



SGSO

Address: LIT by CARDI

Client:

LumCAT: 0017440219 RIO 10W 3000K 1000lm

Luminaire:

Report No:

Voltage(V): 230.4000

Test No: KYZ-A251030009-04-005

Current(A): 0.0459

LampCAT: LED

Power (W): 10.0000

Lamp flux(lm): -1.0

PF: 0.9462

Number of Lamps: 1

Ballast type:

Length(mm): -126

Width(mm): -126

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1000.00

Efficiency(%): 0.00%

Lumens(lm)/Power(W): 100.00

Central intensity(cd): 499.028

Maximum intensity(cd): 510.127

Angle of maximum intensity: C=45.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=84.7

[C90/270]Total=84.4

Field angle(10%Imax): [C0/180]Total=148.4

[C90/270]Total=144.3

Maximum s/h(1/2): C0_180=1.12 C90_270=1.08

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

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 0.00%

Up flux rate of LUM(%): 1.33%

Down flux rate of LUM(%): 98.67%

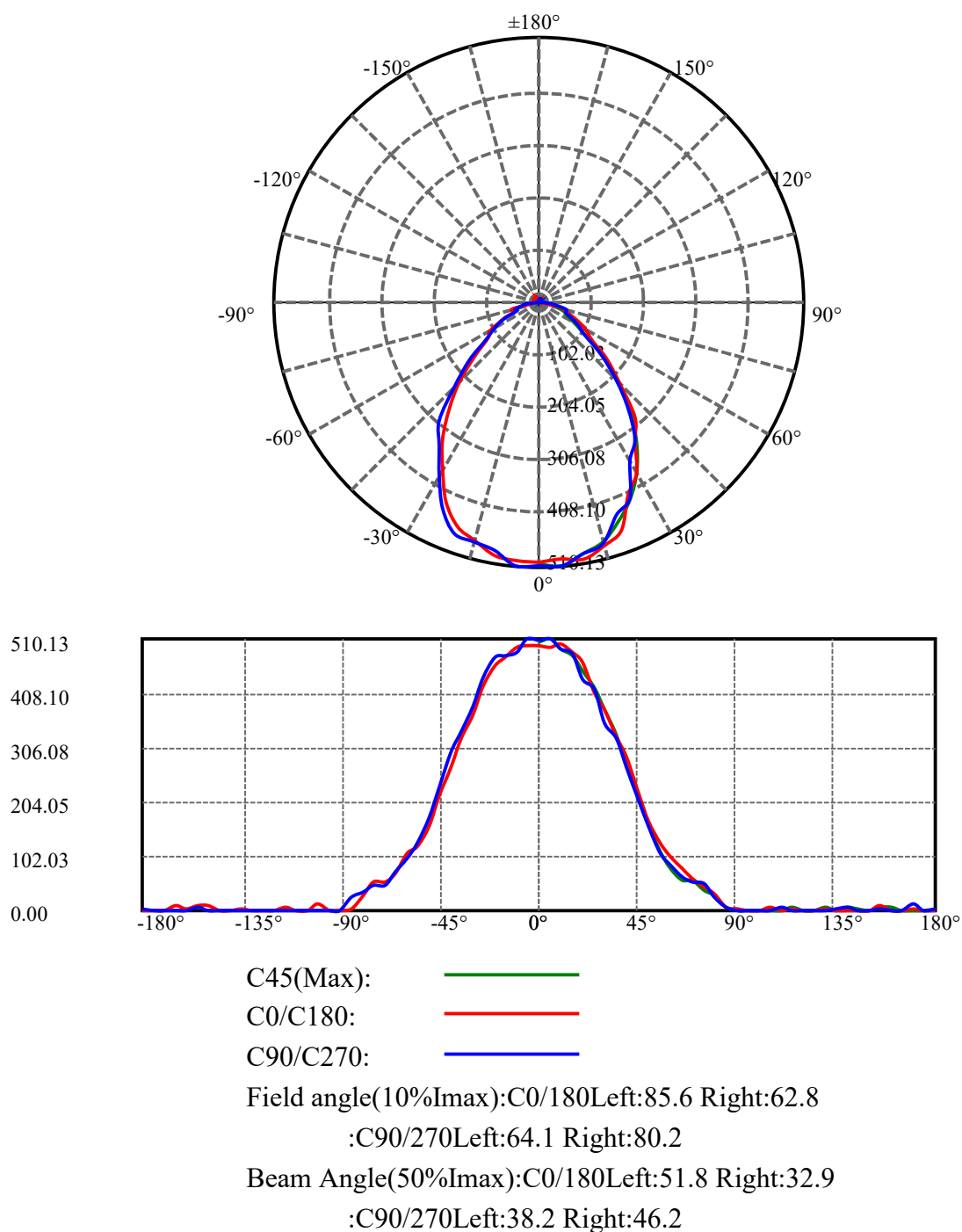
CIE Type : Direct lighting

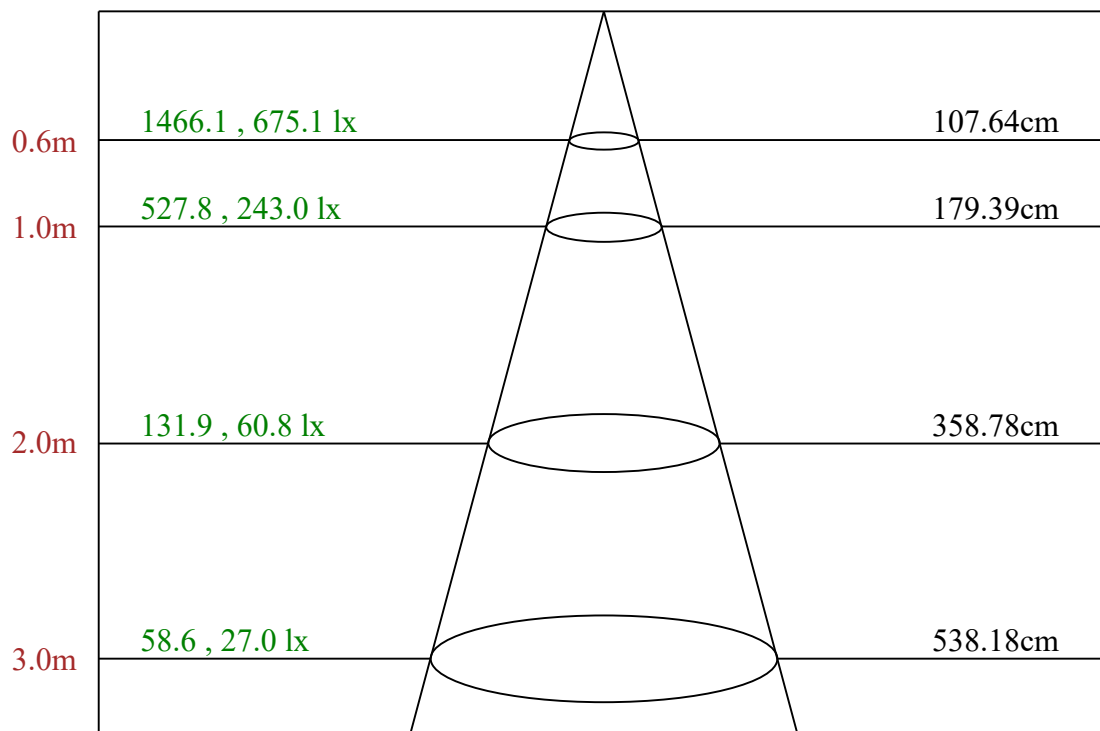
Output flux ratio in π solid angle : 85.928%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	523.526	0.000	0	.000%	.000%
5.0	523.472	12.068	12.068	.000%	1.207%
10.0	511.855	35.711	47.779	.000%	4.778%
15.0	500.451	57.899	105.679	.000%	10.568%
20.0	474.072	77.439	183.118	.000%	18.312%
25.0	434.850	91.916	275.034	.000%	27.503%
30.0	386.036	100.165	375.199	.000%	37.520%
35.0	338.714	102.904	478.103	.000%	47.810%
40.0	290.966	101.296	579.399	.000%	57.940%
45.0	226.005	92.294	671.693	.000%	67.169%
50.0	170.103	77.174	748.867	.000%	74.887%
55.0	123.847	61.626	810.494	.000%	81.049%
60.0	95.070	48.791	859.284	.000%	85.928%
65.0	69.278	38.523	897.807	.000%	89.781%
70.0	53.077	29.872	927.679	.000%	92.768%
75.0	44.178	24.511	952.19	.000%	95.219%
80.0	32.614	19.812	972.001	.000%	97.200%
85.0	11.458	11.547	983.548	.000%	98.355%
90.0	0.373	3.123	986.671	.000%	98.667%
95.0	1.332	0.450	987.122	.000%	98.712%
100.0	2.505	1.005	988.127	.000%	98.813%
105.0	5.436	2.049	990.175	.000%	99.018%
110.0	3.091	2.149	992.324	.000%	99.232%
115.0	2.398	1.340	993.664	.000%	99.366%
120.0	0.373	0.650	994.314	.000%	99.431%
125.0	0.053	0.095	994.409	.000%	99.441%
130.0	1.705	0.369	994.778	.000%	99.478%
135.0	1.173	0.561	995.338	.000%	99.534%
140.0	2.292	0.618	995.957	.000%	99.596%
145.0	1.439	0.600	996.557	.000%	99.656%
150.0	5.222	0.946	997.503	.000%	99.750%
155.0	5.169	1.268	998.771	.000%	99.877%
160.0	1.279	0.652	999.423	.000%	99.942%
165.0	1.119	0.191	999.613	.000%	99.961%
170.0	3.304	0.253	999.866	.000%	99.987%
175.0	0.053	0.116	999.982	.000%	99.998%
180.0	1.492	0.018	1000	.000%	100.000%

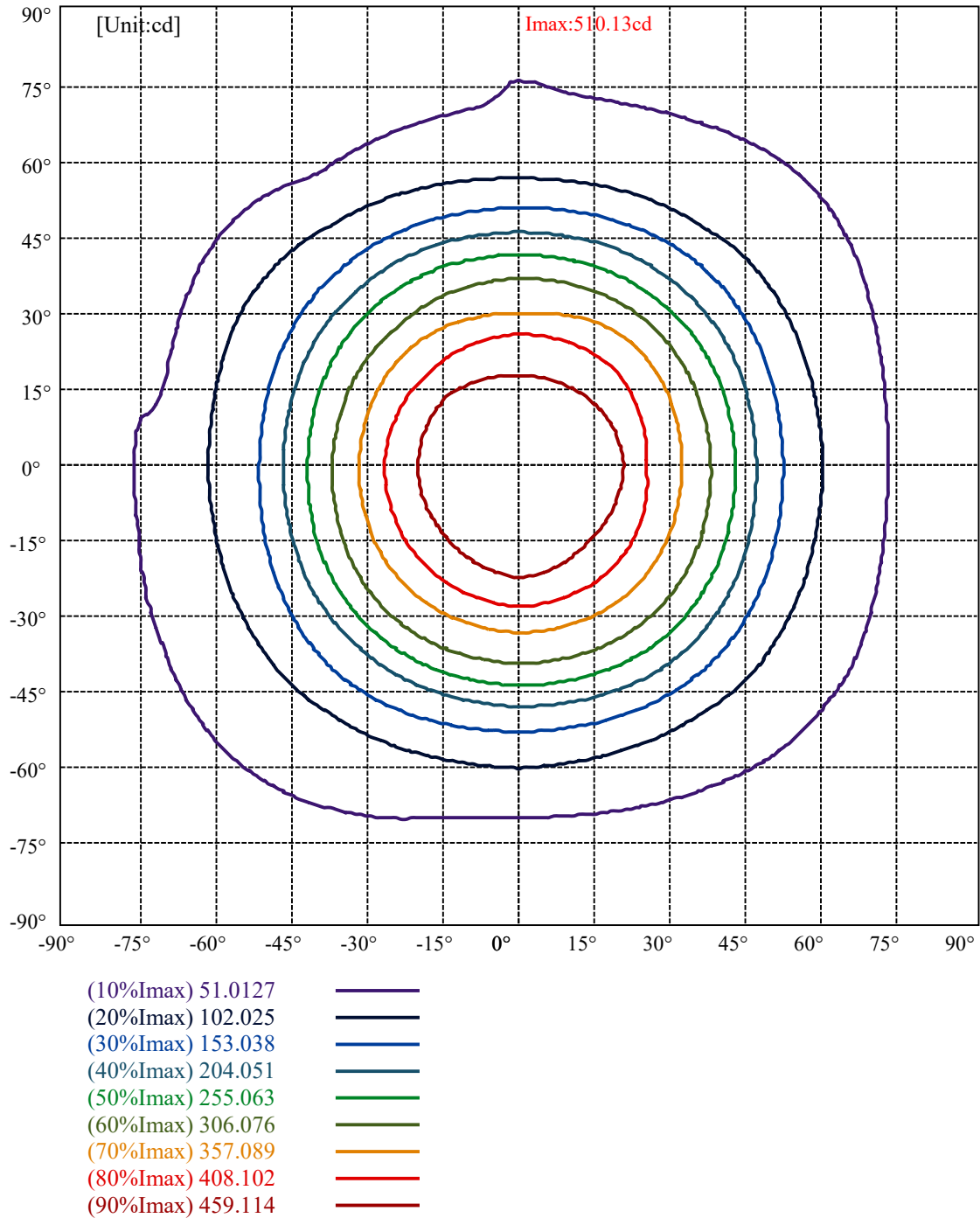
ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	375.20	N.A.	37.52%
0-40	579.40	N.A.	57.94%
0-60	859.28	N.A.	85.93%
0-90	986.67	N.A.	98.67%
0-120	994.31	N.A.	99.43%
0-180	1000.00	N.A.	100.00%
60-90	176.18	N.A.	17.62%
90-120	10.77	N.A.	1.08%
90-130	11.23	N.A.	1.12%
90-150	13.95	N.A.	1.40%
90-180	16.43	N.A.	1.64%
0-54.15	800.00	N.A.	80.00%

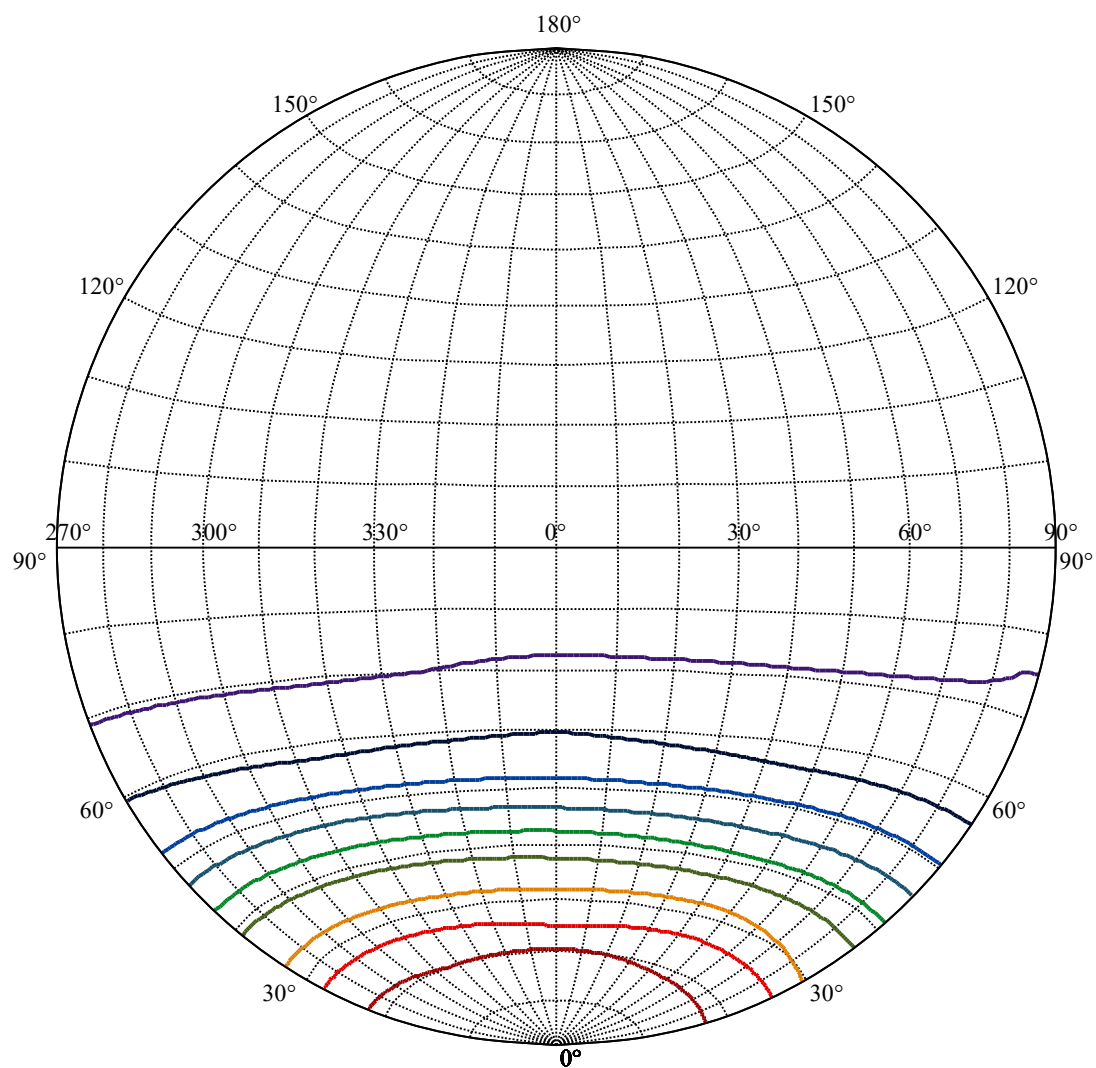
ZONAL LUMEN SUMMARY	
0-10	47.78
10-20	135.34
20-30	192.08
30-40	204.20
40-50	169.47
50-60	110.42
60-70	68.39
70-80	44.32
80-90	14.67
90-100	1.46
100-110	4.20
110-120	1.99
120-130	0.46
130-140	1.18
140-150	1.55
150-160	1.92
160-170	0.44
170-180	0.12





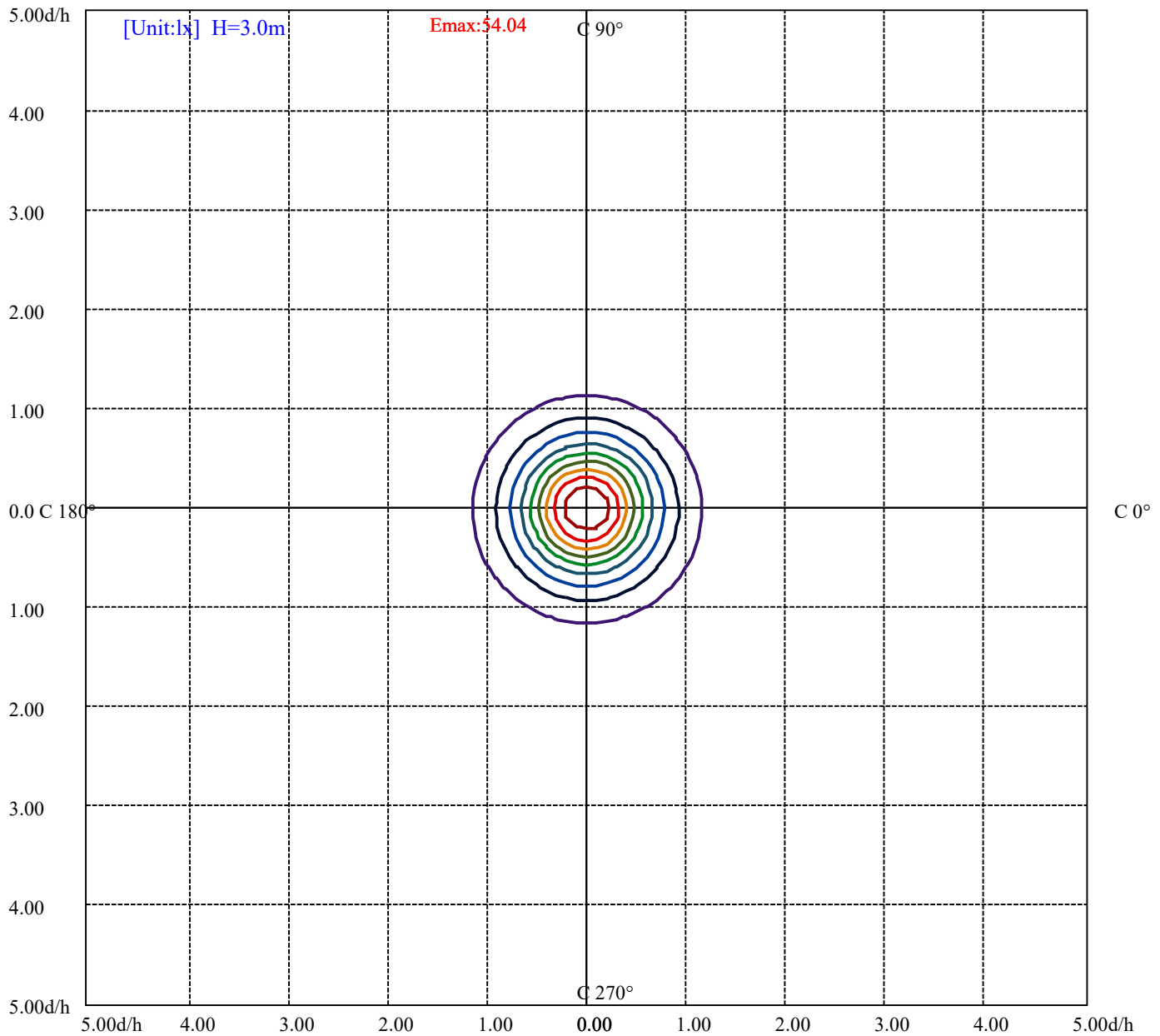
Max , Ave Beam angle of C45 plane 83.78



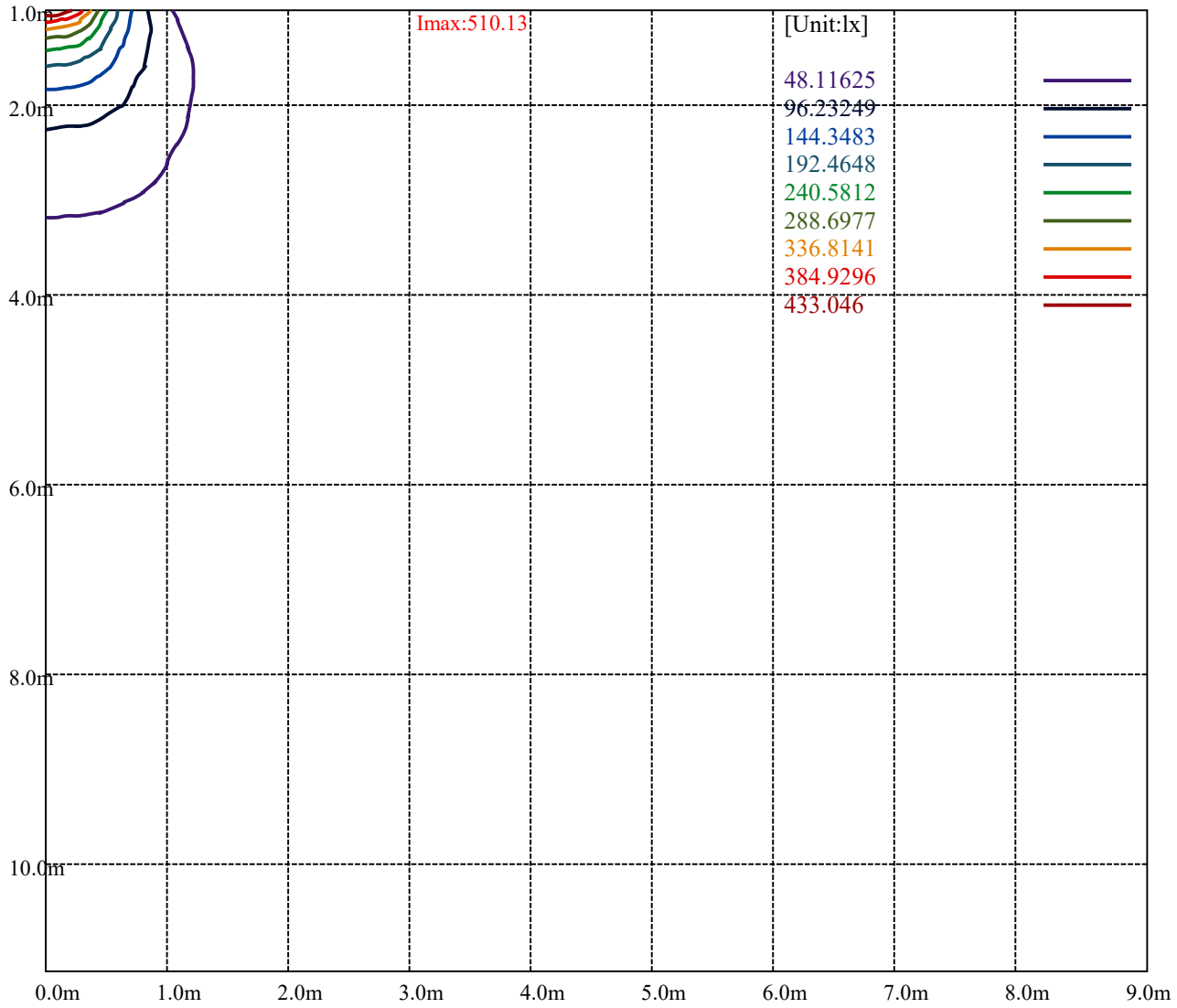


[Unit:cd]

I_{max}:510.13(10%I_{max}) 49.18641(20%I_{max}) 98.37244(30%I_{max}) 147.5591(40%I_{max}) 196.7458(50%I_{max}) 245.9316(60%I_{max}) 295.1183(70%I_{max}) 344.305(80%I_{max}) 393.4917(90%I_{max}) 442.6774



(10%Emax)	5.403501	
(20%Emax)	10.80696	
(30%Emax)	16.21055	
(40%Emax)	21.61403	
(50%Emax)	27.01751	
(60%Emax)	32.42099	
(70%Emax)	37.82447	
(80%Emax)	43.22805	
(90%Emax)	48.63153	



Luminance Table

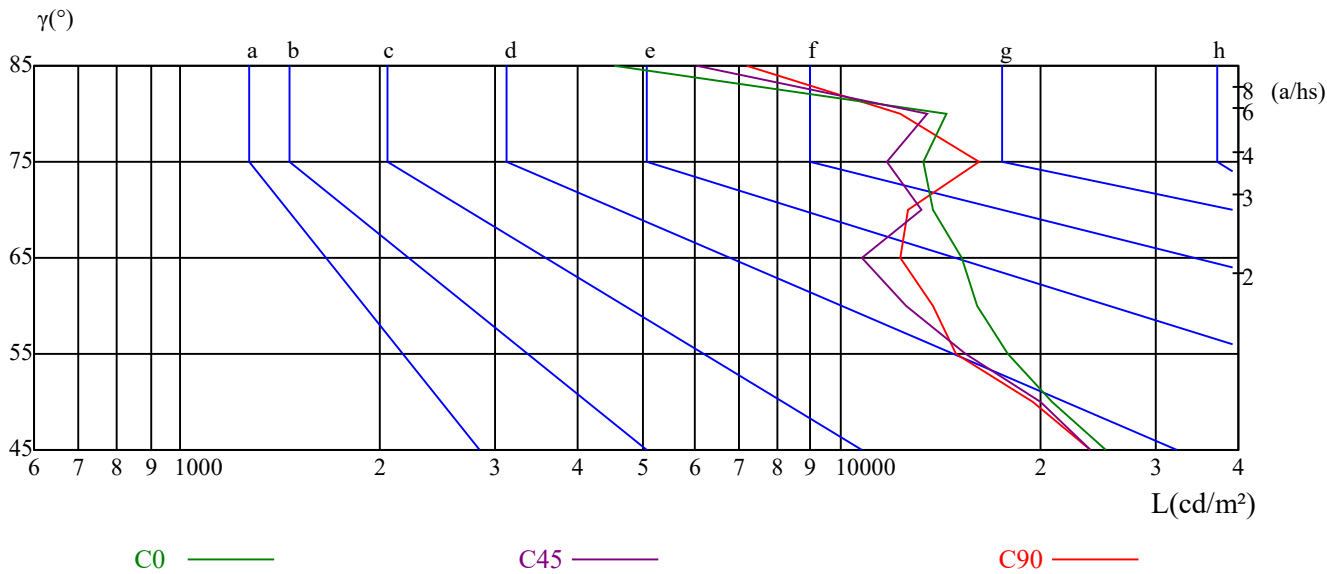
γ	45	50	55	60	65	70	75	80	85
C0	25129	20925	17932	16088	15211	13783	13374	14429	4539
C45	23870	20105	15461	12593	10765	13205	11718	13479	6052
C90	23870	19592	14944	13780	12325	12627	16176	12340	7187

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
14314	13222	11584	14839	15540	11209	3404	15697	10780

Glare Table

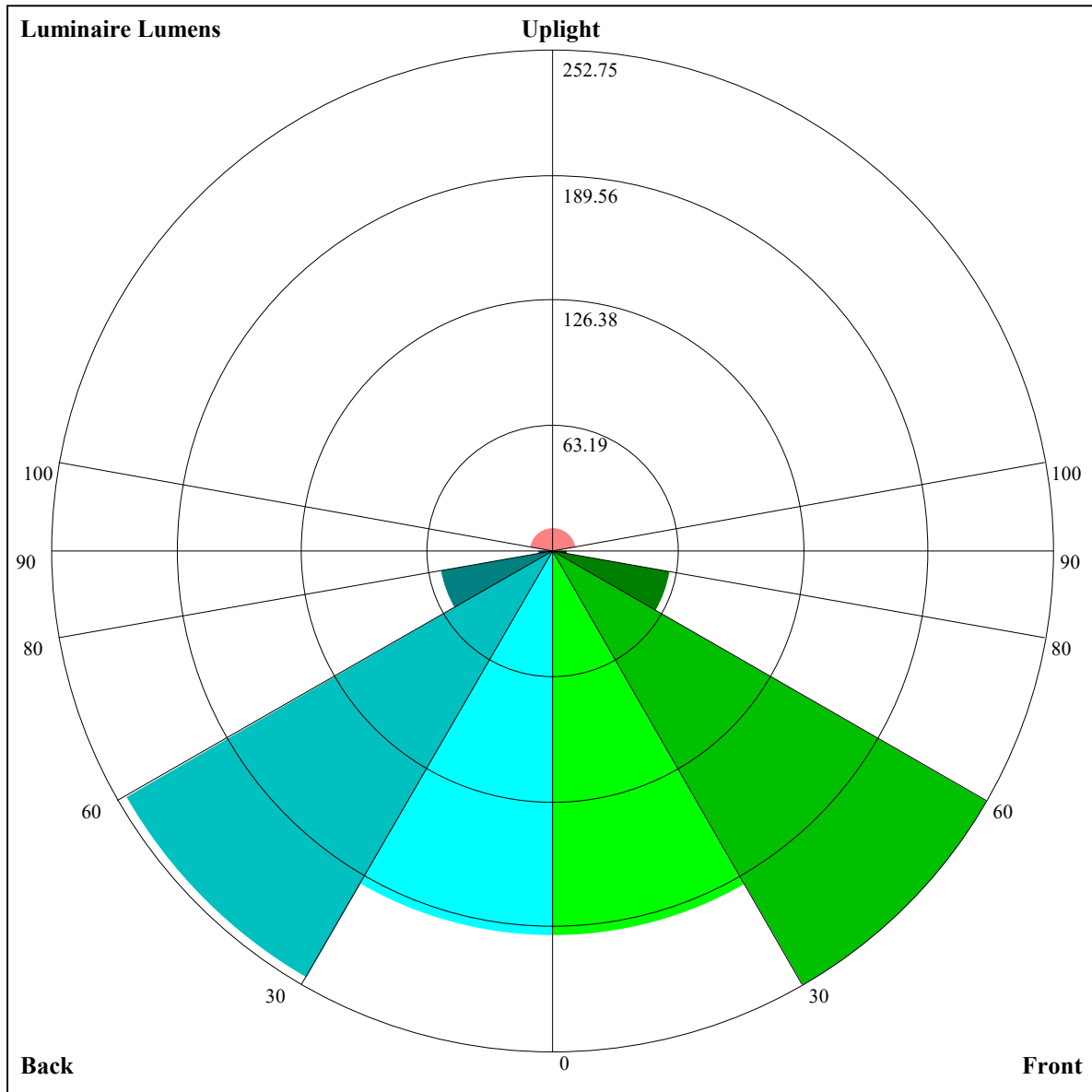
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	17.16	18.59	17.54	18.93	19.28	16.68	18.11	17.06	18.45	18.80
	3H	18.35	19.63	18.75	20.00	20.38	17.80	19.08	18.20	19.45	19.82
	4H	18.87	20.08	19.29	20.46	20.85	18.55	19.75	18.97	20.13	20.53
	6H	19.41	20.52	19.84	20.92	21.34	19.13	20.24	19.56	20.64	21.07
	8H	19.54	20.61	19.98	21.02	21.45	19.25	20.32	19.68	20.73	21.16
	12H	19.55	20.57	19.99	20.99	21.43	19.28	20.31	19.72	20.72	21.16
4H	2H	17.44	18.65	17.86	19.03	19.42	17.03	18.24	17.45	18.62	19.01
	3H	18.87	19.88	19.31	20.30	20.74	18.42	19.43	18.86	19.85	20.29
	4H	19.59	20.48	20.04	20.93	21.40	19.38	20.28	19.84	20.72	21.19
	6H	20.25	21.05	20.74	21.52	21.99	20.07	20.86	20.55	21.33	21.81
	8H	20.47	21.22	20.97	21.69	22.18	20.26	21.01	20.76	21.48	21.98
	12H	20.52	21.21	21.02	21.68	22.22	20.34	21.04	20.84	21.50	22.04
8H	4H	19.80	20.55	20.30	21.02	21.52	19.62	20.37	20.12	20.84	21.34
	6H	20.62	21.25	21.14	21.74	22.27	20.45	21.07	20.97	21.57	22.10
	8H	20.95	21.50	21.49	22.03	22.55	20.76	21.30	21.30	21.84	22.36
	12H	21.03	21.49	21.58	22.02	22.56	20.88	21.33	21.42	21.87	22.41
12H	4H	19.83	20.52	20.33	20.99	21.53	19.66	20.35	20.16	20.82	21.35
	6H	20.72	21.27	21.26	21.80	22.32	20.56	21.10	21.10	21.64	22.16
	8H	21.04	21.49	21.58	22.03	22.57	20.85	21.31	21.40	21.84	22.39
Variation with the observer position at spacings:											
S = 1.0H		0.4/-0.7					0.3/-0.7				
S = 1.5H		0.7/-0.9					0.8/-1.0				
S = 2.0H		1.3/-1.0					1.4/-0.9				
Standard tables:		BK3					BK3				
Uncorrected UGR		6.3					6.6				

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



Luminaire Lumens:

FL=194.63,FM=252.75,FH=60.14,FVH=7.91

BL=193.94,BM=248.83,BH=57.61,BVH=7.88

UL=1.51,UH=12.32

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	499.03	494.92	500.26	485.46	465.73	407.77	378.18	325.15	289.39
45.0	504.37	510.13	490.40	478.89	450.93	418.05	377.76	329.67	270.48
90.0	506.84	509.72	492.45	482.59	434.08	415.17	351.05	322.68	268.83
135.0	508.89	506.02	488.75	483.82	455.04	406.13	365.84	308.71	267.19
180.0	499.03	499.03	493.27	475.60	458.33	421.34	368.72	321.86	268.83
225.0	504.37	506.84	495.33	488.75	458.33	422.16	373.24	330.90	288.15
270.0	506.84	510.13	483.82	479.30	475.19	436.55	384.75	335.84	298.43
315.0	508.89	501.08	503.96	485.87	459.15	427.09	378.18	337.89	293.09
360.0	499.03	494.92	500.26	485.46	465.73	407.77	378.18	325.15	289.39
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	221.56	167.71	128.25	100.30	80.16	58.78	43.16	31.24	4.93
45.0	210.46	161.14	110.58	78.51	56.73	56.32	37.82	29.19	6.58
90.0	210.46	157.03	106.88	85.91	64.95	53.85	52.20	26.72	7.81
135.0	206.35	152.09	107.70	91.67	50.97	40.28	21.79	22.61	1.64
180.0	217.04	159.90	120.03	108.93	70.70	52.62	52.62	30.01	2.47
225.0	214.57	168.12	131.95	85.50	56.32	57.96	42.34	37.41	26.31
270.0	230.61	173.47	128.25	98.65	74.40	46.04	48.09	33.71	26.31
315.0	232.25	172.65	121.67	83.86	80.16	43.57	42.75	40.69	12.33
360.0	221.56	167.71	128.25	100.30	80.16	58.78	43.16	31.24	4.93
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1.64	0.00	0.00	6.58	0.41	3.29	0.00	0.00	4.11
45.0	0.00	1.23	0.00	0.00	0.00	7.40	0.00	0.00	7.81
90.0	0.00	0.00	0.00	0.00	5.76	0.00	0.00	0.00	0.00
135.0	0.00	5.34	0.00	14.39	0.82	0.00	0.00	0.00	0.00
180.0	0.00	0.00	12.33	0.00	0.00	6.99	0.82	0.41	1.23
225.0	0.00	3.29	1.64	13.98	8.63	0.82	0.00	0.00	0.00
270.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315.0	1.23	0.41	5.34	6.99	8.22	0.00	2.06	0.00	0.00
360.0	1.64	0.00	0.00	6.58	0.41	3.29	0.00	0.00	4.11
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	0.82	0.00	8.63	0.00	0.00	4.11	0.00
45.0	0.82	6.58	2.88	0.00	4.93	6.17	0.00	0.00	0.41
90.0	4.52	7.40	0.00	0.00	3.70	0.00	0.00	11.10	0.00
135.0	0.00	2.47	0.00	11.92	0.00	0.00	0.00	0.00	0.00
180.0	3.29	1.23	0.41	10.69	10.69	3.70	8.22	0.00	0.00
225.0	0.00	0.00	5.76	7.81	0.82	0.00	0.41	0.00	0.00
270.0	0.00	0.00	0.00	0.00	4.93	0.00	0.00	1.23	0.00
315.0	0.41	0.00	1.23	9.87	6.17	0.00	0.00	9.04	0.00
360.0	0.00	0.00	0.82	0.00	8.63	0.00	0.00	4.11	0.00
C/γ(°)	180.0								
0.0	0.00								
45.0	1.64								
90.0	4.11								
135.0	0.00								
180.0	0.00								
225.0	1.64								
270.0	4.11								
315.0	0.00								
360.0	0.00								