Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.
www.bellingeel.com

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Address:Rm. 108, No.1 Building, Meibaohe industrial park, No.14 Shilongzi Road, Dalang street, Longhua district, Shenzhen, China

Client:
LumCAT:
Luminaire:
Report No:
Ballast type:

Test No:	Voltage(V): 120.02
LampCAT:	Current(A): 0.0430
Lamp flux(lm): -1.0	Power (W): 4.93
Number of Lamps: 1	PF: 0.9616
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 289.56, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 58.74
Central intensity(cd): 106.141, Maximum intensity(cd): 107.345
Angle of maximum intensity: C=292.5 γ=5.0
Beam Angle(50%Imax): [C0/180]Total=106.7
[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=1.24 C90_270=1.26
Maximum s/h(1/4): C0_180=1.35 C90_270=1.37
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 0.00%
Up flux rate of LUM(%): 1.35%
Down flux rate of LUM(%): 98.65%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 79.427%

Zonal flux distribution table

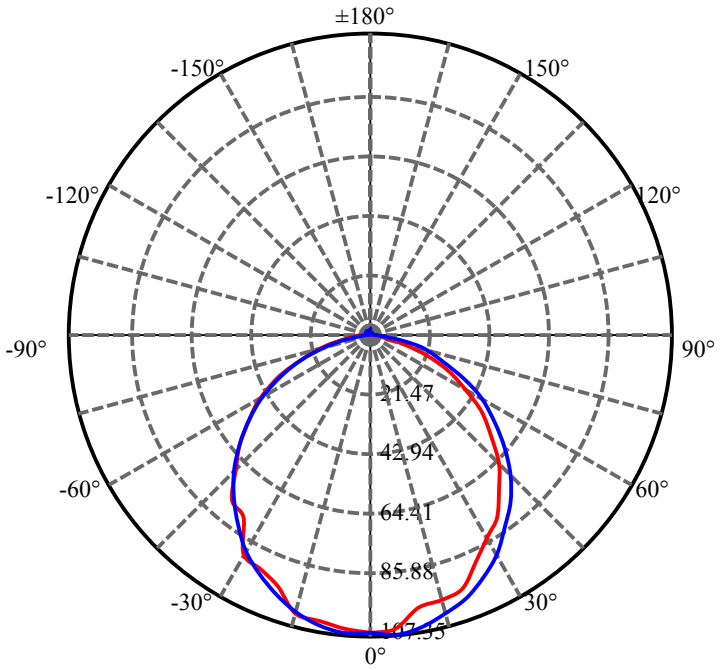
γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	106.141	0.000	0	0.00%	0.00%
5.0	105.660	2.532	2.532	0.00%	0.87%
10.0	103.538	7.484	10.016	0.00%	3.46%
15.0	101.073	12.137	22.153	0.00%	7.65%
20.0	97.157	16.337	38.49	0.00%	13.29%
25.0	92.538	19.896	58.386	0.00%	20.16%
30.0	87.514	22.786	81.171	0.00%	28.03%
35.0	81.258	24.853	106.024	0.00%	36.62%
40.0	74.814	26.039	132.064	0.00%	45.61%
45.0	67.465	26.344	158.408	0.00%	54.71%
50.0	59.602	25.676	184.083	0.00%	63.57%
55.0	51.457	24.148	208.231	0.00%	71.91%
60.0	42.689	21.761	229.993	0.00%	79.43%
65.0	33.733	18.578	248.571	0.00%	85.84%
70.0	24.761	14.811	263.382	0.00%	90.96%
75.0	16.305	10.734	274.116	0.00%	94.66%
80.0	9.003	6.772	280.887	0.00%	97.00%
85.0	3.698	3.451	284.339	0.00%	98.20%
90.0	1.077	1.307	285.646	0.00%	98.65%
95.0	0.577	0.453	286.099	0.00%	98.80%
100.0	0.468	0.284	286.383	0.00%	98.90%
105.0	0.593	0.284	286.667	0.00%	99.00%
110.0	0.484	0.281	286.948	0.00%	99.10%
115.0	0.421	0.229	287.177	0.00%	99.18%
120.0	0.546	0.235	287.412	0.00%	99.26%
125.0	0.609	0.267	287.679	0.00%	99.35%
130.0	0.609	0.265	287.944	0.00%	99.44%
135.0	0.671	0.259	288.203	0.00%	99.53%
140.0	0.671	0.248	288.451	0.00%	99.62%
145.0	0.811	0.247	288.698	0.00%	99.70%
150.0	0.718	0.225	288.923	0.00%	99.78%
155.0	0.796	0.192	289.115	0.00%	99.84%
160.0	0.733	0.160	289.275	0.00%	99.90%
165.0	0.765	0.123	289.399	0.00%	99.94%
170.0	0.749	0.090	289.489	0.00%	99.97%
175.0	0.811	0.056	289.544	0.00%	99.99%
180.0	0.867	0.020	289.564	0.00%	100.00%

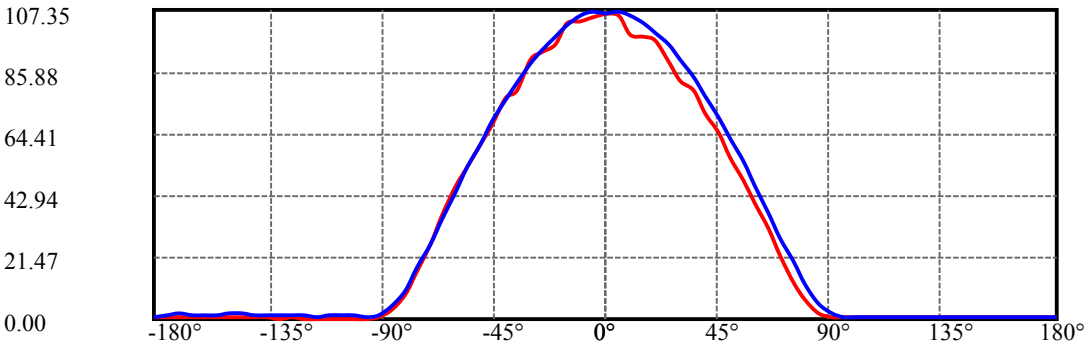
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	81.17	N.A.	28.03%
0-40	132.06	N.A.	45.61%
0-60	229.99	N.A.	79.43%
0-90	285.65	N.A.	98.65%
0-120	287.41	N.A.	99.26%
0-180	289.56	N.A.	100.00%
60-90	55.65	N.A.	19.22%
90-120	1.77	N.A.	0.61%
90-130	2.30	N.A.	0.79%
90-150	3.28	N.A.	1.13%
90-180	3.90	N.A.	1.35%
0-60.45	231.65	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	10.02
10-20	28.47
20-30	42.68
30-40	50.89
40-50	52.02
50-60	45.91
60-70	33.39
70-80	17.51
80-90	4.76
90-100	0.74
100-110	0.57
110-120	0.46
120-130	0.53
130-140	0.51
140-150	0.47
150-160	0.35
160-170	0.21
170-180	0.06



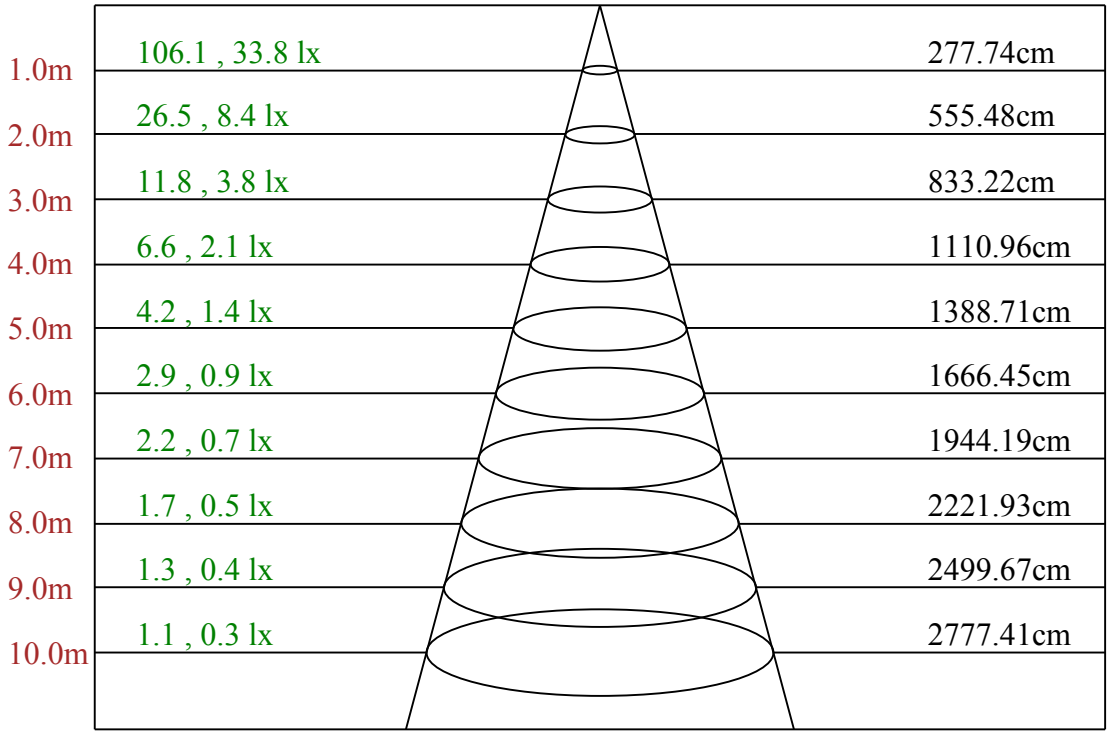


C0/C180:

C90/C270:

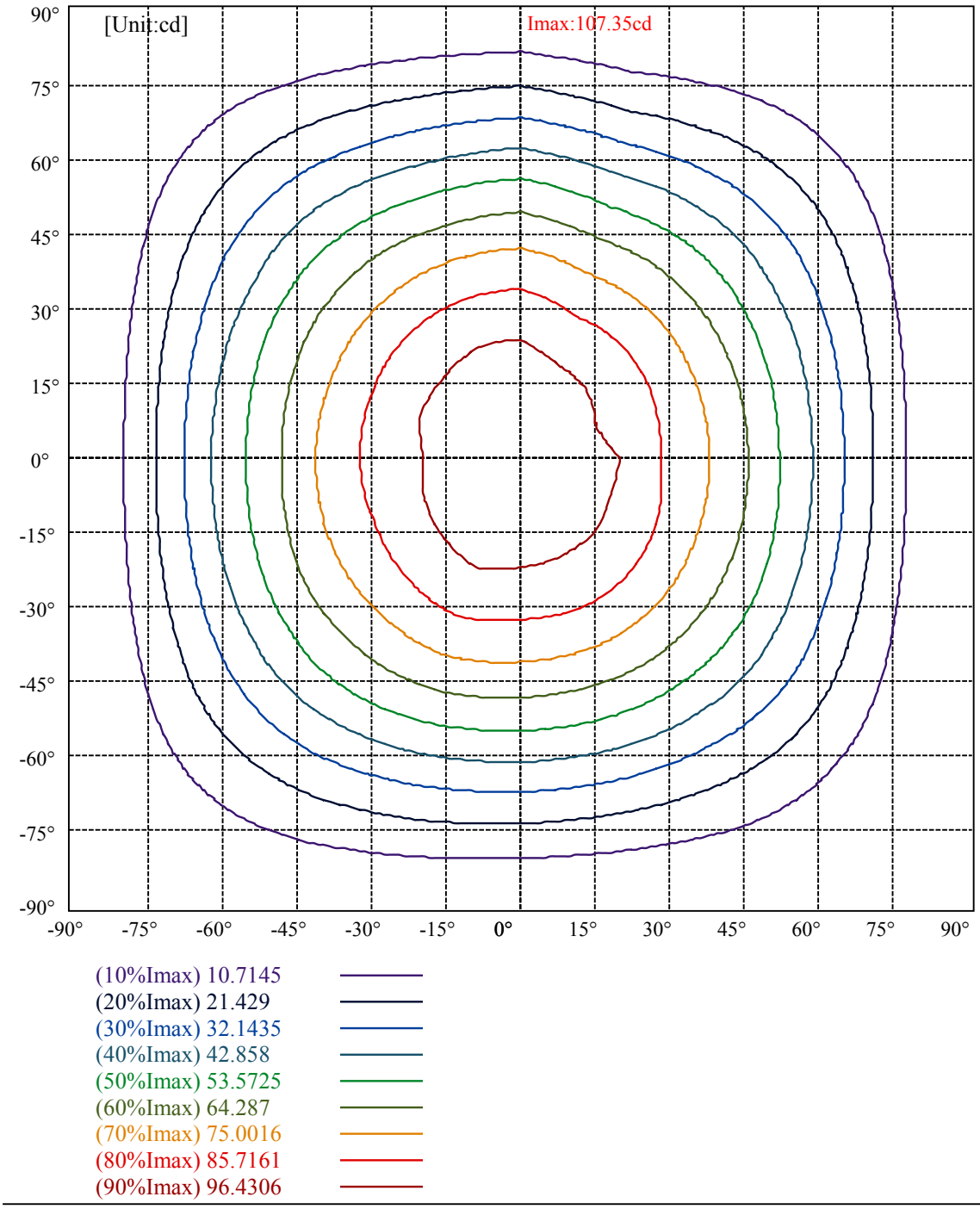
Field angle(10%Imax):C0/180Left:79.0 Right:76.8
:C90/270Left:79.7 Right:80.8

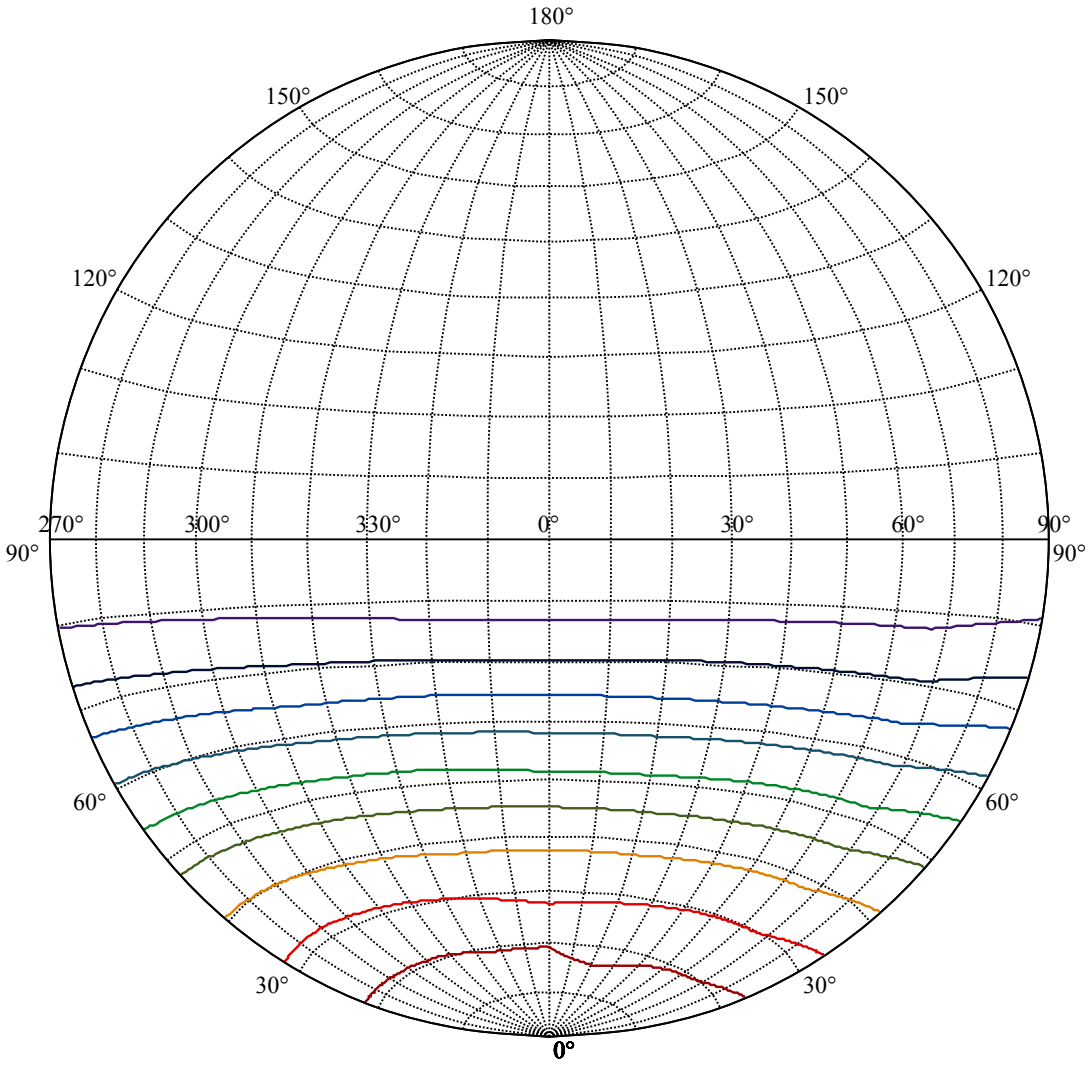
Beam Angle(50%Imax):C0/180Left:54.9 Right:51.8
:C90/270Left:54.4 Right:55.6



Max , Ave

Beam angle of C292.5 plane 108.49


[Unit:cd]
Imax:107.35cd
90°
75°
60°
45°
30°
15°
0°
-15°
-30°
-45°
-60°
-75°
-90°
-90° -75° -60° -45° -30° -15° 0° 15° 30° 45° 60° 75° 90°
(10%Imax) 10.7145
(20%Imax) 21.429
(30%Imax) 32.1435
(40%Imax) 42.858
(50%Imax) 53.5725
(60%Imax) 64.287
(70%Imax) 75.0016
(80%Imax) 85.7161
(90%Imax) 96.4306



House [Unit:cd] Road

Imax:107.35

(10%Imax) 10.7323
(20%Imax) 21.4646
(30%Imax) 32.1968
(40%Imax) 42.9291
(50%Imax) 53.6614
(60%Imax) 64.3937
(70%Imax) 75.126
(80%Imax) 85.8583
(90%Imax) 96.5905

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	106.14	105.35	98.61	97.86	96.36	89.37	82.88	79.14	71.40
22.5	106.14	103.10	100.86	97.36	93.62	89.62	84.38	78.39	71.65
45.0	106.14	105.10	102.60	99.36	95.36	90.12	85.38	79.14	72.65
67.5	106.14	107.10	105.10	101.35	96.36	91.12	85.88	79.89	73.15
90.0	106.14	106.85	105.35	102.85	99.36	95.11	90.12	83.88	77.39
112.5	106.14	106.60	105.10	102.85	99.36	95.11	89.87	83.38	76.64
135.0	106.14	105.60	104.10	101.85	98.11	93.37	88.87	82.63	75.64
157.5	106.14	105.35	103.60	101.10	97.86	93.37	87.87	82.38	75.39
180.0	106.14	104.85	103.10	102.85	95.36	92.37	89.87	79.14	76.39
202.5	106.14	105.85	104.35	101.10	97.11	92.37	87.37	81.63	76.14
225.0	106.14	105.10	103.85	101.85	98.11	93.37	88.37	82.88	76.14
247.5	106.14	106.60	104.60	102.60	99.11	95.36	90.12	84.13	77.39
270.0	106.14	106.35	105.10	102.10	98.11	93.37	88.37	82.13	75.89
292.5	106.14	107.35	105.10	101.60	97.36	93.37	88.37	81.88	75.14
315.0	106.14	105.85	103.10	100.36	97.11	92.37	87.12	80.88	73.64
337.5	106.14	103.60	102.10	100.11	95.86	90.87	85.38	78.64	72.40
360.0	106.14	105.35	98.61	97.86	96.36	89.37	82.88	79.14	71.40

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	64.91	55.92	48.18	39.69	31.21	21.72	12.98	6.49	1.75
22.5	64.41	55.92	47.93	39.44	30.96	22.47	13.48	6.74	2.50
45.0	64.91	56.92	48.68	39.69	30.71	22.22	14.23	7.24	2.75
67.5	65.41	56.92	49.18	40.19	31.21	22.22	14.48	7.74	3.25
90.0	70.15	62.66	54.42	45.68	36.95	27.96	19.72	11.73	5.49
112.5	68.90	60.91	52.67	43.44	35.20	26.21	17.97	10.74	4.74
135.0	68.65	60.91	52.42	43.69	34.70	25.71	17.23	9.74	4.24
157.5	68.40	60.66	52.92	43.69	34.95	25.96	17.23	8.99	3.75
180.0	67.65	60.91	52.92	45.93	35.95	25.96	16.98	8.99	3.50
202.5	69.15	61.66	53.42	44.94	35.70	26.46	17.72	9.74	3.75
225.0	69.15	61.66	53.92	44.69	35.95	26.46	18.22	10.74	4.24
247.5	70.15	61.66	53.42	44.44	35.20	26.71	18.47	10.74	5.24
270.0	68.40	60.91	52.42	43.94	34.70	26.21	17.72	10.24	4.74
292.5	67.40	59.66	51.43	42.44	33.20	24.47	15.98	9.24	3.75
315.0	66.40	58.67	49.93	40.94	31.46	22.97	14.73	8.24	3.00
337.5	65.41	57.67	49.43	40.19	31.70	22.47	13.73	6.74	2.50
360.0	64.91	55.92	48.18	39.69	31.21	21.72	12.98	6.49	1.75

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.50	0.50	0.50	1.00	0.75	0.50	0.75	0.50	0.75
22.5	1.00	0.75	0.50	0.75	0.75	0.50	0.50	0.75	0.75
45.0	1.00	0.25	0.50	1.00	0.50	0.75	0.75	1.00	0.75
67.5	1.00	0.50	0.25	0.75	0.50	0.50	0.75	0.75	0.50
90.0	1.75	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
112.5	1.50	0.50	0.25	0.25	0.25	0.00	0.25	0.25	0.50
135.0	1.00	0.75	0.50	0.50	0.25	0.25	0.25	0.50	0.25
157.5	1.00	0.25	0.50	0.50	0.25	0.50	0.25	0.50	0.50
180.0	0.75	0.25	0.25	0.00	0.00	0.00	0.25	0.50	0.25
202.5	0.75	0.75	0.25	0.50	0.00	0.25	0.25	0.25	0.25
225.0	1.25	0.50	0.25	0.25	0.00	0.25	0.25	0.25	0.25
247.5	1.50	0.50	0.00	0.00	0.00	0.00	0.25	0.50	0.50
270.0	1.25	1.00	1.25	1.25	1.50	1.00	1.25	1.25	1.50
292.5	1.00	0.75	0.75	0.75	1.00	0.75	1.00	0.75	1.00
315.0	1.00	0.75	0.50	0.75	0.75	0.50	0.75	0.75	0.75
337.5	1.00	0.75	0.75	0.75	0.75	0.50	0.75	0.75	0.75
360.0	0.50	0.50	0.50	1.00	0.75	0.50	0.75	0.50	0.75

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	0.75	0.75	0.75	0.50	0.75	0.75	0.75	0.50	0.75
22.5	0.75	1.00	0.75	0.75	0.75	1.00	1.00	0.75	0.75
45.0	0.75	0.50	1.25	0.75	0.75	0.75	0.75	0.75	0.75
67.5	0.75	0.75	1.00	0.75	1.00	0.75	1.00	0.75	0.75
90.0	0.75	0.50	1.00	0.75	0.75	0.75	1.00	1.00	1.00
112.5	0.50	0.50	1.00	0.50	0.75	1.00	0.50	1.00	0.75
135.0	0.25	0.25	0.50	0.50	0.50	0.25	0.50	0.50	0.50
157.5	0.25	0.50	0.50	0.50	0.75	0.50	0.75	0.50	1.00
180.0	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.75	0.75
202.5	0.50	0.25	0.50	0.50	0.75	0.75	0.50	0.25	0.75
225.0	0.25	0.50	0.25	0.50	0.75	0.75	0.50	0.75	0.75
247.5	0.50	0.50	0.50	0.50	0.75	0.50	0.75	0.50	0.75
270.0	1.50	1.50	1.75	1.75	1.50	1.25	1.50	1.75	1.50
292.5	1.25	0.75	1.00	1.00	0.75	0.75	0.75	0.75	0.75
315.0	0.75	1.00	0.75	1.00	0.75	0.75	0.75	1.00	0.75
337.5	0.75	1.00	1.00	0.75	1.00	0.75	0.75	0.50	0.75
360.0	0.75	0.75	0.75	0.50	0.75	0.75	0.75	0.50	0.75

C/γ(°)	180.0
0.0	0.87
22.5	0.87
45.0	0.87
67.5	0.87
90.0	0.87
112.5	0.87
135.0	0.87
157.5	0.87
180.0	0.87
202.5	0.87
225.0	0.87
247.5	0.87
270.0	0.87
292.5	0.87
315.0	0.87
337.5	0.87
360.0	0.87