



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: 1-1008-M

Luminaire: BJB 47.360.1020

Report No: nt0100

Voltage(V): 34.0300

Test No: GC2020011509

Current(A): 0.2970

LampCAT: LUMINUS CXM-9-AC40

Power (W): 10.1100

Lamp flux(lm): 1108.1

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): 816.64, Efficiency(%): 73.70% , Luminous Efficacy(lm/W): 80.78

Central intensity(cd): 5946.188, Maximum intensity(cd): 5946.188

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=18.0

[C90/270]Total=18.0

Field angle(10%Imax): [C0/180]Total=39.0

[C90/270]Total=39.0

Maximum s/h(1/2): C0_180=0.31 C90_270=0.31

Maximum s/h(1/4): C0_180=0.34 C90_270=0.34

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 73.70%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.489%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5946.188	0.000	0	.000%	.000%
1.0	5854.148	5.646	5.646	.510%	.691%
2.0	5563.547	16.388	22.034	1.479%	2.698%
3.0	5214.938	25.779	47.813	2.326%	5.855%
4.0	4887.703	33.817	81.629	3.052%	9.996%
5.0	4549.641	40.599	122.228	3.664%	14.967%
6.0	4177.055	45.861	168.089	4.139%	20.583%
7.0	3784.852	49.419	217.509	4.460%	26.635%
8.0	3381.680	51.289	268.798	4.629%	32.915%
9.0	2990.320	51.642	320.44	4.660%	39.239%
10.0	2624.344	50.811	371.251	4.586%	45.461%
11.0	2314.125	49.345	420.596	4.453%	51.503%
12.0	2043.633	47.637	468.233	4.299%	57.337%
13.0	1767.094	45.224	513.456	4.081%	62.874%
14.0	1526.555	42.158	555.615	3.805%	68.037%
15.0	1275.448	38.467	594.082	3.472%	72.747%
16.0	1142.044	35.423	629.505	3.197%	77.085%
17.0	955.125	32.659	662.163	2.947%	81.084%
18.0	803.974	29.004	691.167	2.618%	84.636%
19.0	658.245	25.440	716.607	2.296%	87.751%
20.0	521.585	21.594	738.201	1.949%	90.395%
21.0	386.466	17.436	755.637	1.574%	92.530%
22.0	282.136	13.436	769.073	1.213%	94.175%
23.0	214.868	10.428	779.502	.941%	95.452%
24.0	101.967	6.927	786.429	.625%	96.301%
25.0	46.786	3.382	789.811	.305%	96.715%
26.0	18.633	1.544	791.355	.139%	96.904%
27.0	11.384	0.734	792.09	.066%	96.994%
28.0	8.944	0.515	792.604	.046%	97.057%
29.0	7.889	0.440	793.045	.040%	97.111%
30.0	7.263	0.409	793.454	.037%	97.161%
31.0	6.757	0.390	793.844	.035%	97.209%
32.0	6.349	0.375	794.219	.034%	97.255%
33.0	6.033	0.365	794.584	.033%	97.299%
34.0	5.773	0.357	794.942	.032%	97.343%
35.0	5.513	0.350	795.292	.032%	97.386%
36.0	5.323	0.345	795.637	.031%	97.428%
37.0	5.196	0.343	795.98	.031%	97.470%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	5.055	0.342	796.322	.031%	97.512%
39.0	4.929	0.341	796.663	.031%	97.554%
40.0	4.830	0.340	797.003	.031%	97.596%
41.0	4.774	0.342	797.345	.031%	97.637%
42.0	4.697	0.344	797.69	.031%	97.680%
43.0	4.620	0.345	798.035	.031%	97.722%
44.0	4.563	0.347	798.381	.031%	97.764%
45.0	4.514	0.349	798.73	.031%	97.807%
46.0	4.465	0.351	799.081	.032%	97.850%
47.0	4.437	0.354	799.435	.032%	97.893%
48.0	4.402	0.357	799.793	.032%	97.937%
49.0	4.380	0.361	800.153	.033%	97.981%
50.0	4.324	0.363	800.516	.033%	98.026%
51.0	4.303	0.365	800.881	.033%	98.070%
52.0	4.275	0.368	801.249	.033%	98.115%
53.0	4.254	0.371	801.62	.033%	98.161%
54.0	4.226	0.374	801.994	.034%	98.207%
55.0	4.212	0.377	802.371	.034%	98.253%
56.0	4.205	0.380	802.751	.034%	98.299%
57.0	4.170	0.383	803.134	.035%	98.346%
58.0	4.170	0.386	803.519	.035%	98.393%
59.0	4.141	0.389	803.908	.035%	98.441%
60.0	4.127	0.391	804.299	.035%	98.489%
61.0	4.113	0.393	804.692	.035%	98.537%
62.0	4.099	0.396	805.088	.036%	98.585%
63.0	4.078	0.398	805.485	.036%	98.634%
64.0	4.085	0.401	805.886	.036%	98.683%
65.0	4.071	0.404	806.29	.036%	98.733%
66.0	4.057	0.406	806.695	.037%	98.782%
67.0	4.050	0.408	807.103	.037%	98.832%
68.0	4.043	0.410	807.513	.037%	98.882%
69.0	4.036	0.412	807.925	.037%	98.933%
70.0	4.029	0.414	808.339	.037%	98.984%
71.0	4.022	0.416	808.755	.038%	99.035%
72.0	4.008	0.418	809.173	.038%	99.086%
73.0	4.036	0.421	809.593	.038%	99.137%
74.0	4.043	0.425	810.018	.038%	99.189%
75.0	4.015	0.426	810.444	.038%	99.241%

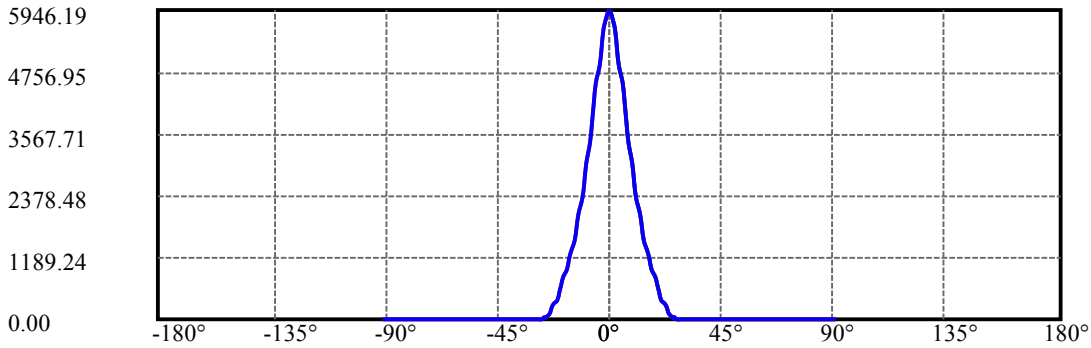
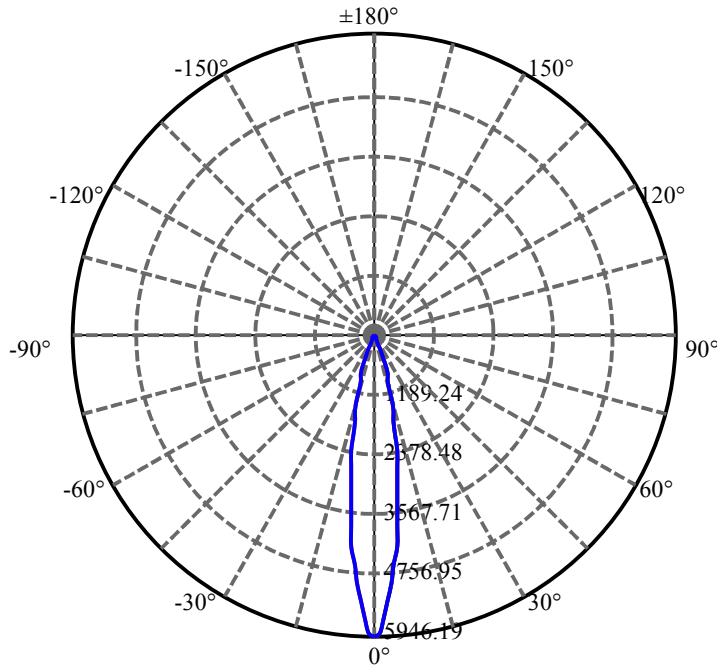
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.973	0.424	810.868	.038%	99.293%
77.0	3.952	0.422	811.29	.038%	99.345%
78.0	3.930	0.422	811.712	.038%	99.397%
79.0	3.902	0.421	812.133	.038%	99.448%
80.0	3.839	0.417	812.55	.038%	99.499%
81.0	3.797	0.413	812.963	.037%	99.550%
82.0	3.783	0.411	813.374	.037%	99.600%
83.0	3.769	0.411	813.785	.037%	99.650%
84.0	3.762	0.410	814.195	.037%	99.701%
85.0	3.755	0.410	814.605	.037%	99.751%
86.0	3.727	0.409	815.014	.037%	99.801%
87.0	3.727	0.408	815.422	.037%	99.851%
88.0	3.698	0.407	815.829	.037%	99.901%
89.0	3.691	0.405	816.234	.037%	99.950%
90.0	3.698	0.405	816.639	.037%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	793.45	71.61%	97.16%
0-40	797.00	71.93%	97.60%
0-60	804.30	72.59%	98.49%
0-90	816.23	73.66%	99.95%
0-120	816.23	73.66%	99.95%
0-180	816.64	73.70%	100.00%
60-90	12.33	1.11%	1.51%
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%
0-16.73	653.31	58.96%	80.00%

ZONAL LUMEN SUMMARY

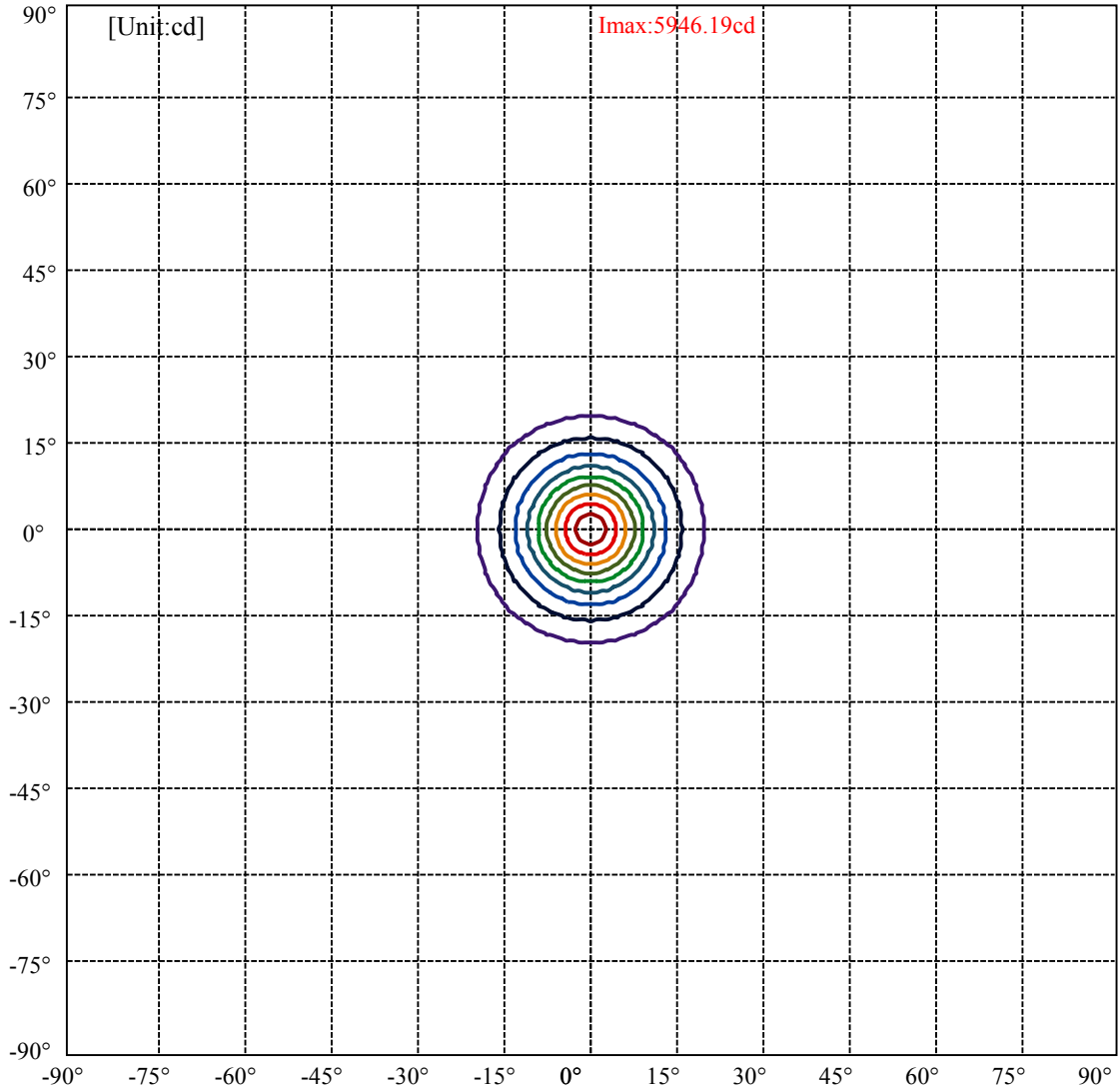
0-10	371.25
10-20	366.95
20-30	55.25
30-40	3.55
40-50	3.51
50-60	3.78
60-70	4.04
70-80	4.21
80-90	3.68
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



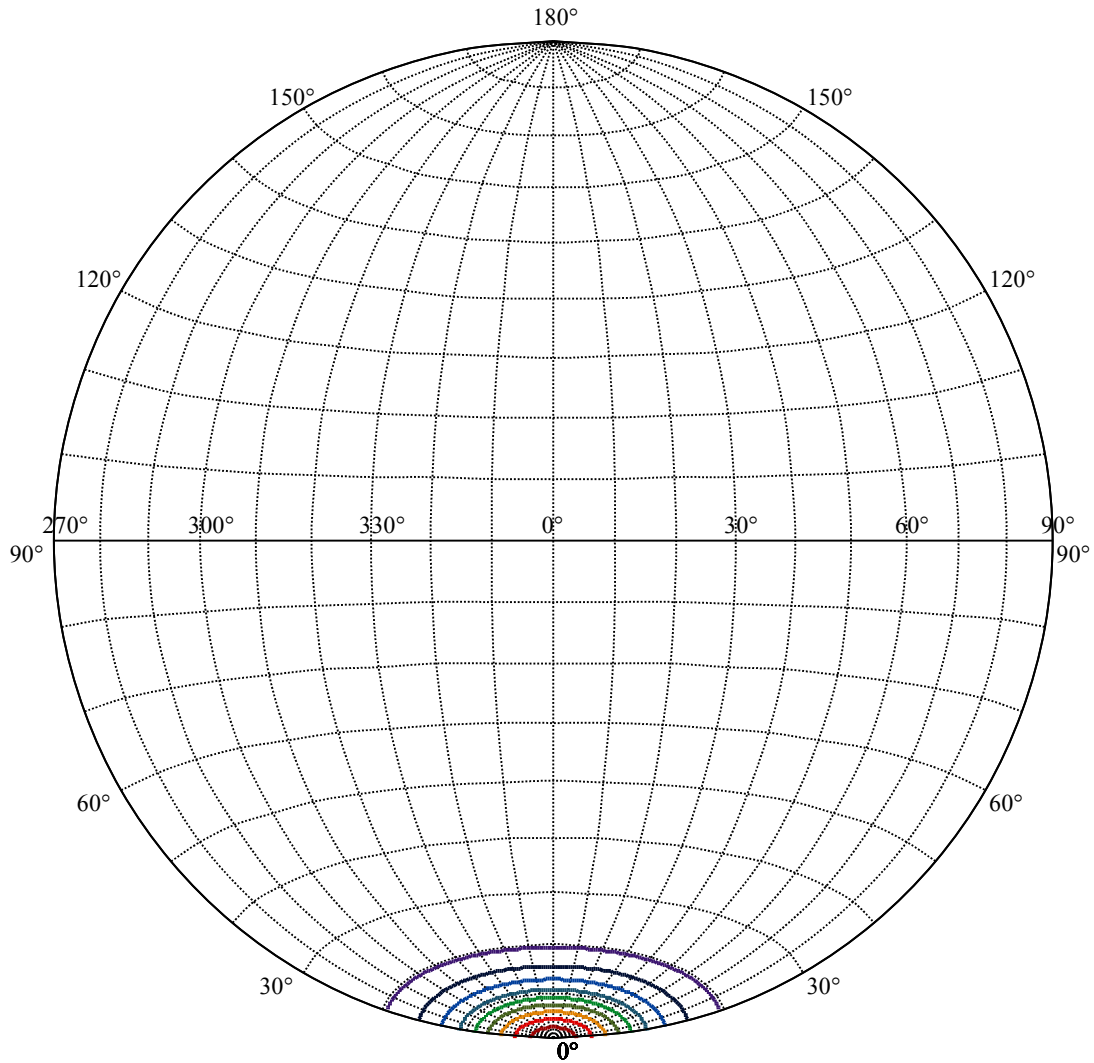
C0(Max): ———
C0/C180: ———
C90/C270: ———

Field angle(10%Imax):C0/180Left:19.5 Right:19.5
:C90/270Left:19.5 Right:19.5

Beam Angle(50%Imax):C0/180Left:9.0 Right:9.0
:C90/270Left:9.0 Right:9.0



(10%Imax) 594.619	—
(20%Imax) 1189.24	—
(30%Imax) 1783.86	—
(40%Imax) 2378.48	—
(50%Imax) 2973.09	—
(60%Imax) 3567.71	—
(70%Imax) 4162.33	—
(80%Imax) 4756.95	—
(90%Imax) 5351.57	—



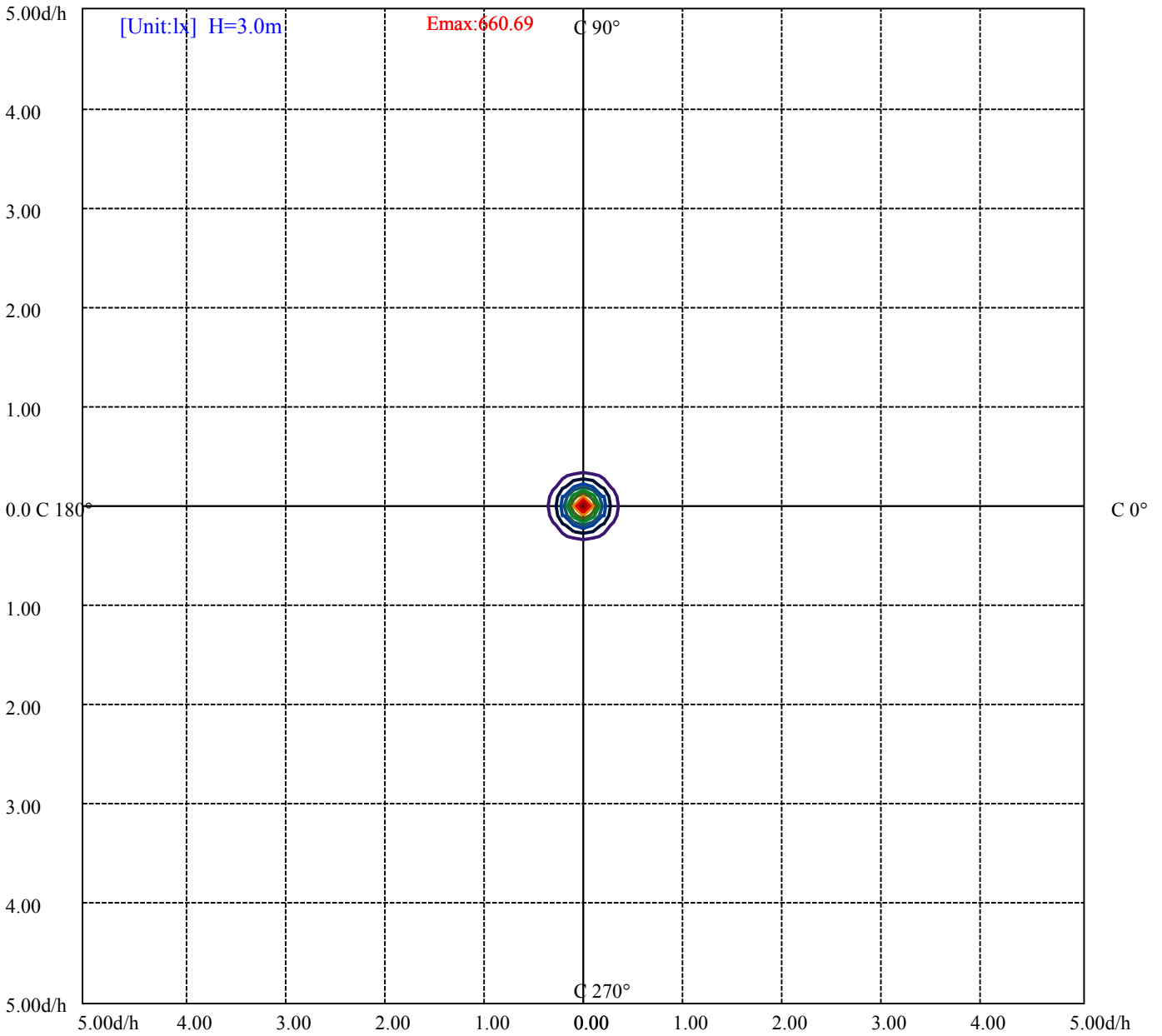
House

[Unit:cd]

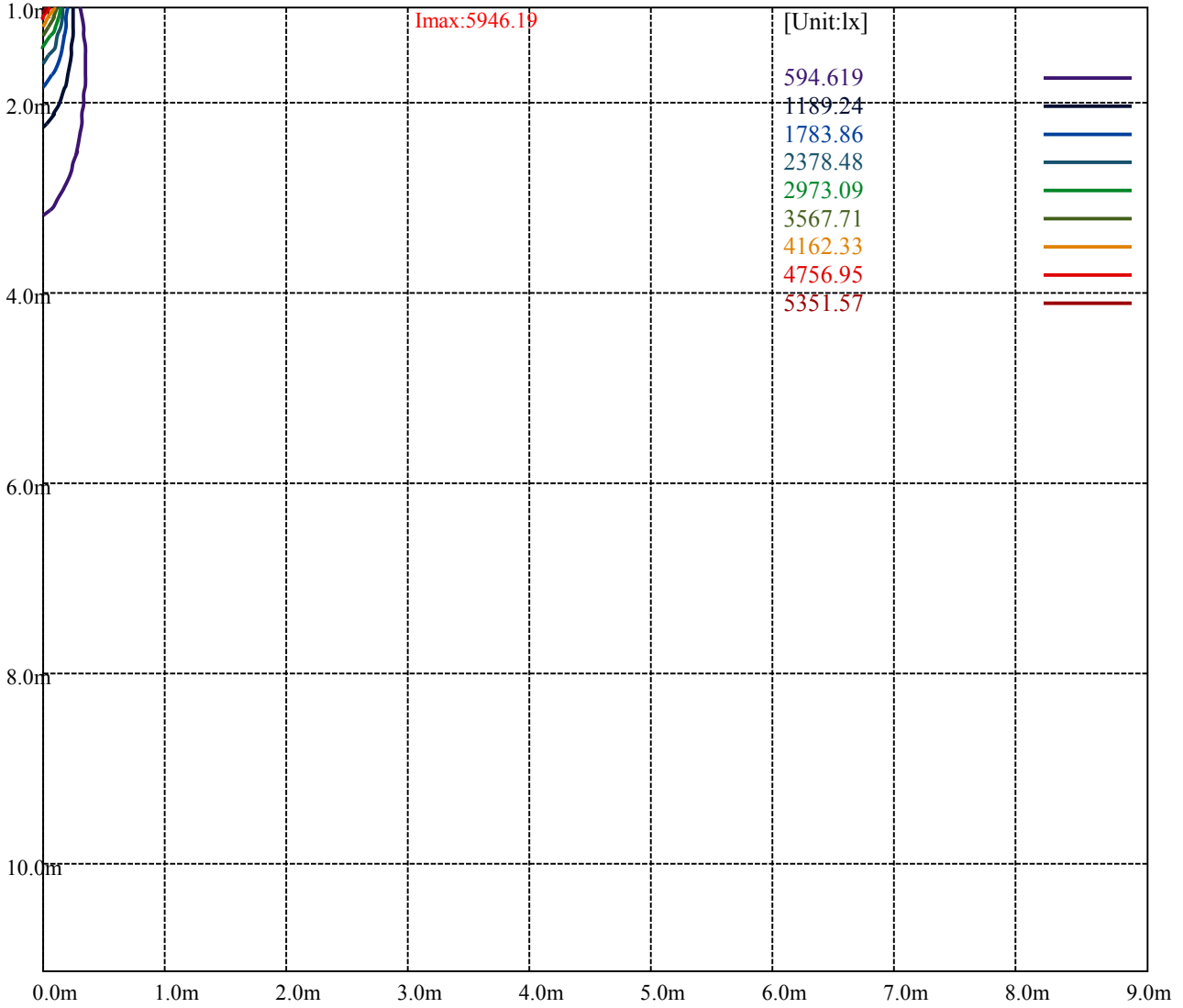
Road

Imax:5946.19

(10%Imax) 594.619	—
(20%Imax) 1189.24	—
(30%Imax) 1783.86	—
(40%Imax) 2378.48	—
(50%Imax) 2973.09	—
(60%Imax) 3567.71	—
(70%Imax) 4162.33	—
(80%Imax) 4756.95	—
(90%Imax) 5351.57	—



(10%Emax) 66.06856	—
(20%Emax) 132.1367	—
(30%Emax) 198.2056	—
(40%Emax) 264.2744	—
(50%Emax) 330.3434	—
(60%Emax) 396.4111	—
(70%Emax) 462.48	—
(80%Emax) 528.5489	—
(90%Emax) 594.6178	—



Luminance Table

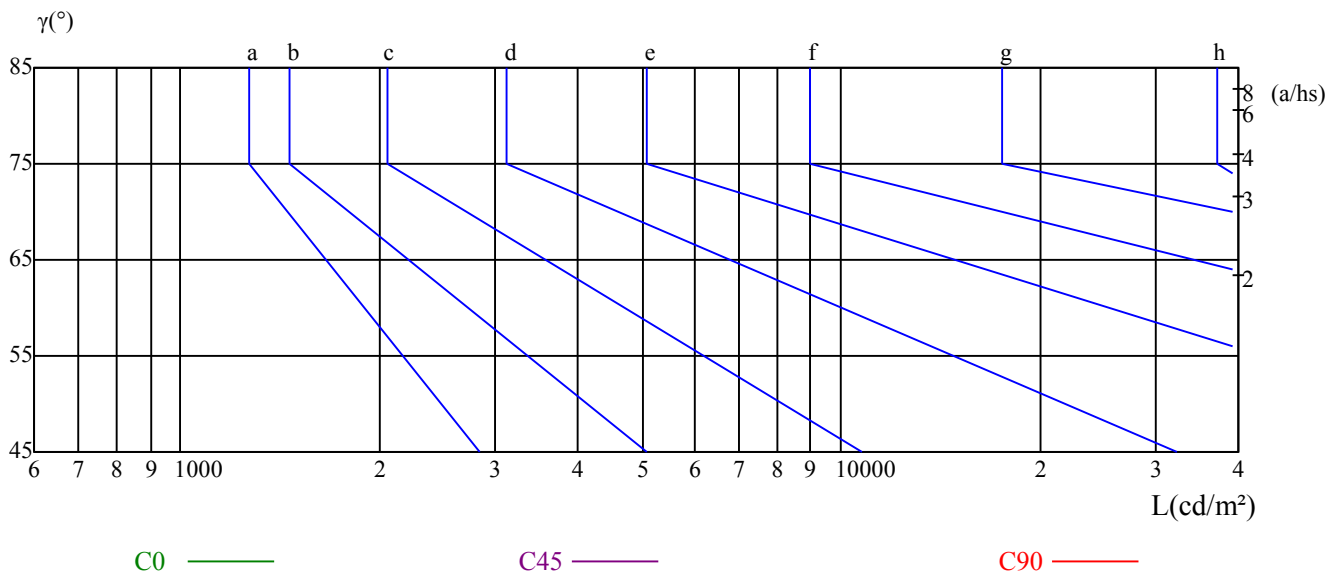
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

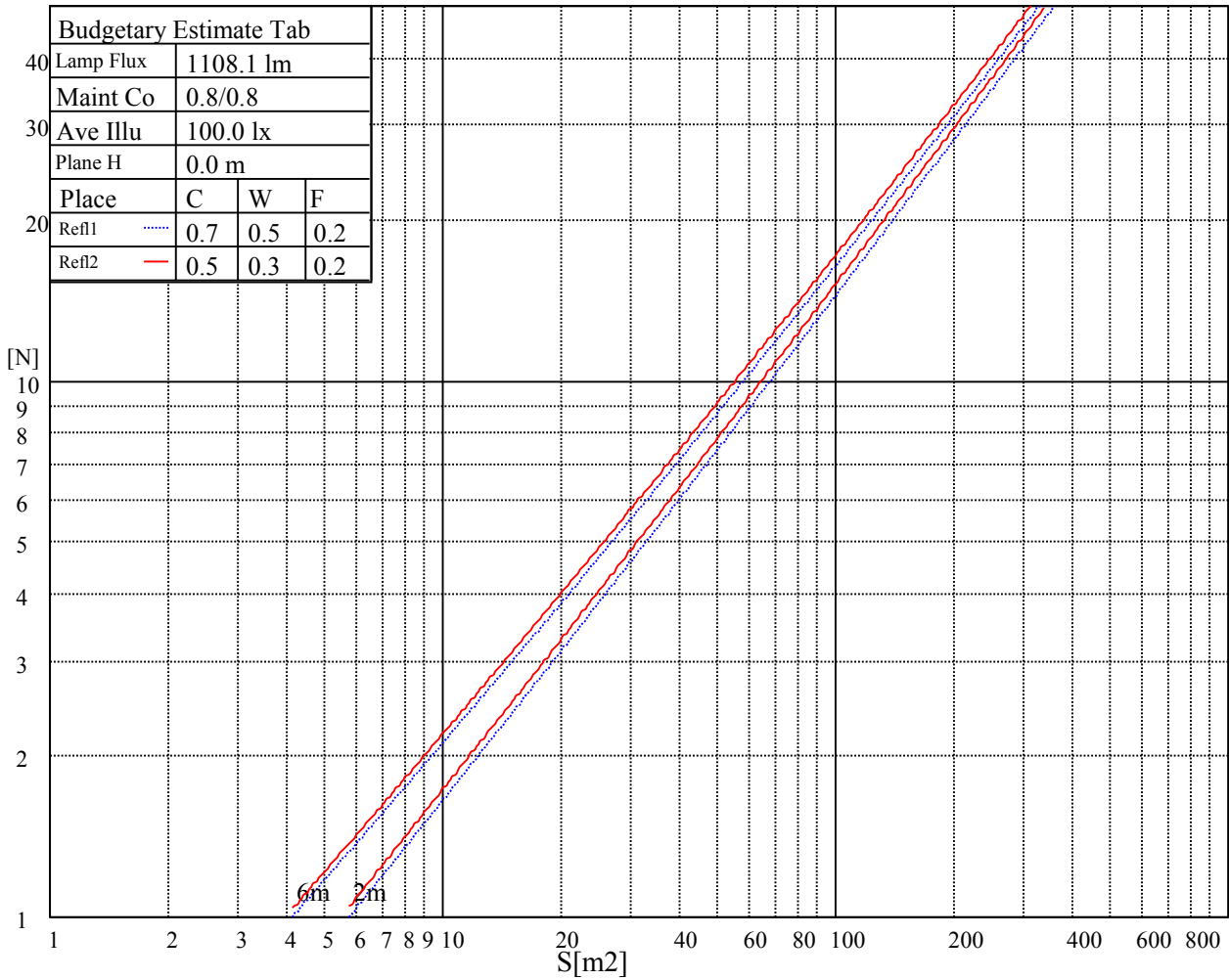
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

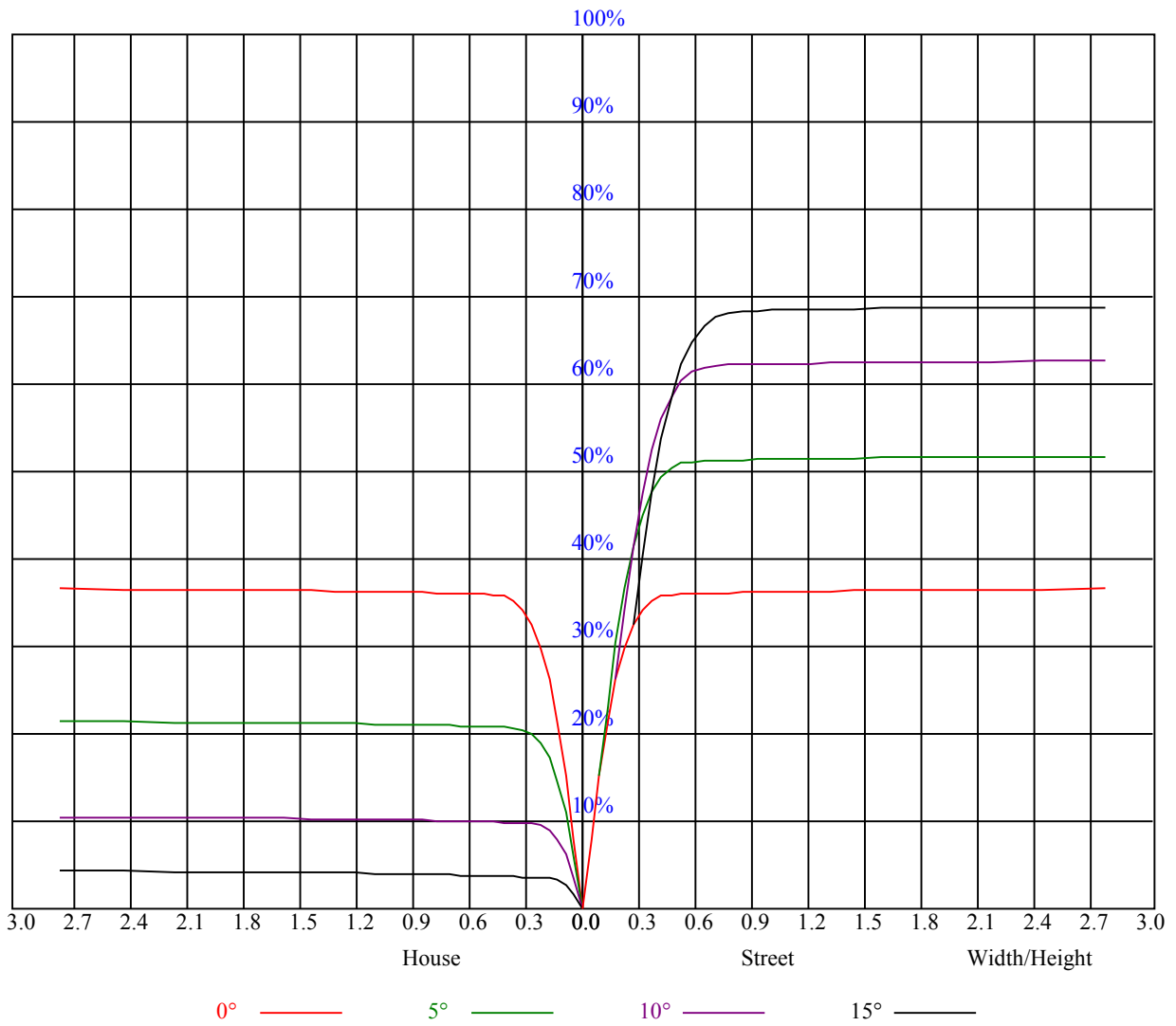
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

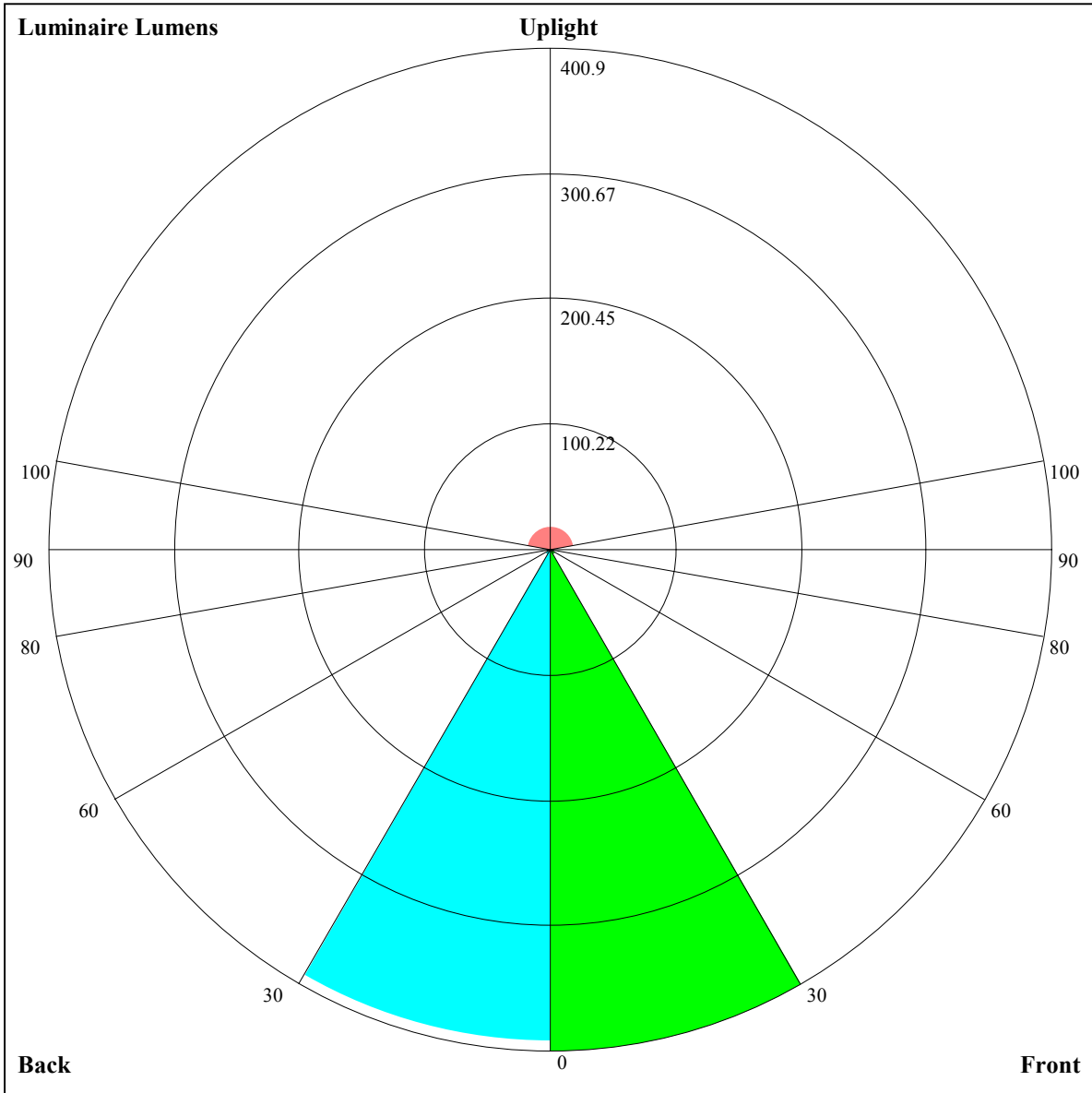
Luminance Limiting Curve





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	0.83	0.82	0.81	0.82	0.80	0.79	0.79	0.78	0.77	0.76	0.75	0.75	0.74	0.73	0.73	0.71
2	0.80	0.78	0.76	0.79	0.77	0.75	0.76	0.75	0.73	0.74	0.73	0.72	0.72	0.71	0.70	0.69
3	0.77	0.74	0.72	0.76	0.74	0.72	0.74	0.72	0.71	0.72	0.71	0.70	0.71	0.70	0.69	0.68
4	0.74	0.72	0.69	0.73	0.71	0.69	0.72	0.70	0.68	0.71	0.69	0.68	0.69	0.68	0.67	0.66
5	0.72	0.69	0.67	0.71	0.69	0.67	0.70	0.68	0.66	0.69	0.67	0.66	0.68	0.67	0.65	0.64
6	0.70	0.67	0.65	0.69	0.67	0.65	0.69	0.66	0.65	0.68	0.66	0.64	0.67	0.65	0.64	0.63
7	0.68	0.65	0.64	0.68	0.65	0.63	0.67	0.65	0.63	0.66	0.64	0.63	0.66	0.64	0.62	0.62
8	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.63	0.62	0.65	0.63	0.61	0.64	0.63	0.61	0.61
9	0.65	0.62	0.61	0.65	0.62	0.61	0.64	0.62	0.60	0.64	0.62	0.60	0.63	0.61	0.60	0.59
10	0.64	0.61	0.59	0.63	0.61	0.59	0.63	0.61	0.59	0.63	0.60	0.59	0.62	0.60	0.59	0.58





Luminaire Lumens:

FL=400.9,FM=5.41,FH=4.1,FVH=2.04

BL=393.17,BM=5.43,BH=4.12,BVH=2.05

UL=4.04,UH=19.2

BUG Rating:B1-U2-G0

NATA 1-1008-M

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	5936.06	5907.38	5673.38	5366.25	5001.19	4689.00	4311.00	3893.63	3501.00
45.0	5946.19	5906.81	5643.56	5254.31	4965.19	4671.00	4312.69	3936.38	3542.06
90.0	5940.56	5787.00	5463.56	5086.13	4779.00	4443.19	4056.19	3674.25	3247.88
135.0	5961.94	5894.44	5632.88	5313.94	4960.13	4586.63	4219.88	3860.44	3437.44
180.0	5936.06	5794.31	5486.06	5103.56	4766.63	4454.44	4026.38	3649.50	3271.50
225.0	5946.19	5754.94	5416.31	5040.00	4731.75	4429.69	4086.00	3612.38	3233.25
270.0	5940.56	5927.06	5640.19	5311.13	4993.31	4653.00	4284.56	3918.94	3478.50
315.0	5961.94	5861.25	5552.44	5244.19	4904.44	4470.19	4119.75	3733.31	3341.81
360.0	5936.06	5907.38	5673.38	5366.25	5001.19	4689.00	4311.00	3893.63	3501.00
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3122.44	2696.63	2394.56	2119.50	1830.94	1573.31	1368.00	1181.25	972.00
45.0	3079.13	2744.44	2436.75	2161.13	1840.50	1613.81	1409.63	1182.94	1016.44
90.0	2896.88	2550.38	2202.19	1977.75	1712.25	1454.63	1228.50	1115.55	917.78
135.0	3078.56	2711.25	2378.25	2111.06	1830.94	1583.44	1389.38	1211.63	1009.69
180.0	2874.38	2521.13	2240.44	1952.44	1721.25	1487.81	1222.31	1108.18	931.84
225.0	2885.06	2493.00	2215.69	1957.50	1690.88	1459.13	1097.21	1076.74	918.28
270.0	3060.00	2721.38	2382.19	2109.94	1825.31	1571.06	1369.69	1184.06	978.19
315.0	2926.13	2556.56	2262.94	1959.75	1684.69	1469.25	1118.87	1076.01	896.79
360.0	3122.44	2696.63	2394.56	2119.50	1830.94	1573.31	1368.00	1181.25	972.00
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	823.50	665.44	538.88	407.25	315.00	231.02	109.52	55.01	19.80
45.0	863.44	701.44	549.00	424.69	309.94	290.81	125.04	56.59	24.02
90.0	773.89	632.42	508.11	363.99	261.73	176.63	91.29	39.38	17.66
135.0	857.81	713.25	567.56	425.81	305.44	238.73	113.57	57.49	22.61
180.0	773.33	633.09	504.28	358.99	257.01	171.11	86.91	40.50	15.92
225.0	765.73	615.83	483.64	351.73	257.85	169.93	94.95	34.03	14.34
270.0	835.31	698.63	539.44	421.88	311.63	286.31	120.49	60.08	20.08
315.0	738.79	605.87	481.78	337.39	238.50	154.41	73.97	31.22	14.63
360.0	823.50	665.44	538.88	407.25	315.00	231.02	109.52	55.01	19.80
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	11.81	9.39	8.21	7.59	6.98	6.53	6.19	5.91	5.57
45.0	12.83	9.51	7.93	7.31	6.75	6.30	6.08	5.74	5.51
90.0	11.59	8.83	7.54	6.92	6.53	6.19	5.85	5.63	5.40
135.0	12.77	9.00	7.76	7.20	6.75	6.30	6.08	5.85	5.57
180.0	10.24	8.33	7.59	7.03	6.58	6.24	5.91	5.68	5.51
225.0	10.52	8.83	7.99	7.37	6.86	6.41	6.08	5.79	5.51
270.0	11.19	9.06	8.21	7.43	6.86	6.47	6.13	5.85	5.51
315.0	10.13	8.61	7.88	7.26	6.75	6.36	5.96	5.74	5.51
360.0	11.81	9.39	8.21	7.59	6.98	6.53	6.19	5.91	5.57
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	5.40	5.23	5.12	4.95	4.84	4.78	4.73	4.61	4.56
45.0	5.34	5.23	5.06	4.95	4.84	4.78	4.67	4.61	4.56
90.0	5.23	5.12	5.01	4.84	4.78	4.73	4.67	4.56	4.56
135.0	5.40	5.29	5.18	5.06	4.95	4.89	4.78	4.73	4.67
180.0	5.29	5.18	5.06	4.95	4.89	4.78	4.73	4.67	4.56
225.0	5.29	5.18	5.01	4.89	4.78	4.73	4.67	4.56	4.50
270.0	5.34	5.18	5.01	4.89	4.78	4.73	4.67	4.61	4.56
315.0	5.29	5.18	5.01	4.89	4.78	4.78	4.67	4.61	4.56
360.0	5.40	5.23	5.12	4.95	4.84	4.78	4.73	4.61	4.56

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	4.50	4.44	4.44	4.39	4.39	4.33	4.33	4.28	4.28
45.0	4.50	4.44	4.39	4.39	4.33	4.28	4.28	4.22	4.22
90.0	4.50	4.44	4.44	4.39	4.39	4.33	4.28	4.28	4.22
135.0	4.61	4.61	4.56	4.56	4.50	4.44	4.39	4.39	4.39
180.0	4.56	4.50	4.44	4.44	4.39	4.33	4.33	4.33	4.28
225.0	4.44	4.39	4.39	4.33	4.33	4.28	4.22	4.22	4.16
270.0	4.50	4.44	4.39	4.33	4.33	4.28	4.28	4.22	4.22
315.0	4.50	4.44	4.44	4.39	4.39	4.33	4.33	4.28	4.28
360.0	4.50	4.44	4.44	4.39	4.39	4.33	4.33	4.28	4.28
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	4.22	4.22	4.22	4.16	4.16	4.16	4.11	4.11	4.11
45.0	4.22	4.16	4.11	4.11	4.11	4.05	4.05	4.05	3.99
90.0	4.22	4.22	4.22	4.16	4.16	4.11	4.11	4.11	4.05
135.0	4.33	4.33	4.33	4.33	4.33	4.28	4.28	4.28	4.28
180.0	4.22	4.22	4.22	4.16	4.22	4.16	4.16	4.11	4.11
225.0	4.16	4.11	4.11	4.05	4.05	4.05	4.05	3.99	3.99
270.0	4.16	4.16	4.16	4.11	4.11	4.11	4.05	4.05	4.05
315.0	4.28	4.28	4.28	4.28	4.22	4.22	4.22	4.22	4.22
360.0	4.22	4.22	4.22	4.16	4.16	4.16	4.11	4.11	4.11
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.11	4.11	4.05	4.11	4.05	4.05	4.05	4.05	4.05
45.0	3.99	3.99	3.94	3.94	3.94	3.88	3.88	3.88	3.88
90.0	4.05	4.05	4.05	3.99	3.99	3.99	3.99	3.94	3.94
135.0	4.22	4.28	4.28	4.22	4.22	4.22	4.22	4.22	4.22
180.0	4.11	4.11	4.11	4.05	4.05	4.05	4.05	4.05	3.99
225.0	3.94	3.94	3.94	3.94	3.94	3.94	3.88	3.88	3.88
270.0	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.94
315.0	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.28
360.0	4.11	4.11	4.05	4.11	4.05	4.05	4.05	4.05	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	4.05	3.99	3.99	3.99	3.99	3.99	3.94	3.88
45.0	3.88	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.77
90.0	3.94	3.99	3.94	3.88	3.88	3.88	3.88	3.83	3.83
135.0	4.22	4.28	4.39	4.39	4.22	4.11	4.05	4.05	3.88
180.0	3.99	3.99	3.99	4.05	3.99	3.99	3.99	3.99	3.94
225.0	3.88	3.88	3.88	3.83	3.83	3.83	3.83	3.83	3.83
270.0	3.88	3.94	3.94	3.88	3.88	3.88	3.88	3.83	3.83
315.0	4.22	4.33	4.39	4.28	4.16	4.11	3.99	3.94	3.77
360.0	4.05	4.05	3.99	3.99	3.99	3.99	3.99	3.94	3.88
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	3.77	3.77	3.71	3.77	3.77	3.71	3.83	3.71	3.71
45.0	3.83	3.77	3.77	3.77	3.77	3.71	3.71	3.71	3.71
90.0	3.83	3.77	3.77	3.71	3.71	3.71	3.71	3.66	3.71
135.0	3.77	3.77	3.77	3.77	3.77	3.71	3.71	3.71	3.71
180.0	3.88	3.83	3.77	3.77	3.77	3.71	3.71	3.71	3.66
225.0	3.77	3.83	3.77	3.77	3.77	3.71	3.71	3.71	3.66
270.0	3.77	3.77	3.83	3.77	3.77	3.77	3.71	3.66	3.66
315.0	3.77	3.77	3.77	3.77	3.77	3.77	3.71	3.71	3.71
360.0	3.77	3.77	3.71	3.77	3.77	3.71	3.83	3.71	3.71

Intensity data(cd)

C/γ(°)	90.0
0.0	3.71
45.0	3.71
90.0	3.66
135.0	3.66
180.0	3.71
225.0	3.71
270.0	3.71
315.0	3.71
360.0	3.71