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Nata

LumCAT: 3-1546-A3

Luminaire: 99.02.73.172+92.76.365.00

Report No: NATA0100

Test No: GC2018072509

LampCAT: BRIDGELUX V9 HD

Lamp flux(lm): 1153.0

Number of Lamps: 1

Length(mm): 84

Phm Type: C

Voltage(V): 34.0000

Current(A): 0.2900

Power (W): 9.8600

PF: 0.0000

Ballast type: DC

Width(mm): 84

Height(mm): 0

Photometric Results

Lumens(lm): 1031.57

Efficiency(%): 89.47%

Lumens(lm)/Power(W): 107.43

Central intensity(cd): 4797.477

Maximum intensity(cd): 4797.477

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=21.2

[C90/270]Total=21.2

Field angle(10%Imax): [C0/180]Total=45.0

[C90/270]Total=45.0

Maximum s/h(1/2): C0_180=0.36 C90_270=0.36

Maximum s/h(1/4): C0_180=0.37 C90_270=0.37

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.87%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.160%

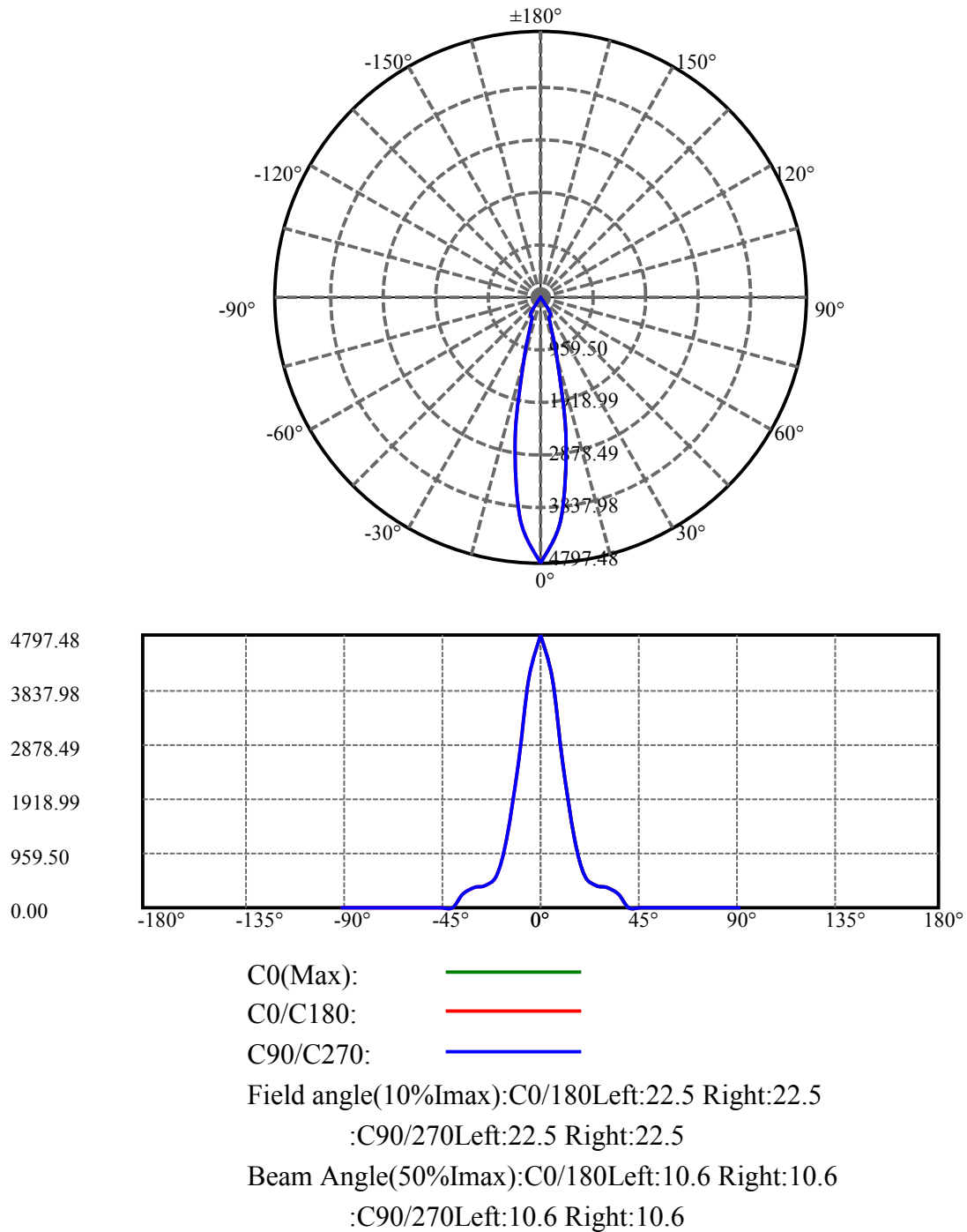
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4797.477	28.690	28.69	2.488%	2.781%
5.0	4032.537	192.648	221.338	16.708%	21.456%
10.0	2562.462	243.903	465.241	21.154%	45.100%
15.0	1209.789	171.631	636.871	14.886%	61.738%
20.0	567.583	106.407	743.278	9.229%	72.053%
25.0	390.439	90.446	833.725	7.844%	80.821%
30.0	352.822	96.697	930.422	8.387%	90.195%
35.0	236.371	74.315	1004.737	6.445%	97.399%
40.0	14.108	4.971	1009.708	.431%	97.881%
45.0	6.400	2.481	1012.189	.215%	98.121%
50.0	4.955	2.081	1014.269	.180%	98.323%
55.0	4.749	2.132	1016.401	.185%	98.529%
60.0	4.632	2.199	1018.6	.191%	98.743%
65.0	4.556	2.263	1020.863	.196%	98.962%
70.0	4.508	2.322	1023.185	.201%	99.187%
75.0	4.466	2.365	1025.55	.205%	99.416%
80.0	4.446	2.400	1027.95	.208%	99.649%
85.0	4.418	2.413	1030.362	.209%	99.883%
90.0	4.411	1.209	1031.571	.105%	100.000%

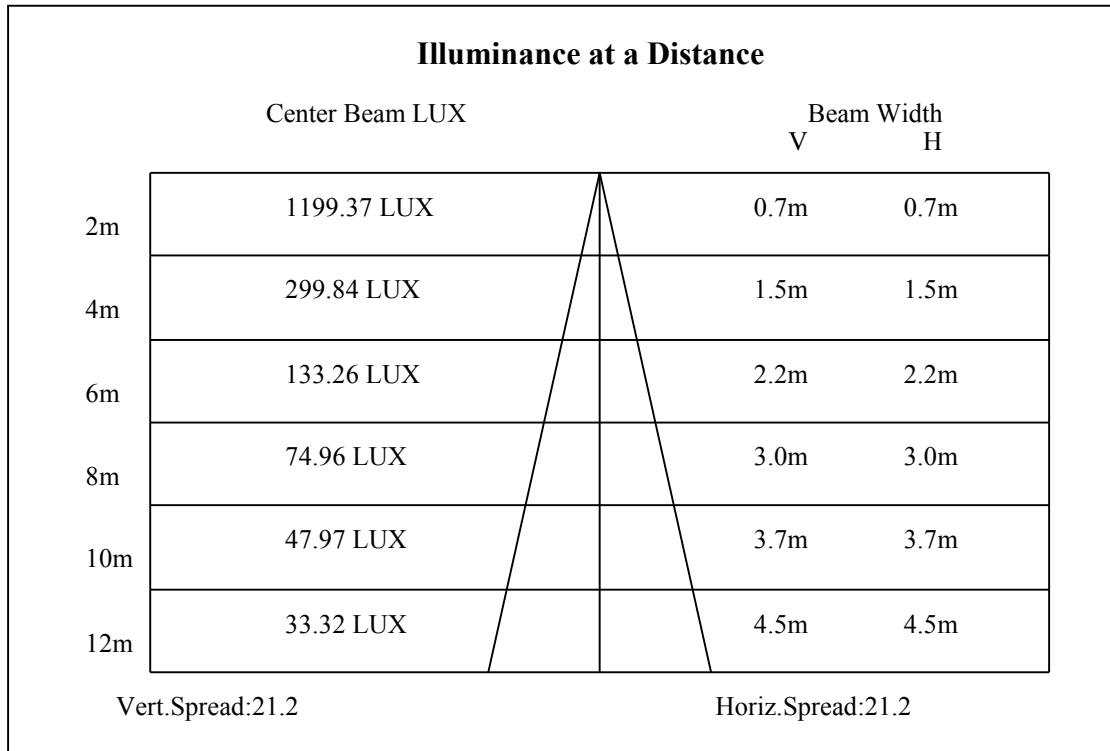
ZONAL LUMEN SUMMARY

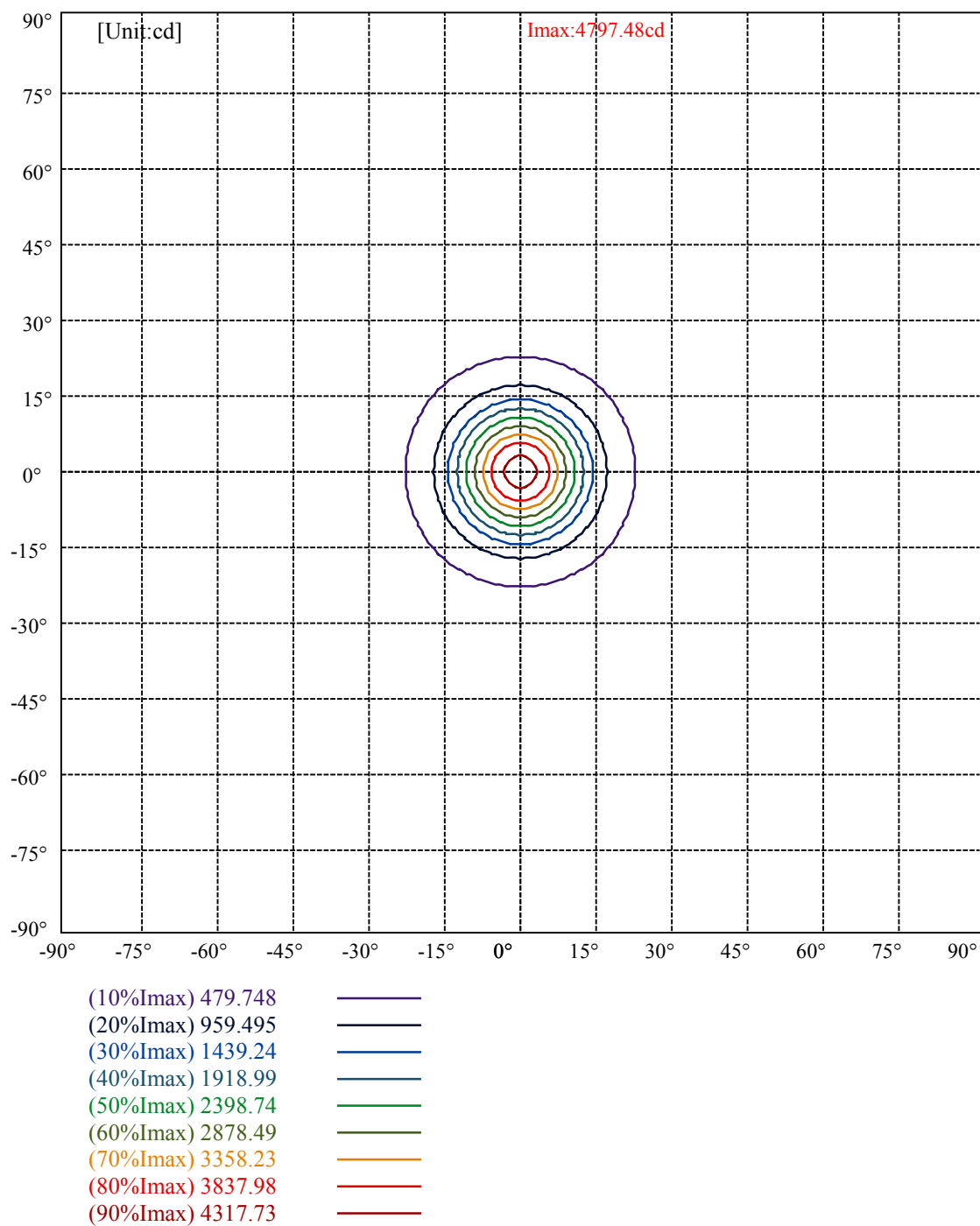
Zone	Lumens	%Lamp	%Fixt
0-30	930.42	80.70%	90.19%
0-40	1009.71	87.57%	97.88%
0-60	1018.60	88.34%	98.74%
0-90	1030.36	89.36%	99.88%
0-120	1030.36	89.36%	99.88%
0-180	1031.57	89.47%	100.00%
60-90	13.96	1.21%	1.35%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-24.53	825.26	71.57%	80.00%

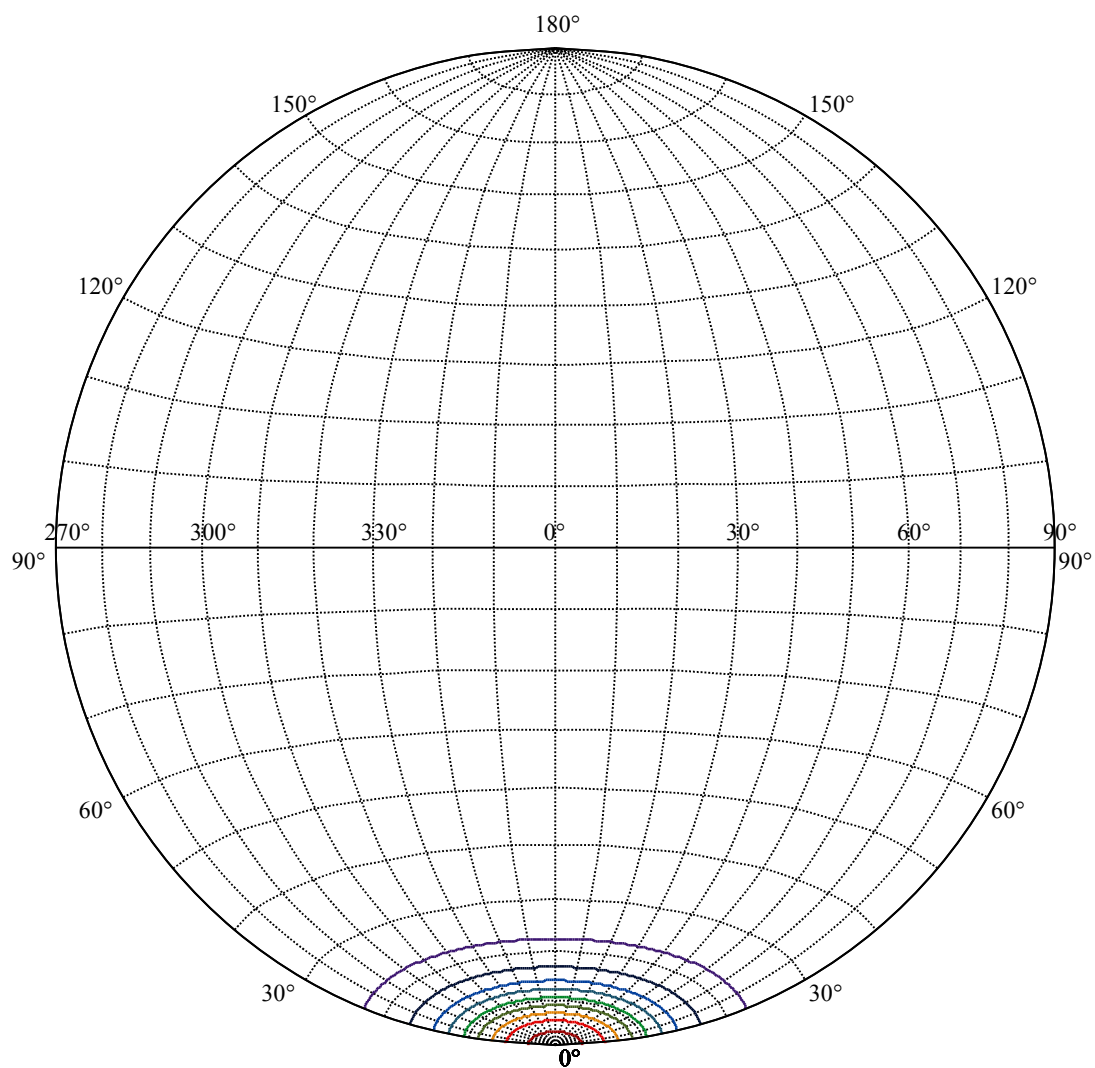
ZONAL LUMEN SUMMARY

0-10	465.24
10-20	278.04
20-30	187.14
30-40	79.29
40-50	4.56
50-60	4.33
60-70	4.59
70-80	4.76
80-90	2.41
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









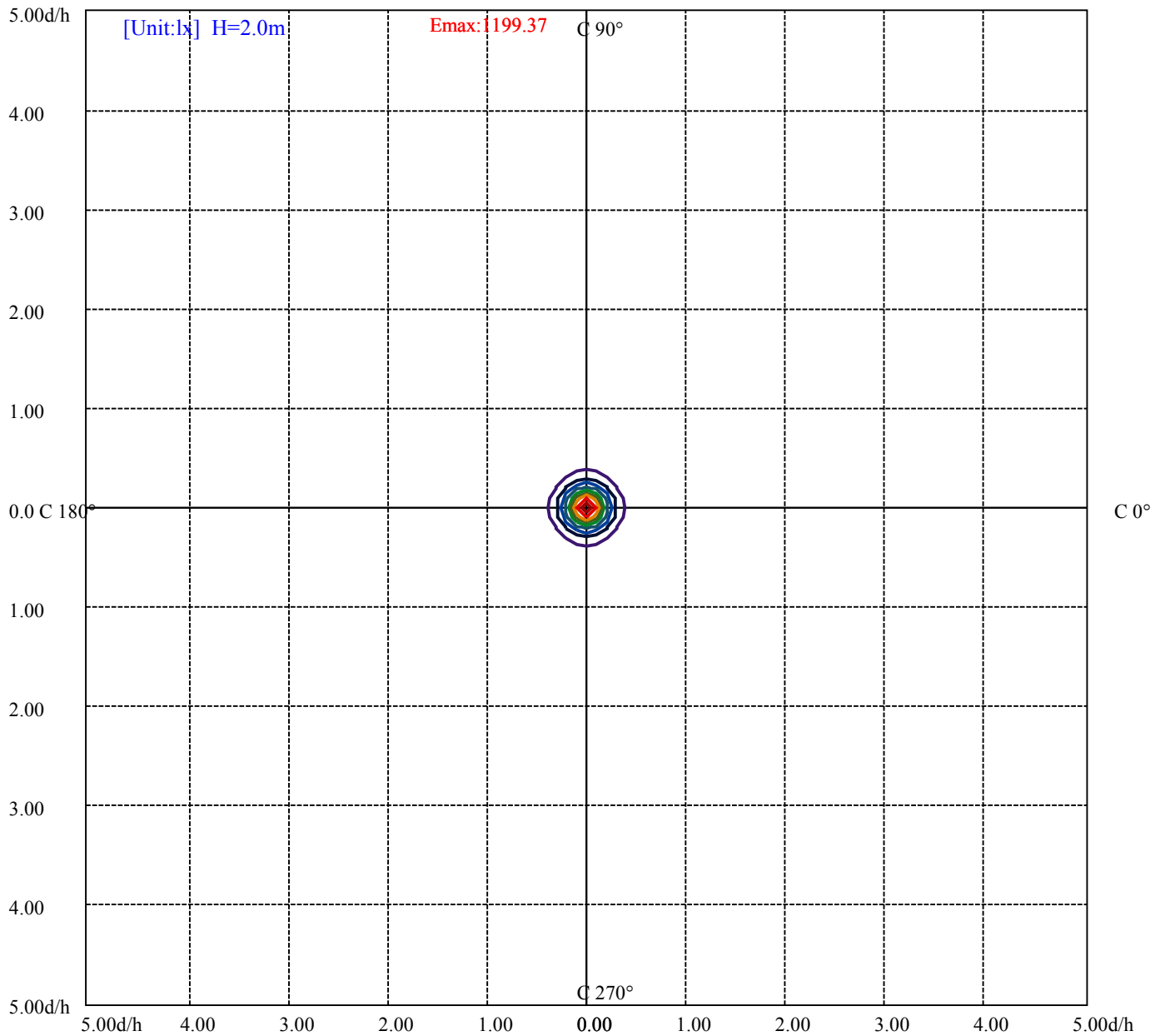
House

[Unit:cd]

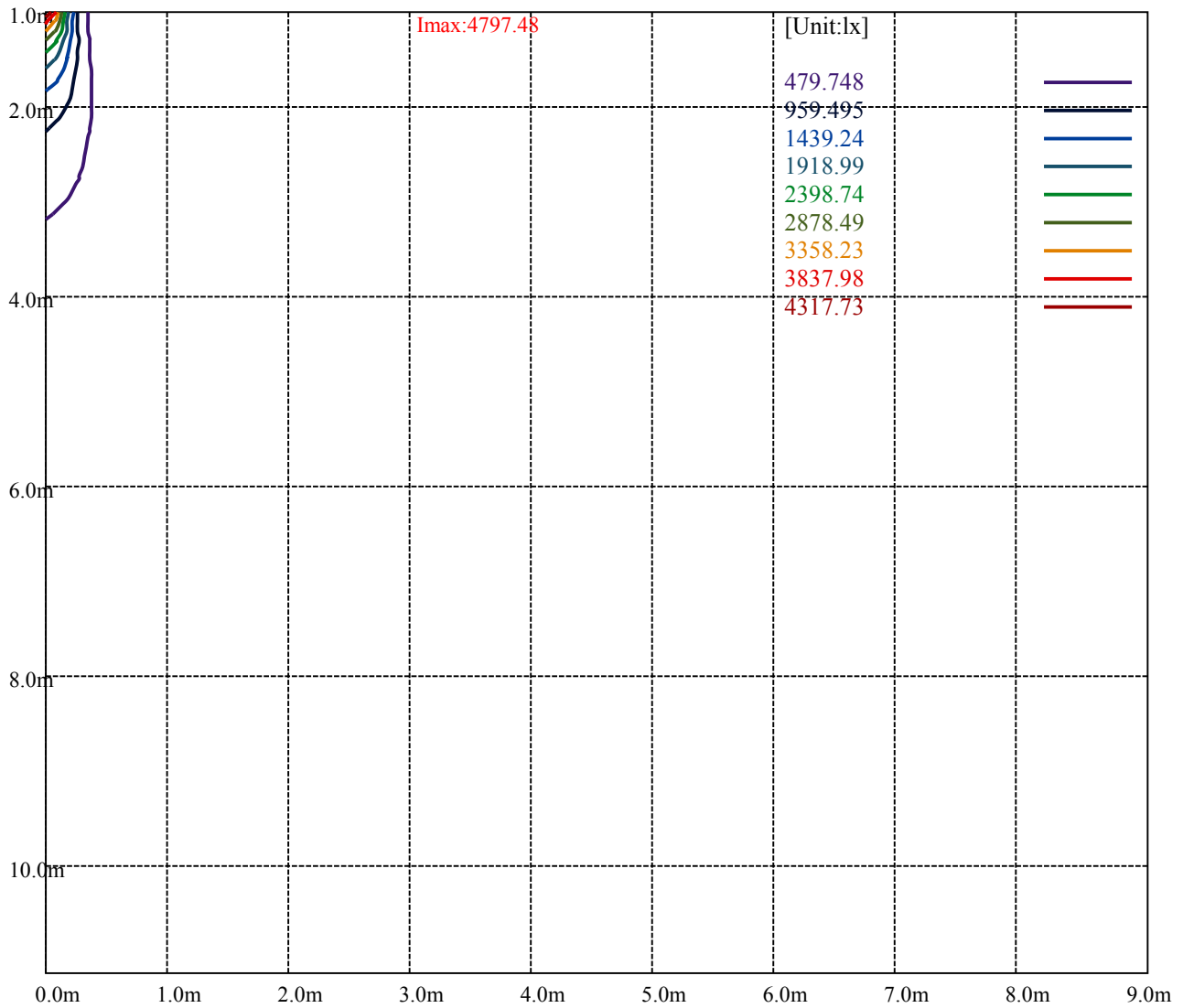
Road

Imax:4797.48

(10%Imax)	479.748	—
(20%Imax)	959.495	—
(30%Imax)	1439.24	—
(40%Imax)	1918.99	—
(50%Imax)	2398.74	—
(60%Imax)	2878.49	—
(70%Imax)	3358.23	—
(80%Imax)	3837.98	—
(90%Imax)	4317.73	—



(10%Emax)	119.9362	—
(20%Emax)	239.8728	—
(30%Emax)	359.81	—
(40%Emax)	479.745	—
(50%Emax)	599.6825	—
(60%Emax)	719.6175	—
(70%Emax)	839.555	—
(80%Emax)	959.49	—
(90%Emax)	1079.427	—



Luminance Table

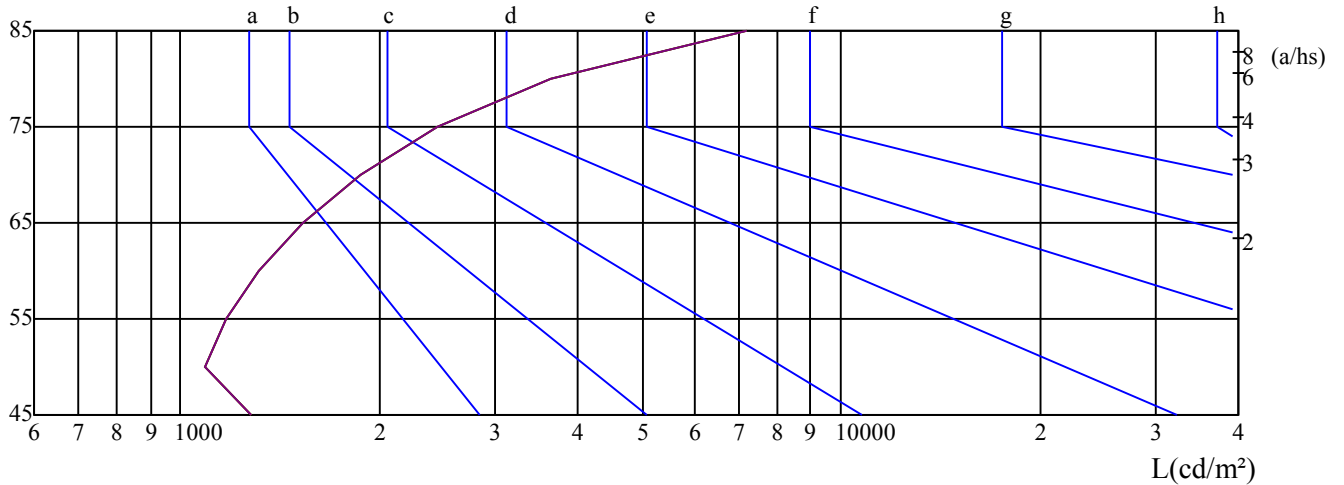
γ	45	50	55	60	65	70	75	80	85
C0	1283	1093	1173	1313	1528	1868	2446	3628	7185
C45	1283	1093	1173	1313	1528	1868	2446	3628	7185
C90	1283	1093	1173	1313	1528	1868	2446	3628	7185

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1528	1528	1528	2446	2446	2446	7185	7185	7185

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

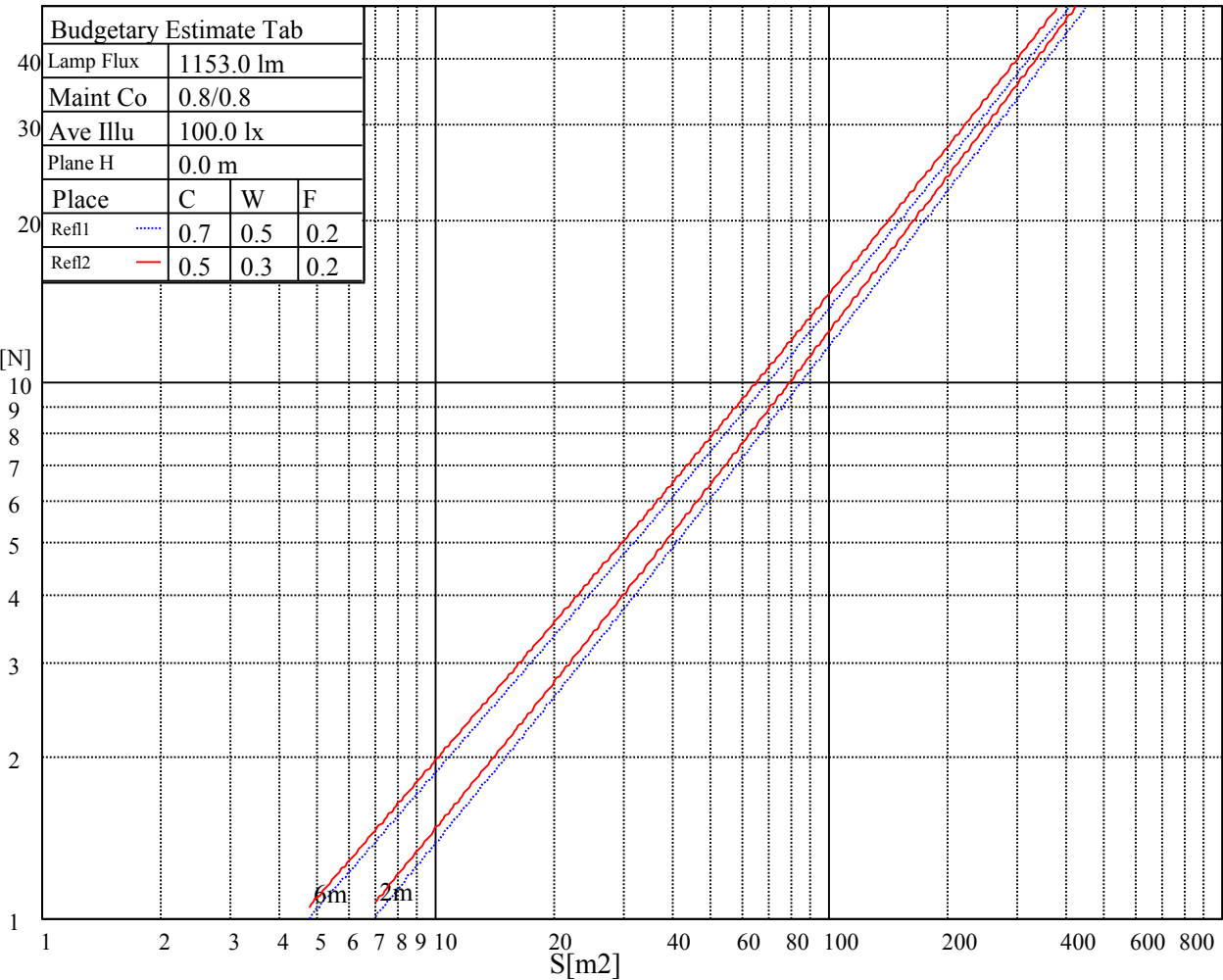
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

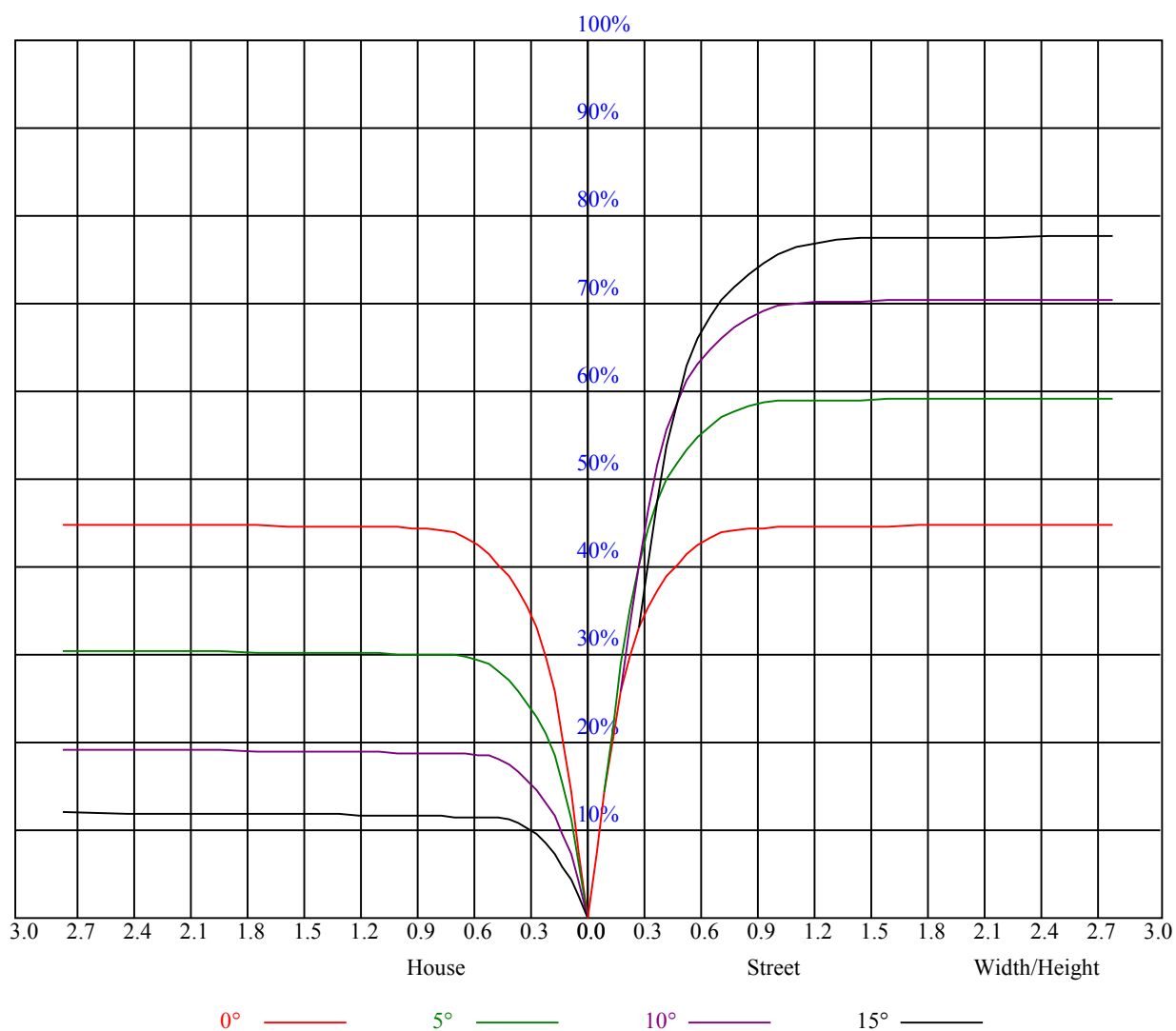
C0 ———

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	1.09	1.09	1.09	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.00	0.97	0.95	0.98	0.96	0.93	0.94	0.92	0.91	0.91	0.89	0.88	0.88	0.86	0.85	0.84
2	0.95	0.91	0.88	0.94	0.90	0.87	0.91	0.88	0.86	0.88	0.86	0.84	0.85	0.84	0.82	0.80
3	0.91	0.87	0.83	0.90	0.86	0.83	0.87	0.84	0.82	0.85	0.82	0.80	0.83	0.81	0.79	0.78
4	0.87	0.83	0.79	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.80	0.77	0.81	0.78	0.76	0.75
5	0.84	0.79	0.76	0.83	0.79	0.76	0.81	0.78	0.75	0.80	0.77	0.75	0.79	0.76	0.74	0.73
6	0.81	0.76	0.73	0.80	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
7	0.78	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.69
8	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.67
9	0.74	0.69	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.65
10	0.72	0.68	0.65	0.71	0.67	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.63



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	4755.77	4274.03	2947.17	1432.57	659.03	401.91	360.07	298.96	15.14		
45.0	4792.66	4201.35	2940.01	1404.49	639.76	400.26	358.97	279.69	15.03		
90.0	4824.04	3977.82	2439.00	1081.25	551.67	381.65	352.20	228.32	14.37		
135.0	4817.44	4131.43	2768.79	1338.42	622.14	386.50	348.51	300.06	15.75		
180.0	4755.77	3800.54	2188.49	1045.69	494.74	375.15	339.81	140.06	11.89		
225.0	4792.66	3796.69	2254.56	1062.81	496.33	386.22	350.49	160.32	11.89		
270.0	4824.04	4116.57	2589.30	1237.67	553.32	399.71	360.62	289.05	15.47		
315.0	4817.44	3961.86	2372.38	1075.42	523.70	392.11	351.92	194.51	13.32		
360.0	4755.77	4274.03	2947.17	1432.57	659.03	401.91	360.07	298.96	15.14		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	7.21	5.01	4.79	4.62	4.57	4.51	4.46	4.46	4.40		
45.0	7.65	5.07	4.84	4.73	4.62	4.57	4.51	4.51	4.46		
90.0	6.44	4.96	4.73	4.62	4.57	4.51	4.46	4.46	4.40		
135.0	8.75	4.96	4.73	4.62	4.57	4.51	4.46	4.40	4.40		
180.0	5.18	4.90	4.73	4.62	4.51	4.46	4.40	4.40	4.40		
225.0	5.29	4.96	4.73	4.62	4.57	4.51	4.51	4.46	4.46		
270.0	5.51	4.96	4.73	4.62	4.51	4.51	4.46	4.46	4.40		
315.0	5.18	4.84	4.68	4.57	4.51	4.46	4.46	4.40	4.40		
360.0	7.21	5.01	4.79	4.62	4.57	4.51	4.46	4.46	4.40		
C/ γ (°)	90.0										
0.0	4.40										
45.0	4.40										
90.0	4.40										
135.0	4.40										
180.0	4.40										
225.0	4.46										
270.0	4.40										
315.0	4.40										
360.0	4.40										