



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

NT

Client: NT

LumCAT: 62-0072-1

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): 2098.18, Efficiency(%): 88.46% , Luminous Efficacy(lm/W): 133.64

Central intensity(cd): 4590.561, Maximum intensity(cd): 4590.561

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

Beam Angle(50%Imax): [C0/180]Total=39.8

[C90/270]Total=39.8

Field angle(10%Imax): [C0/180]Total=60.0

[C90/270]Total=60.0

Maximum s/h(1/2): C0\_180=0.66 C90\_270=0.66

Maximum s/h(1/4): C0\_180=0.61 C90\_270=0.61

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 88.45%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.396%

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	4590.560	0.000	0	0.00%	0.00%
1.0	4587.963	4.392	4.392	0.19%	0.21%
2.0	4580.502	13.159	17.551	0.55%	0.84%
3.0	4567.779	21.880	39.431	0.92%	1.88%
4.0	4544.798	30.503	69.934	1.29%	3.33%
5.0	4514.023	38.971	108.904	1.64%	5.19%
6.0	4465.595	47.190	156.094	1.99%	7.44%
7.0	4403.379	55.050	211.144	2.32%	10.06%
8.0	4334.502	62.535	273.679	2.64%	13.04%
9.0	4242.244	69.510	343.189	2.93%	16.36%
10.0	4137.529	75.834	419.023	3.20%	19.97%
11.0	4010.898	81.420	500.443	3.43%	23.85%
12.0	3861.820	86.060	586.503	3.63%	27.95%
13.0	3701.284	89.755	676.258	3.78%	32.23%
14.0	3535.019	92.624	768.882	3.90%	36.65%
15.0	3353.233	94.565	863.447	3.99%	41.15%
16.0	3126.817	94.951	958.398	4.00%	45.68%
17.0	2945.831	94.567	1052.965	3.99%	50.18%
18.0	2729.607	93.576	1146.541	3.94%	54.64%
19.0	2507.388	91.113	1237.654	3.84%	58.99%
20.0	2283.703	87.690	1325.344	3.70%	63.17%
21.0	2059.685	83.402	1408.746	3.52%	67.14%
22.0	1839.131	78.348	1487.094	3.30%	70.88%
23.0	1592.072	71.996	1559.09	3.04%	74.31%
24.0	1321.139	63.693	1622.783	2.69%	77.34%
25.0	1178.042	56.826	1679.609	2.40%	80.05%
26.0	1036.797	52.282	1731.891	2.20%	82.54%
27.0	872.977	46.723	1778.614	1.97%	84.77%
28.0	701.989	39.875	1818.489	1.68%	86.67%
29.0	584.944	33.670	1852.158	1.42%	88.27%
30.0	452.465	28.010	1880.168	1.18%	89.61%
31.0	358.988	22.582	1902.75	0.95%	90.69%
32.0	288.166	18.540	1921.29	0.78%	91.57%
33.0	230.632	15.284	1936.574	0.64%	92.30%
34.0	193.722	12.842	1949.416	0.54%	92.91%
35.0	150.611	10.694	1960.11	0.45%	93.42%
36.0	110.450	8.312	1968.422	0.35%	93.82%
37.0	92.358	6.614	1975.037	0.28%	94.13%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	79.855	5.748	1980.785	0.24%	94.40%
39.0	71.069	5.151	1985.936	0.22%	94.65%
40.0	64.987	4.745	1990.682	0.20%	94.88%
41.0	60.631	4.473	1995.155	0.19%	95.09%
42.0	57.293	4.284	1999.439	0.18%	95.29%
43.0	54.636	4.146	2003.585	0.17%	95.49%
44.0	52.537	4.045	2007.63	0.17%	95.68%
45.0	50.486	3.959	2011.59	0.17%	95.87%
46.0	48.927	3.888	2015.477	0.16%	96.06%
47.0	47.368	3.830	2019.307	0.16%	96.24%
48.0	46.009	3.775	2023.082	0.16%	96.42%
49.0	44.844	3.731	2026.813	0.16%	96.60%
50.0	43.724	3.693	2030.506	0.16%	96.77%
51.0	42.592	3.652	2034.158	0.15%	96.95%
52.0	41.493	3.608	2037.766	0.15%	97.12%
53.0	40.527	3.568	2041.334	0.15%	97.29%
54.0	39.341	3.520	2044.854	0.15%	97.46%
55.0	38.296	3.466	2048.319	0.15%	97.62%
56.0	37.156	3.409	2051.729	0.14%	97.79%
57.0	35.897	3.340	2055.069	0.14%	97.95%
58.0	34.499	3.255	2058.325	0.14%	98.10%
59.0	32.980	3.155	2061.479	0.13%	98.25%
60.0	31.448	3.044	2064.523	0.13%	98.40%
61.0	29.796	2.923	2067.446	0.12%	98.54%
62.0	27.891	2.780	2070.225	0.12%	98.67%
63.0	25.806	2.612	2072.837	0.11%	98.79%
64.0	23.614	2.425	2075.262	0.10%	98.91%
65.0	21.576	2.236	2077.498	0.09%	99.01%
66.0	19.651	2.057	2079.555	0.09%	99.11%
67.0	18.079	1.897	2081.452	0.08%	99.20%
68.0	16.640	1.759	2083.211	0.07%	99.29%
69.0	15.108	1.620	2084.831	0.07%	99.36%
70.0	13.955	1.493	2086.323	0.06%	99.43%
71.0	12.916	1.389	2087.712	0.06%	99.50%
72.0	11.984	1.295	2089.007	0.05%	99.56%
73.0	11.038	1.204	2090.211	0.05%	99.62%
74.0	10.192	1.116	2091.327	0.05%	99.67%
75.0	9.226	1.026	2092.353	0.04%	99.72%

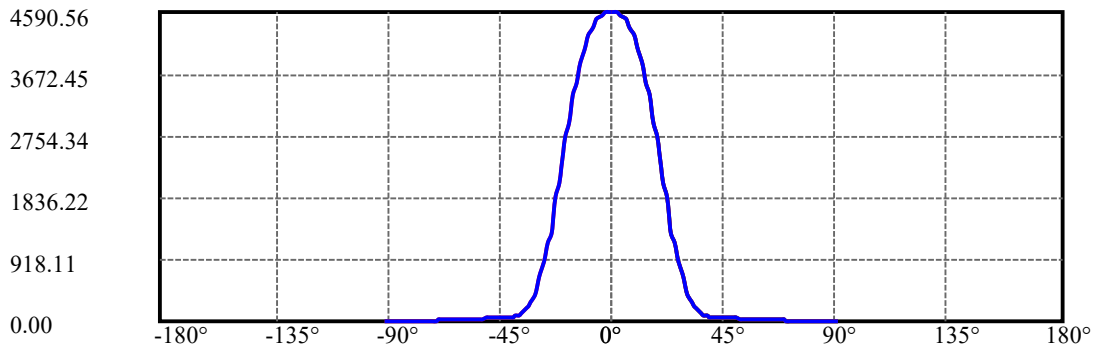
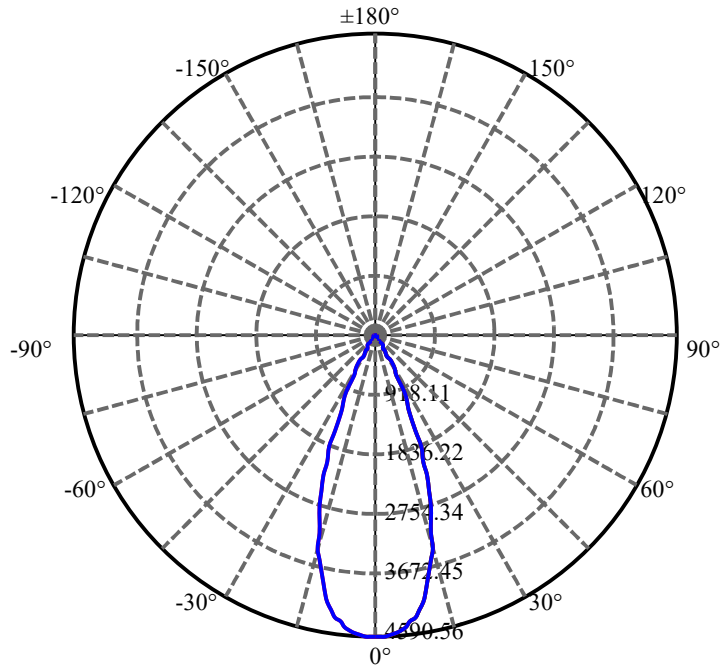
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.287	0.930	2093.282	0.04%	99.77%
77.0	7.427	0.838	2094.12	0.04%	99.81%
78.0	6.555	0.748	2094.869	0.03%	99.84%
79.0	5.722	0.660	2095.528	0.03%	99.87%
80.0	4.923	0.574	2096.102	0.02%	99.90%
81.0	4.123	0.489	2096.591	0.02%	99.92%
82.0	3.364	0.406	2096.997	0.02%	99.94%
83.0	2.678	0.328	2097.326	0.01%	99.96%
84.0	2.012	0.255	2097.581	0.01%	99.97%
85.0	1.465	0.190	2097.771	0.01%	99.98%
86.0	1.059	0.138	2097.909	0.01%	99.99%
87.0	0.733	0.098	2098.007	0.00%	99.99%
88.0	0.546	0.070	2098.077	0.00%	100.00%
89.0	0.460	0.055	2098.132	0.00%	100.00%
90.0	0.400	0.047	2098.179	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1880.17	79.26%	89.61%
0-40	1990.68	83.92%	94.88%
0-60	2064.52	87.04%	98.40%
0-90	2098.13	88.45%	100.00%
0-120	2098.13	88.45%	100.00%
0-180	2098.18	88.46%	100.00%
60-90	33.61	1.42%	1.60%
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%
0-24.98	1678.54	70.76%	80.00%

ZONAL LUMEN SUMMARY

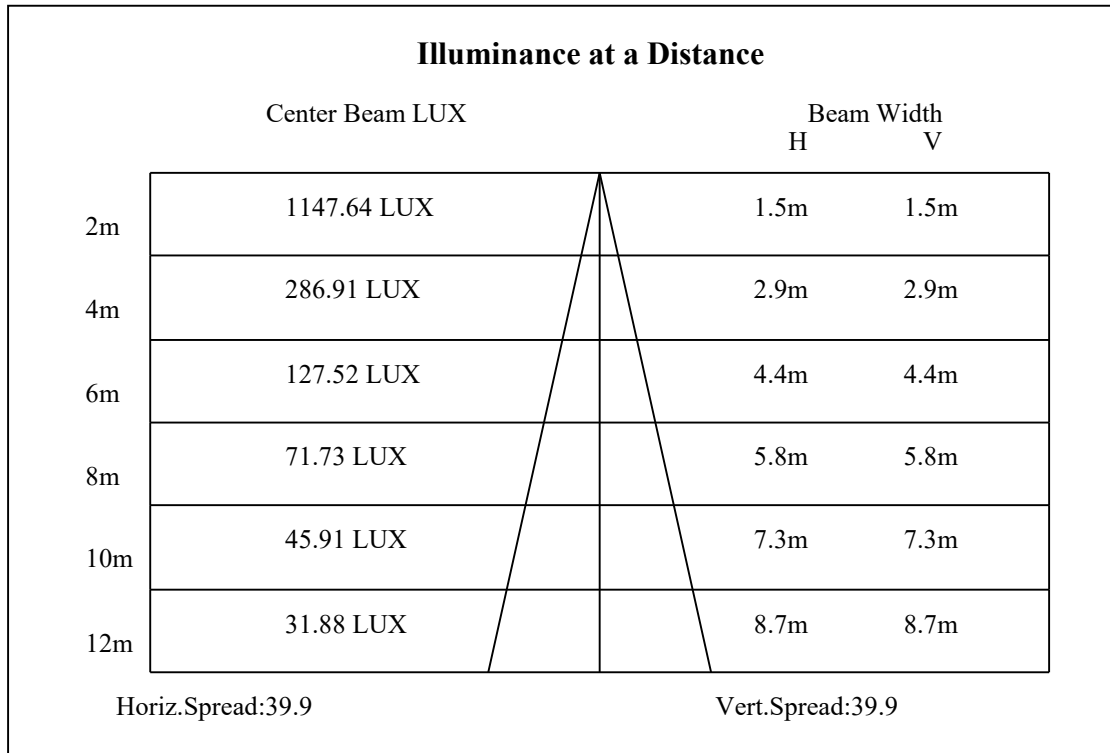
0-10	419.02
10-20	906.32
20-30	554.82
30-40	110.51
40-50	39.82
50-60	34.02
60-70	21.80
70-80	9.78
80-90	2.03
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

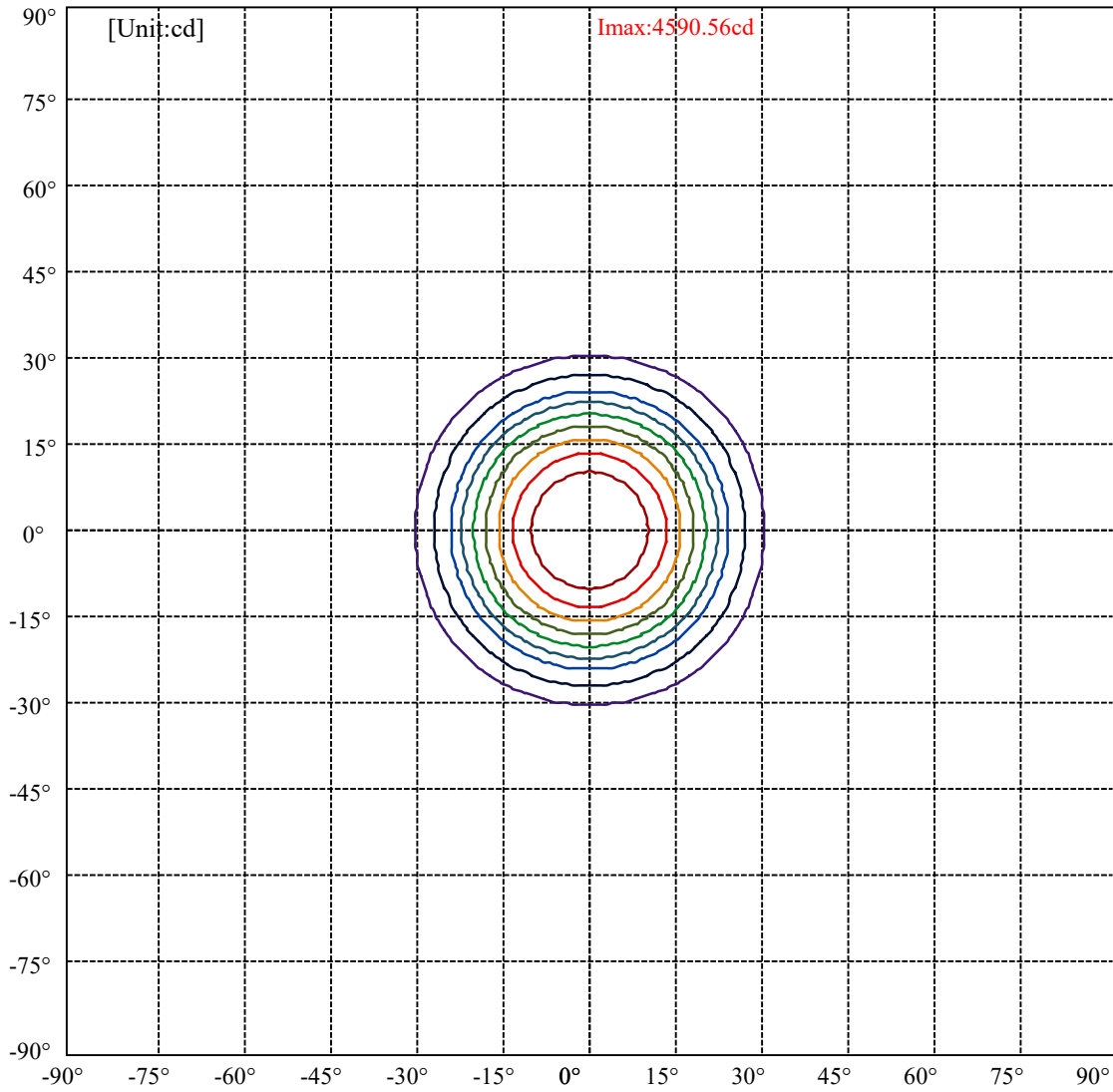


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

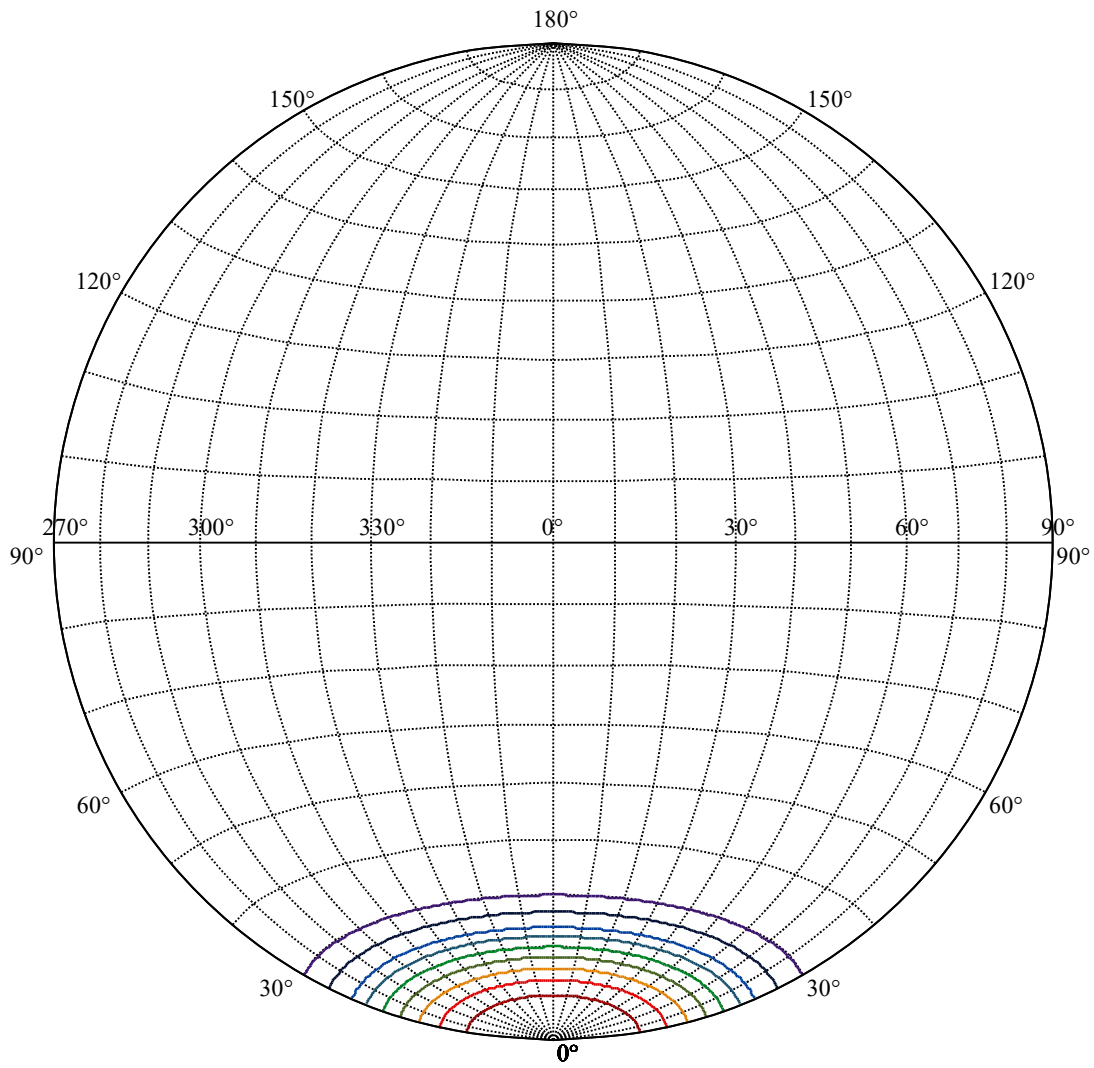
Field angle(10%Imax):C0/180Left:30.0 Right:30.0  
:C90/270Left:30.0 Right:30.0

Beam Angle(50%Imax):C0/180Left:19.9 Right:19.9  
:C90/270Left:19.9 Right:19.9





(10%Imax) 459.056	—
(20%Imax) 918.112	—
(30%Imax) 1377.17	—
(40%Imax) 1836.22	—
(50%Imax) 2295.28	—
(60%Imax) 2754.34	—
(70%Imax) 3213.39	—
(80%Imax) 3672.45	—
(90%Imax) 4131.5	—



House

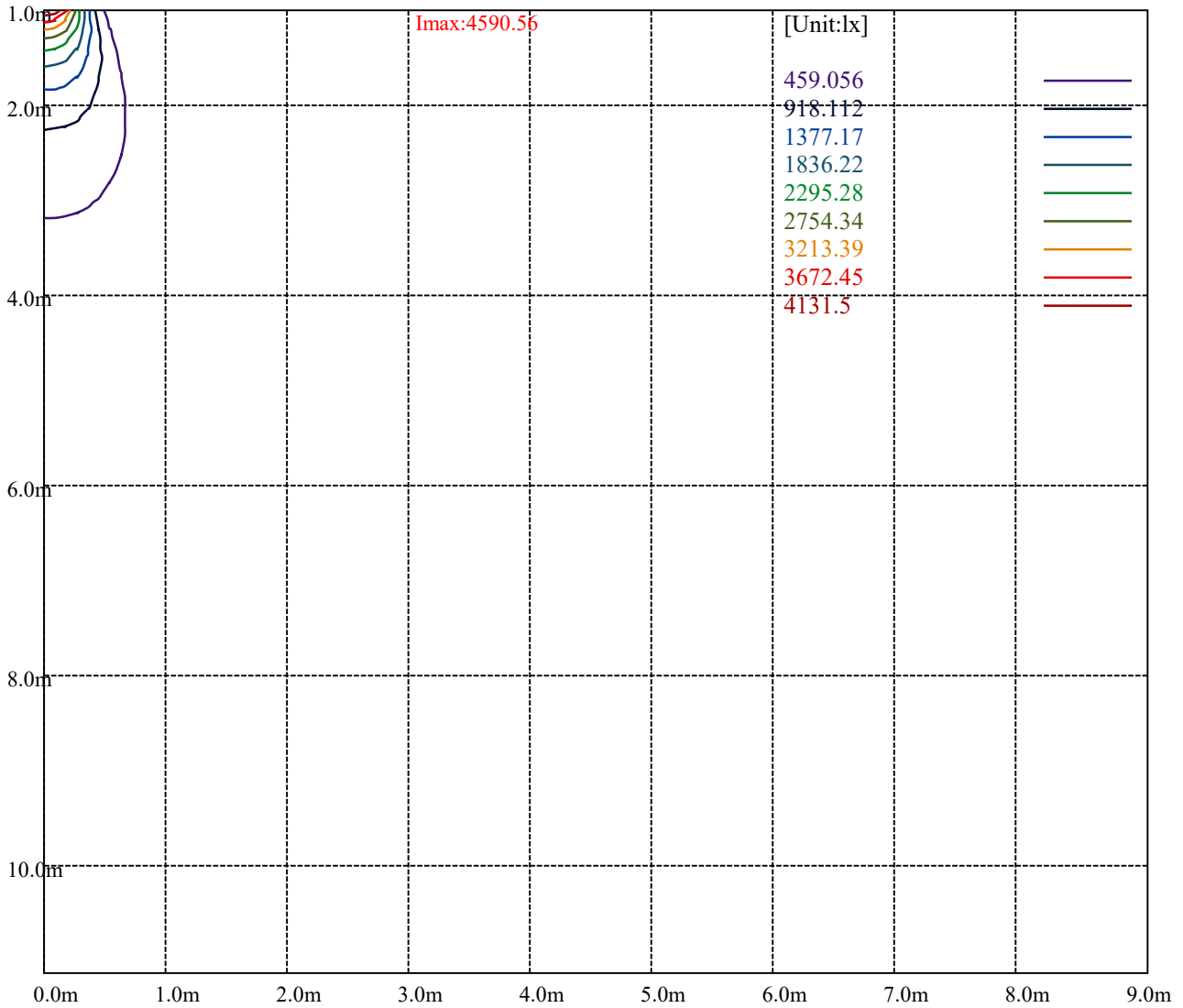
[Unit:cd]

Road

**Imax:4590.56**

(10%Imax) 459.056	—
(20%Imax) 918.112	—
(30%Imax) 1377.17	—
(40%Imax) 1836.22	—
(50%Imax) 2295.28	—
(60%Imax) 2754.34	—
(70%Imax) 3213.39	—
(80%Imax) 3672.45	—
(90%Imax) 4131.5	—





Luminance Table

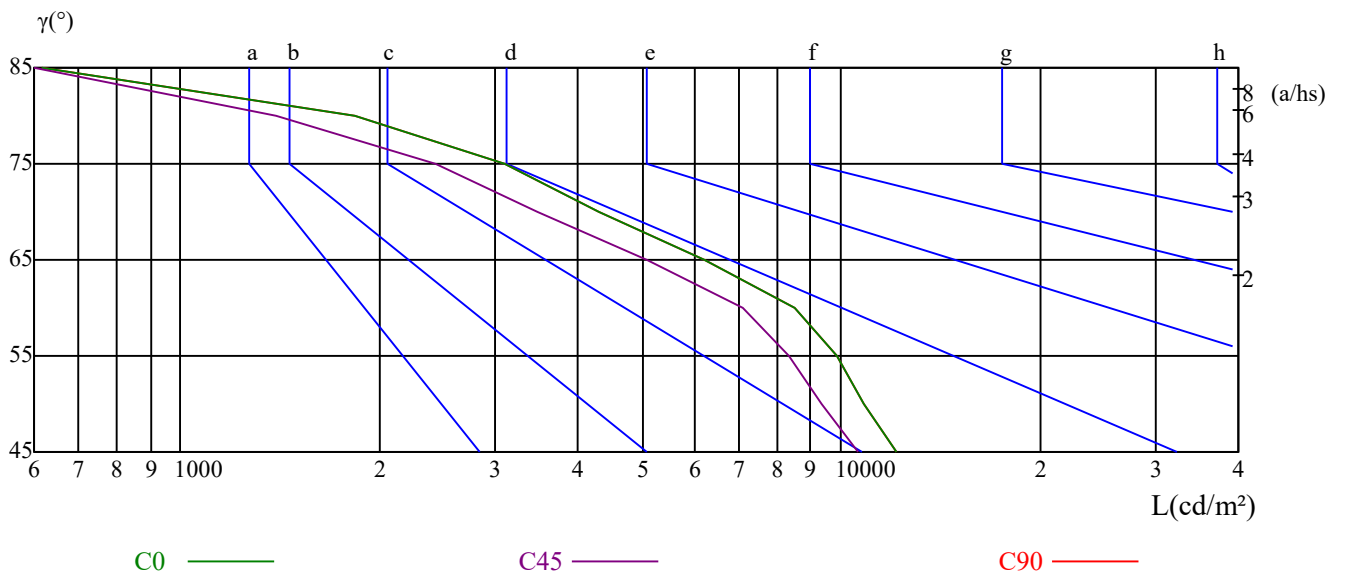
$\gamma$	45	50	55	60	65	70	75	80	85
C0	12122	10828	9868	8513	6202	4311	3105	1835	617
C45	10597	9328	8371	7102	5080	3460	2434	1400	455
C90	12122	10828	9868	8513	6202	4311	3105	1835	617

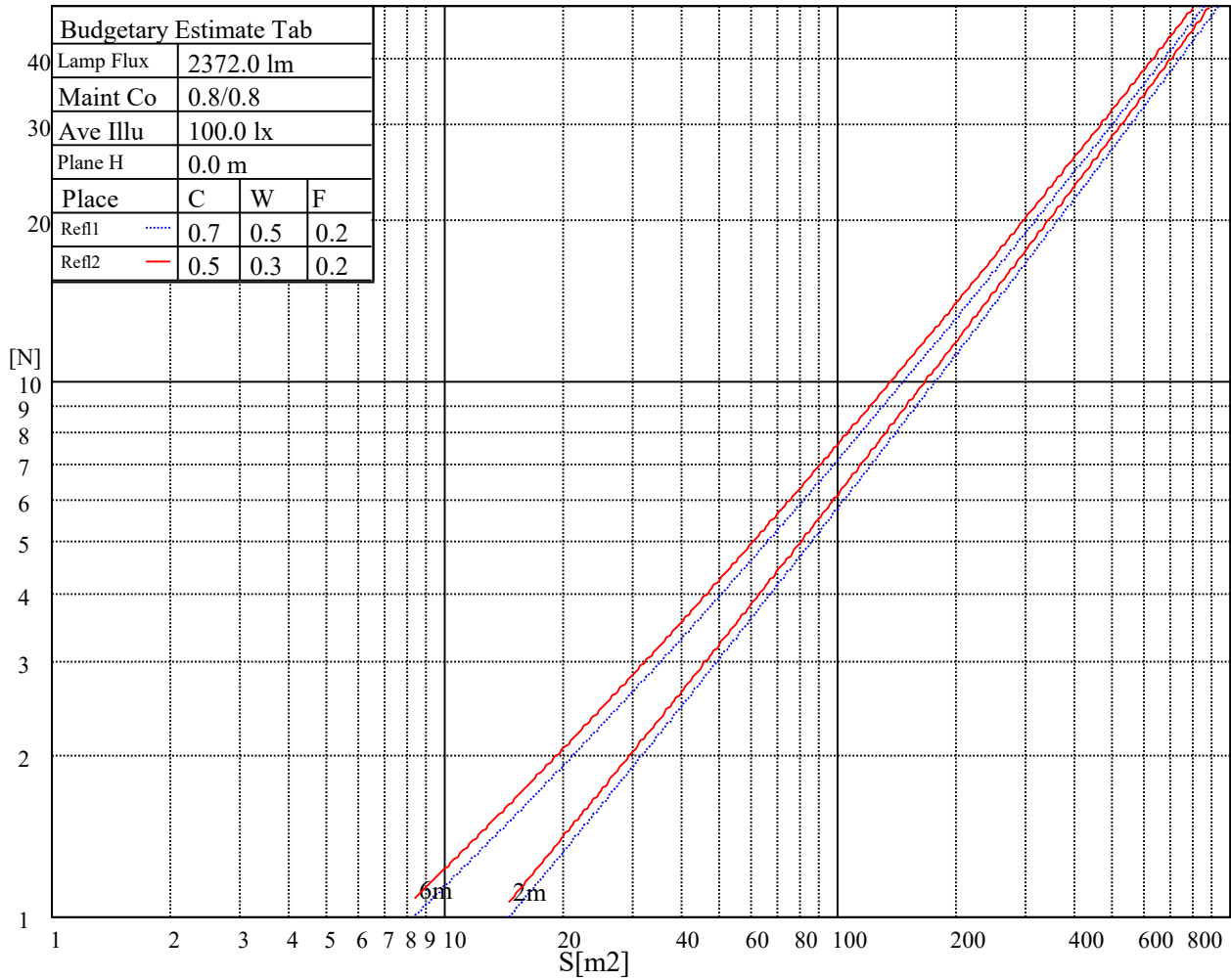
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
13281	13281	13281	9273	9273	9273	4374	4374	4374

Glare Table

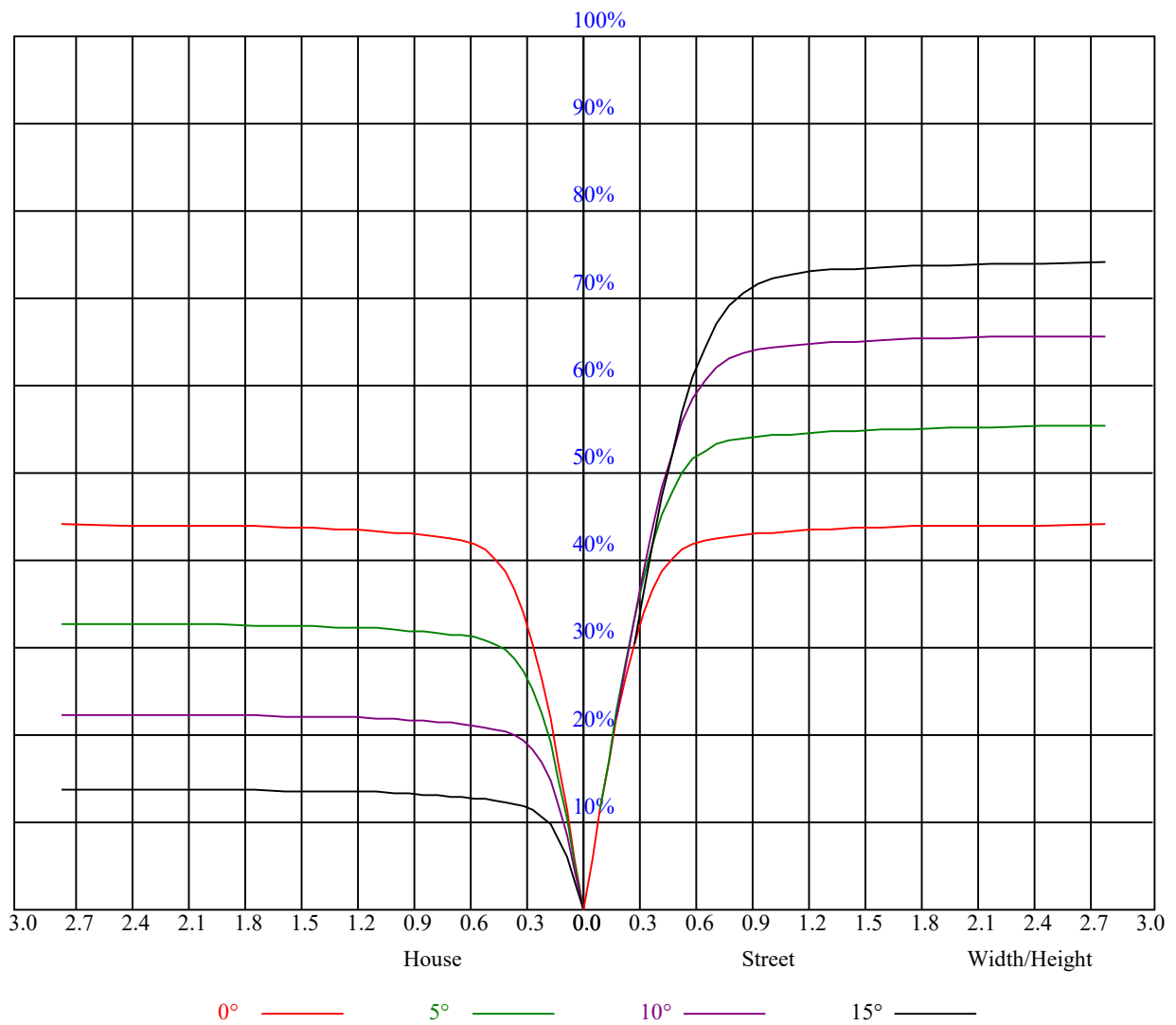
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

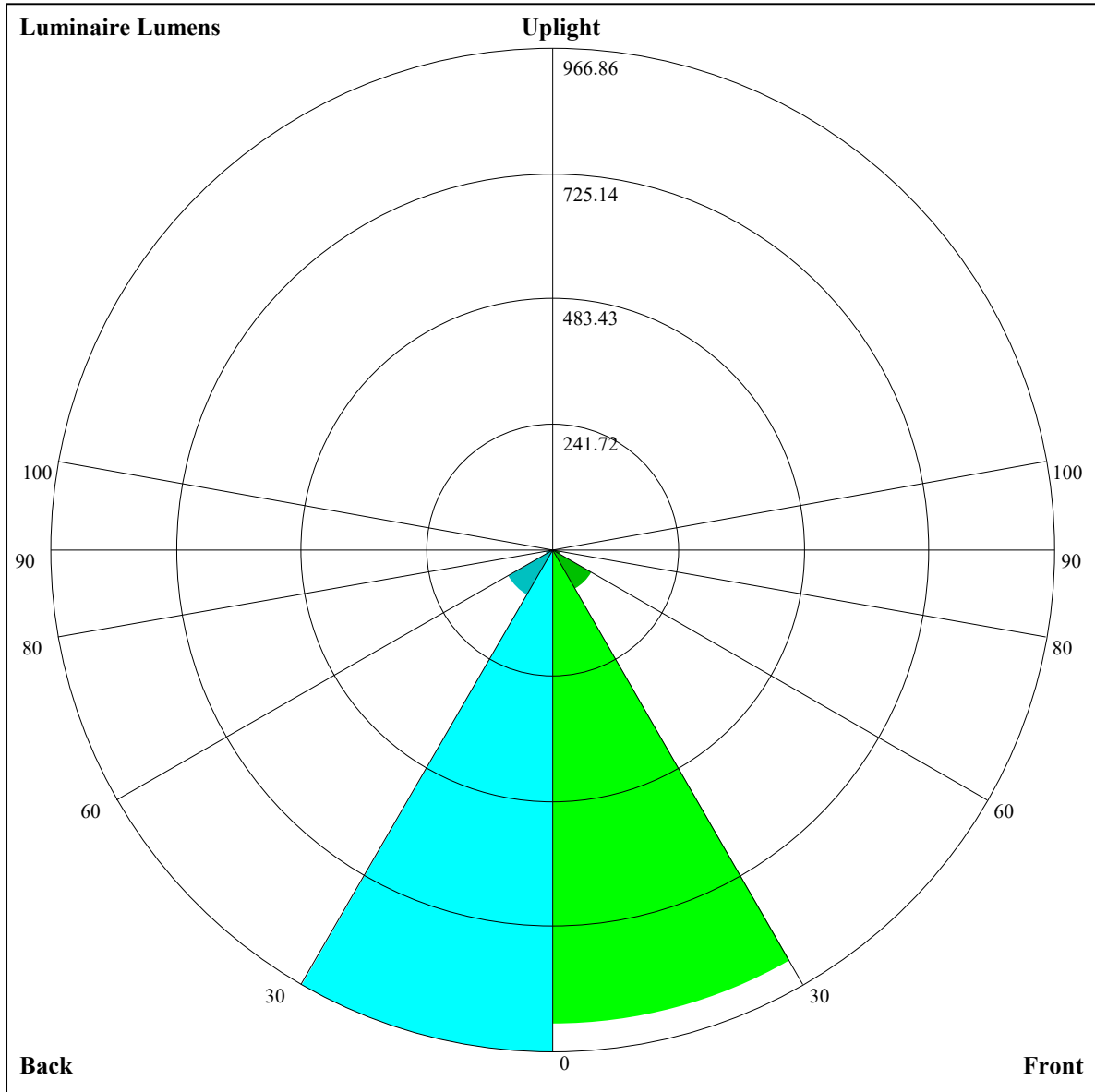
Luminance Limiting Curve





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	1.05	1.05	1.05	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.99	0.97	0.95	0.97	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.93	0.90	0.87	0.92	0.89	0.86	0.89	0.86	0.84	0.86	0.84	0.83	0.84	0.82	0.81	0.80
3	0.88	0.84	0.81	0.87	0.83	0.81	0.85	0.82	0.79	0.82	0.80	0.78	0.81	0.79	0.77	0.76
4	0.84	0.79	0.76	0.83	0.79	0.76	0.81	0.77	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.72
5	0.80	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.69
6	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
7	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.63
8	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.67	0.64	0.61	0.60
9	0.67	0.62	0.60	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.58
10	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.56





Luminaire Lumens:

FL=912.29,FM=87.18,FH=15.14,FVH=0.93

BL=966.86,BM=99.71,BH=16.43,BVH=1.17

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	4592.16	4584.70	4568.18	4548.99	4515.42	4469.59	4408.31	4327.31	4230.32
45.0	4587.90	4594.29	4594.82	4593.22	4577.24	4560.72	4527.68	4481.32	4421.63
90.0	4595.36	4599.62	4597.49	4591.63	4571.91	4538.34	4487.18	4420.57	4345.43
135.0	4586.83	4588.43	4593.22	4595.89	4587.90	4567.11	4531.41	4491.44	4433.89
180.0	4592.16	4591.63	4588.43	4581.50	4569.78	4545.80	4519.68	4467.99	4422.70
225.0	4587.90	4576.17	4558.05	4532.47	4495.70	4450.41	4392.85	4319.85	4234.58
270.0	4595.36	4586.30	4577.24	4557.52	4531.41	4512.76	4449.87	4384.33	4343.29
315.0	4586.83	4582.57	4566.58	4541.00	4509.03	4467.46	4407.78	4334.24	4244.18
360.0	4592.16	4584.70	4568.18	4548.99	4515.42	4469.59	4408.31	4327.31	4230.32
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4113.61	3972.40	3801.34	3621.75	3429.37	3310.53	3096.84	2796.82	2659.33
45.0	4340.10	4245.77	4129.07	3986.78	3827.45	3640.93	3443.23	3232.20	3013.71
90.0	4251.10	4131.73	3993.71	3870.08	3660.65	3466.67	3303.07	3047.28	2874.09
135.0	4366.21	4284.14	4179.69	4080.04	3934.56	3735.79	3594.04	3406.46	3211.95
180.0	4353.95	4250.04	4172.77	4050.73	3911.65	3749.64	3568.99	3388.34	3198.09
225.0	4123.21	4004.37	3857.29	3701.15	3523.69	3411.79	3224.20	2945.50	2820.80
270.0	4255.37	4154.12	4034.75	3893.53	3740.05	3569.52	3391.54	3192.23	2995.59
315.0	4134.40	4057.66	3918.57	3690.49	3582.85	3395.27	3203.95	3005.72	2793.09
360.0	4113.61	3972.40	3801.34	3621.75	3429.37	3310.53	3096.84	2796.82	2659.33
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2432.32	2204.23	1976.15	1748.60	1530.12	1056.95	981.81	945.20	775.90
45.0	2790.42	2559.15	2328.93	2096.59	1869.04	1643.62	1420.87	1211.44	1016.40
90.0	2645.48	2413.13	2181.32	1956.97	1734.22	1517.86	1039.00	1001.48	928.74
135.0	3001.45	2773.37	2545.29	2316.14	2088.59	1867.44	1640.96	1425.67	1224.23
180.0	2995.59	2785.10	2567.67	2344.39	2125.37	1905.81	1689.99	1478.96	1276.99
225.0	2608.17	2391.82	2174.92	1956.97	1740.08	1535.98	1244.48	1011.02	939.34
270.0	2792.56	2583.66	2366.24	2152.01	1937.78	1728.35	1525.85	1324.42	1211.44
315.0	2570.87	2348.65	2129.10	1905.81	1687.85	1480.56	1026.15	1026.15	921.33
360.0	2432.32	2204.23	1976.15	1748.60	1530.12	1056.95	981.81	945.20	775.90
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	624.88	493.79	382.20	293.95	238.90	186.25	147.45	119.26	99.07
45.0	869.85	672.15	553.84	432.34	331.09	284.20	284.20	153.37	121.55
90.0	760.40	610.17	529.06	366.80	280.31	239.17	186.46	145.53	116.17
135.0	1040.38	866.12	703.05	564.50	490.43	343.35	265.01	265.01	209.91
180.0	1162.41	905.56	742.49	650.83	466.45	400.37	307.64	277.27	263.95
225.0	774.41	626.90	547.55	389.92	302.42	259.52	179.80	154.01	122.14
270.0	962.58	801.11	711.05	522.93	453.66	352.94	287.39	287.39	152.84
315.0	788.91	640.12	510.31	398.45	308.66	239.54	187.10	147.93	119.26
360.0	624.88	493.79	382.20	293.95	238.90	186.25	147.45	119.26	99.07
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	85.53	75.35	68.74	64.11	60.64	57.66	54.89	52.76	50.79
45.0	100.61	86.01	75.62	68.10	63.10	59.79	56.81	54.30	52.97
90.0	95.98	81.91	72.26	65.55	60.91	57.55	55.00	52.76	50.84
135.0	137.28	110.58	92.09	79.30	70.72	64.64	60.32	57.13	54.46
180.0	144.04	115.85	96.61	83.08	73.59	66.93	62.24	58.78	56.59
225.0	99.76	84.62	74.07	67.09	61.87	58.09	55.21	52.86	50.73
270.0	121.82	100.13	84.89	73.97	66.40	61.18	57.55	54.78	52.49
315.0	98.59	84.41	74.55	67.36	62.67	59.21	56.33	53.72	51.42
360.0	85.53	75.35	68.74	64.11	60.64	57.66	54.89	52.76	50.79

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	48.92	47.37	45.88	44.71	43.48	42.69	41.14	40.07	39.43
45.0	51.00	49.24	47.64	46.31	45.03	43.70	42.63	41.57	40.50
90.0	49.13	47.75	46.52	45.40	44.28	43.48	42.37	41.25	40.39
135.0	52.17	50.31	48.76	47.53	46.10	44.87	43.96	42.90	41.67
180.0	53.72	51.69	50.31	48.65	47.27	45.88	44.82	43.64	42.53
225.0	48.81	47.11	45.62	44.39	42.95	41.89	40.66	39.54	38.85
270.0	50.47	49.35	47.69	45.78	45.08	43.91	42.79	41.83	40.87
315.0	49.67	48.60	46.52	45.30	44.55	43.38	42.37	41.14	39.97
360.0	48.92	47.37	45.88	44.71	43.48	42.69	41.14	40.07	39.43
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	37.73	36.98	35.70	34.27	32.67	30.91	29.20	27.28	24.89
45.0	39.38	38.32	37.20	35.97	34.59	32.99	31.44	29.90	28.14
90.0	39.33	38.32	37.04	35.70	34.27	32.67	30.96	29.36	27.12
135.0	40.50	39.59	38.58	37.41	36.13	34.80	33.36	31.65	30.06
180.0	41.41	40.45	39.43	38.26	37.04	35.81	34.48	32.93	31.28
225.0	37.73	36.45	35.28	34.05	32.61	31.07	29.58	28.03	26.33
270.0	39.70	38.58	37.62	36.45	35.06	33.68	32.24	30.54	28.88
315.0	38.95	37.68	36.40	35.06	33.63	31.92	30.32	28.67	26.43
360.0	37.73	36.98	35.70	34.27	32.67	30.91	29.20	27.28	24.89
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	22.38	20.41	18.86	17.21	15.61	14.23	13.27	12.31	11.35
45.0	25.90	23.61	21.74	19.98	18.01	16.73	15.19	13.91	12.95
90.0	24.67	22.22	20.25	18.54	16.79	15.19	14.07	13.11	12.15
135.0	28.14	25.79	23.34	21.10	19.34	17.64	16.09	15.08	13.54
180.0	29.63	27.76	25.37	23.02	20.78	19.88	18.23	15.93	14.97
225.0	24.67	22.59	20.68	18.97	17.59	16.20	14.87	13.75	12.79
270.0	27.12	24.94	22.49	20.14	19.18	17.59	15.35	14.34	13.27
315.0	23.93	21.58	19.88	18.23	17.32	15.67	13.80	13.22	12.31
360.0	22.38	20.41	18.86	17.21	15.61	14.23	13.27	12.31	11.35
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	10.34	9.38	8.79	7.46	6.93	5.97	5.22	4.37	3.57
45.0	12.04	11.14	10.13	9.17	8.26	7.41	6.39	5.54	4.74
90.0	11.19	10.28	9.59	8.74	7.41	6.93	6.08	5.28	4.48
135.0	13.00	11.99	11.08	10.18	9.22	8.26	7.41	6.55	5.86
180.0	13.86	12.95	12.04	11.08	10.07	9.11	8.21	7.35	6.39
225.0	11.78	10.87	10.02	9.17	8.21	7.30	6.45	5.60	4.80
270.0	12.31	11.40	10.44	9.49	8.63	7.67	6.77	5.97	5.17
315.0	11.35	10.28	9.43	8.53	7.57	6.77	5.92	5.12	4.37
360.0	10.34	9.38	8.79	7.46	6.93	5.97	5.22	4.37	3.57
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.88	2.13	1.71	1.23	0.91	0.69	0.53	0.53	0.37
45.0	4.00	3.20	2.50	1.76	1.23	0.91	0.53	0.43	0.37
90.0	3.46	2.88	2.29	1.65	1.07	0.80	0.59	0.48	0.48
135.0	5.01	4.26	3.36	2.66	2.03	1.44	0.91	0.64	0.59
180.0	5.60	4.53	3.78	3.09	2.34	1.65	1.12	0.75	0.59
225.0	4.05	3.20	2.66	1.97	1.39	1.01	0.64	0.48	0.37
270.0	4.37	3.68	2.77	2.08	1.65	1.07	0.85	0.53	0.43
315.0	3.62	3.04	2.34	1.65	1.12	0.91	0.69	0.53	0.48
360.0	2.88	2.13	1.71	1.23	0.91	0.69	0.53	0.53	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	0.32
360.0	0.32