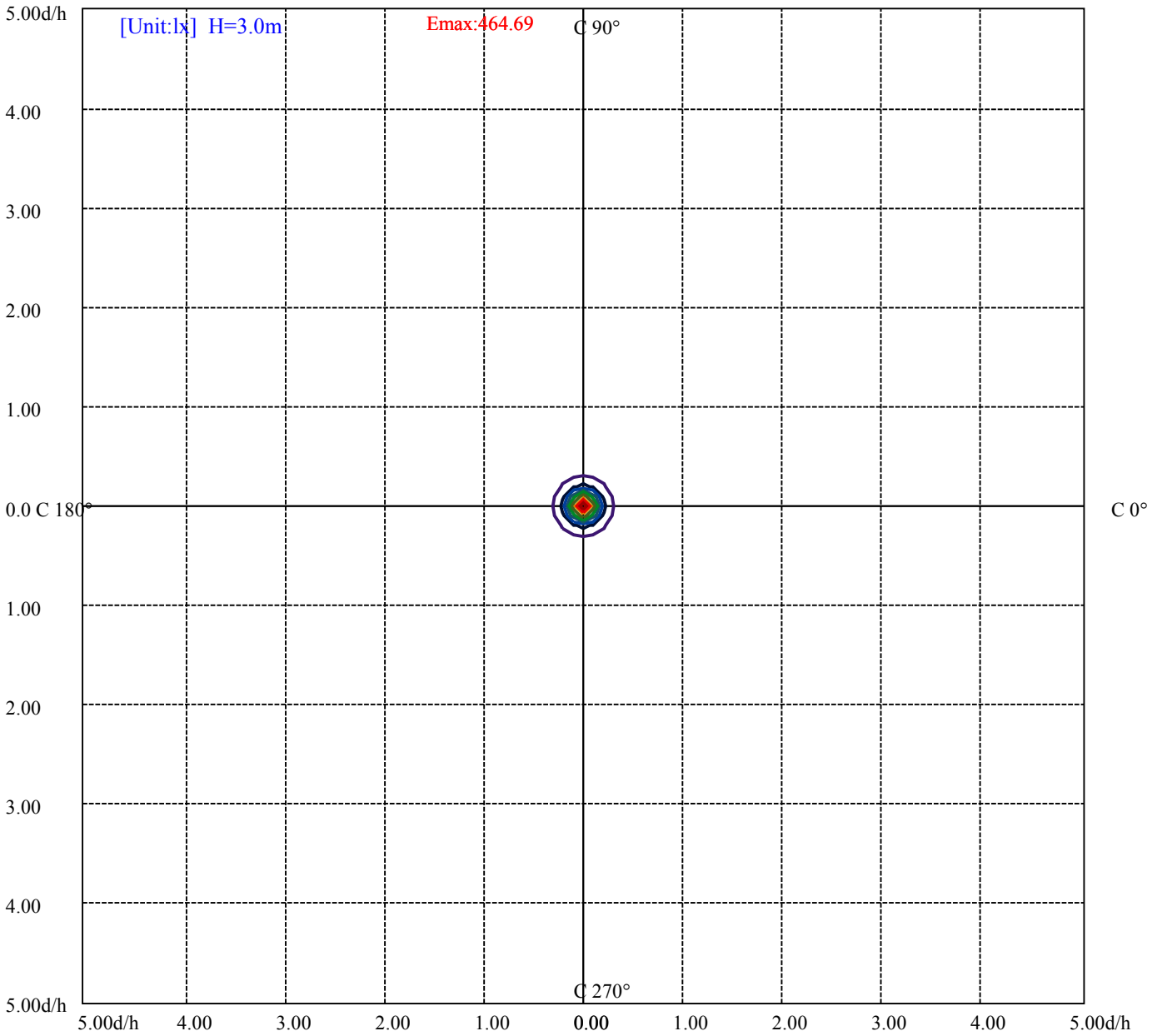
House

[Unit:cd]

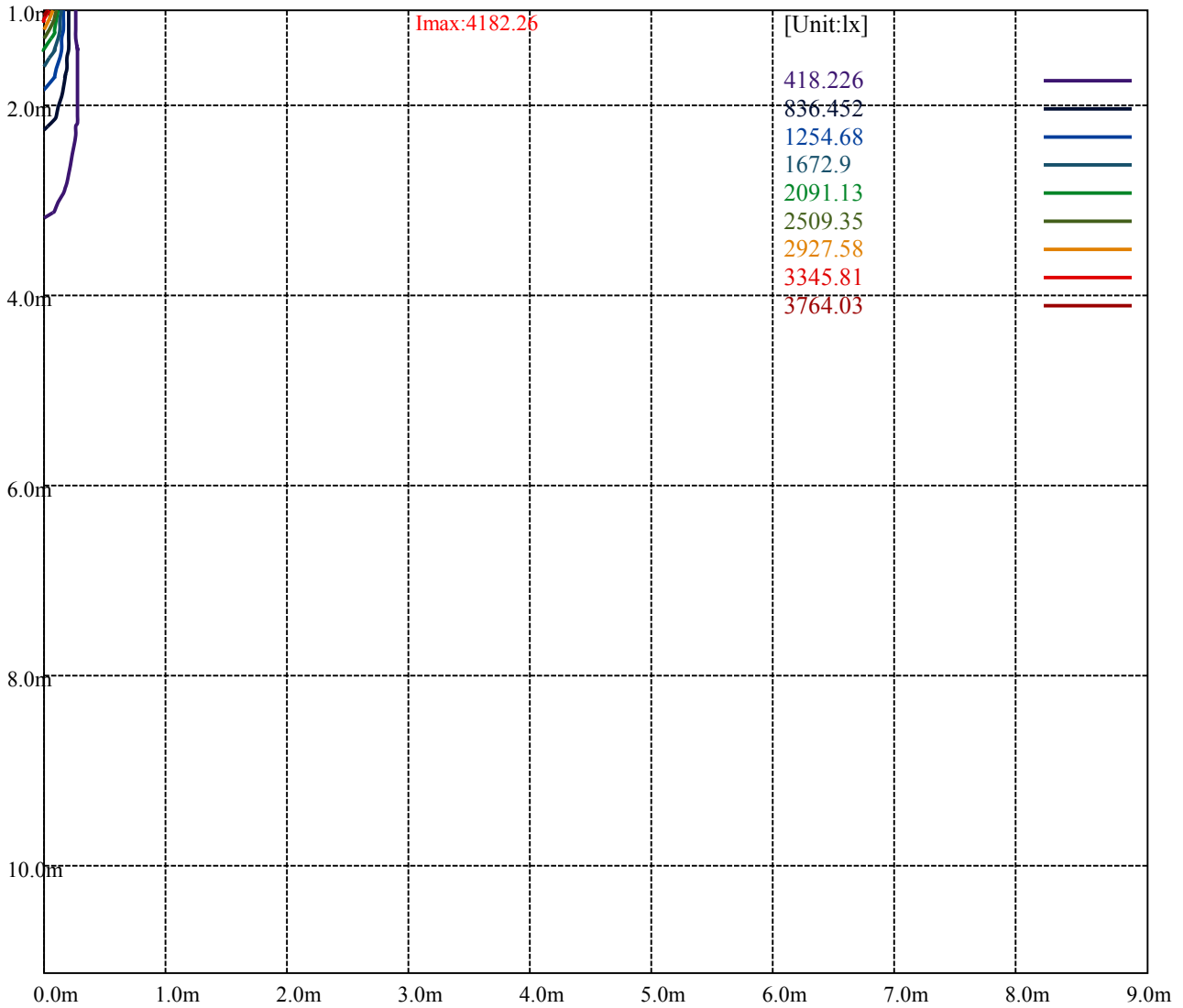
Road

Imax:4182.26

(10%Imax) 418.226	—
(20%Imax) 836.452	—
(30%Imax) 1254.68	—
(40%Imax) 1672.9	—
(50%Imax) 2091.13	—
(60%Imax) 2509.35	—
(70%Imax) 2927.58	—
(80%Imax) 3345.81	—
(90%Imax) 3764.03	—



(10%Emax) 46.46944	—
(20%Emax) 92.93889	—
(30%Emax) 139.4078	—
(40%Emax) 185.8778	—
(50%Emax) 232.3467	—
(60%Emax) 278.8167	—
(70%Emax) 325.2856	—
(80%Emax) 371.7556	—
(90%Emax) 418.2245	—



Luminance Table

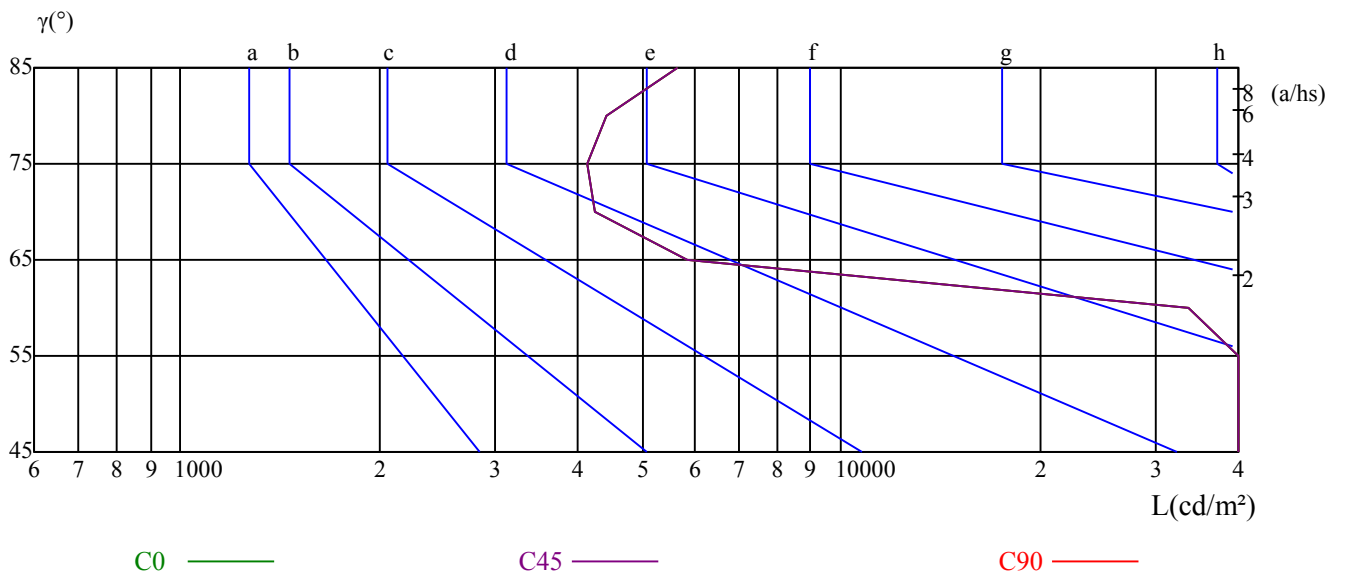
γ	45	50	55	60	65	70	75	80	85
C0	46650	52836	53885	33658	5848	4245	4131	4405	5640
C45	46650	52836	53885	33658	5848	4245	4131	4405	5640
C90	46650	52836	53885	33658	5848	4245	4131	4405	5640

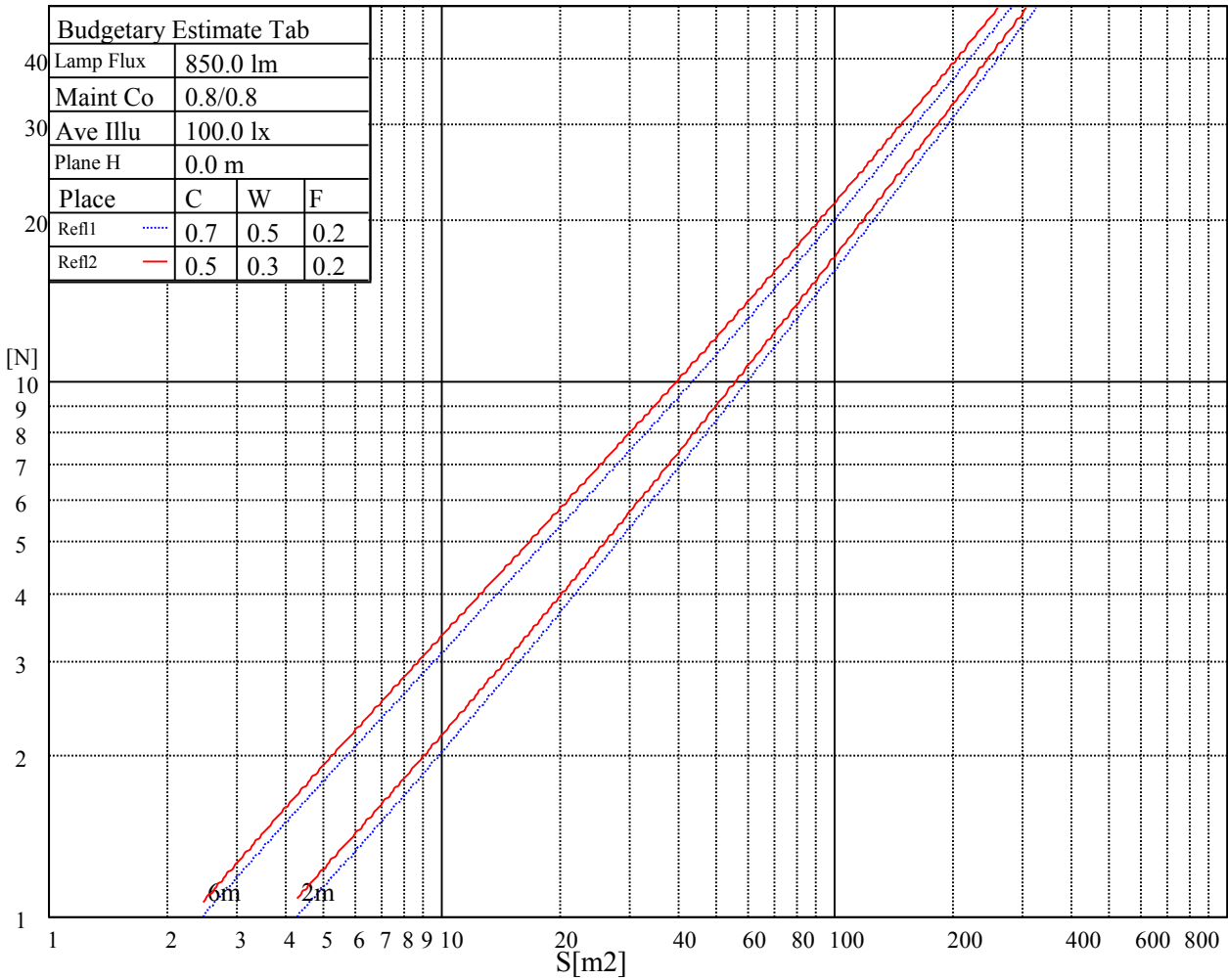
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5848	5848	5848	4131	4131	4131	5640	5640	5640

Glare Table

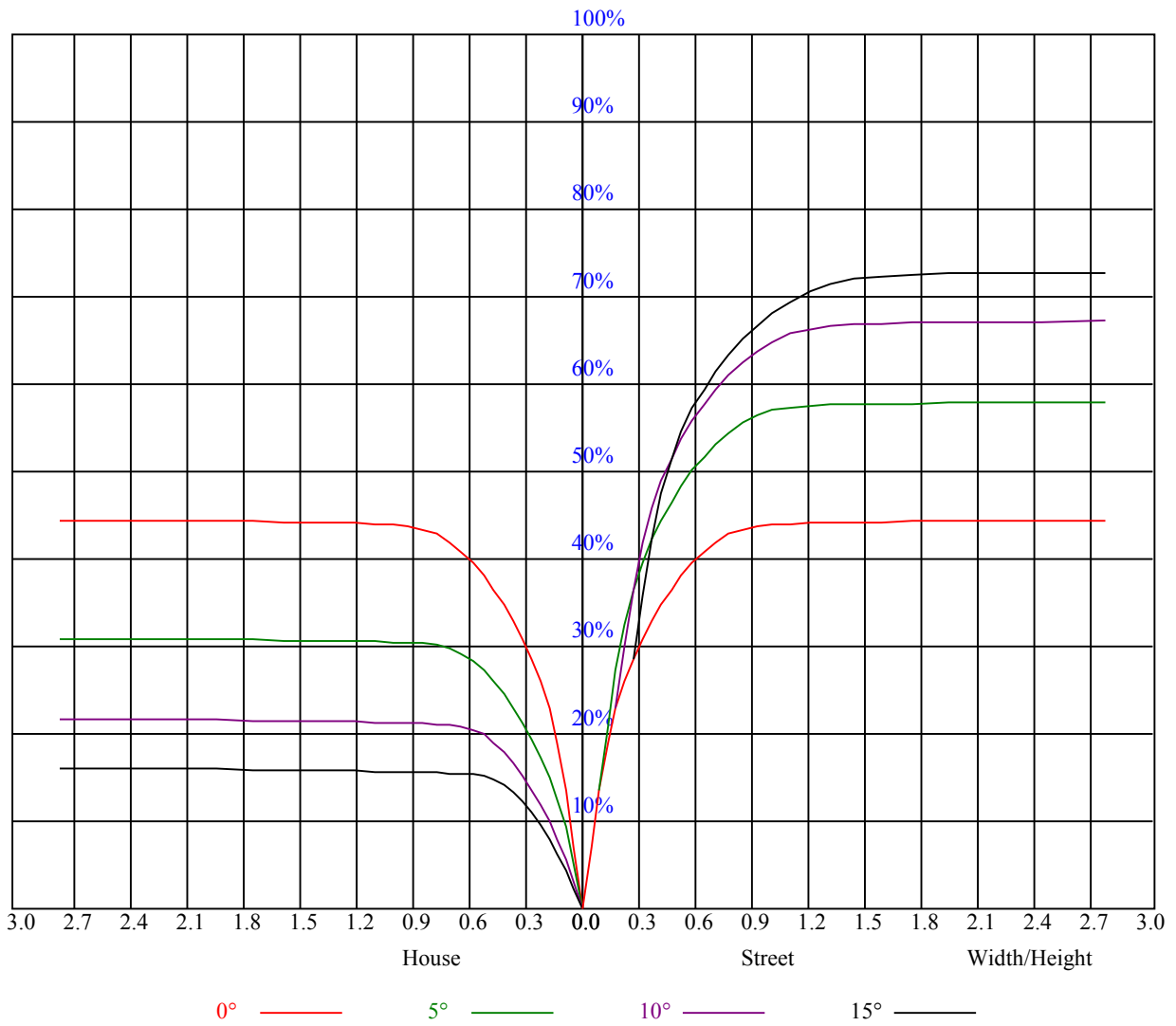
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

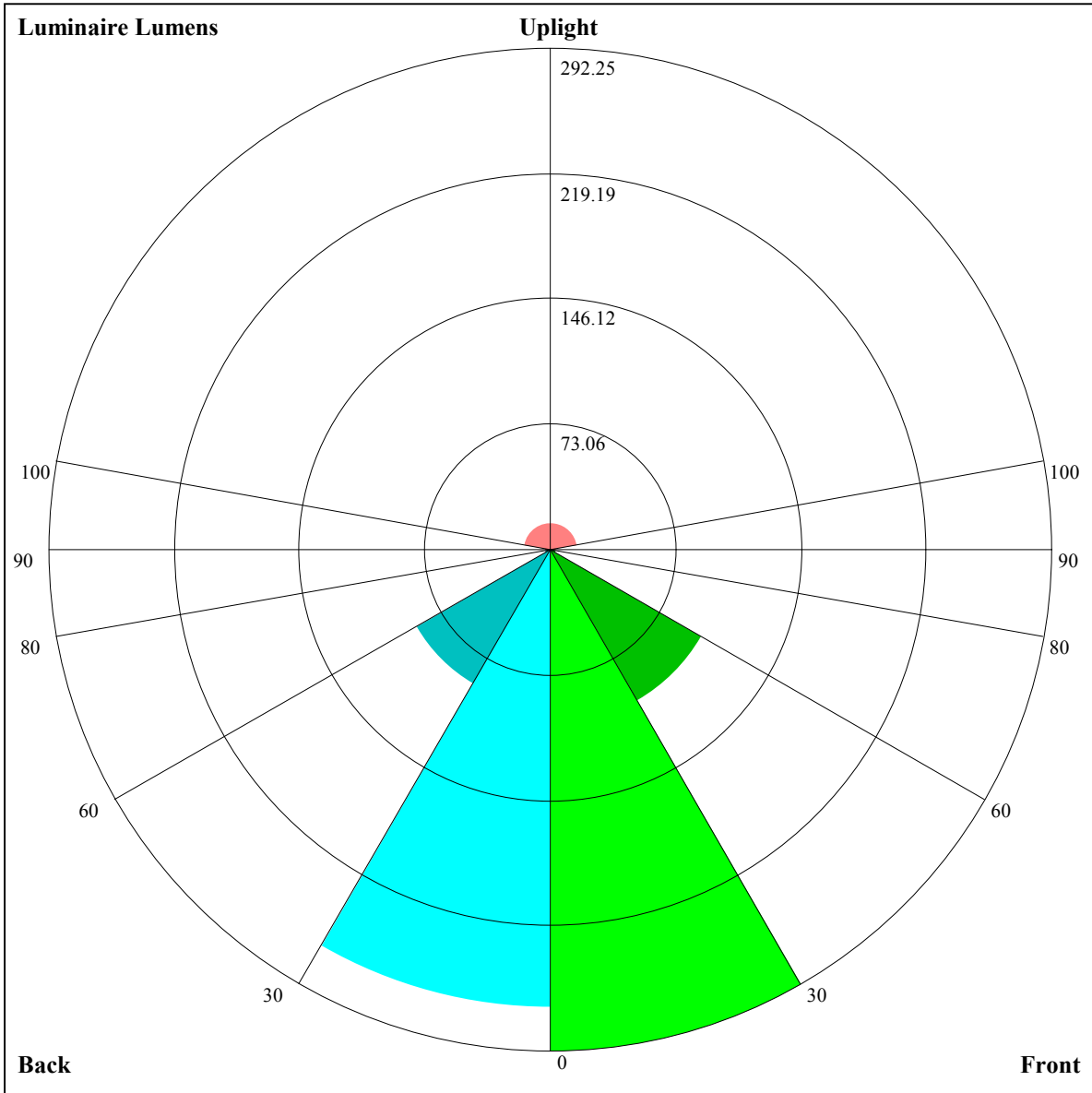
Luminance Limiting Curve





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	1.07	1.07	1.07	1.04	1.04	1.04	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91	0.90
1	1.00	0.98	0.96	0.98	0.96	0.94	0.94	0.93	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.84
2	0.94	0.90	0.88	0.92	0.89	0.87	0.89	0.87	0.85	0.87	0.85	0.83	0.84	0.83	0.81	0.80
3	0.88	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.75
4	0.84	0.79	0.76	0.83	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.74	0.77	0.75	0.73	0.71
5	0.79	0.75	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.68
6	0.75	0.71	0.67	0.75	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
7	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
8	0.69	0.64	0.61	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.59
9	0.66	0.62	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.57
10	0.64	0.59	0.56	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.55





Luminaire Lumens:

FL=292.25,FM=102.16,FH=4.03,FVH=1.9

BL=267.08,BM=90.75,BH=3.95,BVH=1.86

UL=3.47,UH=16.5

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	4181.06	4191.19	4094.44	3895.88	3657.94	3343.50	2993.63	2675.25	2344.50
45.0	4165.31	4185.56	4079.25	3913.31	3687.75	3333.38	3019.50	2693.25	2327.63
90.0	4189.50	4127.63	3949.88	3710.25	3381.19	3063.38	2662.88	2347.88	2042.44
135.0	4194.00	4153.50	3989.81	3707.44	3393.00	3048.19	2616.19	2273.63	1951.88
180.0	4181.06	4053.94	3850.88	3521.25	3129.19	2756.81	2378.25	1938.38	1622.25
225.0	4165.31	4053.38	3822.19	3502.13	3167.44	2746.13	2368.13	1961.44	1590.75
270.0	4187.81	4147.31	3993.19	3773.25	3457.69	3133.69	2745.00	2346.75	1996.31
315.0	4194.00	4115.25	3952.13	3700.13	3394.13	3080.25	2707.88	2324.25	1982.81
360.0	4181.06	4191.19	4094.44	3895.88	3657.94	3343.50	2993.63	2675.25	2344.50
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1933.31	1624.50	1360.69	1100.25	881.44	732.94	612.00	533.25	484.31
45.0	1967.06	1659.38	1355.63	1119.38	892.69	722.25	617.06	537.75	479.81
90.0	1748.81	1409.06	1104.47	945.84	739.41	626.29	546.69	488.03	447.75
135.0	1591.88	1323.00	1078.31	854.44	697.50	600.75	528.75	483.19	443.81
180.0	1254.94	1029.26	862.43	708.24	588.32	510.75	465.86	432.51	403.99
225.0	1120.73	1037.48	827.94	691.93	598.56	514.07	478.58	449.16	425.19
270.0	1629.56	1306.13	1066.50	870.19	695.25	605.81	543.38	496.13	462.94
315.0	1658.81	1095.75	1067.96	874.86	699.08	605.53	540.96	486.73	456.98
360.0	1933.31	1624.50	1360.69	1100.25	881.44	732.94	612.00	533.25	484.31
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	445.50	420.75	401.06	383.06	370.69	360.56	347.63	336.94	324.00
45.0	442.69	417.94	393.19	378.56	367.31	354.38	345.94	336.94	329.63
90.0	421.31	399.54	382.67	367.48	355.89	346.50	338.12	328.56	320.18
135.0	411.19	387.00	367.31	348.75	336.38	326.25	317.25	310.50	304.88
180.0	382.16	360.34	344.08	334.29	319.95	312.69	305.16	295.48	291.77
225.0	408.38	396.51	383.79	371.14	359.94	348.58	339.75	330.41	321.86
270.0	441.56	423.56	409.50	396.56	383.63	372.94	361.13	348.75	338.06
315.0	434.53	412.88	400.95	386.49	374.40	365.46	354.49	342.62	334.63
360.0	445.50	420.75	401.06	383.06	370.69	360.56	347.63	336.94	324.00
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	316.69	314.44	309.38	296.44	285.19	264.26	259.03	255.43	252.00
45.0	320.63	315.00	309.38	302.63	298.13	292.50	286.88	284.06	273.09
90.0	311.51	301.50	294.02	287.49	280.97	275.01	270.34	265.22	258.64
135.0	300.38	294.19	290.25	289.13	284.63	284.06	278.16	273.71	267.24
180.0	284.34	279.79	272.42	268.26	263.76	258.75	254.98	248.68	239.91
225.0	315.11	308.53	300.83	294.58	288.62	281.70	276.53	267.98	260.38
270.0	330.19	317.81	309.94	303.19	293.06	286.88	284.63	272.87	263.08
315.0	326.48	316.01	309.94	302.85	294.86	287.27	281.14	274.61	264.88
360.0	316.69	314.44	309.38	296.44	285.19	264.26	259.03	255.43	252.00
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	243.34	227.53	211.50	192.26	168.24	143.33	110.76	82.91	62.94
45.0	264.71	258.86	245.98	221.23	194.40	164.14	127.01	95.91	70.48
90.0	251.21	235.86	212.46	180.96	147.66	115.43	85.61	50.91	29.93
135.0	259.48	237.38	212.63	183.99	142.88	109.29	79.14	48.66	31.67
180.0	219.60	195.64	164.76	132.19	99.51	69.98	44.66	25.48	16.82
225.0	237.49	211.84	183.43	142.09	112.28	80.89	50.46	26.49	15.98
270.0	256.78	241.37	217.01	183.49	149.18	117.51	83.42	51.98	30.26
315.0	258.36	248.06	229.28	199.58	165.60	132.98	98.72	62.55	40.89
360.0	243.34	227.53	211.50	192.26	168.24	143.33	110.76	82.91	62.94

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	45.62	35.89	31.44	26.33	19.97	16.93	13.56	11.08	9.45
45.0	42.69	31.28	28.35	26.38	23.68	21.88	15.24	9.51	8.10
90.0	19.63	16.14	14.63	12.94	12.15	11.36	7.65	7.43	7.43
135.0	23.68	21.21	18.62	15.92	13.89	11.87	8.78	7.54	6.47
180.0	14.68	12.49	9.84	8.83	7.65	6.30	5.85	5.46	5.12
225.0	13.33	11.81	9.84	8.94	7.54	5.62	5.34	5.12	4.95
270.0	19.24	15.81	14.74	13.39	12.71	5.74	5.06	5.01	4.95
315.0	25.93	20.14	18.62	16.71	15.08	8.27	5.96	5.46	5.18
360.0	45.62	35.89	31.44	26.33	19.97	16.93	13.56	11.08	9.45
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.33	7.31	6.64	6.13	5.74	5.46	5.18	4.95	4.78
45.0	6.98	6.08	5.40	4.95	4.73	4.56	4.44	4.33	4.28
90.0	7.48	7.54	7.48	7.26	6.81	6.41	5.85	5.18	4.73
135.0	5.74	5.06	4.73	4.50	4.33	4.22	4.16	4.05	4.05
180.0	4.84	4.67	4.50	4.39	4.33	4.28	4.22	4.16	4.16
225.0	4.61	4.44	4.33	4.16	4.05	4.05	3.99	3.94	3.94
270.0	4.89	4.67	4.61	4.61	4.50	4.44	4.28	4.16	4.05
315.0	4.95	4.73	4.56	4.44	4.28	4.22	4.11	4.05	3.99
360.0	8.33	7.31	6.64	6.13	5.74	5.46	5.18	4.95	4.78
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.67	4.50	4.44	4.39	4.28	4.22	4.16	4.11	4.05
45.0	4.16	4.11	4.05	3.99	3.94	3.94	3.88	3.88	3.83
90.0	4.39	4.16	4.05	3.99	3.88	3.94	3.88	3.83	3.83
135.0	3.94	3.94	3.88	3.88	3.83	3.83	3.77	3.71	3.77
180.0	4.11	4.11	4.05	4.05	4.05	3.99	3.99	3.99	3.99
225.0	3.88	3.88	3.88	3.88	3.83	3.83	3.77	3.71	3.71
270.0	3.94	3.88	3.88	3.88	3.83	3.83	3.83	3.83	3.77
315.0	3.94	3.88	3.88	3.83	3.77	3.77	3.77	3.71	3.71
360.0	4.67	4.50	4.44	4.39	4.28	4.22	4.16	4.11	4.05
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.05	3.99	4.05	4.05	4.11	4.16	4.22	4.39	4.44
45.0	3.83	3.77	3.71	3.71	3.66	3.60	3.49	3.49	3.49
90.0	3.77	3.71	3.66	3.60	3.54	3.54	3.60	3.77	3.77
135.0	3.66	3.66	3.66	3.66	3.71	3.71	3.77	3.71	3.66
180.0	3.99	4.05	3.99	3.99	3.99	3.99	3.99	3.99	3.99
225.0	3.71	3.66	3.66	3.60	3.60	3.54	3.49	3.43	3.43
270.0	3.71	3.66	3.60	3.49	3.43	3.43	3.43	3.38	3.38
315.0	3.71	3.66	3.66	3.60	3.60	3.54	3.49	3.49	3.49
360.0	4.05	3.99	4.05	4.05	4.11	4.16	4.22	4.39	4.44
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.56	4.61	4.84	4.56	4.22	3.60	3.32	3.21	3.21
45.0	3.49	3.43	3.38	3.43	3.38	3.38	3.26	3.21	3.21
90.0	3.54	3.54	3.54	3.60	3.54	3.54	3.26	3.26	3.26
135.0	3.54	3.49	3.49	3.49	3.49	3.49	3.26	3.21	3.21
180.0	3.94	3.88	3.83	3.77	3.60	3.43	3.32	3.21	3.21
225.0	3.38	3.38	3.38	3.32	3.32	3.26	3.26	3.21	3.21
270.0	3.38	3.32	3.32	3.26	3.32	3.32	3.32	3.32	3.26
315.0	3.43	3.38	3.38	3.32	3.32	3.32	3.21	3.26	3.21
360.0	4.56	4.61	4.84	4.56	4.22	3.60	3.32	3.21	3.21

Intensity data(cd)

C/γ(°)	90.0
0.0	3.15
45.0	3.21
90.0	3.15
135.0	3.15
180.0	3.15
225.0	3.15
270.0	3.26
315.0	3.21
360.0	3.15