



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

Nata

Client:

LumCAT: 1405-N

Luminaire: 92.70.064.00

Report No: nata-0100

Test No: GC2018040402

LampCAT: CITIZEN CLU028

Lamp flux(lm): 1315.0

Number of Lamps: 1

Length(mm): 39

Phm Type: C

Voltage(V):

Current(A):

Power (W): 14.7200

PF:

Ballast type:

Width(mm): 39

Height(mm): 0

Photometric Results

Lumens(lm): 1046.35, Efficiency(%): 79.57% , Luminous Efficacy(lm/W): 71.08

Central intensity(cd): 2204.733, Maximum intensity(cd): 2204.733

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=25.6

[C90/270]Total=25.6

Field angle(10%Imax): [C0/180]Total=81.0

[C90/270]Total=81.0

Maximum s/h(1/2): C0_180=0.42 C90_270=0.42

Maximum s/h(1/4): C0_180=0.50 C90_270=0.50

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 80.50%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 94.965%

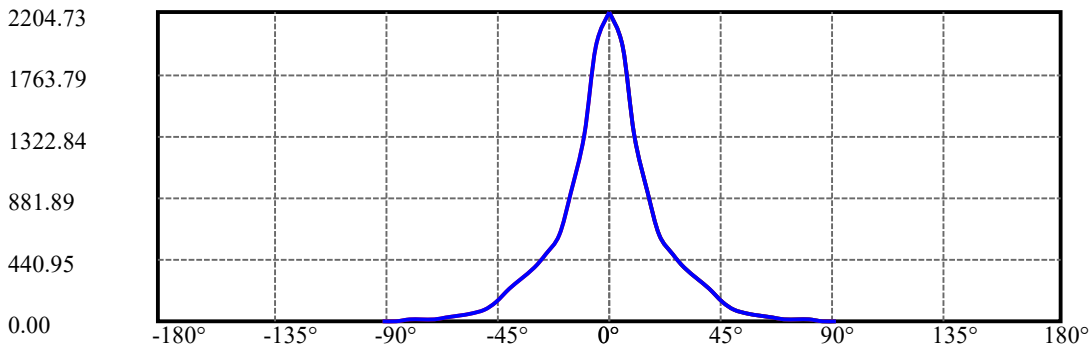
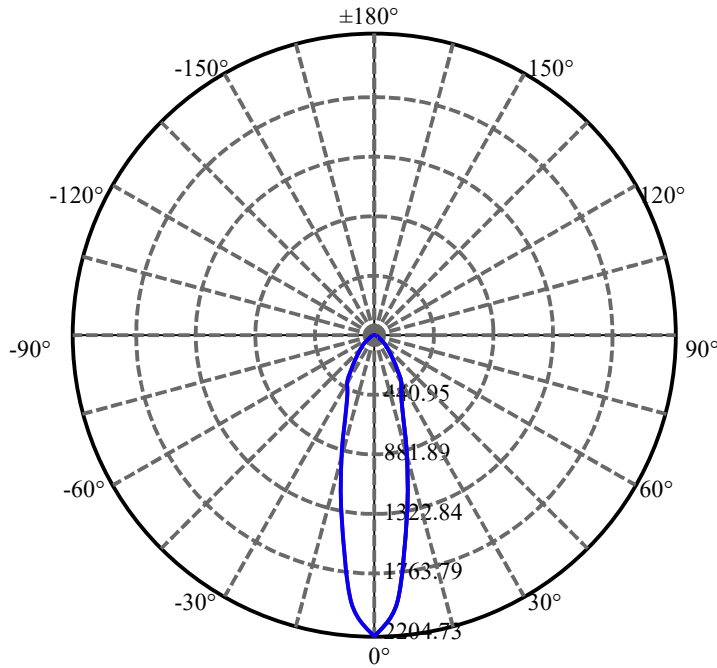
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2204.734	13.185	13.185	1.003%	1.260%
5.0	1956.154	93.452	106.637	7.107%	10.191%
10.0	1335.132	127.082	233.719	9.664%	22.336%
15.0	915.161	129.832	363.551	9.873%	34.745%
20.0	620.403	116.309	479.861	8.845%	45.860%
25.0	473.155	109.608	589.468	8.335%	56.335%
30.0	386.744	105.994	695.463	8.060%	66.465%
35.0	304.283	95.666	791.129	7.275%	75.608%
40.0	229.283	80.784	871.913	6.143%	83.329%
45.0	139.857	54.207	926.121	4.122%	88.509%
50.0	86.411	36.284	962.404	2.759%	91.977%
55.0	54.850	24.628	987.032	1.873%	94.331%
60.0	38.361	18.210	1005.242	1.385%	96.071%
65.0	27.294	13.559	1018.802	1.031%	97.367%
70.0	20.027	10.315	1029.117	.784%	98.353%
75.0	14.053	7.441	1036.558	.566%	99.064%
80.0	9.649	5.208	1041.766	.396%	99.561%
85.0	6.318	3.450	1045.216	.262%	99.891%
90.0	4.157	1.139	1046.355	.087%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	695.46	52.89%	66.47%
0-40	871.91	66.31%	83.33%
0-60	1005.24	76.44%	96.07%
0-90	1045.22	79.48%	99.89%
0-120	1045.22	79.48%	99.89%
0-180	1046.35	79.57%	100.00%
60-90	58.18	4.42%	5.56%
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%
0-37.84	837.08	63.66%	80.00%

ZONAL LUMEN SUMMARY

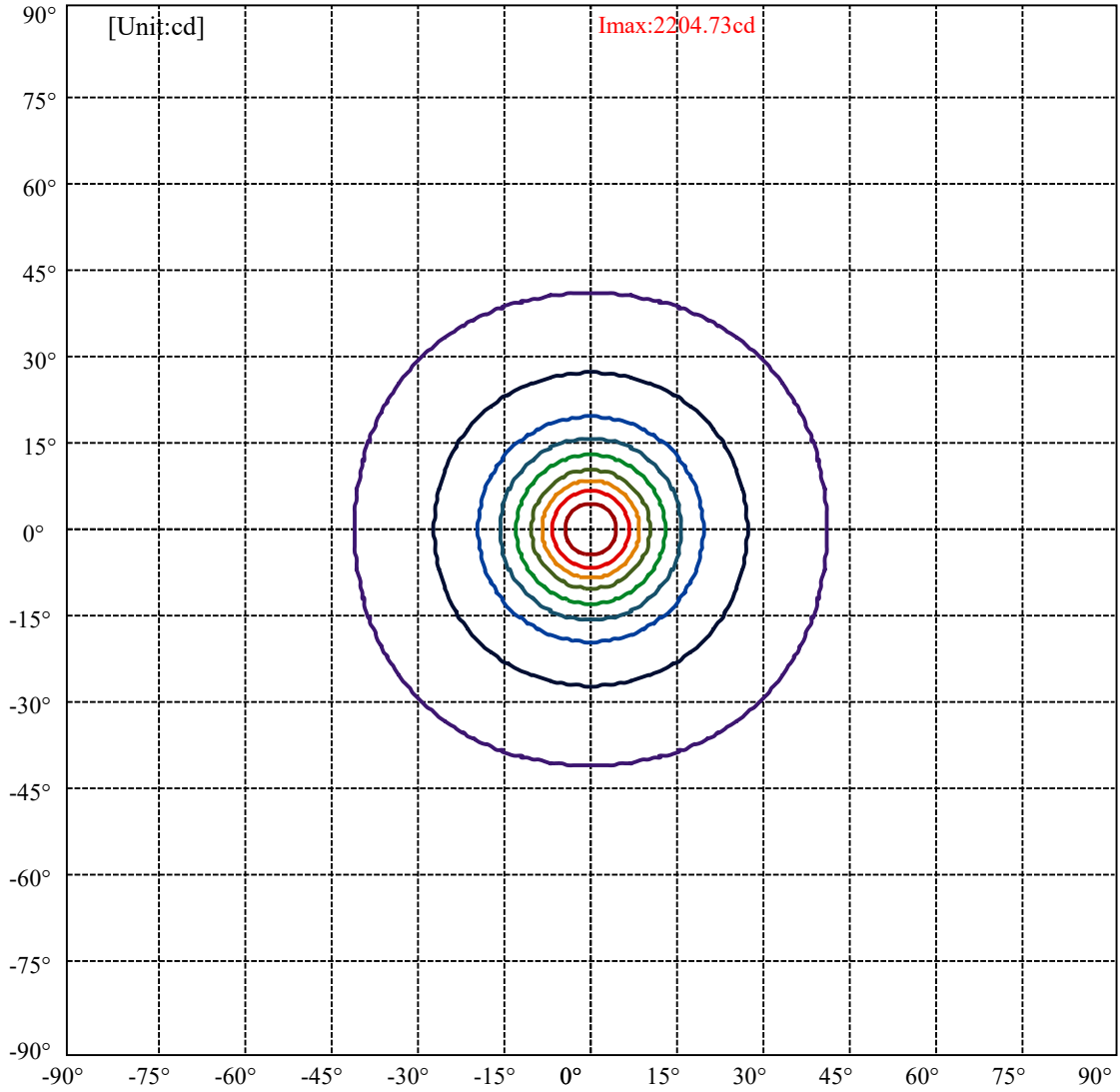
0-10	233.72
10-20	246.14
20-30	215.60
30-40	176.45
40-50	90.49
50-60	42.84
60-70	23.87
70-80	12.65
80-90	3.45
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



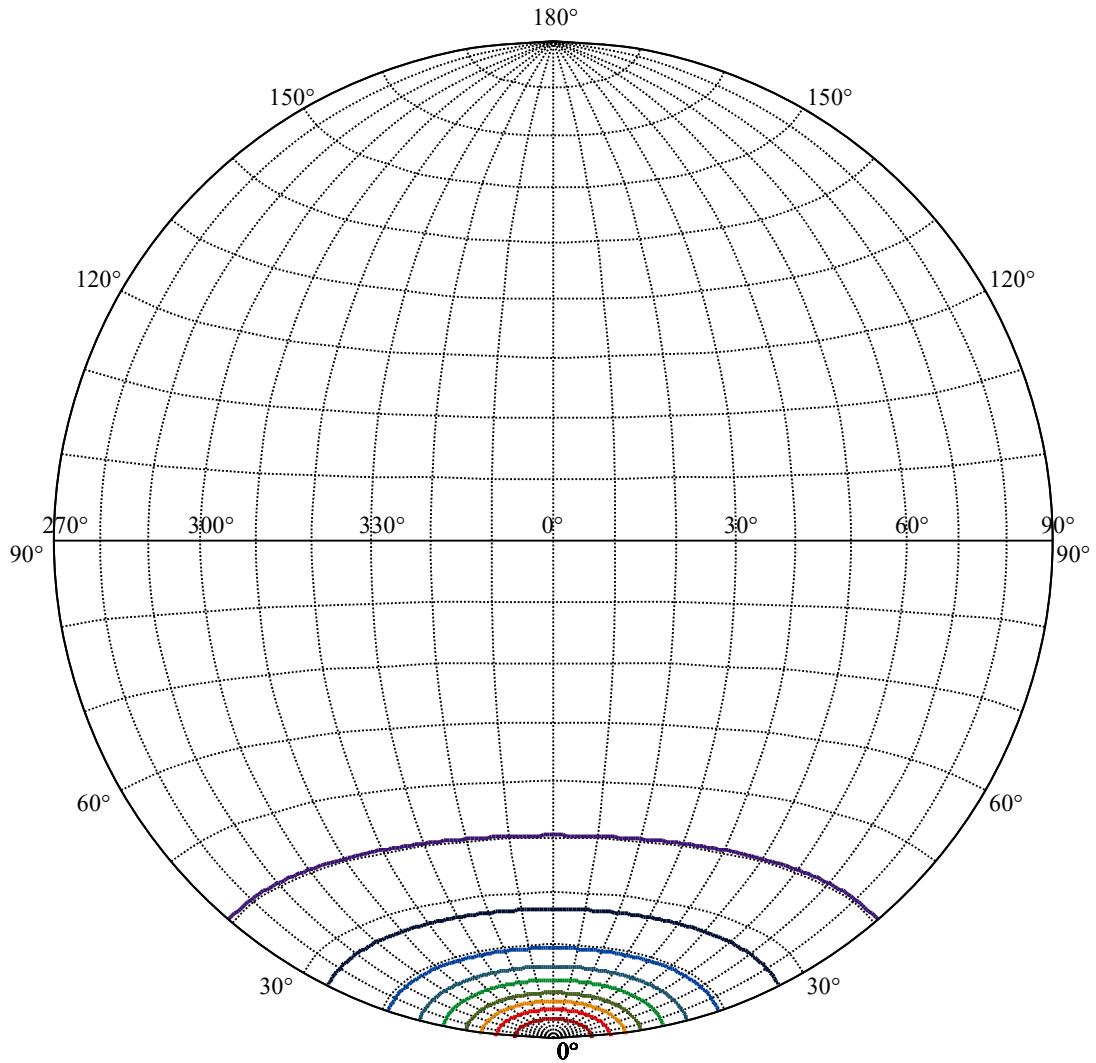
C0(Max): ———
C0/C180: ———
C90/C270: ———

Field angle(10%Imax):C0/180Left:40.5 Right:40.5
:C90/270Left:40.5 Right:40.5

Beam Angle(50%Imax):C0/180Left:12.8 Right:12.8
:C90/270Left:12.8 Right:12.8



(10%Imax) 220.473	—
(20%Imax) 440.947	—
(30%Imax) 661.42	—
(40%Imax) 881.893	—
(50%Imax) 1102.37	—
(60%Imax) 1322.84	—
(70%Imax) 1543.31	—
(80%Imax) 1763.79	—
(90%Imax) 1984.26	—



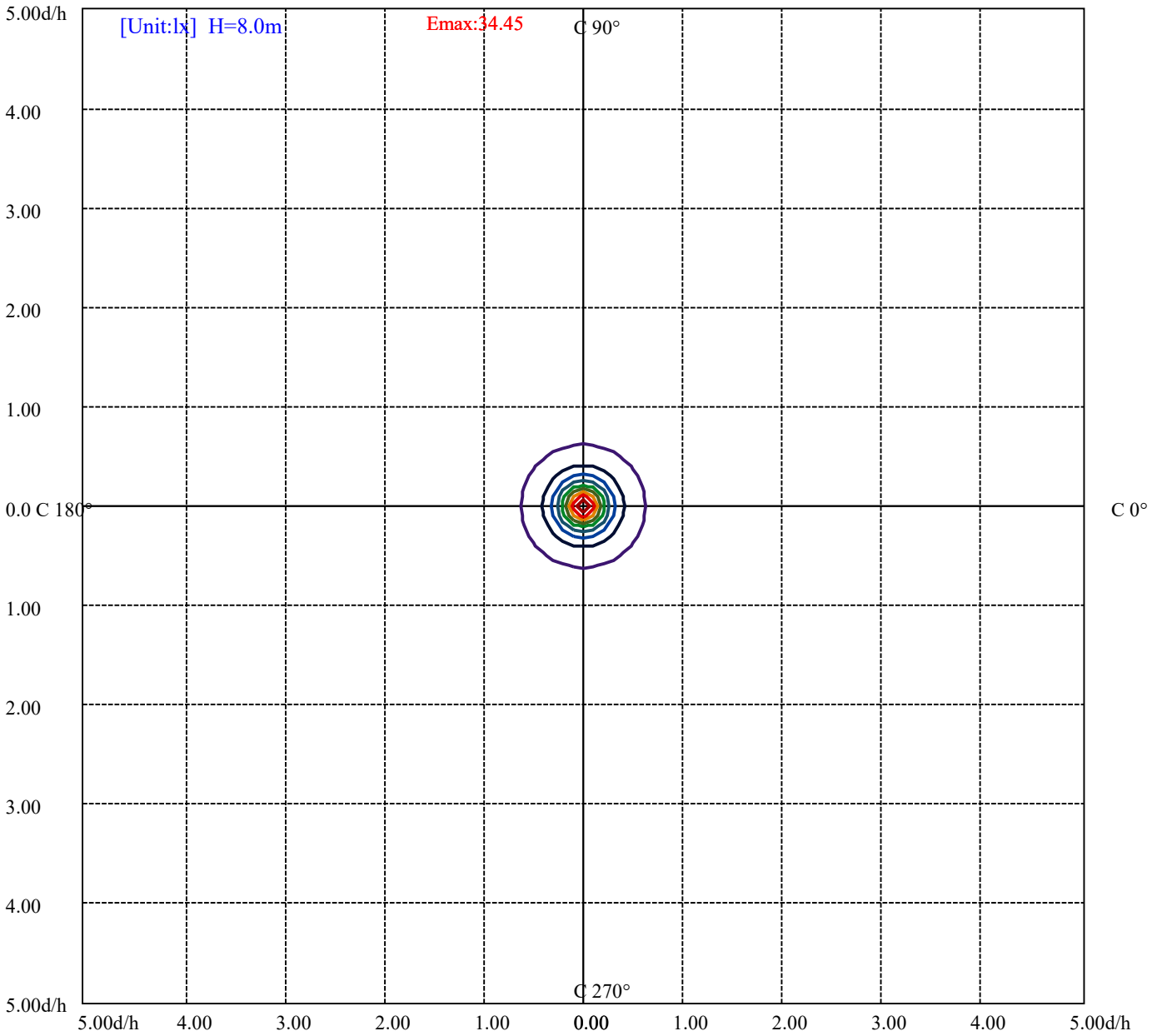
House

[Unit:cd]

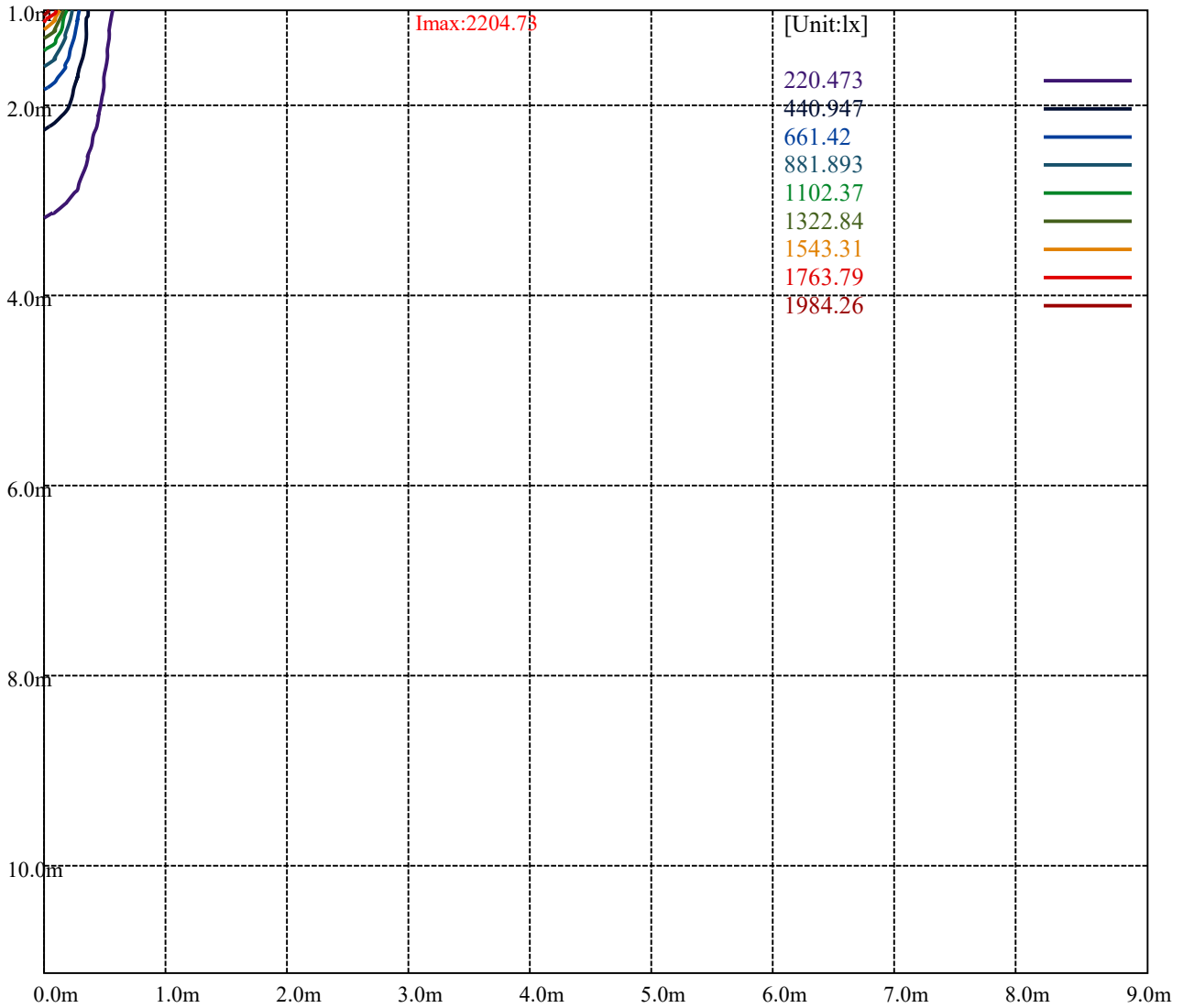
Road

Imax:2204.73

(10%Imax)	220.473	—
(20%Imax)	440.947	—
(30%Imax)	661.42	—
(40%Imax)	881.893	—
(50%Imax)	1102.37	—
(60%Imax)	1322.84	—
(70%Imax)	1543.31	—
(80%Imax)	1763.79	—
(90%Imax)	1984.26	—



- (10%Emax) 3.444891
- (20%Emax) 6.889766
- (30%Emax) 10.33466
- (40%Emax) 13.77953
- (50%Emax) 17.22437
- (60%Emax) 20.66937
- (70%Emax) 24.11422
- (80%Emax) 27.55906
- (90%Emax) 31.00391



Luminance Table

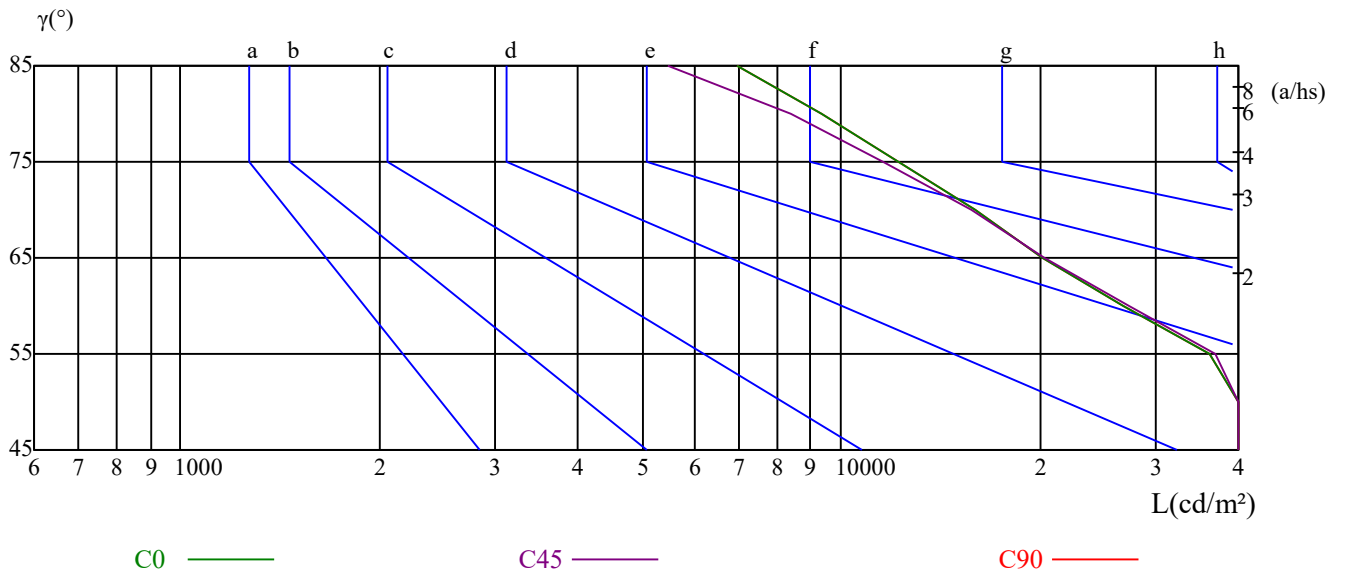
γ	45	50	55	60	65	70	75	80	85
C0	85957	54857	36292	26714	20222	15981	12251	9347	6946
C45	94356	57060	37014	27371	20379	15773	11621	8399	5455
C90	85957	54857	36292	26714	20222	15981	12251	9347	6946

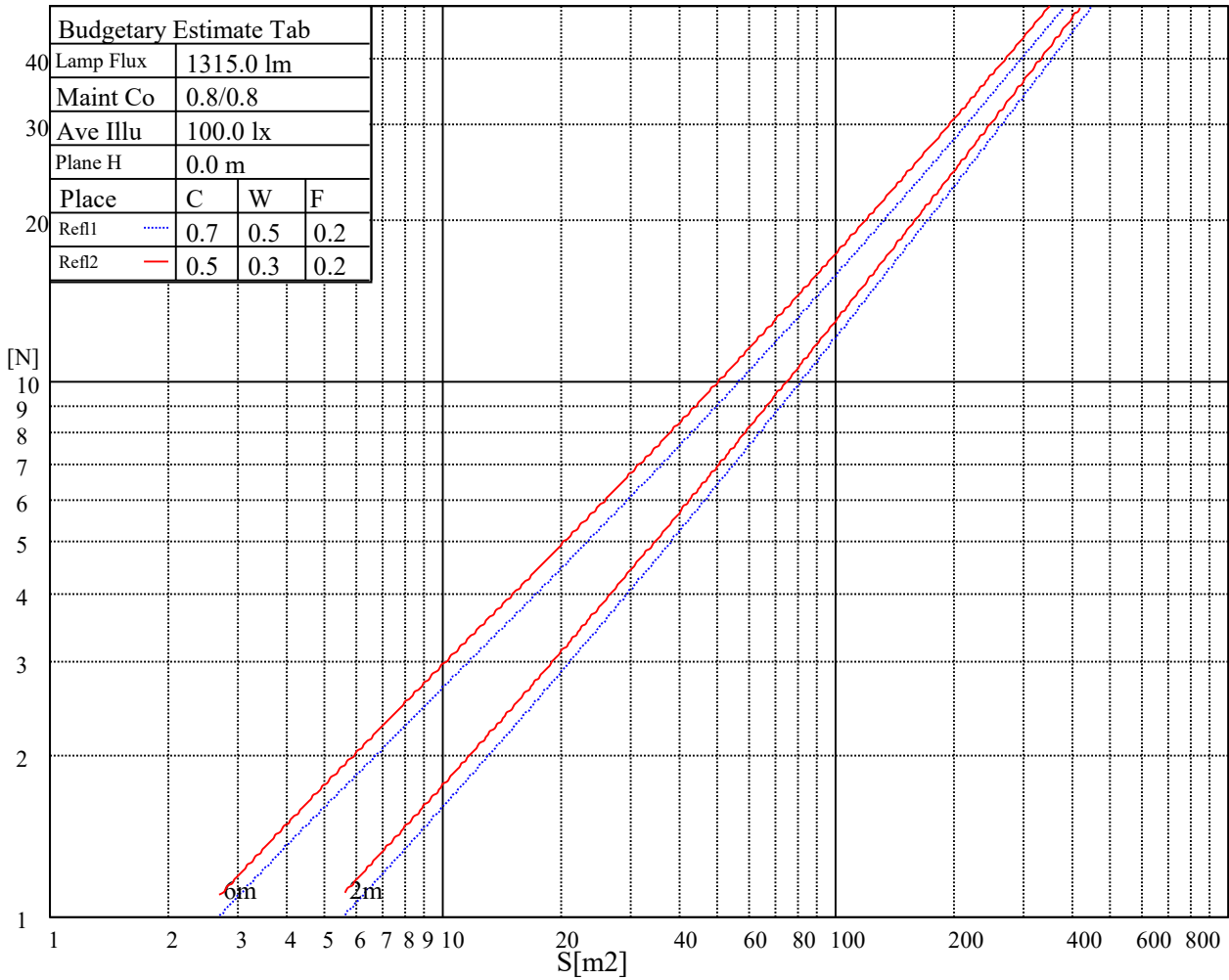
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
42461	42461	57878	35699	35699	47760	47658	47658	58455

Glare Table

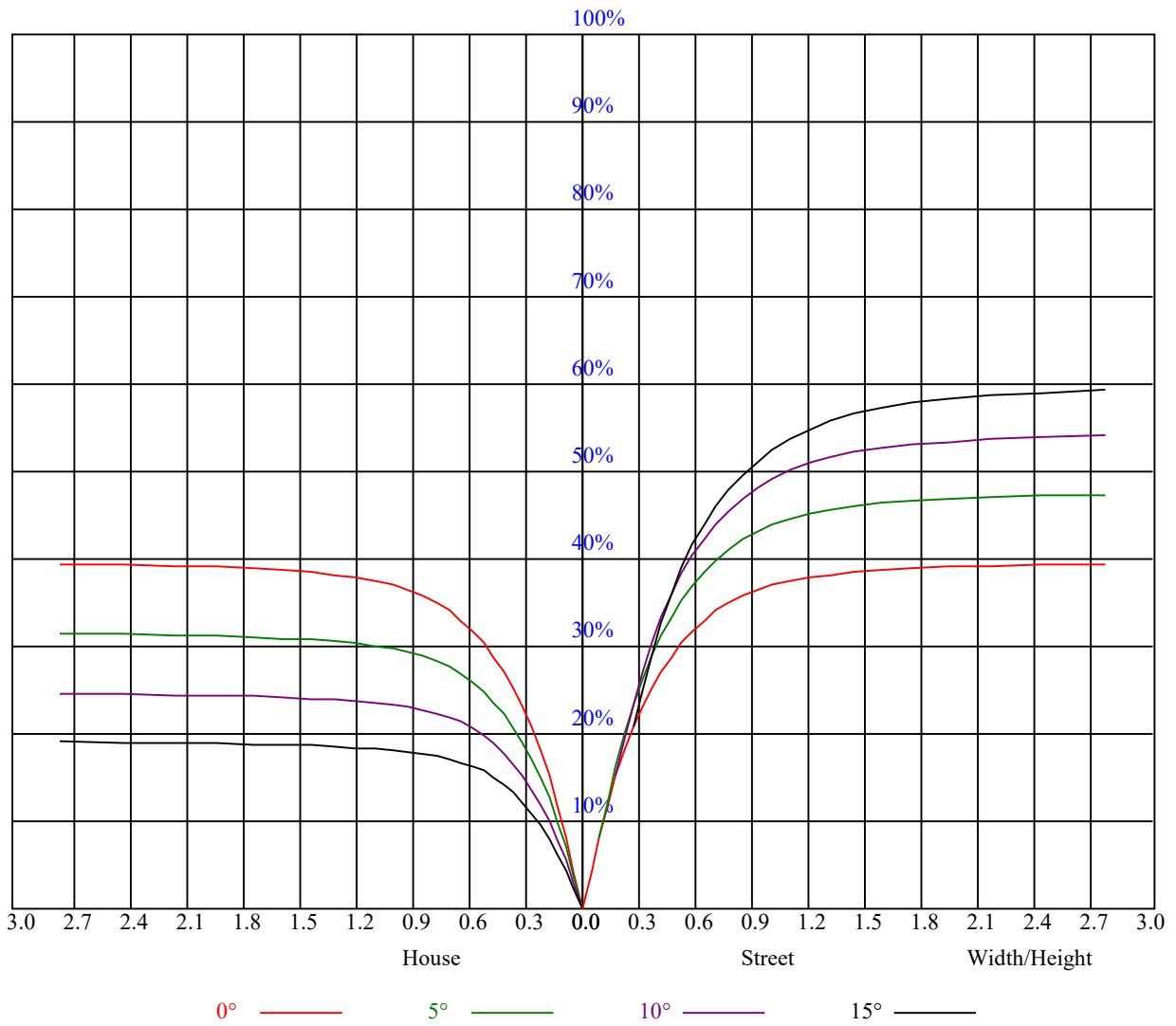
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

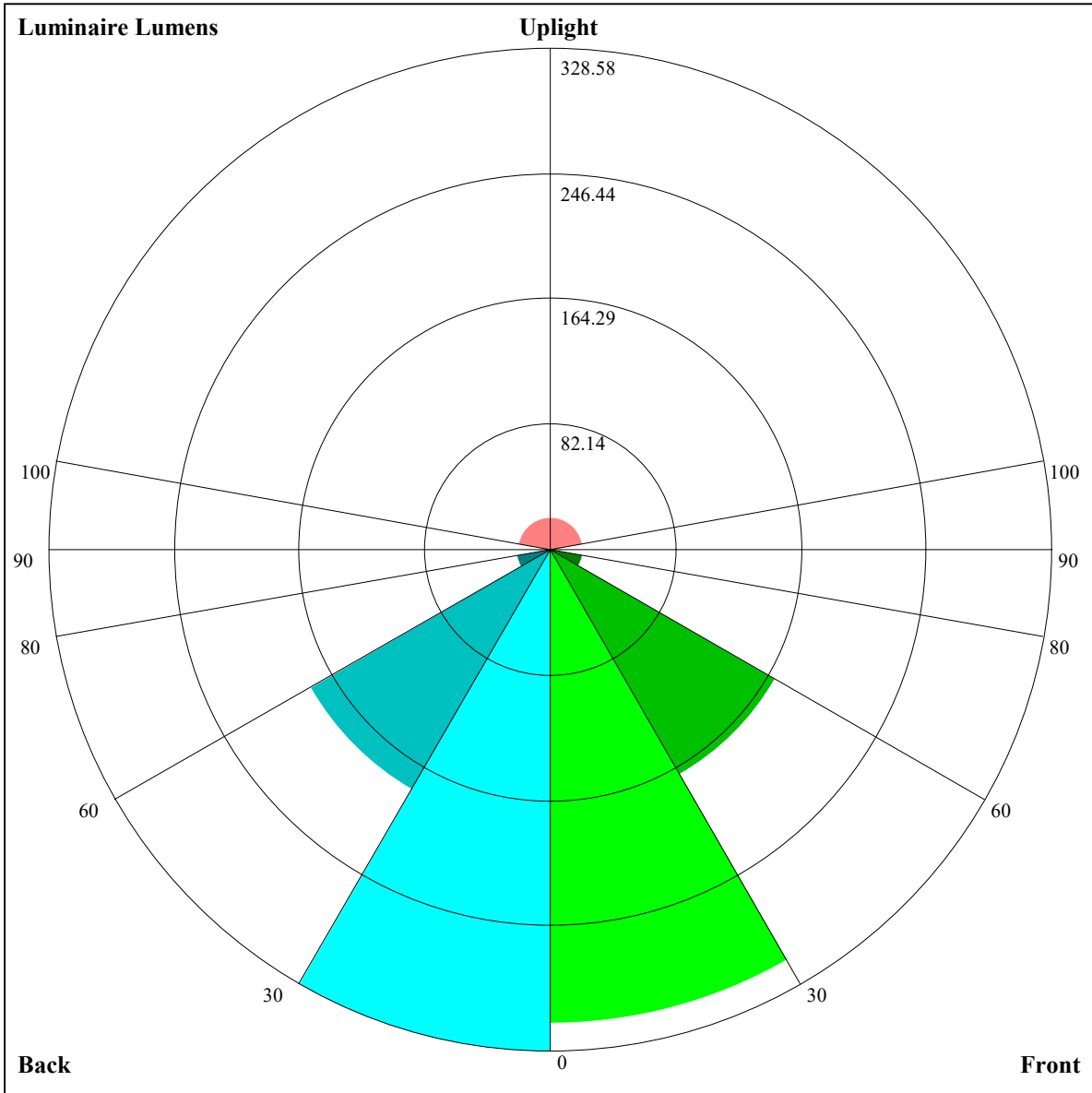
Luminance Limiting Curve





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	0.96	0.96	0.96	0.94	0.94	0.94	0.89	0.89	0.89	0.86	0.86	0.86	0.82	0.82	0.82	0.80
1	0.87	0.85	0.83	0.86	0.83	0.81	0.82	0.81	0.79	0.79	0.78	0.76	0.76	0.75	0.74	0.73
2	0.81	0.77	0.74	0.80	0.76	0.73	0.77	0.74	0.72	0.74	0.72	0.70	0.72	0.70	0.69	0.67
3	0.75	0.71	0.67	0.74	0.70	0.67	0.72	0.69	0.66	0.70	0.67	0.65	0.68	0.66	0.64	0.62
4	0.70	0.66	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.66	0.63	0.60	0.65	0.62	0.59	0.58
5	0.66	0.61	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.62	0.59	0.56	0.61	0.58	0.56	0.54
6	0.62	0.57	0.54	0.62	0.57	0.54	0.60	0.56	0.53	0.59	0.56	0.53	0.58	0.55	0.52	0.51
7	0.59	0.54	0.50	0.58	0.54	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.55	0.52	0.50	0.48
8	0.56	0.51	0.48	0.55	0.51	0.48	0.54	0.50	0.47	0.54	0.50	0.47	0.53	0.49	0.47	0.46
9	0.53	0.48	0.45	0.53	0.48	0.45	0.52	0.48	0.45	0.51	0.48	0.45	0.51	0.47	0.45	0.44
10	0.51	0.46	0.43	0.50	0.46	0.43	0.50	0.46	0.43	0.49	0.45	0.43	0.48	0.45	0.43	0.42





Luminaire Lumens:

FL=310.23,FM=170.6,FH=20.98,FVH=3.53

BL=328.58,BM=182.22,BH=22.26,BVH=3.69

UL=4.54,UH=21.58

BUG Rating:B1-U2-G0

Nata 1405-N

Intensity data(cd)										Appendix Page: 15 Total:15
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	
0.0	2200.60	1886.23	1239.32	827.99	573.80	445.13	370.86	288.72	203.54	
90.0	2208.86	1996.90	1469.46	993.22	658.48	496.06	407.97	323.73	234.27	
180.0	2200.60	2043.14	1557.55	1023.50	688.76	520.28	414.02	328.14	281.34	
270.0	2208.86	1898.35	1074.21	815.94	560.58	431.15	354.12	276.55	197.98	
360.0	2200.60	1886.23	1239.32	827.99	573.80	445.13	370.86	288.72	203.54	
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	
0.0	129.82	79.78	50.60	35.62	24.89	17.89	12.39	8.59	5.89	
90.0	150.86	95.41	59.08	40.52	29.29	21.53	15.03	10.19	6.44	
180.0	158.45	97.06	59.52	41.57	29.40	21.42	15.47	10.57	6.61	
270.0	120.30	73.39	50.21	35.73	25.60	19.27	13.32	9.25	6.33	
360.0	129.82	79.78	50.60	35.62	24.89	17.89	12.39	8.59	5.89	
C/γ(°)	90.0									
0.0	4.13									
90.0	4.18									
180.0	4.18									
270.0	4.13									
360.0	4.13									