



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

Tel:0755-21038430

Address:1 F.,No.1 building,Meibaoh industrial park,Dalang street,Longhua district,Shenzhen,China

---

LumCAT: LL4RR-27K

Luminaire:

Report No:

Voltage(V): 120.01

Test No:

Current(A): 0.1217

LampCAT:

Power (W): 14.4180

Lamp flux(lm): 951.4

PF: 0.9872

Number of Lamps: 1

Ballast type:

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

---

### Photometric Results

---

Lumens(lm): 951.37

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 65.98

Central intensity(cd): 396.058

Maximum intensity(cd): 396.279

Angle of maximum intensity: C=180.0  $\gamma$ =5.0

Beam Angle(50%Imax): [C0/180]Total=102.3

[C90/270]Total=102.1

Field angle(10%Imax): [C0/180]Total=148.8

[C90/270]Total=149.0

Maximum s/h(1/2): C0\_180=1.26 C90\_270=1.18

Maximum s/h(1/4): C0\_180=1.80 C90\_270=1.30

Up flux rate of lamp(%): 0.34%

Down flux rate of lamp(%): 99.66%

Up flux rate of LUM(%): 0.34%

Down flux rate of LUM(%): 99.66%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 84.331%

---

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

Date:  
Humidity(%): 58%

Operator: Zac

## Zonal flux distribution table

Page: 2 Total:8

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	383.957	.000	.000	.000%	.000%
5.0	382.179	9.159	9.159	.963%	.963%
10.0	376.267	27.132	36.291	2.852%	3.815%
15.0	366.798	44.078	80.369	4.633%	8.448%
20.0	353.401	59.355	139.724	6.239%	14.687%
25.0	335.456	72.248	211.972	7.594%	22.281%
30.0	313.693	82.150	294.122	8.635%	30.916%
35.0	288.554	88.685	382.808	9.322%	40.238%
40.0	261.264	91.733	474.541	9.642%	49.880%
45.0	231.618	91.261	565.802	9.593%	59.473%
50.0	199.973	87.209	653.011	9.167%	68.639%
55.0	167.129	79.820	732.831	8.390%	77.029%
60.0	133.402	69.467	802.298	7.302%	84.331%
65.0	99.263	56.561	858.859	5.945%	90.276%
70.0	66.005	41.847	900.706	4.399%	94.675%
75.0	35.683	26.580	927.286	2.794%	97.469%
80.0	14.348	13.387	940.673	1.407%	98.876%
85.0	6.119	5.561	946.234	.585%	99.461%
90.0	.744	1.879	948.113	.198%	99.658%
95.0	.248	.272	948.385	.029%	99.687%
100.0	.290	.146	948.531	.015%	99.702%
105.0	.262	.148	948.679	.016%	99.718%
110.0	.373	.166	948.845	.017%	99.735%
115.0	.428	.203	949.047	.021%	99.756%
120.0	.496	.225	949.272	.024%	99.780%
125.0	.469	.223	949.495	.023%	99.803%
130.0	.565	.225	949.720	.024%	99.827%
135.0	.579	.231	949.951	.024%	99.851%
140.0	.703	.237	950.188	.025%	99.876%
145.0	.772	.246	950.434	.026%	99.902%
150.0	.786	.229	950.664	.024%	99.926%
155.0	.786	.199	950.863	.021%	99.947%
160.0	.855	.172	951.035	.018%	99.965%
165.0	.855	.141	951.176	.015%	99.980%
170.0	.923	.105	951.281	.011%	99.991%
175.0	.841	.063	951.344	.007%	99.998%
180.0	.882	.021	951.365	.002%	100.000%

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

Date:  
Humidity(%): 58%

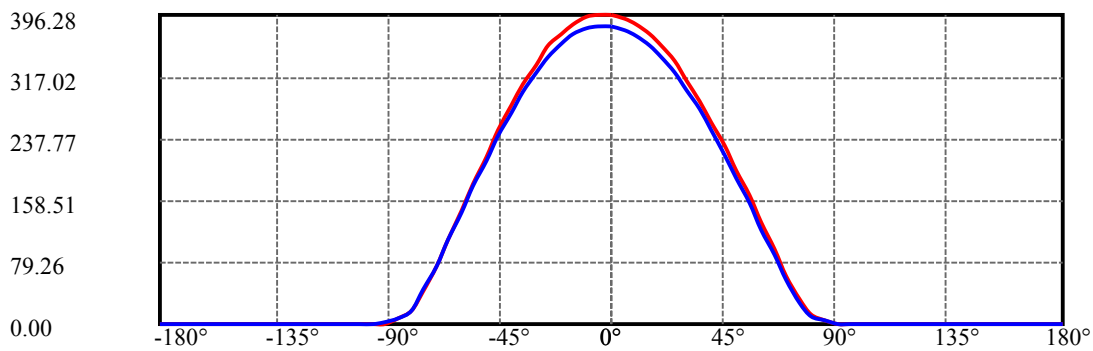
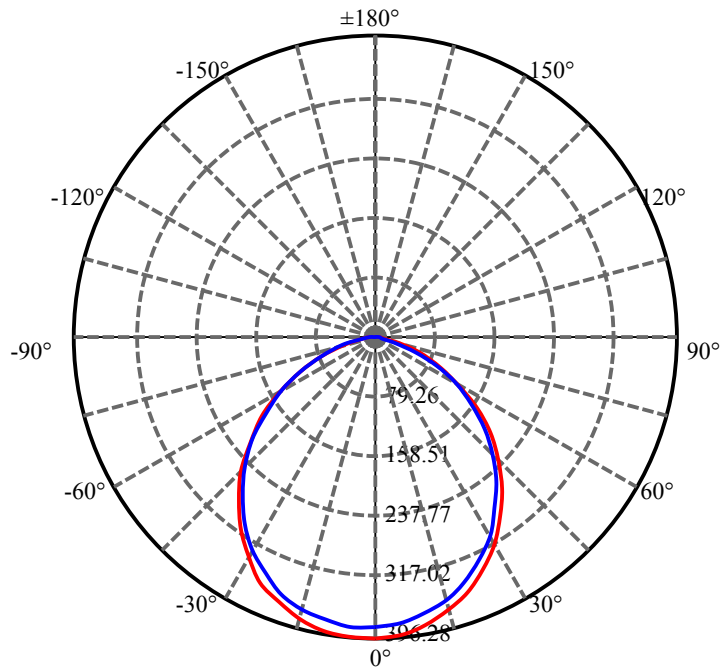
Operator: Zac

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	294.12	30.92%	30.92%
0-40	474.54	49.88%	49.88%
0-60	802.30	84.33%	84.33%
0-90	948.11	99.66%	99.66%
0-120	949.27	99.78%	99.78%
0-180	951.36	100.00%	100.00%
60-90	215.28	22.63%	22.63%
90-120	3.04	0.32%	0.32%
90-130	3.49	0.37%	0.37%
90-150	4.43	0.47%	0.47%
90-180	5.11	0.54%	0.54%
0-57.03	761.09	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	36.29
10-20	103.43
20-30	154.40
30-40	180.42
40-50	178.47
50-60	149.29
60-70	98.41
70-80	39.97
80-90	7.44
90-100	0.42
100-110	0.31
110-120	0.43
120-130	0.45
130-140	0.47
140-150	0.48
150-160	0.37
160-170	0.25
170-180	0.06

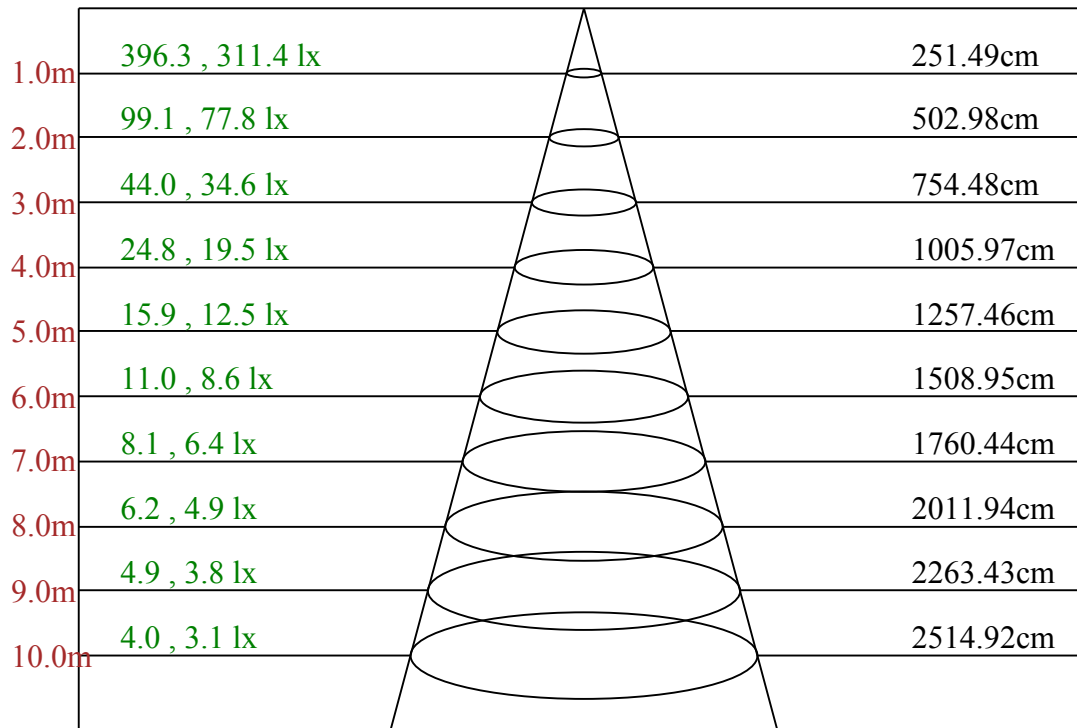


C0/C180: —

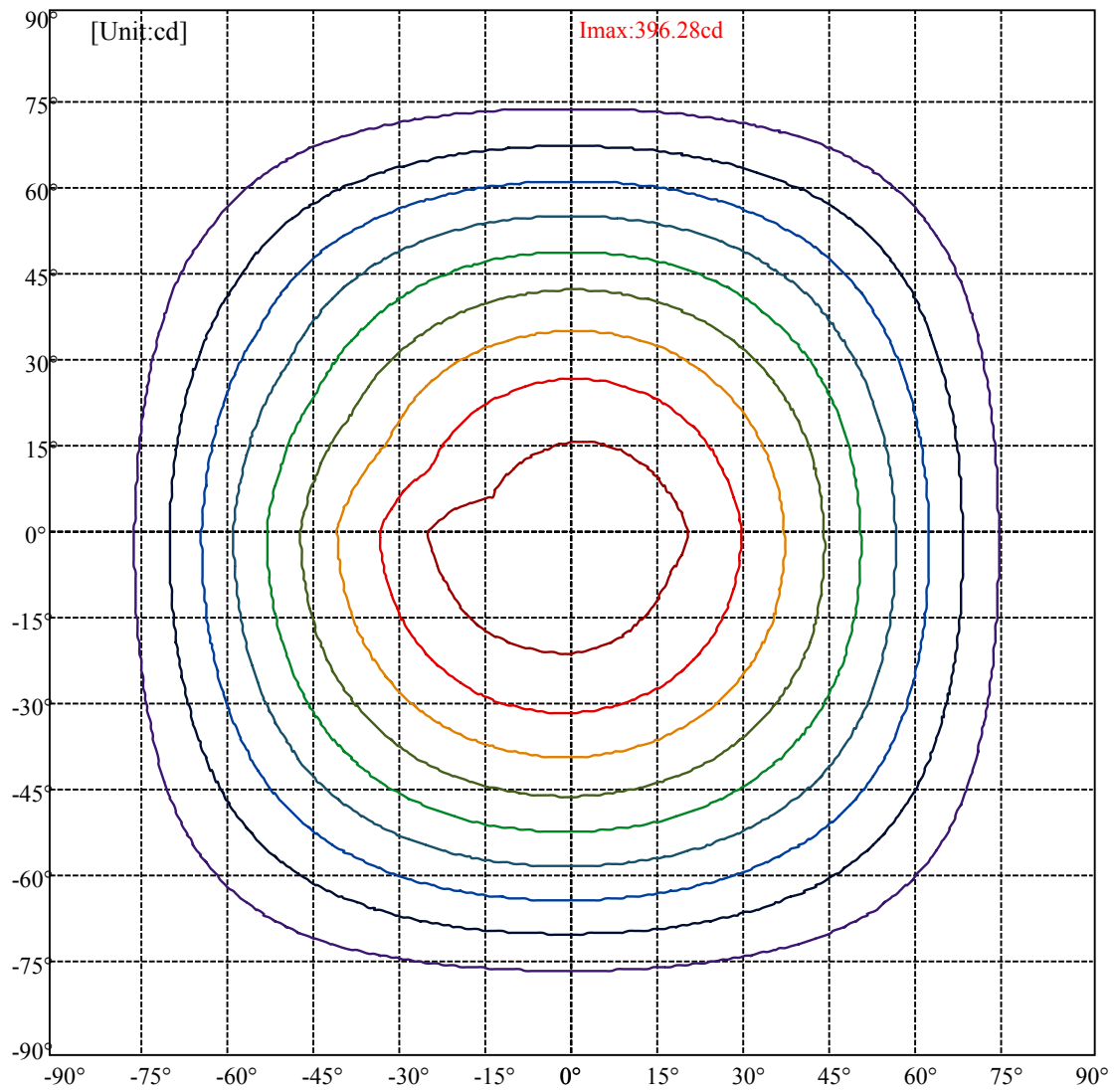
C90/C270: —

Field angle(10%Imax):C0/180Left:70.2 Right:78.6  
 :C90/270Left:70.9 Right:78.1

Beam Angle(50%Imax):C0/180Left:47.5 Right:54.8  
 :C90/270Left:47.8 Right:54.4



Max , Ave      Beam angle of C180plane102.94



(10%Imax) 39.6279	—
(20%Imax) 79.2558	—
(30%Imax) 118.884	—
(40%Imax) 158.512	—
(50%Imax) 198.139	—
(60%Imax) 237.767	—
(70%Imax) 277.395	—
(80%Imax) 317.023	—
(90%Imax) 356.651	—

## Intensity data(cd)

Page: 7 Total:8

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	396.06	392.09	384.15	372.24	357.03	336.96	313.58	286.68	259.11
22.5	390.10	385.47	377.76	365.41	350.41	331.23	307.19	281.61	254.26
45.0	386.58	381.50	373.35	361.88	346.66	326.81	303.66	277.64	250.07
67.5	383.27	379.08	370.70	359.89	344.46	324.17	301.23	276.76	248.09
90.0	381.73	377.54	368.93	357.69	342.91	323.07	300.57	274.99	247.87
112.5	379.08	375.77	367.83	355.70	341.37	321.74	300.13	274.99	246.54
135.0	377.76	373.79	366.95	356.36	340.93	322.40	300.57	276.32	247.65
157.5	377.09	374.67	367.39	356.14	342.03	323.29	301.45	276.54	251.18
180.0	396.06	396.28	392.75	384.81	371.80	355.70	332.55	307.19	279.40
202.5	390.10	391.43	387.24	379.08	367.39	350.41	329.90	304.32	277.20
225.0	386.58	387.24	383.27	376.21	364.52	348.43	326.59	302.56	274.55
247.5	383.27	384.37	379.96	373.35	361.00	345.56	325.27	299.91	272.35
270.0	381.73	381.95	377.98	370.48	359.67	343.13	323.07	297.71	271.68
292.5	379.08	379.74	375.55	368.49	357.03	340.71	320.20	295.72	269.26
315.0	377.76	377.98	374.23	366.29	354.38	337.84	317.77	293.30	266.39
337.5	377.09	375.99	372.24	364.74	352.84	335.86	315.35	290.65	264.63
360.0	396.06	392.09	384.15	372.24	357.03	336.96	313.58	286.68	259.11
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	229.12	197.15	164.29	129.45	95.27	61.53	31.09	12.57	5.51
22.5	223.83	192.52	159.00	126.36	92.18	59.32	29.99	11.91	4.63
45.0	221.18	189.21	157.01	123.27	89.31	57.78	29.11	11.47	5.07
67.5	218.76	187.89	155.25	122.17	88.65	56.01	28.23	10.81	4.41
90.0	217.66	187.00	154.15	121.29	88.43	56.23	27.12	10.37	4.19
112.5	217.66	187.89	155.47	121.95	88.65	57.34	28.45	10.81	4.19
135.0	219.42	188.33	157.23	123.93	90.41	58.00	29.77	11.69	4.85
157.5	221.63	190.31	157.67	125.92	92.18	59.76	30.21	11.91	5.29
180.0	248.53	215.23	180.61	146.21	109.38	73.88	40.80	17.20	7.06
202.5	247.43	213.91	180.17	145.10	109.60	74.54	43.00	17.86	7.72
225.0	244.56	212.58	179.51	144.22	109.60	75.86	44.33	17.86	7.72
247.5	242.58	211.48	177.52	143.56	110.04	75.42	43.22	17.86	7.72
270.0	241.69	209.50	176.20	143.34	108.72	74.54	43.22	16.76	7.28
292.5	239.27	207.73	175.10	141.13	107.17	73.43	42.56	17.20	7.28
315.0	237.28	205.31	173.33	139.15	104.75	72.55	41.02	16.98	7.72
337.5	235.30	203.54	171.57	137.39	103.87	69.91	38.81	16.32	7.28
360.0	229.12	197.15	164.29	129.45	95.27	61.53	31.09	12.57	5.51
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.44	0.44	0.44	0.22	0.22	0.44	0.44	0.66	0.44
22.5	0.66	0.44	0.44	0.44	0.66	0.66	0.88	0.88	0.88
45.0	0.44	0.44	0.44	0.22	0.66	0.66	0.88	0.44	0.88
67.5	0.44	0.44	0.66	0.44	0.66	0.66	0.66	0.66	0.88
90.0	0.22	0.44	0.44	0.66	0.66	0.66	0.66	0.66	0.66
112.5	0.44	0.44	0.44	0.44	0.66	0.44	0.66	0.66	0.88
135.0	0.44	0.44	0.44	0.66	0.44	0.22	0.66	0.44	0.66
157.5	0.44	0.44	0.44	0.44	0.66	0.44	0.66	0.66	0.66
180.0	0.44	0.00	0.00	0.00	0.22	0.44	0.22	0.00	0.44
202.5	1.10	0.22	0.00	0.00	0.00	0.22	0.22	0.44	0.22
225.0	1.54	0.00	0.22	0.22	0.22	0.44	0.44	0.44	0.66
247.5	1.10	0.00	0.00	0.00	0.22	0.22	0.44	0.22	0.22
270.0	1.32	0.22	0.22	0.22	0.22	0.22	0.00	0.22	0.44
292.5	1.10	0.00	0.00	0.00	0.00	0.44	0.44	0.44	0.22
315.0	1.10	0.00	0.44	0.22	0.22	0.22	0.22	0.44	0.44
337.5	0.66	0.00	0.00	0.00	0.22	0.44	0.44	0.22	0.44
360.0	0.44	0.44	0.44	0.22	0.22	0.44	0.44	0.66	0.44

---

**Intensity data(cd)**

<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>	<b>0.44</b>	<b>0.66</b>	<b>0.66</b>	<b>0.44</b>	<b>0.66</b>	<b>0.66</b>	<b>0.66</b>	<b>0.44</b>	<b>0.44</b>
<b>22.5</b>	<b>0.66</b>	<b>0.66</b>	<b>0.88</b>	<b>1.10</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>1.10</b>
<b>45.0</b>	<b>0.66</b>	<b>0.88</b>	<b>1.10</b>	<b>0.88</b>	<b>0.88</b>	<b>1.10</b>	<b>0.88</b>	<b>1.10</b>	<b>0.66</b>
<b>67.5</b>	<b>0.88</b>	<b>0.66</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>1.10</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>
<b>90.0</b>	<b>0.66</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>1.10</b>	<b>1.10</b>
<b>112.5</b>	<b>0.88</b>	<b>1.10</b>	<b>0.88</b>	<b>0.88</b>	<b>0.66</b>	<b>0.88</b>	<b>1.10</b>	<b>1.32</b>	<b>0.88</b>
<b>135.0</b>	<b>0.66</b>	<b>0.88</b>	<b>0.88</b>	<b>0.66</b>	<b>1.10</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>
<b>157.5</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>1.10</b>	<b>1.10</b>	<b>0.88</b>	<b>1.10</b>	<b>0.88</b>	<b>0.88</b>
<b>180.0</b>	<b>0.44</b>	<b>0.66</b>	<b>0.66</b>	<b>0.44</b>	<b>0.66</b>	<b>0.66</b>	<b>0.66</b>	<b>0.88</b>	<b>0.88</b>
<b>202.5</b>	<b>0.44</b>	<b>0.66</b>	<b>0.66</b>	<b>0.88</b>	<b>0.66</b>	<b>0.88</b>	<b>0.66</b>	<b>0.66</b>	<b>0.88</b>
<b>225.0</b>	<b>0.44</b>	<b>0.66</b>	<b>0.66</b>	<b>0.66</b>	<b>0.44</b>	<b>0.88</b>	<b>0.88</b>	<b>1.10</b>	<b>0.88</b>
<b>247.5</b>	<b>0.44</b>	<b>0.44</b>	<b>0.66</b>	<b>0.88</b>	<b>0.88</b>	<b>0.66</b>	<b>0.88</b>	<b>1.10</b>	<b>0.88</b>
<b>270.0</b>	<b>0.22</b>	<b>0.44</b>	<b>0.66</b>	<b>0.66</b>	<b>0.66</b>	<b>0.88</b>	<b>0.66</b>	<b>0.88</b>	<b>0.88</b>
<b>292.5</b>	<b>0.66</b>	<b>0.66</b>	<b>0.66</b>	<b>0.66</b>	<b>0.66</b>	<b>0.66</b>	<b>0.88</b>	<b>0.88</b>	<b>0.66</b>
<b>315.0</b>	<b>0.44</b>	<b>0.66</b>	<b>0.66</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>0.66</b>
<b>337.5</b>	<b>0.44</b>	<b>0.44</b>	<b>0.66</b>	<b>0.66</b>	<b>0.66</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>
<b>360.0</b>	<b>0.44</b>	<b>0.66</b>	<b>0.66</b>	<b>0.44</b>	<b>0.66</b>	<b>0.66</b>	<b>0.66</b>	<b>0.44</b>	<b>0.44</b>
<b>C/γ(°)</b>	<b>180.0</b>								
<b>0.0</b>	<b>0.66</b>								
<b>22.5</b>	<b>0.88</b>								
<b>45.0</b>	<b>0.88</b>								
<b>67.5</b>	<b>0.88</b>								
<b>90.0</b>	<b>0.88</b>								
<b>112.5</b>	<b>0.88</b>								
<b>135.0</b>	<b>1.10</b>								
<b>157.5</b>	<b>0.88</b>								
<b>180.0</b>	<b>0.66</b>								
<b>202.5</b>	<b>0.88</b>								
<b>225.0</b>	<b>0.88</b>								
<b>247.5</b>	<b>0.88</b>								
<b>270.0</b>	<b>0.88</b>								
<b>292.5</b>	<b>0.88</b>								
<b>315.0</b>	<b>1.10</b>								
<b>337.5</b>	<b>0.88</b>								
<b>360.0</b>	<b>0.66</b>								