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NATA

LumCAT: 3-2056-A

Luminaire: 99.02.73.173+92.76.365.00

Report No: NATA0100

Voltage(V): 49.3000

Test No: GC2018101009

Current(A): 0.5000

LampCAT: BRIDGELUX V22B

Power (W): 24.6500

Lamp flux(lm): 3728.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 78

Width(mm): 78

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 3314.04

Efficiency(%): 88.90%

Lumens(lm)/Power(W): 135.51

Central intensity(cd): 4938.328

Maximum intensity(cd): 4938.328

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=49.3

[C90/270]Total=49.3

Field angle(10%Imax): [C0/180]Total=77.1

[C90/270]Total=77.1

Maximum s/h(1/2): C0_180=0.76 C90_270=0.76

Maximum s/h(1/4): C0_180=0.79 C90_270=0.79

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.60%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.773%

Equipment:
Temperature(°C): 25.0

Date: 2018/10/10
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.50

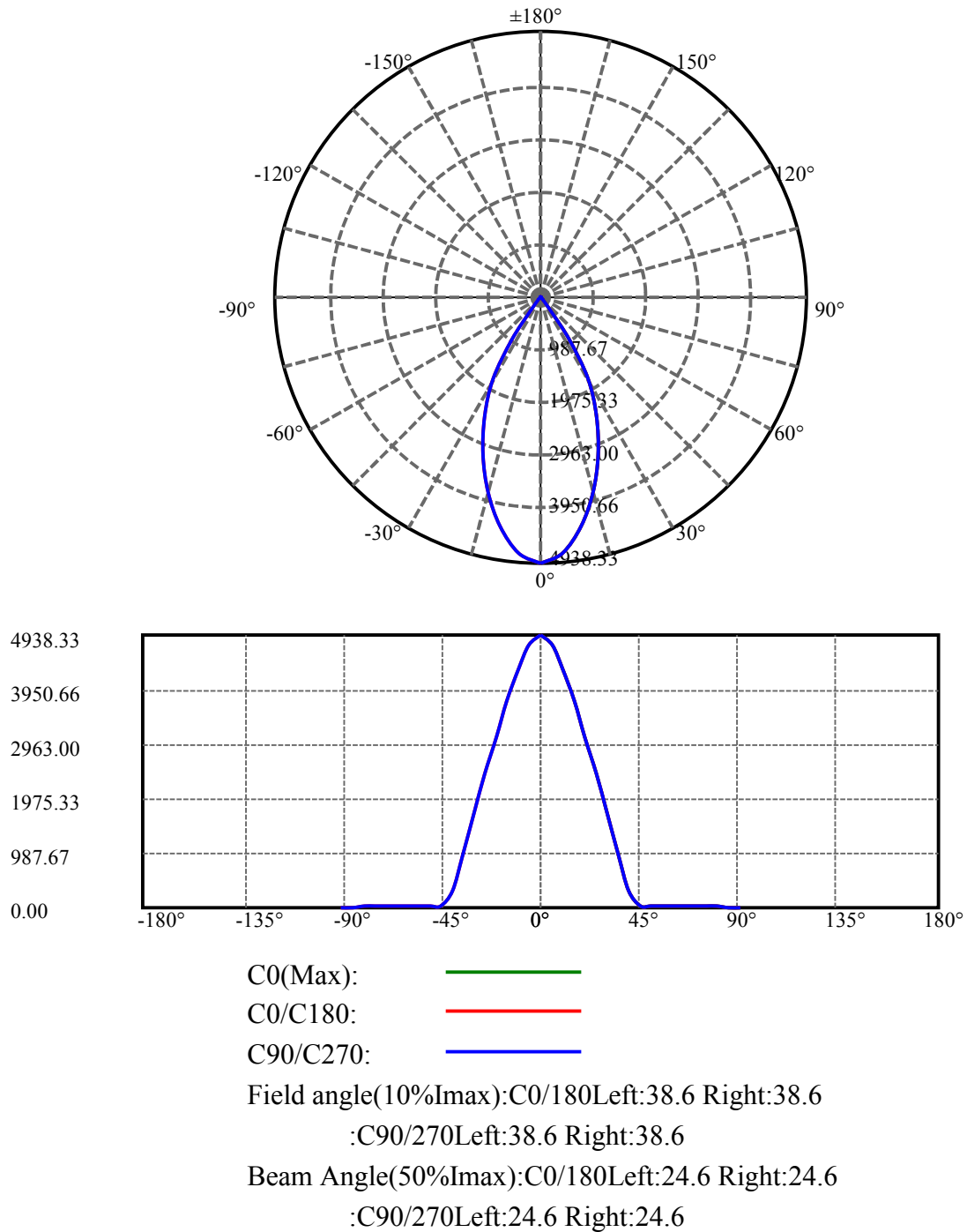
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4938.328	29.532	29.532	.792%	.891%
5.0	4755.656	227.193	256.726	6.094%	7.747%
10.0	4311.211	410.354	667.08	11.007%	20.129%
15.0	3745.547	531.375	1198.455	14.254%	36.163%
20.0	3108.234	582.713	1781.168	15.631%	53.746%
25.0	2420.648	560.750	2341.918	15.042%	70.666%
30.0	1759.430	482.205	2824.123	12.935%	85.217%
35.0	947.243	297.812	3121.935	7.989%	94.203%
40.0	311.027	109.586	3231.521	2.940%	97.510%
45.0	30.509	11.825	3243.346	.317%	97.867%
50.0	17.775	7.464	3250.809	.200%	98.092%
55.0	16.995	7.631	3258.44	.205%	98.322%
60.0	16.024	7.607	3266.047	.204%	98.552%
65.0	17.191	8.540	3274.587	.229%	98.809%
70.0	17.944	9.242	3283.829	.248%	99.088%
75.0	17.487	9.259	3293.088	.248%	99.368%
80.0	16.481	8.897	3301.985	.239%	99.636%
85.0	15.117	8.255	3310.239	.221%	99.885%
90.0	13.880	3.804	3314.043	.102%	100.000%

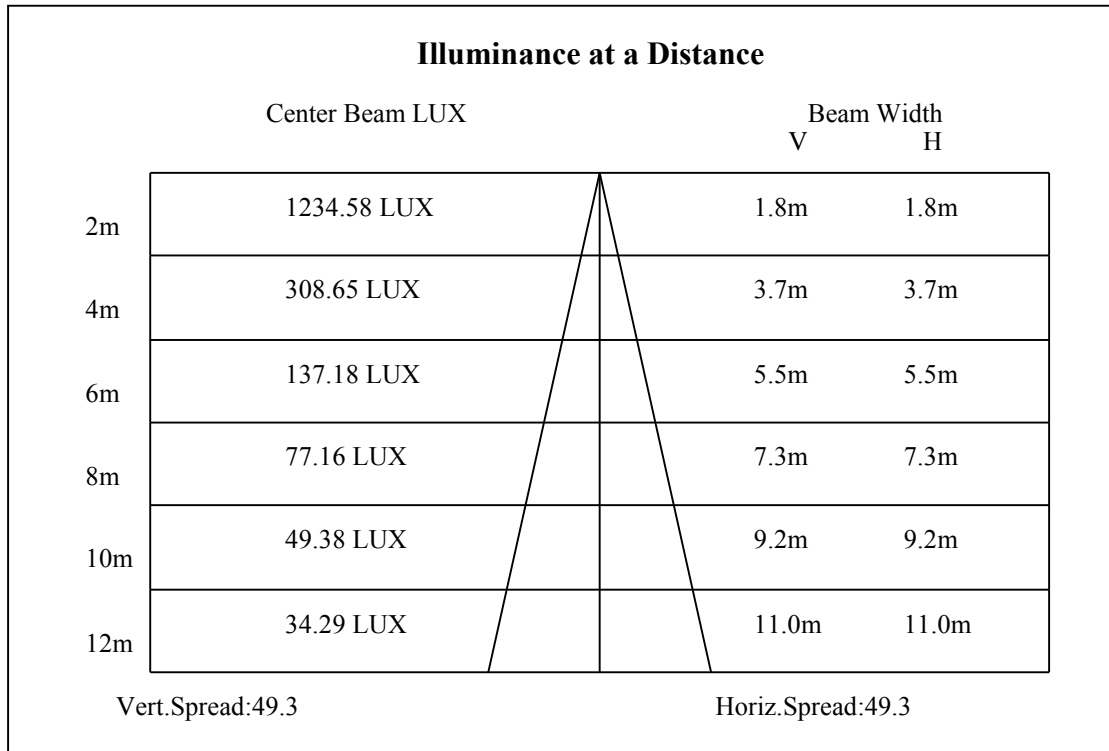
ZONAL LUMEN SUMMARY

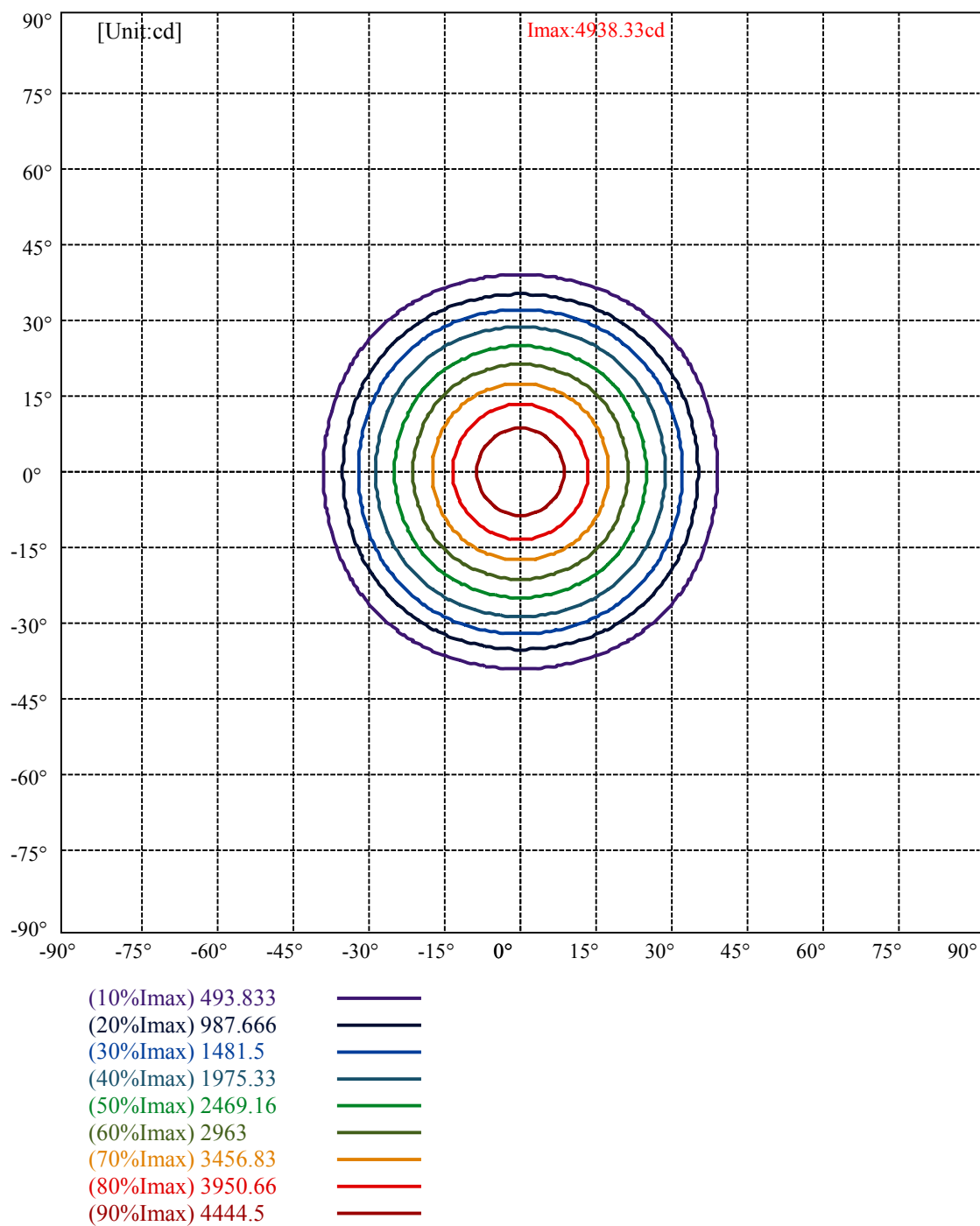
Zone	Lumens	%Lamp	%Fixt
0-30	2824.12	75.75%	85.22%
0-40	3231.52	86.68%	97.51%
0-60	3266.05	87.61%	98.55%
0-90	3310.24	88.79%	99.89%
0-120	3310.24	88.79%	99.89%
0-180	3314.04	88.90%	100.00%
60-90	51.80	1.39%	1.56%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-28.21	2651.24	71.12%	80.00%

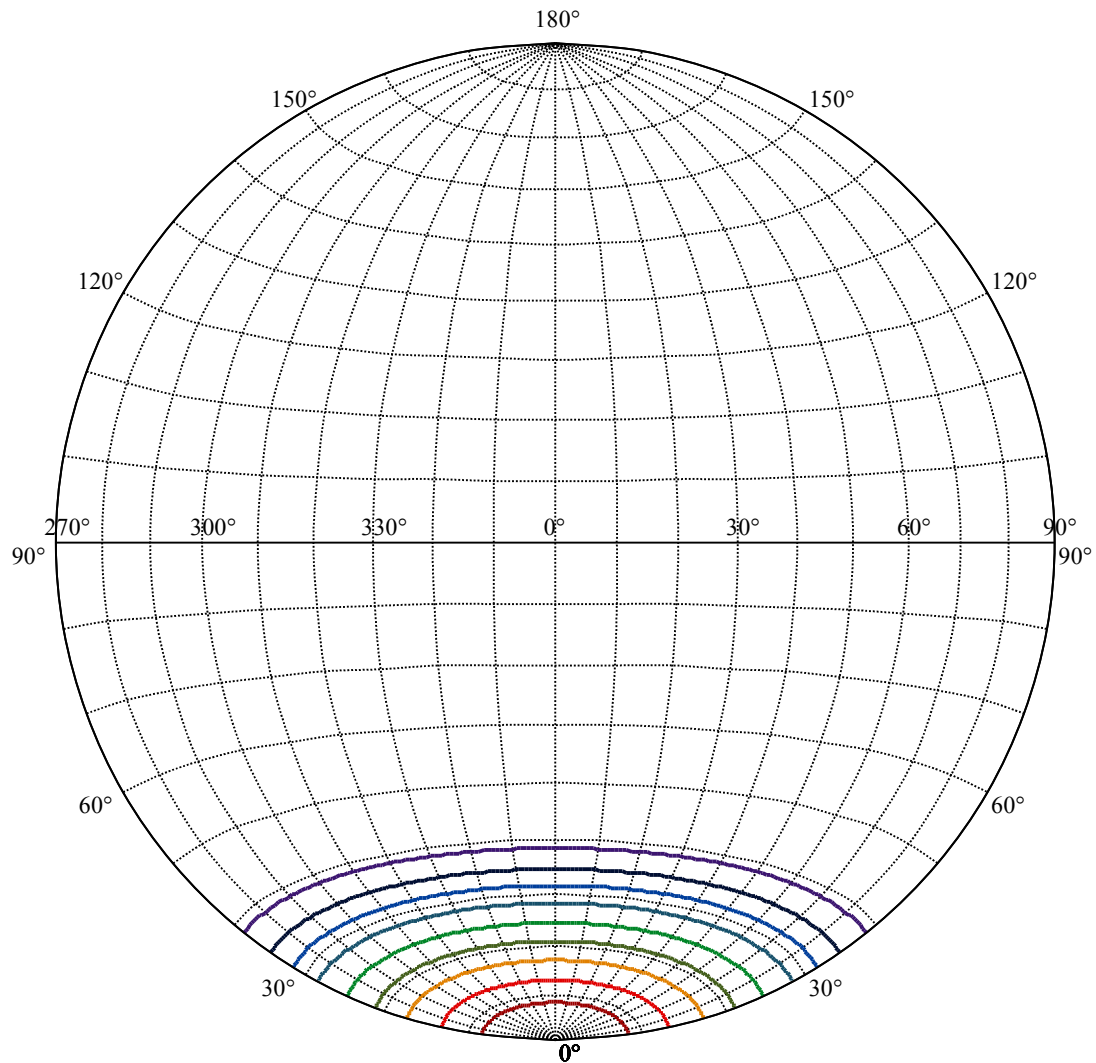
ZONAL LUMEN SUMMARY

0-10	667.08
10-20	1114.09
20-30	1042.95
30-40	407.40
40-50	19.29
50-60	15.24
60-70	17.78
70-80	18.16
80-90	8.25
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









House

[Unit:cd]

Road

Imax:4938.33

(10%Imax) 493.833

(20%Imax) 987.666

(30%Imax) 1481.5

(40%Imax) 1975.33

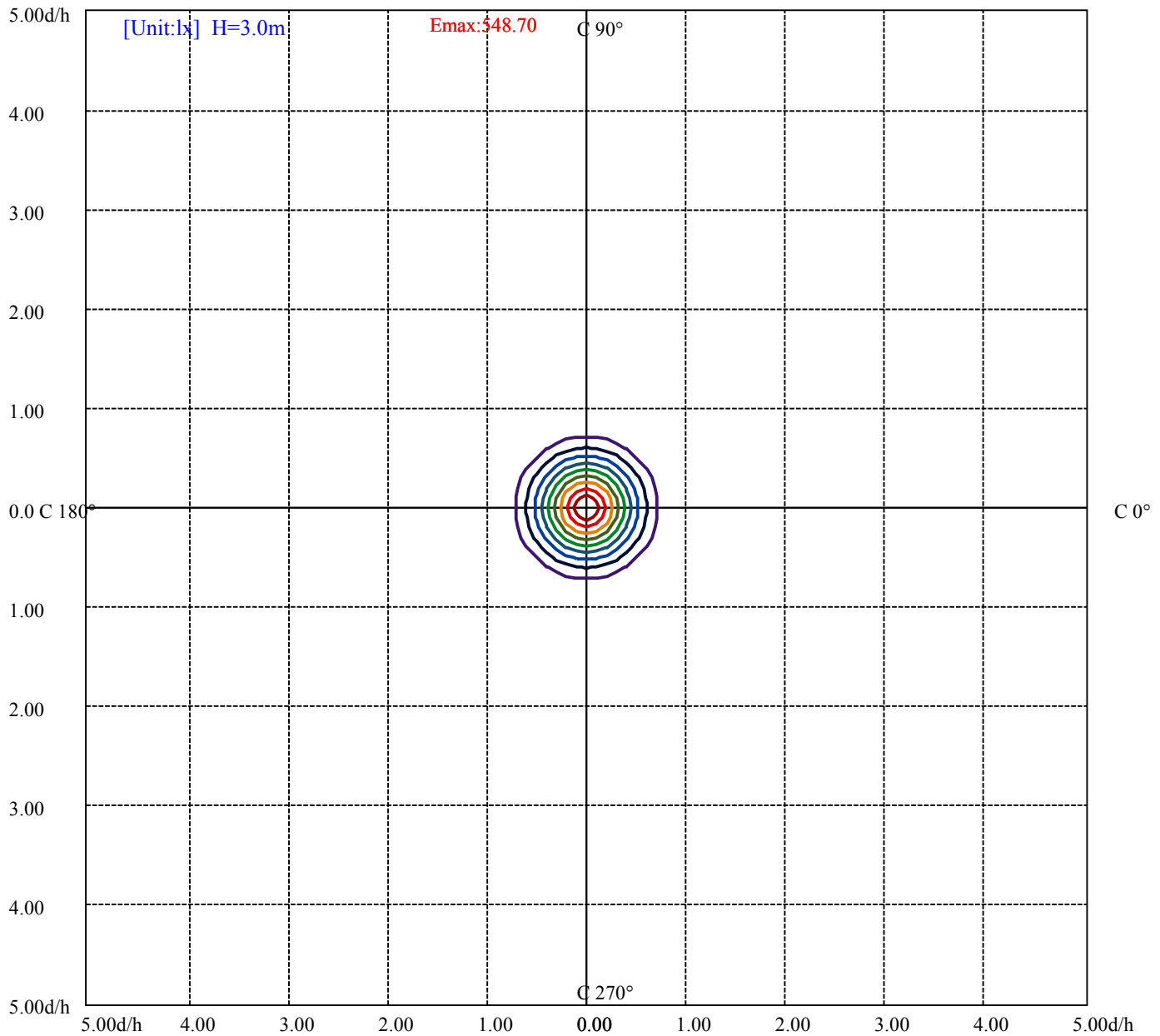
(50%Imax) 2469.16

(60%Imax) 2963

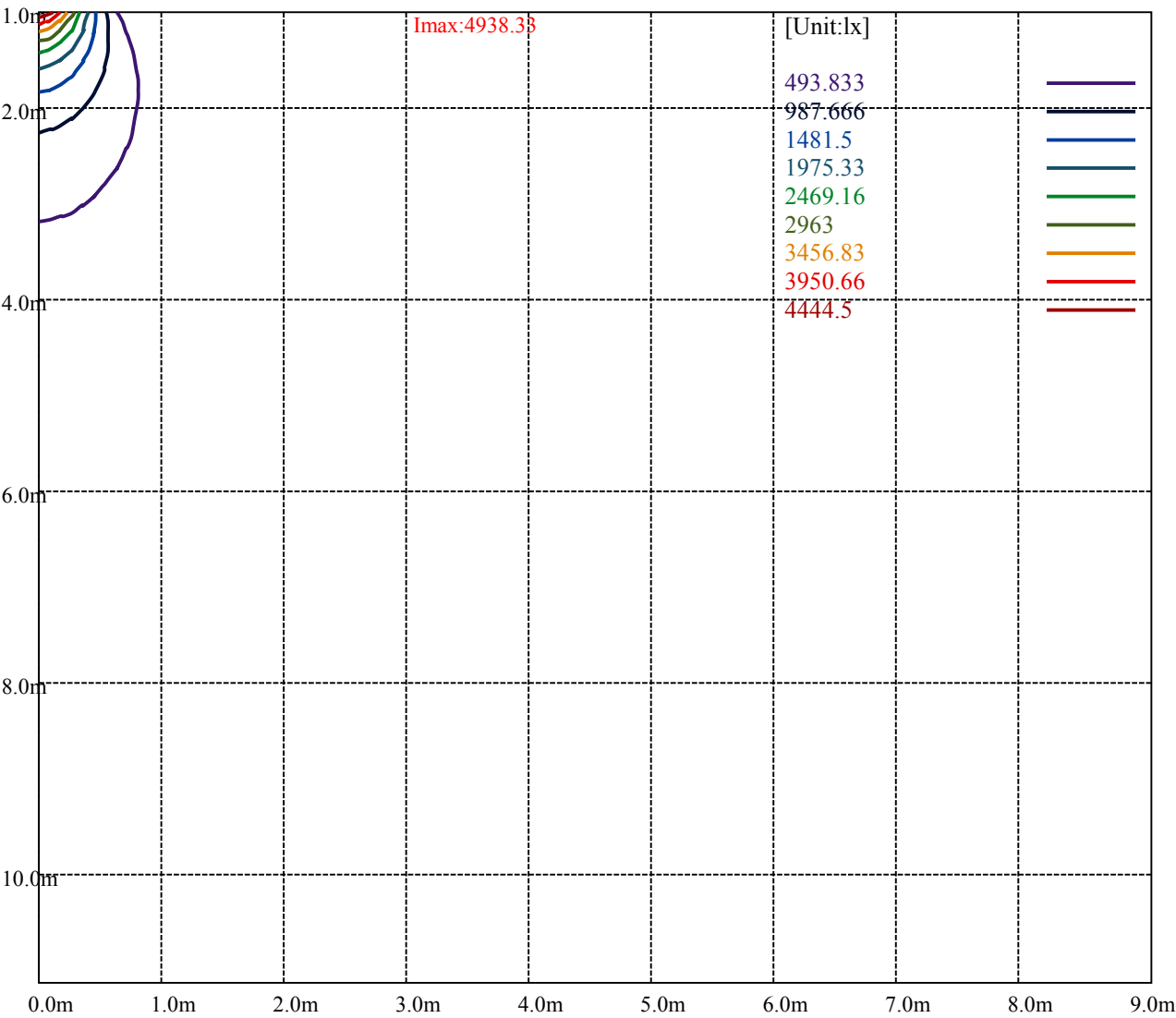
(70%Imax) 3456.83

(80%Imax) 3950.66

(90%Imax) 4444.5



(10%Emax) 54.87022	—
(20%Emax) 109.7406	—
(30%Emax) 164.6111	—
(40%Emax) 219.4811	—
(50%Emax) 274.3511	—
(60%Emax) 329.2211	—
(70%Emax) 384.0922	—
(80%Emax) 438.9622	—
(90%Emax) 493.8322	—



Luminance Table

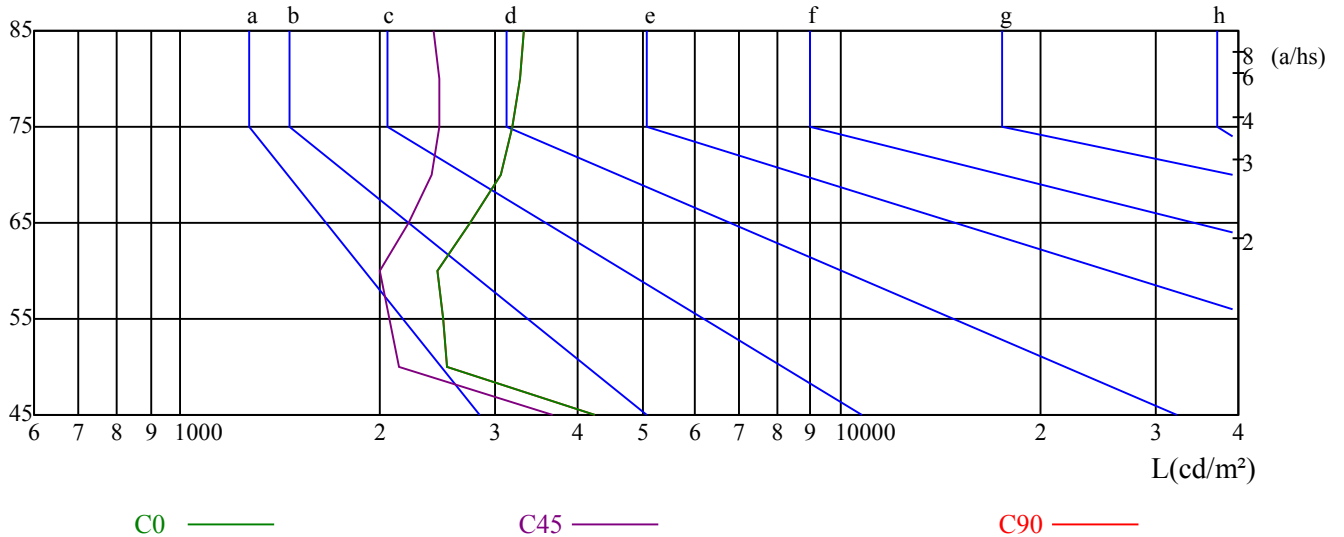
γ	45	50	55	60	65	70	75	80	85
C0	4255	2533	2495	2445	2752	3045	3184	3263	3307
C45	3650	2140	2075	2001	2213	2402	2458	2458	2421
C90	4255	2533	2495	2445	2752	3045	3184	3263	3307

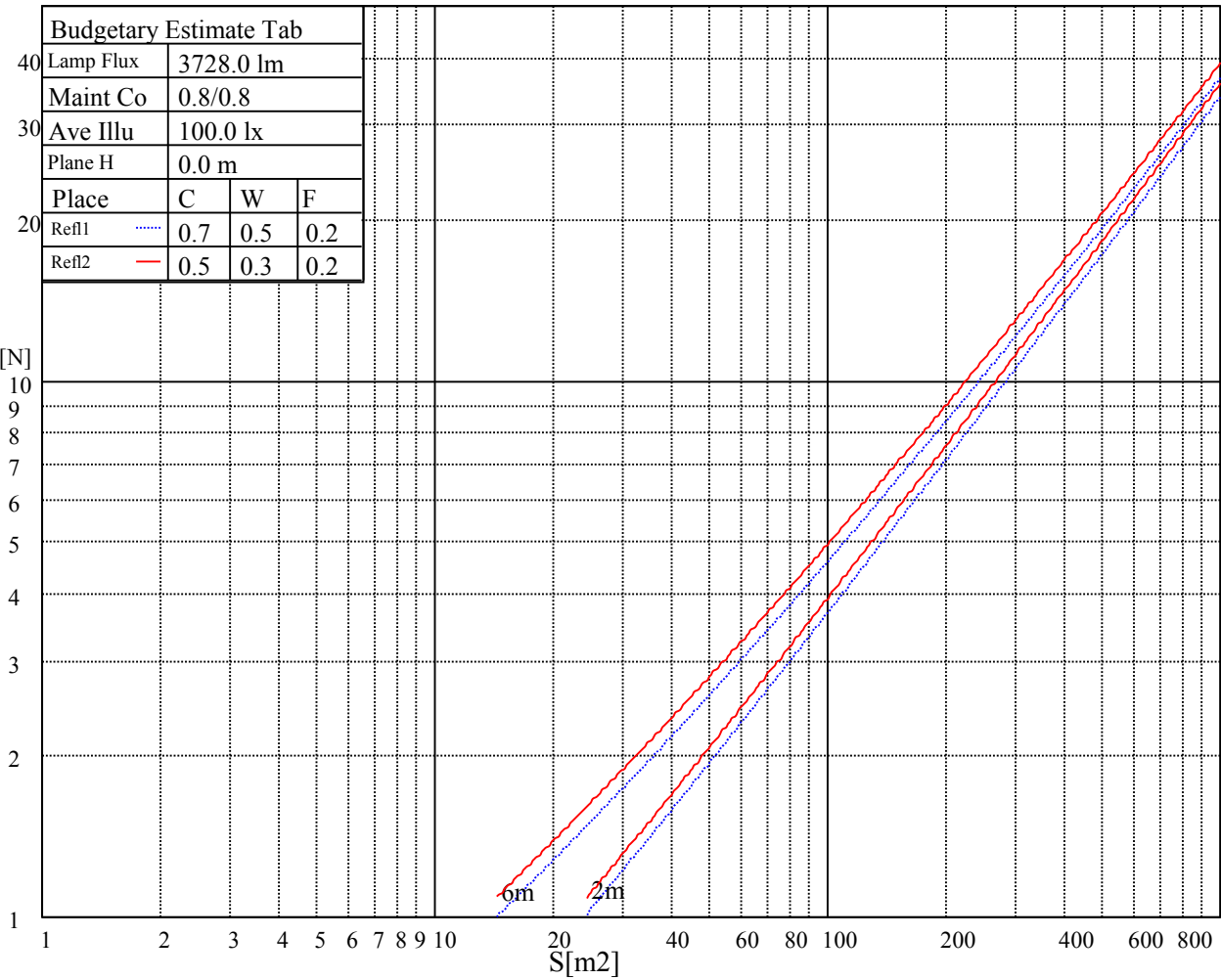
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6686	6686	6686	11105	11105	11105	28509	28509	28509

Glare Table

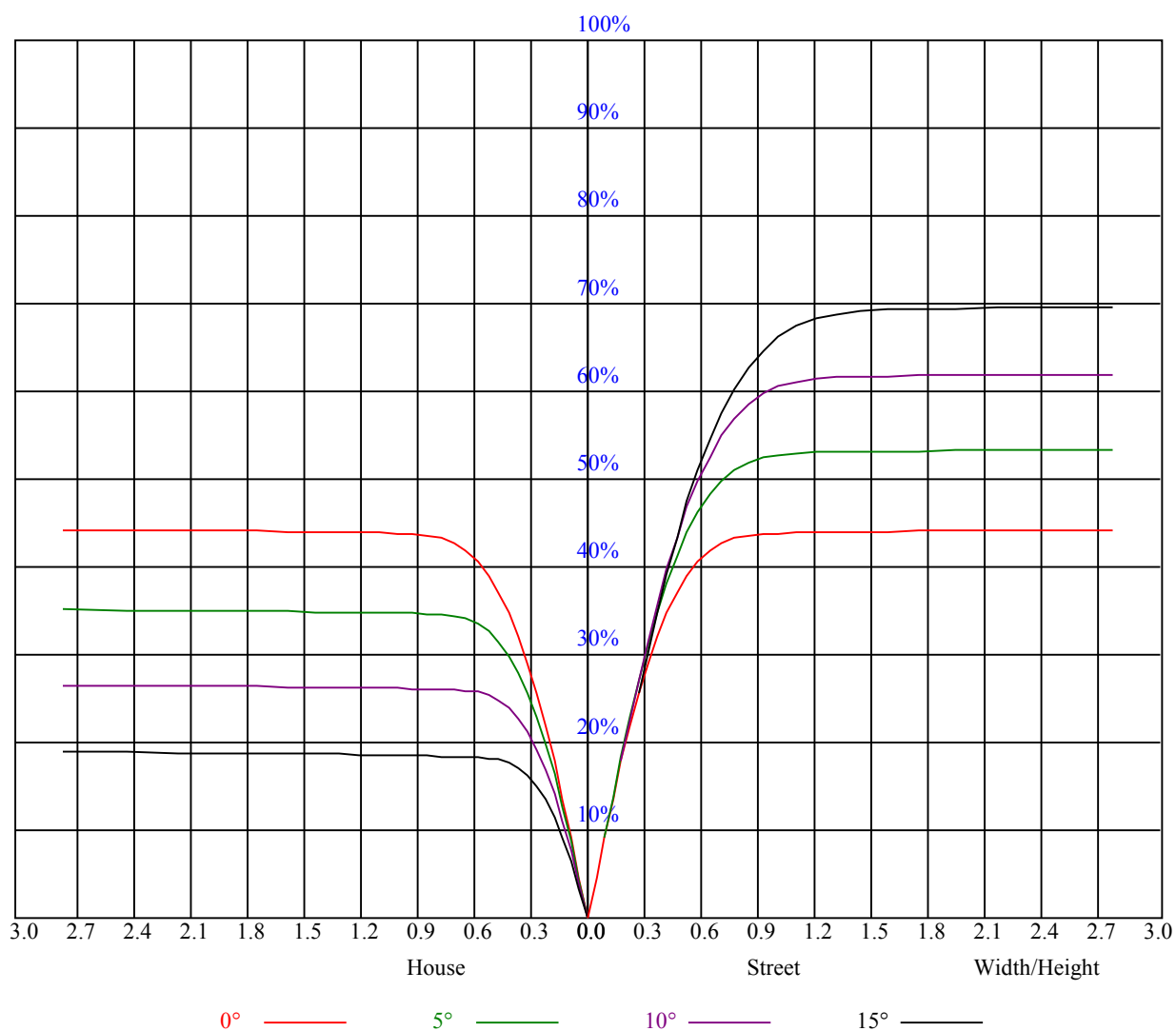
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

 $\gamma(^{\circ})$ 



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	1.07	1.07	1.07	1.04	1.04	1.04	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91	0.90
1	0.99	0.96	0.94	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.87	0.87	0.86	0.85	0.83
2	0.93	0.89	0.86	0.91	0.88	0.85	0.88	0.86	0.84	0.86	0.84	0.82	0.83	0.82	0.80	0.79
3	0.88	0.83	0.80	0.86	0.83	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.74
4	0.83	0.78	0.75	0.82	0.78	0.74	0.80	0.76	0.74	0.78	0.75	0.73	0.77	0.74	0.72	0.71
5	0.79	0.74	0.70	0.78	0.73	0.70	0.76	0.72	0.69	0.75	0.71	0.69	0.73	0.71	0.68	0.67
6	0.75	0.70	0.67	0.74	0.70	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.70	0.67	0.65	0.64
7	0.71	0.66	0.63	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.64	0.62	0.61
8	0.68	0.63	0.60	0.67	0.63	0.60	0.67	0.62	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.58
9	0.65	0.60	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.55
10	0.62	0.58	0.55	0.62	0.57	0.55	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.53



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	4943.81	4687.88	4223.25	3646.13	3017.81	2337.75	1635.19	846.00	306.56		
45.0	4942.13	4746.38	4334.63	3765.94	3116.81	2424.38	1811.81	955.69	296.44		
90.0	4942.69	4777.88	4317.75	3784.50	3128.63	2422.69	1819.13	960.58	286.82		
135.0	4924.69	4891.50	4498.31	4007.25	3366.56	2635.88	2030.06	1234.13	494.44		
180.0	4943.81	4812.75	4383.00	3786.75	3228.75	2522.81	1892.81	1074.94	388.86		
225.0	4942.13	4752.56	4302.00	3723.19	3071.25	2390.06	1771.88	909.23	287.94		
270.0	4942.69	4755.38	4308.75	3729.38	3072.38	2419.88	1779.19	912.38	302.63		
315.0	4924.69	4620.94	4122.00	3521.25	2863.69	2211.75	1335.38	685.01	124.54		
360.0	4943.81	4687.88	4223.25	3646.13	3017.81	2337.75	1635.19	846.00	306.56		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	21.32	18.79	18.23	16.59	18.62	20.59	19.80	17.38	15.30		
45.0	28.52	17.33	16.65	16.31	16.43	17.04	17.21	16.65	15.53		
90.0	29.03	17.21	16.48	15.64	16.09	16.37	16.26	15.98	15.19		
135.0	53.38	17.94	16.14	15.58	15.24	15.47	15.69	15.47	15.02		
180.0	38.25	16.82	15.92	15.47	15.08	15.13	15.19	15.13	14.63		
225.0	27.45	17.10	16.31	15.75	15.58	16.43	16.59	15.98	14.51		
270.0	26.72	18.23	17.78	16.26	18.00	20.31	19.07	17.49	15.19		
315.0	19.41	18.79	18.45	16.59	22.50	22.22	20.08	17.78	15.58		
360.0	21.32	18.79	18.23	16.59	18.62	20.59	19.80	17.38	15.30		
C/ γ (°)	90.0										
0.0	13.78										
45.0	13.95										
90.0	13.95										
135.0	13.84										
180.0	13.73										
225.0	13.95										
270.0	13.95										
315.0	13.89										
360.0	13.78										