



SGSO

Address: LIT by CARDI

Client:

LumCAT: 0017440224 KAI 10W 4000K 1200lm

Luminaire:

Report No:

Voltage(V): 230.4500

Test No:

Current(A): 0.0458

LampCAT: LED

Power (W): 10.0000

Lamp flux(lm): -1.0

PF: 0.9472

Number of Lamps: 1

Ballast type:

Length(mm): -80

Width(mm): -80

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1200.00

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 120.00

Central intensity(cd): 595.547

Maximum intensity(cd): 595.547

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=86.5

[C90/270]Total=87.5

Field angle(10%Imax): [C0/180]Total=140.2

[C90/270]Total=145.6

Maximum s/h(1/2): C0_180=1.16 C90_270=1.22

Maximum s/h(1/4): C0_180=1.18 C90_270=1.22

Up flux rate of lamp(%): 0.76%

Down flux rate of lamp(%): 99.24%

Up flux rate of LUM(%): 0.76%

Down flux rate of LUM(%): 99.24%

CIE Type : Direct lighting

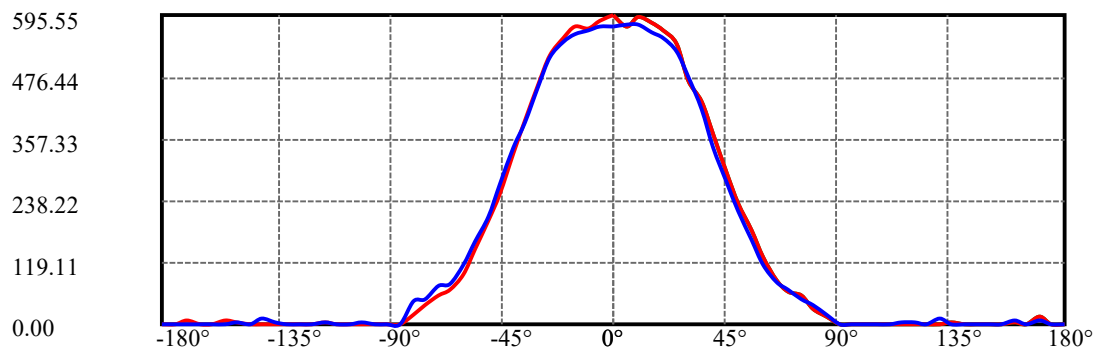
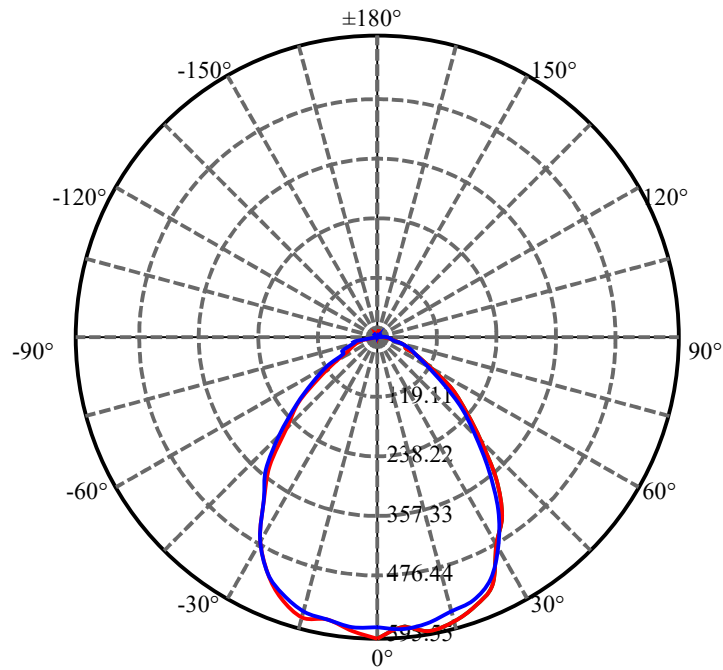
Output flux ratio in π solid angle : 87.319%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	623.582	0.000	0	.000%	.000%
5.0	623.198	13.830	13.83	.000%	1.153%
10.0	621.373	41.312	55.142	.000%	4.595%
15.0	614.364	68.018	123.16	.000%	10.263%
20.0	595.207	92.498	215.657	.000%	17.971%
25.0	561.022	112.523	328.181	.000%	27.348%
30.0	503.360	124.986	453.166	.000%	37.764%
35.0	439.551	128.838	582.005	.000%	48.500%
40.0	369.934	125.318	707.323	.000%	58.943%
45.0	281.063	111.846	819.169	.000%	68.264%
50.0	210.629	92.190	911.359	.000%	75.946%
55.0	161.705	75.120	986.479	.000%	82.206%
60.0	124.351	61.353	1047.833	.000%	87.319%
65.0	87.286	47.740	1095.572	.000%	91.297%
70.0	66.833	36.210	1131.782	.000%	94.315%
75.0	46.284	27.435	1159.217	.000%	96.601%
80.0	32.408	19.537	1178.755	.000%	98.229%
85.0	7.298	10.011	1188.766	.000%	99.064%
90.0	1.152	2.147	1190.913	.000%	99.242%
95.0	0.000	0.293	1191.206	.000%	99.267%
100.0	1.873	0.472	1191.678	.000%	99.306%
105.0	0.816	0.668	1192.345	.000%	99.362%
110.0	0.480	0.314	1192.66	.000%	99.388%
115.0	2.881	0.790	1193.449	.000%	99.454%
120.0	0.336	0.726	1194.175	.000%	99.514%
125.0	0.000	0.072	1194.247	.000%	99.520%
130.0	4.177	0.843	1195.09	.000%	99.591%
135.0	2.017	1.161	1196.251	.000%	99.687%
140.0	2.353	0.751	1197.002	.000%	99.750%
145.0	1.632	0.617	1197.619	.000%	99.801%
150.0	2.016	0.499	1198.117	.000%	99.843%
155.0	1.200	0.378	1198.495	.000%	99.874%
160.0	2.545	0.364	1198.859	.000%	99.905%
165.0	3.073	0.430	1199.289	.000%	99.940%
170.0	5.714	0.484	1199.773	.000%	99.981%
175.0	0.672	0.212	1199.985	.000%	99.998%
180.0	1.056	0.019	1200.004	.000%	100.000%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	453.17	N.A.	37.76%
0-40	707.32	N.A.	58.94%
0-60	1047.83	N.A.	87.32%
0-90	1190.91	N.A.	99.24%
0-120	1194.17	N.A.	99.51%
0-180	1200.00	N.A.	100.00%
60-90	204.43	N.A.	17.04%
90-120	5.41	N.A.	0.45%
90-130	6.32	N.A.	0.53%
90-150	9.35	N.A.	0.78%
90-180	11.22	N.A.	0.93%
0-53.24	960.00	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	55.14
10-20	160.52
20-30	237.51
30-40	254.16
40-50	204.04
50-60	136.47
60-70	83.95
70-80	46.97
80-90	12.16
90-100	0.76
100-110	0.98
110-120	1.52
120-130	0.91
130-140	1.91
140-150	1.12
150-160	0.74
160-170	0.91
170-180	0.21



C0(Max):

C0/C180:

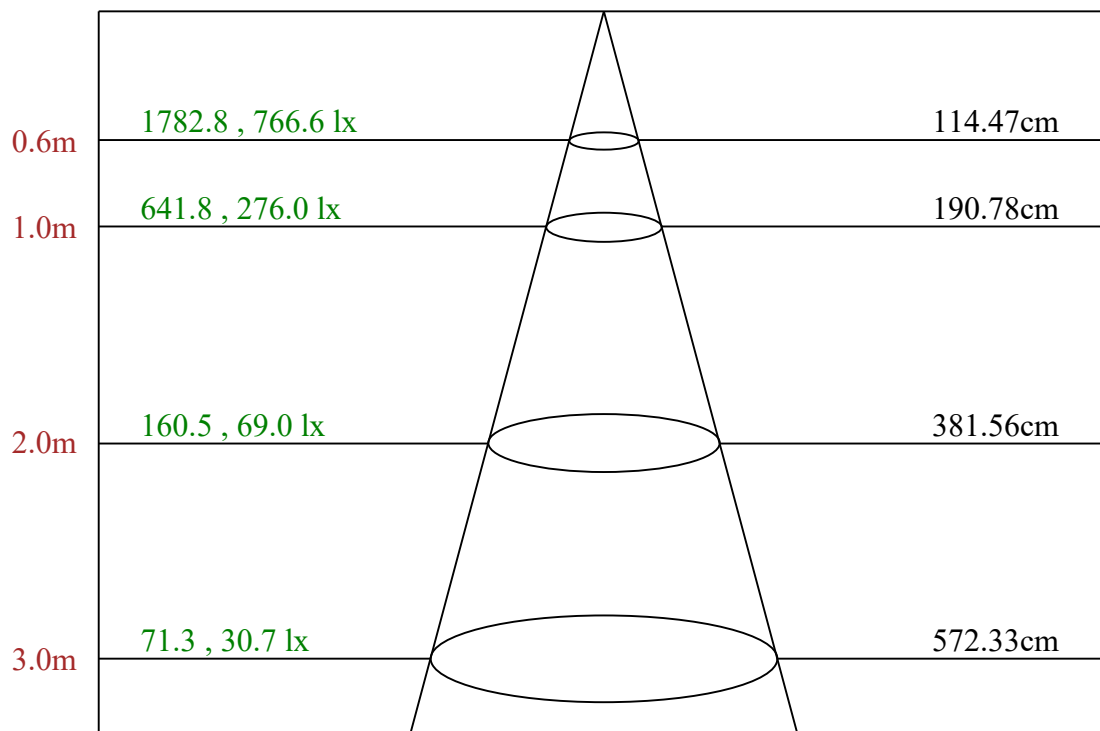
C90/C270:

Field angle(10%I_{max}):C0/180Left:68.0 Right:72.2

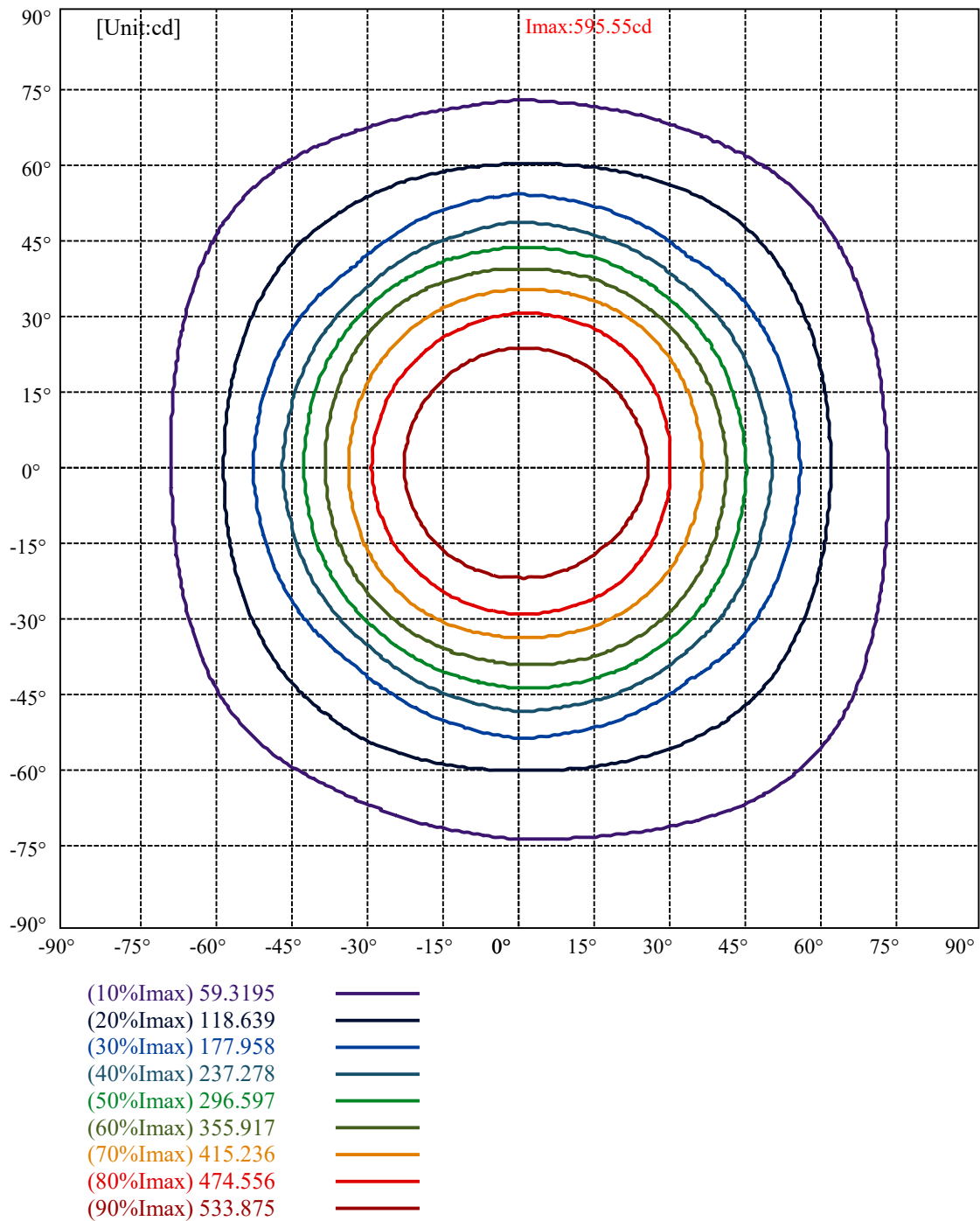
:C90/270Left:78.1 Right:67.5

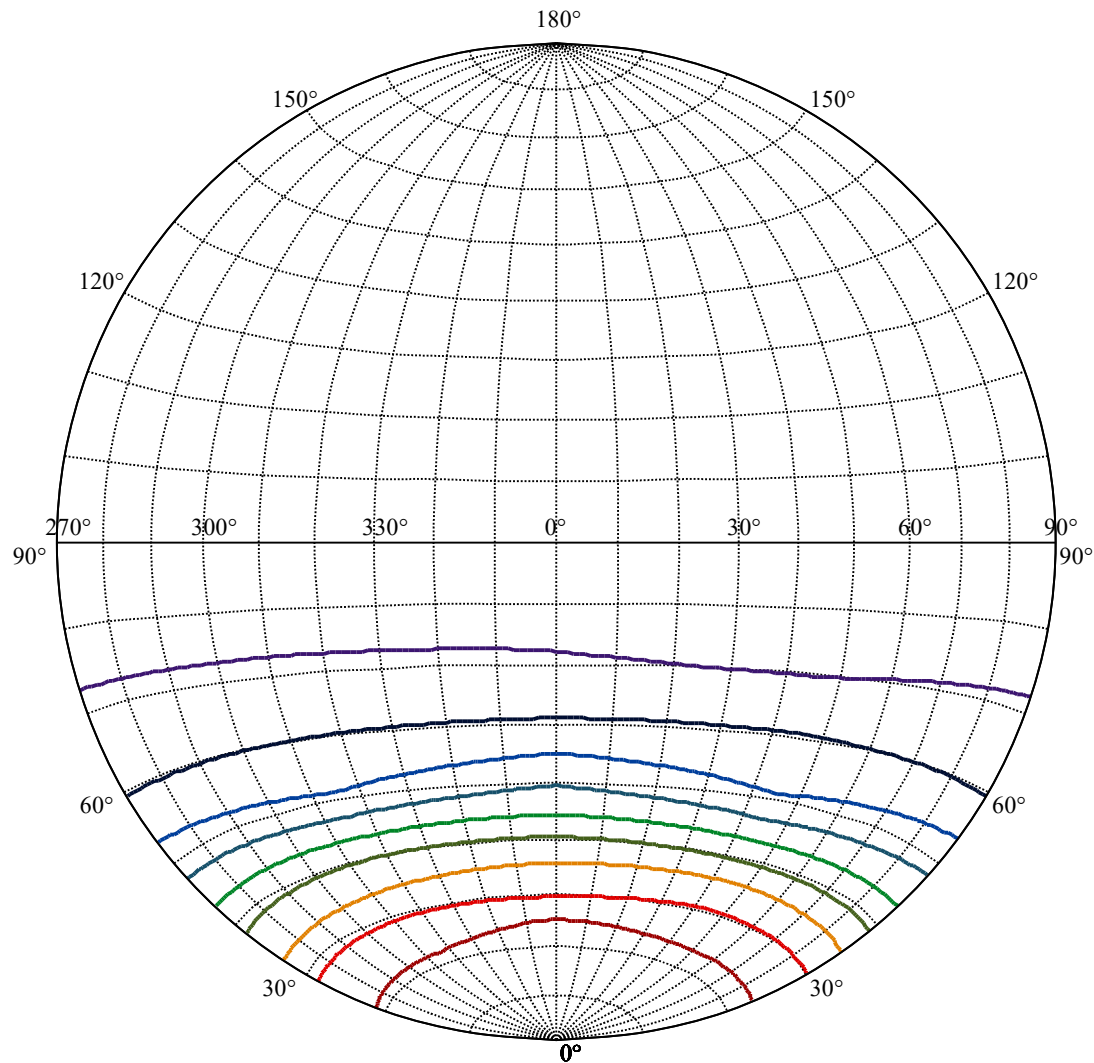
Beam Angle(50%I_{max}):C0/180Left:42.0 Right:44.5

:C90/270Left:48.7 Right:38.8



Max , Ave Beam angle of C0 plane 87.30



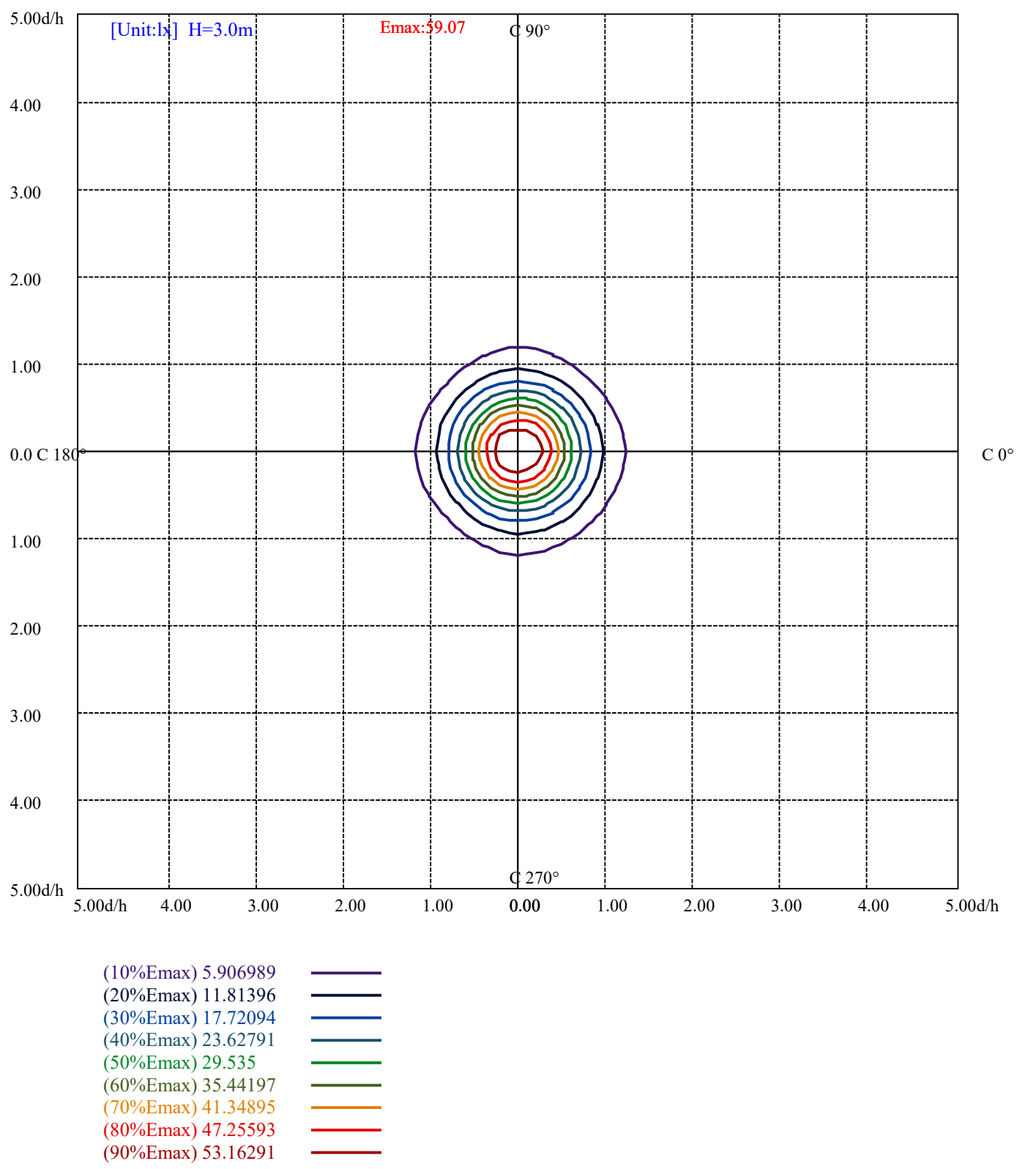


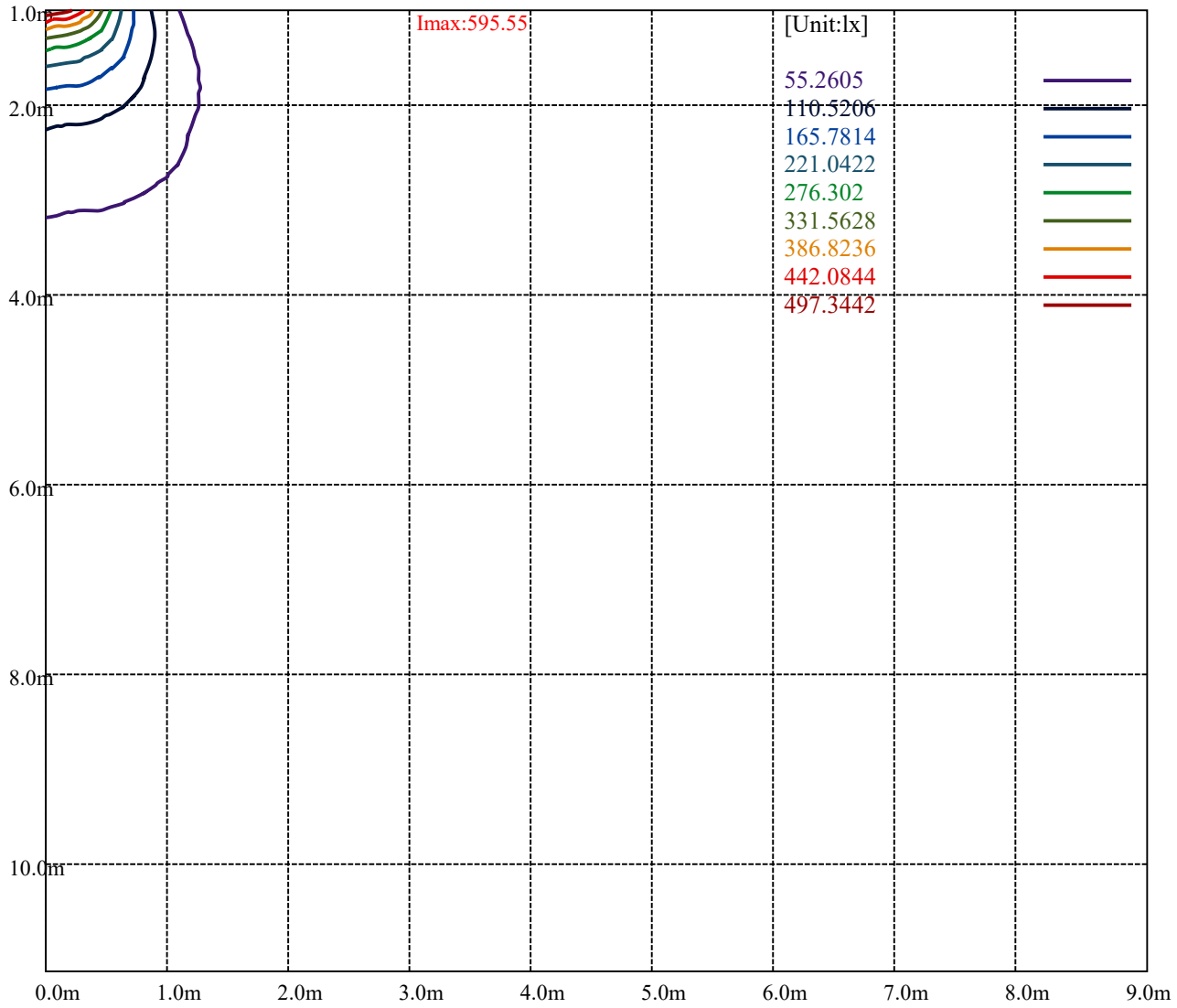
House

[Unit:cd]

Road

Imax:595.55	
(10%Imax) 55.2605	
(20%Imax) 110.5206	
(30%Imax) 165.7814	
(40%Imax) 221.0422	
(50%Imax) 276.302	
(60%Imax) 331.5628	
(70%Imax) 386.8236	
(80%Imax) 442.0844	
(90%Imax) 497.3442	





Luminance Table

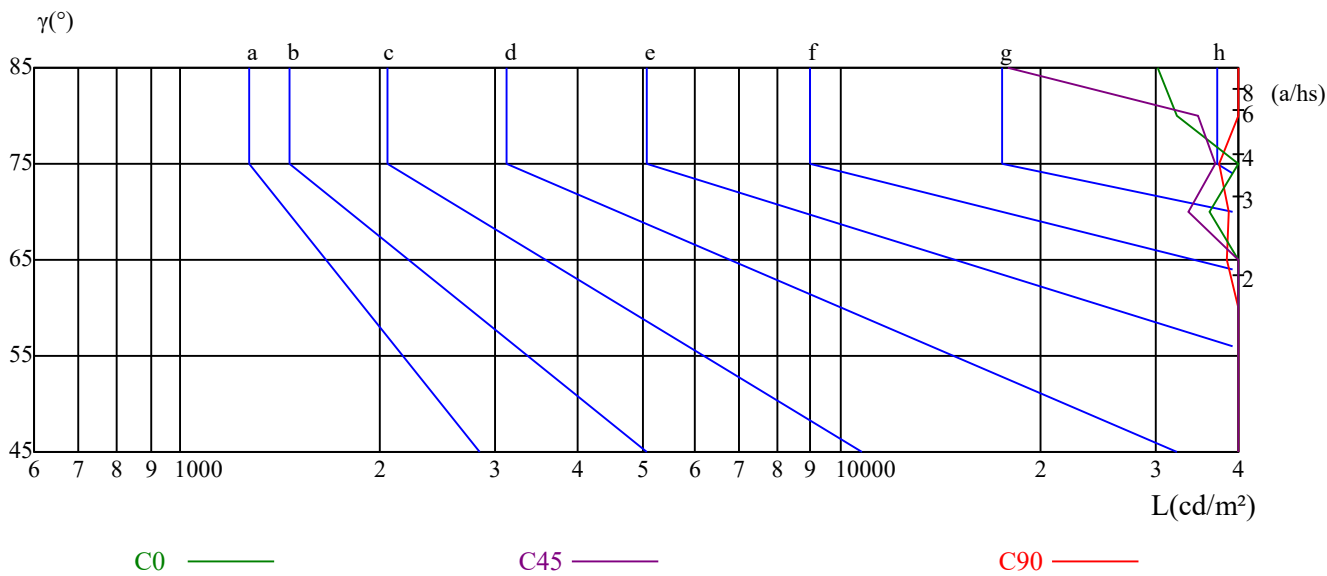
γ	45	50	55	60	65	70	75	80	85
C0	81823	72472	62550	51335	40098	36279	43010	32256	30101
C45	75004	57801	50807	49491	42111	33584	36983	34707	17897
C90	76709	67067	56493	45378	38420	38767	37531	40424	42303

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
35903	37414	39594	35477	37120	29724	15051	21152	12813

Glare Table

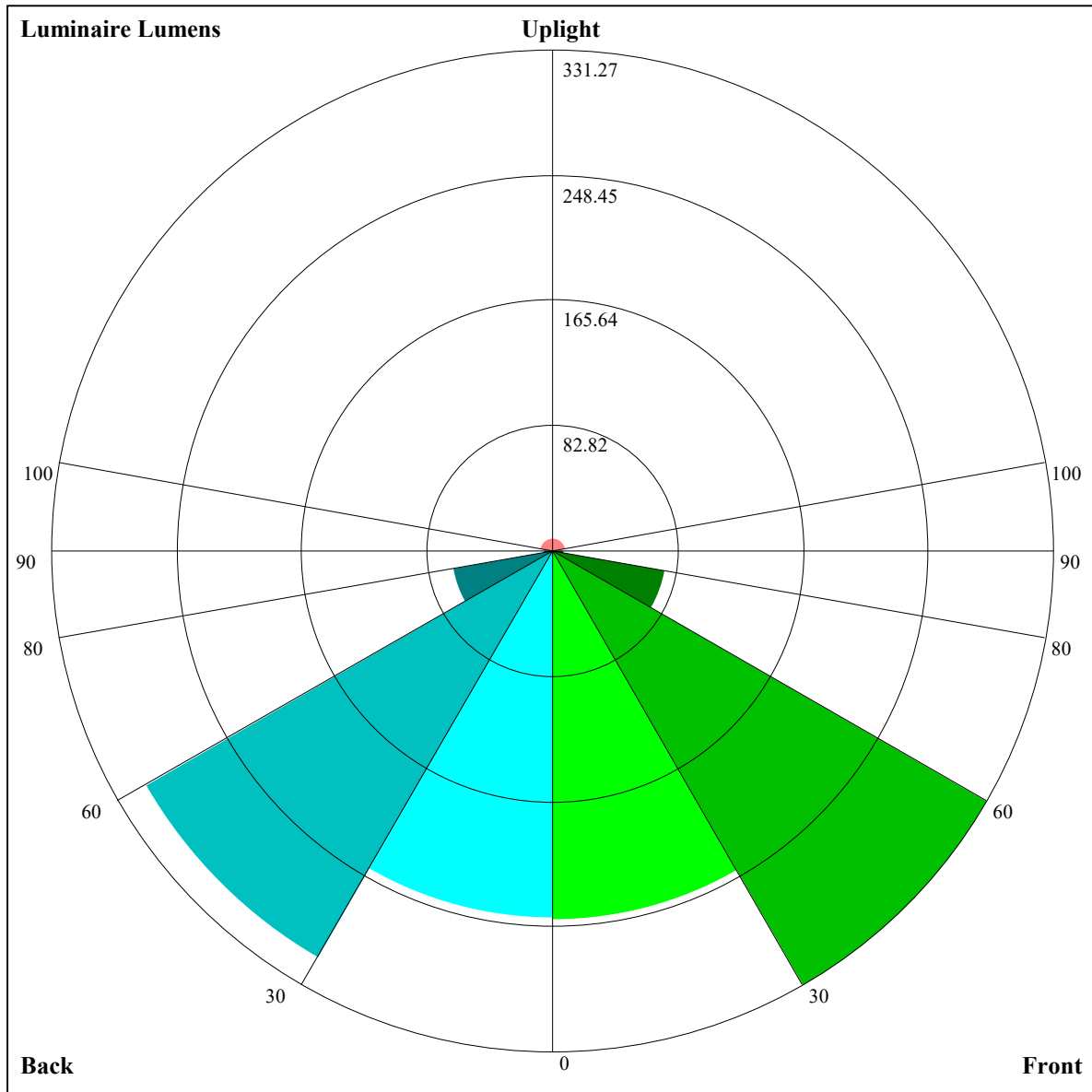
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve



Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	21.91	23.34	22.29	23.67	24.01	21.57	23.00	21.94	23.33	23.67
	3H	22.76	24.05	23.16	24.40	24.76	22.52	23.80	22.91	24.16	24.52
	4H	23.26	24.46	23.66	24.82	25.21	22.98	24.18	23.39	24.55	24.93
	6H	23.64	24.75	24.06	25.13	25.55	23.45	24.56	23.87	24.95	25.36
	8H	23.72	24.79	24.14	25.18	25.60	23.63	24.70	24.05	25.09	25.51
	12H	23.77	24.79	24.20	25.19	25.62	23.76	24.78	24.19	25.19	25.62
4H	2H	22.27	23.47	22.67	23.84	24.22	21.98	23.19	22.39	23.55	23.93
	3H	23.28	24.29	23.71	24.69	25.12	23.09	24.10	23.52	24.50	24.93
	4H	23.97	24.86	24.42	25.29	25.75	23.74	24.63	24.19	25.06	25.52
	6H	24.44	25.23	24.91	25.68	26.15	24.32	25.11	24.79	25.56	26.03
	8H	24.59	25.33	25.08	25.79	26.27	24.58	25.32	25.07	25.78	26.26
	12H	24.70	25.38	25.19	25.84	26.36	24.79	25.47	25.28	25.93	26.45
8H	4H	24.14	24.88	24.63	25.34	25.82	23.93	24.67	24.42	25.13	25.61
	6H	24.72	25.33	25.23	25.82	26.34	24.64	25.25	25.15	25.74	26.26
	8H	24.98	25.52	25.51	26.04	26.55	25.02	25.56	25.55	26.08	26.59
	12H	25.13	25.58	25.67	26.11	26.63	25.30	25.75	25.84	26.27	26.80
12H	4H	24.16	24.84	24.65	25.30	25.82	23.94	24.63	24.44	25.09	25.61
	6H	24.81	25.34	25.33	25.87	26.37	24.72	25.26	25.25	25.78	26.29
	8H	25.05	25.50	25.59	26.02	26.55	25.09	25.54	25.63	26.06	26.59
Variation with the observer position at spacings:											
S = 1.0H		0.4/-0.6					0.4/-0.6				
S = 1.5H		0.7/-1.1					0.7/-1.0				
S = 2.0H		1.6/-1.3					1.9/-1.5				
Standard tables:		BK3					BK3				
Uncorrected UGR		10.5					10.7				

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25



Luminaire Lumens:

FL=244.64,FM=331.27,FH=75.51,FVH=7.76

BL=242.64,BM=311.3,BH=67.24,BVH=6.09

UL=0.82,UH=8.98

BUG Rating:B1-U1-G0

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	595.55	574.16	590.20	581.65	565.25	539.95	471.16	428.40	367.45
45.0	570.24	581.65	578.44	575.59	565.25	523.91	483.64	430.18	348.20
90.0	573.45	577.73	575.23	561.69	552.42	526.05	477.94	414.50	340.72
135.0	575.23	580.94	580.94	585.57	543.87	522.48	458.33	400.60	342.15
180.0	595.55	583.79	568.10	573.81	550.64	516.07	461.54	391.69	329.67
225.0	570.24	584.50	588.78	567.39	548.86	505.02	453.70	396.32	320.40
270.0	573.45	573.09	565.61	560.26	542.09	515.00	459.40	389.90	341.43
315.0	575.23	570.24	565.25	554.56	549.93	516.07	470.81	411.29	356.05
360.0	595.55	574.16	590.20	581.65	565.25	539.95	471.16	428.40	367.45
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	290.82	234.16	180.34	129.02	85.18	62.37	55.95	28.16	13.19
45.0	266.59	186.75	146.48	124.38	89.46	57.74	48.11	30.29	7.84
90.0	272.65	216.69	162.88	114.05	81.62	66.65	48.83	35.28	18.53
135.0	234.51	166.80	137.22	107.63	89.46	55.24	27.09	21.38	0.00
180.0	249.84	201.37	144.34	98.01	67.36	54.17	36.35	18.53	0.00
225.0	226.32	158.95	125.45	115.12	77.70	48.47	32.08	34.22	6.06
270.0	271.22	208.85	157.89	112.98	77.34	74.13	47.76	43.12	0.00
315.0	274.43	189.96	145.77	121.89	79.83	77.34	47.40	29.58	8.55
360.0	290.82	234.16	180.34	129.02	85.18	62.37	55.95	28.16	13.19
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	0.36	0.00	0.00
45.0	2.14	0.00	1.78	0.00	0.00	1.43	0.00	0.00	9.62
90.0	0.00	0.00	0.00	0.00	0.00	3.21	2.14	0.00	10.34
135.0	6.42	0.00	2.85	6.06	0.00	3.21	0.00	0.00	0.00
180.0	0.00	0.00	0.71	0.00	0.00	5.35	0.00	0.00	0.00
225.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.13
270.0	0.00	0.00	2.14	0.00	1.07	4.99	0.00	0.00	1.07
315.0	0.00	0.00	6.42	0.00	2.49	3.21	0.00	0.00	2.85
360.0	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	3.56	0.00	0.00	0.00	0.00	4.99	0.00	15.33	0.00
45.0	2.14	0.00	10.34	0.00	1.43	0.00	4.28	0.00	0.00
90.0	0.00	0.00	0.00	0.00	0.00	8.91	0.00	5.70	0.00
135.0	5.35	0.00	0.00	0.00	0.00	0.00	0.00	9.27	3.21
180.0	0.00	0.00	0.00	2.49	7.48	0.00	0.00	5.70	0.00
225.0	0.00	0.00	0.00	7.13	0.00	3.56	0.00	4.99	0.00
270.0	3.92	11.05	1.78	5.35	0.00	0.71	0.00	1.43	0.00
315.0	0.00	6.42	0.00	0.00	0.00	0.71	18.53	0.00	1.78
360.0	3.56	0.00	0.00	0.00	0.00	4.99	0.00	15.33	0.00
C/γ(°)	180.0								
0.0	0.00								
45.0	2.14								
90.0	0.00								
135.0	1.78								
180.0	0.00								
225.0	2.14								
270.0	0.00								
315.0	1.78								
360.0	0.00								