



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

LumCAT:

Luminaire:

Report No:

Ballast type:

Test No:

Voltage(V): 120.06

LampCAT:

Current(A): 0.1670

Lamp flux(lm): -1.0

Power (W): 19.87

Number of Lamps: 1

PF: 0.9912

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1329.80, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 66.92

Central intensity(cd): 471.599, Maximum intensity(cd): 480.777

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=158.2

[C90/270]Total=160.8

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(%): 0.55%

Down flux rate of LUM(%): 99.45%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 78.997%

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	471.599	0.000	0	0.00%	0.00%
5.0	469.882	11.255	11.255	0.00%	0.85%
10.0	463.789	33.400	44.655	0.00%	3.36%
15.0	452.907	54.378	99.033	0.00%	7.45%
20.0	438.071	73.429	172.462	0.00%	12.97%
25.0	419.254	89.918	262.38	0.00%	19.73%
30.0	396.751	103.266	365.646	0.00%	27.50%
35.0	370.617	113.000	478.646	0.00%	35.99%
40.0	341.644	118.835	597.482	0.00%	44.93%
45.0	309.995	120.656	718.138	0.00%	54.00%
50.0	275.831	118.375	836.512	0.00%	62.91%
55.0	239.501	112.050	948.563	0.00%	71.33%
60.0	201.516	101.940	1050.502	0.00%	79.00%
65.0	162.267	88.436	1138.939	0.00%	85.65%
70.0	122.346	72.066	1211.005	0.00%	91.07%
75.0	83.165	53.717	1264.722	0.00%	95.11%
80.0	46.673	34.741	1299.463	0.00%	97.72%
85.0	17.486	17.434	1316.897	0.00%	99.03%
90.0	2.717	5.532	1322.428	0.00%	99.45%
95.0	1.184	1.068	1323.497	0.00%	99.53%
100.0	1.022	0.599	1324.096	0.00%	99.57%
105.0	0.847	0.500	1324.596	0.00%	99.61%
110.0	0.807	0.432	1325.029	0.00%	99.64%
115.0	0.807	0.409	1325.437	0.00%	99.67%
120.0	0.928	0.422	1325.859	0.00%	99.70%
125.0	0.901	0.423	1326.282	0.00%	99.74%
130.0	1.063	0.427	1326.709	0.00%	99.77%
135.0	1.116	0.440	1327.149	0.00%	99.80%
140.0	1.251	0.438	1327.587	0.00%	99.83%
145.0	1.331	0.431	1328.018	0.00%	99.87%
150.0	1.479	0.414	1328.432	0.00%	99.90%
155.0	1.574	0.386	1328.818	0.00%	99.93%
160.0	1.668	0.340	1329.158	0.00%	99.95%
165.0	1.695	0.277	1329.435	0.00%	99.97%
170.0	1.628	0.197	1329.633	0.00%	99.99%
175.0	1.803	0.123	1329.755	0.00%	100.00%
180.0	1.734	0.042	1329.798	0.00%	100.00%

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

Date:
Humidity(%): 58%

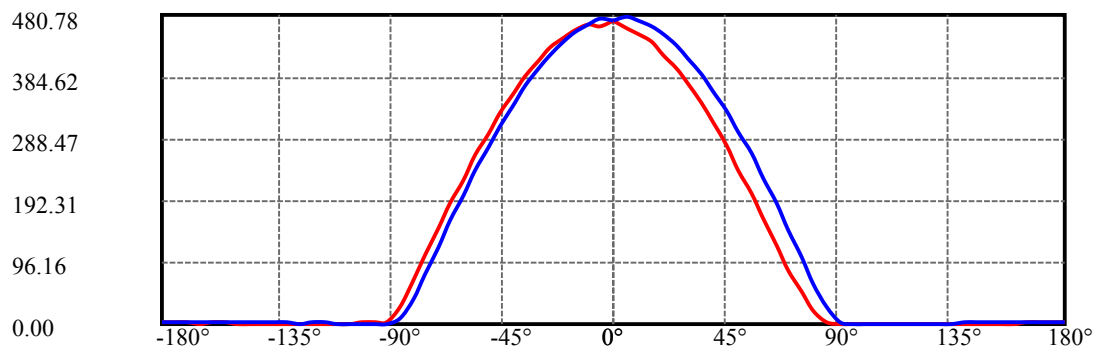
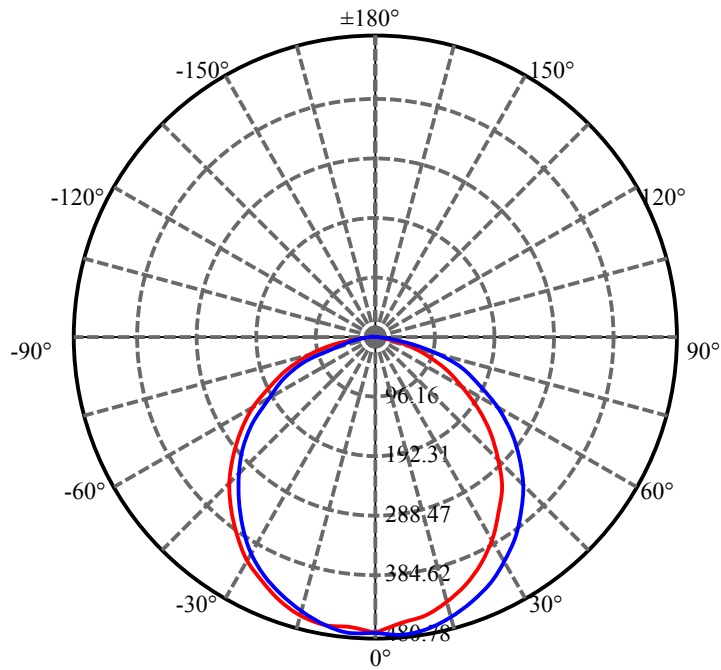
Operator: Tester

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	365.65	N.A.	27.50%
0-40	597.48	N.A.	44.93%
0-60	1050.50	N.A.	79.00%
0-90	1322.43	N.A.	99.45%
0-120	1325.86	N.A.	99.70%
0-180	1329.80	N.A.	100.00%
60-90	271.93	N.A.	20.45%
90-120	3.43	N.A.	0.26%
90-130	4.28	N.A.	0.32%
90-150	6.00	N.A.	0.45%
90-180	7.33	N.A.	0.55%
0-60.75	1063.84	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	44.66
10-20	127.81
20-30	193.18
30-40	231.84
40-50	239.03
50-60	213.99
60-70	160.50
70-80	88.46
80-90	22.97
90-100	1.67
100-110	0.93
110-120	0.83
120-130	0.85
130-140	0.88
140-150	0.84
150-160	0.73
160-170	0.47
170-180	0.12

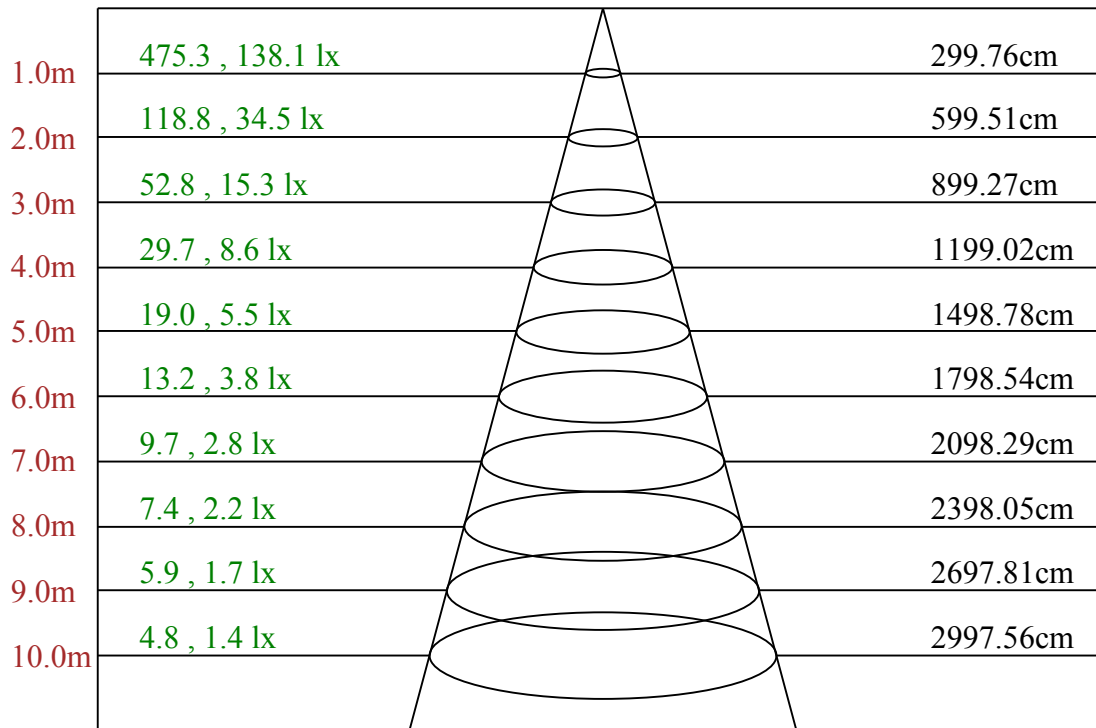


C0/C180: —

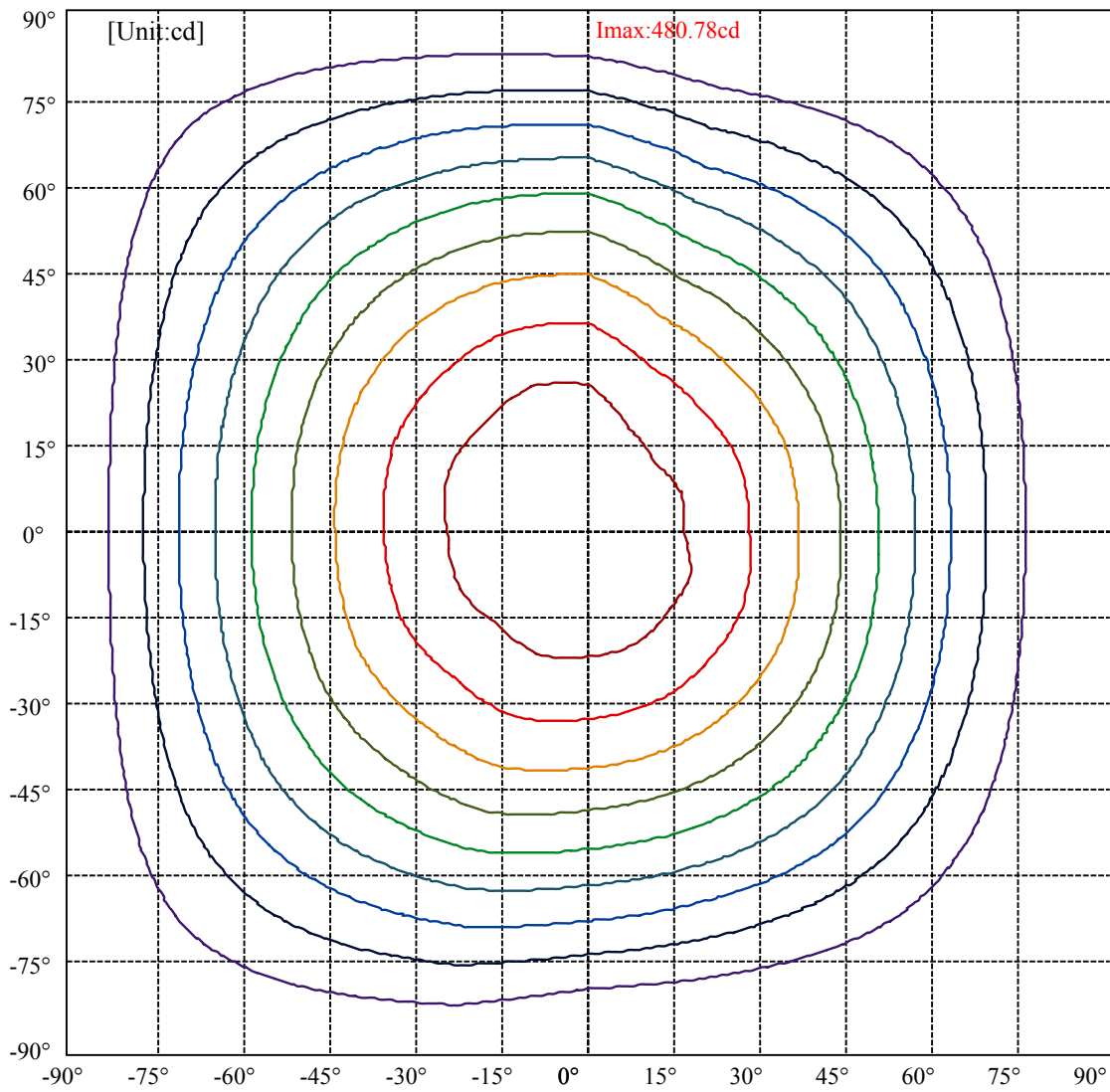
C90/C270: —










Field angle(10%Imax):C0/180Left:82.7 Right:75.5
:C90/270Left:78.8 Right:82.0

Beam Angle(50%Imax):C0/180Left:58.6 Right:50.6
:C90/270Left:54.8 Right:58.4



Max , Ave Beam angle of C112.5 plane 112.58

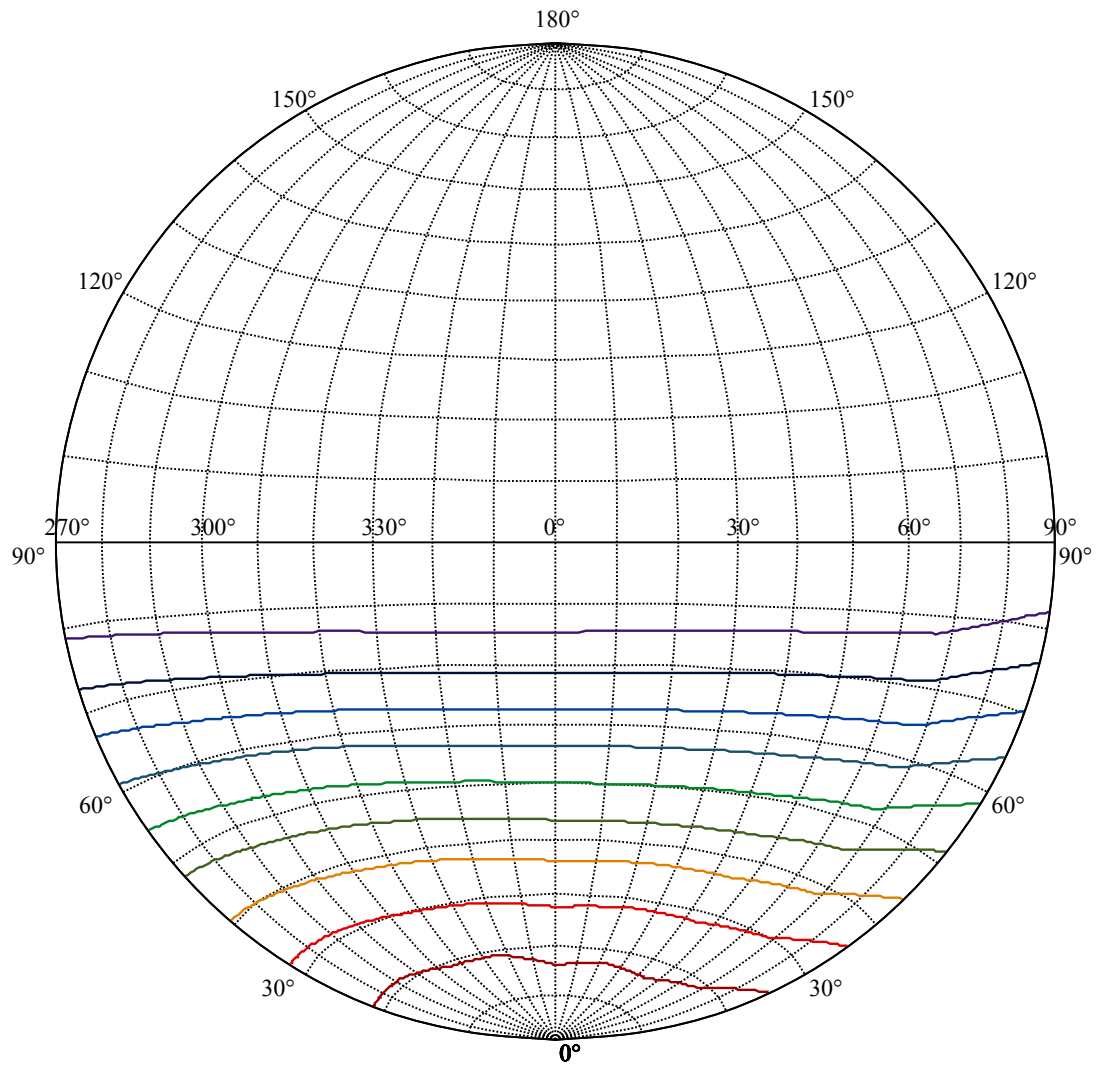


(10%Imax)	48.0372	
(20%Imax)	96.0744	
(30%Imax)	144.112	
(40%Imax)	192.149	
(50%Imax)	240.186	
(60%Imax)	288.223	
(70%Imax)	336.261	
(80%Imax)	384.298	
(90%Imax)	432.335	

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

Date:
Humidity(%): 58%

Operator: Tester



House

[Unit:cd]

Road

I_{max}:480.78

(10%I _{max}) 48.071	
(20%I _{max}) 96.142	
(30%I _{max}) 144.213	
(40%I _{max}) 192.284	
(50%I _{max}) 240.355	
(60%I _{max}) 288.426	
(70%I _{max}) 336.497	
(80%I _{max}) 384.568	
(90%I _{max}) 432.639	

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	471.60	459.47	451.08	437.52	418.80	398.14	372.53	344.12	312.48
22.5	471.60	464.42	454.95	440.53	423.32	401.15	376.19	346.92	314.85
45.0	471.60	459.47	450.65	437.31	420.52	400.50	375.11	346.06	315.50
67.5	471.60	466.36	458.61	445.91	428.48	408.25	385.01	357.68	326.47
90.0	471.60	477.76	473.03	463.78	451.08	433.86	412.99	388.88	361.77
112.5	471.60	480.78	476.69	468.51	456.24	439.46	419.44	394.05	366.29
135.0	471.60	474.11	470.66	462.48	450.65	433.86	414.49	391.04	364.56
157.5	471.60	477.76	473.68	465.71	453.66	437.09	416.21	391.68	364.56
180.0	471.60	464.21	465.07	458.18	445.91	429.77	409.33	384.79	357.89
202.5	471.60	469.80	466.57	458.40	445.91	429.56	409.33	385.01	357.46
225.0	471.60	464.21	459.90	451.08	439.24	422.46	401.37	377.48	351.22
247.5	471.60	470.23	465.28	455.81	441.61	424.61	403.95	379.84	352.73
270.0	471.60	474.75	466.57	454.31	438.17	418.80	395.98	369.94	340.46
292.5	471.60	475.83	467.65	453.23	436.44	415.35	391.68	363.70	333.14
315.0	471.60	468.51	459.26	446.77	429.77	408.68	383.93	357.25	326.04
337.5	471.60	470.45	460.98	446.99	429.34	406.53	380.49	351.44	320.88
360.0	471.60	459.47	451.08	437.52	418.80	398.14	372.53	344.12	312.48
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	277.84	239.96	202.30	163.13	123.53	84.79	49.93	19.58	2.80
22.5	278.48	241.46	204.02	166.14	127.62	89.10	52.30	22.81	3.44
45.0	282.14	245.98	208.75	171.09	133.43	94.48	57.03	25.61	5.17
67.5	293.55	257.82	219.94	180.78	141.39	103.30	65.21	31.21	8.39
90.0	332.07	300.00	264.92	227.05	186.80	145.05	103.95	61.98	25.61
112.5	336.37	304.31	268.58	230.70	190.89	150.43	109.33	67.79	31.85
135.0	336.80	304.74	269.01	230.70	191.97	150.65	108.90	68.65	33.14
157.5	334.44	301.51	266.00	229.20	189.17	150.43	109.76	69.51	30.56
180.0	327.55	295.05	261.91	225.32	186.80	148.49	108.47	69.30	27.98
202.5	328.84	297.42	261.26	224.46	187.23	147.20	105.88	66.07	28.62
225.0	322.81	290.53	256.74	222.31	183.79	143.98	104.81	65.85	29.05
247.5	323.03	291.82	256.10	218.65	180.13	140.75	102.22	63.27	28.41
270.0	308.39	274.39	237.59	199.07	161.19	119.44	77.48	38.09	9.68
292.5	299.14	264.49	226.83	187.23	146.77	105.88	66.72	30.78	7.32
315.0	292.90	256.31	219.94	179.48	137.30	95.34	57.46	24.75	4.30
337.5	285.58	247.49	208.11	168.94	128.27	88.24	51.22	21.52	3.44
360.0	277.84	239.96	202.30	163.13	123.53	84.79	49.93	19.58	2.80
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1.29	1.08	1.08	0.86	1.08	0.86	1.29	1.08	1.29
22.5	1.51	0.86	1.29	1.29	1.08	1.29	1.08	1.29	1.29
45.0	1.72	1.29	1.08	0.86	1.29	1.29	1.29	1.08	1.29
67.5	1.72	1.08	1.08	0.86	0.86	1.08	1.08	0.86	1.08
90.0	3.87	0.86	0.65	0.86	0.65	0.65	1.08	1.08	1.29
112.5	6.46	1.08	0.86	0.86	0.86	0.65	0.86	0.86	1.29
135.0	4.95	1.72	1.08	0.43	0.43	0.22	0.86	0.86	0.86
157.5	3.66	1.51	1.29	0.86	0.65	0.43	0.43	0.43	0.43
180.0	2.58	1.72	1.51	0.65	0.43	0.22	0.43	0.43	0.65
202.5	3.01	1.51	1.29	0.86	0.65	0.43	0.43	0.43	0.65
225.0	3.01	1.08	0.22	0.65	0.43	0.43	0.65	0.65	0.65
247.5	3.66	0.65	0.43	0.43	0.22	0.43	0.43	0.65	0.86
270.0	1.29	1.08	1.08	1.08	1.29	1.72	1.72	1.29	1.51
292.5	1.72	1.08	1.08	1.08	1.08	1.08	1.08	1.29	1.29
315.0	1.72	1.08	1.29	0.86	0.86	1.08	1.08	1.08	1.29
337.5	1.29	1.29	1.08	1.08	1.08	1.08	1.08	1.08	1.29
360.0	1.29	1.08	1.08	0.86	1.08	0.86	1.29	1.08	1.29

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	1.29	1.29	1.29	1.29	1.29	1.08	1.51	1.51	1.72
22.5	1.08	1.29	1.29	1.29	1.51	1.51	1.51	1.51	1.72
45.0	1.29	1.29	1.51	1.51	1.51	1.72	1.94	1.72	1.72
67.5	1.29	1.29	1.51	1.51	1.94	1.72	1.72	1.51	1.94
90.0	1.08	1.51	1.51	1.72	1.94	1.72	1.72	1.72	1.72
112.5	1.29	1.51	1.51	1.72	1.51	1.72	1.94	1.72	1.94
135.0	1.08	1.08	1.29	1.51	1.94	1.72	1.94	1.94	1.94
157.5	0.86	1.08	1.08	1.51	1.51	1.51	1.72	1.51	1.72
180.0	0.65	0.65	0.86	1.29	1.51	1.51	1.29	1.72	1.72
202.5	0.65	0.86	1.08	1.29	1.29	1.72	1.72	1.72	1.72
225.0	0.65	0.86	1.08	1.29	1.51	1.72	1.51	1.72	1.94
247.5	0.86	1.08	1.51	1.51	1.29	1.51	1.94	1.29	1.72
270.0	1.72	1.94	1.51	1.72	1.72	2.37	1.72	2.15	2.15
292.5	1.51	1.51	1.51	1.51	1.72	1.94	1.72	1.72	1.94
315.0	1.29	1.51	1.51	1.51	1.51	1.72	1.51	1.08	1.94
337.5	1.29	1.29	1.29	1.51	1.51	1.51	1.72	1.51	1.29
360.0	1.29	1.29	1.29	1.29	1.29	1.08	1.51	1.51	1.72
C/γ(°)	180.0								
0.0	1.73								
22.5	1.73								
45.0	1.73								
67.5	1.73								
90.0	1.73								
112.5	1.73								
135.0	1.73								
157.5	1.73								
180.0	1.73								
202.5	1.73								
225.0	1.73								
247.5	1.73								
270.0	1.73								
292.5	1.73								
315.0	1.73								
337.5	1.73								
360.0	1.73								