



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

NT

Client: NT

LumCAT: 62-0074-1

Luminaire: 92.70.429.00

Report No: 20250317-B001

Ballast type: AC

Test No: 20250317-C001

Voltage(V): 34.670

LampCAT: CREE CXA1820

Current(A): 0.453

Lamp flux(lm): 2372.0

Power (W): 15.700

Number of Lamps: 1

PF: 0.000

Length(mm): 62

Width(mm): 62

Phm Type: C

Height(mm): 33

Photometric Results

Lumens(lm): 2079.88, Efficiency(%): 87.68% , Luminous Efficacy(lm/W): 132.48

Central intensity(cd): 2177.989, Maximum intensity(cd): 2185.783

Angle of maximum intensity: C=0.0 γ =8.0

Beam Angle(50%Imax): [C0/180]Total=62.4

[C90/270]Total=62.4

Field angle(10%Imax): [C0/180]Total=76.8

[C90/270]Total=76.8

Maximum s/h(1/2): C0_180=1.05 C90_270=1.05

Maximum s/h(1/4): C0_180=0.90 C90_270=0.90

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 87.68%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.576%

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	2177.989	0.000	0	0.00%	0.00%
1.0	2178.522	2.085	2.085	0.09%	0.10%
2.0	2178.522	6.254	8.338	0.26%	0.40%
3.0	2176.923	10.417	18.755	0.44%	0.90%
4.0	2176.857	14.573	33.328	0.61%	1.60%
5.0	2179.388	18.740	52.069	0.79%	2.50%
6.0	2182.852	22.925	74.993	0.97%	3.61%
7.0	2185.383	27.114	102.107	1.14%	4.91%
8.0	2185.783	31.284	133.391	1.32%	6.41%
9.0	2182.452	35.402	168.793	1.49%	8.12%
10.0	2178.322	39.463	208.256	1.66%	10.01%
11.0	2173.792	43.487	251.743	1.83%	12.10%
12.0	2171.594	47.501	299.244	2.00%	14.39%
13.0	2168.597	51.507	350.751	2.17%	16.86%
14.0	2166.598	55.490	406.241	2.34%	19.53%
15.0	2162.801	59.436	465.677	2.51%	22.39%
16.0	2156.473	63.289	528.967	2.67%	25.43%
17.0	2145.349	66.991	595.958	2.82%	28.65%
18.0	2128.629	70.469	666.426	2.97%	32.04%
19.0	2102.450	73.612	740.038	3.10%	35.58%
20.0	2080.268	76.555	816.594	3.23%	39.26%
21.0	2049.760	79.305	895.899	3.34%	43.07%
22.0	2010.192	81.586	977.485	3.44%	47.00%
23.0	1960.366	83.313	1060.798	3.51%	51.00%
24.0	1896.085	84.316	1145.114	3.55%	55.06%
25.0	1823.744	84.581	1229.695	3.57%	59.12%
26.0	1736.148	84.032	1313.726	3.54%	63.16%
27.0	1642.091	82.649	1396.376	3.48%	67.14%
28.0	1514.795	79.926	1476.301	3.37%	70.98%
29.0	1358.262	75.167	1551.469	3.17%	74.59%
30.0	1199.192	69.051	1620.519	2.91%	77.91%
31.0	1115.120	64.404	1684.923	2.72%	81.01%
32.0	972.562	59.810	1744.733	2.52%	83.89%
33.0	814.471	52.647	1797.38	2.22%	86.42%
34.0	662.381	44.694	1842.074	1.88%	88.57%
35.0	537.709	37.270	1879.344	1.57%	90.36%
36.0	412.425	30.252	1909.596	1.28%	91.81%
37.0	310.847	23.589	1933.186	0.99%	92.95%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	236.954	18.285	1951.47	0.77%	93.83%
39.0	195.341	14.755	1966.226	0.62%	94.54%
40.0	136.875	11.587	1977.812	0.49%	95.09%
41.0	93.464	8.202	1986.015	0.35%	95.49%
42.0	74.773	6.112	1992.127	0.26%	95.78%
43.0	65.787	5.207	1997.334	0.22%	96.03%
44.0	58.879	4.705	2002.039	0.20%	96.26%
45.0	53.949	4.336	2006.375	0.18%	96.47%
46.0	49.939	4.063	2010.438	0.17%	96.66%
47.0	46.755	3.846	2014.284	0.16%	96.85%
48.0	43.991	3.668	2017.952	0.15%	97.02%
49.0	41.619	3.516	2021.468	0.15%	97.19%
50.0	39.461	3.381	2024.848	0.14%	97.35%
51.0	37.010	3.235	2028.084	0.14%	97.51%
52.0	34.632	3.074	2031.158	0.13%	97.66%
53.0	32.400	2.916	2034.074	0.12%	97.80%
54.0	29.976	2.749	2036.823	0.12%	97.93%
55.0	27.811	2.579	2039.403	0.11%	98.05%
56.0	26.105	2.436	2041.839	0.10%	98.17%
57.0	24.227	2.301	2044.14	0.10%	98.28%
58.0	22.502	2.161	2046.301	0.09%	98.39%
59.0	21.036	2.035	2048.337	0.09%	98.48%
60.0	19.837	1.931	2050.268	0.08%	98.58%
61.0	18.965	1.852	2052.119	0.08%	98.67%
62.0	18.165	1.789	2053.908	0.08%	98.75%
63.0	17.432	1.731	2055.64	0.07%	98.83%
64.0	16.793	1.679	2057.319	0.07%	98.92%
65.0	16.100	1.628	2058.947	0.07%	98.99%
66.0	15.447	1.574	2060.521	0.07%	99.07%
67.0	14.795	1.521	2062.042	0.06%	99.14%
68.0	14.162	1.467	2063.508	0.06%	99.21%
69.0	13.502	1.411	2064.92	0.06%	99.28%
70.0	12.823	1.352	2066.272	0.06%	99.35%
71.0	12.210	1.294	2067.566	0.05%	99.41%
72.0	11.557	1.236	2068.801	0.05%	99.47%
73.0	10.951	1.177	2069.978	0.05%	99.52%
74.0	10.358	1.120	2071.099	0.05%	99.58%
75.0	9.739	1.062	2072.161	0.04%	99.63%

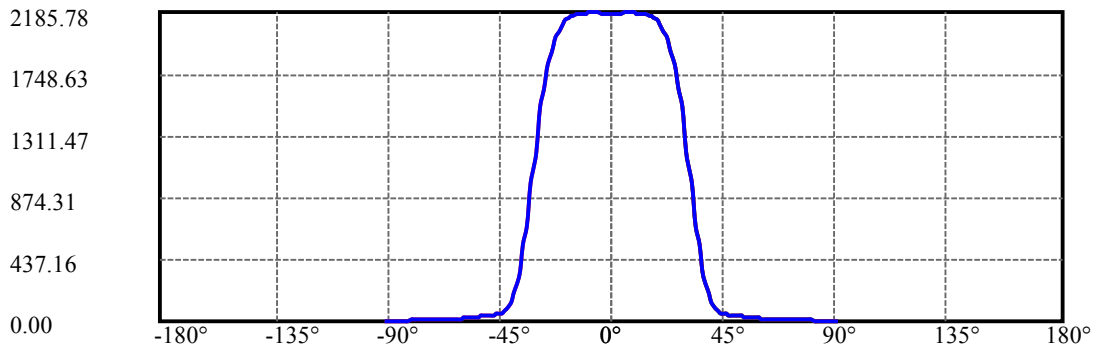
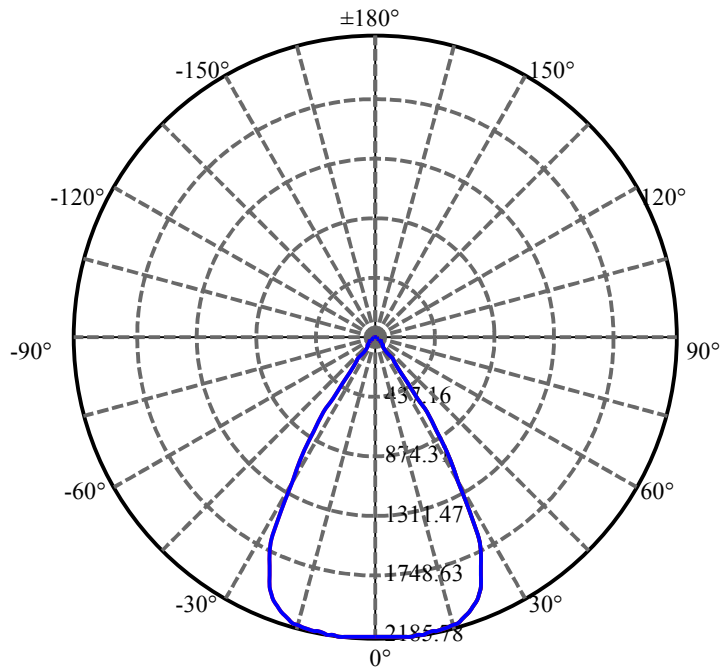
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	9.119	1.001	2073.162	0.04%	99.68%
77.0	8.600	0.945	2074.106	0.04%	99.72%
78.0	8.000	0.889	2074.995	0.04%	99.77%
79.0	7.447	0.830	2075.825	0.03%	99.81%
80.0	6.914	0.774	2076.599	0.03%	99.84%
81.0	6.242	0.711	2077.311	0.03%	99.88%
82.0	5.442	0.634	2077.944	0.03%	99.91%
83.0	4.630	0.548	2078.492	0.02%	99.93%
84.0	3.870	0.463	2078.955	0.02%	99.96%
85.0	2.844	0.366	2079.321	0.02%	99.97%
86.0	1.692	0.248	2079.569	0.01%	99.99%
87.0	0.873	0.140	2079.71	0.01%	99.99%
88.0	0.513	0.076	2079.786	0.00%	100.00%
89.0	0.426	0.051	2079.837	0.00%	100.00%
90.0	0.353	0.043	2079.88	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1620.52	68.32%	77.91%
0-40	1977.81	83.38%	95.09%
0-60	2050.27	86.44%	98.58%
0-90	2079.84	87.68%	100.00%
0-120	2079.84	87.68%	100.00%
0-180	2079.88	87.68%	100.00%
60-90	29.57	1.25%	1.42%
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%
0-30.67	1663.90	70.15%	80.00%

ZONAL LUMEN SUMMARY

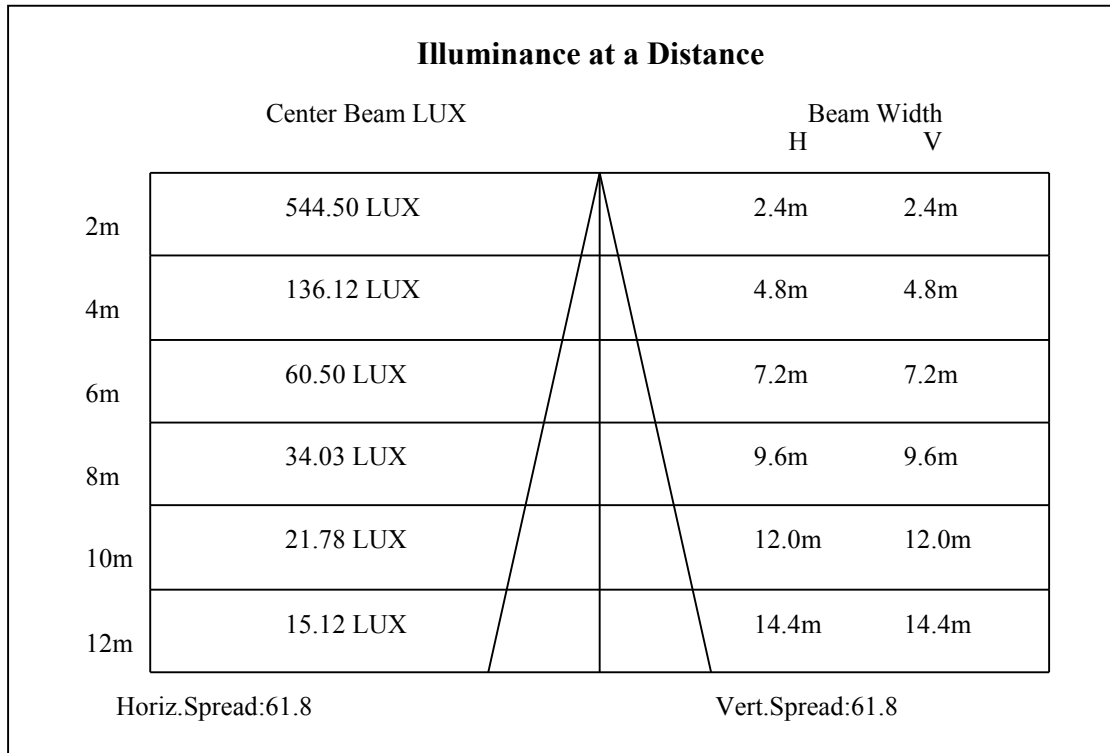
0-10	208.26
10-20	608.34
20-30	803.93
30-40	357.29
40-50	47.04
50-60	25.42
60-70	16.00
70-80	10.33
80-90	3.24
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

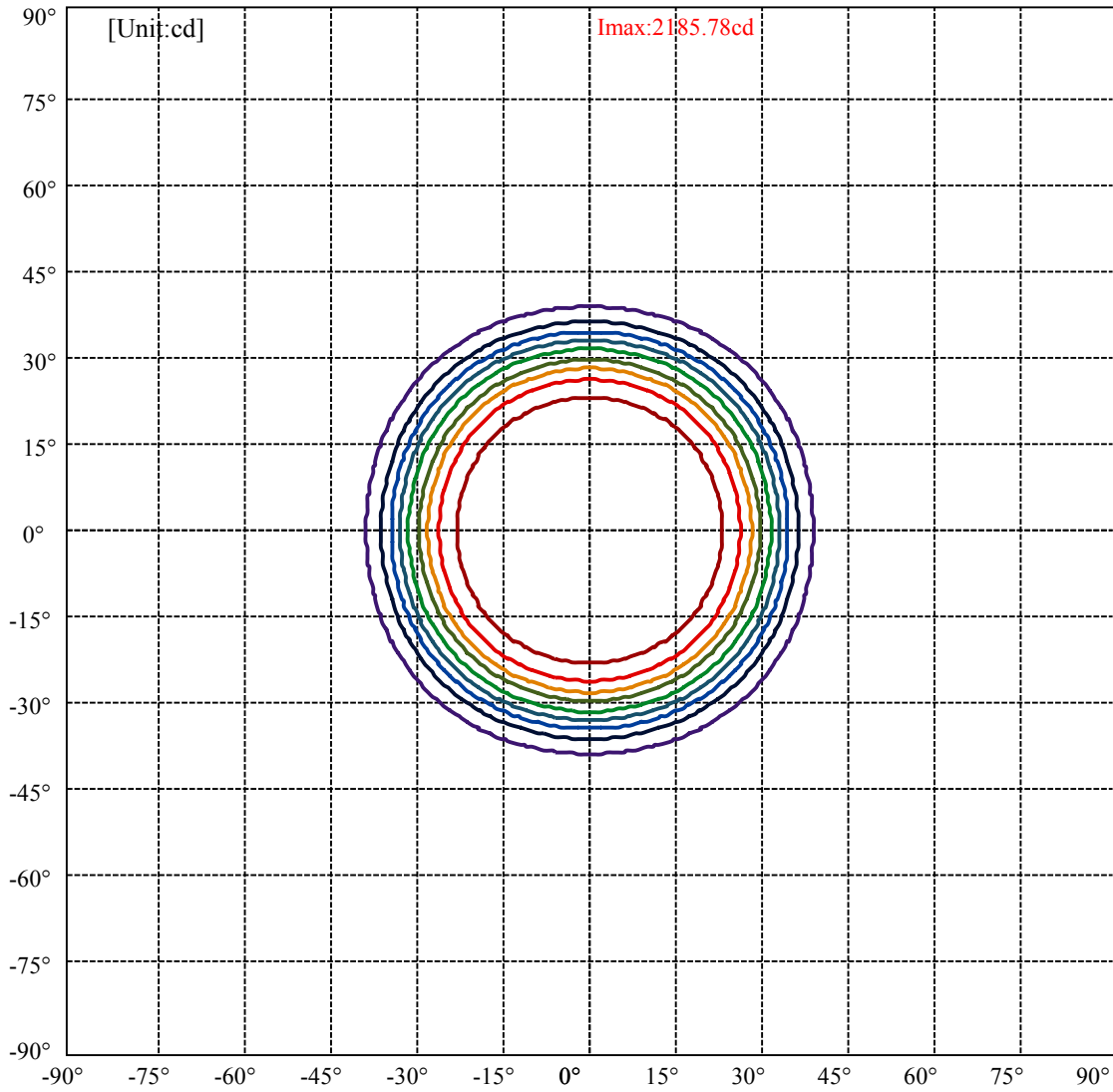


C0(Max): ———
C0/C180: ———
C90/C270: ———

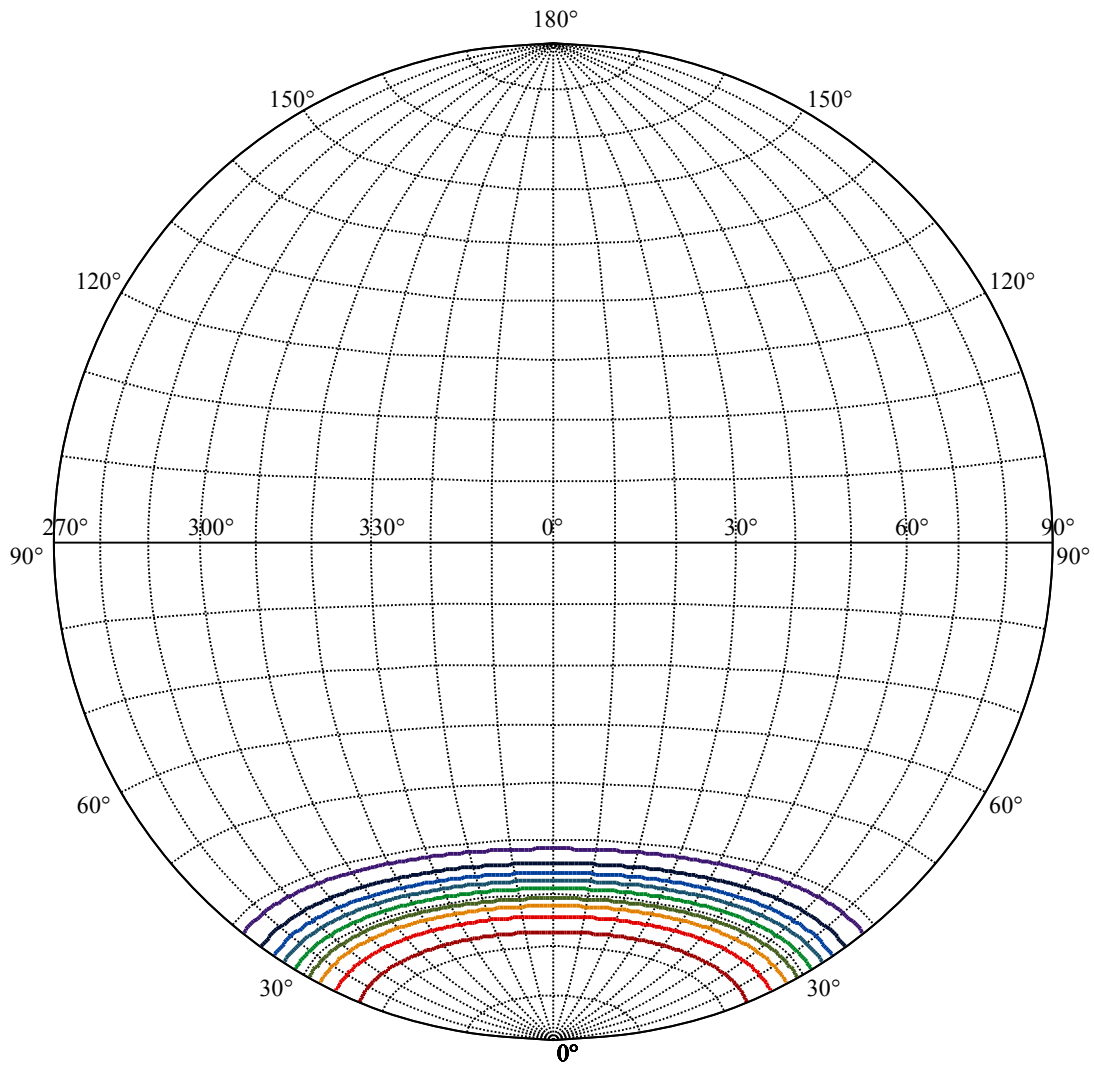
Field angle(10%Imax):C0/180Left:46.4 Right:30.4
:C90/270Left:46.4 Right:30.4

Beam Angle(50%Imax):C0/180Left:39.2 Right:23.2
:C90/270Left:39.2 Right:23.2





(10%Imax)	218.578	—
(20%Imax)	437.157	—
(30%Imax)	655.735	—
(40%Imax)	874.313	—
(50%Imax)	1092.89	—
(60%Imax)	1311.47	—
(70%Imax)	1530.05	—
(80%Imax)	1748.63	—
(90%Imax)	1967.2	—



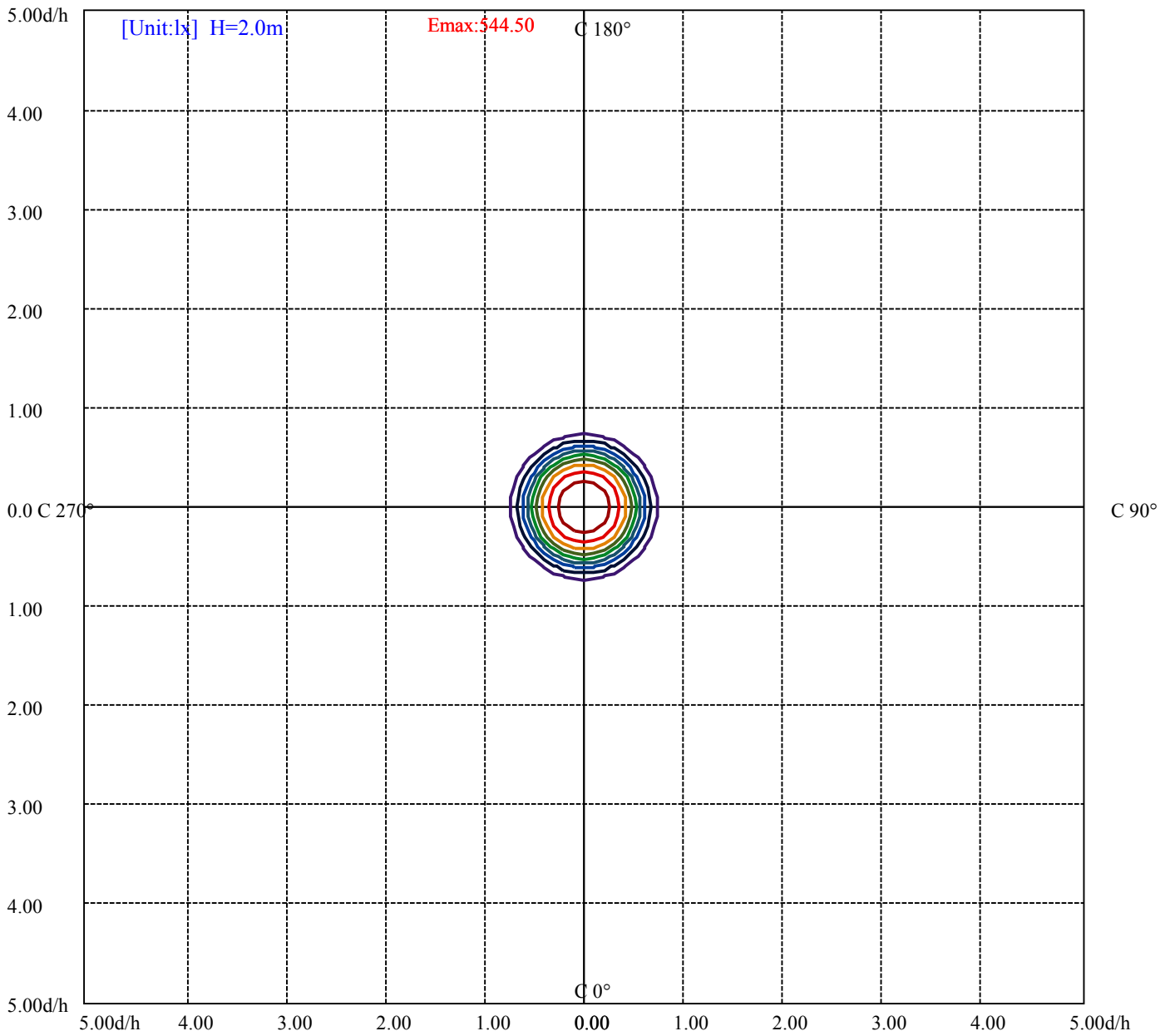
House

[Unit:cd]

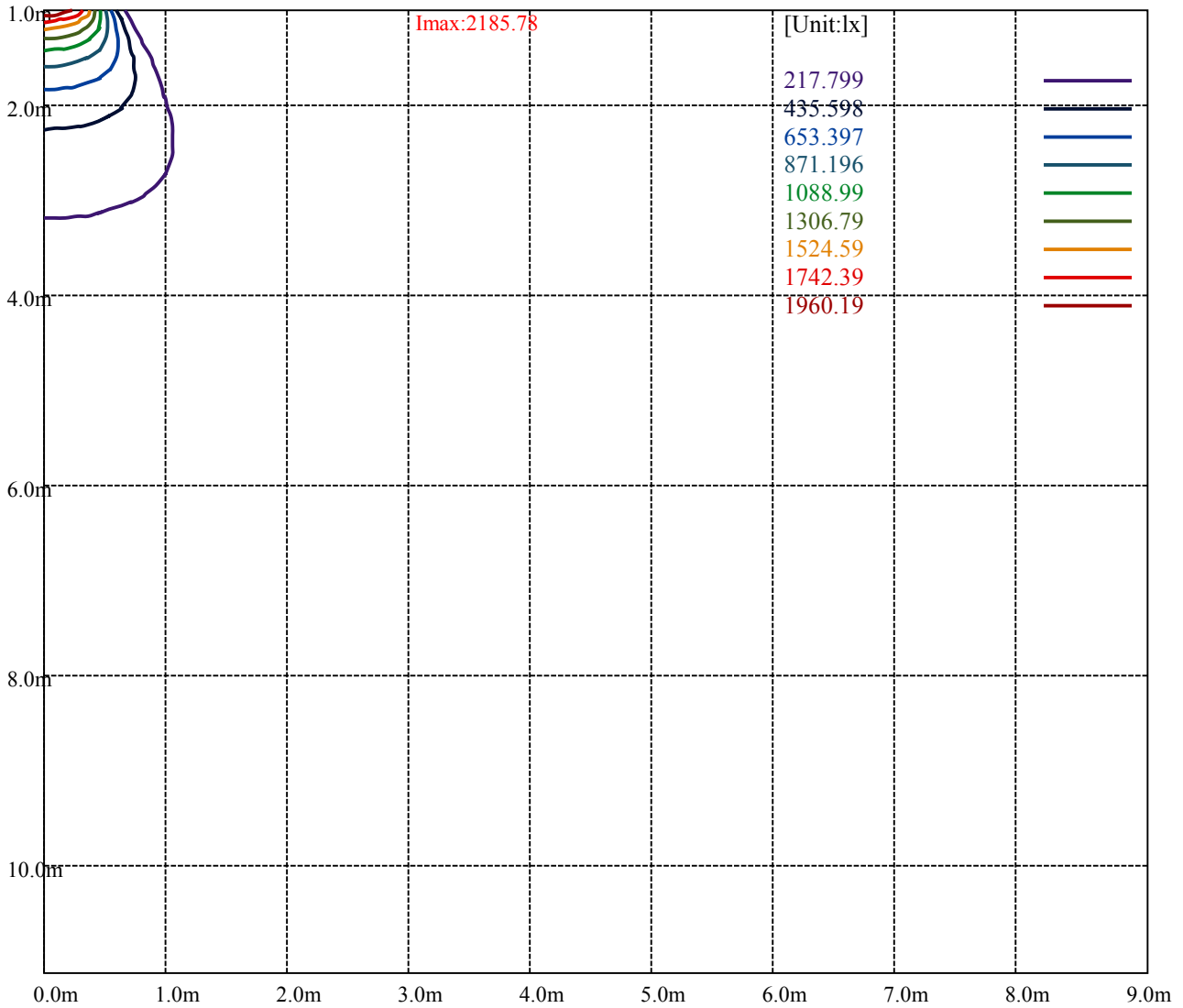
Road

Imax:2185.78

(10%Imax) 218.578	—
(20%Imax) 437.157	—
(30%Imax) 655.735	—
(40%Imax) 874.313	—
(50%Imax) 1092.89	—
(60%Imax) 1311.47	—
(70%Imax) 1530.05	—
(80%Imax) 1748.63	—
(90%Imax) 1967.2	—



(10%Emax) 54.44975	—
(20%Emax) 108.8995	—
(30%Emax) 163.3492	—
(40%Emax) 217.799	—
(50%Emax) 272.2475	—
(60%Emax) 326.6975	—
(70%Emax) 381.1475	—
(80%Emax) 435.5975	—
(90%Emax) 490.0475	—



Luminance Table

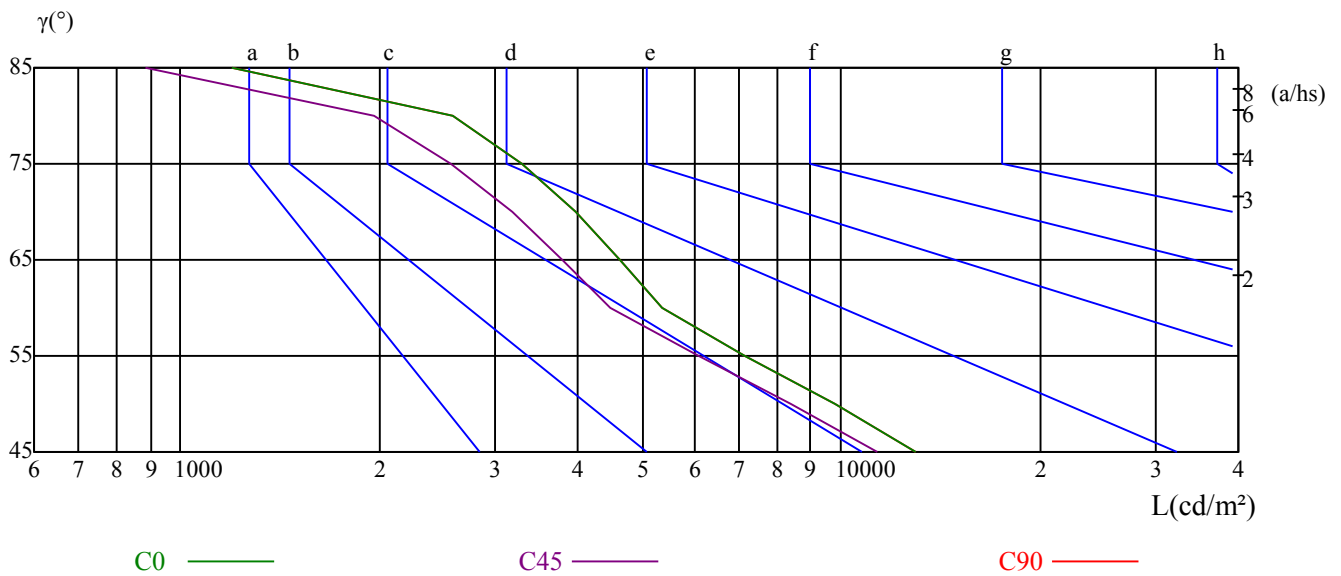
γ	45	50	55	60	65	70	75	80	85
C0	12953	9772	7166	5370	4628	3961	3278	2578	1199
C45	11324	8419	6079	4480	3791	3179	2570	1966	884
C90	12953	9772	7166	5370	4628	3961	3278	2578	1199

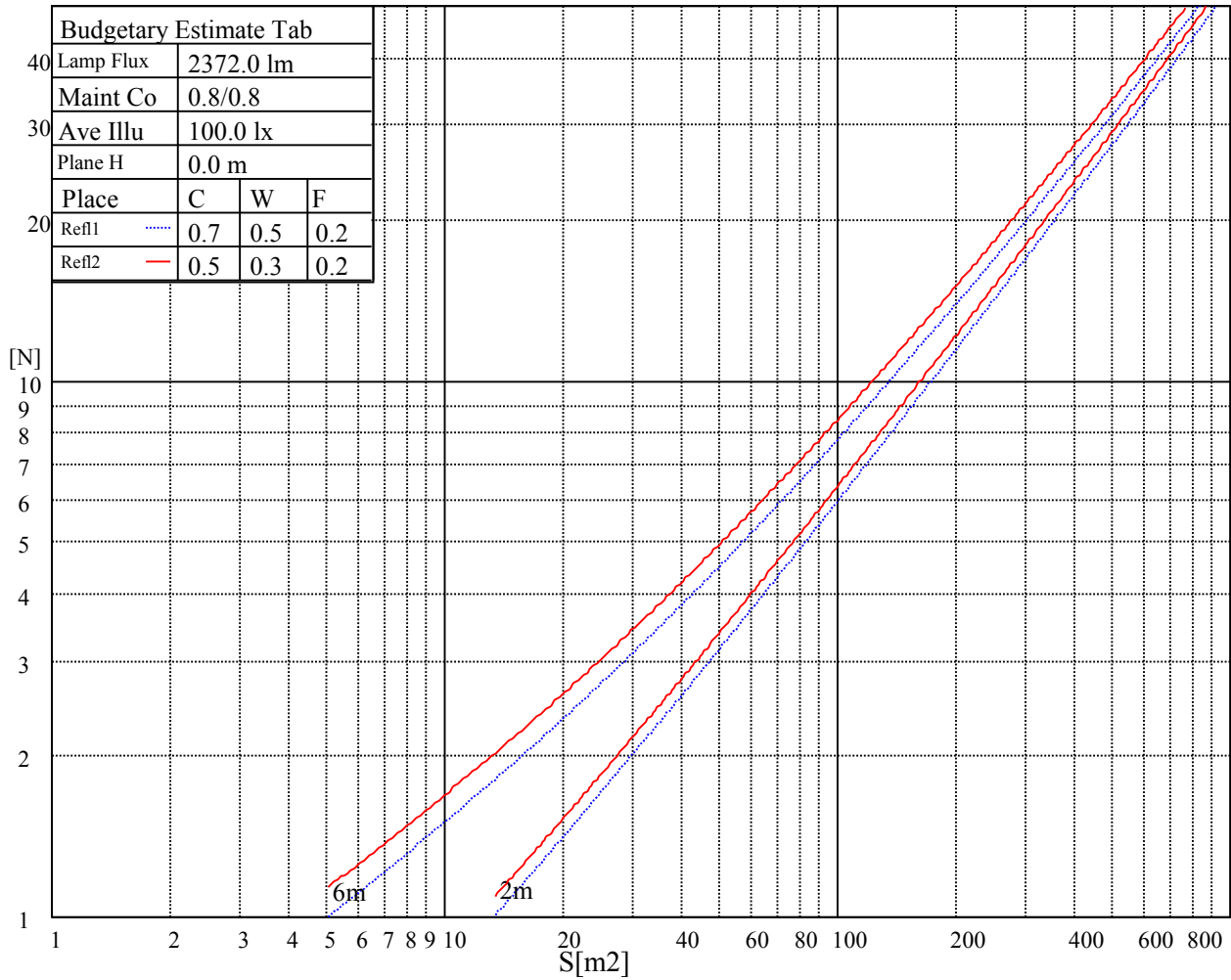
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9911	9911	9911	9789	9789	9789	8490	8490	8490

Glare Table

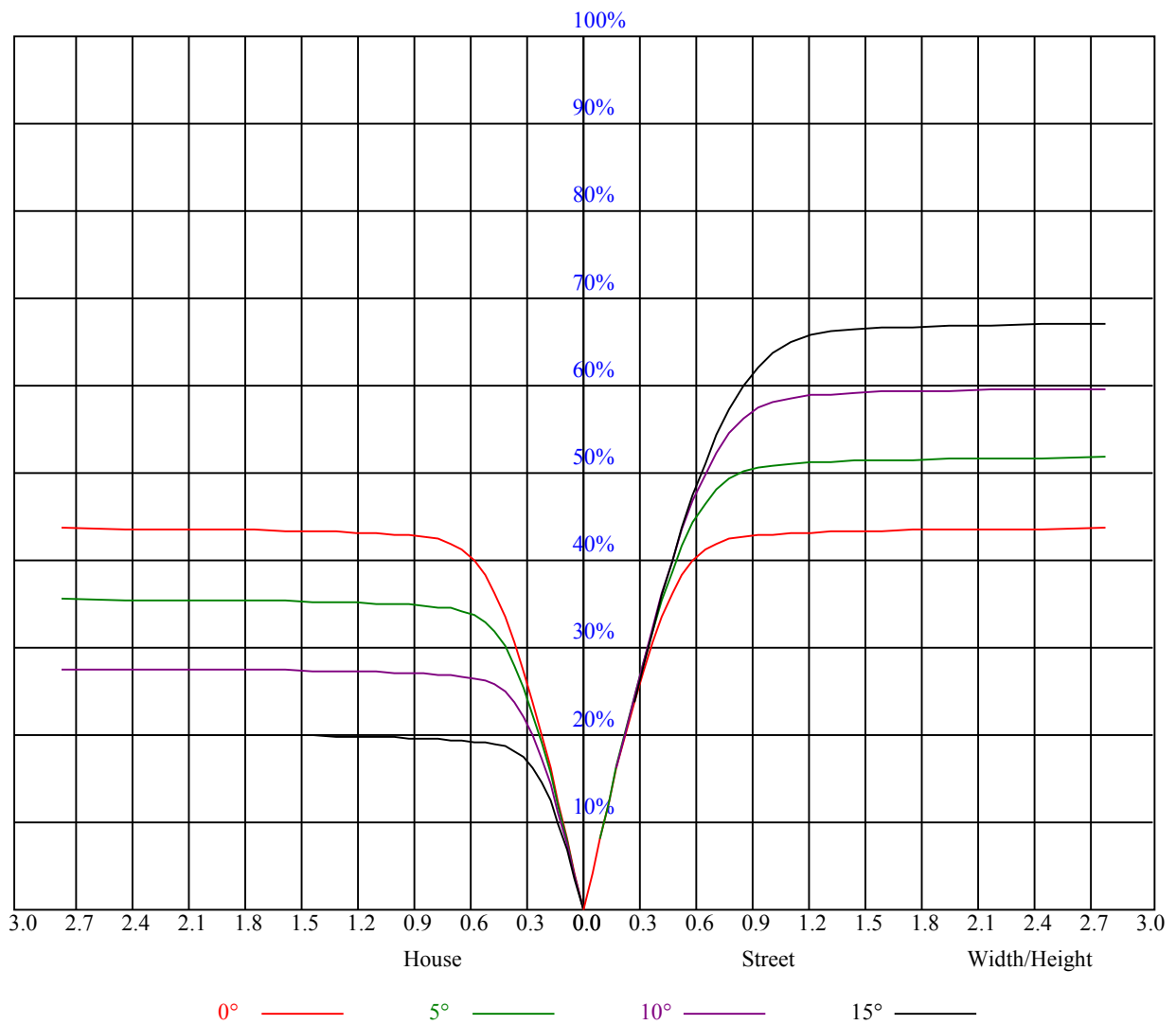
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

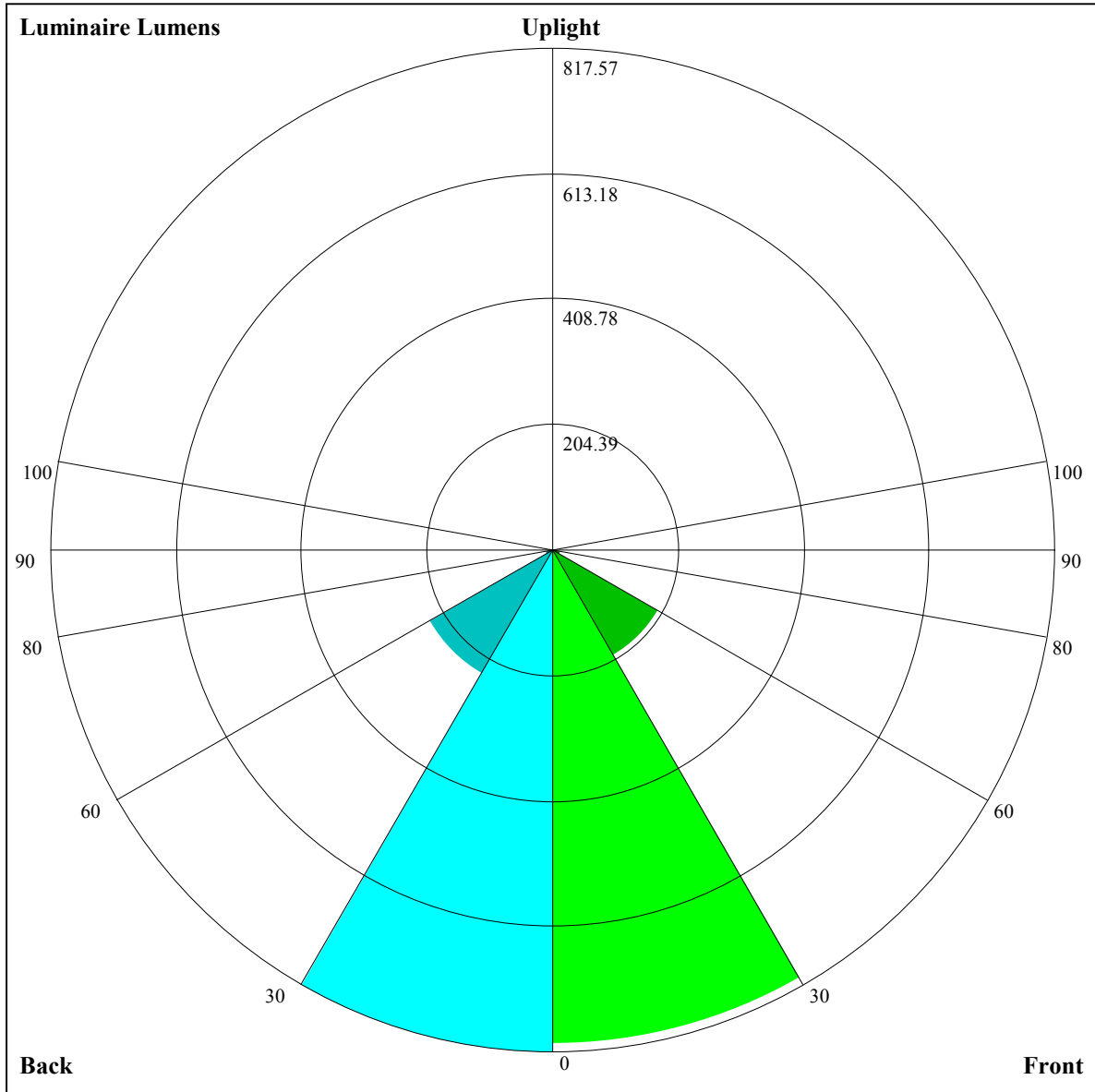
Luminance Limiting Curve





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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.88
1	0.97	0.95	0.93	0.95	0.93	0.91	0.92	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.82
2	0.90	0.87	0.84	0.89	0.86	0.83	0.86	0.84	0.81	0.84	0.81	0.80	0.81	0.79	0.78	0.76
3	0.85	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.71
4	0.79	0.74	0.71	0.78	0.74	0.70	0.76	0.73	0.70	0.75	0.71	0.69	0.73	0.70	0.68	0.67
5	0.74	0.69	0.66	0.74	0.69	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.69	0.66	0.64	0.62
6	0.70	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.62	0.60	0.58
7	0.66	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.55
8	0.62	0.57	0.54	0.62	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.52
9	0.59	0.54	0.50	0.58	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.50	0.49
10	0.56	0.51	0.47	0.55	0.51	0.47	0.55	0.50	0.47	0.54	0.50	0.47	0.53	0.50	0.47	0.46





Luminaire Lumens:

FL=803.23,FM=198.06,FH=12.83,FVH=1.55

BL=817.57,BM=232.67,BH=13.4,BVH=1.76

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	2179.19	2180.25	2181.85	2180.25	2185.58	2191.44	2198.37	2205.30	2200.50
45.0	2178.66	2176.52	2177.59	2172.26	2169.60	2164.27	2161.07	2157.87	2157.87
90.0	2174.39	2172.79	2168.00	2163.20	2159.47	2158.94	2160.00	2166.40	2165.33
135.0	2179.72	2174.39	2169.06	2167.46	2162.14	2165.87	2167.46	2170.66	2179.19
180.0	2179.19	2177.59	2179.19	2169.06	2165.33	2166.40	2164.27	2163.20	2163.20
225.0	2178.66	2178.12	2177.06	2174.39	2171.73	2174.39	2174.39	2172.79	2164.27
270.0	2174.39	2179.72	2182.39	2189.85	2193.04	2197.31	2210.63	2212.76	2215.96
315.0	2179.72	2188.78	2193.04	2198.91	2207.96	2216.49	2226.62	2234.08	2239.94
360.0	2179.19	2180.25	2181.85	2180.25	2185.58	2191.44	2198.37	2205.30	2200.50
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2200.50	2199.44	2197.84	2195.17	2189.85	2180.25	2168.53	2152.01	2144.55
45.0	2157.34	2149.88	2137.62	2130.16	2123.77	2116.31	2108.85	2098.72	2079.00
90.0	2155.21	2152.01	2154.14	2156.81	2155.74	2156.27	2156.27	2155.21	2141.88
135.0	2179.19	2175.46	2172.26	2173.33	2172.79	2176.52	2178.12	2180.25	2179.19
180.0	2160.00	2157.87	2145.62	2141.35	2138.15	2139.75	2139.75	2140.29	2135.49
225.0	2154.14	2145.62	2140.29	2137.62	2132.83	2126.43	2121.63	2105.65	2091.26
270.0	2212.76	2208.50	2207.43	2209.03	2209.56	2213.29	2213.83	2211.69	2203.17
315.0	2240.47	2237.81	2235.14	2229.28	2226.08	2223.95	2215.43	2207.96	2188.25
360.0	2200.50	2199.44	2197.84	2195.17	2189.85	2180.25	2168.53	2152.01	2144.55
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2129.63	2091.79	2072.08	2032.11	1976.15	1907.94	1825.34	1735.28	1636.16
45.0	2050.76	2019.85	1996.94	1964.43	1929.79	1879.70	1820.55	1749.67	1682.53
90.0	2125.90	2103.52	2079.00	2049.16	2009.73	1958.03	1891.42	1808.29	1712.37
135.0	2166.40	2150.41	2133.89	2114.17	2084.33	2047.03	1993.74	1927.66	1843.46
180.0	2129.63	2113.64	2092.86	2068.88	2041.70	2009.19	1967.63	1914.34	1845.06
225.0	2072.08	2035.30	2018.79	1985.21	1943.11	1890.89	1821.61	1743.81	1653.75
270.0	2187.71	2165.33	2139.75	2110.44	2075.27	2033.71	1972.42	1930.32	1845.59
315.0	2166.93	2139.75	2108.85	2073.67	2021.45	1956.44	1875.97	1780.58	1670.27
360.0	2129.63	2091.79	2072.08	2032.11	1976.15	1907.94	1825.34	1735.28	1636.16
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1514.66	1381.97	1015.39	1015.39	914.62	783.31	602.28	493.20	374.42
45.0	1587.67	1478.96	1373.44	1245.55	1097.93	944.46	789.92	642.84	516.01
90.0	1598.33	1467.77	1326.02	1015.81	1015.81	851.41	755.07	549.85	470.66
135.0	1786.44	1631.90	1503.47	1421.94	1281.25	1132.57	975.37	820.83	667.35
180.0	1797.63	1666.54	1602.59	1483.22	1352.13	1220.50	1076.08	918.88	755.81
225.0	1551.43	1436.33	1308.96	1006.38	1006.38	914.83	707.21	564.98	486.43
270.0	1751.27	1639.36	1514.66	1373.98	1221.57	1067.56	905.02	746.75	598.61
315.0	1549.30	1415.54	1221.57	1031.27	1031.27	865.86	704.81	561.73	432.40
360.0	1514.66	1381.97	1015.39	1015.39	914.62	783.31	602.28	493.20	374.42
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	259.47	199.84	142.66	106.10	83.67	71.46	63.89	57.87	53.24
45.0	400.90	302.85	284.73	201.28	134.45	101.84	76.58	70.40	62.56
90.0	354.49	260.16	184.54	131.79	96.93	76.20	65.81	59.10	53.56
135.0	521.87	395.57	290.59	290.59	147.03	106.31	81.16	68.10	60.96
180.0	601.80	465.38	349.21	291.12	291.12	137.91	96.56	77.86	69.54
225.0	370.74	275.14	199.20	144.42	107.27	84.09	71.94	64.16	58.19
270.0	465.38	350.28	274.07	274.07	140.85	94.06	76.20	69.65	59.31
315.0	324.75	237.57	170.63	123.37	93.68	75.83	66.03	59.15	53.66
360.0	259.47	199.84	142.66	106.10	83.67	71.46	63.89	57.87	53.24

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	49.61	46.84	44.18	41.67	39.81	37.68	35.33	32.61	30.80
45.0	56.86	52.54	48.97	45.94	43.64	41.35	39.01	36.50	33.89
90.0	49.40	46.36	44.07	42.15	40.23	38.16	35.86	33.25	30.59
135.0	56.49	51.00	48.07	45.24	42.69	40.23	37.52	34.43	31.71
180.0	60.80	56.27	51.74	47.96	44.87	42.15	39.65	37.57	35.54
225.0	53.18	49.51	46.74	44.39	42.15	39.91	37.78	35.54	34.00
270.0	55.79	51.00	47.21	44.18	41.83	39.97	38.16	35.86	33.63
315.0	49.45	45.99	43.06	40.39	37.73	36.24	32.77	31.28	29.04
360.0	49.61	46.84	44.18	41.67	39.81	37.68	35.33	32.61	30.80
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	27.50	25.42	24.30	22.59	21.16	19.98	19.13	18.28	17.59
45.0	31.39	29.10	27.07	25.26	23.71	22.28	21.10	20.20	19.56
90.0	28.72	26.06	24.51	22.65	20.78	19.72	18.76	18.01	17.27
135.0	29.20	26.91	24.83	22.91	21.26	19.82	18.54	17.69	17.11
180.0	33.89	32.13	30.38	28.24	26.06	23.93	22.17	20.78	19.77
225.0	31.49	28.40	27.18	25.31	23.71	22.22	21.05	20.09	19.29
270.0	31.65	29.79	27.76	25.53	23.39	21.69	20.20	19.50	18.28
315.0	25.95	24.67	22.81	21.32	19.93	18.65	17.75	17.16	16.47
360.0	27.50	25.42	24.30	22.59	21.16	19.98	19.13	18.28	17.59
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	16.89	16.20	15.45	14.76	14.12	13.43	12.74	12.04	11.40
45.0	18.60	17.96	17.27	16.52	15.83	15.08	14.44	13.75	13.06
90.0	16.57	15.93	15.24	14.65	13.96	13.38	12.68	12.04	11.46
135.0	16.52	15.88	15.29	14.92	14.18	13.80	13.27	12.63	11.99
180.0	18.92	18.17	17.75	16.73	16.31	15.56	14.87	14.18	13.54
225.0	18.54	17.80	17.00	16.31	15.56	14.87	14.18	13.48	12.79
270.0	17.53	17.11	16.15	15.67	15.03	14.39	13.75	13.06	12.36
315.0	15.88	15.29	14.65	14.02	13.38	12.79	12.10	11.40	11.08
360.0	16.89	16.20	15.45	14.76	14.12	13.43	12.74	12.04	11.40
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	10.82	10.13	9.75	8.85	8.26	7.89	6.98	6.66	6.02
45.0	12.36	11.72	11.03	10.39	9.81	9.22	8.58	7.99	7.46
90.0	10.92	10.34	9.75	9.38	8.58	7.99	7.62	6.87	6.50
135.0	11.40	10.76	10.13	9.49	8.95	8.42	7.99	7.46	6.82
180.0	12.84	12.20	11.51	10.92	10.34	9.70	9.06	8.47	7.94
225.0	12.10	11.46	10.82	10.28	9.54	9.11	8.47	7.89	7.25
270.0	11.78	11.14	10.50	9.75	9.17	8.63	7.99	7.46	6.93
315.0	10.23	9.86	9.38	8.85	8.31	7.83	7.30	6.77	6.39
360.0	10.82	10.13	9.75	8.85	8.26	7.89	6.98	6.66	6.02
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.33	4.21	3.68	2.88	1.44	0.75	0.48	0.48	0.43
45.0	6.71	5.86	4.80	4.00	2.72	1.65	0.80	0.48	0.43
90.0	5.54	4.74	4.05	3.73	2.40	1.01	0.59	0.43	0.43
135.0	6.13	5.60	4.90	4.42	3.62	2.29	1.07	0.59	0.53
180.0	7.30	6.66	5.76	4.74	3.78	3.14	1.65	0.75	0.43
225.0	6.55	5.49	4.64	3.57	2.72	1.49	0.64	0.43	0.32
270.0	6.34	5.76	4.85	4.16	3.62	2.03	1.07	0.48	0.37
315.0	6.02	5.22	4.37	3.46	2.45	1.17	0.69	0.48	0.48
360.0	5.33	4.21	3.68	2.88	1.44	0.75	0.48	0.48	0.43

Intensity data(cd)

C/γ(°)	90.0
0.0	0.32
45.0	0.37
90.0	0.32
135.0	0.43
180.0	0.37
225.0	0.27
270.0	0.37
315.0	0.37
360.0	0.32