



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

NT

Client: NT

LumCAT: 62-0089-1

Luminaire: 92.70.429.00

Report No: 20250326-B005

Ballast type: AC

Test No: 20250326-C005

Voltage(V): 34.950

LampCAT: CREE CXA1820

Current(A): 0.450

Lamp flux(lm): 2300.1

Power (W): 15.720

Number of Lamps: 1

PF: 0.000

Length(mm): 62

Width(mm): 62

Phm Type: C

Height(mm): 33

### Photometric Results

Lumens(lm): 2063.31, Efficiency(%): 89.71% , Luminous Efficacy(lm/W): 131.25

Central intensity(cd): 1937.784, Maximum intensity(cd): 2066.879

Angle of maximum intensity: C=0.0  $\gamma$ =17.0

Beam Angle(50%Imax): [C0/180]Total=64.0

[C90/270]Total=64.0

Field angle(10%Imax): [C0/180]Total=78.0

[C90/270]Total=78.0

Maximum s/h(1/2): C0\_180=1.10 C90\_270=1.10

Maximum s/h(1/4): C0\_180=0.93 C90\_270=0.93

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.71%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.770%

Equipment: GMS 1800  
Temperature(°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	1937.784	0.000	0	0.00%	0.00%
1.0	1937.318	1.854	1.854	0.08%	0.09%
2.0	1937.584	5.562	7.416	0.24%	0.36%
3.0	1939.050	9.272	16.687	0.40%	0.81%
4.0	1940.649	12.987	29.674	0.56%	1.44%
5.0	1944.512	16.714	46.388	0.73%	2.25%
6.0	1949.908	20.466	66.854	0.89%	3.24%
7.0	1958.234	24.258	91.112	1.05%	4.42%
8.0	1970.491	28.117	119.229	1.22%	5.78%
9.0	1986.212	32.067	151.296	1.39%	7.33%
10.0	2002.731	36.098	187.394	1.57%	9.08%
11.0	2016.520	40.161	227.555	1.75%	11.03%
12.0	2032.441	44.261	271.816	1.92%	13.17%
13.0	2042.033	48.354	320.17	2.10%	15.52%
14.0	2051.825	52.401	372.571	2.28%	18.06%
15.0	2059.885	56.447	429.018	2.45%	20.79%
16.0	2066.147	60.458	489.476	2.63%	23.72%
17.0	2066.879	64.362	553.838	2.80%	26.84%
18.0	2065.147	68.128	621.966	2.96%	30.14%
19.0	2055.489	71.691	693.657	3.12%	33.62%
20.0	2040.567	74.969	768.626	3.26%	37.25%
21.0	2017.253	77.918	846.545	3.39%	41.03%
22.0	1986.145	80.450	926.995	3.50%	44.93%
23.0	1946.644	82.521	1009.515	3.59%	48.93%
24.0	1897.484	84.046	1093.561	3.65%	53.00%
25.0	1835.001	84.869	1178.43	3.69%	57.11%
26.0	1760.728	84.878	1263.308	3.69%	61.23%
27.0	1670.735	83.952	1347.259	3.65%	65.30%
28.0	1560.558	81.809	1429.069	3.56%	69.26%
29.0	1423.955	78.083	1507.152	3.39%	73.05%
30.0	1285.215	73.147	1580.299	3.18%	76.59%
31.0	1159.903	68.044	1648.343	2.96%	79.89%
32.0	1035.958	62.909	1711.252	2.74%	82.94%
33.0	893.980	56.857	1768.109	2.47%	85.69%
34.0	751.769	49.805	1817.914	2.17%	88.11%
35.0	609.291	42.269	1860.183	1.84%	90.16%
36.0	470.957	34.395	1894.579	1.50%	91.82%
37.0	352.194	26.847	1921.425	1.17%	93.12%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	274.677	20.924	1942.349	0.91%	94.14%
39.0	204.081	16.341	1958.69	0.71%	94.93%
40.0	134.131	11.796	1970.486	0.51%	95.50%
41.0	100.132	8.342	1978.828	0.36%	95.91%
42.0	74.506	6.345	1985.173	0.28%	96.21%
43.0	65.593	5.190	1990.363	0.23%	96.46%
44.0	57.893	4.661	1995.023	0.20%	96.69%
45.0	52.224	4.232	1999.255	0.18%	96.90%
46.0	47.808	3.912	2003.167	0.17%	97.08%
47.0	43.764	3.642	2006.809	0.16%	97.26%
48.0	40.247	3.396	2010.206	0.15%	97.43%
49.0	37.163	3.179	2013.384	0.14%	97.58%
50.0	34.299	2.979	2016.364	0.13%	97.72%
51.0	31.654	2.790	2019.154	0.12%	97.86%
52.0	29.230	2.613	2021.767	0.11%	97.99%
53.0	27.231	2.456	2024.223	0.11%	98.11%
54.0	25.200	2.311	2026.534	0.10%	98.22%
55.0	23.354	2.167	2028.701	0.09%	98.32%
56.0	21.842	2.042	2030.744	0.09%	98.42%
57.0	20.363	1.930	2032.673	0.08%	98.51%
58.0	19.178	1.829	2034.502	0.08%	98.60%
59.0	18.199	1.747	2036.249	0.08%	98.69%
60.0	17.379	1.681	2037.93	0.07%	98.77%
61.0	16.646	1.624	2039.554	0.07%	98.85%
62.0	15.974	1.572	2041.126	0.07%	98.92%
63.0	15.301	1.521	2042.647	0.07%	99.00%
64.0	14.701	1.472	2044.119	0.06%	99.07%
65.0	14.095	1.425	2045.544	0.06%	99.14%
66.0	13.462	1.375	2046.919	0.06%	99.21%
67.0	12.876	1.324	2048.243	0.06%	99.27%
68.0	12.283	1.274	2049.518	0.06%	99.33%
69.0	11.717	1.224	2050.742	0.05%	99.39%
70.0	11.118	1.173	2051.915	0.05%	99.45%
71.0	10.511	1.118	2053.033	0.05%	99.50%
72.0	9.952	1.064	2054.097	0.05%	99.55%
73.0	9.359	1.010	2055.107	0.04%	99.60%
74.0	8.819	0.956	2056.062	0.04%	99.65%
75.0	8.267	0.903	2056.965	0.04%	99.69%

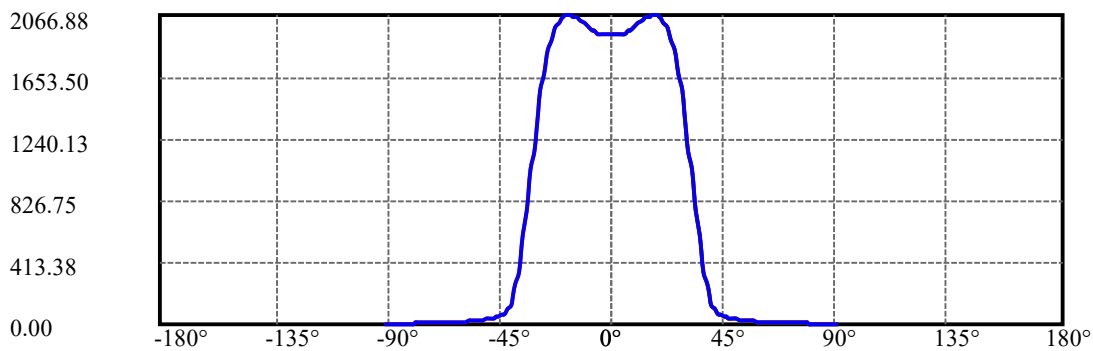
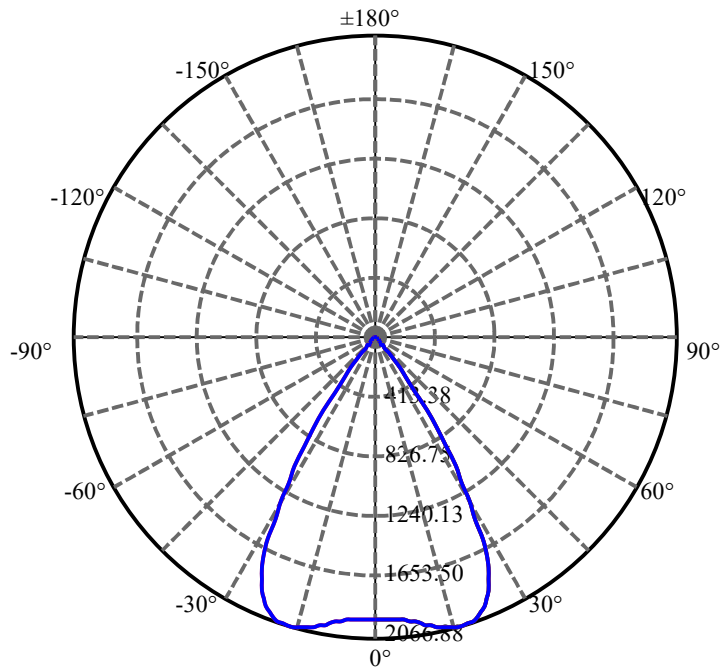
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.654	0.845	2057.81	0.04%	99.73%
77.0	7.174	0.791	2058.601	0.03%	99.77%
78.0	6.608	0.738	2059.339	0.03%	99.81%
79.0	6.042	0.680	2060.018	0.03%	99.84%
80.0	5.502	0.622	2060.641	0.03%	99.87%
81.0	4.823	0.558	2061.199	0.02%	99.90%
82.0	4.097	0.484	2061.683	0.02%	99.92%
83.0	3.317	0.403	2062.086	0.02%	99.94%
84.0	2.665	0.326	2062.412	0.01%	99.96%
85.0	2.132	0.262	2062.673	0.01%	99.97%
86.0	1.619	0.205	2062.878	0.01%	99.98%
87.0	1.126	0.150	2063.029	0.01%	99.99%
88.0	0.866	0.109	2063.138	0.00%	99.99%
89.0	0.799	0.091	2063.229	0.00%	100.00%
90.0	0.746	0.085	2063.314	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1580.30	68.71%	76.59%
0-40	1970.49	85.67%	95.50%
0-60	2037.93	88.60%	98.77%
0-90	2063.23	89.70%	100.00%
0-120	2063.23	89.70%	100.00%
0-180	2063.31	89.71%	100.00%
60-90	25.30	1.10%	1.23%
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%
0-31.04	1650.65	71.76%	80.00%

ZONAL LUMEN SUMMARY

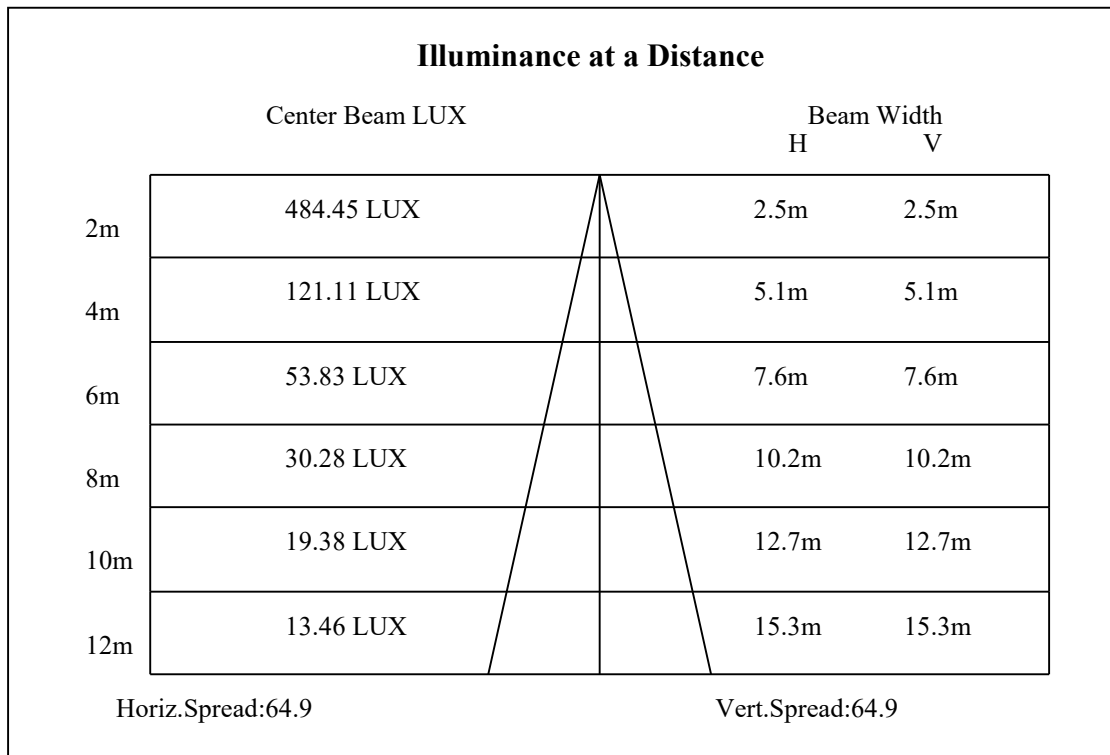
0-10	187.39
10-20	581.23
20-30	811.67
30-40	390.19
40-50	45.88
50-60	21.57
60-70	13.98
70-80	8.73
80-90	2.59
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

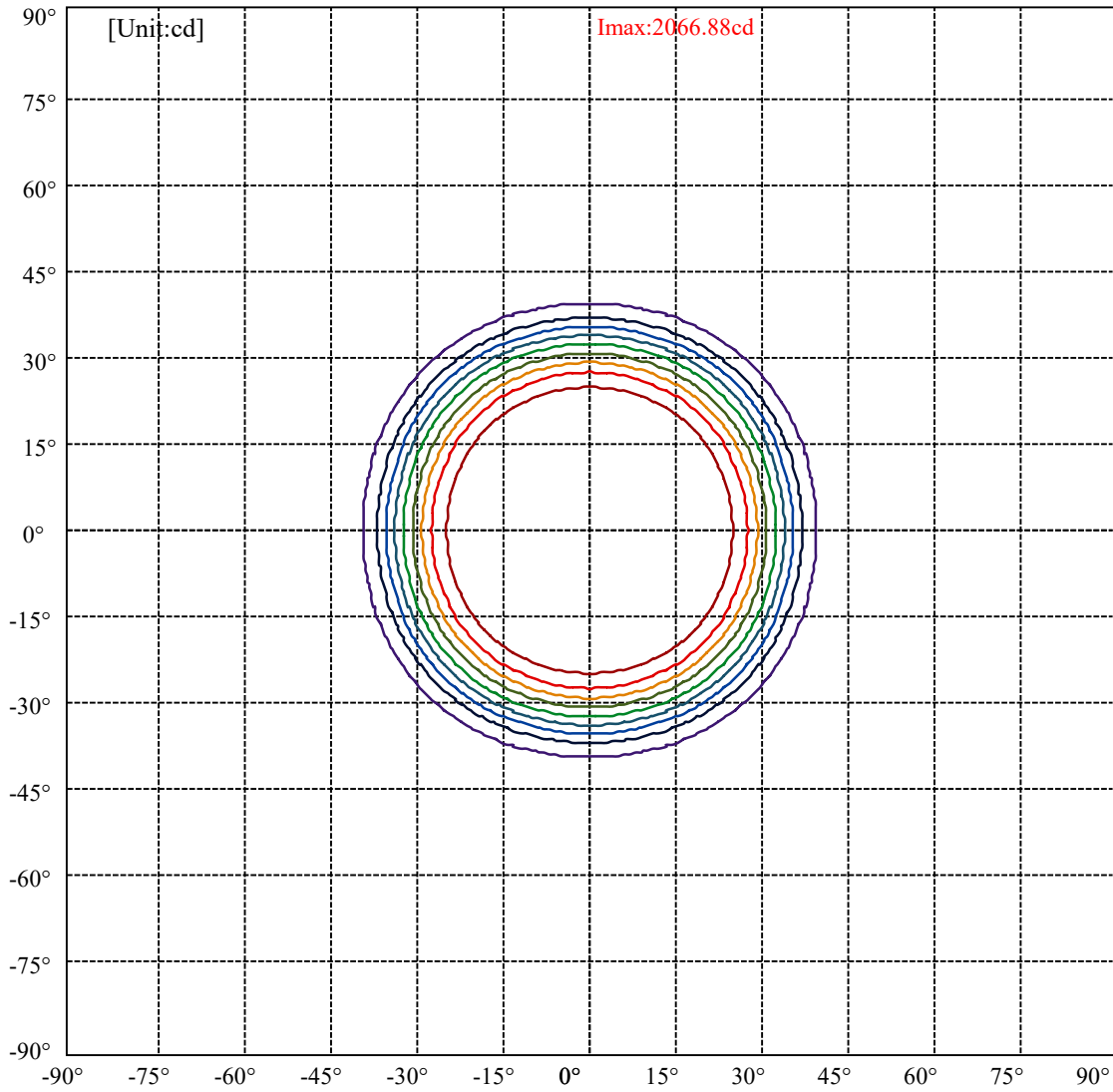


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

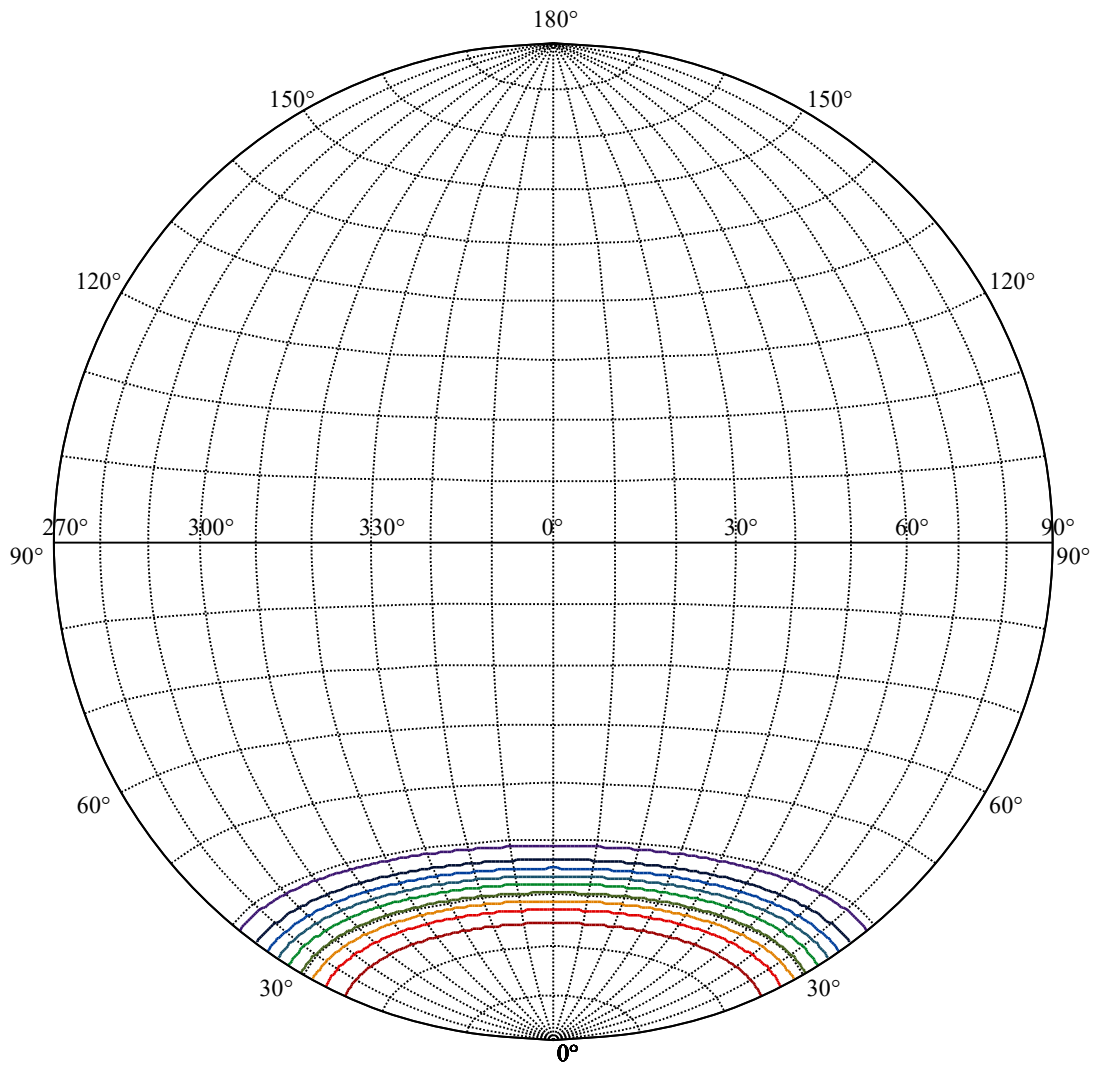
Field angle(10%Imax):C0/180Left:56.0 Right:22.0  
:C90/270Left:56.0 Right:22.0

Beam Angle(50%Imax):C0/180Left:49.0 Right:15.0  
:C90/270Left:49.0 Right:15.0





(10%Imax) 206.688	—
(20%Imax) 413.376	—
(30%Imax) 620.064	—
(40%Imax) 826.752	—
(50%Imax) 1033.44	—
(60%Imax) 1240.13	—
(70%Imax) 1446.82	—
(80%Imax) 1653.5	—
(90%Imax) 1860.19	—



House

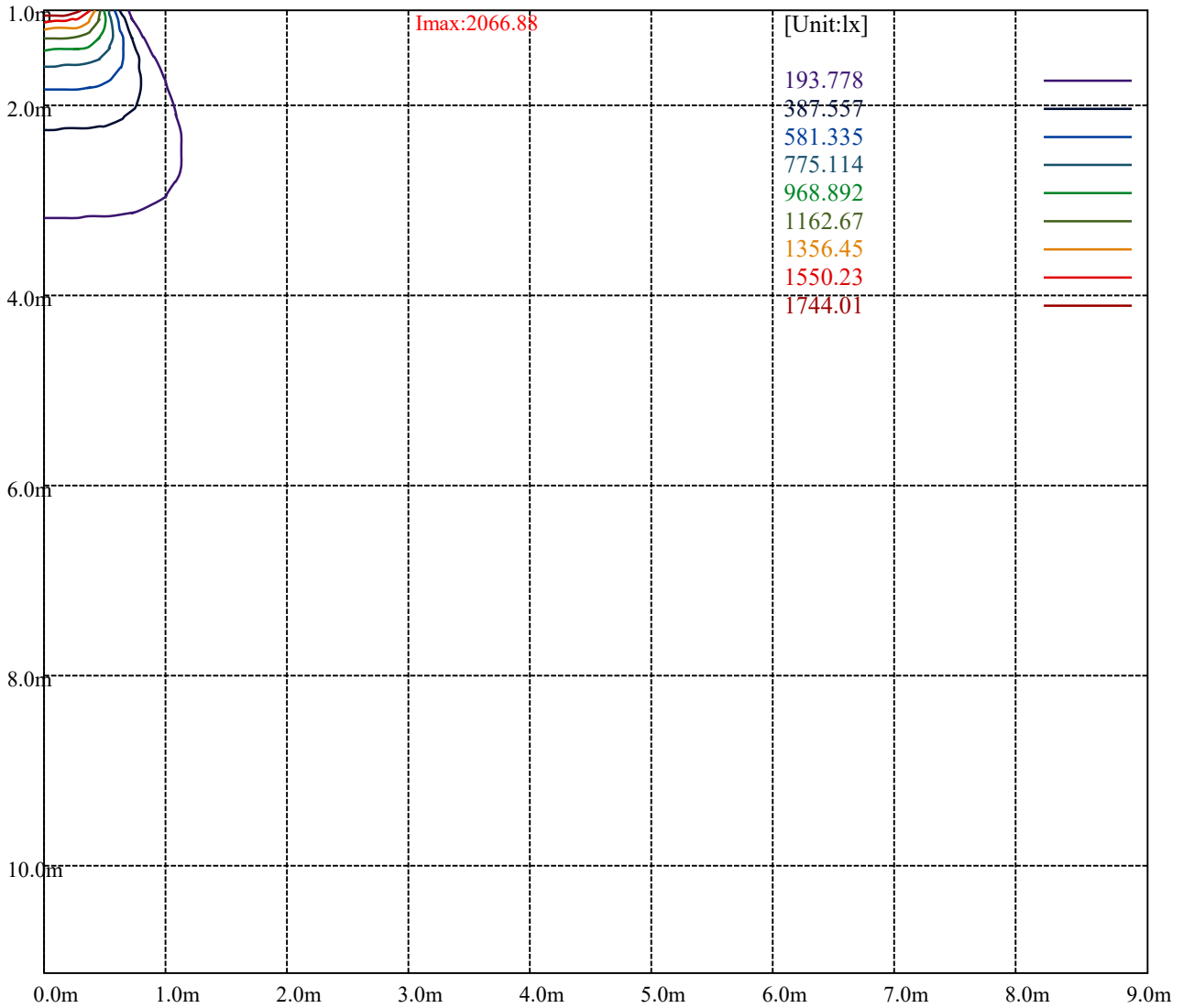
[Unit:cd]

Road

**Imax:2066.88**

(10%Imax)	206.688	—
(20%Imax)	413.376	—
(30%Imax)	620.064	—
(40%Imax)	826.752	—
(50%Imax)	1033.44	—
(60%Imax)	1240.13	—
(70%Imax)	1446.82	—
(80%Imax)	1653.5	—
(90%Imax)	1860.19	—





Luminance Table

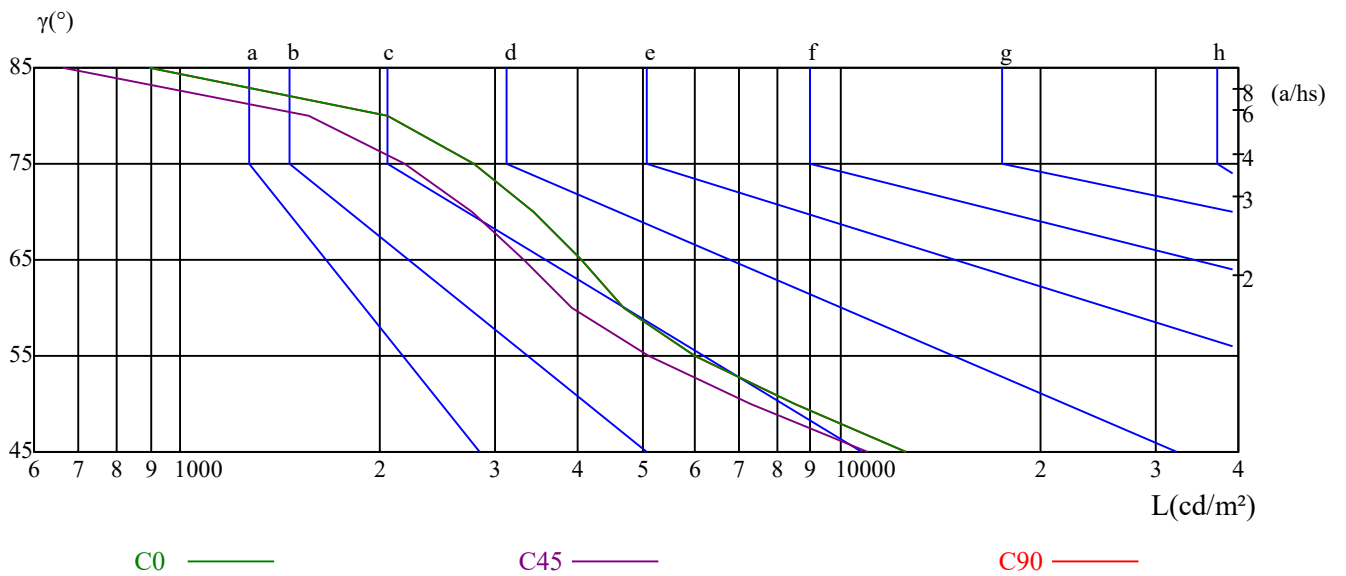
$\gamma$	45	50	55	60	65	70	75	80	85
C0	12539	8494	6018	4705	4052	3434	2782	2051	898
C45	10962	7317	5105	3925	3319	2756	2181	1564	663
C90	12539	8494	6018	4705	4052	3434	2782	2051	898

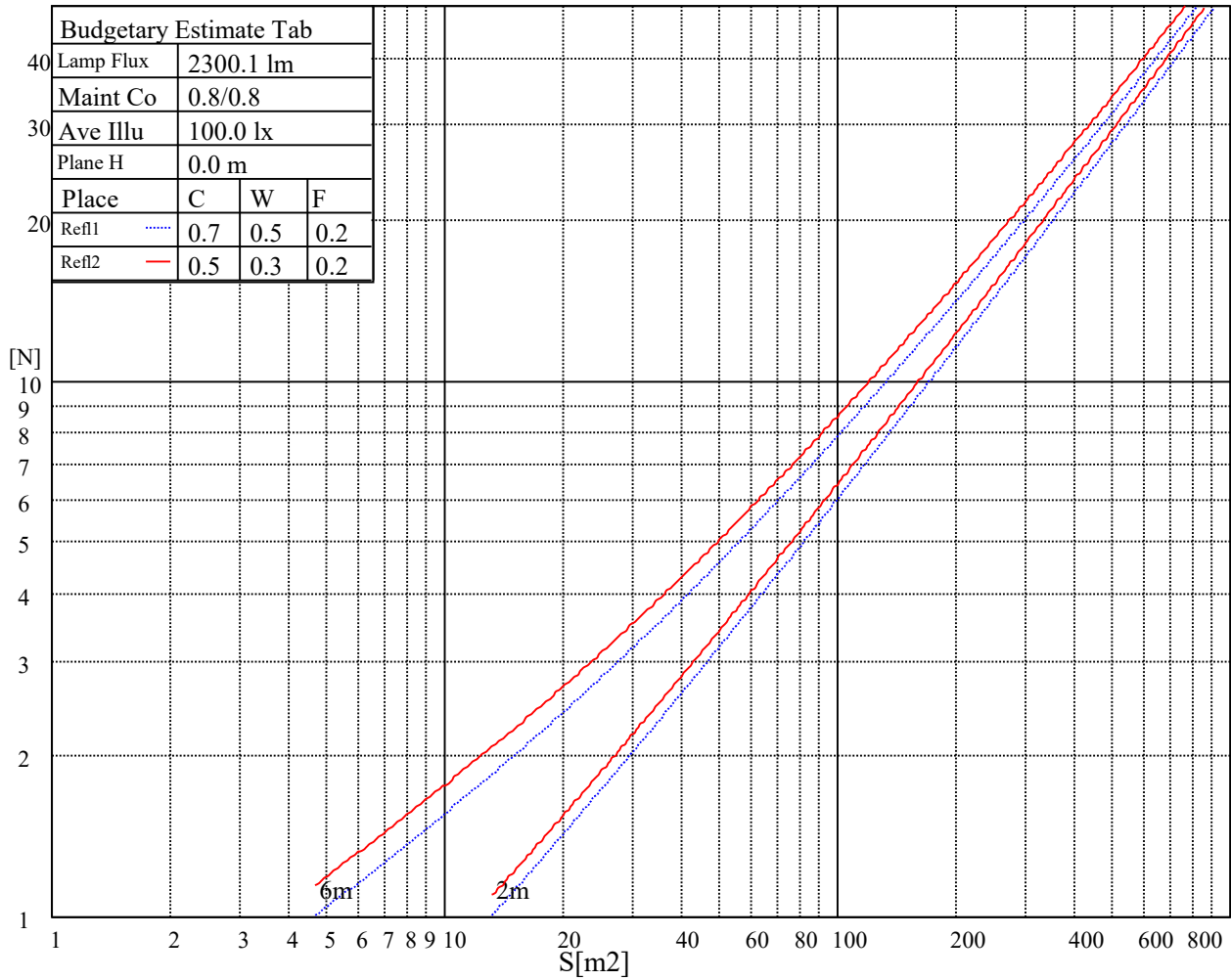
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8676	8676	8676	8309	8309	8309	6362	6362	6362

Glare Table

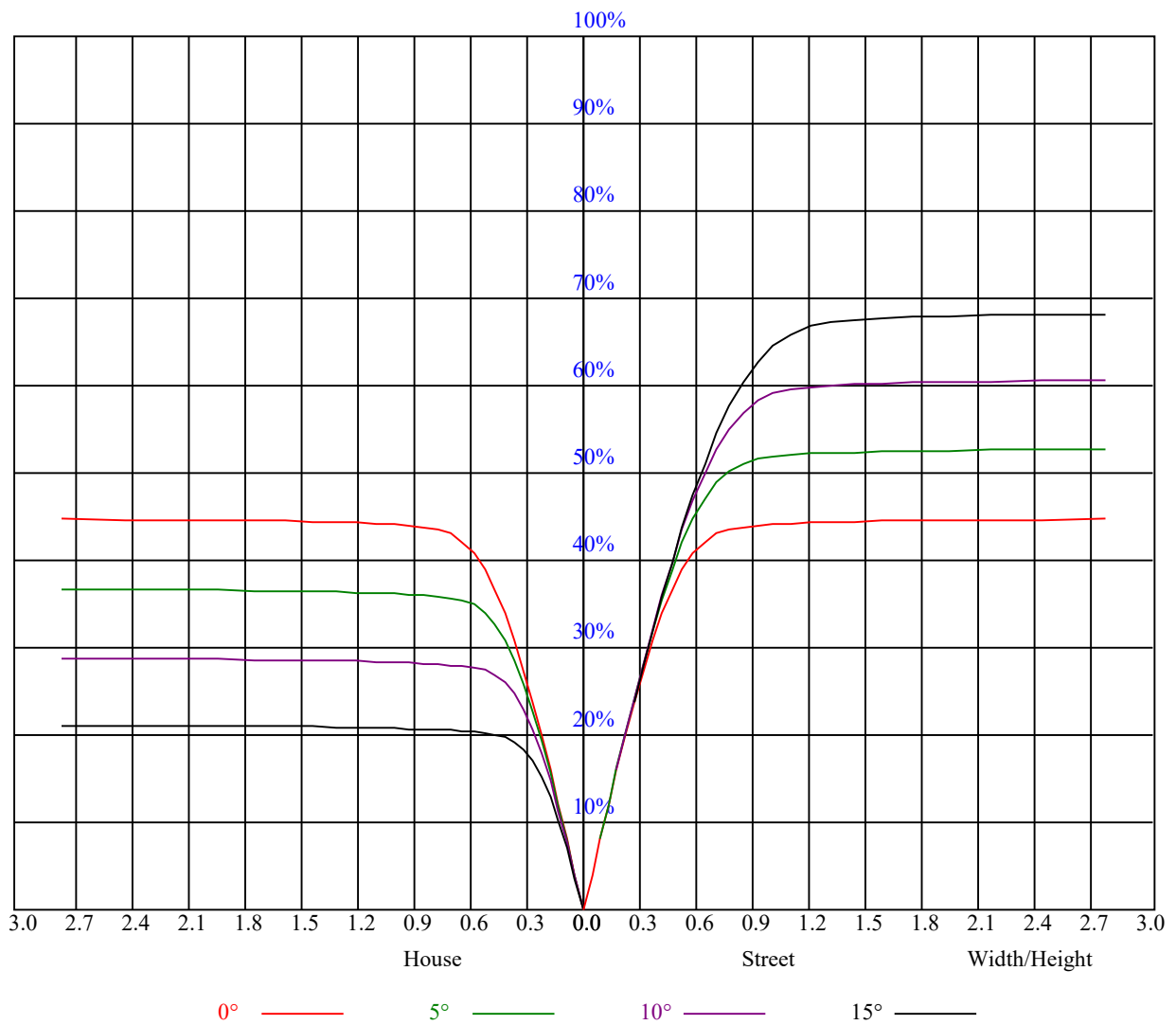
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

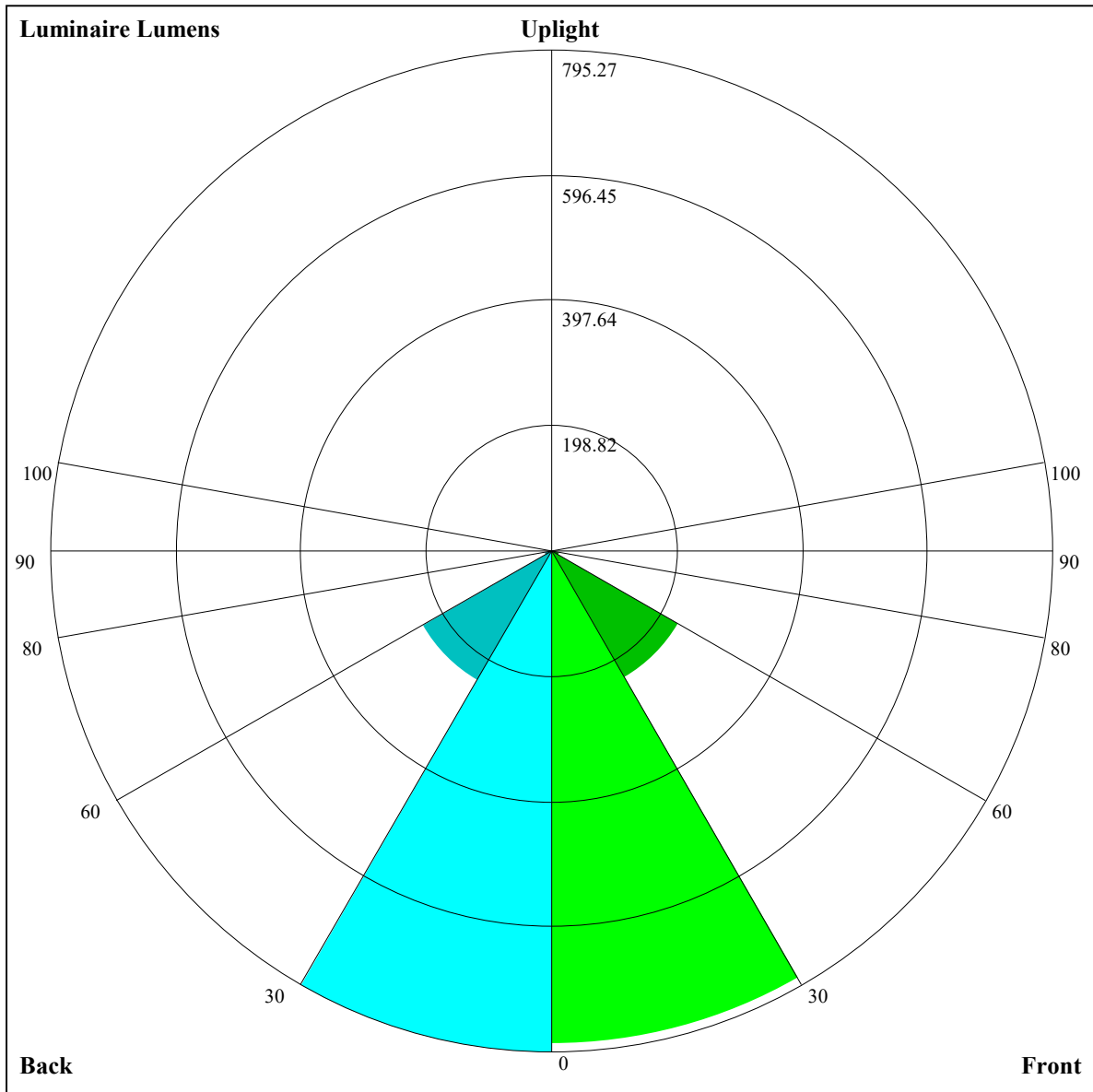
Luminance Limiting Curve





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	1.07	1.07	1.07	1.04	1.04	1.04	1.00	1.00	1.00	0.95	0.95	0.95	0.92	0.92	0.92	0.90
1	0.99	0.97	0.95	0.97	0.95	0.94	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.92	0.89	0.86	0.91	0.88	0.85	0.88	0.85	0.83	0.85	0.83	0.81	0.83	0.81	0.80	0.78
3	0.86	0.82	0.78	0.85	0.81	0.78	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.73
4	0.81	0.76	0.72	0.80	0.75	0.72	0.78	0.74	0.71	0.76	0.73	0.70	0.74	0.72	0.69	0.68
5	0.76	0.71	0.67	0.75	0.70	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.70	0.67	0.65	0.63
6	0.71	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.59
7	0.67	0.62	0.58	0.66	0.61	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.56
8	0.63	0.58	0.54	0.63	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.53	0.52
9	0.60	0.54	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.58	0.53	0.50	0.57	0.53	0.50	0.49
10	0.56	0.51	0.48	0.56	0.51	0.48	0.55	0.51	0.48	0.55	0.50	0.47	0.54	0.50	0.47	0.46





Luminaire Lumens:

FL=782.91,FM=231.28,FH=11.4,FVH=1.39

BL=795.27,BM=236.35,BH=11.27,BVH=1.34

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	1926.59	1915.94	1913.80	1908.47	1905.81	1906.34	1912.74	1917.00	1924.46
45.0	1940.98	1943.11	1938.85	1948.98	1952.17	1956.44	1960.17	1966.56	1976.15
90.0	1949.51	1960.70	1971.89	1977.22	1986.28	2001.20	2012.92	2029.98	2046.50
135.0	1934.05	1947.38	1964.43	1973.49	1980.42	1988.94	2006.53	2024.11	2040.63
180.0	1926.59	1940.98	1947.91	1961.76	1970.29	1976.69	1984.68	1994.80	2004.93
225.0	1940.98	1934.59	1936.72	1933.52	1930.32	1932.99	1938.32	1944.71	1955.37
270.0	1949.51	1938.32	1924.99	1912.21	1908.47	1902.61	1894.62	1895.15	1902.08
315.0	1934.05	1917.53	1902.08	1896.75	1891.42	1890.89	1889.29	1893.55	1913.80
360.0	1926.59	1915.94	1913.80	1908.47	1905.81	1906.34	1912.74	1917.00	1924.46
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1940.98	1949.51	1960.70	1973.49	1978.82	1980.95	1984.68	1985.75	1981.48
45.0	1992.14	2004.40	2017.19	2028.38	2031.04	2042.23	2044.36	2041.17	2036.37
90.0	2064.08	2081.67	2097.65	2112.04	2115.77	2121.63	2122.70	2120.04	2111.51
135.0	2056.09	2082.73	2097.65	2111.51	2123.77	2131.76	2138.69	2147.21	2144.02
180.0	2026.25	2046.50	2059.29	2079.54	2095.52	2106.71	2114.71	2123.77	2130.16
225.0	1969.23	1986.28	1995.87	2005.46	2013.46	2017.72	2021.98	2025.71	2027.84
270.0	1915.40	1928.72	1944.71	1958.57	1975.09	1992.67	2010.79	2026.78	2035.30
315.0	1925.53	1942.05	1959.10	1990.54	2002.80	2020.92	2041.17	2058.75	2068.34
360.0	1940.98	1949.51	1960.70	1973.49	1978.82	1980.95	1984.68	1985.75	1981.48
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1978.28	1960.17	1948.44	1922.33	1884.49	1844.53	1790.70	1720.89	1634.03
45.0	2026.25	2014.52	1994.80	1967.09	1932.46	1889.82	1841.86	1784.31	1727.29
90.0	2097.12	2069.94	2034.77	1996.40	1945.24	1886.09	1812.02	1723.56	1620.71
135.0	2138.15	2118.44	2094.99	2059.82	2015.59	1963.36	1902.61	1829.07	1736.35
180.0	2129.63	2127.50	2114.17	2092.86	2066.21	2032.64	1988.94	1931.39	1852.52
225.0	2021.98	2006.53	1997.47	1975.09	1943.65	1903.15	1850.39	1784.84	1703.84
270.0	2050.76	2059.29	2058.75	2054.49	2045.43	2024.11	1997.47	1964.43	1934.59
315.0	2079.00	2087.53	2081.13	2069.94	2056.09	2029.44	1995.87	1941.51	1876.50
360.0	1978.28	1960.17	1948.44	1922.33	1884.49	1844.53	1790.70	1720.89	1634.03
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1540.24	1428.86	1303.63	1033.45	1033.45	912.64	731.67	611.40	467.03
45.0	1642.02	1522.66	1427.80	1302.03	1164.01	1020.66	871.98	721.71	575.16
90.0	1505.07	1377.71	1033.08	1001.21	936.78	843.10	626.00	482.65	404.15
135.0	1631.37	1513.60	1378.24	1234.36	1142.70	928.47	833.62	674.81	528.80
180.0	1799.23	1656.95	1588.20	1461.90	1263.13	1174.67	1018.53	860.79	703.05
225.0	1610.05	1498.14	1380.37	1196.52	1009.31	1009.31	810.33	718.62	578.78
270.0	1844.53	1798.16	1707.04	1610.58	1500.27	1376.11	1237.02	1087.81	927.41
315.0	1793.37	1688.39	1573.28	1441.65	1229.56	1022.69	1022.69	856.37	689.95
360.0	1540.24	1428.86	1303.63	1033.45	1033.45	912.64	731.67	611.40	467.03
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	348.41	248.70	172.66	123.21	92.35	75.51	67.15	60.59	54.73
45.0	440.34	327.89	307.11	267.14	114.09	96.19	73.17	68.21	61.66
90.0	292.83	208.42	144.90	104.29	81.96	70.24	62.83	56.59	51.32
135.0	396.64	288.99	288.99	137.81	98.00	77.06	66.35	59.31	53.56
180.0	548.51	413.16	300.72	300.72	142.76	107.43	77.54	66.13	60.59
225.0	448.22	334.45	244.33	173.89	122.51	91.93	75.03	65.97	58.89
270.0	760.08	601.80	456.86	331.62	289.52	190.88	102.58	86.22	66.67
315.0	532.63	394.13	281.85	193.98	131.84	91.82	71.41	61.71	55.74
360.0	348.41	248.70	172.66	123.21	92.35	75.51	67.15	60.59	54.73

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	49.67	45.35	41.62	38.37	35.44	32.67	30.11	27.87	26.65
45.0	55.85	50.84	46.52	42.74	39.43	36.50	33.84	31.33	29.15
90.0	46.63	42.74	39.33	36.45	33.68	31.12	28.88	26.75	24.78
135.0	48.65	44.34	40.55	38.00	34.64	32.61	30.27	28.08	25.95
180.0	53.56	48.87	45.51	41.83	38.74	35.76	33.04	30.59	28.30
225.0	53.24	48.17	43.86	39.97	36.72	33.68	31.07	28.67	27.39
270.0	59.58	56.17	50.89	46.36	42.37	38.69	35.38	32.40	29.68
315.0	50.63	45.99	41.83	38.26	36.29	33.36	30.64	28.14	25.95
360.0	49.67	45.35	41.62	38.37	35.44	32.67	30.11	27.87	26.65
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	23.98	22.97	21.42	19.56	18.86	18.07	17.32	16.57	15.83
45.0	27.23	25.37	23.71	22.28	20.94	19.77	18.92	18.12	17.53
90.0	23.45	21.64	20.46	19.18	18.12	17.37	16.63	15.93	15.24
135.0	24.03	22.28	20.68	19.29	18.07	17.21	16.41	15.67	15.03
180.0	26.27	24.41	22.75	21.32	20.04	18.86	18.07	17.37	16.63
225.0	25.31	22.86	21.96	20.57	19.40	18.39	17.59	16.84	16.15
270.0	27.28	25.05	23.07	21.42	19.93	18.70	17.64	16.84	16.15
315.0	24.03	22.28	20.68	19.29	18.07	17.21	16.47	15.83	15.24
360.0	23.98	22.97	21.42	19.56	18.86	18.07	17.32	16.57	15.83
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	15.19	14.55	13.91	13.22	12.63	11.94	11.30	10.71	10.13
45.0	16.68	15.99	15.51	14.87	14.18	13.48	12.90	12.20	11.51
90.0	14.60	13.96	13.32	12.63	11.99	11.40	10.76	10.18	9.59
135.0	14.34	13.70	13.06	12.58	11.99	11.40	11.03	10.28	9.70
180.0	15.93	15.29	14.92	14.02	13.43	13.06	12.42	11.78	11.19
225.0	15.51	14.81	14.18	13.54	12.90	12.20	11.62	11.03	10.39
270.0	15.51	15.19	14.28	13.75	13.38	12.79	12.26	11.67	11.08
315.0	14.65	14.12	13.59	13.11	12.52	11.99	11.46	11.08	10.50
360.0	15.19	14.55	13.91	13.22	12.63	11.94	11.30	10.71	10.13
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	9.49	8.90	8.53	7.73	7.14	6.77	6.02	5.60	5.01
45.0	10.87	10.23	9.59	8.90	8.26	7.73	7.09	6.39	5.81
90.0	9.06	8.47	7.94	7.67	6.98	6.66	6.18	5.33	4.90
135.0	9.38	8.90	8.42	7.94	7.51	7.03	6.50	5.97	5.49
180.0	10.55	9.91	9.33	8.74	8.05	7.41	6.77	6.23	5.65
225.0	9.75	9.11	8.53	8.05	7.30	6.87	6.23	5.65	5.06
270.0	10.55	10.02	9.49	8.85	8.31	7.73	7.19	6.66	6.13
315.0	9.97	9.33	8.74	8.26	7.67	7.19	6.87	6.50	5.97
360.0	9.49	8.90	8.53	7.73	7.14	6.77	6.02	5.60	5.01
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.37	3.30	2.77	2.13	1.60	1.17	0.85	0.75	0.75
45.0	5.12	4.32	3.36	2.61	1.87	1.44	0.85	0.59	0.48
90.0	3.84	3.20	2.72	2.29	1.65	1.01	0.85	0.80	0.75
135.0	4.85	4.16	3.36	2.88	2.29	1.49	1.01	0.91	0.91
180.0	5.01	4.42	3.46	2.77	2.34	1.92	1.23	0.75	0.64
225.0	4.37	3.46	2.88	2.18	1.55	1.07	0.64	0.53	0.48
270.0	5.70	5.22	4.21	3.20	2.77	2.40	1.92	1.23	1.07
315.0	5.33	4.69	3.78	3.25	2.98	2.45	1.65	1.39	1.33
360.0	4.37	3.30	2.77	2.13	1.60	1.17	0.85	0.75	0.75

Intensity data(cd)

C/γ(°)	90.0
0.0	0.75
45.0	0.48
90.0	0.59
135.0	0.69
180.0	0.59
225.0	0.48
270.0	1.07
315.0	1.33
360.0	0.75