
Nata

Client:

LumCAT: 3-1703-N

Luminaire: 92.70.045.00+92.70.061.00

Report No: nata-0100

Voltage(V): 34.0000

Test No: GC2018060108

Current(A): 0.5000

LampCAT: NICHIA NFCWD084B-V3

Power (W): 17.0000

Lamp flux(lm): 2152.5

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 86

Width(mm): 86

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1675.02, Efficiency(%): 77.82% , Luminous Efficacy(lm/W): 98.53

Central intensity(cd): 3914.648, Maximum intensity(cd): 3914.648

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=34.2

[C90/270]Total=34.2

Field angle(10%Imax): [C0/180]Total=62.6

[C90/270]Total=62.6

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(%): 78.83%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.537%

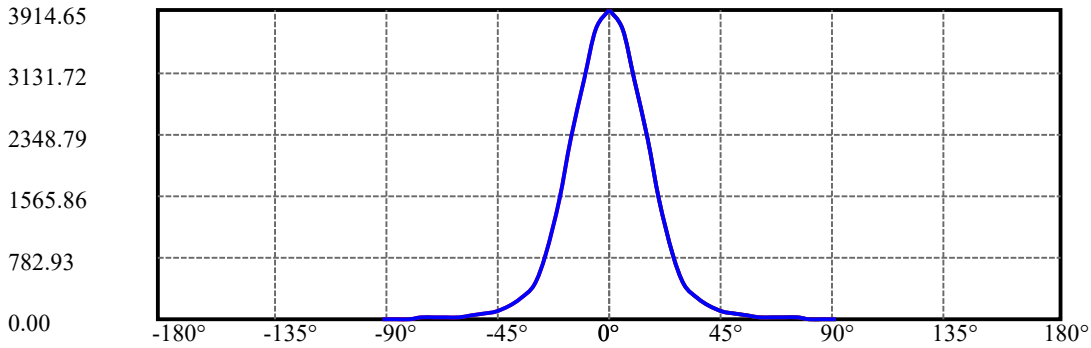
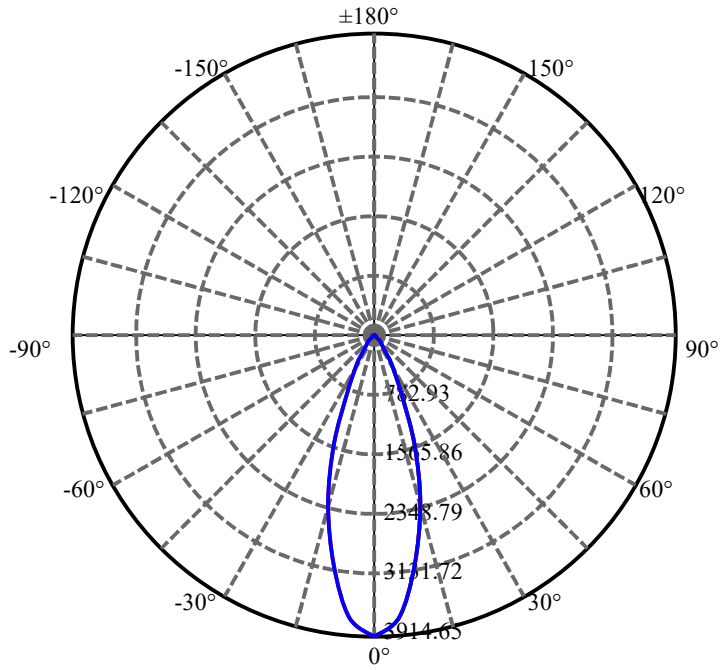
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3914.648	23.410	23.41	1.088%	1.398%
5.0	3676.666	175.647	199.057	8.160%	11.884%
10.0	3031.061	288.506	487.563	13.403%	29.108%
15.0	2279.748	323.424	810.987	15.025%	48.417%
20.0	1507.430	282.604	1093.591	13.129%	65.288%
25.0	818.757	189.668	1283.258	8.811%	76.612%
30.0	434.519	119.088	1402.346	5.532%	83.721%
35.0	264.794	83.251	1485.597	3.868%	88.692%
40.0	161.308	56.835	1542.432	2.640%	92.085%
45.0	102.137	39.587	1582.019	1.839%	94.448%
50.0	64.086	26.909	1608.929	1.250%	96.055%
55.0	38.732	17.391	1626.32	.808%	97.093%
60.0	24.741	11.745	1638.064	.546%	97.794%
65.0	18.458	9.169	1647.234	.426%	98.341%
70.0	15.787	8.132	1655.365	.378%	98.827%
75.0	13.207	6.992	1662.358	.325%	99.244%
80.0	10.915	5.892	1668.25	.274%	99.596%
85.0	8.788	4.799	1673.049	.223%	99.883%
90.0	7.178	1.967	1675.016	.091%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1402.35	65.15%	83.72%
0-40	1542.43	71.66%	92.08%
0-60	1638.06	76.10%	97.79%
0-90	1673.05	77.73%	99.88%
0-120	1673.05	77.73%	99.88%
0-180	1675.02	77.82%	100.00%
60-90	46.73	2.17%	2.79%
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%
0-27.38	1340.01	62.25%	80.00%

ZONAL LUMEN SUMMARY

0-10	487.56
10-20	606.03
20-30	308.76
30-40	140.09
40-50	66.50
50-60	29.14
60-70	17.30
70-80	12.88
80-90	4.80
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: ———

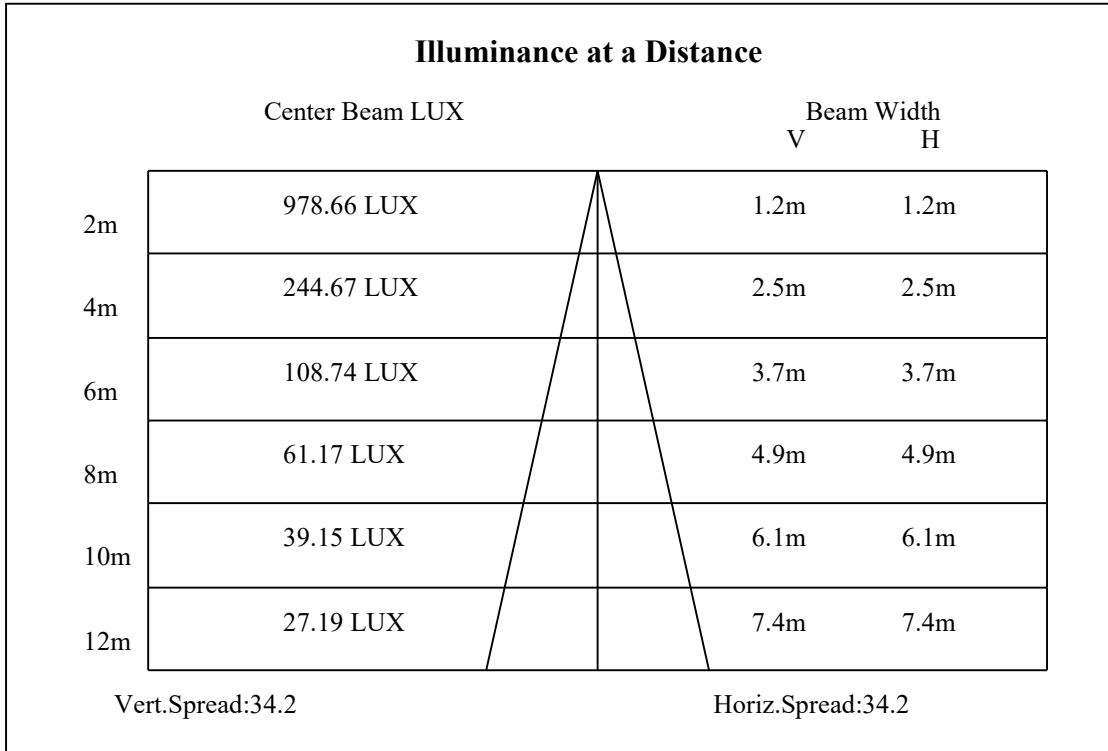
C90/C270: ———

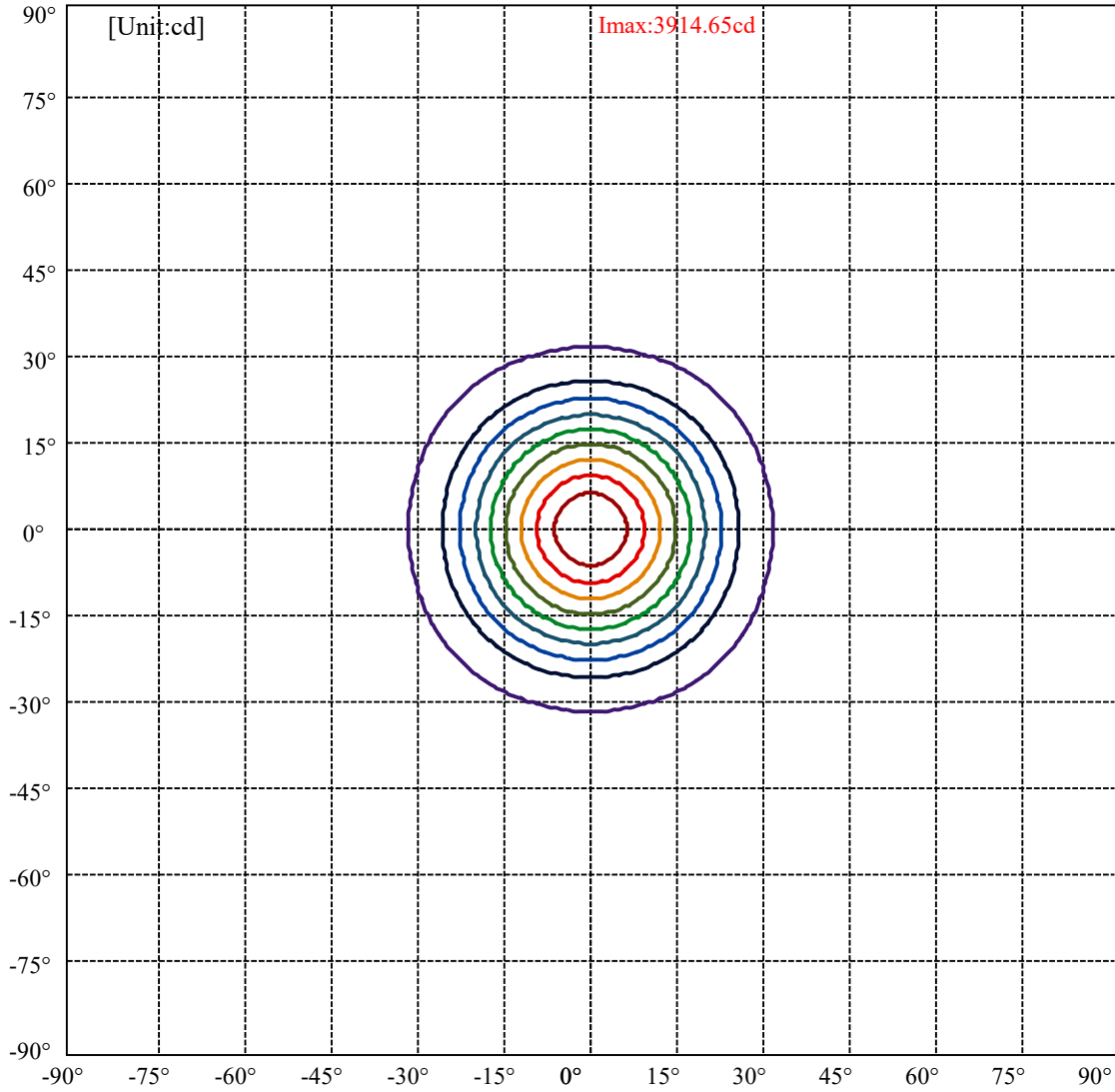
Field angle(10%Imax):C0/180Left:31.3 Right:31.3

:C90/270Left:31.3 Right:31.3

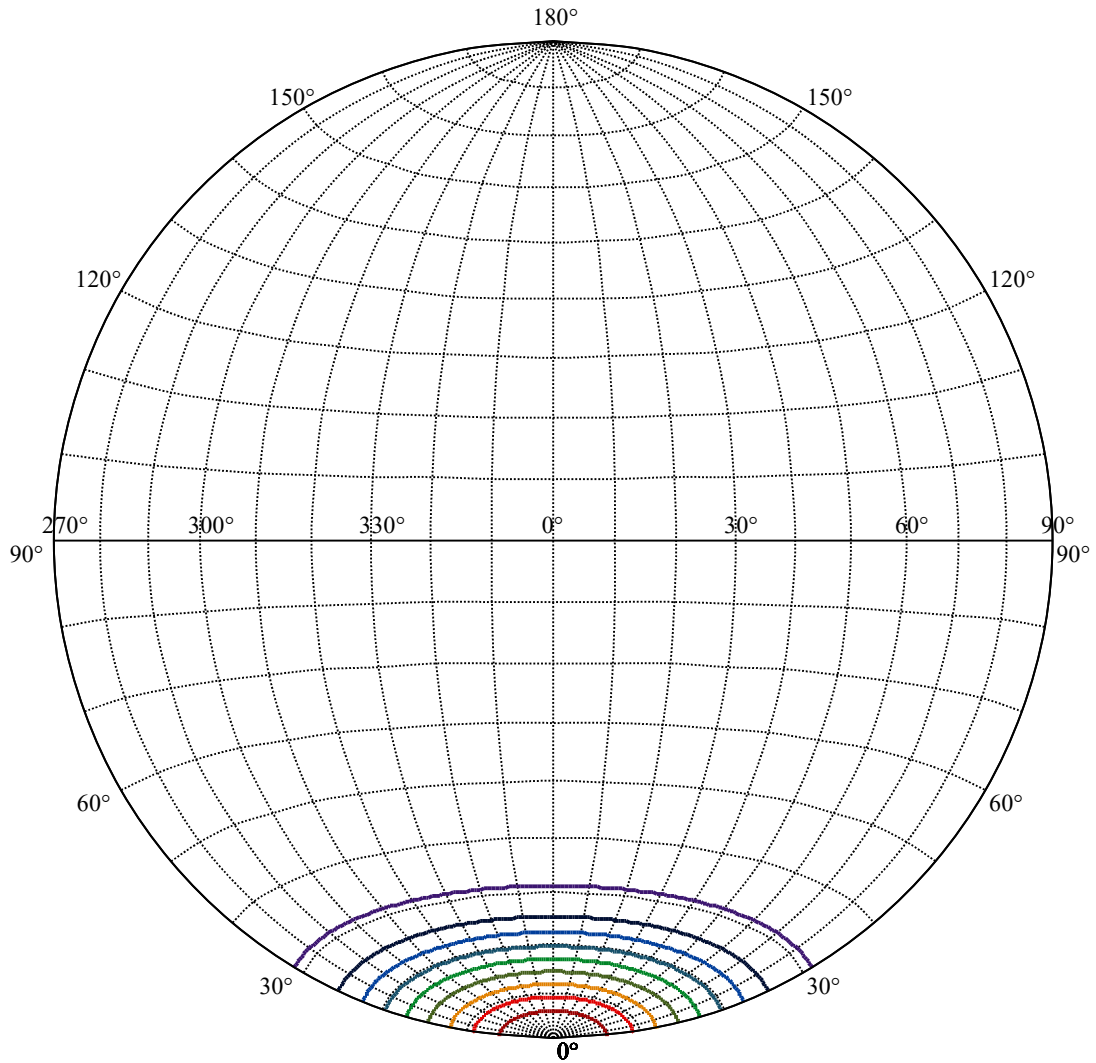
Beam Angle(50%Imax):C0/180Left:17.1 Right:17.1

:C90/270Left:17.1 Right:17.1





(10%Imax) 391.465	—
(20%Imax) 782.93	—
(30%Imax) 1174.39	—
(40%Imax) 1565.86	—
(50%Imax) 1957.32	—
(60%Imax) 2348.79	—
(70%Imax) 2740.25	—
(80%Imax) 3131.72	—
(90%Imax) 3523.18	—



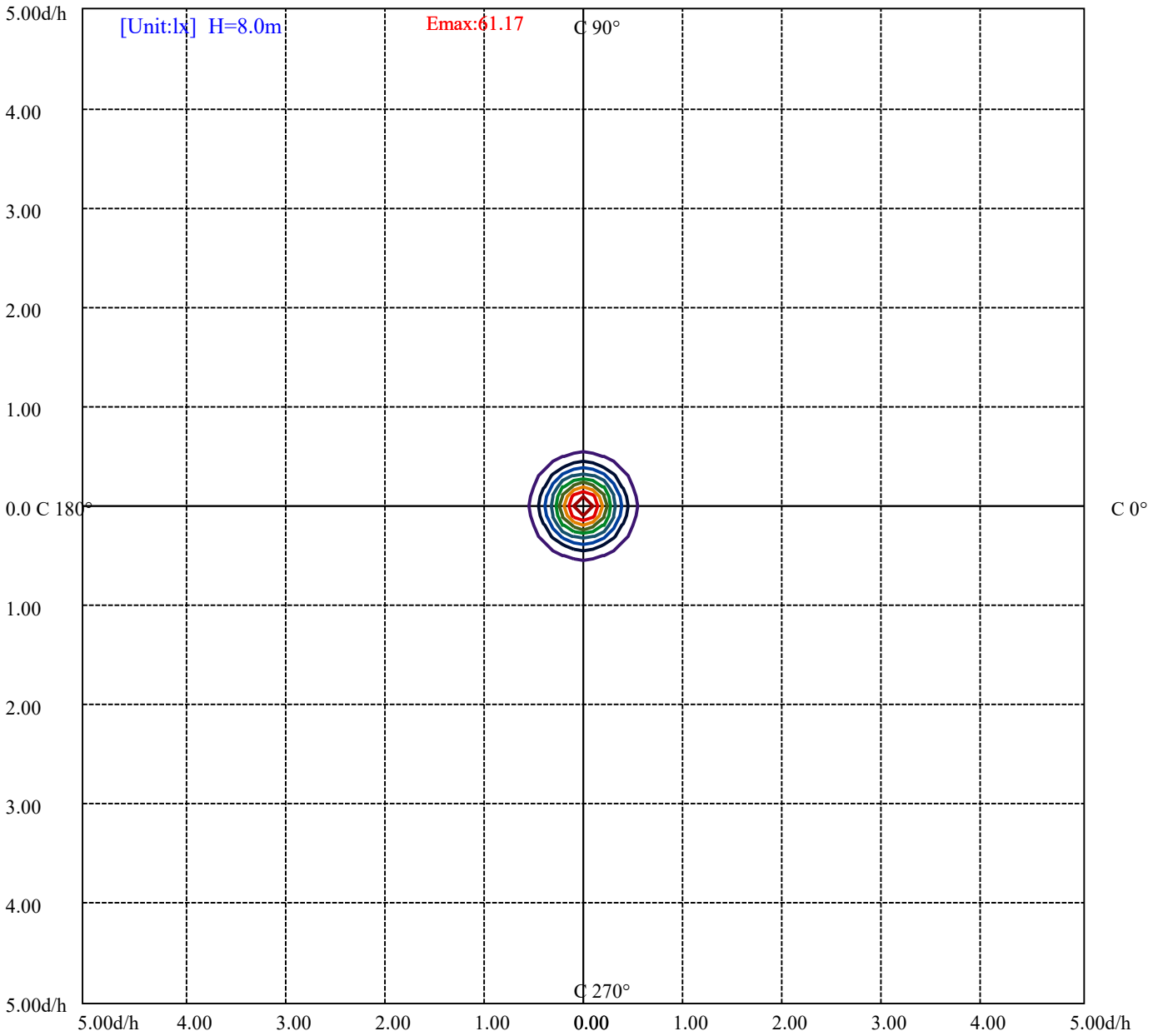
House

[Unit:cd]

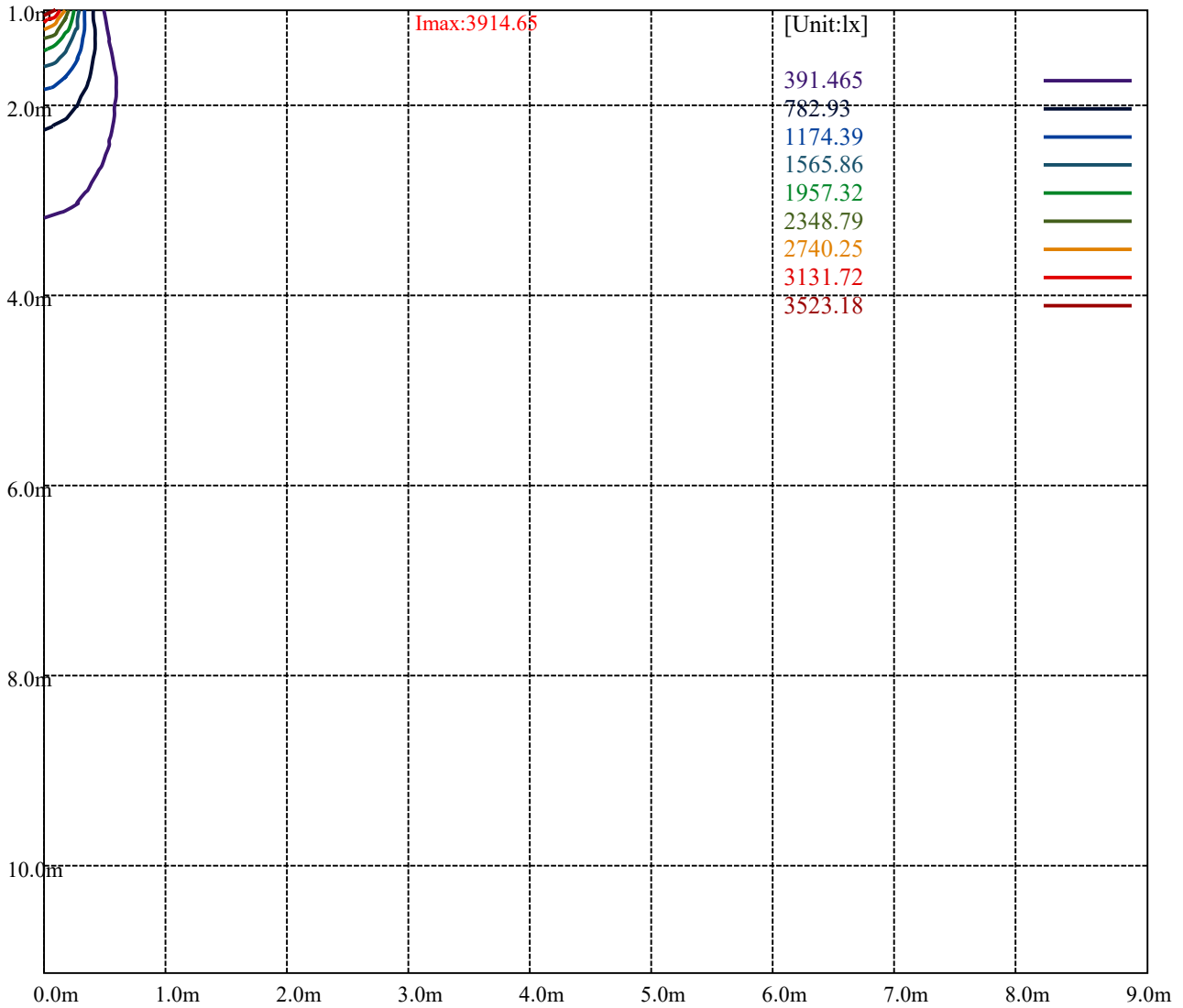
Road

Imax:3914.65

(10%Imax) 391.465	—
(20%Imax) 782.93	—
(30%Imax) 1174.39	—
(40%Imax) 1565.86	—
(50%Imax) 1957.32	—
(60%Imax) 2348.79	—
(70%Imax) 2740.25	—
(80%Imax) 3131.72	—
(90%Imax) 3523.18	—



- (10%Emax) 6.116625
- (20%Emax) 12.23325
- (30%Emax) 18.34984
- (40%Emax) 24.46656
- (50%Emax) 30.58312
- (60%Emax) 36.69969
- (70%Emax) 42.81641
- (80%Emax) 48.93297
- (90%Emax) 55.04969



Luminance Table

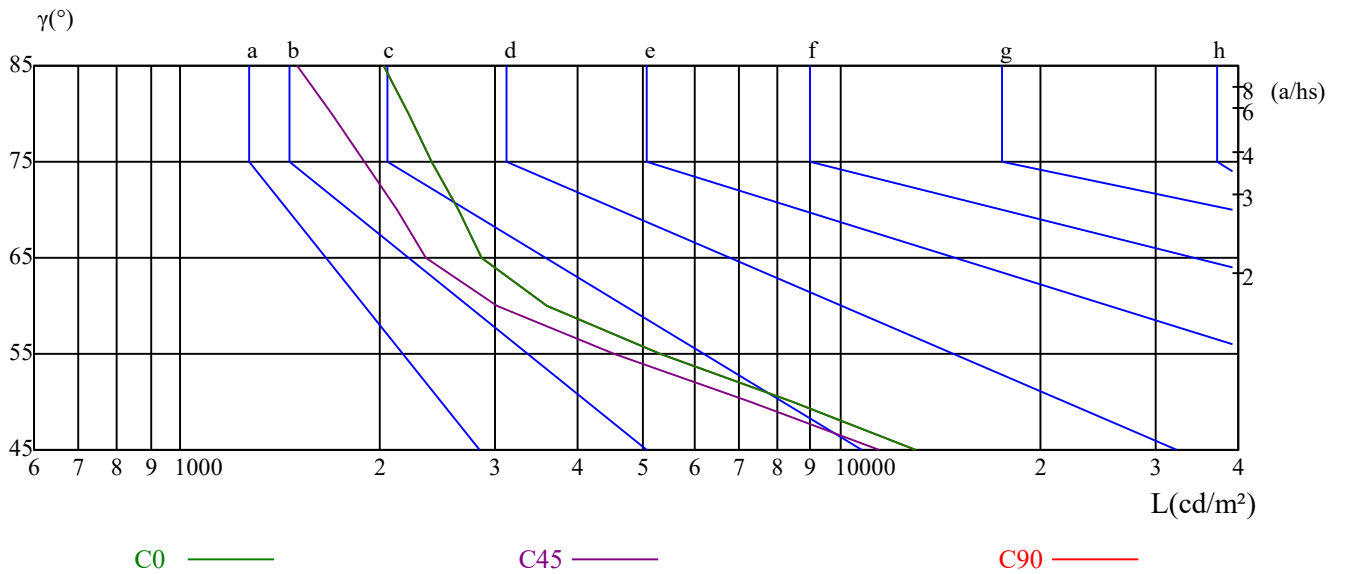
γ	45	50	55	60	65	70	75	80	85
C0	13020	8447	5327	3585	2850	2629	2407	2216	2030
C45	11440	7315	4543	3007	2347	2121	1896	1696	1501
C90	13020	8447	5327	3585	2850	2629	2407	2216	2030

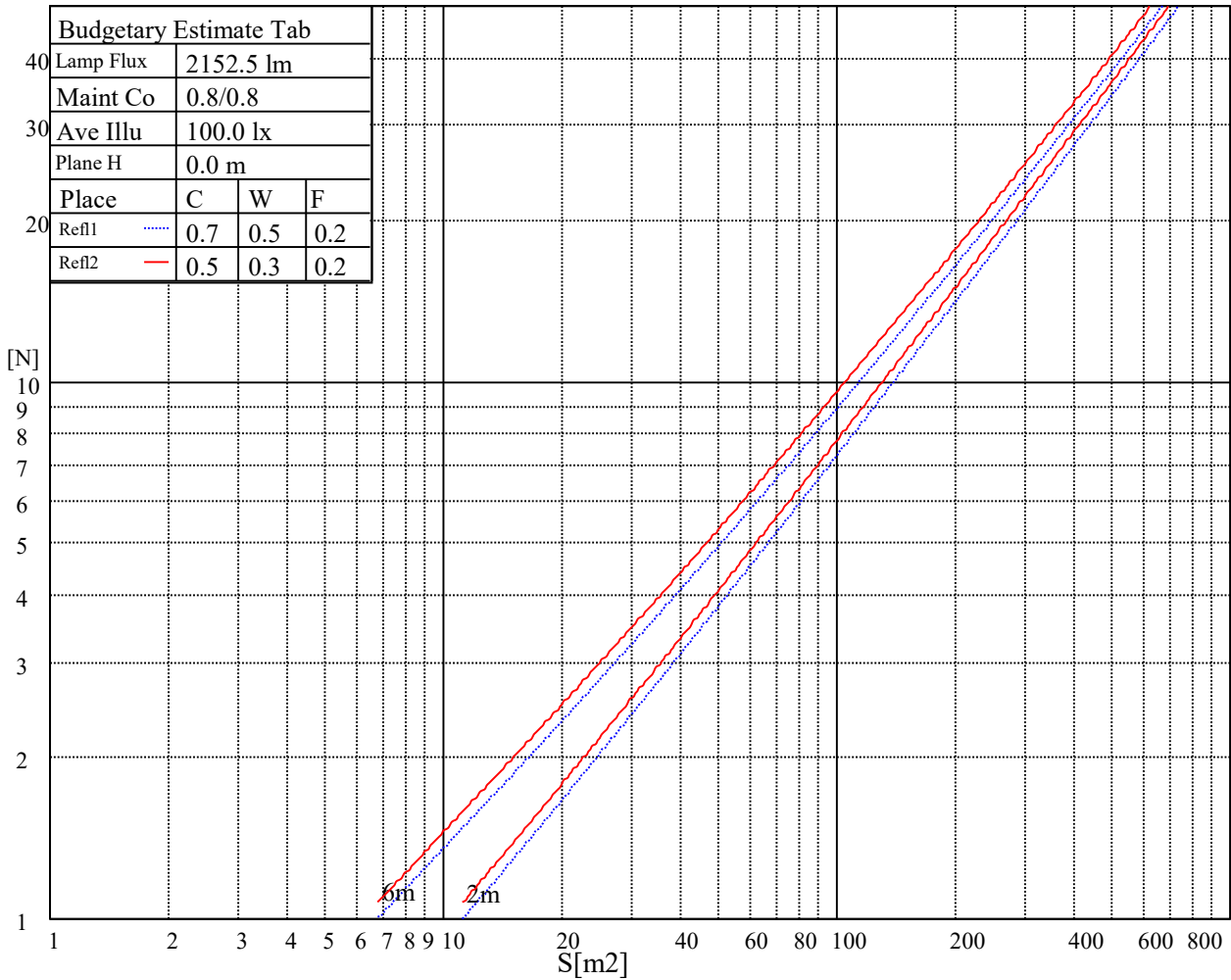
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5905	5905	5905	6899	6899	6899	13634	13634	13634

Glare Table

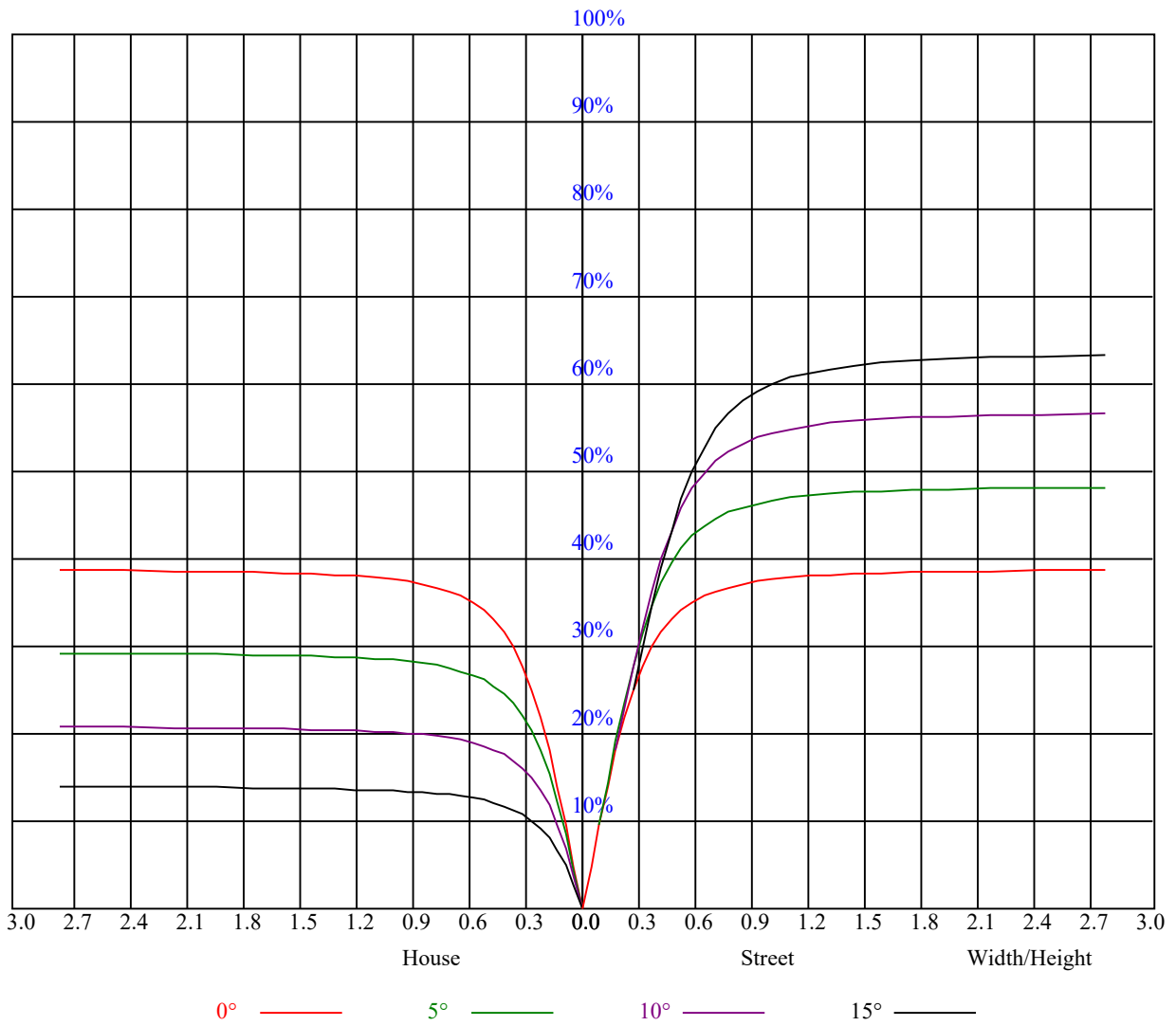
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

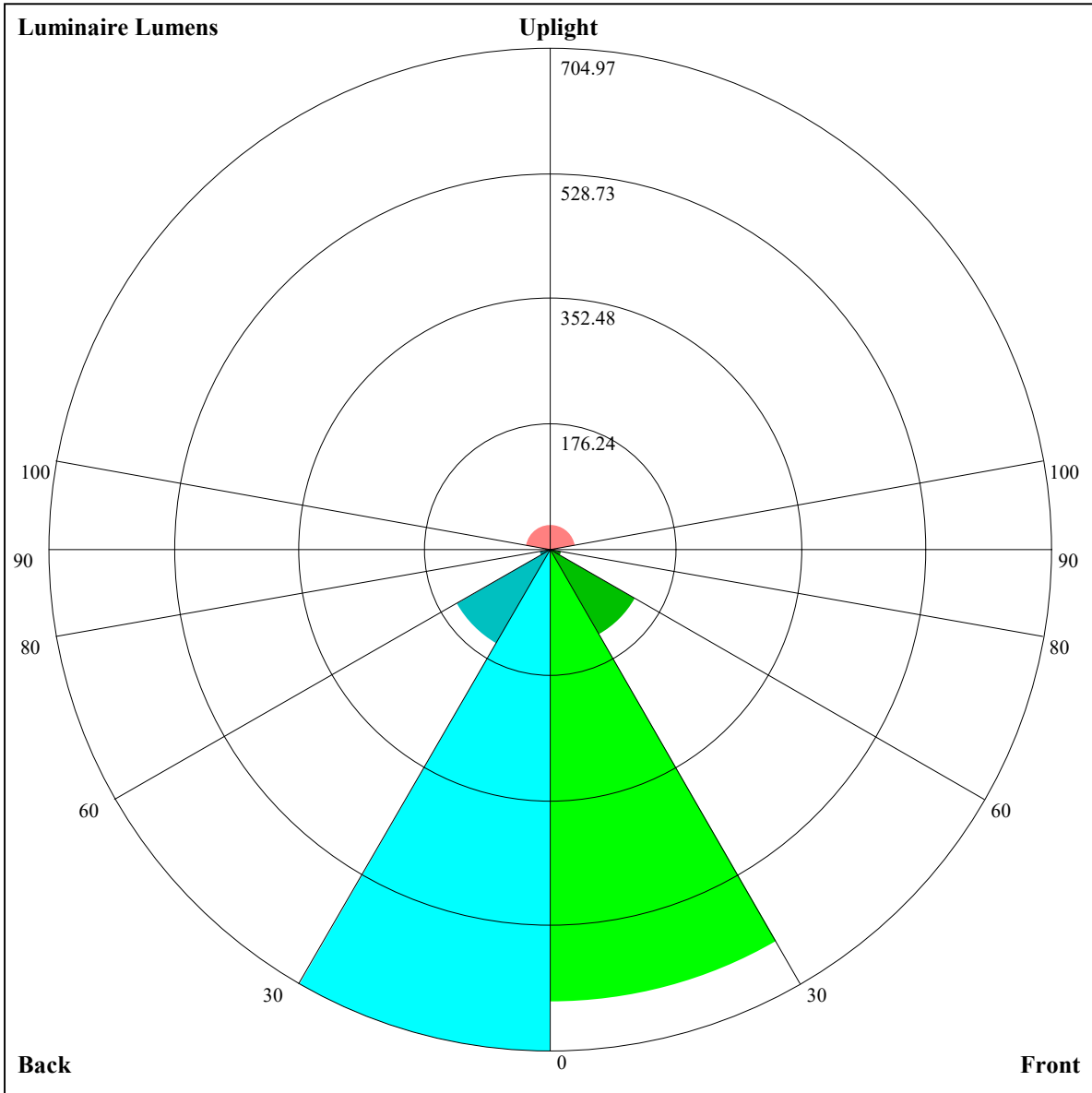
Luminance Limiting Curve





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	0.94	0.94	0.94	0.92	0.92	0.92	0.88	0.88	0.88	0.84	0.84	0.84	0.80	0.80	0.80	0.79
1	0.87	0.84	0.82	0.85	0.83	0.81	0.82	0.80	0.79	0.79	0.77	0.76	0.76	0.75	0.74	0.73
2	0.81	0.78	0.76	0.80	0.77	0.75	0.78	0.75	0.73	0.75	0.73	0.72	0.73	0.71	0.70	0.69
3	0.77	0.73	0.70	0.76	0.73	0.70	0.74	0.71	0.69	0.72	0.70	0.68	0.70	0.68	0.67	0.65
4	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.67	0.65	0.69	0.66	0.64	0.68	0.65	0.64	0.62
5	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.64	0.62	0.66	0.64	0.61	0.65	0.63	0.61	0.60
6	0.67	0.63	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.63	0.60	0.58	0.57
7	0.64	0.60	0.57	0.63	0.60	0.57	0.62	0.59	0.57	0.62	0.59	0.56	0.61	0.58	0.56	0.55
8	0.61	0.57	0.55	0.61	0.57	0.55	0.60	0.57	0.54	0.59	0.56	0.54	0.59	0.56	0.54	0.53
9	0.59	0.55	0.53	0.59	0.55	0.52	0.58	0.55	0.52	0.57	0.54	0.52	0.57	0.54	0.52	0.51
10	0.57	0.53	0.51	0.57	0.53	0.51	0.56	0.53	0.50	0.56	0.53	0.50	0.55	0.52	0.50	0.49





Luminaire Lumens:

FL=637.55,FM=137.47,FH=16.31,FVH=4.78

BL=704.97,BM=153.76,BH=16.9,BVH=4.95

UL=7.83,UH=37.27

BUG Rating:B2-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	3922.22	3611.70	2920.74	2137.29	1352.74	694.26	389.80	245.88	142.65
45.0	3921.12	3629.87	2965.34	2191.24	1475.51	766.94	412.37	281.34	156.08
90.0	3907.90	3578.67	2896.52	2174.73	1466.70	749.15	401.25	246.65	157.24
135.0	3909.00	3736.68	3207.04	2571.68	1835.03	1018.54	532.95	306.11	187.85
180.0	3922.22	3749.89	3199.88	2490.75	1715.56	963.49	486.53	280.35	180.58
225.0	3921.12	3735.58	3072.70	2352.56	1590.58	846.11	454.82	263.17	164.73
270.0	3904.60	3749.89	3111.24	2292.00	1556.44	854.48	436.60	283.54	163.02
315.0	3909.00	3621.06	2875.05	2027.73	1066.88	657.10	361.83	211.31	138.30
360.0	3922.22	3611.70	2920.74	2137.29	1352.74	694.26	389.80	245.88	142.65

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	92.33	58.75	35.95	23.89	17.95	15.36	12.77	10.57	8.31
45.0	96.68	60.18	37.77	23.73	18.11	15.75	13.05	10.68	8.53
90.0	96.90	61.11	36.12	23.18	17.89	15.53	12.94	10.63	8.64
135.0	123.38	74.00	43.16	26.98	19.32	16.35	13.65	11.40	9.19
180.0	113.58	70.75	41.68	26.76	18.83	15.91	13.43	11.07	9.14
225.0	105.54	65.90	39.48	24.56	18.77	15.91	13.32	11.18	9.03
270.0	101.47	66.34	40.58	25.93	18.99	16.35	13.71	11.40	9.03
315.0	87.21	55.66	35.13	22.90	17.78	15.14	12.77	10.41	8.42
360.0	92.33	58.75	35.95	23.89	17.95	15.36	12.77	10.57	8.31

C/γ(°)	90.0
0.0	7.10
45.0	7.21
90.0	7.21
135.0	7.16
180.0	7.10
225.0	7.21
270.0	7.21
315.0	7.21
360.0	7.10