



SGSO

Address: LIT by CARDI

Client:

LumCAT: 0017440220 RIO 14W 4000K 1400lm

Luminaire:

Report No:

Voltage(V): 230.2500

Test No: KYZ-A251020063-02-005

Current(A): 0.0647

LampCAT: LED

Power (W): 14.0000

Lamp flux(lm): -1.0

PF: 0.9402

Number of Lamps: 1

Ballast type:

Length(mm): -175

Width(mm): -175

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1400.00

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 100.00

Central intensity(cd): 714.111

Maximum intensity(cd): 723.422

Angle of maximum intensity: C=90.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=82.5

[C90/270]Total=82.7

Field angle(10%Imax): [C0/180]Total=139.3

[C90/270]Total=137.1

Maximum s/h(1/2): C0_180=1.12 C90_270=1.06

Maximum s/h(1/4): C0_180=1.17 C90_270=1.13

Up flux rate of lamp(%): 1.17%

Down flux rate of lamp(%): 98.83%

Up flux rate of LUM(%): 1.17%

Down flux rate of LUM(%): 98.83%

CIE Type : Direct lighting

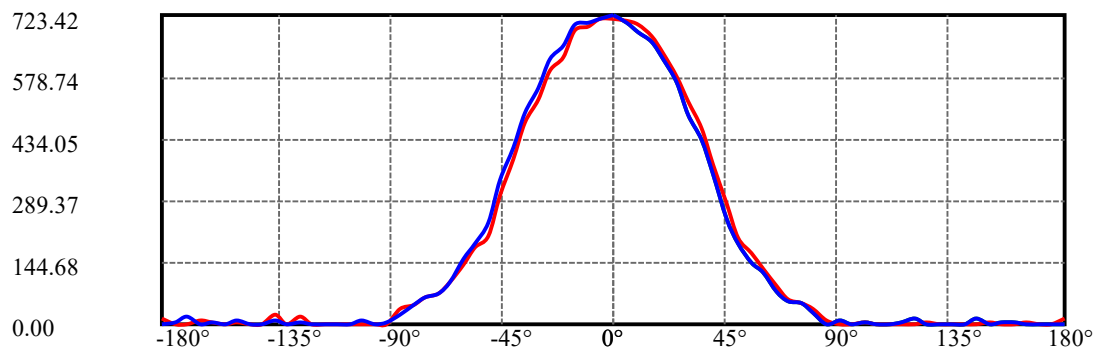
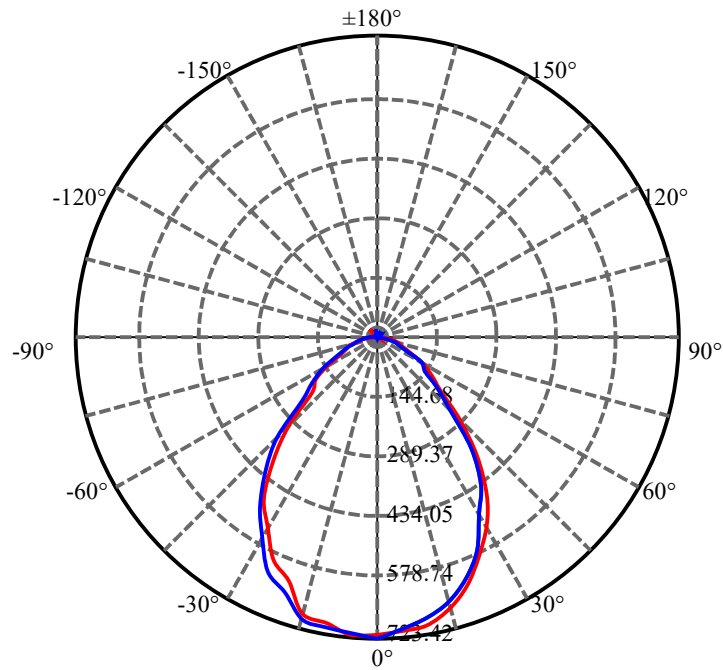
Output flux ratio in π solid angle : 85.947%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	757.368	0.000	0	.000%	.000%
5.0	754.248	16.998	16.998	.000%	1.214%
10.0	743.542	50.399	67.396	.000%	4.814%
15.0	720.516	81.689	149.086	.000%	10.649%
20.0	677.102	108.343	257.429	.000%	18.388%
25.0	627.016	128.655	386.084	.000%	27.577%
30.0	557.993	141.058	527.142	.000%	37.653%
35.0	489.078	145.032	672.174	.000%	48.013%
40.0	406.982	140.622	812.796	.000%	58.057%
45.0	316.870	126.068	938.864	.000%	67.062%
50.0	237.303	105.329	1044.193	.000%	74.585%
55.0	188.508	87.087	1131.28	.000%	80.806%
60.0	142.511	71.970	1203.25	.000%	85.947%
65.0	104.422	56.465	1259.715	.000%	89.980%
70.0	73.703	42.424	1302.139	.000%	93.010%
75.0	61.922	33.345	1335.484	.000%	95.392%
80.0	42.716	26.335	1361.819	.000%	97.273%
85.0	19.206	15.826	1377.645	.000%	98.403%
90.0	3.874	5.944	1383.589	.000%	98.828%
95.0	2.905	1.746	1385.335	.000%	98.953%
100.0	2.690	1.430	1386.765	.000%	99.055%
105.0	0.000	0.677	1387.442	.000%	99.103%
110.0	2.044	0.503	1387.945	.000%	99.139%
115.0	1.076	0.743	1388.688	.000%	99.192%
120.0	3.766	1.107	1389.795	.000%	99.271%
125.0	5.649	2.047	1391.842	.000%	99.418%
130.0	1.130	1.386	1393.229	.000%	99.517%
135.0	4.734	1.115	1394.343	.000%	99.596%
140.0	0.646	0.937	1395.28	.000%	99.663%
145.0	6.402	1.106	1396.386	.000%	99.742%
150.0	6.348	1.766	1398.152	.000%	99.868%
155.0	0.377	0.800	1398.953	.000%	99.925%
160.0	2.152	0.249	1399.202	.000%	99.943%
165.0	2.152	0.334	1399.536	.000%	99.967%
170.0	2.636	0.267	1399.803	.000%	99.986%
175.0	0.969	0.121	1399.924	.000%	99.995%
180.0	5.488	0.073	1399.997	.000%	100.000%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	527.14	N.A.	37.65%
0-40	812.80	N.A.	58.06%
0-60	1203.25	N.A.	85.95%
0-90	1383.59	N.A.	98.83%
0-120	1389.80	N.A.	99.27%
0-180	1400.00	N.A.	100.00%
60-90	252.31	N.A.	18.02%
90-120	12.15	N.A.	0.87%
90-130	15.58	N.A.	1.11%
90-150	20.51	N.A.	1.46%
90-180	22.28	N.A.	1.59%
0-54.35	1120.00	N.A.	80.00%

ZONAL LUMEN SUMMARY

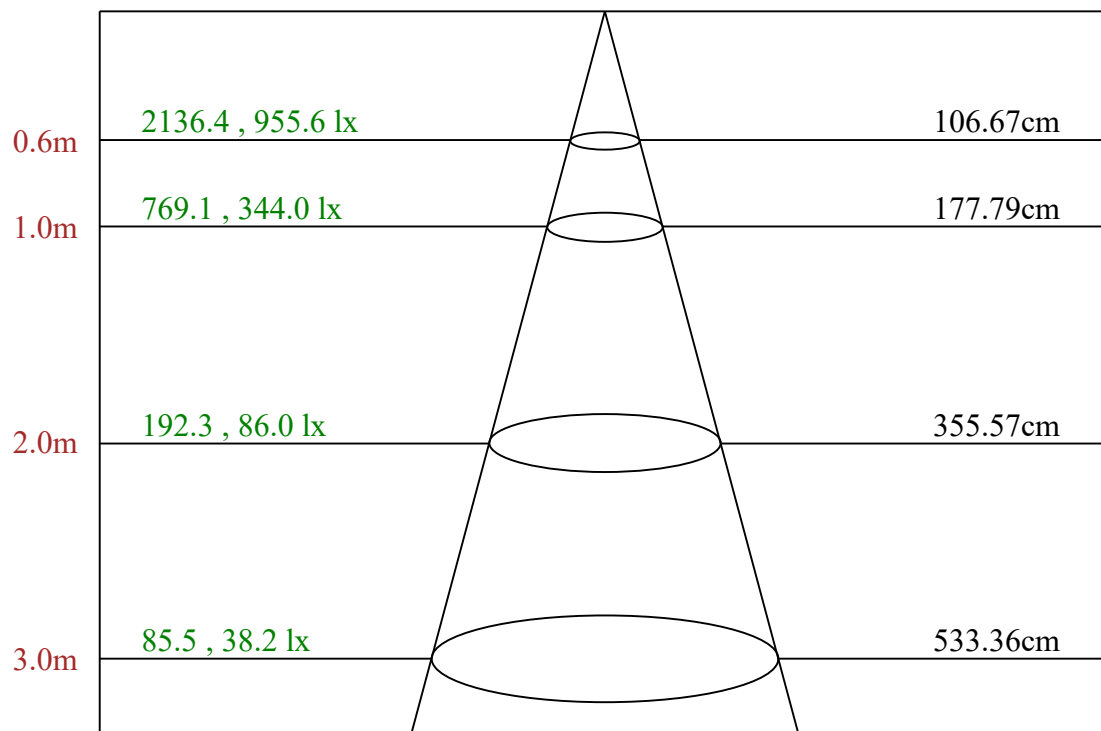
0-10	67.40
10-20	190.03
20-30	269.71
30-40	285.65
40-50	231.40
50-60	159.06
60-70	98.89
70-80	59.68
80-90	21.77
90-100	3.18
100-110	1.18
110-120	1.85
120-130	3.43
130-140	2.05
140-150	2.87
150-160	1.05
160-170	0.60
170-180	0.12

C90(Max): —————C0/C180: —————C90/C270: —————Field angle(10%I_{max}):C0/180Left:66.4 Right:72.9

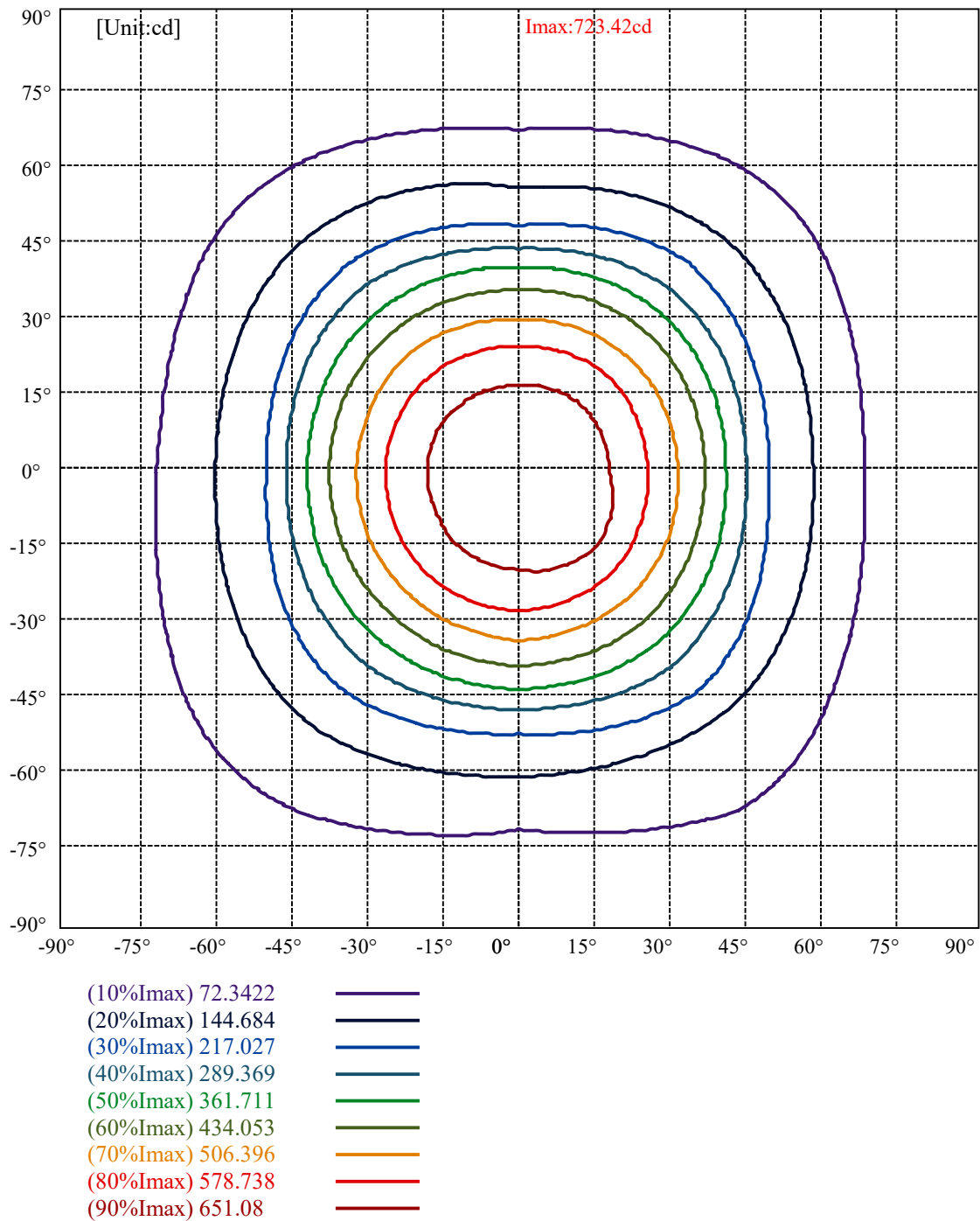
:C90/270Left:70.9 Right:66.2

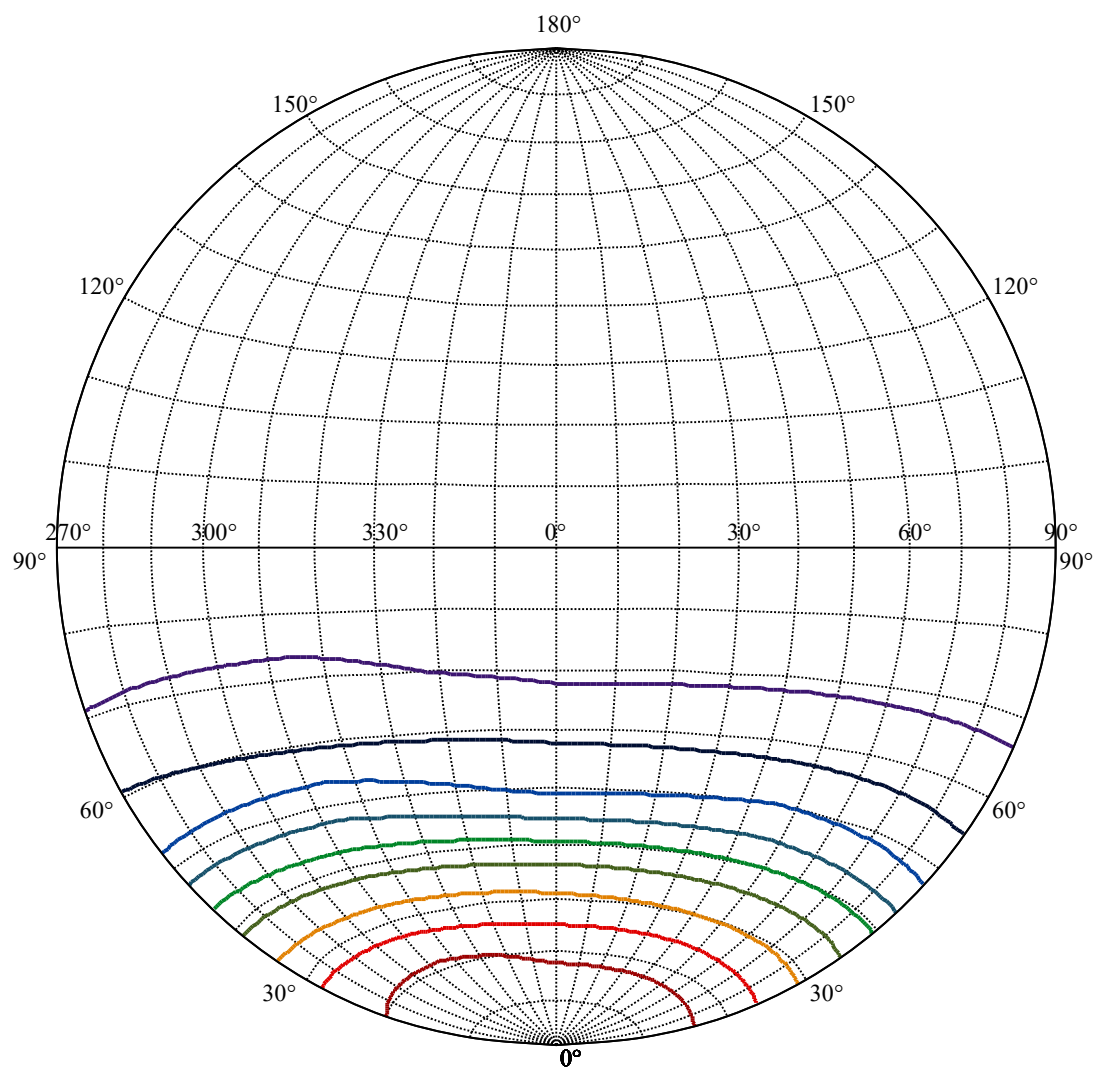
Beam Angle(50%I_{max}):C0/180Left:36.6 Right:45.9

:C90/270Left:43.4 Right:39.3



Max , Ave Beam angle of C90 plane 83.27





House

[Unit:cd]

Road

Imax:723.42

(10%Imax) 68.04607

(20%Imax) 136.0918

(30%Imax) 204.1386

(40%Imax) 272.1844

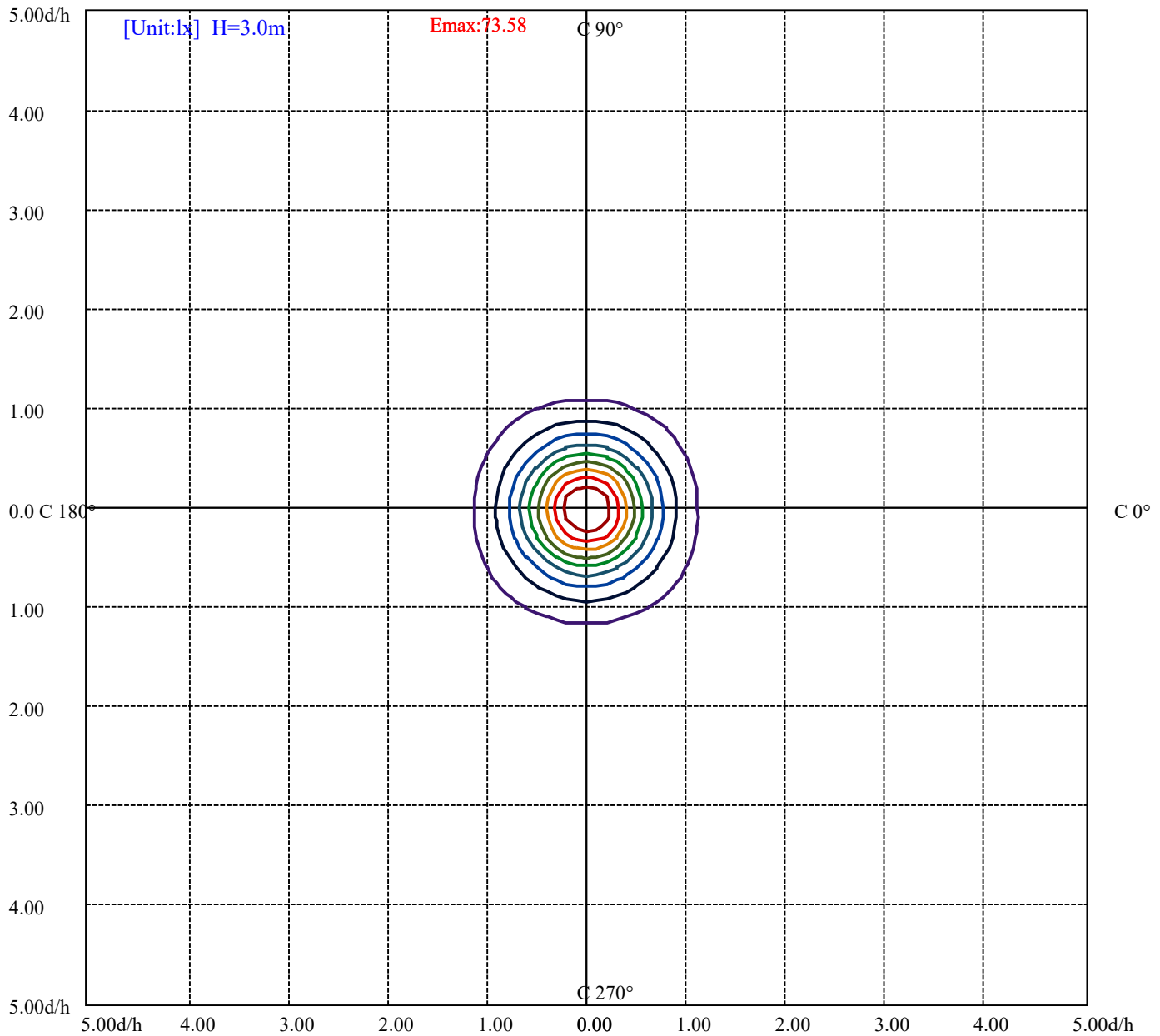
(50%Imax) 340.2303

(60%Imax) 408.2762

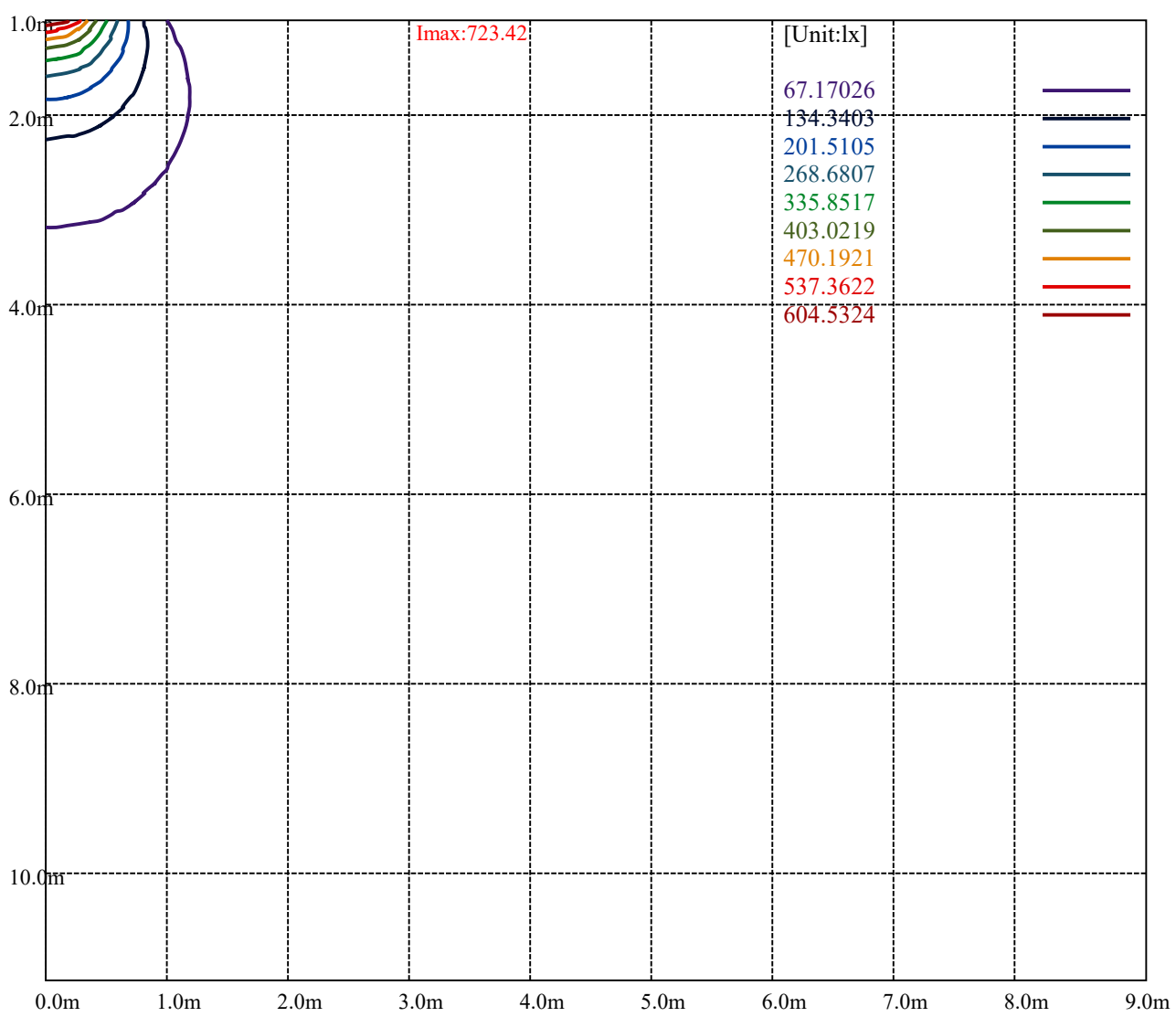
(70%Imax) 476.323

(80%Imax) 544.3688

(90%Imax) 612.4148



(10%Emax)	7.357616	—
(20%Emax)	14.71527	—
(30%Emax)	22.07286	—
(40%Emax)	29.43044	—
(50%Emax)	36.78803	—
(60%Emax)	44.14572	—
(70%Emax)	51.5033	—
(80%Emax)	58.86088	—
(90%Emax)	66.21848	—



Luminance Table

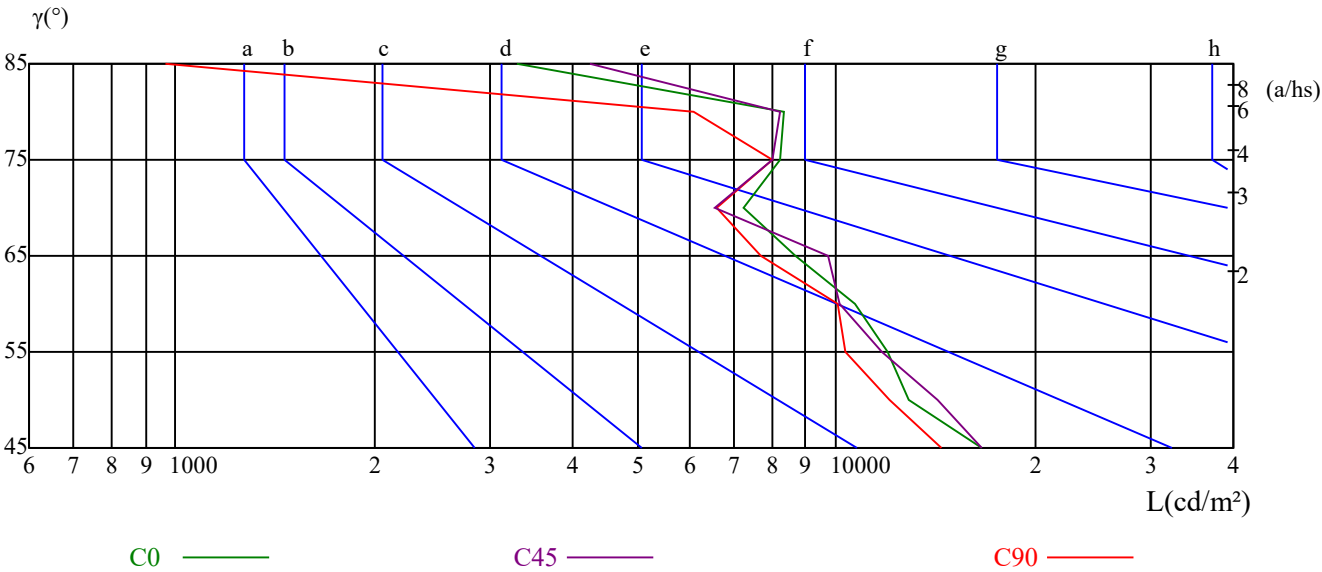
γ	45	50	55	60	65	70	75	80	85
C0	16638	12935	11943	10671	8682	7234	8259	8335	3283
C45	16685	14270	11708	10166	9757	6545	7998	8239	4248
C90	14448	12071	10358	10065	7686	6594	7998	6106	966

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9180	8722	10374	9332	9137	9478	10235	5407	9414

Glare Table

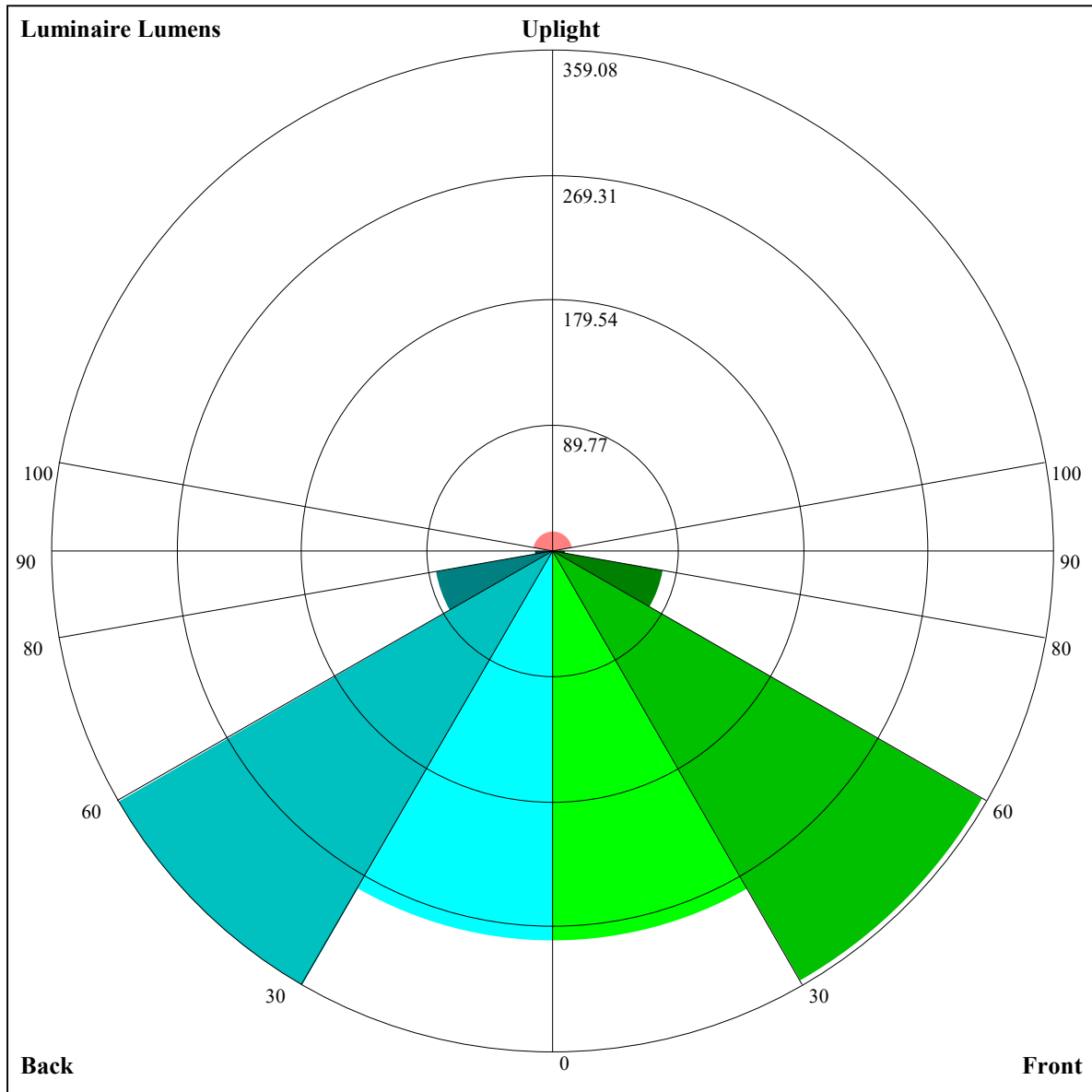
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	15.86	17.30	16.24	17.64	17.98	15.52	16.95	15.90	17.29	17.63
	3H	16.70	17.99	17.10	18.35	18.73	16.31	17.60	16.71	17.96	18.33
	4H	17.13	18.34	17.55	18.72	19.11	16.75	17.96	17.17	18.34	18.73
	6H	17.59	18.71	18.01	19.10	19.52	17.11	18.23	17.54	18.62	19.05
	8H	17.70	18.77	18.13	19.17	19.60	17.15	18.23	17.58	18.63	19.06
	12H	17.70	18.73	18.14	19.14	19.58	17.12	18.15	17.56	18.56	19.00
4H	2H	16.25	17.46	16.67	17.84	18.23	15.96	17.17	16.38	17.55	17.94
	3H	17.22	18.24	17.66	18.65	19.09	16.89	17.91	17.33	18.32	18.76
	4H	17.85	18.75	18.30	19.19	19.66	17.54	18.43	17.99	18.87	19.34
	6H	18.42	19.22	18.90	19.69	20.16	17.99	18.79	18.47	19.25	19.73
	8H	18.61	19.35	19.10	19.82	20.32	18.09	18.84	18.58	19.31	19.80
	12H	18.66	19.35	19.16	19.82	20.35	18.09	18.79	18.59	19.25	19.79
8H	4H	18.04	18.78	18.53	19.25	19.75	17.75	18.50	18.24	18.97	19.46
	6H	18.75	19.38	19.27	19.87	20.40	18.34	18.97	18.85	19.46	19.99
	8H	19.05	19.60	19.59	20.13	20.64	18.55	19.09	19.08	19.62	20.14
	12H	19.13	19.59	19.68	20.12	20.66	18.57	19.03	19.11	19.56	20.09
12H	4H	18.05	18.75	18.55	19.21	19.75	17.78	18.47	18.28	18.94	19.47
	6H	18.85	19.39	19.38	19.92	20.44	18.45	19.00	18.99	19.53	20.05
	8H	19.13	19.58	19.67	20.12	20.65	18.64	19.10	19.19	19.63	20.17
Variation with the observer position at spacings:											
S = 1.0H		0.5/-0.9					0.4/-0.8				
S = 1.5H		0.9/-1.0					0.8/-1.0				
S = 2.0H		1.8/-1.6					1.8/-1.4				
Standard tables:		BK3					BK3				
Uncorrected UGR		4.4					4.8				

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



Luminaire Lumens:

FL=280.12,FM=355.9,FH=81.1,FVH=9.2

BL=279.43,BM=359.08,BH=85.4,BVH=12.95

UL=3.38,UH=14.05

BUG Rating:B1-U2-G1

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	714.11	708.04	701.16	673.22	631.93	581.73	521.41	459.48	373.25
45.0	703.99	712.90	704.40	673.22	625.45	576.47	505.63	446.52	364.75
90.0	723.42	705.21	684.15	659.46	618.57	564.73	491.46	431.54	350.17
135.0	708.04	700.75	701.97	664.72	626.26	575.26	512.51	442.47	364.75
180.0	714.11	714.92	697.11	687.39	625.05	592.26	527.08	470.00	385.80
225.0	703.99	708.85	690.63	674.44	645.29	604.81	541.66	463.93	400.37
270.0	723.42	714.11	706.42	699.13	650.55	621.81	550.56	493.89	415.35
315.0	708.04	710.87	709.25	690.23	672.01	601.17	548.54	472.43	408.06
360.0	714.11	708.04	701.16	673.22	631.93	581.73	521.41	459.48	373.25
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	282.97	199.98	164.76	128.33	88.25	59.51	51.41	34.81	6.88
45.0	283.78	220.63	161.53	122.26	99.18	53.84	49.79	34.41	8.91
90.0	245.73	186.62	142.90	121.04	78.13	54.25	49.79	25.50	2.02
135.0	295.52	219.01	176.91	120.23	97.16	58.70	55.46	34.01	19.43
180.0	299.57	206.06	180.15	140.47	98.37	74.08	64.77	42.91	36.03
225.0	319.00	255.85	197.96	154.64	111.33	94.73	63.96	61.94	31.98
270.0	336.41	236.82	190.27	150.60	99.18	74.08	63.96	45.34	20.65
315.0	321.43	260.71	204.03	134.81	114.16	85.42	66.80	42.51	18.62
360.0	282.97	199.98	164.76	128.33	88.25	59.51	51.41	34.81	6.88
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	4.45	0.00	0.81	0.00	0.00	6.48	0.00
45.0	10.53	10.53	0.00	0.00	2.43	4.86	0.00	5.26	0.00
90.0	7.29	0.00	5.26	0.00	0.00	3.24	11.74	0.00	0.00
135.0	0.81	0.00	0.00	0.00	12.15	0.00	12.55	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.60	0.00
225.0	6.88	8.10	0.00	0.00	0.00	0.00	4.05	8.10	2.43
270.0	2.83	0.00	10.53	0.00	0.00	0.00	0.00	6.07	0.00
315.0	0.81	3.24	0.00	0.00	0.00	0.00	0.00	0.00	6.07
360.0	0.00	0.00	4.45	0.00	0.81	0.00	0.00	6.48	0.00
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.00	0.00	0.00	4.05	0.00	0.00	3.64	0.00	0.00
45.0	0.00	0.00	6.48	6.88	0.00	6.07	0.00	0.00	0.00
90.0	0.40	0.00	15.38	0.00	2.83	2.83	0.00	1.62	1.62
135.0	0.81	0.00	16.60	4.45	0.00	0.00	0.00	0.00	0.00
180.0	23.89	0.00	0.00	6.48	0.00	2.83	9.72	0.00	0.00
225.0	0.00	4.86	4.86	7.69	0.00	0.00	2.83	0.00	0.00
270.0	7.69	0.00	0.00	10.53	0.00	4.45	0.00	18.22	4.05
315.0	2.83	0.00	4.86	7.69	0.00	0.00	0.00	0.00	1.62
360.0	0.00	0.00	0.00	4.05	0.00	0.00	3.64	0.00	0.00
C/γ(°)	180.0								
0.0	14.57								
45.0	0.00								
90.0	0.00								
135.0	6.07								
180.0	14.57								
225.0	0.00								
270.0	0.00								
315.0	6.07								
360.0	14.57								