
Nata

Client:

LumCAT: 1655-N

Luminaire: 92.70.043.00

Report No: nata0100

Test No: GC2018050201

LampCAT: CREE CXA1310

Lamp flux(lm): 623.0

Number of Lamps: 1

Length(mm): 32

Phm Type: C

Voltage(V): 17.8000

Current(A): 0.3500

Power (W): 6.2300

PF: 0.0000

Ballast type: DC

Width(mm): 32

Height(mm): 0

Photometric Results

Lumens(lm): 537.64, Efficiency(%): 86.30% , Luminous Efficacy(lm/W): 86.30

Central intensity(cd): 1513.776, Maximum intensity(cd): 1513.776

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=30.0

[C90/270]Total=30.0

Field angle(10%Imax): [C0/180]Total=63.8

[C90/270]Total=63.8

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

Maximum s/h(1/4): C0_180=0.51 C90_270=0.51

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 87.67%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.969%

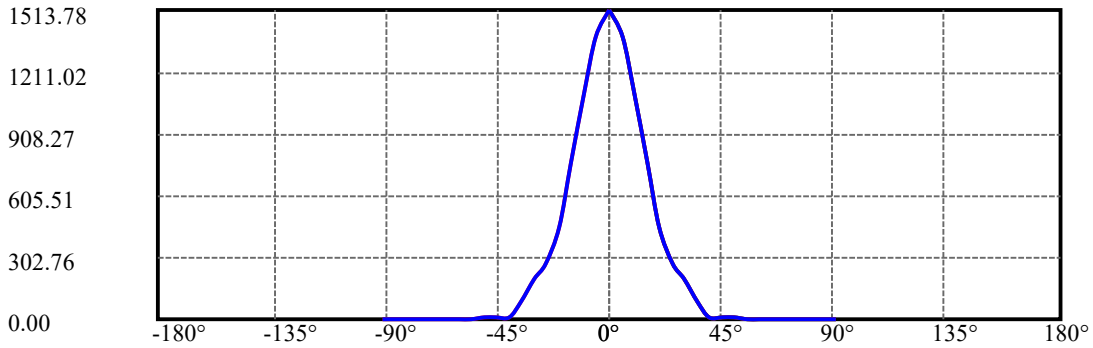
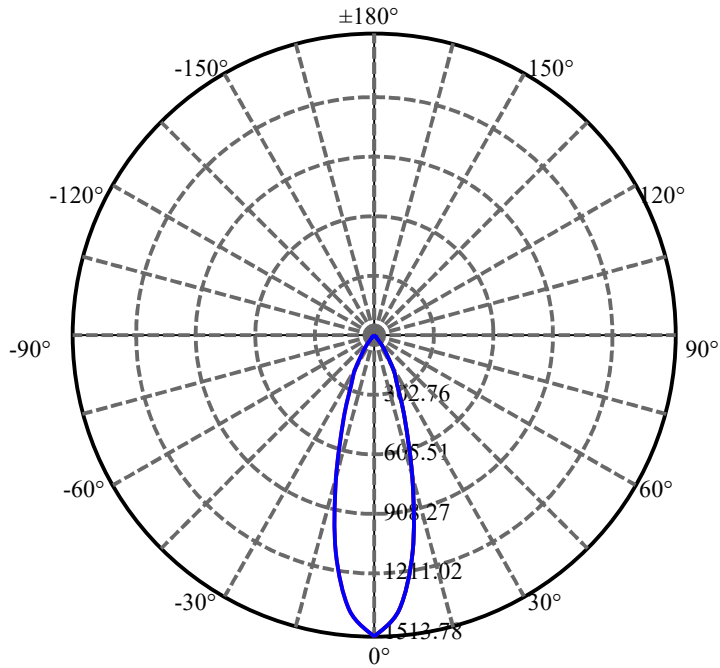
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1513.776	9.053	9.053	1.453%	1.684%
5.0	1383.017	66.071	75.124	10.605%	13.973%
10.0	1105.113	105.188	180.312	16.884%	33.538%
15.0	758.932	107.668	287.98	17.282%	53.564%
20.0	454.876	85.277	373.258	13.688%	69.425%
25.0	276.906	64.146	437.404	10.296%	81.356%
30.0	194.982	53.439	490.843	8.578%	91.296%
35.0	81.188	25.525	516.368	4.097%	96.044%
40.0	12.773	4.500	520.868	.722%	96.881%
45.0	7.061	2.737	523.605	.439%	97.390%
50.0	5.444	2.286	525.891	.367%	97.815%
55.0	4.377	1.965	527.856	.315%	98.180%
60.0	3.730	1.771	529.627	.284%	98.510%
65.0	3.276	1.627	531.254	.261%	98.812%
70.0	3.007	1.549	532.803	.249%	99.100%
75.0	2.808	1.487	534.29	.239%	99.377%
80.0	2.581	1.393	535.683	.224%	99.636%
85.0	2.478	1.353	537.036	.217%	99.888%
90.0	2.202	0.604	537.639	.097%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	490.84	78.79%	91.30%
0-40	520.87	83.61%	96.88%
0-60	529.63	85.01%	98.51%
0-90	537.04	86.20%	99.89%
0-120	537.04	86.20%	99.89%
0-180	537.64	86.30%	100.00%
60-90	9.18	1.47%	1.71%
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%
0-24.43	430.11	69.04%	80.00%

ZONAL LUMEN SUMMARY

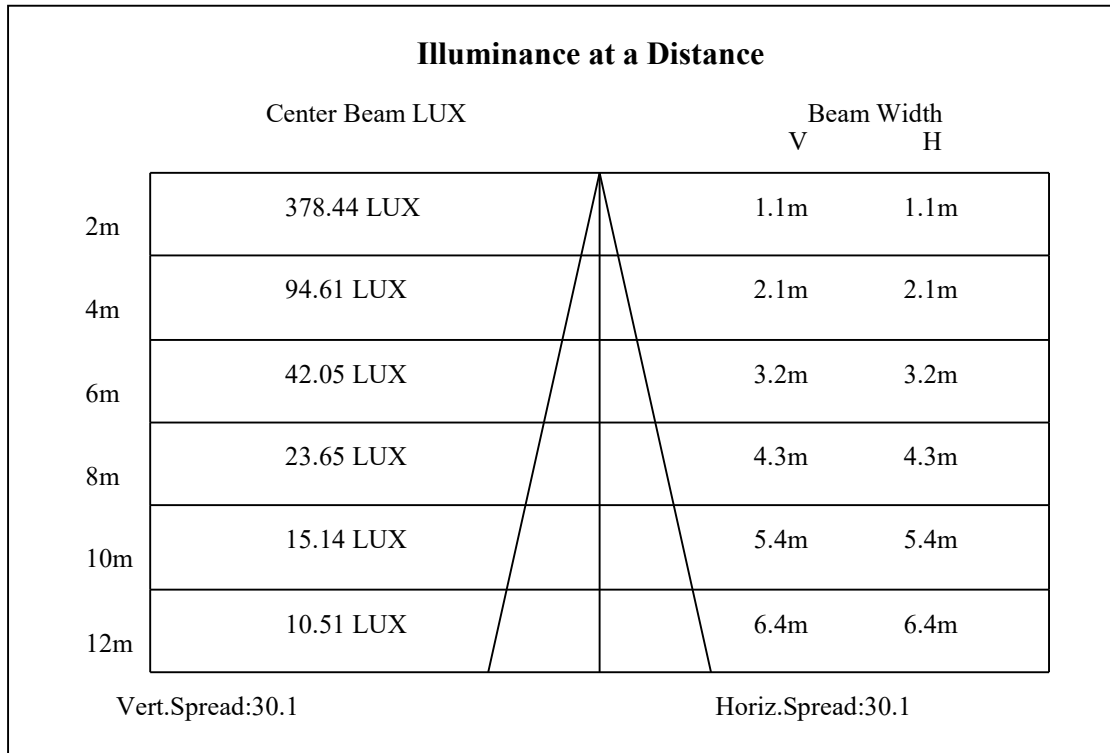
0-10	180.31
10-20	192.95
20-30	117.58
30-40	30.03
40-50	5.02
50-60	3.74
60-70	3.18
70-80	2.88
80-90	1.35
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

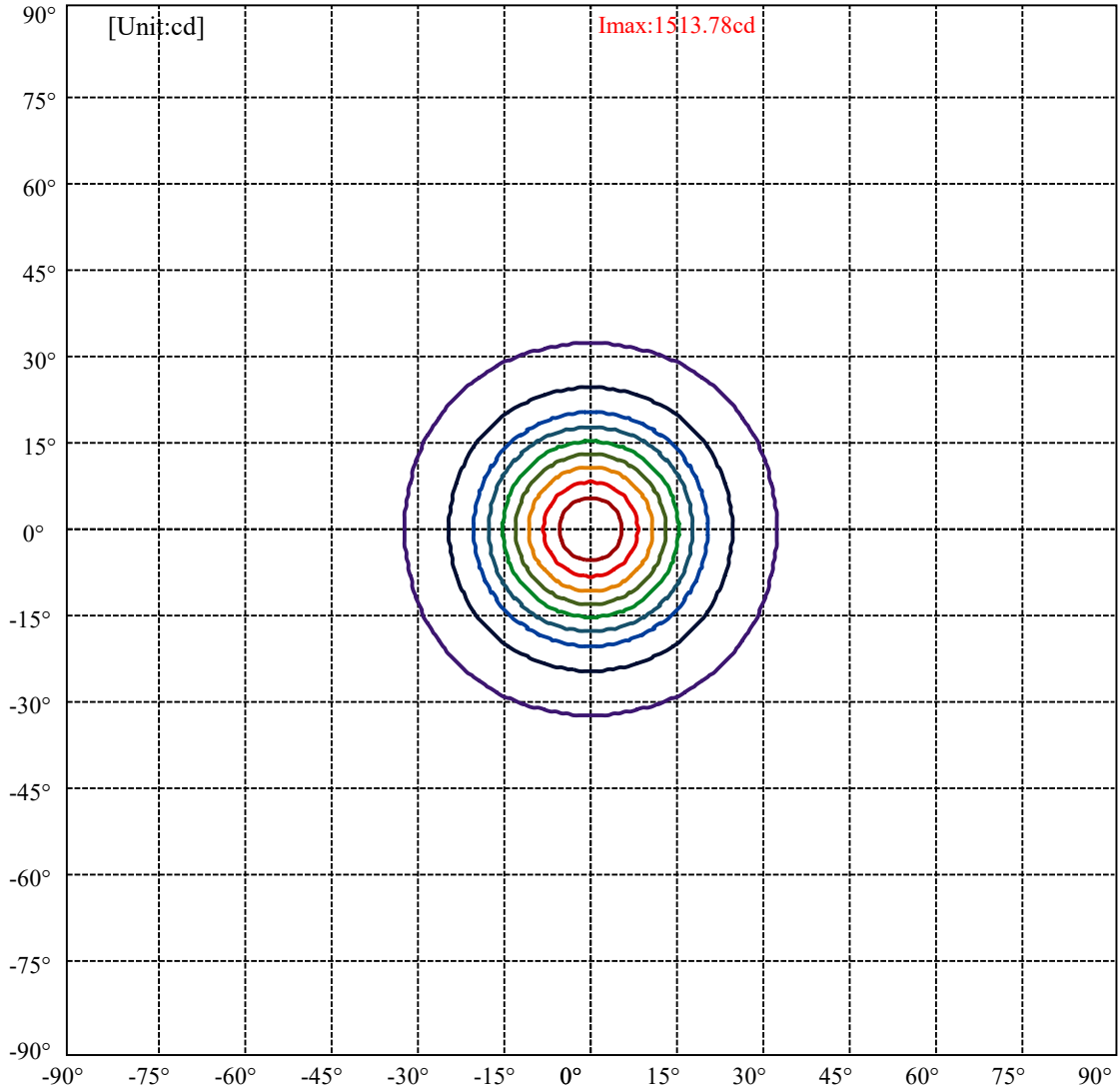


C0(Max): —————
 C0/C180: —————
 C90/C270: —————

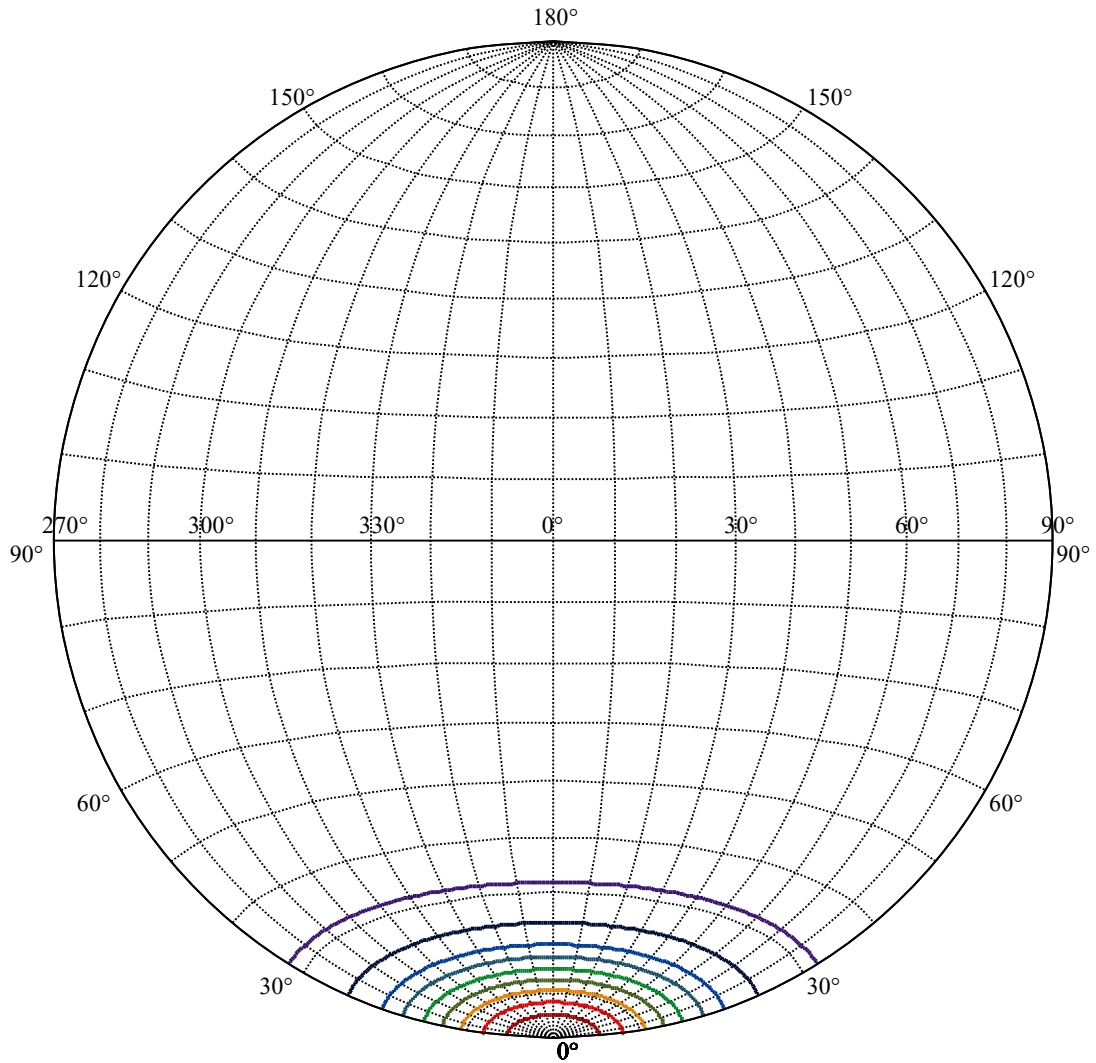
Field angle(10%Imax):C0/180Left:31.9 Right:31.9
 :C90/270Left:31.9 Right:31.9

Beam Angle(50%Imax):C0/180Left:15.0 Right:15.0
 :C90/270Left:15.0 Right:15.0





(10%Imax)	151.378	—
(20%Imax)	302.755	—
(30%Imax)	454.133	—
(40%Imax)	605.51	—
(50%Imax)	756.888	—
(60%Imax)	908.265	—
(70%Imax)	1059.64	—
(80%Imax)	1211.02	—
(90%Imax)	1362.4	—



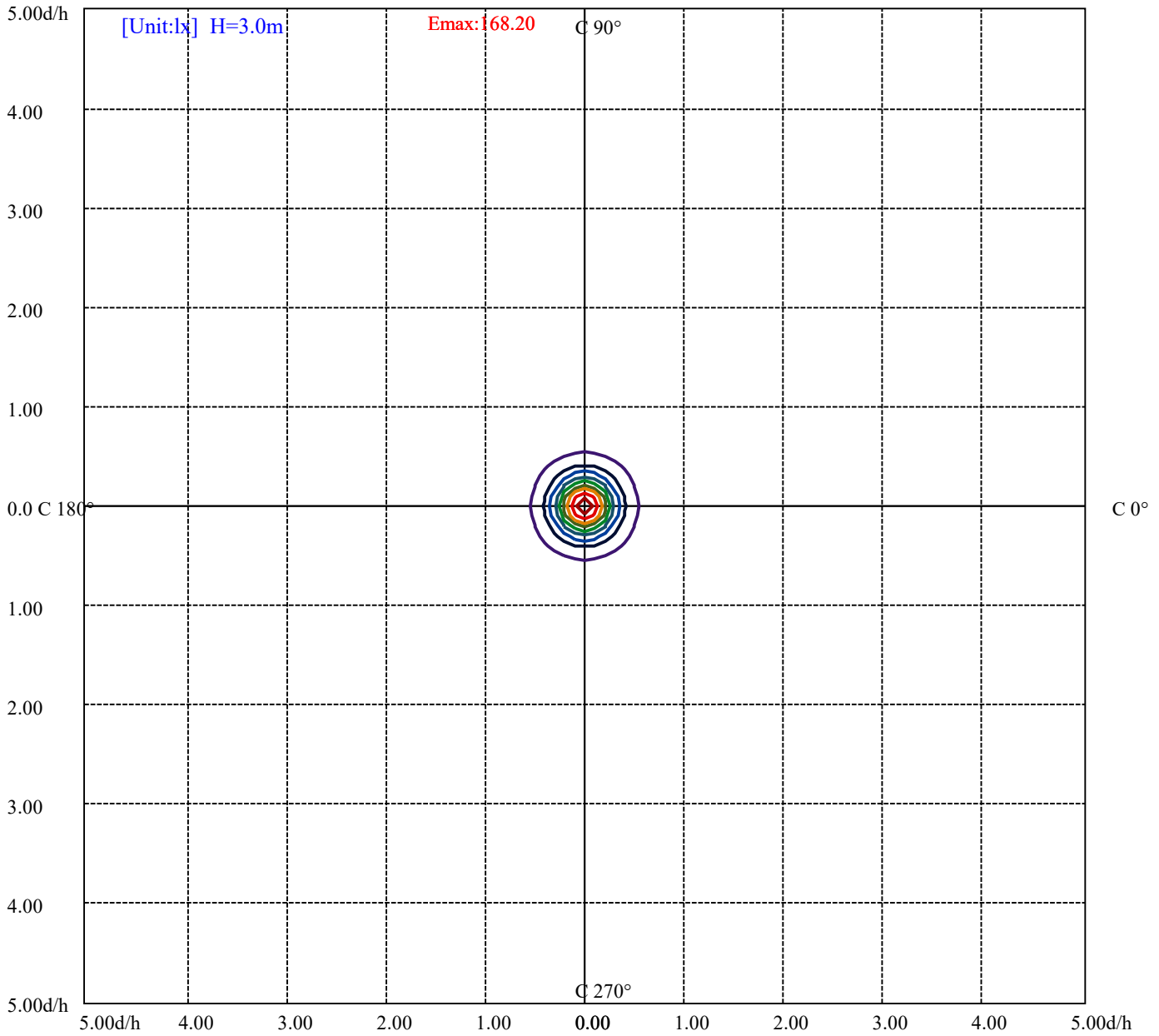
House

[Unit:cd]

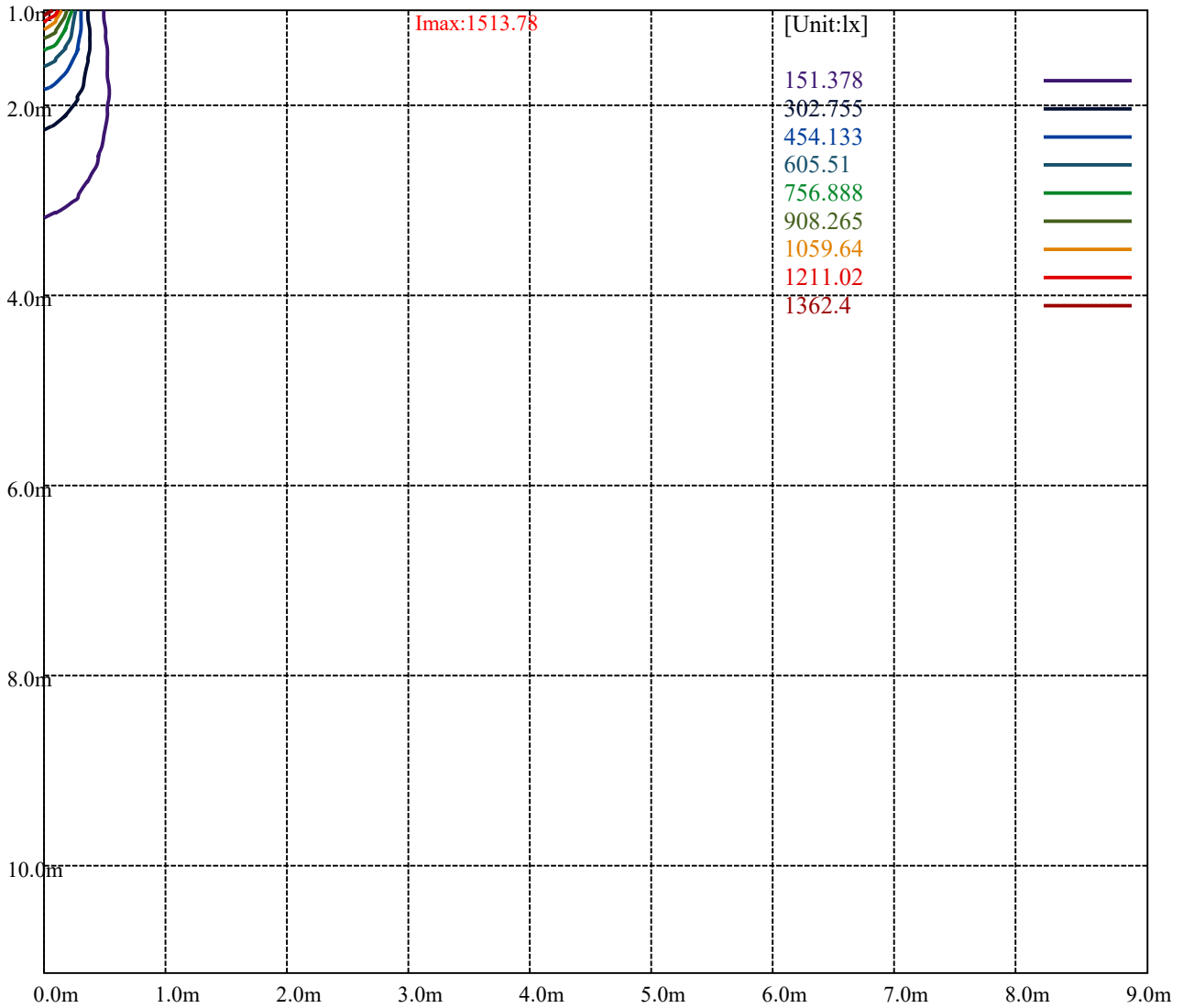
Road

Imax:1513.78

(10%Imax)	151.378	—
(20%Imax)	302.755	—
(30%Imax)	454.133	—
(40%Imax)	605.51	—
(50%Imax)	756.888	—
(60%Imax)	908.265	—
(70%Imax)	1059.64	—
(80%Imax)	1211.02	—
(90%Imax)	1362.4	—



(10%Emax) 16.81967	—
(20%Emax) 33.63933	—
(30%Emax) 50.45911	—
(40%Emax) 67.27878	—
(50%Emax) 84.09844	—
(60%Emax) 100.9181	—
(70%Emax) 117.7378	—
(80%Emax) 134.5578	—
(90%Emax) 151.3767	—



Luminance Table

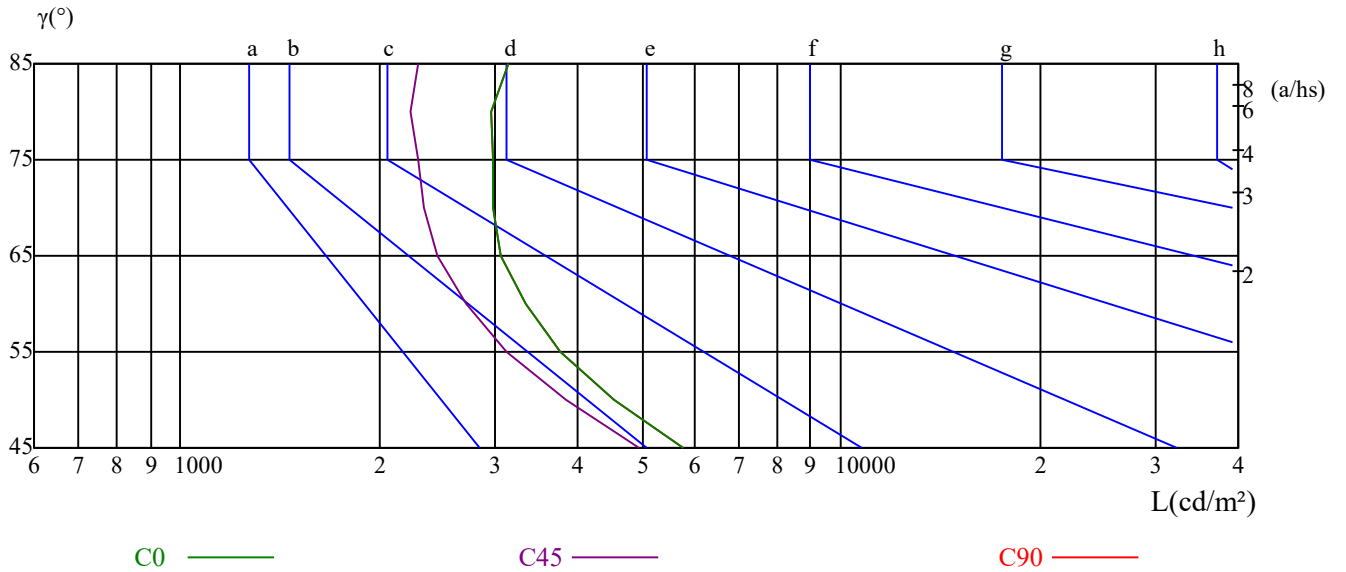
γ	45	50	55	60	65	70	75	80	85
C0	5779	4546	3760	3325	3059	2972	2971	2963	3134
C45	4944	3831	3120	2714	2454	2339	2289	2228	2292
C90	5779	4546	3760	3325	3059	2972	2971	2963	3134

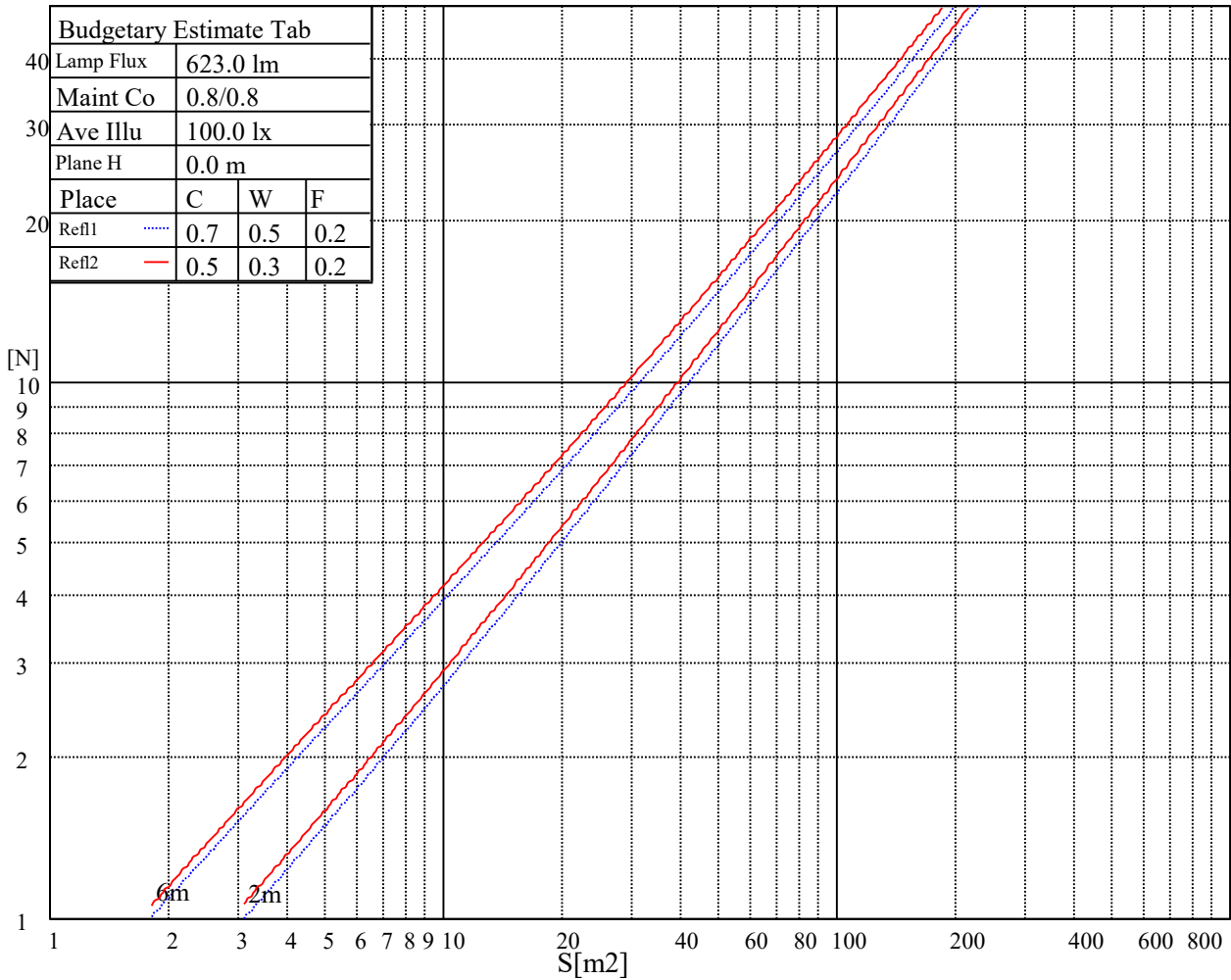
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7570	7570	7570	10595	10595	10595	27760	27760	27760

Glare Table

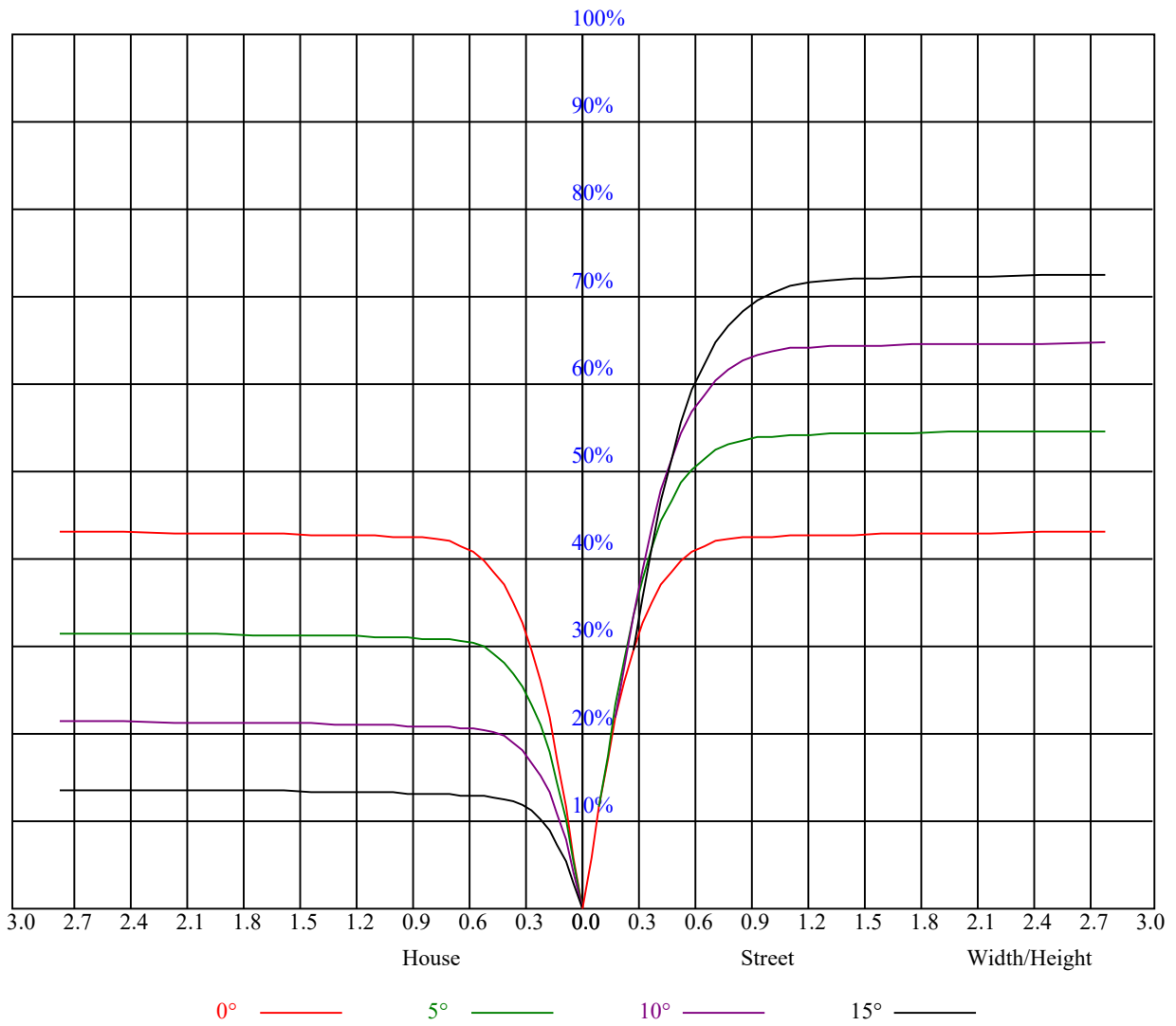
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

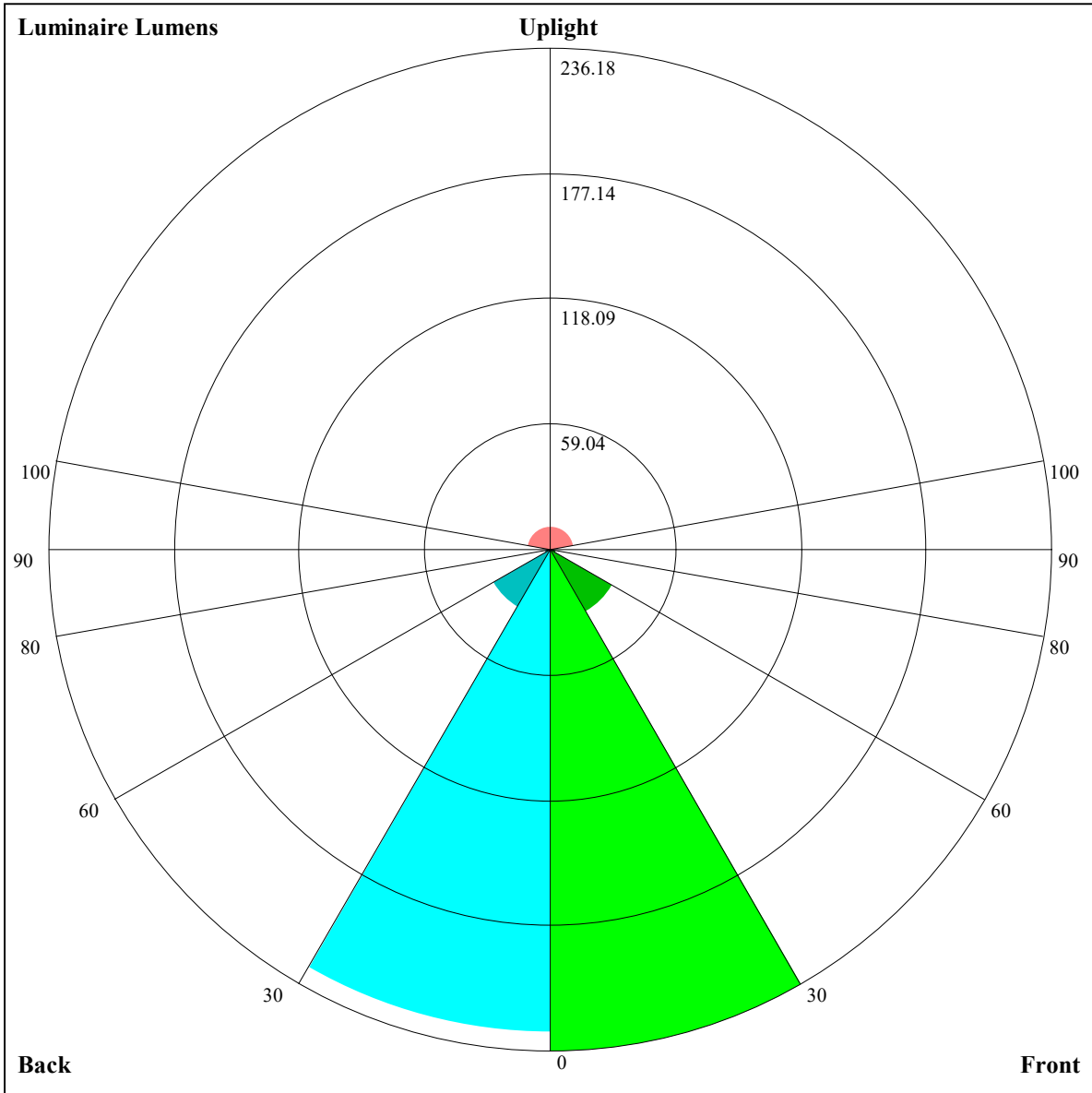
Luminance Limiting Curve





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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.88
1	0.96	0.94	0.92	0.95	0.92	0.91	0.91	0.89	0.88	0.88	0.86	0.85	0.85	0.84	0.83	0.81
2	0.91	0.88	0.85	0.90	0.87	0.84	0.87	0.85	0.82	0.84	0.82	0.81	0.82	0.80	0.79	0.78
3	0.87	0.83	0.80	0.86	0.82	0.79	0.83	0.81	0.78	0.81	0.79	0.77	0.79	0.77	0.76	0.74
4	0.83	0.79	0.76	0.82	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.77	0.75	0.73	0.72
5	0.80	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
6	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.73	0.70	0.68	0.72	0.70	0.68	0.67
7	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.64
8	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
9	0.69	0.65	0.62	0.68	0.64	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.60
10	0.66	0.62	0.60	0.66	0.62	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.58





Luminaire Lumens:

FL=236.18,FM=33.9,FH=3.15,FVH=1.3

BL=227.16,BM=31.49,BH=3.11,BVH=1.34

UL=2.4,UH=11.43

BUG Rating:B1-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	1510.20	1422.66	1187.02	837.96	516.98	313.27	215.99	108.08	16.52
45.0	1512.40	1400.08	1151.23	805.48	486.70	289.05	193.91	92.55	15.58
90.0	1516.80	1368.70	1056.86	689.75	436.60	264.44	182.51	74.60	13.10
135.0	1515.70	1392.38	1129.21	803.27	488.90	292.90	211.53	93.32	12.44
180.0	1510.20	1343.93	1060.61	714.91	411.49	255.85	187.03	60.78	9.97
225.0	1512.40	1349.43	1038.97	715.51	396.96	249.79	191.87	66.12	11.01
270.0	1516.80	1394.03	1133.61	770.24	460.82	284.64	183.67	82.31	12.88
315.0	1515.70	1392.93	1083.40	734.34	440.56	265.32	193.36	71.74	10.68
360.0	1510.20	1422.66	1187.02	837.96	516.98	313.27	215.99	108.08	16.52
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	7.54	5.78	4.62	3.85	3.36	3.08	2.81	2.59	2.37
45.0	7.87	6.00	4.84	4.02	3.47	3.19	2.86	2.59	2.37
90.0	7.27	5.56	4.29	3.69	3.25	3.03	2.86	2.53	2.37
135.0	6.55	5.18	4.18	3.63	3.25	2.92	2.81	2.53	2.53
180.0	6.22	4.96	4.07	3.58	3.19	2.92	2.75	2.64	2.70
225.0	6.77	5.07	4.18	3.63	3.25	3.03	2.86	2.64	2.64
270.0	7.49	5.73	4.51	3.80	3.30	3.03	2.81	2.59	2.42
315.0	6.77	5.29	4.29	3.63	3.14	2.86	2.70	2.53	2.42
360.0	7.54	5.78	4.62	3.85	3.36	3.08	2.81	2.59	2.37
C/ γ (°)	90.0								
0.0	2.31								
45.0	2.20								
90.0	2.20								
135.0	2.26								
180.0	2.15								
225.0	2.15								
270.0	2.15								
315.0	2.20								
360.0	2.31								