



SGSO

Address: LIT by CARDI

Client:

LumCAT: 0017440226 KAI 15W 3000K 1800lm

Luminaire:

Report No:

Voltage(V): 230.4400

Test No: KYZ-A251030009-03-003

Current(A): 0.0669

LampCAT: LED

Power (W): 15.0000

Lamp flux(lm): -1.0

PF: 0.9730

Number of Lamps: 1

Ballast type:

Length(mm): -178

Width(mm): -178

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1800.00

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 120.00

Central intensity(cd): 874.113

Maximum intensity(cd): 880.672

Angle of maximum intensity: C=45.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=87.0

[C90/270]Total=87.4

Field angle(10%Imax): [C0/180]Total=146.7

[C90/270]Total=147.0

Maximum s/h(1/2): C0_180=1.12 C90_270=1.18

Maximum s/h(1/4): C0_180=1.18 C90_270=1.23

Up flux rate of lamp(%): 0.81%

Down flux rate of lamp(%): 99.19%

Up flux rate of LUM(%): 0.81%

Down flux rate of LUM(%): 99.19%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 85.953%

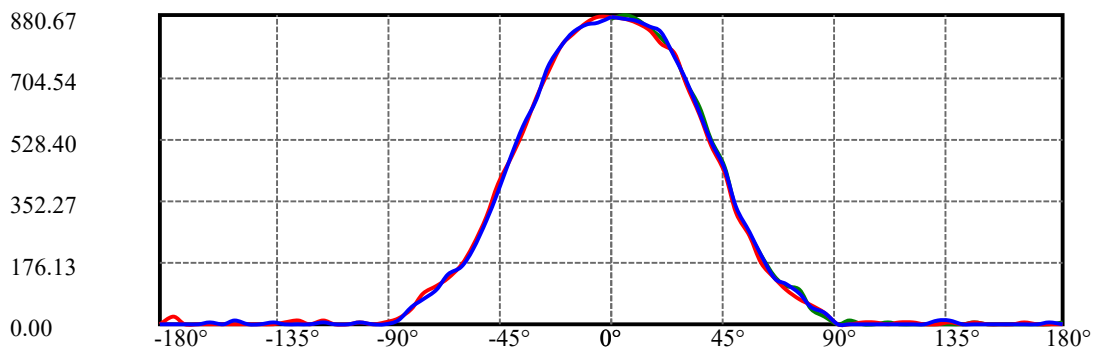
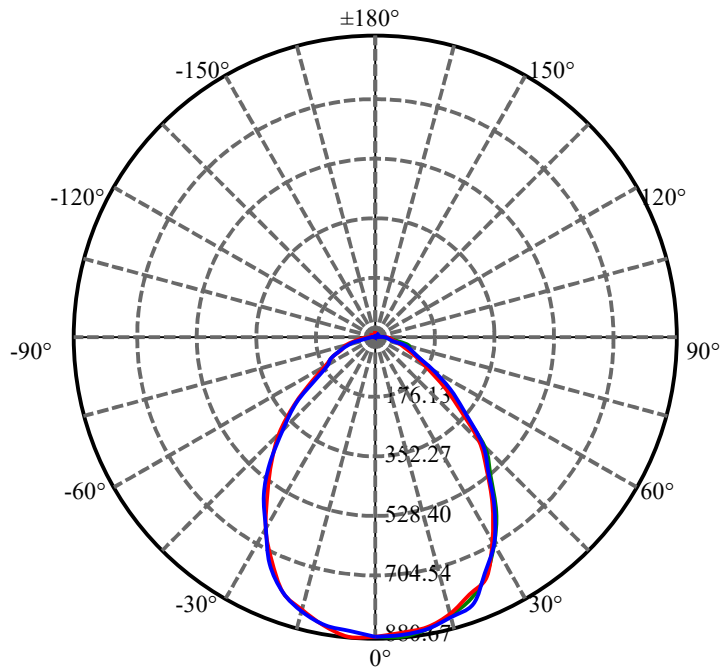
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	850.836	0.000	0	.000%	.000%
5.0	848.864	20.841	20.841	.000%	1.158%
10.0	837.246	61.867	82.708	.000%	4.595%
15.0	811.720	100.328	183.037	.000%	10.169%
20.0	778.360	134.411	317.448	.000%	17.636%
25.0	721.819	161.383	478.831	.000%	26.602%
30.0	647.852	177.786	656.616	.000%	36.479%
35.0	565.785	183.307	839.924	.000%	46.662%
40.0	485.583	179.919	1019.842	.000%	56.658%
45.0	398.453	167.891	1187.733	.000%	65.985%
50.0	301.837	145.139	1332.872	.000%	74.049%
55.0	231.601	118.967	1451.839	.000%	80.658%
60.0	170.423	95.314	1547.152	.000%	85.953%
65.0	126.512	74.040	1621.192	.000%	90.066%
70.0	100.239	58.890	1680.082	.000%	93.338%
75.0	74.714	46.905	1726.986	.000%	95.944%
80.0	46.043	33.141	1760.127	.000%	97.785%
85.0	21.050	18.699	1778.826	.000%	98.824%
90.0	2.452	6.600	1785.426	.000%	99.191%
95.0	1.492	1.107	1786.534	.000%	99.252%
100.0	2.398	1.084	1787.618	.000%	99.312%
105.0	1.279	1.009	1788.627	.000%	99.368%
110.0	1.386	0.714	1789.342	.000%	99.408%
115.0	4.317	1.481	1790.823	.000%	99.490%
120.0	2.611	1.727	1792.55	.000%	99.586%
125.0	1.759	1.036	1793.586	.000%	99.644%
130.0	3.677	1.212	1794.798	.000%	99.711%
135.0	4.530	1.701	1796.499	.000%	99.806%
140.0	0.000	0.860	1797.359	.000%	99.853%
145.0	2.185	0.374	1797.733	.000%	99.874%
150.0	1.386	0.539	1798.273	.000%	99.904%
155.0	1.119	0.325	1798.598	.000%	99.922%
160.0	1.705	0.304	1798.902	.000%	99.939%
165.0	3.890	0.473	1799.375	.000%	99.965%
170.0	1.386	0.321	1799.696	.000%	99.983%
175.0	3.677	0.186	1799.881	.000%	99.994%
180.0	5.756	0.116	1799.997	.000%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	656.62	N.A.	36.48%
0-40	1019.84	N.A.	56.66%
0-60	1547.15	N.A.	85.95%
0-90	1785.43	N.A.	99.19%
0-120	1792.55	N.A.	99.59%
0-180	1800.00	N.A.	100.00%
60-90	333.59	N.A.	18.53%
90-120	13.72	N.A.	0.76%
90-130	15.97	N.A.	0.89%
90-150	19.45	N.A.	1.08%
90-180	21.06	N.A.	1.17%
0-54.50	1440.00	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	82.71
10-20	234.74
20-30	339.17
30-40	363.23
40-50	313.03
50-60	214.28
60-70	132.93
70-80	80.05
80-90	25.30
90-100	2.19
100-110	1.72
110-120	3.21
120-130	2.25
130-140	2.56
140-150	0.91
150-160	0.63
160-170	0.79
170-180	0.19

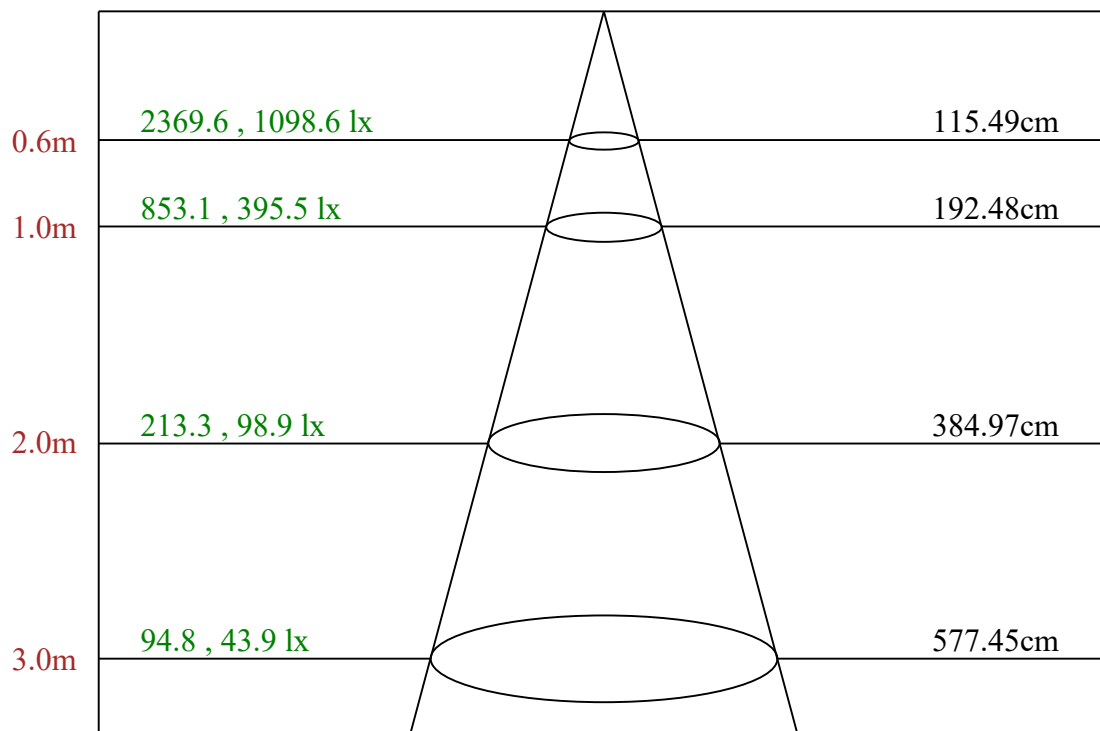
C45(Max): ———C0/C180: ———C90/C270: ———

Field angle(10%Imax):C0/180Left:70.0 Right:76.7

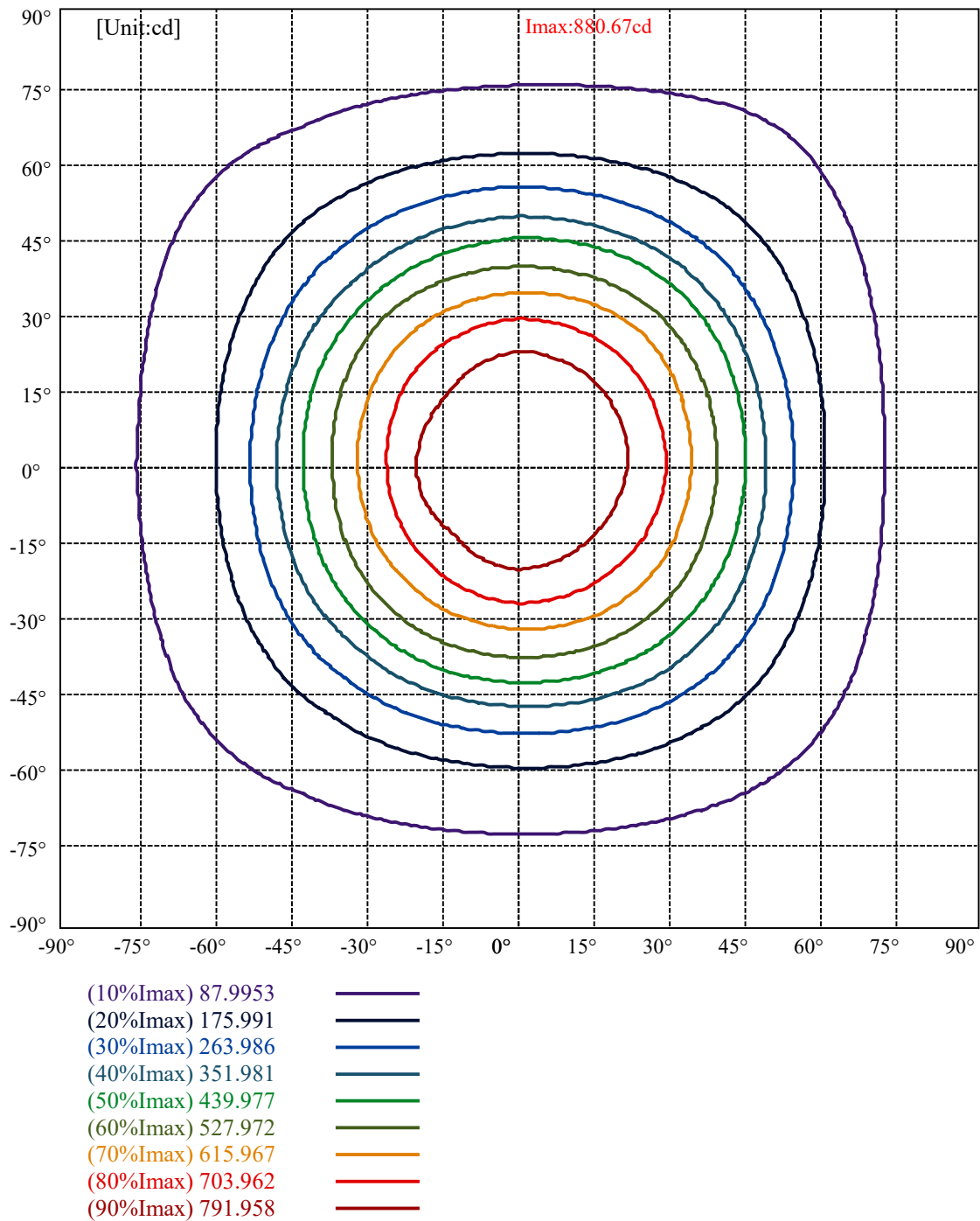
:C90/270Left:72.0 Right:75.0

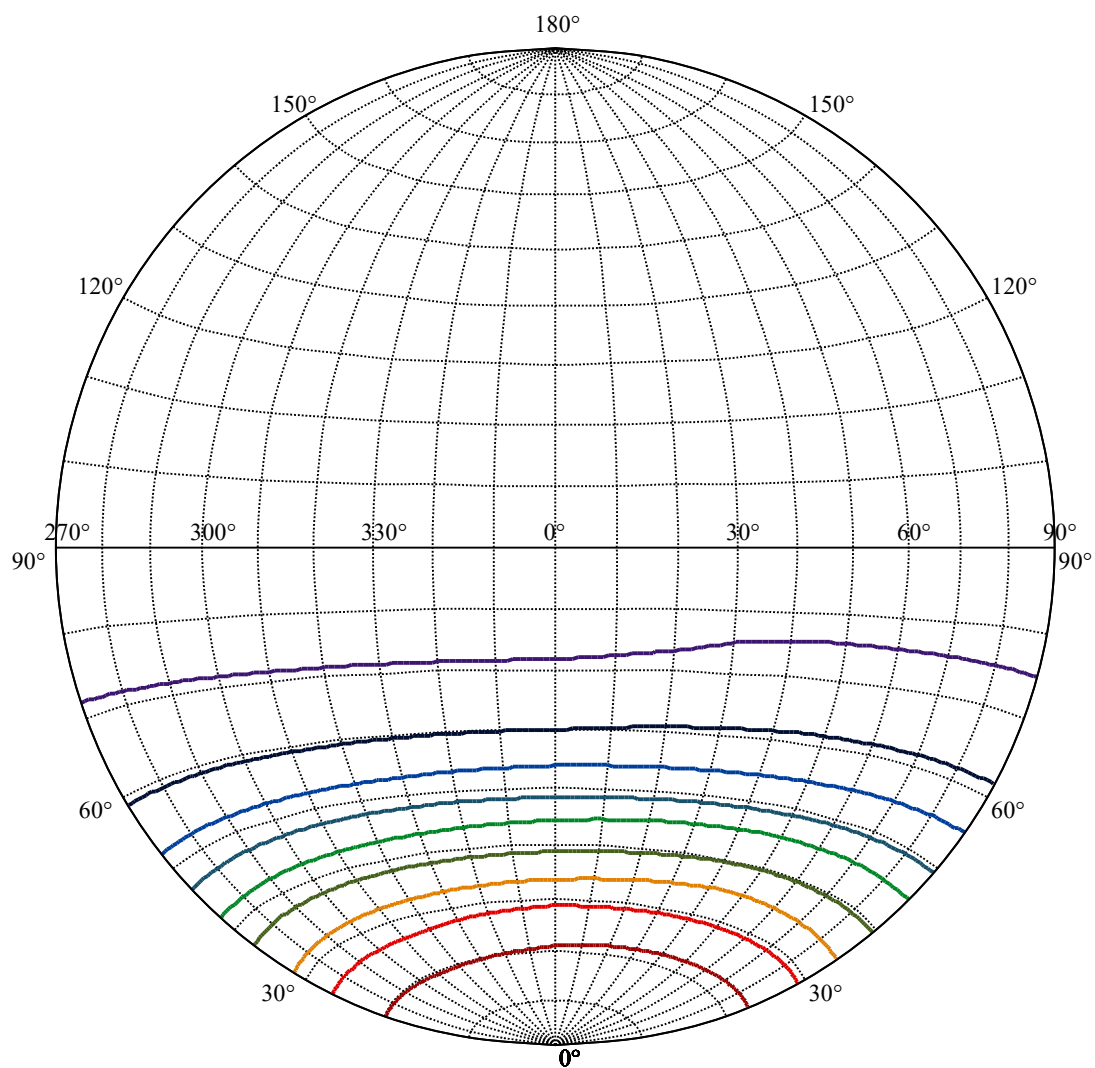
Beam Angle(50%Imax):C0/180Left:37.4 Right:49.6

:C90/270Left:42.2 Right:45.2



Max , Ave Beam angle of C45 plane 87.81





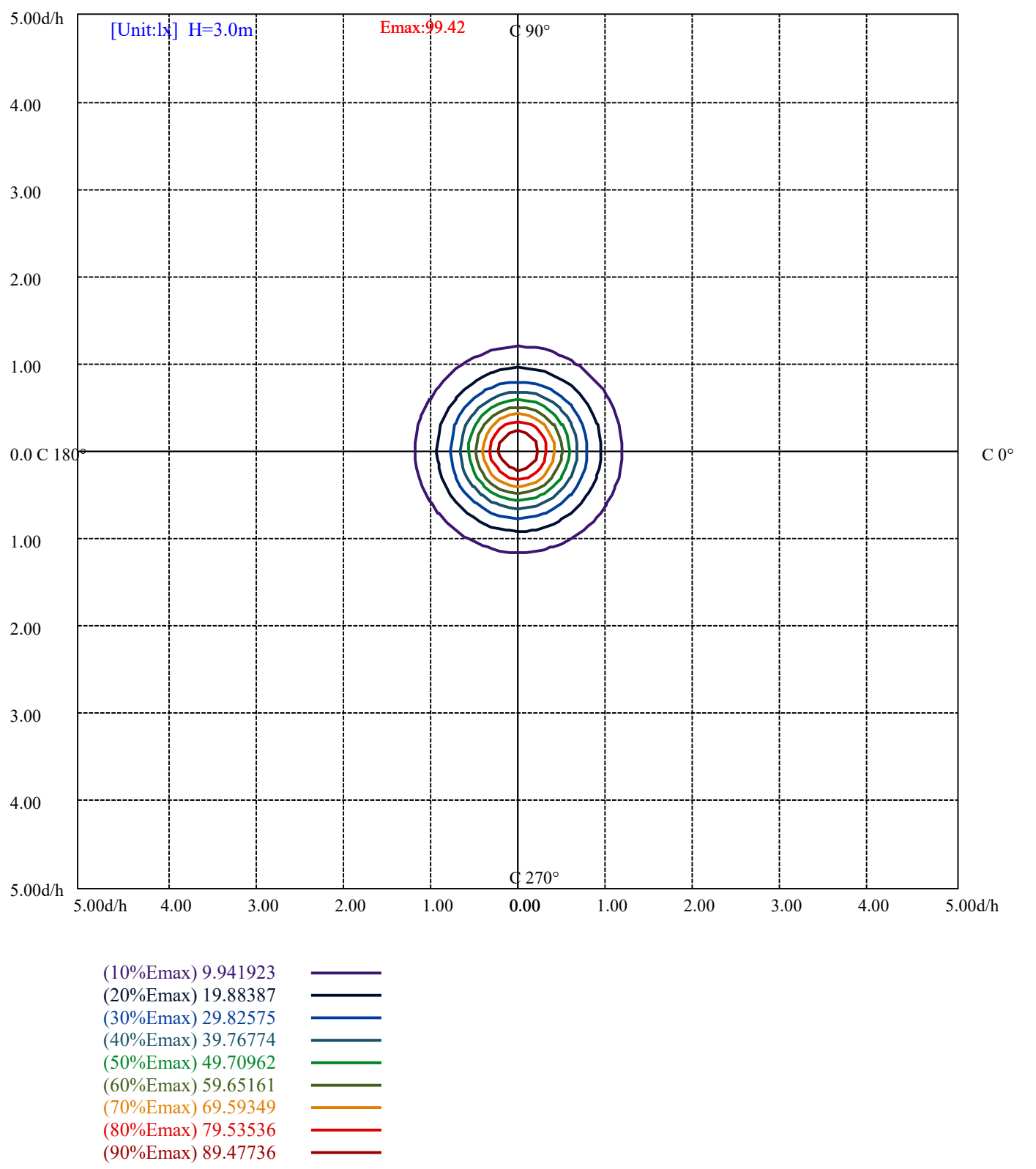
House

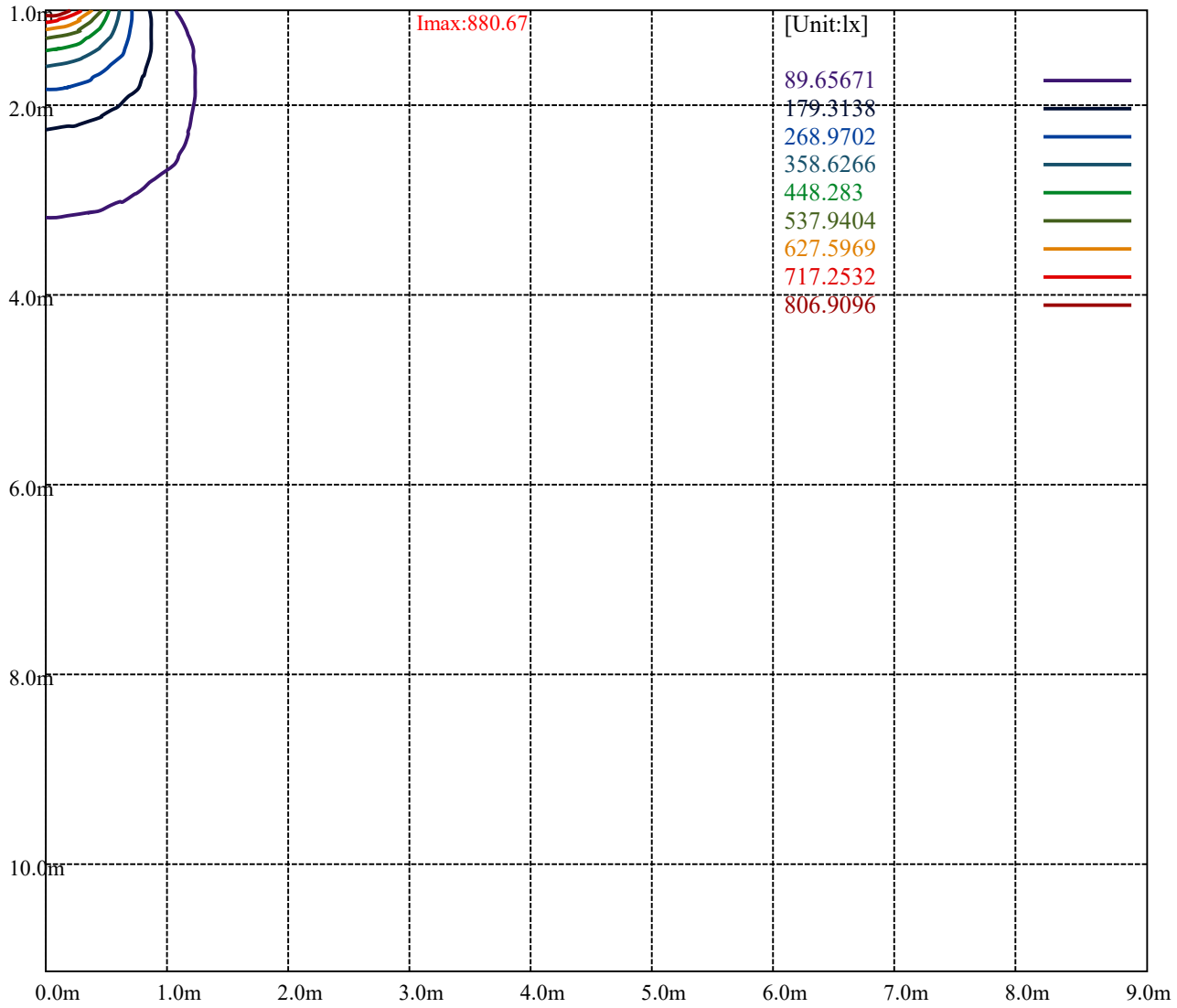
[Unit:cd]

Road

Imax:880.67
(10%Imax) 90.32945
(20%Imax) 180.6585
(30%Imax) 270.9888
(40%Imax) 361.318
(50%Imax) 451.6473
(60%Imax) 541.9766
(70%Imax) 632.3057
(80%Imax) 722.636
(90%Imax) 812.9653







Luminance Limiting Curve(no luminous side)

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Luminance Table

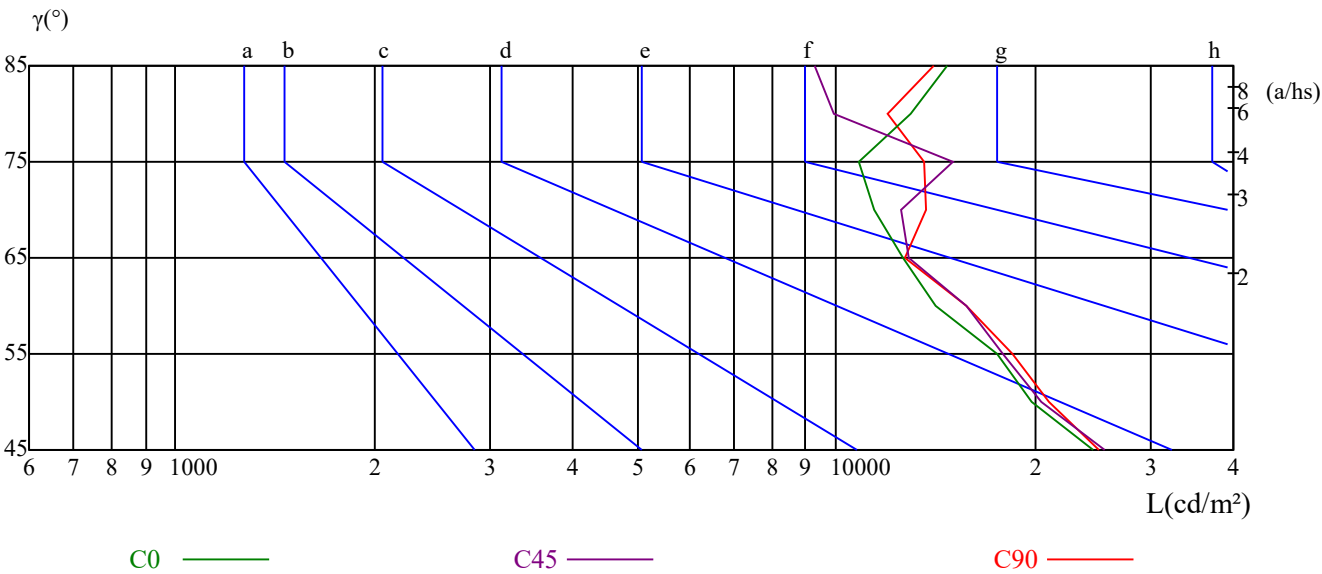
γ	45	50	55	60	65	70	75	80	85
C0	24553	19820	17493	14128	12640	11406	10863	12953	14718
C45	25621	20503	17953	15815	12931	12536	15005	9917	9274
C90	25074	20995	18565	15745	12723	13666	13579	11941	14113

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
12661	13118	11788	12221	12119	11627	11694	10081	9022

Glare Table

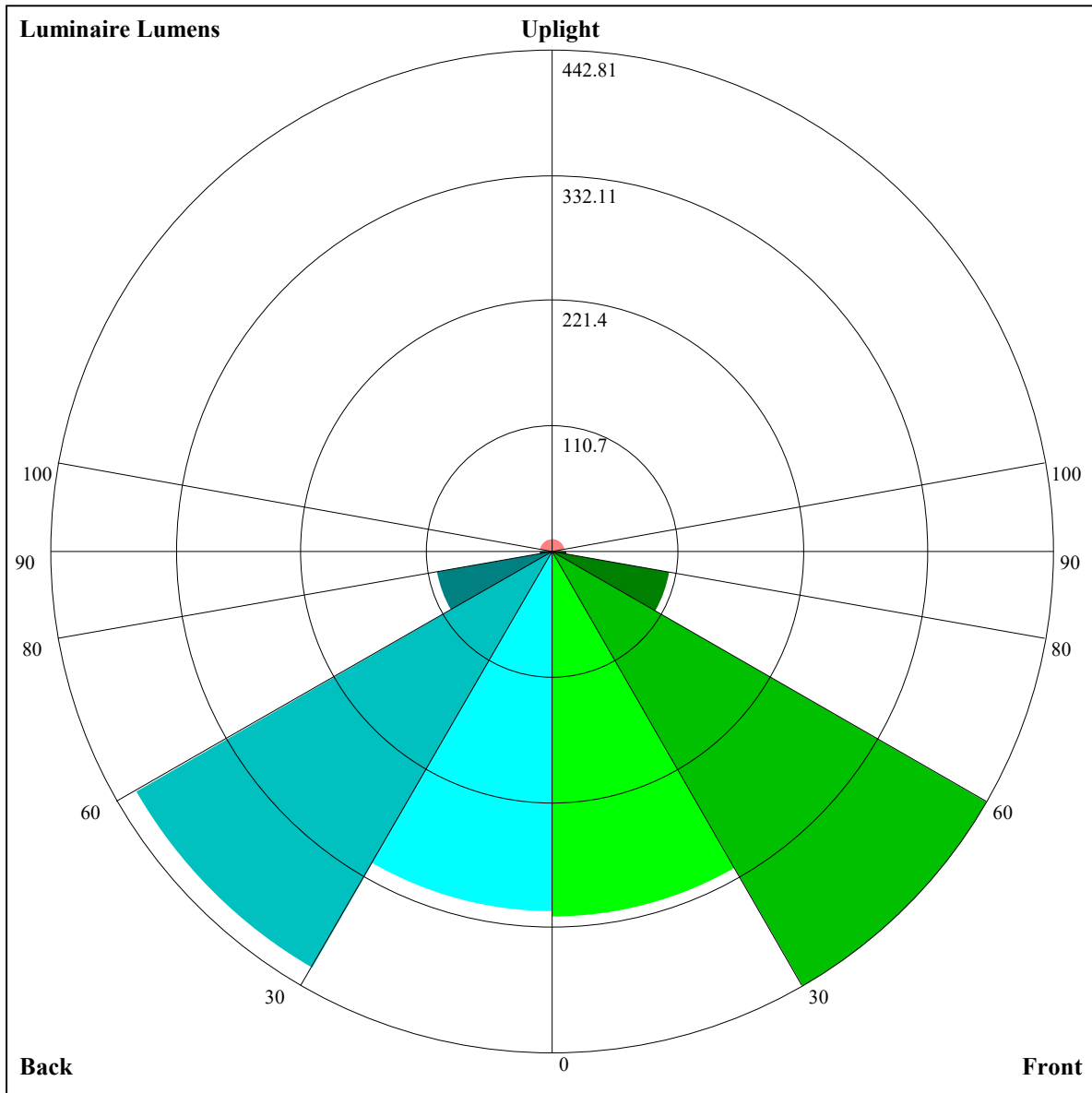
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	17.01	18.47	17.38	18.80	19.13	17.22	18.68	17.59	19.01	19.35
	3H	17.95	19.27	18.35	19.62	19.98	18.26	19.57	18.65	19.93	20.29
	4H	18.39	19.62	18.80	19.99	20.37	18.82	20.05	19.23	20.42	20.81
	6H	18.85	19.99	19.28	20.38	20.79	19.26	20.40	19.68	20.78	21.20
	8H	19.05	20.14	19.47	20.54	20.96	19.40	20.49	19.82	20.89	21.31
	12H	19.21	20.26	19.64	20.66	21.09	19.52	20.57	19.95	20.98	21.41
4H	2H	17.44	18.67	17.85	19.04	19.42	17.62	18.85	18.02	19.21	19.60
	3H	18.60	19.64	19.03	20.04	20.47	18.88	19.92	19.31	20.32	20.75
	4H	19.26	20.18	19.71	20.61	21.07	19.67	20.58	20.11	21.01	21.47
	6H	19.82	20.63	20.29	21.09	21.55	20.18	20.99	20.66	21.45	21.91
	8H	20.09	20.85	20.58	21.31	21.80	20.39	21.15	20.88	21.61	22.10
	12H	20.34	21.05	20.83	21.50	22.03	20.59	21.30	21.09	21.76	22.28
8H	4H	19.55	20.31	20.04	20.77	21.25	19.90	20.67	20.39	21.13	21.61
	6H	20.21	20.84	20.71	21.33	21.85	20.51	21.15	21.02	21.63	22.15
	8H	20.60	21.16	21.13	21.68	22.19	20.84	21.40	21.37	21.92	22.43
	12H	20.94	21.40	21.47	21.93	22.45	21.12	21.59	21.66	22.11	22.64
12H	4H	19.56	20.27	20.06	20.73	21.25	19.92	20.62	20.41	21.08	21.60
	6H	20.29	20.85	20.82	21.37	21.88	20.59	21.15	21.12	21.67	22.18
	8H	20.68	21.14	21.22	21.67	22.20	20.91	21.37	21.45	21.90	22.43
Variation with the observer position at spacings:											
S = 1.0H		0.3/-0.5					0.3/-0.6				
S = 1.5H		0.5/-1.0					0.6/-1.1				
S = 2.0H		1.4/-1.3					1.4/-1.3				
Standard tables:		BK3					BK3				
Uncorrected UGR		7.4					7.2				

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



Luminaire Lumens:

FL=322.61,FM=442.81,FH=105.72,FVH=12.78

BL=317.69,BM=425.4,BH=103.64,BVH=11.98

UL=2.14,UH=12.05

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	874.11	868.43	858.37	834.76	799.34	770.92	685.65	593.82	508.55
45.0	872.36	880.67	867.12	840.88	813.33	764.36	691.77	620.49	524.29
90.0	874.99	870.61	866.24	848.75	829.51	763.05	692.21	603.88	517.30
135.0	869.30	880.67	864.93	838.69	789.72	738.99	672.09	581.58	510.30
180.0	874.11	876.74	856.62	826.01	794.09	714.94	644.98	548.78	475.32
225.0	872.36	861.43	838.69	807.65	781.41	709.70	626.62	555.78	471.38
270.0	874.99	859.68	854.43	830.39	791.47	730.69	641.48	562.34	481.44
315.0	869.30	867.12	863.62	833.45	787.97	730.25	661.16	575.89	495.87
360.0	874.11	868.43	858.37	834.76	799.34	770.92	685.65	593.82	508.55
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	432.03	317.02	249.68	175.78	132.93	97.08	69.96	55.97	31.92
45.0	450.83	327.96	256.24	196.77	135.99	106.70	96.64	42.85	20.11
90.0	441.21	335.83	264.99	195.90	133.81	116.32	87.46	51.60	30.61
135.0	395.73	300.41	243.12	180.59	129.00	99.26	80.46	40.23	23.18
180.0	397.05	306.09	226.07	168.35	133.37	110.19	87.46	44.17	18.80
225.0	369.06	282.48	216.89	149.99	110.63	95.33	57.72	49.41	12.24
270.0	379.99	296.91	215.58	163.54	142.11	99.70	68.65	51.16	13.12
315.0	403.61	310.03	227.82	167.48	120.25	97.95	64.72	42.42	22.74
360.0	432.03	317.02	249.68	175.78	132.93	97.08	69.96	55.97	31.92
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.00	1.75	3.06	3.50	0.00	5.25	6.12	0.00	0.00
45.0	0.00	8.75	0.00	0.00	3.94	2.62	0.00	0.00	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	10.49
135.0	4.81	0.00	0.00	3.06	0.00	0.00	0.00	3.50	3.94
180.0	7.00	0.00	4.81	1.75	0.00	11.81	2.62	10.93	6.56
225.0	7.43	1.75	0.00	2.19	7.43	12.24	0.00	0.00	0.00
270.0	0.00	0.00	4.81	0.00	0.00	3.06	0.00	0.00	0.00
315.0	0.87	0.00	7.00	0.00	0.00	0.00	12.68	0.00	9.18
360.0	0.00	1.75	3.06	3.50	0.00	5.25	6.12	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	7.43	0.00	6.56	2.19	0.00	0.00	3.50	1.31	0.44
45.0	0.00	0.00	4.81	0.00	0.00	0.00	0.00	0.00	0.00
90.0	12.24	0.00	1.31	0.00	1.75	0.00	0.00	1.75	5.68
135.0	11.37	0.00	0.00	0.00	4.81	0.44	13.12	3.94	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.19	19.24
225.0	0.00	0.00	0.00	0.00	0.00	4.37	8.75	2.19	0.00
270.0	6.12	0.00	0.44	9.18	0.00	4.81	0.00	0.00	0.00
315.0	0.00	0.00	4.81	0.00	2.62	4.37	6.56	0.00	4.81
360.0	7.43	0.00	6.56	2.19	0.00	0.00	3.50	1.31	0.44
C/γ(°)	180.0								
0.0	0.00								
45.0	6.12								
90.0	0.00								
135.0	17.49								
180.0	0.00								
225.0	6.12								
270.0	0.00								
315.0	17.49								
360.0	0.00								