
Nata

Client:

LumCAT: 1408-N

Luminaire: 92.70.064.00

Report No: GC2019031803

Test No:

LampCAT: CITIZEN CLU700

Lamp flux(lm): 378.0

Number of Lamps: 1

Length(mm): 39

Phm Type: C

Voltage(V):

Current(A):

Power (W): 3.9800

PF:

Ballast type:

Width(mm): 39

Height(mm): 0

Photometric Results

Lumens(lm): 331.15, Efficiency(%): 87.61% , Luminous Efficacy(lm/W): 83.20

Central intensity(cd): 314.496, Maximum intensity(cd): 314.496

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=57.6

[C90/270]Total=57.6

Field angle(10%Imax): [C0/180]Total=99.4

[C90/270]Total=99.4

Maximum s/h(1/2): C0_180=0.85 C90_270=0.85

Maximum s/h(1/4): C0_180=0.90 C90_270=0.90

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 87.61%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 94.994%

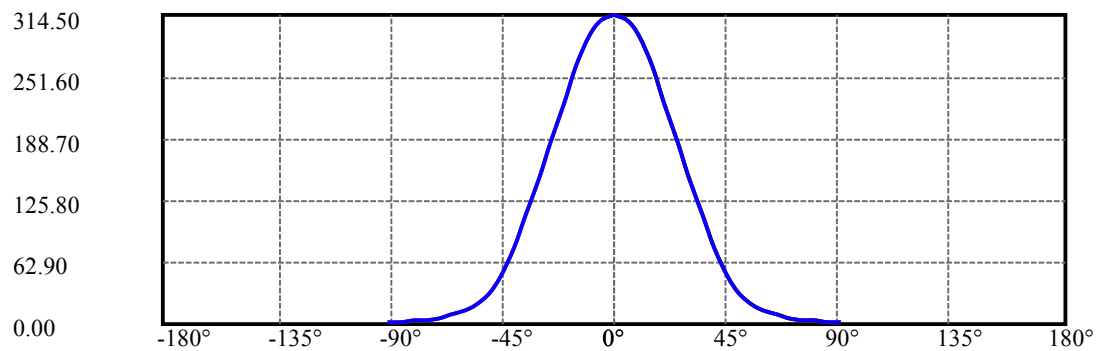
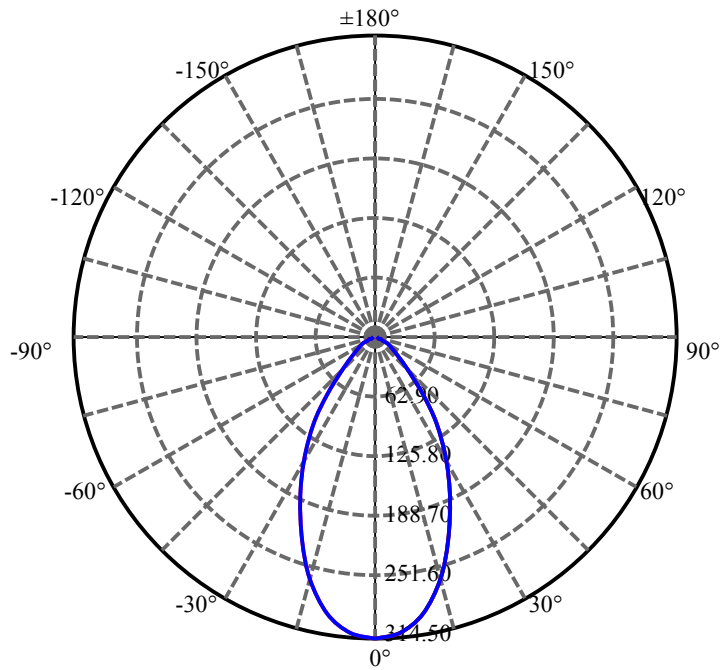
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	314.496	0.000	0	.000%	.000%
5.0	309.183	7.456	7.456	1.972%	2.252%
10.0	292.288	21.516	28.972	5.692%	8.749%
15.0	262.000	32.880	61.852	8.698%	18.678%
20.0	225.456	40.173	102.026	10.628%	30.809%
25.0	185.423	43.094	145.119	11.400%	43.823%
30.0	148.322	42.236	187.355	11.173%	56.577%
35.0	110.430	38.103	225.458	10.080%	68.083%
40.0	77.643	31.379	256.836	8.301%	77.559%
45.0	49.448	23.532	280.368	6.225%	84.665%
50.0	30.295	16.113	296.481	4.263%	89.531%
55.0	18.871	10.690	307.172	2.828%	92.759%
60.0	13.152	7.402	314.573	1.958%	94.994%
65.0	9.236	5.442	320.016	1.440%	96.637%
70.0	6.614	4.013	324.029	1.062%	97.849%
75.0	4.591	2.929	326.958	.775%	98.734%
80.0	3.021	2.037	328.994	.539%	99.349%
85.0	1.817	1.315	330.309	.348%	99.746%
90.0	1.259	0.842	331.151	.223%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	187.35	49.56%	56.58%
0-40	256.84	67.95%	77.56%
0-60	314.57	83.22%	94.99%
0-90	330.31	87.38%	99.75%
0-120	330.31	87.38%	99.75%
0-180	331.15	87.61%	100.00%
60-90	23.14	6.12%	6.99%
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%
0-41.72	264.92	70.08%	80.00%

ZONAL LUMEN SUMMARY

0-10	28.97
10-20	73.05
20-30	85.33
30-40	69.48
40-50	39.64
50-60	18.09
60-70	9.46
70-80	4.97
80-90	1.31
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



C0(Max): —————

C0/C180: —————

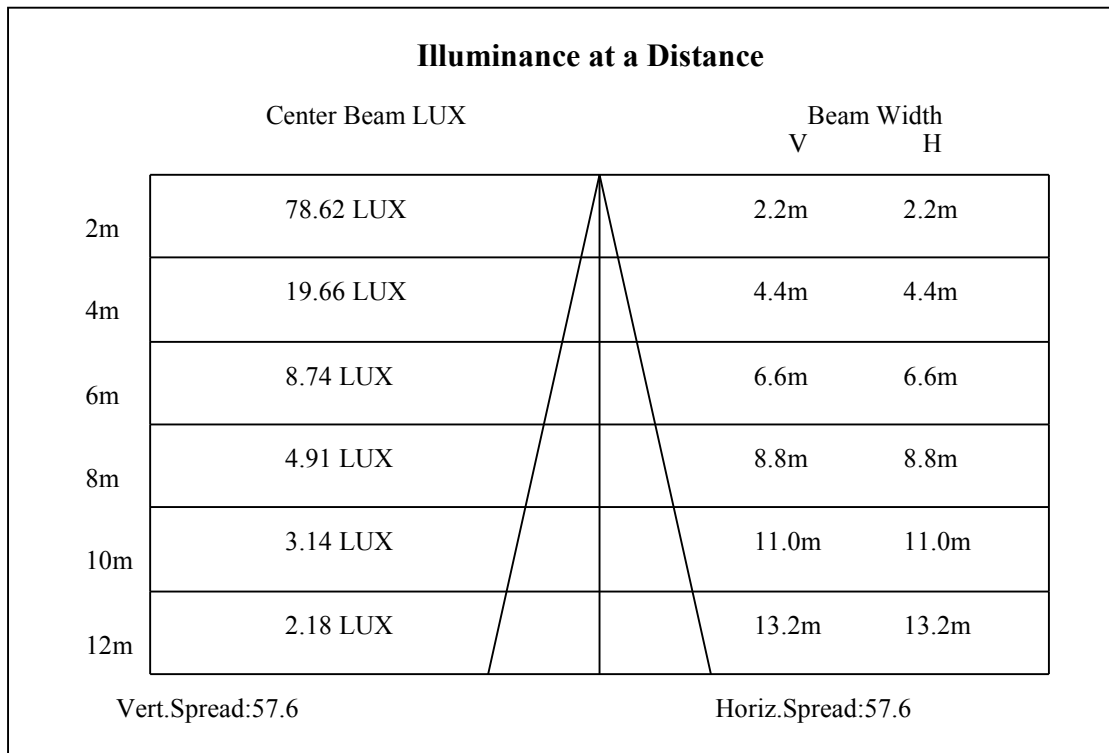
C90/C270: —————

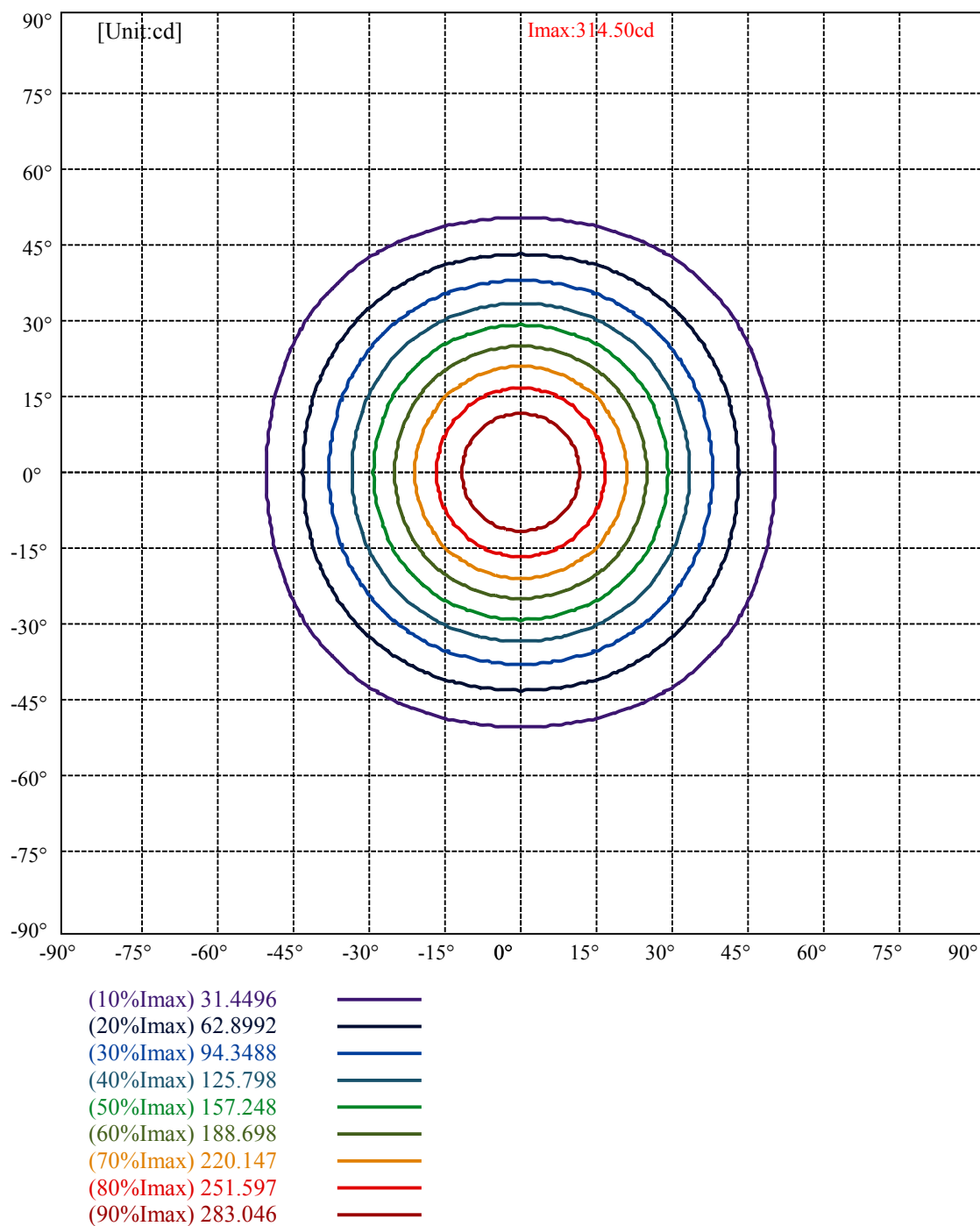
Field angle(10%Imax):C0/180Left:49.7 Right:49.7

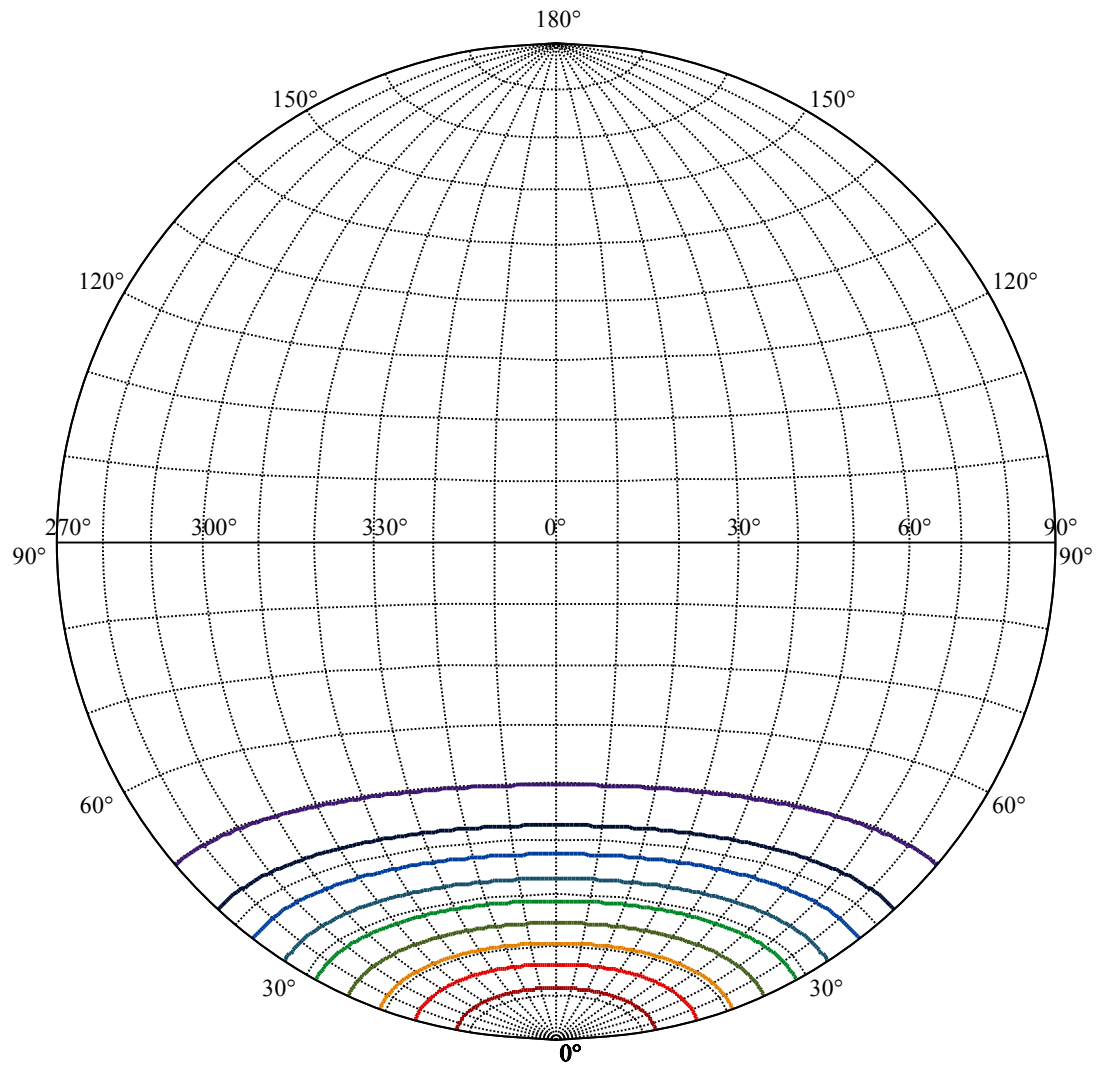
:C90/270Left:49.7 Right:49.7

Beam Angle(50%Imax):C0/180Left:28.8 Right:28.8

:C90/270Left:28.8 Right:28.8





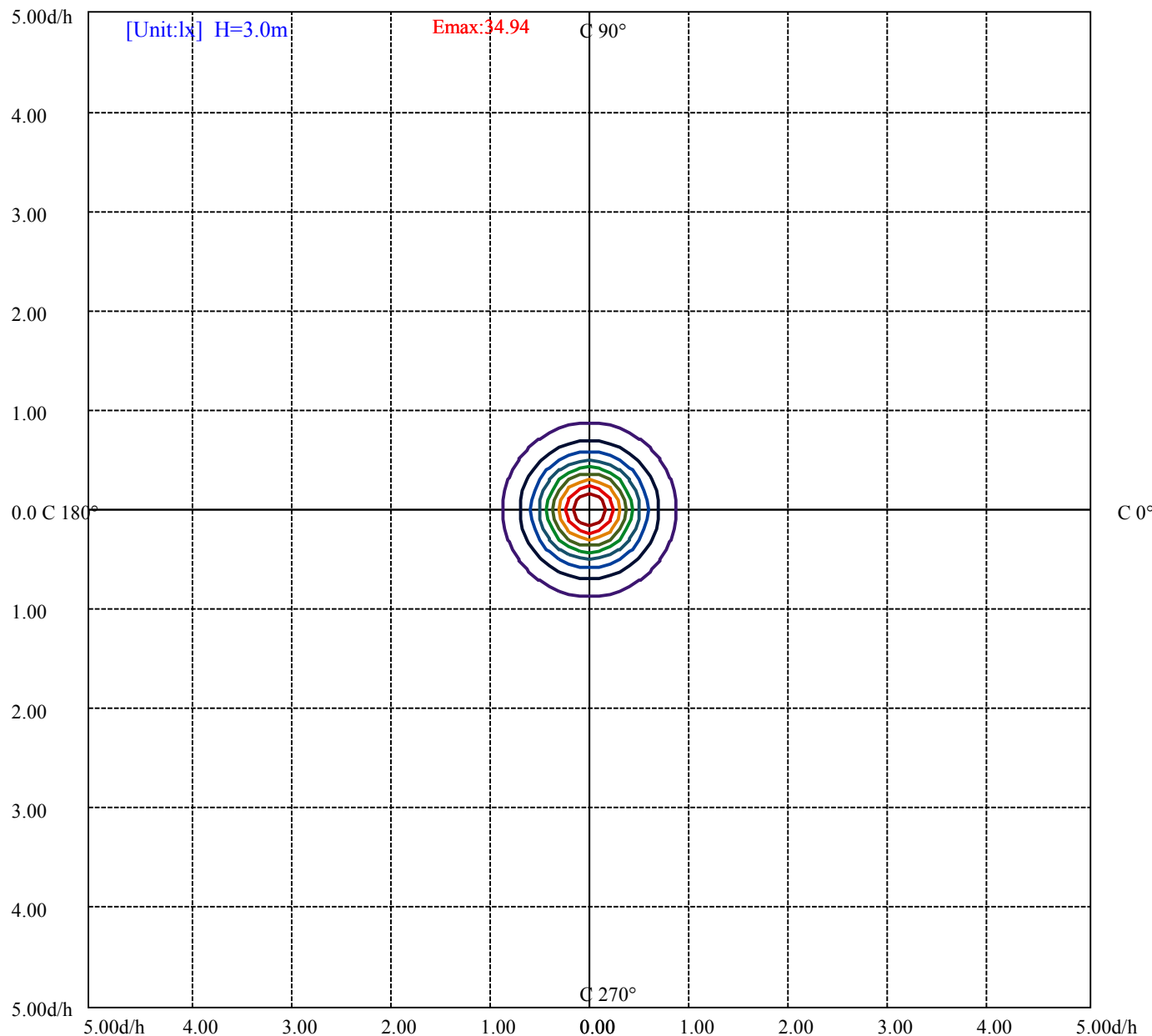


House

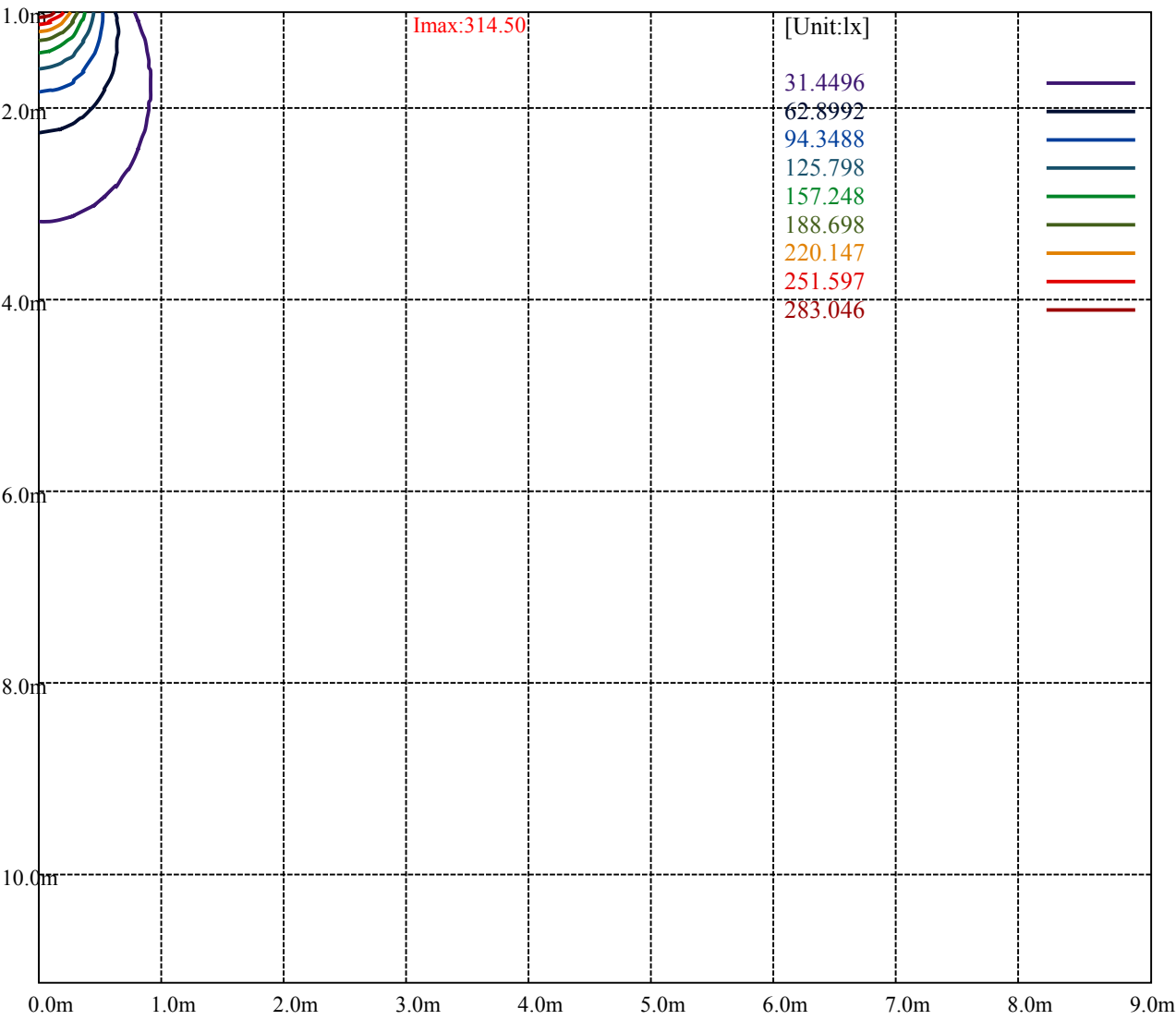
[Unit:cd]

Road

Imax:314.50	
(10%Imax) 31.4496	
(20%Imax) 62.8992	
(30%Imax) 94.3488	
(40%Imax) 125.798	
(50%Imax) 157.248	
(60%Imax) 188.698	
(70%Imax) 220.147	
(80%Imax) 251.597	
(90%Imax) 283.046	



(10%Emax)	3.4944	
(20%Emax)	6.9888	
(30%Emax)	10.4832	
(40%Emax)	13.97756	
(50%Emax)	17.472	
(60%Emax)	20.96644	
(70%Emax)	24.46078	
(80%Emax)	27.95522	
(90%Emax)	31.44955	



Luminance Table

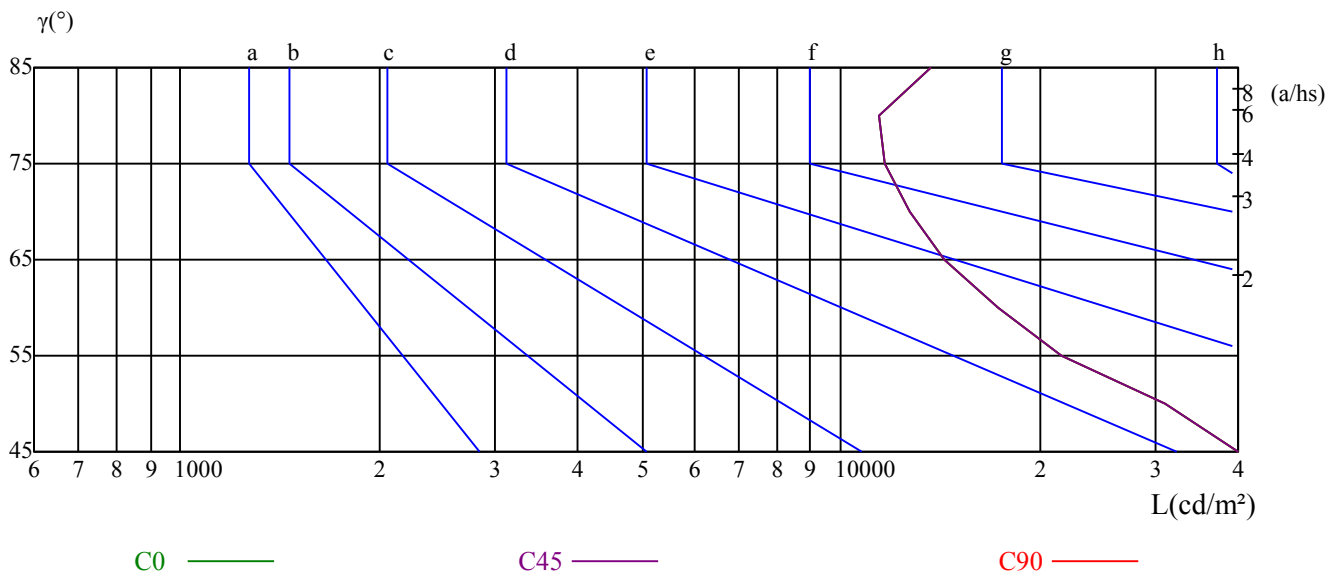
γ	45	50	55	60	65	70	75	80	85
C0	45976	30986	21630	17293	14368	12714	11661	11439	13706
C45	45976	30986	21630	17293	14368	12714	11661	11439	13706
C90	45976	30986	21630	17293	14368	12714	11661	11439	13706

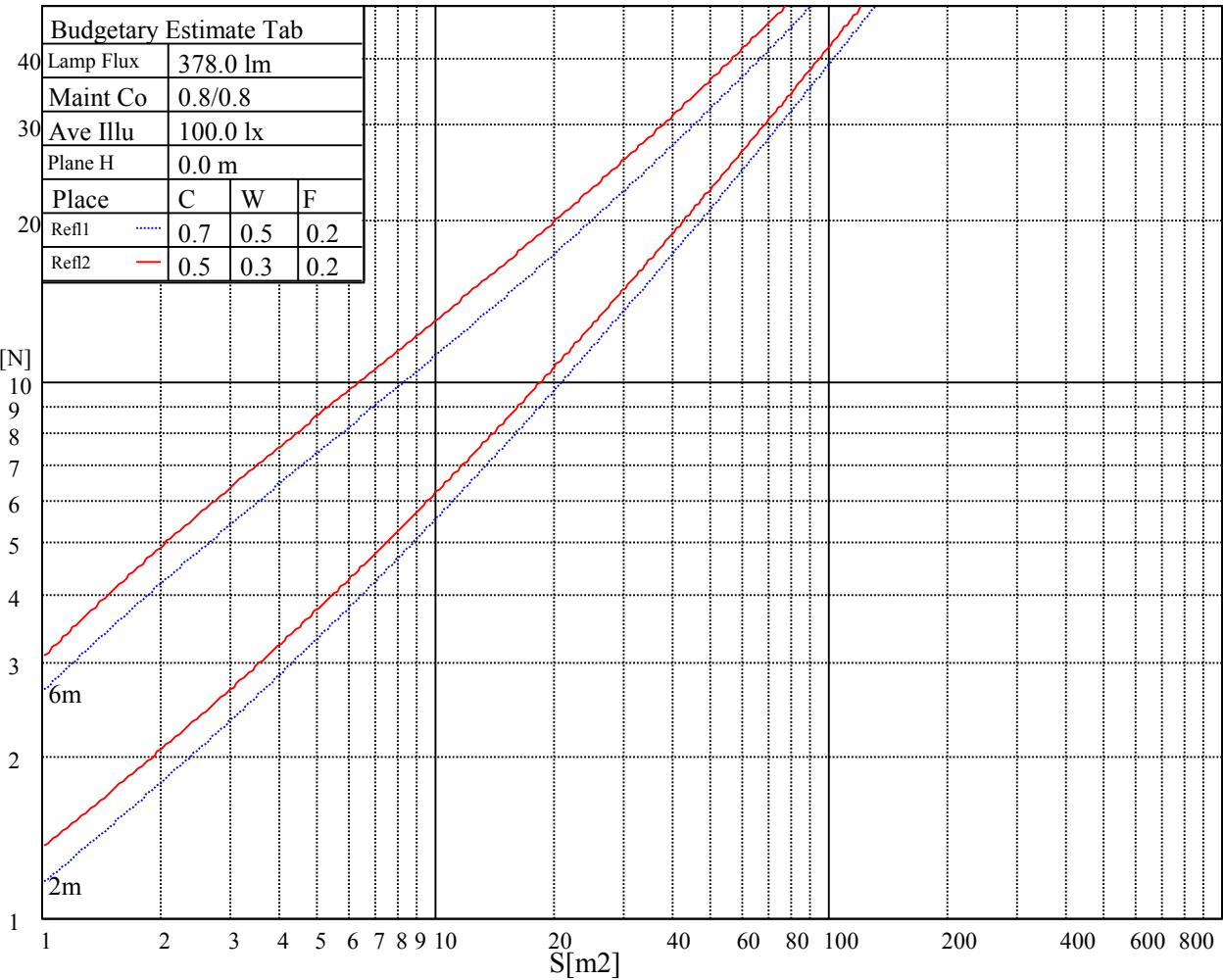
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
14368	14368	14368	11661	11661	11661	13706	13706	13706

Glare Table

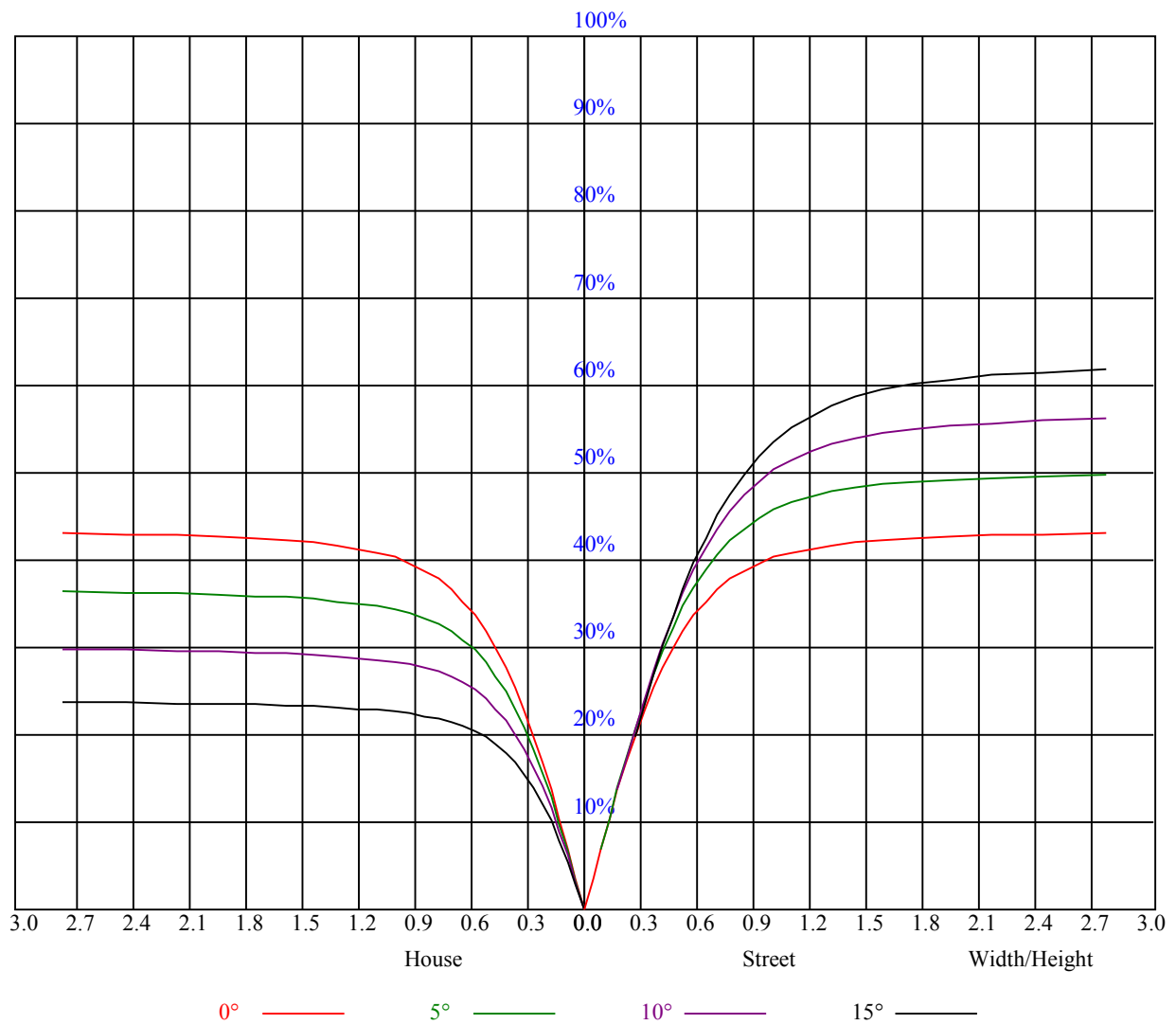
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

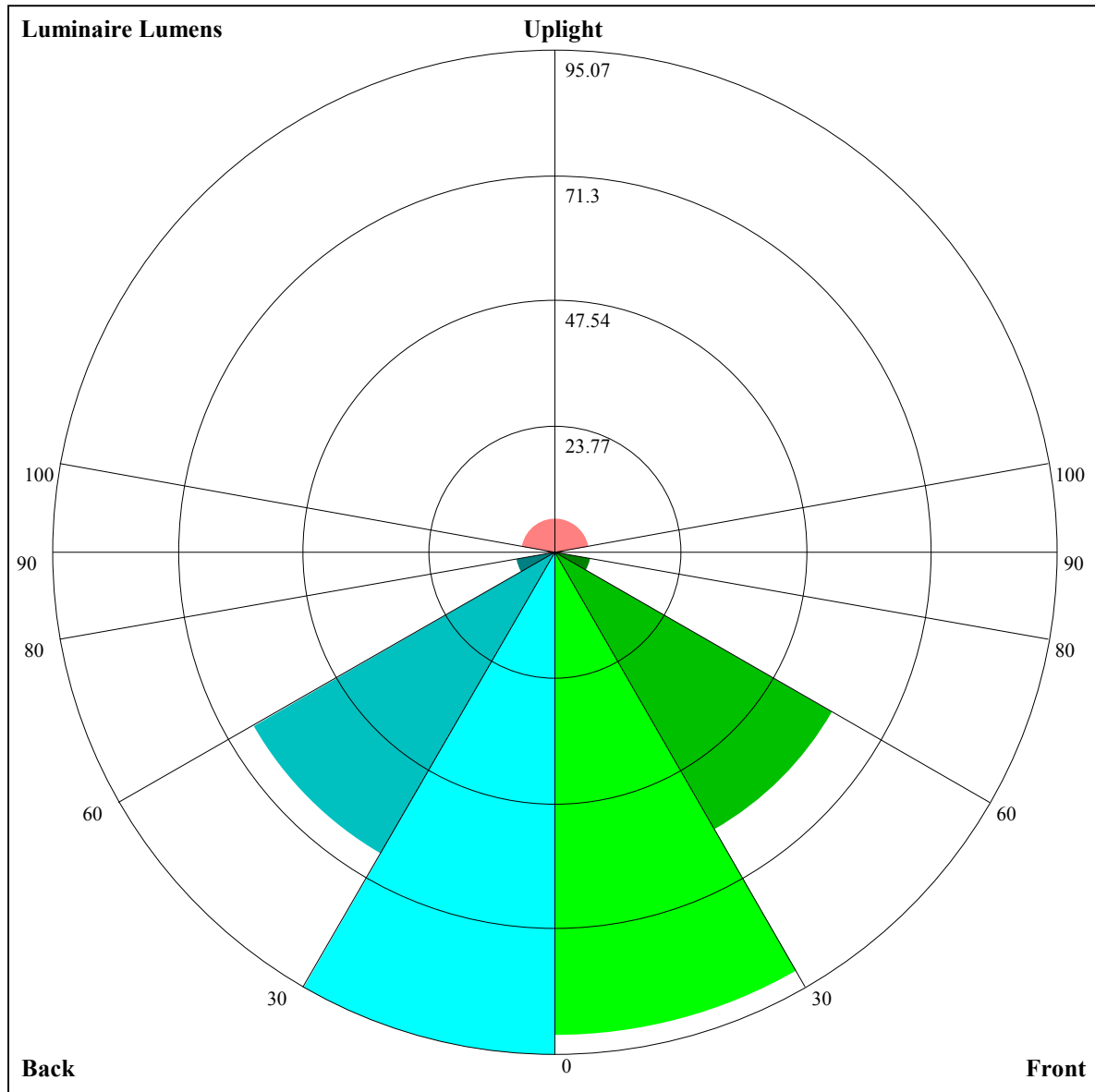
Luminance Limiting Curve





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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.88
1	0.95	0.93	0.90	0.93	0.91	0.89	0.90	0.88	0.86	0.87	0.85	0.84	0.84	0.82	0.81	0.80
2	0.87	0.83	0.80	0.86	0.82	0.79	0.83	0.80	0.77	0.80	0.78	0.75	0.78	0.76	0.74	0.72
3	0.80	0.75	0.71	0.79	0.74	0.70	0.77	0.72	0.69	0.74	0.71	0.68	0.72	0.69	0.67	0.65
4	0.74	0.68	0.64	0.73	0.68	0.64	0.71	0.66	0.63	0.69	0.65	0.62	0.67	0.64	0.61	0.60
5	0.68	0.62	0.58	0.67	0.62	0.58	0.66	0.61	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.55
6	0.63	0.57	0.53	0.63	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.52	0.59	0.55	0.52	0.50
7	0.59	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.48	0.56	0.52	0.48	0.55	0.51	0.48	0.47
8	0.55	0.49	0.45	0.55	0.49	0.45	0.54	0.49	0.45	0.53	0.48	0.45	0.52	0.48	0.45	0.43
9	0.52	0.46	0.42	0.51	0.46	0.42	0.50	0.45	0.42	0.50	0.45	0.42	0.49	0.45	0.42	0.40
10	0.49	0.43	0.39	0.48	0.43	0.39	0.47	0.43	0.39	0.47	0.42	0.39	0.46	0.42	0.39	0.38





Luminaire Lumens:

FL=91.7,FM=60.57,FH=7.02,FVH=1.04

BL=95.07,BM=66.08,BH=7.44,BVH=1.13

UL=1.37,UH=6.54

BUG Rating:B0-U1-G0

Intensity data(cd)										Appendix Page: 15 Total:15	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	313.66	306.99	289.10	259.48	222.70	181.14	144.25	106.15	73.34		
45.0	315.86	309.64	291.91	260.64	224.63	183.89	147.44	108.13	72.90		
90.0	315.80	313.77	301.16	274.57	240.05	203.65	162.03	123.77	89.14		
135.0	312.67	312.12	300.06	276.44	242.74	201.84	165.33	126.24	93.21		
180.0	313.66	309.53	294.55	265.15	228.10	189.23	151.41	113.91	81.92		
225.0	315.86	311.12	296.53	264.22	227.16	185.76	151.30	114.41	80.99		
270.0	315.80	306.55	284.70	250.67	211.91	170.18	134.17	96.46	64.25		
315.0	312.67	303.75	280.29	244.84	206.35	167.70	130.65	94.37	65.41		
360.0	313.66	306.99	289.10	259.48	222.70	181.14	144.25	106.15	73.34		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	49.17	30.01	18.94	12.94	9.14	6.50	4.41	2.92	1.65		
45.0	47.57	29.68	19.05	13.43	9.47	6.77	4.63	3.03	1.87		
90.0	58.75	36.01	22.24	15.58	10.79	7.82	5.62	3.69	2.15		
135.0	59.96	37.33	22.02	14.76	10.52	7.54	5.34	3.69	2.15		
180.0	49.88	29.95	18.72	13.21	9.19	6.61	4.57	3.03	1.93		
225.0	50.87	30.56	18.72	12.99	8.97	6.50	4.52	2.97	1.82		
270.0	39.59	24.34	15.58	11.18	7.93	5.73	3.85	2.48	1.54		
315.0	39.81	24.50	15.69	11.12	7.87	5.45	3.80	2.37	1.43		
360.0	49.17	30.01	18.94	12.94	9.14	6.50	4.41	2.92	1.65		
C/γ(°)	90.0										
0.0	1.27										
45.0	1.21										
90.0	1.38										
135.0	1.32										
180.0	1.27										
225.0	1.21										
270.0	1.21										
315.0	1.21										
360.0	1.27										