



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

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Client:

LumCAT: LB4S24V-30K

Luminaire:

Report No:

Ballast type:

Test No:

Voltage(V): 24.01

LampCAT:

Current(A): 0.5310

Lamp flux(lm): -1.0

Power (W): 12.75

Number of Lamps: 1

PF: 0.9998

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 752.67, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 59.03

Central intensity(cd): 287.272, Maximum intensity(cd): 291.073

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

Beam Angle(50%Imax): [C0/180]Total=103.7

[C90/270]Total=104.0

Field angle(10%Imax): [C0/180]Total=158.5

[C90/270]Total=158.6

Maximum s/h(1/2): C0_180=1.22 C90_270=1.25

Maximum s/h(1/4): C0_180=1.32 C90_270=1.35

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 0.00%

Up flux rate of LUM(%): 0.05%

Down flux rate of LUM(%): 99.95%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 80.215%

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

Date:
Humidity(%): 59%

Operator: Tester

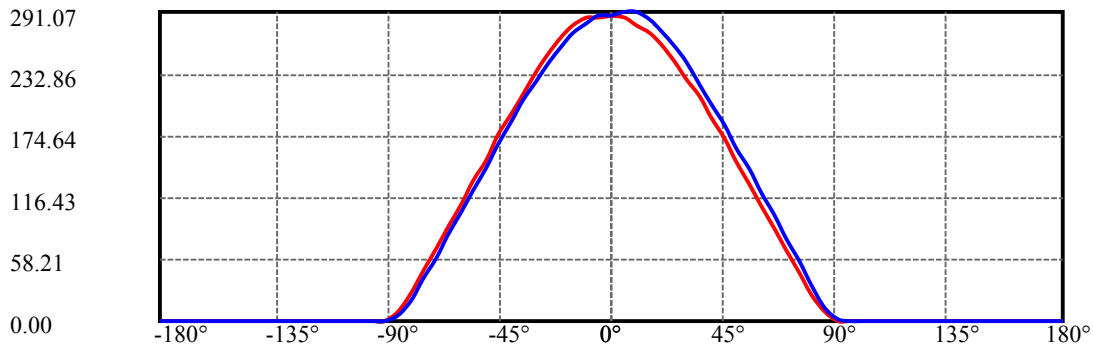
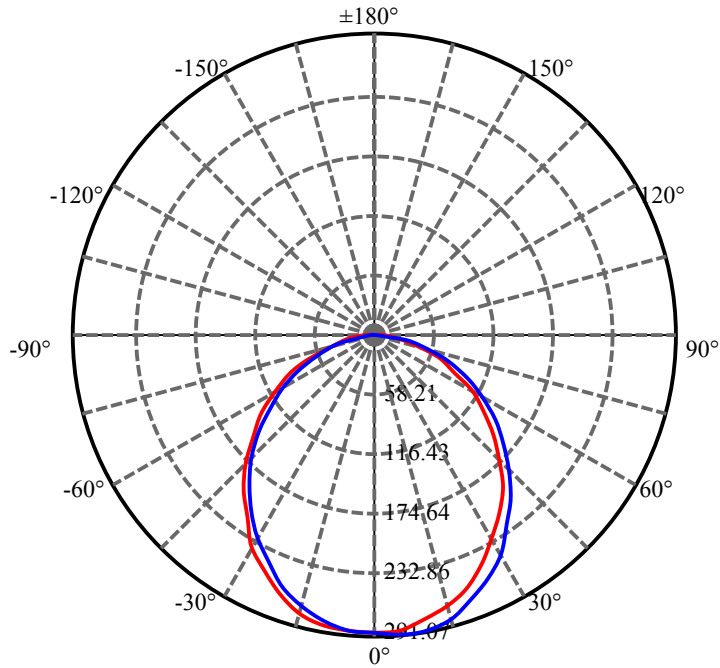
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	287.272	0.000	0	0.00%	0.00%
5.0	286.306	6.857	6.857	0.00%	0.91%
10.0	282.146	20.335	27.192	0.00%	3.61%
15.0	275.137	33.058	60.25	0.00%	8.00%
20.0	263.684	44.406	104.656	0.00%	13.90%
25.0	248.558	53.725	158.381	0.00%	21.04%
30.0	232.378	60.863	219.244	0.00%	29.13%
35.0	213.470	65.654	284.898	0.00%	37.85%
40.0	193.941	67.973	352.871	0.00%	46.88%
45.0	173.507	68.036	420.907	0.00%	55.92%
50.0	151.695	65.712	486.619	0.00%	64.65%
55.0	130.910	61.448	548.067	0.00%	72.82%
60.0	110.017	55.690	603.756	0.00%	80.21%
65.0	88.556	48.274	652.03	0.00%	86.63%
70.0	67.366	39.481	691.51	0.00%	91.87%
75.0	45.879	29.600	721.111	0.00%	95.81%
80.0	25.782	19.174	740.285	0.00%	98.35%
85.0	9.035	9.461	749.746	0.00%	99.61%
90.0	0.216	2.533	752.279	0.00%	99.95%
95.0	0.014	0.063	752.342	0.00%	99.96%
100.0	0.014	0.007	752.349	0.00%	99.96%
105.0	0.014	0.007	752.357	0.00%	99.96%
110.0	0.027	0.011	752.367	0.00%	99.96%
115.0	0.014	0.010	752.377	0.00%	99.96%
120.0	0.054	0.016	752.394	0.00%	99.96%
125.0	0.027	0.019	752.413	0.00%	99.97%
130.0	0.041	0.015	752.427	0.00%	99.97%
135.0	0.095	0.027	752.454	0.00%	99.97%
140.0	0.081	0.032	752.487	0.00%	99.98%
145.0	0.108	0.032	752.518	0.00%	99.98%
150.0	0.081	0.028	752.546	0.00%	99.98%
155.0	0.149	0.029	752.575	0.00%	99.99%
160.0	0.162	0.033	752.608	0.00%	99.99%
165.0	0.203	0.030	752.638	0.00%	100.00%
170.0	0.162	0.022	752.66	0.00%	100.00%
175.0	0.135	0.011	752.67	0.00%	100.00%
180.0	0.102	0.003	752.673	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	219.24	N.A.	29.13%
0-40	352.87	N.A.	46.88%
0-60	603.76	N.A.	80.21%
0-90	752.28	N.A.	99.95%
0-120	752.39	N.A.	99.96%
0-180	752.67	N.A.	100.00%
60-90	148.52	N.A.	19.73%
90-120	0.11	N.A.	0.02%
90-130	0.15	N.A.	0.02%
90-150	0.27	N.A.	0.04%
90-180	0.39	N.A.	0.05%
0-59.85	602.14	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	27.19
10-20	77.46
20-30	114.59
30-40	133.63
40-50	133.75
50-60	117.14
60-70	87.75
70-80	48.77
80-90	11.99
90-100	0.07
100-110	0.02
110-120	0.03
120-130	0.03
130-140	0.06
140-150	0.06
150-160	0.06
160-170	0.05
170-180	0.01

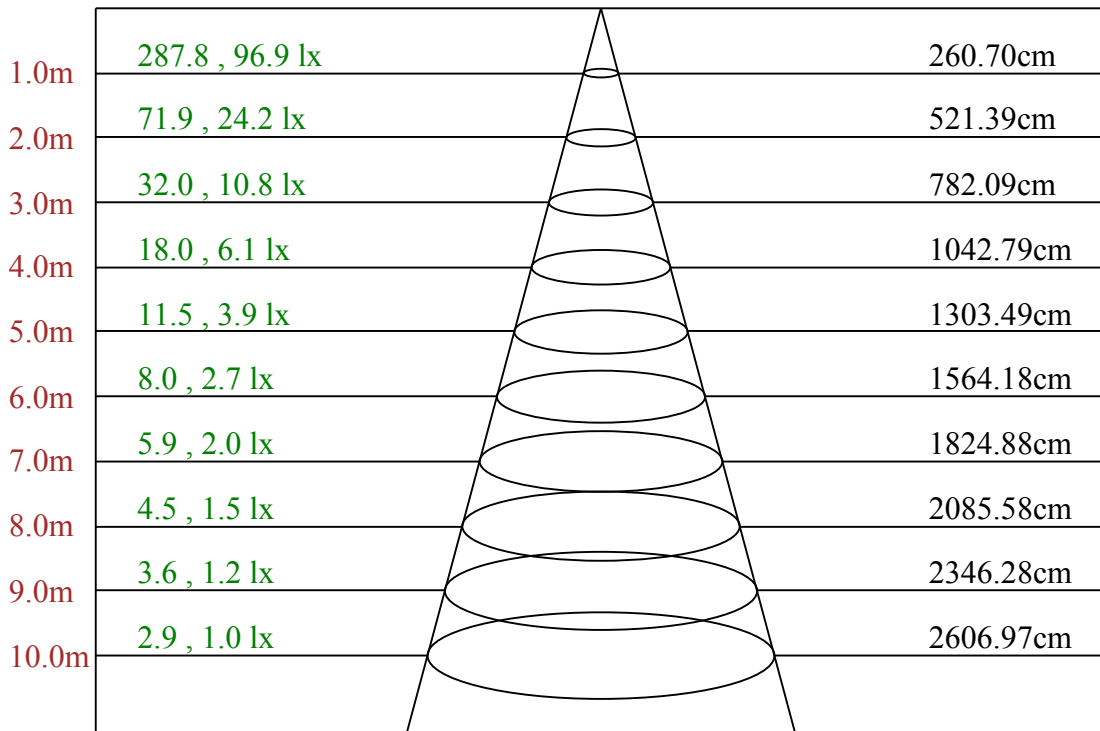


C0/C180: —

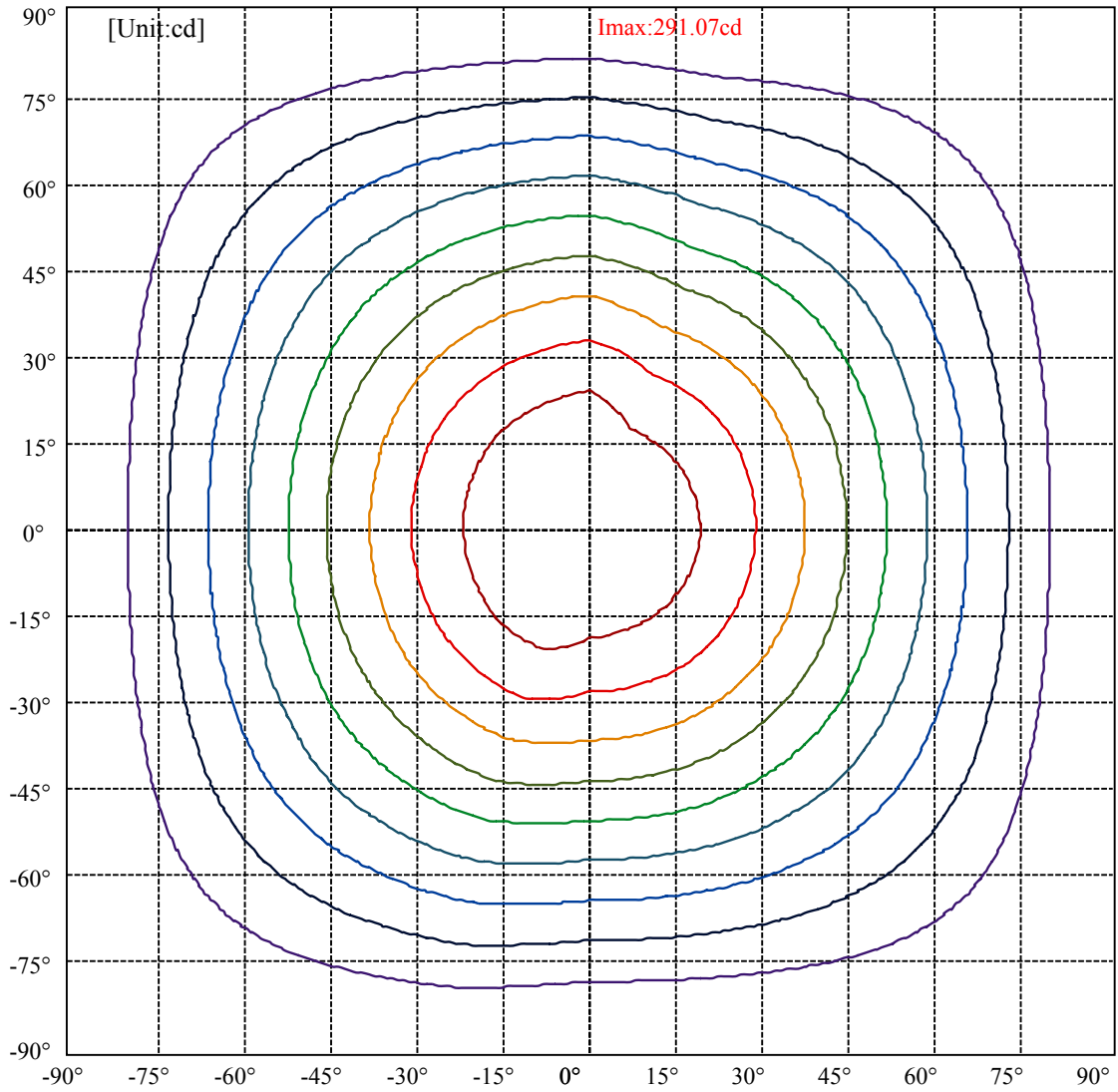
C90/C270: —

Field angle(10%Imax):C0/180Left:79.4 Right:79.1
:C90/270Left:77.5 Right:81.1

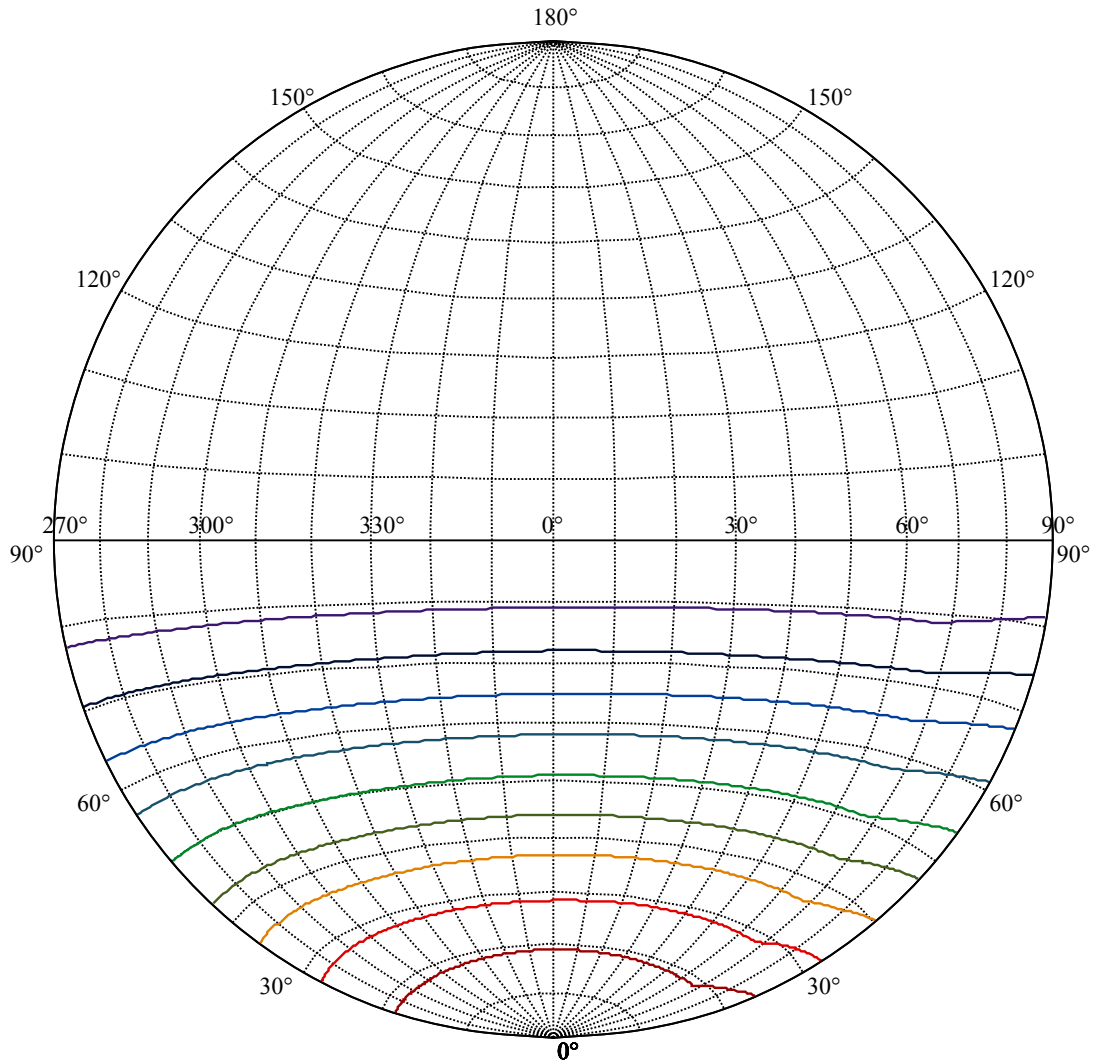
Beam Angle(50%Imax):C0/180Left:52.2 Right:51.5
:C90/270Left:49.9 Right:54.1



Max , Ave Beam angle of C90 plane 105.01



(10%Imax)	29.1073	—
(20%Imax)	58.2146	—
(30%Imax)	87.3219	—
(40%Imax)	116.429	—
(50%Imax)	145.536	—
(60%Imax)	174.644	—
(70%Imax)	203.751	—
(80%Imax)	232.858	—
(90%Imax)	261.966	—



House

[Unit:cd]

Road

Imax:291.07

(10%Imax) 29.1073

(20%Imax) 58.2146

(30%Imax) 87.3219

(40%Imax) 116.429

(50%Imax) 145.536

(60%Imax) 174.644

(70%Imax) 203.751

(80%Imax) 232.858

(90%Imax) 261.966



LB4S24V-30K

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	287.27	286.10	278.11	270.55	259.96	244.18	227.98	211.55	191.89
22.5	287.27	284.59	278.32	271.19	259.31	244.40	229.06	212.20	191.24
45.0	287.27	284.37	278.32	269.68	259.31	244.18	229.06	210.90	192.32
67.5	287.27	283.94	278.54	270.76	258.88	244.40	228.41	210.90	190.59
90.0	287.27	291.07	290.43	283.94	272.71	259.09	244.40	221.71	204.85
112.5	287.27	288.91	287.40	281.57	270.55	255.85	239.43	219.98	201.18
135.0	287.27	287.62	285.24	280.05	269.25	254.55	237.27	218.04	199.02
157.5	287.27	286.75	285.46	279.62	268.17	253.04	236.40	215.87	196.43
180.0	287.27	286.54	285.02	278.32	266.87	251.75	235.54	214.15	195.13
202.5	287.27	286.32	284.37	278.11	266.87	251.10	234.46	214.58	194.27
225.0	287.27	286.97	283.73	277.89	267.30	252.61	234.46	214.58	195.35
247.5	287.27	286.54	284.81	278.76	267.95	252.18	236.19	216.31	196.21
270.0	287.27	286.75	279.62	270.98	258.01	242.24	225.17	208.10	187.57
292.5	287.27	285.24	278.54	269.68	257.36	242.45	225.81	208.53	188.00
315.0	287.27	284.59	277.89	270.55	257.58	241.59	227.11	208.10	188.86
337.5	287.27	284.59	278.54	270.55	258.88	243.32	227.33	210.04	190.16
360.0	287.27	286.10	278.11	270.55	259.96	244.18	227.98	211.55	191.89
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	171.36	149.97	128.14	108.48	86.65	66.77	44.73	25.28	9.29
22.5	171.14	149.97	129.44	108.91	87.30	66.56	45.16	25.72	9.51
45.0	171.14	149.97	129.01	108.91	87.73	66.12	44.08	25.72	9.72
67.5	170.93	148.89	128.79	108.26	87.52	66.34	44.30	23.99	8.21
90.0	184.33	162.07	141.97	120.36	99.40	77.14	55.32	33.49	13.18
112.5	180.65	158.83	138.95	117.34	95.73	74.34	52.29	31.12	11.89
135.0	178.27	157.10	135.71	114.10	92.92	71.09	49.70	28.74	11.24
157.5	176.76	153.64	133.54	112.37	90.76	69.37	48.40	27.44	9.94
180.0	175.68	152.56	132.46	110.42	89.46	68.28	46.68	26.36	9.51
202.5	174.39	152.56	132.25	109.77	88.81	67.64	46.03	25.50	8.86
225.0	174.39	152.99	131.82	111.29	88.60	67.64	45.81	25.93	8.86
247.5	176.55	153.86	133.54	111.72	90.33	69.37	47.54	27.01	8.21
270.0	166.61	145.00	122.52	103.51	81.25	60.07	38.90	19.45	4.54
292.5	167.04	145.86	123.82	103.51	82.33	60.94	39.76	20.53	5.62
315.0	167.47	145.86	125.55	104.59	83.20	62.02	41.71	22.26	7.35
337.5	169.42	148.02	127.06	106.75	84.92	64.18	43.65	23.99	8.64
360.0	171.36	149.97	128.14	108.48	86.65	66.77	44.73	25.28	9.29
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67.5	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00
90.0	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270.0	0.00	0.22	0.22	0.22	0.43	0.22	0.43	0.43	0.22
292.5	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.22
315.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
337.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

LB4S24V-30K

Intensity data(cd)

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C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.00	0.22	0.00	0.00	0.22	0.00	0.43	0.22	0.43
22.5	0.22	0.00	0.22	0.00	0.22	0.22	0.22	0.22	0.22
45.0	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.00	0.22
67.5	0.00	0.00	0.00	0.00	0.22	0.00	0.22	0.00	0.00
90.0	0.00	0.00	0.22	0.22	0.22	0.43	0.22	0.22	0.22
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.43	0.22
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00
180.0	0.00	0.00	0.00	0.00	0.22	0.22	0.00	0.00	0.00
202.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00
225.0	0.00	0.00	0.00	0.00	0.00	0.22	0.43	0.00	0.00
247.5	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00
270.0	0.65	0.43	0.43	0.43	0.43	0.43	0.65	0.65	0.86
292.5	0.22	0.22	0.43	0.22	0.00	0.43	0.22	0.00	0.00
315.0	0.00	0.00	0.00	0.22	0.43	0.22	0.00	0.22	0.00
337.5	0.22	0.22	0.22	0.00	0.22	0.00	0.22	0.22	0.00
360.0	0.00	0.22	0.00	0.00	0.22	0.00	0.43	0.22	0.43

C/γ(°)	180.0
0.0	0.10
22.5	0.10
45.0	0.10
67.5	0.10
90.0	0.10
112.5	0.10
135.0	0.10
157.5	0.10
180.0	0.10
202.5	0.10
225.0	0.10
247.5	0.10
270.0	0.10
292.5	0.10
315.0	0.10
337.5	0.10
360.0	0.10