



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

Client:

LumCAT: CR01D05015BM

Luminaire: 92.70.185.00

Report No:

Voltage(V): 34.6500

Test No: GC2019053001

Current(A): 0.2510

LampCAT: CREE CXA1507

Power (W): 8.7000

Lamp flux(lm): 1181.0

PF: 1.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 50

Width(mm): 50

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 870.46, Efficiency(%): 73.71% , Luminous Efficacy(lm/W): 100.05

Central intensity(cd): 3666.235, Maximum intensity(cd): 3666.235

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=16.0

[C90/270]Total=16.0

Field angle(10%Imax): [C0/180]Total=40.2

[C90/270]Total=40.2

Maximum s/h(1/2): C0_180=0.27 C90_270=0.27

Maximum s/h(1/4): C0_180=0.30 C90_270=0.30

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 73.71%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 87.595%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3666.234	0.000	0	.000%	.000%
1.0	3639.727	3.496	3.496	.296%	.402%
2.0	3525.750	10.285	13.78	.871%	1.583%
3.0	3330.914	16.399	30.179	1.389%	3.467%
4.0	3095.859	21.512	51.692	1.822%	5.938%
5.0	2781.000	25.282	76.974	2.141%	8.843%
6.0	2444.555	27.462	104.435	2.325%	11.998%
7.0	2136.797	28.436	132.872	2.408%	15.265%
8.0	1823.484	28.343	161.215	2.400%	18.521%
9.0	1542.516	27.280	188.494	2.310%	21.655%
10.0	1296.949	25.696	214.19	2.176%	24.607%
11.0	1106.670	24.017	238.207	2.034%	27.366%
12.0	951.405	22.498	260.705	1.905%	29.950%
13.0	804.206	20.835	281.54	1.764%	32.344%
14.0	685.638	19.070	300.61	1.615%	34.535%
15.0	597.333	17.613	318.223	1.491%	36.558%
16.0	526.563	16.468	334.691	1.394%	38.450%
17.0	467.346	15.478	350.169	1.311%	40.228%
18.0	427.521	14.754	364.923	1.249%	41.923%
19.0	397.301	14.350	379.274	1.215%	43.572%
20.0	368.452	14.015	393.289	1.187%	45.182%
21.0	343.941	13.679	406.968	1.158%	46.753%
22.0	323.332	13.409	420.378	1.135%	48.294%
23.0	302.154	13.124	433.502	1.111%	49.802%
24.0	282.839	12.790	446.292	1.083%	51.271%
25.0	267.356	12.510	458.802	1.059%	52.708%
26.0	246.973	12.141	470.943	1.028%	54.103%
27.0	231.300	11.701	482.644	.991%	55.447%
28.0	216.605	11.340	493.984	.960%	56.750%
29.0	203.456	10.990	504.974	.931%	58.013%
30.0	191.475	10.663	515.637	.903%	59.238%
31.0	180.886	10.362	525.999	.877%	60.428%
32.0	170.923	10.079	536.078	.853%	61.586%
33.0	162.366	9.819	545.897	.831%	62.714%
34.0	154.891	9.601	555.498	.813%	63.817%
35.0	147.579	9.394	564.892	.795%	64.896%
36.0	141.490	9.204	574.096	.779%	65.953%
37.0	136.505	9.067	583.162	.768%	66.995%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	131.752	8.954	592.116	.758%	68.024%
39.0	127.076	8.834	600.951	.748%	69.039%
40.0	123.525	8.740	609.691	.740%	70.043%
41.0	120.255	8.681	618.372	.735%	71.040%
42.0	116.944	8.618	626.99	.730%	72.030%
43.0	114.166	8.561	635.551	.725%	73.014%
44.0	111.741	8.526	644.077	.722%	73.993%
45.0	109.034	8.485	652.562	.718%	74.968%
46.0	106.383	8.424	660.986	.713%	75.936%
47.0	103.711	8.356	669.342	.708%	76.896%
48.0	100.434	8.253	677.595	.699%	77.844%
49.0	97.341	8.122	685.717	.688%	78.777%
50.0	93.790	7.969	693.685	.675%	79.692%
51.0	90.513	7.798	701.483	.660%	80.588%
52.0	87.546	7.641	709.124	.647%	81.466%
53.0	84.122	7.468	716.591	.632%	82.324%
54.0	80.276	7.246	723.837	.614%	83.156%
55.0	76.936	7.018	730.855	.594%	83.962%
56.0	73.484	6.797	737.652	.576%	84.743%
57.0	69.764	6.550	744.201	.555%	85.496%
58.0	66.614	6.307	750.508	.534%	86.220%
59.0	63.696	6.092	756.6	.516%	86.920%
60.0	60.750	5.879	762.479	.498%	87.595%
61.0	58.177	5.675	768.155	.481%	88.247%
62.0	55.793	5.492	773.647	.465%	88.878%
63.0	53.578	5.319	778.966	.450%	89.489%
64.0	51.335	5.148	784.114	.436%	90.081%
65.0	49.317	4.981	789.095	.422%	90.653%
66.0	47.482	4.830	793.925	.409%	91.208%
67.0	46.034	4.702	798.627	.398%	91.748%
68.0	44.578	4.590	803.217	.389%	92.275%
69.0	43.010	4.468	807.685	.378%	92.789%
70.0	41.330	4.332	812.017	.367%	93.286%
71.0	39.333	4.169	816.186	.353%	93.765%
72.0	37.519	3.996	820.182	.338%	94.224%
73.0	36.134	3.851	824.034	.326%	94.667%
74.0	34.657	3.722	827.755	.315%	95.094%
75.0	33.047	3.577	831.332	.303%	95.505%

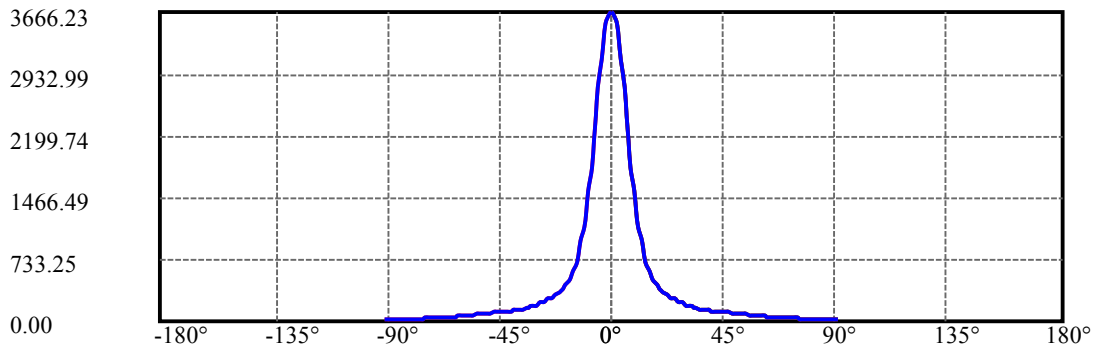
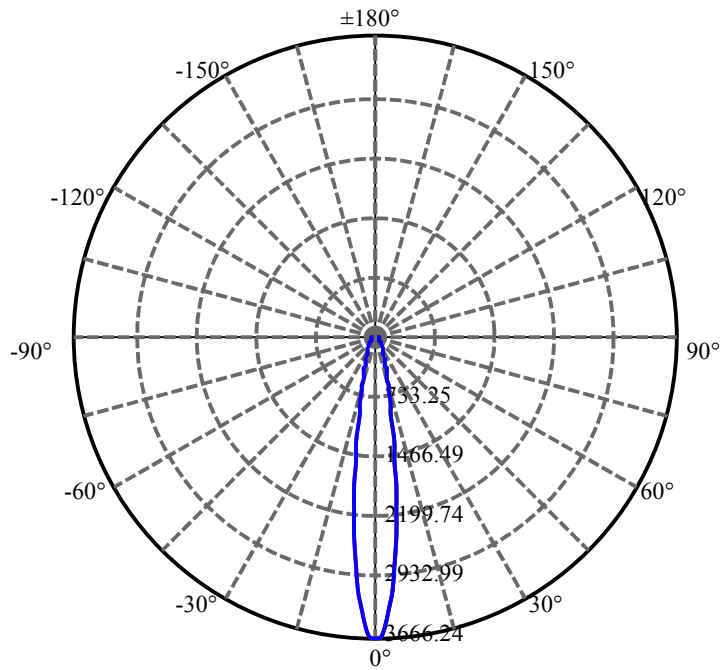
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	31.641	3.434	834.766	.291%	95.900%
77.0	30.150	3.294	838.061	.279%	96.278%
78.0	28.983	3.165	841.226	.268%	96.642%
79.0	28.167	3.071	844.297	.260%	96.995%
80.0	27.162	2.983	847.28	.253%	97.337%
81.0	26.213	2.886	850.166	.244%	97.669%
82.0	25.313	2.794	852.96	.237%	97.990%
83.0	24.026	2.682	855.642	.227%	98.298%
84.0	22.275	2.522	858.165	.214%	98.588%
85.0	21.016	2.363	860.527	.200%	98.859%
86.0	20.264	2.256	862.784	.191%	99.119%
87.0	19.294	2.165	864.949	.183%	99.367%
88.0	17.958	2.041	866.989	.173%	99.602%
89.0	16.158	1.870	868.859	.158%	99.817%
90.0	12.973	1.597	870.456	.135%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	515.64	43.66%	59.24%
0-40	609.69	51.62%	70.04%
0-60	762.48	64.56%	87.60%
0-90	868.86	73.57%	99.82%
0-120	868.86	73.57%	99.82%
0-180	870.46	73.71%	100.00%
60-90	112.26	9.51%	12.90%
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%
0-50.34	696.37	58.96%	80.00%

ZONAL LUMEN SUMMARY

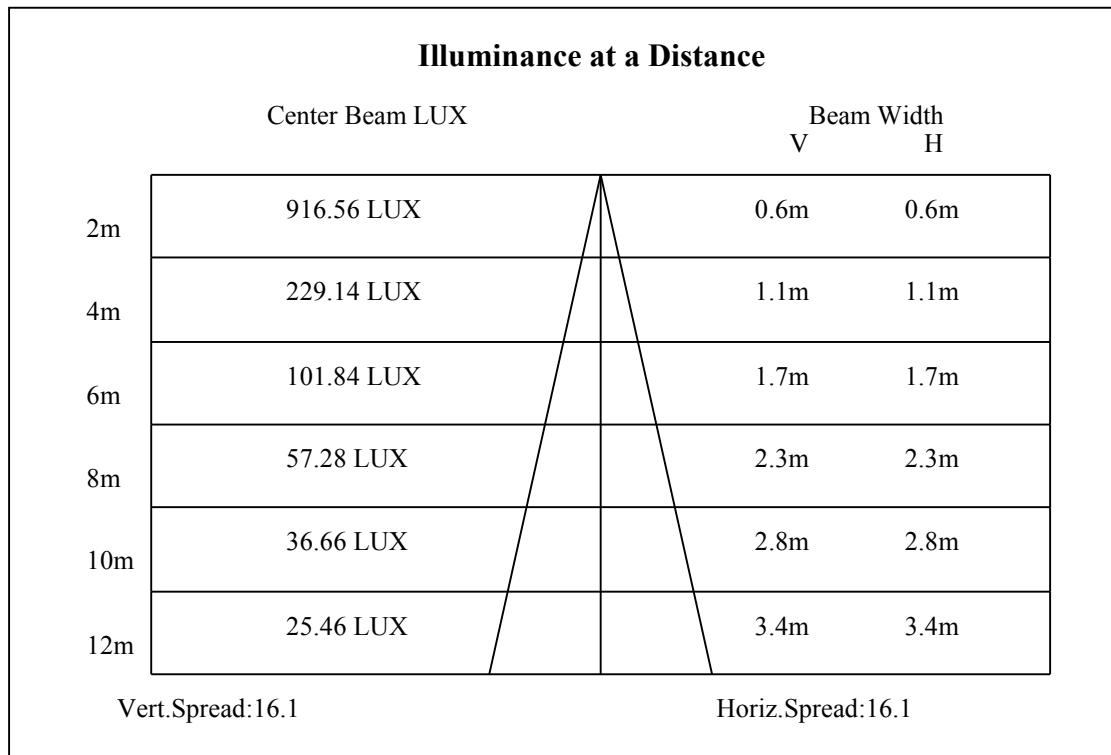
0-10	214.19
10-20	179.10
20-30	122.35
30-40	94.05
40-50	83.99
50-60	68.79
60-70	49.54
70-80	35.26
80-90	21.58
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

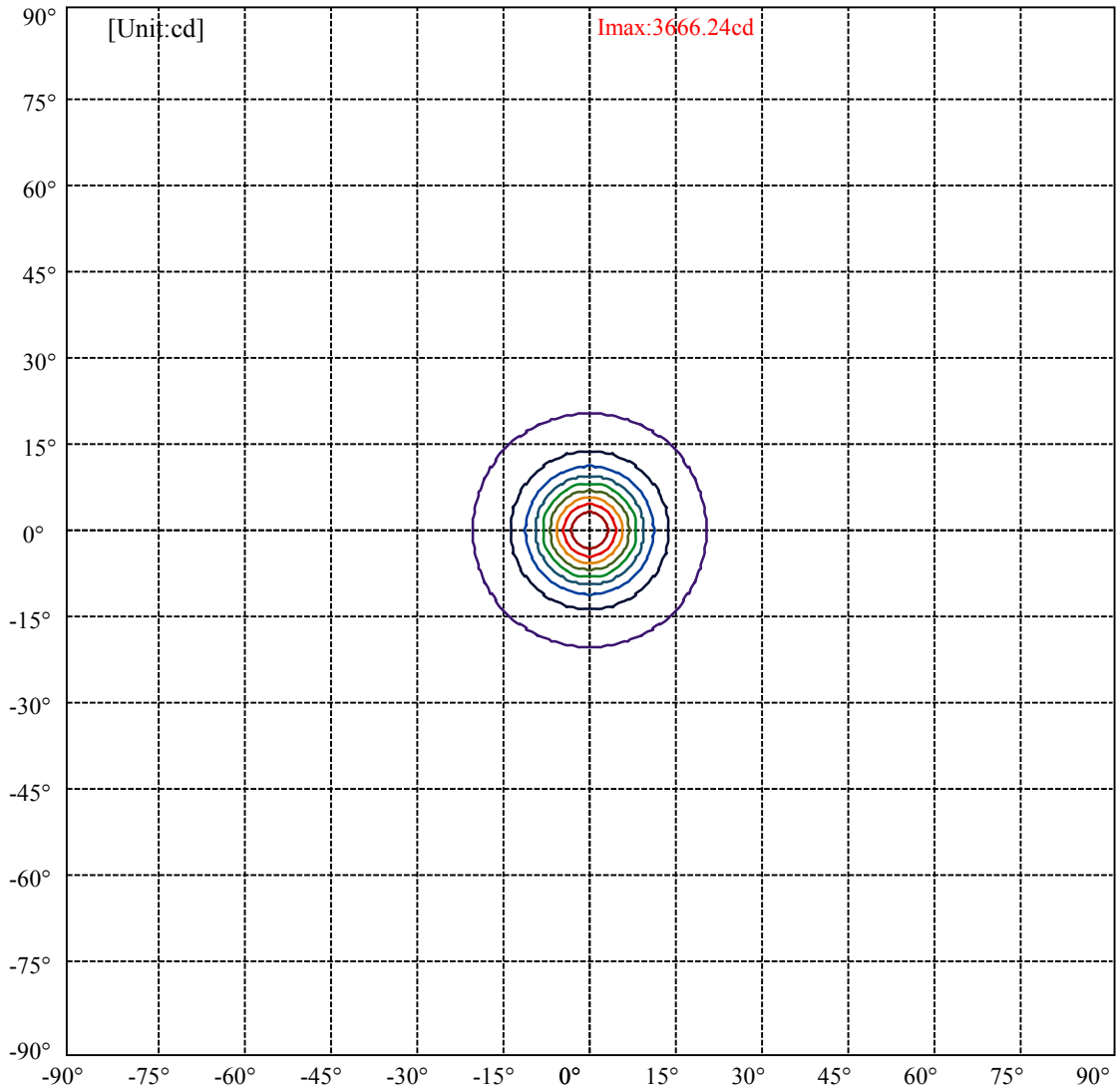


C0(Max): —————
C0/C180: —————
C90/C270: —————

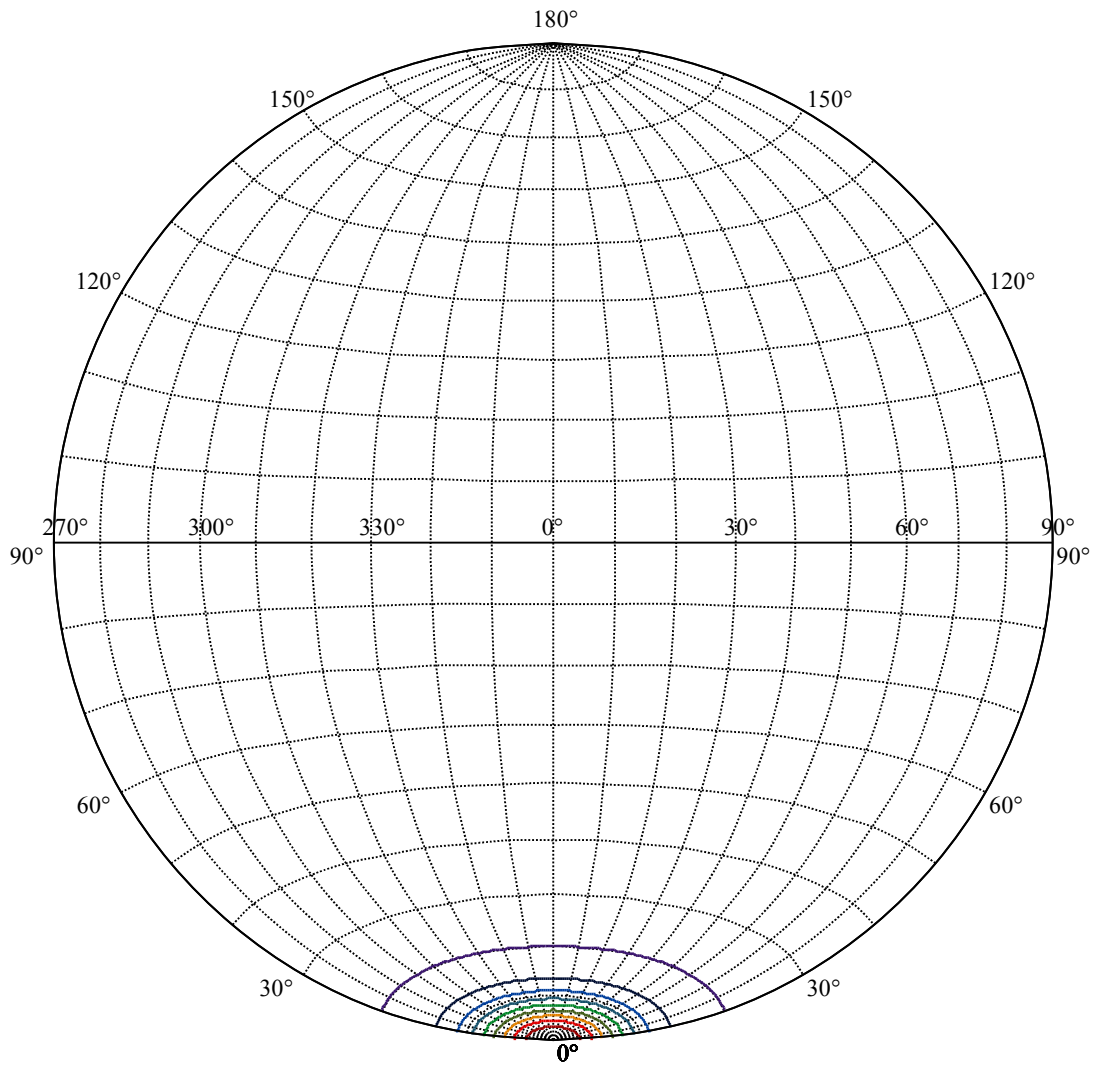
Field angle(10%Imax):C0/180Left:20.1 Right:20.1
:C90/270Left:20.1 Right:20.1

Beam Angle(50%Imax):C0/180Left:8.0 Right:8.0
:C90/270Left:8.0 Right:8.0





(10%Imax) 366.623	—
(20%Imax) 733.247	—
(30%Imax) 1099.87	—
(40%Imax) 1466.49	—
(50%Imax) 1833.12	—
(60%Imax) 2199.74	—
(70%Imax) 2566.36	—
(80%Imax) 2932.99	—
(90%Imax) 3299.61	—



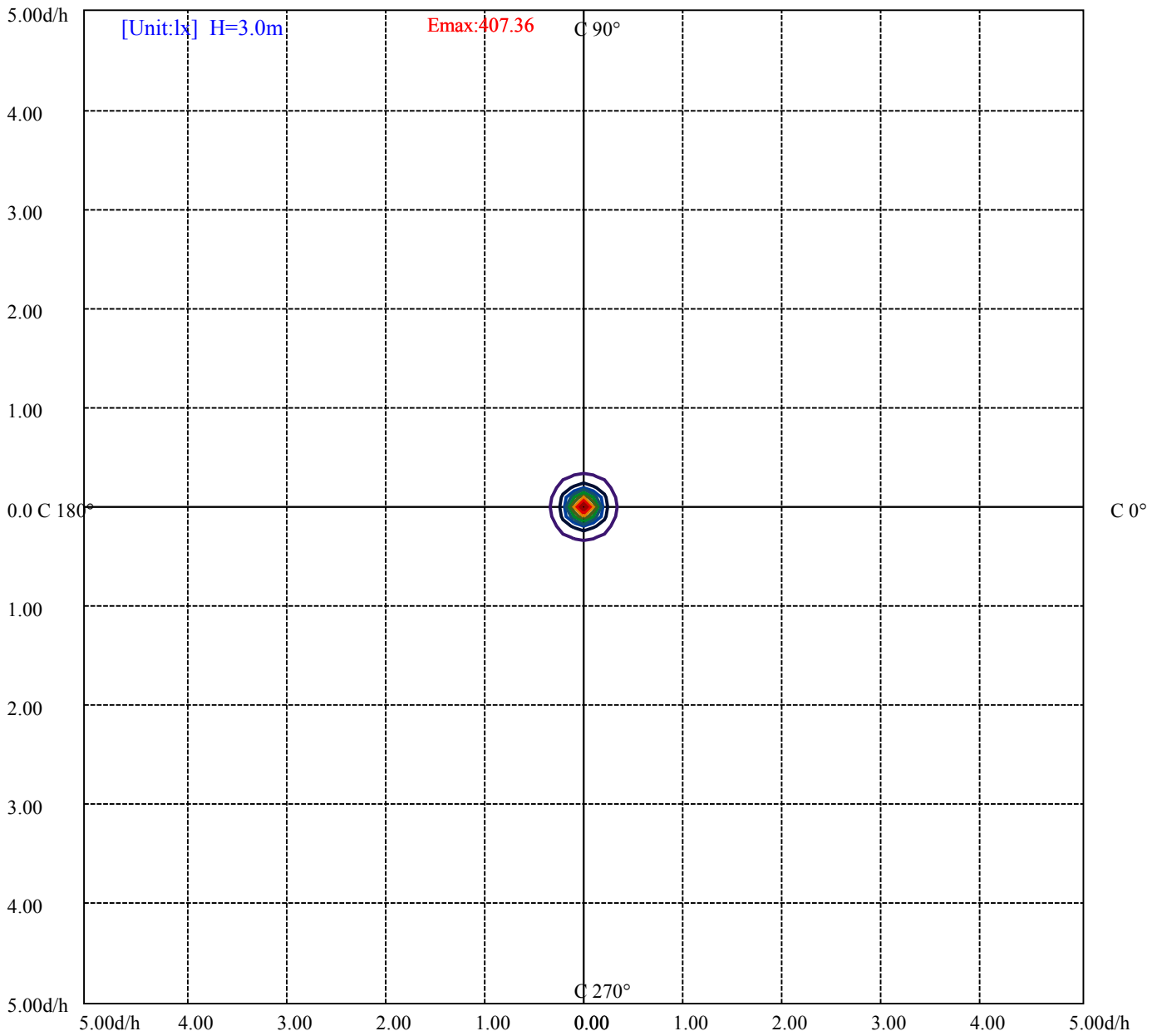
House

[Unit:cd]

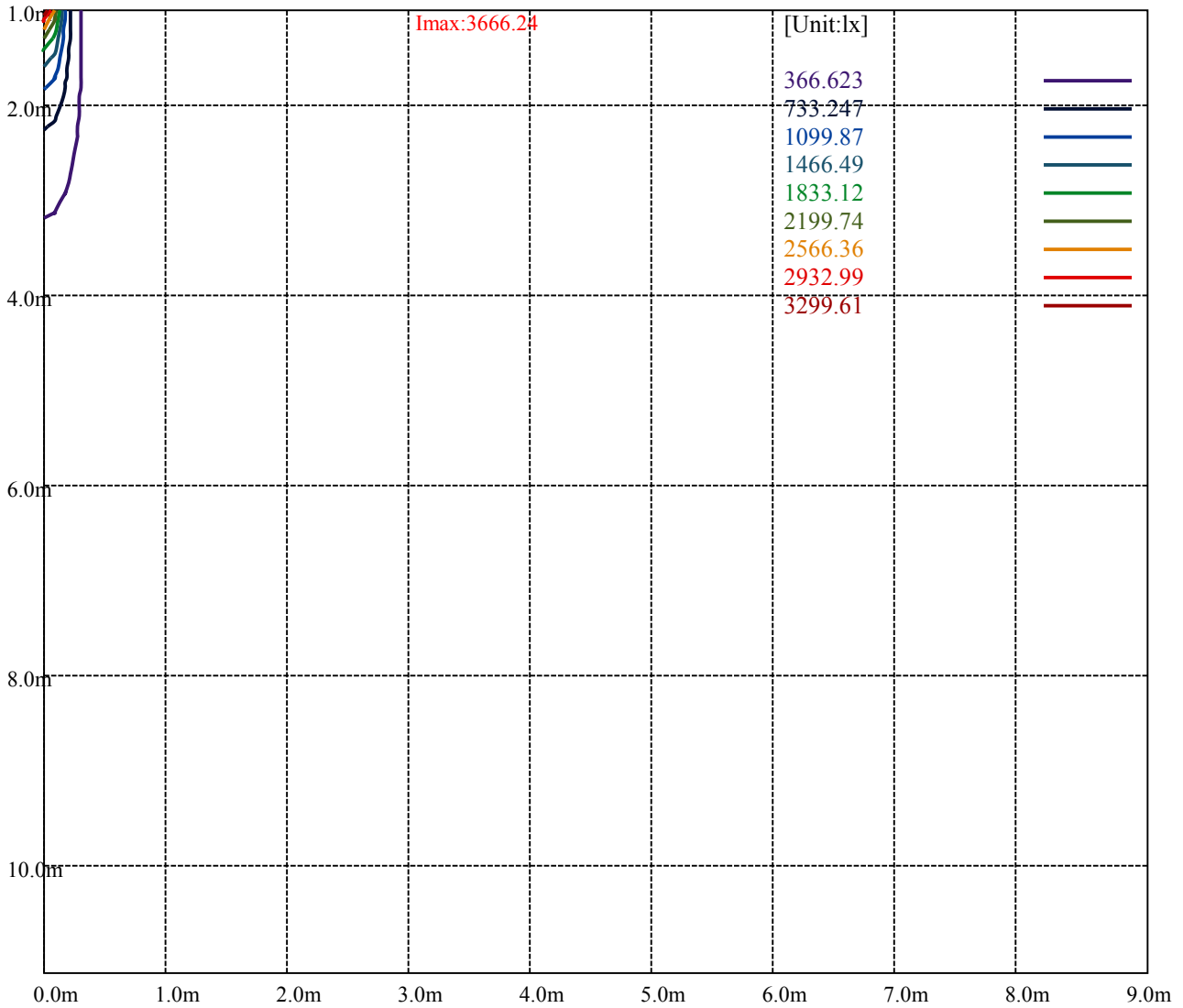
Road

Imax:3666.24

(10%Imax) 366.623	—
(20%Imax) 733.247	—
(30%Imax) 1099.87	—
(40%Imax) 1466.49	—
(50%Imax) 1833.12	—
(60%Imax) 2199.74	—
(70%Imax) 2566.36	—
(80%Imax) 2932.99	—
(90%Imax) 3299.61	—



(10%Emax) 40.73589	—
(20%Emax) 81.47177	—
(30%Emax) 122.2078	—
(40%Emax) 162.9433	—
(50%Emax) 203.68	—
(60%Emax) 244.4156	—
(70%Emax) 285.1511	—
(80%Emax) 325.8867	—
(90%Emax) 366.6234	—



Luminance Table

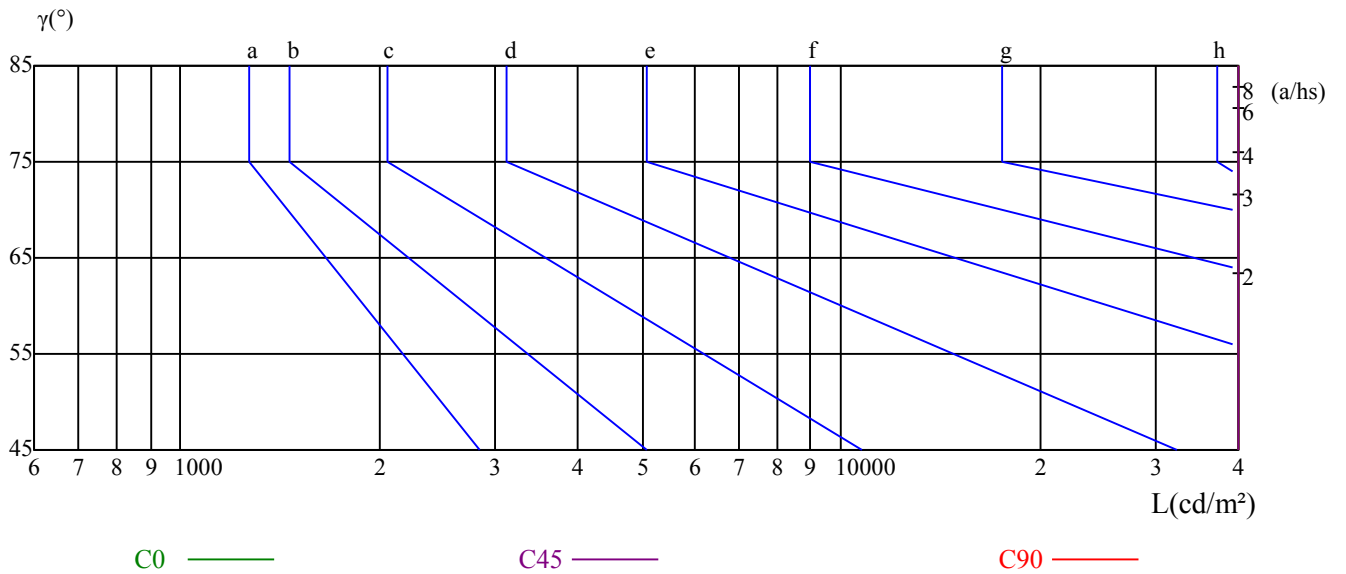
γ	45	50	55	60	65	70	75	80	85
C0	61679	58364	53653	48600	46678	48336	51073	62567	96454
C45	61679	58364	53653	48600	46678	48336	51073	62567	96454
C90	61679	58364	53653	48600	46678	48336	51073	62567	96454

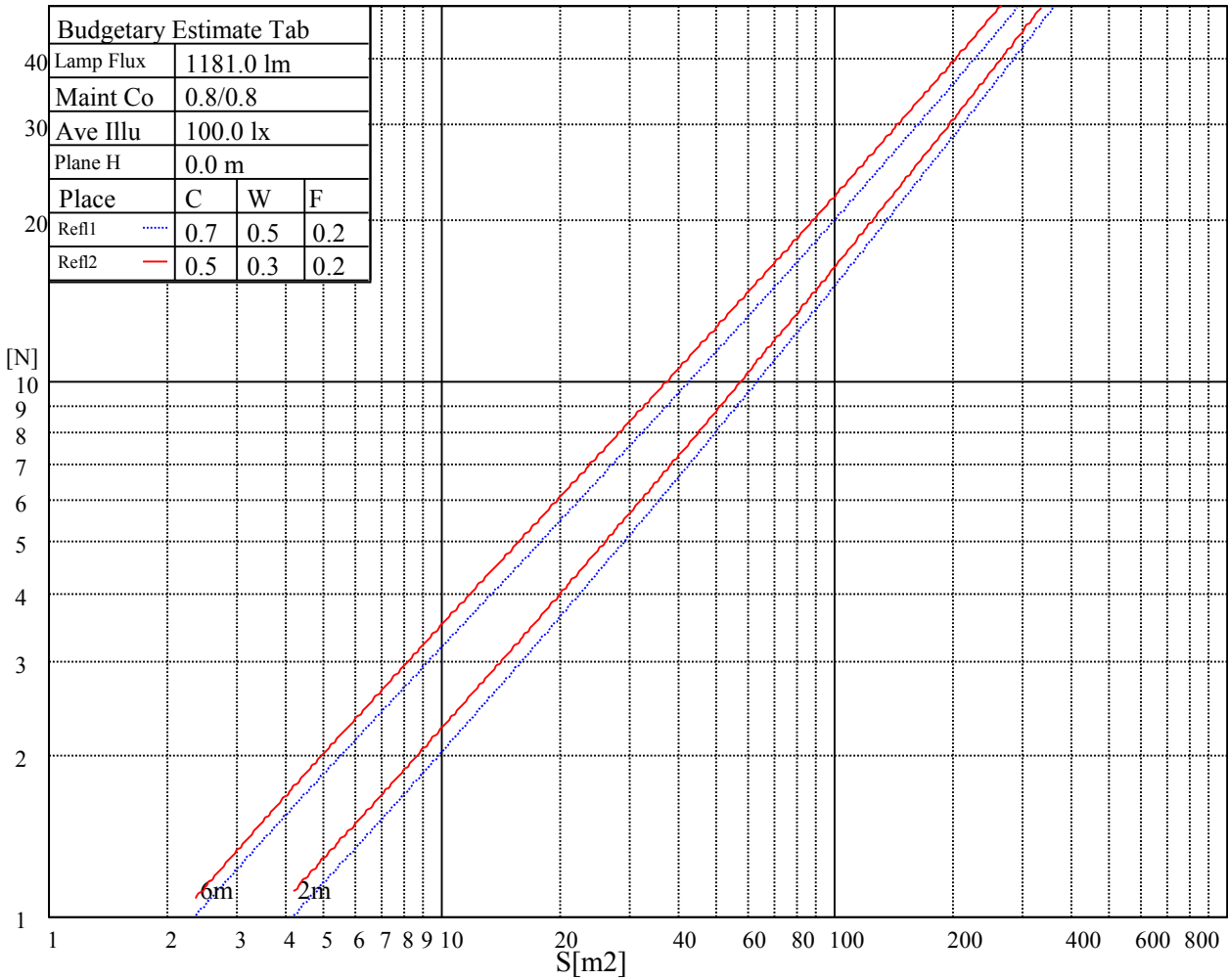
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
46678	46678	46678	51073	51073	51073	96454	96454	96454

Glare Table

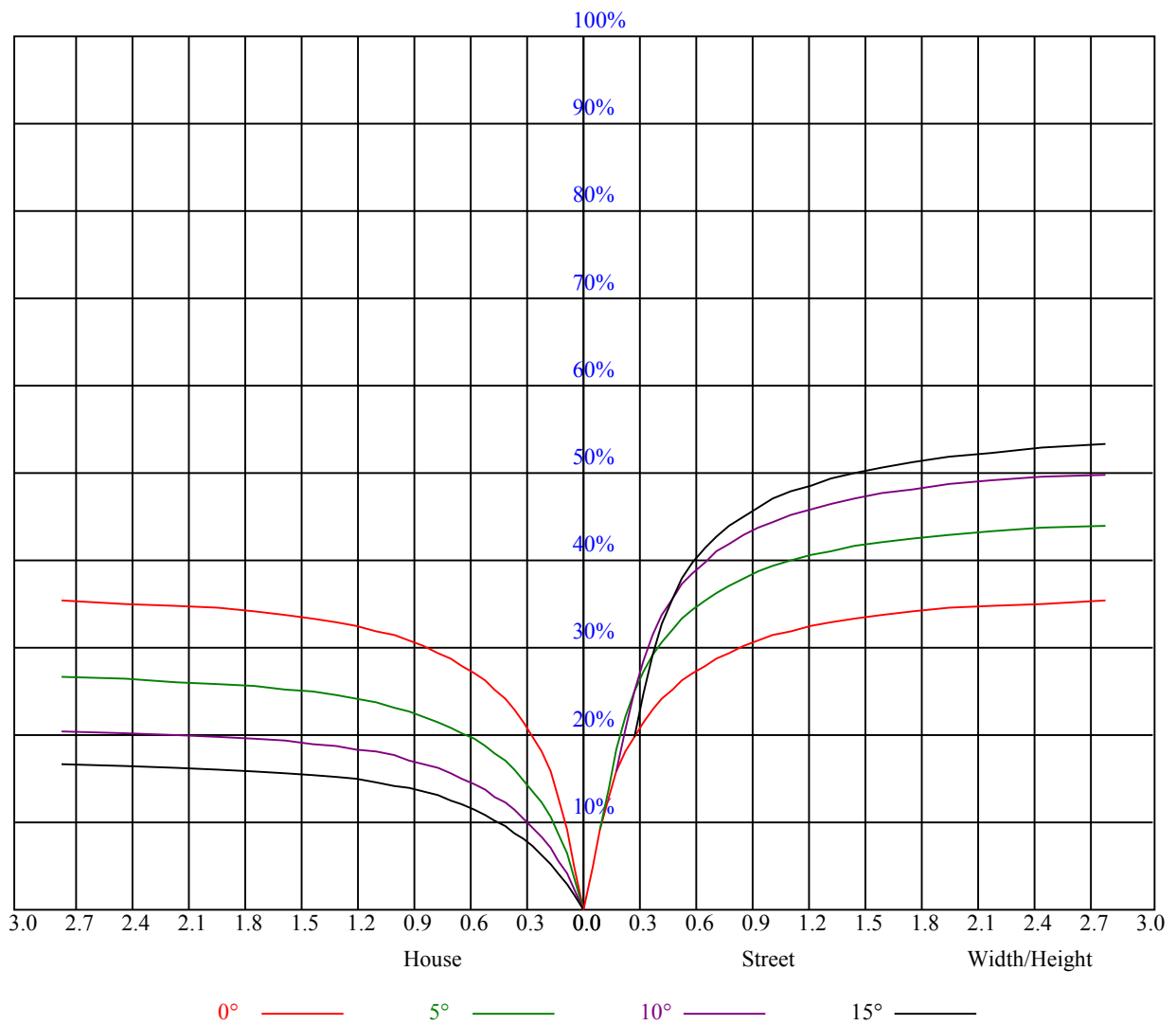
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

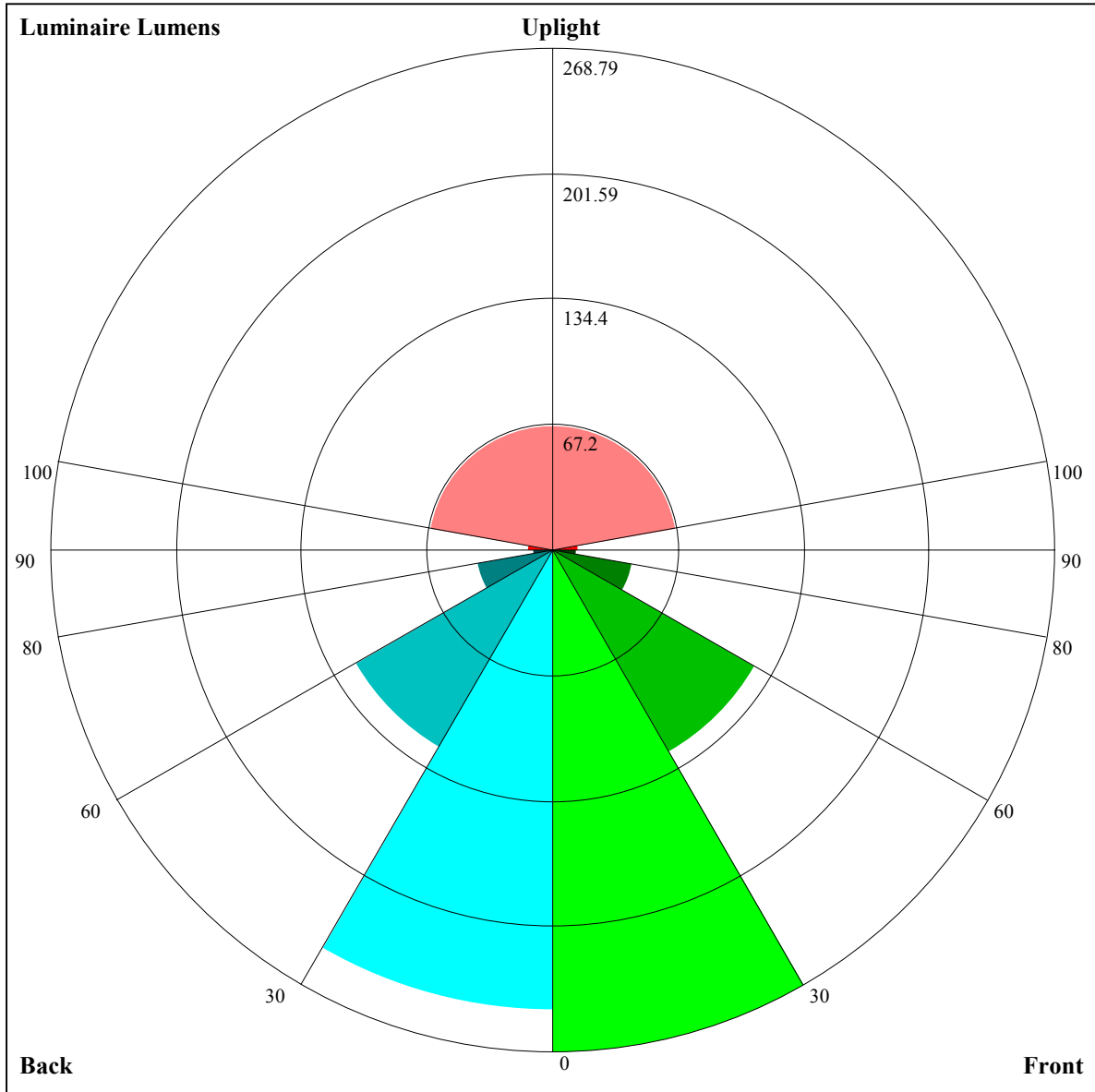
Luminance Limiting Curve





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	0.88	0.88	0.88	0.86	0.86	0.86	0.82	0.82	0.82	0.78	0.78	0.78	0.75	0.75	0.75	0.74
1	0.79	0.77	0.75	0.78	0.75	0.73	0.75	0.73	0.71	0.72	0.70	0.69	0.69	0.68	0.67	0.65
2	0.72	0.69	0.65	0.71	0.68	0.65	0.69	0.66	0.63	0.66	0.64	0.62	0.64	0.62	0.60	0.59
3	0.67	0.62	0.59	0.66	0.62	0.58	0.64	0.60	0.57	0.62	0.59	0.56	0.60	0.58	0.55	0.54
4	0.62	0.57	0.54	0.61	0.57	0.53	0.59	0.56	0.53	0.58	0.55	0.52	0.56	0.54	0.51	0.50
5	0.58	0.53	0.50	0.57	0.53	0.49	0.56	0.52	0.49	0.55	0.51	0.48	0.53	0.50	0.48	0.47
6	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.52	0.48	0.46	0.51	0.48	0.45	0.44
7	0.52	0.47	0.44	0.51	0.47	0.44	0.50	0.46	0.43	0.49	0.46	0.43	0.49	0.45	0.43	0.42
8	0.49	0.45	0.41	0.49	0.44	0.41	0.48	0.44	0.41	0.47	0.44	0.41	0.46	0.43	0.41	0.40
9	0.47	0.43	0.39	0.47	0.42	0.39	0.46	0.42	0.39	0.45	0.42	0.39	0.45	0.41	0.39	0.38
10	0.45	0.41	0.38	0.45	0.41	0.38	0.44	0.40	0.38	0.44	0.40	0.38	0.43	0.40	0.37	0.36





Luminaire Lumens:

FL=268.79,FM=125.22,FH=43.69,FVH=12.62

BL=246.2,BM=121.76,BH=41.4,BVH=10.66

UL=14.15,UH=67.36

BUG Rating:B1-U2-G1

Intensity data(cd)

C/ γ ($^{\circ}$)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	3665.25	3680.44	3646.13	3540.38	3333.94	3057.19	2770.31	2432.81	2135.81
45.0	3661.88	3671.44	3612.38	3475.69	3284.44	3008.25	2674.69	2370.38	2035.69
90.0	3666.94	3624.75	3488.63	3272.06	3029.63	2708.44	2372.63	2064.94	1751.06
135.0	3670.88	3651.19	3505.50	3318.19	3108.94	2763.56	2428.31	2162.25	1811.81
180.0	3665.25	3582.56	3417.75	3123.56	2840.63	2538.56	2190.38	1859.06	1597.50
225.0	3661.88	3590.44	3413.81	3146.06	2859.75	2494.69	2138.06	1839.94	1548.56
270.0	3666.94	3656.81	3556.13	3389.06	3154.50	2834.44	2477.81	2165.06	1835.44
315.0	3670.88	3660.19	3565.69	3382.31	3155.06	2842.88	2504.25	2199.94	1872.00
360.0	3665.25	3680.44	3646.13	3540.38	3333.94	3057.19	2770.31	2432.81	2135.81
C/ γ ($^{\circ}$)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1827.56	1550.25	1334.25	1147.50	951.19	817.31	705.38	592.31	524.81
45.0	1734.19	1492.88	1258.31	1085.63	922.50	786.38	685.13	602.44	522.56
90.0	1505.25	1117.86	1078.65	938.08	801.62	686.70	601.82	534.99	477.17
135.0	1537.31	1348.31	1116.56	961.31	812.25	687.94	599.63	531.56	468.56
180.0	1332.56	1107.00	943.65	792.84	681.19	579.83	504.79	456.19	419.29
225.0	1248.75	1098.68	900.73	787.22	664.59	559.35	502.65	453.15	405.23
270.0	1543.50	1315.13	1100.25	942.19	795.38	672.75	583.88	514.69	451.69
315.0	1611.00	1345.50	1120.95	956.48	804.94	694.86	595.41	527.18	469.46
360.0	1827.56	1550.25	1334.25	1147.50	951.19	817.31	705.38	592.31	524.81
C/ γ ($^{\circ}$)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	474.75	436.50	397.69	371.25	348.19	321.19	300.94	287.44	260.33
45.0	473.06	435.38	397.69	372.38	348.75	324.00	302.63	285.19	263.08
90.0	433.46	402.08	375.81	347.18	326.81	306.68	284.18	266.79	250.14
135.0	430.88	401.06	371.25	349.31	328.50	306.56	285.75	284.06	249.13
180.0	383.18	359.66	339.47	316.07	298.29	281.70	263.76	247.28	233.27
225.0	382.33	359.94	337.33	316.46	298.35	279.45	262.07	247.61	232.31
270.0	415.69	387.00	357.19	336.38	316.69	296.44	285.19	258.98	241.71
315.0	426.83	396.79	371.19	342.51	321.08	301.22	278.21	261.51	245.81
360.0	474.75	436.50	397.69	371.25	348.19	321.19	300.94	287.44	260.33
C/ γ ($^{\circ}$)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	242.27	227.31	212.74	200.59	188.78	178.14	169.71	161.16	153.11
45.0	245.14	228.54	214.93	200.42	188.21	178.43	168.41	159.75	152.04
90.0	232.76	217.13	204.08	190.63	180.06	169.20	159.53	152.04	144.68
135.0	234.73	219.60	205.03	193.39	181.80	171.34	162.56	154.35	146.19
180.0	218.48	206.33	193.50	181.52	171.84	162.23	153.84	147.32	141.64
225.0	219.49	206.10	194.12	184.39	175.61	165.94	159.13	152.78	145.97
270.0	227.87	213.53	200.48	190.13	179.61	170.61	163.07	156.26	148.78
315.0	229.67	214.31	202.78	190.74	181.18	171.51	162.68	155.48	148.22
360.0	242.27	227.31	212.74	200.59	188.78	178.14	169.71	161.16	153.11
C/ γ ($^{\circ}$)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	146.87	141.36	135.11	131.06	127.52	124.03	120.77	118.29	115.93
45.0	144.51	138.94	134.44	128.03	123.98	120.60	116.33	113.74	111.77
90.0	138.15	132.98	128.25	123.13	119.48	116.16	113.46	110.25	107.72
135.0	140.29	134.83	129.43	125.21	121.78	118.46	114.64	111.26	108.45
180.0	135.34	131.12	127.35	123.24	119.98	116.89	113.57	111.04	108.84
225.0	141.36	137.08	133.09	128.42	124.59	121.28	117.79	114.64	111.94
270.0	143.49	138.77	133.88	129.71	126.28	122.79	119.70	117.06	114.47
315.0	141.92	136.97	132.47	127.80	124.59	121.84	119.31	117.06	114.81
360.0	146.87	141.36	135.11	131.06	127.52	124.03	120.77	118.29	115.93

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	113.68	111.94	108.96	105.69	101.87	97.82	94.33	90.68	86.34
45.0	108.90	105.81	103.67	100.58	97.65	94.33	91.24	88.76	85.78
90.0	105.08	102.21	99.90	96.64	93.88	91.07	88.31	85.50	82.52
135.0	105.81	103.05	100.18	96.30	92.93	89.16	86.12	83.25	79.14
180.0	105.81	103.73	100.91	97.37	94.50	90.96	86.85	83.98	80.72
225.0	108.56	105.36	102.54	99.79	97.20	94.11	91.07	88.20	85.11
270.0	111.99	108.96	106.09	103.50	100.52	96.69	93.94	91.13	87.75
315.0	112.44	110.03	107.44	103.61	100.18	96.19	92.25	88.88	85.61
360.0	113.68	111.94	108.96	105.69	101.87	97.82	94.33	90.68	86.34
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	82.91	79.59	75.49	72.39	69.36	66.15	63.11	60.64	58.22
45.0	82.35	78.92	75.99	71.61	68.63	65.53	62.27	59.79	57.32
90.0	78.36	75.04	71.78	67.84	64.80	62.04	59.12	56.42	54.11
135.0	75.77	72.11	68.29	65.08	61.99	59.18	56.59	54.17	51.75
180.0	76.05	73.24	70.09	66.66	63.51	61.03	58.44	56.03	53.83
225.0	81.00	77.51	73.80	70.48	66.99	63.90	61.31	58.50	55.80
270.0	84.21	80.89	77.63	73.41	70.09	66.99	63.39	60.81	58.44
315.0	81.56	78.19	74.81	70.65	67.56	64.74	61.76	59.06	56.87
360.0	82.91	79.59	75.49	72.39	69.36	66.15	63.11	60.64	58.22
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	56.25	54.00	51.86	50.18	48.43	47.64	47.03	45.68	43.37
45.0	55.18	52.59	50.57	48.21	46.35	44.55	43.20	41.63	39.71
90.0	51.58	49.16	47.36	45.17	44.33	43.37	42.19	40.22	38.03
135.0	49.67	47.08	45.00	43.09	41.29	39.32	37.52	35.83	33.75
180.0	51.47	49.67	47.87	46.86	45.68	44.38	42.30	40.56	38.87
225.0	53.94	52.26	49.67	47.87	46.24	44.16	42.24	40.61	38.70
270.0	56.03	53.66	51.69	50.01	49.16	47.98	46.41	44.49	41.96
315.0	54.51	52.26	50.51	48.49	46.80	45.23	43.20	41.63	40.28
360.0	56.25	54.00	51.86	50.18	48.43	47.64	47.03	45.68	43.37
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	41.34	39.66	38.19	36.51	35.10	33.69	32.06	31.39	30.83
45.0	38.31	37.13	35.61	33.58	32.29	31.05	29.48	28.91	28.69
90.0	36.00	34.59	33.19	31.39	29.93	28.46	27.68	27.23	26.44
135.0	32.29	30.83	28.86	26.89	25.03	22.78	21.43	20.08	18.28
180.0	37.07	35.89	34.65	33.47	31.89	31.28	30.71	29.48	28.13
225.0	37.07	35.78	34.09	32.91	31.44	29.87	29.25	28.18	26.61
270.0	39.66	38.14	36.90	35.55	34.65	32.63	30.99	30.21	29.36
315.0	38.42	37.07	35.78	34.09	32.79	31.44	30.26	29.87	28.97
360.0	41.34	39.66	38.19	36.51	35.10	33.69	32.06	31.39	30.83
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	29.76	28.80	27.62	25.37	23.46	22.11	21.94	20.81	19.35
45.0	27.90	27.56	26.83	24.58	23.01	22.16	21.60	20.36	18.96
90.0	25.82	25.43	23.96	22.61	21.88	21.54	20.70	19.46	17.83
135.0	17.04	15.53	13.67	11.93	10.35	8.72	7.31	6.24	5.74
180.0	27.17	25.65	24.24	22.84	22.22	22.05	20.08	18.73	15.30
225.0	25.93	24.86	23.34	22.33	21.60	21.21	19.41	18.17	15.58
270.0	27.96	27.00	25.59	23.96	22.78	22.16	21.54	19.80	18.17
315.0	28.13	27.68	26.94	24.58	22.84	22.16	21.77	20.08	18.34
360.0	29.76	28.80	27.62	25.37	23.46	22.11	21.94	20.81	19.35

Intensity data(cd)

C/ γ (°)	90.0
0.0	16.99
45.0	16.65
90.0	14.85
135.0	5.46
180.0	9.34
225.0	11.03
270.0	14.29
315.0	15.19
360.0	16.99