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NATA

Client:

LumCAT: 2-1318-E

Luminaire: 99.02.73.171

Report No: nt0100

Voltage(V): 34.0200

Test No: GC2019122622

Current(A): 0.2970

LampCAT: LUMINUS CXM-9-AC40

Power (W): 10.1000

Lamp flux(lm): 1106.0

PF: 1.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1007.05, Efficiency(%): 91.05% , Luminous Efficacy(lm/W): 99.71

Central intensity(cd): 2195.859, Maximum intensity(cd): 2195.859

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=36.2

[C90/270]Total=36.2

Field angle(10%Imax): [C0/180]Total=68.6

[C90/270]Total=68.6

Maximum s/h(1/2): C0_180=0.57 C90_270=0.57

Maximum s/h(1/4): C0_180=0.63 C90_270=0.63

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.05%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.423%

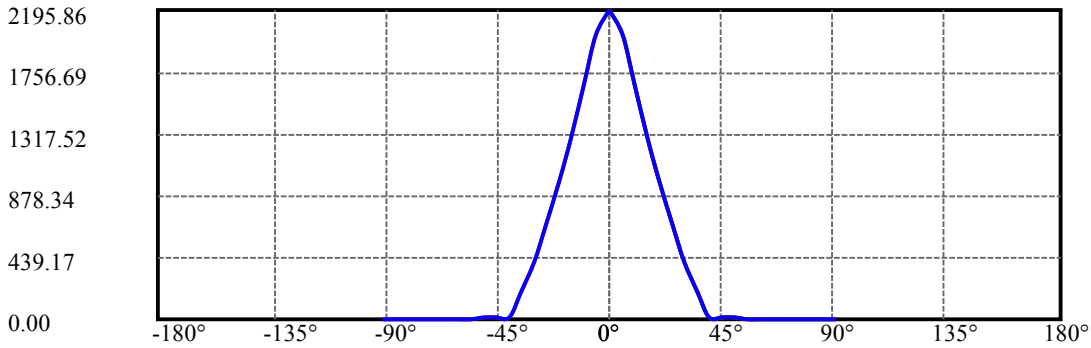
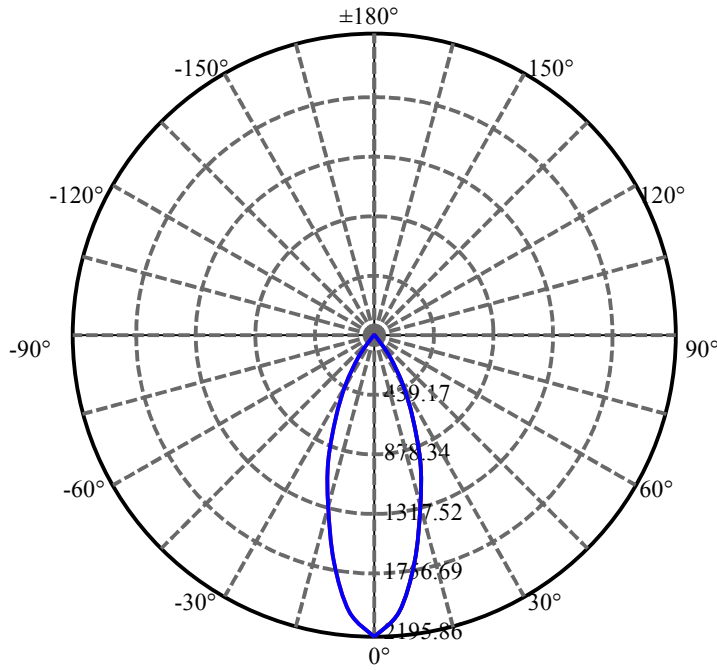
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2195.859	0.000	0	.000%	.000%
5.0	2021.625	50.419	50.419	4.559%	5.007%
10.0	1676.320	132.287	182.706	11.961%	18.143%
15.0	1288.230	175.855	358.561	15.900%	35.605%
20.0	981.963	187.096	545.657	16.916%	54.184%
25.0	661.908	172.412	718.069	15.589%	71.304%
30.0	414.415	136.210	854.278	12.316%	84.830%
35.0	185.892	88.399	942.678	7.993%	93.608%
40.0	18.225	34.055	976.733	3.079%	96.990%
45.0	9.169	5.072	981.805	.459%	97.493%
50.0	7.552	3.379	985.184	.305%	97.829%
55.0	6.588	3.074	988.258	.278%	98.134%
60.0	5.991	2.908	991.166	.263%	98.423%
65.0	5.548	2.805	993.971	.254%	98.701%
70.0	5.238	2.731	996.702	.247%	98.973%
75.0	4.999	2.676	999.378	.242%	99.238%
80.0	4.809	2.625	1002.002	.237%	99.499%
85.0	4.620	2.562	1004.564	.232%	99.753%
90.0	4.451	2.484	1007.048	.225%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	854.28	77.24%	84.83%
0-40	976.73	88.31%	96.99%
0-60	991.17	89.62%	98.42%
0-90	1004.56	90.83%	99.75%
0-120	1004.56	90.83%	99.75%
0-180	1007.05	91.05%	100.00%
60-90	16.31	1.47%	1.62%
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%
0-28.21	805.64	72.84%	80.00%

ZONAL LUMEN SUMMARY

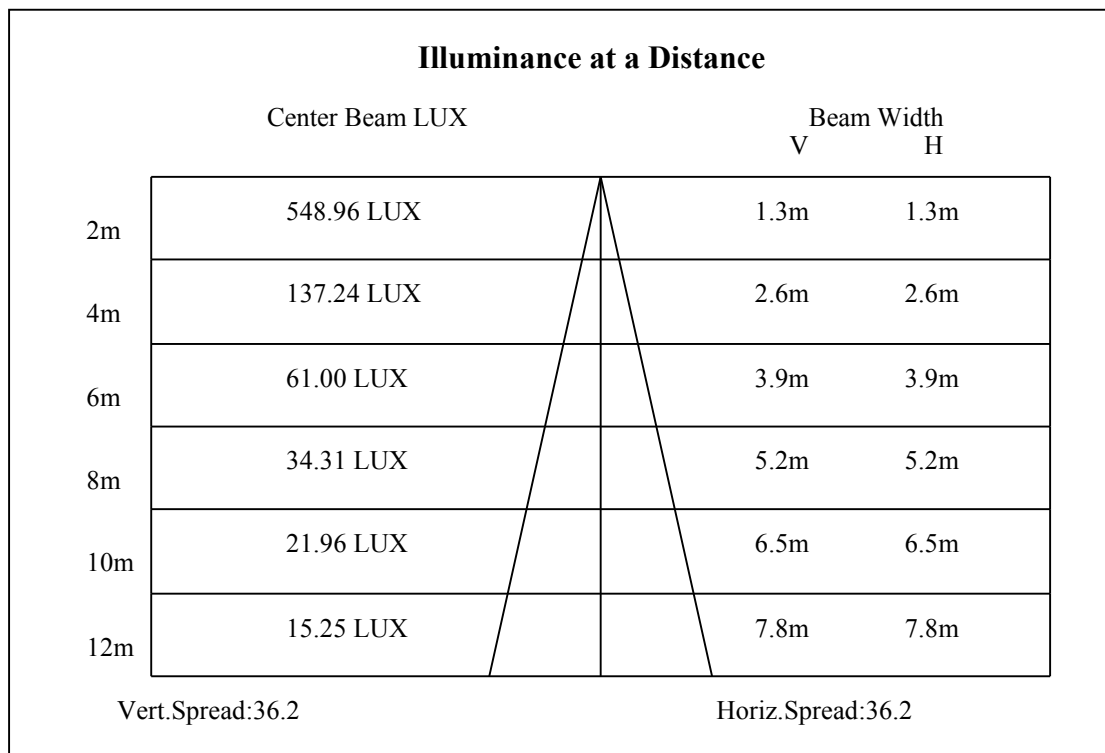
0-10	182.71
10-20	362.95
20-30	308.62
30-40	122.45
40-50	8.45
50-60	5.98
60-70	5.54
70-80	5.30
80-90	2.56
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

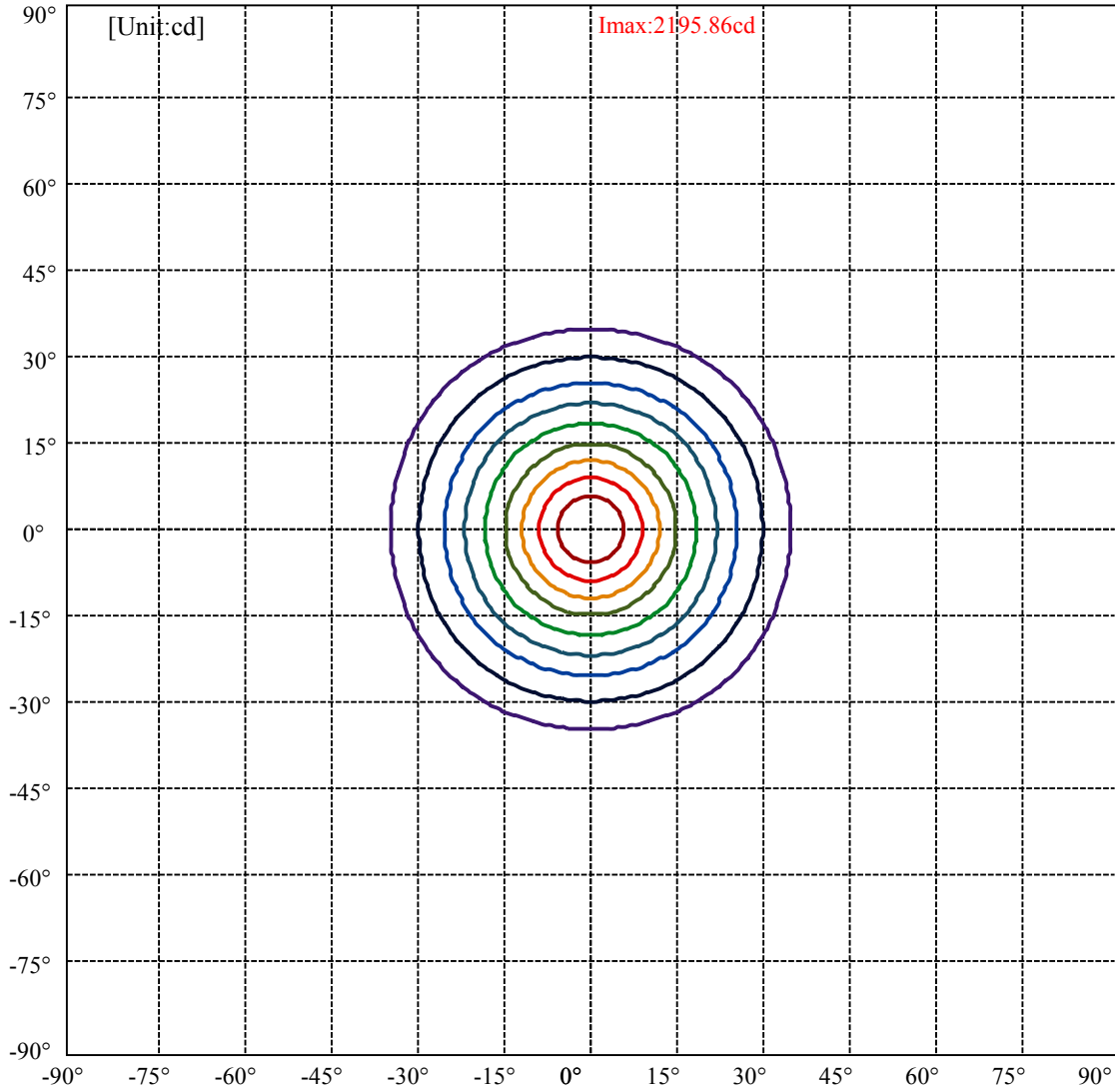


C0(Max): ———
C0/C180: ———
C90/C270: ———

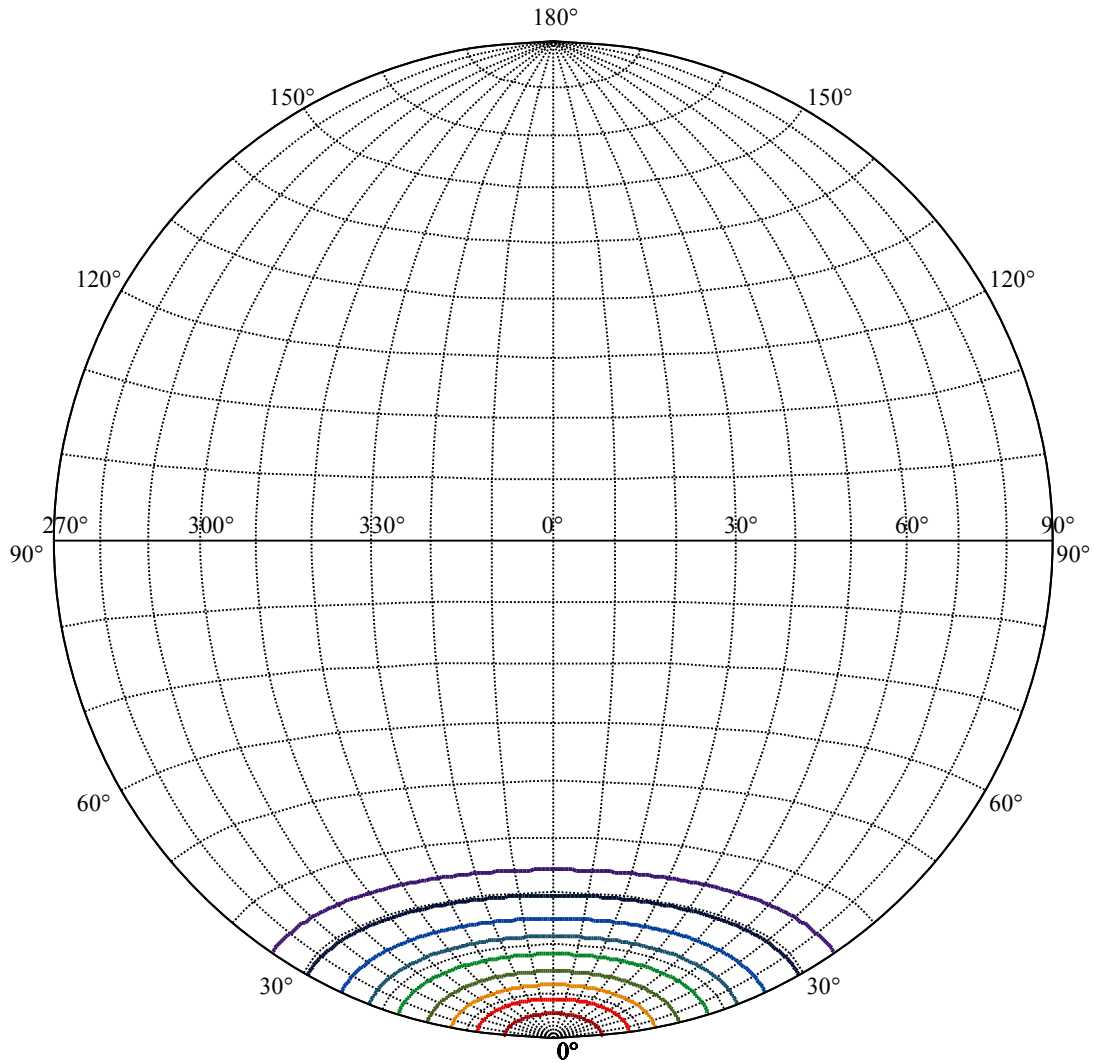
Field angle(10%Imax):C0/180Left:34.3 Right:34.3
:C90/270Left:34.3 Right:34.3

Beam Angle(50%Imax):C0/180Left:18.1 Right:18.1
:C90/270Left:18.1 Right:18.1





(10%Imax) 219.586	—
(20%Imax) 439.172	—
(30%Imax) 658.758	—
(40%Imax) 878.344	—
(50%Imax) 1097.93	—
(60%Imax) 1317.52	—
(70%Imax) 1537.1	—
(80%Imax) 1756.69	—
(90%Imax) 1976.27	—



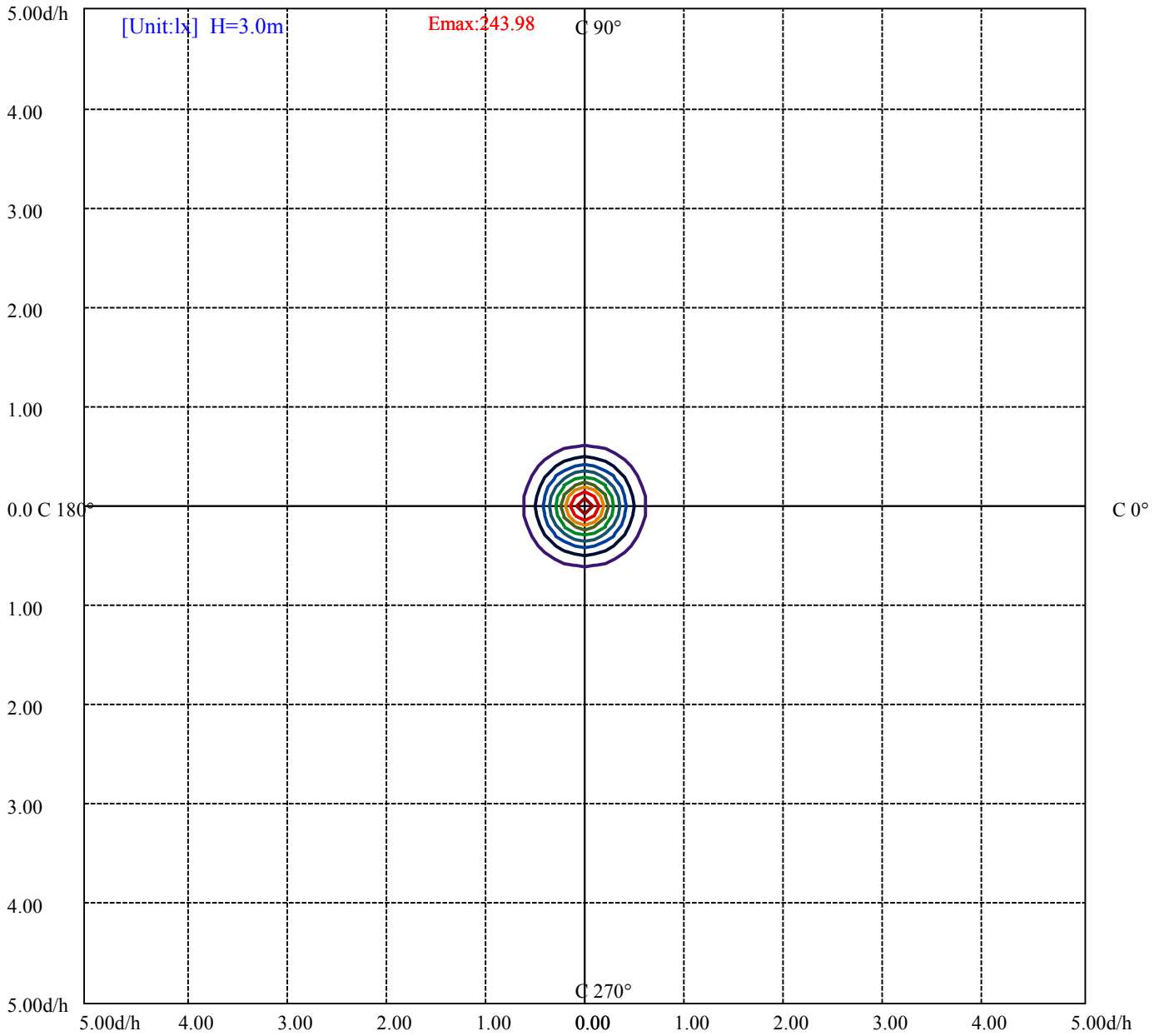
House

[Unit:cd]

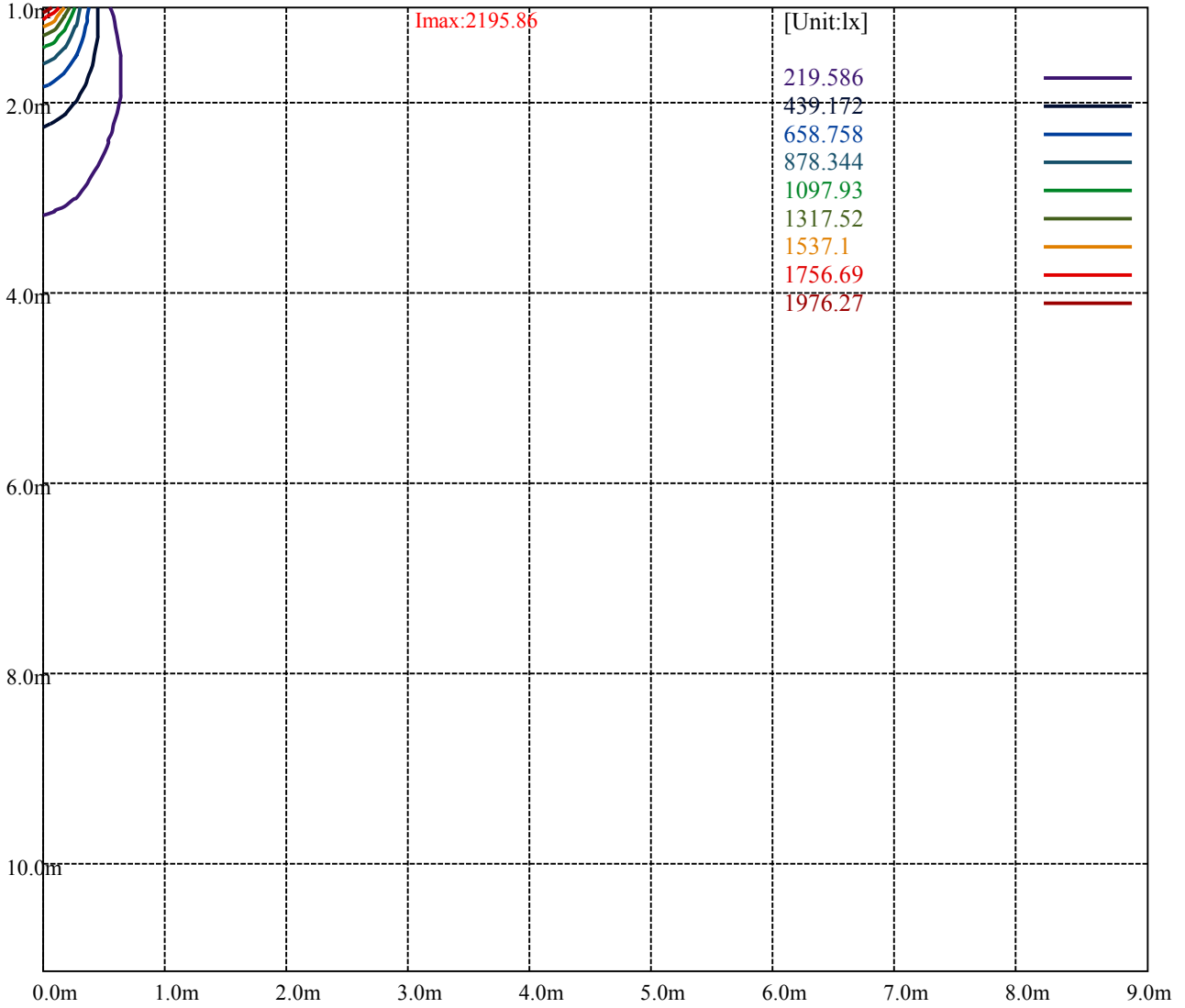
Road

Imax:2195.86

(10%Imax)	219.586	—
(20%Imax)	439.172	—
(30%Imax)	658.758	—
(40%Imax)	878.344	—
(50%Imax)	1097.93	—
(60%Imax)	1317.52	—
(70%Imax)	1537.1	—
(80%Imax)	1756.69	—
(90%Imax)	1976.27	—



(10%Emax) 24.39833	—
(20%Emax) 48.79678	—
(30%Emax) 73.19511	—
(40%Emax) 97.59355	—
(50%Emax) 121.9922	—
(60%Emax) 146.39	—
(70%Emax) 170.7889	—
(80%Emax) 195.1867	—
(90%Emax) 219.5856	—



Luminance Table

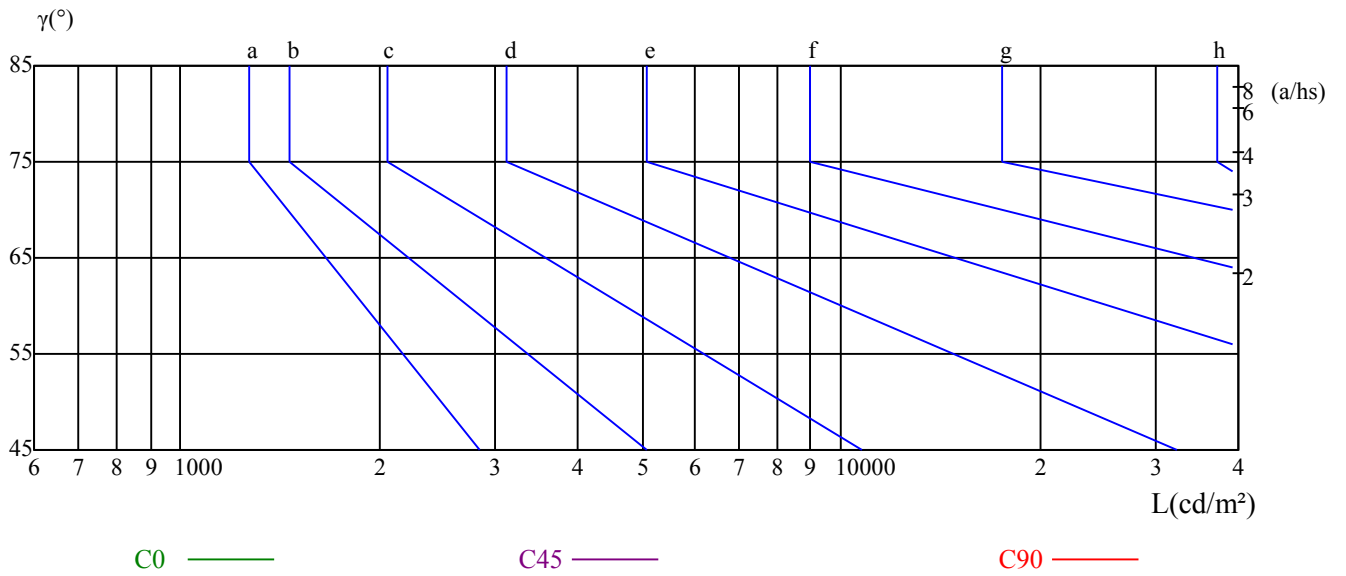
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

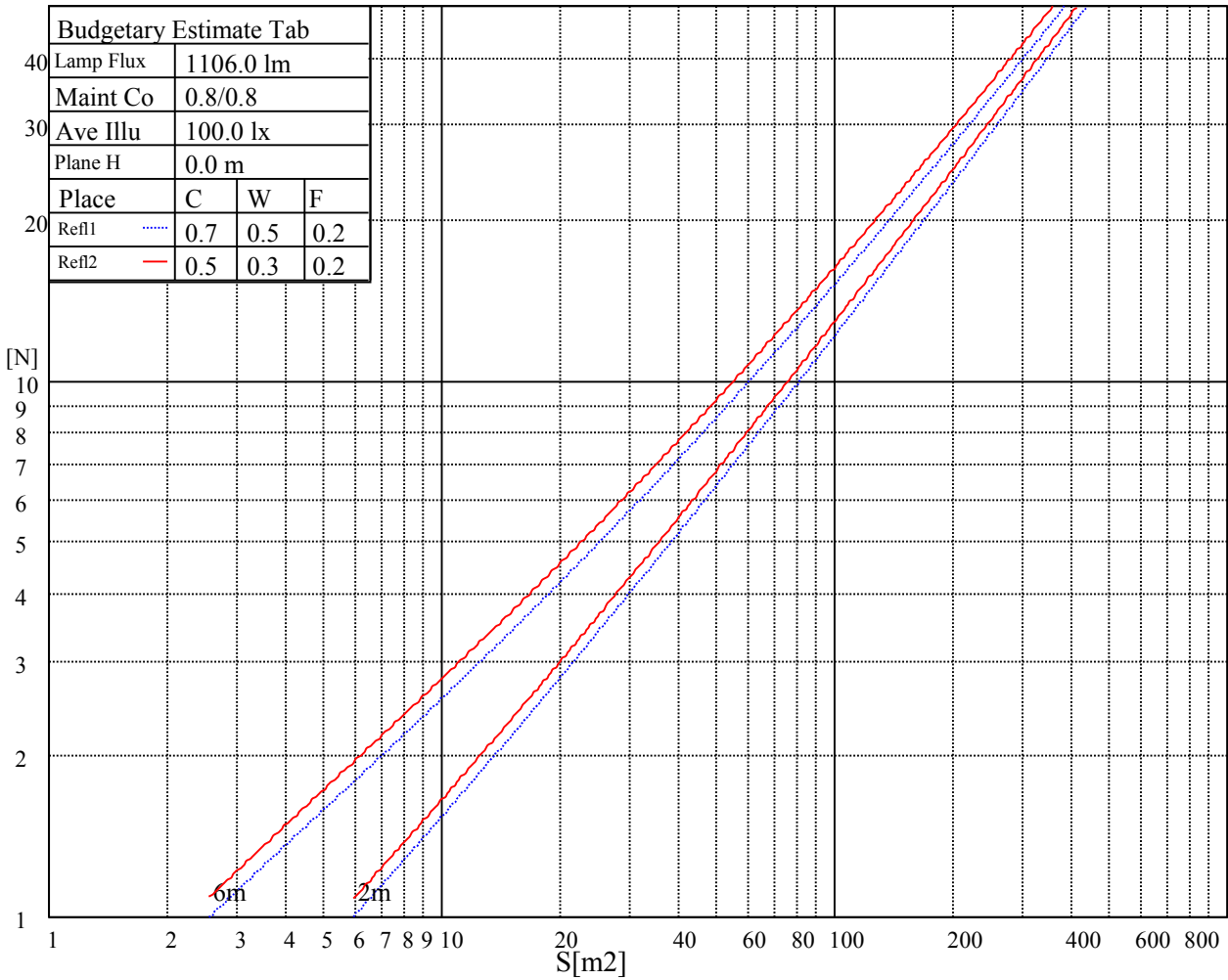
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

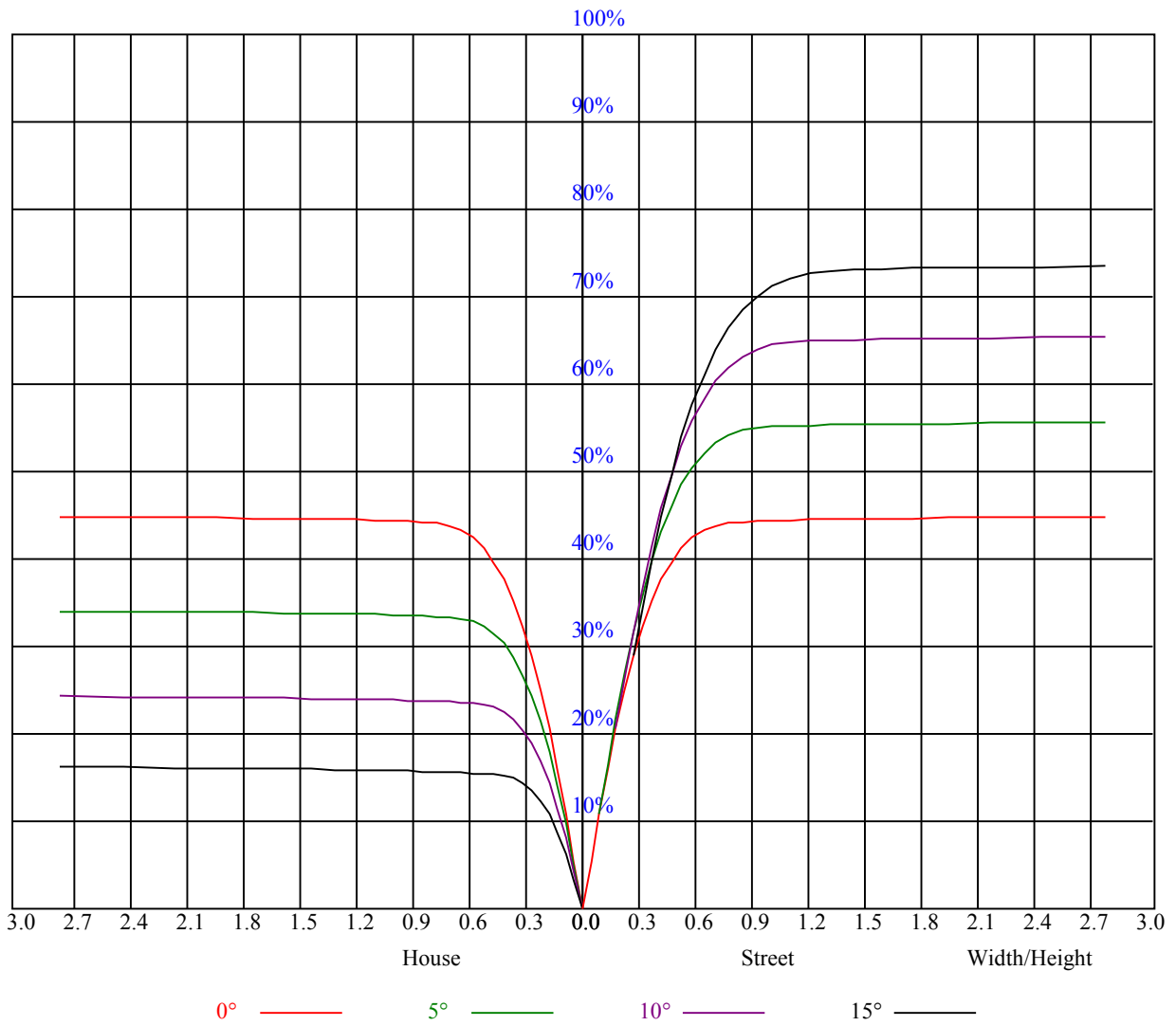
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

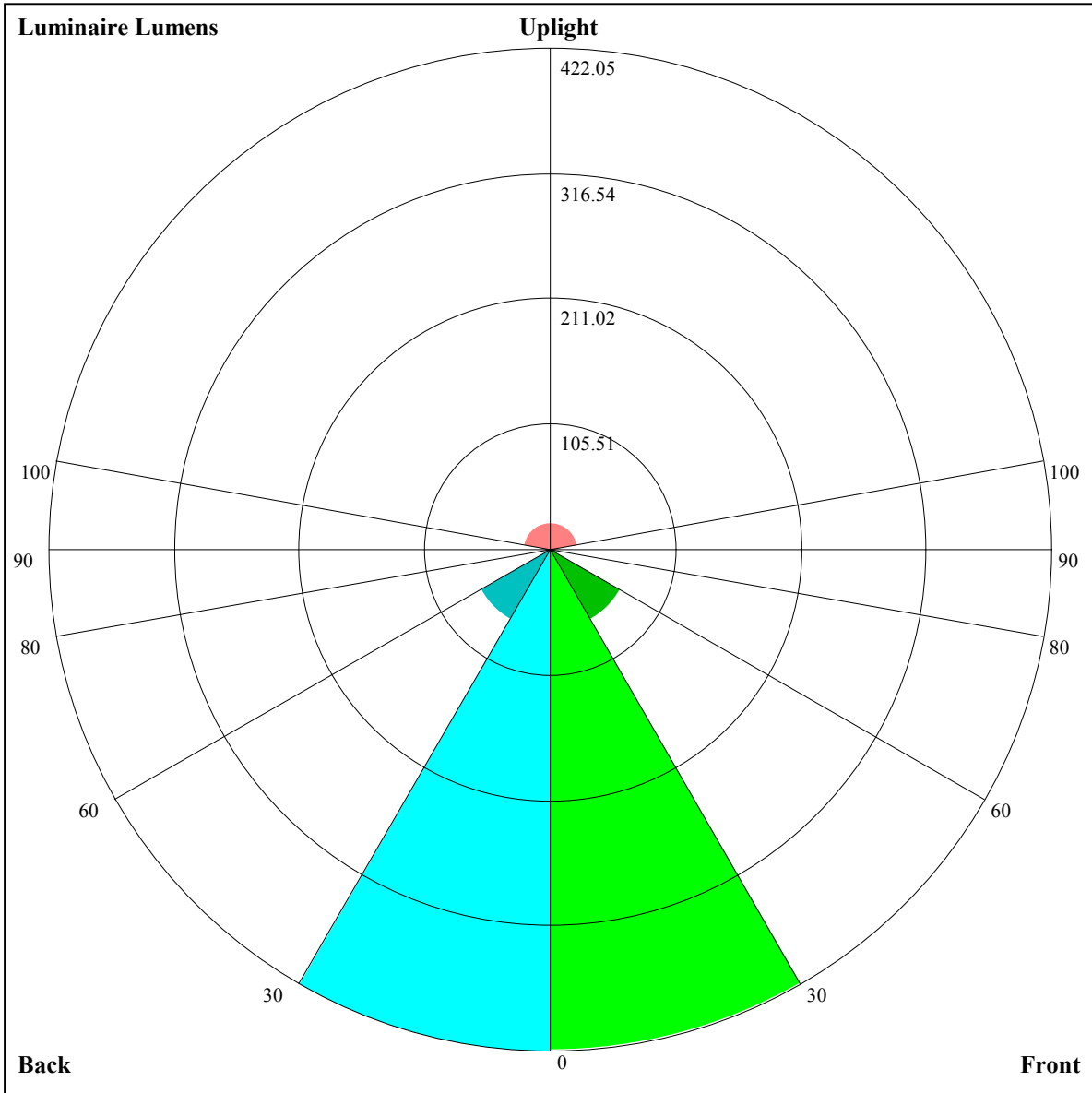
Luminance Limiting Curve





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	1.08	1.08	1.08	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.01	0.99	0.97	0.99	0.97	0.96	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86
2	0.95	0.92	0.89	0.94	0.91	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.83	0.81
3	0.90	0.86	0.82	0.89	0.85	0.82	0.86	0.83	0.81	0.84	0.81	0.79	0.82	0.80	0.78	0.77
4	0.85	0.80	0.77	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.77	0.75	0.79	0.76	0.74	0.73
5	0.81	0.76	0.72	0.80	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.71	0.75	0.73	0.70	0.69
6	0.77	0.72	0.68	0.76	0.71	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
7	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.63
8	0.70	0.65	0.62	0.69	0.65	0.61	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.60
9	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.57
10	0.64	0.59	0.56	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.55





Luminaire Lumens:

FL=421.22,FM=67.42,FH=5.44,FVH=2.52

BL=422.05,BM=67.85,BH=5.44,BVH=2.53

UL=4.86,UH=23.11

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	2189.81	2067.75	1766.81	1390.50	1054.13	710.44	443.81	296.44	21.38
45.0	2202.75	1978.88	1637.44	1261.69	905.63	578.81	369.00	109.52	13.67
90.0	2187.00	1963.69	1576.13	1112.91	865.69	533.70	324.23	80.72	13.73
135.0	2203.88	2040.19	1671.75	1302.19	1017.56	673.88	425.25	212.23	16.82
180.0	2189.81	1958.63	1611.56	1217.25	958.11	621.68	389.36	141.19	13.27
225.0	2202.75	2059.88	1715.06	1344.94	1008.73	741.09	468.17	200.08	23.34
270.0	2187.00	2077.31	1763.44	1363.50	1047.38	771.19	473.06	293.06	27.06
315.0	2203.88	2026.69	1668.38	1312.88	998.49	664.48	422.44	153.90	16.54
360.0	2189.81	2067.75	1766.81	1390.50	1054.13	710.44	443.81	296.44	21.38
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	9.28	7.76	6.81	6.08	5.57	5.23	5.01	4.84	4.61
45.0	9.23	7.65	6.64	6.08	5.57	5.23	5.01	4.78	4.56
90.0	9.51	7.71	6.64	6.08	5.63	5.29	5.01	4.78	4.56
135.0	8.66	7.26	6.36	5.79	5.40	5.18	4.95	4.78	4.61
180.0	8.10	6.92	6.24	5.79	5.40	5.18	4.95	4.78	4.56
225.0	9.34	7.71	6.69	6.08	5.68	5.29	5.06	4.84	4.67
270.0	10.46	8.04	6.92	6.24	5.74	5.40	5.12	4.89	4.73
315.0	8.77	7.37	6.41	5.79	5.40	5.12	4.89	4.78	4.67
360.0	9.28	7.76	6.81	6.08	5.57	5.23	5.01	4.84	4.61
C/ γ (°)	90.0								
0.0	4.44								
45.0	4.44								
90.0	4.44								
135.0	4.44								
180.0	4.44								
225.0	4.50								
270.0	4.44								
315.0	4.44								
360.0	4.44								