



Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.  
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Client:

LumCAT:

Luminaire:

Report No:

Ballast type:

Test No:

Voltage(V): 120.11

LampCAT:

Current(A): 0.0680

Lamp flux(lm): -1.0

Power (W): 7.94

Number of Lamps: 1

PF: 0.9748

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

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### Photometric Results

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Lumens(lm): 515.89, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 64.97

Central intensity(cd): 184.771, Maximum intensity(cd): 189.223

Angle of maximum intensity: C=90.0  $\gamma$ =5.0

Beam Angle(50%Imax): [C0/180]Total=107.5

[C90/270]Total=113.5

Field angle(10%Imax): [C0/180]Total=155.0

[C90/270]Total=161.0

Maximum s/h(1/2): C0\_180=1.23 C90\_270=1.30

Maximum s/h(1/4): C0\_180=1.36 C90\_270=1.41

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 0.00%

Up flux rate of LUM(%): 0.84%

Down flux rate of LUM(%): 99.16%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 79.494%

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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	184.771	0.000	0	0.00%	0.00%
5.0	184.185	4.411	4.411	0.00%	0.85%
10.0	181.480	13.081	17.492	0.00%	3.39%
15.0	177.186	21.276	38.768	0.00%	7.51%
20.0	171.257	28.717	67.484	0.00%	13.08%
25.0	163.659	35.126	102.611	0.00%	19.89%
30.0	154.829	40.305	142.916	0.00%	27.70%
35.0	144.672	44.104	187.019	0.00%	36.25%
40.0	133.331	46.383	233.402	0.00%	45.24%
45.0	120.857	47.065	280.467	0.00%	54.37%
50.0	107.572	46.157	326.624	0.00%	63.31%
55.0	93.494	43.718	370.343	0.00%	71.79%
60.0	78.525	39.762	410.104	0.00%	79.49%
65.0	62.939	34.390	444.494	0.00%	86.16%
70.0	46.804	27.788	472.282	0.00%	91.55%
75.0	30.749	20.271	492.553	0.00%	95.48%
80.0	15.455	12.363	504.916	0.00%	97.87%
85.0	4.018	5.291	510.207	0.00%	98.90%
90.0	0.956	1.362	511.569	0.00%	99.16%
95.0	0.502	0.399	511.968	0.00%	99.24%
100.0	0.502	0.273	512.241	0.00%	99.29%
105.0	0.486	0.264	512.506	0.00%	99.34%
110.0	0.551	0.271	512.777	0.00%	99.40%
115.0	0.680	0.312	513.088	0.00%	99.46%
120.0	0.632	0.319	513.407	0.00%	99.52%
125.0	0.599	0.285	513.692	0.00%	99.57%
130.0	0.697	0.282	513.974	0.00%	99.63%
135.0	0.761	0.295	514.268	0.00%	99.69%
140.0	0.826	0.294	514.562	0.00%	99.74%
145.0	0.875	0.284	514.846	0.00%	99.80%
150.0	0.907	0.262	515.109	0.00%	99.85%
155.0	0.940	0.234	515.342	0.00%	99.89%
160.0	0.940	0.197	515.539	0.00%	99.93%
165.0	0.924	0.154	515.693	0.00%	99.96%
170.0	0.924	0.110	515.803	0.00%	99.98%
175.0	0.956	0.067	515.87	0.00%	100.00%
180.0	0.961	0.023	515.893	0.00%	100.00%

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

Date:  
Humidity(%): 58%

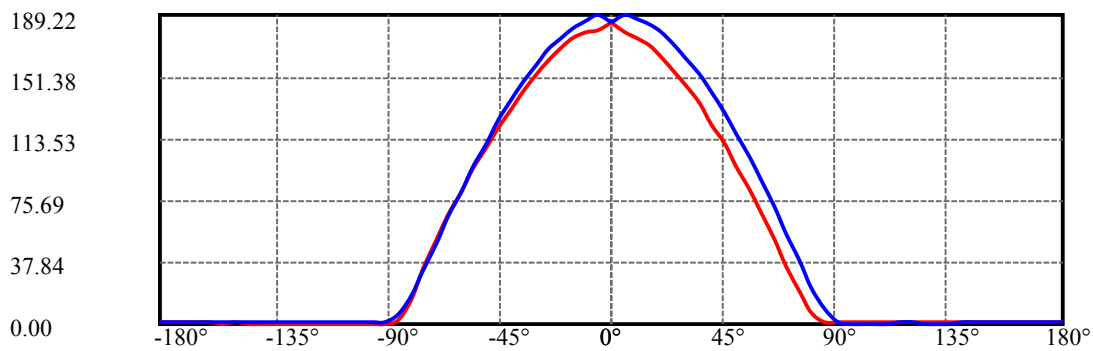
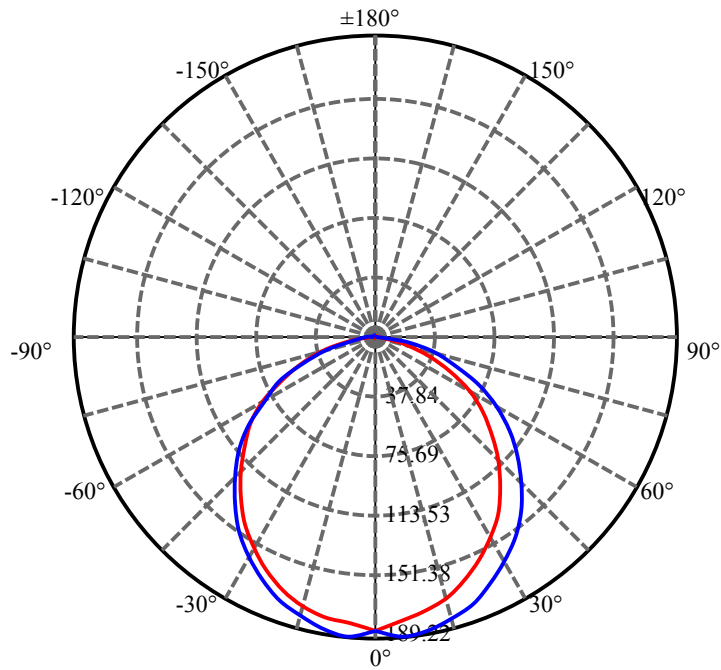
Operator: Tester

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	142.92	N.A.	27.70%
0-40	233.40	N.A.	45.24%
0-60	410.10	N.A.	79.49%
0-90	511.57	N.A.	99.16%
0-120	513.41	N.A.	99.52%
0-180	515.89	N.A.	100.00%
60-90	101.46	N.A.	19.67%
90-120	1.84	N.A.	0.36%
90-130	2.40	N.A.	0.47%
90-150	3.54	N.A.	0.69%
90-180	4.30	N.A.	0.83%
0-60.38	412.71	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	17.49
10-20	49.99
20-30	75.43
30-40	90.49
40-50	93.22
50-60	83.48
60-70	62.18
70-80	32.63
80-90	6.65
90-100	0.67
100-110	0.54
110-120	0.63
120-130	0.57
130-140	0.59
140-150	0.55
150-160	0.43
160-170	0.26
170-180	0.07



C0/C180: —

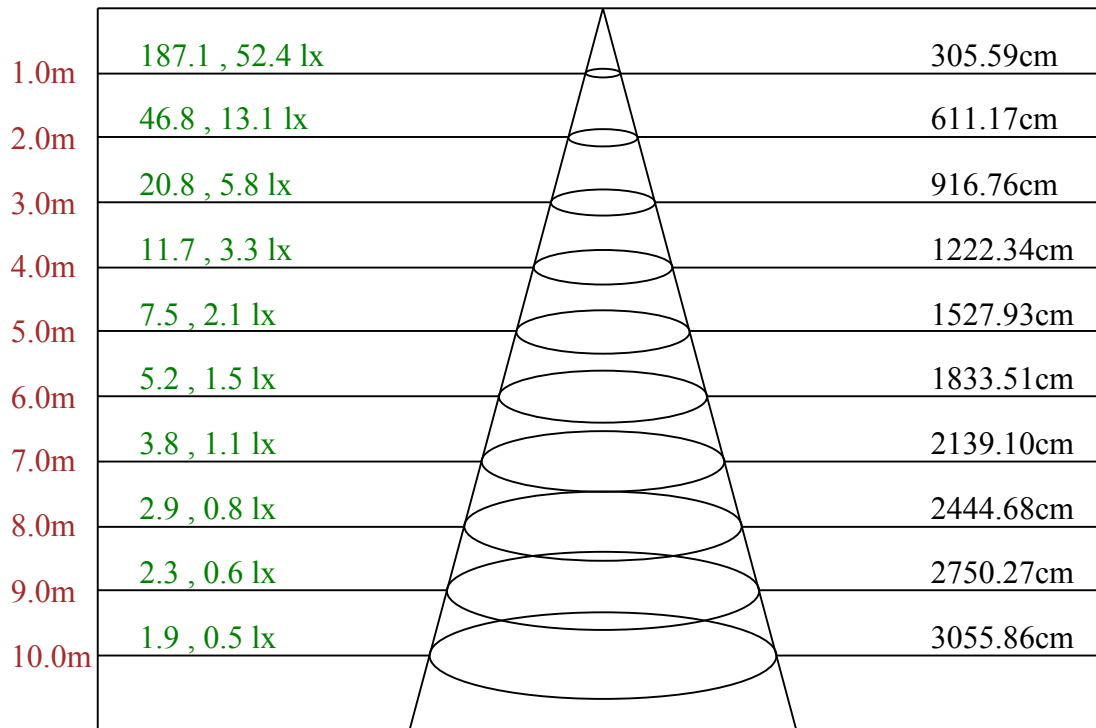
C90/C270: —

Field angle(10%Imax):C0/180Left:79.3 Right:75.7

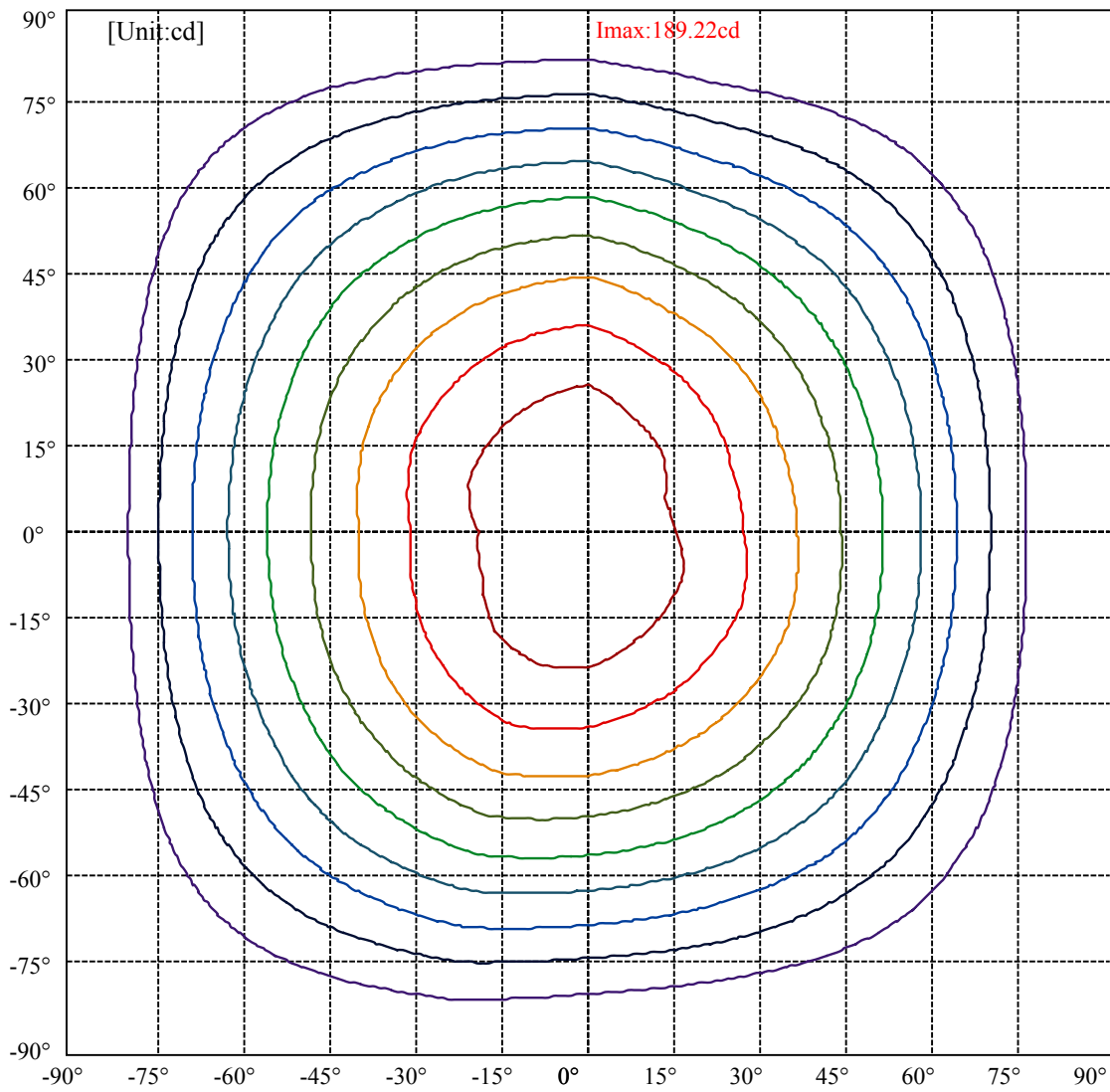
:C90/270Left:79.6 Right:81.4










Beam Angle(50%Imax):C0/180Left:56.0 Right:51.5

:C90/270Left:55.8 Right:57.7



Max , Ave      Beam angle of C90 plane 113.59

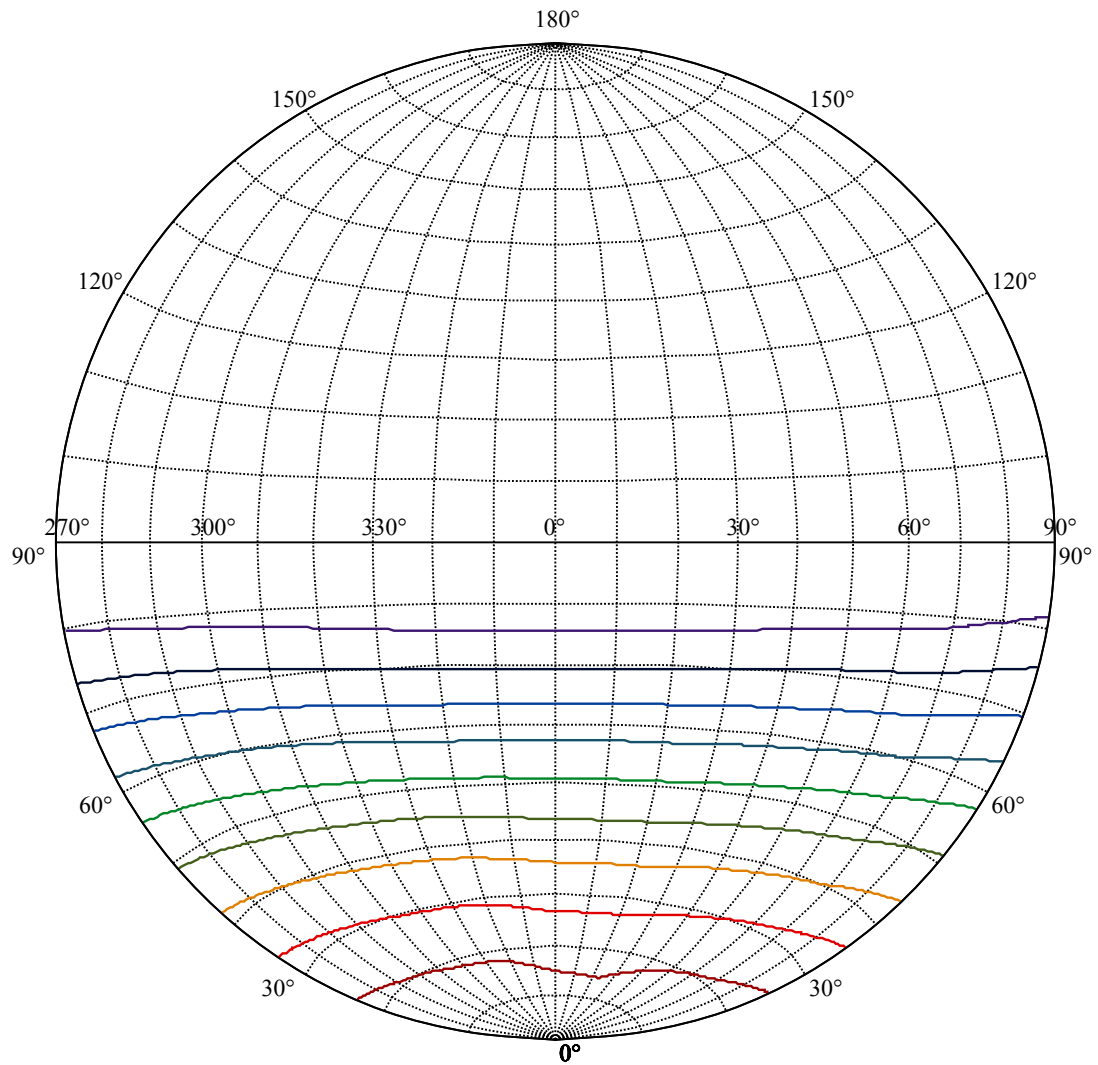


(10%Imax) 18.9223	
(20%Imax) 37.8446	
(30%Imax) 56.7669	
(40%Imax) 75.6892	
(50%Imax) 94.6115	
(60%Imax) 113.534	
(70%Imax) 132.456	
(80%Imax) 151.378	
(90%Imax) 170.301	

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

Date:  
Humidity(%): 58%

Operator: Tester












House

[Unit:cd]

Road

**I<sub>max</sub>:189.22**

(10%I <sub>max</sub> ) 18.9223	
(20%I <sub>max</sub> ) 37.8446	
(30%I <sub>max</sub> ) 56.7669	
(40%I <sub>max</sub> ) 75.6892	
(50%I <sub>max</sub> ) 94.6115	
(60%I <sub>max</sub> ) 113.534	
(70%I <sub>max</sub> ) 132.456	
(80%I <sub>max</sub> ) 151.378	
(90%I <sub>max</sub> ) 170.301	

## Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	184.77	178.60	175.23	170.30	163.04	154.49	145.42	134.79	122.61
22.5	184.77	178.34	174.97	169.52	162.53	154.75	145.68	134.53	123.64
45.0	184.77	183.78	179.89	174.71	167.97	159.67	149.82	139.71	127.27
67.5	184.77	185.85	182.74	178.08	171.86	163.82	155.27	144.64	132.46
90.0	184.77	189.22	186.89	183.00	178.08	170.82	162.27	152.68	142.31
112.5	184.77	187.15	184.82	181.19	176.00	168.75	160.71	151.12	140.23
135.0	184.77	185.08	183.26	179.63	173.93	167.45	158.90	149.05	137.90
157.5	184.77	184.56	182.23	179.11	173.67	166.41	157.60	147.49	136.34
180.0	184.77	180.15	178.34	174.71	169.01	161.49	152.42	142.31	131.16
202.5	184.77	180.41	178.60	175.23	170.04	163.04	155.27	145.68	134.53
225.0	184.77	185.59	183.52	179.89	174.71	167.71	159.41	149.31	138.94
247.5	184.77	187.41	185.34	181.71	176.78	169.26	161.49	152.42	141.01
270.0	184.77	188.71	185.85	180.93	175.23	167.97	158.90	148.53	137.38
292.5	184.77	185.59	182.74	177.82	171.08	163.30	154.23	143.60	132.20
315.0	184.77	183.52	179.89	174.97	168.75	160.45	150.60	140.49	128.57
337.5	184.77	183.00	179.37	174.19	167.45	159.16	149.31	138.42	126.75
360.0	184.77	178.60	175.23	170.30	163.04	154.49	145.42	134.79	122.61
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	109.91	96.69	82.69	67.91	51.84	35.51	20.22	7.26	1.04
22.5	110.42	97.20	82.69	68.17	52.88	36.55	20.74	8.04	1.30
45.0	114.57	100.83	86.32	70.76	55.47	40.18	23.85	10.37	1.81
67.5	119.76	106.80	92.02	75.95	60.14	44.33	28.00	13.74	3.63
90.0	129.61	116.39	102.65	87.61	72.06	55.21	39.14	22.55	9.33
112.5	127.53	114.83	100.83	85.80	70.76	54.18	37.85	21.51	7.78
135.0	126.24	112.76	98.50	83.47	67.65	51.58	35.51	19.96	4.93
157.5	123.64	110.68	96.69	82.17	66.10	50.29	34.73	17.11	2.85
180.0	119.76	107.57	95.13	81.65	67.14	51.32	34.22	15.81	2.33
202.5	123.13	109.65	95.91	81.13	66.36	50.29	34.73	17.37	3.11
225.0	126.75	113.02	99.02	84.76	68.69	52.36	36.55	20.48	5.18
247.5	129.35	116.65	102.65	87.61	71.80	55.73	38.88	22.81	8.55
270.0	124.94	110.94	96.95	81.39	65.84	49.25	32.66	17.89	6.22
292.5	119.24	106.28	92.02	76.73	60.66	45.36	29.03	13.74	3.37
315.0	115.61	101.87	87.87	73.10	56.77	40.44	24.88	10.63	1.81
337.5	113.28	99.02	83.98	68.17	52.88	36.29	21.00	8.04	1.04
360.0	109.91	96.69	82.69	67.91	51.84	35.51	20.22	7.26	1.04
C/ $\gamma$ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.78	0.78	0.78	0.78	0.78	1.04	1.04	0.78	1.04
22.5	1.04	0.52	1.04	0.78	0.78	1.04	1.04	1.04	1.04
45.0	1.30	0.78	0.52	0.52	0.78	1.04	0.52	0.52	0.78
67.5	1.56	0.78	0.78	0.52	0.78	1.04	1.04	1.04	1.04
90.0	1.56	0.52	0.26	0.52	0.52	0.78	0.78	0.52	0.26
112.5	0.52	0.26	0.00	0.26	0.26	0.26	0.00	0.26	0.26
135.0	0.52	0.00	0.26	0.00	0.26	0.26	0.26	0.26	0.26
157.5	0.52	0.26	0.00	0.26	0.00	0.26	0.26	0.52	0.26
180.0	0.26	0.52	0.26	0.26	0.26	0.26	0.26	0.26	0.52
202.5	0.52	0.00	0.00	0.00	0.26	0.00	0.52	0.26	0.78
225.0	0.52	0.26	0.26	0.52	0.52	0.52	0.00	0.26	0.26
247.5	1.04	0.26	0.26	0.26	0.26	0.52	0.52	0.26	0.52
270.0	1.30	1.04	1.04	1.30	1.30	1.30	1.30	1.30	1.30
292.5	1.56	0.78	0.78	0.52	0.78	0.78	1.04	0.78	1.04
315.0	1.04	0.78	1.04	0.78	0.78	1.04	0.78	0.78	0.78
337.5	1.30	0.52	0.78	0.52	0.52	0.78	0.78	0.78	1.04
360.0	0.78	0.78	0.78	0.78	0.78	1.04	1.04	0.78	1.04



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**Intensity data(cd)**

Appendix Page: 9 Total:9

<b>C/γ(°)</b>	<b>135.0</b>	<b>140.0</b>	<b>145.0</b>	<b>150.0</b>	<b>155.0</b>	<b>160.0</b>	<b>165.0</b>	<b>170.0</b>	<b>175.0</b>
<b>0.0</b>	1.04	0.78	1.04	1.04	1.04	1.04	1.04	0.78	1.04
<b>22.5</b>	0.78	1.04	0.78	1.04	1.04	1.30	1.04	0.78	1.04
<b>45.0</b>	1.30	0.78	1.30	1.04	1.04	1.04	0.78	1.30	1.04
<b>67.5</b>	0.78	0.78	1.04	1.04	0.78	1.04	0.78	1.04	1.04
<b>90.0</b>	0.52	0.78	0.78	0.78	0.78	0.78	1.04	0.78	0.78
<b>112.5</b>	0.78	0.78	0.52	0.52	1.04	0.78	0.52	0.52	0.78
<b>135.0</b>	0.26	0.78	0.52	1.04	0.78	0.78	0.78	0.78	0.78
<b>157.5</b>	0.52	0.52	0.78	0.78	0.78	0.78	0.78	0.78	1.04
<b>180.0</b>	0.26	0.52	0.52	0.78	0.52	0.78	0.78	1.30	0.78
<b>202.5</b>	0.52	0.52	0.52	0.78	0.78	0.78	1.04	1.04	0.78
<b>225.0</b>	0.52	0.78	0.78	0.52	0.78	0.78	1.04	0.78	0.78
<b>247.5</b>	0.26	0.52	0.78	0.78	0.78	0.78	0.78	0.52	1.04
<b>270.0</b>	1.56	1.56	1.56	1.30	1.56	1.30	1.56	1.56	1.56
<b>292.5</b>	1.04	1.30	1.30	1.04	1.04	1.04	1.04	0.78	1.04
<b>315.0</b>	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
<b>337.5</b>	1.04	0.78	0.78	1.04	1.30	1.04	0.78	1.04	0.78
<b>360.0</b>	1.04	0.78	1.04	1.04	1.04	1.04	1.04	0.78	1.04
<b>C/γ(°)</b>	<b>180.0</b>								
<b>0.0</b>	0.96								
<b>22.5</b>	0.96								
<b>45.0</b>	0.96								
<b>67.5</b>	0.96								
<b>90.0</b>	0.96								
<b>112.5</b>	0.96								
<b>135.0</b>	0.96								
<b>157.5</b>	0.96								
<b>180.0</b>	0.96								
<b>202.5</b>	0.96								
<b>225.0</b>	0.96								
<b>247.5</b>	0.96								
<b>270.0</b>	0.96								
<b>292.5</b>	0.96								
<b>315.0</b>	0.96								
<b>337.5</b>	0.96								
<b>360.0</b>	0.96								