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Nata

LumCAT: 3-2442-A
Luminaire: 92.70.153.00
Report No: NATA0100
Test No: GC2019111310
LampCAT: PHILIPS SLM92757 TWL112024
Lamp flux(lm): 1026.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 34.1700
Current(A): 0.3220
Power (W): 11.0000
PF: 1.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 858.86
Efficiency(%): 83.71%
Lumens(lm)/Power(W): 78.08
Central intensity(cd): 1709.859
Maximum intensity(cd): 1709.859
Angle of maximum intensity: $C=0.0$ $\gamma=0.0$
Beam Angle(50%Imax): [C0/180]Total=36.6
[C90/270]Total=36.6
Field angle(10%Imax): [C0/180]Total=74.0
[C90/270]Total=74.0
Maximum s/h(1/2): C0_180=0.60 C90_270=0.60
Maximum s/h(1/4): C0_180=0.61 C90_270=0.61
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 83.71%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.232%

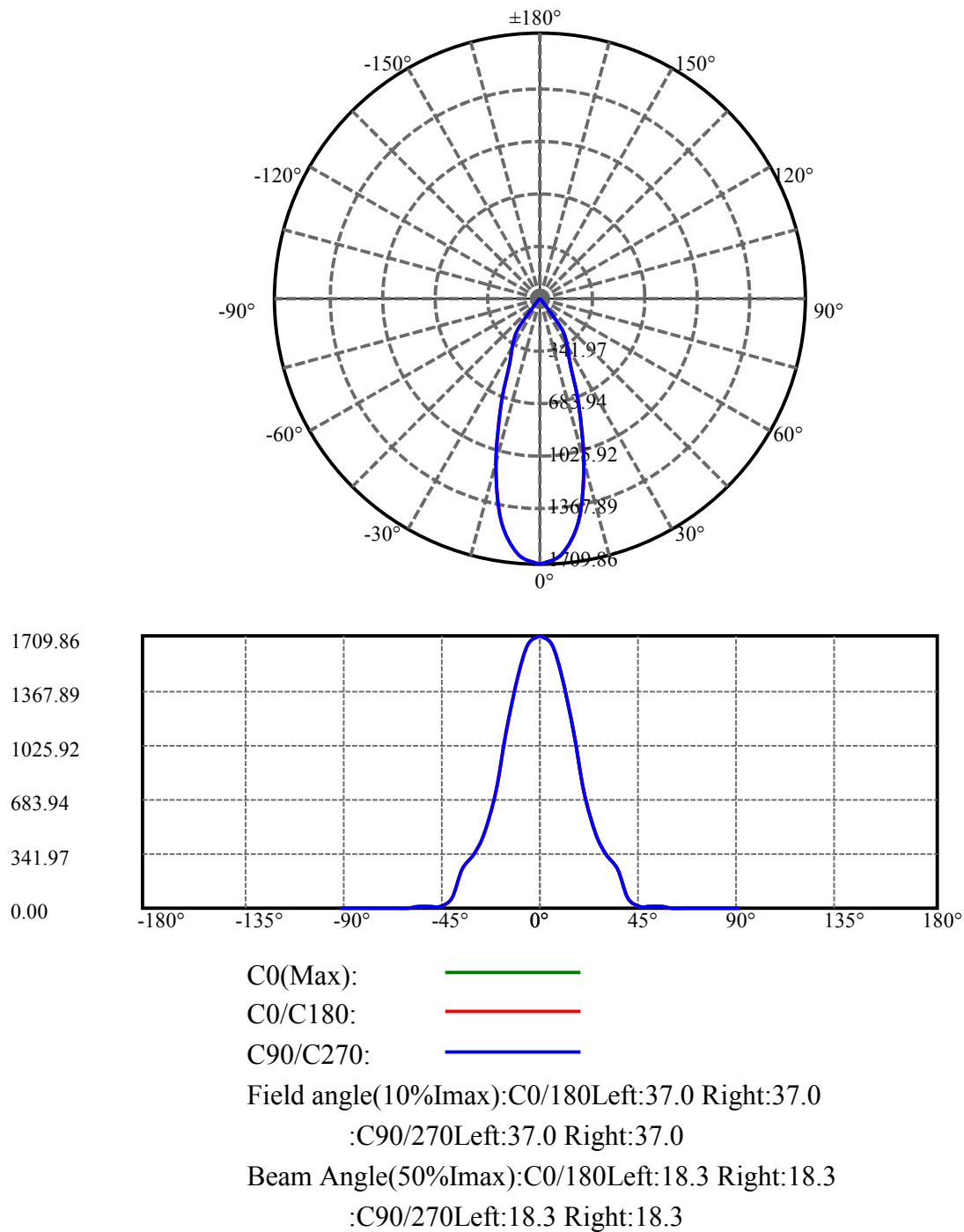
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1709.859	0.000	0	.000%	.000%
5.0	1655.578	40.233	40.233	3.921%	4.684%
10.0	1453.289	111.214	151.447	10.840%	17.634%
15.0	1102.655	151.617	303.064	14.777%	35.287%
20.0	728.283	150.895	453.959	14.707%	52.856%
25.0	466.362	125.296	579.255	12.212%	67.445%
30.0	344.173	102.574	681.829	9.997%	79.388%
35.0	240.230	86.057	767.886	8.388%	89.408%
40.0	67.985	51.423	819.309	5.012%	95.395%
45.0	14.681	15.306	834.616	1.492%	97.177%
50.0	5.934	4.166	838.781	.406%	97.663%
55.0	5.351	2.454	841.235	.239%	97.948%
60.0	5.196	2.438	843.673	.238%	98.232%
65.0	5.112	2.506	846.179	.244%	98.524%
70.0	5.048	2.573	848.751	.251%	98.823%
75.0	4.985	2.623	851.374	.256%	99.129%
80.0	4.887	2.641	854.015	.257%	99.436%
85.0	4.577	2.572	856.587	.251%	99.736%
90.0	3.713	2.270	858.857	.221%	100.000%

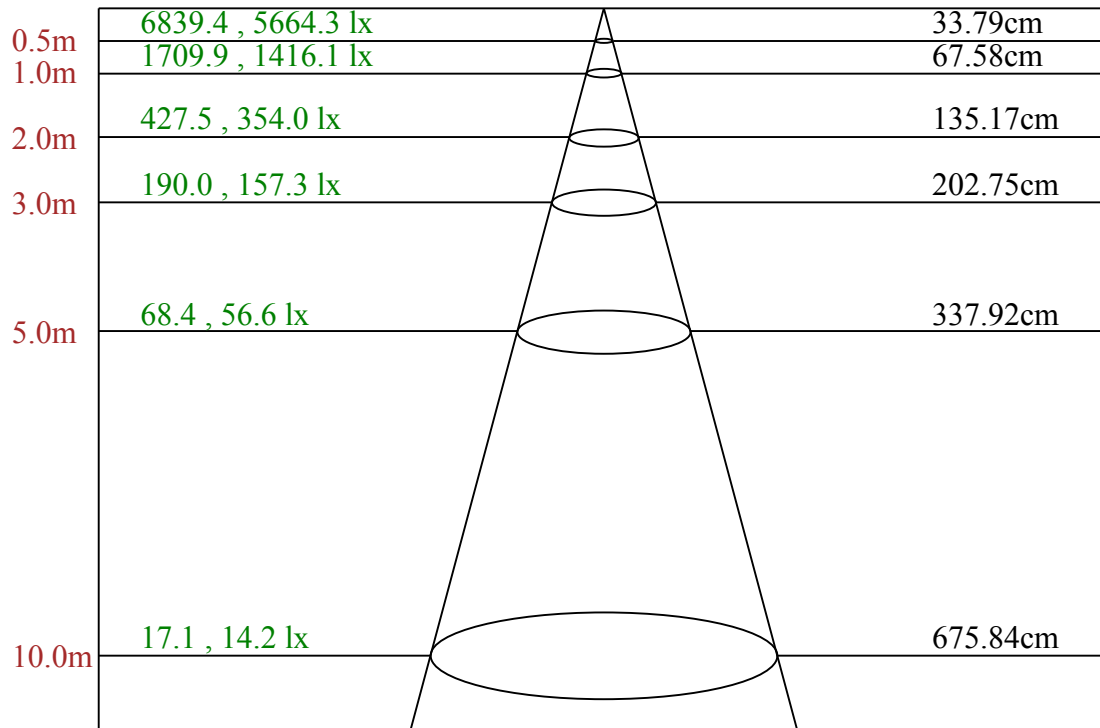
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	681.83	66.46%	79.39%
0-40	819.31	79.85%	95.40%
0-60	843.67	82.23%	98.23%
0-90	856.59	83.49%	99.74%
0-120	856.59	83.49%	99.74%
0-180	858.86	83.71%	100.00%
60-90	15.35	1.50%	1.79%
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%
0-30.31	687.09	66.97%	80.00%

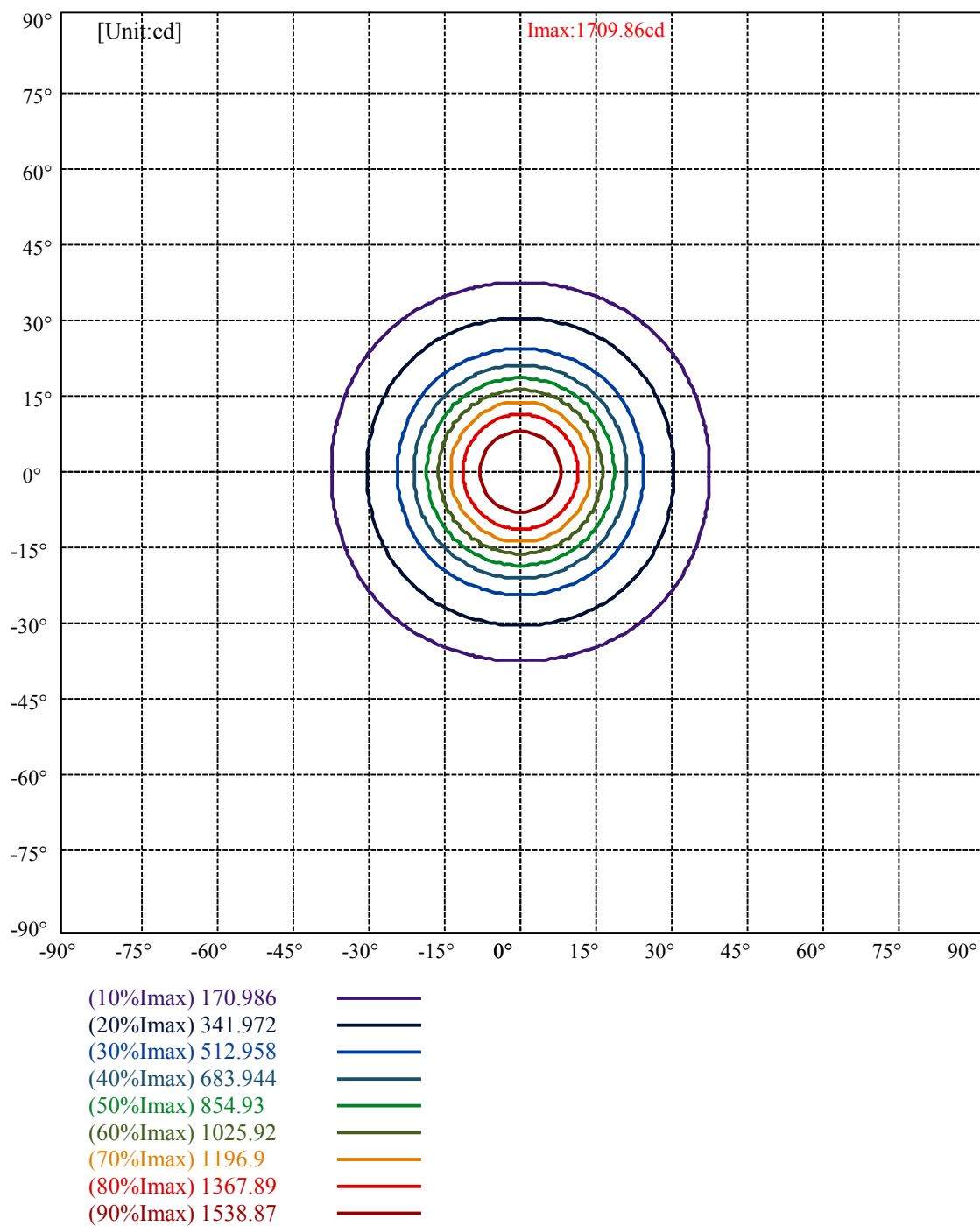
ZONAL LUMEN SUMMARY

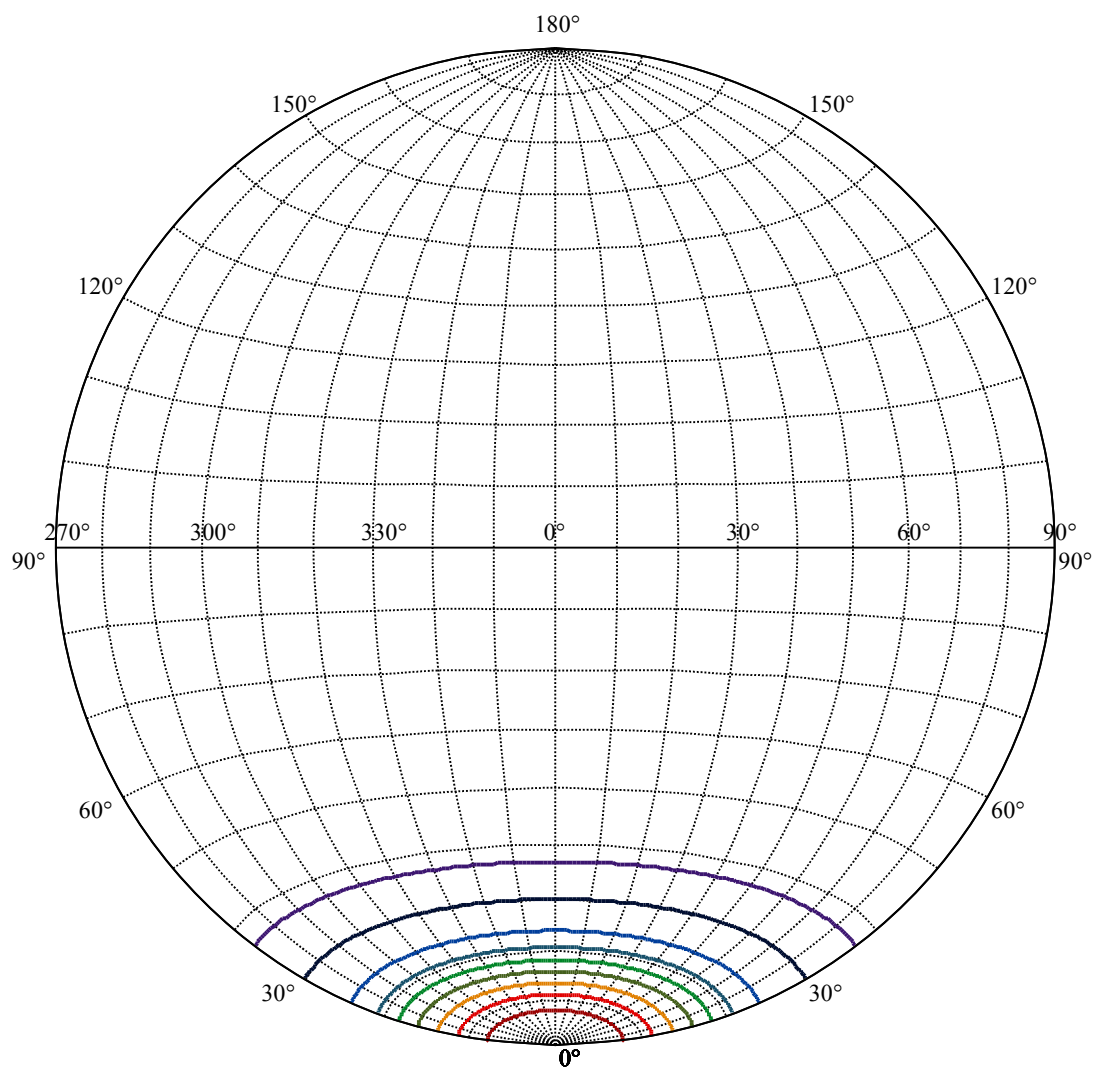
0-10	151.45
10-20	302.51
20-30	227.87
30-40	137.48
40-50	19.47
50-60	4.89
60-70	5.08
70-80	5.26
80-90	2.57
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C0 plane 37.34





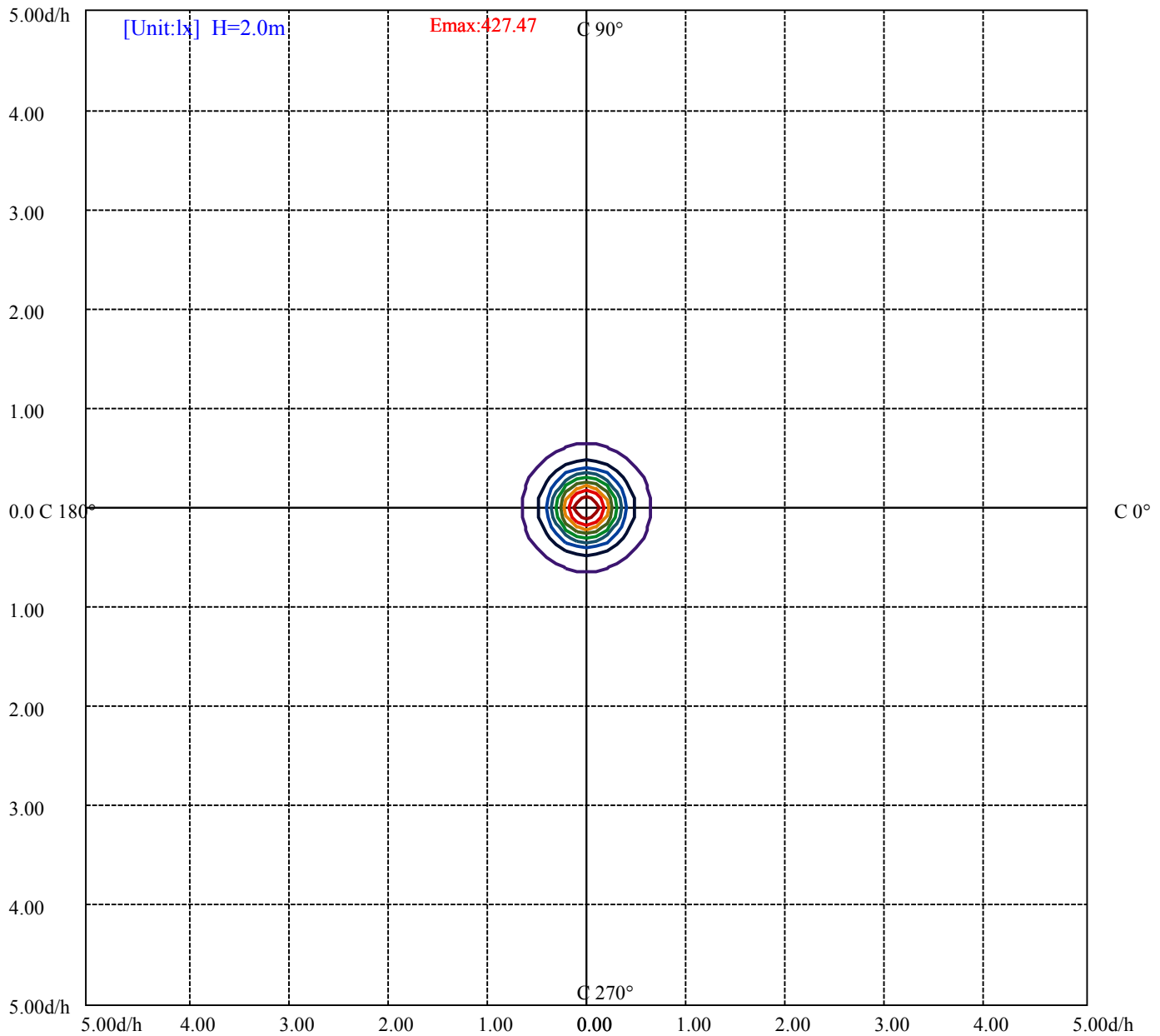
House

[Unit:cd]

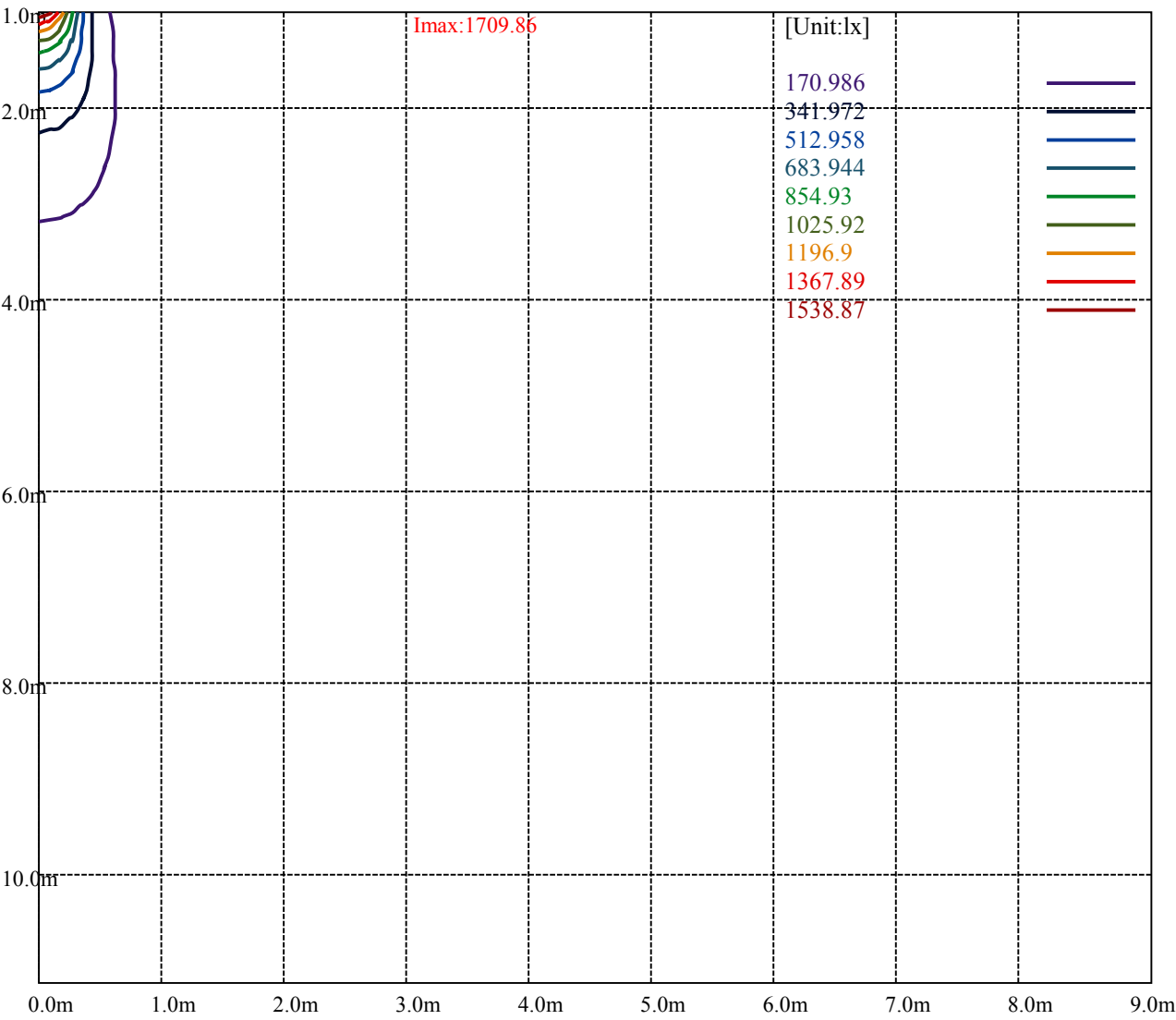
Road

Imax:1709.86

(10%Imax)	170.986	—
(20%Imax)	341.972	—
(30%Imax)	512.958	—
(40%Imax)	683.944	—
(50%Imax)	854.93	—
(60%Imax)	1025.92	—
(70%Imax)	1196.9	—
(80%Imax)	1367.89	—
(90%Imax)	1538.87	—



(10%Emax)	42.7465	—
(20%Emax)	85.493	—
(30%Emax)	128.2392	—
(40%Emax)	170.9857	—
(50%Emax)	213.7323	—
(60%Emax)	256.4775	—
(70%Emax)	299.225	—
(80%Emax)	341.9725	—
(90%Emax)	384.7175	—



Luminance Table

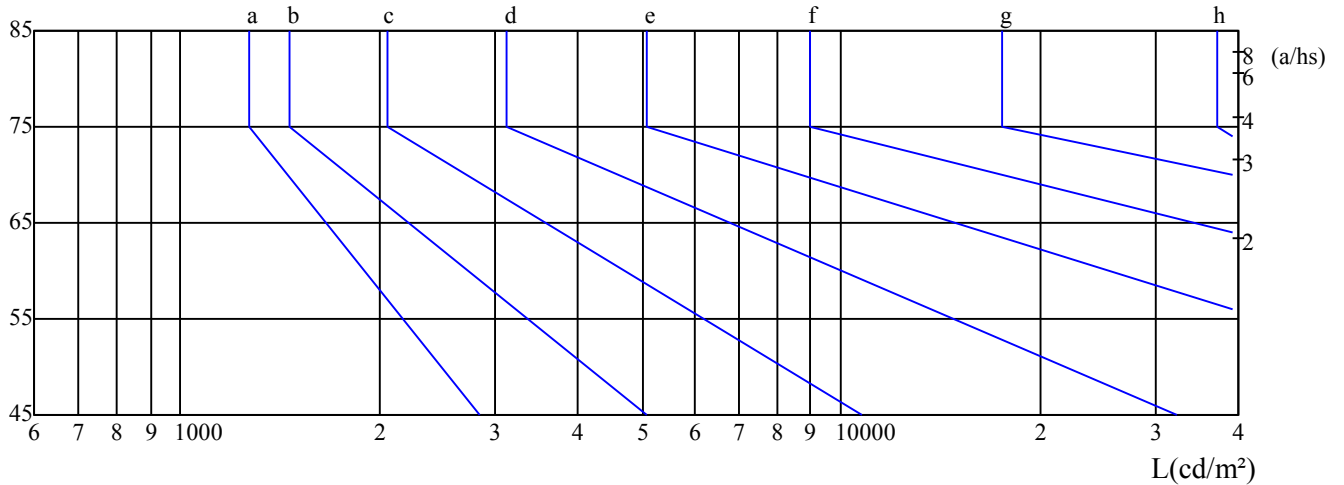
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

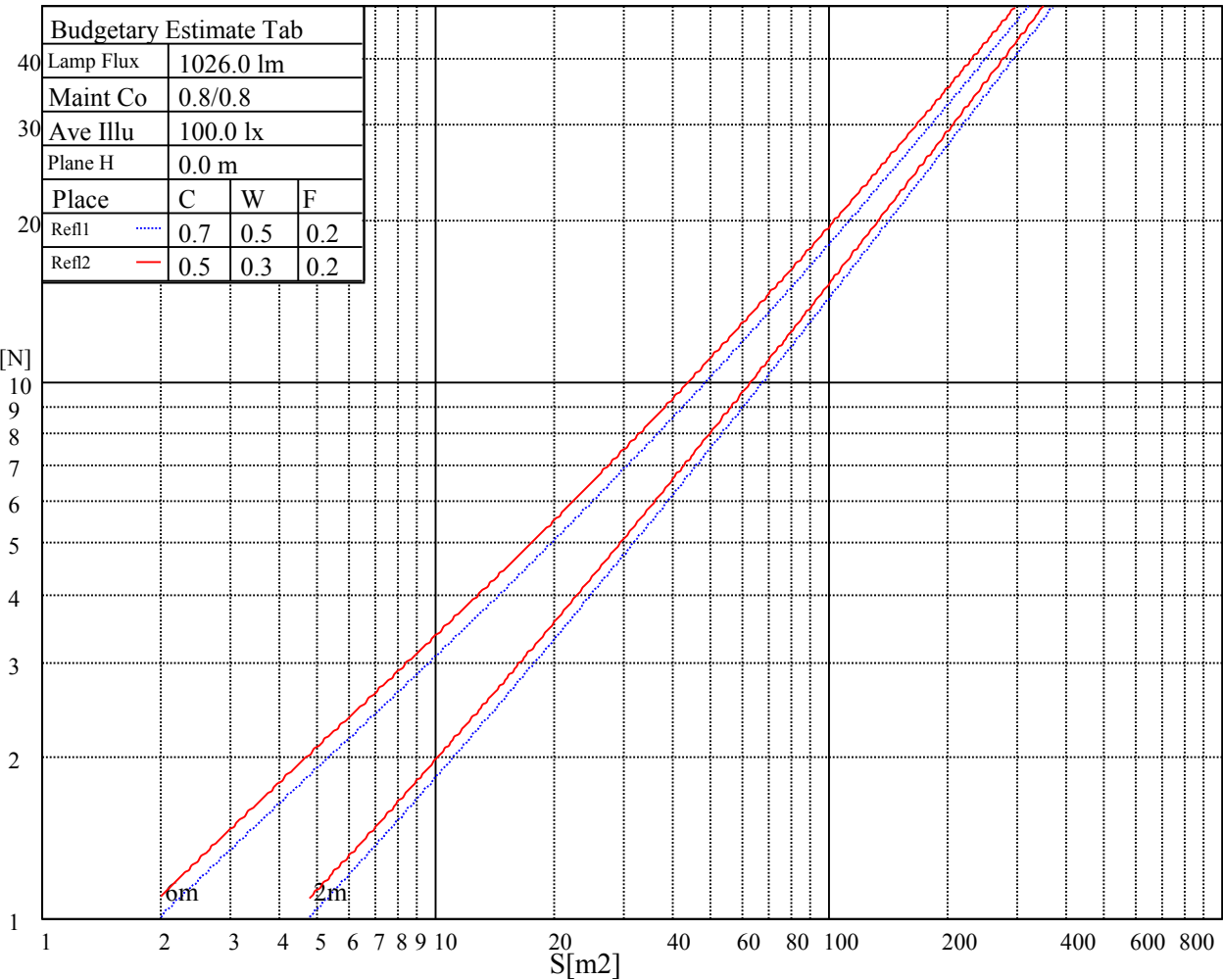
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

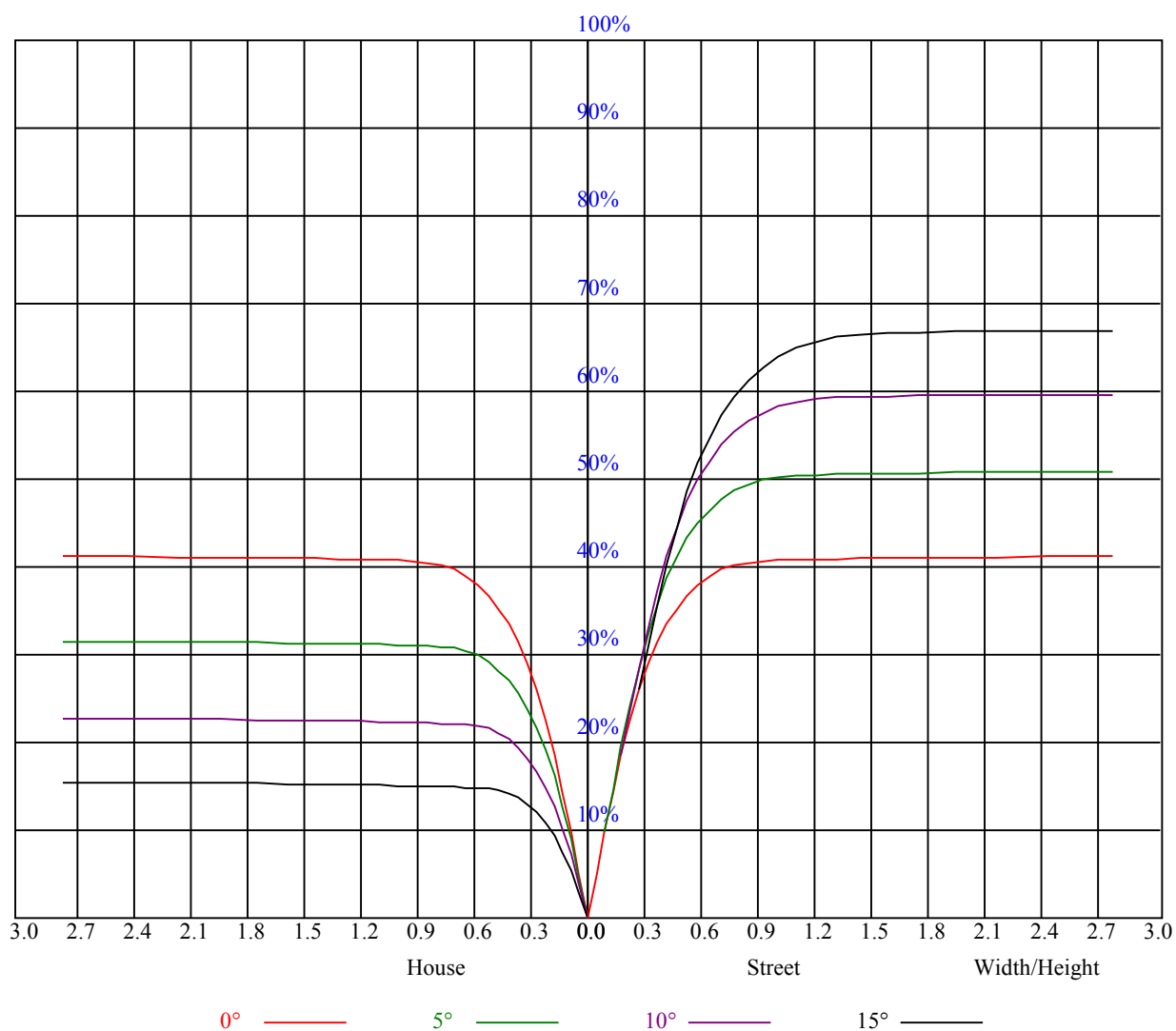
C0 ———

C45 ———

C90 ———



RHOC	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	1.00	1.00	1.00	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85	0.84
1	0.93	0.91	0.89	0.91	0.89	0.88	0.88	0.86	0.85	0.85	0.84	0.82	0.82	0.81	0.80	0.79
2	0.87	0.84	0.81	0.86	0.83	0.80	0.83	0.81	0.79	0.81	0.79	0.77	0.78	0.77	0.75	0.74
3	0.82	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.70
4	0.77	0.73	0.70	0.76	0.73	0.69	0.75	0.71	0.69	0.73	0.70	0.68	0.72	0.69	0.67	0.66
5	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.68	0.66	0.64	0.62
6	0.69	0.65	0.62	0.69	0.65	0.61	0.68	0.64	0.61	0.66	0.63	0.61	0.65	0.63	0.60	0.59
7	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.56
8	0.63	0.58	0.55	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.53
9	0.60	0.56	0.53	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.55	0.52	0.58	0.54	0.52	0.51
10	0.57	0.53	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.49



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	1711.13	1670.06	1481.06	1143.56	765.00	489.94	354.38	293.06	79.71		
45.0	1710.00	1662.75	1465.31	1122.75	772.31	483.19	348.19	285.75	75.43		
90.0	1708.31	1648.13	1409.63	1046.31	705.60	453.83	329.46	191.87	59.01		
135.0	1710.00	1666.69	1500.75	1129.50	753.75	476.44	352.69	255.99	74.25		
180.0	1711.13	1639.13	1418.06	1068.98	685.74	440.78	334.13	201.88	59.12		
225.0	1710.00	1648.13	1434.38	1081.63	699.75	450.68	338.06	210.21	60.47		
270.0	1708.31	1670.06	1486.13	1169.44	760.50	484.31	360.56	287.44	75.60		
315.0	1710.00	1639.69	1431.00	1059.08	683.61	451.74	335.93	195.64	60.30		
360.0	1711.13	1670.06	1481.06	1143.56	765.00	489.94	354.38	293.06	79.71		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	16.99	6.36	5.68	5.46	5.34	5.29	5.23	5.12	4.84		
45.0	16.14	6.19	5.46	5.29	5.18	5.12	5.06	5.06	4.89		
90.0	12.83	5.57	5.18	5.06	5.01	4.95	4.89	4.73	4.50		
135.0	16.76	6.08	5.34	5.23	5.12	5.06	5.01	4.89	4.61		
180.0	13.84	5.96	5.51	5.34	5.29	5.18	5.06	4.95	4.44		
225.0	12.83	5.74	5.29	5.12	5.06	4.95	4.89	4.84	4.39		
270.0	15.30	5.91	5.12	4.95	4.89	4.84	4.78	4.67	4.39		
315.0	12.77	5.68	5.23	5.12	5.01	5.01	4.95	4.84	4.56		
360.0	16.99	6.36	5.68	5.46	5.34	5.29	5.23	5.12	4.84		
C/ γ (°)	90.0										
0.0	3.71										
45.0	3.71										
90.0	3.71										
135.0	3.71										
180.0	3.71										
225.0	3.71										
270.0	3.71										
315.0	3.71										
360.0	3.71										