Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.
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Client:
LumCAT:
Luminaire:
Report No:
Ballast type:

Test No:	Voltage(V): 120.09
LampCAT:	Current(A): 0.0430
Lamp flux(lm): -1.0	Power (W): 4.91
Number of Lamps: 1	PF: 0.9618
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 280.40, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 57.11
Central intensity(cd): 103.150, Maximum intensity(cd): 104.459
Angle of maximum intensity: C=292.5 γ=5.0
Beam Angle(50%Imax): [C0/180]Total=106.3
[C90/270]Total=110.0
Field angle(10%Imax): [C0/180]Total=155.8
[C90/270]Total=160.5
Maximum s/h(1/2): C0_180=1.23 C90_270=1.26
Maximum s/h(1/4): C0_180=1.34 C90_270=1.38
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 0.00%
Up flux rate of LUM(%): 1.33%
Down flux rate of LUM(%): 98.67%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 79.598%

Zonal flux distribution table

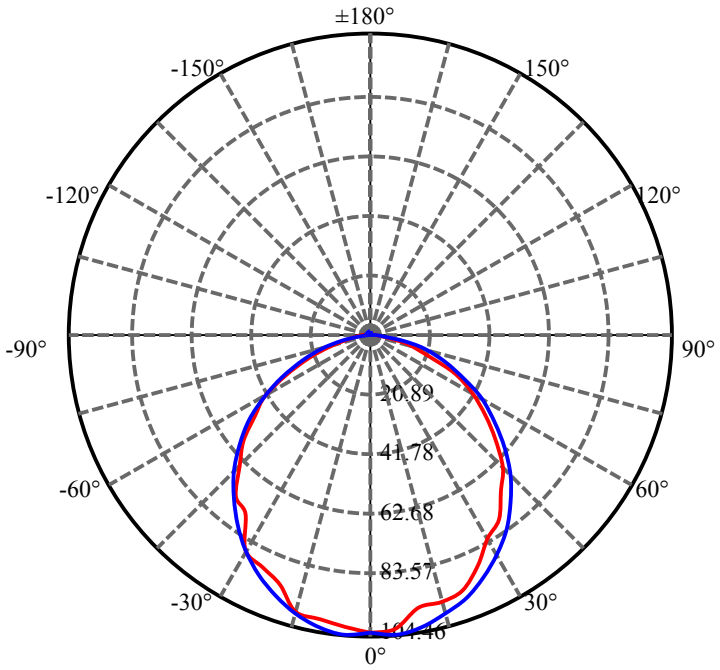
γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	103.150	0.000	0	0.00%	0.00%
5.0	102.645	2.460	2.46	0.00%	0.88%
10.0	100.575	7.270	9.73	0.00%	3.47%
15.0	98.081	11.784	21.514	0.00%	7.67%
20.0	94.394	15.863	37.377	0.00%	13.33%
25.0	89.875	19.326	56.703	0.00%	20.22%
30.0	84.978	22.128	78.831	0.00%	28.11%
35.0	78.948	24.139	102.97	0.00%	36.72%
40.0	72.647	25.292	128.263	0.00%	45.74%
45.0	65.483	25.576	153.839	0.00%	54.86%
50.0	57.806	24.912	178.751	0.00%	63.75%
55.0	49.751	23.386	202.137	0.00%	72.09%
60.0	41.348	21.057	223.195	0.00%	79.60%
65.0	32.568	17.969	241.164	0.00%	86.01%
70.0	23.848	14.285	255.449	0.00%	91.10%
75.0	15.551	10.298	265.747	0.00%	94.77%
80.0	8.554	6.450	272.197	0.00%	97.07%
85.0	3.491	3.273	275.47	0.00%	98.24%
90.0	0.952	1.216	276.686	0.00%	98.67%
95.0	0.454	0.385	277.071	0.00%	98.81%
100.0	0.469	0.251	277.321	0.00%	98.90%
105.0	0.499	0.259	277.58	0.00%	98.99%
110.0	0.484	0.257	277.837	0.00%	99.09%
115.0	0.499	0.249	278.086	0.00%	99.17%
120.0	0.574	0.261	278.347	0.00%	99.27%
125.0	0.559	0.262	278.609	0.00%	99.36%
130.0	0.574	0.246	278.855	0.00%	99.45%
135.0	0.589	0.235	279.09	0.00%	99.53%
140.0	0.680	0.235	279.325	0.00%	99.62%
145.0	0.695	0.229	279.555	0.00%	99.70%
150.0	0.755	0.214	279.768	0.00%	99.77%
155.0	0.740	0.189	279.958	0.00%	99.84%
160.0	0.756	0.157	280.115	0.00%	99.90%
165.0	0.771	0.126	280.24	0.00%	99.94%
170.0	0.740	0.090	280.33	0.00%	99.97%
175.0	0.740	0.053	280.383	0.00%	99.99%
180.0	0.839	0.019	280.402	0.00%	100.00%

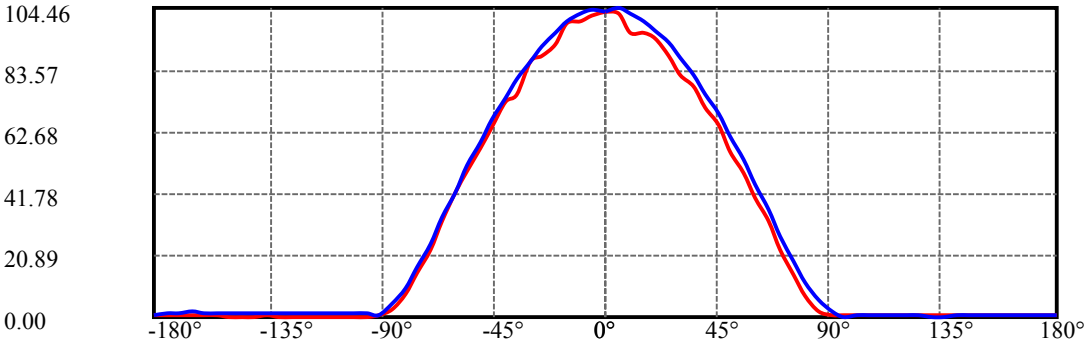
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	78.83	N.A.	28.11%
0-40	128.26	N.A.	45.74%
0-60	223.19	N.A.	79.60%
0-90	276.69	N.A.	98.67%
0-120	278.35	N.A.	99.27%
0-180	280.40	N.A.	100.00%
60-90	53.49	N.A.	19.08%
90-120	1.66	N.A.	0.59%
90-130	2.17	N.A.	0.77%
90-150	3.08	N.A.	1.10%
90-180	3.70	N.A.	1.32%
0-60.31	224.32	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	9.73
10-20	27.65
20-30	41.45
30-40	49.43
40-50	50.49
50-60	44.44
60-70	32.25
70-80	16.75
80-90	4.49
90-100	0.64
100-110	0.52
110-120	0.51
120-130	0.51
130-140	0.47
140-150	0.44
150-160	0.35
160-170	0.22
170-180	0.05



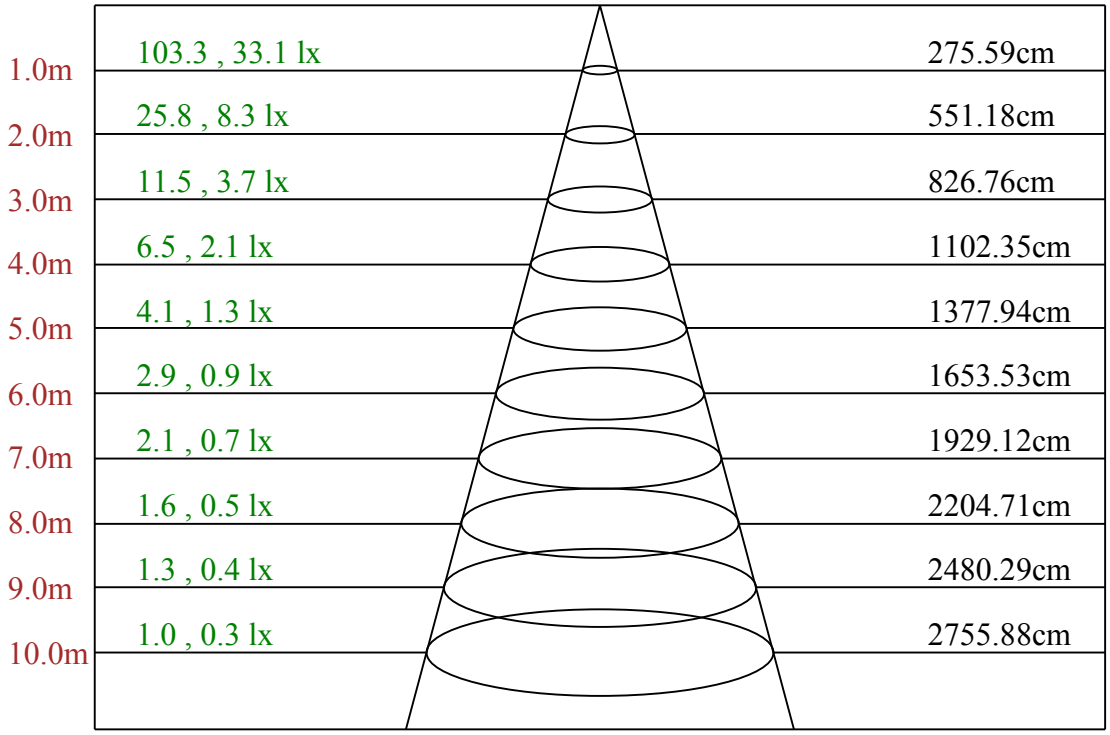


C0/C180:

C90/C270:

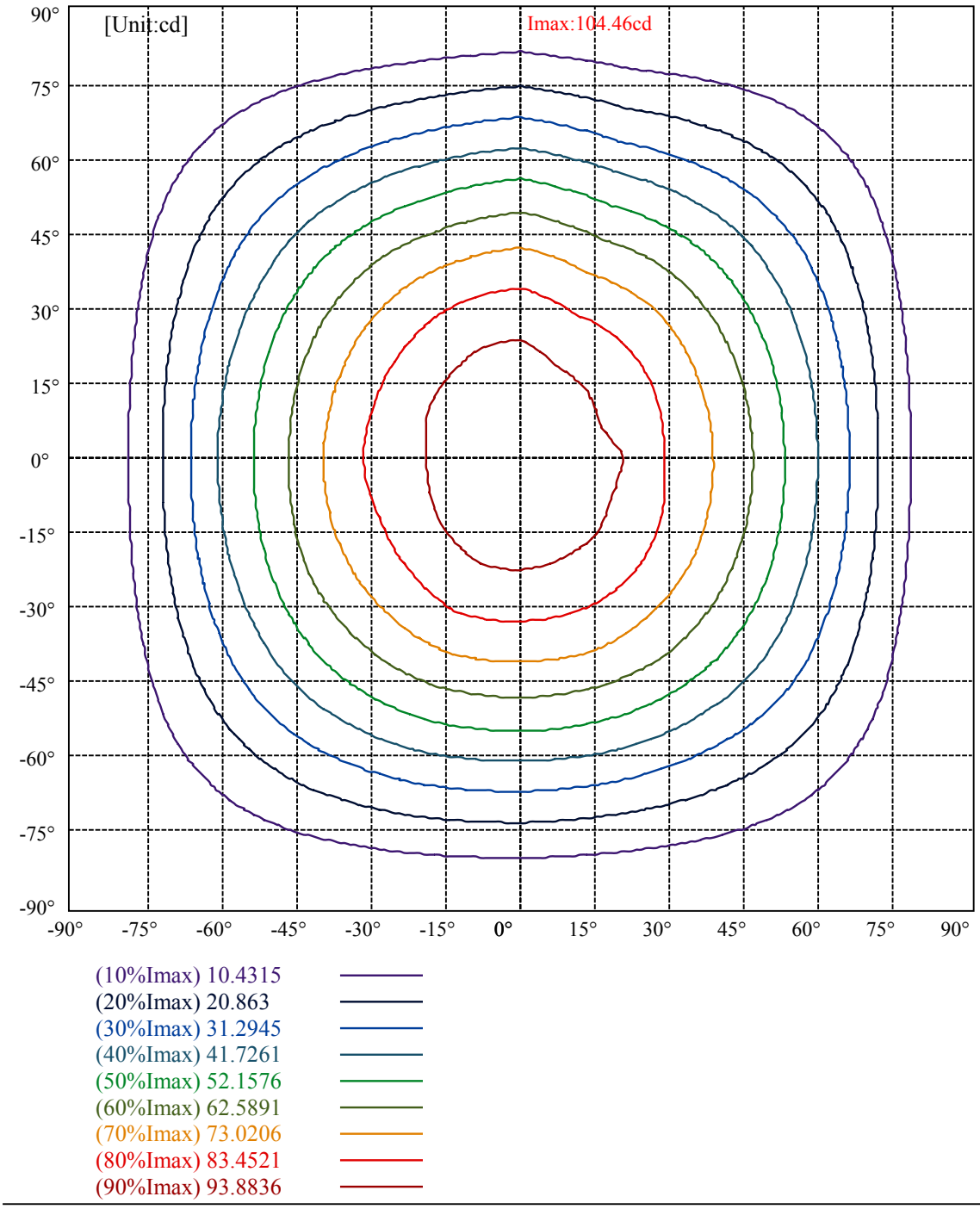
Field angle(10%Imax):C0/180Left:78.1 Right:77.7
:C90/270Left:79.7 Right:80.8

Beam Angle(50%Imax):C0/180Left:53.4 Right:52.9
:C90/270Left:54.5 Right:55.5



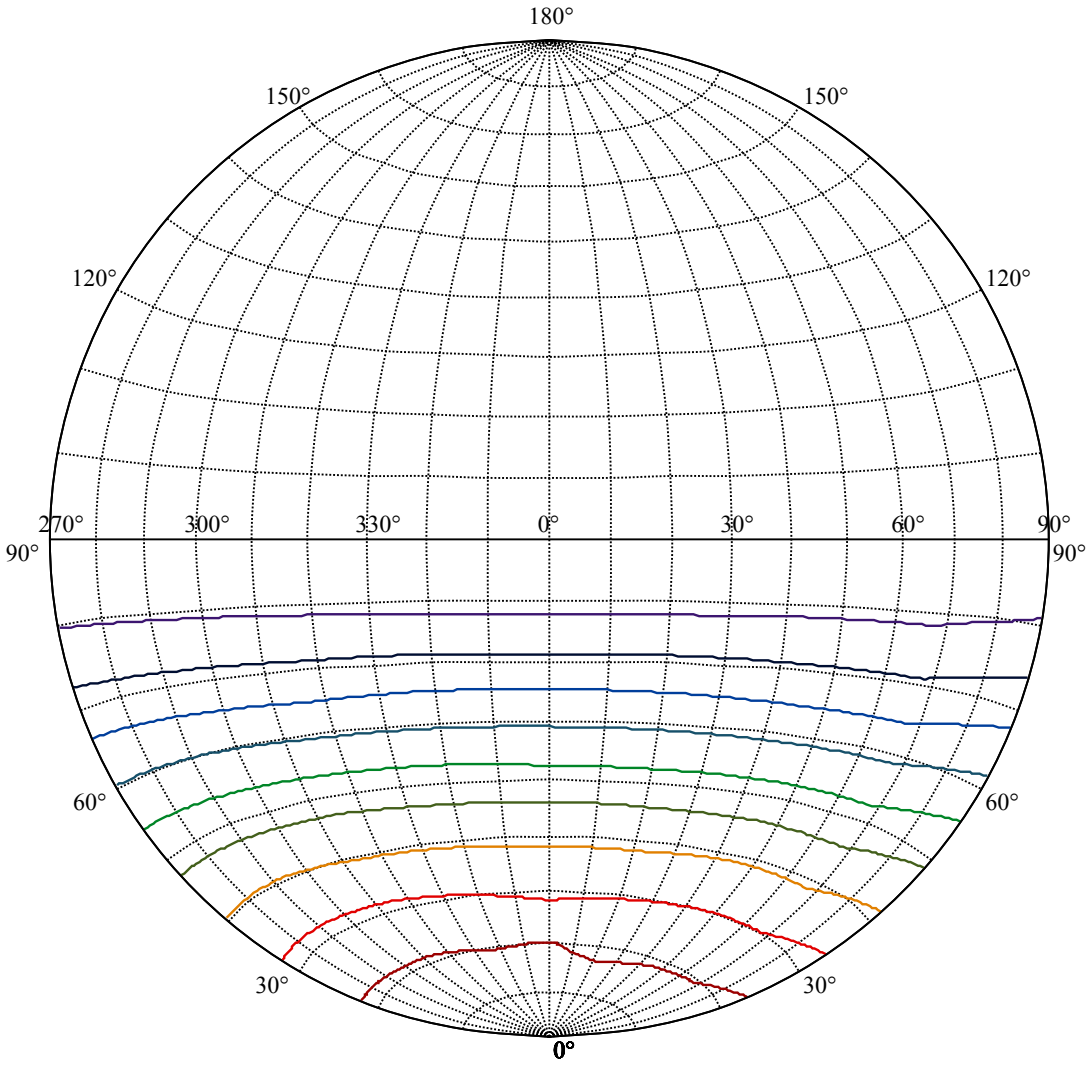
Max , Ave

Beam angle of C292.5 plane 108.06



Equipment: GMS-3000
Temperature(°C): 25
Date:
Humidity(%): 58%
Operator: Tester

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:104.46

(10%Imax) 10.4448
(20%Imax) 20.8896
(30%Imax) 31.3345
(40%Imax) 41.7793
(50%Imax) 52.2241
(60%Imax) 62.6689
(70%Imax) 73.1138
(80%Imax) 83.5586
(90%Imax) 94.0034

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	103.15	102.28	96.24	95.75	94.30	88.02	81.49	77.86	70.61
22.5	103.15	100.35	98.17	95.27	91.89	87.77	82.94	77.14	70.85
45.0	103.15	102.04	99.62	96.72	92.85	88.50	83.66	78.10	71.82
67.5	103.15	103.98	101.80	98.17	93.34	88.98	83.91	77.86	71.33
90.0	103.15	104.22	102.77	100.11	96.72	92.61	87.77	81.97	75.44
112.5	103.15	103.98	102.04	99.38	96.48	92.13	87.05	80.76	73.99
135.0	103.15	102.52	101.07	98.41	95.03	89.95	85.11	79.55	72.78
157.5	103.15	102.04	100.11	97.45	94.30	89.71	84.39	78.34	71.57
180.0	103.15	101.56	100.11	99.14	91.89	88.50	86.08	75.44	72.54
202.5	103.15	102.77	100.83	97.45	93.34	88.50	83.66	77.62	72.30
225.0	103.15	101.56	99.86	97.93	94.55	89.71	84.63	79.31	72.78
247.5	103.15	103.01	101.32	99.14	95.75	91.89	86.81	81.25	74.48
270.0	103.15	103.98	102.52	99.62	96.00	91.40	86.32	80.52	73.75
292.5	103.15	104.46	102.77	99.14	95.27	90.92	86.32	80.28	73.99
315.0	103.15	102.77	100.59	97.93	95.03	90.43	85.60	79.55	72.30
337.5	103.15	100.83	99.38	97.69	93.58	88.98	83.91	77.62	71.82
360.0	103.15	102.28	96.24	95.75	94.30	88.02	81.49	77.86	70.61

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	64.80	56.10	48.36	40.38	32.16	22.97	14.03	7.25	2.18
22.5	64.08	56.10	48.12	40.14	31.68	23.21	14.27	7.50	2.66
45.0	64.32	56.34	48.36	39.66	30.71	22.49	14.75	7.98	2.90
67.5	63.84	56.10	48.12	39.66	30.47	22.25	14.51	8.22	3.39
90.0	68.67	60.69	52.96	44.49	36.03	27.32	19.10	11.37	5.56
112.5	66.25	58.52	50.30	42.07	33.37	24.66	16.44	9.67	4.35
135.0	65.53	58.03	49.57	41.11	32.16	23.46	15.23	8.46	3.39
157.5	64.32	57.55	49.09	40.62	31.92	23.46	14.99	7.50	2.90
180.0	64.08	57.07	49.09	42.32	32.40	22.73	14.75	7.50	2.66
202.5	65.29	57.79	49.57	41.35	32.89	23.70	15.23	7.98	3.14
225.0	65.77	58.27	50.54	41.83	33.37	24.42	16.20	8.95	3.63
247.5	66.98	59.00	51.26	42.56	33.85	25.15	16.68	9.67	4.35
270.0	66.74	59.00	51.26	42.32	33.85	24.91	17.17	9.91	4.84
292.5	66.50	58.52	50.54	41.83	32.64	24.18	15.72	9.19	4.11
315.0	65.77	58.52	49.57	40.62	31.43	23.21	14.99	8.46	3.39
337.5	64.80	57.31	49.33	40.62	32.16	23.46	14.75	7.25	2.42
360.0	64.80	56.10	48.36	40.38	32.16	22.97	14.03	7.25	2.18

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.73	0.73	0.48	0.48	0.73	0.73	0.73	0.48	0.73
22.5	0.73	0.48	0.48	0.48	0.73	0.48	0.97	0.73	0.73
45.0	0.73	0.48	0.48	0.48	0.73	0.73	0.73	0.73	0.73
67.5	0.73	0.48	0.48	0.24	0.48	0.73	0.48	0.48	0.73
90.0	1.69	0.24	0.73	0.73	0.48	0.48	0.48	0.48	0.24
112.5	1.45	0.24	0.73	0.48	0.24	0.24	0.48	0.73	0.48
135.0	0.73	0.24	0.00	0.24	0.24	0.24	0.24	0.24	0.48
157.5	0.73	0.24	0.24	0.24	0.24	0.48	0.24	0.24	0.48
180.0	0.48	0.24	0.24	0.24	0.24	0.00	0.24	0.24	0.24
202.5	0.73	0.24	0.24	0.48	0.00	0.00	0.24	0.48	0.24
225.0	0.97	0.24	0.00	0.24	0.00	0.24	0.24	0.24	0.48
247.5	1.45	0.48	0.00	0.24	0.24	0.24	0.24	0.24	0.24
270.0	0.97	1.21	1.45	1.21	1.21	1.21	1.45	1.21	1.45
292.5	1.21	0.73	0.73	0.97	0.97	0.97	0.97	0.97	0.97
315.0	0.97	0.48	0.73	0.73	0.73	0.48	0.73	0.73	0.48
337.5	0.97	0.48	0.48	0.48	0.48	0.73	0.73	0.73	0.48
360.0	0.73	0.73	0.48	0.48	0.73	0.73	0.73	0.48	0.73

Intensity data(cd)

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.73	0.97	0.97	0.73	0.48	0.73	0.73	0.73	0.73
22.5	0.73	0.73	0.73	0.73	0.73	0.73	0.97	0.73	0.73
45.0	0.73	0.73	0.73	0.73	0.97	0.48	0.73	0.48	0.73
67.5	0.97	0.73	0.73	0.73	0.73	0.48	0.73	0.73	0.48
90.0	0.24	0.48	0.97	0.97	0.73	0.97	0.97	0.97	0.73
112.5	0.24	0.48	0.73	0.73	0.73	0.73	0.73	0.73	0.97
135.0	0.24	0.48	0.48	0.24	0.48	0.73	0.73	0.73	0.48
157.5	0.24	0.48	0.73	0.97	0.73	0.48	0.48	0.73	0.73
180.0	0.48	0.24	0.24	0.24	0.73	0.73	0.73	0.48	0.73
202.5	0.48	0.48	0.48	0.73	0.73	0.48	0.48	0.48	0.73
225.0	0.48	0.24	0.24	0.24	0.48	0.97	0.48	0.73	0.97
247.5	0.48	0.73	0.24	0.73	0.48	0.48	0.73	0.73	0.48
270.0	1.21	1.45	1.45	1.45	1.45	1.45	1.69	1.45	1.45
292.5	0.73	0.97	0.97	0.97	0.97	0.97	0.73	0.97	0.73
315.0	0.73	0.73	0.97	0.97	0.73	0.97	0.73	0.48	0.48
337.5	0.73	0.97	0.48	0.97	0.73	0.73	0.73	0.73	0.73
360.0	0.73	0.97	0.97	0.73	0.48	0.73	0.73	0.73	0.73

C/γ(°)	180.0
0.0	0.84
22.5	0.84
45.0	0.84
67.5	0.84
90.0	0.84
112.5	0.84
135.0	0.84
157.5	0.84
180.0	0.84
202.5	0.84
225.0	0.84
247.5	0.84
270.0	0.84
292.5	0.84
315.0	0.84
337.5	0.84
360.0	0.84