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

Test No:	Voltage(V): 120.07
LampCAT:	Current(A): 0.0670
Lamp flux(lm): -1.0	Power (W): 7.86
Number of Lamps: 1	PF: 0.9745
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 472.44, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 60.11
Central intensity(cd): 167.923, Maximum intensity(cd): 171.745
Angle of maximum intensity: C=90.0 γ=5.0
Beam Angle(50%Imax): [C0/180]Total=109.5
[C90/270]Total=113.4
Field angle(10%Imax): [C0/180]Total=156.9
[C90/270]Total=160.6
Maximum s/h(1/2): C0_180=1.25 C90_270=1.31
Maximum s/h(1/4): C0_180=1.38 C90_270=1.41
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 0.00%
Up flux rate of LUM(%): 0.72%
Down flux rate of LUM(%): 99.28%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 79.256%

Zonal flux distribution table

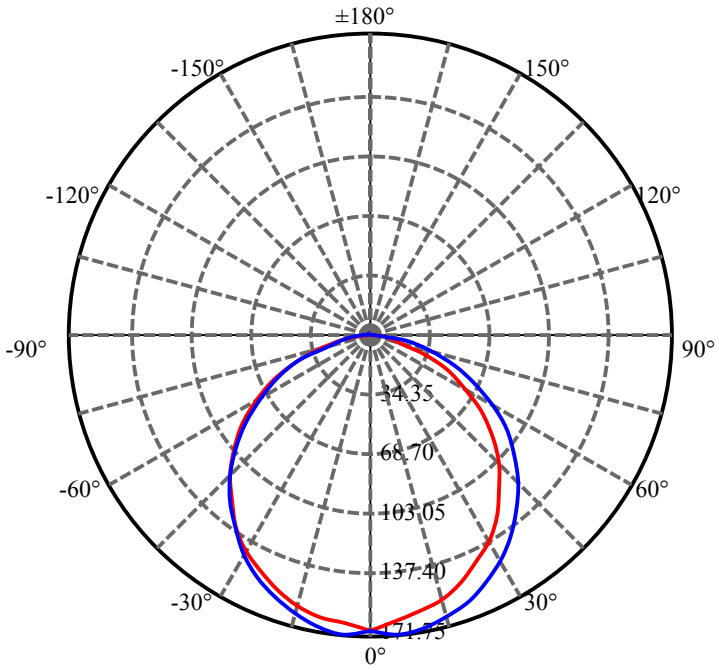
γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	167.923	0.000	0	0.00%	0.00%
5.0	167.366	4.008	4.008	0.00%	0.85%
10.0	165.023	11.891	15.899	0.00%	3.37%
15.0	161.134	19.347	35.246	0.00%	7.46%
20.0	155.834	26.123	61.369	0.00%	12.99%
25.0	149.112	31.983	93.352	0.00%	19.76%
30.0	141.309	36.753	130.105	0.00%	27.54%
35.0	132.097	40.261	170.366	0.00%	36.06%
40.0	121.914	42.380	212.746	0.00%	45.03%
45.0	110.751	43.080	255.826	0.00%	54.15%
50.0	98.496	42.281	298.107	0.00%	63.10%
55.0	85.455	39.997	338.104	0.00%	71.57%
60.0	71.740	36.335	374.44	0.00%	79.26%
65.0	57.302	31.370	405.81	0.00%	85.90%
70.0	42.642	25.306	431.116	0.00%	91.25%
75.0	28.264	18.534	449.65	0.00%	95.18%
80.0	15.482	11.705	461.355	0.00%	97.65%
85.0	5.790	5.780	467.135	0.00%	98.88%
90.0	1.166	1.905	469.04	0.00%	99.28%
95.0	0.479	0.450	469.49	0.00%	99.38%
100.0	0.393	0.237	469.727	0.00%	99.43%
105.0	0.356	0.200	469.927	0.00%	99.47%
110.0	0.393	0.196	470.123	0.00%	99.51%
115.0	0.405	0.202	470.325	0.00%	99.55%
120.0	0.528	0.227	470.551	0.00%	99.60%
125.0	0.478	0.233	470.784	0.00%	99.65%
130.0	0.515	0.216	471	0.00%	99.69%
135.0	0.577	0.221	471.221	0.00%	99.74%
140.0	0.626	0.223	471.443	0.00%	99.79%
145.0	0.687	0.219	471.662	0.00%	99.84%
150.0	0.650	0.197	471.859	0.00%	99.88%
155.0	0.675	0.168	472.027	0.00%	99.91%
160.0	0.699	0.144	472.171	0.00%	99.94%
165.0	0.724	0.117	472.288	0.00%	99.97%
170.0	0.699	0.084	472.373	0.00%	99.99%
175.0	0.724	0.051	472.424	0.00%	100.00%
180.0	0.739	0.017	472.441	0.00%	100.00%

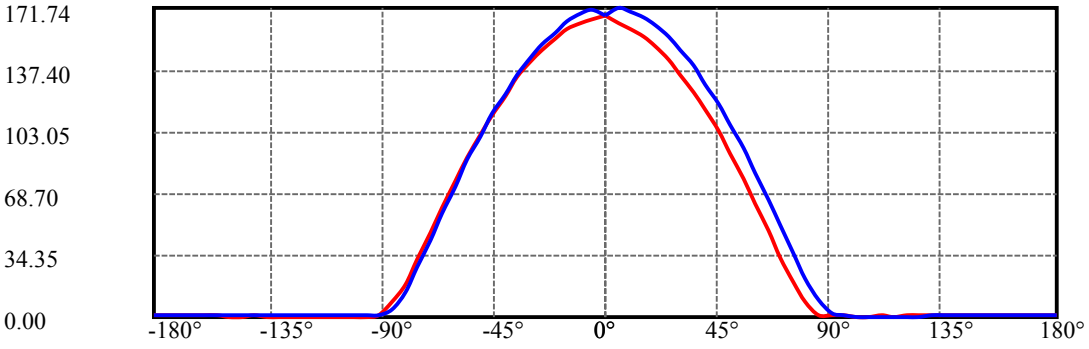
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	130.10	N.A.	27.54%
0-40	212.75	N.A.	45.03%
0-60	374.44	N.A.	79.26%
0-90	469.04	N.A.	99.28%
0-120	470.55	N.A.	99.60%
0-180	472.44	N.A.	100.00%
60-90	94.60	N.A.	20.02%
90-120	1.51	N.A.	0.32%
90-130	1.96	N.A.	0.41%
90-150	2.82	N.A.	0.60%
90-180	3.38	N.A.	0.72%
0-60.56	377.95	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	15.90
10-20	45.47
20-30	68.74
30-40	82.64
40-50	85.36
50-60	76.33
60-70	56.68
70-80	30.24
80-90	7.68
90-100	0.69
100-110	0.40
110-120	0.43
120-130	0.45
130-140	0.44
140-150	0.42
150-160	0.31
160-170	0.20
170-180	0.05



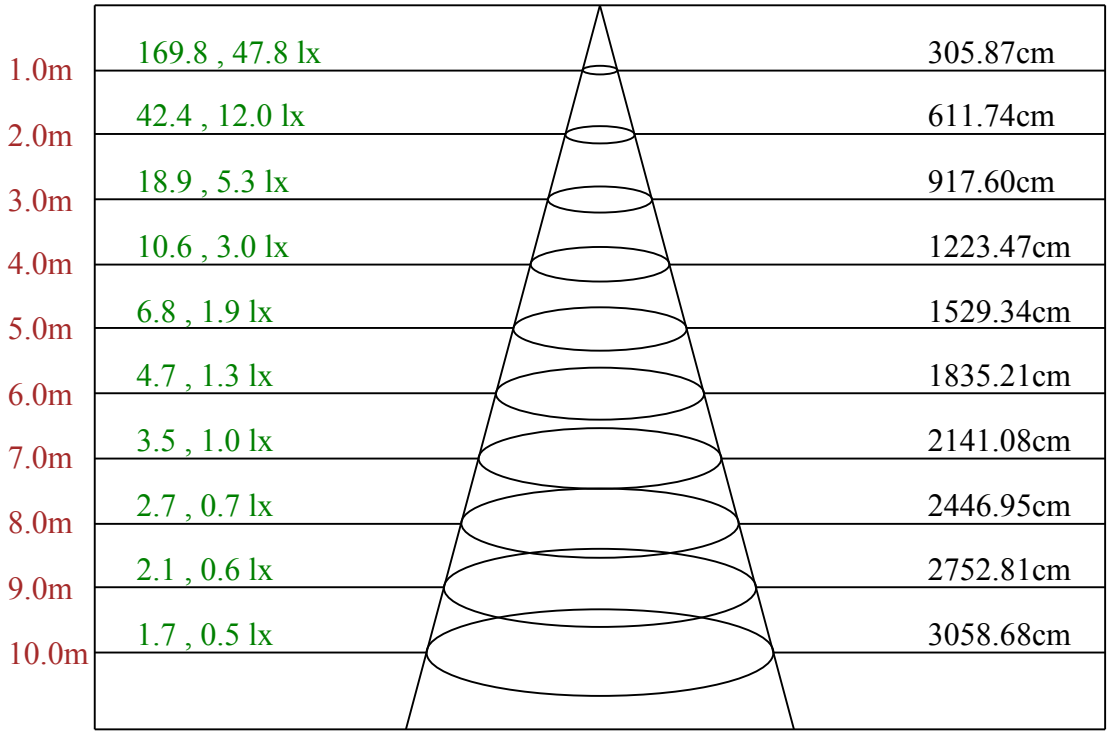


C0/C180:

C90/C270:

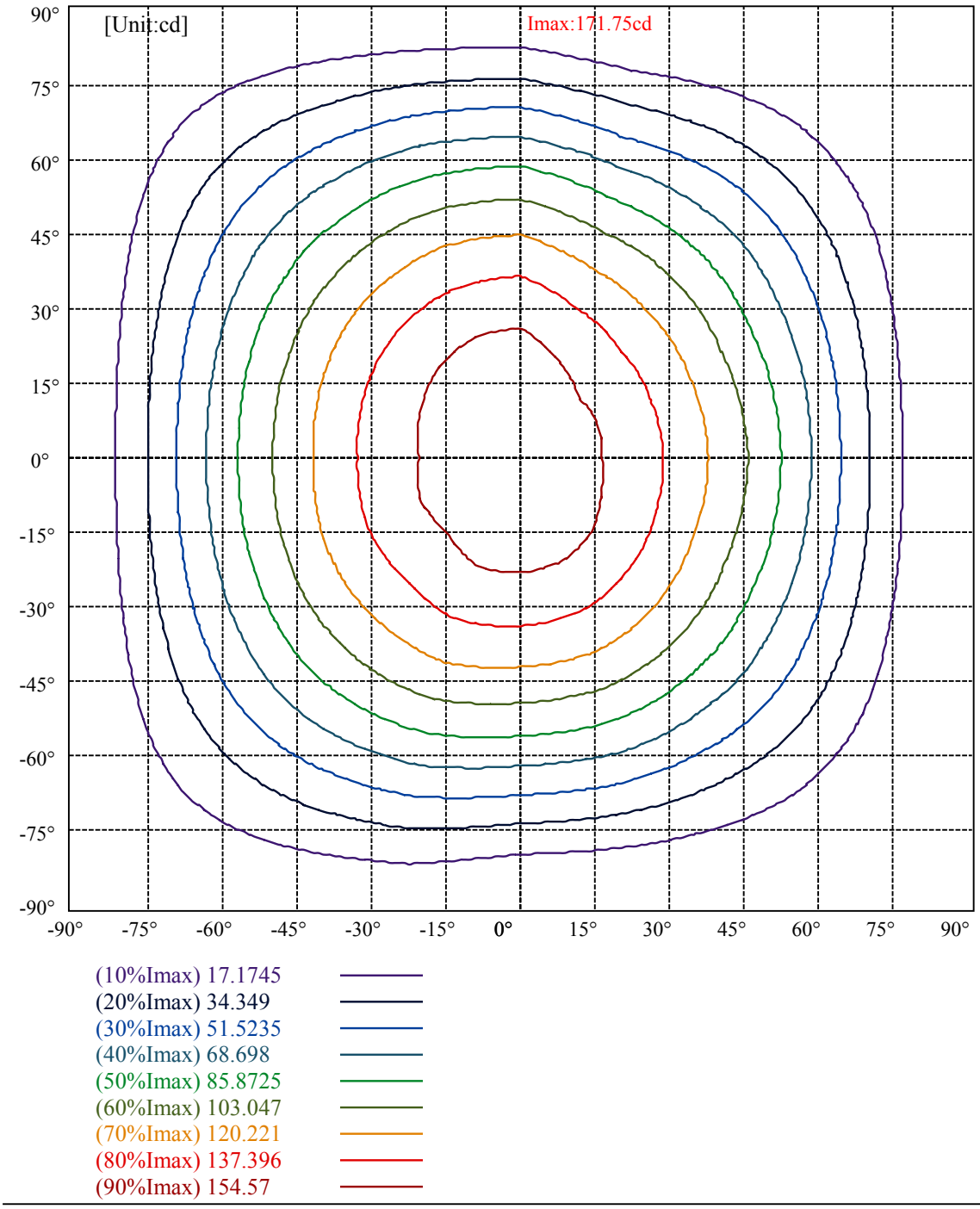
Field angle(10%Imax):C0/180Left:80.7 Right:76.2
:C90/270Left:78.9 Right:81.7

Beam Angle(50%Imax):C0/180Left:56.9 Right:52.6
:C90/270Left:55.4 Right:58.0

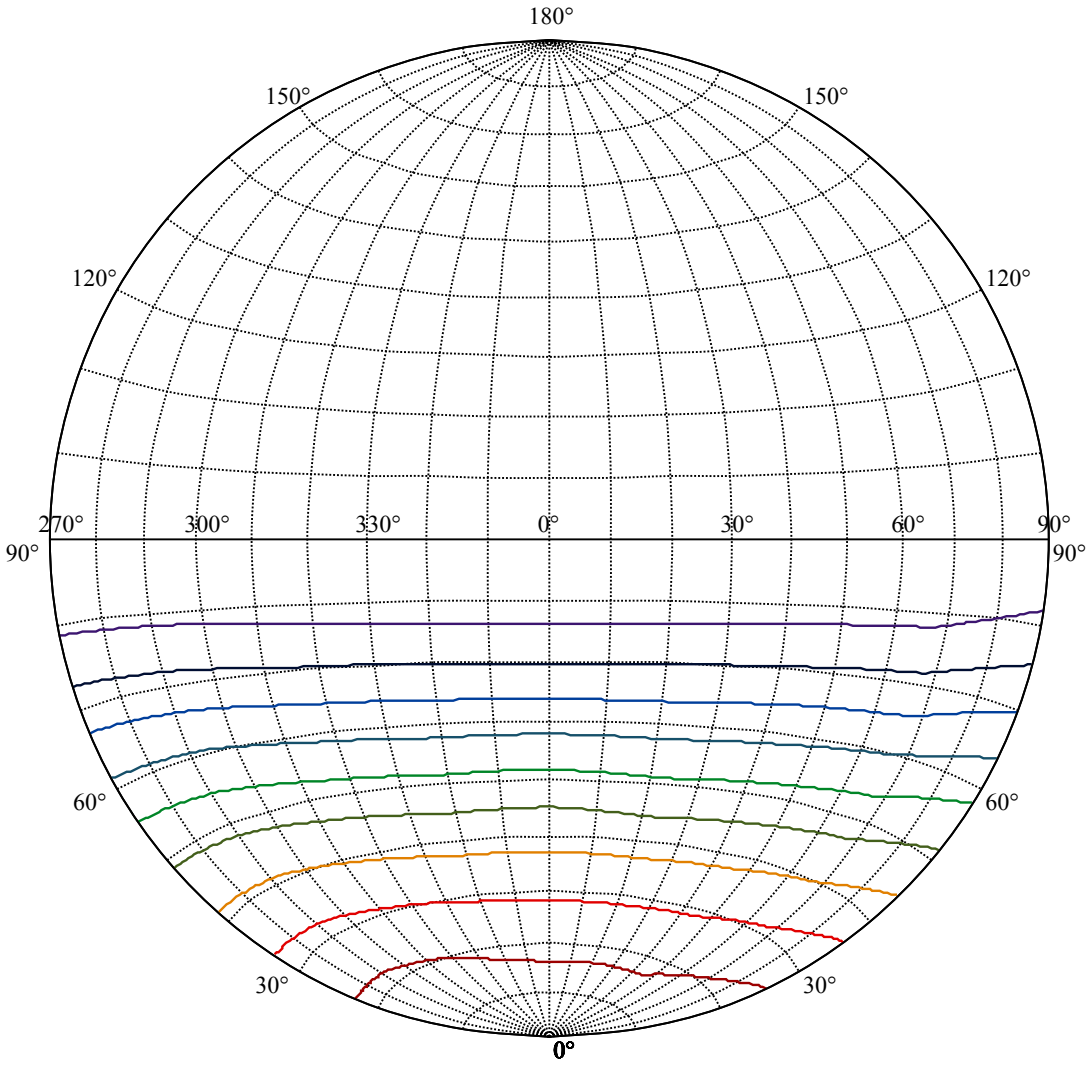


Max , Ave

Beam angle of C90 plane 113.64


[Unit:cd]
Imax:171.75cd
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) 17.1745
(20%Imax) 34.349
(30%Imax) 51.5235
(40%Imax) 68.698
(50%Imax) 85.8725
(60%Imax) 103.047
(70%Imax) 120.221
(80%Imax) 137.396
(90%Imax) 154.57

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:171.75

(10%Imax) 17.1745
(20%Imax) 34.349
(30%Imax) 51.5235
(40%Imax) 68.698
(50%Imax) 85.8725
(60%Imax) 103.047
(70%Imax) 120.221
(80%Imax) 137.396
(90%Imax) 154.57

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	167.92	163.50	160.36	155.85	150.15	142.50	134.84	125.03	114.82
22.5	167.92	164.88	161.54	156.63	150.55	143.09	134.26	124.25	113.65
45.0	167.92	163.50	160.95	156.44	150.55	143.87	135.24	126.01	115.22
67.5	167.92	167.62	165.07	160.95	155.26	148.19	140.14	130.72	119.93
90.0	167.92	171.75	169.98	166.64	161.93	155.65	148.19	139.56	129.55
112.5	167.92	171.35	169.39	166.25	161.34	155.26	147.80	138.77	128.96
135.0	167.92	169.59	167.62	164.29	159.38	152.90	145.84	136.61	126.99
157.5	167.92	166.64	164.68	161.34	156.63	150.55	143.28	134.45	124.64
180.0	167.92	164.88	162.91	159.77	154.87	148.58	141.52	132.88	122.87
202.5	167.92	166.05	164.68	161.34	156.44	150.35	142.89	133.86	124.05
225.0	167.92	164.48	162.91	159.77	155.26	149.17	141.91	133.67	124.64
247.5	167.92	168.61	166.45	163.11	158.59	152.12	144.86	136.22	126.40
270.0	167.92	170.96	168.61	164.09	158.40	151.53	143.87	134.45	123.85
292.5	167.92	170.57	167.43	163.50	157.61	150.55	142.30	132.88	122.48
315.0	167.92	168.41	165.46	160.75	154.87	147.21	138.57	128.76	118.16
337.5	167.92	165.07	162.32	157.42	151.53	144.27	135.43	125.42	114.43
360.0	167.92	163.50	160.36	155.85	150.15	142.50	134.84	125.03	114.82

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	103.83	91.07	77.14	62.61	47.70	32.98	19.43	8.44	1.57
22.5	101.28	88.52	75.18	62.22	47.89	33.76	20.02	9.03	1.96
45.0	104.23	91.66	78.32	64.38	50.64	36.12	22.18	10.40	2.75
67.5	108.35	95.79	82.63	68.50	53.00	39.26	24.54	12.17	3.53
90.0	118.75	106.58	94.21	80.28	65.36	50.84	35.53	21.20	9.23
112.5	118.36	106.38	93.63	79.89	65.36	50.44	35.33	21.00	9.23
135.0	115.61	103.44	90.29	77.14	62.81	48.09	33.17	20.41	8.83
157.5	113.65	101.87	89.50	75.96	62.03	47.30	33.37	19.82	8.44
180.0	112.27	101.48	88.92	75.96	61.24	46.91	31.80	18.25	8.24
202.5	113.65	101.67	89.11	75.57	62.03	47.30	32.78	19.43	8.44
225.0	113.84	102.46	89.90	76.94	62.42	47.89	33.76	20.22	8.83
247.5	115.81	103.64	90.88	77.53	63.20	48.48	34.35	20.81	8.83
270.0	112.67	99.91	86.95	72.43	57.90	42.79	27.68	14.13	4.51
292.5	110.70	98.14	84.79	70.66	55.74	40.04	25.71	12.76	3.93
315.0	106.38	93.43	79.49	65.36	50.84	35.92	22.18	10.60	2.55
337.5	102.65	89.90	76.35	62.42	48.68	34.15	20.41	9.03	1.77
360.0	103.83	91.07	77.14	62.61	47.70	32.98	19.43	8.44	1.57

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.59	0.59	0.39	0.39	0.59	0.39	0.79	0.59	0.59
22.5	0.39	0.59	0.59	0.59	0.59	0.59	0.39	0.79	0.79
45.0	0.59	0.39	0.59	0.59	0.59	0.59	0.79	0.59	0.59
67.5	0.39	0.39	0.59	0.39	0.59	0.39	0.59	0.59	0.59
90.0	1.77	0.59	0.20	0.39	0.39	0.39	0.39	0.39	0.59
112.5	2.16	0.59	0.39	0.20	0.20	0.39	0.39	0.20	0.59
135.0	1.77	0.39	0.20	0.20	0.00	0.20	0.20	0.20	0.39
157.5	1.37	0.39	0.20	0.00	0.20	0.39	0.39	0.39	0.20
180.0	1.18	0.20	0.20	0.20	0.00	0.00	0.20	0.20	0.20
202.5	1.57	0.20	0.39	0.00	0.39	0.20	0.39	0.59	0.39
225.0	1.57	0.20	0.20	0.20	0.00	0.20	0.39	0.20	0.39
247.5	2.36	0.39	0.20	0.00	0.20	0.20	0.39	0.20	0.39
270.0	1.18	0.98	0.79	0.98	0.98	0.98	0.98	0.79	0.98
292.5	0.79	0.59	0.59	0.59	0.59	0.39	0.79	0.79	0.59
315.0	0.39	0.59	0.39	0.39	0.59	0.79	0.79	0.59	0.59
337.5	0.59	0.59	0.39	0.59	0.39	0.39	0.59	0.59	0.39
360.0	0.59	0.59	0.39	0.39	0.59	0.39	0.79	0.59	0.59

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	0.59	0.79	0.59	0.79	0.79	0.59	0.79	0.79	0.79
22.5	0.59	0.39	0.79	0.79	0.59	0.59	0.59	0.59	0.79
45.0	0.39	0.59	0.79	0.59	0.59	0.79	0.79	0.79	0.79
67.5	0.79	0.59	0.98	0.79	0.59	0.59	0.59	0.59	0.79
90.0	0.59	0.79	0.79	0.79	0.79	0.98	0.79	0.79	0.79
112.5	0.59	0.39	0.39	0.79	0.59	0.79	0.79	0.79	0.59
135.0	0.39	0.59	0.59	0.39	0.59	0.39	0.59	0.59	0.59
157.5	0.39	0.39	0.59	0.59	0.59	0.79	0.59	0.59	0.59
180.0	0.39	0.59	0.39	0.39	0.59	0.79	0.59	0.59	0.59
202.5	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.79
225.0	0.20	0.39	0.59	0.39	0.59	0.59	0.79	0.59	0.59
247.5	0.20	0.59	0.39	0.39	0.59	0.59	0.59	0.79	0.59
270.0	1.37	0.98	0.98	1.18	1.18	1.37	1.18	0.98	1.18
292.5	0.79	0.79	0.79	0.79	0.79	0.59	0.79	0.79	0.79
315.0	0.59	0.79	0.98	0.59	0.59	0.59	0.79	0.59	0.59
337.5	0.79	0.79	0.79	0.59	0.79	0.59	0.79	0.79	0.79
360.0	0.59	0.79	0.59	0.79	0.79	0.59	0.79	0.79	0.79

C/γ(°)	180.0
0.0	0.74
22.5	0.74
45.0	0.74
67.5	0.74
90.0	0.74
112.5	0.74
135.0	0.74
157.5	0.74
180.0	0.74
202.5	0.74
225.0	0.74
247.5	0.74
270.0	0.74
292.5	0.74
315.0	0.74
337.5	0.74
360.0	0.74