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## Nata

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### Client:

LumCAT: 3-1742-N

Luminaire: 92.70.045.00+92.70.061.00

Report No: nata-0100

Voltage(V): 36.2000

Test No: GC2018052906

Current(A): 0.5000

LampCAT: NICHIA NFDWJ130B-V3

Power (W): 18.1000

Lamp flux(lm): 2390.3

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 86

Width(mm): 86

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 1868.04, Efficiency(%): 78.15% , Luminous Efficacy(lm/W): 103.21

Central intensity(cd): 7223.675, Maximum intensity(cd): 7223.675

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=24.0

[C90/270]Total=24.0

Field angle(10%Imax): [C0/180]Total=48.2

[C90/270]Total=48.2

Maximum s/h(1/2): C0\_180=0.41 C90\_270=0.41

Maximum s/h(1/4): C0\_180=0.42 C90\_270=0.42

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 79.88%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 95.848%

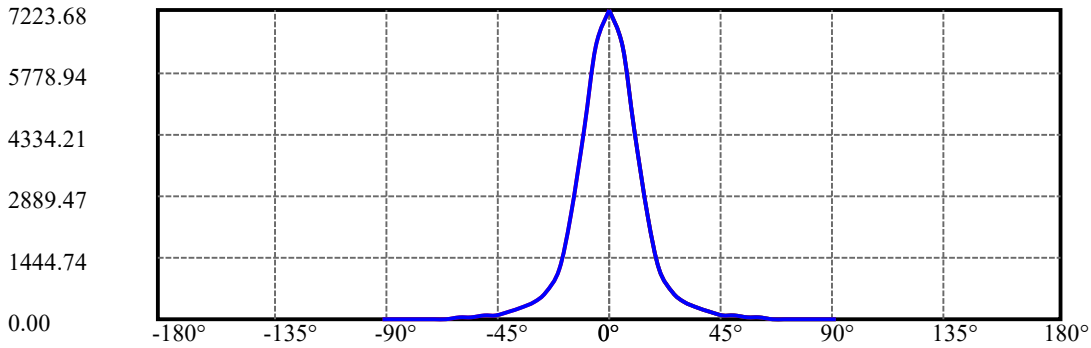
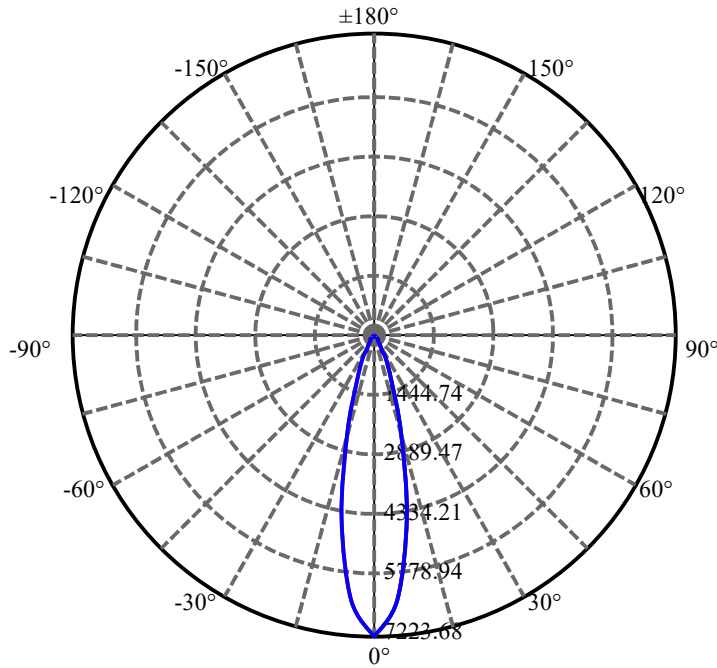
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7223.675	43.199	43.199	1.807%	2.313%
5.0	6391.153	305.327	348.526	12.774%	18.657%
10.0	4433.279	421.973	770.499	17.653%	41.246%
15.0	2412.296	342.229	1112.727	14.317%	59.567%
20.0	1156.370	216.789	1329.517	9.070%	71.172%
25.0	632.798	146.589	1476.106	6.133%	79.019%
30.0	407.548	111.696	1587.802	4.673%	84.998%
35.0	262.750	82.608	1670.41	3.456%	89.421%
40.0	169.126	59.589	1730	2.493%	92.611%
45.0	107.690	41.740	1771.74	1.746%	94.845%
50.0	67.912	28.516	1800.256	1.193%	96.371%
55.0	40.184	18.043	1818.299	.755%	97.337%
60.0	25.023	11.879	1830.177	.497%	97.973%
65.0	18.437	9.159	1839.336	.383%	98.464%
70.0	15.856	8.167	1847.504	.342%	98.901%
75.0	13.682	7.244	1854.747	.303%	99.289%
80.0	11.493	6.204	1860.952	.260%	99.621%
85.0	9.132	4.987	1865.938	.209%	99.888%
90.0	7.660	2.099	1868.038	.088%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1587.80	66.43%	85.00%
0-40	1730.00	72.38%	92.61%
0-60	1830.18	76.57%	97.97%
0-90	1865.94	78.06%	99.89%
0-120	1865.94	78.06%	99.89%
0-180	1868.04	78.15%	100.00%
60-90	47.64	1.99%	2.55%
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%
0-25.82	1494.43	62.52%	80.00%

ZONAL LUMEN SUMMARY

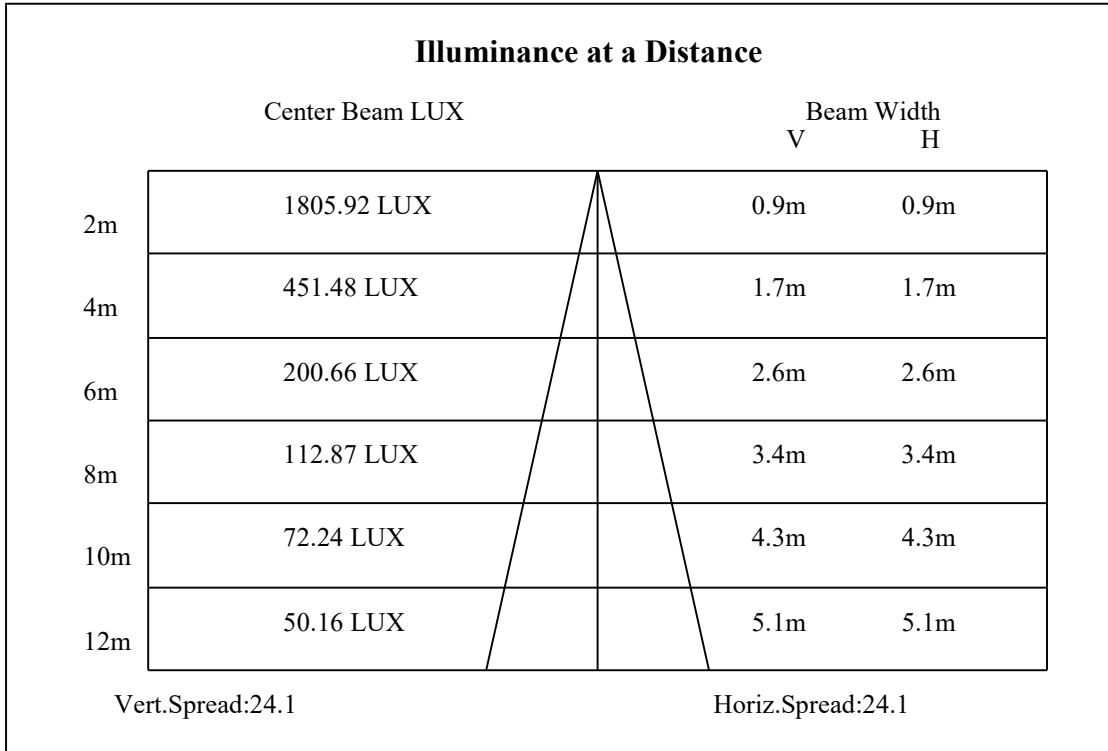
0-10	770.50
10-20	559.02
20-30	258.29
30-40	142.20
40-50	70.26
50-60	29.92
60-70	17.33
70-80	13.45
80-90	4.99
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

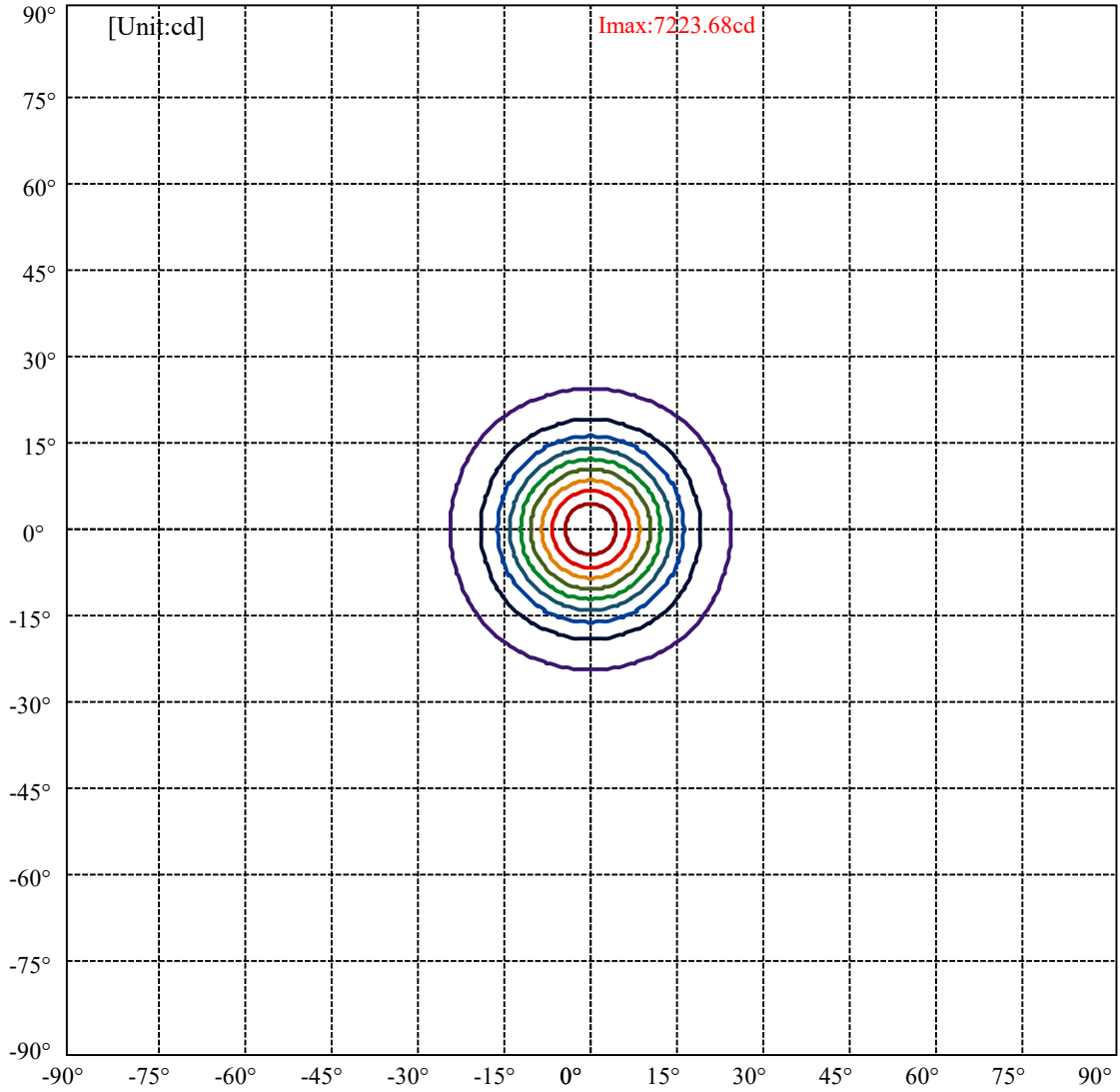


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

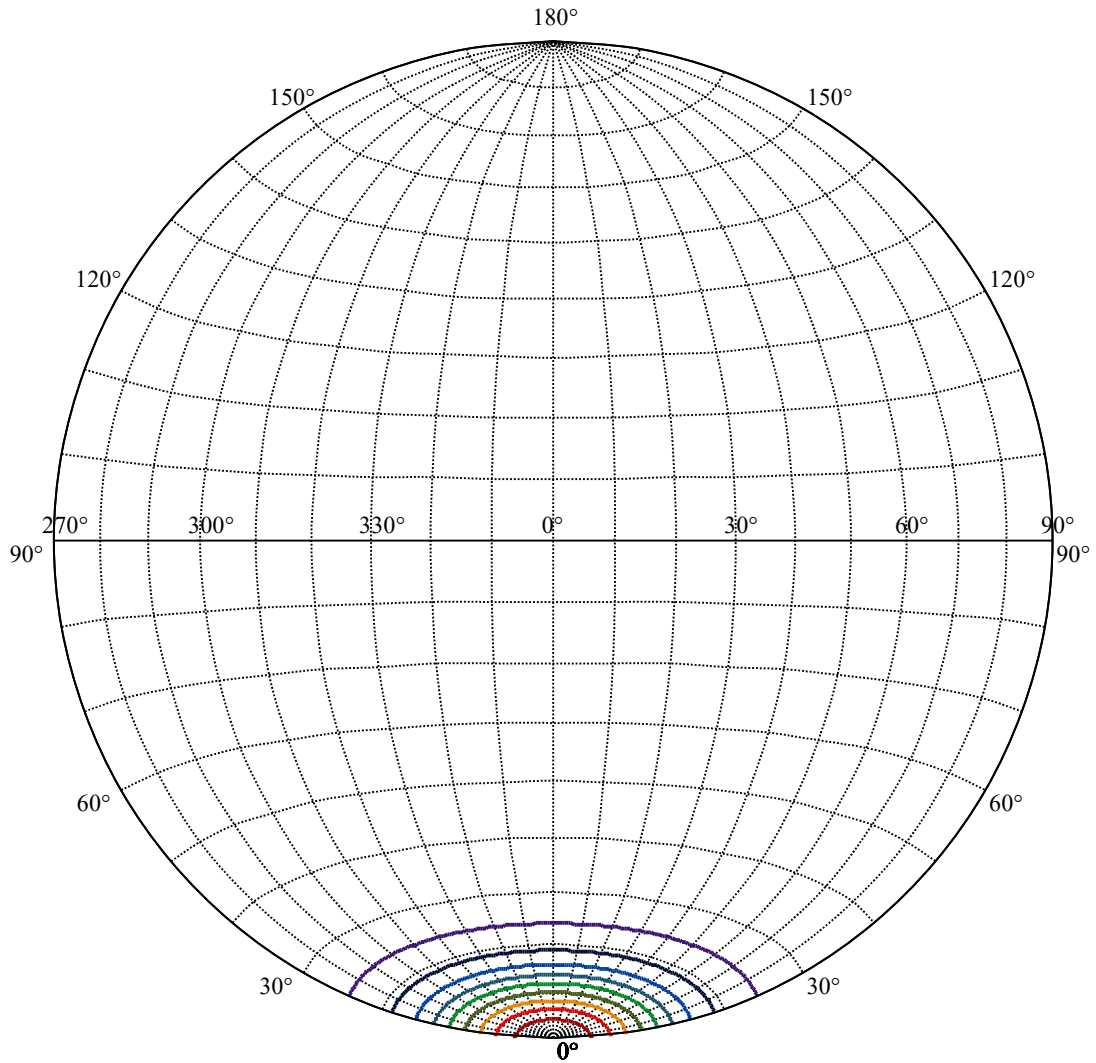
Field angle(10%Imax):C0/180Left:24.1 Right:24.1  
:C90/270Left:24.1 Right:24.1

Beam Angle(50%Imax):C0/180Left:12.0 Right:12.0  
:C90/270Left:12.0 Right:12.0





(10%Imax) 722.368	—
(20%Imax) 1444.74	—
(30%Imax) 2167.1	—
(40%Imax) 2889.47	—
(50%Imax) 3611.84	—
(60%Imax) 4334.21	—
(70%Imax) 5056.57	—
(80%Imax) 5778.94	—
(90%Imax) 6501.31	—



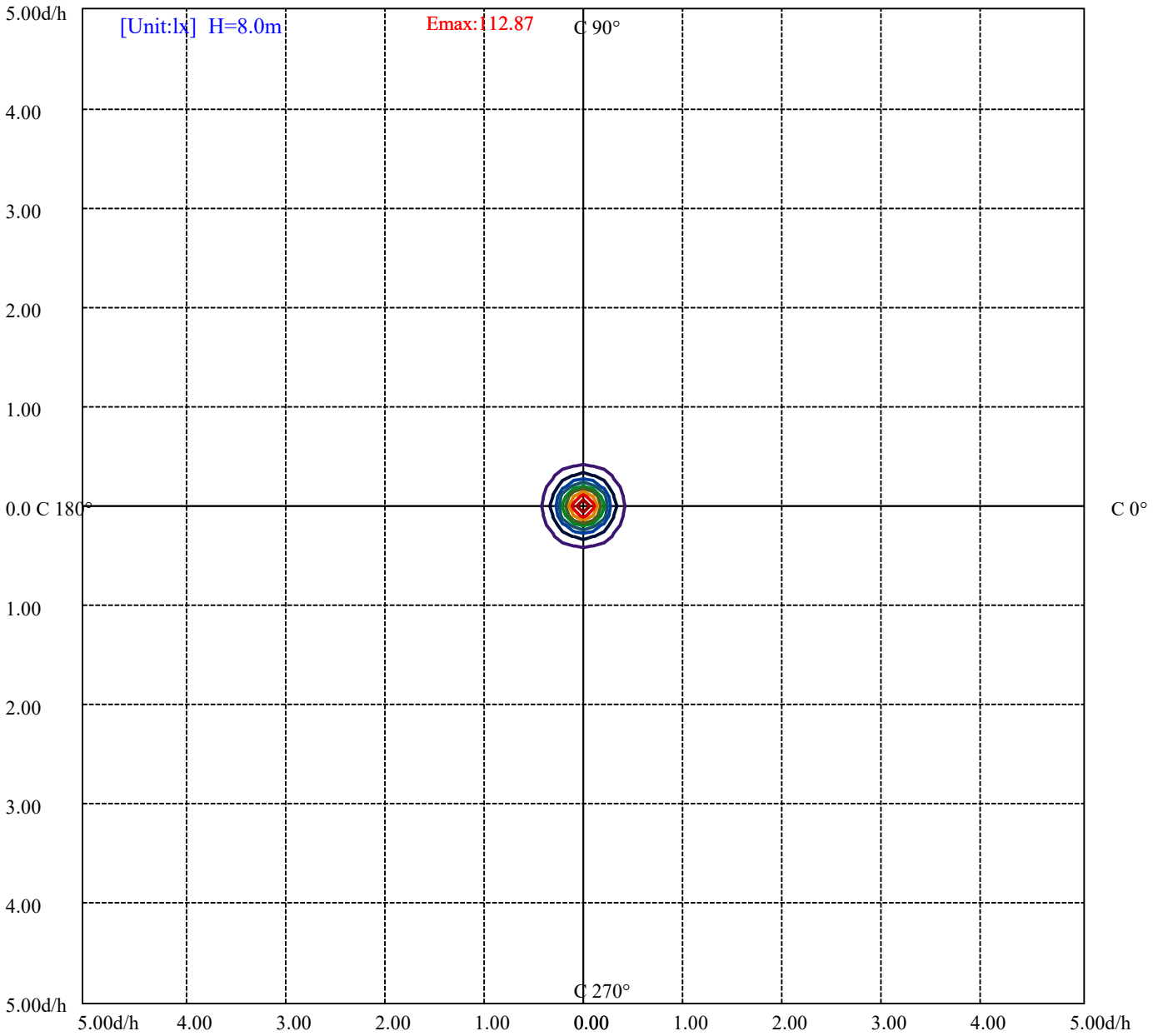
House

[Unit:cd]

Road

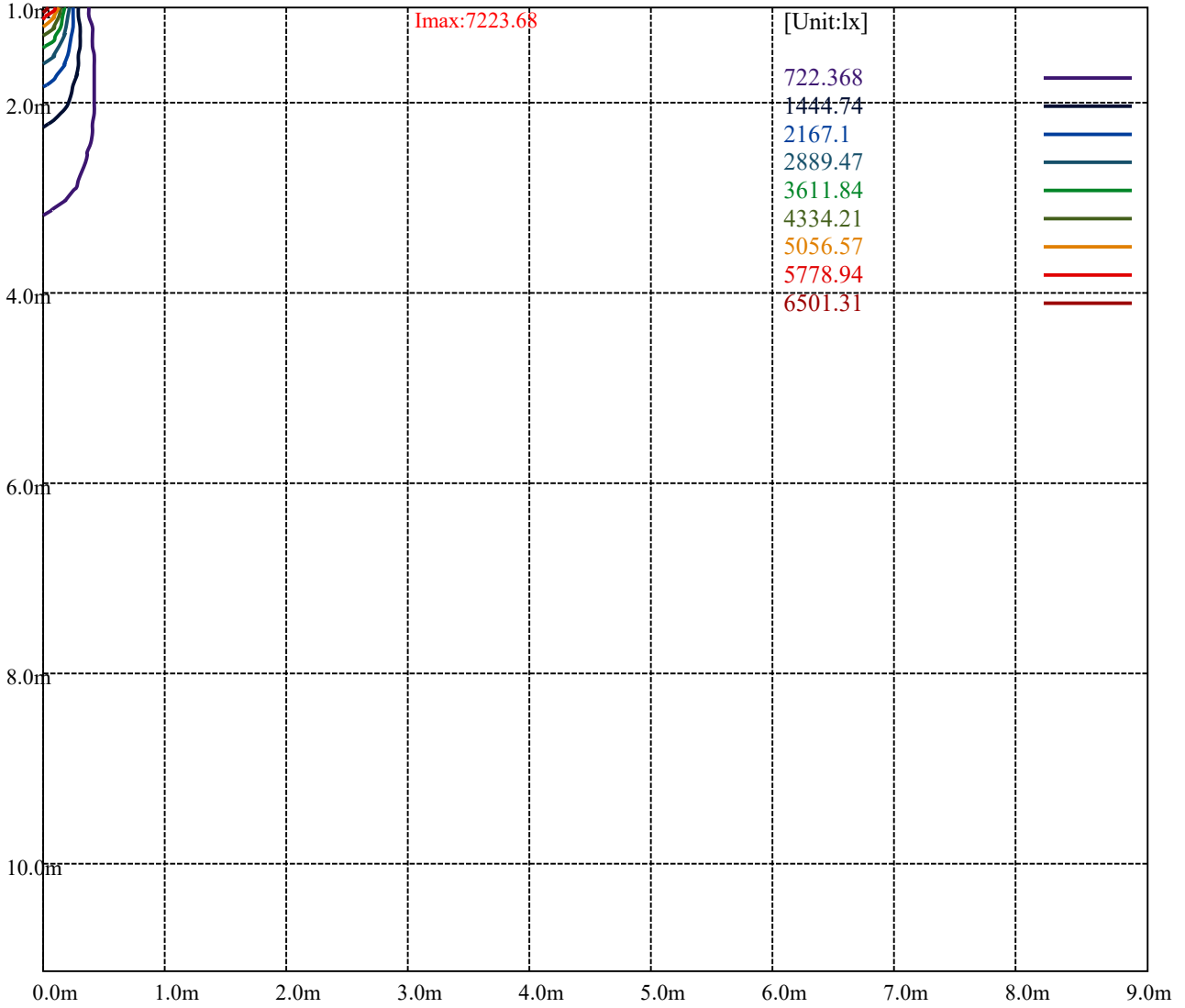
Imax:7223.68

(10%Imax)	722.368	—
(20%Imax)	1444.74	—
(30%Imax)	2167.1	—
(40%Imax)	2889.47	—
(50%Imax)	3611.84	—
(60%Imax)	4334.21	—
(70%Imax)	5056.57	—
(80%Imax)	5778.94	—
(90%Imax)	6501.31	—



- (10%Emax) 11.28695
- (20%Emax) 22.57391
- (30%Emax) 33.86094
- (40%Emax) 45.14781
- (50%Emax) 56.43484
- (60%Emax) 67.72172
- (70%Emax) 79.00875
- (80%Emax) 90.29562
- (90%Emax) 101.5827





Luminance Table

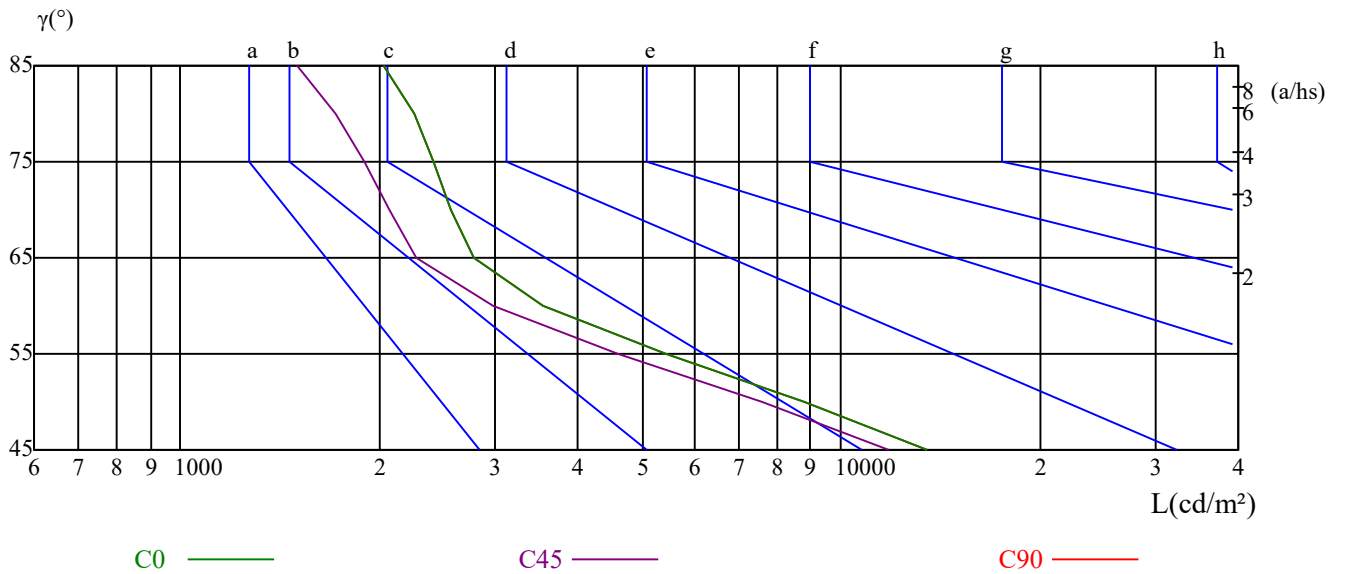
$\gamma$	45	50	55	60	65	70	75	80	85
C0	13518	8798	5421	3550	2780	2571	2420	2256	2029
C45	11834	7591	4605	2966	2280	2067	1900	1722	1498
C90	13518	8798	5421	3550	2780	2571	2420	2256	2029

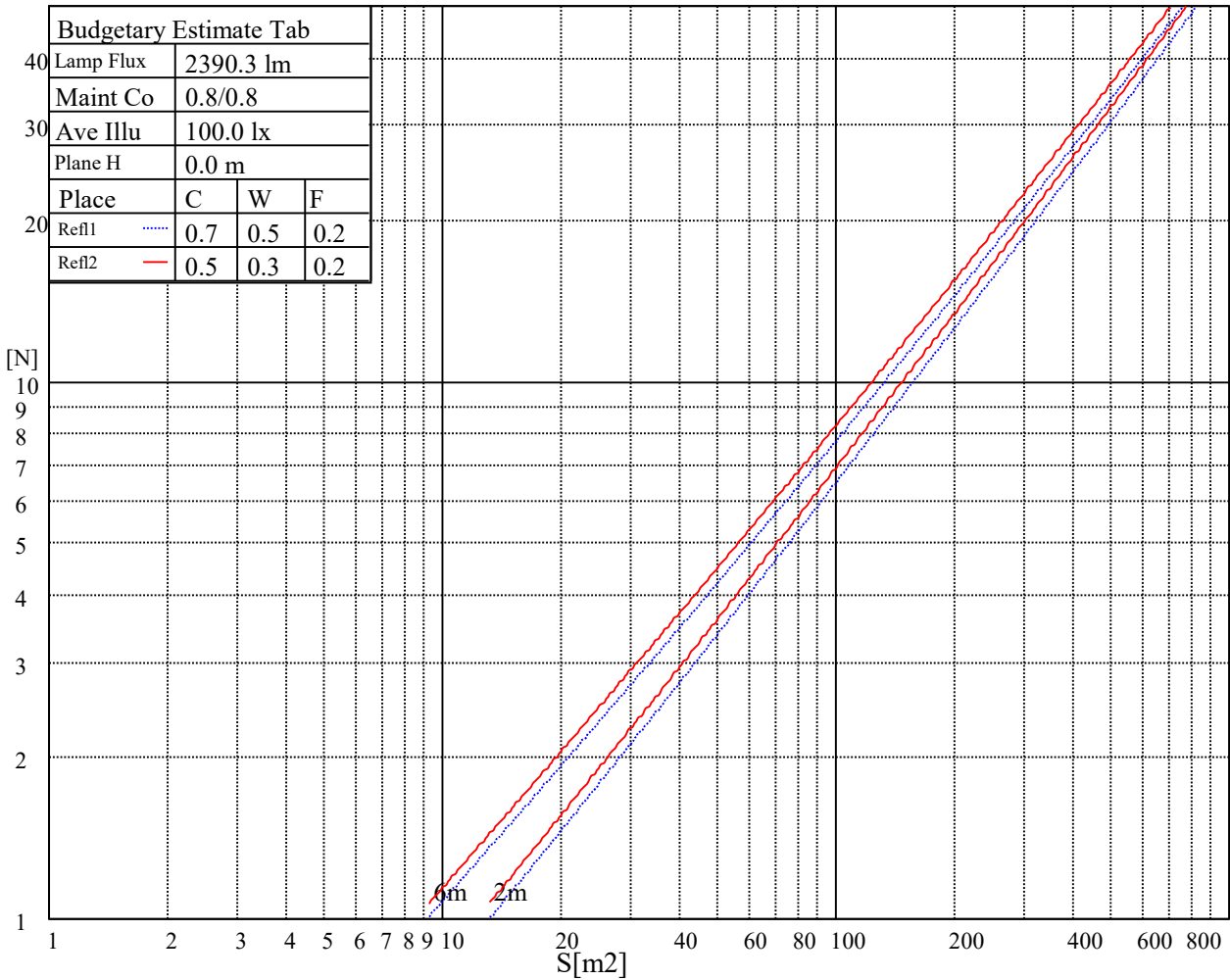
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5899	5899	5899	7147	7147	7147	14168	14168	14168

Glare Table

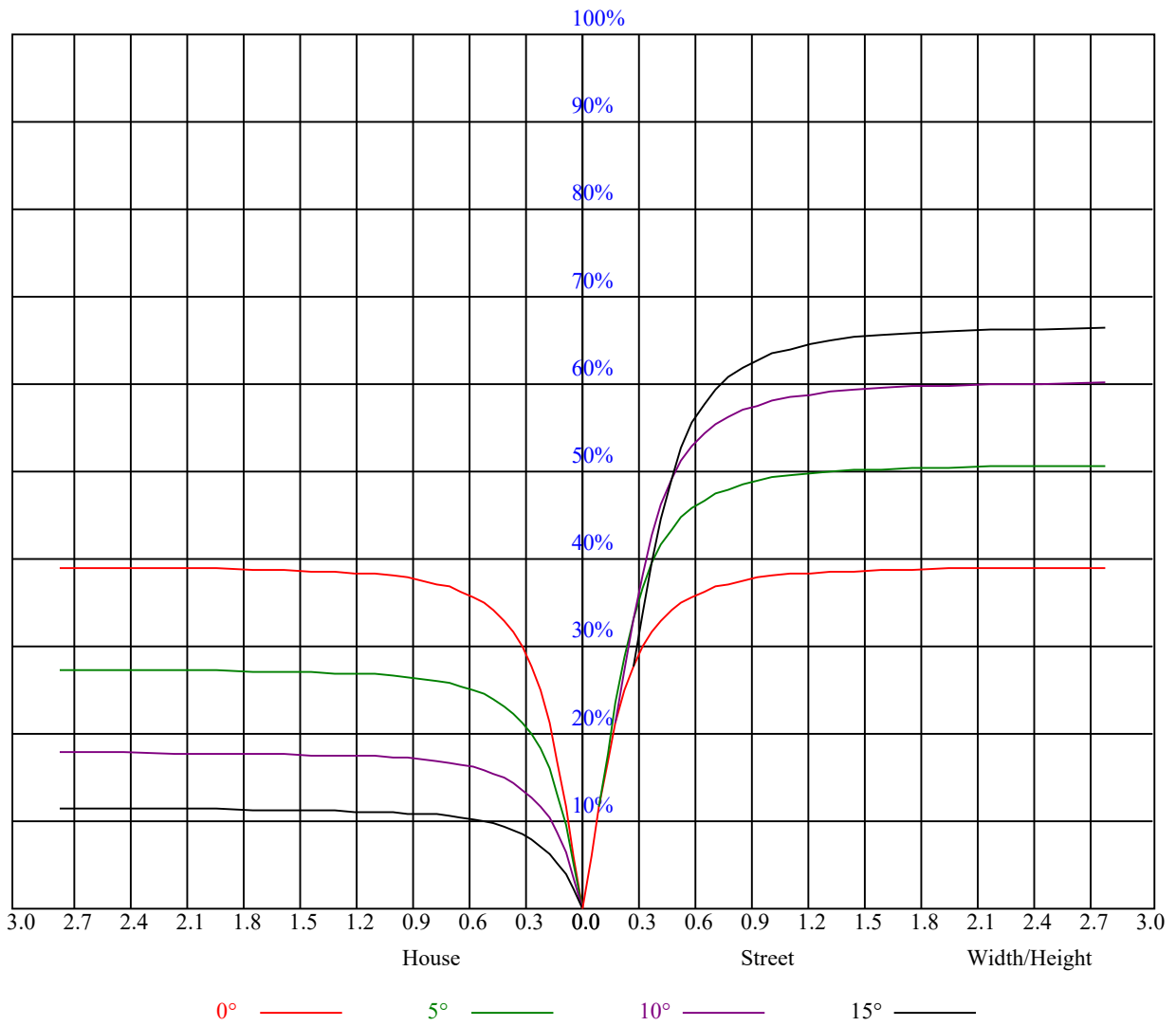
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

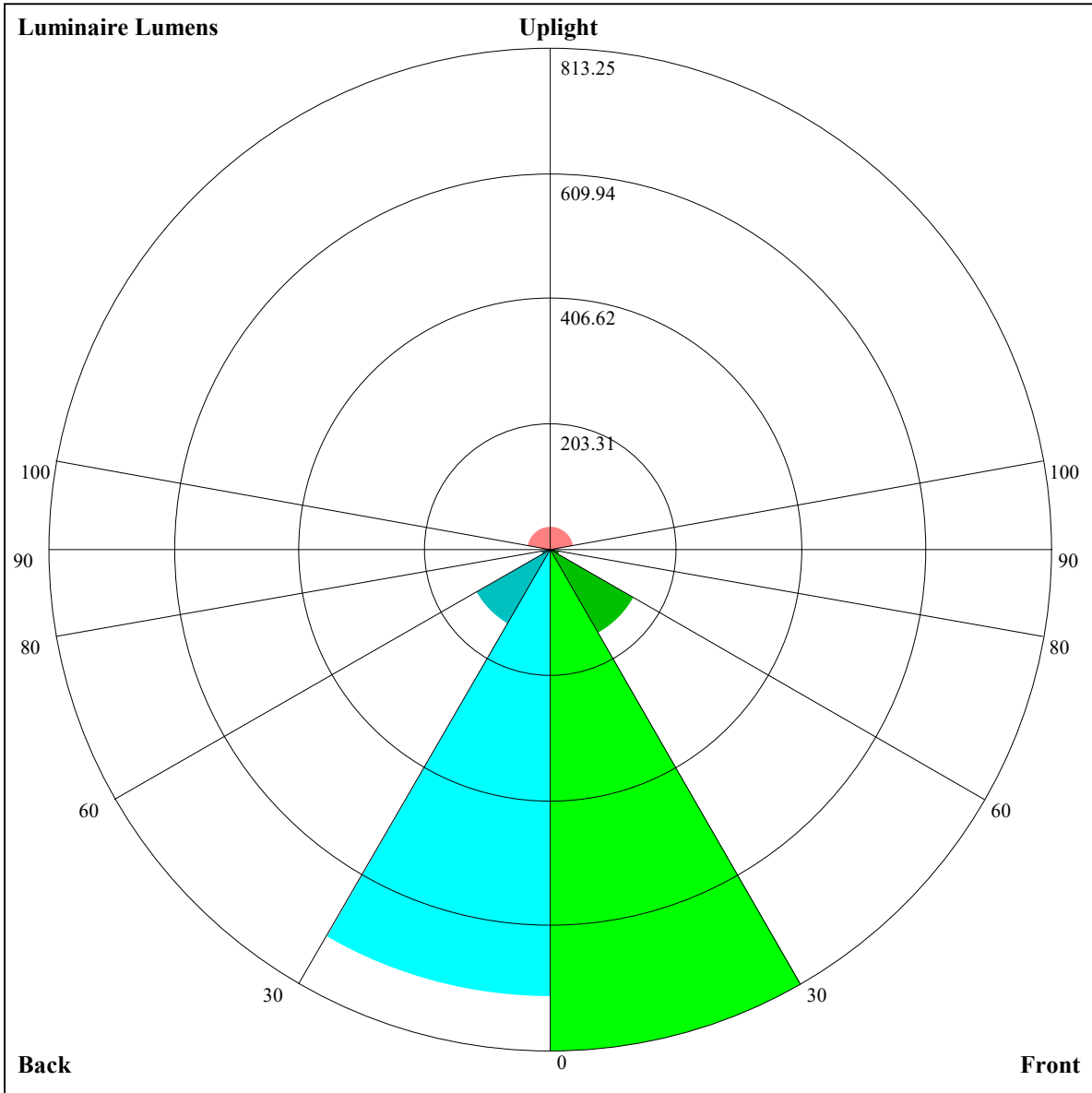
Luminance Limiting Curve





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	0.95	0.95	0.95	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85	0.82	0.82	0.82	0.80
1	0.87	0.85	0.83	0.85	0.83	0.81	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	0.81	0.78	0.76	0.78	0.76	0.74	0.76	0.74	0.72	0.74	0.72	0.71	0.70
3	0.78	0.75	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.71	0.70	0.68	0.67
4	0.75	0.71	0.68	0.74	0.70	0.68	0.72	0.69	0.67	0.71	0.68	0.66	0.69	0.67	0.65	0.64
5	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.66	0.64	0.68	0.66	0.63	0.67	0.65	0.63	0.62
6	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.65	0.63	0.61	0.60
7	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.58
8	0.64	0.60	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.62	0.59	0.57	0.62	0.59	0.57	0.56
9	0.62	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.60	0.57	0.55	0.55
10	0.61	0.57	0.54	0.60	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.54	0.59	0.56	0.54	0.53





Luminaire Lumens:

FL=813.25,FM=155.26,FH=17.22,FVH=5.19

BL=725.87,BM=140.54,BH=16.46,BVH=5.01

UL=8.36,UH=39.77

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	7215.69	6765.33	5028.85	2909.18	1487.62	737.21	458.62	290.15	187.91
45.0	7193.67	6877.09	5194.57	3087.01	1472.76	719.59	477.34	284.09	186.48
90.0	7261.94	6499.41	4545.46	2439.55	1072.50	621.59	397.89	254.36	167.54
135.0	7223.40	6612.82	4580.69	2408.17	1102.78	601.22	384.29	289.60	165.50
180.0	7215.69	6017.11	3810.45	1882.93	919.55	531.29	346.25	224.69	146.51
225.0	7193.67	5975.82	3819.81	1912.66	963.38	559.65	355.83	219.29	151.18
270.0	7261.94	6196.60	4367.07	2376.23	1161.14	672.24	434.95	282.44	177.78
315.0	7223.40	6185.04	4119.32	2282.64	1071.23	619.60	405.22	257.39	170.12
360.0	7215.69	6765.33	5028.85	2909.18	1487.62	737.21	458.62	290.15	187.91

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	120.79	78.18	46.30	28.30	19.32	16.63	14.31	12.22	9.63
45.0	122.94	79.61	47.68	29.35	19.77	16.79	14.53	12.55	9.86
90.0	109.18	69.32	40.63	25.93	18.83	16.19	14.15	11.84	9.69
135.0	106.92	67.83	41.29	25.60	18.77	16.19	14.15	11.89	9.41
180.0	92.16	58.30	34.13	21.69	17.73	15.31	13.10	10.85	8.59
225.0	93.93	57.26	34.47	21.31	17.23	14.98	12.77	10.52	8.42
270.0	111.05	67.28	38.76	24.28	17.95	15.42	13.27	11.01	8.64
315.0	104.55	65.52	38.21	23.73	17.89	15.36	13.16	11.07	8.81
360.0	120.79	78.18	46.30	28.30	19.32	16.63	14.31	12.22	9.63

C/γ(°)	90.0
0.0	7.82
45.0	7.82
90.0	7.65
135.0	7.60
180.0	7.60
225.0	7.60
270.0	7.60
315.0	7.60
360.0	7.82