



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

NT

Client: NT

LumCAT: 62-0070-1

Luminaire: 92.70.429.00

Report No: 20250317-B005

Ballast type: AC

Test No: 20250317-C005

Voltage(V): 34.650

LampCAT: CREE CXA1820

Current(A): 0.453

Lamp flux(lm): 2372.0

Power (W): 15.690

Number of Lamps: 1

PF: 0.000

Length(mm): 62

Width(mm): 62

Phm Type: C

Height(mm): 33

Photometric Results

Lumens(lm): 2143.66, Efficiency(%): 90.37% , Luminous Efficacy(lm/W): 136.63

Central intensity(cd): 10579.020, Maximum intensity(cd): 10579.020

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=24.4

[C90/270]Total=24.4

Field angle(10%Imax): [C0/180]Total=41.0

[C90/270]Total=41.0

Maximum s/h(1/2): C0_180=0.42 C90_270=0.42

Maximum s/h(1/4): C0_180=0.40 C90_270=0.40

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.37%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.533%

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2025/3/17
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	10579.024	0.000	0	0.00%	0.00%
1.0	10558.774	10.114	10.114	0.43%	0.47%
2.0	10451.528	30.156	40.27	1.27%	1.88%
3.0	10234.771	49.475	89.745	2.09%	4.19%
4.0	9984.574	67.681	157.425	2.85%	7.34%
5.0	9608.413	84.288	241.713	3.55%	11.28%
6.0	9204.275	98.866	340.579	4.17%	15.89%
7.0	8711.076	111.200	451.779	4.69%	21.08%
8.0	8147.535	120.654	572.433	5.09%	26.70%
9.0	7518.580	126.965	699.399	5.35%	32.63%
10.0	6842.063	129.959	829.357	5.48%	38.69%
11.0	6146.029	129.778	959.135	5.47%	44.74%
12.0	5461.519	126.887	1086.022	5.35%	50.66%
13.0	4770.148	121.424	1207.446	5.12%	56.33%
14.0	4081.508	113.300	1320.747	4.78%	61.61%
15.0	3514.769	104.285	1425.032	4.40%	66.48%
16.0	2865.430	93.488	1518.519	3.94%	70.84%
17.0	2440.709	82.631	1601.15	3.48%	74.69%
18.0	2003.664	73.278	1674.428	3.09%	78.11%
19.0	1579.962	62.348	1736.776	2.63%	81.02%
20.0	1175.338	50.430	1787.206	2.13%	83.37%
21.0	947.649	40.766	1827.971	1.72%	85.27%
22.0	735.715	33.828	1861.799	1.43%	86.85%
23.0	570.709	27.412	1889.212	1.16%	88.13%
24.0	440.722	22.114	1911.325	0.93%	89.16%
25.0	341.362	17.783	1929.108	0.75%	89.99%
26.0	275.742	14.567	1943.675	0.61%	90.67%
27.0	229.160	12.353	1956.027	0.52%	91.25%
28.0	202.682	10.933	1966.961	0.46%	91.76%
29.0	154.921	9.356	1976.317	0.39%	92.19%
30.0	131.300	7.728	1984.045	0.33%	92.55%
31.0	116.245	6.889	1990.933	0.29%	92.88%
32.0	104.335	6.319	1997.253	0.27%	93.17%
33.0	95.189	5.878	2003.131	0.25%	93.44%
34.0	87.682	5.534	2008.665	0.23%	93.70%
35.0	81.307	5.248	2013.913	0.22%	93.95%
36.0	76.418	5.022	2018.935	0.21%	94.18%
37.0	71.449	4.823	2023.758	0.20%	94.41%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	68.391	4.668	2028.425	0.20%	94.62%
39.0	65.354	4.565	2032.99	0.19%	94.84%
40.0	62.836	4.471	2037.461	0.19%	95.05%
41.0	60.458	4.390	2041.852	0.19%	95.25%
42.0	58.619	4.326	2046.178	0.18%	95.45%
43.0	56.614	4.269	2050.446	0.18%	95.65%
44.0	54.922	4.210	2054.656	0.18%	95.85%
45.0	53.243	4.157	2058.813	0.18%	96.04%
46.0	51.705	4.104	2062.917	0.17%	96.23%
47.0	50.219	4.054	2066.971	0.17%	96.42%
48.0	48.767	4.002	2070.973	0.17%	96.61%
49.0	47.208	3.941	2074.914	0.17%	96.79%
50.0	45.636	3.871	2078.785	0.16%	96.97%
51.0	44.157	3.799	2082.584	0.16%	97.15%
52.0	42.532	3.720	2086.304	0.16%	97.32%
53.0	41.060	3.636	2089.94	0.15%	97.49%
54.0	39.295	3.542	2093.482	0.15%	97.66%
55.0	37.696	3.437	2096.919	0.14%	97.82%
56.0	35.997	3.330	2100.249	0.14%	97.98%
57.0	34.132	3.206	2103.455	0.14%	98.12%
58.0	32.147	3.065	2106.52	0.13%	98.27%
59.0	30.289	2.919	2109.439	0.12%	98.40%
60.0	28.430	2.774	2112.213	0.12%	98.53%
61.0	26.645	2.628	2114.841	0.11%	98.66%
62.0	24.773	2.478	2117.319	0.10%	98.77%
63.0	23.028	2.325	2119.644	0.10%	98.88%
64.0	21.403	2.180	2121.824	0.09%	98.98%
65.0	19.977	2.048	2123.872	0.09%	99.08%
66.0	18.612	1.925	2125.797	0.08%	99.17%
67.0	17.226	1.802	2127.599	0.08%	99.25%
68.0	15.894	1.678	2129.277	0.07%	99.33%
69.0	14.542	1.553	2130.83	0.07%	99.40%
70.0	13.396	1.435	2132.264	0.06%	99.47%
71.0	12.390	1.333	2133.597	0.06%	99.53%
72.0	11.531	1.244	2134.841	0.05%	99.59%
73.0	10.638	1.159	2136	0.05%	99.64%
74.0	9.799	1.074	2137.075	0.05%	99.69%
75.0	8.893	0.988	2138.062	0.04%	99.74%

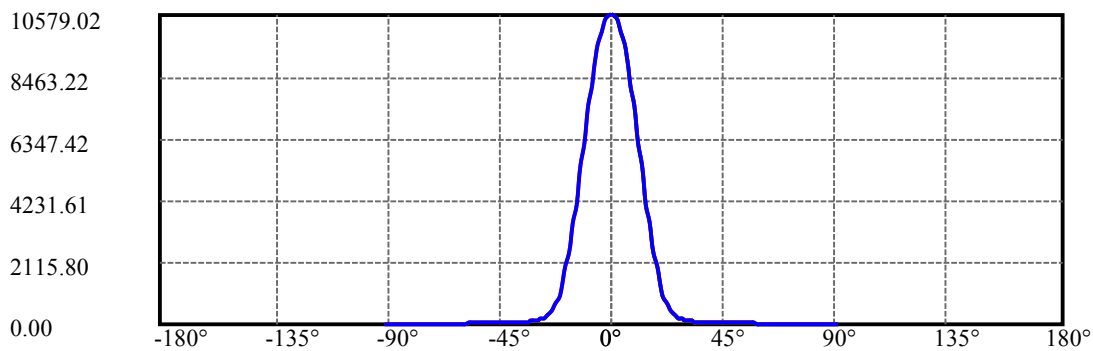
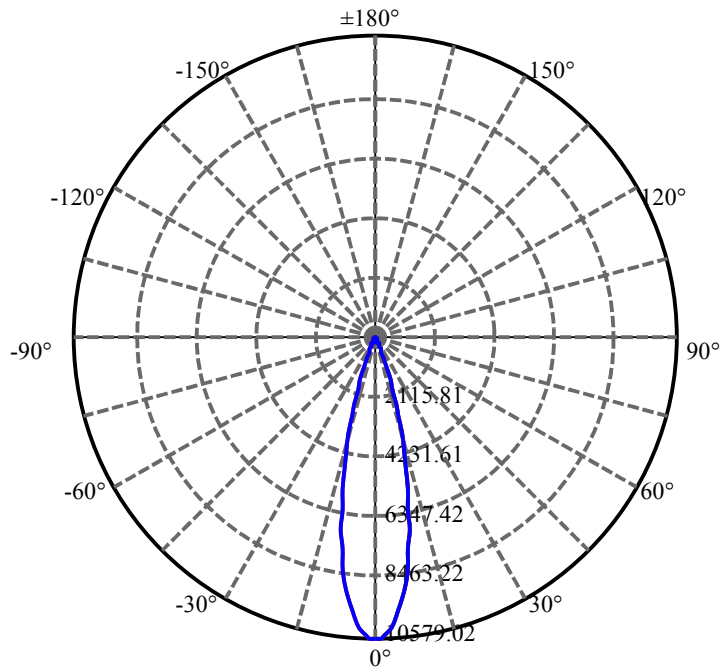
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.033	0.899	2138.961	0.04%	99.78%
77.0	7.154	0.810	2139.77	0.03%	99.82%
78.0	6.322	0.721	2140.492	0.03%	99.85%
79.0	5.469	0.633	2141.125	0.03%	99.88%
80.0	4.676	0.547	2141.672	0.02%	99.91%
81.0	3.977	0.468	2142.14	0.02%	99.93%
82.0	3.171	0.388	2142.528	0.02%	99.95%
83.0	2.558	0.311	2142.839	0.01%	99.96%
84.0	1.918	0.244	2143.083	0.01%	99.97%
85.0	1.412	0.182	2143.265	0.01%	99.98%
86.0	0.979	0.131	2143.396	0.01%	99.99%
87.0	0.686	0.091	2143.487	0.00%	99.99%
88.0	0.540	0.067	2143.554	0.00%	100.00%
89.0	0.453	0.054	2143.608	0.00%	100.00%
90.0	0.406	0.047	2143.655	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1984.04	83.64%	92.55%
0-40	2037.46	85.90%	95.05%
0-60	2112.21	89.05%	98.53%
0-90	2143.61	90.37%	100.00%
0-120	2143.61	90.37%	100.00%
0-180	2143.66	90.37%	100.00%
60-90	31.40	1.32%	1.46%
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%
0-18.65	1714.92	72.30%	80.00%

ZONAL LUMEN SUMMARY

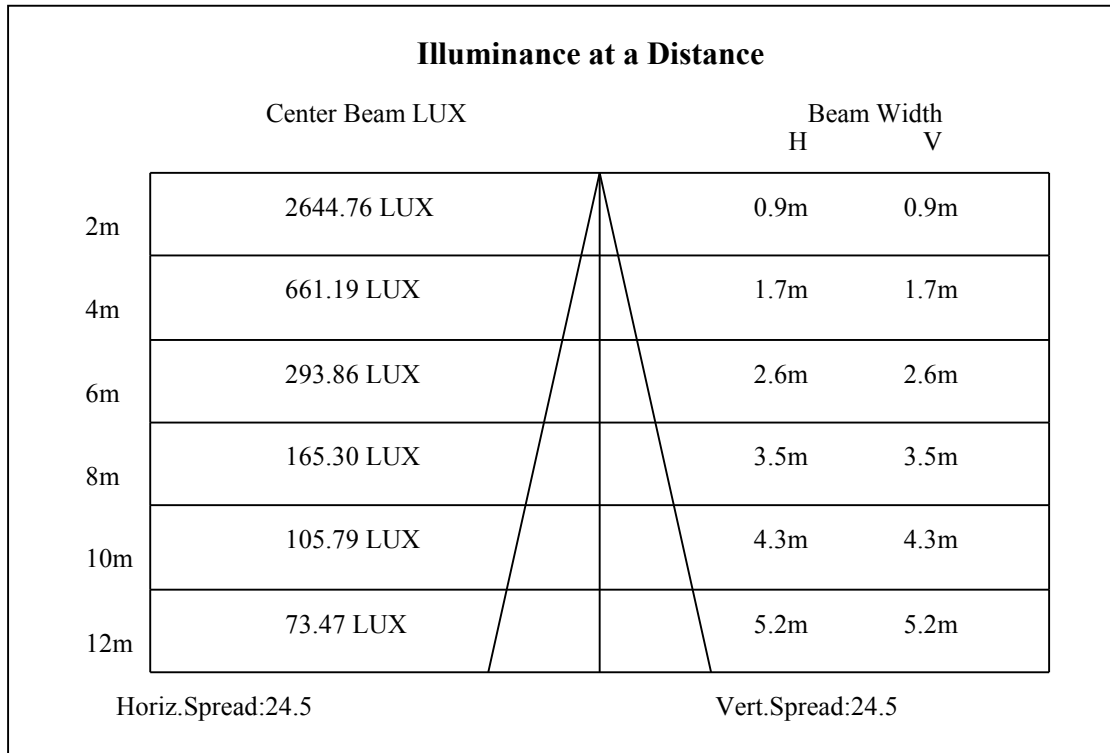
0-10	829.36
10-20	957.85
20-30	196.84
30-40	53.42
40-50	41.32
50-60	33.43
60-70	20.05
70-80	9.41
80-90	1.94
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

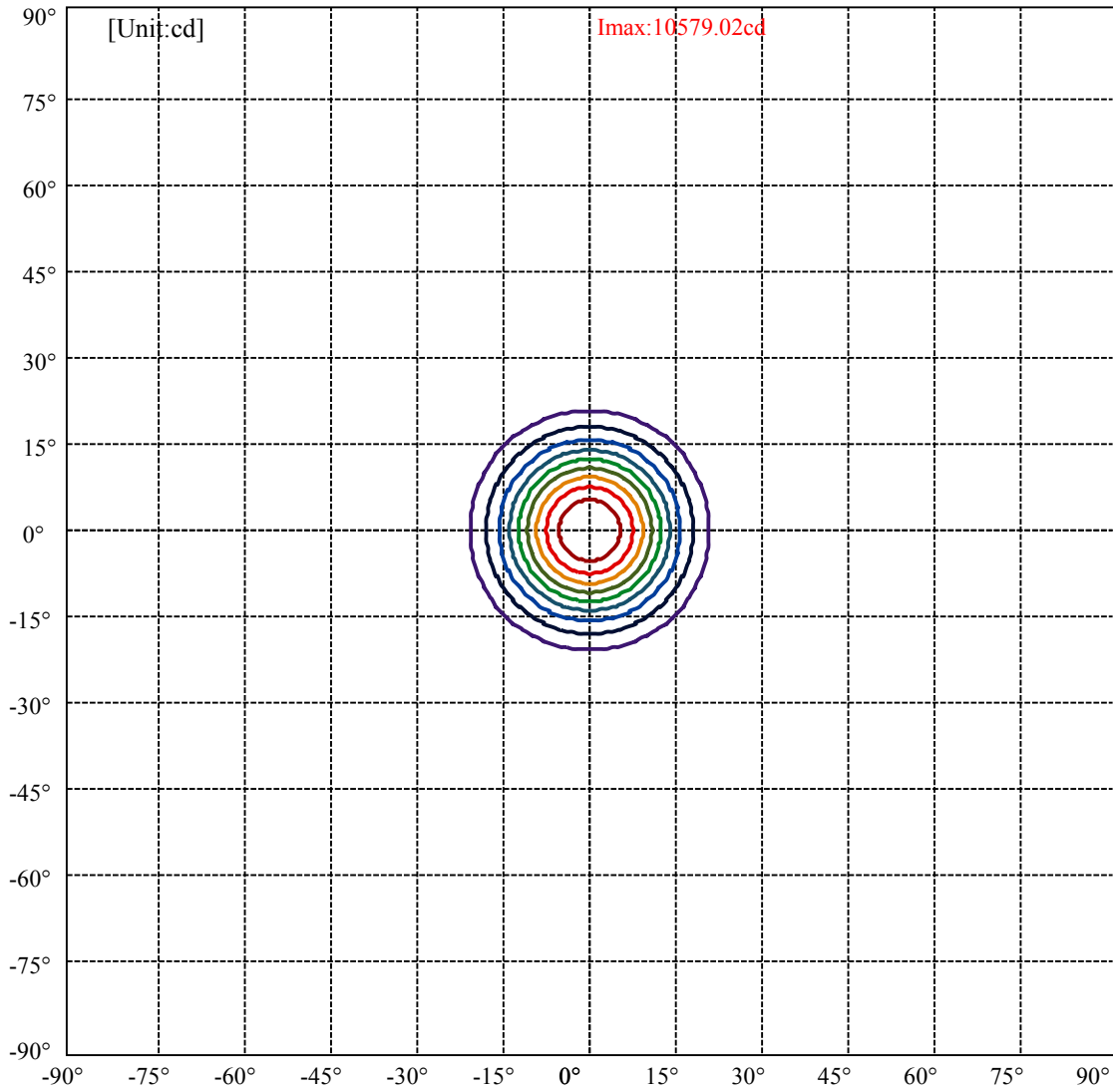


C0(Max): —————
C0/C180: —————
C90/C270: —————

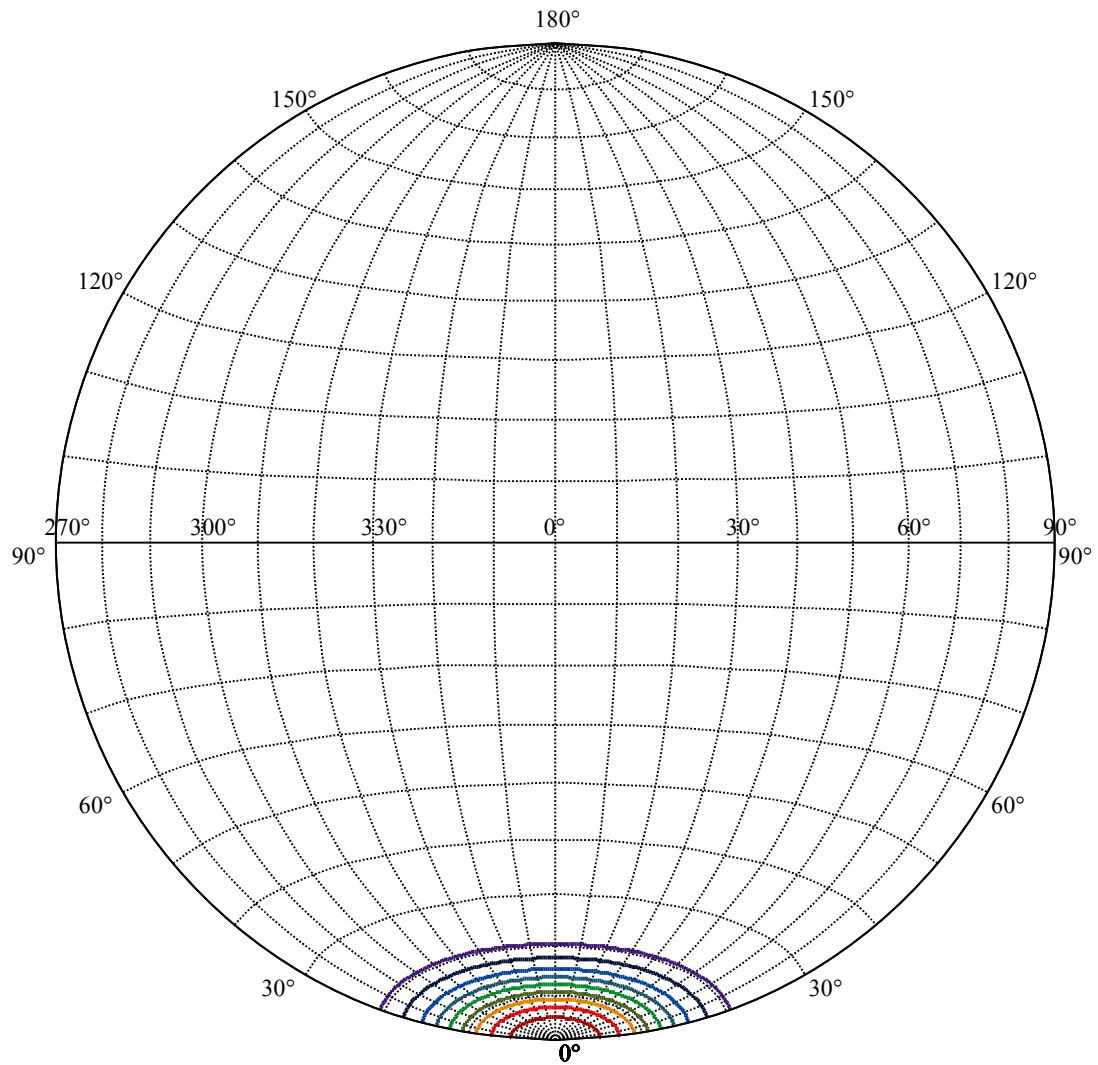
Field angle(10%Imax):C0/180Left:20.5 Right:20.5
:C90/270Left:20.5 Right:20.5

Beam Angle(50%Imax):C0/180Left:12.2 Right:12.2
:C90/270Left:12.2 Right:12.2





(10%Imax) 1057.9	—
(20%Imax) 2115.8	—
(30%Imax) 3173.71	—
(40%Imax) 4231.61	—
(50%Imax) 5289.51	—
(60%Imax) 6347.41	—
(70%Imax) 7405.32	—
(80%Imax) 8463.22	—
(90%Imax) 9521.12	—



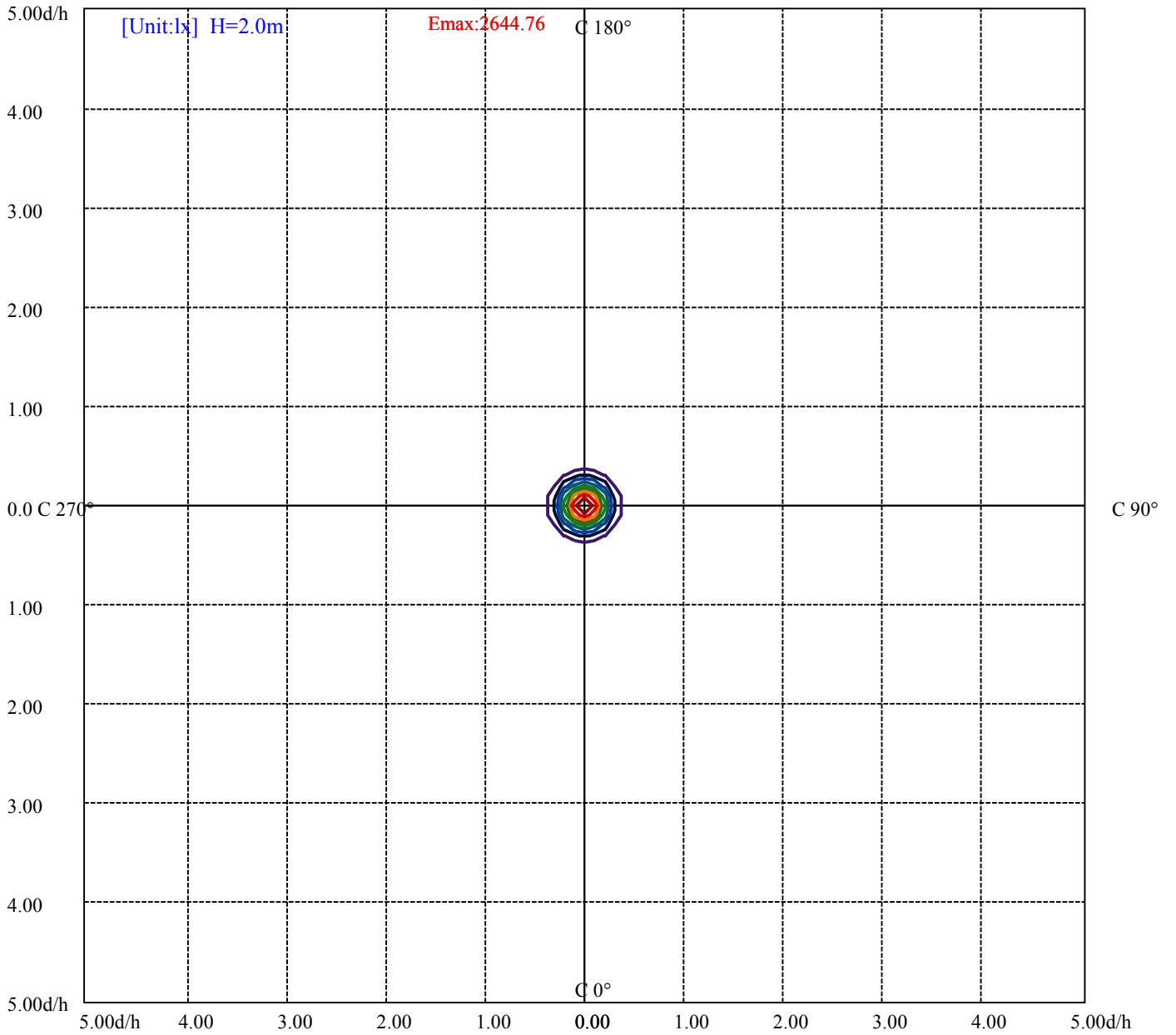
House

[Unit:cd]

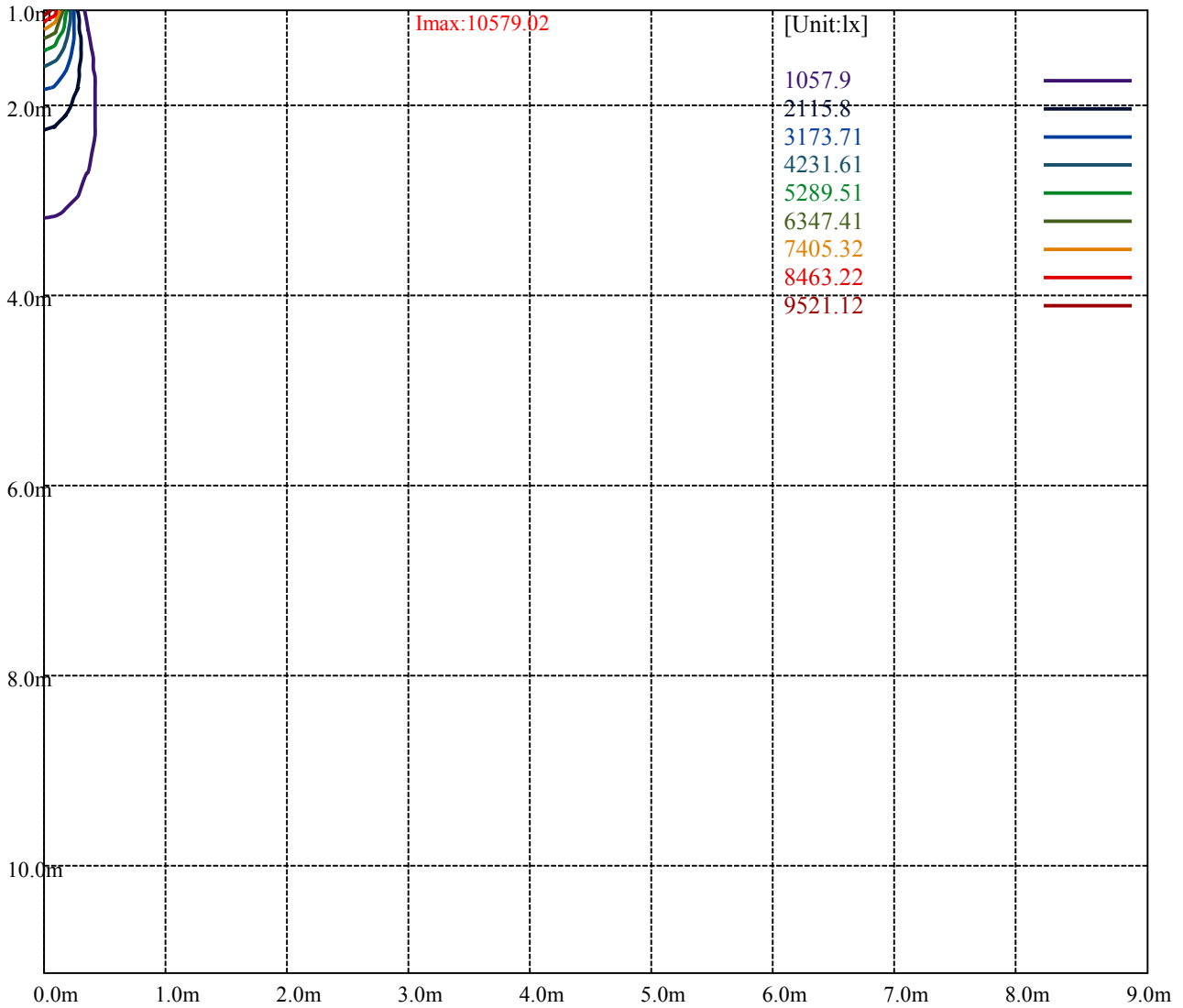
Road

Imax:10579.02

(10%Imax) 1057.9	—
(20%Imax) 2115.8	—
(30%Imax) 3173.71	—
(40%Imax) 4231.61	—
(50%Imax) 5289.51	—
(60%Imax) 6347.41	—
(70%Imax) 7405.32	—
(80%Imax) 8463.22	—
(90%Imax) 9521.12	—



- (10%Emax) 264.475
- (20%Emax) 528.95
- (30%Emax) 793.4275
- (40%Emax) 1057.902
- (50%Emax) 1322.377
- (60%Emax) 1586.853
- (70%Emax) 1851.328
- (80%Emax) 2115.805
- (90%Emax) 2380.28



Luminance Table

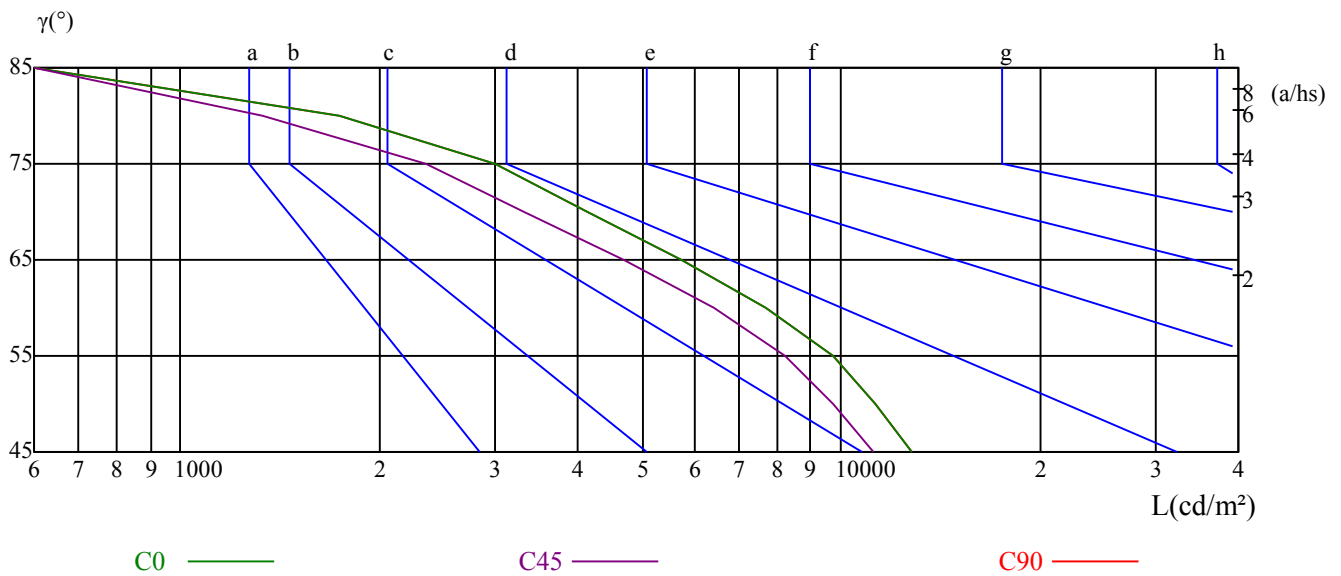
γ	45	50	55	60	65	70	75	80	85
C0	12784	11301	9713	7697	5742	4138	2993	1743	595
C45	11176	9736	8240	6421	4704	3321	2347	1330	439
C90	12784	11301	9713	7697	5742	4138	2993	1743	595

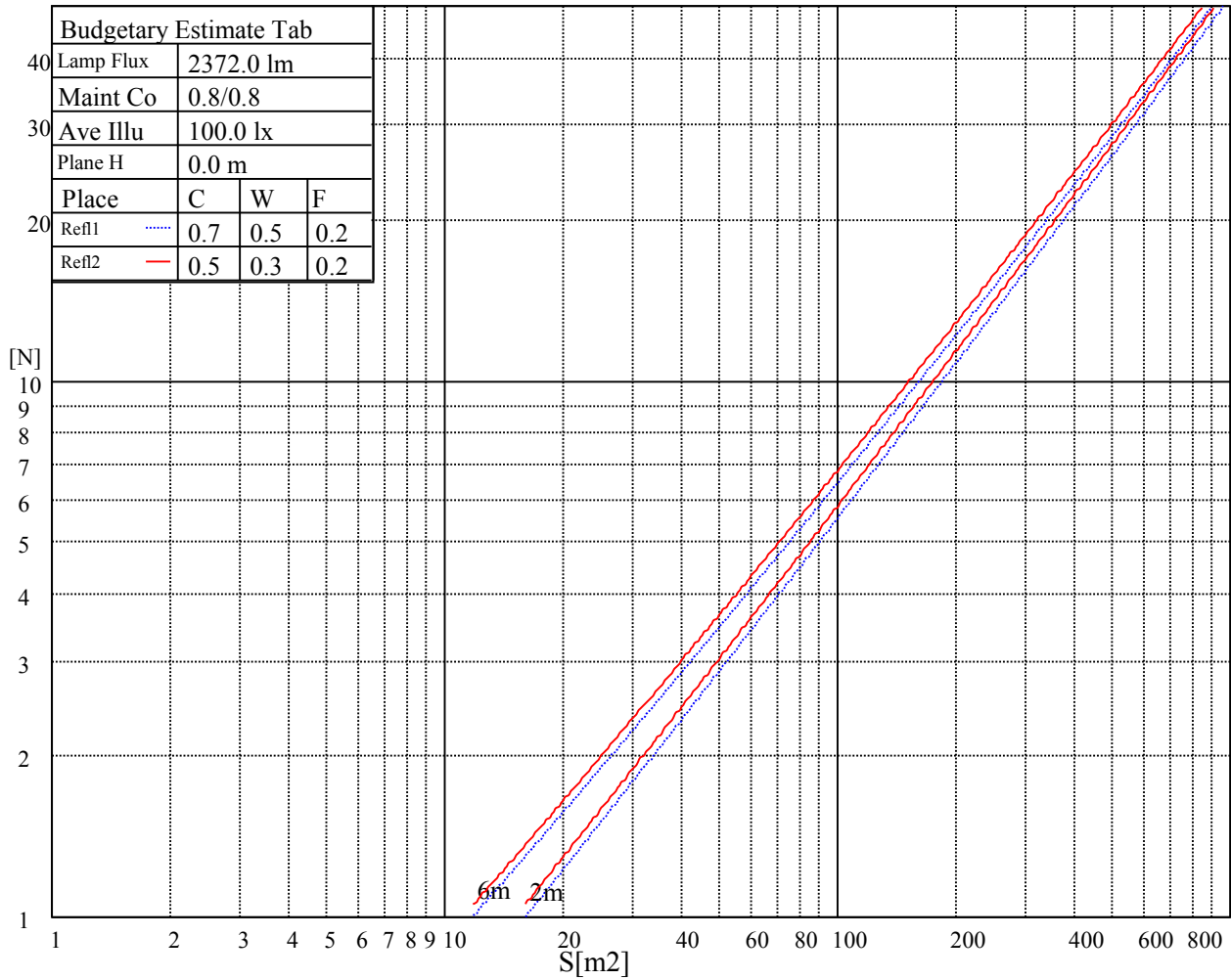
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
12297	12297	12297	8938	8938	8938	4215	4215	4215

Glare Table

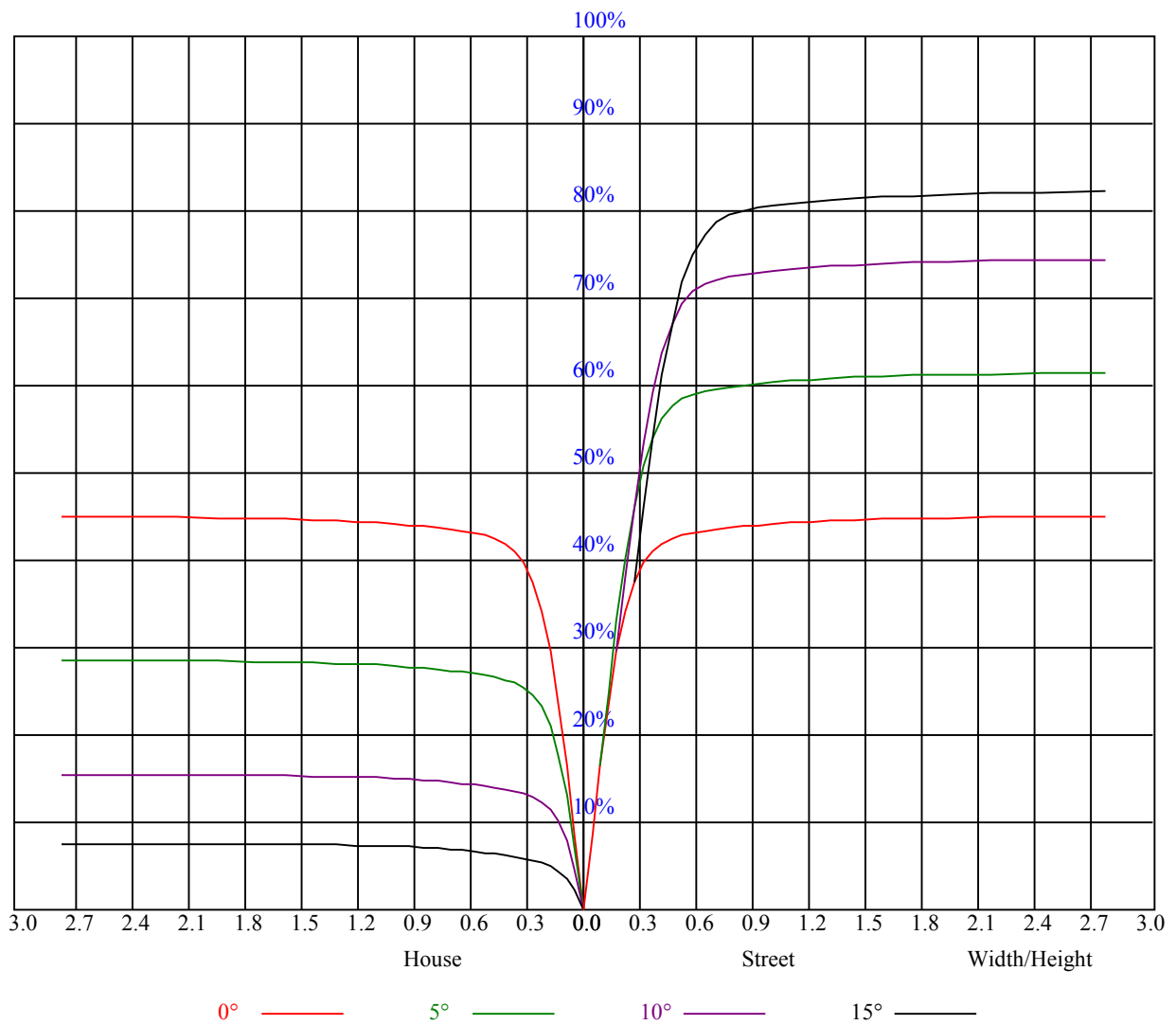
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

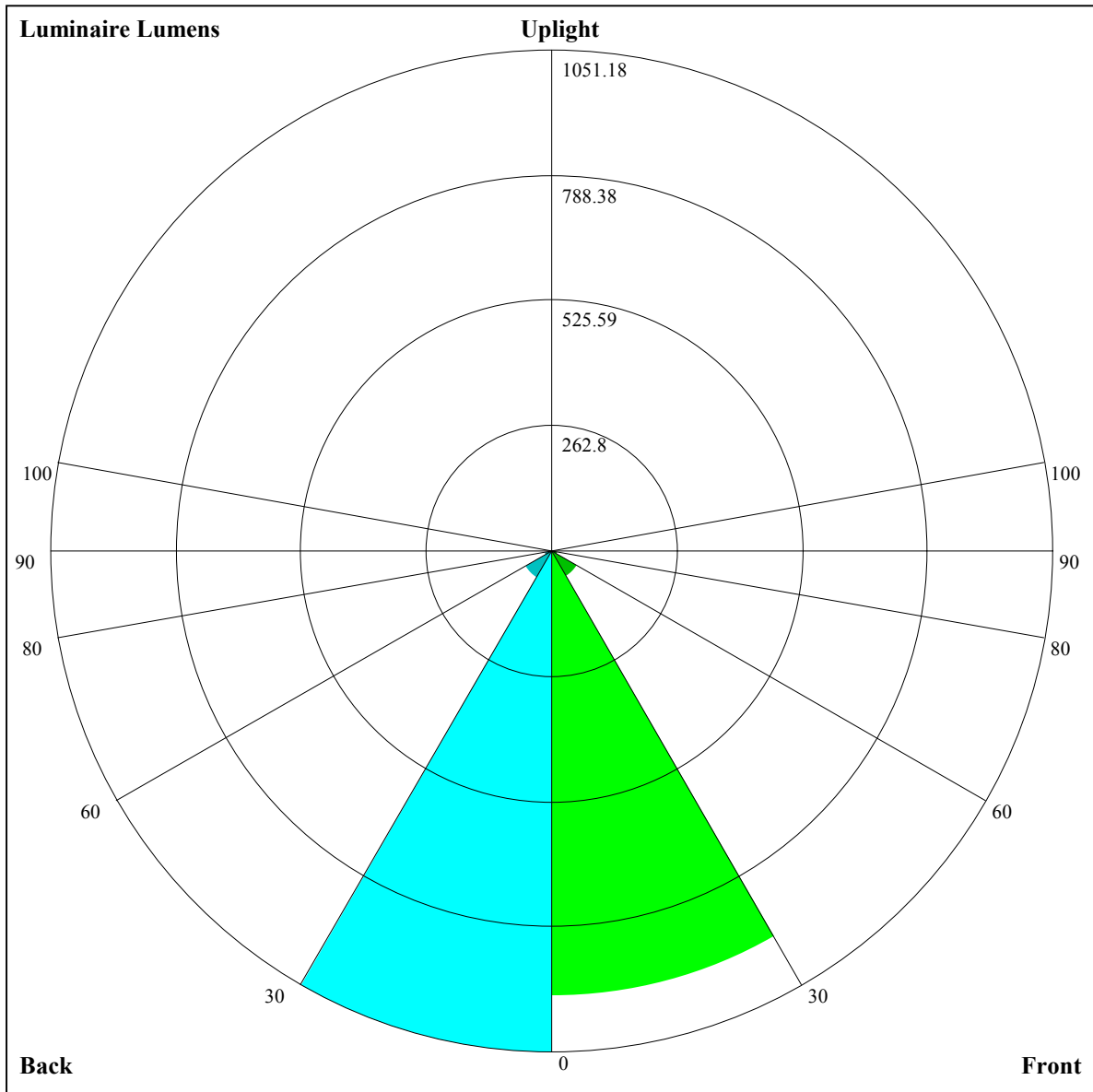
Luminance Limiting Curve





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	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.02	1.00	0.98	1.00	0.98	0.97	0.96	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	0.95	0.93	0.91	0.93	0.91	0.89	0.90	0.88	0.87	0.88	0.86	0.85	0.84
3	0.93	0.89	0.87	0.92	0.89	0.86	0.89	0.87	0.85	0.87	0.85	0.83	0.85	0.84	0.82	0.81
4	0.89	0.85	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	0.82	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	0.75	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	0.70	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=933.63,FM=61.61,FH=14.04,FVH=0.89

BL=1051.18,BM=66.45,BH=15.37,BVH=1.11

UL=0,UH=0

BUG Rating:B3-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	10575.03	10405.03	10160.43	9842.29	9446.88	8971.00	8424.24	7808.21	7127.70
45.0	10561.70	10605.40	10482.84	10280.33	9997.90	9635.52	9214.53	8713.61	8143.40
90.0	10589.42	10528.67	10320.83	10047.99	9697.87	9283.28	8790.35	8231.33	7600.91
135.0	10589.95	10614.99	10594.74	10440.20	10211.06	9907.30	9550.26	9118.61	8617.69
180.0	10575.03	10575.03	10622.46	10493.49	10386.91	10136.45	9822.04	9449.01	8990.72
225.0	10561.70	10561.70	10456.19	10222.78	10044.79	9537.47	9275.28	8783.95	8219.08
270.0	10589.42	10589.42	10557.44	10392.24	10253.69	9949.94	9576.91	9145.26	8649.66
315.0	10589.95	10589.95	10417.29	10158.83	9837.49	9446.35	8980.59	8438.63	7831.13
360.0	10575.03	10405.03	10160.43	9842.29	9446.88	8971.00	8424.24	7808.21	7127.70
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	6419.47	5693.13	4987.04	4293.20	3637.74	3023.30	2673.19	1955.37	1693.18
45.0	7487.94	6784.51	6070.42	5494.89	4786.13	3949.48	3437.90	2825.06	2825.06
90.0	6906.01	6187.66	5481.04	4787.20	4112.02	3458.68	3087.78	2304.42	2004.40
135.0	8031.50	7402.67	6741.88	6049.11	5351.01	4658.24	3986.78	3363.29	2782.43
180.0	8468.47	7860.97	7210.83	6518.06	5819.96	5137.85	4450.41	3789.61	3176.78
225.0	7585.46	6892.16	6173.27	5459.72	4761.62	4082.71	3440.03	2835.19	2285.24
270.0	8079.46	7439.98	6741.88	6043.78	5340.35	4652.91	3965.47	3336.65	2745.13
315.0	7170.33	6475.43	5761.87	5046.19	4352.35	3688.89	3076.59	2513.85	2013.46
360.0	6419.47	5693.13	4987.04	4293.20	3637.74	3023.30	2673.19	1955.37	1693.18
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1039.31	1039.31	808.09	631.75	487.71	376.12	290.48	227.92	186.94
45.0	1803.49	1404.35	1093.67	851.73	659.89	506.41	383.31	290.06	290.06
90.0	1360.12	995.30	943.93	725.54	561.25	430.00	330.88	259.10	207.24
135.0	2782.43	2241.54	1490.15	1168.81	914.08	708.92	544.25	420.62	325.76
180.0	2830.39	2830.39	1764.06	1382.50	1081.41	847.47	658.29	504.28	387.58
225.0	1808.29	1007.82	1007.82	913.76	709.29	553.42	431.06	340.20	268.26
270.0	2745.13	2192.51	1366.52	1110.72	853.87	664.15	515.47	398.24	310.31
315.0	1660.14	928.47	928.47	796.37	618.22	479.18	372.02	290.48	229.79
360.0	1039.31	1039.31	808.09	631.75	487.71	376.12	290.48	227.92	186.94
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	157.74	136.42	118.89	106.31	97.63	89.05	81.53	77.32	72.15
45.0	221.37	161.52	139.25	122.35	108.45	97.25	88.04	81.16	76.36
90.0	170.74	146.49	131.79	113.08	102.37	96.03	88.25	81.75	75.78
135.0	283.13	283.13	172.07	151.50	131.73	117.50	106.26	96.99	89.53
180.0	298.58	284.20	219.93	161.68	141.06	123.79	111.16	105.25	92.46
225.0	219.66	184.60	157.58	135.78	119.10	105.67	96.61	88.94	81.96
270.0	295.39	268.21	163.07	139.46	122.78	109.51	102.64	89.90	84.14
315.0	186.67	156.89	136.80	120.22	106.85	95.87	87.02	80.15	78.07
360.0	157.74	136.42	118.89	106.31	97.63	89.05	81.53	77.32	72.15
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	68.58	65.97	63.84	61.98	60.22	58.94	57.39	55.74	54.04
45.0	71.89	68.16	65.44	63.04	60.27	57.61	55.26	53.88	52.70
90.0	71.14	67.47	64.69	62.03	59.42	57.61	55.95	54.30	52.70
135.0	82.87	76.84	72.31	68.58	65.87	63.47	61.39	59.15	57.61
180.0	88.09	81.21	76.42	72.79	69.44	66.13	63.31	60.22	57.98
225.0	77.06	72.85	69.76	66.51	64.69	61.07	59.84	57.02	54.73
270.0	77.59	70.66	68.58	65.12	62.35	60.22	58.73	57.07	55.53
315.0	74.13	68.42	66.08	62.78	60.43	58.62	57.07	55.53	54.09
360.0	68.58	65.97	63.84	61.98	60.22	58.94	57.39	55.74	54.04

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	52.49	51.00	49.51	47.69	45.83	43.96	42.31	40.66	39.54
45.0	50.89	49.29	47.96	46.58	45.14	43.75	42.21	40.61	39.17
90.0	51.00	49.56	48.17	46.58	45.08	43.64	42.15	40.50	39.65
135.0	55.95	54.41	52.86	51.26	49.67	48.01	47.11	45.51	43.80
180.0	56.54	55.47	54.04	52.86	51.69	50.36	48.97	47.27	45.40
225.0	53.02	51.11	49.51	48.33	46.58	44.92	43.43	41.89	40.29
270.0	53.61	52.06	50.63	49.35	47.91	46.26	44.66	43.16	41.57
315.0	52.44	50.73	49.08	47.48	45.78	44.18	42.42	40.66	39.06
360.0	52.49	51.00	49.51	47.69	45.83	43.96	42.31	40.66	39.54
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	36.88	35.76	33.68	30.59	29.42	27.55	25.74	23.82	22.12
45.0	37.78	36.24	34.64	32.83	30.59	28.78	27.18	25.53	23.82
90.0	38.05	35.86	34.80	33.04	30.85	28.94	27.07	25.31	23.39
135.0	42.21	40.50	38.90	36.93	35.17	33.09	30.75	28.78	26.96
180.0	43.70	42.37	40.34	38.85	37.09	34.69	32.67	30.59	28.67
225.0	38.58	37.04	35.38	33.57	31.44	29.74	28.03	26.70	24.41
270.0	39.86	38.21	36.56	35.28	32.88	31.33	29.58	27.76	25.90
315.0	37.30	35.60	33.68	31.97	29.74	28.19	26.43	24.67	22.91
360.0	36.88	35.76	33.68	30.59	29.42	27.55	25.74	23.82	22.12
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	20.52	19.24	18.12	16.63	15.08	13.75	12.79	11.94	11.08
45.0	22.17	20.68	19.82	18.54	16.89	16.09	14.71	13.59	12.63
90.0	21.53	19.93	18.60	17.43	15.99	14.44	13.11	12.20	11.30
135.0	25.10	23.07	21.32	19.77	18.60	17.11	15.51	14.12	13.06
180.0	26.75	24.73	22.75	21.10	19.56	18.44	16.95	15.35	13.96
225.0	22.97	21.48	19.77	18.81	17.59	16.15	14.76	13.64	12.68
270.0	23.93	22.33	20.68	19.29	18.23	16.73	15.24	13.91	12.90
315.0	21.26	19.77	18.76	17.32	15.88	14.44	13.27	12.42	11.51
360.0	20.52	19.24	18.12	16.63	15.08	13.75	12.79	11.94	11.08
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	10.13	9.17	8.69	7.46	6.93	6.08	4.85	4.32	3.57
45.0	11.67	10.76	9.91	9.01	8.05	7.14	6.23	5.44	4.58
90.0	10.39	9.49	8.95	8.10	6.82	6.34	5.44	4.64	3.89
135.0	12.52	11.67	10.50	9.91	9.06	8.15	7.30	6.45	5.65
180.0	13.00	12.04	11.14	10.23	9.65	8.31	7.46	6.93	5.70
225.0	11.83	10.98	10.02	9.11	8.15	7.30	6.39	5.44	4.64
270.0	12.04	11.19	10.28	9.33	8.53	7.62	7.14	5.92	5.17
315.0	10.66	9.81	8.90	7.99	7.09	6.29	5.76	4.64	4.21
360.0	10.13	9.17	8.69	7.46	6.93	6.08	4.85	4.32	3.57
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.93	2.08	1.71	1.07	0.80	0.53	0.53	0.48	0.37
45.0	3.73	3.04	2.24	1.60	1.23	0.75	0.53	0.48	0.43
90.0	3.20	2.50	2.08	1.55	1.07	0.80	0.59	0.48	0.48
135.0	4.80	4.10	3.25	2.50	1.87	1.23	0.91	0.69	0.53
180.0	5.22	4.10	3.52	2.77	2.24	1.65	1.07	0.75	0.53
225.0	3.94	3.20	2.50	1.81	1.28	0.91	0.59	0.43	0.32
270.0	4.69	3.62	2.98	2.40	1.60	1.17	0.69	0.53	0.48
315.0	3.30	2.72	2.18	1.65	1.23	0.80	0.59	0.48	0.48
360.0	2.93	2.08	1.71	1.07	0.80	0.53	0.53	0.48	0.37

Intensity data(cd)

C/γ(°)	90.0
0.0	0.32
45.0	0.37
90.0	0.37
135.0	0.53
180.0	0.48
225.0	0.37
270.0	0.43
315.0	0.37
360.0	0.32