



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

NT

Client: NT

LumCAT: 62-0083-1

Luminaire: 92.70.429.00

Report No: 20250326-B003

Ballast type: AC

Test No: 20250326-C003

Voltage(V): 34.920

LampCAT: CREE CXA1820

Current(A): 0.450

Lamp flux(lm): 2300.1

Power (W): 15.710

Number of Lamps: 1

PF: 0.000

Length(mm): 62

Width(mm): 62

Phm Type: C

Height(mm): 33

Photometric Results

Lumens(lm): 2084.28, Efficiency(%): 90.62% , Luminous Efficacy(lm/W): 132.67

Central intensity(cd): 12626.430, Maximum intensity(cd): 12626.430

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=19.6

[C90/270]Total=19.6

Field angle(10%Imax): [C0/180]Total=38.2

[C90/270]Total=38.2

Maximum s/h(1/2): C0_180=0.34 C90_270=0.34

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(%): 90.62%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.521%

Equipment: GMS 1800
Temperature($^{\circ}$ C): 25.0

Date: 2025/3/26
Humidity(%): 60.0%

Operator: NT
Distance(m): 7.30

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	12626.426	0.000	0	0.00%	0.00%
1.0	12580.463	12.061	12.061	0.52%	0.58%
2.0	12425.922	35.892	47.953	1.56%	2.30%
3.0	11948.910	58.297	106.249	2.53%	5.10%
4.0	11325.217	77.906	184.155	3.39%	8.84%
5.0	10758.745	95.004	279.159	4.13%	13.39%
6.0	10052.452	109.368	388.528	4.75%	18.64%
7.0	9038.344	118.496	507.024	5.15%	24.33%
8.0	8121.423	122.809	629.833	5.34%	30.22%
9.0	7050.893	122.963	752.796	5.35%	36.12%
10.0	6165.680	119.605	872.401	5.20%	41.86%
11.0	5298.118	114.547	986.948	4.98%	47.35%
12.0	4483.314	106.925	1093.873	4.65%	52.48%
13.0	3805.199	98.364	1192.237	4.28%	57.20%
14.0	3218.743	89.906	1282.143	3.91%	61.52%
15.0	2735.203	81.738	1363.881	3.55%	65.44%
16.0	2424.655	75.606	1439.488	3.29%	69.06%
17.0	2030.309	69.376	1508.864	3.02%	72.39%
18.0	1580.748	59.538	1568.402	2.59%	75.25%
19.0	1281.964	49.805	1618.207	2.17%	77.64%
20.0	1086.177	43.344	1661.551	1.88%	79.72%
21.0	942.240	38.950	1700.501	1.69%	81.59%
22.0	792.156	34.853	1735.354	1.52%	83.26%
23.0	668.357	30.645	1766	1.33%	84.73%
24.0	558.146	26.816	1792.815	1.17%	86.02%
25.0	474.021	23.469	1816.285	1.02%	87.14%
26.0	398.163	20.588	1836.873	0.90%	88.13%
27.0	333.908	17.910	1854.783	0.78%	88.99%
28.0	289.125	15.774	1870.557	0.69%	89.75%
29.0	257.031	14.289	1884.846	0.62%	90.43%
30.0	209.783	12.604	1897.45	0.55%	91.04%
31.0	182.865	10.927	1908.376	0.48%	91.56%
32.0	154.175	9.656	1918.032	0.42%	92.02%
33.0	135.823	8.543	1926.576	0.37%	92.43%
34.0	120.016	7.742	1934.318	0.34%	92.81%
35.0	107.926	7.079	1941.397	0.31%	93.14%
36.0	97.414	6.538	1947.935	0.28%	93.46%
37.0	89.267	6.089	1954.024	0.26%	93.75%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	83.705	5.774	1959.797	0.25%	94.03%
39.0	78.490	5.536	1965.333	0.24%	94.29%
40.0	74.599	5.339	1970.673	0.23%	94.55%
41.0	70.882	5.181	1975.853	0.23%	94.80%
42.0	68.205	5.053	1980.906	0.22%	95.04%
43.0	65.640	4.958	1985.864	0.22%	95.28%
44.0	63.495	4.874	1990.738	0.21%	95.51%
45.0	61.230	4.793	1995.532	0.21%	95.74%
46.0	59.192	4.709	2000.241	0.20%	95.97%
47.0	57.160	4.628	2004.869	0.20%	96.19%
48.0	55.029	4.535	2009.404	0.20%	96.41%
49.0	52.977	4.435	2013.839	0.19%	96.62%
50.0	50.712	4.323	2018.162	0.19%	96.83%
51.0	48.547	4.200	2022.362	0.18%	97.03%
52.0	46.429	4.075	2026.437	0.18%	97.22%
53.0	44.131	3.939	2030.377	0.17%	97.41%
54.0	41.873	3.791	2034.167	0.16%	97.60%
55.0	39.701	3.641	2037.809	0.16%	97.77%
56.0	37.270	3.478	2041.287	0.15%	97.94%
57.0	35.058	3.307	2044.594	0.14%	98.10%
58.0	32.667	3.132	2047.726	0.14%	98.25%
59.0	30.409	2.949	2050.674	0.13%	98.39%
60.0	28.224	2.770	2053.444	0.12%	98.52%
61.0	26.245	2.599	2056.044	0.11%	98.65%
62.0	24.393	2.440	2058.484	0.11%	98.76%
63.0	22.662	2.289	2060.772	0.10%	98.87%
64.0	21.043	2.145	2062.917	0.09%	98.98%
65.0	19.431	2.003	2064.92	0.09%	99.07%
66.0	17.939	1.865	2066.785	0.08%	99.16%
67.0	16.553	1.734	2068.519	0.08%	99.24%
68.0	15.254	1.611	2070.13	0.07%	99.32%
69.0	13.995	1.492	2071.622	0.06%	99.39%
70.0	12.943	1.383	2073.006	0.06%	99.46%
71.0	11.857	1.282	2074.288	0.06%	99.52%
72.0	10.938	1.185	2075.473	0.05%	99.58%
73.0	10.145	1.102	2076.575	0.05%	99.63%
74.0	9.366	1.026	2077.601	0.04%	99.68%
75.0	8.560	0.947	2078.548	0.04%	99.73%

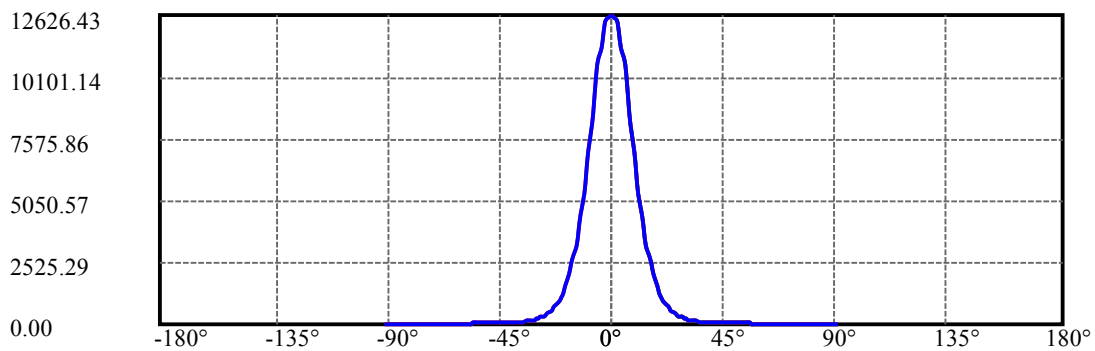
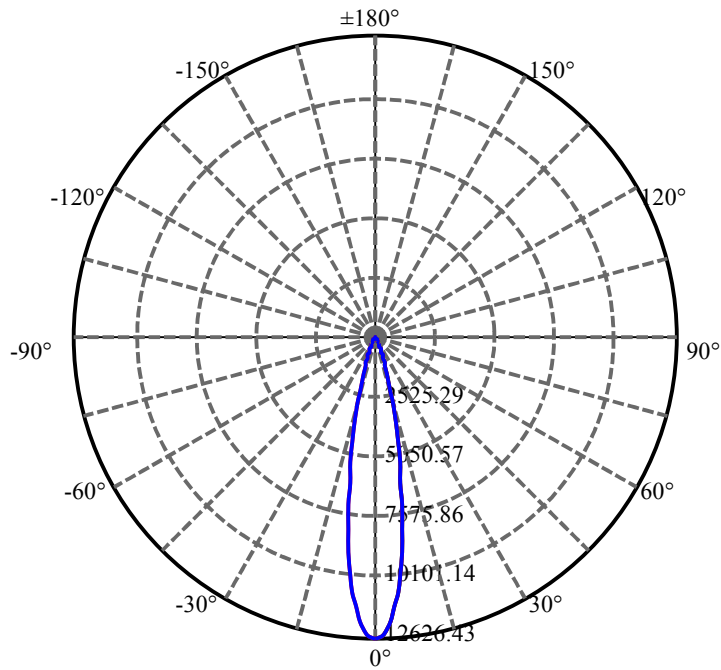
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.800	0.868	2079.417	0.04%	99.77%
77.0	7.021	0.790	2080.207	0.03%	99.80%
78.0	6.242	0.710	2080.917	0.03%	99.84%
79.0	5.496	0.631	2081.547	0.03%	99.87%
80.0	4.743	0.552	2082.099	0.02%	99.90%
81.0	4.103	0.478	2082.578	0.02%	99.92%
82.0	3.404	0.407	2082.985	0.02%	99.94%
83.0	2.811	0.338	2083.323	0.01%	99.95%
84.0	2.225	0.274	2083.597	0.01%	99.97%
85.0	1.719	0.215	2083.812	0.01%	99.98%
86.0	1.192	0.159	2083.971	0.01%	99.99%
87.0	0.819	0.110	2084.082	0.00%	99.99%
88.0	0.626	0.079	2084.161	0.00%	99.99%
89.0	0.513	0.062	2084.223	0.00%	100.00%
90.0	0.460	0.053	2084.276	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1897.45	82.49%	91.04%
0-40	1970.67	85.68%	94.55%
0-60	2053.44	89.28%	98.52%
0-90	2084.22	90.61%	100.00%
0-120	2084.22	90.61%	100.00%
0-180	2084.28	90.62%	100.00%
60-90	30.78	1.34%	1.48%
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%
0-20.15	1667.42	72.49%	80.00%

ZONAL LUMEN SUMMARY

0-10	872.40
10-20	789.15
20-30	235.90
30-40	73.22
40-50	47.49
50-60	35.28
60-70	19.56
70-80	9.09
80-90	2.12
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



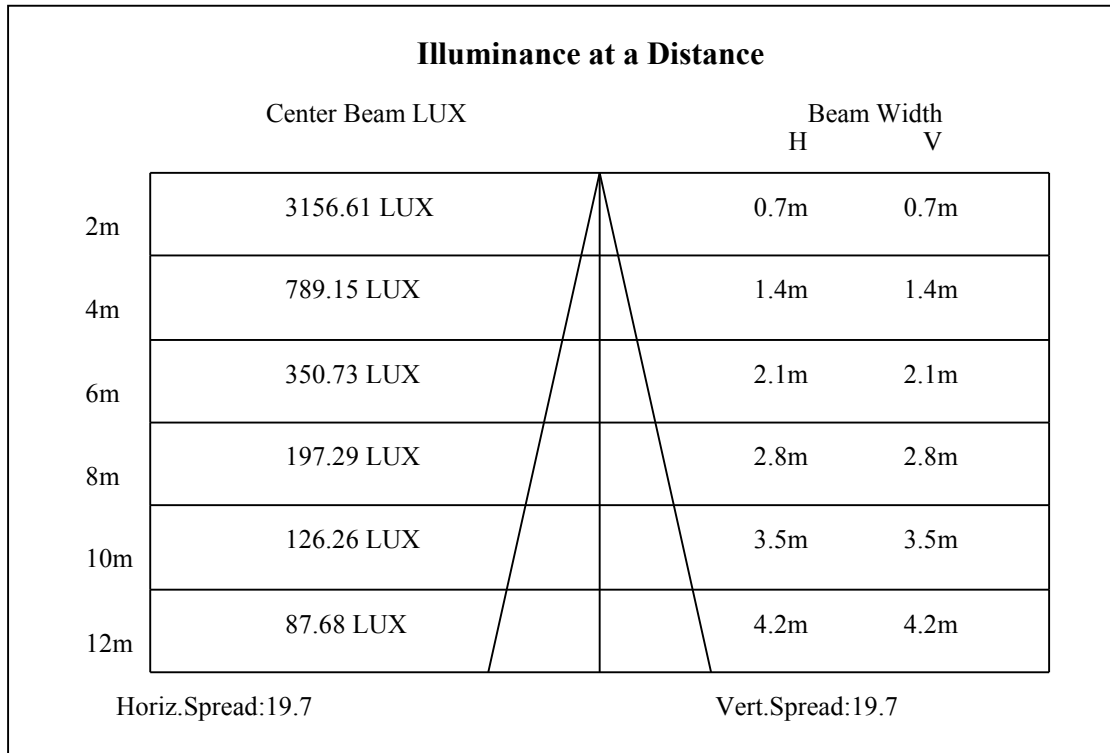
C0(Max): —————

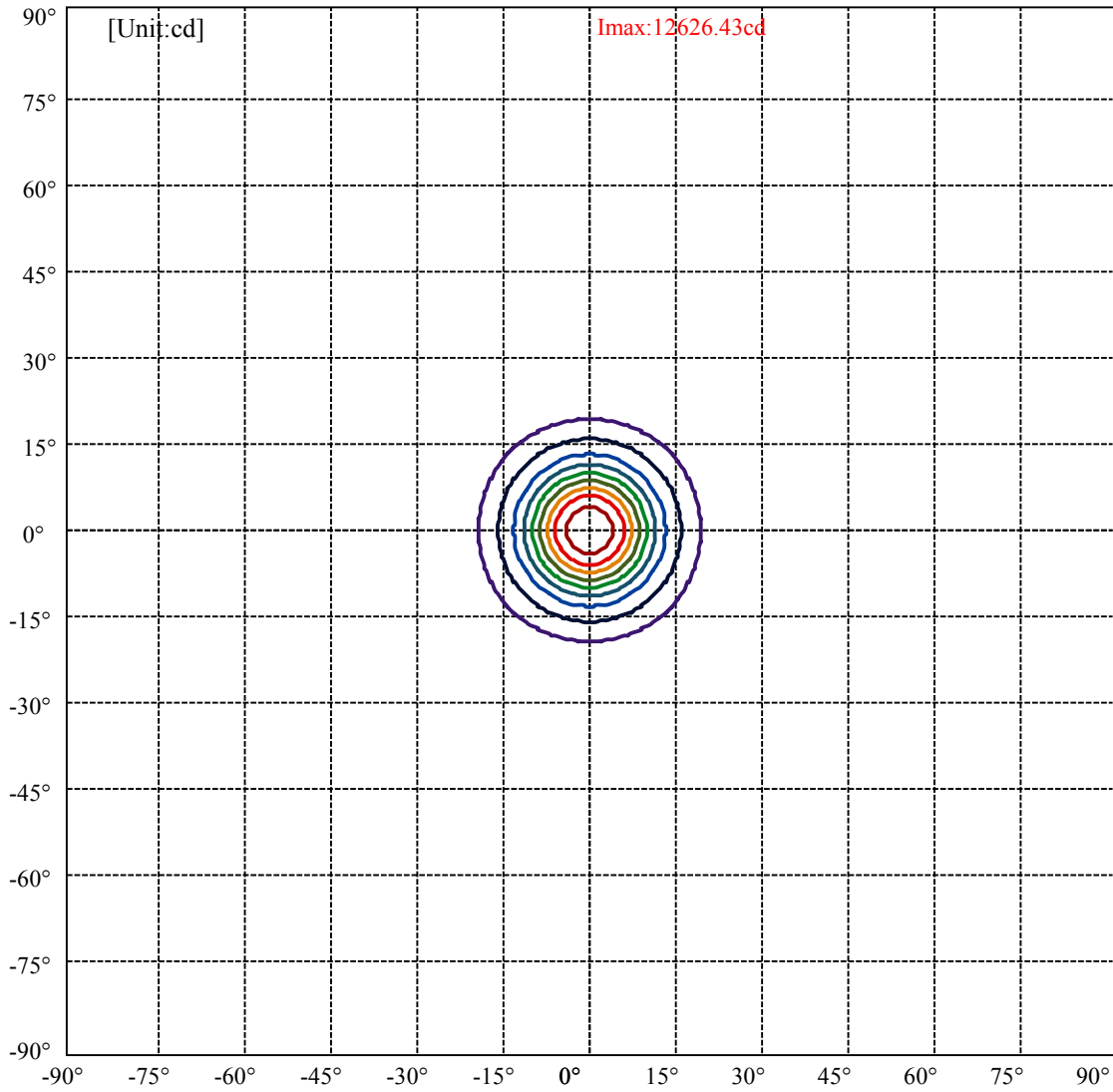
C0/C180: —————

C90/C270: —————

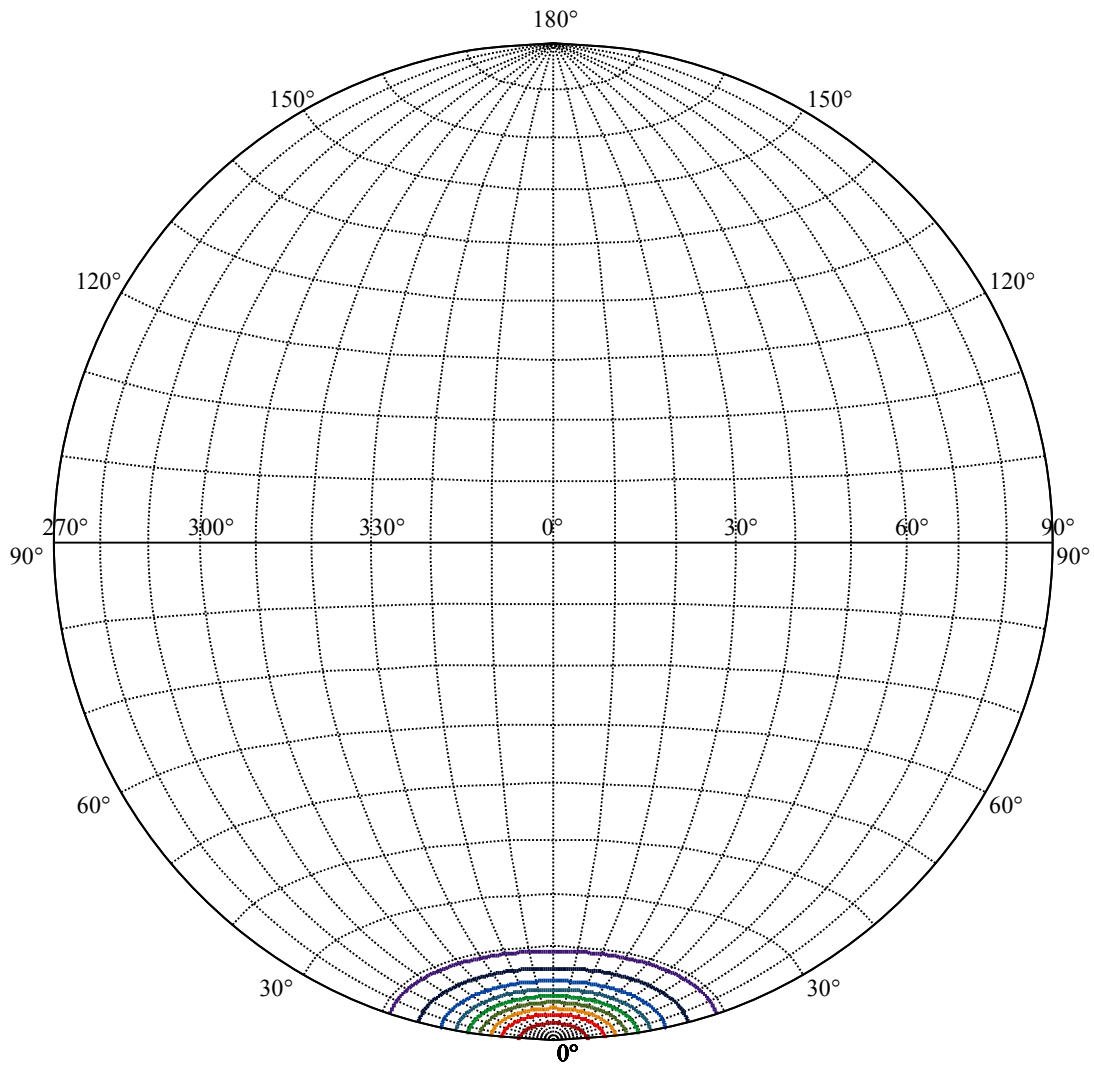
Field angle(10%Imax):C0/180Left:19.1 Right:19.1
:C90/270Left:19.1 Right:19.1

Beam Angle(50%Imax):C0/180Left:9.8 Right:9.8
:C90/270Left:9.8 Right:9.8





(10%Imax) 1262.64	—
(20%Imax) 2525.29	—
(30%Imax) 3787.93	—
(40%Imax) 5050.57	—
(50%Imax) 6313.21	—
(60%Imax) 7575.86	—
(70%Imax) 8838.5	—
(80%Imax) 10101.1	—
(90%Imax) 11363.8	—



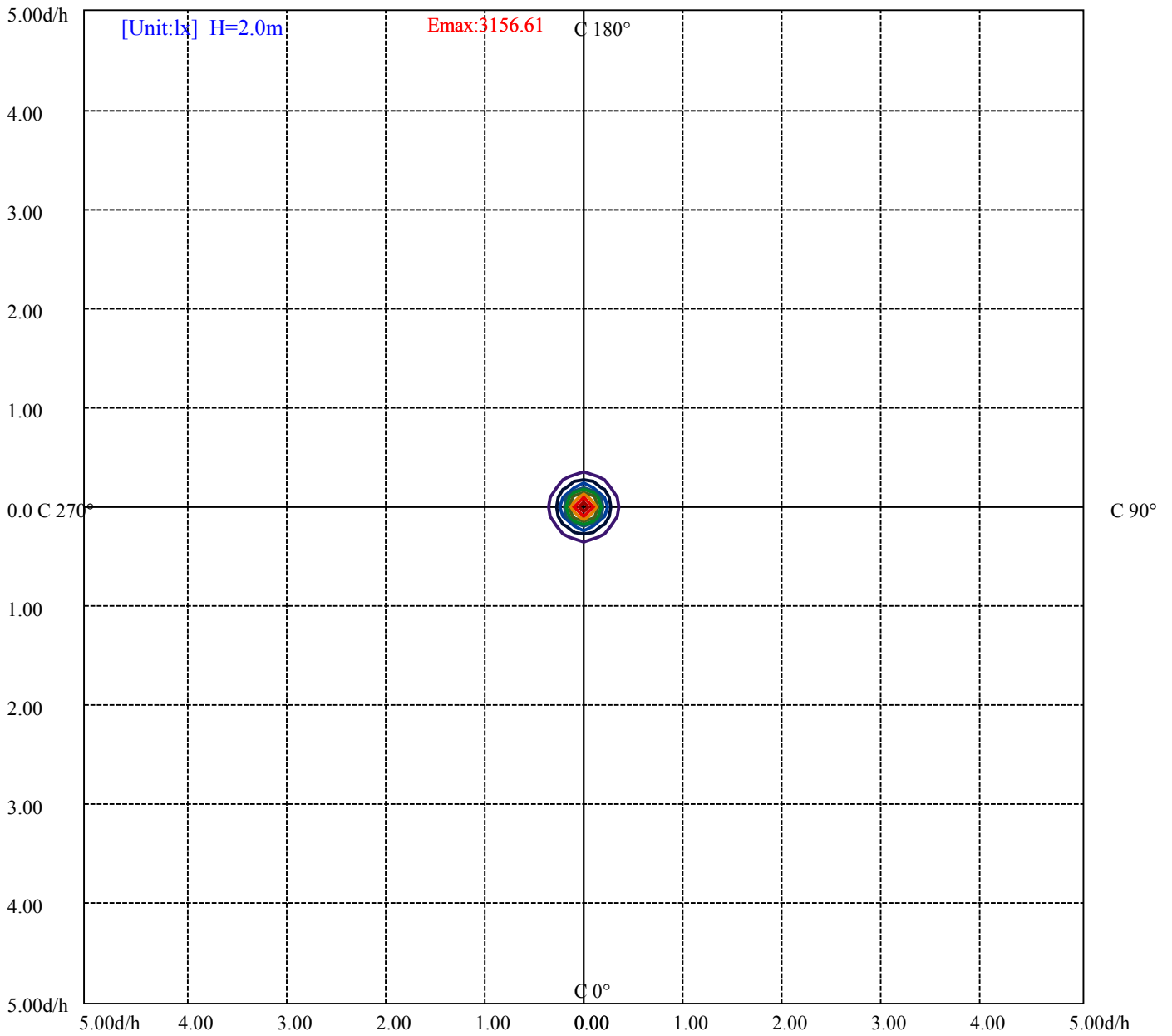
House










[Unit:cd]

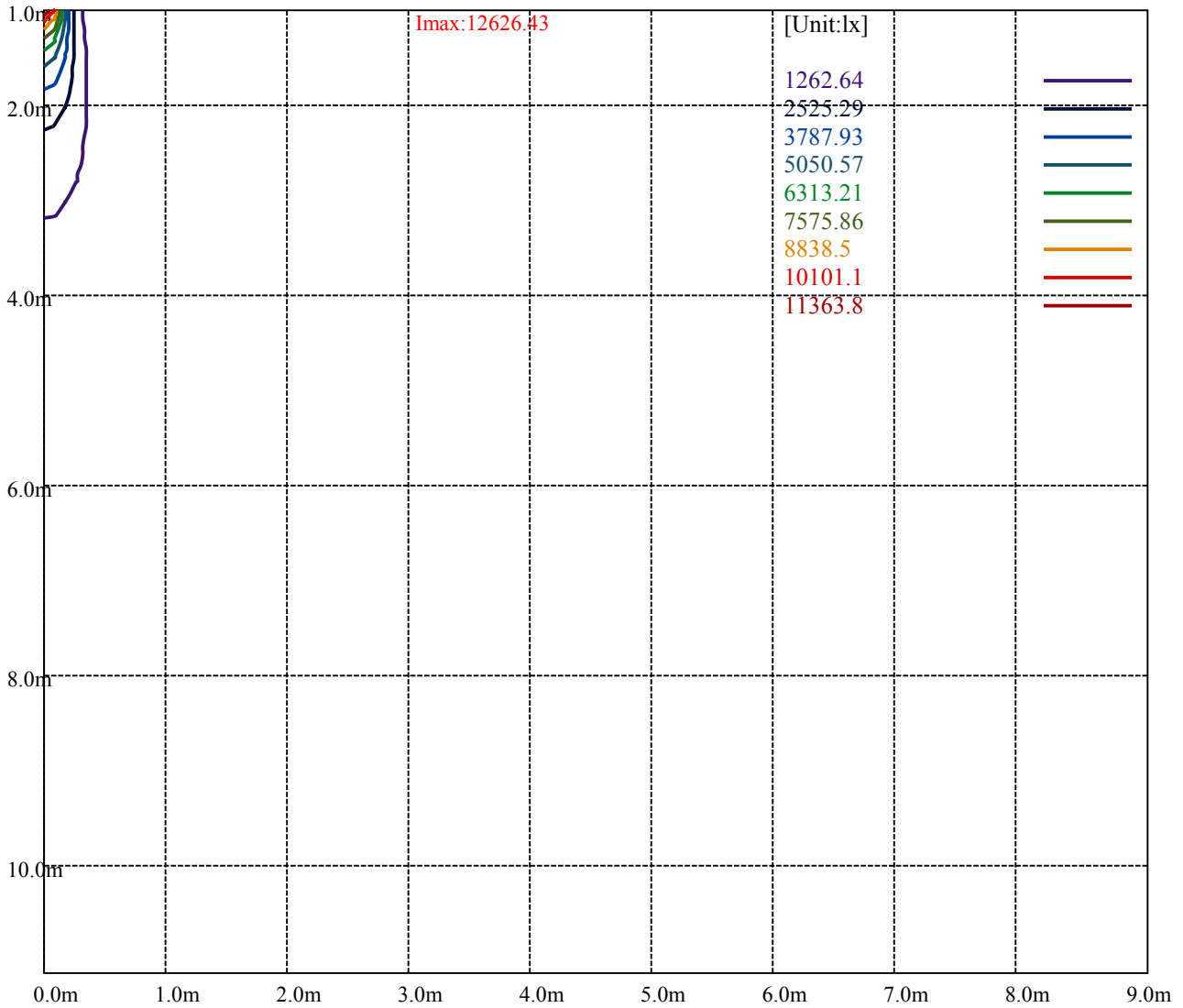
Road

Imax:12626.43

(10%Imax)	1262.64	—
(20%Imax)	2525.29	—
(30%Imax)	3787.93	—
(40%Imax)	5050.57	—
(50%Imax)	6313.21	—
(60%Imax)	7575.86	—
(70%Imax)	8838.5	—
(80%Imax)	10101.1	—
(90%Imax)	11363.8	—



(10%Emax) 315.66	
(20%Emax) 631.32	
(30%Emax) 946.9825	
(40%Emax) 1262.642	
(50%Emax) 1578.302	
(60%Emax) 1893.963	
(70%Emax) 2209.623	
(80%Emax) 2525.275	
(90%Emax) 2840.95	



Luminance Table

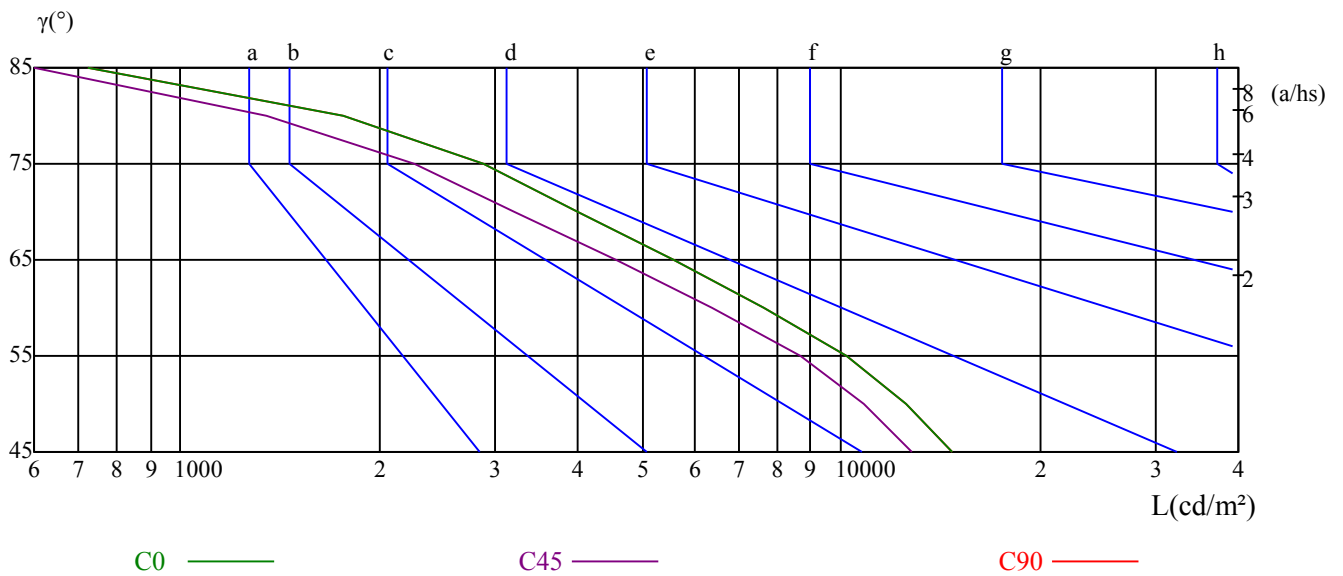
γ	45	50	55	60	65	70	75	80	85
C0	14702	12558	10230	7641	5585	3998	2881	1768	724
C45	12852	10819	8678	6374	4575	3209	2259	1349	534
C90	14702	12558	10230	7641	5585	3998	2881	1768	724

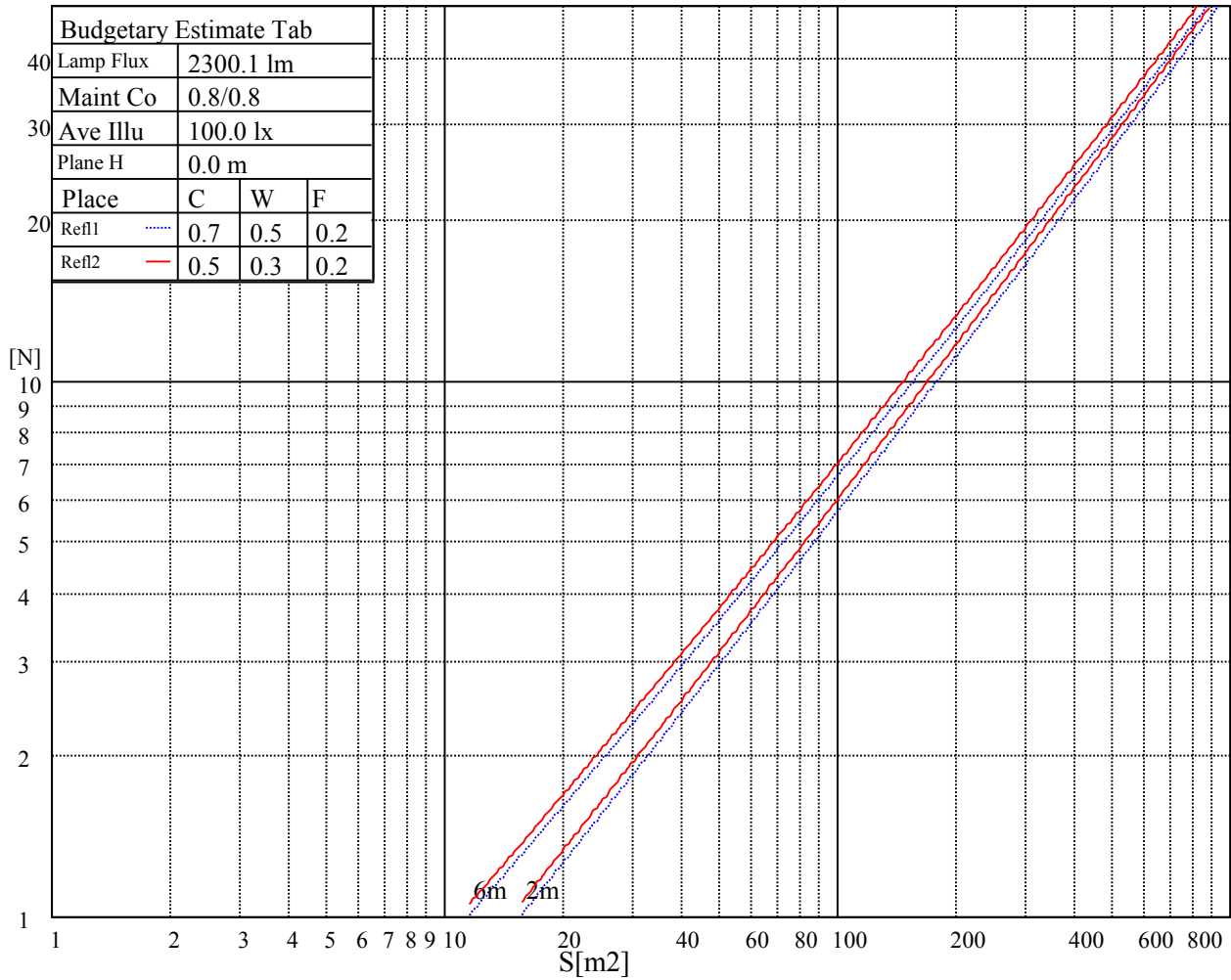
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
11961	11961	11961	8604	8604	8604	5130	5130	5130

Glare Table

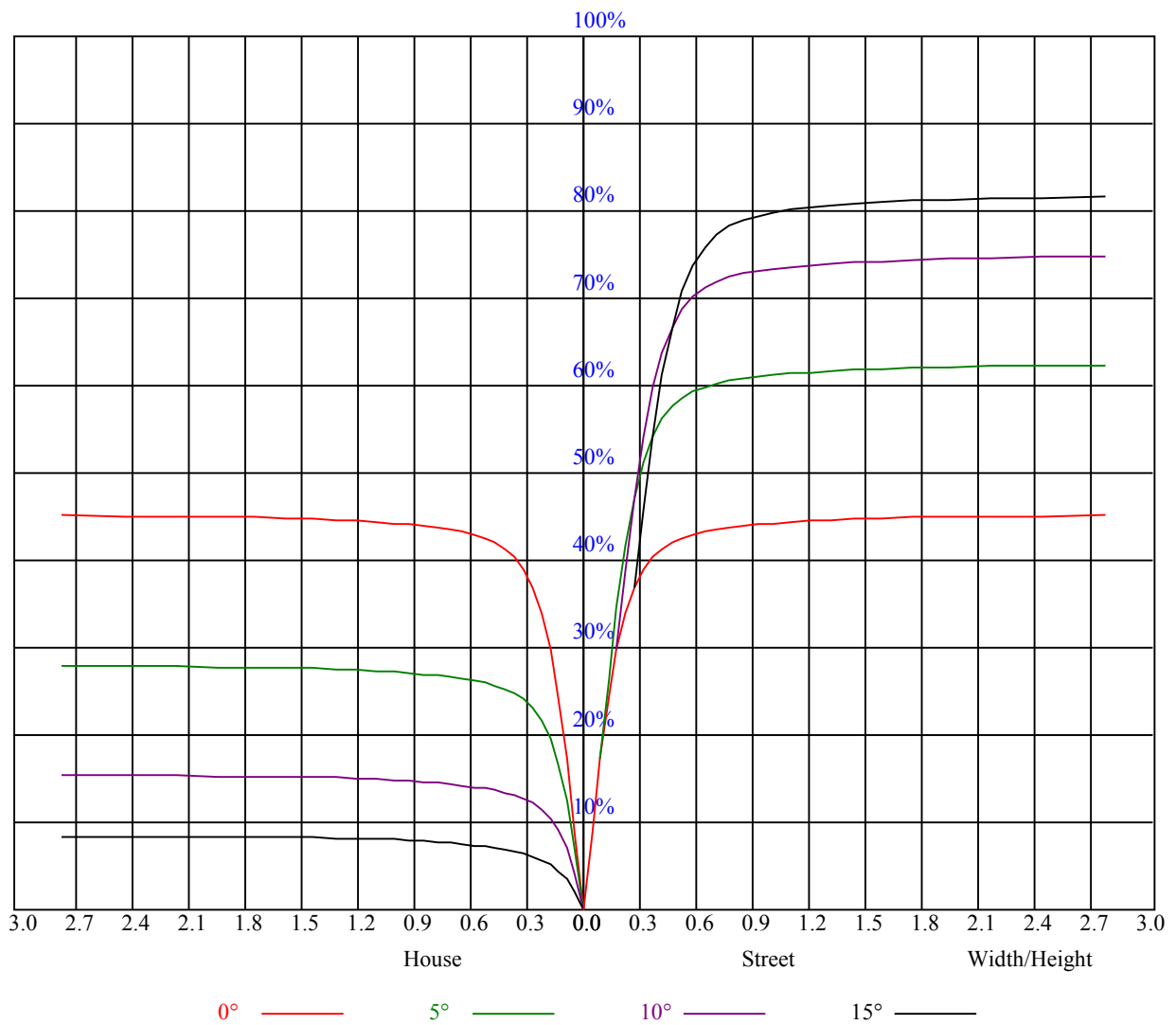
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

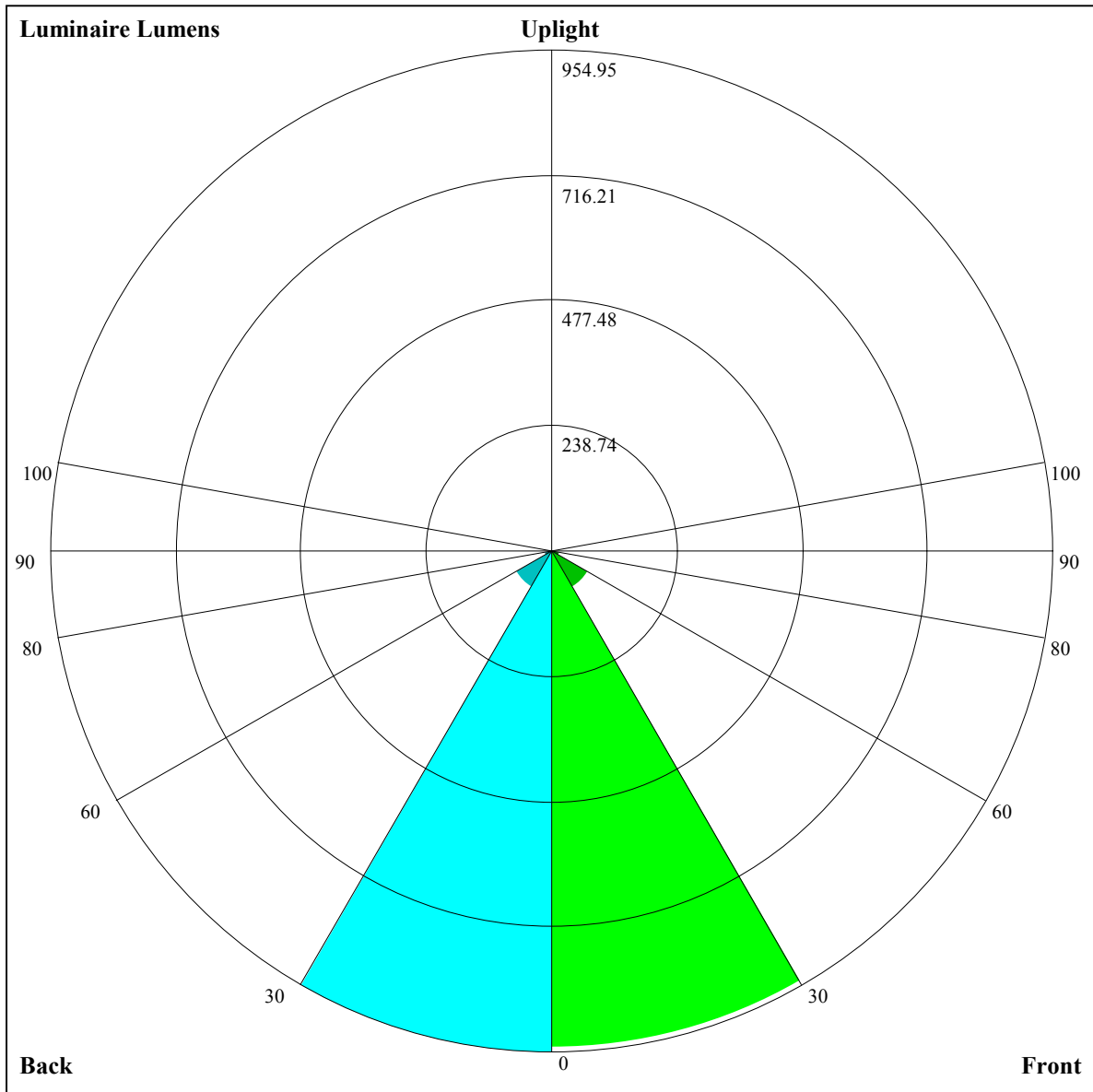
Luminance Limiting Curve





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	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.91
1	1.02	1.00	0.99	1.00	0.99	0.97	0.97	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.87
2	0.97	0.94	0.92	0.96	0.93	0.91	0.93	0.91	0.89	0.90	0.89	0.87	0.88	0.86	0.85	0.84
3	0.93	0.90	0.87	0.92	0.89	0.86	0.89	0.87	0.85	0.87	0.85	0.84	0.85	0.84	0.82	0.81
4	0.89	0.86	0.83	0.88	0.85	0.82	0.86	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.80	0.78
5	0.86	0.82	0.79	0.85	0.82	0.79	0.84	0.81	0.78	0.82	0.80	0.78	0.81	0.79	0.77	0.76
6	0.83	0.79	0.77	0.83	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.79	0.77	0.75	0.74
7	0.81	0.77	0.74	0.80	0.77	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.77	0.75	0.73	0.72
8	0.78	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.76	0.73	0.71	0.70
9	0.76	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.74	0.72	0.70	0.74	0.71	0.69	0.69
10	0.74	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.73	0.70	0.68	0.72	0.70	0.68	0.67





Luminaire Lumens:

FL=947.49,FM=77.86,FH=14.41,FVH=1.13

BL=954.95,BM=79.25,BH=14.35,BVH=1.1

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	12641.08	12550.49	12321.34	11900.35	10294.72	10294.72	9336.03	8315.00	7287.57
45.0	12630.42	12630.42	12539.83	12305.35	11873.70	11234.22	10440.20	9507.63	8516.43
90.0	12593.12	12427.92	12092.19	10450.33	10450.33	9713.86	8699.75	7640.88	7015.26
135.0	12641.08	12603.78	12481.21	11980.28	11623.24	10893.17	10008.55	9022.69	7962.22
180.0	12641.08	12635.75	12545.16	12337.33	11921.67	11266.20	10775.93	9486.31	8463.14
225.0	12630.42	12550.49	12321.34	11900.35	10434.87	10434.87	9880.13	8879.34	7841.78
270.0	12593.12	12641.08	12593.12	12438.58	12145.48	11879.03	10925.14	10061.84	9491.64
315.0	12641.08	12603.78	12513.18	12278.71	11857.72	10353.87	10353.87	9393.06	8393.33
360.0	12641.08	12550.49	12321.34	11900.35	10294.72	10294.72	9336.03	8315.00	7287.57
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	6263.33	5685.67	4825.57	3814.66	3437.36	2876.22	2395.01	1992.14	1655.88
45.0	7482.61	6470.10	5516.21	4690.21	3960.14	3325.99	2787.76	2787.76	2314.01
90.0	5636.11	4776.01	4326.24	3647.86	3070.20	2567.14	2143.48	1788.04	1492.28
135.0	6896.42	5878.58	4977.98	4210.60	3539.15	2958.29	2755.79	2755.79	1661.74
180.0	7834.32	6784.51	5787.99	4903.37	4146.65	3501.85	2936.97	2729.14	2633.22
225.0	6823.94	5864.72	4998.76	4236.71	3588.18	3030.76	2543.69	2129.10	1780.58
270.0	8106.10	7493.27	6502.07	5574.83	4764.82	4050.73	3427.24	2883.68	2686.51
315.0	7364.30	6372.58	5450.13	4788.27	3935.09	3438.96	2891.68	2331.60	2018.25
360.0	6263.33	5685.67	4825.57	3814.66	3437.36	2876.22	2395.01	1992.14	1655.88
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1251.41	1001.05	964.60	804.15	673.37	561.41	467.09	404.20	328.05
45.0	1691.05	1408.08	1172.01	975.90	811.77	675.88	564.50	468.58	390.78
90.0	1042.57	1042.57	864.68	720.43	599.78	498.21	413.48	355.87	296.19
135.0	1381.97	1238.62	1038.78	868.79	729.70	611.93	510.68	427.55	357.74
180.0	1725.69	1444.32	1213.57	1025.46	866.12	754.21	614.06	517.07	449.39
225.0	1549.30	1003.29	1003.29	938.81	795.19	675.40	570.15	484.19	408.68
270.0	2317.21	1709.17	1429.40	1201.32	1016.93	859.73	727.57	633.25	534.66
315.0	1686.79	1408.61	1003.08	1003.08	844.38	710.09	597.65	501.46	419.82
360.0	1251.41	1001.05	964.60	804.15	673.37	561.41	467.09	404.20	328.05
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	276.26	242.42	206.34	171.43	153.79	135.25	120.49	108.07	98.00
45.0	326.29	292.19	292.19	201.65	172.34	148.89	131.47	115.85	104.87
90.0	241.24	210.34	180.39	155.29	134.72	119.58	107.65	96.99	88.99
135.0	300.72	281.53	271.41	183.58	158.38	138.02	125.44	111.27	98.75
180.0	378.52	317.24	267.14	267.14	193.02	166.64	144.90	127.58	113.40
225.0	344.68	293.68	251.05	215.13	186.04	161.68	142.39	126.08	118.04
270.0	450.46	378.52	319.37	270.34	270.34	196.27	169.30	147.29	128.91
315.0	353.10	297.09	268.37	213.69	194.30	167.06	144.95	126.99	112.44
360.0	276.26	242.42	206.34	171.43	153.79	135.25	120.49	108.07	98.00
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	90.06	83.99	79.24	75.41	72.26	69.60	67.20	64.80	62.78
45.0	94.75	86.60	81.11	76.42	72.85	69.33	66.77	64.32	62.19
90.0	83.29	78.02	74.87	71.52	69.06	66.51	64.43	62.46	61.12
135.0	92.30	84.84	79.67	75.25	71.78	68.74	66.51	64.11	61.98
180.0	101.78	93.10	87.93	78.92	76.26	72.31	68.64	65.71	63.26
225.0	102.16	93.52	89.31	83.24	78.44	74.61	71.14	68.00	65.33
270.0	114.15	102.58	93.26	88.57	81.91	75.03	72.74	69.81	67.41
315.0	100.82	91.50	84.25	78.60	74.23	70.93	68.21	65.92	63.89
360.0	90.06	83.99	79.24	75.41	72.26	69.60	67.20	64.80	62.78

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	60.64	59.47	56.65	54.41	53.13	49.88	48.44	46.04	43.75
45.0	59.90	57.82	55.79	54.41	52.28	49.19	47.85	45.40	43.06
90.0	58.35	56.22	55.00	51.96	49.61	48.28	45.08	43.70	41.62
135.0	60.06	58.09	56.11	53.98	51.90	49.72	47.59	46.26	43.27
180.0	60.91	58.46	56.43	54.46	52.38	50.20	48.07	45.88	43.59
225.0	62.83	60.48	58.14	55.90	53.61	51.32	49.08	46.52	44.18
270.0	65.17	62.99	60.96	58.94	56.91	54.84	52.54	50.25	48.01
315.0	61.98	60.00	58.19	56.17	53.98	52.28	49.72	47.37	45.56
360.0	60.64	59.47	56.65	54.41	53.13	49.88	48.44	46.04	43.75
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	41.41	39.01	36.72	34.27	31.55	29.42	27.50	25.53	23.71
45.0	40.93	38.64	36.50	34.32	32.19	29.79	27.50	25.58	23.77
90.0	39.38	37.09	34.48	31.76	29.52	27.55	25.58	23.77	22.01
135.0	40.98	39.81	36.61	35.17	32.61	30.00	27.92	25.95	24.09
180.0	41.41	39.27	36.98	34.96	32.67	30.54	28.30	26.38	24.57
225.0	41.83	39.49	37.14	34.90	32.61	30.75	28.56	26.11	24.62
270.0	45.72	43.32	41.03	38.69	36.40	34.05	31.33	29.52	27.18
315.0	43.32	40.98	38.69	36.40	33.79	31.17	29.10	27.12	25.21
360.0	41.41	39.01	36.72	34.27	31.55	29.42	27.50	25.53	23.71
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	22.01	20.41	18.81	17.32	15.88	14.49	13.32	12.68	11.40
45.0	22.06	20.46	18.86	17.64	16.57	15.35	14.65	13.54	12.10
90.0	20.36	18.76	17.27	15.88	14.49	13.75	12.10	11.46	10.60
135.0	22.28	20.57	18.92	17.43	15.93	14.60	13.27	12.10	11.19
180.0	22.86	21.58	20.09	18.39	17.37	16.04	14.76	13.59	12.52
225.0	22.75	21.10	19.45	17.91	16.41	14.97	13.75	12.63	11.62
270.0	25.63	23.82	22.01	20.41	18.76	17.32	15.88	14.44	13.38
315.0	23.34	21.64	20.04	18.54	17.00	15.51	14.23	13.11	12.04
360.0	22.01	20.41	18.81	17.32	15.88	14.49	13.32	12.68	11.40
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	10.50	10.02	9.17	8.31	7.51	6.77	5.97	5.17	4.42
45.0	11.51	10.66	9.81	8.95	8.10	7.30	6.55	5.76	4.96
90.0	9.43	8.95	8.15	7.41	6.61	5.86	5.06	4.37	3.68
135.0	10.34	9.43	8.63	7.83	7.41	6.66	5.60	5.22	4.42
180.0	11.51	10.60	9.75	8.95	8.15	7.30	6.55	5.81	5.06
225.0	10.71	9.86	9.11	8.31	7.46	6.71	6.23	5.22	4.42
270.0	12.36	11.40	10.50	9.70	8.90	8.15	7.30	6.55	5.81
315.0	11.14	10.23	9.81	9.01	8.26	7.41	6.66	5.86	5.17
360.0	10.50	10.02	9.17	8.31	7.51	6.77	5.97	5.17	4.42
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	3.78	3.20	2.50	1.81	1.39	0.80	0.59	0.53	0.48
45.0	4.26	3.57	2.77	2.13	1.65	1.01	0.69	0.59	0.53
90.0	3.09	2.50	1.97	1.55	1.12	0.80	0.69	0.59	0.37
135.0	3.73	2.88	2.45	1.92	1.60	1.12	0.80	0.75	0.59
180.0	4.32	3.68	3.14	2.50	1.76	1.39	0.80	0.64	0.53
225.0	4.05	3.25	2.61	2.13	1.60	1.01	0.69	0.53	0.48
270.0	5.06	4.37	3.73	3.04	2.45	1.87	1.33	0.69	0.53
315.0	4.53	3.78	3.30	2.72	2.18	1.55	0.96	0.69	0.59
360.0	3.78	3.20	2.50	1.81	1.39	0.80	0.59	0.53	0.48

Intensity data(cd)

C/γ(°)	90.0
0.0	0.43
45.0	0.43
90.0	0.37
135.0	0.37
180.0	0.53
225.0	0.48
270.0	0.53
315.0	0.53
360.0	0.43