



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): 120.05

LampCAT:

Current(A): 0.1670

Lamp flux(lm): -1.0

Power (W): 19.91

Number of Lamps: 1

PF: 0.9913

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1306.93, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 65.64

Central intensity(cd): 463.230, Maximum intensity(cd): 473.155

Angle of maximum intensity: C=112.5 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=109.2

[C90/270]Total=113.2

Field angle(10%Imax): [C0/180]Total=158.0

[C90/270]Total=160.9

Maximum s/h(1/2): C0_180=1.29 C90_270=1.30

Maximum s/h(1/4): C0_180=1.40 C90_270=1.41

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 0.00%

Up flux rate of LUM(%): 0.56%

Down flux rate of LUM(%): 99.44%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 78.984%

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	463.230	0.000	0	0.00%	0.00%
5.0	461.816	11.059	11.059	0.00%	0.85%
10.0	455.809	32.826	43.885	0.00%	3.36%
15.0	445.078	53.440	97.325	0.00%	7.45%
20.0	430.656	72.173	169.498	0.00%	12.97%
25.0	411.960	88.375	257.873	0.00%	19.73%
30.0	389.877	101.473	359.346	0.00%	27.50%
35.0	364.009	111.015	470.361	0.00%	35.99%
40.0	335.879	116.771	587.132	0.00%	44.92%
45.0	304.521	118.575	705.707	0.00%	54.00%
50.0	270.807	116.253	821.96	0.00%	62.89%
55.0	235.532	110.095	932.055	0.00%	71.32%
60.0	197.995	100.209	1032.264	0.00%	78.98%
65.0	159.518	86.912	1119.176	0.00%	85.63%
70.0	120.194	70.825	1190.001	0.00%	91.05%
75.0	81.810	52.801	1242.801	0.00%	95.09%
80.0	45.979	34.193	1276.994	0.00%	97.71%
85.0	17.307	17.196	1294.191	0.00%	99.02%
90.0	2.726	5.485	1299.676	0.00%	99.44%
95.0	1.178	1.069	1300.744	0.00%	99.53%
100.0	0.993	0.590	1301.334	0.00%	99.57%
105.0	0.860	0.496	1301.83	0.00%	99.61%
110.0	0.781	0.429	1302.259	0.00%	99.64%
115.0	0.834	0.409	1302.668	0.00%	99.67%
120.0	0.887	0.418	1303.086	0.00%	99.71%
125.0	0.887	0.410	1303.496	0.00%	99.74%
130.0	0.993	0.409	1303.904	0.00%	99.77%
135.0	1.138	0.430	1304.335	0.00%	99.80%
140.0	1.257	0.443	1304.778	0.00%	99.84%
145.0	1.297	0.426	1305.204	0.00%	99.87%
150.0	1.469	0.407	1305.612	0.00%	99.90%
155.0	1.482	0.373	1305.985	0.00%	99.93%
160.0	1.614	0.325	1306.31	0.00%	99.95%
165.0	1.601	0.265	1306.575	0.00%	99.97%
170.0	1.681	0.195	1306.769	0.00%	99.99%
175.0	1.747	0.123	1306.892	0.00%	100.00%
180.0	1.706	0.041	1306.933	0.00%	100.00%

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

Date:
Humidity(%): 58%

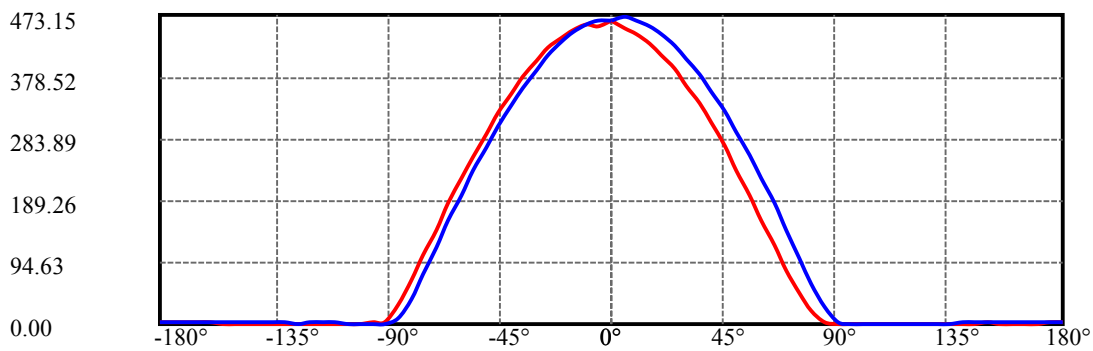
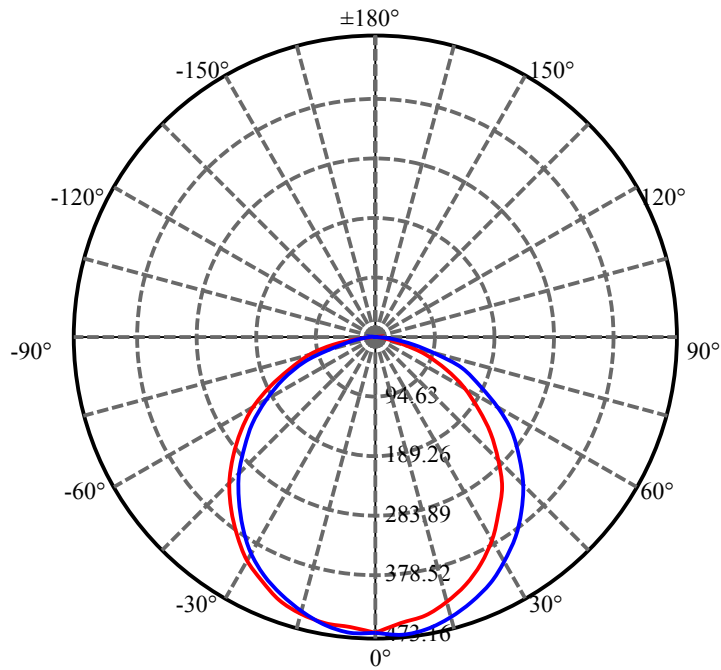
Operator: Tester

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	359.35	N.A.	27.50%
0-40	587.13	N.A.	44.92%
0-60	1032.26	N.A.	78.98%
0-90	1299.68	N.A.	99.44%
0-120	1303.09	N.A.	99.71%
0-180	1306.93	N.A.	100.00%
60-90	267.41	N.A.	20.46%
90-120	3.41	N.A.	0.26%
90-130	4.23	N.A.	0.32%
90-150	5.94	N.A.	0.45%
90-180	7.22	N.A.	0.55%
0-60.76	1045.55	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	43.88
10-20	125.61
20-30	189.85
30-40	227.79
40-50	234.83
50-60	210.30
60-70	157.74
70-80	86.99
80-90	22.68
90-100	1.66
100-110	0.92
110-120	0.83
120-130	0.82
130-140	0.87
140-150	0.83
150-160	0.70
160-170	0.46
170-180	0.12

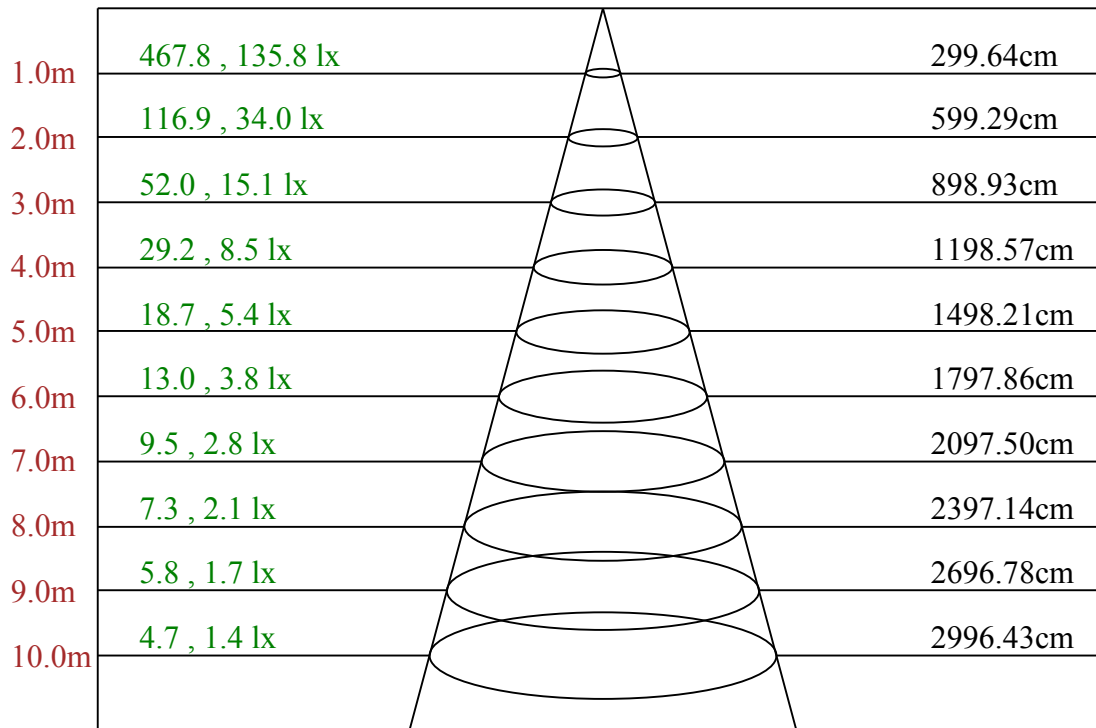


C0/C180: —

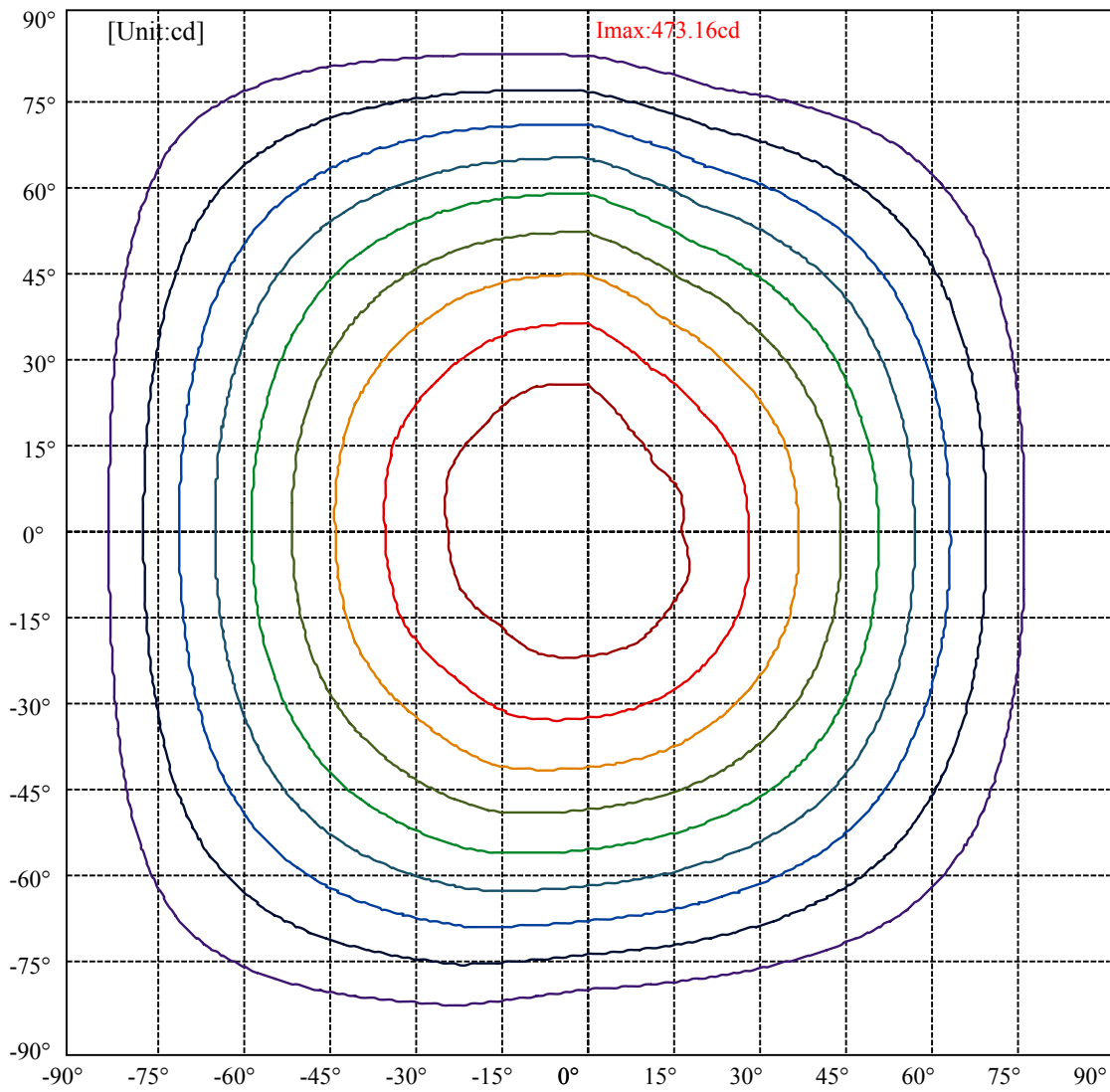
C90/C270: —

Field angle(10%Imax):C0/180Left:82.7 Right:75.3
:C90/270Left:78.9 Right:82.0

Beam Angle(50%Imax):C0/180Left:58.6 Right:50.6
:C90/270Left:54.9 Right:58.3



Max , Ave Beam angle of C112.5 plane 112.56

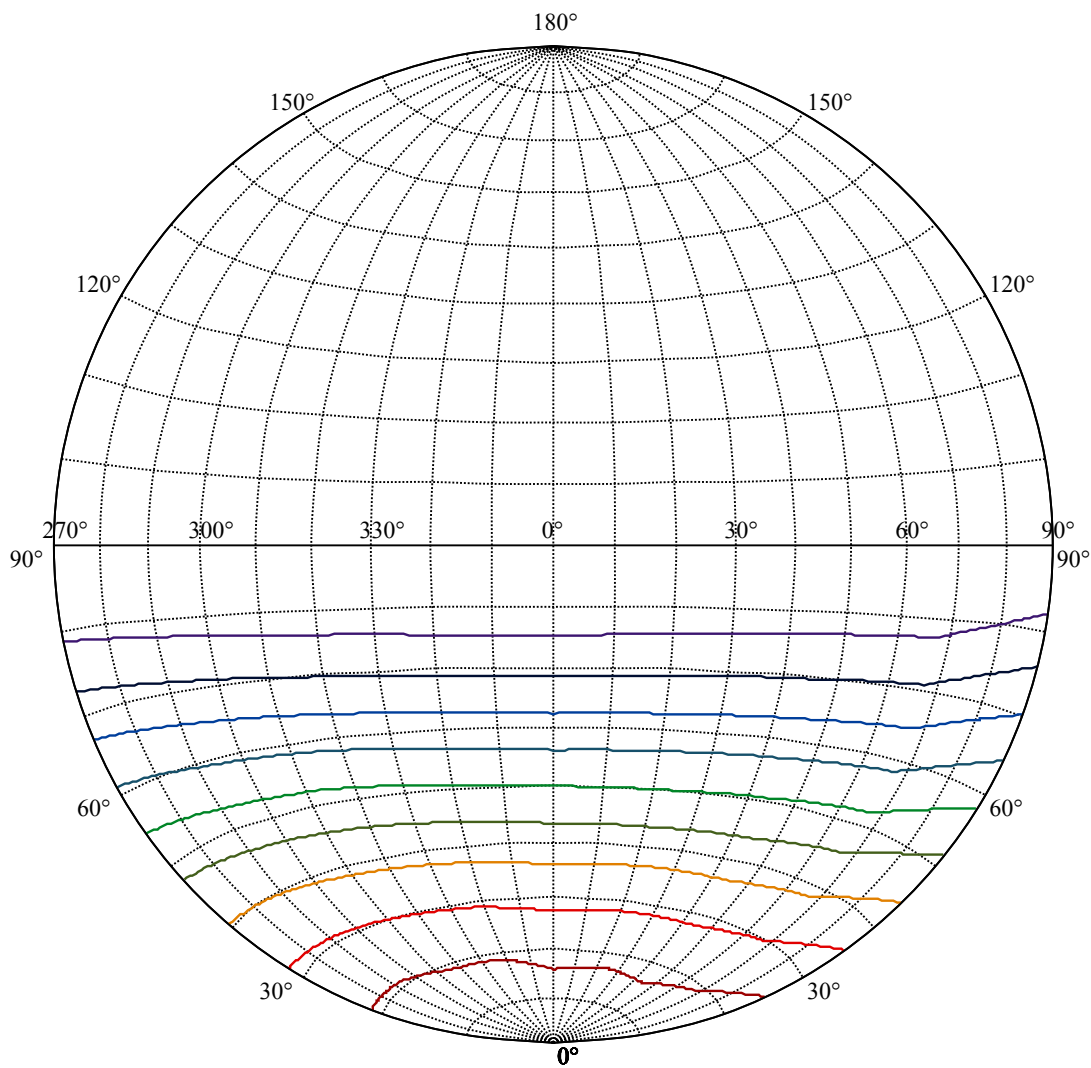


(10%I _{max}) 47.2712	—
(20%I _{max}) 94.5424	—
(30%I _{max}) 141.814	—
(40%I _{max}) 189.085	—
(50%I _{max}) 236.356	—
(60%I _{max}) 283.627	—
(70%I _{max}) 330.899	—
(80%I _{max}) 378.17	—
(90%I _{max}) 425.441	—

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

Date:
Humidity(%): 58%

Operator: Tester



House

[Unit:cd]

Road

I_{max}:473.16

(10%I _{max}) 47.308	—
(20%I _{max}) 94.616	—
(30%I _{max}) 141.924	—
(40%I _{max}) 189.232	—
(50%I _{max}) 236.54	—
(60%I _{max}) 283.848	—
(70%I _{max}) 331.156	—
(80%I _{max}) 378.464	—
(90%I _{max}) 425.772	—

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	463.23	451.35	443.09	429.12	412.19	391.02	365.40	337.67	307.82
22.5	463.23	456.64	447.12	433.14	416.00	393.13	370.06	341.69	309.30
45.0	463.23	451.35	443.09	428.91	413.88	393.34	368.79	340.42	310.57
67.5	463.23	458.97	450.72	438.65	421.71	401.18	378.31	351.21	320.94
90.0	463.23	469.77	464.90	455.37	442.67	426.16	405.83	381.91	356.08
112.5	463.23	473.16	468.71	460.03	448.39	432.09	410.92	386.57	360.11
135.0	463.23	466.17	461.94	454.95	443.09	426.58	407.95	384.45	358.20
157.5	463.23	469.13	466.38	457.70	445.42	429.33	409.64	385.72	358.20
180.0	463.23	455.58	457.49	450.08	438.22	422.56	403.51	377.68	352.27
202.5	463.23	461.94	458.34	450.29	438.44	422.56	401.81	378.52	352.49
225.0	463.23	456.43	452.20	443.94	431.66	415.57	395.04	370.69	344.65
247.5	463.23	461.72	456.85	447.75	435.05	417.05	396.10	373.23	346.77
270.0	463.23	465.75	458.12	446.27	430.82	411.76	389.11	362.65	334.28
292.5	463.23	467.65	458.76	446.27	429.33	409.01	384.24	356.30	327.93
315.0	463.23	460.45	451.99	439.07	422.35	401.39	377.89	350.58	320.09
337.5	463.23	462.99	453.26	439.71	421.29	398.64	373.44	344.86	314.38
360.0	463.23	451.35	443.09	429.12	412.19	391.02	365.40	337.67	307.82
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	273.31	236.26	198.15	159.62	121.73	83.62	48.27	19.48	2.54
22.5	273.52	236.68	200.91	162.59	124.90	87.86	52.08	21.38	3.18
45.0	277.12	241.76	205.78	168.73	130.83	92.51	56.95	25.83	5.08
67.5	289.19	252.98	215.51	176.98	139.72	101.19	63.72	30.06	8.68
90.0	326.45	294.06	259.55	222.29	183.97	142.90	101.19	61.18	26.46
112.5	330.68	298.29	264.42	227.16	187.99	147.13	107.97	67.11	30.70
135.0	329.83	299.56	265.26	227.58	187.99	148.40	107.97	67.96	32.81
157.5	329.41	296.81	261.88	224.83	186.30	146.92	107.12	68.80	30.70
180.0	322.21	290.46	256.80	222.08	183.76	145.44	107.12	67.75	27.95
202.5	322.85	290.03	257.01	220.81	183.12	143.75	104.79	65.63	27.52
225.0	316.28	286.01	252.98	218.27	181.01	141.63	102.46	64.15	29.00
247.5	317.55	285.16	251.93	215.51	177.41	138.45	99.71	62.66	28.37
270.0	301.89	269.07	234.14	196.67	158.14	117.50	77.06	38.11	9.53
292.5	294.27	259.55	222.29	183.97	145.44	105.22	65.42	29.85	7.62
315.0	287.70	253.62	216.36	175.71	134.64	94.42	56.10	24.13	3.81
337.5	280.08	242.61	205.56	165.13	125.33	86.16	51.02	21.59	2.96
360.0	273.31	236.26	198.15	159.62	121.73	83.62	48.27	19.48	2.54
C/ γ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1.27	0.85	1.06	1.06	1.06	1.06	1.06	1.06	1.06
22.5	1.48	0.85	1.27	1.06	1.06	1.06	1.06	1.06	1.06
45.0	1.69	1.06	0.85	0.85	1.06	1.06	1.06	1.06	1.06
67.5	1.69	1.27	0.64	1.06	0.85	1.06	0.85	1.06	1.06
90.0	4.23	0.85	0.85	0.64	0.85	1.06	1.06	1.06	1.27
112.5	6.14	1.06	0.85	0.64	0.64	0.64	0.85	0.85	1.06
135.0	5.08	1.91	1.06	0.64	0.42	0.64	0.85	0.85	1.06
157.5	3.60	1.69	1.48	0.85	0.64	0.64	0.21	0.64	0.64
180.0	2.33	1.48	1.06	0.64	0.21	0.21	0.42	0.42	0.42
202.5	2.96	1.69	1.27	0.85	0.64	0.42	0.64	0.42	0.42
225.0	3.39	1.06	0.64	0.64	0.42	0.42	0.42	0.64	0.64
247.5	3.81	0.64	0.21	0.21	0.21	0.21	0.42	0.42	0.85
270.0	1.27	1.27	1.27	1.27	1.69	1.69	1.69	1.27	1.48
292.5	1.69	1.06	1.06	1.06	0.85	1.27	1.48	1.27	1.48
315.0	1.69	1.06	1.27	1.27	1.06	1.06	1.06	1.06	1.06
337.5	1.27	1.06	1.06	1.06	0.85	0.85	1.06	1.06	1.27
360.0	1.27	0.85	1.06	1.06	1.06	1.06	1.06	1.06	1.06

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	1.06	1.27	1.27	1.48	1.27	1.27	1.27	1.27	1.69
22.5	1.06	1.06	1.48	1.27	1.27	1.27	1.69	1.69	1.48
45.0	1.27	1.48	1.27	1.27	1.48	1.69	1.48	1.69	1.69
67.5	1.27	1.48	1.48	1.69	1.48	1.48	1.48	1.69	1.69
90.0	1.27	1.48	1.48	1.69	1.69	1.69	1.91	2.12	1.69
112.5	1.48	1.48	1.48	1.69	1.69	1.48	1.69	1.91	1.69
135.0	1.06	1.06	1.27	1.69	1.69	1.69	1.91	1.69	1.91
157.5	0.85	1.06	1.06	1.48	1.48	1.69	1.69	1.91	1.91
180.0	0.64	0.85	0.85	1.27	1.27	1.48	1.69	1.69	1.69
202.5	0.64	0.85	0.85	1.27	1.27	1.69	1.69	1.69	1.69
225.0	0.42	0.85	1.27	1.27	1.48	1.69	1.48	1.69	1.69
247.5	0.85	1.06	1.27	1.48	1.48	1.69	1.69	1.27	1.91
270.0	2.12	1.91	1.69	1.69	1.69	2.33	1.69	2.33	2.54
292.5	1.48	1.48	1.48	1.48	1.48	1.69	1.48	1.48	1.69
315.0	1.27	1.48	1.27	1.48	1.69	1.48	1.48	1.27	1.69
337.5	1.48	1.27	1.27	1.27	1.27	1.48	1.27	1.48	1.27
360.0	1.06	1.27	1.27	1.48	1.27	1.27	1.27	1.27	1.69
C/γ(°)	180.0								
0.0	1.71								
22.5	1.71								
45.0	1.71								
67.5	1.71								
90.0	1.71								
112.5	1.71								
135.0	1.71								
157.5	1.71								
180.0	1.71								
202.5	1.71								
225.0	1.71								
247.5	1.71								
270.0	1.71								
292.5	1.71								
315.0	1.71								
337.5	1.71								
360.0	1.71								