



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

LumCAT:

Luminaire:

Report No:

Ballast type:

Test No:

Voltage(V): 120.09

LampCAT:

Current(A): 0.0940

Lamp flux(lm): -1.0

Power (W): 11.06

Number of Lamps: 1

PF: 0.9757

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 728.13, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 65.83

Central intensity(cd): 260.088, Maximum intensity(cd): 273.207

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

Beam Angle(50%Imax): [C0/180]Total=107.3

[C90/270]Total=114.0

Field angle(10%Imax): [C0/180]Total=157.2

[C90/270]Total=160.5

Maximum s/h(1/2): C0_180=1.24 C90_270=1.34

Maximum s/h(1/4): C0_180=1.36 C90_270=1.44

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 0.00%

Up flux rate of LUM(%): 0.43%

Down flux rate of LUM(%): 99.57%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 79.627%

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

Date:
Humidity(%): 58%

Operator: Tester

Zonal flux distribution table

Appendix Page: 2 Total:9

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	260.088	0.000	0	0.00%	0.00%
5.0	259.254	6.209	6.209	0.00%	0.85%
10.0	255.564	18.417	24.625	0.00%	3.38%
15.0	249.631	29.968	54.593	0.00%	7.50%
20.0	241.583	40.483	95.076	0.00%	13.06%
25.0	231.193	49.585	144.661	0.00%	19.87%
30.0	219.000	56.972	201.634	0.00%	27.69%
35.0	204.593	62.377	264.011	0.00%	36.26%
40.0	188.823	65.639	329.649	0.00%	45.27%
45.0	171.294	66.679	396.328	0.00%	54.43%
50.0	152.359	65.399	461.727	0.00%	63.41%
55.0	132.288	61.892	523.619	0.00%	71.91%
60.0	110.699	56.166	579.785	0.00%	79.63%
65.0	88.486	48.422	628.207	0.00%	86.28%
70.0	65.818	39.071	667.277	0.00%	91.64%
75.0	43.547	28.586	695.864	0.00%	95.57%
80.0	23.434	17.922	713.786	0.00%	98.03%
85.0	8.233	8.605	722.391	0.00%	99.21%
90.0	1.292	2.608	724.999	0.00%	99.57%
95.0	0.298	0.435	725.434	0.00%	99.63%
100.0	0.270	0.154	725.588	0.00%	99.65%
105.0	0.326	0.159	725.748	0.00%	99.67%
110.0	0.284	0.159	725.907	0.00%	99.69%
115.0	0.397	0.172	726.079	0.00%	99.72%
120.0	0.411	0.197	726.276	0.00%	99.75%
125.0	0.468	0.203	726.479	0.00%	99.77%
130.0	0.440	0.197	726.677	0.00%	99.80%
135.0	0.596	0.209	726.886	0.00%	99.83%
140.0	0.653	0.231	727.117	0.00%	99.86%
145.0	0.639	0.215	727.333	0.00%	99.89%
150.0	0.653	0.190	727.523	0.00%	99.92%
155.0	0.738	0.176	727.699	0.00%	99.94%
160.0	0.724	0.153	727.852	0.00%	99.96%
165.0	0.695	0.117	727.969	0.00%	99.98%
170.0	0.738	0.085	728.054	0.00%	99.99%
175.0	0.780	0.054	728.108	0.00%	100.00%
180.0	0.908	0.020	728.129	0.00%	100.00%

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

Date:
Humidity(%): 58%

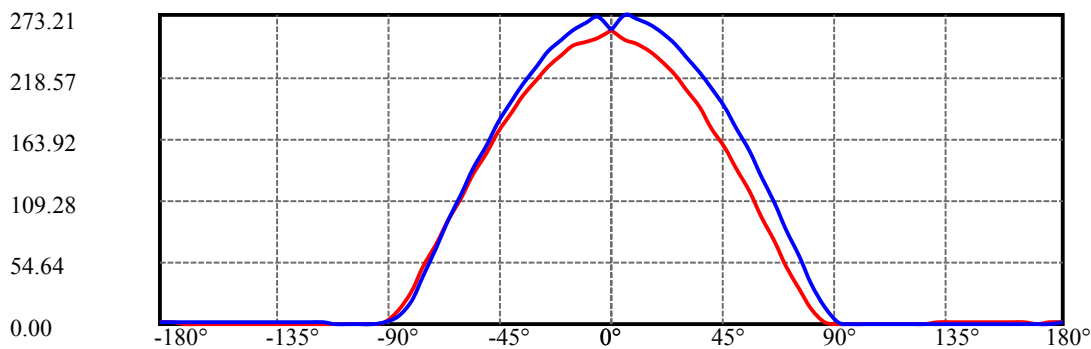
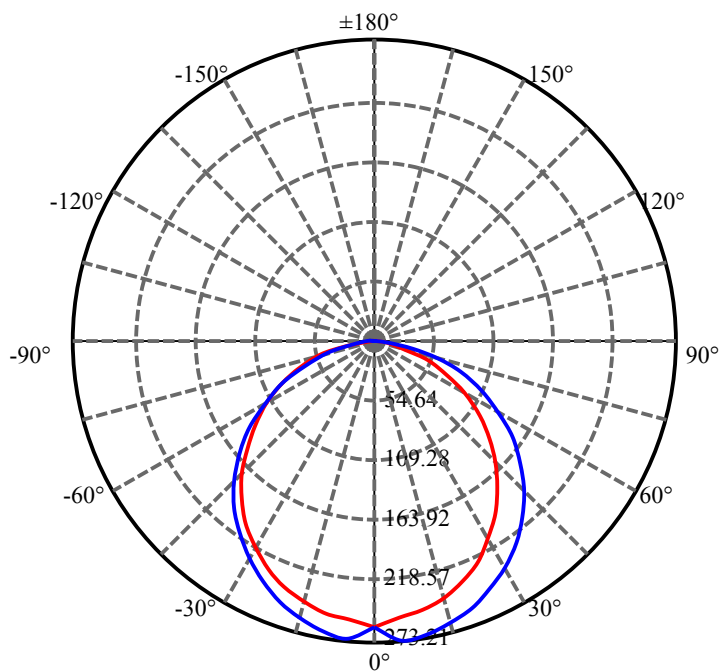
Operator: Tester

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	201.63	N.A.	27.69%
0-40	329.65	N.A.	45.27%
0-60	579.78	N.A.	79.63%
0-90	725.00	N.A.	99.57%
0-120	726.28	N.A.	99.75%
0-180	728.13	N.A.	100.00%
60-90	145.21	N.A.	19.94%
90-120	1.28	N.A.	0.18%
90-130	1.68	N.A.	0.23%
90-150	2.52	N.A.	0.35%
90-180	3.11	N.A.	0.43%
0-60.28	582.50	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	24.63
10-20	70.45
20-30	106.56
30-40	128.02
40-50	132.08
50-60	118.06
60-70	87.49
70-80	46.51
80-90	11.21
90-100	0.59
100-110	0.32
110-120	0.37
120-130	0.40
130-140	0.44
140-150	0.41
150-160	0.33
160-170	0.20
170-180	0.05

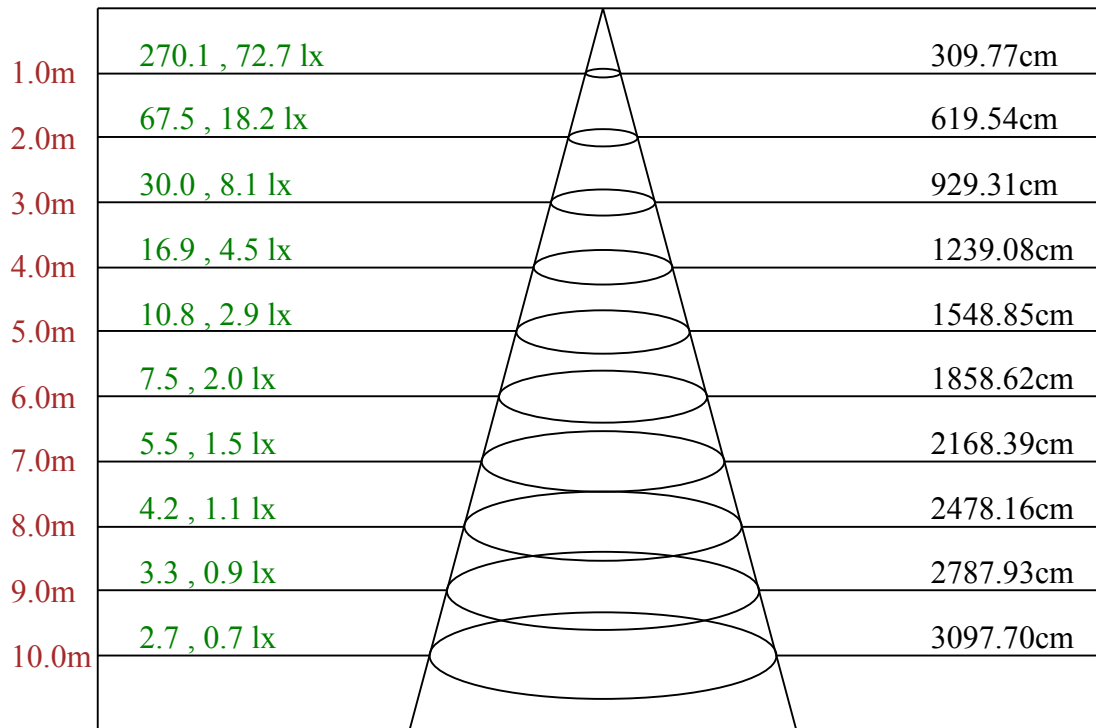


C0/C180: —

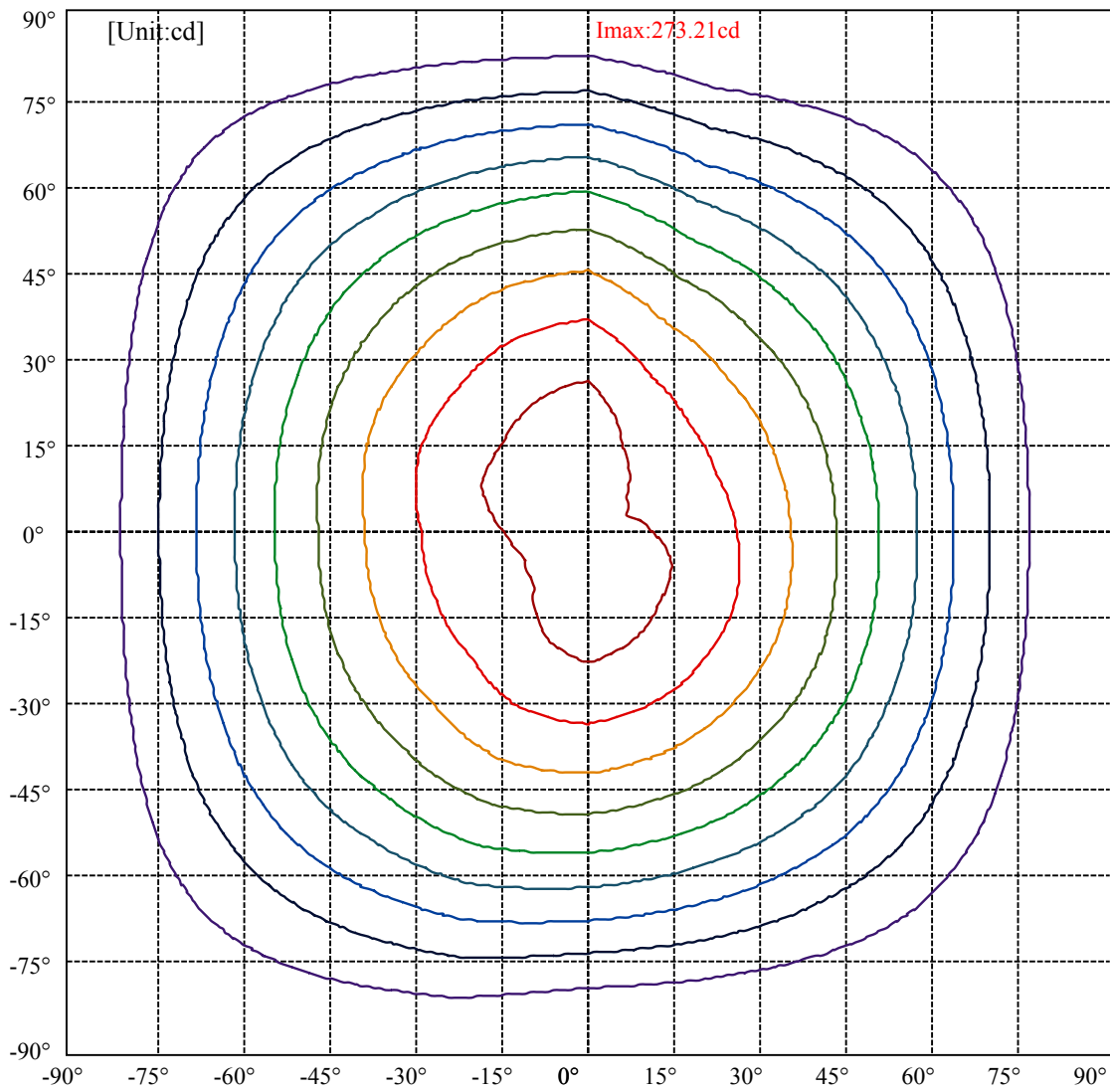
C90/C270: —

Field angle(10%Imax):C0/180Left:80.9 Right:76.3
 :C90/270Left:78.6 Right:81.9

Beam Angle(50%Imax):C0/180Left:55.6 Right:51.7
 :C90/270Left:55.3 Right:58.7



Max , Ave Beam angle of C90 plane 114.30

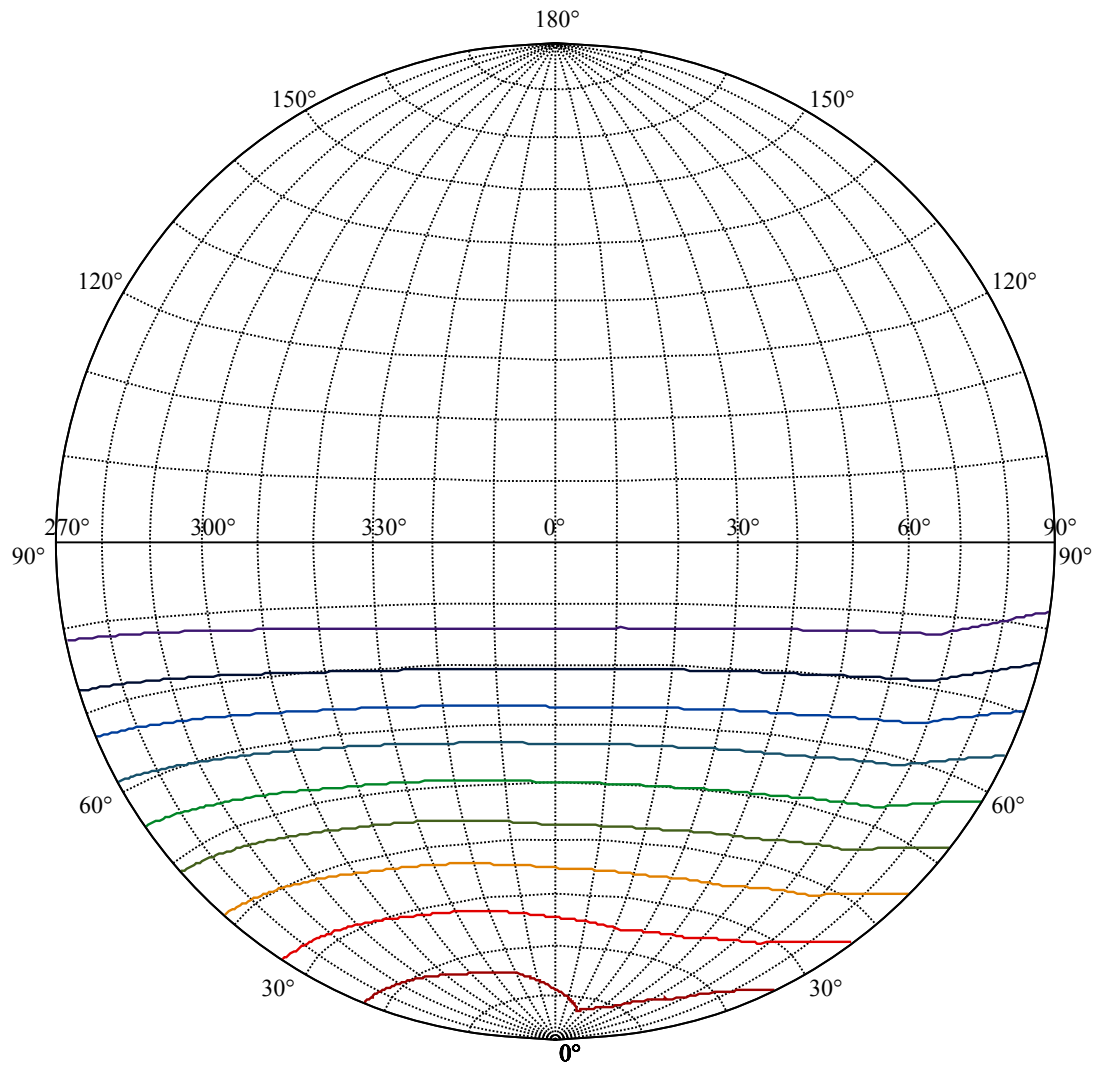


(10%I _{max})	27.3207	—
(20%I _{max})	54.6414	—
(30%I _{max})	81.9621	—
(40%I _{max})	109.283	—
(50%I _{max})	136.604	—
(60%I _{max})	163.924	—
(70%I _{max})	191.245	—
(80%I _{max})	218.566	—
(90%I _{max})	245.886	—

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

Date:
Humidity(%): 58%

Operator: Tester



House

[Unit:cd]

Road

I_{max}:273.21

(10%I_{max}) 27.3207

(20%I_{max}) 54.6414

(30%I_{max}) 81.9621

(40%I_{max}) 109.283

(50%I_{max}) 136.604

(60%I_{max}) 163.924

(70%I_{max}) 191.245

(80%I_{max}) 218.566

(90%I_{max}) 245.886



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	260.09	251.86	247.32	240.73	231.65	220.29	206.89	191.00	173.74
22.5	260.09	247.77	243.23	236.19	227.79	216.43	203.71	189.63	173.28
45.0	260.09	250.04	245.27	238.69	229.83	218.93	205.98	191.45	176.23
67.5	260.09	257.99	253.90	247.09	238.69	227.79	215.75	200.99	184.41
90.0	260.09	273.21	270.48	265.03	257.76	248.23	236.64	223.02	208.03
112.5	260.09	268.67	265.71	261.40	253.68	244.14	233.01	219.38	204.17
135.0	260.09	263.44	260.49	255.49	247.77	238.46	226.65	212.34	197.13
157.5	260.09	261.17	258.22	252.77	245.96	235.96	223.70	209.62	194.40
180.0	260.09	253.22	250.04	245.27	237.78	228.01	215.30	202.12	186.00
202.5	260.09	250.04	247.77	242.78	235.28	226.42	215.30	202.12	187.13
225.0	260.09	252.31	249.13	243.91	236.87	227.56	216.66	203.49	188.50
247.5	260.09	259.58	256.86	252.09	245.05	235.74	224.83	211.44	196.90
270.0	260.09	271.62	267.08	260.04	251.63	240.28	227.79	212.80	197.13
292.5	260.09	266.85	262.31	255.72	246.41	235.05	222.79	207.12	190.31
315.0	260.09	261.17	256.86	250.04	241.19	229.83	216.43	200.76	183.73
337.5	260.09	259.13	254.36	246.86	238.01	225.97	212.57	196.22	180.09
360.0	260.09	251.86	247.32	240.73	231.65	220.29	206.89	191.00	173.74
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	155.34	136.94	116.96	94.70	73.13	51.33	30.66	12.95	2.27
22.5	155.79	136.72	116.96	95.84	74.04	52.23	31.57	13.85	2.73
45.0	158.52	139.44	118.78	97.66	76.31	54.28	33.38	15.22	3.86
67.5	166.92	147.16	126.27	104.24	81.76	58.82	36.56	17.71	5.00
90.0	191.22	172.37	152.61	130.81	107.42	82.67	58.82	35.43	14.54
112.5	186.91	168.74	147.85	126.04	102.88	79.94	55.87	33.16	13.63
135.0	181.00	162.83	142.85	120.14	97.88	74.95	51.10	30.21	12.49
157.5	176.69	157.84	137.40	116.73	94.48	72.67	50.19	29.30	11.58
180.0	169.19	151.03	132.40	112.64	92.43	71.31	50.19	29.07	11.36
202.5	170.78	153.30	134.67	114.01	92.66	71.99	48.83	28.62	11.81
225.0	172.83	155.11	136.04	115.60	94.48	72.45	50.19	29.98	12.26
247.5	179.41	160.79	141.49	121.05	98.34	74.72	52.69	31.11	12.95
270.0	178.73	158.07	137.85	115.14	91.52	67.22	42.92	21.12	6.36
292.5	171.24	151.93	130.36	107.65	84.71	61.09	38.38	18.40	4.77
315.0	164.88	144.21	124.23	101.52	78.35	55.19	34.07	15.44	3.41
337.5	161.24	141.26	119.91	97.43	75.40	52.23	31.34	13.40	2.73
360.0	155.34	136.94	116.96	94.70	73.13	51.33	30.66	12.95	2.27
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	0.45	0.23	0.23	0.68	0.45	0.68	0.91
22.5	0.91	0.23	0.45	0.68	0.68	0.68	0.91	0.68	0.68
45.0	1.14	0.68	0.68	0.68	0.45	0.68	0.68	0.68	0.68
67.5	1.14	0.68	0.45	0.68	0.68	0.91	0.91	0.68	0.68
90.0	2.50	0.23	0.00	0.23	0.00	0.23	0.23	0.23	0.23
112.5	2.27	0.00	0.00	0.23	0.00	0.45	0.00	0.00	0.00
135.0	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00
157.5	1.14	0.00	0.00	0.00	0.23	0.23	0.00	0.00	0.23
180.0	1.14	0.23	0.00	0.00	0.00	0.45	0.00	0.45	0.00
202.5	1.36	0.23	0.23	0.00	0.23	0.00	0.45	0.45	0.23
225.0	1.82	0.00	0.23	0.23	0.00	0.23	0.23	0.45	0.23
247.5	1.82	0.23	0.23	0.45	0.00	0.00	0.23	0.45	0.68
270.0	1.14	0.68	0.68	0.68	0.68	1.14	0.91	0.91	0.91
292.5	0.68	0.23	0.23	0.45	0.45	0.23	0.45	0.45	0.45
315.0	0.91	0.45	0.45	0.45	0.45	0.23	0.68	0.45	0.68
337.5	0.68	0.45	0.23	0.23	0.45	0.23	0.45	0.45	0.45
360.0	0.45	0.45	0.45	0.23	0.23	0.68	0.45	0.68	0.91

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	0.91	1.14	0.91	0.91	0.91	0.91	0.91	0.68	0.91
22.5	0.68	0.91	0.91	0.91	0.68	0.91	0.68	0.91	0.68
45.0	0.68	0.68	0.68	0.68	0.91	0.91	0.91	1.14	0.91
67.5	0.45	0.91	0.68	0.91	0.68	0.91	0.68	0.91	0.91
90.0	0.68	0.45	0.45	0.45	0.45	0.45	0.68	0.23	0.68
112.5	0.45	0.45	0.00	0.23	0.45	0.45	0.68	0.68	0.68
135.0	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.68	0.45
157.5	0.45	0.45	0.45	0.45	0.68	0.68	0.68	0.68	0.68
180.0	0.23	0.45	0.68	0.45	0.45	0.68	0.68	0.68	0.91
202.5	0.68	0.45	0.45	0.68	0.91	0.68	0.45	0.68	0.91
225.0	0.45	0.45	0.45	0.45	0.91	0.45	0.68	0.68	0.91
247.5	0.45	0.68	0.91	0.45	0.68	0.68	0.68	0.91	0.68
270.0	1.14	1.14	1.14	1.14	1.36	1.14	1.36	0.91	1.36
292.5	0.68	0.45	0.68	0.68	0.68	0.45	0.45	0.68	0.68
315.0	0.45	0.68	0.45	0.68	0.91	0.91	0.45	0.68	0.45
337.5	0.68	0.68	0.91	0.91	0.68	0.91	0.68	0.68	0.68
360.0	0.91	1.14	0.91	0.91	0.91	0.91	0.91	0.68	0.91

C/γ(°)	180.0
0.0	0.91
22.5	0.91
45.0	0.91
67.5	0.91
90.0	0.91
112.5	0.91
135.0	0.91
157.5	0.91
180.0	0.91
202.5	0.91
225.0	0.91
247.5	0.91
270.0	0.91
292.5	0.91
315.0	0.91
337.5	0.91
360.0	0.91