



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: 3-2403-A

Luminaire: 92.70.230.00

Report No: GC2019091909

Voltage(V): 28.7600

Test No: GC2019100807

Current(A): 0.2470 Power (W): 10.0000

LampCAT: LUMILEDS LUXEON 3030 2D(ROUND LES) ARRAY 10W

Lamp flux(lm): 1435.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 78

Width(mm): 78

Phm Type: C

Height(mm): 0

---

## Photometric Results

---

Lumens(lm): 1186.71, Efficiency(%): 82.70% , Luminous Efficacy(lm/W): 118.67

Central intensity(cd): 1436.062, Maximum intensity(cd): 1436.062

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

Beam Angle(50%Imax): [C0/180]Total=55.8

[C90/270]Total=55.8

Field angle(10%Imax): [C0/180]Total=80.0

[C90/270]Total=80.0

Maximum s/h(1/2): C0\_180=0.88 C90\_270=0.88

Maximum s/h(1/4): C0\_180=0.84 C90\_270=0.84

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 82.70%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 96.851%

---

Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2019/10/8  
Humidity(%): 65.0%

Operator: NT07  
Distance(m): 7.50

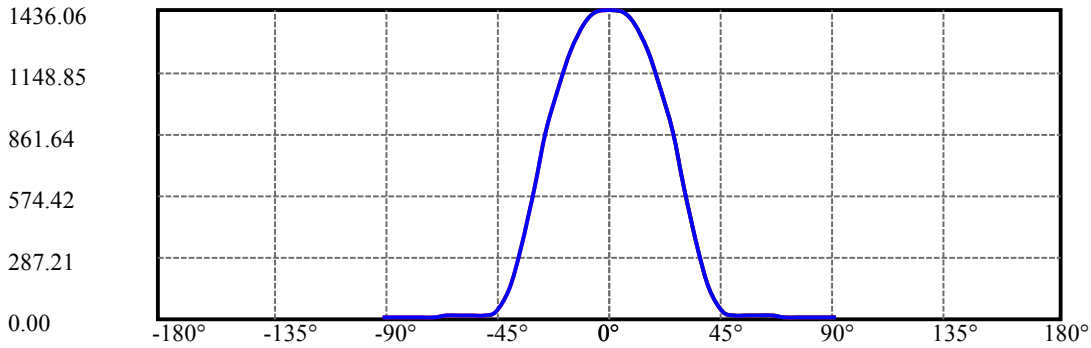
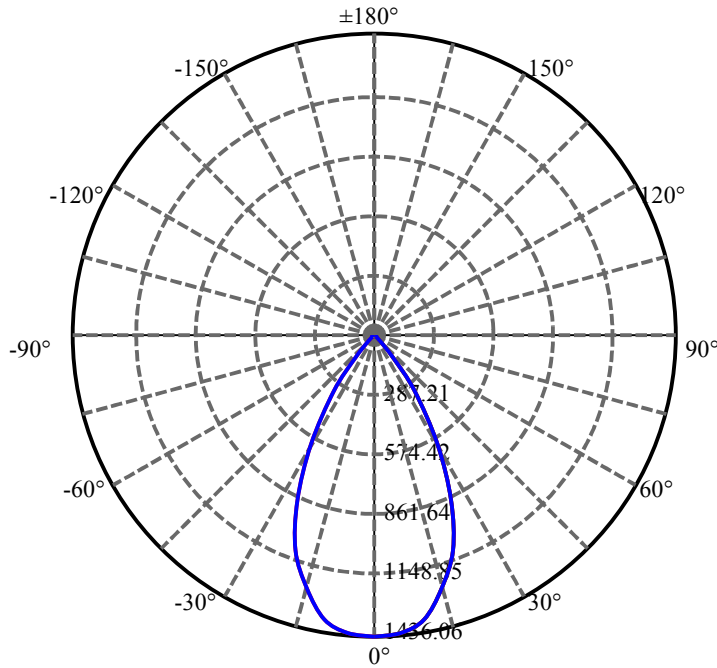
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1436.063	0.000	0	.000%	.000%
5.0	1424.320	34.195	34.195	2.383%	2.881%
10.0	1374.188	100.111	134.306	6.976%	11.318%
15.0	1250.620	155.702	290.008	10.850%	24.438%
20.0	1088.473	192.774	482.782	13.434%	40.682%
25.0	871.833	205.600	688.382	14.327%	58.008%
30.0	603.162	186.662	875.044	13.008%	73.737%
35.0	327.530	137.051	1012.095	9.551%	85.286%
40.0	144.267	78.716	1090.811	5.485%	91.919%
45.0	39.136	33.959	1124.769	2.366%	94.780%
50.0	16.622	11.267	1136.036	.785%	95.730%
55.0	14.484	6.764	1142.799	.471%	96.300%
60.0	13.823	6.543	1149.343	.456%	96.851%
65.0	13.444	6.629	1155.971	.462%	97.410%
70.0	13.205	6.748	1162.719	.470%	97.978%
75.0	12.980	6.844	1169.563	.477%	98.555%
80.0	12.600	6.844	1176.408	.477%	99.132%
85.0	9.914	6.118	1182.525	.426%	99.647%
90.0	5.372	4.185	1186.711	.292%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	875.04	60.98%	73.74%
0-40	1090.81	76.01%	91.92%
0-60	1149.34	80.09%	96.85%
0-90	1182.53	82.41%	99.65%
0-120	1182.53	82.41%	99.65%
0-180	1186.71	82.70%	100.00%
60-90	39.73	2.77%	3.35%
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%
0-32.71	949.37	66.16%	80.00%

ZONAL LUMEN SUMMARY

0-10	134.31
10-20	348.48
20-30	392.26
30-40	215.77
40-50	45.23
50-60	13.31
60-70	13.38
70-80	13.69
80-90	6.12
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

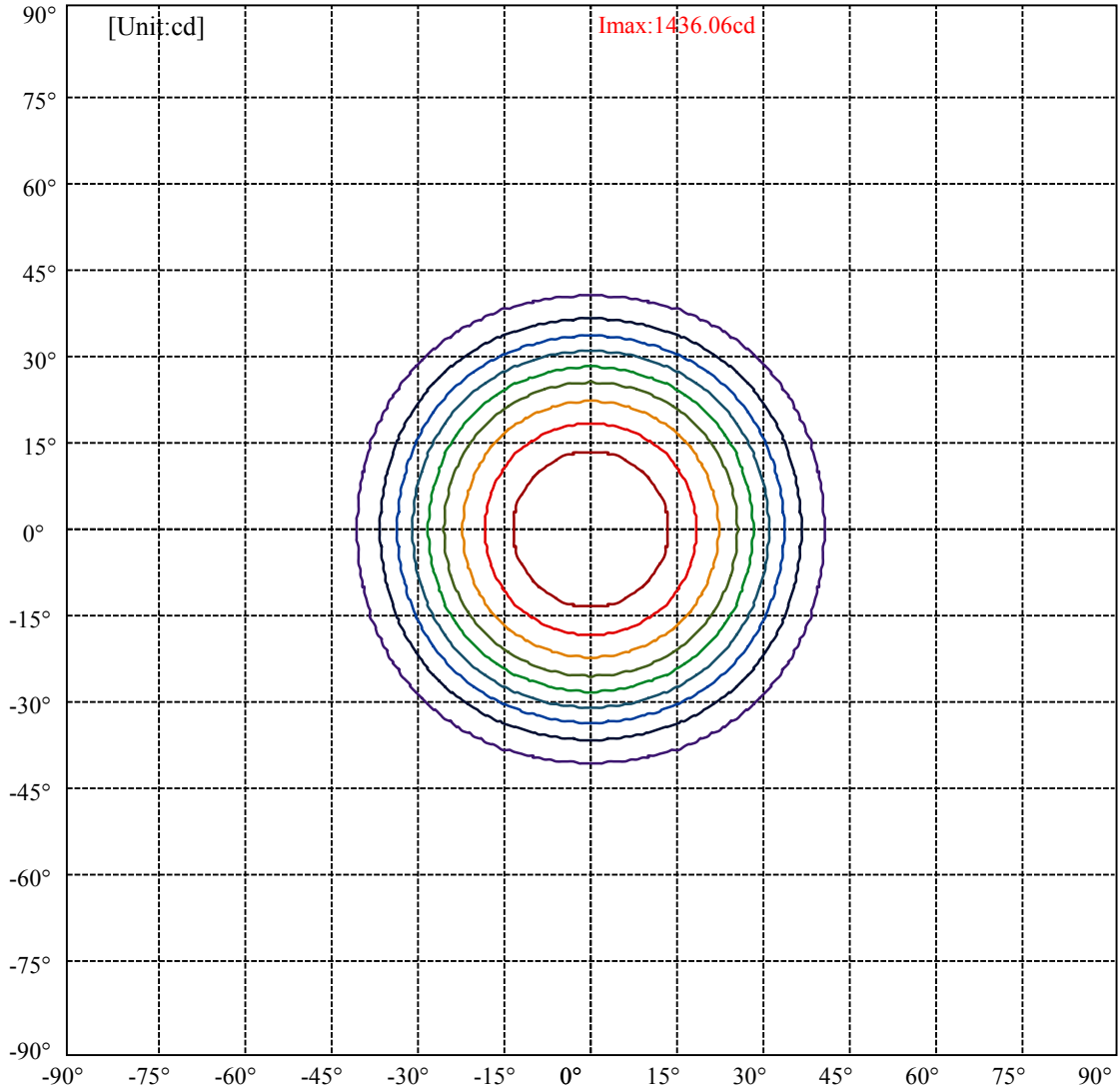


C0(Max): ———  
 C0/C180: ———  
 C90/C270: ———

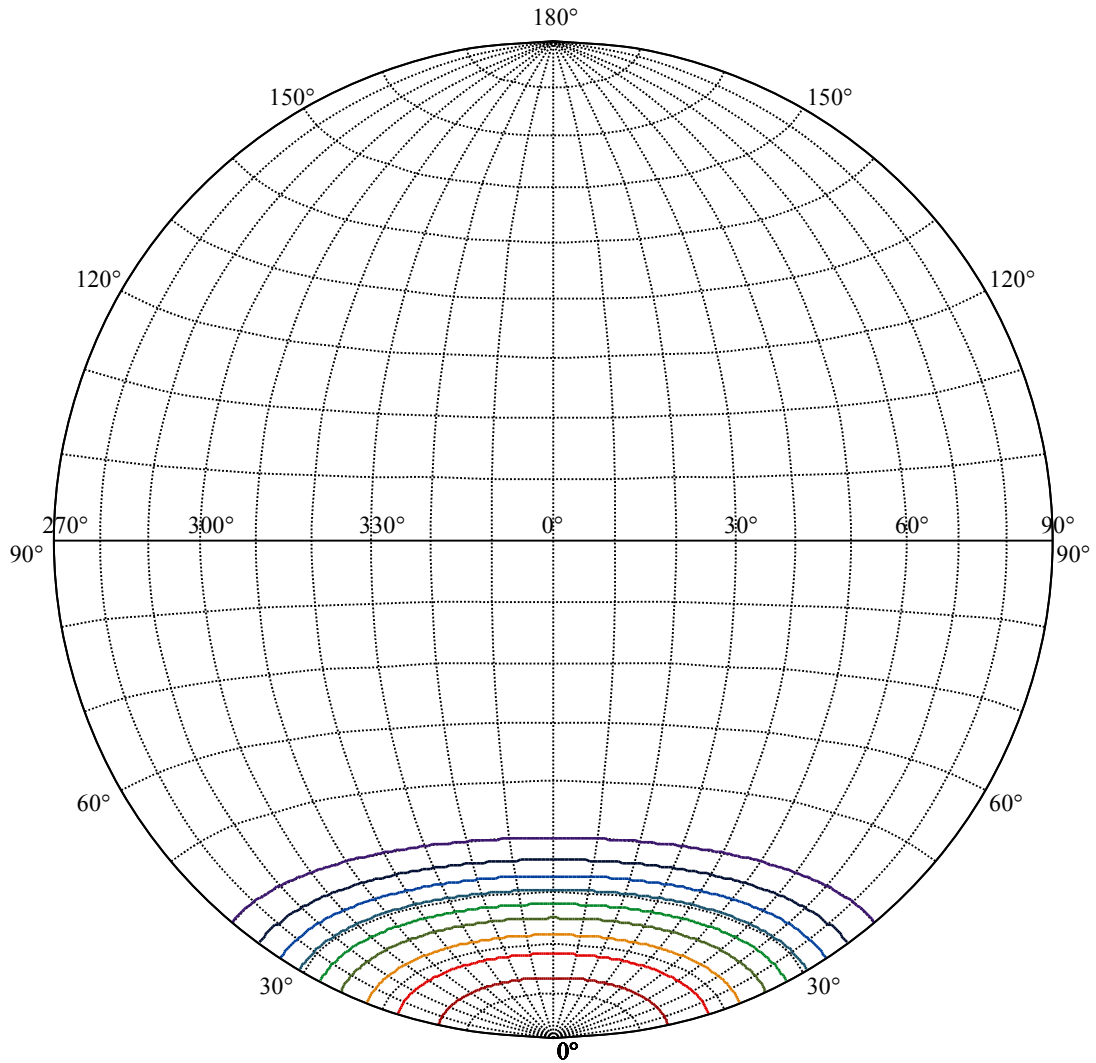
Field angle(10%Imax):C0/180Left:40.0 Right:40.0  
 :C90/270Left:40.0 Right:40.0

Beam Angle(50%Imax):C0/180Left:27.9 Right:27.9  
 :C90/270Left:27.9 Right:27.9





(10%Imax) 143.606	—
(20%Imax) 287.212	—
(30%Imax) 430.819	—
(40%Imax) 574.425	—
(50%Imax) 718.031	—
(60%Imax) 861.637	—
(70%Imax) 1005.24	—
(80%Imax) 1148.85	—
(90%Imax) 1292.46	—



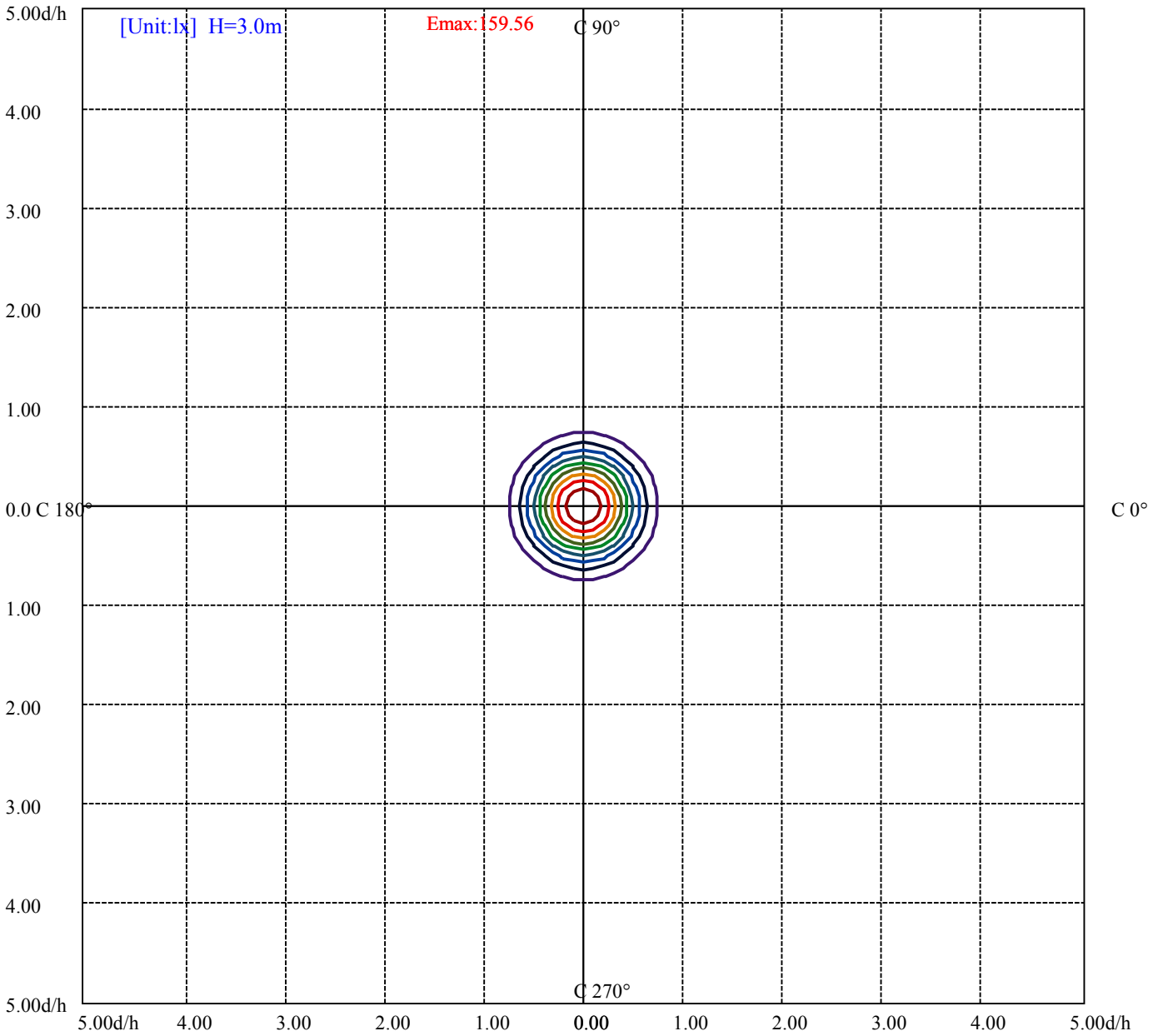
House

[Unit:cd]

Road

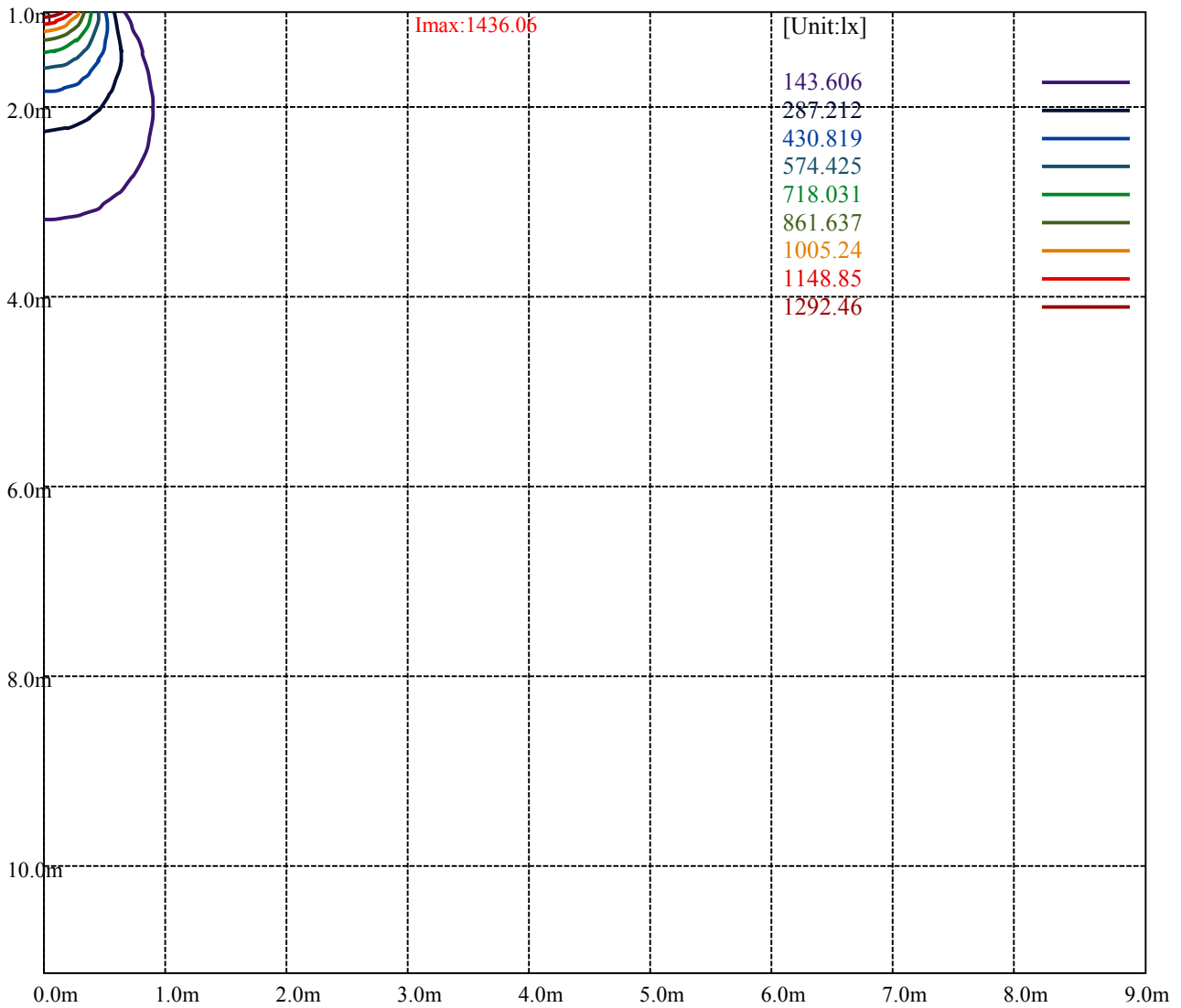
Imax:1436.06

(10%Imax)	143.606	—
(20%Imax)	287.212	—
(30%Imax)	430.819	—
(40%Imax)	574.425	—
(50%Imax)	718.031	—
(60%Imax)	861.637	—
(70%Imax)	1005.24	—
(80%Imax)	1148.85	—
(90%Imax)	1292.46	—



(10%Emax) 15.95622	—
(20%Emax) 31.91245	—
(30%Emax) 47.86878	—
(40%Emax) 63.825	—
(50%Emax) 79.78122	—
(60%Emax) 95.73745	—
(70%Emax) 111.6933	—
(80%Emax) 127.65	—
(90%Emax) 143.6067	—





Luminance Table

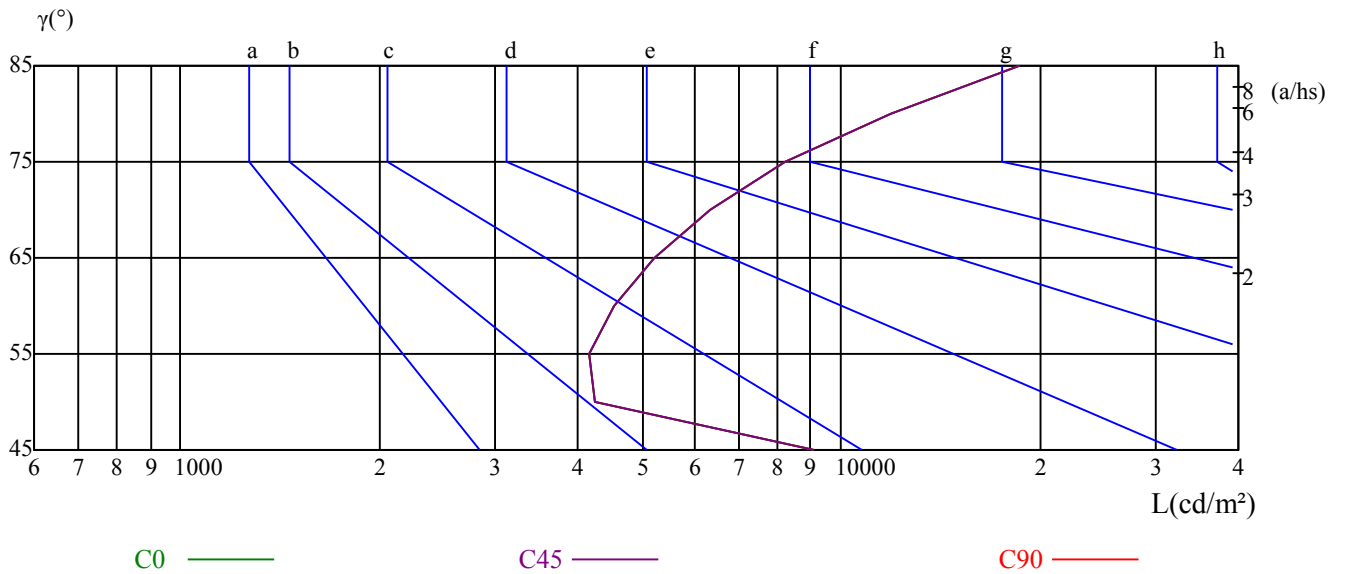
$\gamma$	45	50	55	60	65	70	75	80	85
C0	9097	4250	4151	4544	5229	6346	8243	11926	18697
C45	9097	4250	4151	4544	5229	6346	8243	11926	18697
C90	9097	4250	4151	4544	5229	6346	8243	11926	18697

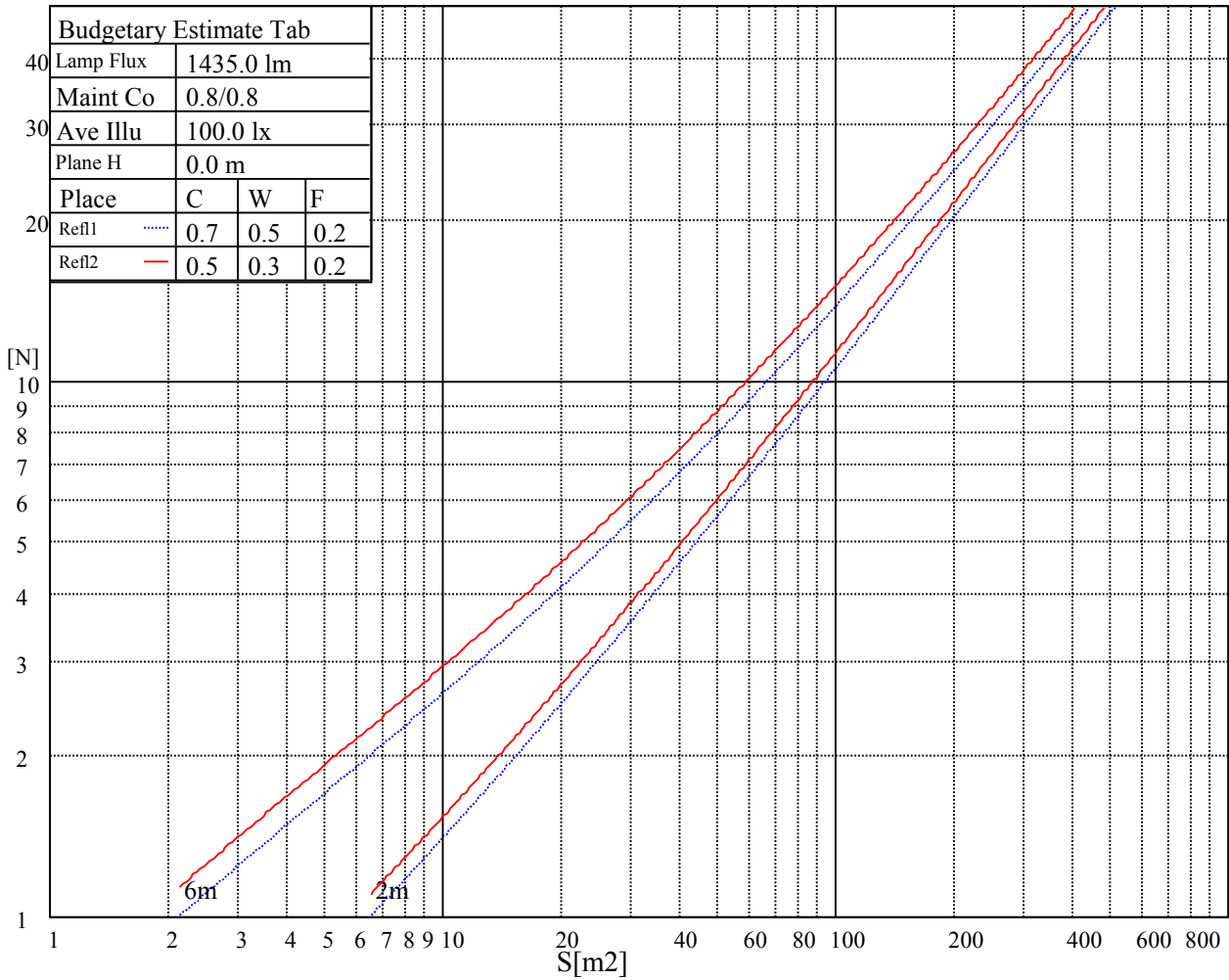
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5229	5229	5229	8243	8243	8243	18697	18697	18697

Glare Table

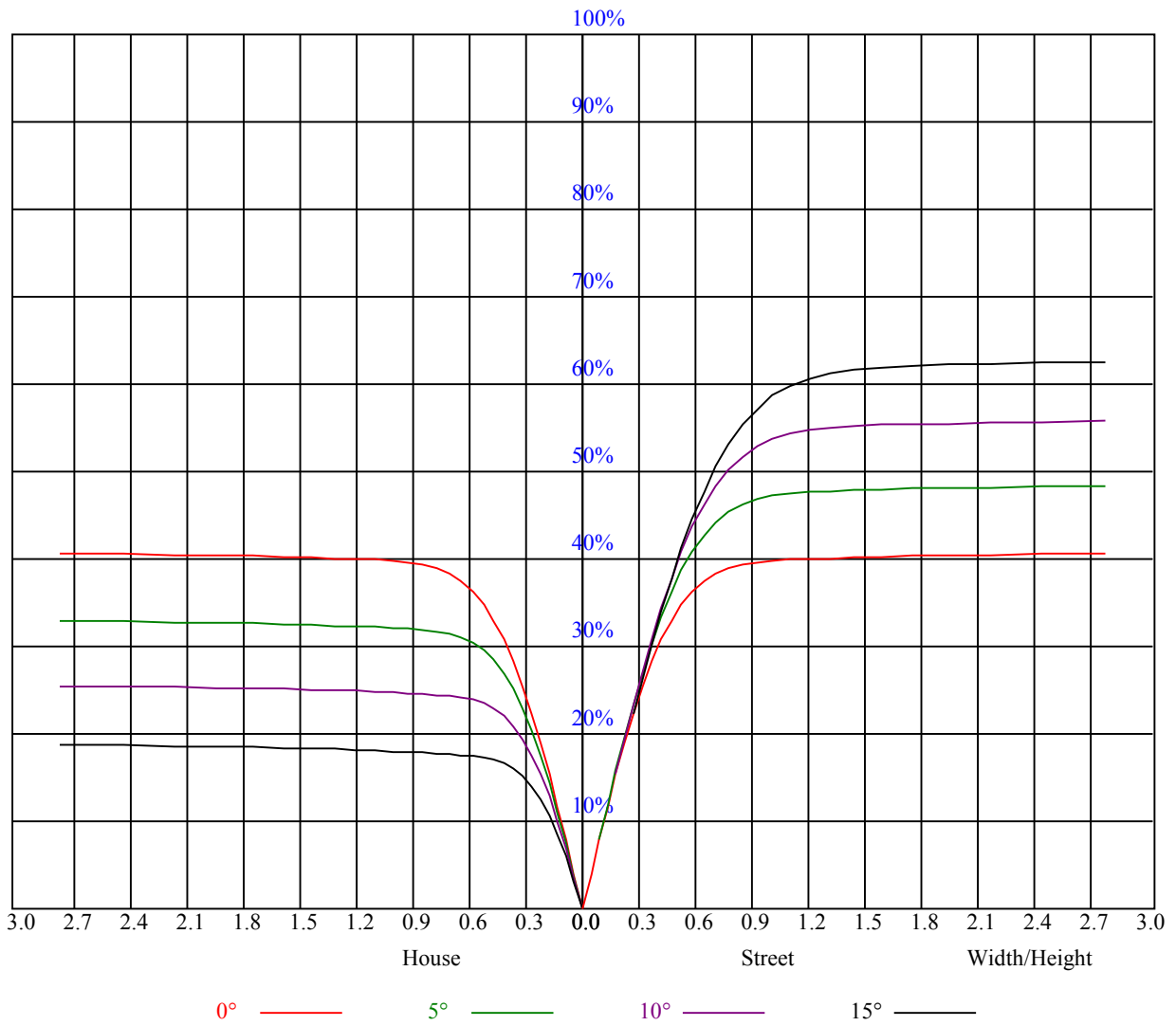
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

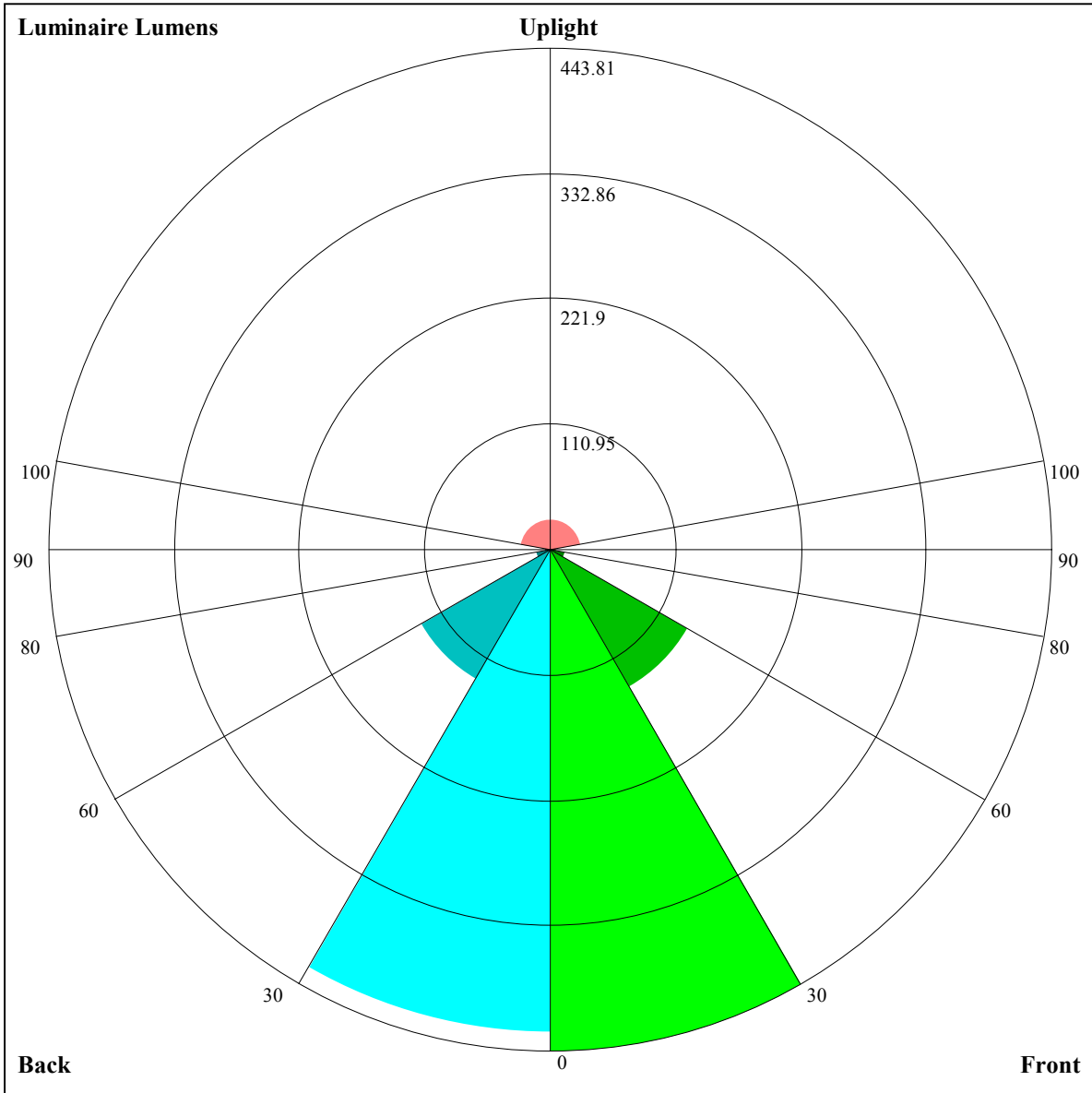
Luminance Limiting Curve





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	0.98	0.98	0.98	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.84	0.84	0.84	0.83
1	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.84	0.83	0.83	0.82	0.80	0.80	0.79	0.78	0.77
2	0.85	0.81	0.78	0.83	0.80	0.77	0.80	0.78	0.76	0.78	0.76	0.74	0.76	0.74	0.72	0.71
3	0.79	0.75	0.71	0.78	0.74	0.71	0.76	0.72	0.70	0.74	0.71	0.69	0.72	0.69	0.68	0.66
4	0.74	0.69	0.66	0.73	0.69	0.65	0.71	0.67	0.65	0.69	0.66	0.64	0.68	0.65	0.63	0.62
5	0.69	0.64	0.61	0.69	0.64	0.61	0.67	0.63	0.60	0.66	0.62	0.60	0.64	0.61	0.59	0.58
6	0.65	0.60	0.57	0.65	0.60	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.55	0.54
7	0.61	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.52	0.58	0.55	0.52	0.51
8	0.58	0.53	0.50	0.58	0.53	0.50	0.57	0.52	0.49	0.56	0.52	0.49	0.55	0.52	0.49	0.48
9	0.55	0.50	0.47	0.55	0.50	0.47	0.54	0.50	0.47	0.53	0.49	0.46	0.52	0.49	0.46	0.45
10	0.52	0.47	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.50	0.47	0.44	0.50	0.46	0.44	0.43





Luminaire Lumens:

FL=443.81,FM=139.6,FH=13.61,FVH=5.05

BL=427.86,BM=132.48,BH=13.52,BVH=5.34

UL=5.86,UH=27.89

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	1438.31	1452.38	1411.31	1287.00	1120.50	881.44	608.06	309.94	115.31
45.0	1428.19	1455.19	1463.06	1380.94	1222.31	1040.63	763.88	454.50	287.44
90.0	1436.06	1439.44	1411.31	1313.44	1117.86	943.31	690.13	381.88	165.32
135.0	1441.69	1423.69	1371.38	1275.19	1131.19	939.94	685.13	401.06	174.83
180.0	1438.31	1405.13	1347.19	1225.13	1060.93	865.97	598.56	319.61	146.93
225.0	1428.19	1386.56	1298.81	1119.71	976.33	714.38	459.90	215.16	73.46
270.0	1436.06	1409.63	1343.25	1202.63	1045.69	801.56	520.31	294.75	103.84
315.0	1441.69	1422.56	1347.19	1200.94	1032.98	787.44	499.33	243.34	87.02
360.0	1438.31	1452.38	1411.31	1287.00	1120.50	881.44	608.06	309.94	115.31
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	31.33	15.64	14.23	13.67	13.39	13.22	12.94	12.83	8.27
45.0	63.28	18.06	14.63	13.89	13.44	13.16	12.94	12.49	10.52
90.0	46.29	16.93	14.29	13.50	13.05	12.71	12.21	11.08	10.63
135.0	55.24	18.00	14.29	13.22	12.54	11.81	10.86	10.13	9.90
180.0	44.32	17.33	14.91	14.18	13.67	13.44	13.28	12.77	12.15
225.0	22.22	15.64	14.57	14.18	14.06	14.06	14.12	14.01	9.90
270.0	28.01	16.09	14.74	14.29	14.06	14.06	14.29	14.34	10.80
315.0	22.39	15.30	14.23	13.67	13.33	13.16	13.22	13.16	7.14
360.0	31.33	15.64	14.23	13.67	13.39	13.22	12.94	12.83	8.27
C/ $\gamma$ (°)	90.0								
0.0	5.34								
45.0	5.40								
90.0	5.34								
135.0	5.40								
180.0	5.40								
225.0	5.40								
270.0	5.34								
315.0	5.34								
360.0	5.34								