



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

NT

Client: NT

LumCAT: 62-0087-1

Luminaire: 92.70.429.00

Report No: 20250326-B002

Ballast type: AC

Test No: 20250326-C002

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): 2019.85, Efficiency(%): 87.82% , Luminous Efficacy(lm/W): 128.49

Central intensity(cd): 4501.966, Maximum intensity(cd): 4501.966

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=38.2

[C90/270]Total=38.2

Field angle(10%Imax): [C0/180]Total=60.4

[C90/270]Total=60.4

Maximum s/h(1/2): C0_180=0.63 C90_270=0.63

Maximum s/h(1/4): C0_180=0.60 C90_270=0.60

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 87.82%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.009%

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	4501.966	0.000	0	0.00%	0.00%
1.0	4497.836	4.306	4.306	0.19%	0.21%
2.0	4483.581	12.891	17.197	0.56%	0.85%
3.0	4458.068	21.385	38.583	0.93%	1.91%
4.0	4419.500	29.716	68.299	1.29%	3.38%
5.0	4373.604	37.827	106.126	1.64%	5.25%
6.0	4308.323	45.626	151.752	1.98%	7.51%
7.0	4236.981	53.041	204.793	2.31%	10.14%
8.0	4158.379	60.084	264.877	2.61%	13.11%
9.0	4063.056	66.630	331.507	2.90%	16.41%
10.0	3941.022	72.434	403.941	3.15%	20.00%
11.0	3817.256	77.521	481.462	3.37%	23.84%
12.0	3664.114	81.782	563.244	3.56%	27.89%
13.0	3501.579	85.039	648.283	3.70%	32.10%
14.0	3319.727	87.312	735.595	3.80%	36.42%
15.0	3139.540	88.676	824.271	3.86%	40.81%
16.0	2915.323	88.721	912.991	3.86%	45.20%
17.0	2706.559	87.548	1000.539	3.81%	49.54%
18.0	2509.919	86.008	1086.548	3.74%	53.79%
19.0	2280.705	83.347	1169.895	3.62%	57.92%
20.0	2073.141	79.687	1249.582	3.46%	61.86%
21.0	1860.647	75.537	1325.119	3.28%	65.60%
22.0	1654.481	70.638	1395.757	3.07%	69.10%
23.0	1432.382	64.771	1460.527	2.82%	72.31%
24.0	1217.010	57.925	1518.453	2.52%	75.18%
25.0	1076.218	52.143	1570.596	2.27%	77.76%
26.0	956.789	47.989	1618.585	2.09%	80.13%
27.0	797.591	42.921	1661.506	1.87%	82.26%
28.0	677.036	37.334	1698.841	1.62%	84.11%
29.0	570.043	32.627	1731.468	1.42%	85.72%
30.0	463.896	27.916	1759.384	1.21%	87.10%
31.0	376.940	23.399	1782.783	1.02%	88.26%
32.0	313.438	19.779	1802.562	0.86%	89.24%
33.0	263.346	16.992	1819.554	0.74%	90.08%
34.0	219.328	14.607	1834.161	0.64%	90.81%
35.0	181.073	12.435	1846.596	0.54%	91.42%
36.0	143.457	10.333	1856.929	0.45%	91.93%
37.0	123.540	8.708	1865.637	0.38%	92.36%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	109.025	7.763	1873.4	0.34%	92.75%
39.0	97.860	7.062	1880.461	0.31%	93.10%
40.0	89.714	6.542	1887.003	0.28%	93.42%
41.0	82.566	6.135	1893.138	0.27%	93.73%
42.0	76.964	5.796	1898.934	0.25%	94.01%
43.0	72.907	5.552	1904.486	0.24%	94.29%
44.0	69.077	5.359	1909.845	0.23%	94.55%
45.0	65.973	5.190	1915.035	0.23%	94.81%
46.0	63.129	5.049	1920.084	0.22%	95.06%
47.0	60.611	4.921	1925.005	0.21%	95.30%
48.0	58.446	4.813	1929.818	0.21%	95.54%
49.0	56.321	4.713	1934.531	0.20%	95.78%
50.0	54.496	4.620	1939.151	0.20%	96.00%
51.0	52.730	4.537	1943.688	0.20%	96.23%
52.0	50.859	4.445	1948.133	0.19%	96.45%
53.0	49.060	4.346	1952.48	0.19%	96.66%
54.0	47.355	4.250	1956.729	0.18%	96.87%
55.0	45.263	4.134	1960.863	0.18%	97.08%
56.0	43.638	4.017	1964.881	0.17%	97.28%
57.0	41.693	3.902	1968.782	0.17%	97.47%
58.0	39.555	3.757	1972.539	0.16%	97.66%
59.0	37.783	3.616	1976.155	0.16%	97.84%
60.0	35.844	3.478	1979.633	0.15%	98.01%
61.0	33.919	3.329	1982.962	0.14%	98.17%
62.0	32.081	3.180	1986.143	0.14%	98.33%
63.0	30.069	3.023	1989.165	0.13%	98.48%
64.0	28.210	2.860	1992.025	0.12%	98.62%
65.0	26.445	2.705	1994.73	0.12%	98.76%
66.0	24.673	2.550	1997.28	0.11%	98.88%
67.0	22.828	2.389	1999.669	0.10%	99.00%
68.0	21.156	2.228	2001.897	0.10%	99.11%
69.0	19.291	2.063	2003.96	0.09%	99.21%
70.0	17.253	1.877	2005.837	0.08%	99.31%
71.0	15.647	1.700	2007.538	0.07%	99.39%
72.0	14.042	1.544	2009.081	0.07%	99.47%
73.0	12.836	1.406	2010.487	0.06%	99.54%
74.0	11.690	1.289	2011.776	0.06%	99.60%
75.0	10.698	1.183	2012.959	0.05%	99.66%

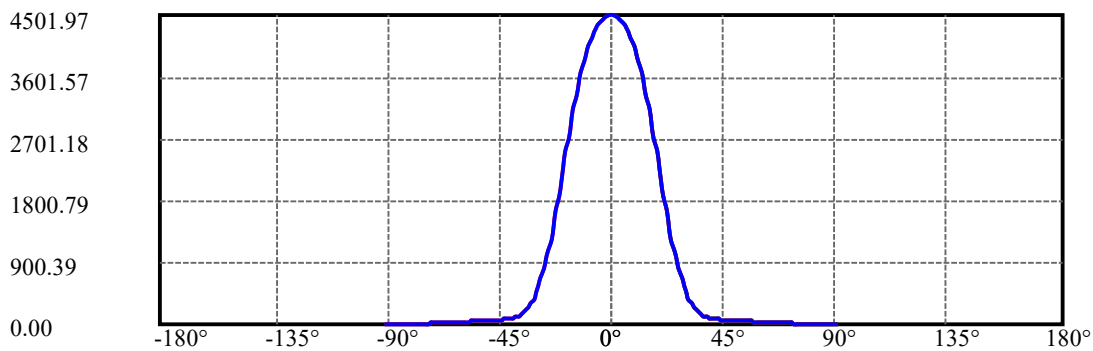
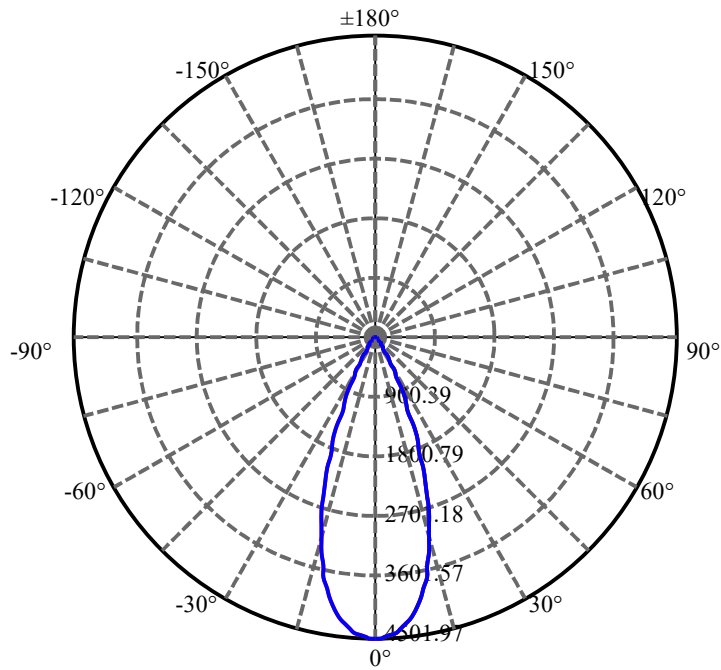
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	9.599	1.077	2014.037	0.05%	99.71%
77.0	8.720	0.977	2015.013	0.04%	99.76%
78.0	7.747	0.881	2015.895	0.04%	99.80%
79.0	6.721	0.777	2016.672	0.03%	99.84%
80.0	5.869	0.679	2017.351	0.03%	99.88%
81.0	4.896	0.582	2017.933	0.03%	99.90%
82.0	4.037	0.484	2018.418	0.02%	99.93%
83.0	3.231	0.395	2018.813	0.02%	99.95%
84.0	2.498	0.312	2019.125	0.01%	99.96%
85.0	1.845	0.237	2019.362	0.01%	99.98%
86.0	1.239	0.169	2019.53	0.01%	99.98%
87.0	0.839	0.114	2019.644	0.00%	99.99%
88.0	0.653	0.082	2019.726	0.00%	99.99%
89.0	0.593	0.068	2019.794	0.00%	100.00%
90.0	0.513	0.061	2019.855	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1759.38	76.49%	87.10%
0-40	1887.00	82.04%	93.42%
0-60	1979.63	86.07%	98.01%
0-90	2019.79	87.81%	100.00%
0-120	2019.79	87.81%	100.00%
0-180	2019.85	87.82%	100.00%
60-90	40.16	1.75%	1.99%
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%
0-25.94	1615.88	70.25%	80.00%

ZONAL LUMEN SUMMARY

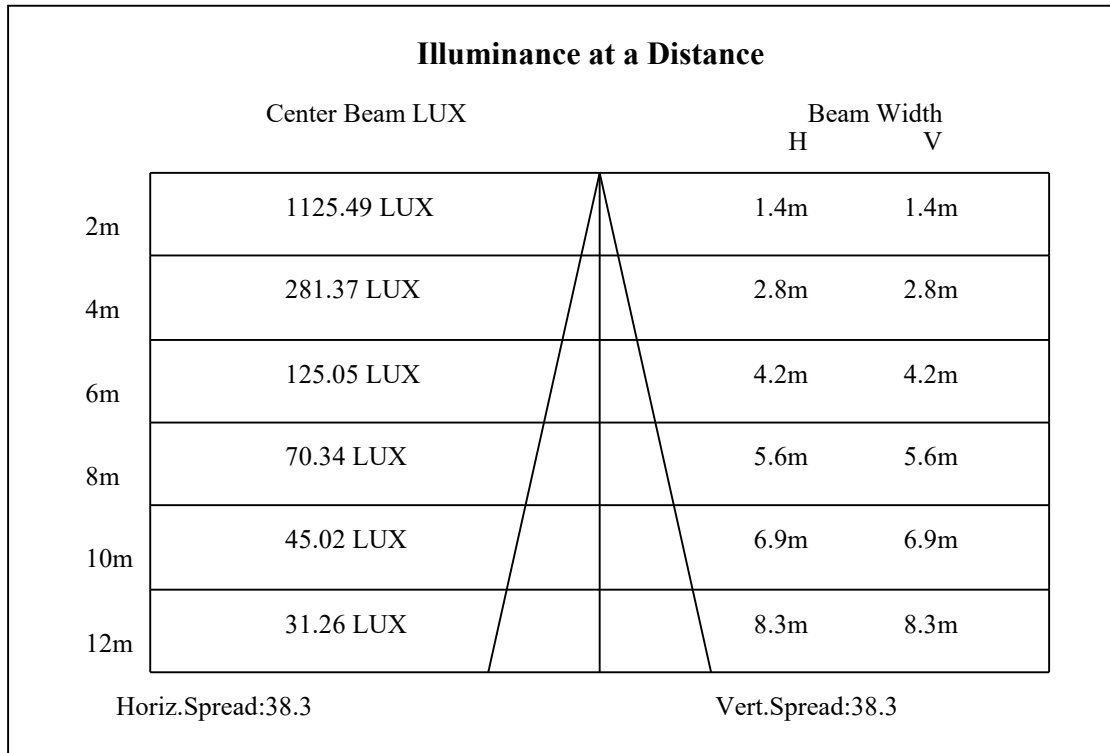
0-10	403.94
10-20	845.64
20-30	509.80
30-40	127.62
40-50	52.15
50-60	40.48
60-70	26.20
70-80	11.51
80-90	2.44
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

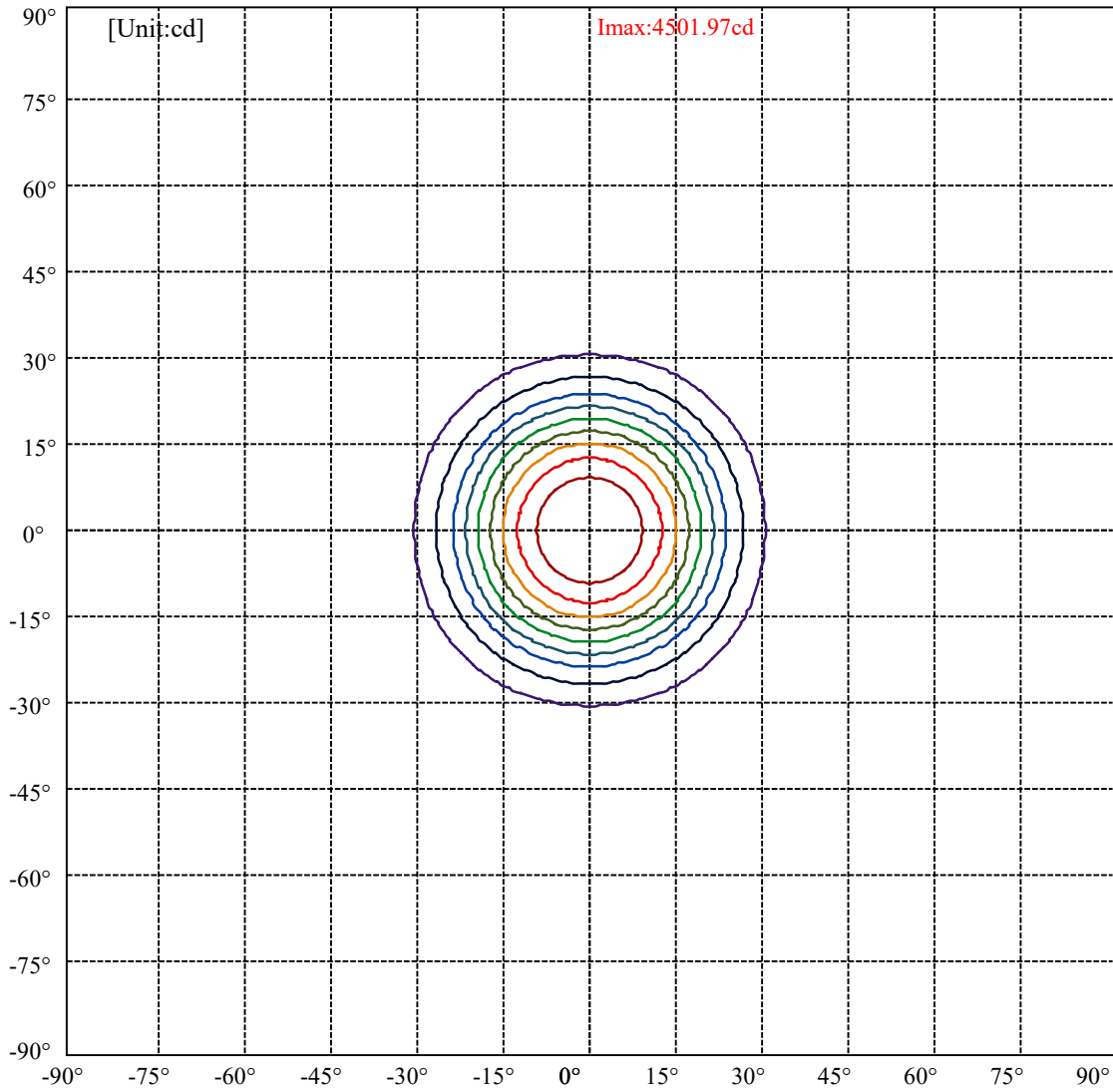


C0(Max): —————
C0/C180: —————
C90/C270: —————

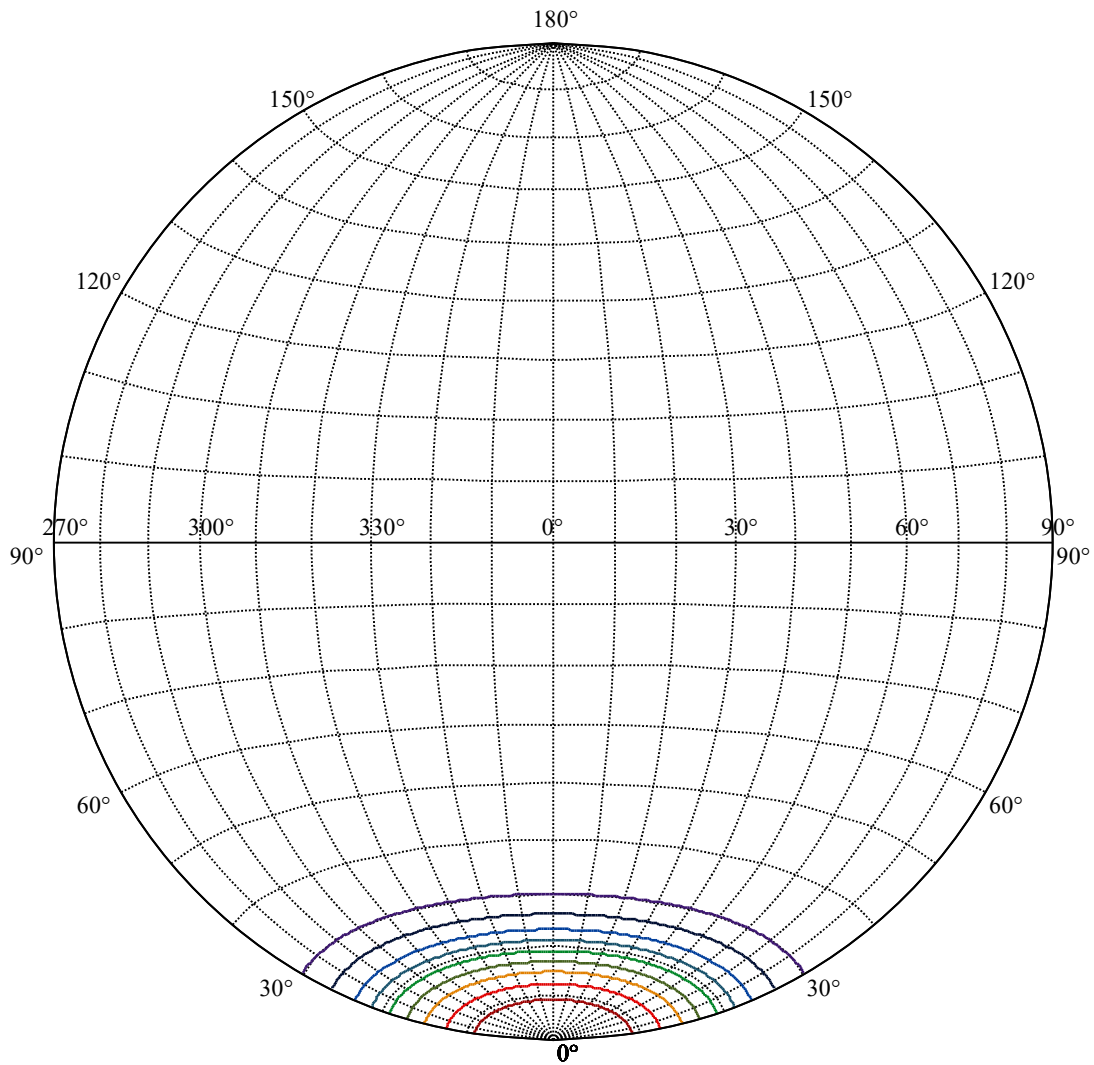
Field angle(10%Imax):C0/180Left:30.2 Right:30.2
:C90/270Left:30.2 Right:30.2

Beam Angle(50%Imax):C0/180Left:19.1 Right:19.1
:C90/270Left:19.1 Right:19.1





(10%Imax) 450.197	—
(20%Imax) 900.393	—
(30%Imax) 1350.59	—
(40%Imax) 1800.79	—
(50%Imax) 2250.98	—
(60%Imax) 2701.18	—
(70%Imax) 3151.38	—
(80%Imax) 3601.57	—
(90%Imax) 4051.77	—



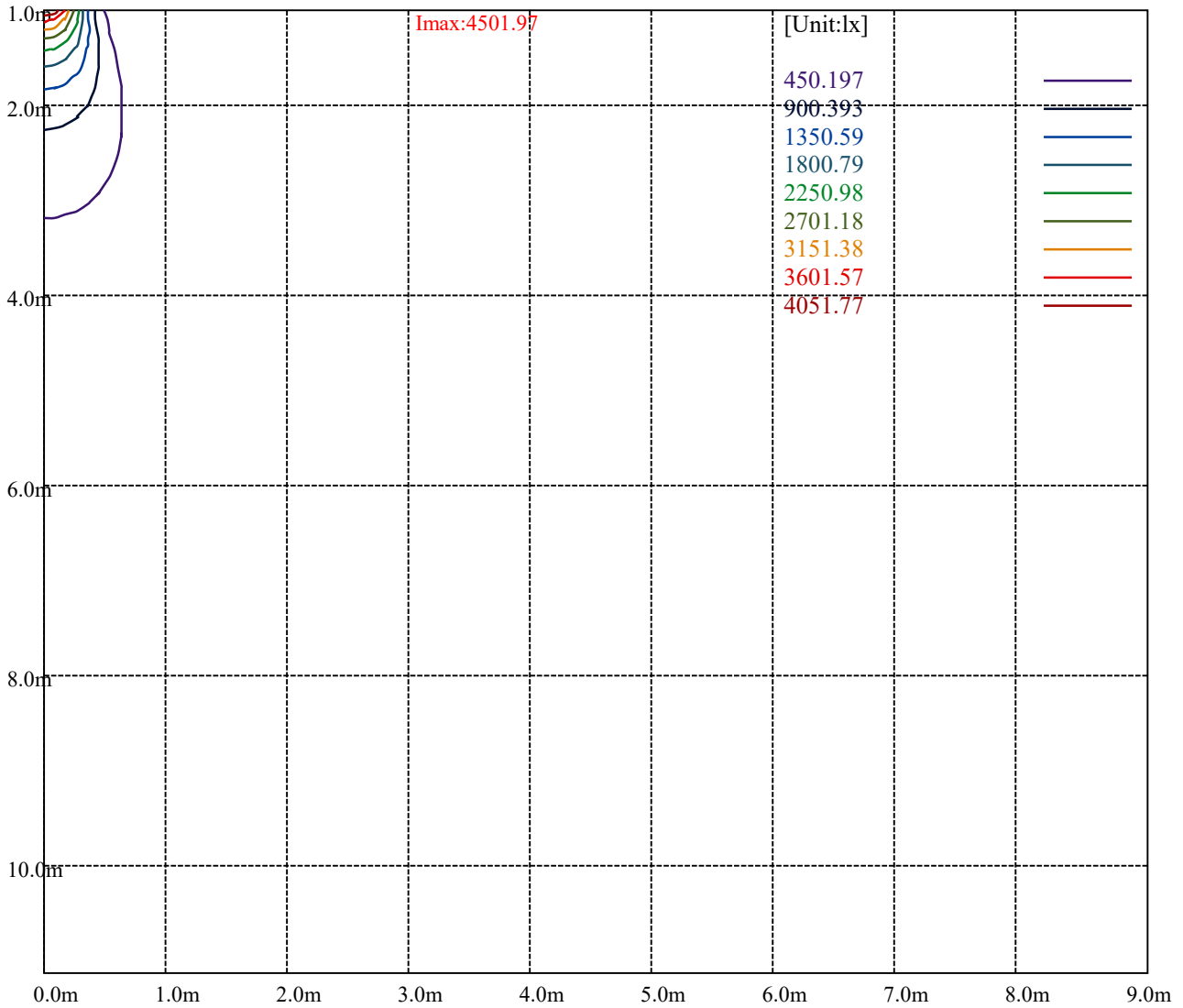
House

[Unit:cd]

Road

Imax:4501.97

(10%Imax) 450.197	—
(20%Imax) 900.393	—
(30%Imax) 1350.59	—
(40%Imax) 1800.79	—
(50%Imax) 2250.98	—
(60%Imax) 2701.18	—
(70%Imax) 3151.38	—
(80%Imax) 3601.57	—
(90%Imax) 4051.77	—



Luminance Table

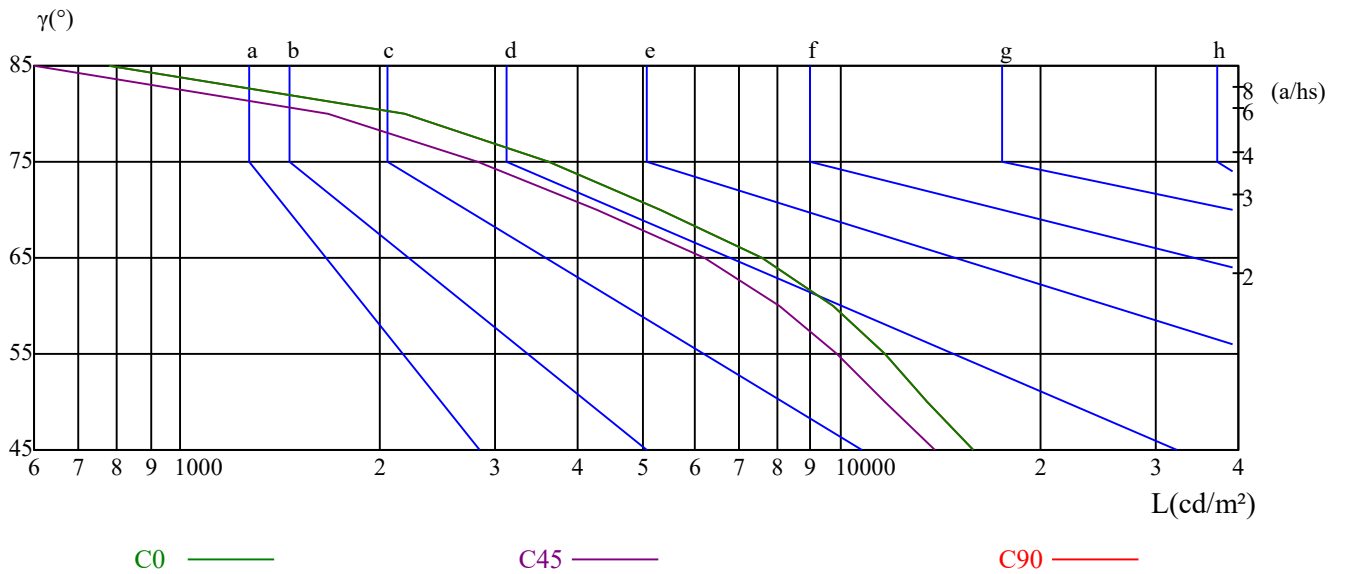
γ	45	50	55	60	65	70	75	80	85
C0	15840	13495	11663	9704	7602	5329	3601	2188	777
C45	13848	11626	9894	8095	6227	4277	2823	1669	573
C90	15840	13495	11663	9704	7602	5329	3601	2188	777

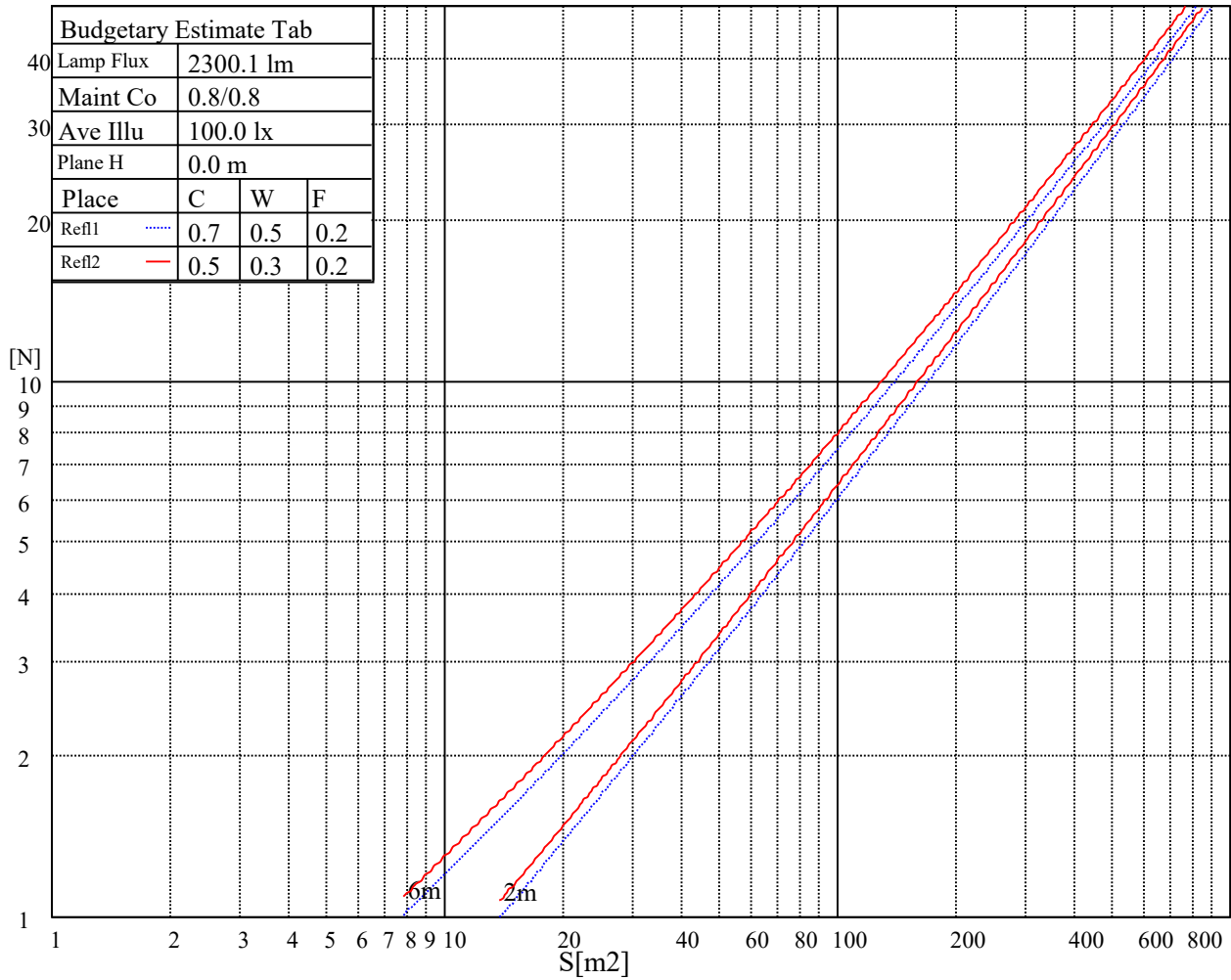
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
16279	16279	16279	10753	10753	10753	5508	5508	5508

Glare Table

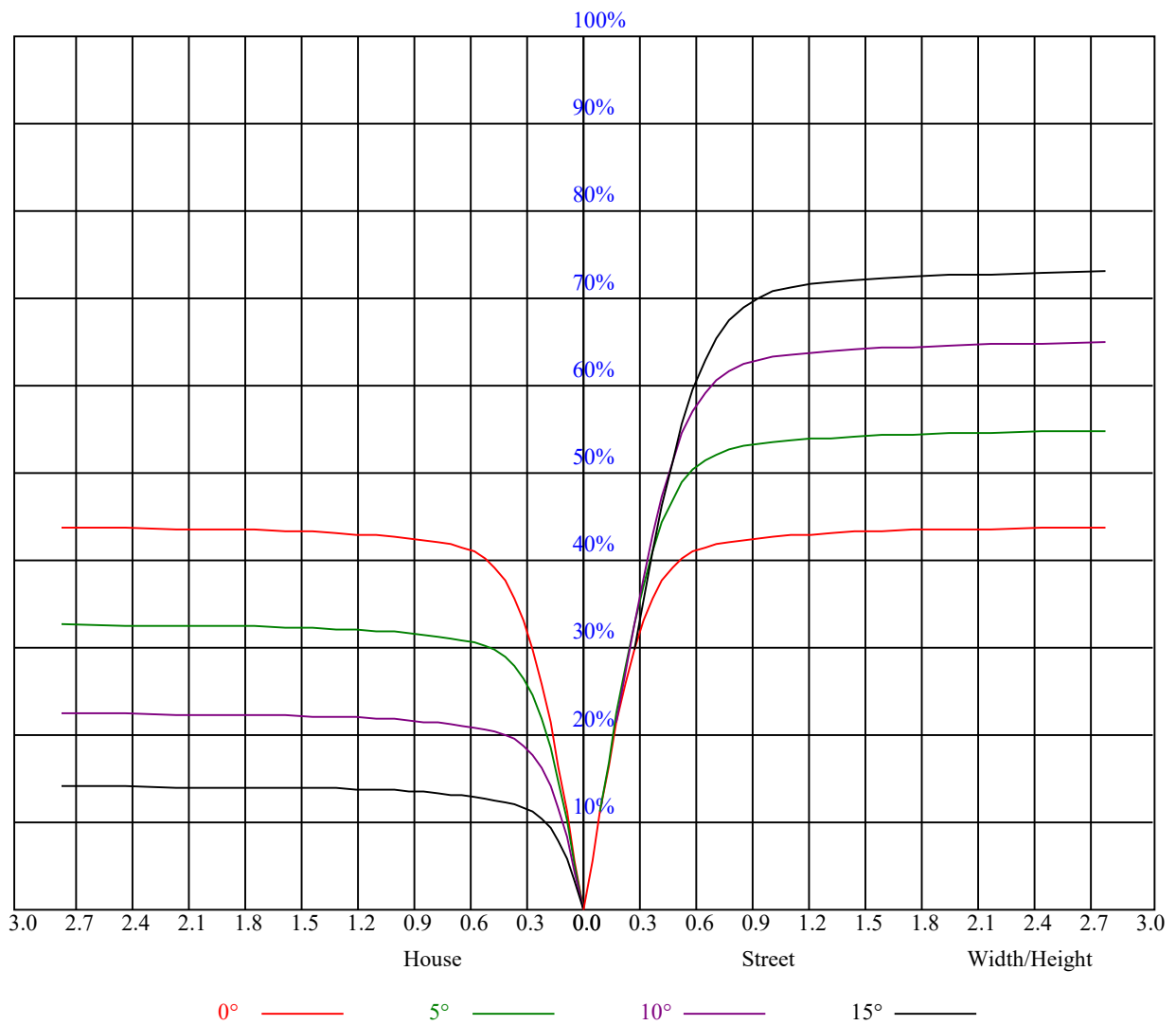
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

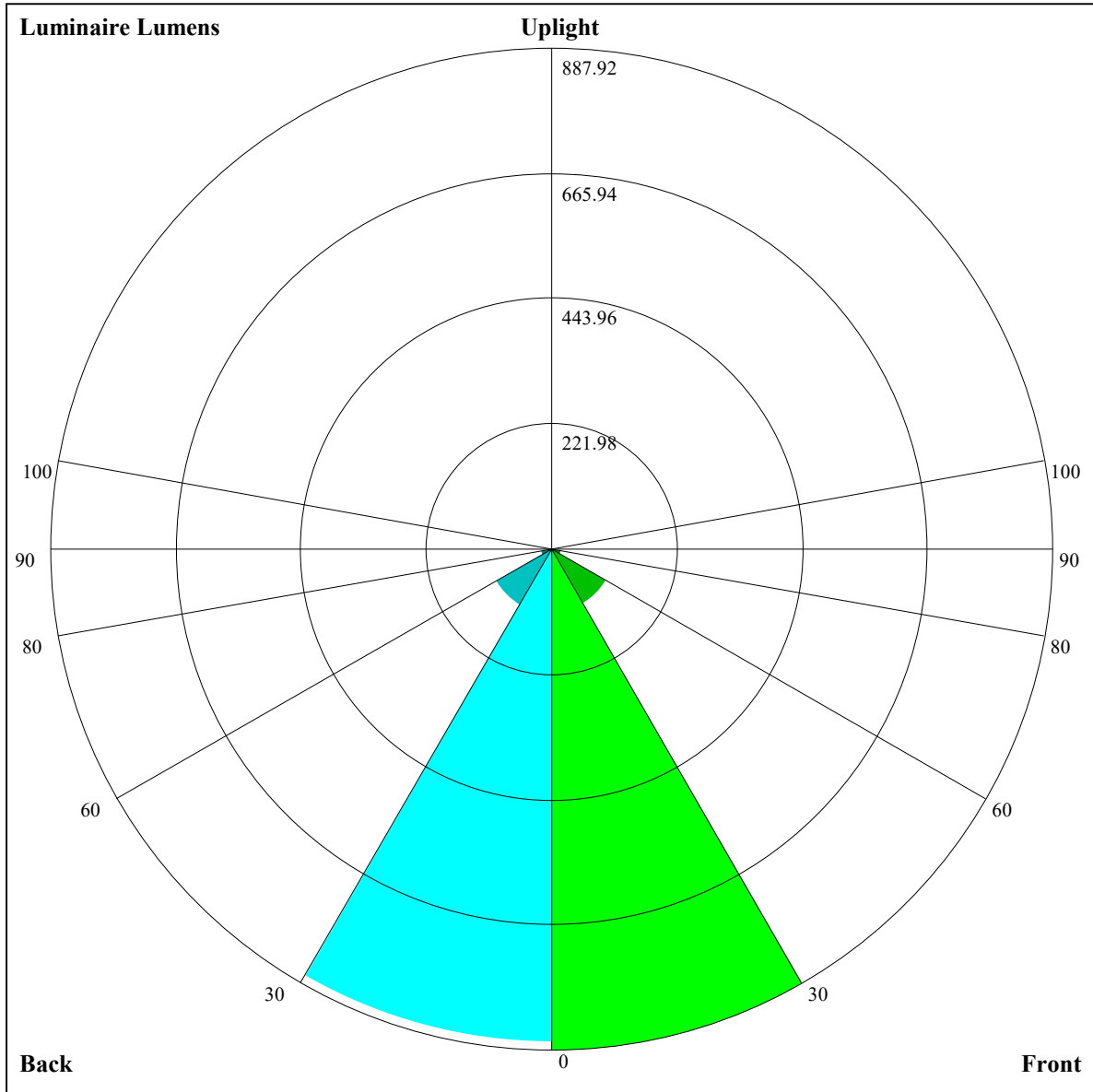
Luminance Limiting Curve





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	1.02	1.02	1.02	0.98	0.98	0.98	0.93	0.93	0.93	0.90	0.90	0.90	0.88
1	0.98	0.96	0.94	0.96	0.94	0.93	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.85	0.83
2	0.92	0.89	0.86	0.91	0.88	0.85	0.88	0.85	0.83	0.85	0.83	0.82	0.83	0.81	0.80	0.79
3	0.87	0.83	0.80	0.86	0.82	0.79	0.83	0.81	0.78	0.81	0.79	0.77	0.79	0.77	0.76	0.74
4	0.82	0.78	0.75	0.81	0.77	0.74	0.80	0.76	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.71
5	0.78	0.74	0.71	0.78	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.73	0.71	0.69	0.67
6	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.64
7	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.62
8	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.59
9	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.57
10	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.55	0.61	0.58	0.55	0.54





Luminaire Lumens:

FL=887.92,FM=110.64,FH=18.69,FVH=1.29

BL=872.3,BM=114.22,BH=19.17,BVH=1.3

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	4517.02	4527.68	4525.01	4507.43	4477.05	4438.68	4379.00	4308.12	4217.00
45.0	4502.10	4502.63	4496.77	4476.52	4442.95	4409.37	4359.28	4300.66	4226.06
90.0	4483.45	4453.61	4412.04	4365.14	4304.39	4229.79	4151.45	4060.86	3952.68
135.0	4505.30	4475.99	4437.62	4386.99	4324.64	4249.50	4166.90	4077.91	3976.13
180.0	4517.02	4502.10	4476.52	4441.88	4390.19	4352.35	4246.31	4163.71	4111.48
225.0	4502.10	4493.57	4471.19	4436.02	4391.79	4331.04	4261.23	4178.63	4088.04
270.0	4483.45	4502.10	4512.76	4517.02	4511.69	4493.57	4458.93	4412.57	4358.22
315.0	4505.30	4525.01	4536.74	4533.54	4513.29	4484.51	4443.48	4393.39	4337.43
360.0	4517.02	4527.68	4525.01	4507.43	4477.05	4438.68	4379.00	4308.12	4217.00
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4107.22	3976.66	3828.51	3665.98	3474.67	3268.97	3096.31	2826.66	2641.21
45.0	4135.46	4029.95	3902.59	3757.10	3592.44	3408.59	3210.88	3000.92	2787.23
90.0	3830.11	3688.36	3530.09	3356.90	3168.78	2970.54	2845.31	2540.49	2322.01
135.0	3911.11	3739.52	3652.12	3497.05	3337.18	3161.32	2971.08	2776.04	2567.14
180.0	4012.90	3899.92	3774.16	3639.33	3489.59	3321.19	3147.47	2960.42	2764.31
225.0	3979.86	3853.03	3713.94	3556.20	3381.94	3200.76	2999.85	2790.96	2578.86
270.0	4291.07	4207.41	4103.49	3981.99	3841.84	3681.97	3499.71	3303.07	3098.44
315.0	4236.71	4133.33	4033.15	3858.36	3726.20	3544.48	3345.71	3124.02	2893.27
360.0	4107.22	3976.66	3828.51	3665.98	3474.67	3268.97	3096.31	2826.66	2641.21
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2409.93	2183.98	1959.63	1743.28	1534.91	1251.94	1058.66	992.37	837.24
45.0	2563.94	2336.39	2115.24	1895.69	1684.12	1560.49	1284.45	1105.39	1004.68
90.0	2194.64	1982.55	1767.26	1567.42	1377.17	1001.91	1001.91	848.11	710.09
135.0	2357.71	2147.21	1939.38	1739.01	1543.44	1353.73	1177.34	1018.53	867.72
180.0	2562.88	2363.57	2158.94	1956.44	1757.66	1566.35	1383.57	1205.58	1103.80
225.0	2450.43	2151.48	2025.71	1820.55	1621.24	1429.93	1024.66	1024.66	931.46
270.0	2881.02	2656.67	2429.12	2202.64	1982.01	1770.99	1567.42	1369.71	1221.03
315.0	2658.80	2423.79	2189.85	1960.17	1735.28	1523.72	1238.09	1045.39	978.30
360.0	2409.93	2183.98	1959.63	1743.28	1534.91	1251.94	1058.66	992.37	837.24
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	697.25	573.40	506.63	374.15	302.74	266.61	200.00	177.72	147.99
45.0	846.94	708.92	586.88	480.84	391.84	319.37	282.60	282.60	174.68
90.0	588.06	483.13	394.99	322.03	264.37	217.90	194.83	152.84	139.41
135.0	730.23	607.67	497.89	440.87	331.62	293.25	293.25	185.56	153.74
180.0	891.70	752.61	673.75	558.11	456.86	371.06	302.31	277.80	219.55
225.0	788.37	662.66	548.94	449.82	365.78	309.61	243.16	199.89	171.65
270.0	1016.93	892.77	748.88	597.54	511.21	416.35	338.55	275.14	275.14
315.0	821.25	735.14	602.39	487.82	391.10	313.35	252.06	203.09	166.42
360.0	697.25	573.40	506.63	374.15	302.74	266.61	200.00	177.72	147.99
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	126.67	111.43	99.71	90.38	83.13	77.48	72.79	68.96	65.71
45.0	146.44	125.71	111.54	100.29	91.82	86.44	79.30	75.51	71.41
90.0	121.29	108.02	97.95	90.17	83.67	78.18	73.86	69.92	66.51
135.0	131.41	115.80	103.33	93.63	86.01	79.94	75.14	71.04	67.47
180.0	155.77	130.83	114.41	102.21	92.19	84.57	78.55	73.97	71.46
225.0	143.99	123.95	109.30	97.84	88.78	81.96	76.58	72.21	68.58
270.0	182.09	151.82	129.44	112.87	104.98	91.29	83.99	80.36	73.59
315.0	139.99	120.76	106.53	95.50	87.13	80.68	75.51	71.30	67.89
360.0	126.67	111.43	99.71	90.38	83.13	77.48	72.79	68.96	65.71

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	62.94	60.38	58.19	56.22	54.46	52.76	51.00	49.24	47.85
45.0	67.68	64.59	61.60	59.05	56.65	54.52	52.44	50.41	48.28
90.0	63.57	60.80	58.41	56.27	54.30	52.28	51.32	48.65	46.84
135.0	65.71	61.71	59.15	57.87	54.94	53.88	52.22	50.52	48.76
180.0	66.40	64.69	61.87	59.58	57.34	55.26	53.24	51.48	49.56
225.0	65.49	62.88	60.54	58.41	56.49	54.68	52.92	51.05	49.19
270.0	71.20	67.84	64.91	62.30	60.06	57.98	56.11	54.25	52.44
315.0	64.80	62.14	60.22	57.87	56.33	54.62	52.60	51.26	49.56
360.0	62.94	60.38	58.19	56.22	54.46	52.76	51.00	49.24	47.85
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	45.67	43.70	42.15	40.23	38.26	36.34	34.43	32.51	30.59
45.0	46.36	44.34	42.31	40.23	38.32	36.34	34.37	32.56	31.44
90.0	45.67	43.01	41.99	40.07	37.52	36.34	34.32	32.29	30.38
135.0	47.00	45.30	43.64	41.83	39.75	37.84	35.92	34.05	32.08
180.0	47.59	45.67	43.86	41.94	39.97	38.00	36.18	34.37	32.51
225.0	48.12	45.46	44.28	42.31	39.54	38.32	36.45	34.37	32.40
270.0	50.68	48.71	46.84	44.82	42.90	40.93	38.90	36.93	34.90
315.0	47.75	45.94	44.02	42.10	40.18	38.16	36.18	34.27	32.35
360.0	45.67	43.70	42.15	40.23	38.26	36.34	34.43	32.51	30.59
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	28.67	26.75	24.78	23.02	21.26	19.45	17.37	15.29	13.86
45.0	28.72	26.91	25.85	24.03	22.33	20.68	19.02	17.43	15.72
90.0	28.40	26.43	24.51	22.70	20.84	19.02	16.84	14.87	13.54
135.0	30.11	28.24	26.22	25.10	22.38	20.57	19.40	16.36	15.24
180.0	30.70	28.94	27.98	25.63	24.51	22.97	21.26	19.56	17.53
225.0	30.54	28.56	26.65	24.73	22.91	21.10	19.29	17.16	15.19
270.0	32.99	31.39	29.04	27.50	25.58	23.77	21.96	20.14	18.17
315.0	30.43	28.46	26.54	24.67	22.81	21.69	19.18	17.21	15.93
360.0	28.67	26.75	24.78	23.02	21.26	19.45	17.37	15.29	13.86
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	12.74	11.62	10.55	9.59	8.63	7.99	7.09	6.18	5.28
45.0	14.23	13.06	11.88	10.76	9.70	8.69	7.73	6.71	5.76
90.0	12.36	11.19	10.18	9.38	8.15	7.41	6.45	5.38	4.64
135.0	13.80	12.58	11.40	10.34	9.33	8.31	7.41	6.45	5.54
180.0	15.45	14.02	12.79	11.62	10.50	9.43	8.37	7.41	6.39
225.0	13.80	12.63	11.46	10.87	9.43	8.74	7.73	6.34	5.81
270.0	16.15	14.49	13.27	12.10	11.08	10.13	9.11	8.10	7.19
315.0	13.80	13.11	11.99	10.92	9.97	9.06	8.10	7.19	6.34
360.0	12.74	11.62	10.55	9.59	8.63	7.99	7.09	6.18	5.28
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.05	3.36	2.72	2.13	1.55	1.01	0.64	0.53	0.53
45.0	4.85	4.00	2.98	2.40	1.65	1.07	0.69	0.59	0.59
90.0	3.78	2.98	2.40	1.76	1.23	0.85	0.75	0.69	0.48
135.0	4.64	3.78	2.88	2.24	1.65	1.12	0.85	0.80	0.69
180.0	5.38	4.48	3.46	2.56	1.97	1.39	0.91	0.69	0.64
225.0	4.64	3.78	3.14	2.34	1.76	1.07	0.69	0.53	0.53
270.0	6.34	5.49	4.48	3.52	2.72	1.92	1.28	0.69	0.64
315.0	5.49	4.42	3.78	3.04	2.24	1.49	0.91	0.69	0.64
360.0	4.05	3.36	2.72	2.13	1.55	1.01	0.64	0.53	0.53

Intensity data(cd)

C/γ(°)	90.0
0.0	0.53
45.0	0.43
90.0	0.43
135.0	0.43
180.0	0.53
225.0	0.48
270.0	0.64
315.0	0.64
360.0	0.53