



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

---

## Nata

---

Client:

LumCAT: 1657-S

Luminaire: 92.70.132.00

Report No: NT2017080305

Test No: nata-0100

LampCAT: LUMILEDS 1203

Lamp flux(lm): 1132.0

Number of Lamps: 1

Length(mm): 47

Phm Type: C

Voltage(V): 35.3300

Current(A): 0.3000

Power (W): 10.5660

PF: 0.0000

Ballast type: DC

Width(mm): 47

Height(mm): 0

---

## Photometric Results

---

Lumens(lm): 1000.46, Efficiency(%): 88.38% , Luminous Efficacy(lm/W): 94.69

Central intensity(cd): 3998.289, Maximum intensity(cd): 3998.289

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

Beam Angle(50%Imax): [C0/180]Total=23.2

[C90/270]Total=23.2

Field angle(10%Imax): [C0/180]Total=53.6

[C90/270]Total=53.6

Maximum s/h(1/2): C0\_180=0.40 C90\_270=0.40

Maximum s/h(1/4): C0\_180=0.39 C90\_270=0.39

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.41%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 96.411%

---

Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2017/8/3  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.46

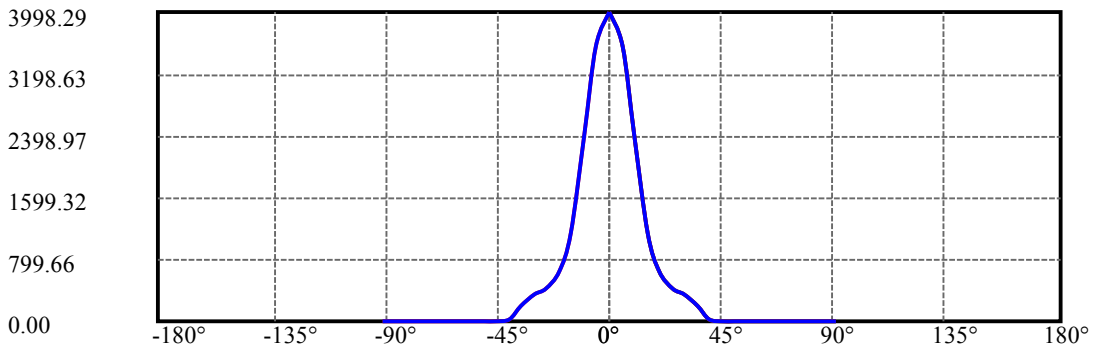
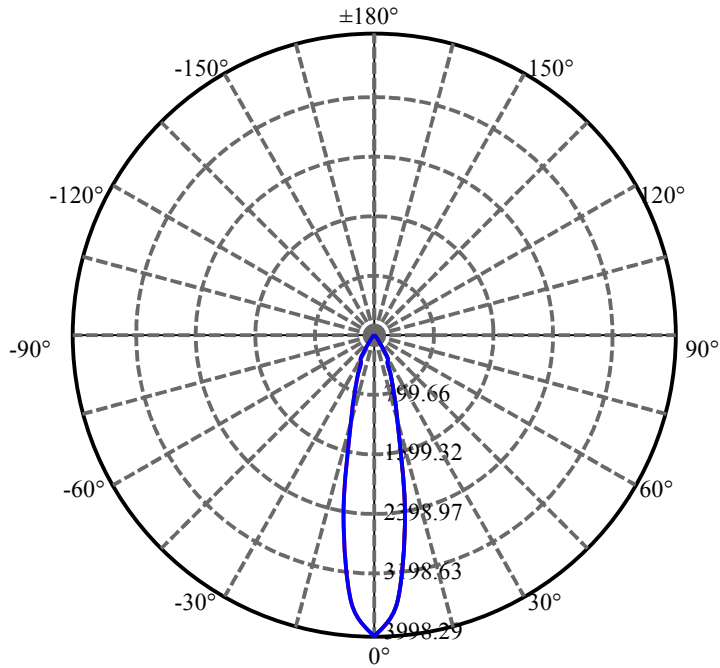
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3998.289	23.911	23.911	2.112%	2.390%
5.0	3544.033	169.310	193.221	14.957%	19.313%
10.0	2403.593	228.781	422.002	20.210%	42.181%
15.0	1154.416	163.775	585.777	14.468%	58.551%
20.0	633.816	118.824	704.601	10.497%	70.428%
25.0	421.923	97.740	802.341	8.634%	80.198%
30.0	359.092	98.416	900.757	8.694%	90.035%
35.0	199.302	62.660	963.417	5.535%	96.298%
40.0	30.768	10.841	974.258	.958%	97.381%
45.0	9.120	3.535	977.793	.312%	97.735%
50.0	7.478	3.140	980.933	.277%	98.049%
55.0	6.609	2.967	983.9	.262%	98.345%
60.0	5.857	2.780	986.681	.246%	98.623%
65.0	5.301	2.633	989.314	.233%	98.886%
70.0	4.988	2.569	991.883	.227%	99.143%
75.0	4.744	2.512	994.395	.222%	99.394%
80.0	4.570	2.467	996.862	.218%	99.641%
85.0	4.459	2.435	999.297	.215%	99.884%
90.0	4.230	1.159	1000.456	.102%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	900.76	79.57%	90.03%
0-40	974.26	86.07%	97.38%
0-60	986.68	87.16%	98.62%
0-90	999.30	88.28%	99.88%
0-120	999.30	88.28%	99.88%
0-180	1000.46	88.38%	100.00%
60-90	15.40	1.36%	1.54%
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%
0-24.90	800.36	70.70%	80.00%

## ZONAL LUMEN SUMMARY

0-10	422.00
10-20	282.60
20-30	196.16
30-40	73.50
40-50	6.67
50-60	5.75
60-70	5.20
70-80	4.98
80-90	2.43
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: —————

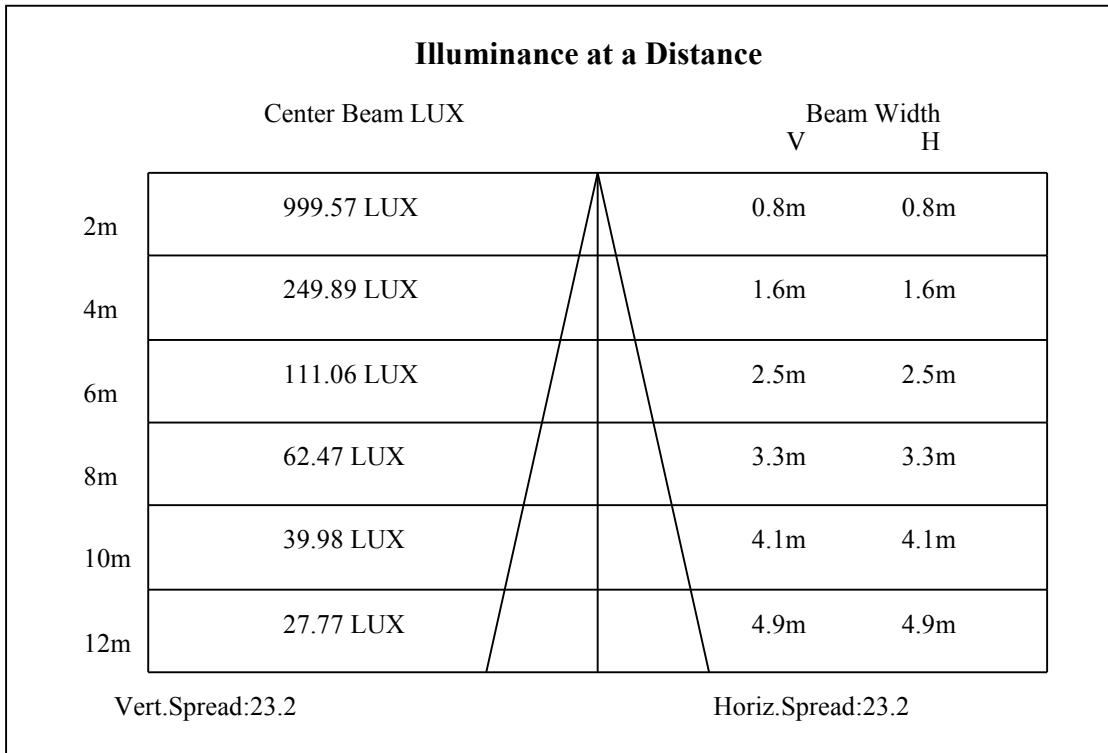
C90/C270: —————

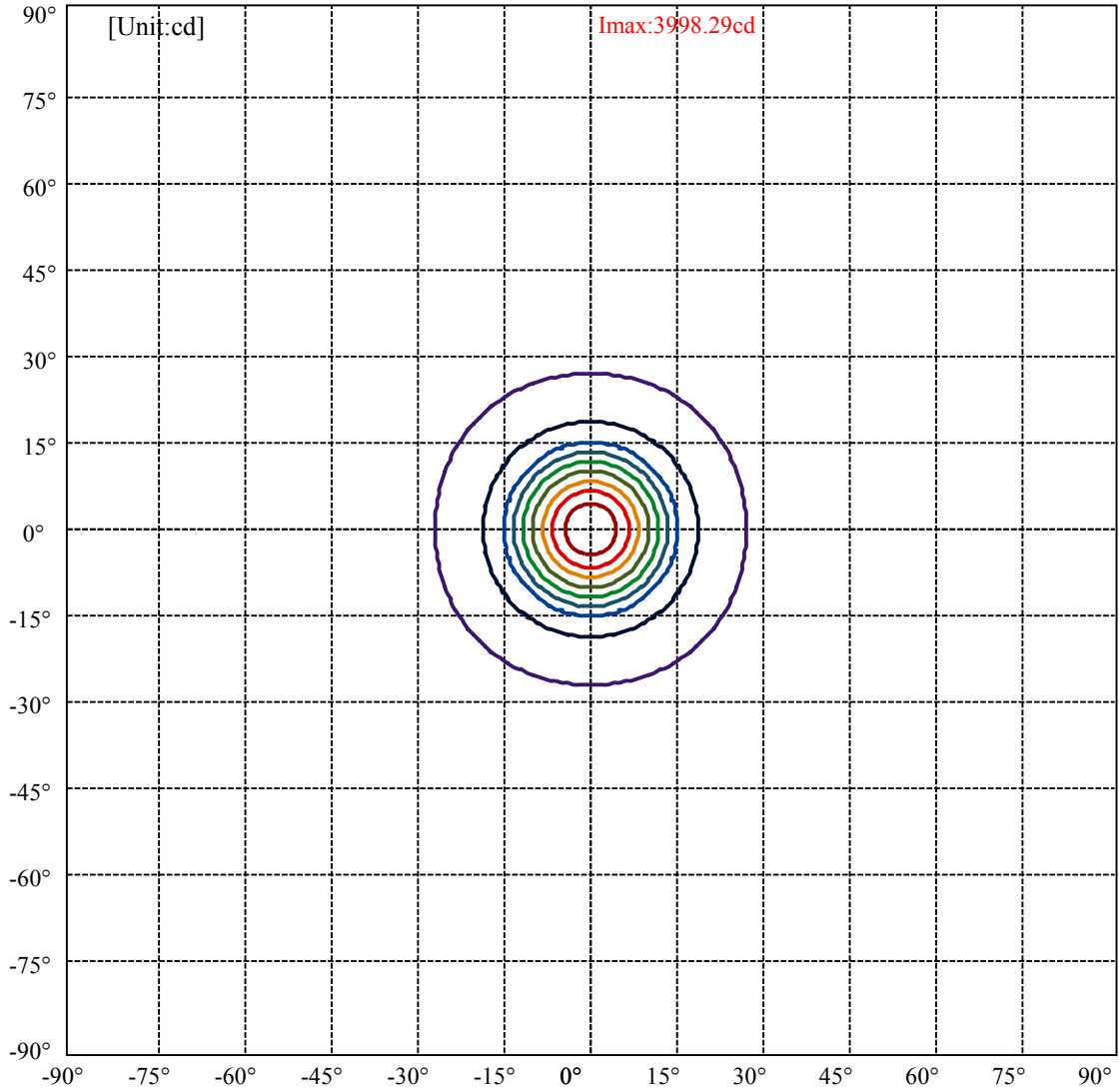
Field angle(10%Imax):C0/180Left:26.8 Right:26.8

:C90/270Left:26.8 Right:26.8

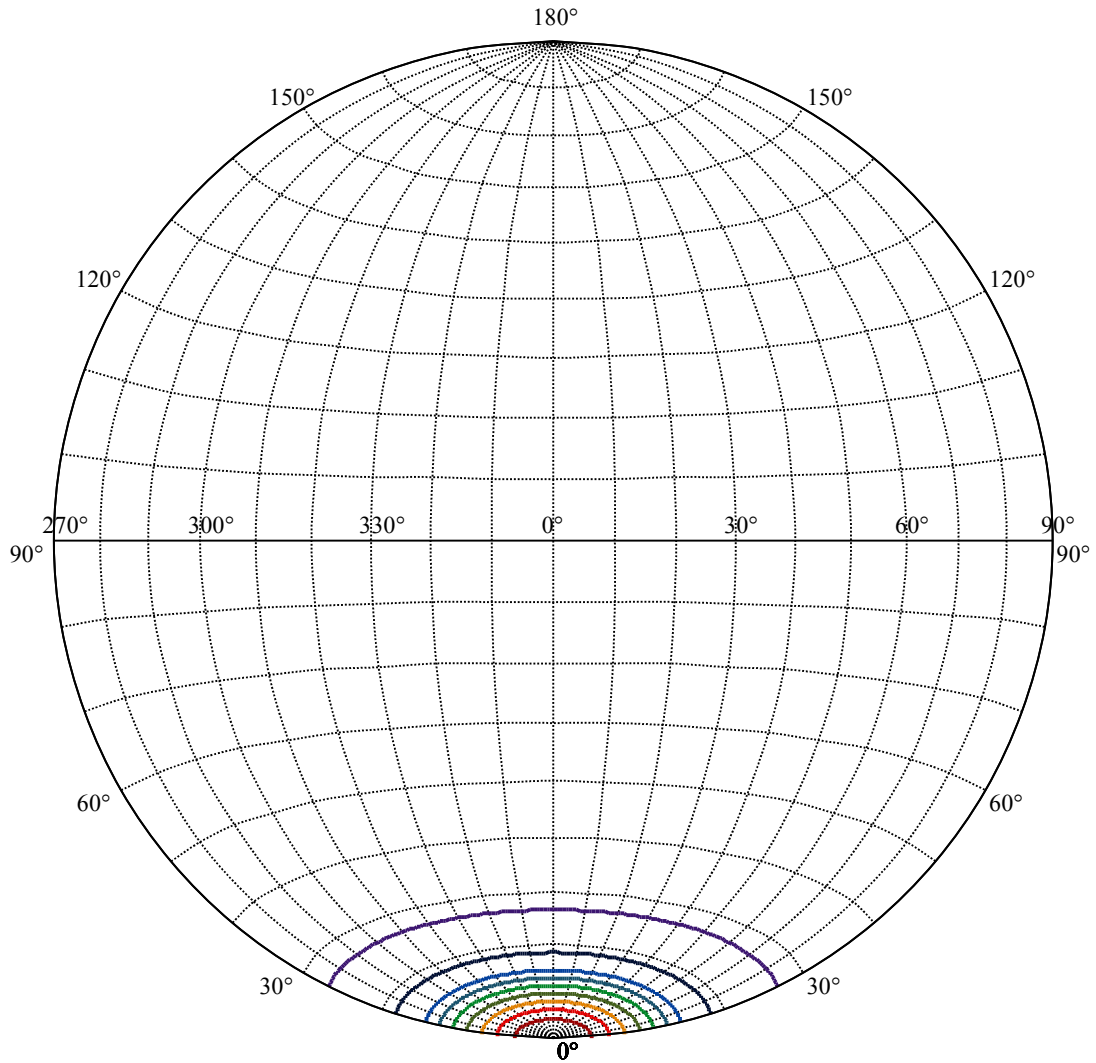
Beam Angle(50%Imax):C0/180Left:11.6 Right:11.6

:C90/270Left:11.6 Right:11.6





(10%Imax) 399.829	—
(20%Imax) 799.658	—
(30%Imax) 1199.49	—
(40%Imax) 1599.32	—
(50%Imax) 1999.14	—
(60%Imax) 2398.97	—
(70%Imax) 2798.8	—
(80%Imax) 3198.63	—
(90%Imax) 3598.46	—



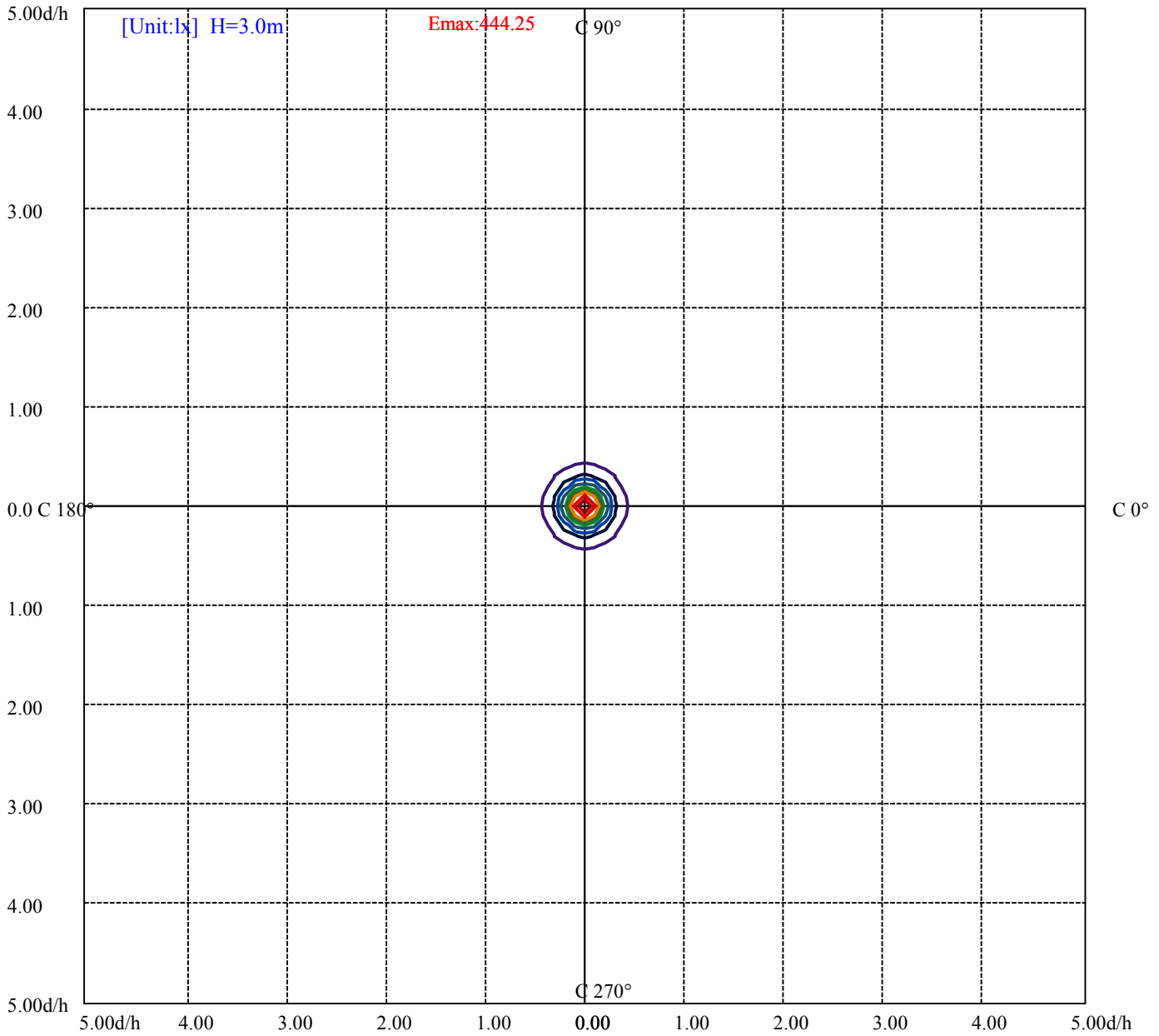
House

[Unit:cd]

Road

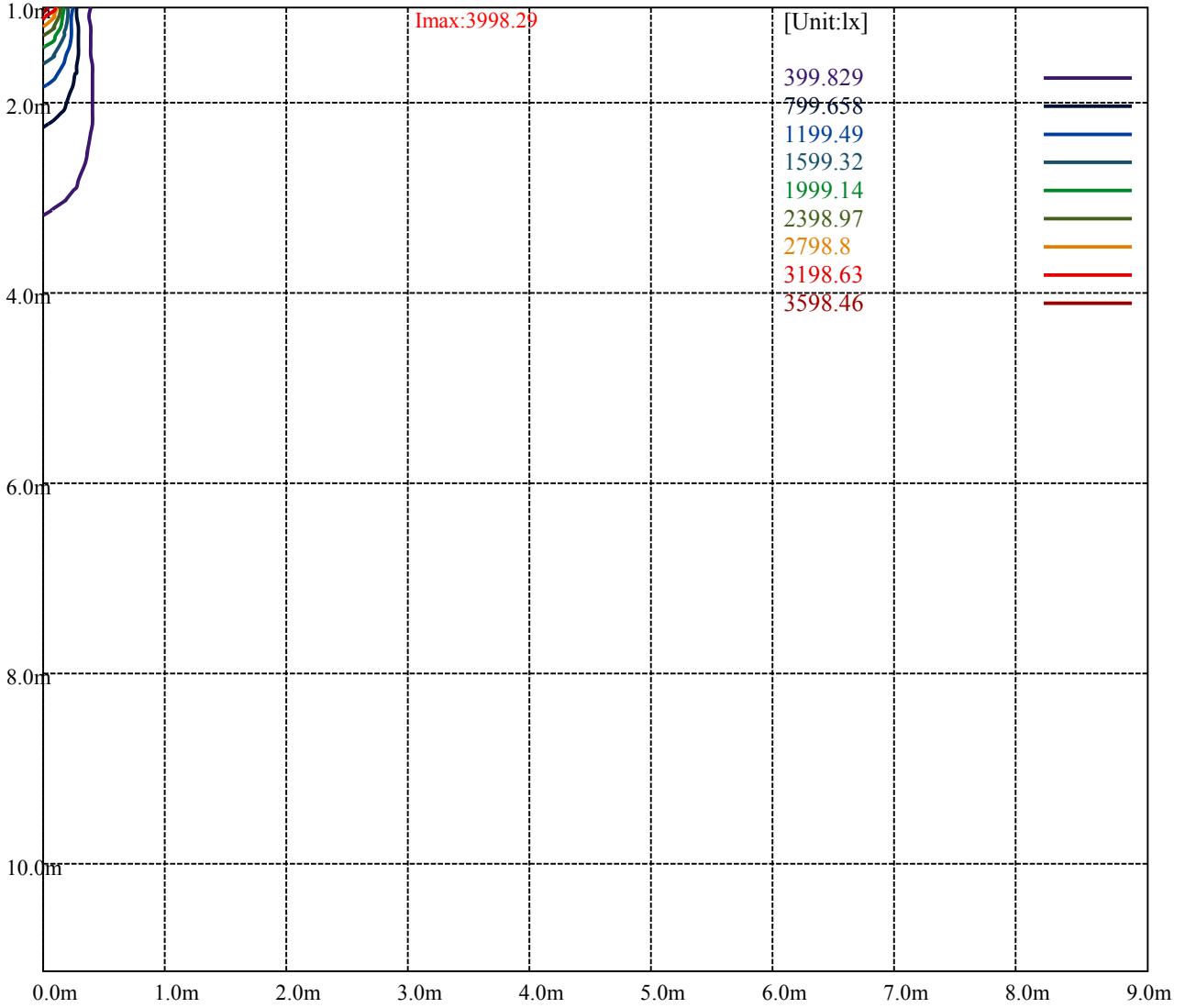
**Imax:3998.29**

(10%Imax) 399.829	—
(20%Imax) 799.658	—
(30%Imax) 1199.49	—
(40%Imax) 1599.32	—
(50%Imax) 1999.14	—
(60%Imax) 2398.97	—
(70%Imax) 2798.8	—
(80%Imax) 3198.63	—
(90%Imax) 3598.46	—



- (10%Emax) 44.42533
- (20%Emax) 88.85056
- (30%Emax) 133.2756
- (40%Emax) 177.7011
- (50%Emax) 222.1267
- (60%Emax) 266.5522
- (70%Emax) 310.9767
- (80%Emax) 355.4022
- (90%Emax) 399.8278





Luminance Table

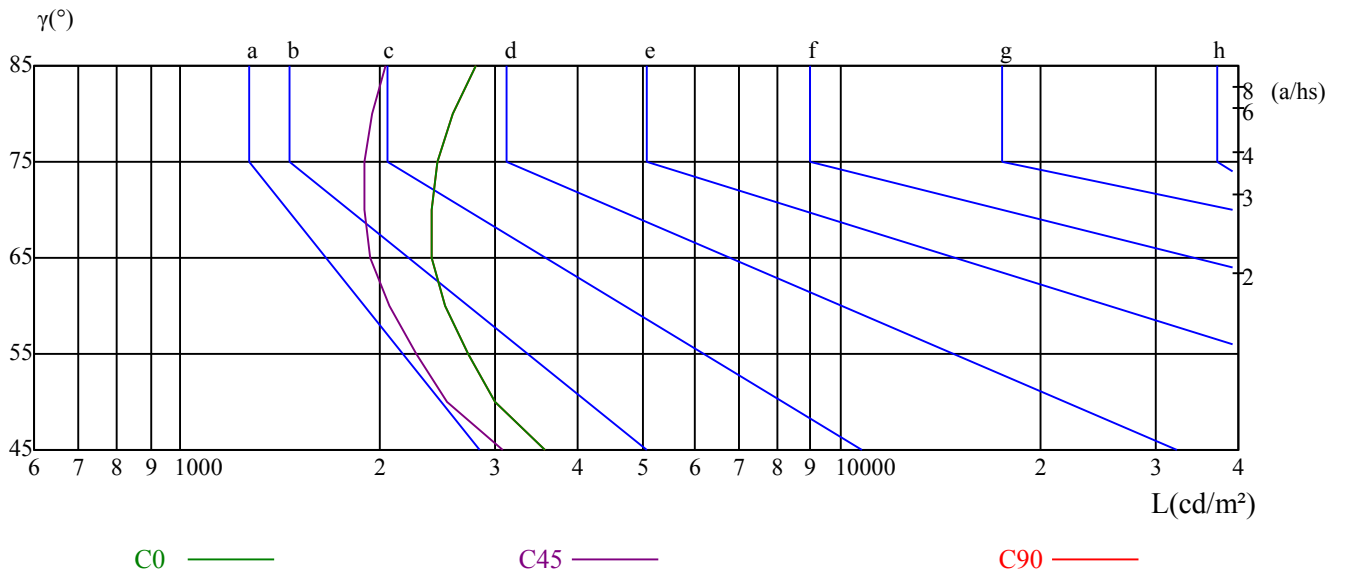
$\gamma$	45	50	55	60	65	70	75	80	85
C0	3564	2991	2729	2519	2397	2397	2454	2579	2792
C45	3069	2537	2278	2069	1934	1897	1899	1947	2046
C90	3564	2991	2729	2519	2397	2397	2454	2579	2792

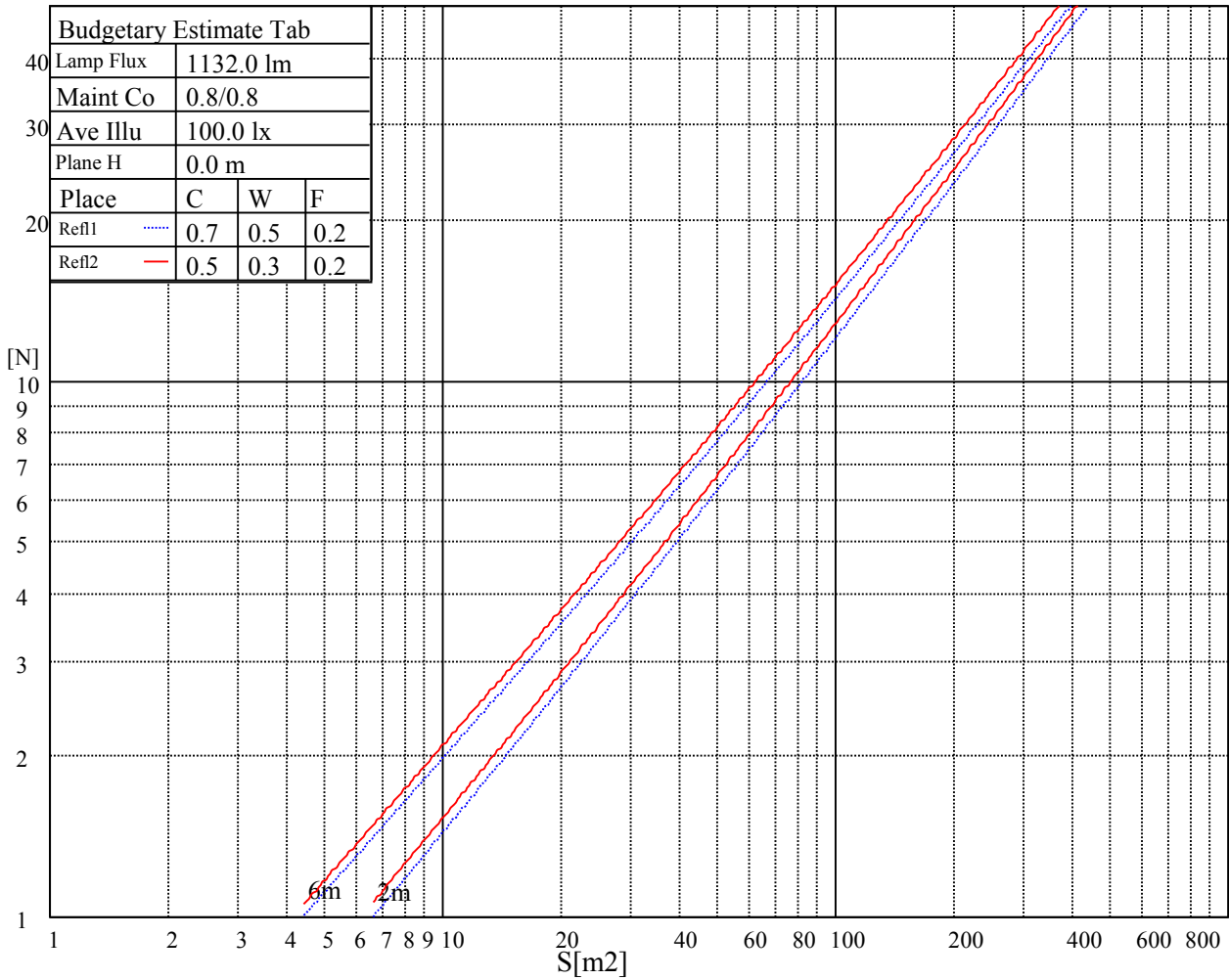
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5678	5678	5678	8298	8298	8298	23161	23161	23161

Glare Table

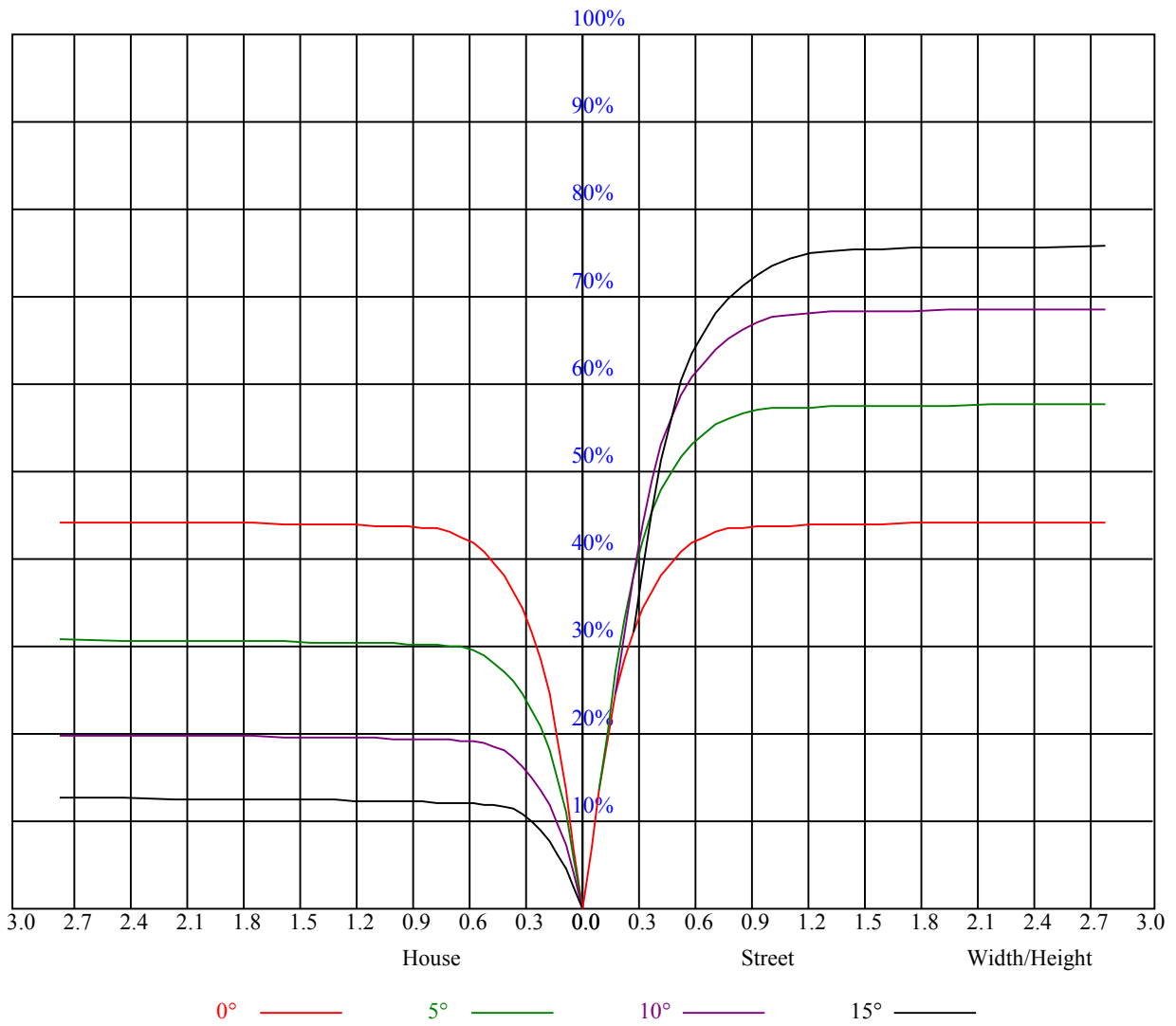
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

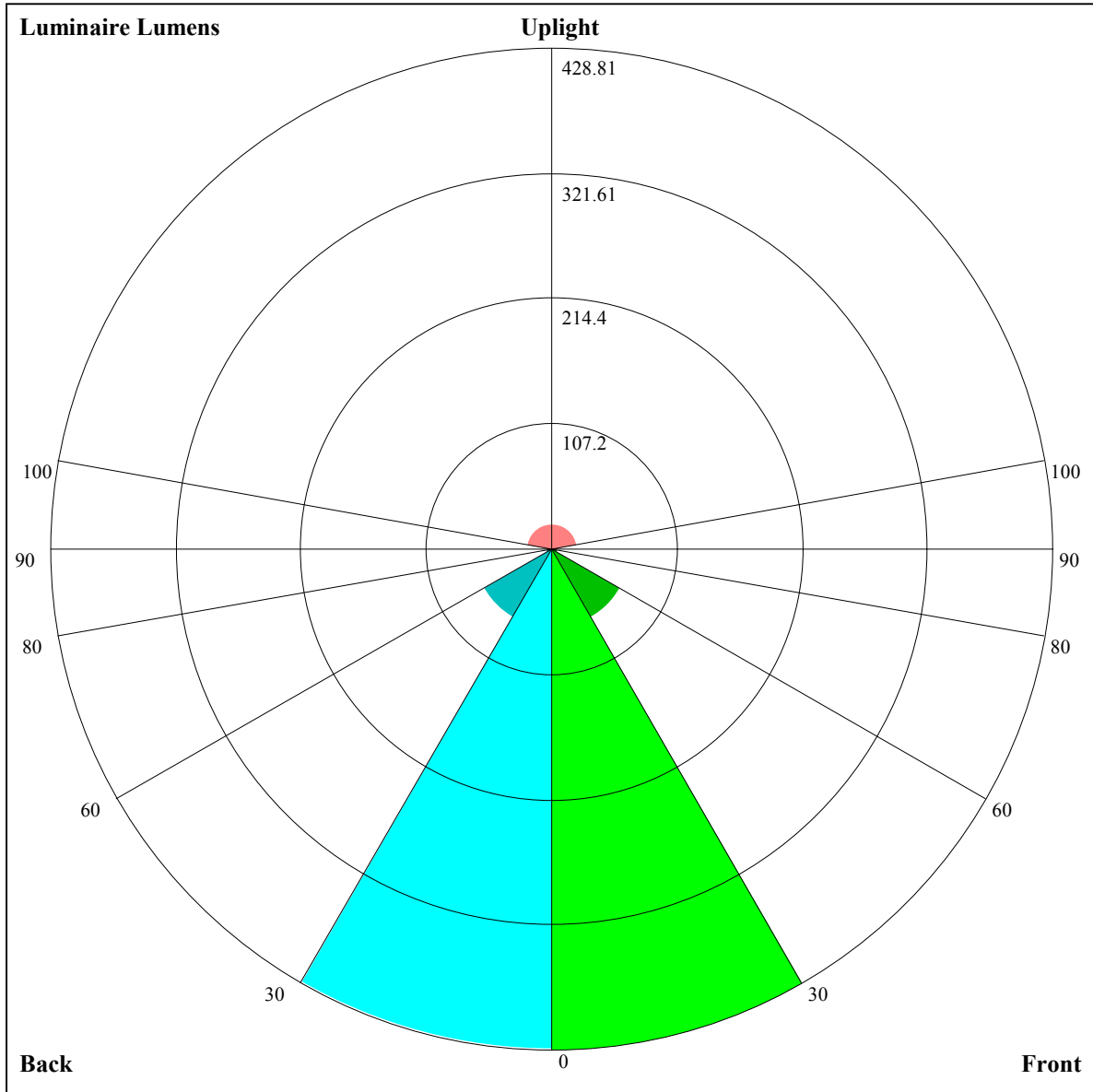
Luminance Limiting Curve





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	0.99	0.96	0.94	0.97	0.95	0.92	0.93	0.91	0.90	0.90	0.88	0.87	0.87	0.85	0.84	0.83
2	0.94	0.90	0.87	0.92	0.89	0.86	0.89	0.87	0.84	0.87	0.85	0.83	0.84	0.82	0.81	0.79
3	0.89	0.85	0.82	0.88	0.85	0.82	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.77
4	0.86	0.81	0.78	0.85	0.81	0.78	0.83	0.79	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
5	0.82	0.78	0.75	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.73	0.77	0.75	0.73	0.71
6	0.79	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
7	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
8	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
9	0.72	0.68	0.65	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.63
10	0.70	0.66	0.63	0.69	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.68	0.65	0.63	0.62





Luminaire Lumens:

FL=428.81,FM=67.96,FH=5.21,FVH=2.43

BL=427.62,BM=67.59,BH=5.22,BVH=2.42

UL=4.61,UH=21.96

BUG Rating:B1-U2-G0

Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	4015.26	3664.10	2505.99	1299.46	672.27	439.09	382.33	281.04	22.76
45.0	4016.38	3390.85	2087.49	1058.49	556.52	407.93	341.14	136.12	15.30
90.0	3944.03	2971.24	1815.91	850.63	458.29	371.75	283.60	84.31	15.75
135.0	4017.49	3503.27	2249.44	1096.34	557.63	406.26	363.96	158.38	19.48
180.0	4015.26	3499.37	2298.41	1071.07	612.45	419.33	370.97	179.59	18.14
225.0	4016.38	3754.26	2721.92	1076.36	729.09	445.82	382.33	251.04	49.75
270.0	3944.03	3924.55	3031.90	1690.70	816.41	451.33	364.52	285.49	74.63
315.0	4017.49	3644.62	2517.68	1092.27	667.87	433.86	383.88	218.43	30.33
360.0	4015.26	3664.10	2505.99	1299.46	672.27	439.09	382.33	281.04	22.76
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	6.23	5.62	5.45	5.34	5.01	4.84	4.62	4.56	4.40
45.0	7.85	7.07	6.46	5.73	5.34	4.95	4.67	4.51	4.56
90.0	9.46	8.13	6.73	5.84	5.40	5.12	4.90	4.67	4.56
135.0	9.52	8.07	6.90	5.95	5.34	5.01	4.73	4.56	4.40
180.0	6.90	6.23	5.95	5.51	5.18	4.90	4.73	4.51	4.45
225.0	9.79	7.74	6.85	5.90	5.23	4.90	4.62	4.40	4.34
270.0	14.47	9.63	8.01	6.73	5.68	5.18	4.90	4.73	4.51
315.0	8.74	7.35	6.51	5.84	5.23	5.01	4.79	4.62	4.45
360.0	6.23	5.62	5.45	5.34	5.01	4.84	4.62	4.56	4.40
C/ $\gamma$ (°)	90.0								
0.0	4.17								
45.0	4.17								
90.0	4.23								
135.0	4.23								
180.0	4.23								
225.0	4.23								
270.0	4.34								
315.0	4.23								
360.0	4.17								