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Nata

Client:

LumCAT: CR01D04438AK

Luminaire:

Report No: GC2019091909

Voltage(V): 220.6000

Test No:

Current(A): 0.0180

LampCAT: CREE CXA1304

Power (W): 2.9800

Lamp flux(lm): 231.0

PF: 0.0000

Number of Lamps: 1

Ballast type:

Length(mm): 43

Width(mm): 43

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 192.07, Efficiency(%): 83.15% , Luminous Efficacy(lm/W): 64.45

Central intensity(cd): 451.006, Maximum intensity(cd): 451.006

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=34.4

[C90/270]Total=34.4

Field angle(10%Imax): [C0/180]Total=59.8

[C90/270]Total=59.8

Maximum s/h(1/2): C0_180=0.56 C90_270=0.56

Maximum s/h(1/4): C0_180=0.57 C90_270=0.57

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 83.15%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 93.897%

Equipment:
Temperature(°C): -1.0

Date: 2019/9/26
Humidity(%): -1.0%

Operator:
Distance(m): 1.00

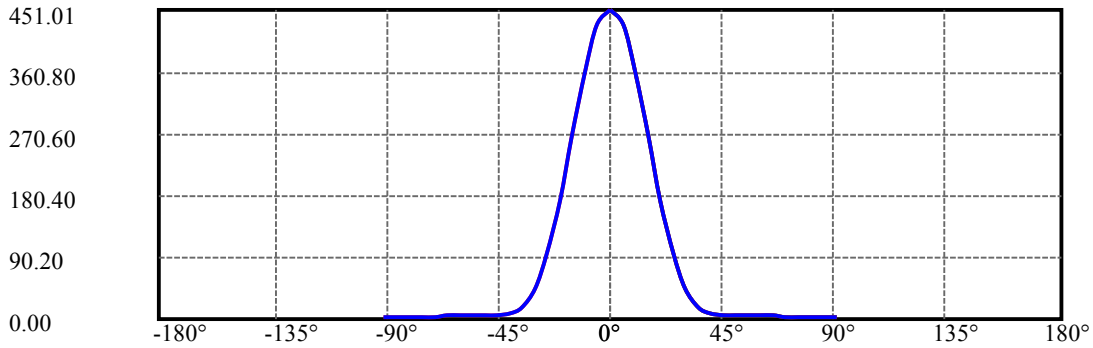
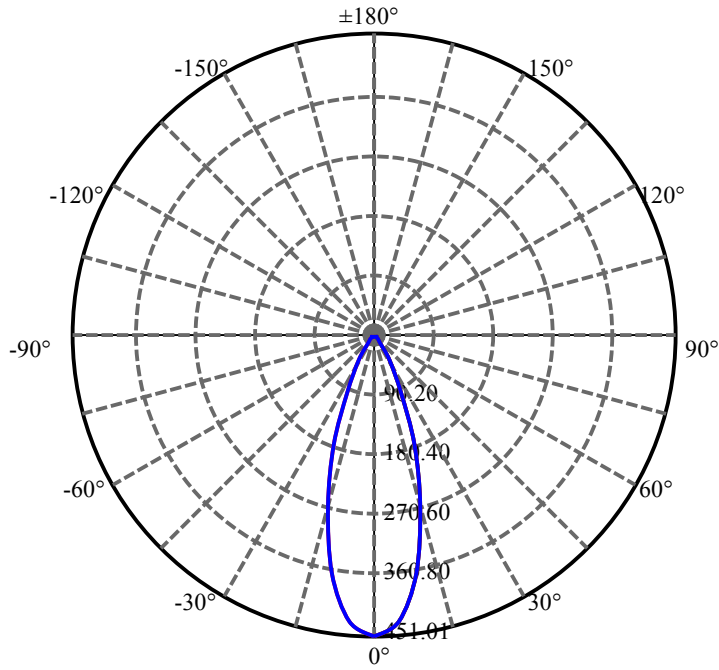
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	451.006	0.000	0	.000%	.000%
5.0	429.921	10.531	10.531	4.559%	5.483%
10.0	360.380	28.272	38.803	12.239%	20.202%
15.0	265.677	37.137	75.94	16.077%	39.538%
20.0	173.218	36.171	112.111	15.658%	58.370%
25.0	94.460	28.074	140.186	12.153%	72.986%
30.0	43.816	17.499	157.685	7.575%	82.097%
35.0	15.423	8.723	166.408	3.776%	86.639%
40.0	7.923	3.895	170.303	1.686%	88.667%
45.0	6.027	2.583	172.886	1.118%	90.012%
50.0	5.696	2.369	175.255	1.025%	91.245%
55.0	5.754	2.490	177.744	1.078%	92.541%
60.0	5.510	2.604	180.348	1.127%	93.897%
65.0	4.582	2.453	182.801	1.062%	95.174%
70.0	3.643	2.083	184.884	.902%	96.258%
75.0	3.283	1.810	186.694	.784%	97.201%
80.0	3.126	1.715	188.409	.742%	98.094%
85.0	3.312	1.749	190.159	.757%	99.004%
90.0	3.672	1.912	192.071	.828%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	157.68	68.26%	82.10%
0-40	170.30	73.72%	88.67%
0-60	180.35	78.07%	93.90%
0-90	190.16	82.32%	99.00%
0-120	190.16	82.32%	99.00%
0-180	192.07	83.15%	100.00%
60-90	12.41	5.37%	6.46%
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%
0-28.85	153.66	66.52%	80.00%

ZONAL LUMEN SUMMARY

0-10	38.80
10-20	73.31
20-30	45.57
30-40	12.62
40-50	4.95
50-60	5.09
60-70	4.54
70-80	3.53
80-90	1.75
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: ———

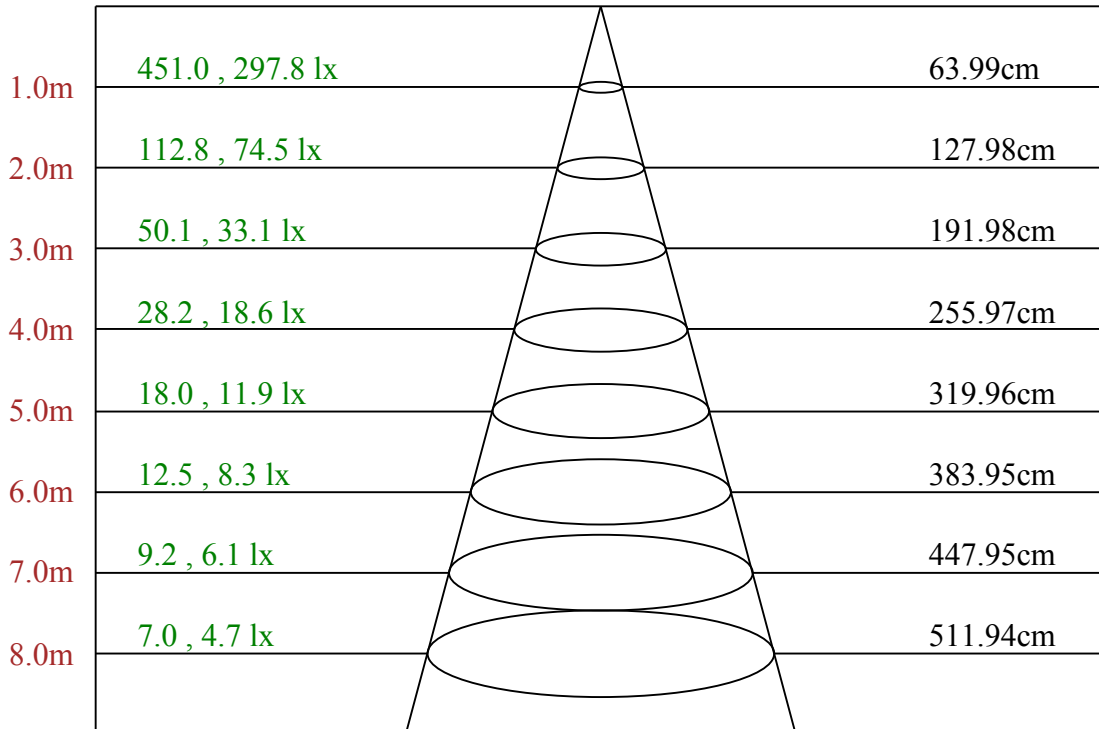
C90/C270: ———

Field angle(10%Imax):C0/180Left:29.9 Right:29.9

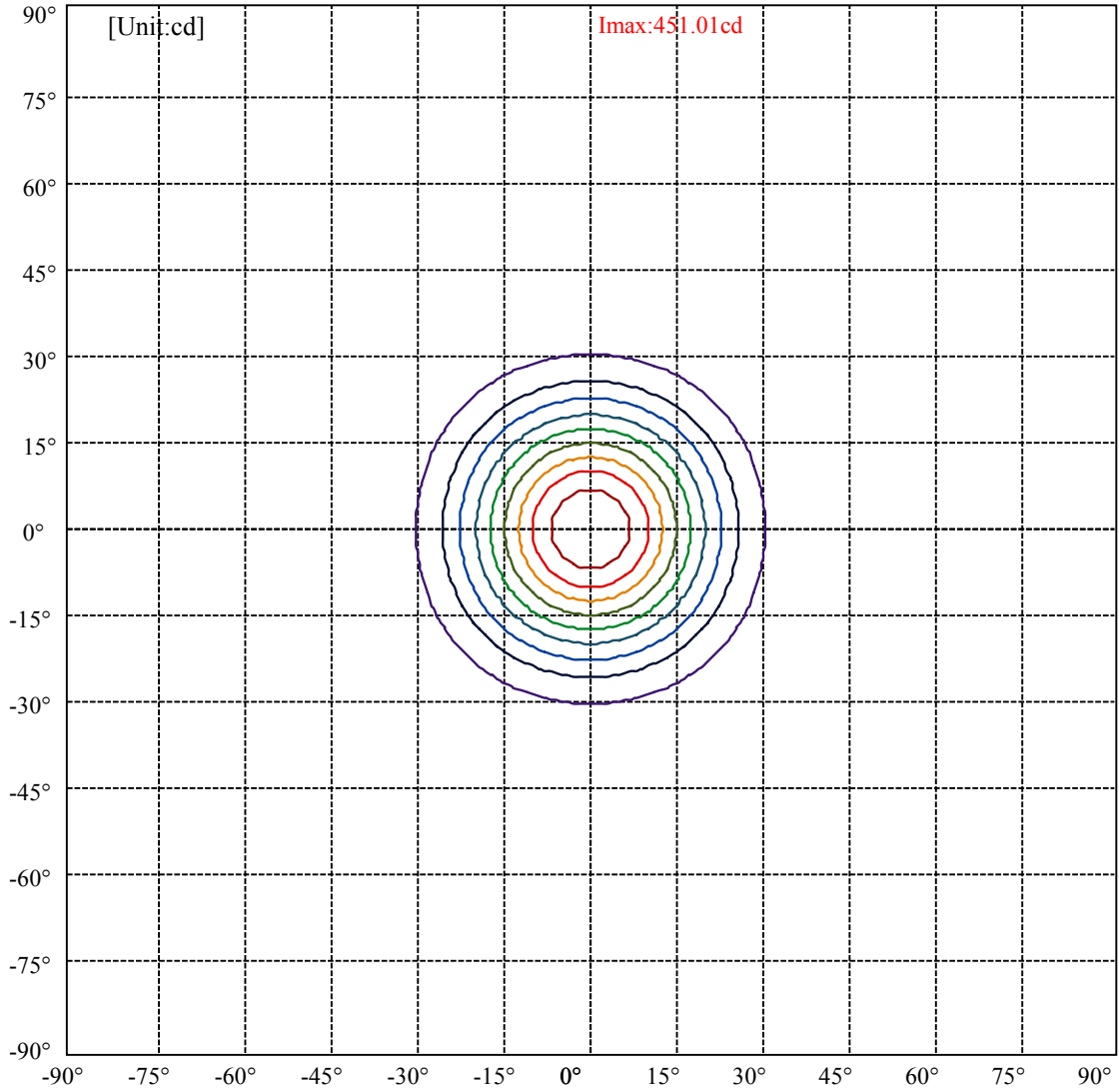
:C90/270Left:29.9 Right:29.9

Beam Angle(50%Imax):C0/180Left:17.2 Right:17.2

:C90/270Left:17.2 Right:17.2



Max , Ave Beam angle of C0 plane 35.49

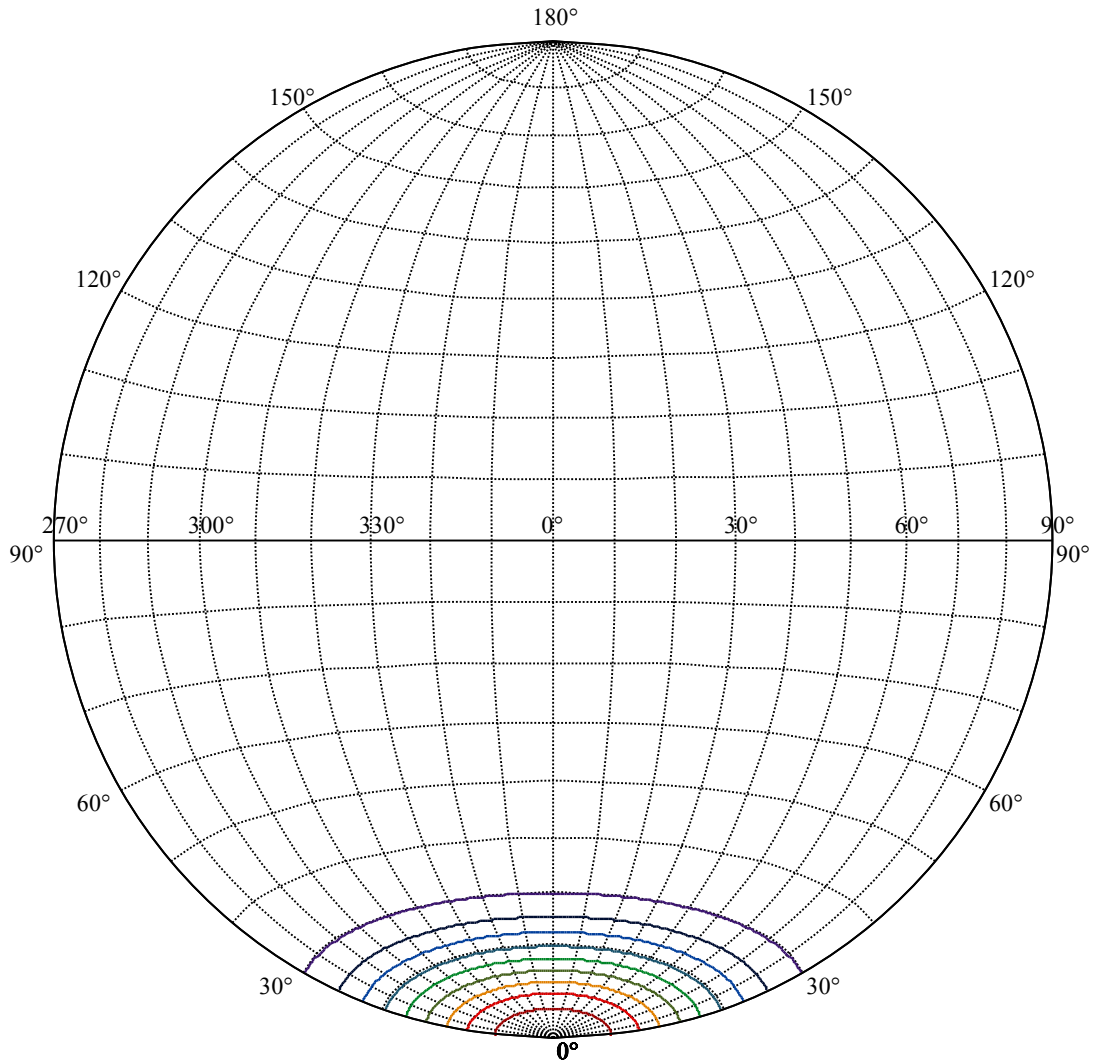


(10%Imax) 45.1006	—
(20%Imax) 90.2012	—
(30%Imax) 135.302	—
(40%Imax) 180.402	—
(50%Imax) 225.503	—
(60%Imax) 270.604	—
(70%Imax) 315.704	—
(80%Imax) 360.805	—
(90%Imax) 405.905	—

Equipment:
Temperature(°C): -1.0

Date: 2019/9/26
Humidity(%): -1.0%

Operator:
Distance(m): 1.00



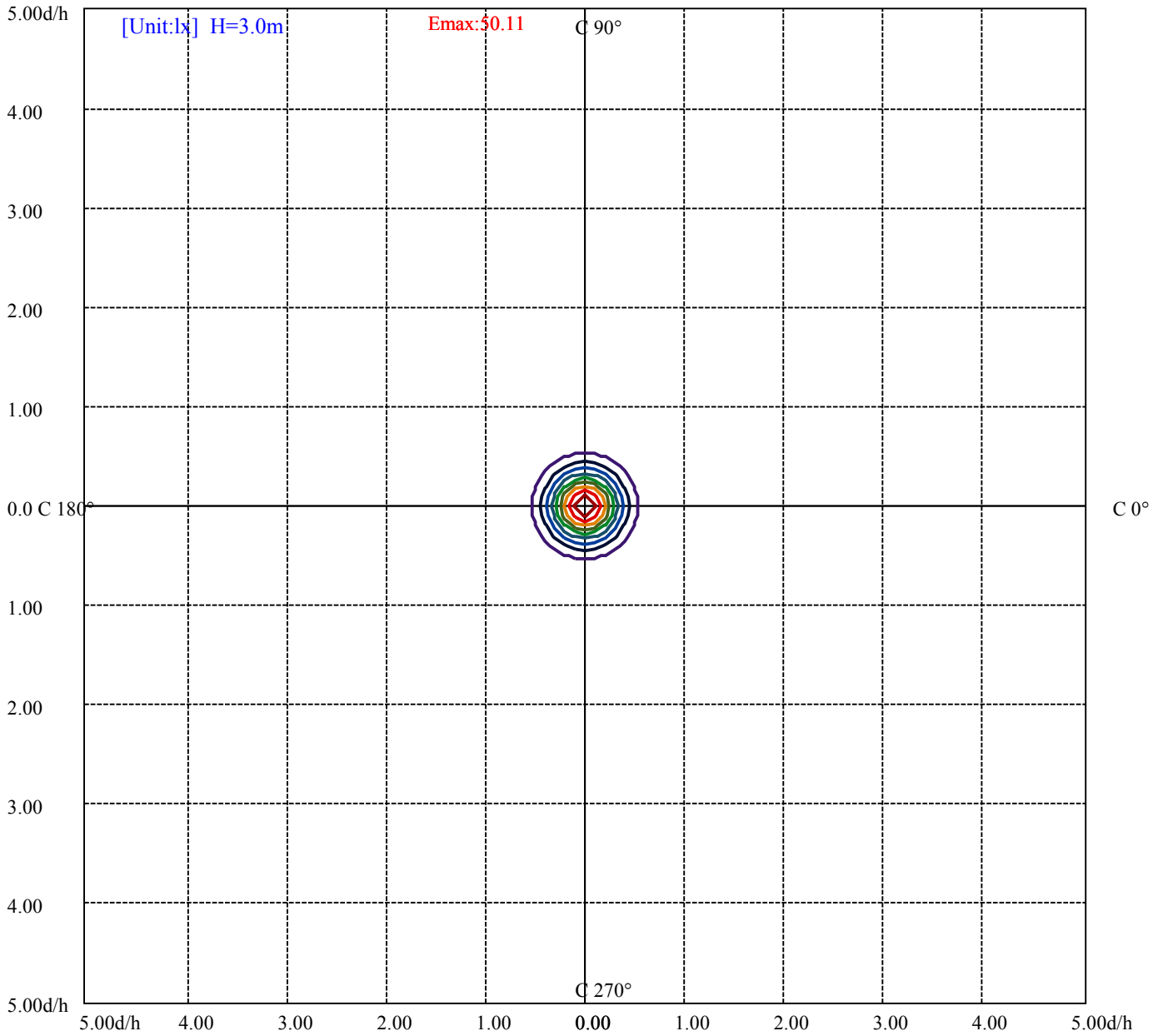
House

[Unit:cd]

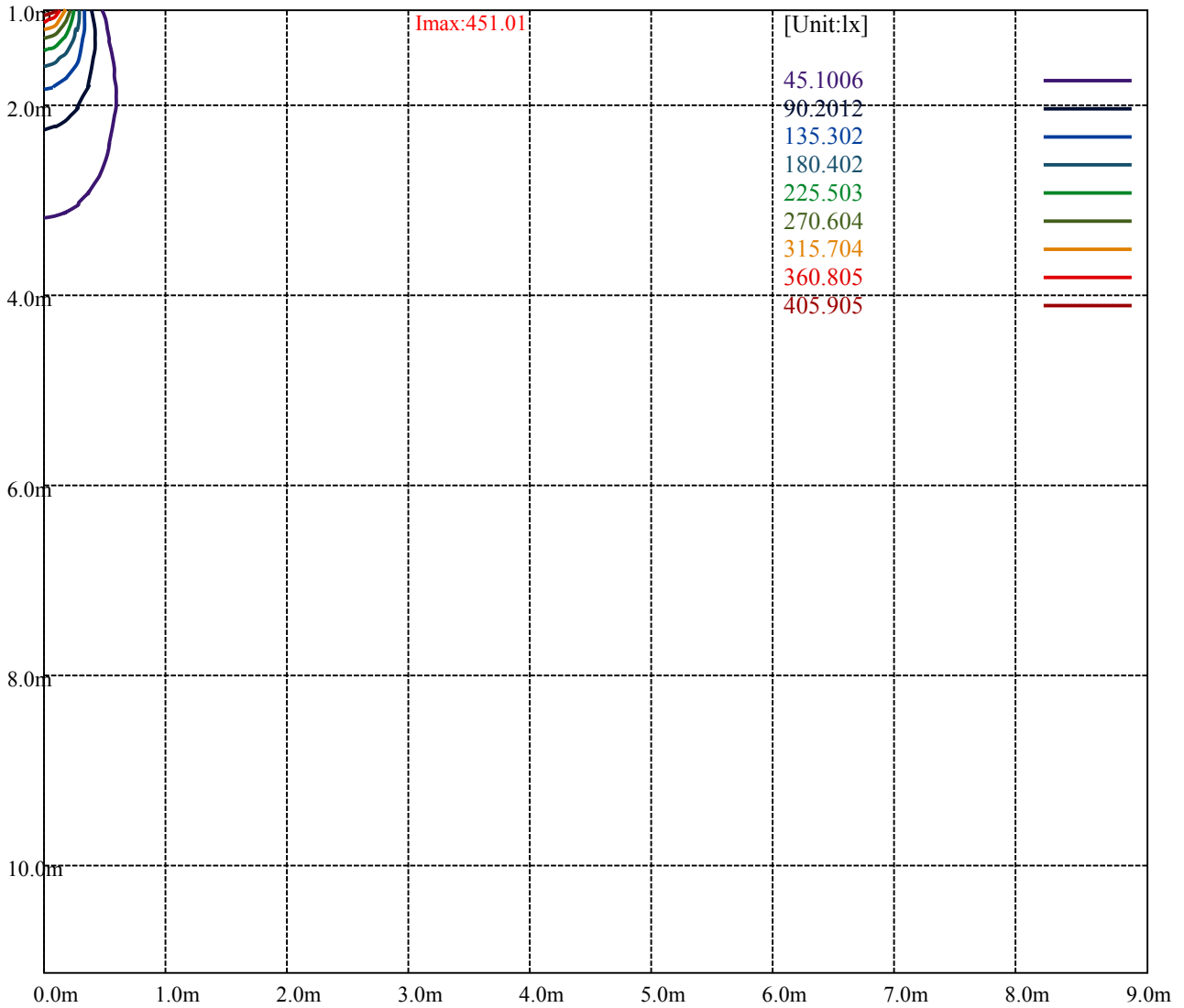
Road

Imax:451.01

- (10%Imax) 45.1006 —
- (20%Imax) 90.2012 —
- (30%Imax) 135.302 —
- (40%Imax) 180.402 —
- (50%Imax) 225.503 —
- (60%Imax) 270.604 —
- (70%Imax) 315.704 —
- (80%Imax) 360.805 —
- (90%Imax) 405.905 —



(10%Emax) 5.011167	—
(20%Emax) 10.02234	—
(30%Emax) 15.03356	—
(40%Emax) 20.04467	—
(50%Emax) 25.05589	—
(60%Emax) 30.067	—
(70%Emax) 35.07822	—
(80%Emax) 40.08933	—
(90%Emax) 45.10056	—



Luminance Table

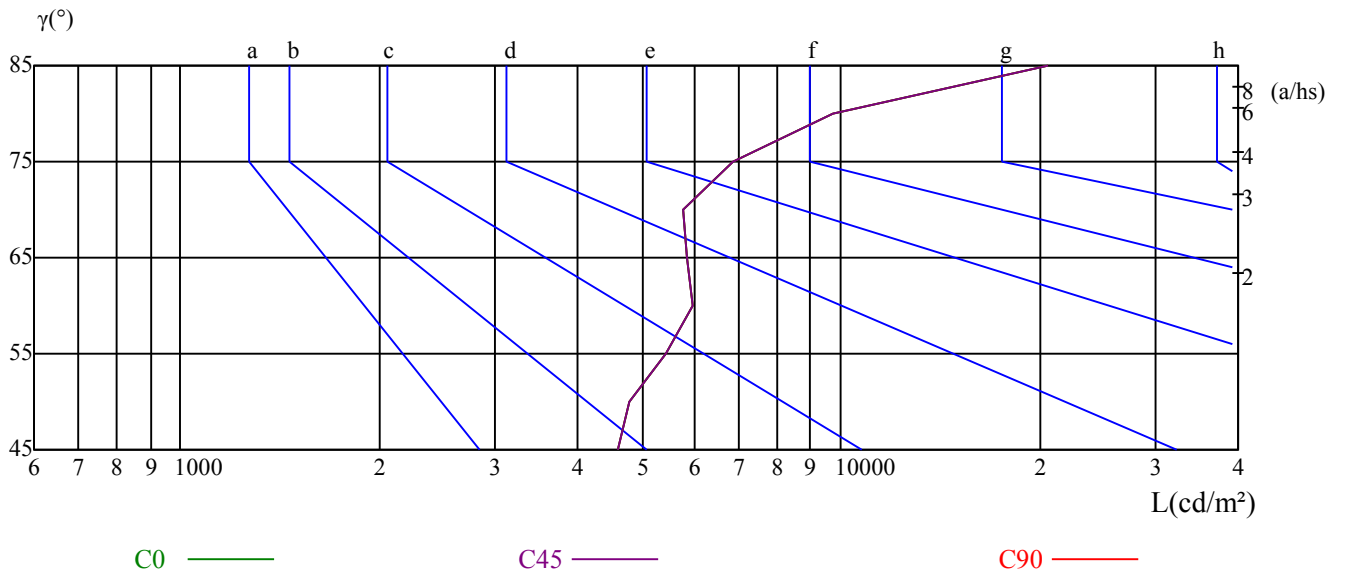
γ	45	50	55	60	65	70	75	80	85
C0	4610	4793	5426	5960	5864	5761	6860	9736	20552
C45	4610	4793	5426	5960	5864	5761	6860	9736	20552
C90	4610	4793	5426	5960	5864	5761	6860	9736	20552

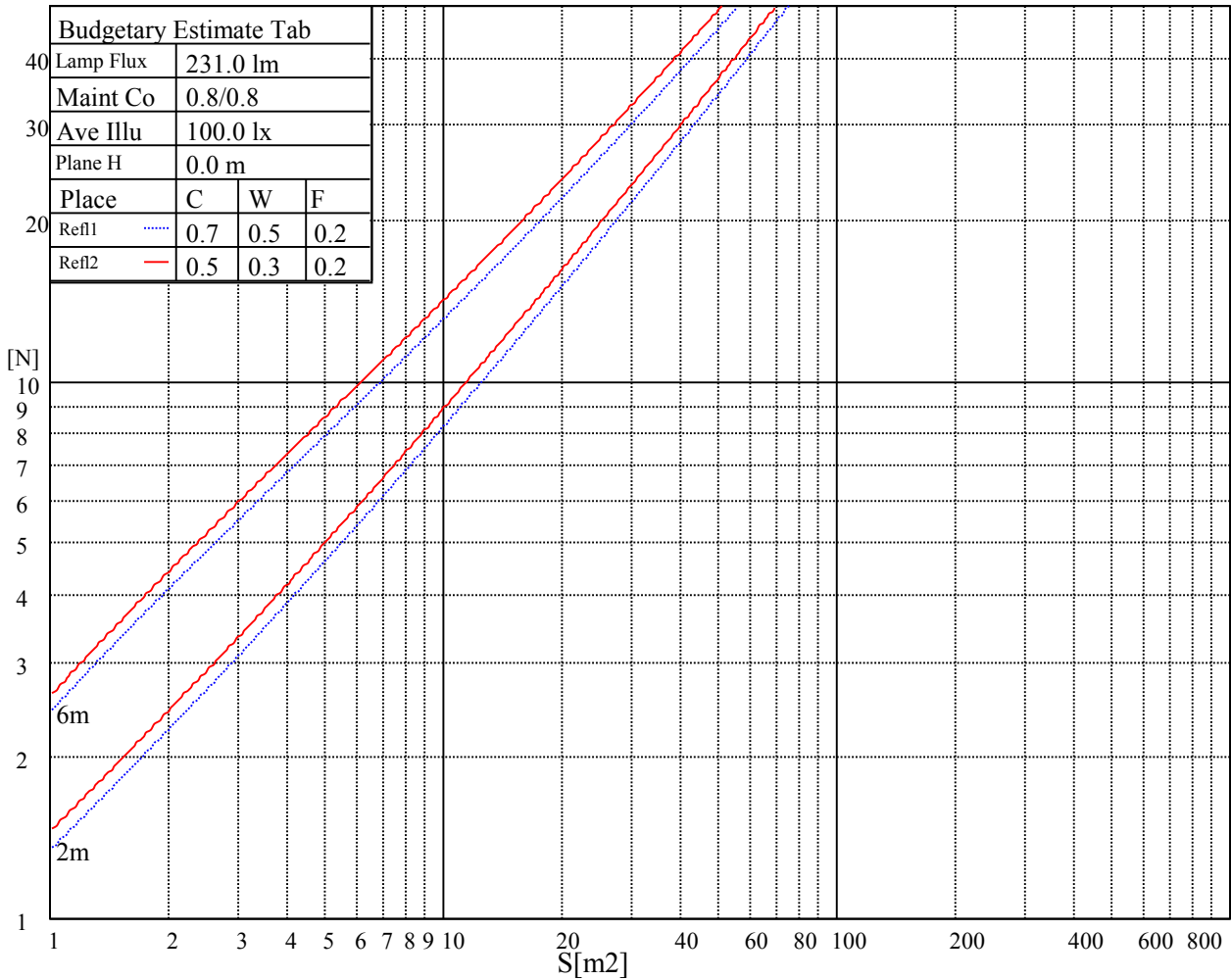
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5864	5864	5864	6860	6860	6860	20552	20552	20552

Glare Table

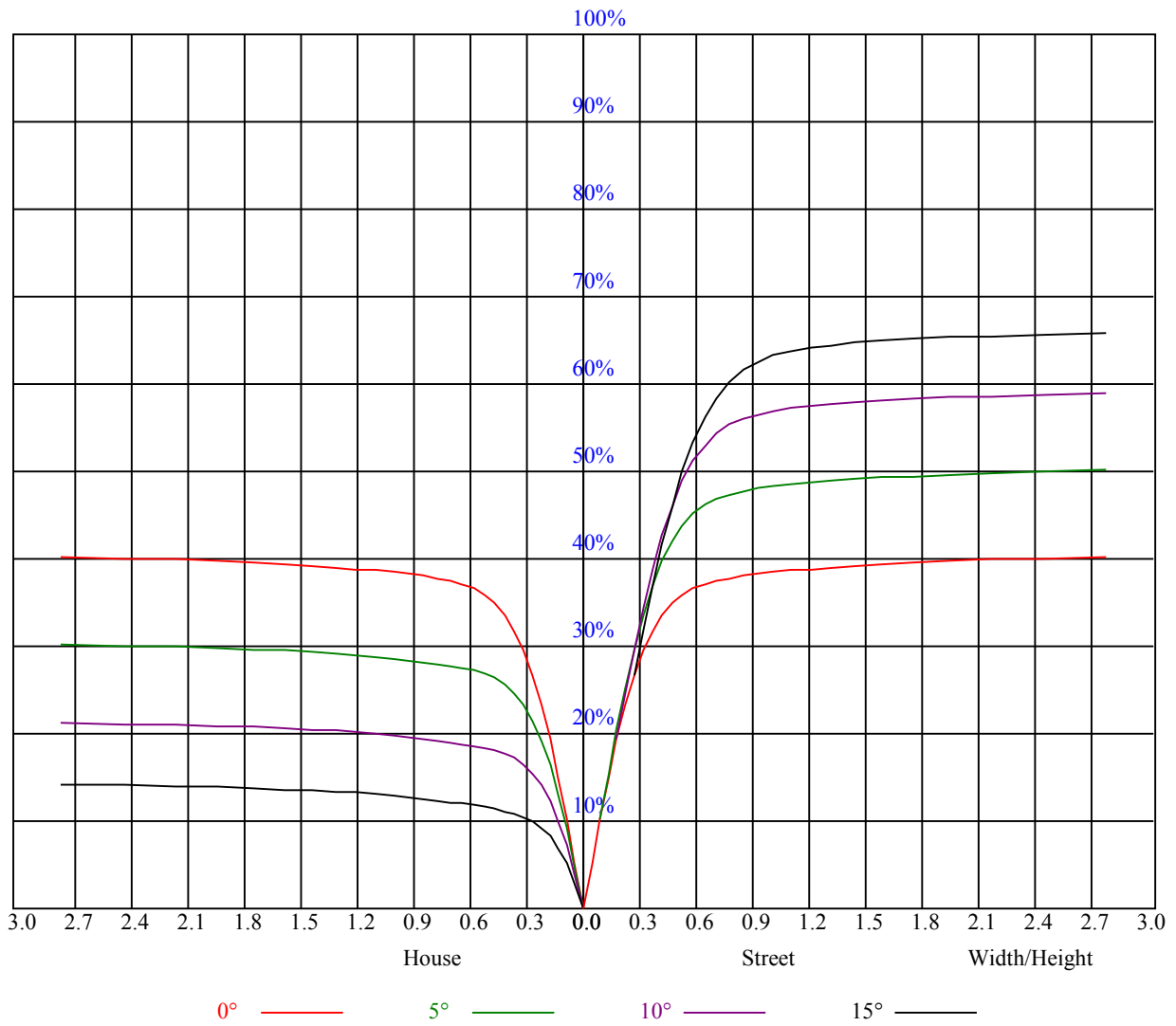
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

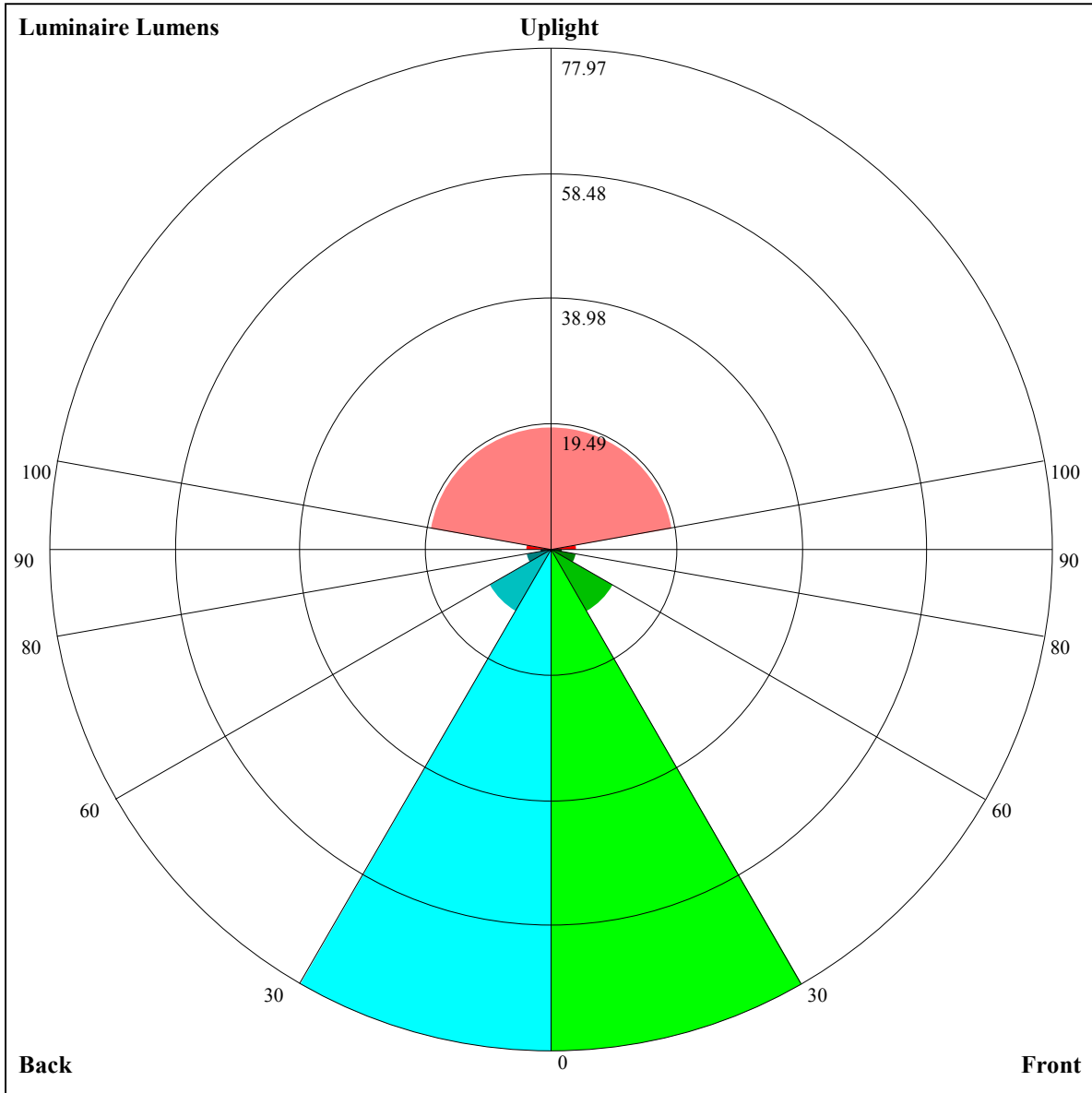
Luminance Limiting Curve





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	0.99	0.99	0.99	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.85	0.85	0.85	0.83
1	0.91	0.89	0.87	0.90	0.88	0.86	0.86	0.85	0.83	0.83	0.82	0.81	0.80	0.79	0.78	0.77
2	0.85	0.82	0.79	0.84	0.81	0.78	0.81	0.79	0.76	0.79	0.77	0.75	0.76	0.75	0.73	0.72
3	0.80	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.68
4	0.76	0.71	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.71	0.68	0.66	0.70	0.67	0.65	0.64
5	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.61
6	0.68	0.64	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.58
7	0.65	0.61	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.56
8	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.54	0.60	0.57	0.54	0.53
9	0.60	0.56	0.53	0.60	0.55	0.53	0.59	0.55	0.52	0.58	0.55	0.52	0.57	0.54	0.52	0.51
10	0.58	0.53	0.51	0.57	0.53	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.55	0.52	0.50	0.49





Luminaire Lumens:

FL=77.97,FM=11.26,FH=4.03,FVH=1.83

BL=77.97,BM=11.26,BH=4.03,BVH=1.83

UL=4.01,UH=19.07

BUG Rating:B0-U2-G0

Intensity data(cd)

C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	451.01	429.92	360.38	265.68	173.22	94.46	43.82	15.42	7.92
45.0	451.01	429.92	360.38	265.68	173.22	94.46	43.82	15.42	7.92
90.0	451.01	429.92	360.38	265.68	173.22	94.46	43.82	15.42	7.92
135.0	451.01	429.92	360.38	265.68	173.22	94.46	43.82	15.42	7.92
180.0	451.01	429.92	360.38	265.68	173.22	94.46	43.82	15.42	7.92
225.0	451.01	429.92	360.38	265.68	173.22	94.46	43.82	15.42	7.92
270.0	451.01	429.92	360.38	265.68	173.22	94.46	43.82	15.42	7.92
315.0	451.01	429.92	360.38	265.68	173.22	94.46	43.82	15.42	7.92
360.0	451.01	429.92	360.38	265.68	173.22	94.46	43.82	15.42	7.92
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	6.03	5.70	5.75	5.51	4.58	3.64	3.28	3.13	3.31
45.0	6.03	5.70	5.75	5.51	4.58	3.64	3.28	3.13	3.31
90.0	6.03	5.70	5.75	5.51	4.58	3.64	3.28	3.13	3.31
135.0	6.03	5.70	5.75	5.51	4.58	3.64	3.28	3.13	3.31
180.0	6.03	5.70	5.75	5.51	4.58	3.64	3.28	3.13	3.31
225.0	6.03	5.70	5.75	5.51	4.58	3.64	3.28	3.13	3.31
270.0	6.03	5.70	5.75	5.51	4.58	3.64	3.28	3.13	3.31
315.0	6.03	5.70	5.75	5.51	4.58	3.64	3.28	3.13	3.31
360.0	6.03	5.70	5.75	5.51	4.58	3.64	3.28	3.13	3.31
C/ γ (°)	90.0								
0.0	3.67								
45.0	3.67								
90.0	3.67								
135.0	3.67								
180.0	3.67								
225.0	3.67								
270.0	3.67								
315.0	3.67								
360.0	3.67								