
Nata

Client:

LumCAT: 3-1700-N

Luminaire: 92.70.045.00+92.70.089.00

Report No: nata-0100

Test No: GC2018060106

LampCAT: NICHIA NFCWD084B-V3

Lamp flux(lm): 2152.5

Number of Lamps: 1

Length(mm): 77

Phm Type: C

Voltage(V): 34.0000

Current(A): 0.5000

Power (W): 17.0000

PF: 0.0000

Ballast type: DC

Width(mm): 77

Height(mm): 0

Photometric Results

Lumens(lm): 1681.46, Efficiency(%): 78.12% , Luminous Efficacy(lm/W): 98.91

Central intensity(cd): 3596.009, Maximum intensity(cd): 3596.009

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=36.8

[C90/270]Total=36.8

Field angle(10%Imax): [C0/180]Total=65.4

[C90/270]Total=65.4

Maximum s/h(1/2): C0_180=0.61 C90_270=0.61

Maximum s/h(1/4): C0_180=0.59 C90_270=0.59

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 79.04%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.885%

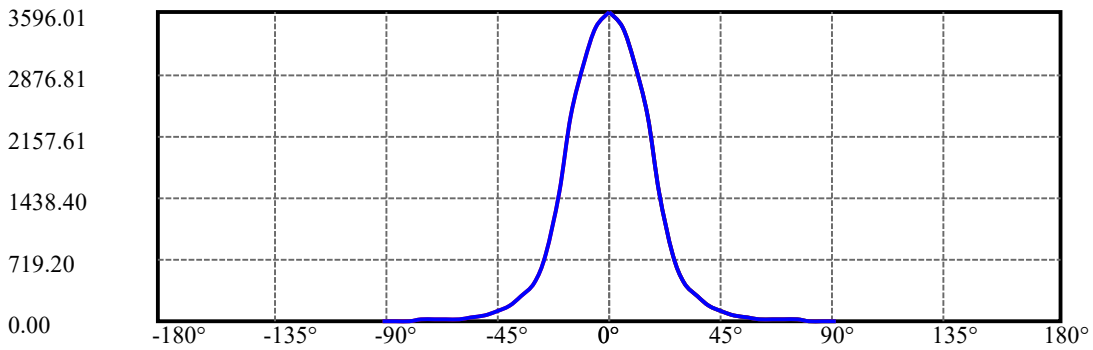
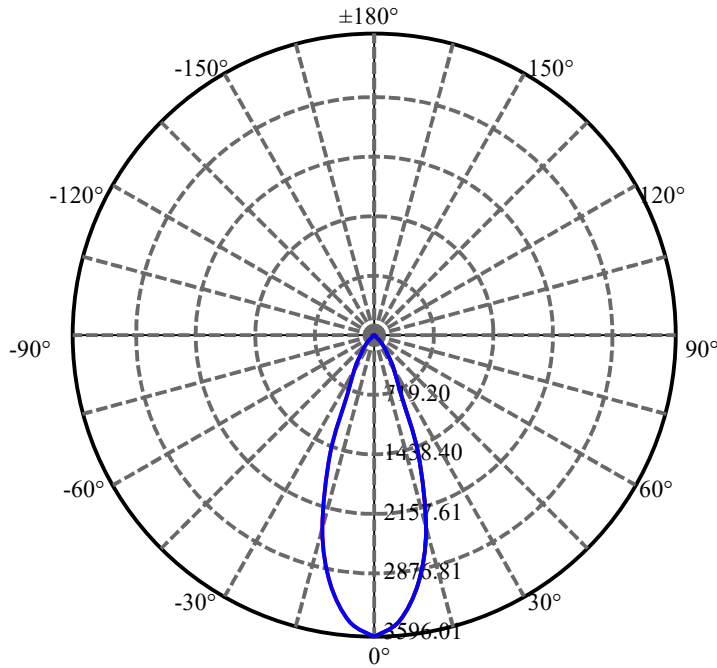
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3596.009	21.505	21.505	.999%	1.279%
5.0	3427.743	163.755	185.26	7.608%	11.018%
10.0	3005.391	286.062	471.322	13.290%	28.031%
15.0	2400.597	340.569	811.891	15.822%	48.285%
20.0	1507.451	282.608	1094.499	13.129%	65.092%
25.0	779.055	180.470	1274.969	8.384%	75.825%
30.0	451.084	123.628	1398.597	5.743%	83.178%
35.0	282.873	88.935	1487.532	4.132%	88.467%
40.0	182.195	64.194	1551.726	2.982%	92.284%
45.0	108.840	42.185	1593.911	1.960%	94.793%
50.0	64.588	27.120	1621.031	1.260%	96.406%
55.0	37.576	16.872	1637.903	.784%	97.410%
60.0	22.057	10.470	1648.374	.486%	98.032%
65.0	16.345	8.120	1656.494	.377%	98.515%
70.0	13.640	7.026	1663.519	.326%	98.933%
75.0	11.562	6.122	1669.641	.284%	99.297%
80.0	9.876	5.331	1674.972	.248%	99.614%
85.0	8.300	4.532	1679.504	.211%	99.884%
90.0	7.137	1.956	1681.46	.091%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1398.60	64.97%	83.18%
0-40	1551.73	72.09%	92.28%
0-60	1648.37	76.58%	98.03%
0-90	1679.50	78.03%	99.88%
0-120	1679.50	78.03%	99.88%
0-180	1681.46	78.12%	100.00%
60-90	41.60	1.93%	2.47%
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%
0-27.84	1345.17	62.49%	80.00%

ZONAL LUMEN SUMMARY

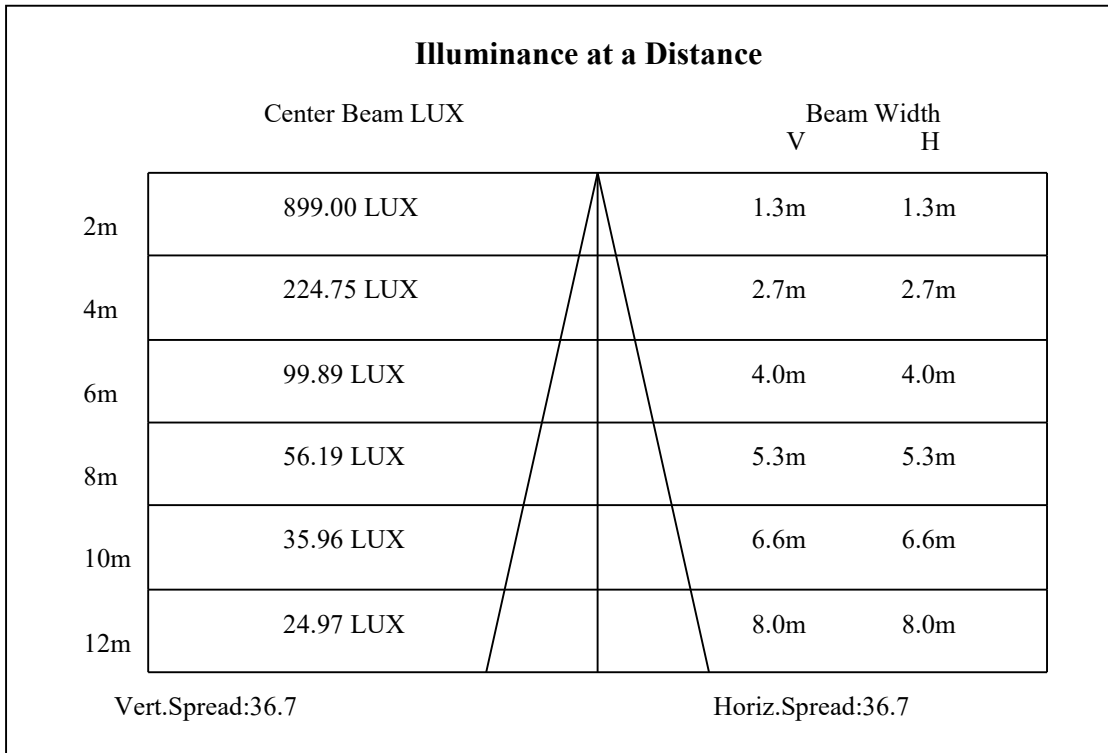
0-10	471.32
10-20	623.18
20-30	304.10
30-40	153.13
40-50	69.31
50-60	27.34
60-70	15.15
70-80	11.45
80-90	4.53
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

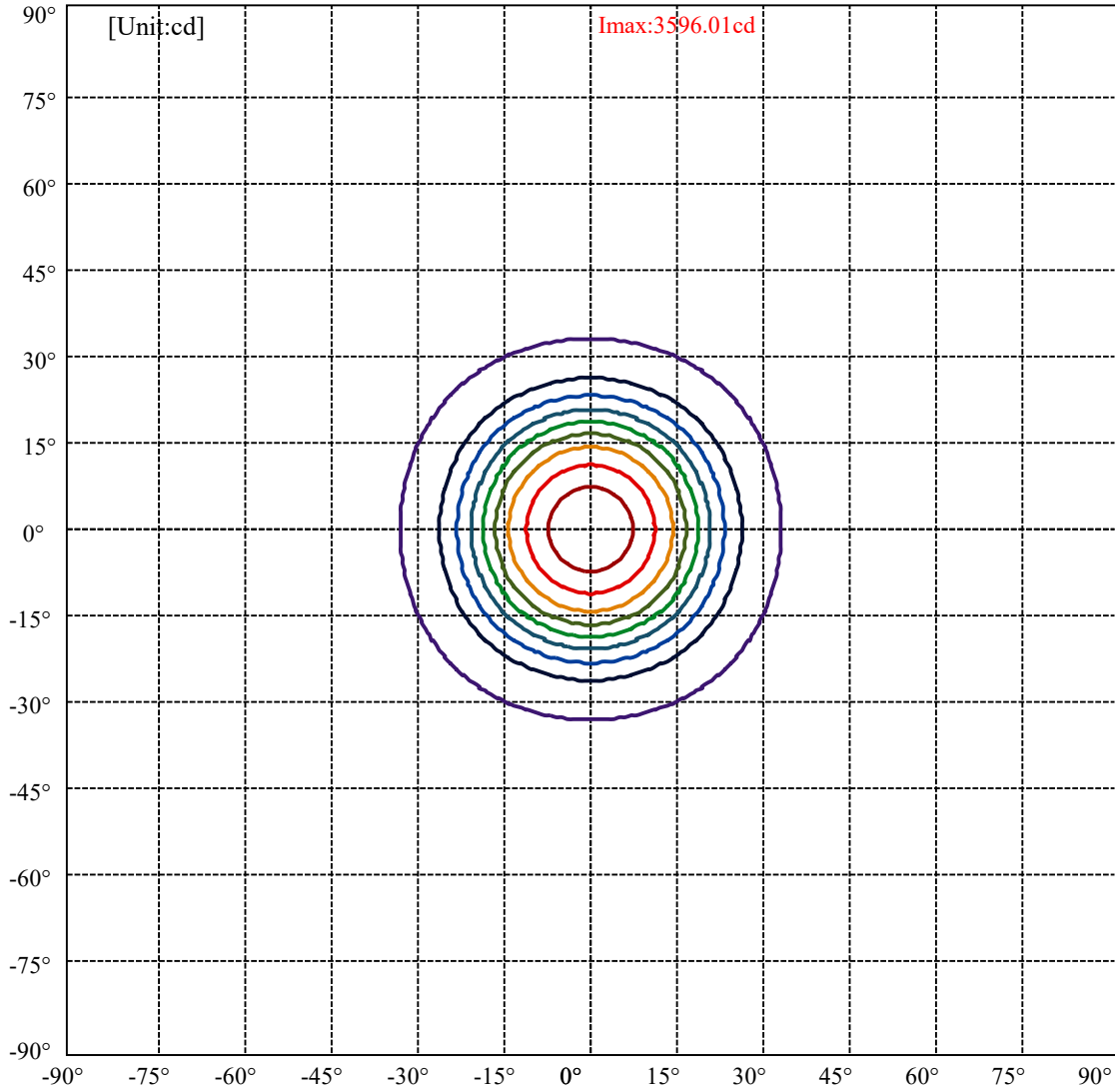


C0(Max): ———
C0/C180: ———
C90/C270: ———

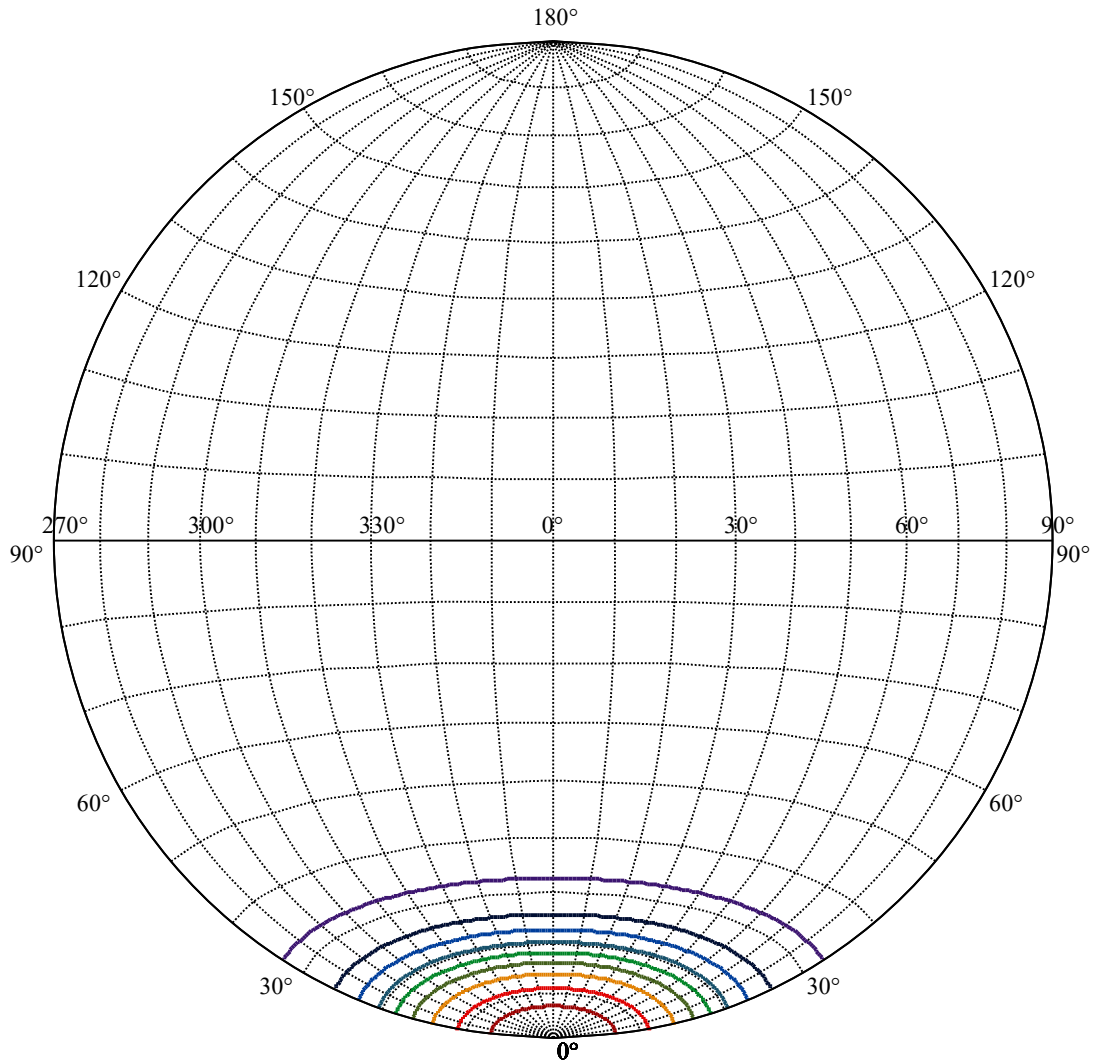
Field angle(10%Imax):C0/180Left:32.7 Right:32.7
:C90/270Left:32.7 Right:32.7

Beam Angle(50%Imax):C0/180Left:18.4 Right:18.4
:C90/270Left:18.4 Right:18.4





(10%Imax) 359.601	—
(20%Imax) 719.202	—
(30%Imax) 1078.8	—
(40%Imax) 1438.4	—
(50%Imax) 1798	—
(60%Imax) 2157.61	—
(70%Imax) 2517.21	—
(80%Imax) 2876.81	—
(90%Imax) 3236.41	—



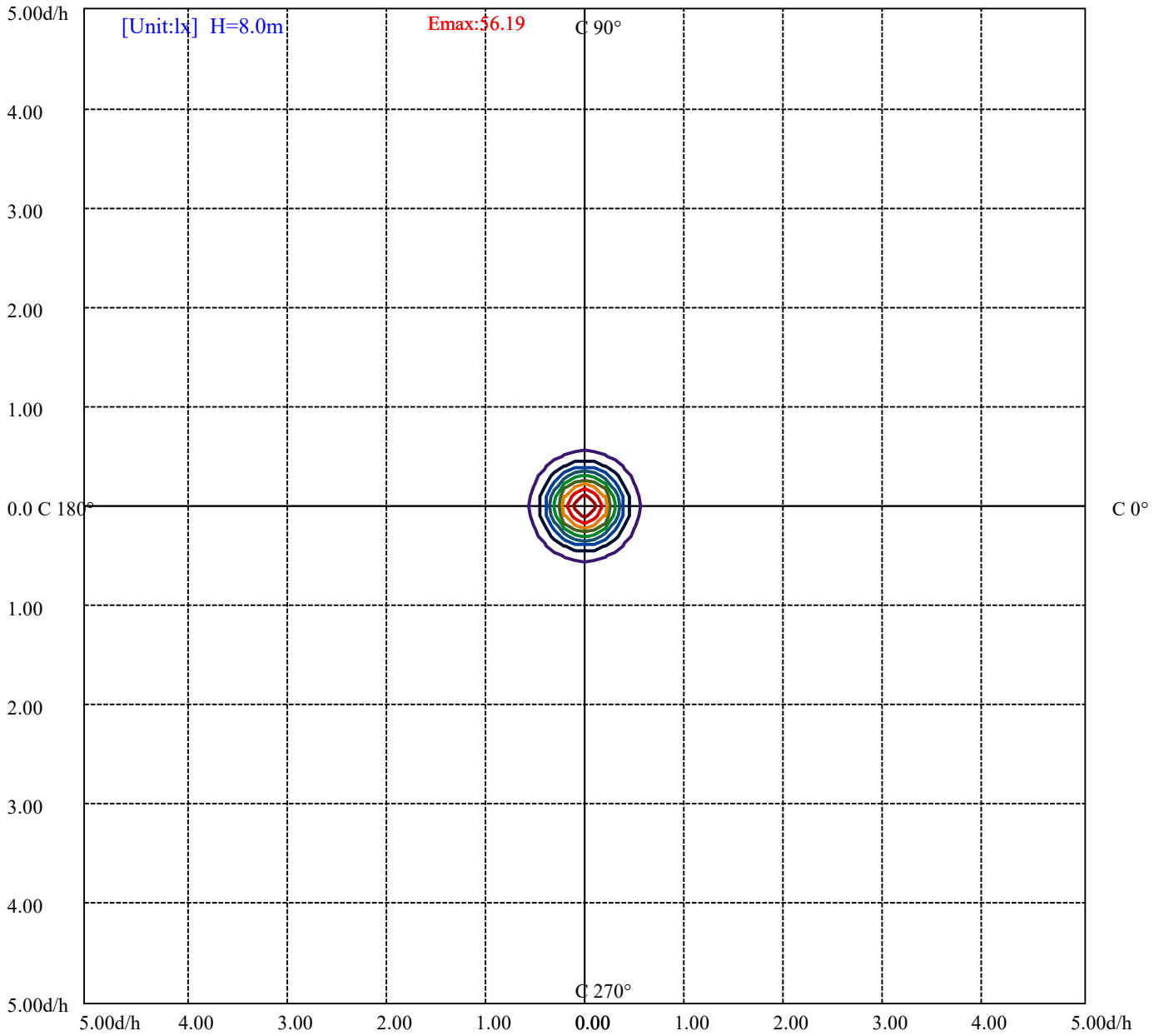
House

[Unit:cd]

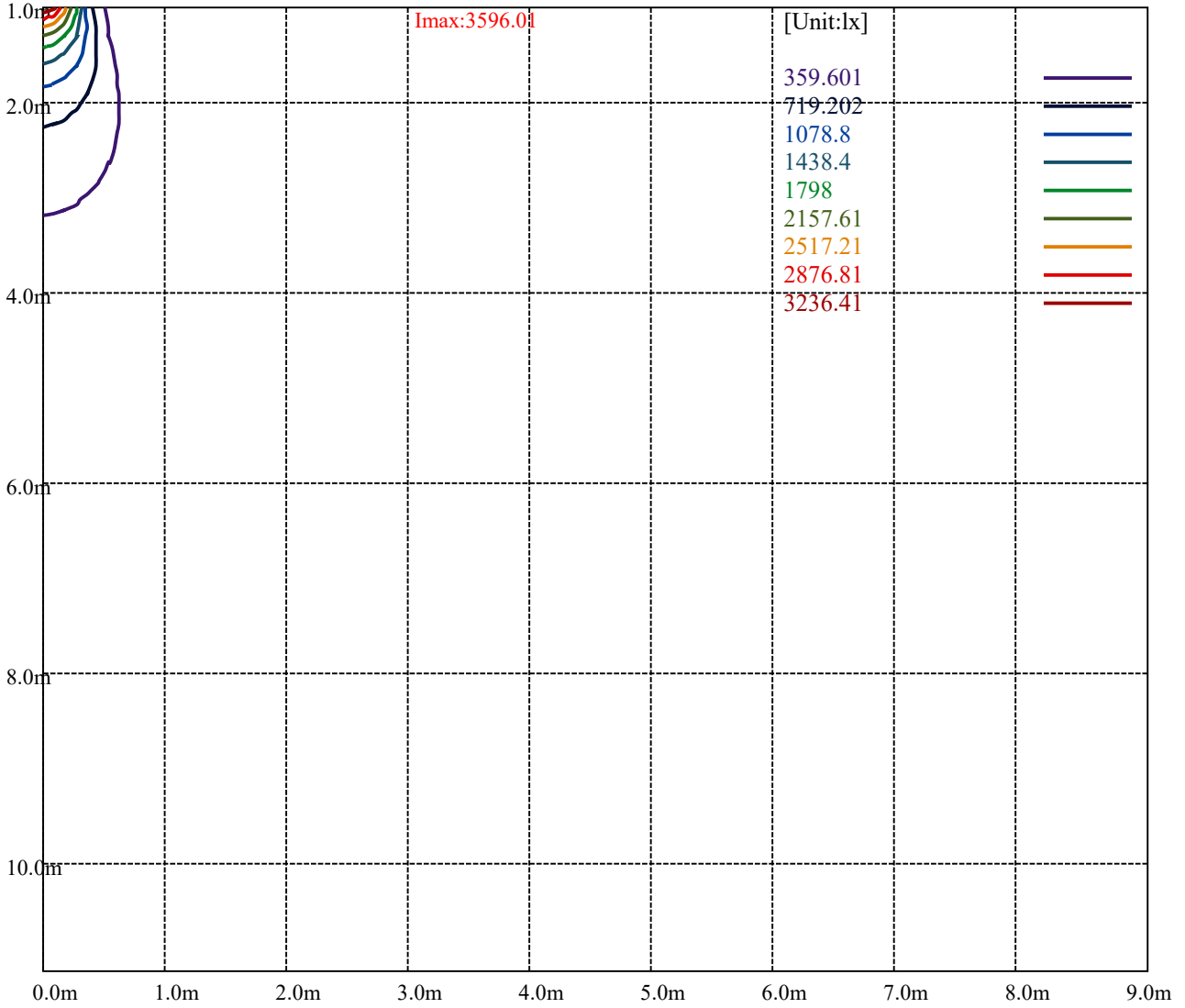
Road

Imax:3596.01

(10%Imax)	359.601	—
(20%Imax)	719.202	—
(30%Imax)	1078.8	—
(40%Imax)	1438.4	—
(50%Imax)	1798	—
(60%Imax)	2157.61	—
(70%Imax)	2517.21	—
(80%Imax)	2876.81	—
(90%Imax)	3236.41	—



- (10%Emax) 5.61875
- (20%Emax) 11.23752
- (30%Emax) 16.85625
- (40%Emax) 22.475
- (50%Emax) 28.09375
- (60%Emax) 33.7125
- (70%Emax) 39.33125
- (80%Emax) 44.95
- (90%Emax) 50.56875



Luminance Table

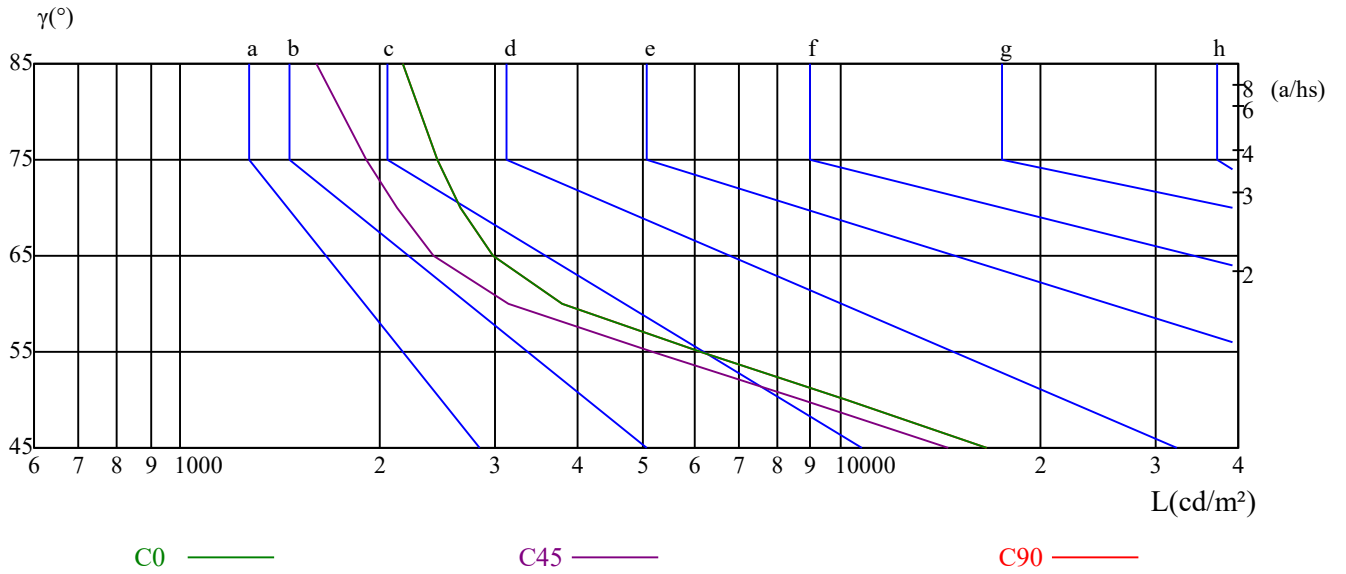
γ	45	50	55	60	65	70	75	80	85
C0	16658	10175	6147	3782	2968	2654	2443	2302	2175
C45	14505	8730	5193	3142	2422	2122	1909	1751	1602
C90	16658	10175	6147	3782	2968	2654	2443	2302	2175

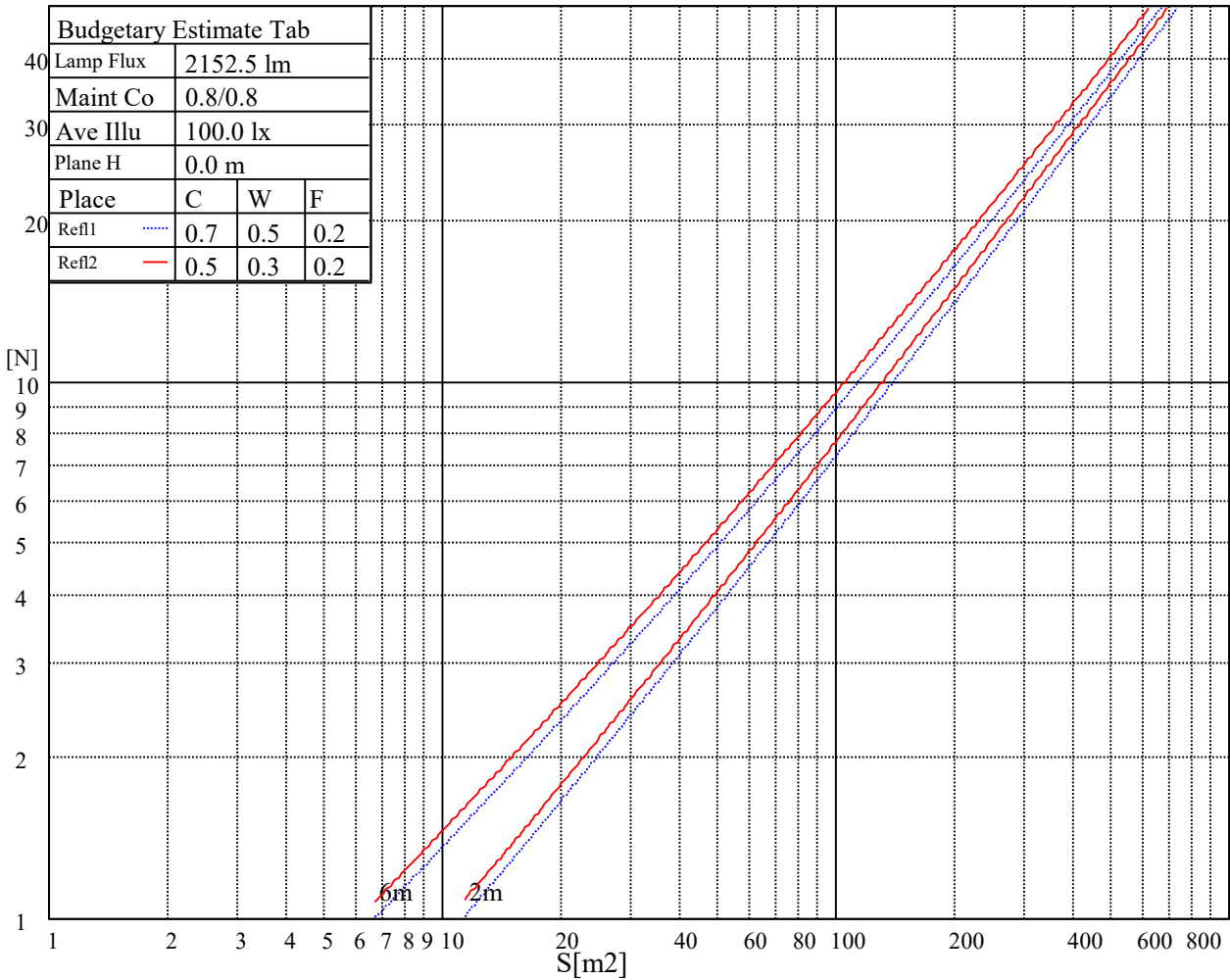
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6523	6523	6523	7534	7534	7534	16062	16062	16062

Glare Table

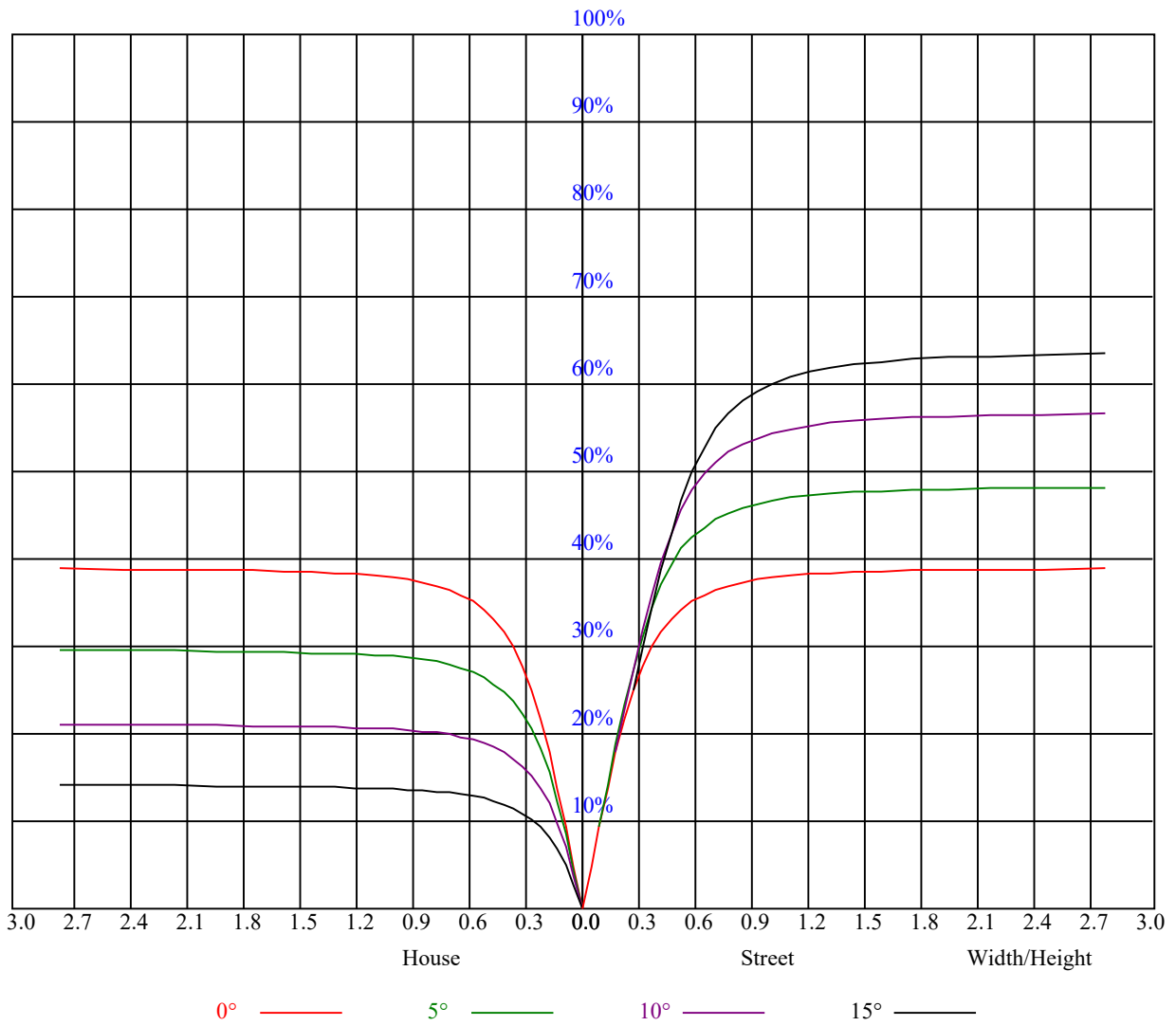
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

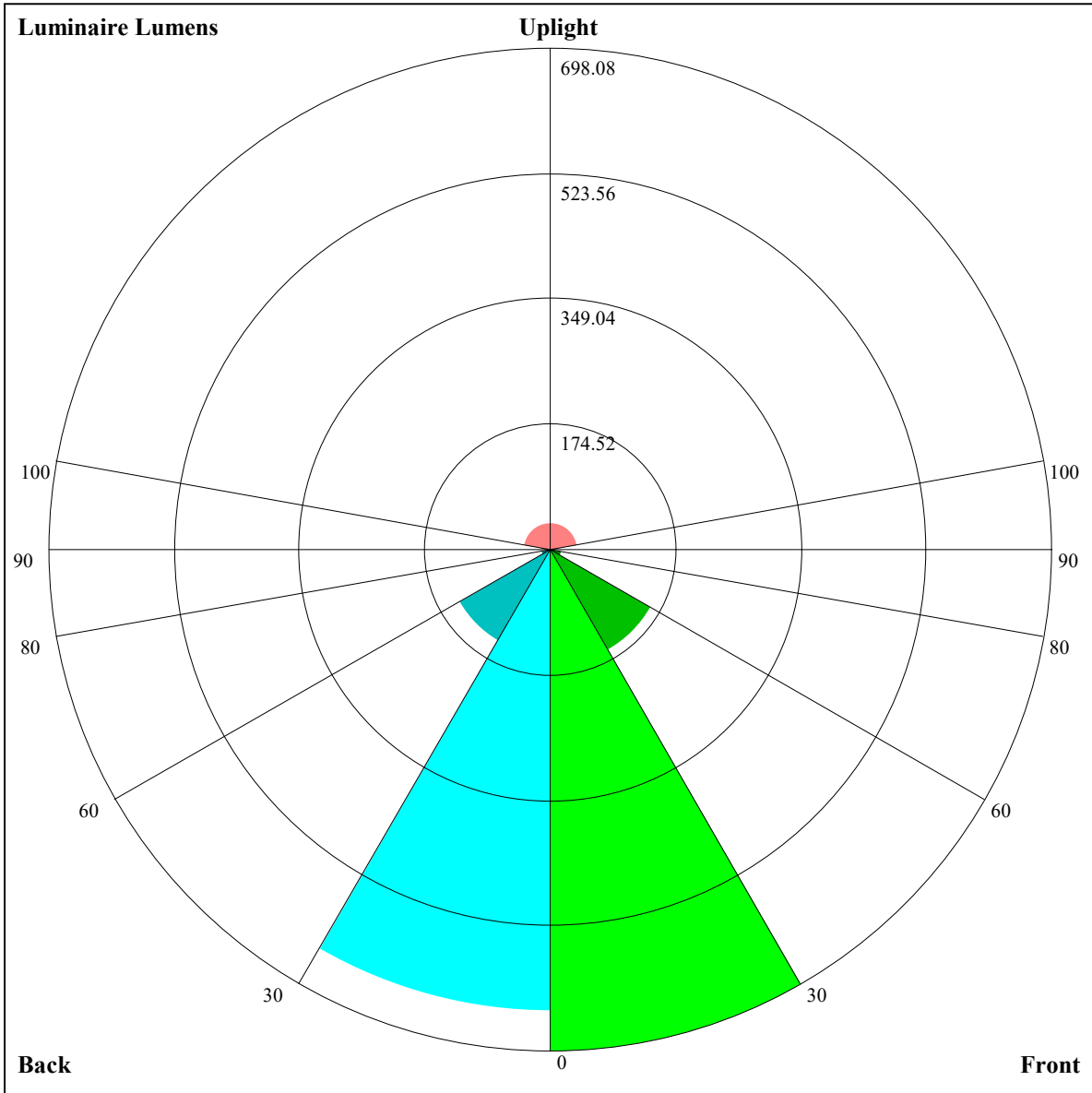
Luminance Limiting Curve





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	0.81	0.81	0.81	0.79
1	0.87	0.85	0.83	0.85	0.83	0.82	0.82	0.80	0.79	0.79	0.78	0.77	0.76	0.75	0.74	0.73
2	0.82	0.79	0.76	0.80	0.78	0.75	0.78	0.76	0.74	0.76	0.74	0.72	0.73	0.72	0.70	0.69
3	0.77	0.74	0.71	0.76	0.73	0.70	0.74	0.71	0.69	0.72	0.70	0.68	0.71	0.69	0.67	0.66
4	0.73	0.69	0.66	0.73	0.69	0.66	0.71	0.68	0.65	0.69	0.67	0.65	0.68	0.66	0.64	0.63
5	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.61	0.65	0.63	0.61	0.60
6	0.67	0.63	0.60	0.66	0.62	0.60	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	0.63	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	0.52	0.50	0.55	0.52	0.50	0.49





Luminaire Lumens:

FL=698.08,FM=160.81,FH=14.87,FVH=4.64

BL=642.78,BM=147.93,BH=14.42,BVH=4.54

UL=7.79,UH=37.05

BUG Rating:B2-U2-G0

Nata 3-1700-N

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	3594.63	3488.92	3136.56	2555.17	1757.95	915.04	499.91	308.87	201.12
45.0	3586.92	3516.45	3155.28	2594.81	1865.31	968.44	530.19	325.38	211.14
90.0	3600.14	3442.13	3000.02	2397.71	1597.19	783.12	450.09	280.57	185.32
135.0	3602.34	3444.88	3061.69	2479.19	1653.34	813.18	478.99	294.55	187.96
180.0	3594.63	3362.29	2870.09	2233.09	1065.29	644.49	396.46	250.62	161.98
225.0	3586.92	3334.77	2840.36	2146.10	1074.26	625.00	387.60	249.19	156.80
270.0	3600.14	3415.15	2990.11	2442.30	1554.79	743.26	431.09	284.09	176.18
315.0	3602.34	3417.35	2989.01	2356.41	1491.48	739.90	434.34	269.72	177.06
360.0	3594.63	3488.92	3136.56	2555.17	1757.95	915.04	499.91	308.87	201.12

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	121.45	71.63	43.44	24.11	16.85	13.93	11.95	10.19	8.53
45.0	124.81	73.61	42.45	24.56	17.18	14.26	12.06	10.30	8.75
90.0	110.99	64.03	38.70	22.41	16.63	13.98	11.84	10.19	8.64
135.0	114.30	68.05	38.65	23.18	16.79	13.87	11.73	10.08	8.53
180.0	98.06	58.52	33.20	19.99	15.69	13.21	11.12	9.47	7.98
225.0	91.61	55.83	31.71	19.55	15.47	12.99	10.96	9.19	7.76
270.0	105.71	64.69	38.76	21.86	16.35	13.65	11.51	9.91	8.09
315.0	103.78	60.34	33.69	20.81	15.80	13.21	11.34	9.69	8.09
360.0	121.45	71.63	43.44	24.11	16.85	13.93	11.95	10.19	8.53

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