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## Nata

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### Client:

LumCAT: 1689-M

Luminaire: 92.70.125.00

Report No: NT2018010506

Test No: GC2018010506

LampCAT: BXRV-DR-1830-H-1000-B-13

Lamp flux(lm): 1472.0

Number of Lamps: 1

Length(mm): 46

Phm Type: C

Voltage(V): 35.3000

Current(A): 0.5000

Power (W): 17.6500

PF: 0.0000

Ballast type: DC

Width(mm): 46

Height(mm): 0

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## Photometric Results

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Lumens(lm): 1343.09, Efficiency(%): 91.24% , Luminous Efficacy(lm/W): 76.10

Central intensity(cd): 1194.861, Maximum intensity(cd): 1194.861

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

Beam Angle(50%Imax): [C0/180]Total=69.6

[C90/270]Total=69.6

Field angle(10%Imax): [C0/180]Total=94.8

[C90/270]Total=94.8

Maximum s/h(1/2): C0\_180=0.97 C90\_270=0.97

Maximum s/h(1/4): C0\_180=1.03 C90\_270=1.03

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.64%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.229%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2018/1/4  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.42

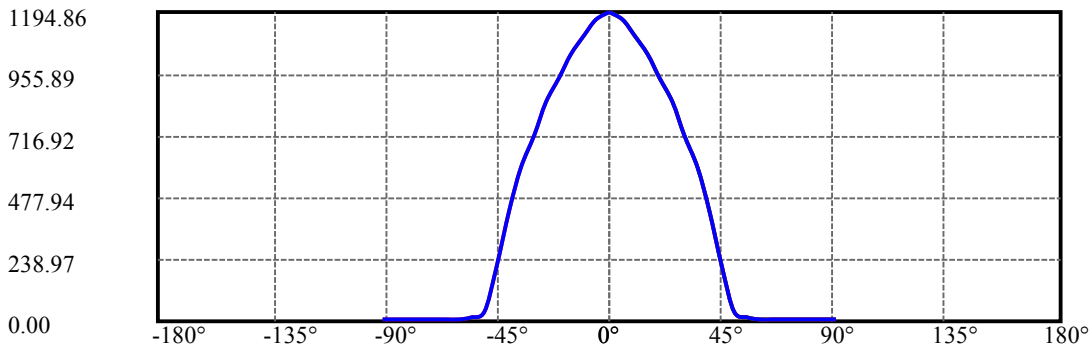
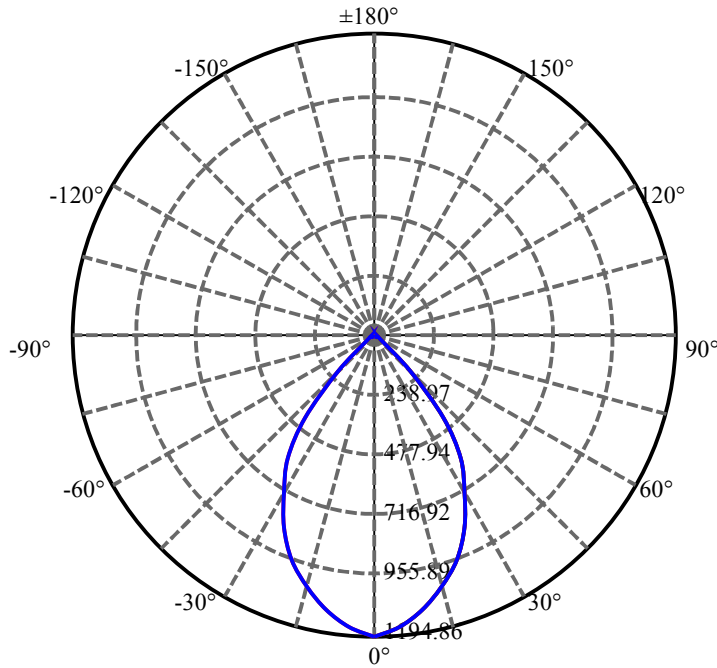
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1194.862	7.146	7.146	.485%	.532%
5.0	1164.030	55.610	62.755	3.778%	4.672%
10.0	1108.746	105.534	168.289	7.169%	12.530%
15.0	1029.706	146.083	314.372	9.924%	23.407%
20.0	946.213	177.390	491.762	12.051%	36.614%
25.0	842.556	195.180	686.943	13.260%	51.147%
30.0	720.695	197.520	884.462	13.418%	65.853%
35.0	592.572	186.304	1070.766	12.657%	79.724%
40.0	427.169	150.507	1221.273	10.225%	90.930%
45.0	199.490	77.321	1298.594	5.253%	96.687%
50.0	35.388	14.859	1313.453	1.009%	97.794%
55.0	15.196	6.823	1320.276	.464%	98.302%
60.0	10.089	4.789	1325.065	.325%	98.658%
65.0	7.818	3.884	1328.949	.264%	98.947%
70.0	6.744	3.474	1332.423	.236%	99.206%
75.0	6.056	3.207	1335.63	.218%	99.445%
80.0	5.630	3.039	1338.668	.206%	99.671%
85.0	5.416	2.958	1341.626	.201%	99.891%
90.0	5.334	1.462	1343.088	.099%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	884.46	60.09%	65.85%
0-40	1221.27	82.97%	90.93%
0-60	1325.07	90.02%	98.66%
0-90	1341.63	91.14%	99.89%
0-120	1341.63	91.14%	99.89%
0-180	1343.09	91.24%	100.00%
60-90	21.35	1.45%	1.59%
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%
0-35.12	1074.47	72.99%	80.00%

ZONAL LUMEN SUMMARY

0-10	168.29
10-20	323.47
20-30	392.70
30-40	336.81
40-50	92.18
50-60	11.61
60-70	7.36
70-80	6.25
80-90	2.96
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

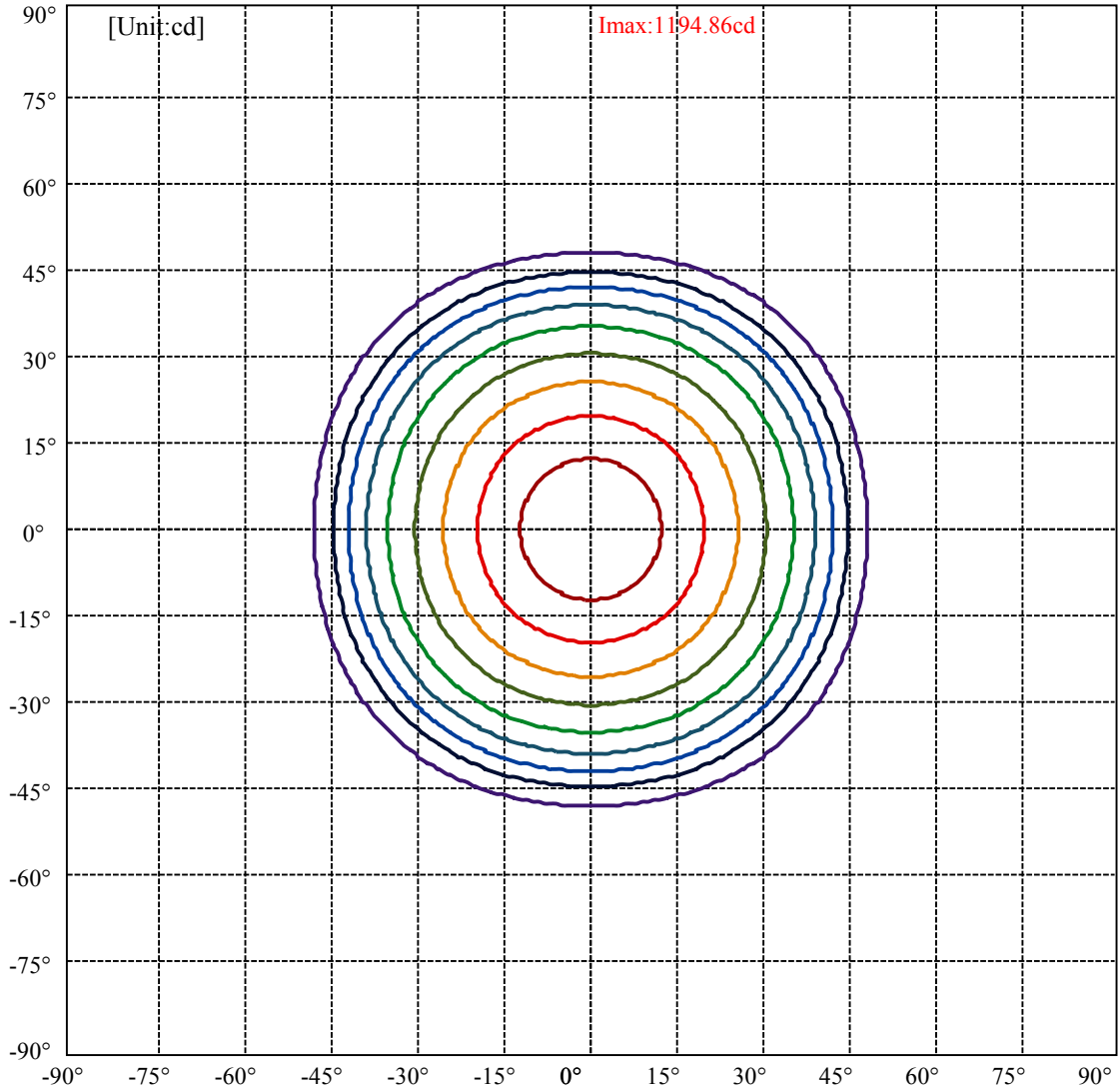


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

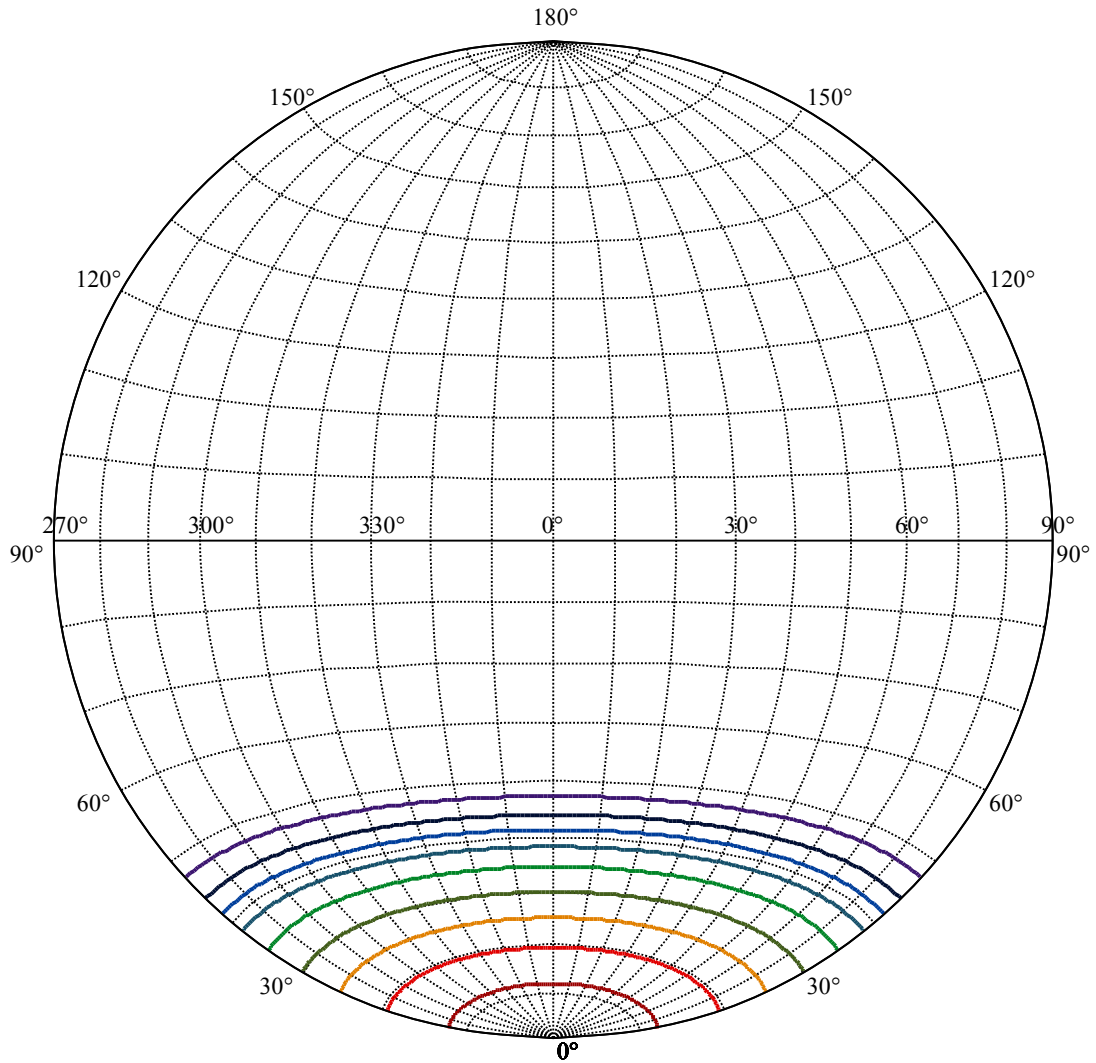
Field angle(10%Imax):C0/180Left:47.4 Right:47.4  
:C90/270Left:47.4 Right:47.4

Beam Angle(50%Imax):C0/180Left:34.8 Right:34.8  
:C90/270Left:34.8 Right:34.8





(10%Imax) 119.486	—
(20%Imax) 238.972	—
(30%Imax) 358.458	—
(40%Imax) 477.945	—
(50%Imax) 597.431	—
(60%Imax) 716.917	—
(70%Imax) 836.403	—
(80%Imax) 955.889	—
(90%Imax) 1075.38	—



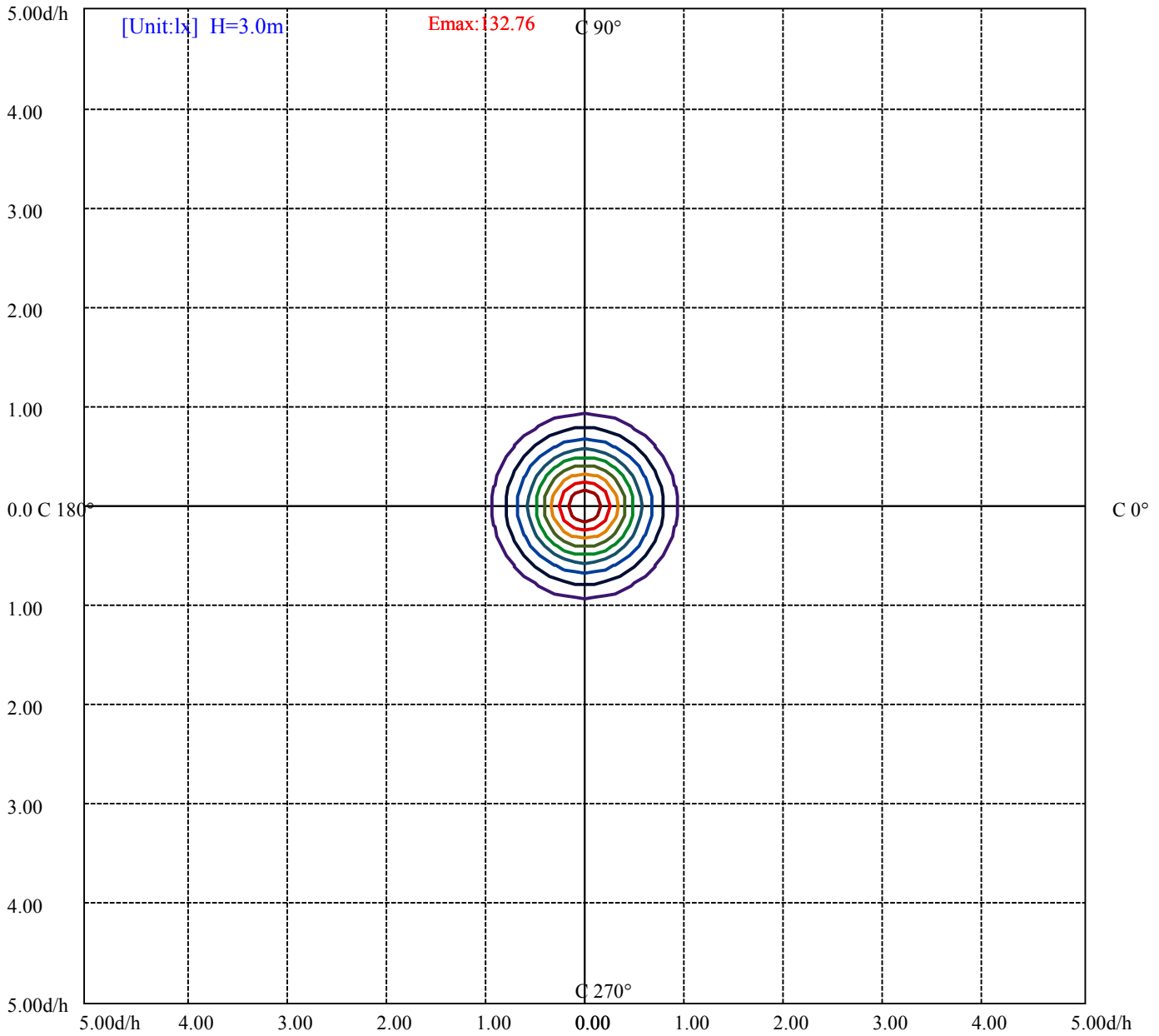
House

[Unit:cd]

Road

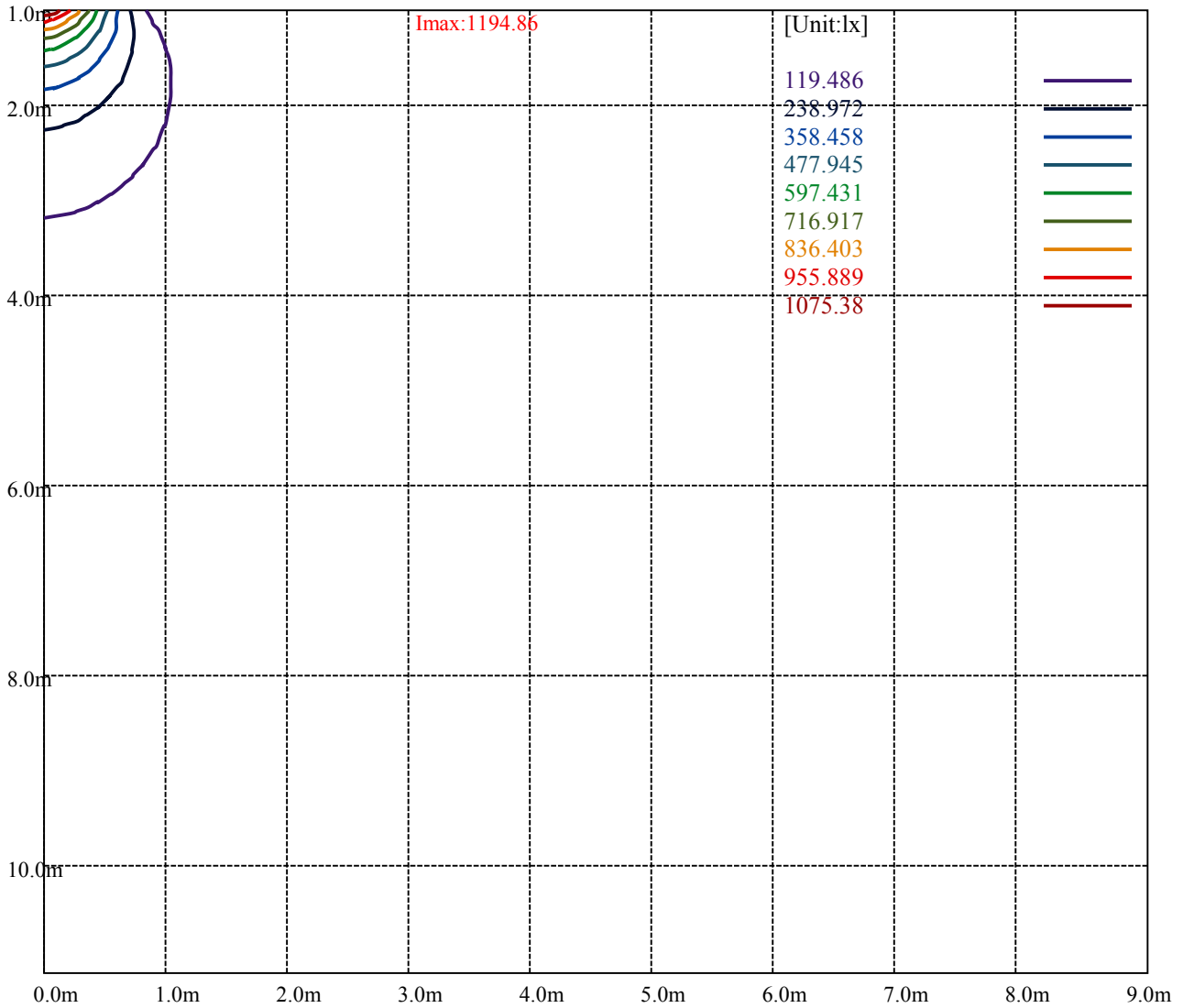
**Imax:1194.86**

(10%Imax)	119.486	—
(20%Imax)	238.972	—
(30%Imax)	358.458	—
(40%Imax)	477.945	—
(50%Imax)	597.431	—
(60%Imax)	716.917	—
(70%Imax)	836.403	—
(80%Imax)	955.889	—
(90%Imax)	1075.38	—



- (10%Emax) 13.27622
- (20%Emax) 26.55244
- (30%Emax) 39.82867
- (40%Emax) 53.10489
- (50%Emax) 66.38111
- (60%Emax) 79.65733
- (70%Emax) 92.93356
- (80%Emax) 106.2098
- (90%Emax) 119.4856





Luminance Table

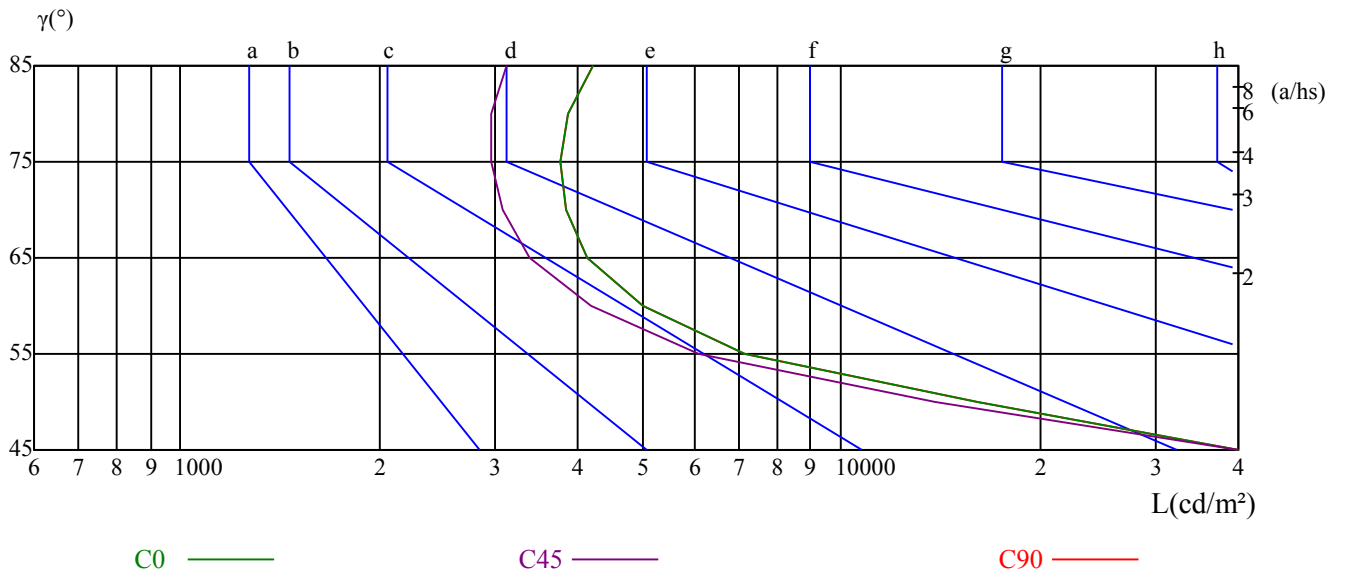
$\gamma$	45	50	55	60	65	70	75	80	85
C0	87615	16043	7174	5009	4126	3830	3752	3870	4217
C45	76720	13844	6096	4186	3385	3078	2946	2955	3113
C90	87615	16043	7174	5009	4126	3830	3752	3870	4217

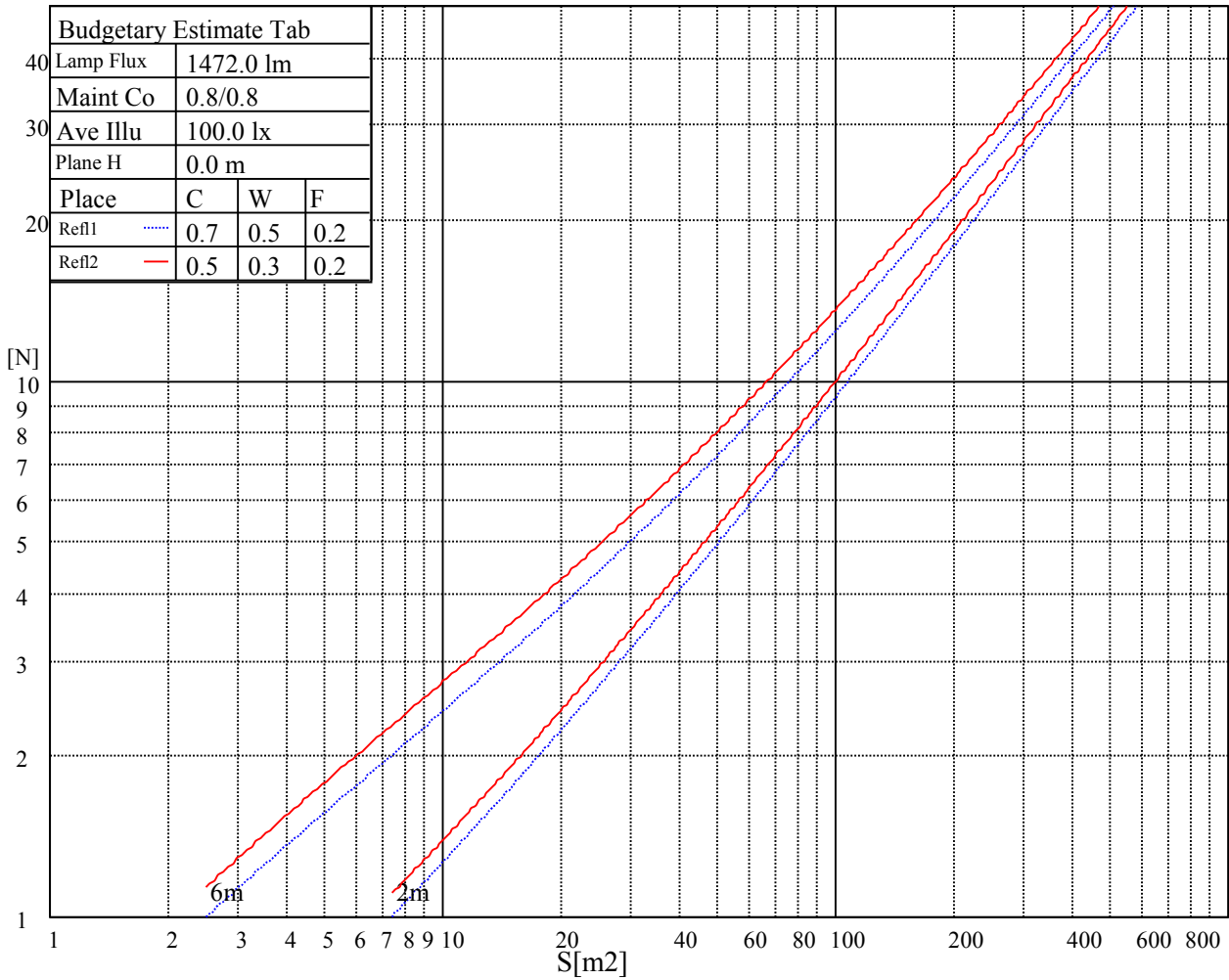
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8742	8742	8742	11058	11058	11058	29368	29368	29368

Glare Table

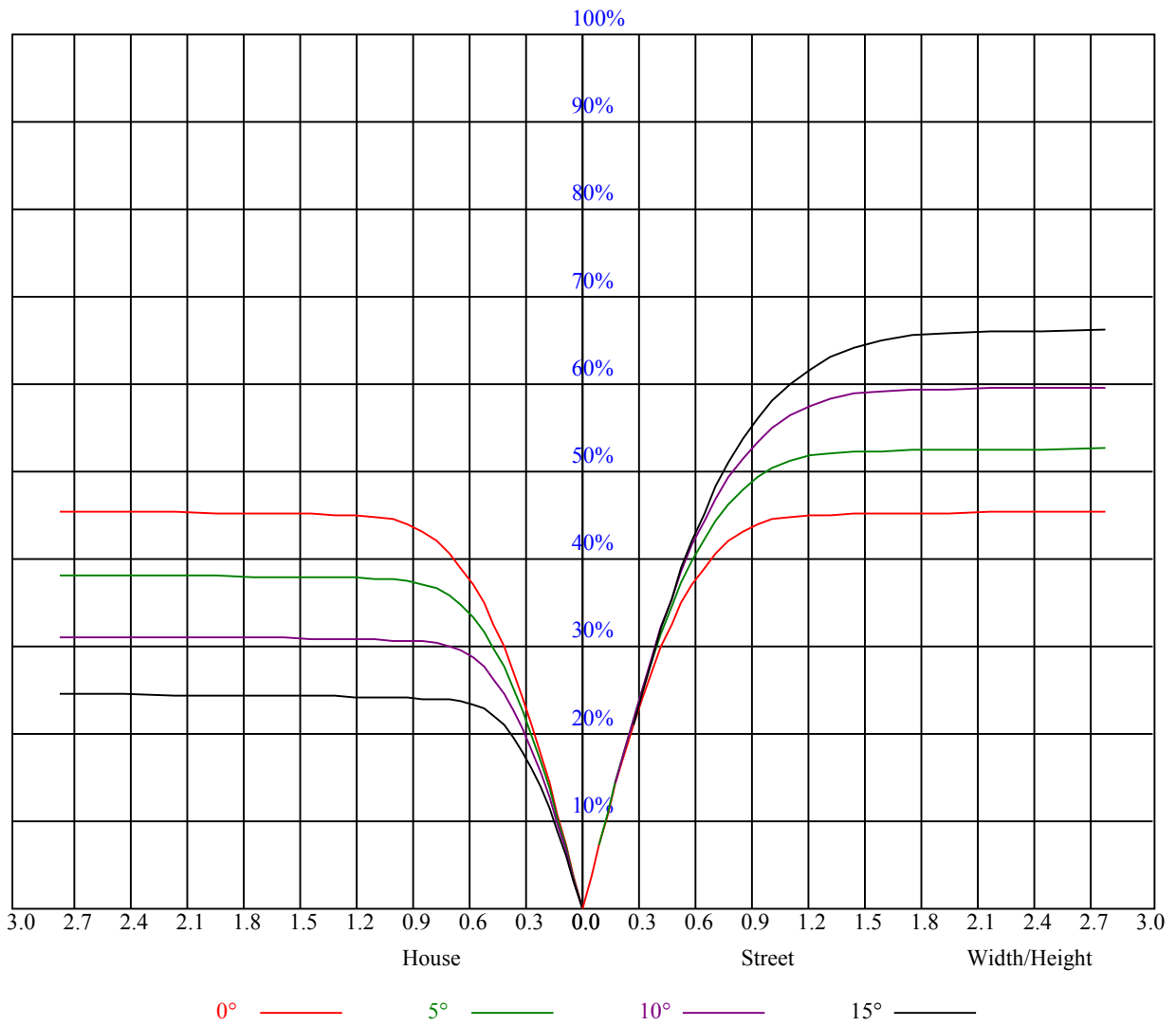
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

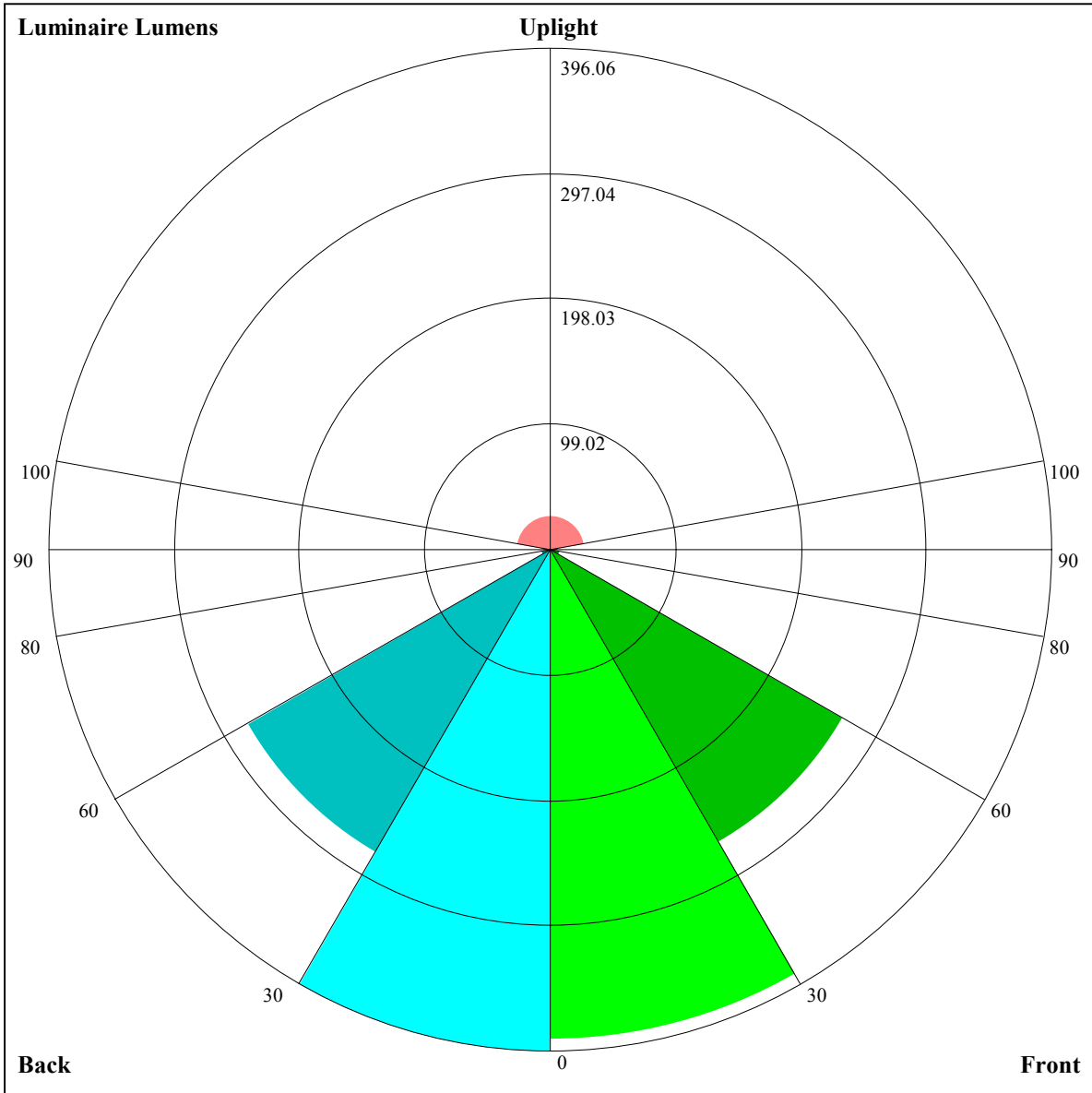
Luminance Limiting Curve





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	1.09	1.09	1.09	1.07	1.07	1.07	1.02	1.02	1.02	0.97	0.97	0.97	0.94	0.94	0.94	0.92
1	1.01	0.98	0.96	0.99	0.96	0.94	0.95	0.93	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.84
2	0.93	0.89	0.86	0.92	0.88	0.85	0.89	0.86	0.83	0.86	0.84	0.81	0.83	0.81	0.80	0.78
3	0.87	0.82	0.78	0.86	0.81	0.78	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.72
4	0.81	0.76	0.72	0.80	0.75	0.71	0.78	0.74	0.70	0.76	0.72	0.69	0.74	0.71	0.69	0.67
5	0.76	0.70	0.66	0.75	0.70	0.66	0.73	0.69	0.65	0.72	0.68	0.65	0.70	0.67	0.64	0.63
6	0.71	0.65	0.61	0.70	0.65	0.61	0.69	0.64	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.58
7	0.66	0.61	0.57	0.66	0.60	0.57	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.56	0.54
8	0.63	0.57	0.53	0.62	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.52	0.59	0.55	0.52	0.51
9	0.59	0.53	0.50	0.59	0.53	0.50	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.48
10	0.56	0.50	0.47	0.55	0.50	0.47	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.45





Luminaire Lumens:

FL=386.37,FM=266.29,FH=7.39,FVH=2.96

BL=396.06,BM=276.88,BH=7.1,BVH=2.98

UL=5.82,UH=27.69

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	1195.27	1166.09	1108.84	1026.80	943.67	834.10	713.53	597.91	427.24
45.0	1201.88	1168.85	1103.33	1012.49	921.09	814.83	705.27	581.40	422.83
90.0	1191.42	1154.53	1095.95	1040.18	959.91	855.19	722.56	586.74	404.88
135.0	1190.87	1174.35	1130.31	1062.59	994.32	900.17	769.69	618.28	480.09
180.0	1195.27	1167.20	1098.54	1033.96	959.80	852.44	718.93	586.41	418.92
225.0	1201.88	1171.05	1132.51	1042.27	952.53	853.81	727.57	595.77	446.84
270.0	1191.42	1162.24	1115.44	1020.20	928.80	830.80	715.18	599.01	444.31
315.0	1190.87	1147.93	1085.05	999.16	909.59	799.09	692.83	575.06	372.24
360.0	1195.27	1166.09	1108.84	1026.80	943.67	834.10	713.53	597.91	427.24
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	179.59	41.73	18.77	11.78	8.70	7.10	6.22	5.73	5.45
45.0	211.91	35.02	15.91	10.68	7.98	6.77	6.06	5.62	5.40
90.0	159.50	30.17	12.06	8.31	6.94	6.28	5.84	5.51	5.34
135.0	279.14	34.96	12.11	8.20	6.99	6.39	5.89	5.56	5.45
180.0	176.18	30.67	12.28	8.70	7.32	6.72	6.17	5.84	5.62
225.0	176.24	34.02	15.58	10.24	7.98	6.88	6.22	5.67	5.40
270.0	288.50	41.40	18.06	11.89	8.53	7.10	6.17	5.62	5.34
315.0	124.87	35.13	16.79	10.90	8.09	6.72	5.89	5.51	5.34
360.0	179.59	41.73	18.77	11.78	8.70	7.10	6.22	5.73	5.45
C/ $\gamma$ (°)	90.0								
0.0	5.34								
45.0	5.34								
90.0	5.34								
135.0	5.29								
180.0	5.34								
225.0	5.34								
270.0	5.34								
315.0	5.34								
360.0	5.34								