
Nata

LumCAT: 3-1546-A3	
Luminaire: TE 2213401-1+92.76.365.00	
Report No: GC2015051310	Voltage(V): 40.0000
Test No: NT-0010	Current(A): 0.7300
LampCAT: CREE CXA1816	Power (W): 29.2000
Lamp flux(lm): 2259.6	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 84	Width(mm): 84
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2139.81
Efficiency(%): 94.70%
Lumens(lm)/Power(W): 73.28
Central intensity(cd): 7687.753
Maximum intensity(cd): 7687.753
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=25.6
[C90/270]Total=25.6
Field angle(10%Imax): [C0/180]Total=54.0
[C90/270]Total=54.0
Maximum s/h(1/2): C0_180=0.43 C90_270=0.43
Maximum s/h(1/4): C0_180=0.43 C90_270=0.43
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 94.70%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.409%

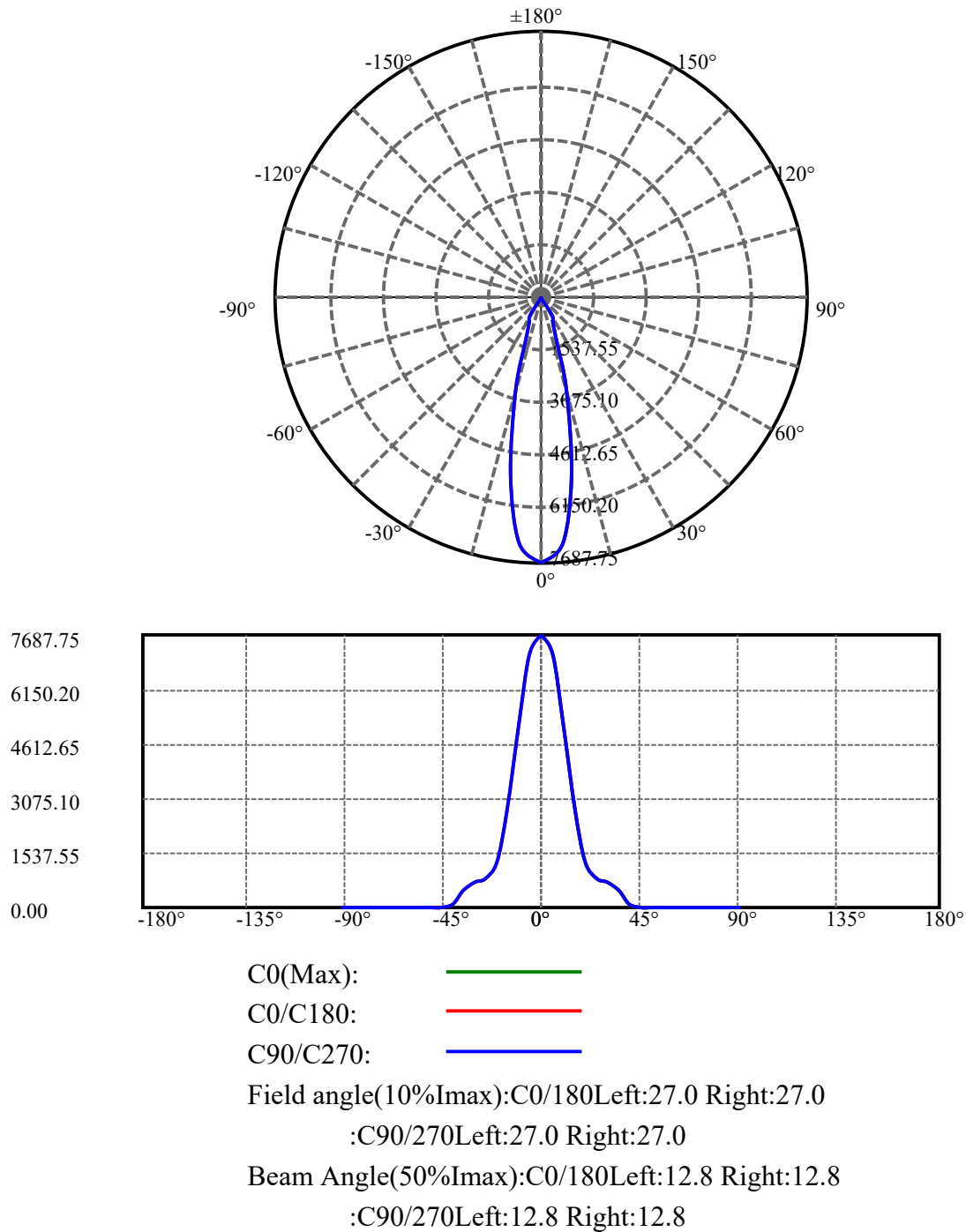
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7687.753	0.000	0	.000%	.000%
5.0	7123.941	177.070	177.07	7.836%	8.275%
10.0	5200.646	440.889	617.959	19.512%	28.879%
15.0	2764.006	472.458	1090.417	20.909%	50.958%
20.0	1291.727	334.249	1424.666	14.792%	66.579%
25.0	811.001	220.537	1645.203	9.760%	76.885%
30.0	704.304	191.763	1836.966	8.487%	85.847%
35.0	459.856	171.431	2008.397	7.587%	93.859%
40.0	96.291	92.789	2101.186	4.106%	98.195%
45.0	6.826	19.093	2120.279	.845%	99.087%
50.0	5.483	2.487	2122.766	.110%	99.203%
55.0	4.868	2.251	2125.017	.100%	99.309%
60.0	4.476	2.160	2127.176	.096%	99.409%
65.0	4.196	2.108	2129.285	.093%	99.508%
70.0	4.028	2.083	2131.367	.092%	99.605%
75.0	3.917	2.077	2133.444	.092%	99.702%
80.0	3.861	2.081	2135.525	.092%	99.800%
85.0	4.028	2.144	2137.669	.095%	99.900%
90.0	3.805	2.145	2139.813	.095%	100.000%

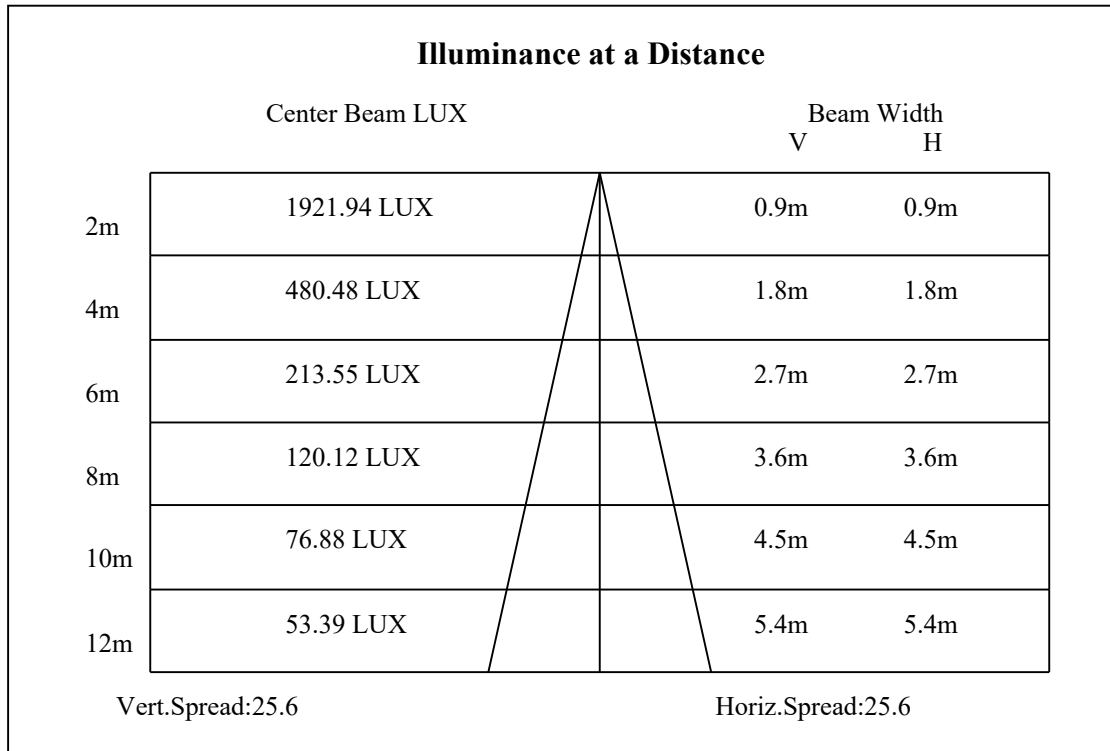
ZONAL LUMEN SUMMARY

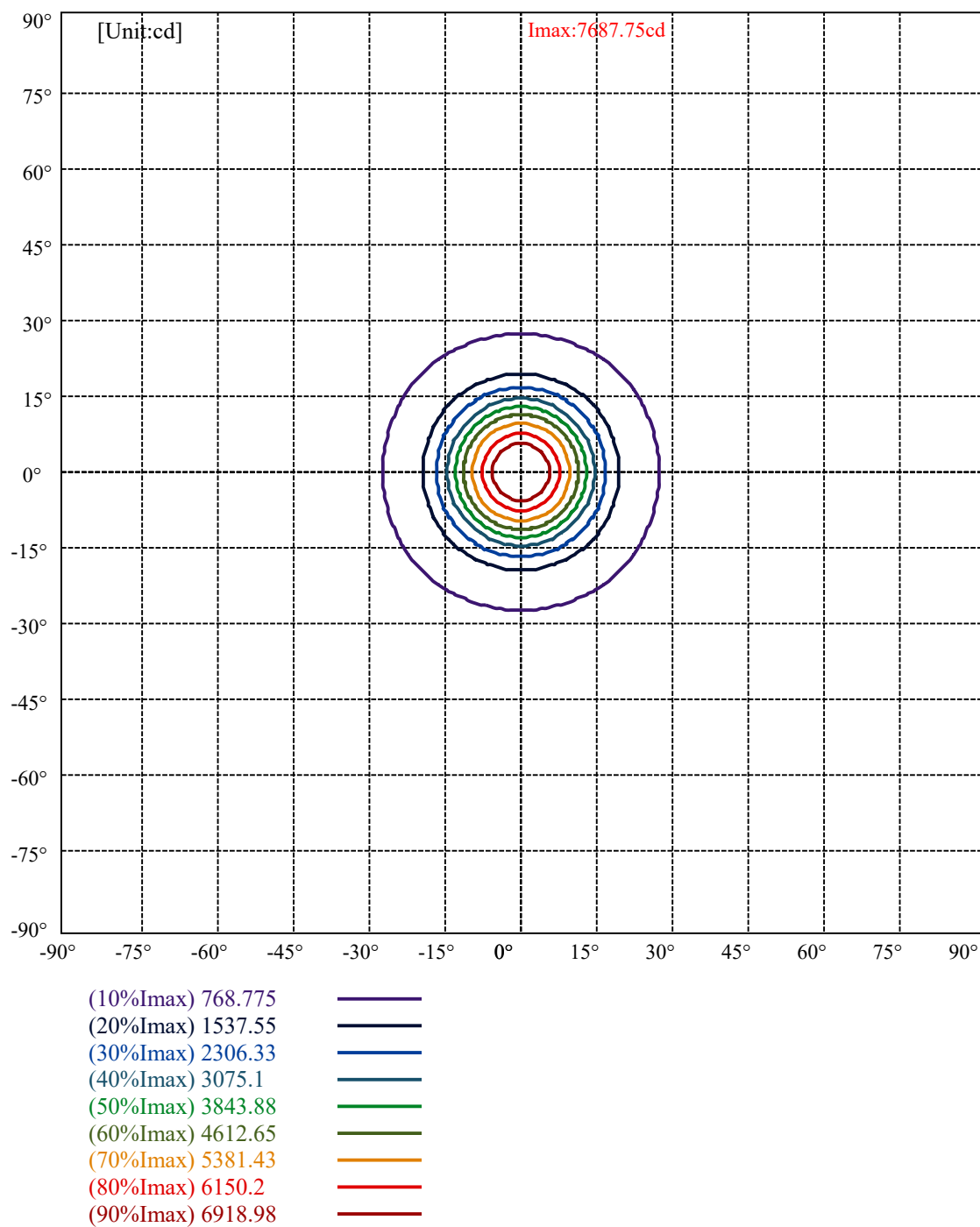
Zone	Lumens	%Lamp	%Fixt
0-30	1836.97	81.30%	85.85%
0-40	2101.19	92.99%	98.19%
0-60	2127.18	94.14%	99.41%
0-90	2137.67	94.60%	99.90%
0-120	2137.67	94.60%	99.90%
0-180	2139.81	94.70%	100.00%
60-90	12.65	0.56%	0.59%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-26.74	1711.85	75.76%	80.00%

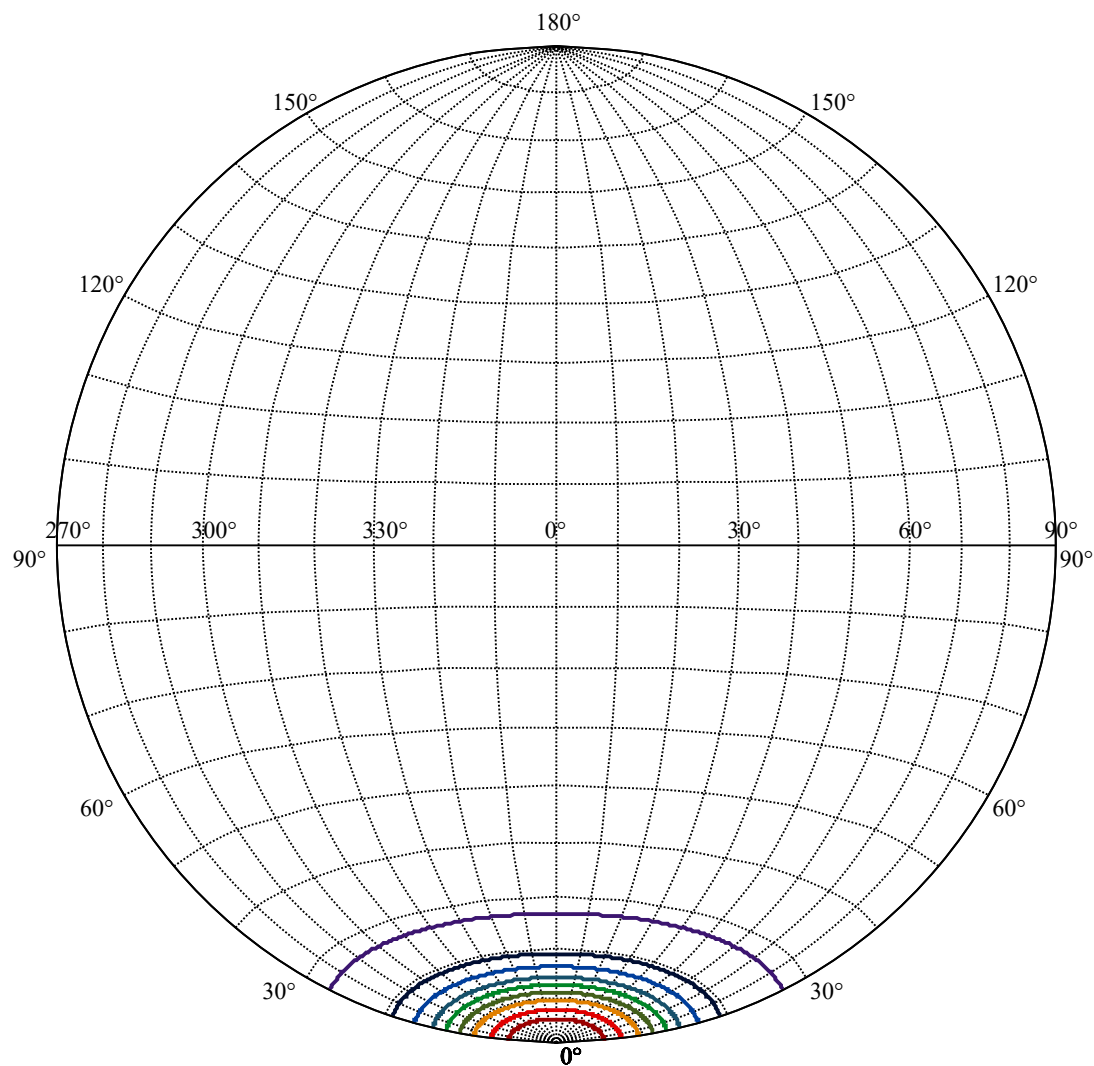
ZONAL LUMEN SUMMARY

0-10	617.96
10-20	806.71
20-30	412.30
30-40	264.22
40-50	21.58
50-60	4.41
60-70	4.19
70-80	4.16
80-90	2.14
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







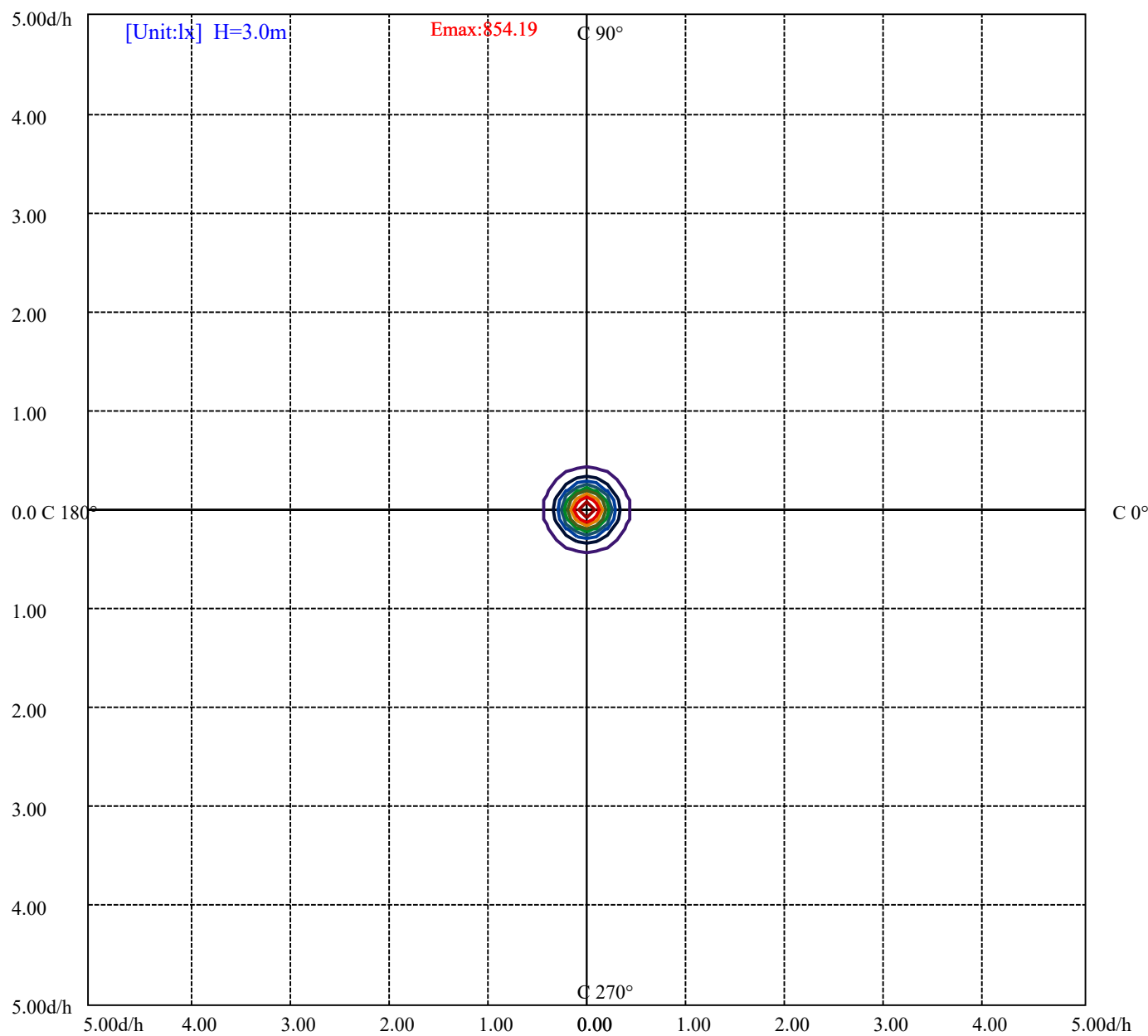


House

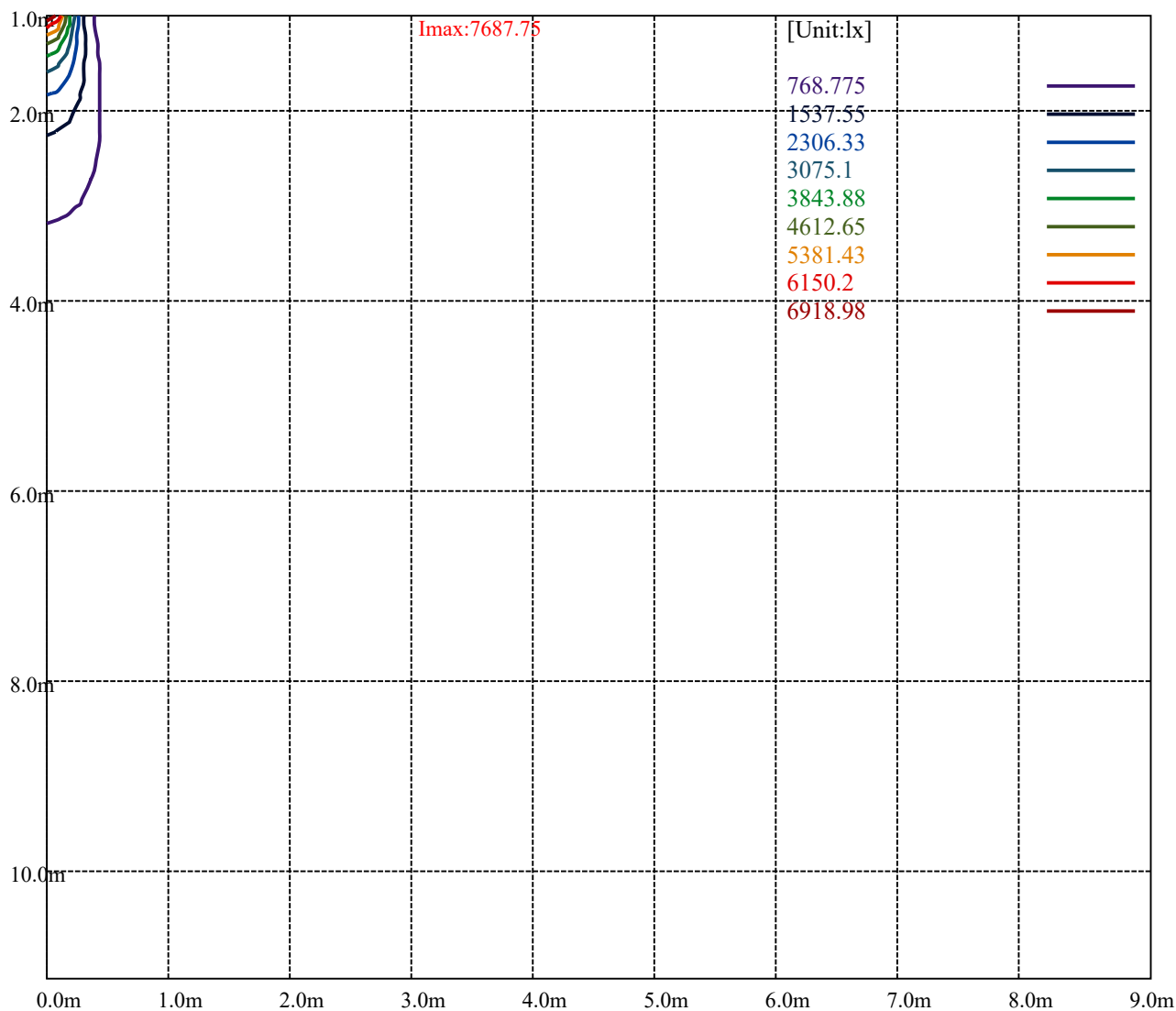
[Unit:cd]

Road

Imax:7687.75	
(10%Imax) 768.775	
(20%Imax) 1537.55	
(30%Imax) 2306.33	
(40%Imax) 3075.1	
(50%Imax) 3843.88	
(60%Imax) 4612.65	
(70%Imax) 5381.43	
(80%Imax) 6150.2	
(90%Imax) 6918.98	



(10%E _{max}) 85.41933	—
(20%E _{max}) 170.8389	—
(30%E _{max}) 256.2578	—
(40%E _{max}) 341.6767	—
(50%E _{max}) 427.0967	—
(60%E _{max}) 512.5156	—
(70%E _{max}) 597.9355	—
(80%E _{max}) 683.3544	—
(90%E _{max}) 768.7733	—



Luminance Table

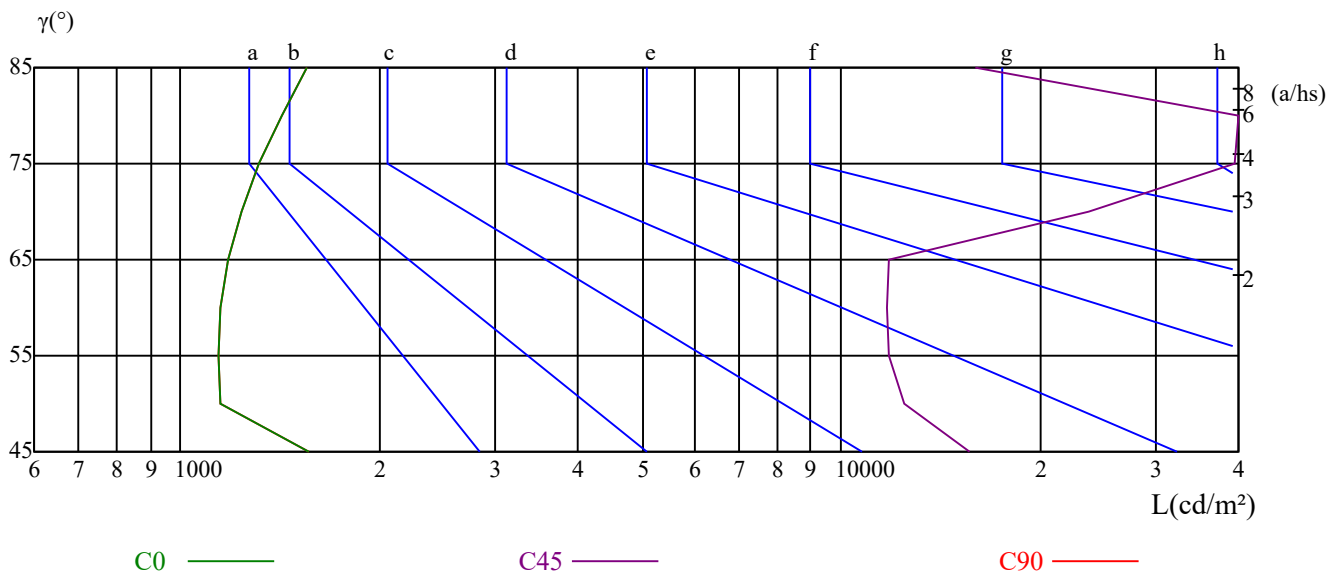
γ	45	50	55	60	65	70	75	80	85
C0	1560	1152	1139	1149	1182	1238	1318	1426	1558
C45	15695	12461	11856	11735	11828	23694	39537	41748	15951
C90	1560	1152	1139	1149	1182	1238	1318	1426	1558

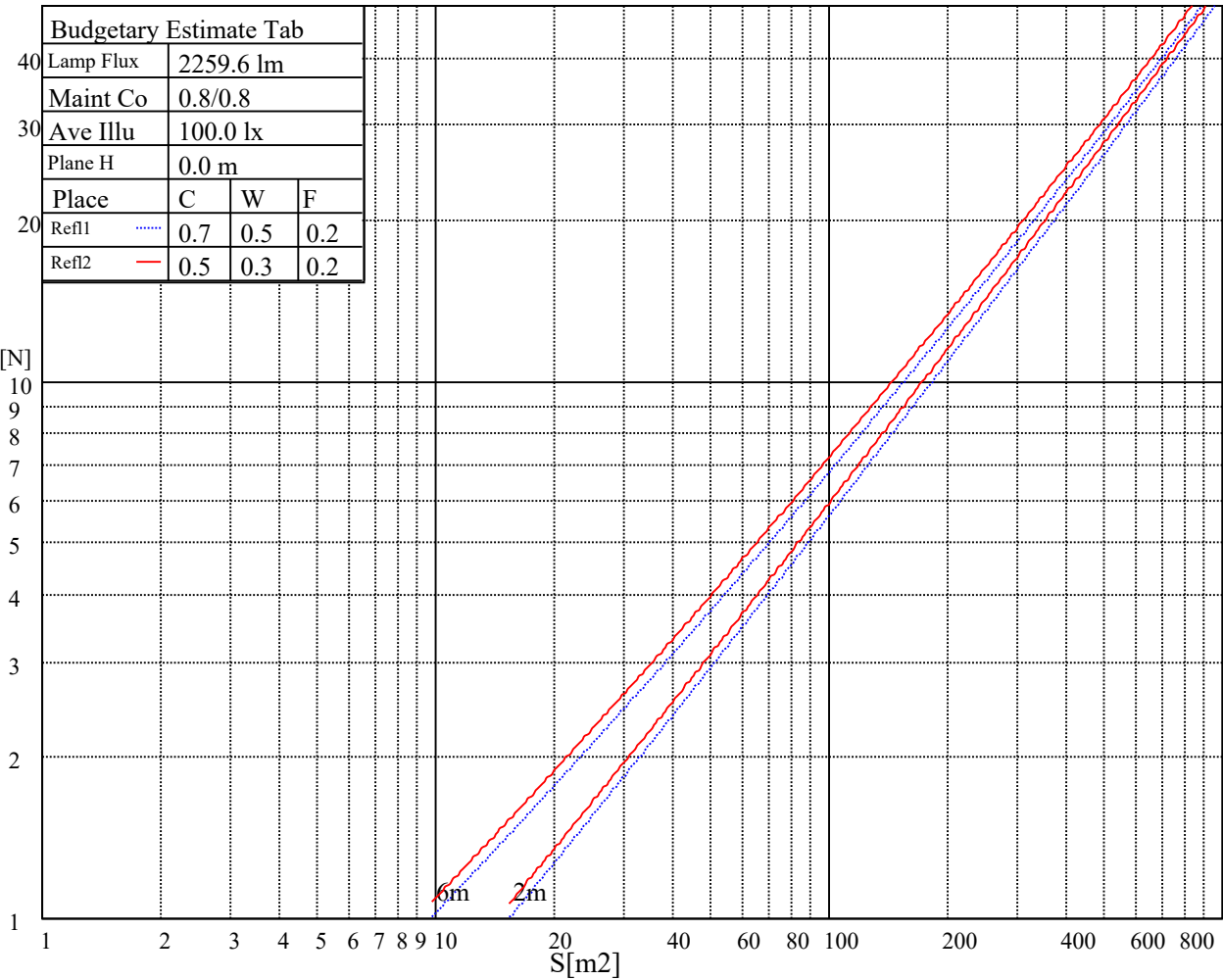
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2912	2912	36306	4674	4674	181925	13705	13705	191893

Glare Table

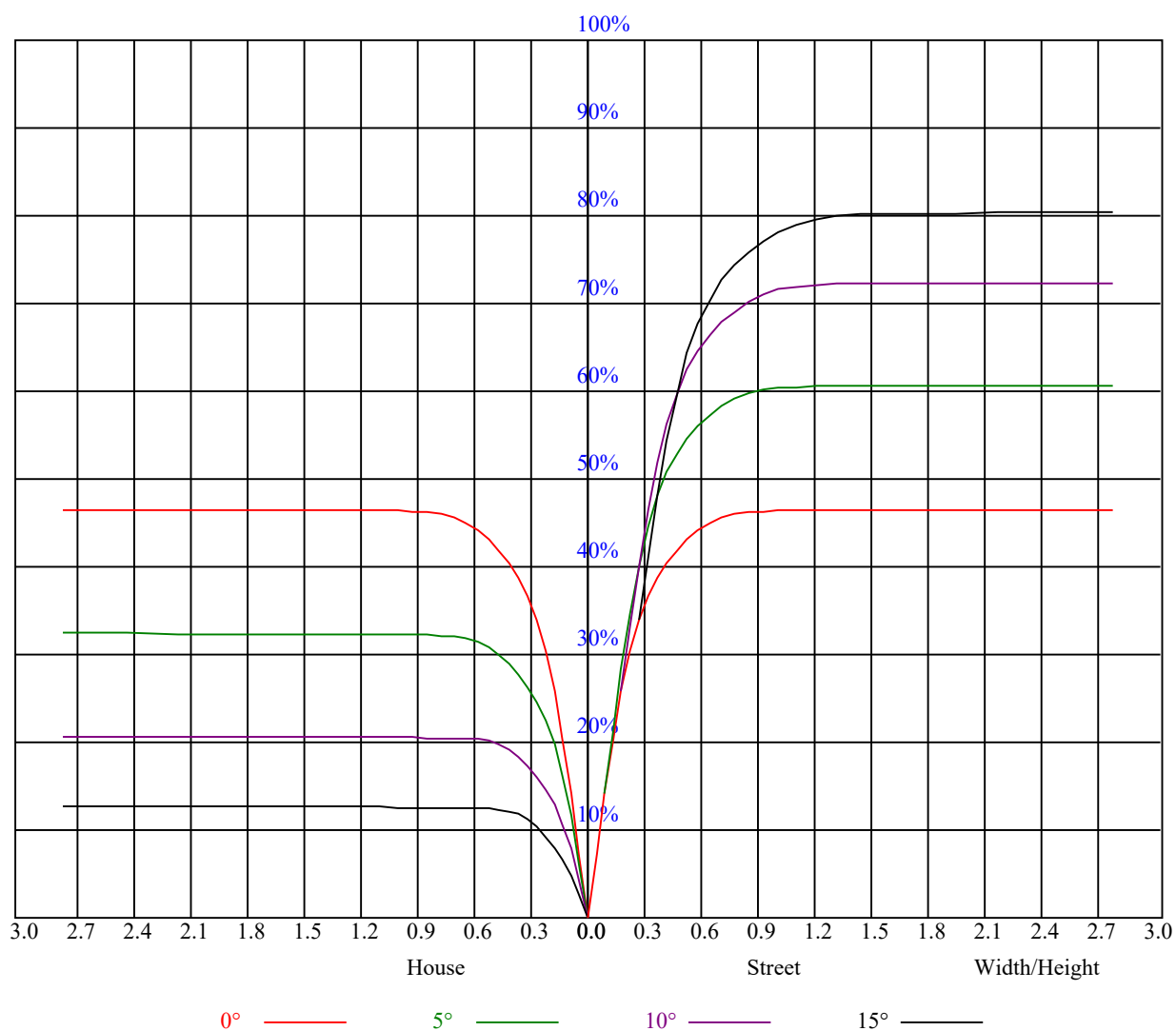
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	1.13	1.13	1.13	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	0.97	0.97	0.97	0.95
1	1.06	1.04	1.02	1.04	1.02	1.01	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.90
2	1.01	0.97	0.95	0.99	0.96	0.94	0.96	0.94	0.92	0.93	0.91	0.90	0.91	0.89	0.88	0.86
3	0.96	0.92	0.89	0.94	0.91	0.88	0.92	0.89	0.87	0.90	0.87	0.85	0.88	0.86	0.84	0.83
4	0.91	0.87	0.84	0.90	0.86	0.83	0.88	0.85	0.82	0.86	0.84	0.81	0.85	0.82	0.80	0.79
5	0.87	0.83	0.79	0.86	0.82	0.79	0.85	0.81	0.78	0.83	0.80	0.78	0.82	0.79	0.77	0.76
6	0.83	0.79	0.76	0.83	0.79	0.75	0.81	0.78	0.75	0.80	0.77	0.75	0.79	0.76	0.74	0.73
7	0.80	0.76	0.72	0.80	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.74	0.71	0.70
8	0.77	0.73	0.70	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.69	0.68
9	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.72	0.69	0.66	0.65
10	0.72	0.67	0.65	0.71	0.67	0.65	0.71	0.67	0.64	0.70	0.67	0.64	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	7687.75	7123.94	5200.65	2764.01	1291.73	811.00	704.30	459.86	96.29		
45.0	7687.75	7123.94	5200.65	2764.01	1291.73	811.00	704.30	459.86	96.29		
90.0	7687.75	7123.94	5200.65	2764.01	1291.73	811.00	704.30	459.86	96.29		
135.0	7687.75	7123.94	5200.65	2764.01	1291.73	811.00	704.30	459.86	96.29		
180.0	7687.75	7123.94	5200.65	2764.01	1291.73	811.00	704.30	459.86	96.29		
225.0	7687.75	7123.94	5200.65	2764.01	1291.73	811.00	704.30	459.86	96.29		
270.0	7687.75	7123.94	5200.65	2764.01	1291.73	811.00	704.30	459.86	96.29		
315.0	7687.75	7123.94	5200.65	2764.01	1291.73	811.00	704.30	459.86	96.29		
360.0	7687.75	7123.94	5200.65	2764.01	1291.73	811.00	704.30	459.86	96.29		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	6.83	5.48	4.87	4.48	4.20	4.03	3.92	3.86	4.03		
45.0	6.83	5.48	4.87	4.48	4.20	4.03	3.92	3.86	4.03		
90.0	6.83	5.48	4.87	4.48	4.20	4.03	3.92	3.86	4.03		
135.0	6.83	5.48	4.87	4.48	4.20	4.03	3.92	3.86	4.03		
180.0	6.83	5.48	4.87	4.48	4.20	4.03	3.92	3.86	4.03		
225.0	6.83	5.48	4.87	4.48	4.20	4.03	3.92	3.86	4.03		
270.0	6.83	5.48	4.87	4.48	4.20	4.03	3.92	3.86	4.03		
315.0	6.83	5.48	4.87	4.48	4.20	4.03	3.92	3.86	4.03		
360.0	6.83	5.48	4.87	4.48	4.20	4.03	3.92	3.86	4.03		
C/γ(°)	90.0										
0.0	3.80										
45.0	3.80										
90.0	3.80										
135.0	3.80										
180.0	3.80										
225.0	3.80										
270.0	3.80										
315.0	3.80										
360.0	3.80										