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

Tel:0755-21038430
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): 0.1680
Lamp flux(lm): -1.0	Power (W): 19.94
Number of Lamps: 1	PF: 0.9912
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1221.24, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 61.25
Central intensity(cd): 433.094, Maximum intensity(cd): 449.960
Angle of maximum intensity: C=90.0 γ=5.0
Beam Angle(50%Imax): [C0/180]Total=108.8
[C90/270]Total=113.3
Field angle(10%Imax): [C0/180]Total=157.9
[C90/270]Total=160.7
Maximum s/h(1/2): C0_180=1.28 C90_270=1.32
Maximum s/h(1/4): C0_180=1.40 C90_270=1.43
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 0.00%
Up flux rate of LUM(%): 0.53%
Down flux rate of LUM(%): 99.47%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 79.007%

Zonal flux distribution table

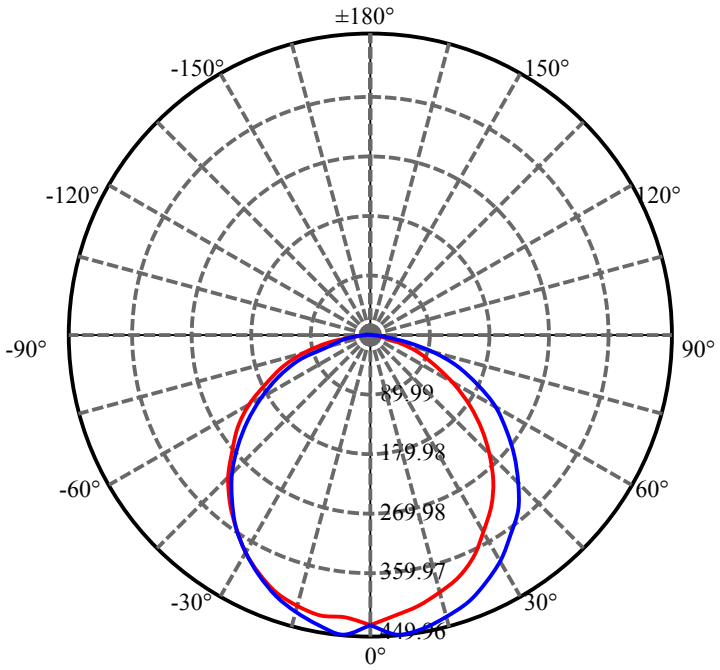
γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	433.094	0.000	0	0.00%	0.00%
5.0	431.600	10.337	10.337	0.00%	0.85%
10.0	426.009	30.679	41.017	0.00%	3.36%
15.0	415.881	49.940	90.957	0.00%	7.45%
20.0	402.388	67.437	158.394	0.00%	12.97%
25.0	385.079	82.591	240.985	0.00%	19.73%
30.0	364.198	94.822	335.806	0.00%	27.50%
35.0	340.382	103.754	439.561	0.00%	35.99%
40.0	313.996	109.178	548.739	0.00%	44.93%
45.0	284.748	110.862	659.601	0.00%	54.01%
50.0	253.213	108.703	768.304	0.00%	62.91%
55.0	220.038	102.901	871.205	0.00%	71.34%
60.0	185.188	93.667	964.871	0.00%	79.01%
65.0	149.065	81.258	1046.129	0.00%	85.66%
70.0	112.233	66.163	1112.292	0.00%	91.08%
75.0	76.429	49.313	1161.605	0.00%	95.12%
80.0	42.924	31.935	1193.54	0.00%	97.73%
85.0	16.220	16.071	1209.611	0.00%	99.05%
90.0	2.593	5.151	1214.763	0.00%	99.47%
95.0	1.052	0.998	1215.761	0.00%	99.55%
100.0	0.795	0.502	1216.263	0.00%	99.59%
105.0	0.746	0.412	1216.675	0.00%	99.63%
110.0	0.661	0.368	1217.043	0.00%	99.66%
115.0	0.685	0.341	1217.384	0.00%	99.68%
120.0	0.795	0.360	1217.743	0.00%	99.71%
125.0	0.869	0.385	1218.128	0.00%	99.74%
130.0	0.881	0.380	1218.508	0.00%	99.78%
135.0	1.040	0.388	1218.896	0.00%	99.81%
140.0	1.052	0.387	1219.284	0.00%	99.84%
145.0	1.162	0.369	1219.653	0.00%	99.87%
150.0	1.297	0.362	1220.015	0.00%	99.90%
155.0	1.419	0.344	1220.359	0.00%	99.93%
160.0	1.505	0.307	1220.665	0.00%	99.95%
165.0	1.541	0.251	1220.916	0.00%	99.97%
170.0	1.517	0.181	1221.098	0.00%	99.99%
175.0	1.529	0.109	1221.207	0.00%	100.00%
180.0	1.589	0.037	1221.244	0.00%	100.00%

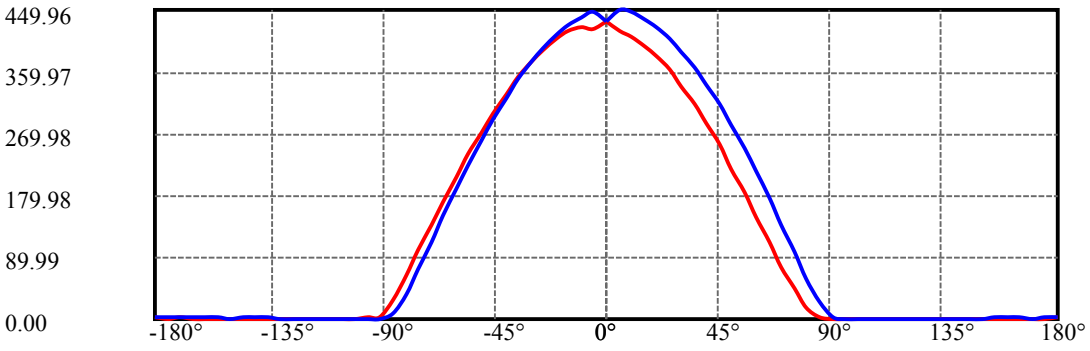
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	335.81	N.A.	27.50%
0-40	548.74	N.A.	44.93%
0-60	964.87	N.A.	79.01%
0-90	1214.76	N.A.	99.47%
0-120	1217.74	N.A.	99.71%
0-180	1221.24	N.A.	100.00%
60-90	249.89	N.A.	20.46%
90-120	2.98	N.A.	0.24%
90-130	3.75	N.A.	0.31%
90-150	5.25	N.A.	0.43%
90-180	6.44	N.A.	0.53%
0-60.75	977.00	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	41.02
10-20	117.38
20-30	177.41
30-40	212.93
40-50	219.57
50-60	196.57
60-70	147.42
70-80	81.25
80-90	21.22
90-100	1.50
100-110	0.78
110-120	0.70
120-130	0.76
130-140	0.78
140-150	0.73
150-160	0.65
160-170	0.43
170-180	0.11



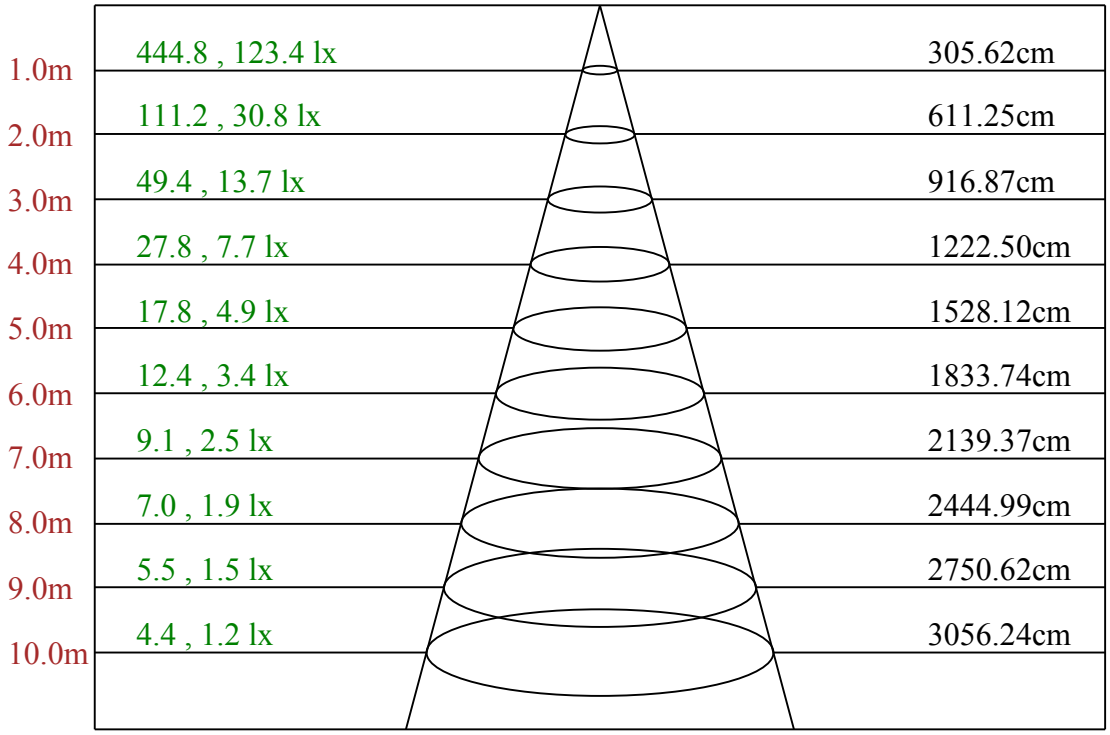


C0/C180:

C90/C270:

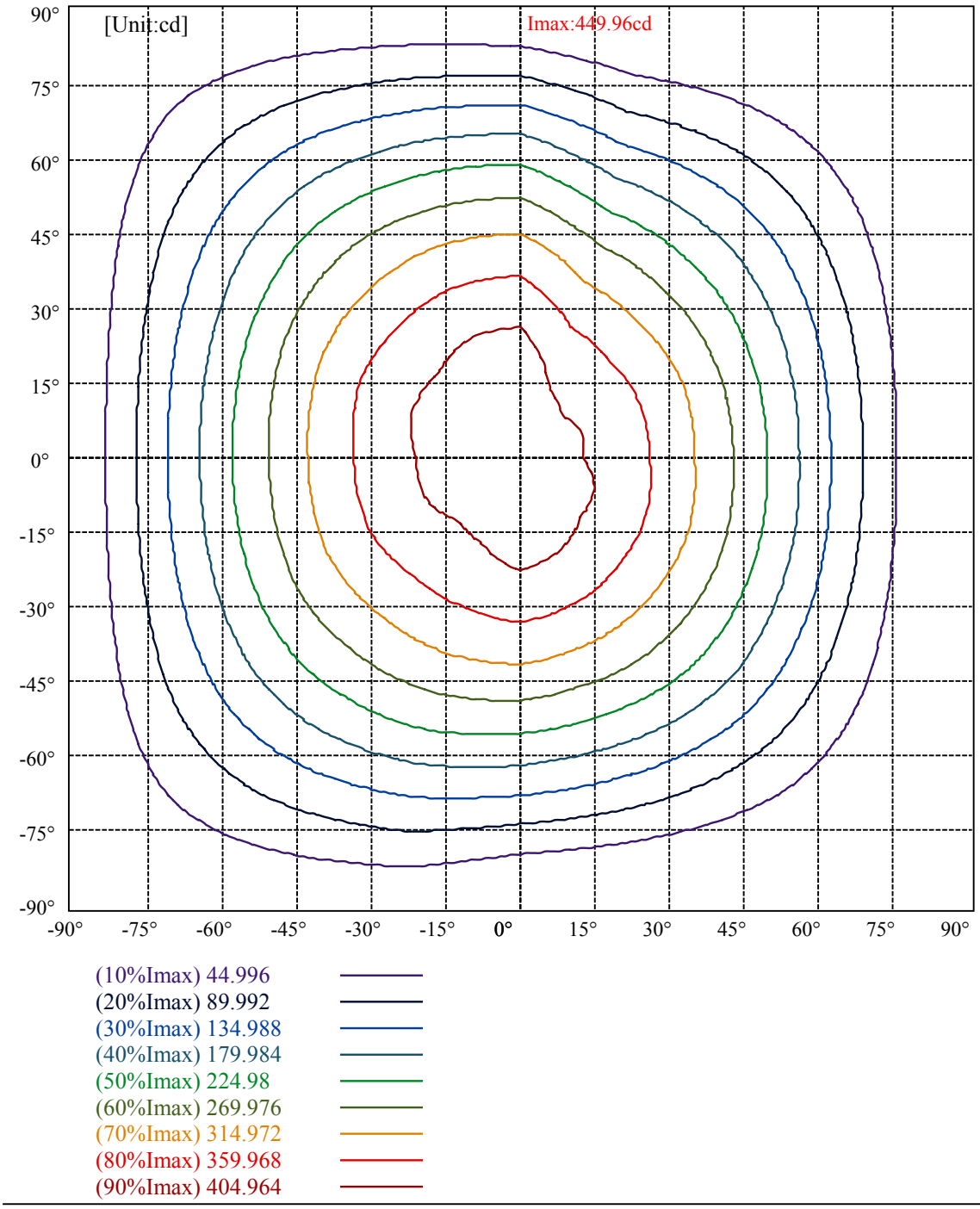
Field angle(10%Imax):C0/180Left:82.8 Right:75.1
:C90/270Left:78.8 Right:81.9

Beam Angle(50%Imax):C0/180Left:58.5 Right:50.3
:C90/270Left:54.9 Right:58.4

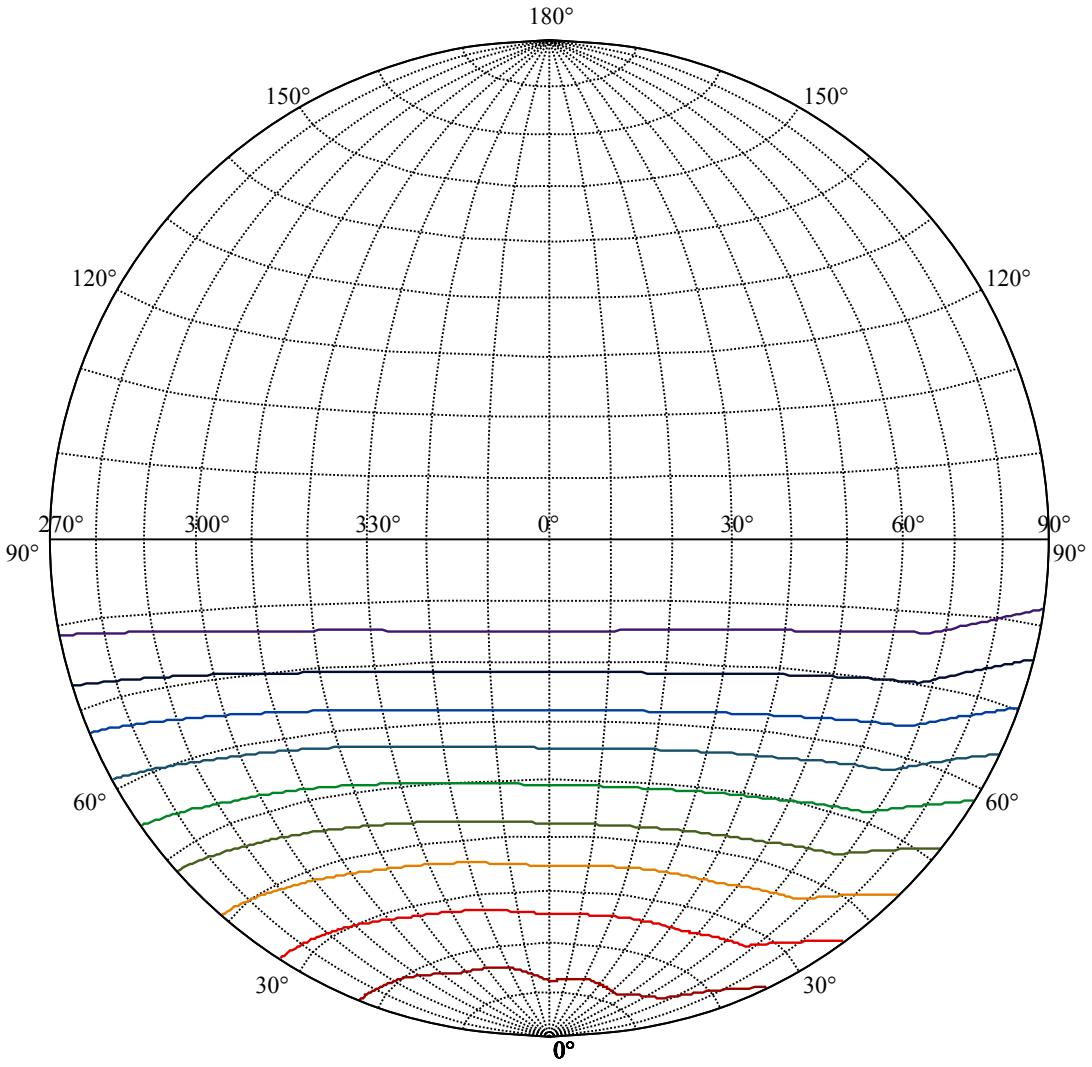


Max , Ave

Beam angle of C90 plane 113.60


[Unit:cd]
Imax:449.96cd
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) 44.996
(20%Imax) 89.992
(30%Imax) 134.988
(40%Imax) 179.984
(50%Imax) 224.98
(60%Imax) 269.976
(70%Imax) 314.972
(80%Imax) 359.968
(90%Imax) 404.964

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:449.96

(10%Imax) 44.996
(20%Imax) 89.992
(30%Imax) 134.988
(40%Imax) 179.984
(50%Imax) 224.98
(60%Imax) 269.976
(70%Imax) 314.972
(80%Imax) 359.968
(90%Imax) 404.964

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	433.09	419.04	411.21	397.90	383.22	362.87	338.99	312.76	285.16
22.5	433.09	422.95	413.75	400.44	384.39	364.63	340.75	315.89	285.75
45.0	433.09	417.28	409.25	397.31	382.83	363.84	340.75	314.72	287.51
67.5	433.09	423.93	416.49	404.95	389.68	371.48	349.36	324.70	296.71
90.0	433.09	449.96	445.85	436.85	424.13	408.47	388.50	365.61	341.14
112.5	433.09	446.83	443.11	434.89	423.73	407.88	388.50	365.61	339.77
135.0	433.09	436.06	433.32	425.89	414.54	400.05	381.85	360.13	337.23
157.5	433.09	437.24	433.91	426.47	415.12	400.25	381.46	359.73	334.09
180.0	433.09	422.95	424.71	417.86	407.29	392.62	374.22	351.32	327.44
202.5	433.09	428.43	425.10	417.86	406.32	392.22	373.63	351.32	326.46
225.0	433.09	421.97	418.45	410.82	399.27	384.39	365.61	343.68	319.61
247.5	433.09	427.45	422.76	413.95	402.21	385.37	366.39	345.45	320.98
270.0	433.09	447.61	439.78	428.04	413.75	395.16	373.43	348.19	321.37
292.5	433.09	442.52	433.72	421.58	405.53	385.76	363.65	337.81	309.04
315.0	433.09	431.37	423.34	411.01	394.77	375.39	353.08	327.64	299.26
337.5	433.09	430.00	421.39	408.27	391.44	370.89	347.01	321.57	292.41
360.0	433.09	419.04	411.21	397.90	383.22	362.87	338.99	312.76	285.16

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	253.07	218.62	183.19	147.18	111.95	76.72	44.04	17.62	2.35
22.5	252.87	219.01	185.35	149.92	114.50	78.48	47.36	19.77	2.94
45.0	256.39	223.32	189.26	155.60	120.76	85.33	51.28	23.49	4.50
67.5	267.16	234.08	199.44	163.62	128.98	92.18	58.72	27.79	7.83
90.0	312.57	281.45	248.17	213.92	175.76	136.61	97.86	58.33	23.88
112.5	312.76	281.64	248.96	214.51	177.52	138.77	101.97	63.41	29.36
135.0	308.85	280.86	248.57	213.53	176.93	139.94	101.38	64.20	31.12
157.5	306.69	277.73	244.45	210.01	174.39	137.79	100.60	64.98	28.97
180.0	299.65	269.90	239.95	206.88	171.26	136.22	100.40	63.81	26.81
202.5	299.84	270.09	239.17	205.70	170.67	135.24	98.06	61.26	25.84
225.0	294.17	264.61	234.28	202.18	168.12	131.52	95.12	59.50	27.21
247.5	293.78	263.83	233.10	200.42	164.01	128.39	93.75	58.33	26.62
270.0	290.84	258.94	224.10	188.67	152.08	112.54	72.61	36.60	9.00
292.5	278.51	245.04	210.60	173.60	137.00	99.03	61.46	26.81	6.85
315.0	268.53	236.82	201.59	163.82	125.26	87.68	51.67	21.92	3.52
337.5	260.31	225.47	190.44	153.45	115.87	79.27	46.58	18.99	2.74
360.0	253.07	218.62	183.19	147.18	111.95	76.72	44.04	17.62	2.35

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1.17	0.98	0.98	0.98	0.98	0.98	0.98	1.17	0.98
22.5	1.37	0.98	1.17	0.78	0.98	0.98	0.98	1.37	0.98
45.0	1.57	0.98	0.78	0.98	0.78	1.17	1.17	0.98	0.98
67.5	1.57	0.98	0.59	0.78	0.78	0.78	0.78	0.98	0.98
90.0	3.72	0.59	0.39	0.59	0.39	0.59	0.78	0.98	0.78
112.5	6.46	0.78	0.39	0.78	0.59	0.59	0.78	0.78	0.98
135.0	4.89	1.37	0.98	0.78	0.39	0.78	0.78	0.78	0.78
157.5	3.52	1.76	1.17	0.98	0.59	0.59	0.39	0.59	0.59
180.0	2.35	1.57	0.98	0.59	0.39	0.20	0.39	0.39	0.59
202.5	2.74	1.57	1.17	0.59	0.39	0.00	0.39	0.39	0.78
225.0	3.33	0.78	0.39	0.39	0.39	0.20	0.39	0.20	0.59
247.5	3.52	0.59	0.39	0.20	0.20	0.20	0.39	0.78	0.59
270.0	0.78	0.98	0.98	0.78	0.98	1.37	1.37	1.17	1.37
292.5	1.37	0.98	0.78	0.78	0.98	0.78	0.98	1.17	1.17
315.0	1.57	0.98	0.78	0.98	0.98	0.98	1.17	1.17	0.98
337.5	1.57	0.98	0.78	0.98	0.78	0.78	0.98	0.98	0.98
360.0	1.17	0.98	0.98	0.98	0.98	0.98	0.98	1.17	0.98

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	1.17	0.78	1.17	1.37	1.17	1.37	1.37	1.37	1.37
22.5	1.17	1.17	1.17	1.37	1.17	1.17	1.37	1.57	1.57
45.0	1.37	0.98	1.17	1.17	1.37	1.57	1.57	1.57	1.57
67.5	1.17	1.17	1.37	1.37	1.57	1.57	1.57	1.76	1.57
90.0	1.17	1.17	1.17	1.37	1.57	1.57	1.76	1.37	1.57
112.5	1.17	1.17	1.17	1.17	1.57	1.57	1.76	1.37	1.57
135.0	0.78	1.17	1.17	1.37	1.57	1.76	1.76	1.57	1.17
157.5	0.98	0.78	1.17	1.17	1.37	1.76	1.37	1.57	1.57
180.0	0.59	0.59	0.78	1.17	1.37	1.37	1.37	1.57	1.37
202.5	0.59	0.59	0.98	1.17	1.37	1.37	1.37	1.57	1.57
225.0	0.59	0.78	0.98	1.37	1.37	1.37	1.57	1.76	1.57
247.5	0.78	0.98	1.17	1.17	1.37	1.37	1.57	1.17	1.57
270.0	1.57	1.57	1.57	1.37	1.57	1.96	1.76	1.96	1.96
292.5	1.37	1.17	1.17	1.57	1.37	1.57	1.57	1.57	1.57
315.0	0.98	1.57	1.17	1.37	1.57	1.37	1.37	1.17	1.57
337.5	1.17	1.17	1.17	1.17	1.37	1.37	1.57	1.37	1.37
360.0	1.17	0.78	1.17	1.37	1.17	1.37	1.37	1.37	1.37

C/γ(°)	180.0
0.0	1.59
22.5	1.59
45.0	1.59
67.5	1.59
90.0	1.59
112.5	1.59
135.0	1.59
157.5	1.59
180.0	1.59
202.5	1.59
225.0	1.59
247.5	1.59
270.0	1.59
292.5	1.59
315.0	1.59
337.5	1.59
360.0	1.59