
Nata

LumCAT: 2-1740-M	
Luminaire: 92.70.136.00	
Report No: NT2017082603	Voltage(V): 36.7000
Test No: GC2017082603	Current(A): 1.0000
LampCAT: CREE CXA3050	Power (W): 36.7000
Lamp flux(lm): 3994.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 70	Width(mm): 70
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 3543.25
Efficiency(%): 88.71%
Lumens(lm)/Power(W): 96.55
Central intensity(cd): 7866.459
Maximum intensity(cd): 7866.459
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=35.4
[C90/270]Total=35.4
Field angle(10%Imax): [C0/180]Total=70.1
[C90/270]Total=70.1
Maximum s/h(1/2): C0_180=0.60 C90_270=0.60
Maximum s/h(1/4): C0_180=0.56 C90_270=0.56
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.71%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.732%

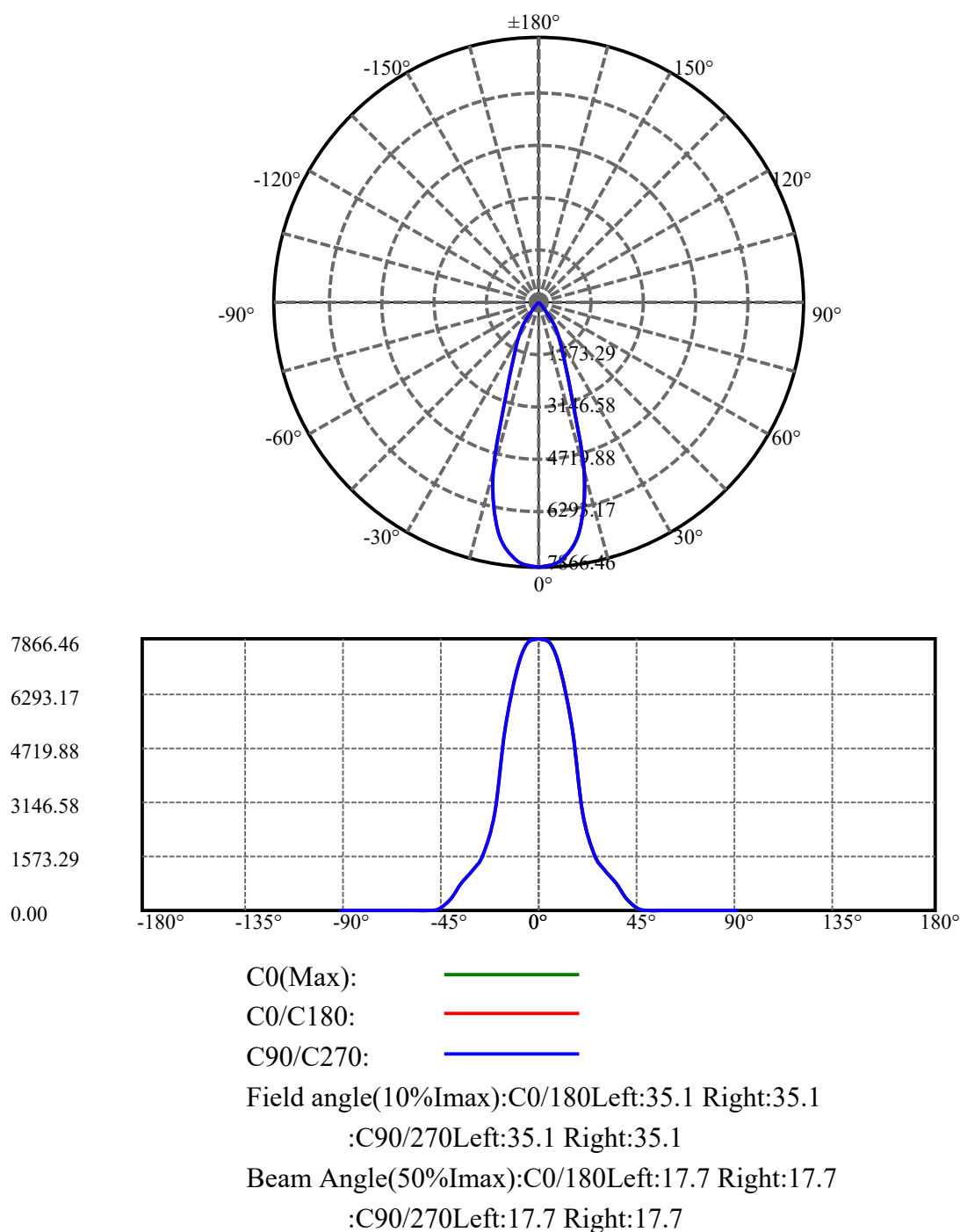
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7866.458	0.000	0	.000%	.000%
5.0	7706.726	186.173	186.173	4.661%	5.254%
10.0	6929.880	523.597	709.77	13.110%	20.032%
15.0	5215.217	720.439	1430.209	18.038%	40.364%
20.0	2823.567	662.509	2092.718	16.588%	59.062%
25.0	1619.346	465.980	2558.698	11.667%	72.213%
30.0	1194.889	356.144	2914.842	8.917%	82.265%
35.0	791.099	292.451	3207.292	7.322%	90.518%
40.0	350.764	190.511	3397.804	4.770%	95.895%
45.0	44.671	73.218	3471.022	1.833%	97.962%
50.0	18.052	12.674	3483.696	.317%	98.319%
55.0	16.042	7.413	3491.109	.186%	98.528%
60.0	15.209	7.224	3498.333	.181%	98.732%
65.0	14.734	7.279	3505.612	.182%	98.938%
70.0	14.411	7.380	3512.992	.185%	99.146%
75.0	14.198	7.478	3520.47	.187%	99.357%
80.0	14.060	7.561	3528.031	.189%	99.570%
85.0	13.957	7.613	3535.644	.191%	99.785%
90.0	13.826	7.607	3543.251	.190%	100.000%

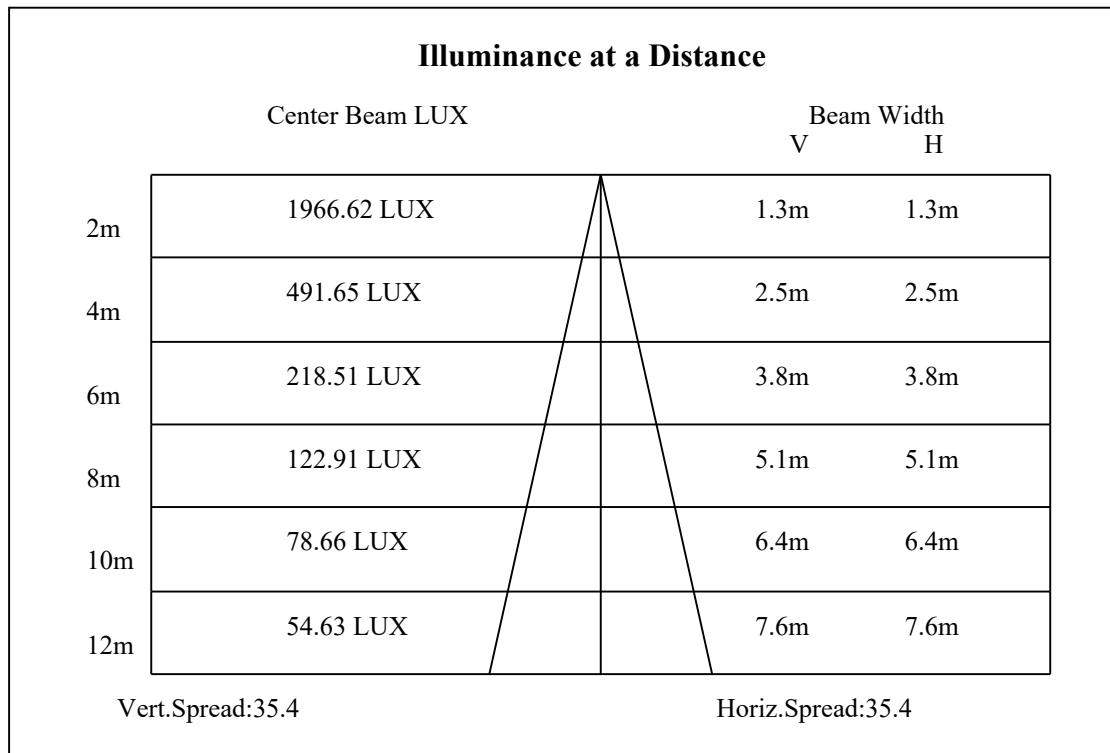
ZONAL LUMEN SUMMARY

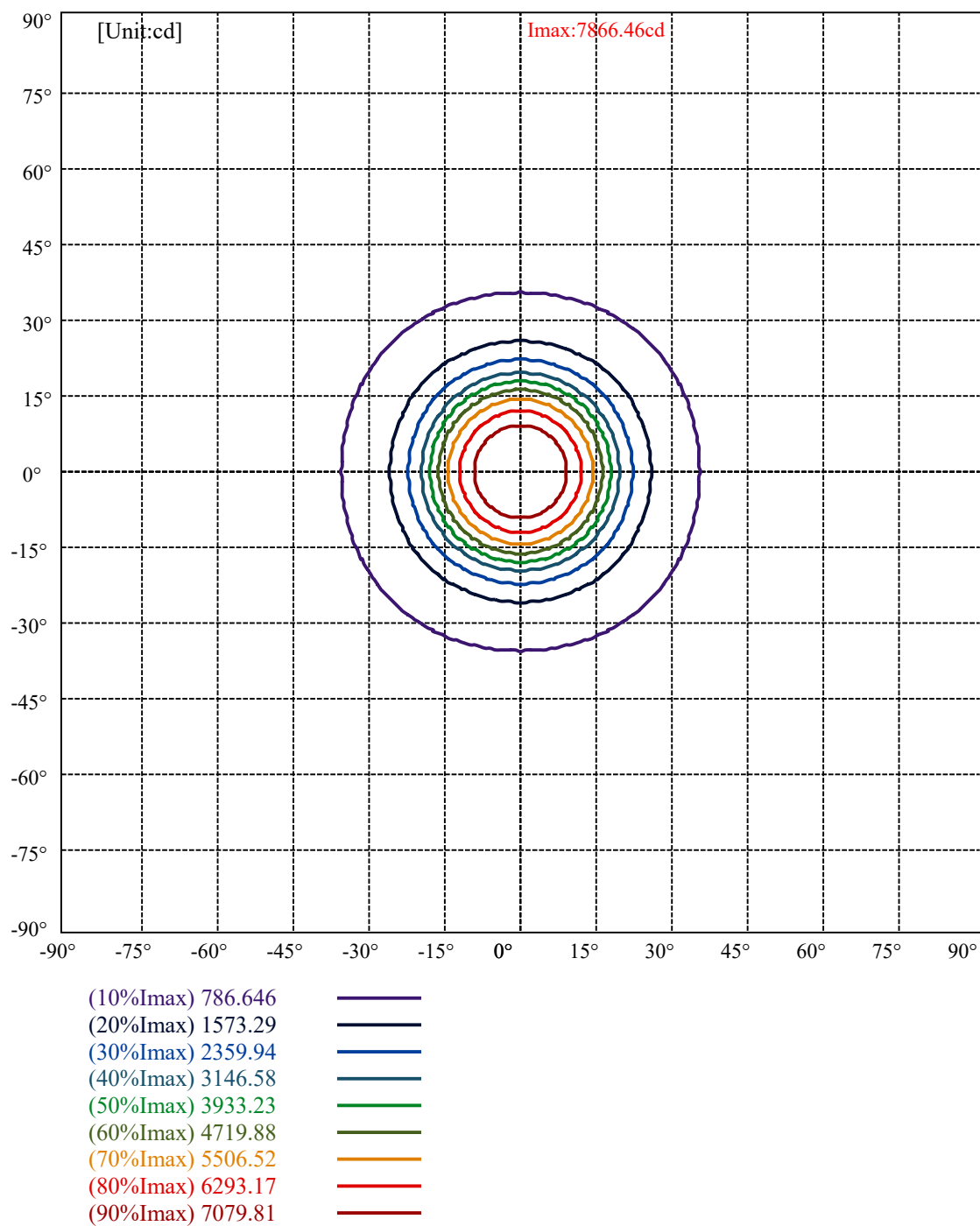
Zone	Lumens	%Lamp	%Fixt
0-30	2914.84	72.98%	82.26%
0-40	3397.80	85.07%	95.90%
0-60	3498.33	87.59%	98.73%
0-90	3535.64	88.52%	99.79%
0-120	3535.64	88.52%	99.79%
0-180	3543.25	88.71%	100.00%
60-90	44.53	1.12%	1.26%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-28.87	2834.60	70.97%	80.00%

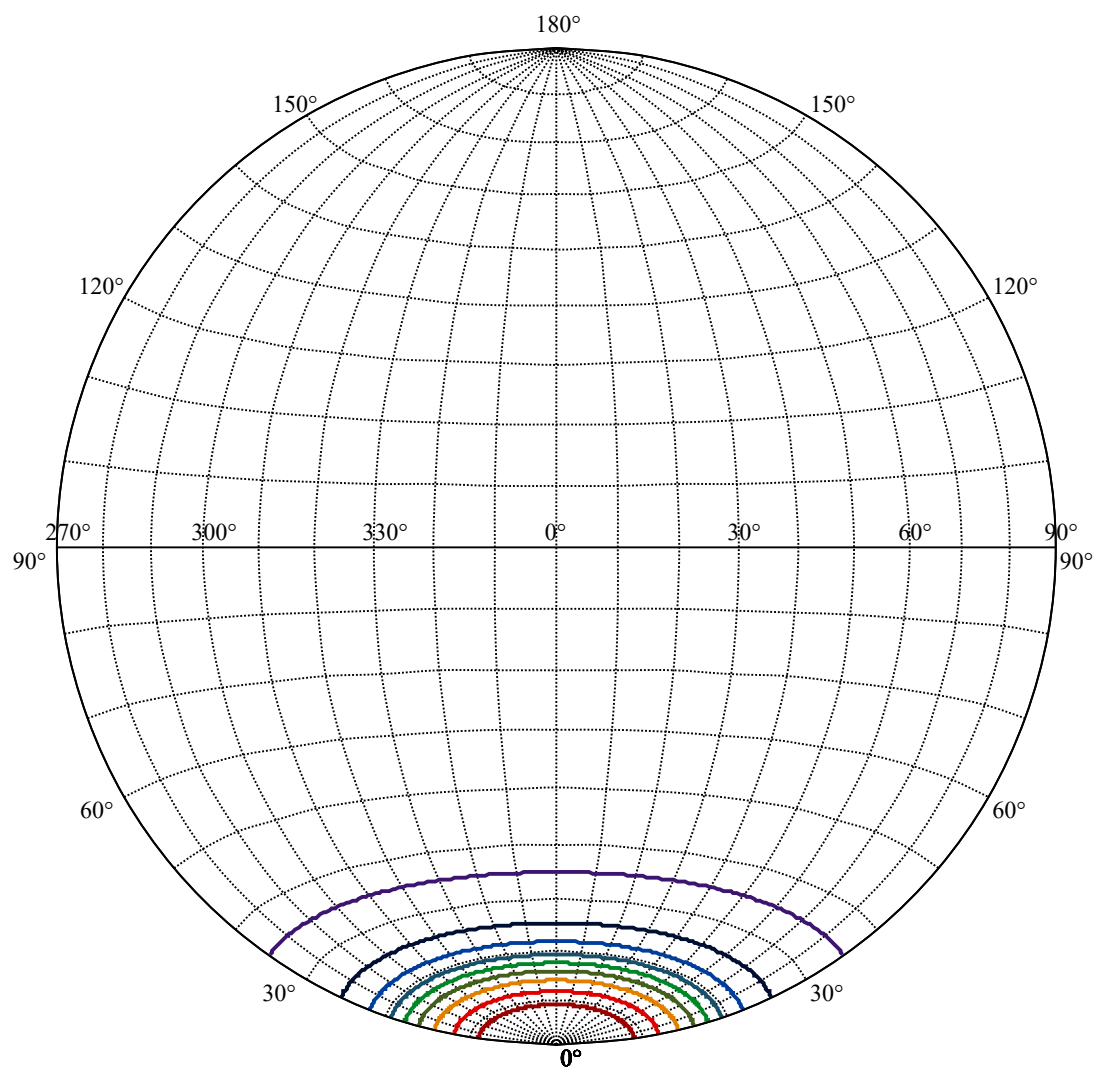
ZONAL LUMEN SUMMARY

0-10	709.77
10-20	1382.95
20-30	822.12
30-40	482.96
40-50	85.89
50-60	14.64
60-70	14.66
70-80	15.04
80-90	7.61
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









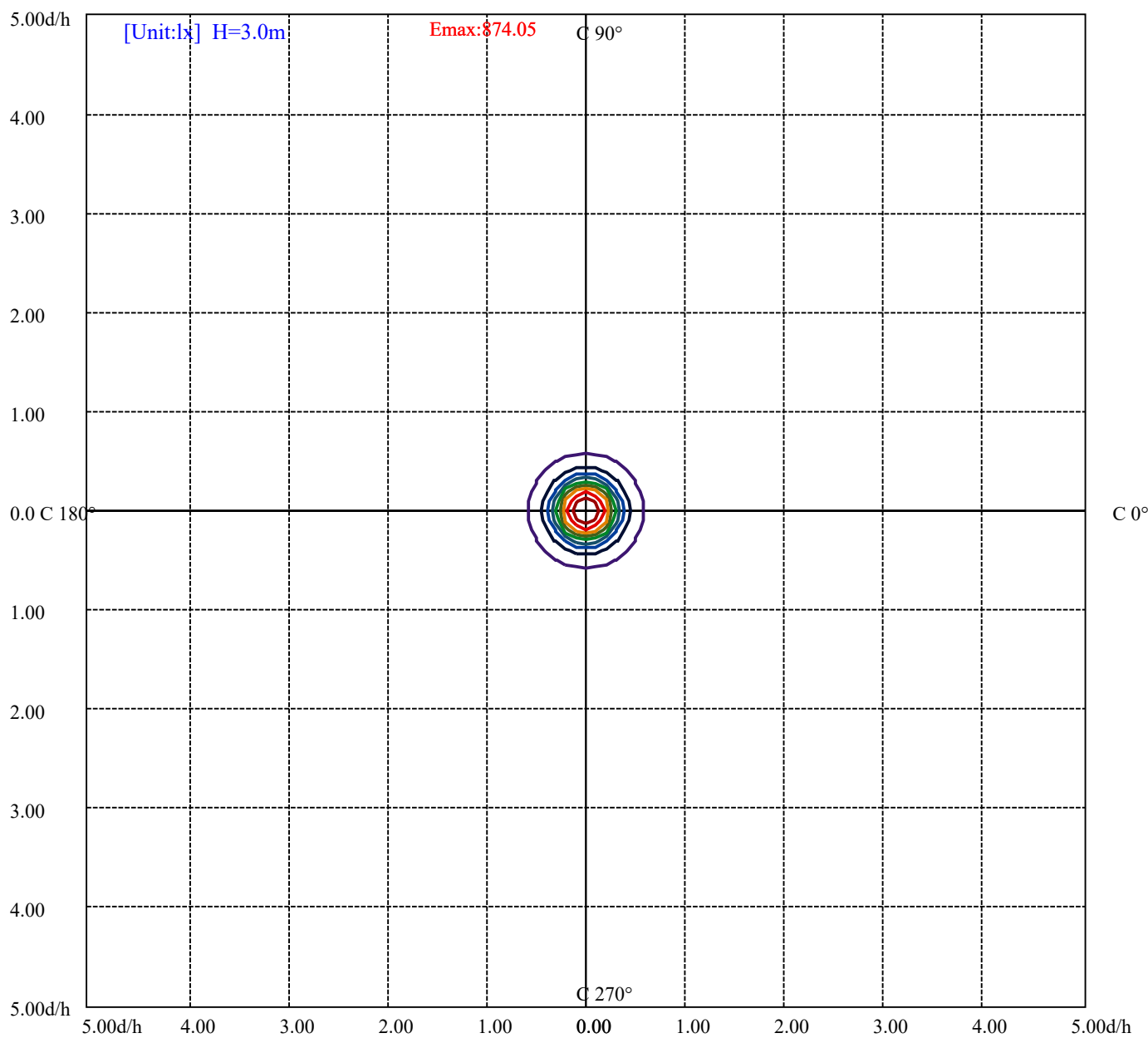
House

[Unit:cd]

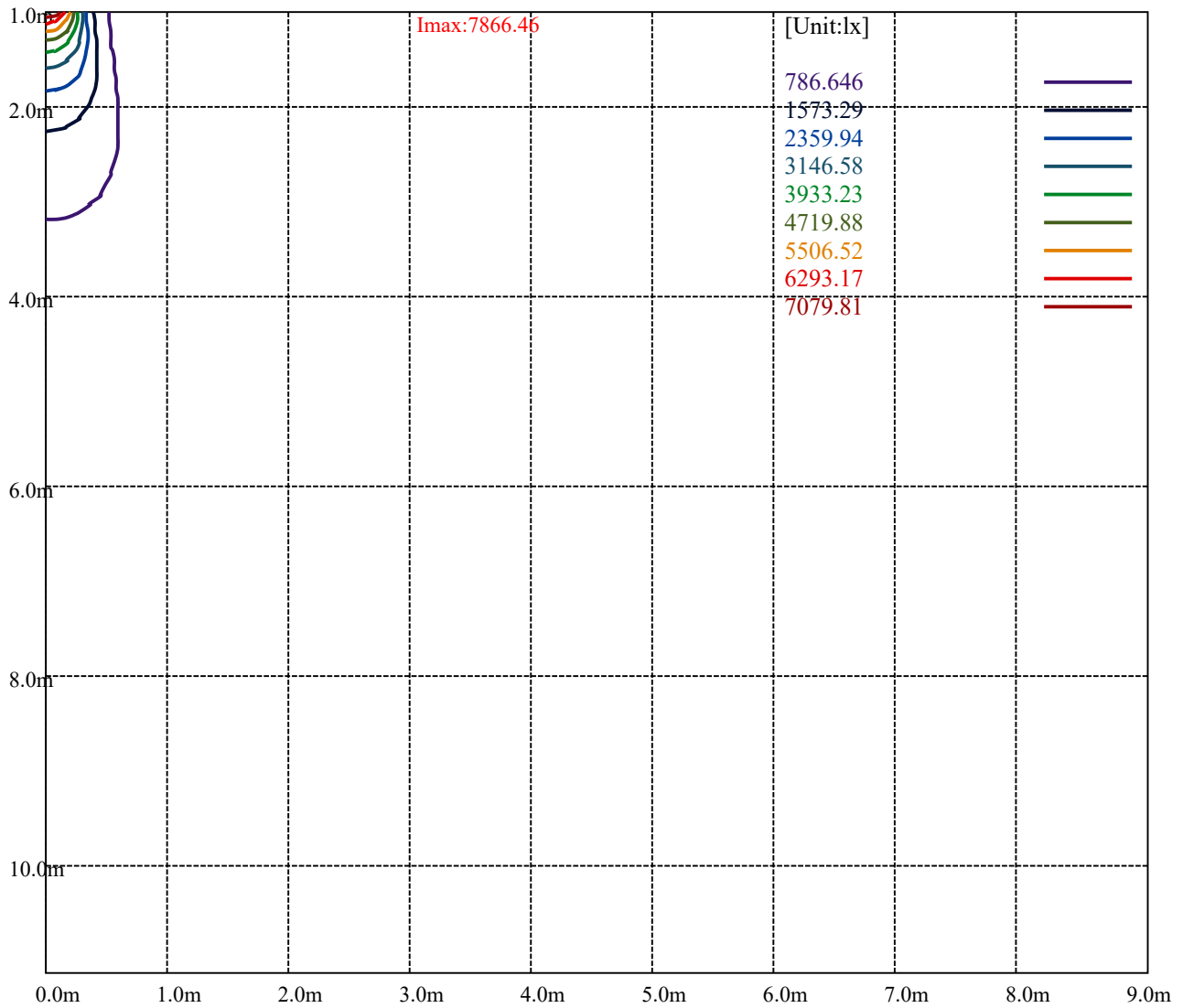
Road

Imax:7866.46

(10%Imax)	786.646	—
(20%Imax)	1573.29	—
(30%Imax)	2359.94	—
(40%Imax)	3146.58	—
(50%Imax)	3933.23	—
(60%Imax)	4719.88	—
(70%Imax)	5506.52	—
(80%Imax)	6293.17	—
(90%Imax)	7079.81	—



(10%Emax) 87.405	—
(20%Emax) 174.81	—
(30%Emax) 262.2155	—
(40%Emax) 349.62	—
(50%Emax) 437.0255	—
(60%Emax) 524.43	—
(70%Emax) 611.8356	—
(80%Emax) 699.24	—
(90%Emax) 786.6456	—



Luminance Table

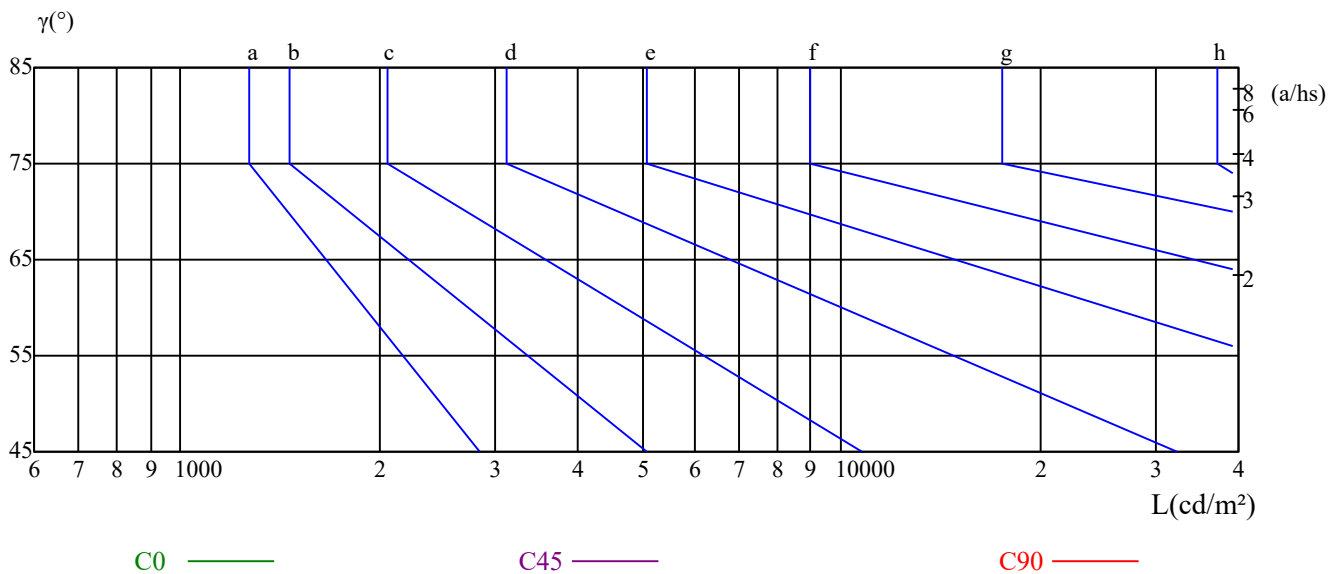
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

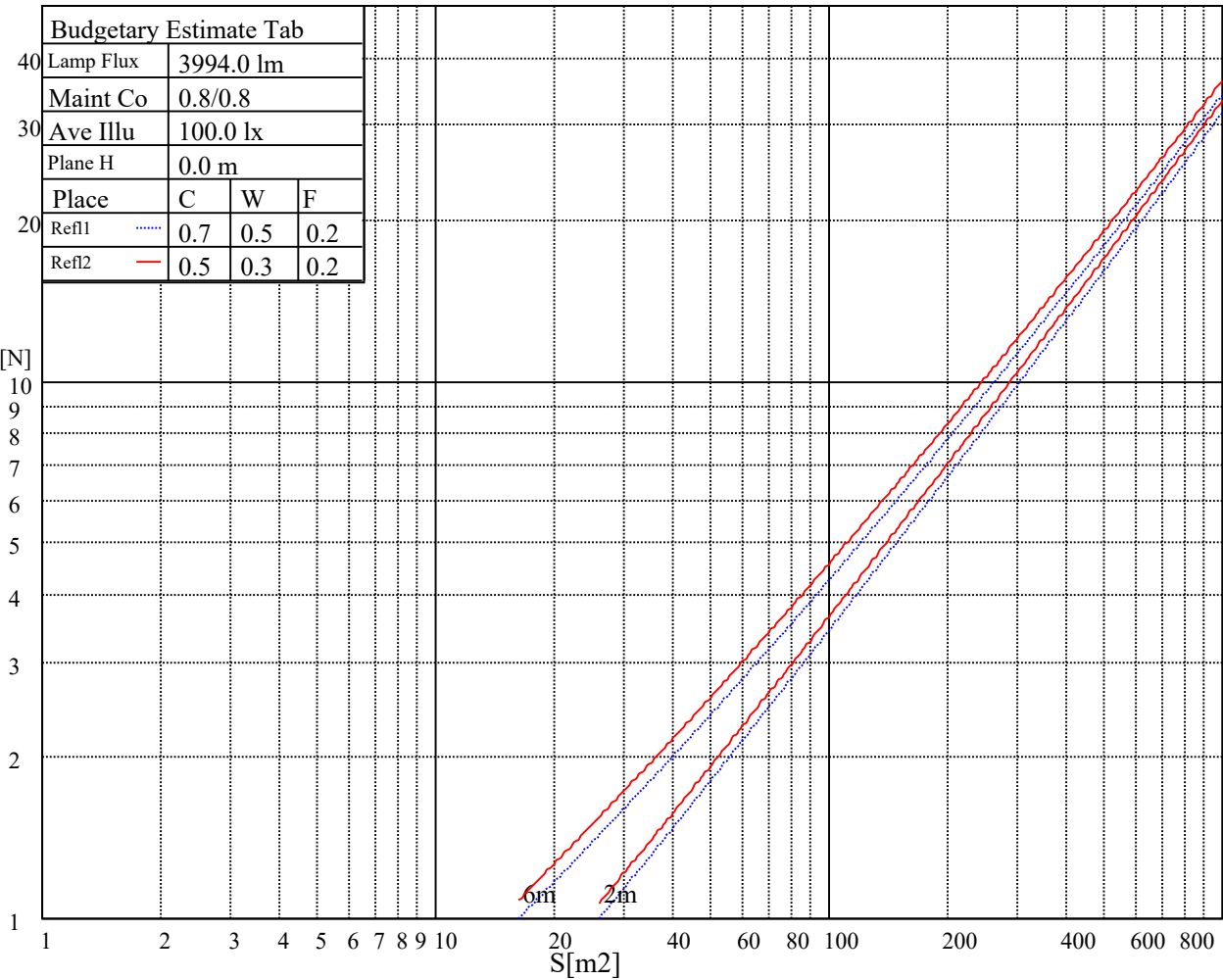
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

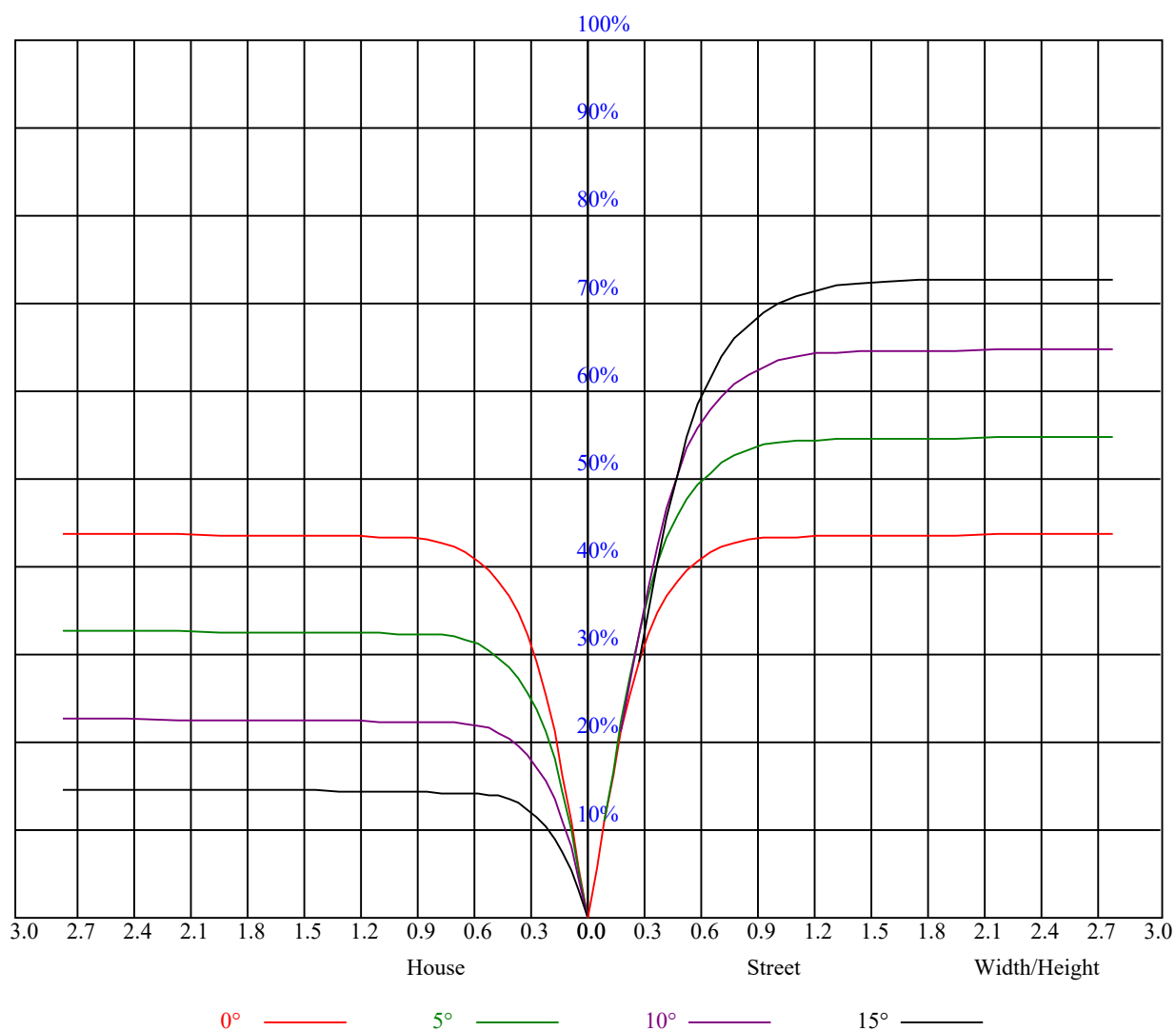
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	1.06	1.06	1.06	1.03	1.03	1.03	0.99	0.99	0.99	0.94	0.94	0.94	0.91	0.91	0.91	0.89
1	0.99	0.97	0.95	0.97	0.95	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.93	0.90	0.87	0.91	0.89	0.86	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.81	0.79
3	0.88	0.84	0.81	0.87	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.80	0.78	0.76	0.75
4	0.83	0.79	0.76	0.82	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.73	0.77	0.75	0.73	0.71
5	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.68
6	0.75	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
7	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.62
8	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.59
9	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
10	0.63	0.59	0.56	0.63	0.58	0.56	0.62	0.58	0.55	0.61	0.58	0.55	0.61	0.57	0.55	0.54



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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	7859.30	7749.74	7147.97	5627.87	3137.66	1783.83	1294.38	853.37	426.69		
45.0	7876.92	7723.86	6987.21	5244.12	2996.72	1629.12	1250.88	813.73	369.98		
90.0	7867.56	7593.38	6664.58	4792.66	2457.72	1516.80	1078.61	722.56	283.65		
135.0	7862.05	7734.87	7008.13	5282.66	2903.12	1628.02	1244.83	777.95	358.42		
180.0	7859.30	7697.44	6841.31	5006.83	2555.72	1509.65	1095.18	698.01	251.00		
225.0	7876.92	7713.40	6907.93	5034.91	2728.04	1585.07	1079.16	780.31	331.82		
270.0	7867.56	7776.72	7064.29	5439.02	3084.26	1706.20	1323.01	889.16	438.80		
315.0	7862.05	7664.40	6817.63	5293.67	2725.29	1596.09	1193.07	793.69	345.75		
360.0	7859.30	7749.74	7147.97	5627.87	3137.66	1783.83	1294.38	853.37	426.69		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	63.76	19.05	16.30	15.36	14.87	14.53	14.31	14.15	14.04		
45.0	43.82	18.50	16.35	15.42	14.92	14.59	14.31	14.09	13.98		
90.0	33.09	17.89	16.02	15.31	14.87	14.53	14.26	14.09	13.87		
135.0	41.35	17.51	15.91	15.20	14.76	14.37	14.20	14.04	13.93		
180.0	32.59	16.90	15.64	14.98	14.53	14.26	14.09	14.04	13.98		
225.0	34.36	17.62	15.75	14.98	14.53	14.26	14.09	13.98	13.98		
270.0	65.63	18.94	16.35	15.31	14.76	14.37	14.15	14.04	13.93		
315.0	42.78	18.00	16.02	15.14	14.65	14.37	14.15	14.04	13.93		
360.0	63.76	19.05	16.30	15.36	14.87	14.53	14.31	14.15	14.04		
C/ γ (°)	90.0										
0.0	13.87										
45.0	13.82										
90.0	13.82										
135.0	13.82										
180.0	13.82										
225.0	13.82										
270.0	13.82										
315.0	13.82										
360.0	13.87										