



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): 120.04

LampCAT:

Current(A): 0.1670

Lamp flux(lm): -1.0

Power (W): 19.92

Number of Lamps: 1

PF: 0.9914

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1248.04, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 62.65

Central intensity(cd): 448.568, Maximum intensity(cd): 462.657

Angle of maximum intensity: C=90.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=108.6

[C90/270]Total=112.5

Field angle(10%Imax): [C0/180]Total=155.9

[C90/270]Total=160.4

Maximum s/h(1/2): C0_180=1.33 C90_270=1.30

Maximum s/h(1/4): C0_180=1.45 C90_270=1.41

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 0.00%

Up flux rate of LUM(%): 0.48%

Down flux rate of LUM(%): 99.52%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 79.457%

Equipment: GMS-3000
Temperature(°C): 25

Date:
Humidity(%): 58%

Operator: Tester

Zonal flux distribution table

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$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	448.568	0.000	0	0.00%	0.00%
5.0	446.676	10.702	10.702	0.00%	0.86%
10.0	440.286	31.729	42.432	0.00%	3.40%
15.0	429.641	51.603	94.035	0.00%	7.53%
20.0	415.218	69.628	163.663	0.00%	13.11%
25.0	396.834	85.169	248.833	0.00%	19.94%
30.0	375.418	97.729	346.562	0.00%	27.77%
35.0	350.518	106.899	453.461	0.00%	36.33%
40.0	323.077	112.384	565.845	0.00%	45.34%
45.0	292.475	113.974	679.82	0.00%	54.47%
50.0	259.444	111.523	791.343	0.00%	63.41%
55.0	224.279	105.178	896.521	0.00%	71.83%
60.0	187.302	95.136	991.656	0.00%	79.46%
65.0	149.383	81.849	1073.505	0.00%	86.01%
70.0	110.693	65.853	1139.358	0.00%	91.29%
75.0	73.870	48.242	1187.6	0.00%	95.16%
80.0	41.766	30.941	1218.541	0.00%	97.64%
85.0	19.605	16.676	1235.217	0.00%	98.97%
90.0	5.575	6.895	1242.112	0.00%	99.52%
95.0	0.716	1.723	1243.834	0.00%	99.66%
100.0	0.520	0.336	1244.17	0.00%	99.69%
105.0	0.505	0.274	1244.444	0.00%	99.71%
110.0	0.576	0.283	1244.727	0.00%	99.73%
115.0	0.548	0.285	1245.011	0.00%	99.76%
120.0	0.548	0.266	1245.278	0.00%	99.78%
125.0	0.716	0.292	1245.57	0.00%	99.80%
130.0	0.787	0.327	1245.897	0.00%	99.83%
135.0	0.857	0.332	1246.229	0.00%	99.85%
140.0	0.885	0.322	1246.551	0.00%	99.88%
145.0	0.983	0.312	1246.863	0.00%	99.91%
150.0	0.983	0.290	1247.152	0.00%	99.93%
155.0	1.011	0.252	1247.405	0.00%	99.95%
160.0	1.124	0.224	1247.629	0.00%	99.97%
165.0	1.068	0.181	1247.809	0.00%	99.98%
170.0	1.124	0.130	1247.939	0.00%	99.99%
175.0	1.054	0.078	1248.017	0.00%	100.00%
180.0	1.230	0.027	1248.045	0.00%	100.00%

Equipment: GMS-3000
Temperature($^{\circ}\text{C}$): 25

Date:
Humidity(%): 58%

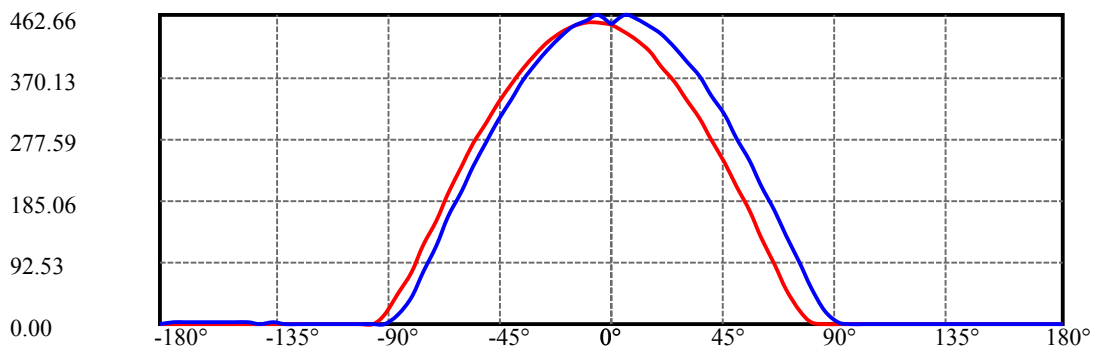
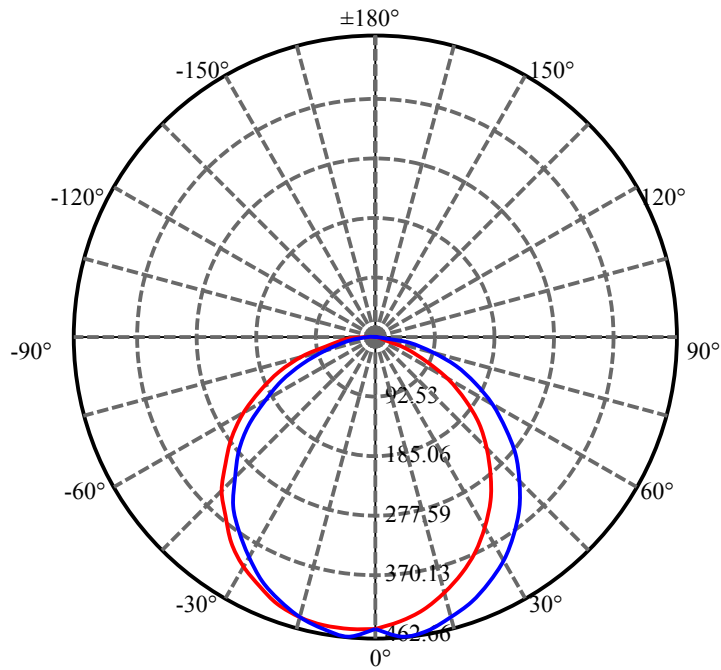
Operator: Tester

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	346.56	N.A.	27.77%
0-40	565.85	N.A.	45.34%
0-60	991.66	N.A.	79.46%
0-90	1242.11	N.A.	99.52%
0-120	1245.28	N.A.	99.78%
0-180	1248.04	N.A.	100.00%
60-90	250.46	N.A.	20.07%
90-120	3.17	N.A.	0.25%
90-130	3.78	N.A.	0.30%
90-150	5.04	N.A.	0.40%
90-180	5.91	N.A.	0.47%
0-60.41	998.44	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	42.43
10-20	121.23
20-30	182.90
30-40	219.28
40-50	225.50
50-60	200.31
60-70	147.70
70-80	79.18
80-90	23.57
90-100	2.06
100-110	0.56
110-120	0.55
120-130	0.62
130-140	0.65
140-150	0.60
150-160	0.48
160-170	0.31
170-180	0.08

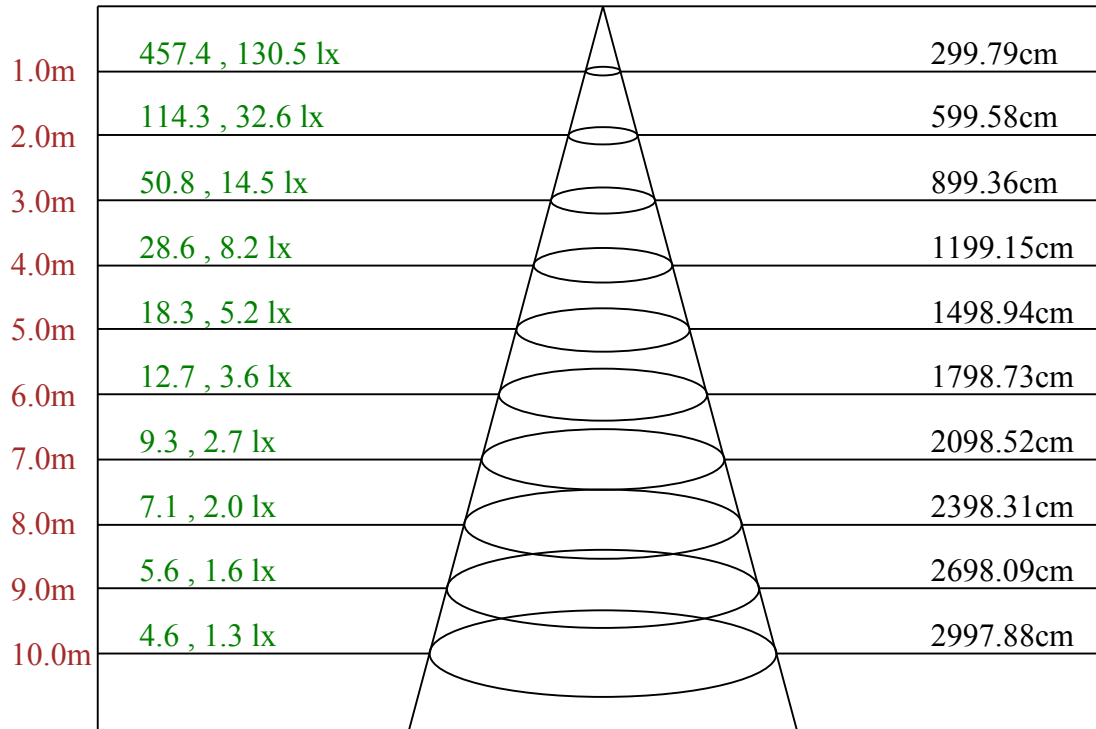


C0/C180: —

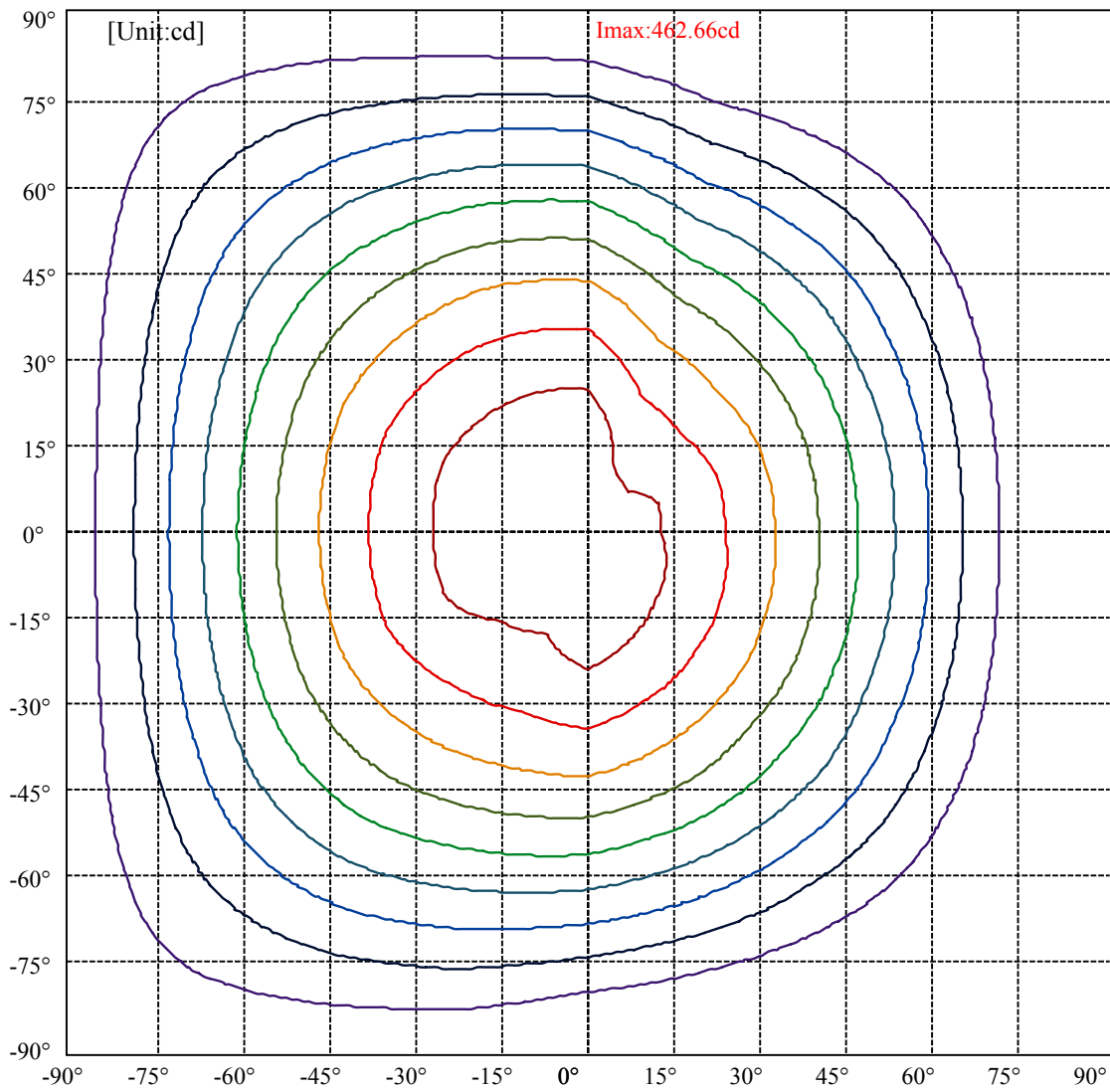
C90/C270: —

Field angle(10%Imax):C0/180Left:85.0 Right:70.9
 :C90/270Left:79.3 Right:81.1

Beam Angle(50%Imax):C0/180Left:61.2 Right:47.4
 :C90/270Left:55.6 Right:56.9



Max , Ave Beam angle of C90 plane 112.58

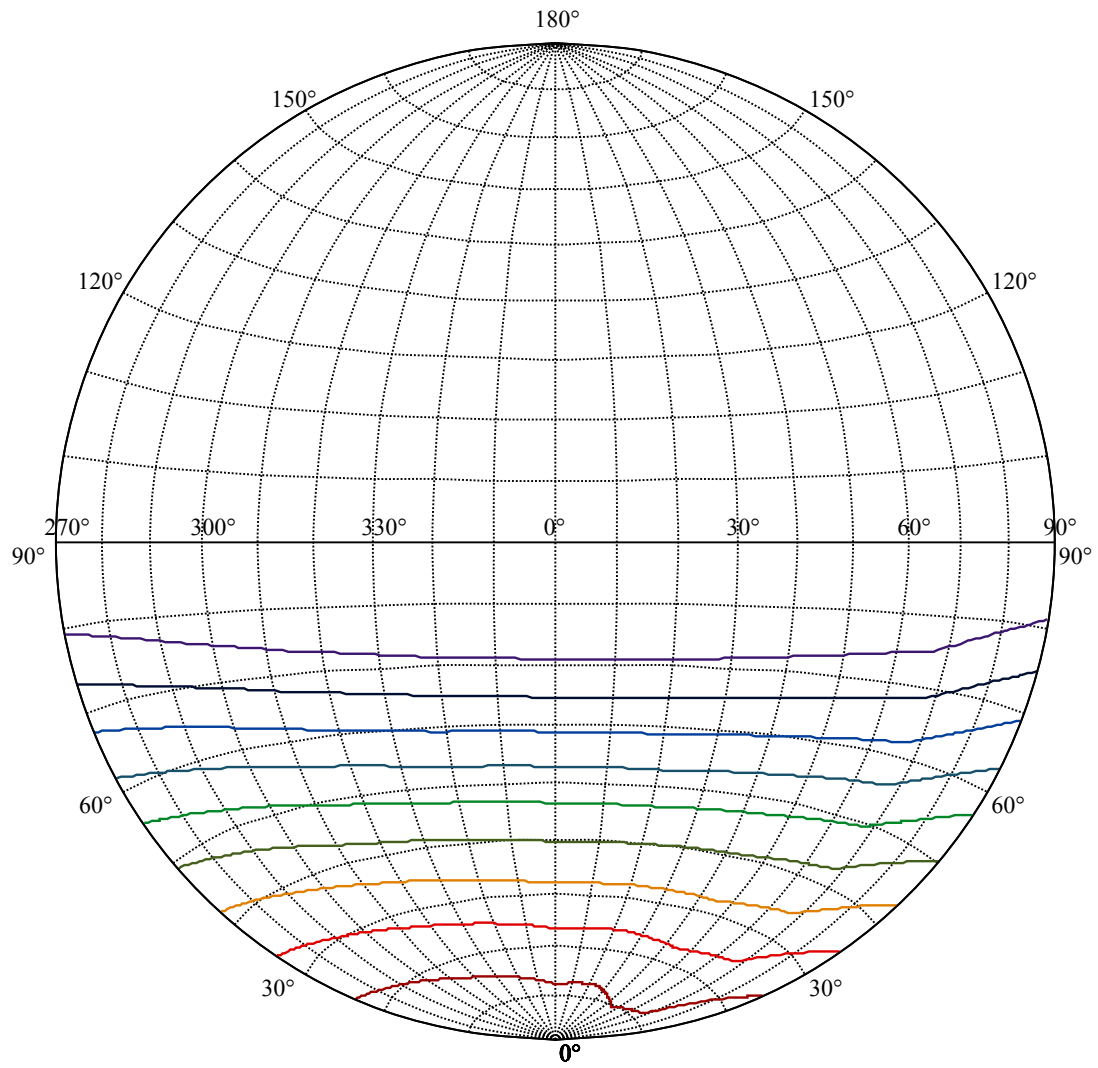


(10%Imax) 46.2657	—
(20%Imax) 92.5314	—
(30%Imax) 138.797	—
(40%Imax) 185.063	—
(50%Imax) 231.329	—
(60%Imax) 277.594	—
(70%Imax) 323.86	—
(80%Imax) 370.126	—
(90%Imax) 416.391	—

Equipment: GMS-3000
Temperature(°C): 25

Date:
Humidity(%): 58%

Operator: Tester



House

[Unit:cd]

Road

Imax:462.66

(10%Imax) 46.2657	—
(20%Imax) 92.5314	—
(30%Imax) 138.797	—
(40%Imax) 185.063	—
(50%Imax) 231.329	—
(60%Imax) 277.594	—
(70%Imax) 323.86	—
(80%Imax) 370.126	—
(90%Imax) 416.391	—

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	448.57	437.49	424.68	407.16	386.48	363.34	336.38	306.72	275.48
22.5	448.57	439.74	426.48	409.85	389.86	365.36	339.07	308.96	277.51
45.0	448.57	426.71	415.70	401.09	382.66	361.09	336.60	309.64	281.10
67.5	448.57	428.95	420.19	406.48	389.86	369.63	347.61	322.00	293.68
90.0	448.57	462.66	456.59	446.48	432.77	414.57	393.45	369.41	343.12
112.5	448.57	460.41	456.37	448.05	435.92	418.39	398.17	375.70	349.63
135.0	448.57	455.02	453.45	446.25	436.14	421.31	403.34	380.87	354.58
157.5	448.57	454.57	453.89	448.50	438.84	425.36	407.83	386.04	361.77
180.0	448.57	450.52	450.07	445.13	435.69	421.76	404.91	383.34	359.07
202.5	448.57	451.87	451.42	446.03	436.82	423.11	406.03	384.46	359.75
225.0	448.57	436.59	435.24	429.40	419.96	406.48	389.41	369.18	346.26
247.5	448.57	435.47	432.10	425.36	413.90	399.74	381.99	361.09	337.05
270.0	448.57	461.76	455.24	444.23	429.85	411.43	389.41	364.46	337.05
292.5	448.57	455.02	446.03	433.22	415.70	394.57	371.43	344.92	315.25
315.0	448.57	446.93	435.92	421.99	403.34	381.54	356.15	327.61	294.81
337.5	448.57	443.11	431.20	415.02	395.70	371.65	344.92	313.91	283.12
360.0	448.57	437.49	424.68	407.16	386.48	363.34	336.38	306.72	275.48
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	242.00	206.50	168.75	128.53	88.08	51.01	18.88	1.80	0.67
22.5	242.90	206.05	168.75	129.43	90.78	53.25	21.35	2.92	0.90
45.0	249.19	214.59	178.64	140.44	102.24	64.49	31.01	6.97	1.57
67.5	262.45	228.07	192.12	155.49	118.42	82.24	47.19	17.08	2.47
90.0	312.78	279.75	245.37	208.07	169.87	130.78	91.90	53.25	20.90
112.5	321.55	289.64	254.59	218.63	180.66	142.24	101.79	63.14	28.76
135.0	325.82	294.13	260.20	225.60	189.42	149.88	109.65	71.01	37.75
157.5	333.01	301.32	267.84	233.01	194.59	154.82	117.52	78.20	42.02
180.0	331.66	301.55	269.87	234.36	196.39	156.17	117.29	78.42	45.17
202.5	331.66	301.32	268.52	233.01	196.84	157.07	117.07	78.65	43.59
225.0	320.20	291.66	259.53	226.50	189.65	151.45	112.35	74.38	38.42
247.5	309.19	279.30	245.82	210.10	175.04	138.42	103.14	66.51	32.36
270.0	305.82	271.89	235.71	197.96	159.99	119.09	78.65	41.12	13.03
292.5	283.35	248.52	211.67	172.79	134.60	93.70	55.05	22.47	3.15
315.0	259.53	225.37	188.97	149.43	108.98	69.88	35.73	9.21	1.57
337.5	248.52	211.44	172.12	133.47	94.60	56.62	23.37	3.15	1.35
360.0	242.00	206.50	168.75	128.53	88.08	51.01	18.88	1.80	0.67
C/ γ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.45	0.45	0.67	0.45	0.90	0.90	0.45	0.90	0.67
22.5	0.67	0.45	0.23	0.45	0.90	0.67	0.90	0.67	1.12
45.0	0.90	0.67	0.45	0.45	0.90	0.67	0.67	0.90	0.90
67.5	0.67	0.45	0.45	0.67	0.90	0.67	0.67	0.90	0.90
90.0	2.25	0.45	0.23	0.23	0.23	0.23	0.45	0.67	0.67
112.5	6.29	0.90	0.45	0.23	0.23	0.45	0.23	0.67	0.67
135.0	10.34	0.67	0.23	0.23	0.45	0.23	0.23	0.67	0.23
157.5	13.48	0.90	0.45	0.67	0.67	0.23	0.45	0.67	0.67
180.0	15.73	0.45	0.90	0.67	0.45	0.45	0.45	0.45	0.67
202.5	14.83	1.35	0.67	0.45	0.23	0.45	0.45	0.45	0.67
225.0	11.91	1.12	0.67	0.67	0.23	0.23	0.23	0.23	0.67
247.5	7.87	1.35	0.67	0.45	0.23	0.23	0.23	0.45	0.45
270.0	0.90	0.67	0.90	0.90	1.12	1.12	1.12	1.35	1.35
292.5	0.90	0.23	0.45	0.45	0.67	0.67	0.67	0.90	1.12
315.0	1.12	0.67	0.45	0.67	0.67	0.90	0.90	0.90	0.90
337.5	0.90	0.67	0.45	0.45	0.45	0.67	0.67	0.67	0.90
360.0	0.45	0.45	0.67	0.45	0.90	0.90	0.45	0.90	0.67

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	0.90	0.90	1.12	1.12	1.12	1.12	1.12	1.12	1.12
22.5	0.90	1.12	1.12	1.12	1.12	1.35	1.12	1.12	1.12
45.0	1.12	1.12	1.12	1.12	1.12	0.90	1.12	1.12	1.12
67.5	0.90	1.35	1.12	1.12	1.35	1.35	0.90	1.12	0.90
90.0	0.90	0.67	0.90	0.90	0.90	1.35	1.12	1.12	0.90
112.5	0.67	0.90	0.67	0.90	0.90	0.90	0.90	0.90	1.12
135.0	0.45	0.67	0.67	0.90	0.67	0.90	0.90	0.90	0.67
157.5	0.67	0.67	0.67	0.67	1.12	1.12	1.12	0.90	0.90
180.0	0.67	0.67	0.67	0.67	0.67	1.12	0.90	1.12	1.12
202.5	0.45	0.67	0.67	0.67	0.90	0.90	1.12	1.12	0.90
225.0	0.45	0.45	0.90	0.67	0.90	0.90	1.12	0.90	1.12
247.5	0.45	0.45	0.90	0.90	0.67	0.90	0.90	1.12	1.12
270.0	1.57	1.35	1.57	1.57	1.57	1.80	1.80	1.80	1.57
292.5	1.35	1.12	1.35	1.12	1.12	1.12	0.90	1.12	1.35
315.0	1.12	0.90	1.12	1.12	0.90	1.12	1.12	1.35	0.90
337.5	1.12	1.12	1.12	1.12	1.12	1.12	0.90	1.12	0.90
360.0	0.90	0.90	1.12	1.12	1.12	1.12	1.12	1.12	1.12

C/γ(°)	180.0
0.0	1.23
22.5	1.23
45.0	1.23
67.5	1.23
90.0	1.23
112.5	1.23
135.0	1.23
157.5	1.23
180.0	1.23
202.5	1.23
225.0	1.23
247.5	1.23
270.0	1.23
292.5	1.23
315.0	1.23
337.5	1.23
360.0	1.23