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Nata

LumCAT: 4-2412-L

Luminaire:

Report No: NATA0100

Voltage(V): 34.1000

Test No: GC2020010626

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.6580

Lamp flux(lm): 2559.0

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): 2636.83

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 127.64

Central intensity(cd): 16721.720

Maximum intensity(cd): 16721.720

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=15.8

[C90/270]Total=15.8

Field angle(10%Imax): [C0/180]Total=37.3

[C90/270]Total=37.3

Maximum s/h(1/2): C0_180=0.27 C90_270=0.27

Maximum s/h(1/4): C0_180=0.30 C90_270=0.30

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 103.04%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.520%

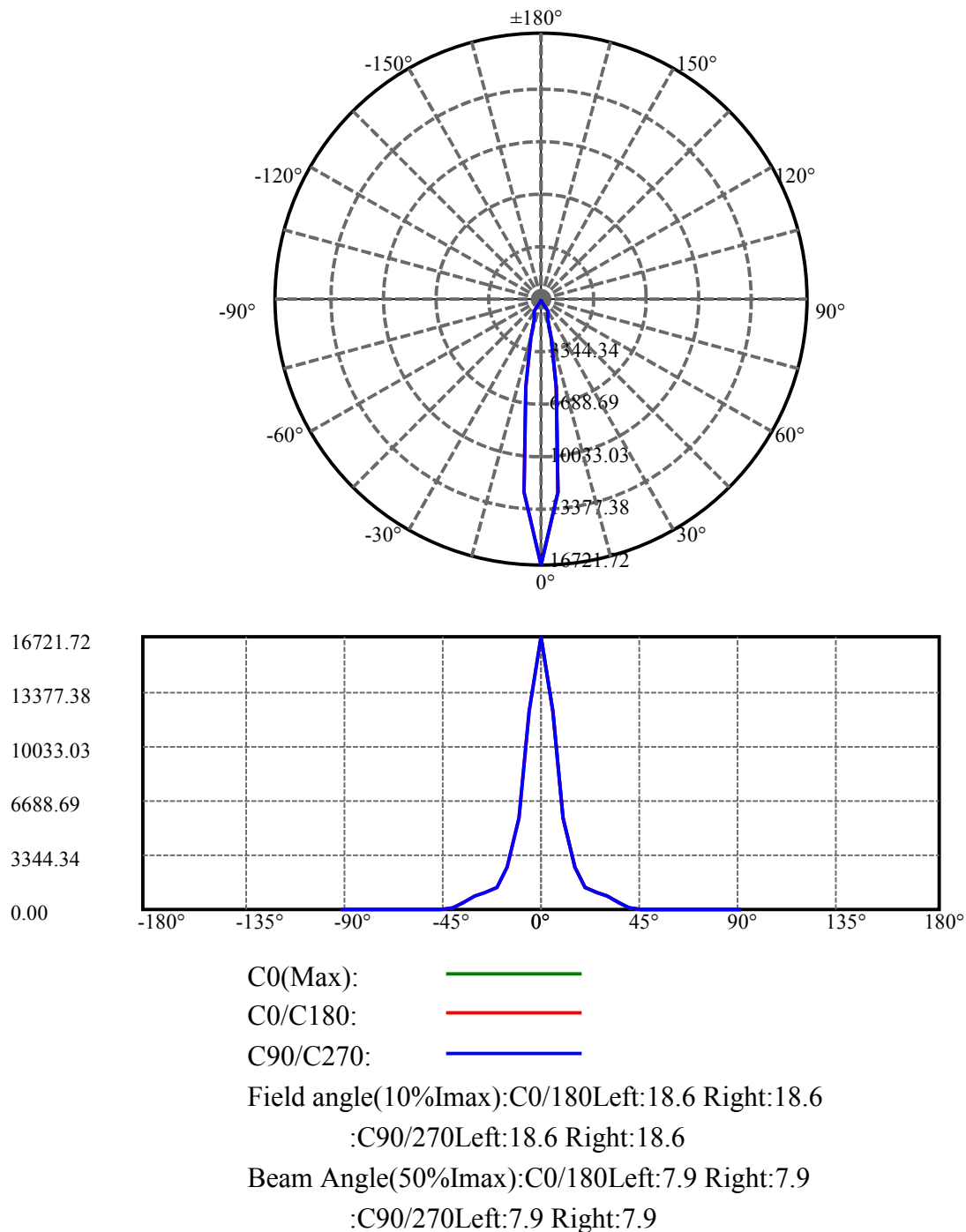
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	16721.719	0.000	0	.000%	.000%
5.0	12148.242	345.132	345.132	13.487%	13.089%
10.0	5634.633	636.149	981.282	24.859%	37.214%
15.0	2582.578	487.439	1468.721	19.048%	55.700%
20.0	1331.191	322.550	1791.271	12.605%	67.933%
25.0	1024.010	247.017	2038.288	9.653%	77.301%
30.0	858.776	238.268	2276.556	9.311%	86.337%
35.0	461.742	194.456	2471.011	7.599%	93.711%
40.0	70.320	88.770	2559.782	3.469%	97.078%
45.0	19.695	16.667	2576.449	.651%	97.710%
50.0	16.763	7.367	2583.815	.288%	97.989%
55.0	15.441	7.002	2590.817	.274%	98.255%
60.0	14.780	6.985	2597.803	.273%	98.520%
65.0	13.859	6.962	2604.765	.272%	98.784%
70.0	12.938	6.785	2611.55	.265%	99.041%
75.0	12.016	6.523	2618.072	.255%	99.288%
80.0	11.672	6.338	2624.411	.248%	99.529%
85.0	11.384	6.265	2630.675	.245%	99.766%
90.0	11.109	6.159	2636.834	.241%	100.000%

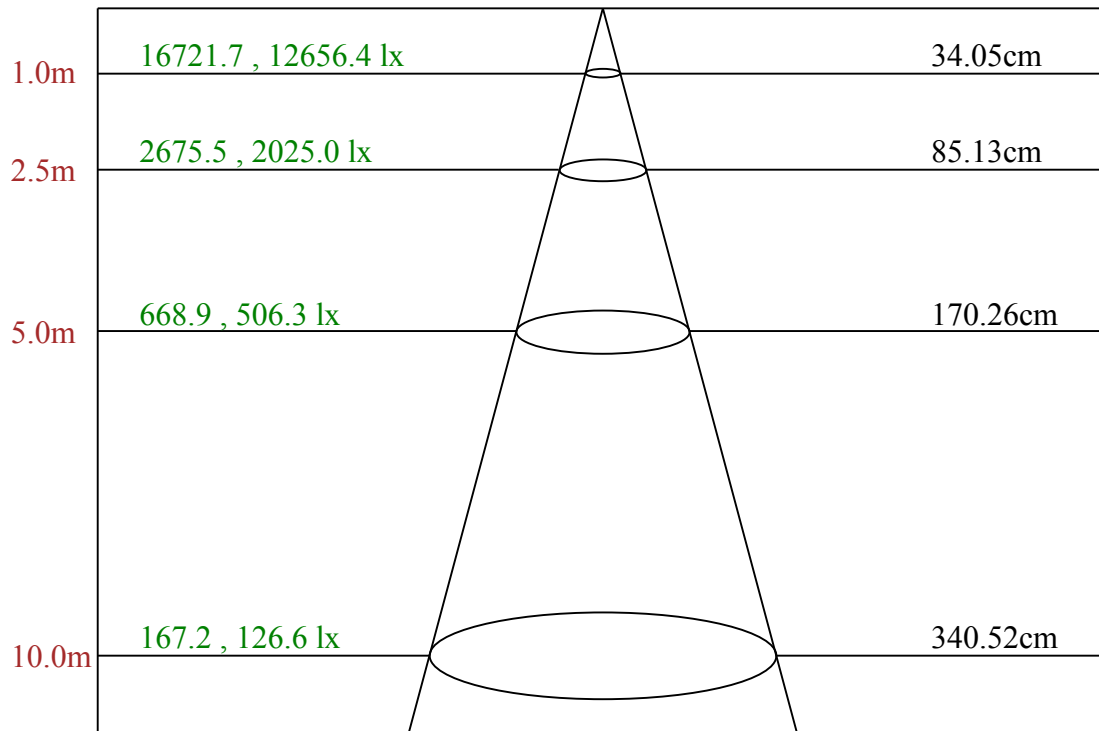
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2276.56	88.96%	86.34%
0-40	2559.78	100.03%	97.08%
0-60	2597.80	101.52%	98.52%
0-90	2630.68	102.80%	99.77%
0-120	2630.68	102.80%	99.77%
0-180	2636.83	103.04%	100.00%
60-90	39.86	1.56%	1.51%
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%
0-26.49	2109.47	82.43%	80.00%

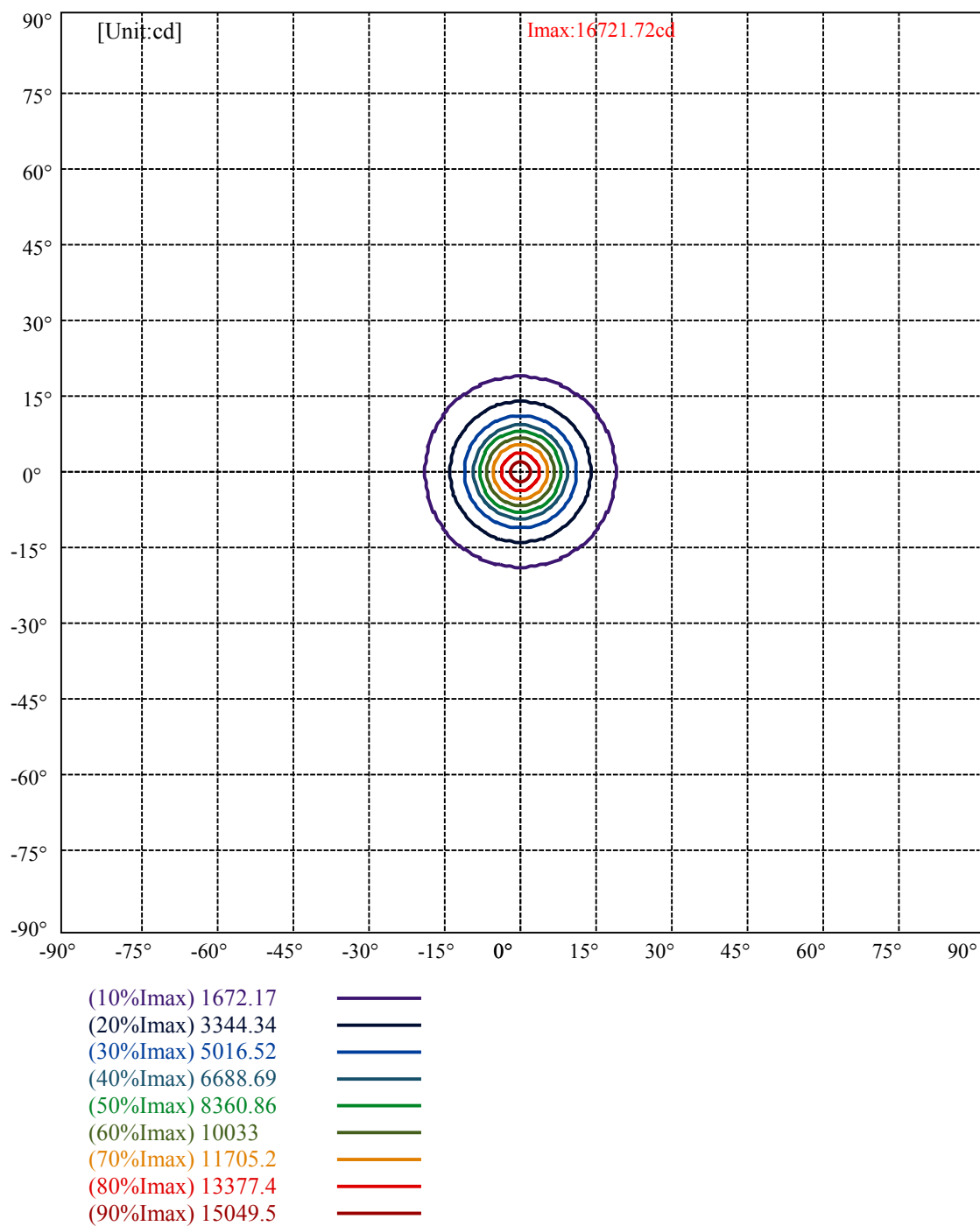
ZONAL LUMEN SUMMARY

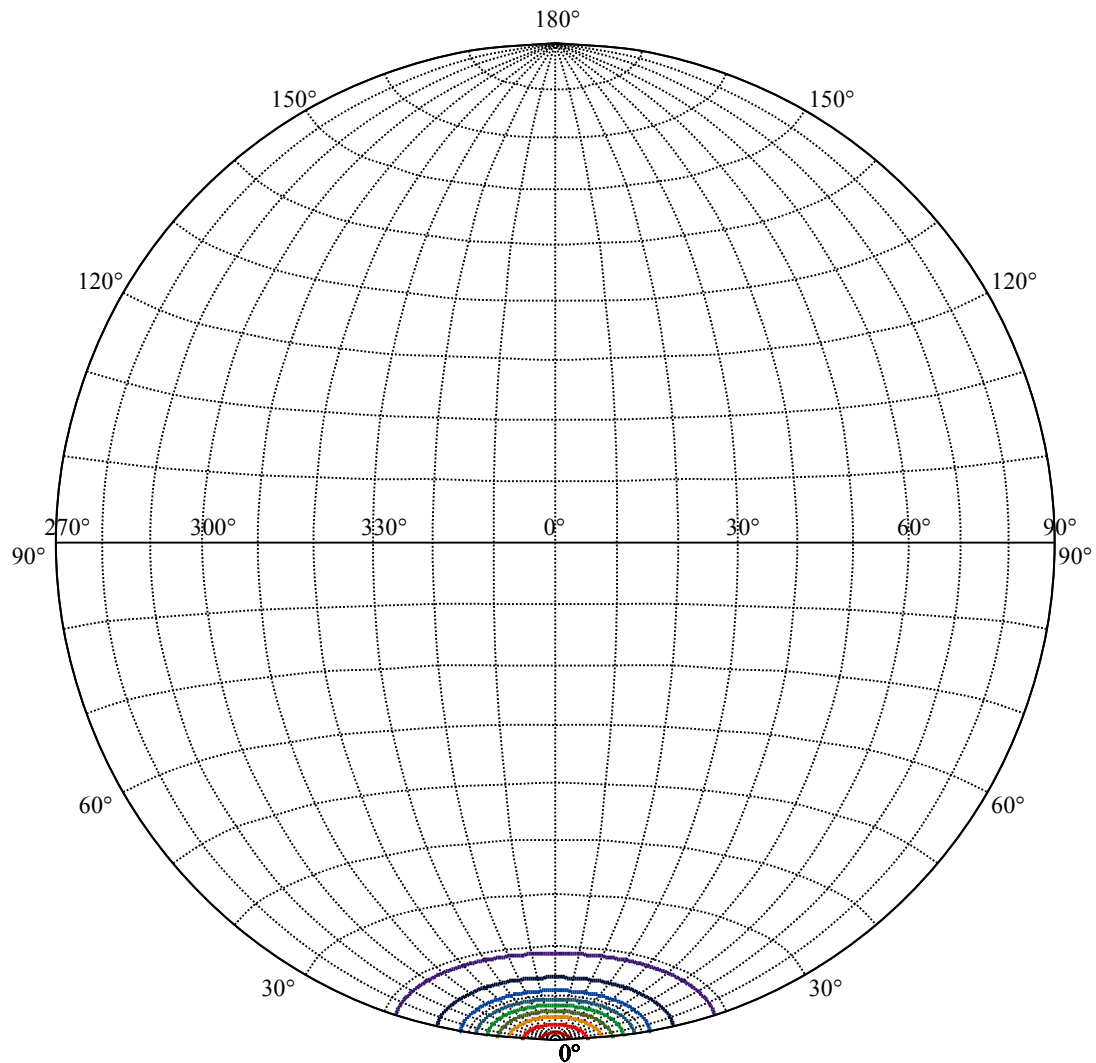
0-10	981.28
10-20	809.99
20-30	485.29
30-40	283.23
40-50	24.03
50-60	13.99
60-70	13.75
70-80	12.86
80-90	6.26
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C0 plane 19.33





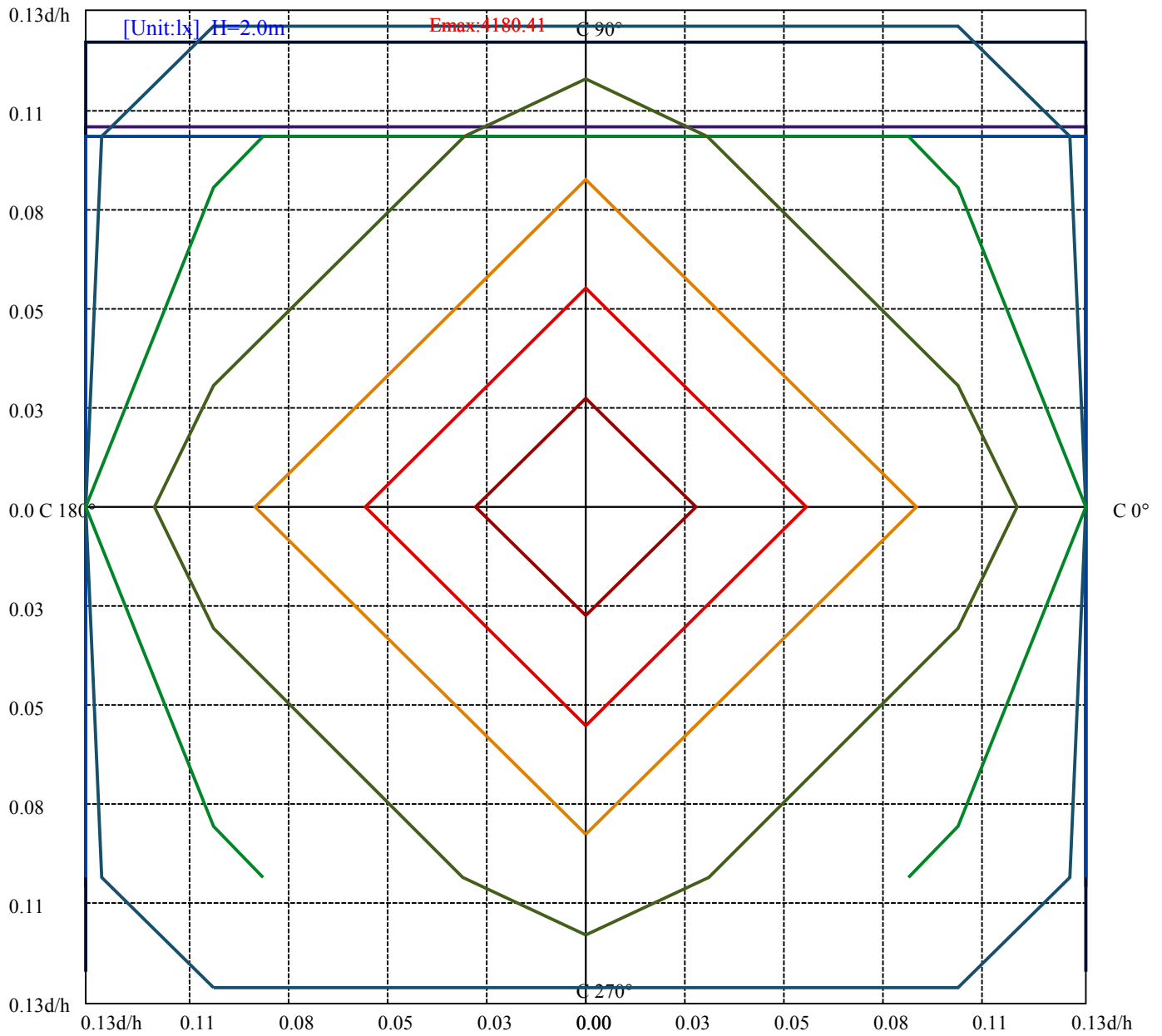
House

[Unit:cd]

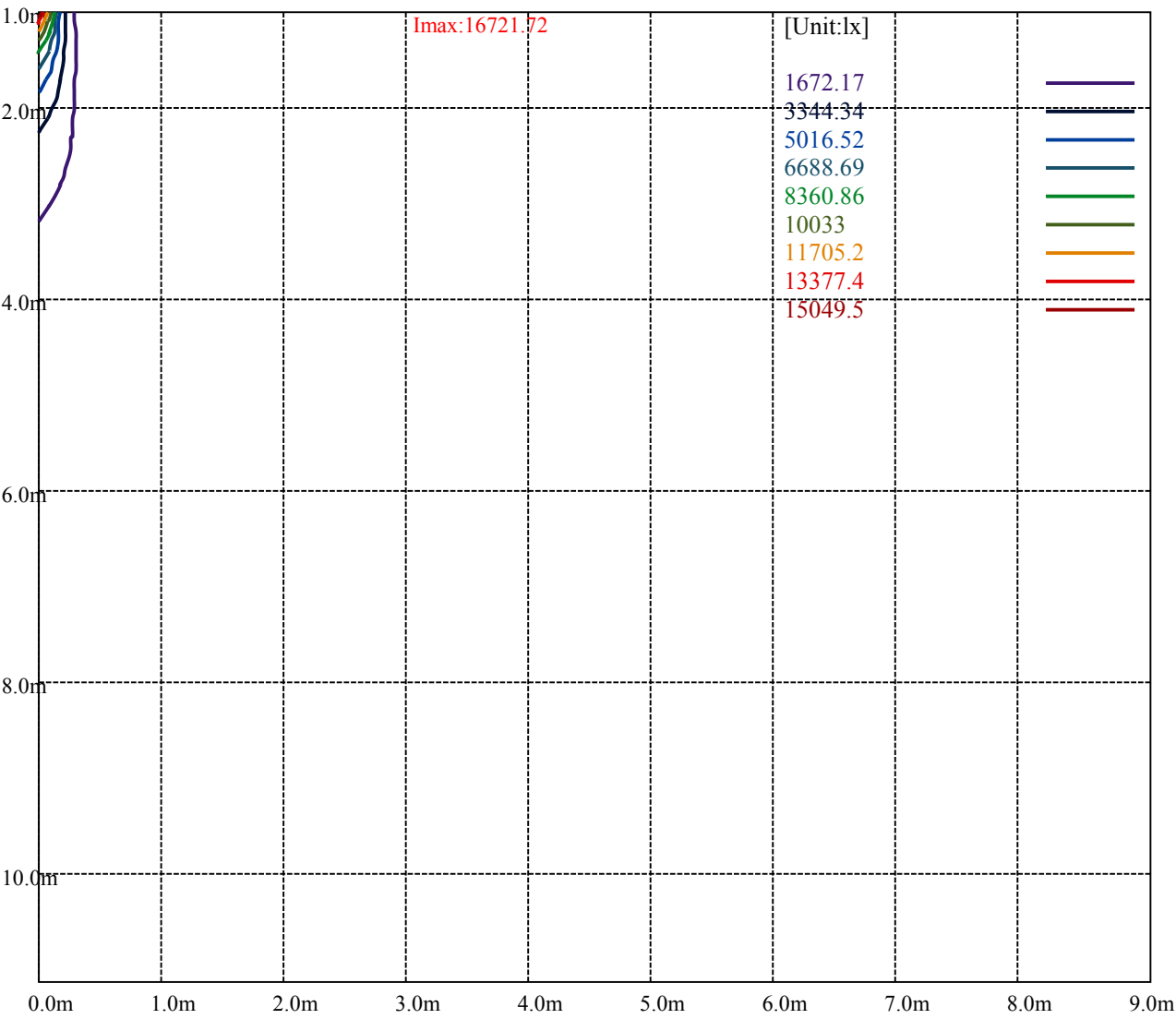
Road

Imax:16721.72

(10%Imax)	1672.17	—
(20%Imax)	3344.34	—
(30%Imax)	5016.52	—
(40%Imax)	6688.69	—
(50%Imax)	8360.86	—
(60%Imax)	10033	—
(70%Imax)	11705.2	—
(80%Imax)	13377.4	—
(90%Imax)	15049.5	—



(10%Emax)	418.04	
(20%Emax)	836.08	
(30%Emax)	1254.118	
(40%Emax)	1672.157	
(50%Emax)	2090.198	
(60%Emax)	2508.225	
(70%Emax)	2926.275	
(80%Emax)	3344.325	
(90%Emax)	3762.35	



Luminance Table

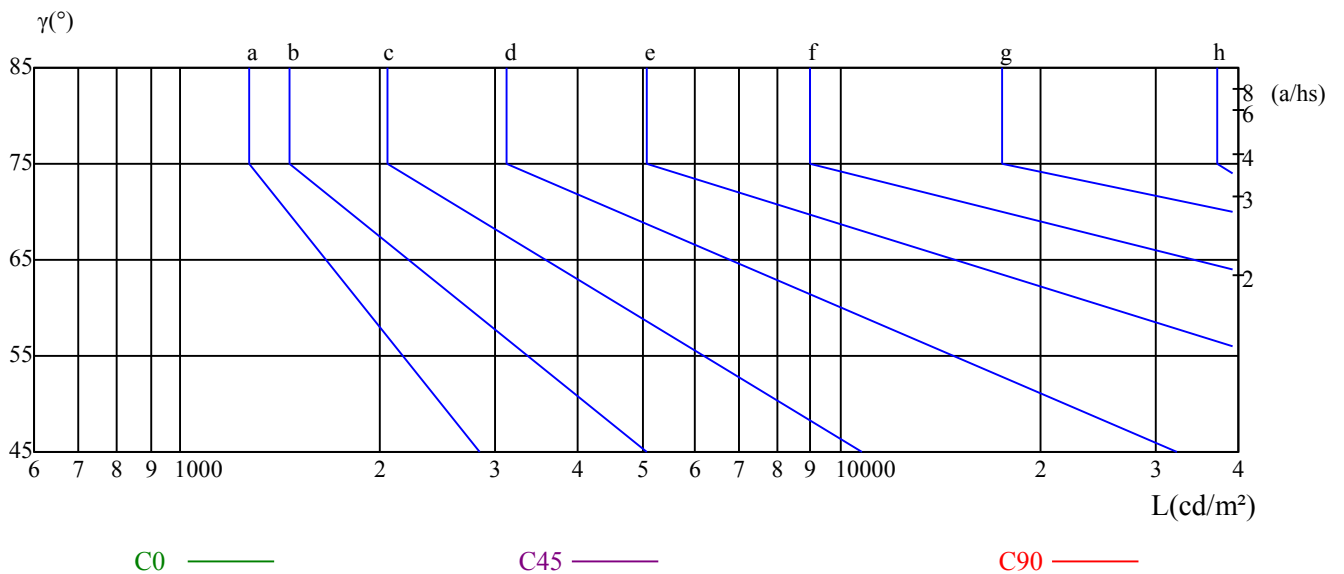
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

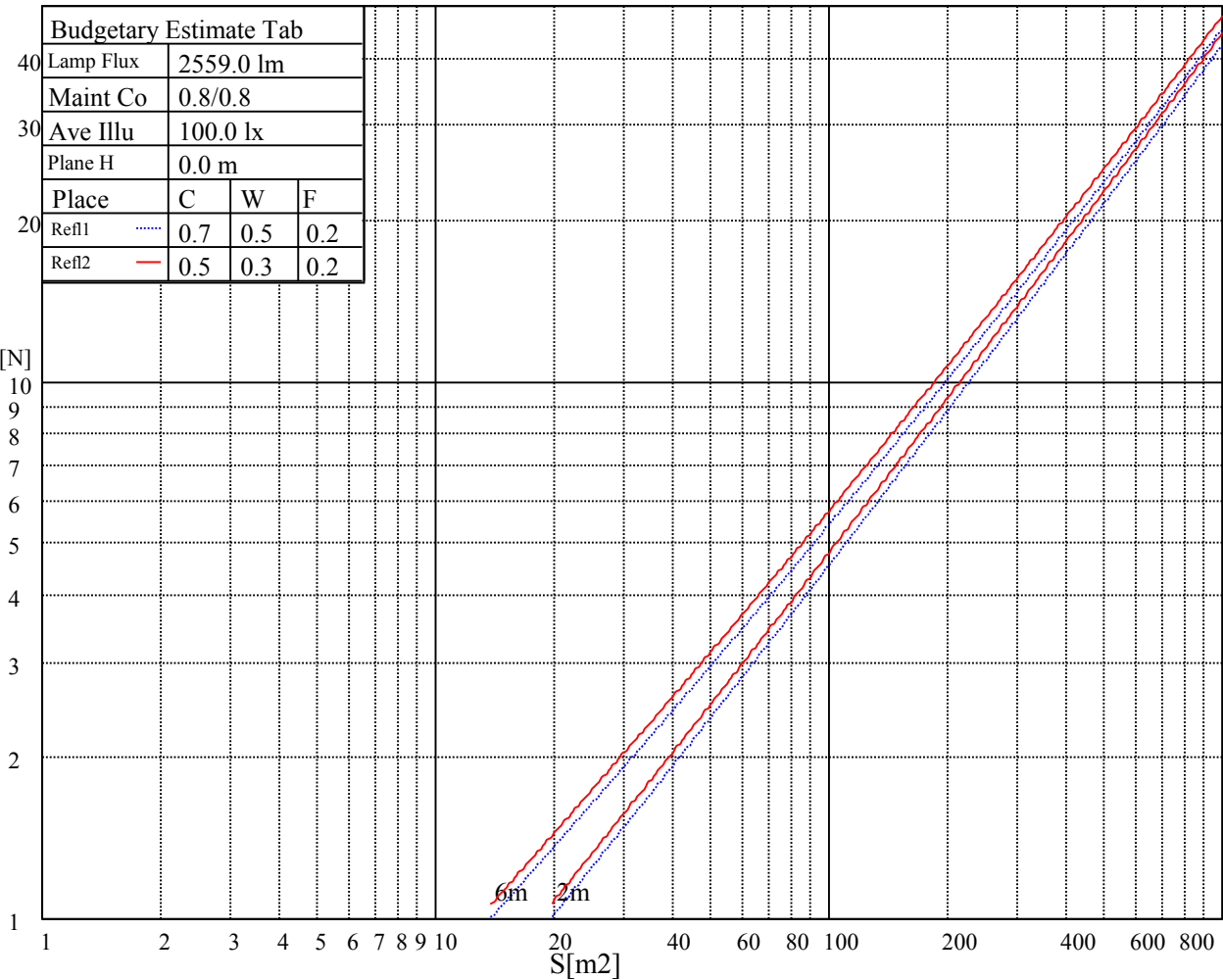
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

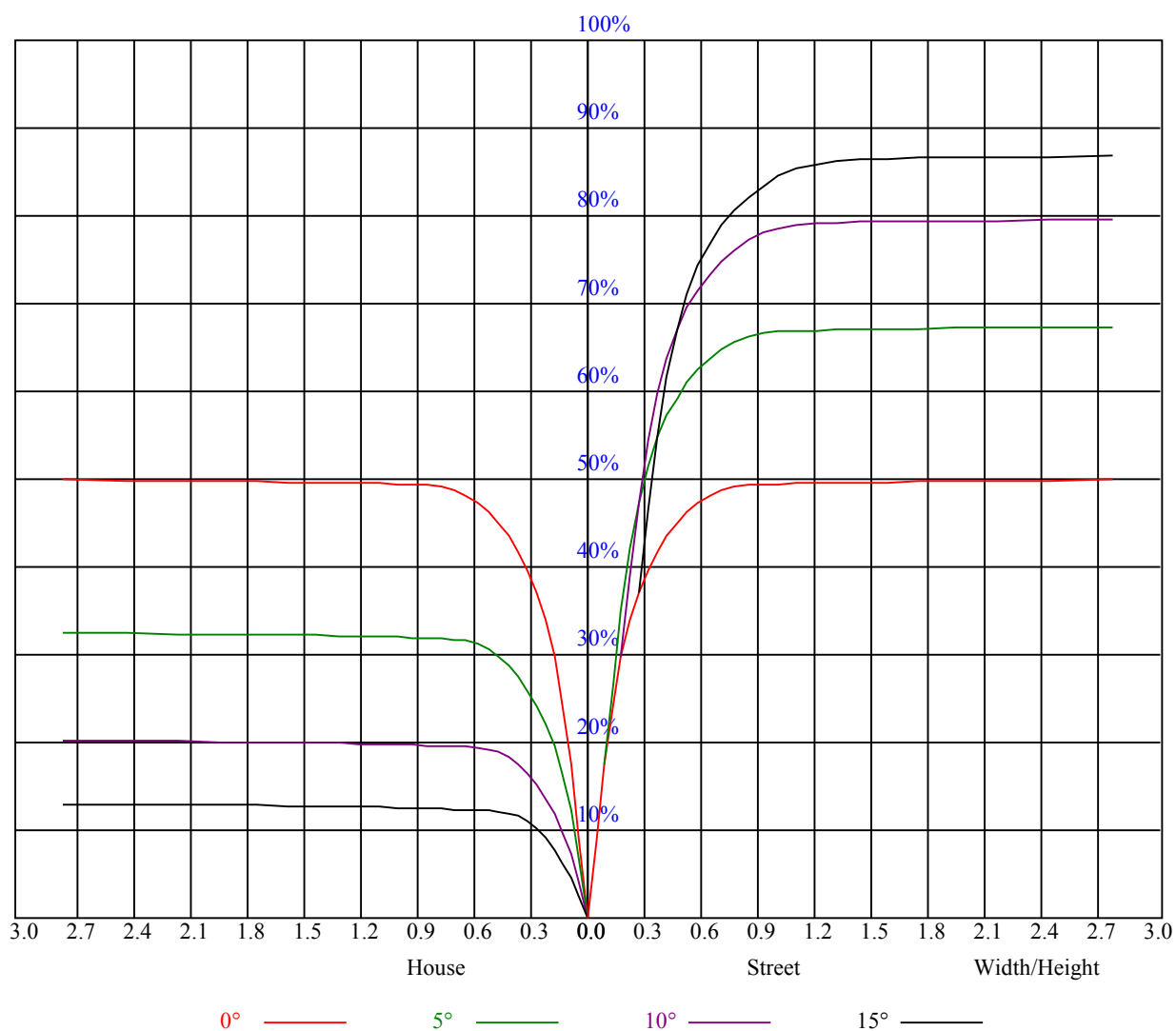
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	1.23	1.23	1.23	1.20	1.20	1.20	1.14	1.14	1.14	1.10	1.10	1.10	1.05	1.05	1.05	1.03
1	1.16	1.13	1.11	1.13	1.11	1.10	1.09	1.08	1.06	1.05	1.04	1.03	1.02	1.01	1.00	0.98
2	1.10	1.06	1.03	1.08	1.05	1.02	1.05	1.02	1.00	1.02	1.00	0.98	0.99	0.97	0.96	0.94
3	1.04	1.00	0.97	1.03	0.99	0.96	1.00	0.97	0.95	0.98	0.95	0.93	0.96	0.94	0.92	0.90
4	1.00	0.95	0.92	0.99	0.95	0.91	0.97	0.93	0.90	0.95	0.92	0.89	0.93	0.90	0.88	0.87
5	0.96	0.91	0.88	0.95	0.91	0.87	0.93	0.89	0.87	0.92	0.88	0.86	0.90	0.87	0.85	0.84
6	0.92	0.87	0.84	0.91	0.87	0.84	0.90	0.86	0.83	0.89	0.85	0.83	0.87	0.84	0.82	0.81
7	0.89	0.84	0.81	0.88	0.84	0.81	0.87	0.83	0.80	0.86	0.82	0.80	0.85	0.82	0.79	0.78
8	0.86	0.81	0.78	0.85	0.81	0.78	0.84	0.80	0.78	0.83	0.80	0.77	0.82	0.79	0.77	0.76
9	0.83	0.78	0.75	0.83	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.75	0.74
10	0.80	0.76	0.73	0.80	0.76	0.73	0.79	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.73	0.72



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	16531.88	14715.00	7447.50	3273.75	1663.88	1149.75	931.50	720.00	304.31	
45.0	16638.75	14023.13	6249.38	2981.25	1207.13	929.81	796.50	534.38	70.48	
90.0	16813.13	10836.00	4957.88	1973.81	1111.22	977.18	832.39	353.36	25.93	
135.0	16903.13	12763.13	6356.25	2958.75	1538.44	1080.00	871.31	423.00	30.71	
180.0	16531.88	10577.81	4512.94	1945.13	1107.00	962.66	803.48	264.54	22.84	
225.0	16638.75	10341.00	3611.81	1577.81	1083.94	935.49	818.21	294.86	29.81	
270.0	16813.13	12718.13	5585.63	2868.75	1265.63	1044.00	887.63	537.19	38.14	
315.0	16903.13	11211.75	6355.69	3081.38	1672.31	1113.19	929.19	566.61	40.33	
360.0	16531.88	14715.00	7447.50	3273.75	1663.88	1149.75	931.50	720.00	304.31	
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	
0.0	21.15	17.44	15.24	14.57	14.01	13.22	12.04	11.59	11.42	
45.0	21.83	17.38	15.69	14.85	13.95	13.28	12.32	11.93	11.48	
90.0	17.04	16.14	15.86	15.19	14.01	12.94	11.98	11.70	11.36	
135.0	17.44	15.19	14.57	14.51	13.84	12.94	11.93	11.59	11.31	
180.0	16.48	14.91	14.34	13.78	12.94	12.38	11.87	11.53	11.31	
225.0	20.87	17.94	16.37	15.24	13.78	12.77	12.21	11.87	11.36	
270.0	21.49	18.68	16.88	15.86	14.51	12.99	11.87	11.53	11.36	
315.0	21.26	16.43	14.57	14.23	13.84	12.99	11.93	11.64	11.48	
360.0	21.15	17.44	15.24	14.57	14.01	13.22	12.04	11.59	11.42	
C/ γ (°)	90.0									
0.0	11.19									
45.0	11.14									
90.0	11.08									
135.0	11.08									
180.0	11.08									
225.0	11.14									
270.0	11.08									
315.0	11.08									
360.0	11.19									