



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NATA

Client:

LumCAT: 1450-E

Luminaire: 92.70.064.00

Report No: nt0100

Test No: GC2019122618

LampCAT: LUMINUS CXM-9-AC40

Lamp flux(lm): 1100.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 33.6100

Current(A): 0.2970

Power (W): 9.9800

PF: 1.0000

Ballast type: DC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 993.76, Efficiency(%): 90.34% , Luminous Efficacy(lm/W): 99.57

Central intensity(cd): 2099.250, Maximum intensity(cd): 2099.250

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=30.4

[C90/270]Total=30.4

Field angle(10%Imax): [C0/180]Total=75.8

[C90/270]Total=75.8

Maximum s/h(1/2): C0_180=0.50 C90_270=0.50

Maximum s/h(1/4): C0_180=0.58 C90_270=0.58

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.34%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.097%

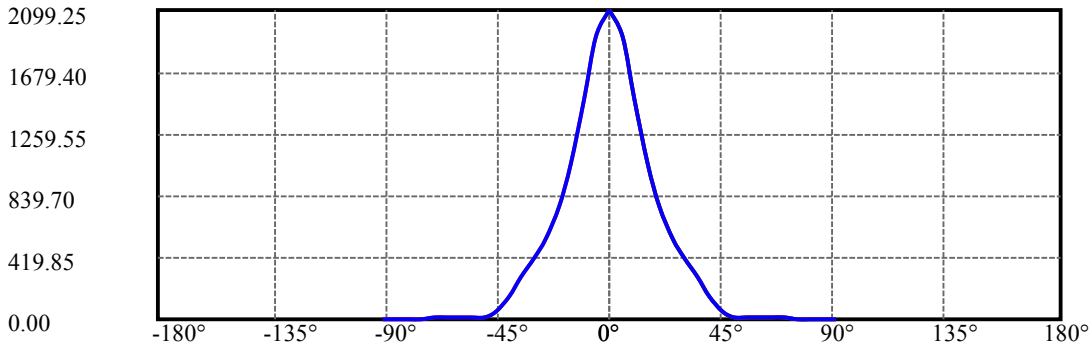
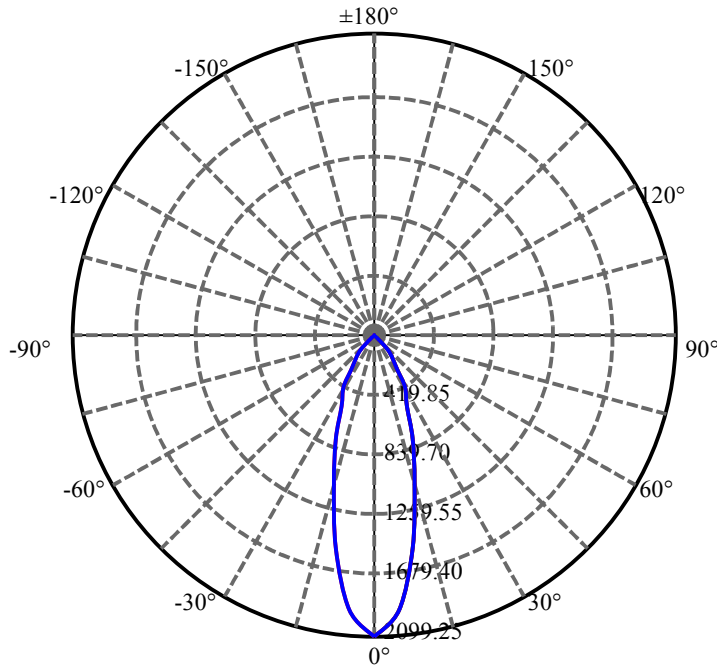
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2099.250	0.000	0	.000%	.000%
5.0	1920.938	48.060	48.06	4.369%	4.836%
10.0	1504.202	122.528	170.588	11.139%	17.166%
15.0	1061.395	152.190	322.778	13.835%	32.481%
20.0	763.186	150.371	473.149	13.670%	47.612%
25.0	553.219	138.067	611.215	12.552%	61.506%
30.0	415.913	122.644	733.86	11.149%	73.847%
35.0	285.898	103.346	837.206	9.395%	84.247%
40.0	157.127	73.915	911.122	6.720%	91.685%
45.0	52.214	38.761	949.883	3.524%	95.585%
50.0	18.570	14.303	964.186	1.300%	97.024%
55.0	10.455	6.311	970.497	.574%	97.659%
60.0	8.360	4.349	974.846	.395%	98.097%
65.0	7.123	3.764	978.61	.342%	98.476%
70.0	6.595	3.473	982.083	.316%	98.825%
75.0	6.145	3.330	985.413	.303%	99.160%
80.0	5.611	3.146	988.559	.286%	99.477%
85.0	4.662	2.791	991.35	.254%	99.758%
90.0	4.127	2.407	993.757	.219%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	733.86	66.71%	73.85%
0-40	911.12	82.83%	91.68%
0-60	974.85	88.62%	98.10%
0-90	991.35	90.12%	99.76%
0-120	991.35	90.12%	99.76%
0-180	993.76	90.34%	100.00%
60-90	20.85	1.90%	2.10%
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%
0-32.96	795.01	72.27%	80.00%

ZONAL LUMEN SUMMARY

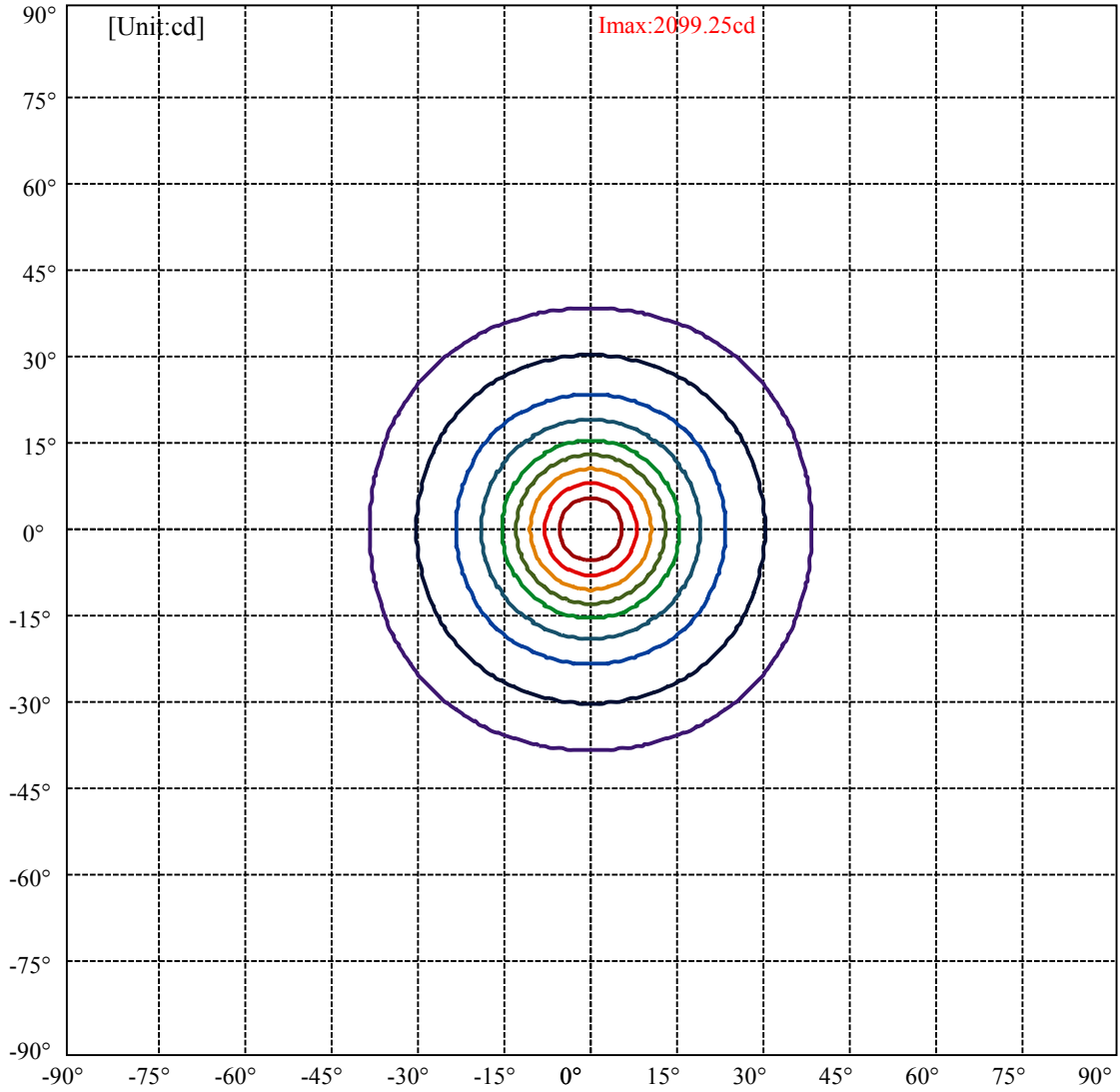
0-10	170.59
10-20	302.56
20-30	260.71
30-40	177.26
40-50	53.06
50-60	10.66
60-70	7.24
70-80	6.48
80-90	2.79
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



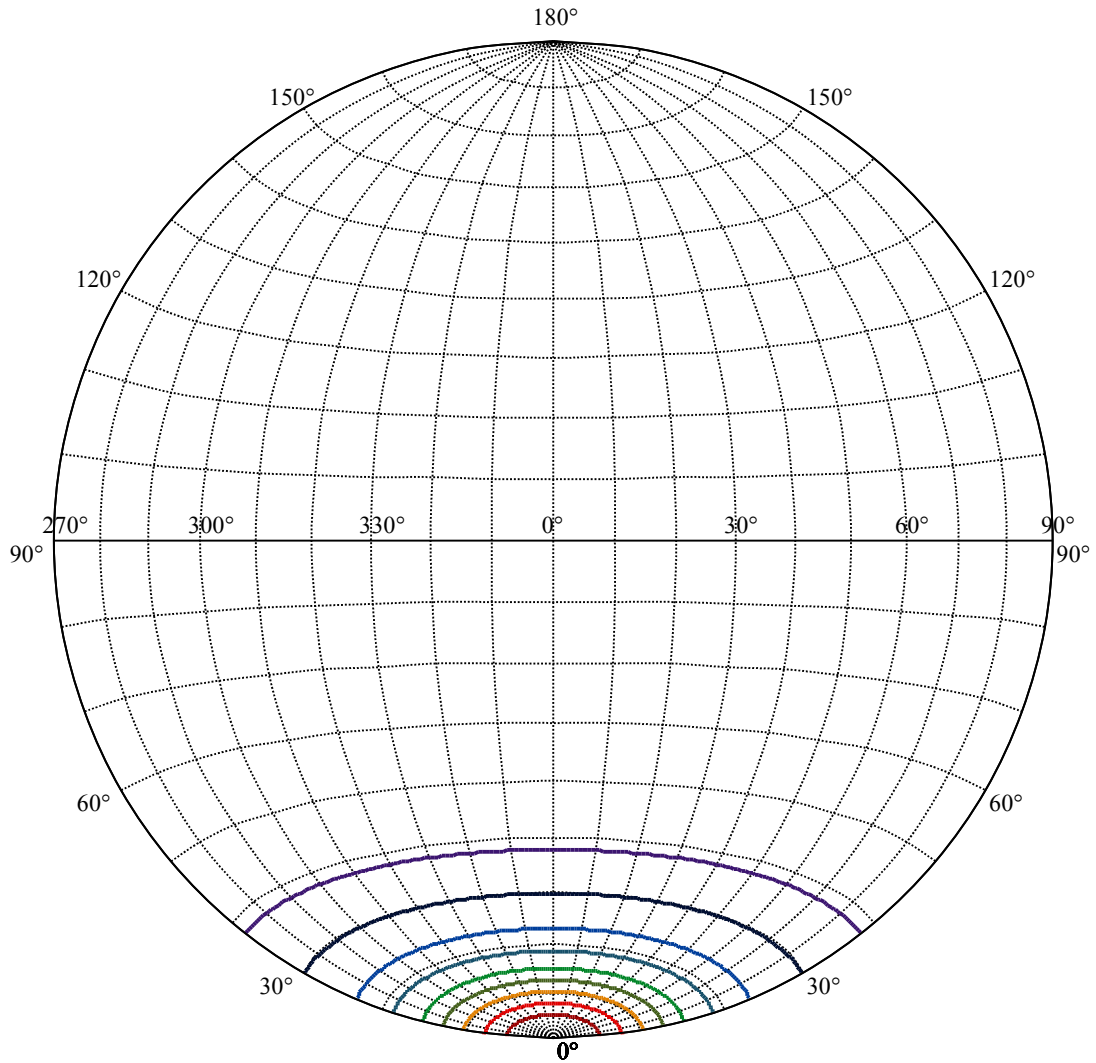
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:37.9 Right:37.9
:C90/270Left:37.9 Right:37.9

Beam Angle(50%Imax):C0/180Left:15.2 Right:15.2
:C90/270Left:15.2 Right:15.2



(10%Imax) 209.925	—
(20%Imax) 419.85	—
(30%Imax) 629.775	—
(40%Imax) 839.7	—
(50%Imax) 1049.63	—
(60%Imax) 1259.55	—
(70%Imax) 1469.47	—
(80%Imax) 1679.4	—
(90%Imax) 1889.32	—



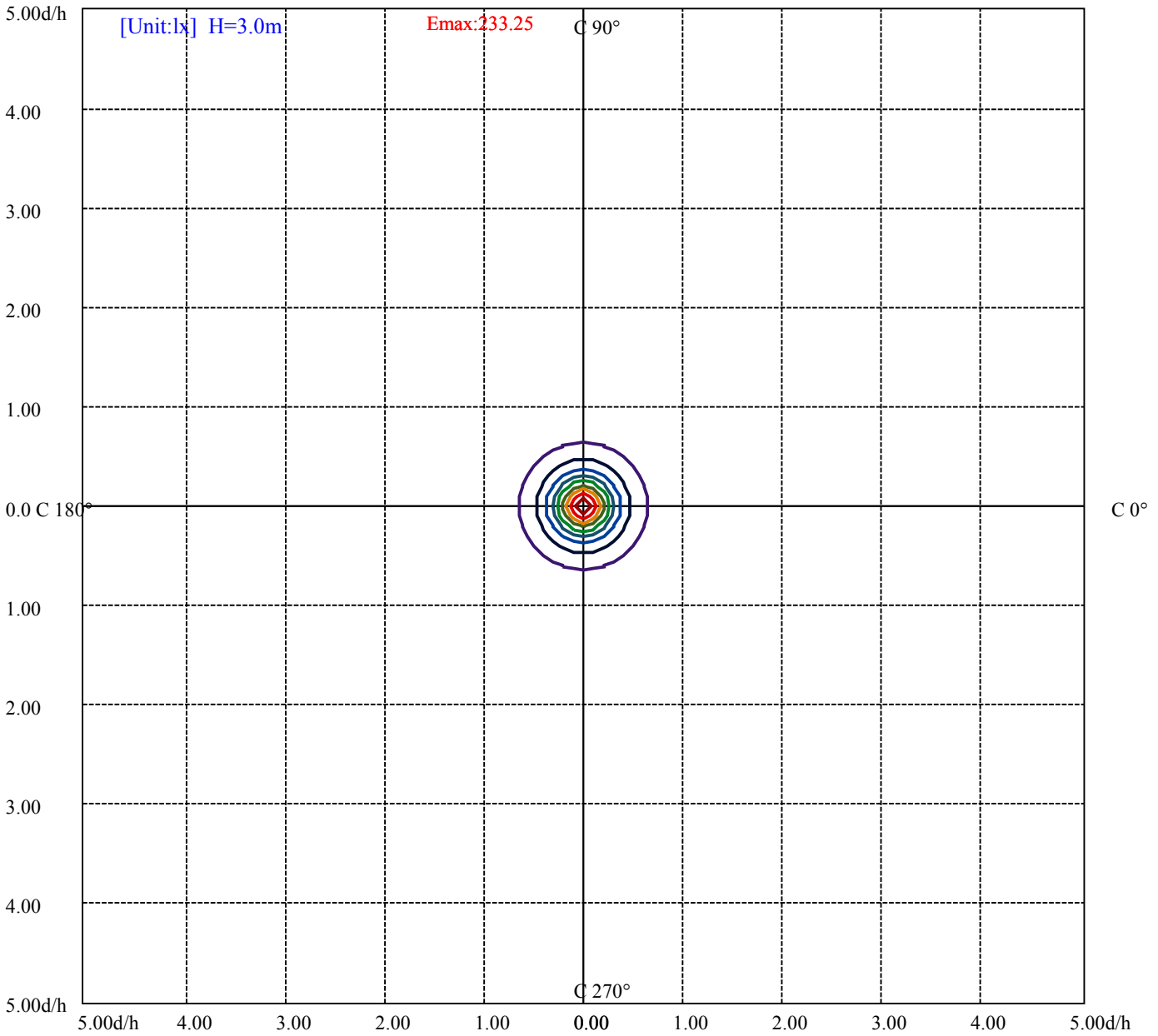
House

[Unit:cd]

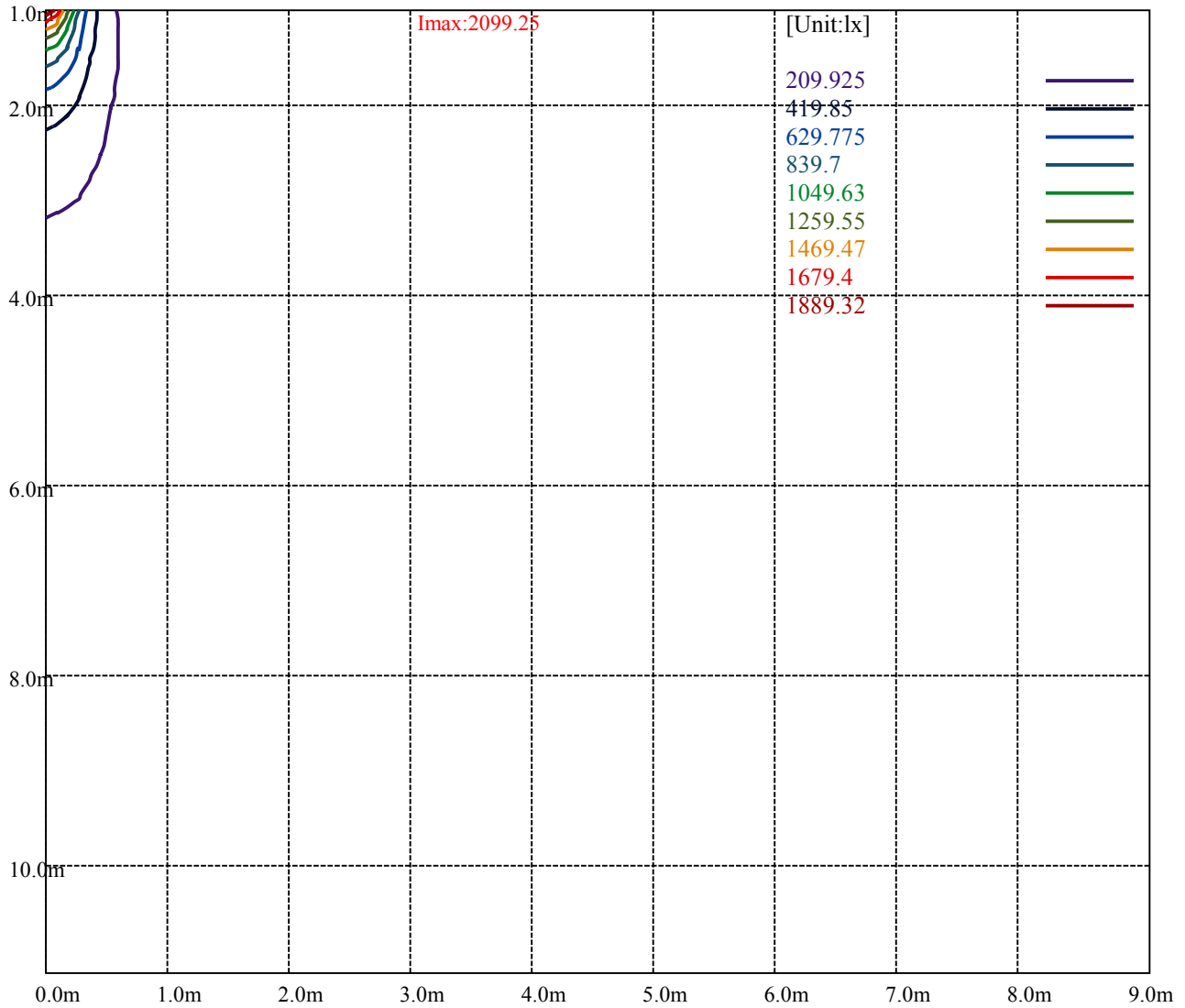
Road

Imax:2099.25

(10%Imax) 209.925	—
(20%Imax) 419.85	—
(30%Imax) 629.775	—
(40%Imax) 839.7	—
(50%Imax) 1049.63	—
(60%Imax) 1259.55	—
(70%Imax) 1469.47	—
(80%Imax) 1679.4	—
(90%Imax) 1889.32	—



- (10%Emax) 23.32489
- (20%Emax) 46.64989
- (30%Emax) 69.97478
- (40%Emax) 93.29977
- (50%Emax) 116.6244
- (60%Emax) 139.95
- (70%Emax) 163.2744
- (80%Emax) 186.6
- (90%Emax) 209.9244



Luminance Table

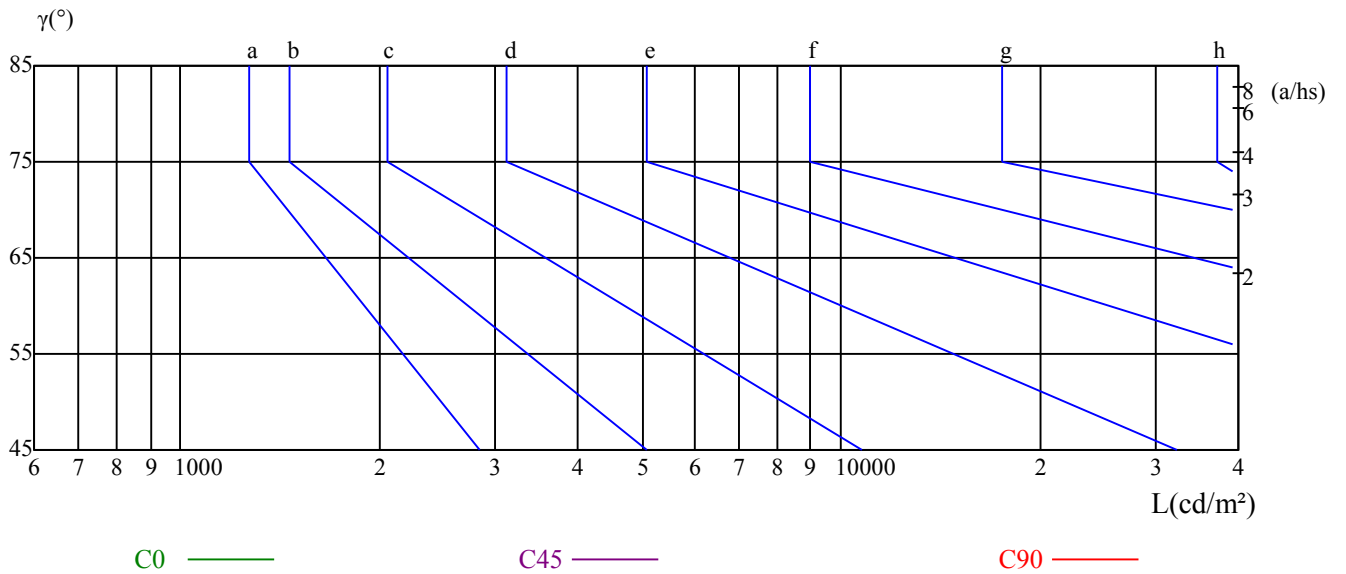
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

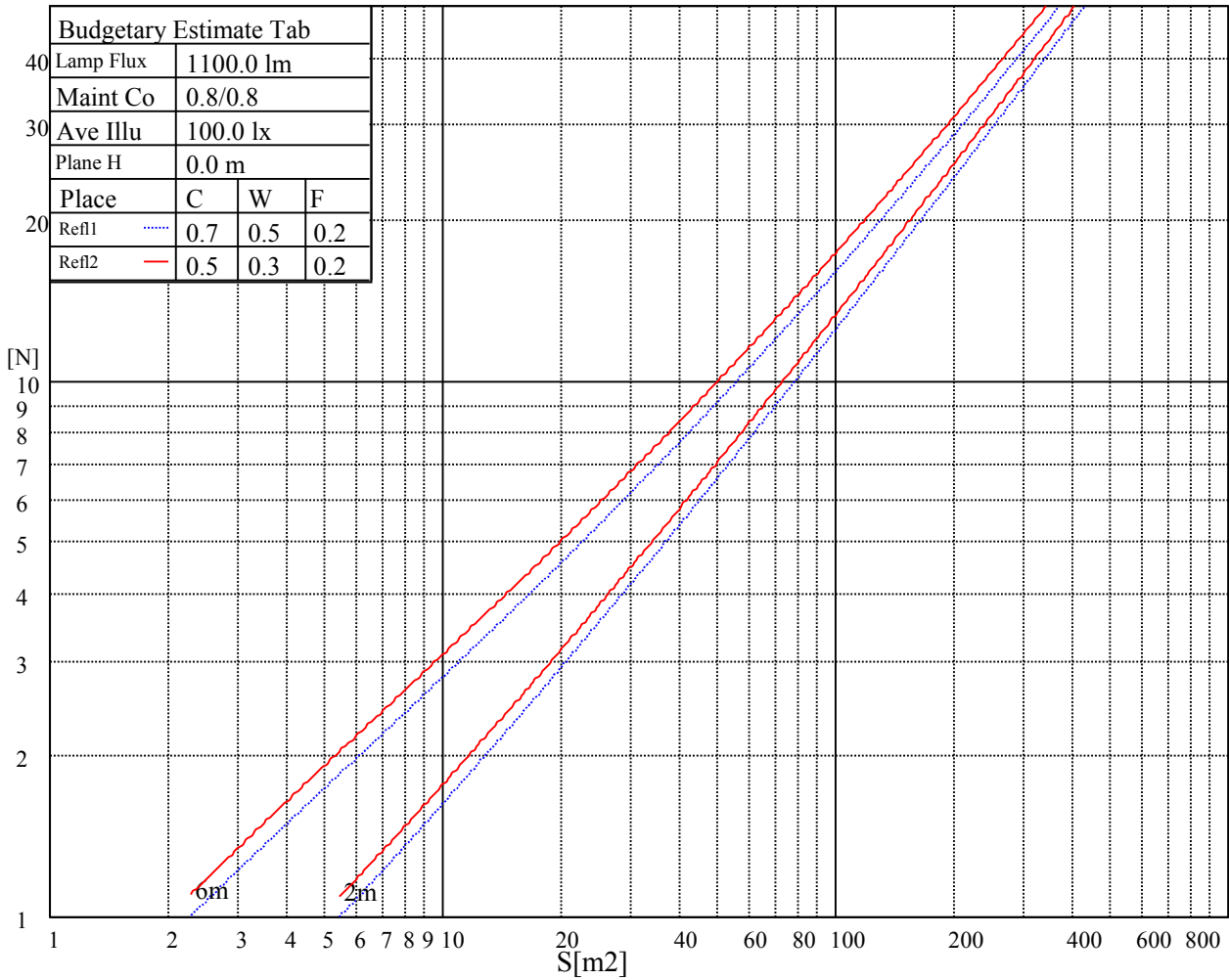
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

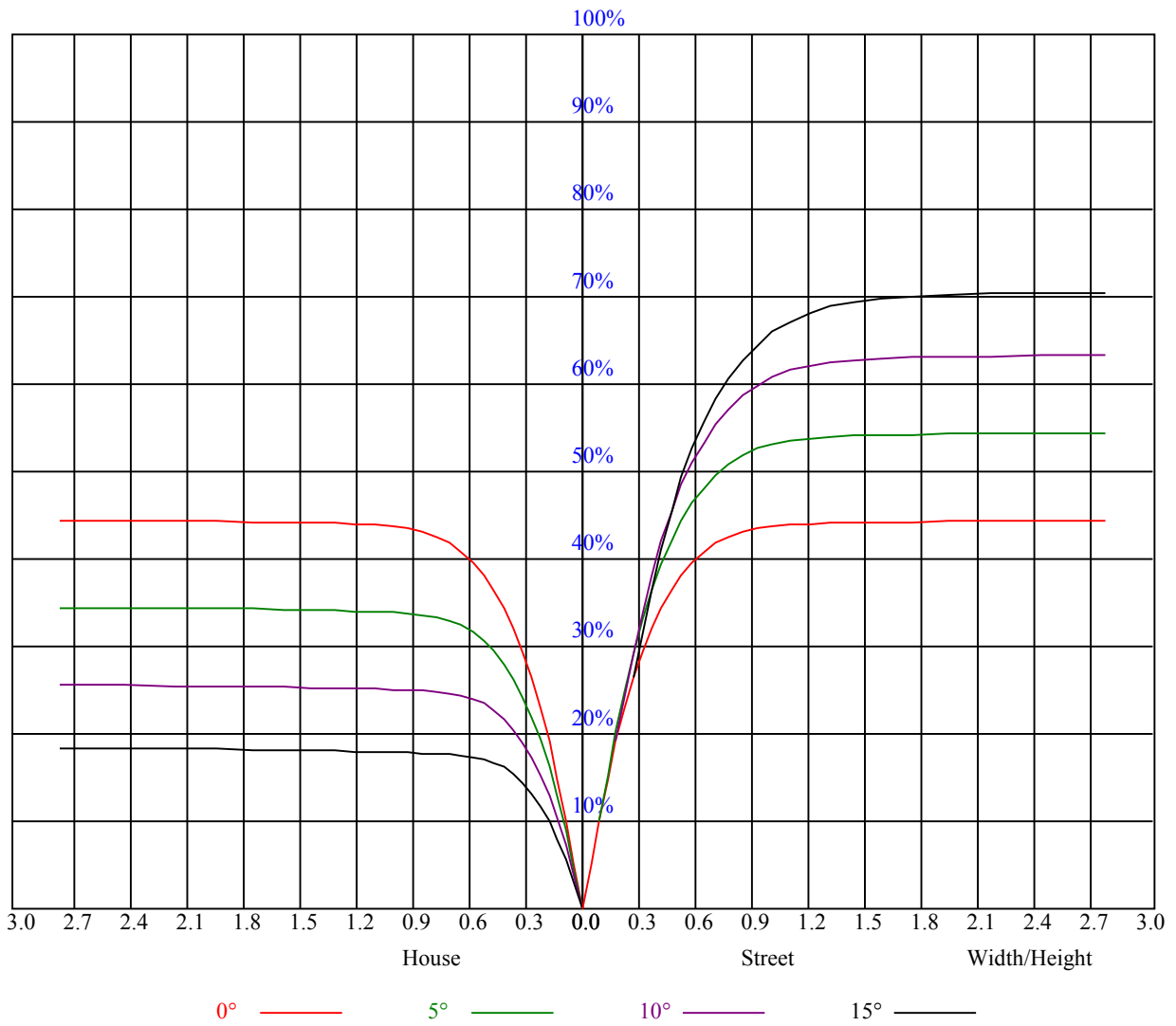
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

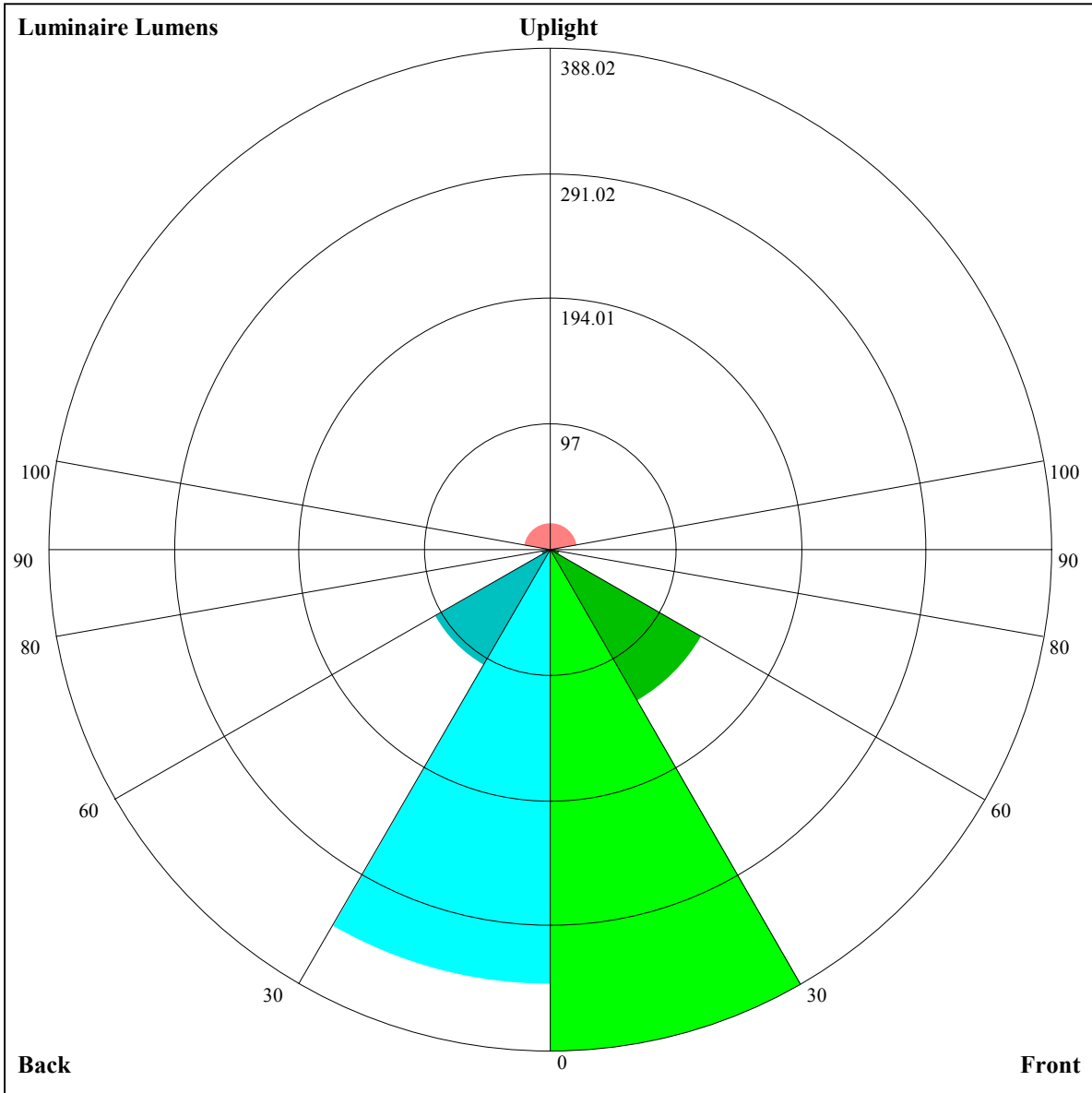
Luminance Limiting Curve





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	1.08	1.08	1.08	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.00	0.98	0.96	0.98	0.96	0.94	0.94	0.93	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.84
2	0.93	0.90	0.87	0.92	0.89	0.86	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.80	0.79
3	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.77	0.75	0.74
4	0.82	0.77	0.74	0.81	0.77	0.73	0.79	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.69
5	0.77	0.72	0.69	0.77	0.72	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.72	0.69	0.67	0.65
6	0.73	0.68	0.64	0.72	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.65	0.63	0.62
7	0.69	0.64	0.61	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.58
8	0.66	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.56	0.55
9	0.63	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.52
10	0.60	0.55	0.52	0.59	0.55	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.57	0.54	0.51	0.50





Luminaire Lumens:

FL=388.02,FM=134.57,FH=7.51,FVH=2.67

BL=336.44,BM=103.06,BH=7.04,BVH=2.59

UL=4.5,UH=21.43

BUG Rating:B1-U2-G0

NATA 1450-E

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	2075.63	2099.81	1791.00	1391.06	993.38	693.56	511.88	375.75	284.63
45.0	2126.81	1919.25	1543.50	1089.00	783.00	578.81	445.50	311.06	171.90
90.0	2081.81	1793.25	1340.44	903.21	657.84	478.74	356.34	226.35	112.78
135.0	2112.19	1785.38	1355.06	917.44	649.13	498.38	381.38	288.00	110.36
180.0	2075.63	1700.44	1102.56	855.39	617.46	453.60	335.48	193.28	69.86
225.0	2127.94	1956.38	1494.56	1001.64	711.73	515.98	393.19	265.61	138.32
270.0	2081.81	2054.25	1690.31	1213.31	828.00	583.31	441.00	296.44	171.17
315.0	2112.19	2058.75	1716.19	1120.11	864.96	623.36	462.54	330.69	198.00
360.0	2075.63	2099.81	1791.00	1391.06	993.38	693.56	511.88	375.75	284.63
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	98.38	27.90	7.03	6.36	6.08	5.46	5.12	4.78	4.61
45.0	48.49	13.78	11.14	8.83	7.65	7.43	7.54	7.14	4.73
90.0	33.58	15.36	12.15	10.35	9.28	8.44	7.14	5.34	4.67
135.0	26.94	10.86	8.61	6.64	5.68	5.40	5.12	4.95	4.50
180.0	21.94	10.52	8.94	6.92	5.68	5.34	5.12	5.01	4.28
225.0	34.93	13.61	10.24	7.43	6.13	5.79	5.40	5.12	4.89
270.0	77.06	32.46	16.37	12.38	10.24	9.23	8.21	7.37	5.01
315.0	76.39	24.08	9.17	7.99	6.24	5.68	5.51	5.18	4.61
360.0	98.38	27.90	7.03	6.36	6.08	5.46	5.12	4.78	4.61
C/γ(°)	90.0								
0.0	4.28								
45.0	4.11								
90.0	4.05								
135.0	4.05								
180.0	4.11								
225.0	4.11								
270.0	4.11								
315.0	4.22								
360.0	4.28								