



SGSO

Address: LIT by CARDI

Client:

LumCAT: 0017440217 RIO 7W 4000K 700lm

Luminaire:

Report No:

Voltage(V): 230.47

Test No: KYZ-A251030009-06-003

Current(A): 0.0317

LampCAT: LED

Power (W): 7.0000

Lamp flux(lm): -1.0

PF: 0.9577

Number of Lamps: 1

Ballast type:

Length(mm): -47

Width(mm): -47

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 700.00

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 100.00

Central intensity(cd): 359.045

Maximum intensity(cd): 364.550

Angle of maximum intensity: C=90.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=81.8

[C90/270]Total=82.2

Field angle(10%Imax): [C0/180]Total=146.4

[C90/270]Total=137.9

Maximum s/h(1/2): C0_180=1.10 C90_270=1.09

Maximum s/h(1/4): C0_180=1.16 C90_270=1.18

Up flux rate of lamp(%): 1.53%

Down flux rate of lamp(%): 98.47%

Up flux rate of LUM(%): 1.53%

Down flux rate of LUM(%): 98.47%

CIE Type : Direct lighting

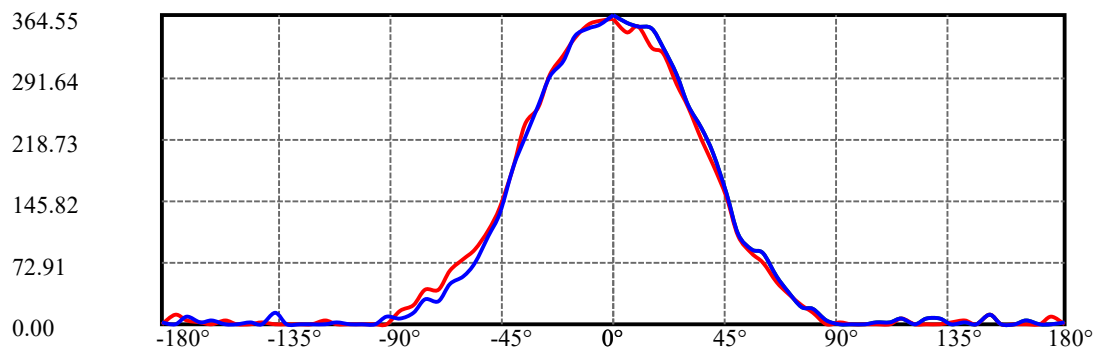
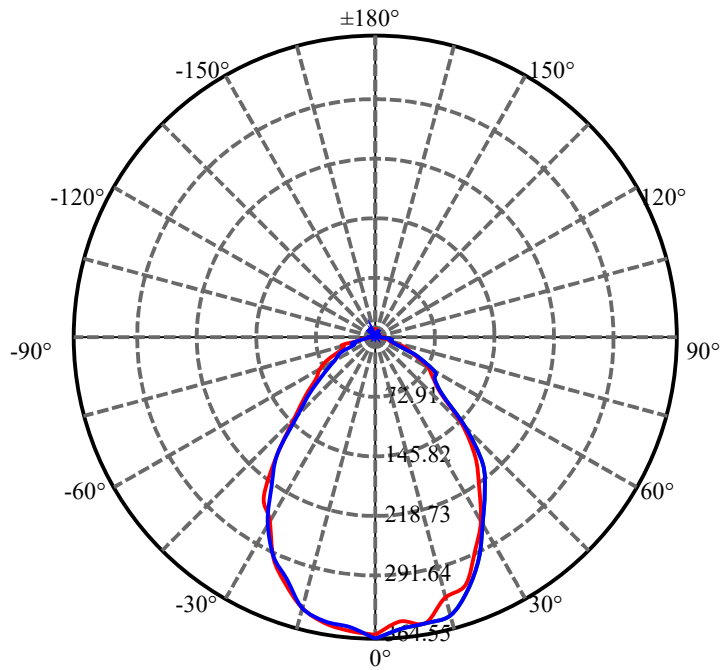
Output flux ratio in π solid angle : 85.244%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	359.498	0.000	0	.000%	.000%
5.0	351.557	8.442	8.442	.000%	1.206%
10.0	350.811	24.954	33.396	.000%	4.771%
15.0	336.636	40.499	73.895	.000%	10.556%
20.0	320.915	53.820	127.715	.000%	18.245%
25.0	296.668	64.329	192.045	.000%	27.435%
30.0	258.512	69.777	261.822	.000%	37.403%
35.0	229.948	71.436	333.258	.000%	47.608%
40.0	188.861	69.396	402.654	.000%	57.522%
45.0	148.254	61.992	464.646	.000%	66.378%
50.0	114.095	52.648	517.294	.000%	73.899%
55.0	86.864	43.396	560.69	.000%	80.098%
60.0	70.024	36.016	596.706	.000%	85.243%
65.0	52.705	29.631	626.337	.000%	89.476%
70.0	38.369	22.902	649.239	.000%	92.748%
75.0	26.858	16.933	666.172	.000%	95.167%
80.0	19.824	12.405	678.577	.000%	96.939%
85.0	8.686	7.694	686.271	.000%	98.038%
90.0	2.398	3.014	689.285	.000%	98.469%
95.0	0.000	0.652	689.937	.000%	98.562%
100.0	0.053	0.014	689.951	.000%	98.564%
105.0	0.373	0.113	690.065	.000%	98.580%
110.0	2.025	0.623	690.687	.000%	98.669%
115.0	4.050	1.528	692.215	.000%	98.888%
120.0	0.480	1.094	693.309	.000%	99.044%
125.0	1.546	0.465	693.774	.000%	99.110%
130.0	1.759	0.714	694.487	.000%	99.212%
135.0	1.919	0.738	695.225	.000%	99.318%
140.0	3.411	0.980	696.205	.000%	99.458%
145.0	1.492	0.812	697.017	.000%	99.574%
150.0	4.423	0.865	697.882	.000%	99.697%
155.0	3.251	0.964	698.847	.000%	99.835%
160.0	0.959	0.439	699.285	.000%	99.898%
165.0	1.492	0.201	699.486	.000%	99.926%
170.0	2.451	0.232	699.718	.000%	99.960%
175.0	3.464	0.210	699.929	.000%	99.990%
180.0	2.665	0.073	700.001	.000%	100.000%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	261.82	N.A.	37.40%
0-40	402.65	N.A.	57.52%
0-60	596.71	N.A.	85.24%
0-90	689.28	N.A.	98.47%
0-120	693.31	N.A.	99.04%
0-180	700.00	N.A.	100.00%
60-90	128.59	N.A.	18.37%
90-120	7.04	N.A.	1.01%
90-130	8.22	N.A.	1.17%
90-150	11.61	N.A.	1.66%
90-180	13.66	N.A.	1.95%
0-54.92	560.00	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	33.40
10-20	94.32
20-30	134.11
30-40	140.83
40-50	114.64
50-60	79.41
60-70	52.53
70-80	29.34
80-90	10.71
90-100	0.67
100-110	0.74
110-120	2.62
120-130	1.18
130-140	1.72
140-150	1.68
150-160	1.40
160-170	0.43
170-180	0.21



C90(Max):

C0/C180:

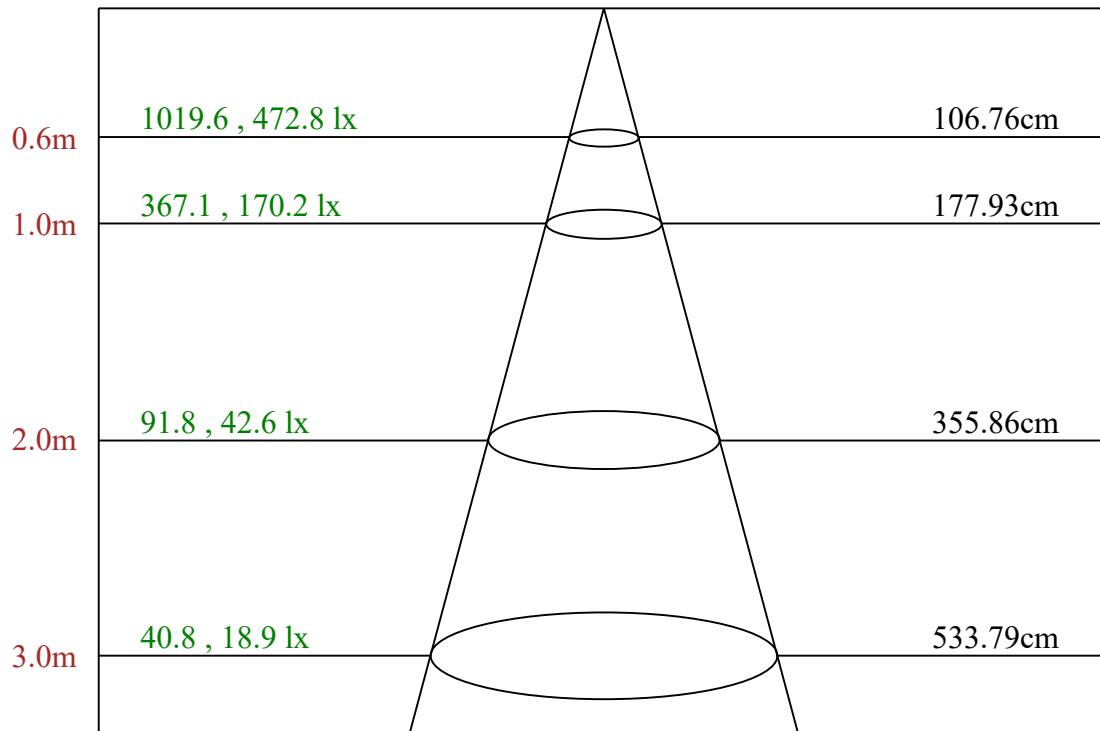
C90/C270:

Field angle(10%Imax):C0/180Left:76.2 Right:70.2

:C90/270Left:67.5 Right:70.4

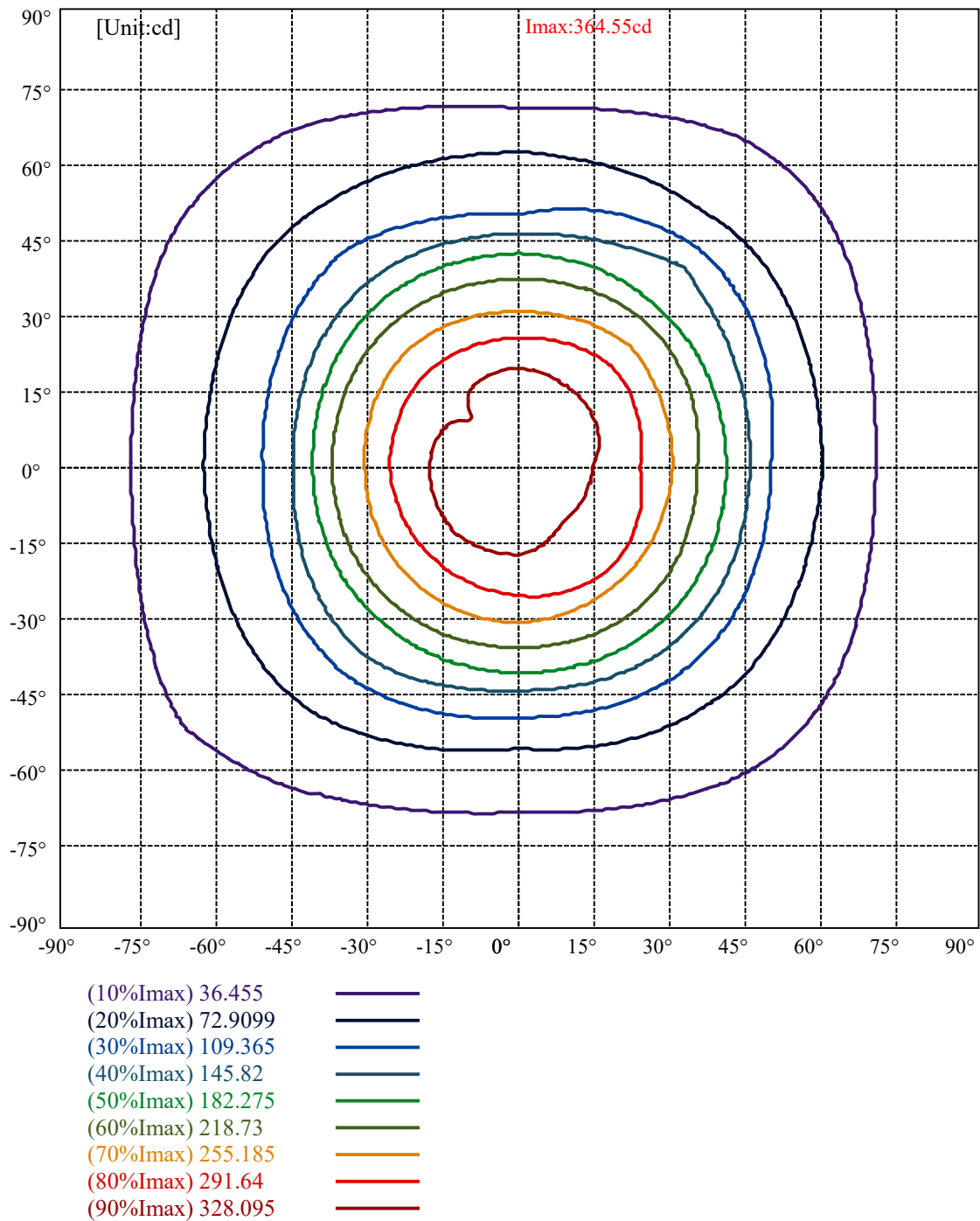
Beam Angle(50%Imax):C0/180Left:40.7 Right:41.1

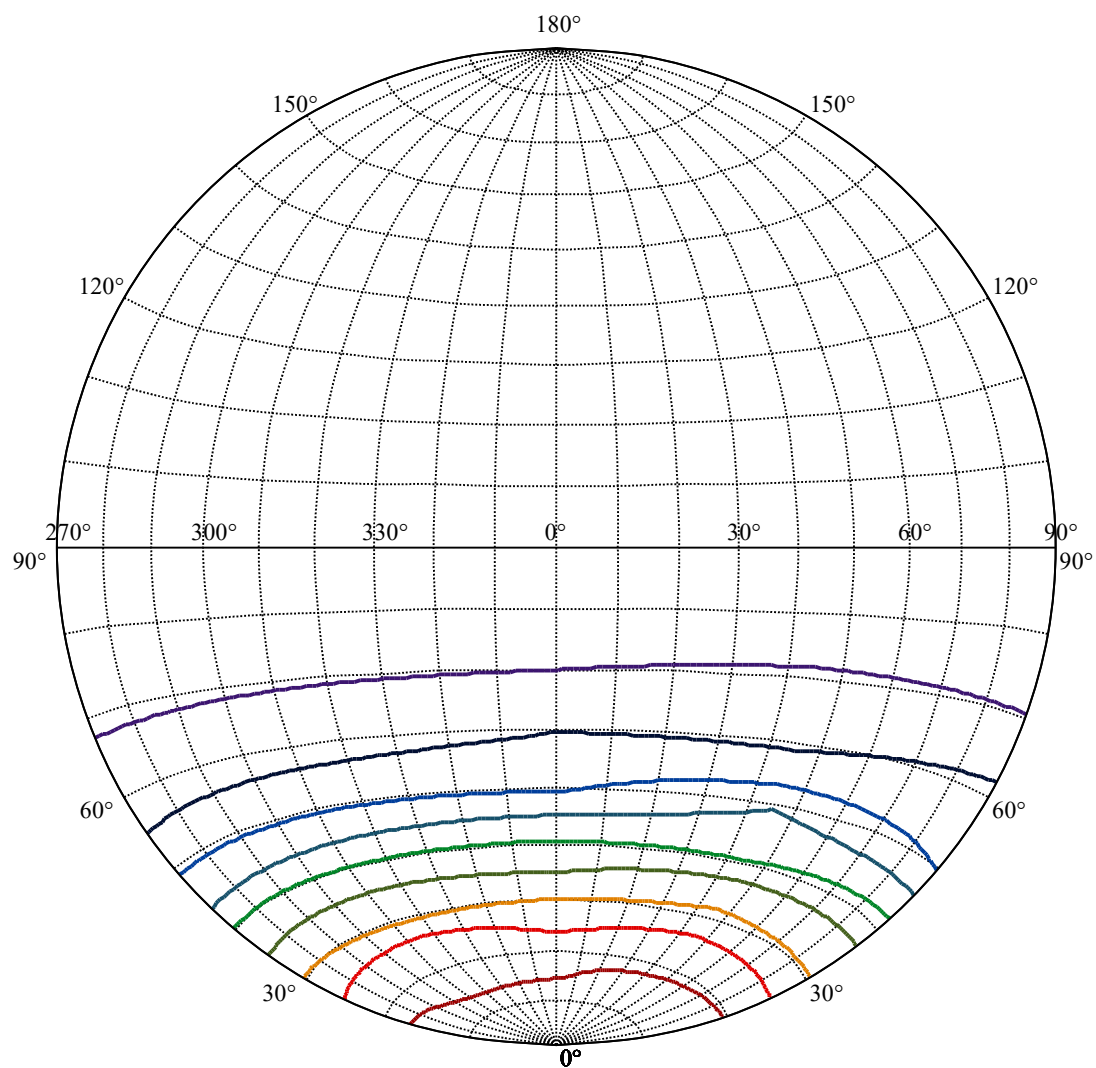
:C90/270Left:40.2 Right:42.0



Max , Ave

Beam angle of C90 plane 83.32





House

[Unit:cd]

Road

Imax:364.55

(10%Imax) 36.20518

(20%Imax) 72.41026

(30%Imax) 108.6155

(40%Imax) 144.8207

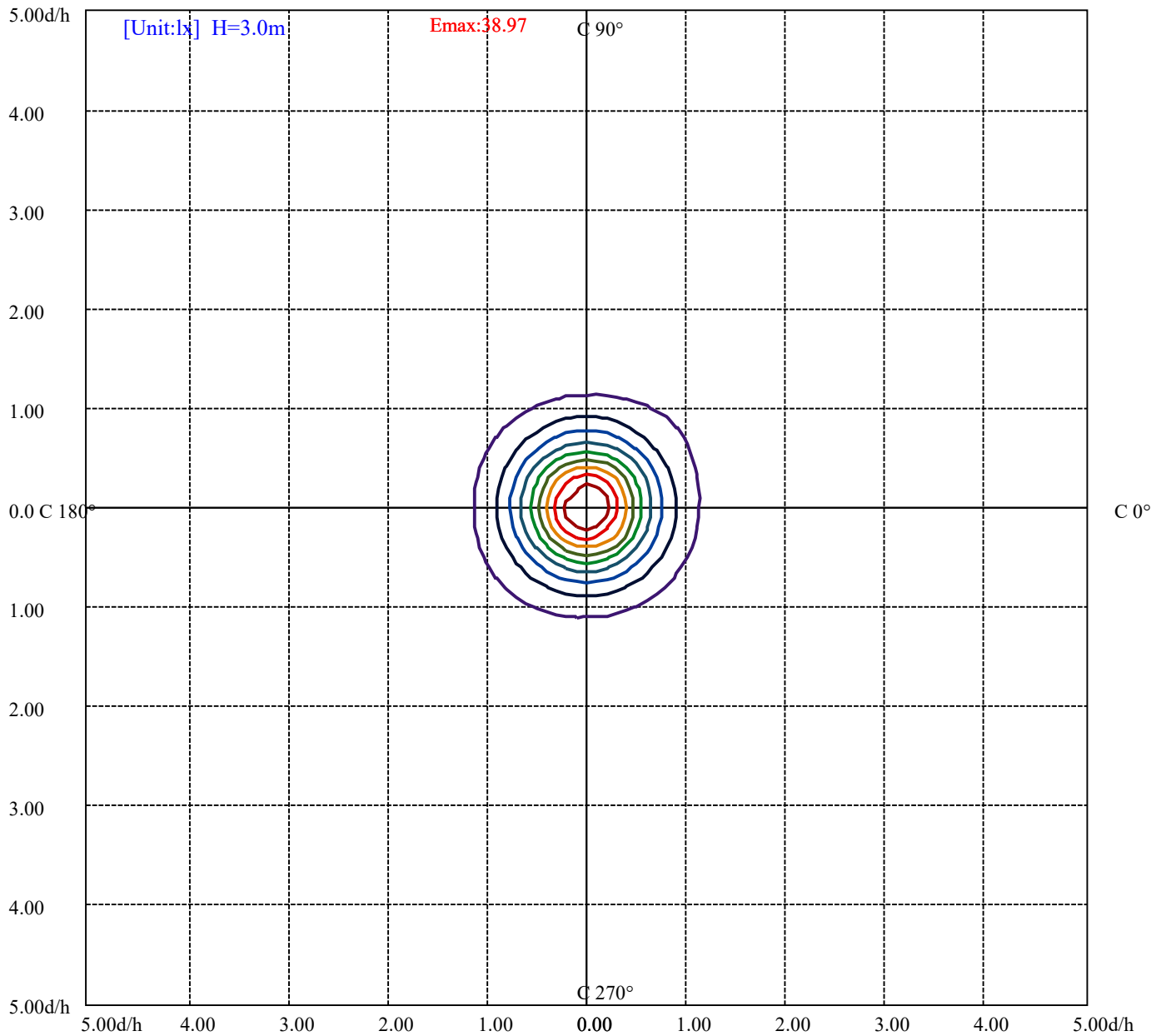
(50%Imax) 181.0259

(60%Imax) 217.2311

(70%Imax) 253.4363

(80%Imax) 289.6415

(90%Imax) 325.8466



(10%Emax) 3.896646

(20%Emax) 7.793293

(30%Emax) 11.68989

(40%Emax) 15.58656

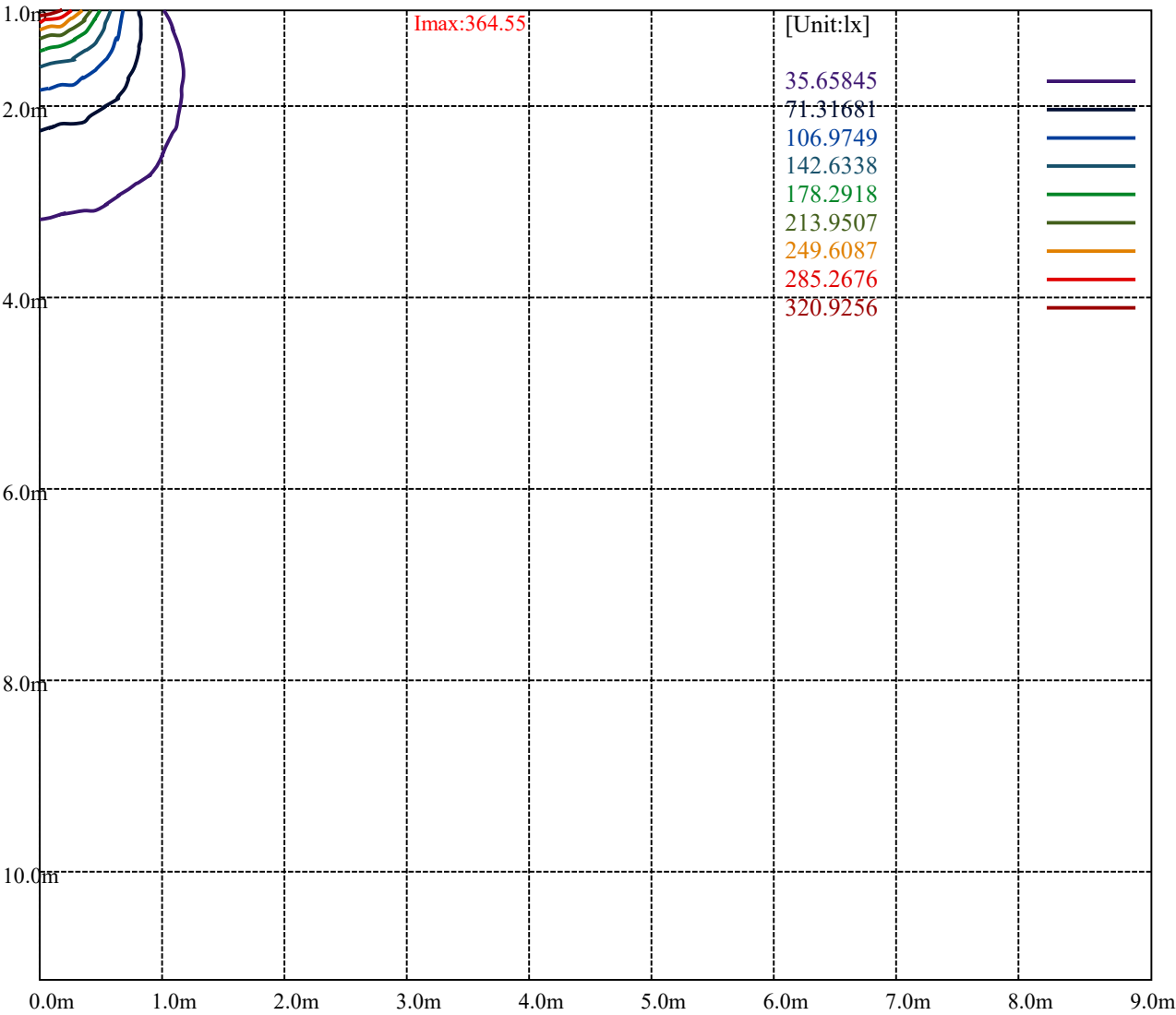
(50%Emax) 19.48323

(60%Emax) 23.3799

(70%Emax) 27.27657

(80%Emax) 31.17313

(90%Emax) 35.0698



Luminance Table

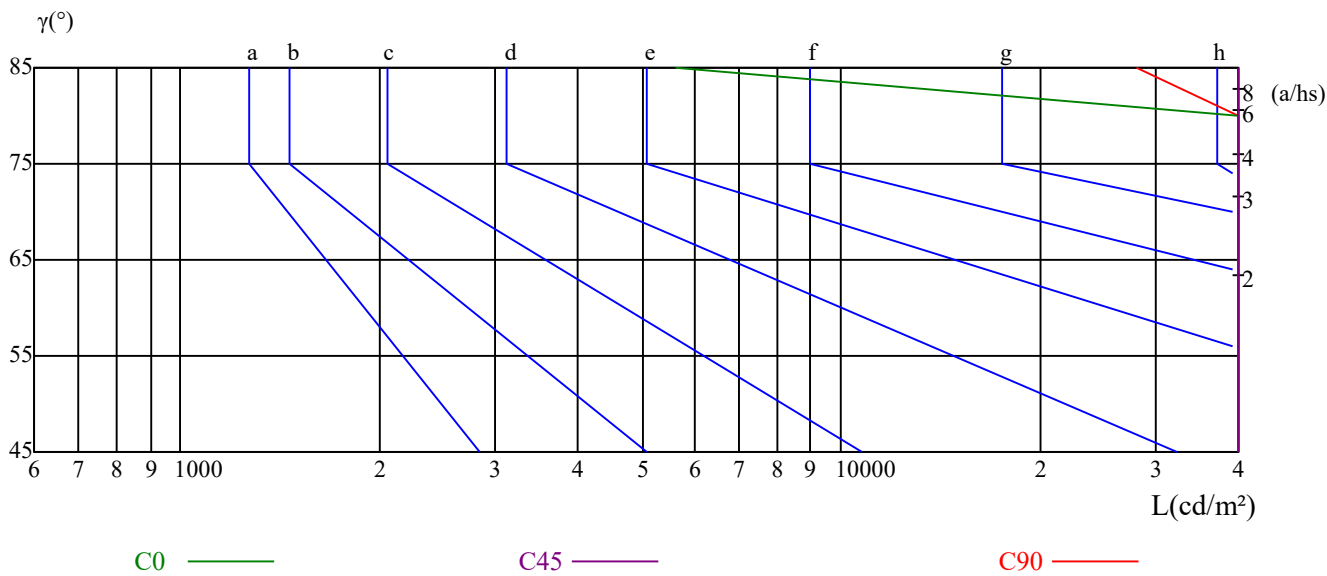
γ	45	50	55	60	65	70	75	80	85
C0	121141	93398	84670	82975	69295	61364	49974	44971	5602
C45	129423	129086	91903	78094	61788	74921	50916	66053	145606
C90	125282	95676	87649	95665	76225	64218	43374	61836	27999

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
77957	69873	68862	69776	54217	56810	53204	36400	69302

Glare Table

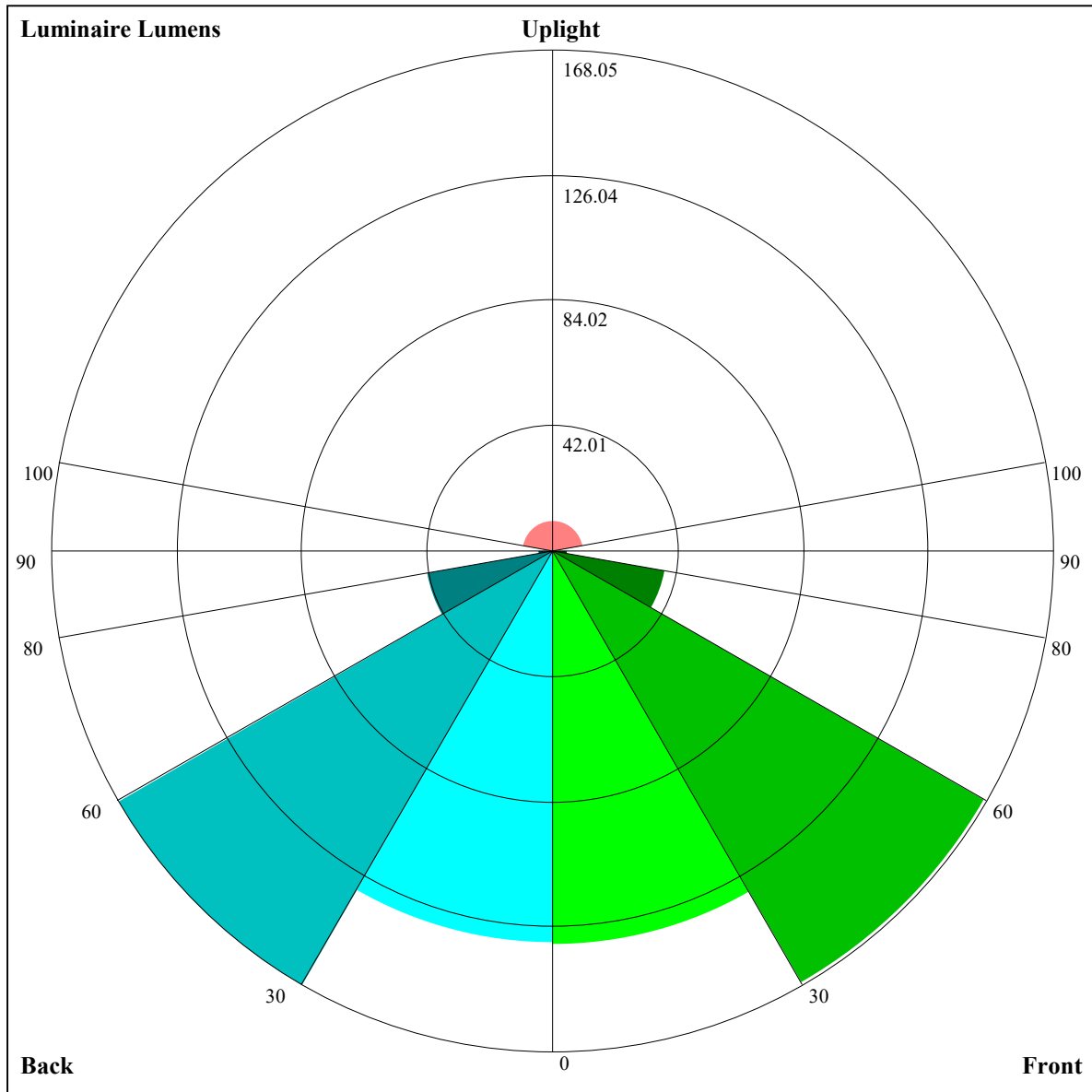
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	22.78	24.21	23.17	24.56	24.91	23.06	24.49	23.45	24.84	25.19
	3H	23.77	25.06	24.18	25.43	25.81	24.07	25.36	24.48	25.73	26.11
	4H	24.09	25.30	24.51	25.68	26.08	24.32	25.53	24.74	25.91	26.31
	6H	24.35	25.47	24.78	25.87	26.30	24.64	25.76	25.08	26.16	26.59
	8H	24.39	25.46	24.82	25.87	26.31	24.76	25.83	25.20	26.24	26.68
	12H	24.36	25.39	24.80	25.81	26.25	24.79	25.81	25.23	26.23	26.68
4H	2H	23.18	24.39	23.60	24.77	25.17	23.42	24.62	23.84	25.00	25.41
	3H	24.38	25.40	24.82	25.82	26.27	24.62	25.64	25.07	26.06	26.51
	4H	24.84	25.74	25.30	26.19	26.67	25.01	25.91	25.47	26.36	26.83
	6H	25.18	25.98	25.67	26.45	26.93	25.44	26.24	25.93	26.71	27.19
	8H	25.30	26.05	25.80	26.53	27.03	25.66	26.41	26.16	26.88	27.38
	12H	25.34	26.03	25.84	26.50	27.04	25.77	26.46	26.28	26.93	27.48
8H	4H	25.01	25.76	25.51	26.23	26.73	25.17	25.91	25.66	26.39	26.89
	6H	25.52	26.14	26.04	26.64	27.18	25.78	26.40	26.30	26.90	27.44
	8H	25.81	26.36	26.35	26.89	27.42	26.19	26.73	26.73	27.27	27.79
	12H	25.96	26.41	26.51	26.95	27.49	26.43	26.89	26.98	27.43	27.97
12H	4H	25.04	25.74	25.55	26.21	26.75	25.19	25.88	25.69	26.35	26.89
	6H	25.69	26.24	26.23	26.77	27.30	25.93	26.48	26.47	27.02	27.54
	8H	26.05	26.51	26.60	27.04	27.59	26.40	26.86	26.95	27.40	27.94
Variation with the observer position at spacings:											
S = 1.0H		0.3/-0.8					0.3/-0.7				
S = 1.5H		0.8/-1.1					0.8/-1.2				
S = 2.0H		1.3/-1.1					1.5/-1.2				
Standard tables:		BK4					BK4				
Uncorrected UGR		13.2					12.8				

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



Luminaire Lumens:

FL=131.87,FM=167.12,FH=38.37,FVH=5.27

BL=131.65,BM=168.05,BH=42.86,BVH=5.15

UL=0.67,UH=10.11

BUG Rating:B1-U2-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	359.04	343.80	350.15	326.02	318.82	283.26	256.16	218.48	187.99
45.0	353.12	342.11	351.85	341.69	319.25	306.12	261.66	244.30	185.03
90.0	364.55	354.39	351.00	348.04	326.02	294.26	257.85	230.75	200.69
135.0	351.42	347.19	330.68	326.02	324.33	295.11	262.51	232.02	194.34
180.0	359.04	356.93	352.27	338.30	317.13	293.42	255.73	234.56	185.87
225.0	353.12	349.31	345.07	337.03	320.52	284.95	254.47	223.56	177.83
270.0	364.55	353.12	349.31	339.14	310.78	292.15	258.27	220.17	184.60
315.0	351.42	346.34	356.93	318.40	312.89	307.81	247.27	223.13	184.18
360.0	359.04	343.80	350.15	326.02	318.82	283.26	256.16	218.48	187.99
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	148.61	104.16	84.26	71.98	50.81	36.41	22.44	13.55	0.85
45.0	158.78	143.96	91.45	67.74	45.30	44.46	22.86	19.90	22.02
90.0	153.69	106.70	87.22	82.99	55.89	38.11	19.48	18.63	4.23
135.0	149.04	117.71	100.35	75.79	55.47	49.12	28.37	30.48	12.28
180.0	138.45	110.08	87.22	77.91	63.51	41.07	40.22	21.59	15.24
225.0	156.23	115.17	84.26	69.86	50.81	37.26	31.33	9.31	0.00
270.0	130.83	103.31	72.83	57.16	46.57	26.25	29.21	14.40	6.77
315.0	142.26	105.43	82.56	52.92	50.39	32.18	19.48	29.64	7.62
360.0	148.61	104.16	84.26	71.98	50.81	36.41	22.44	13.55	0.85
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1.69	0.00	0.00	0.00	0.00	6.77	0.00	0.85	0.00
45.0	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.0	0.85	0.00	0.00	2.96	2.12	7.62	0.00	6.35	7.20
135.0	5.93	0.00	0.42	0.00	0.00	13.97	0.00	0.00	6.77
180.0	0.00	0.00	0.00	0.00	0.00	3.81	0.00	0.00	0.00
225.0	0.00	0.00	0.00	0.00	10.58	0.00	3.81	5.08	0.00
270.0	9.74	0.00	0.00	0.00	3.39	0.00	0.00	0.00	0.00
315.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360.0	1.69	0.00	0.00	0.00	0.00	6.77	0.00	0.85	0.00
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	2.54	5.08	0.00	11.43	0.00	0.00	0.00	0.00	8.47
45.0	0.00	11.01	1.69	12.70	8.89	0.00	1.27	5.08	0.00
90.0	0.00	3.39	0.42	11.01	0.00	0.00	5.08	0.00	0.00
135.0	0.00	0.00	6.35	0.00	0.00	0.00	0.42	0.00	5.93
180.0	0.00	1.69	0.00	0.00	5.50	0.00	3.39	4.66	10.58
225.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69	2.54
270.0	12.70	0.00	3.39	0.00	0.00	4.66	1.69	8.04	0.00
315.0	0.00	5.93	0.00	0.00	11.43	2.96	0.00	0.00	0.00
360.0	2.54	5.08	0.00	11.43	0.00	0.00	0.00	0.00	8.47
C/γ(°)	180.0								
0.0	0.00								
45.0	7.20								
90.0	3.39								
135.0	0.00								
180.0	0.00								
225.0	7.20								
270.0	3.39								
315.0	0.00								
360.0	0.00								