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Nata

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Client:

LumCAT: 3-1703-N

Luminaire: 92.70.045.00+92.70.061.00

Report No: nata-0100

Test No: GC2018052905

LampCAT: NICHIA NFDWJ130B-V3

Lamp flux(lm): 2390.3

Number of Lamps: 1

Length(mm): 86

Phm Type: C

Voltage(V): 36.2000

Current(A): 0.5000

Power (W): 18.1000

PF: 0.0000

Ballast type: DC

Width(mm): 86

Height(mm): 0

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Photometric Results

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Lumens(lm): 1868.84, Efficiency(%): 78.18% , Luminous Efficacy(lm/W): 103.25

Central intensity(cd): 4188.553, Maximum intensity(cd): 4188.553

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

Beam Angle(50%Imax): [C0/180]Total=35.4

[C90/270]Total=35.4

Field angle(10%Imax): [C0/180]Total=64.0

[C90/270]Total=64.0

Maximum s/h(1/2): C0\_180=0.57 C90\_270=0.57

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(%): 79.16%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 96.668%

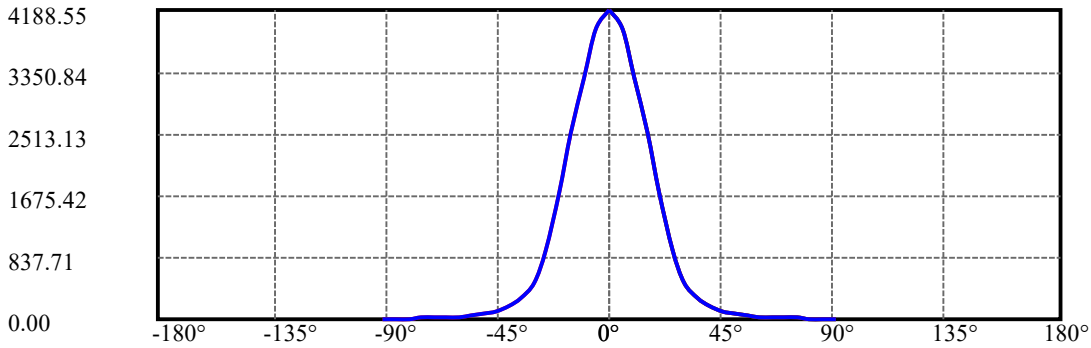
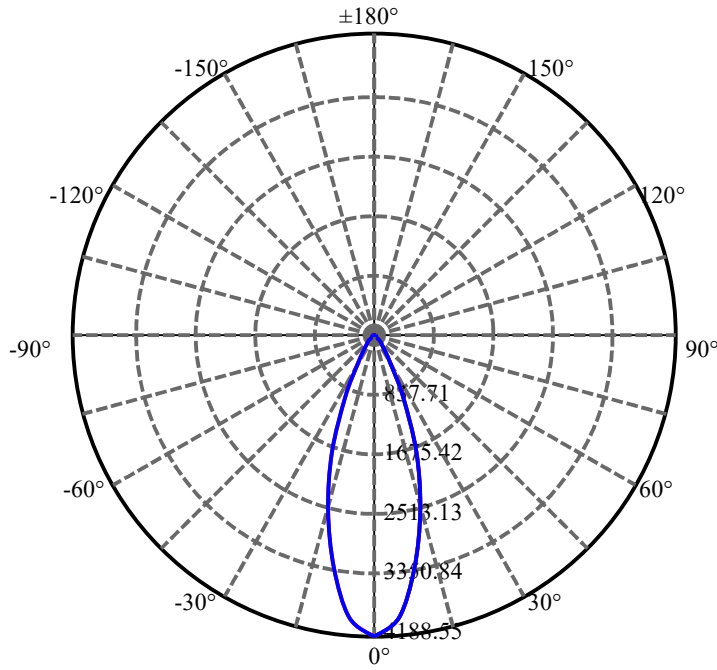
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4188.553	25.048	25.048	1.048%	1.340%
5.0	3926.691	187.591	212.639	7.848%	11.378%
10.0	3279.641	312.166	524.806	13.060%	28.082%
15.0	2510.916	356.220	881.025	14.903%	47.143%
20.0	1725.880	323.558	1204.583	13.536%	64.456%
25.0	949.379	219.926	1424.509	9.201%	76.224%
30.0	501.908	137.557	1562.067	5.755%	83.585%
35.0	295.563	92.925	1654.991	3.888%	88.557%
40.0	186.091	65.566	1720.558	2.743%	92.065%
45.0	116.410	45.119	1765.677	1.888%	94.480%
50.0	73.225	30.747	1796.424	1.286%	96.125%
55.0	43.605	19.579	1816.003	.819%	97.173%
60.0	27.528	13.068	1829.071	.547%	97.872%
65.0	19.910	9.891	1838.962	.414%	98.401%
70.0	16.909	8.710	1847.671	.364%	98.867%
75.0	14.184	7.510	1855.181	.314%	99.269%
80.0	11.748	6.342	1861.523	.265%	99.608%
85.0	9.442	5.156	1866.678	.216%	99.884%
90.0	7.901	2.165	1868.844	.091%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1562.07	65.35%	83.58%
0-40	1720.56	71.98%	92.07%
0-60	1829.07	76.52%	97.87%
0-90	1866.68	78.09%	99.88%
0-120	1866.68	78.09%	99.88%
0-180	1868.84	78.18%	100.00%
60-90	50.68	2.12%	2.71%
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%
0-27.56	1495.08	62.55%	80.00%

ZONAL LUMEN SUMMARY

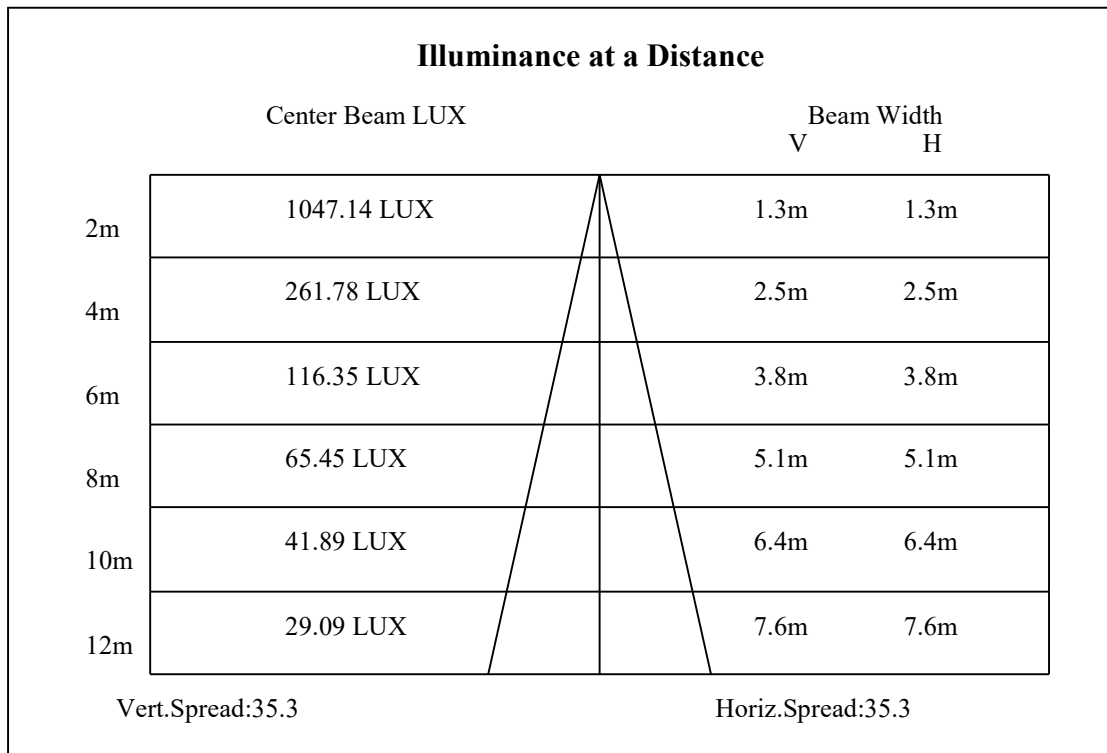
0-10	524.81
10-20	679.78
20-30	357.48
30-40	158.49
40-50	75.87
50-60	32.65
60-70	18.60
70-80	13.85
80-90	5.16
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

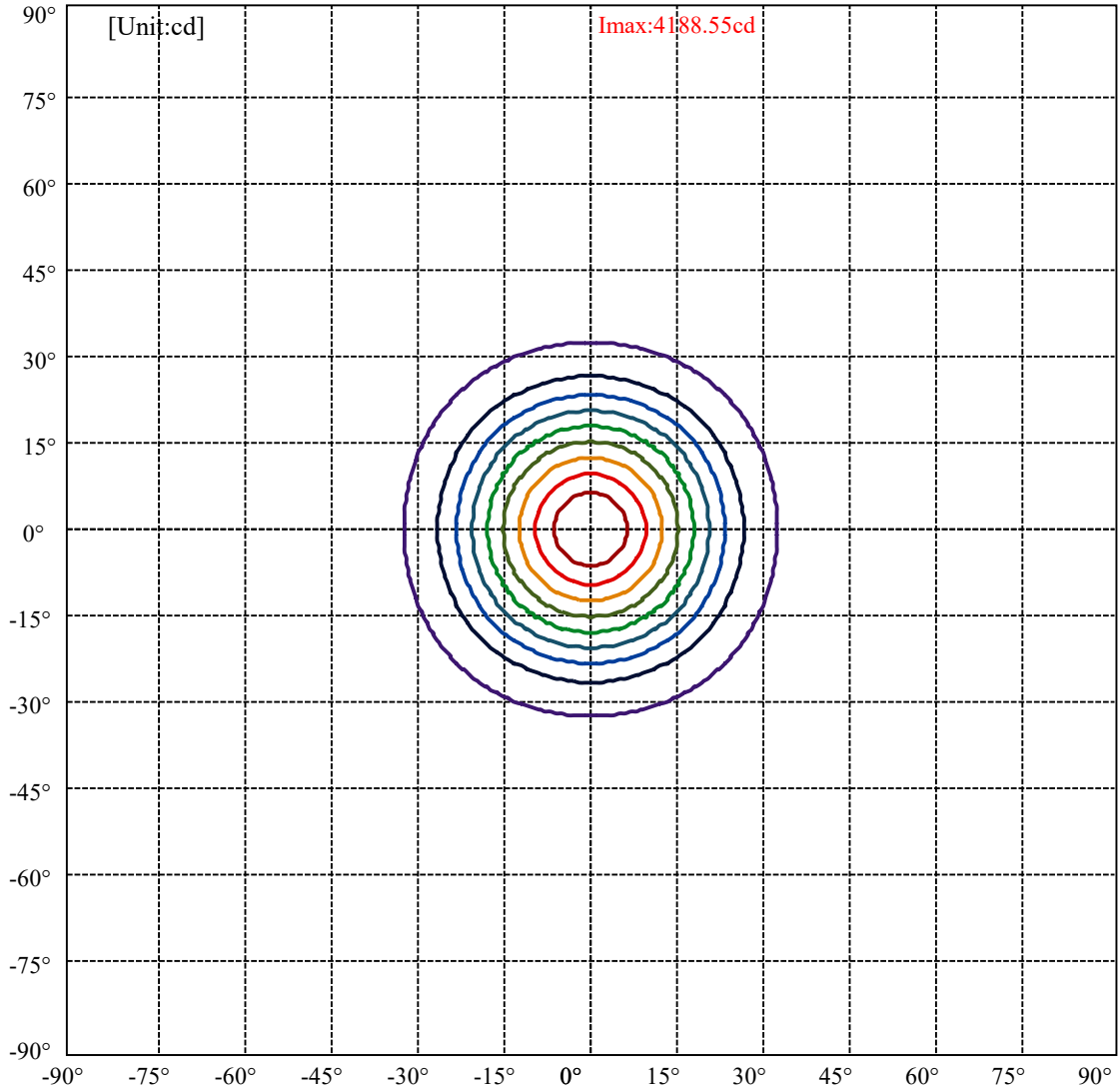


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

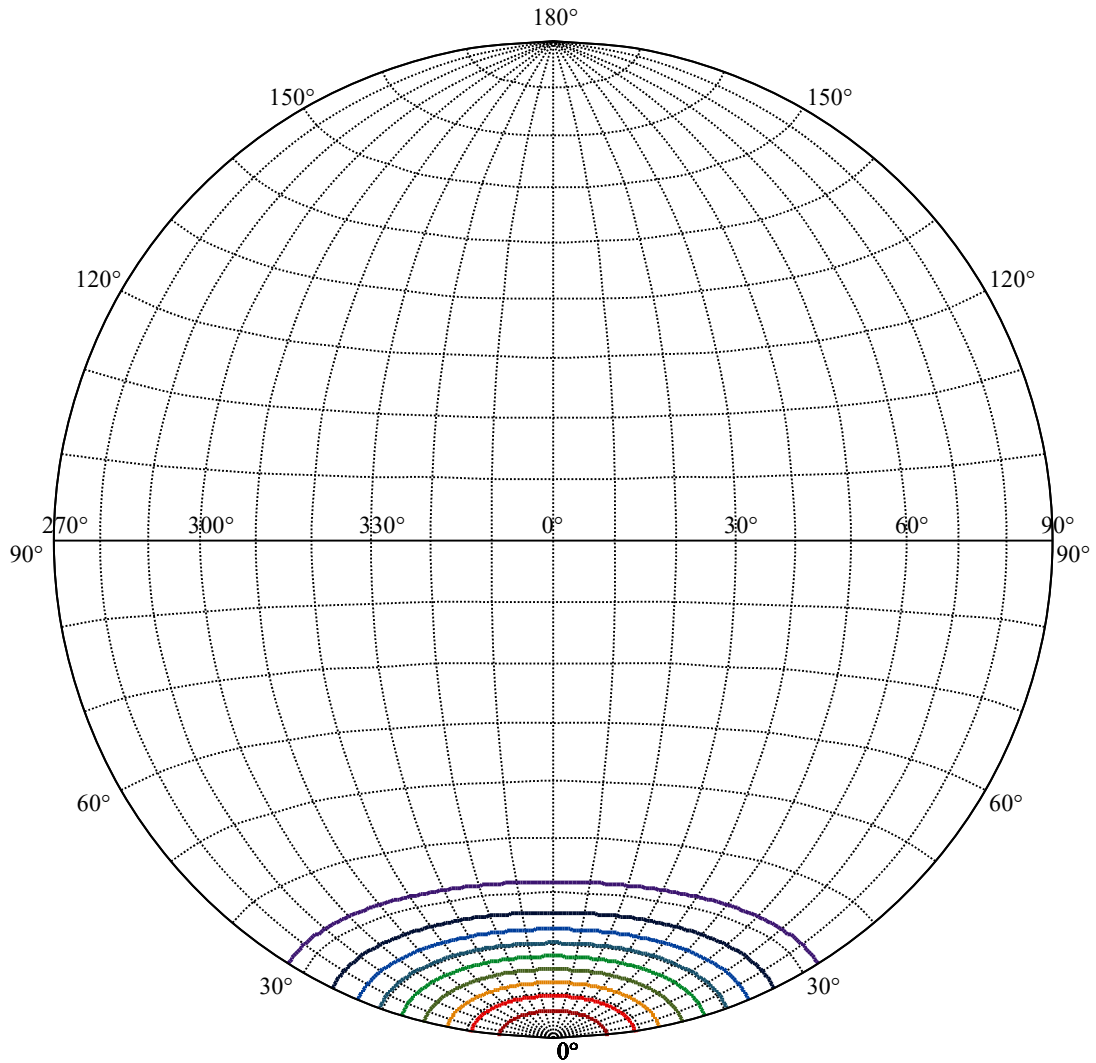
Field angle(10%Imax):C0/180Left:32.0 Right:32.0  
:C90/270Left:32.0 Right:32.0

Beam Angle(50%Imax):C0/180Left:17.7 Right:17.7  
:C90/270Left:17.7 Right:17.7





(10%Imax) 418.855	—
(20%Imax) 837.711	—
(30%Imax) 1256.57	—
(40%Imax) 1675.42	—
(50%Imax) 2094.28	—
(60%Imax) 2513.13	—
(70%Imax) 2931.99	—
(80%Imax) 3350.84	—
(90%Imax) 3769.7	—



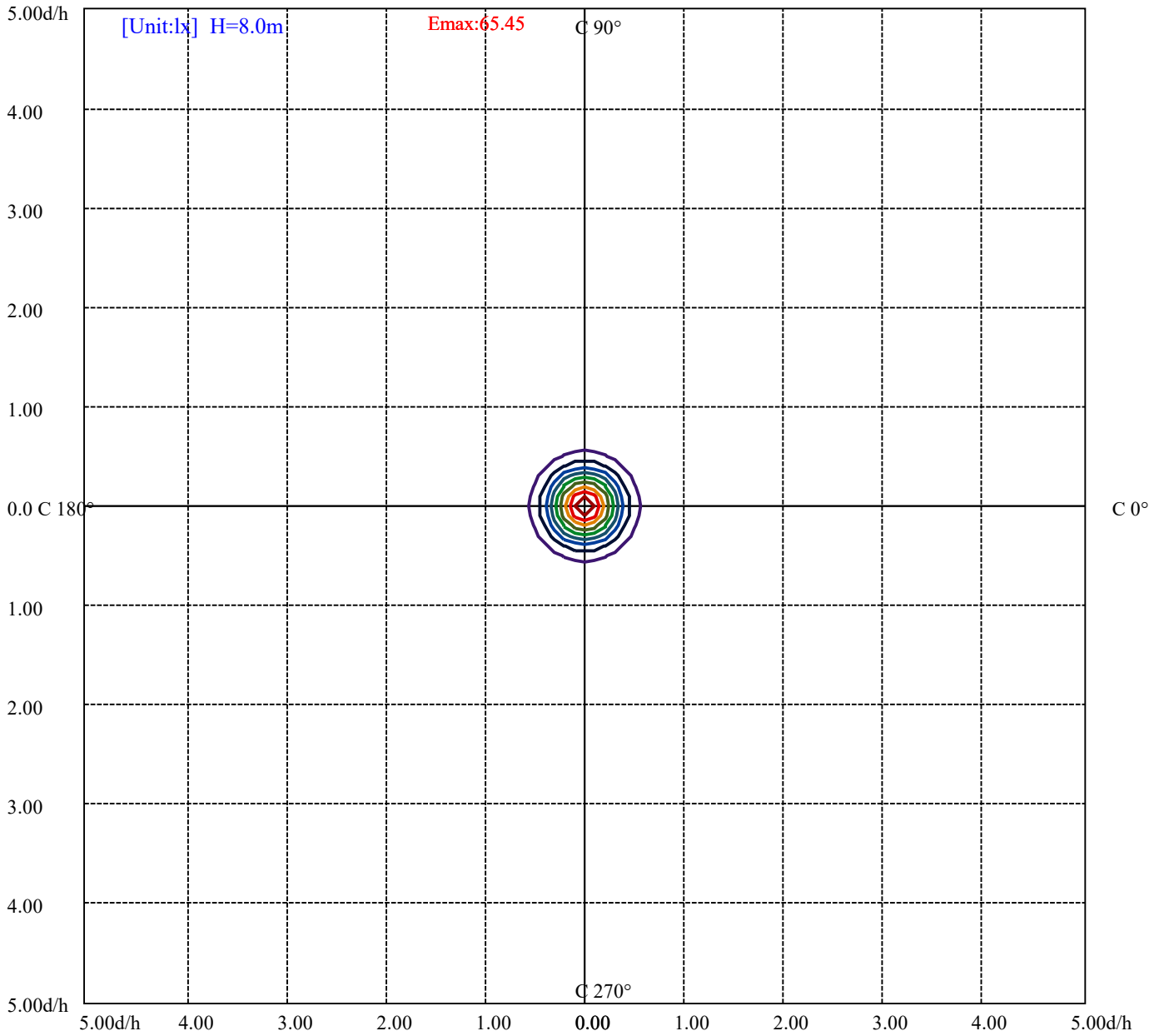
House

[Unit:cd]

Road

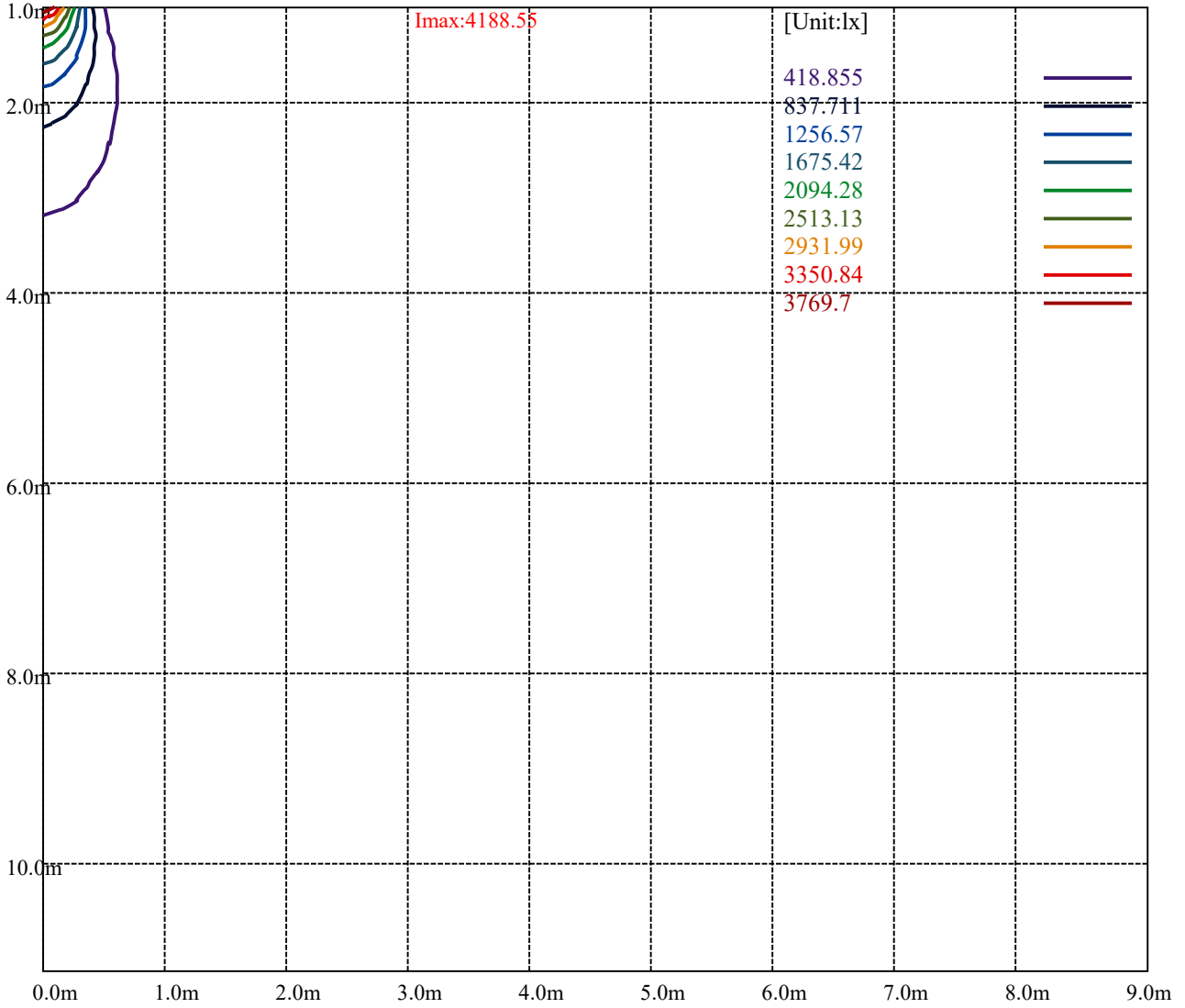
**Imax:4188.55**

(10%Imax)	418.855	—
(20%Imax)	837.711	—
(30%Imax)	1256.57	—
(40%Imax)	1675.42	—
(50%Imax)	2094.28	—
(60%Imax)	2513.13	—
(70%Imax)	2931.99	—
(80%Imax)	3350.84	—
(90%Imax)	3769.7	—



- (10%Emax) 6.54461
- (20%Emax) 13.0892
- (30%Emax) 19.63375
- (40%Emax) 26.17844
- (50%Emax) 32.72297
- (60%Emax) 39.26765
- (70%Emax) 45.81219
- (80%Emax) 52.35688
- (90%Emax) 58.90141





Luminance Table

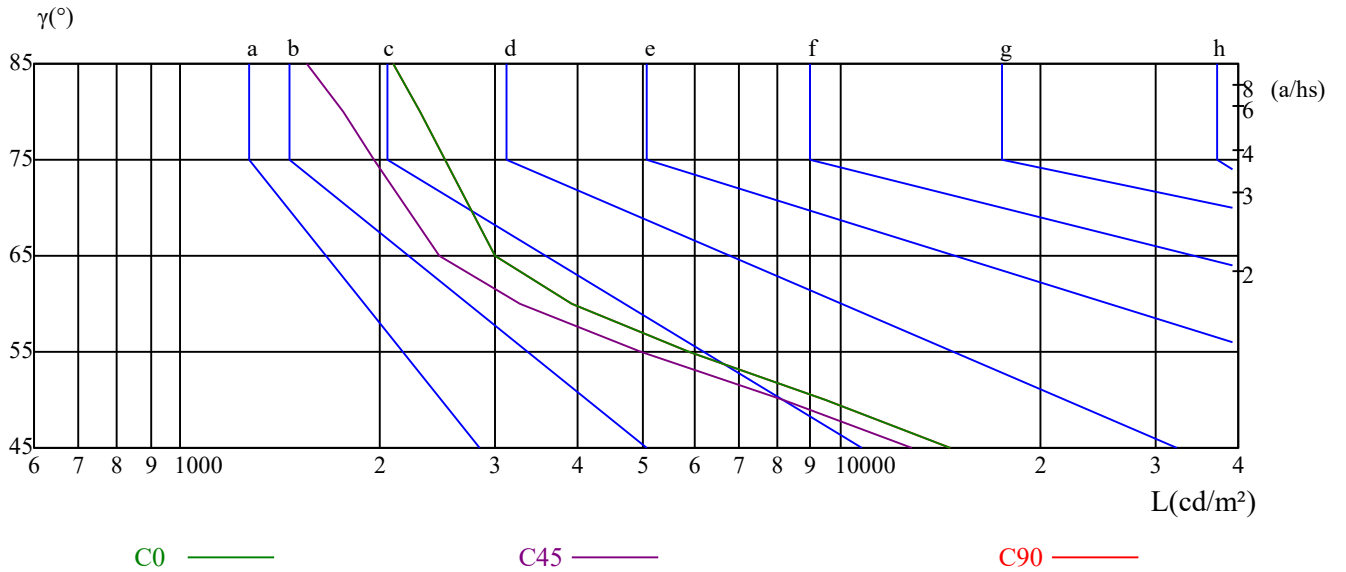
$\gamma$	45	50	55	60	65	70	75	80	85
C0	14613	9487	5883	3905	3002	2742	2509	2305	2098
C45	12793	8185	4997	3263	2462	2204	1970	1760	1549
C90	14613	9487	5883	3905	3002	2742	2509	2305	2098

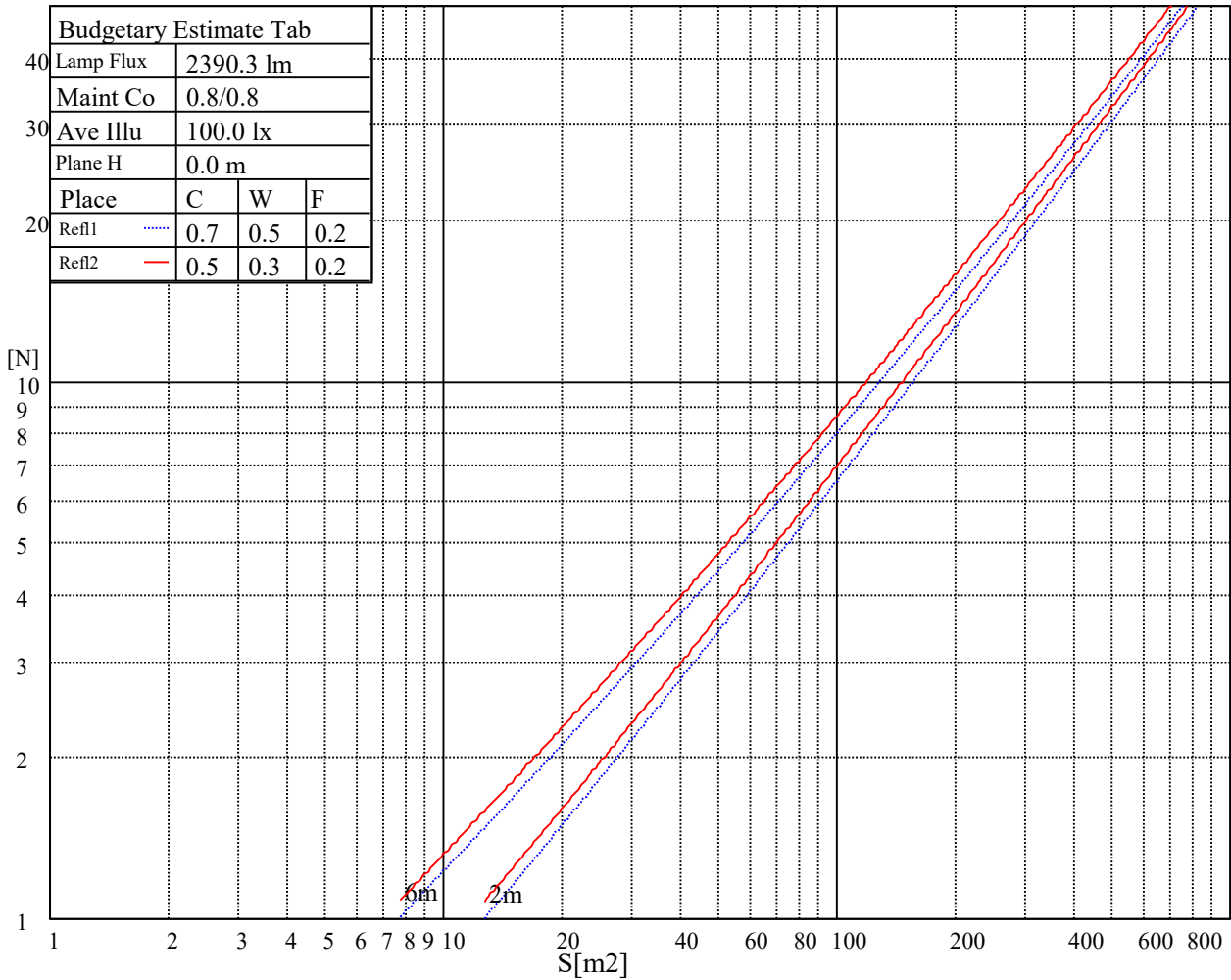
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6370	6370	6370	7410	7410	7410	14648	14648	14648

Glare Table

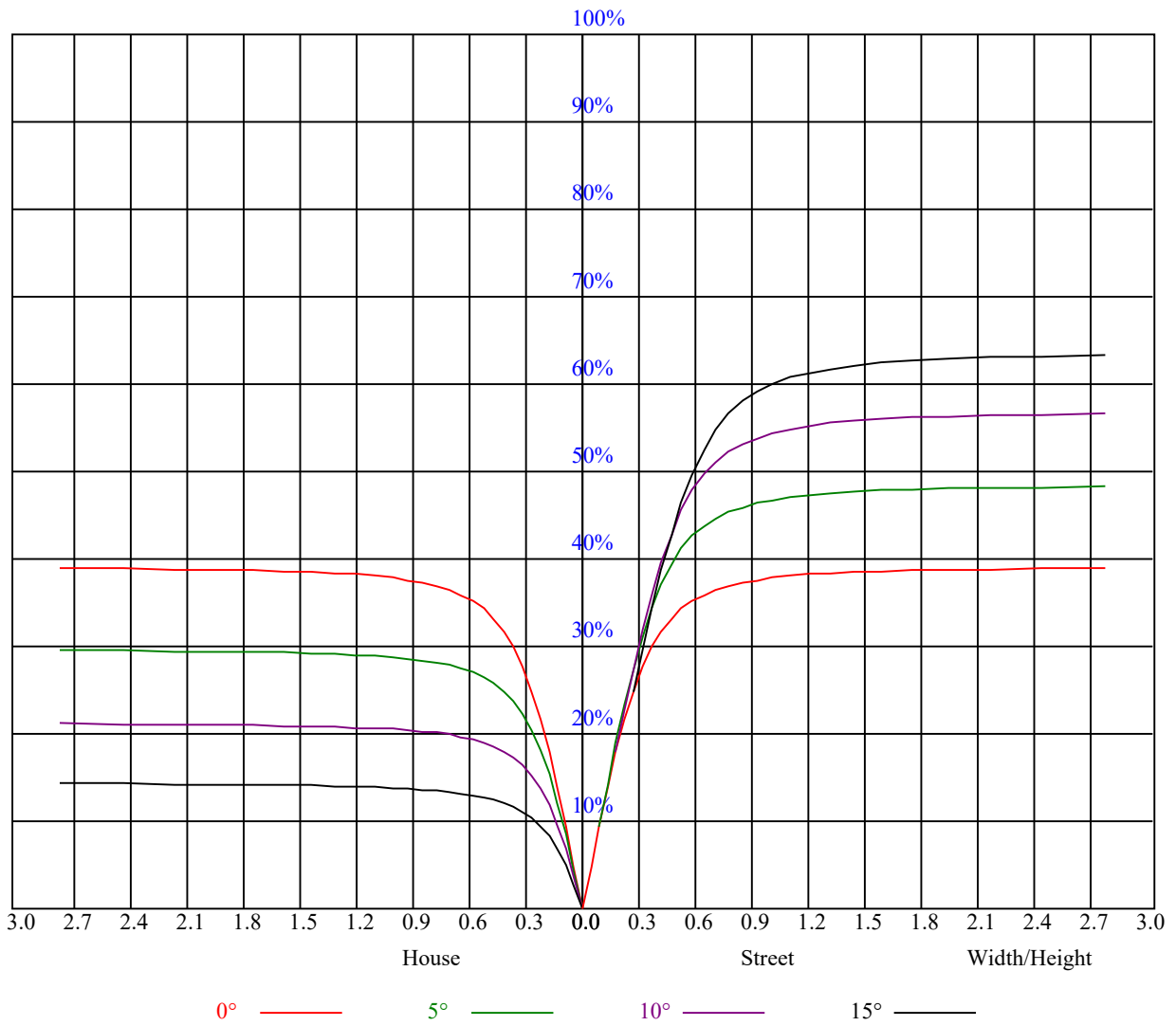
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

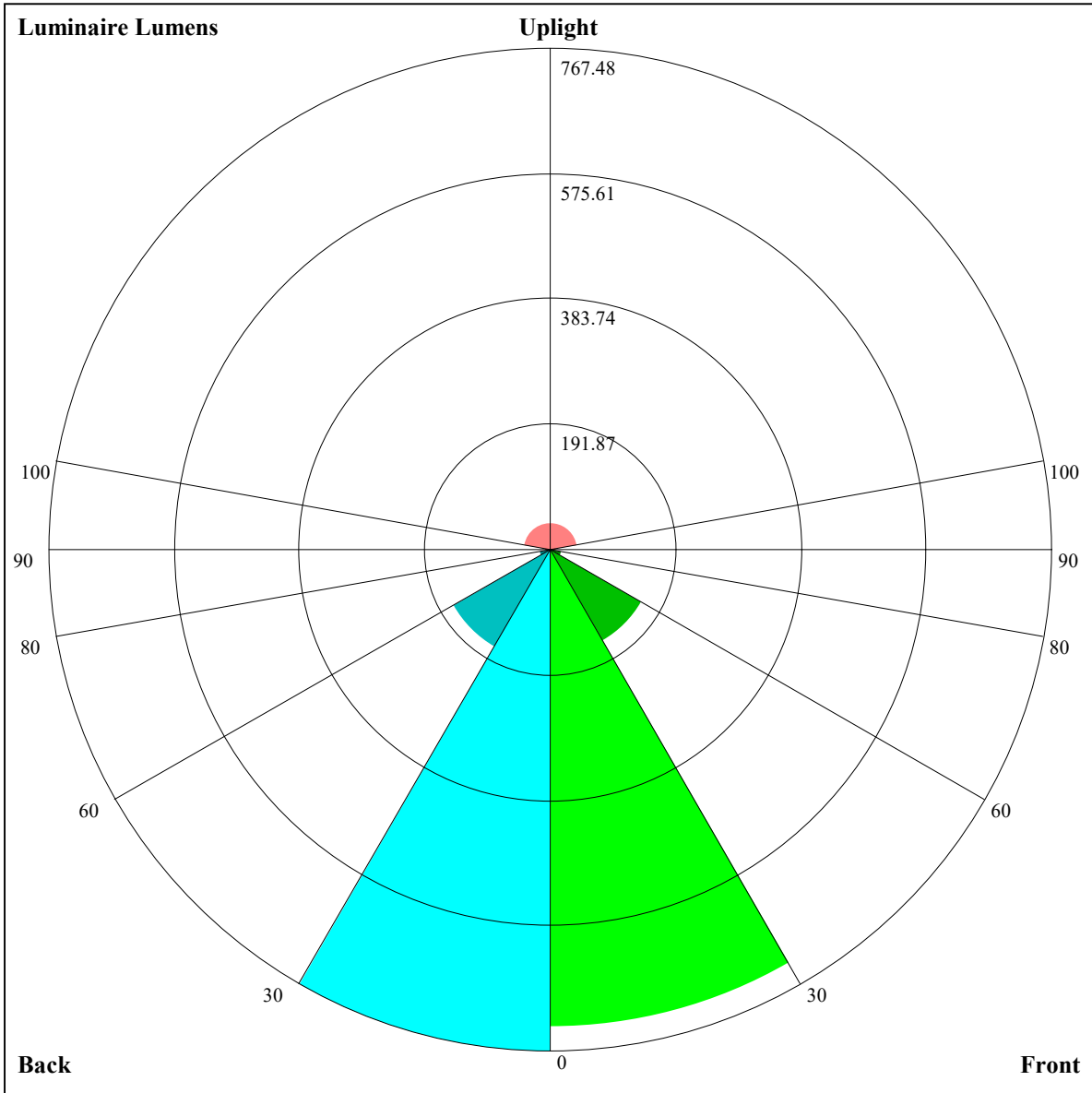
Luminance Limiting Curve





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	0.73	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	0.72	0.69	0.66	0.71	0.68	0.65	0.69	0.67	0.64	0.68	0.66	0.64	0.63
5	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.64	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	0.59	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	0.54	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	0.52	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	0.50	0.56	0.53	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.49





Luminaire Lumens:

FL=729.97,FM=162.3,FH=17.68,FVH=5.16

BL=767.48,BM=171.88,BH=18.23,BVH=5.35

UL=8.62,UH=41.02

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	4192.54	3870.46	3220.25	2447.26	1690.23	909.53	480.09	283.54	178.77
45.0	4216.77	3819.81	3173.45	2412.57	1664.91	876.50	471.28	284.64	178.11
90.0	4161.16	3731.17	3060.59	2322.28	1547.64	833.06	463.96	274.84	177.34
135.0	4183.74	3923.32	3309.44	2559.02	1787.68	1027.90	535.15	312.72	200.96
180.0	4192.54	4000.95	3348.53	2609.67	1789.33	978.35	498.65	298.02	185.87
225.0	4216.77	4098.40	3497.18	2661.43	1850.45	1023.94	525.18	305.56	192.37
270.0	4161.16	4093.99	3501.04	2717.58	1901.65	1103.88	583.05	335.84	204.15
315.0	4183.74	3875.42	3126.65	2357.52	1575.16	841.87	457.90	269.34	171.17
360.0	4192.54	3870.46	3220.25	2447.26	1690.23	909.53	480.09	283.54	178.77

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	111.38	68.77	42.01	26.26	19.55	16.74	13.93	11.45	8.97
45.0	108.85	68.93	40.52	25.38	19.32	16.46	13.65	11.29	8.75
90.0	106.86	64.36	37.99	23.84	18.88	16.02	13.43	11.01	8.86
135.0	123.00	76.14	44.10	28.19	20.26	17.12	14.48	11.89	9.63
180.0	117.27	75.76	44.60	27.91	20.32	17.12	14.37	11.95	9.86
225.0	122.67	80.11	48.45	30.34	20.26	17.40	14.65	12.17	10.08
270.0	131.47	83.08	50.10	31.66	21.03	17.73	14.92	12.61	10.02
315.0	109.78	68.66	41.07	26.65	19.66	16.68	14.04	11.62	9.36
360.0	111.38	68.77	42.01	26.26	19.55	16.74	13.93	11.45	8.97

C/γ(°)	90.0
0.0	7.82
45.0	7.82
90.0	7.87
135.0	7.87
180.0	7.82
225.0	8.04
270.0	8.09
315.0	7.87
360.0	7.82