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Nata

LumCAT:CT01D03636AH

Luminaire:

Report No: NATA0100

Voltage(V): 33.6100

Test No: GC20190602

Current(A): 0.2970

LampCAT: XICATO XOB LES 9.8MM

Power (W): 9.9800

Lamp flux(lm): 1033.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 847.72

Efficiency(%): 82.06%

Lumens(lm)/Power(W): 84.94

Central intensity(cd): 1241.156

Maximum intensity(cd): 1241.156

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=39.1

[C90/270]Total=39.1

Field angle(10%Imax): [C0/180]Total=78.3

[C90/270]Total=78.3

Maximum s/h(1/2): C0_180=0.63 C90_270=0.63

Maximum s/h(1/4): C0_180=0.65 C90_270=0.65

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 82.06%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 88.927%

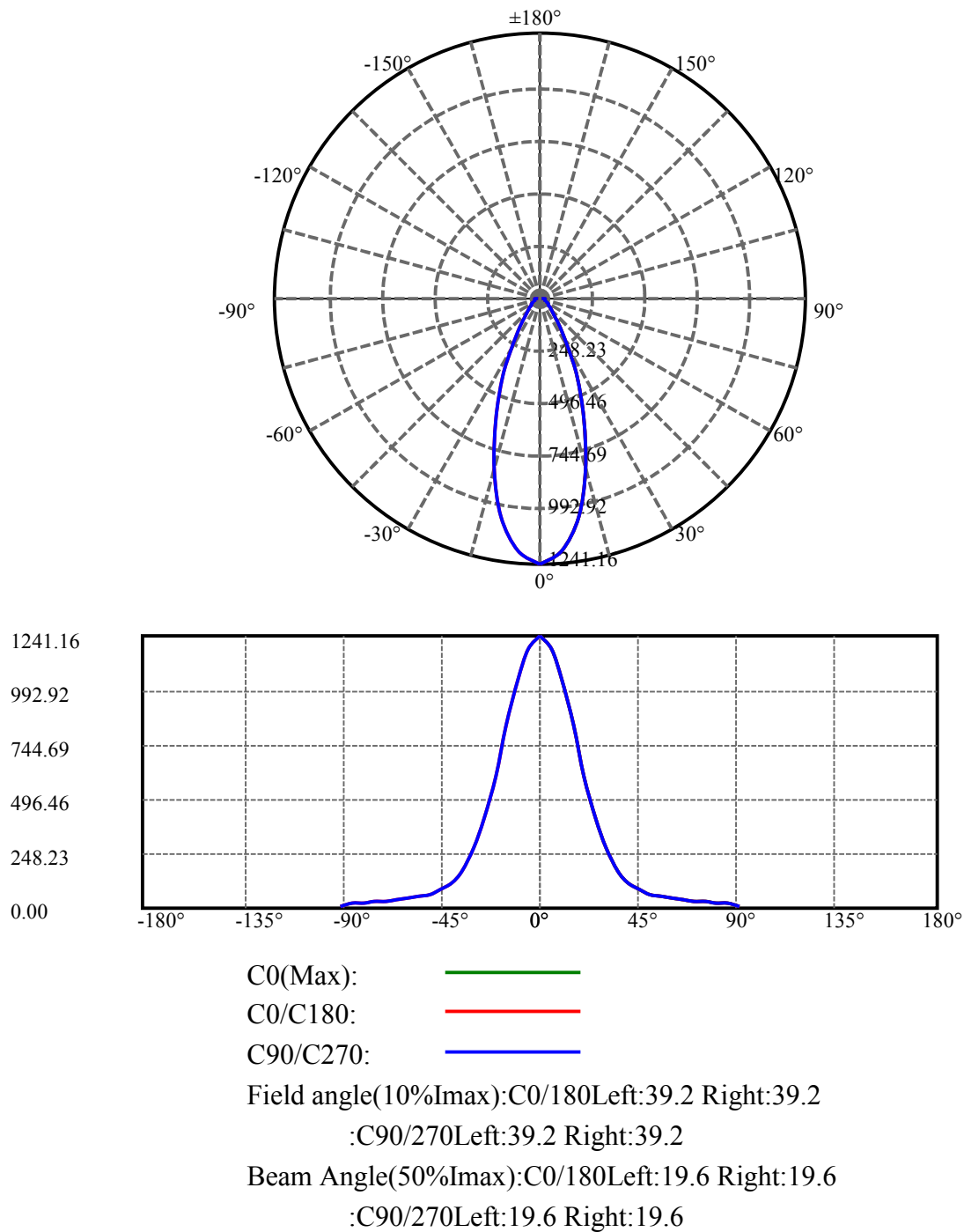
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1241.156	0.000	0	.000%	.000%
5.0	1178.916	28.931	28.931	2.801%	3.413%
10.0	1038.305	79.317	108.248	7.678%	12.769%
15.0	829.491	110.796	219.045	10.726%	25.839%
20.0	601.123	117.903	336.947	11.414%	39.747%
25.0	405.000	105.524	442.471	10.215%	52.195%
30.0	274.838	86.034	528.505	8.329%	62.344%
35.0	166.570	65.000	593.505	6.292%	70.012%
40.0	115.446	47.052	640.558	4.555%	75.562%
45.0	83.707	36.875	677.432	3.570%	79.912%
50.0	62.670	29.578	707.01	2.863%	83.401%
55.0	51.117	24.741	731.751	2.395%	86.320%
60.0	44.487	22.099	753.85	2.139%	88.927%
65.0	39.192	20.343	774.192	1.969%	91.326%
70.0	34.383	18.630	792.822	1.803%	93.524%
75.0	28.905	16.543	809.364	1.601%	95.475%
80.0	26.564	14.842	824.206	1.437%	97.226%
85.0	25.116	14.043	838.249	1.359%	98.883%
90.0	9.478	9.472	847.721	.917%	100.000%

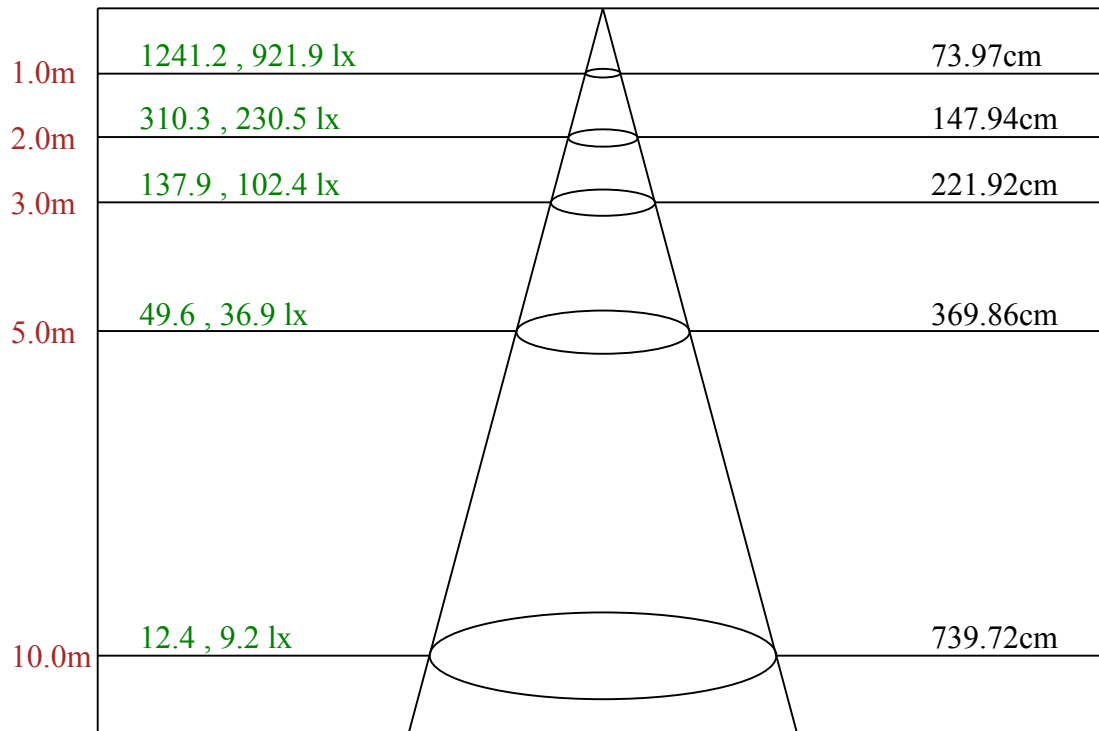
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	528.50	51.16%	62.34%
0-40	640.56	62.01%	75.56%
0-60	753.85	72.98%	88.93%
0-90	838.25	81.15%	98.88%
0-120	838.25	81.15%	98.88%
0-180	847.72	82.06%	100.00%
60-90	106.50	10.31%	12.56%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-45.13	678.18	65.65%	80.00%

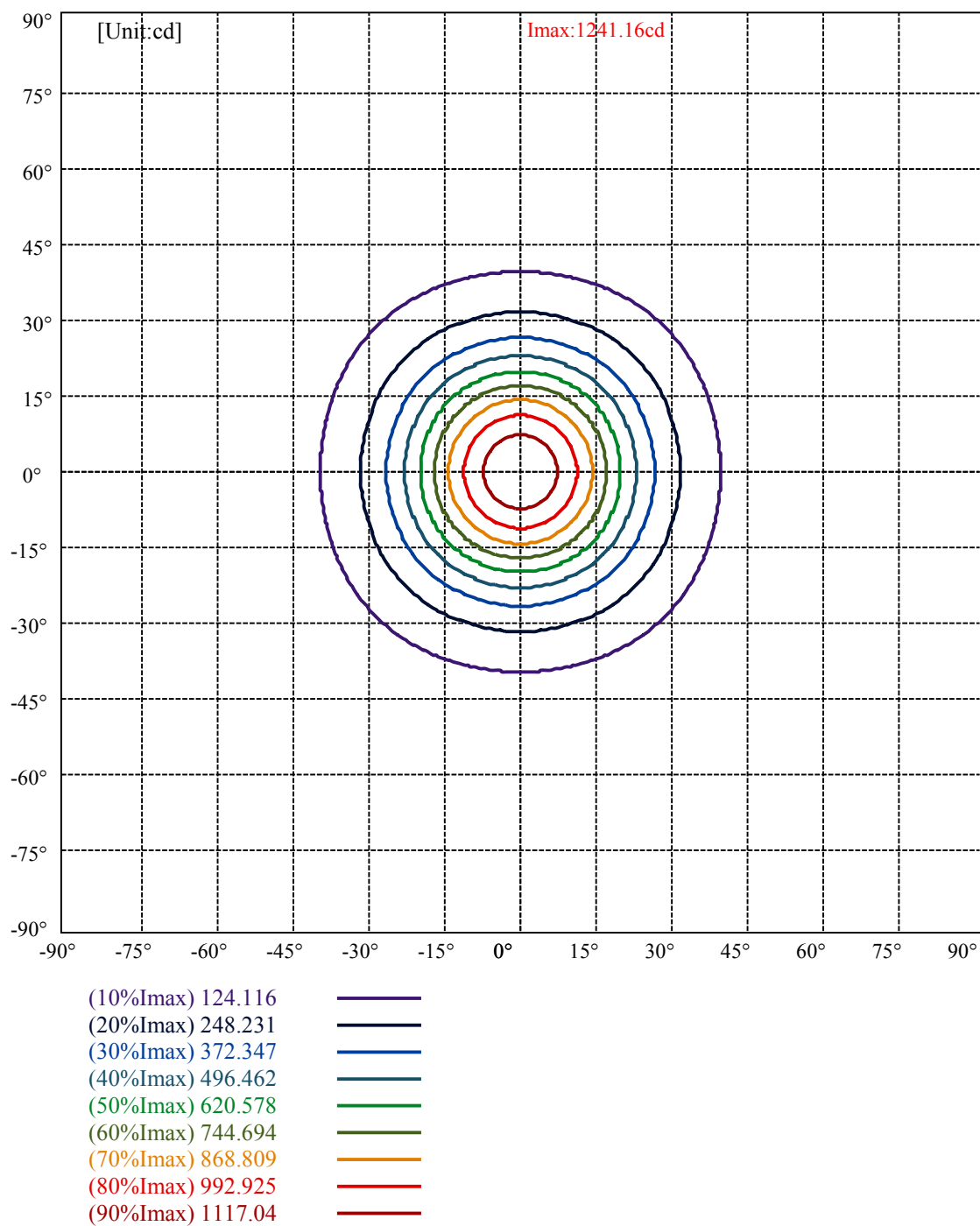
ZONAL LUMEN SUMMARY

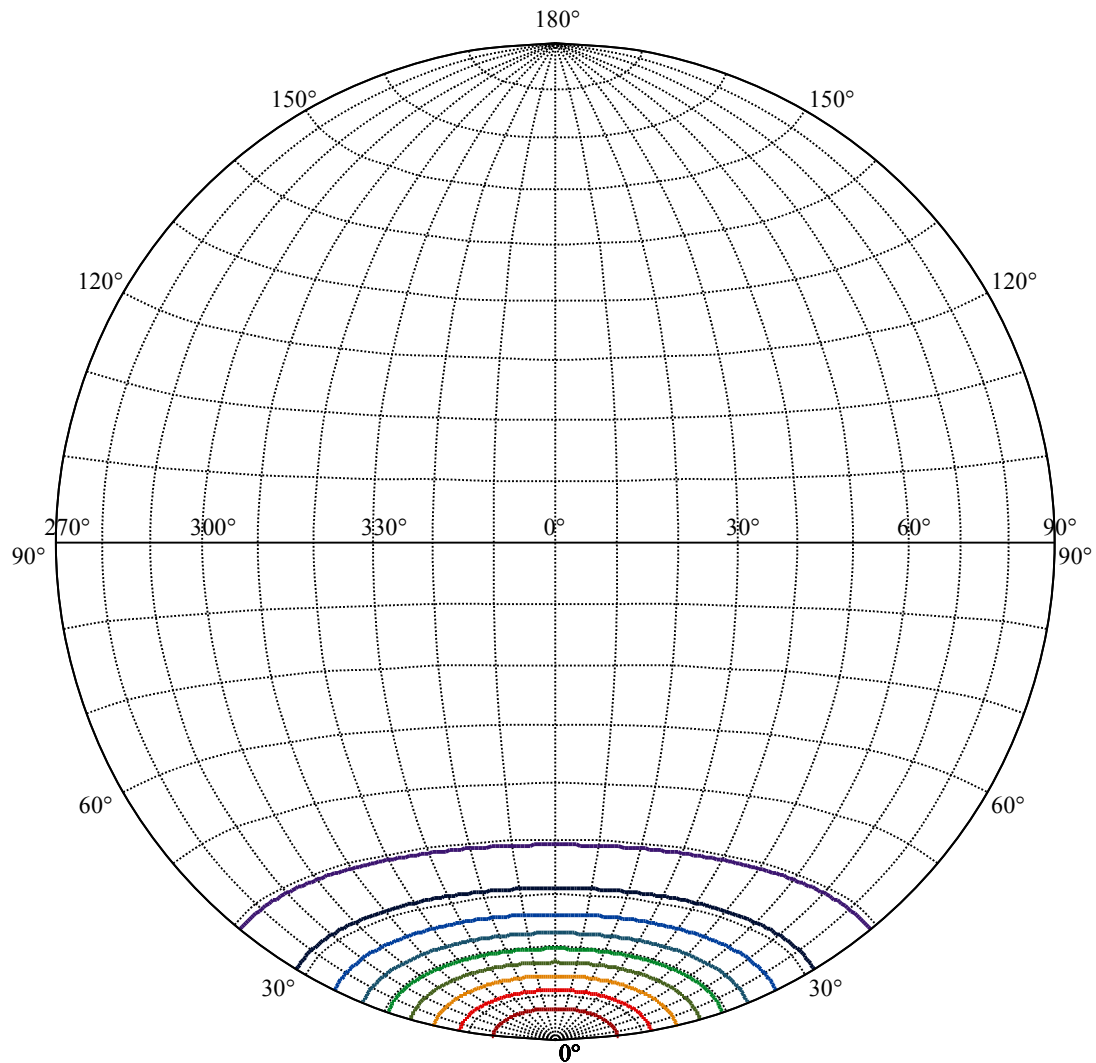
0-10	108.25
10-20	228.70
20-30	191.56
30-40	112.05
40-50	66.45
50-60	46.84
60-70	38.97
70-80	31.38
80-90	14.04
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C0 plane 40.59





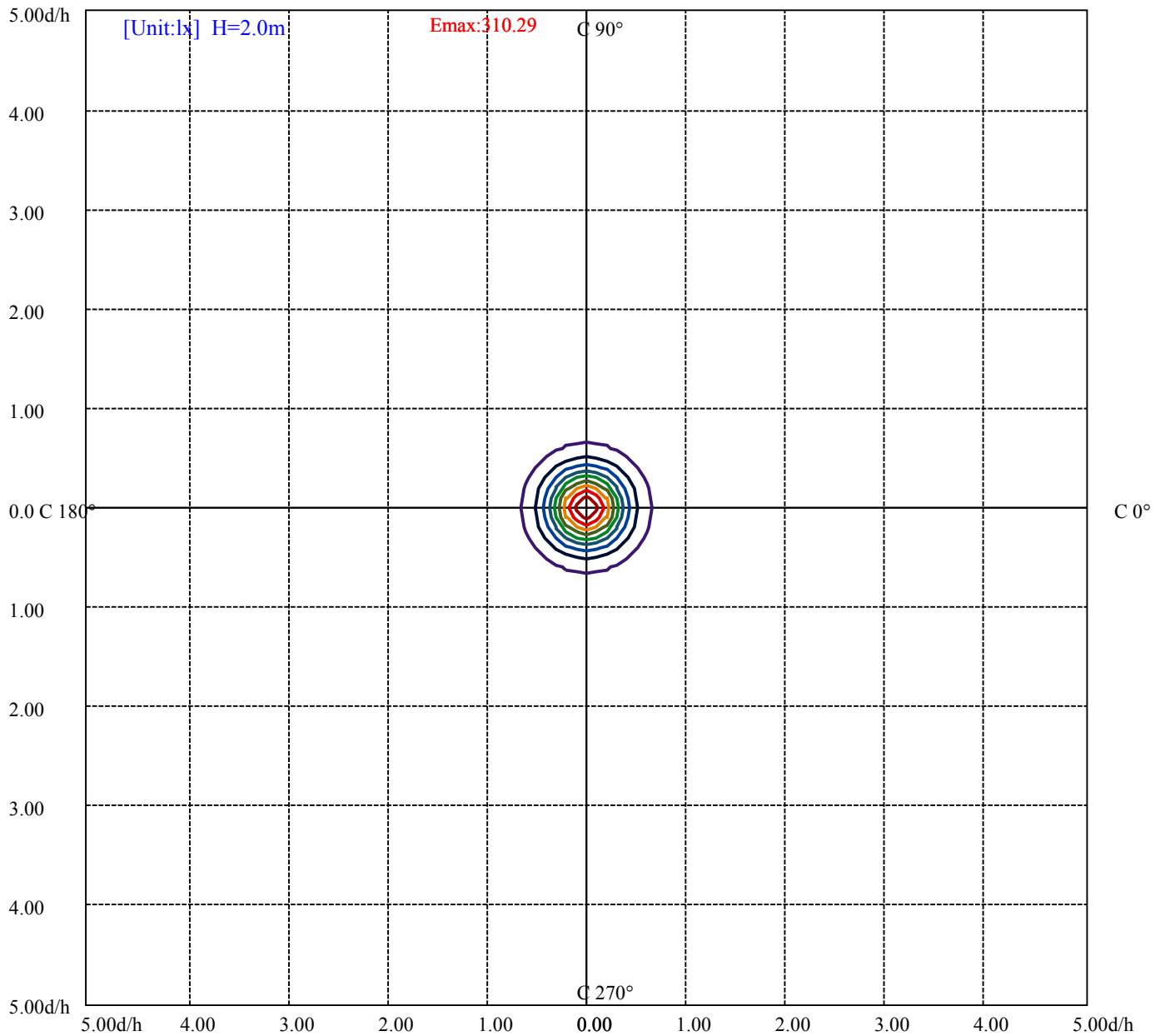
House

[Unit:cd]

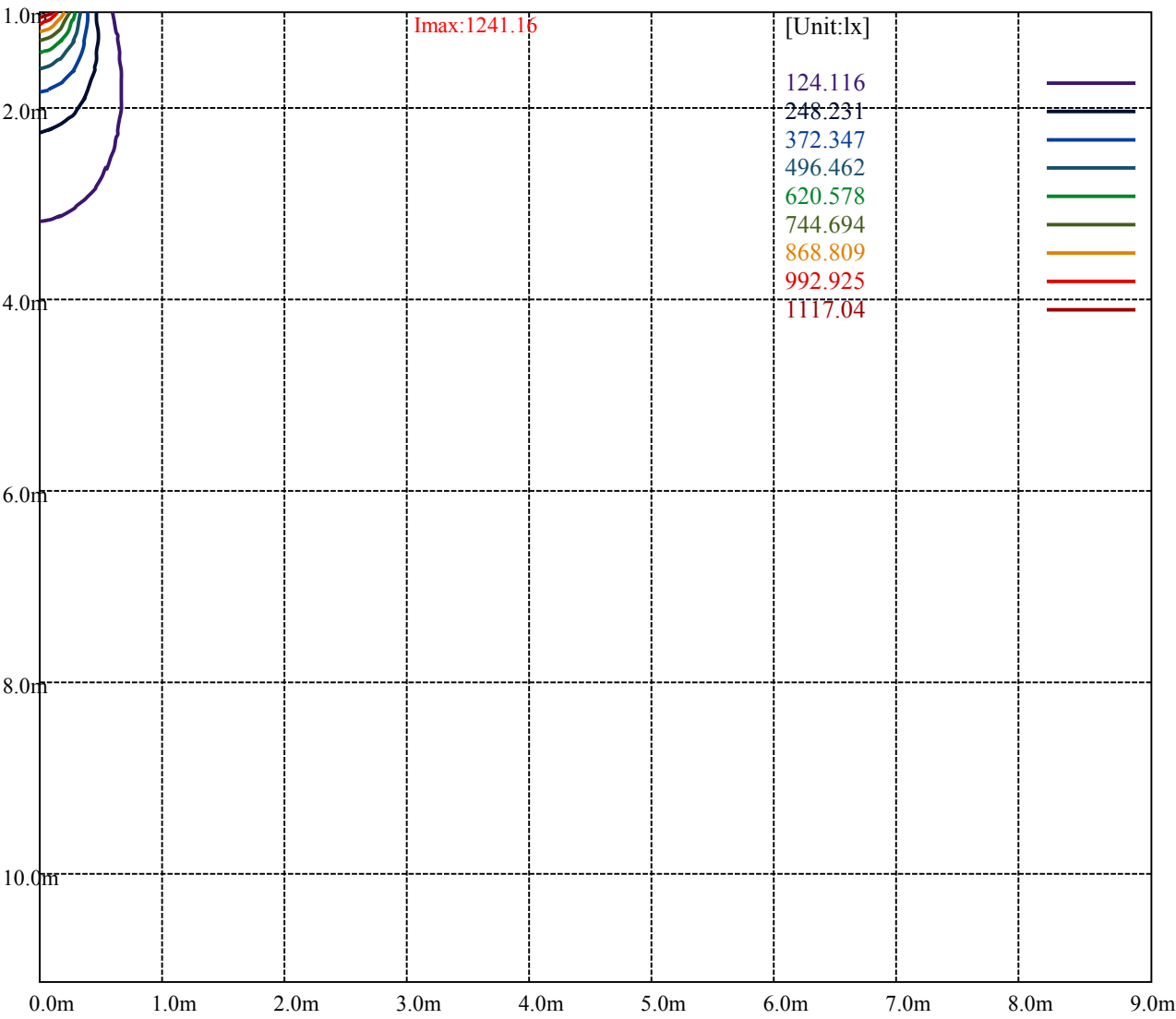
Road

Imax:1241.16

(10%Imax)	124.116	—
(20%Imax)	248.231	—
(30%Imax)	372.347	—
(40%Imax)	496.462	—
(50%Imax)	620.578	—
(60%Imax)	744.694	—
(70%Imax)	868.809	—
(80%Imax)	992.925	—
(90%Imax)	1117.04	—



(10%Emax)	31.02875	—
(20%Emax)	62.05775	—
(30%Emax)	93.0865	—
(40%Emax)	124.1155	—
(50%Emax)	155.1443	—
(60%Emax)	186.1732	—
(70%Emax)	217.202	—
(80%Emax)	248.2307	—
(90%Emax)	279.26	—



Luminance Table

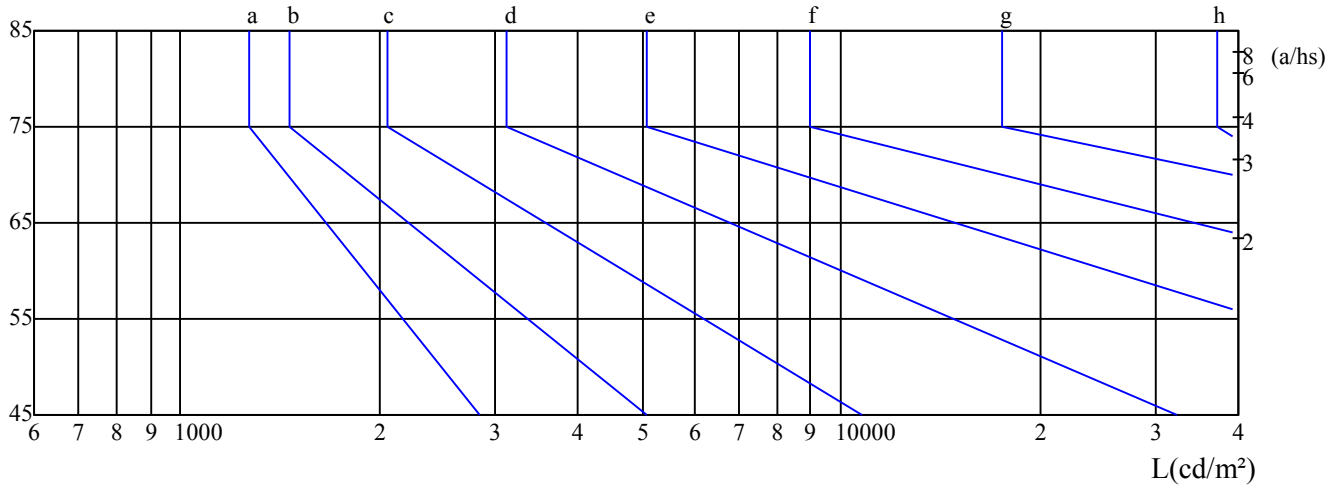
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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

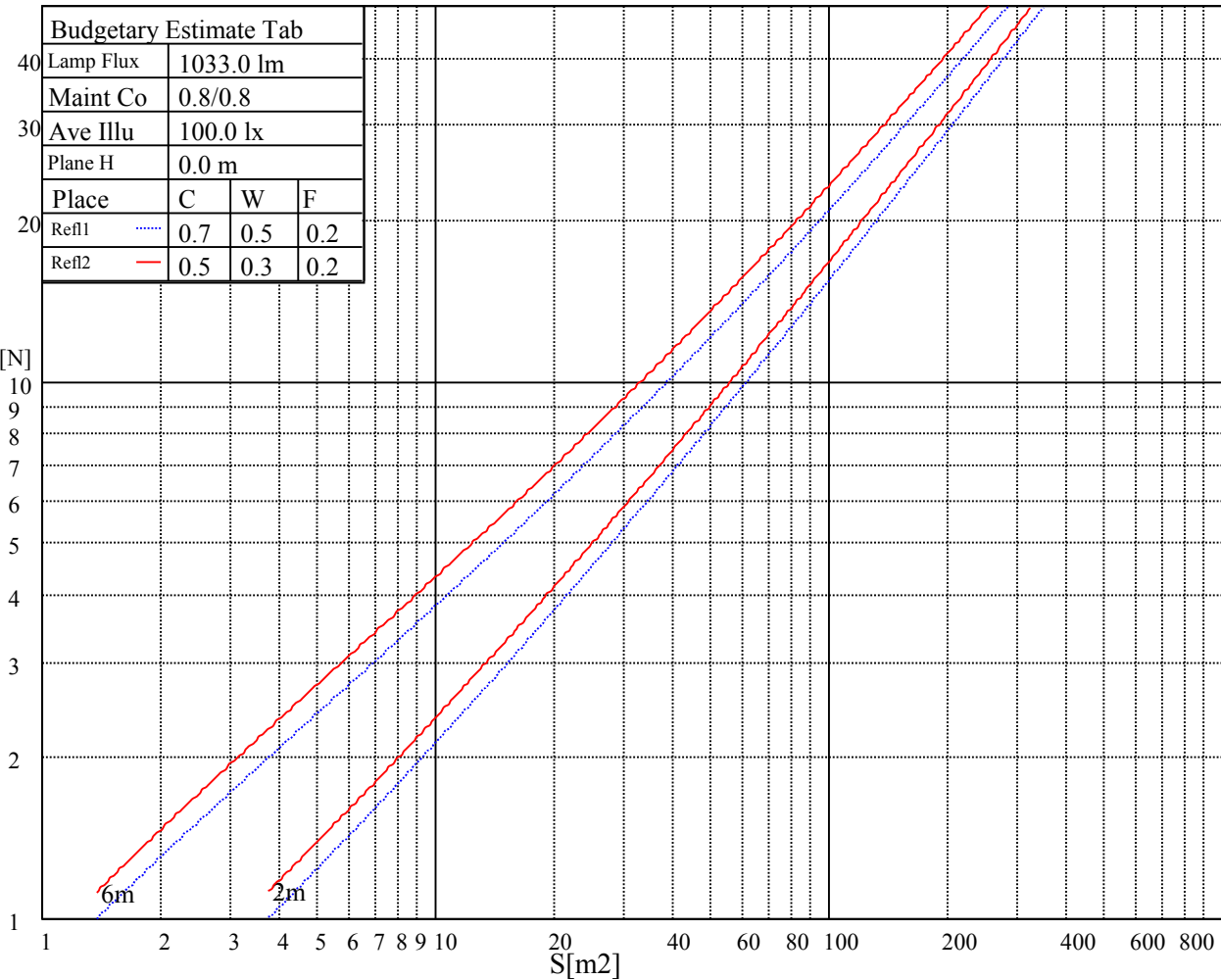
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

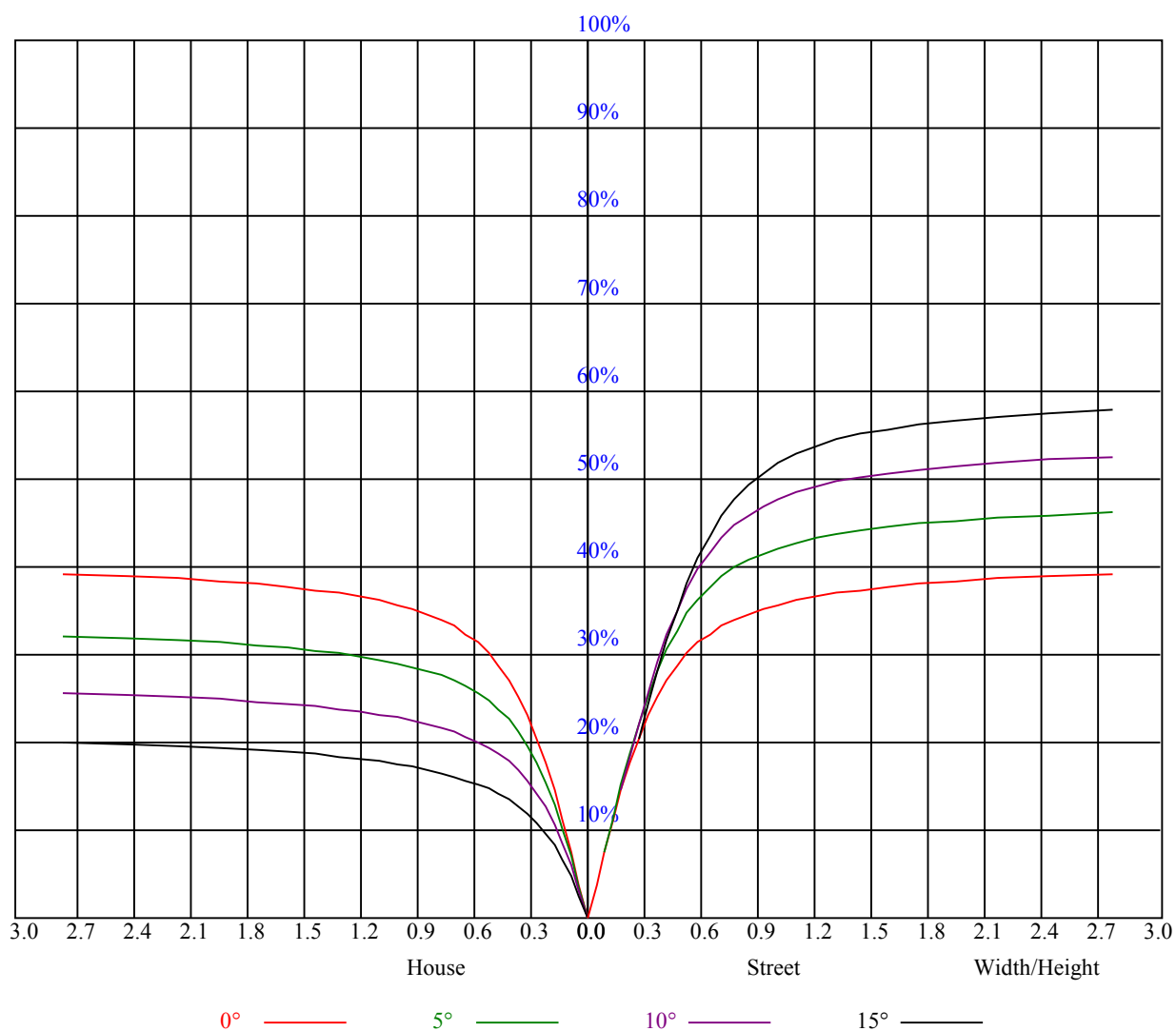
C0 ———

C45 ———

C90 ———



RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	0.98	0.98	0.98	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.84	0.84	0.84	0.82
1	0.88	0.85	0.83	0.86	0.84	0.82	0.83	0.81	0.79	0.80	0.78	0.77	0.77	0.76	0.74	0.73
2	0.81	0.76	0.73	0.79	0.75	0.72	0.76	0.73	0.70	0.74	0.71	0.69	0.71	0.69	0.67	0.66
3	0.74	0.69	0.65	0.73	0.68	0.65	0.71	0.67	0.64	0.69	0.65	0.63	0.67	0.64	0.62	0.60
4	0.69	0.63	0.59	0.68	0.63	0.59	0.66	0.62	0.58	0.64	0.60	0.57	0.63	0.59	0.57	0.55
5	0.64	0.59	0.55	0.63	0.58	0.54	0.62	0.57	0.54	0.60	0.56	0.53	0.59	0.56	0.53	0.51
6	0.60	0.54	0.51	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.49	0.48
7	0.56	0.51	0.47	0.56	0.51	0.47	0.55	0.50	0.47	0.54	0.50	0.46	0.53	0.49	0.46	0.45
8	0.53	0.48	0.44	0.53	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.50	0.46	0.44	0.42
9	0.50	0.45	0.42	0.50	0.45	0.42	0.49	0.45	0.41	0.48	0.44	0.41	0.48	0.44	0.41	0.40
10	0.48	0.43	0.39	0.47	0.43	0.39	0.47	0.42	0.39	0.46	0.42	0.39	0.45	0.42	0.39	0.38



Intensity data(cd)										Appendix Page: 14 Total:14	
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	1237.50	1202.63	1065.38	864.56	638.44	424.13	287.44	180.62	120.54		
45.0	1241.44	1181.81	1015.31	804.38	573.19	384.19	286.88	155.42	105.75		
90.0	1240.31	1116.79	956.14	726.58	504.73	332.78	211.28	135.84	97.59		
135.0	1245.38	1173.94	1012.50	784.13	558.56	375.19	285.19	148.84	106.88		
180.0	1237.50	1120.73	1004.91	789.53	550.63	375.13	237.71	149.63	106.76		
225.0	1241.44	1194.19	1055.87	849.09	632.03	422.04	277.99	175.50	120.43		
270.0	1240.31	1229.63	1127.25	946.69	708.75	497.81	325.69	202.84	138.32		
315.0	1245.38	1211.63	1069.09	870.98	642.66	428.74	286.54	183.88	127.29		
360.0	1237.50	1202.63	1065.38	864.56	638.44	424.13	287.44	180.62	120.54		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	89.33	64.80	51.69	43.76	38.19	33.19	28.29	25.99	23.06		
45.0	77.63	59.46	49.67	43.59	38.70	34.59	28.63	26.16	22.44		
90.0	75.83	59.06	49.44	44.44	39.26	34.31	28.58	25.88	23.40		
135.0	80.33	61.82	52.31	46.13	40.44	35.55	29.70	27.51	28.63		
180.0	77.74	59.23	49.44	44.04	38.87	33.58	28.74	26.38	23.79		
225.0	83.19	62.83	50.18	43.31	38.70	33.98	28.63	26.49	25.31		
270.0	96.24	68.06	53.44	46.07	40.33	35.94	30.15	26.94	26.16		
315.0	89.38	66.09	52.76	44.55	39.04	33.92	28.52	27.17	28.13		
360.0	89.33	64.80	51.69	43.76	38.19	33.19	28.29	25.99	23.06		
C/ γ (°)	90.0										
0.0	5.06										
45.0	5.29										
90.0	6.19										
135.0	13.11										
180.0	13.56										
225.0	13.44										
270.0	13.67										
315.0	5.51										
360.0	5.06										