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NATA

Client:

LumCAT: 3-1703-N

Luminaire: 92.70.065.00+92.70.061.00

Report No: nt0100

Voltage(V): 34.0300

Test No: GC2020011018

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.4100

Lamp flux(lm): 2436.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1890.69, Efficiency(%): 77.61% , Luminous Efficacy(lm/W): 92.64

Central intensity(cd): 3955.922, Maximum intensity(cd): 3955.922

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=35.8

[C90/270]Total=35.8

Field angle(10%Imax): [C0/180]Total=66.2

[C90/270]Total=66.2

Maximum s/h(1/2): C0_180=0.58 C90_270=0.58

Maximum s/h(1/4): C0_180=0.60 C90_270=0.60

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 77.61%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.094%

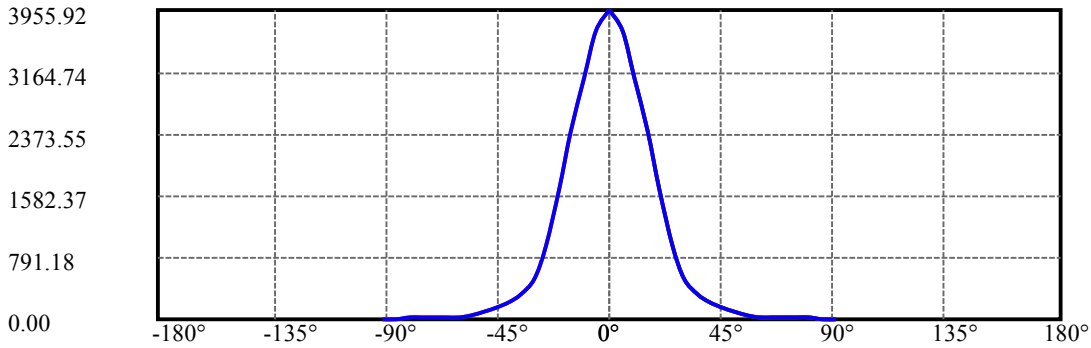
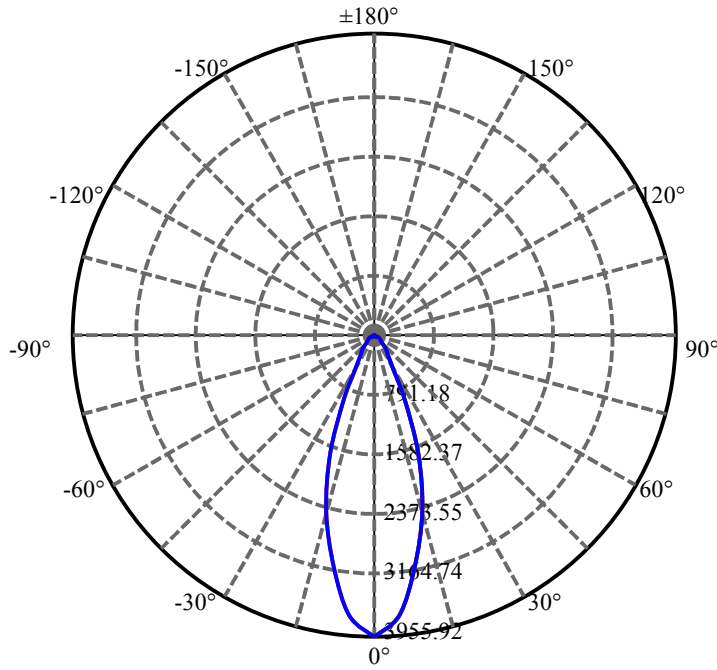
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3955.922	0.000	0	.000%	.000%
5.0	3697.242	91.491	91.491	3.756%	4.839%
10.0	3106.758	243.400	334.892	9.992%	17.713%
15.0	2408.273	327.148	662.04	13.430%	35.016%
20.0	1666.055	335.782	997.822	13.784%	52.776%
25.0	945.654	273.920	1271.742	11.245%	67.263%
30.0	520.031	185.484	1457.225	7.614%	77.074%
35.0	321.476	123.918	1581.143	5.087%	83.628%
40.0	221.498	90.591	1671.734	3.719%	88.419%
45.0	140.091	66.951	1738.686	2.748%	91.960%
50.0	88.207	46.131	1784.816	1.894%	94.400%
55.0	53.184	30.743	1815.56	1.262%	96.026%
60.0	34.123	20.181	1835.74	.828%	97.094%
65.0	24.785	14.321	1850.061	.588%	97.851%
70.0	20.630	11.499	1861.56	.472%	98.459%
75.0	16.727	9.765	1871.325	.401%	98.976%
80.0	13.261	8.024	1879.349	.329%	99.400%
85.0	10.062	6.337	1885.686	.260%	99.735%
90.0	8.213	5.004	1890.69	.205%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1457.23	59.82%	77.07%
0-40	1671.73	68.63%	88.42%
0-60	1835.74	75.36%	97.09%
0-90	1885.69	77.41%	99.74%
0-120	1885.69	77.41%	99.74%
0-180	1890.69	77.61%	100.00%
60-90	70.13	2.88%	3.71%
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%
0-32.23	1512.55	62.09%	80.00%

ZONAL LUMEN SUMMARY

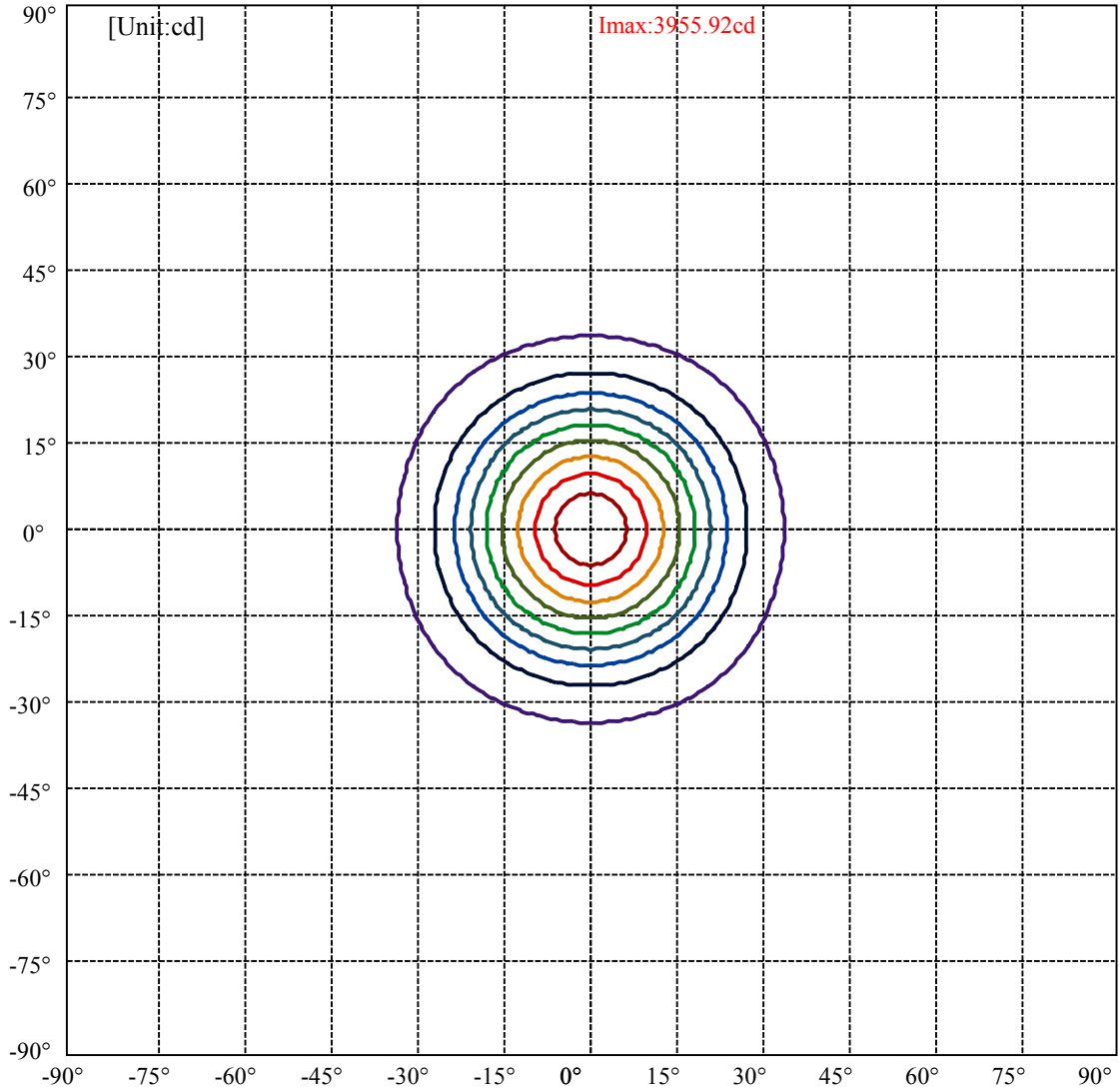
0-10	334.89
10-20	662.93
20-30	459.40
30-40	214.51
40-50	113.08
50-60	50.92
60-70	25.82
70-80	17.79
80-90	6.34
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



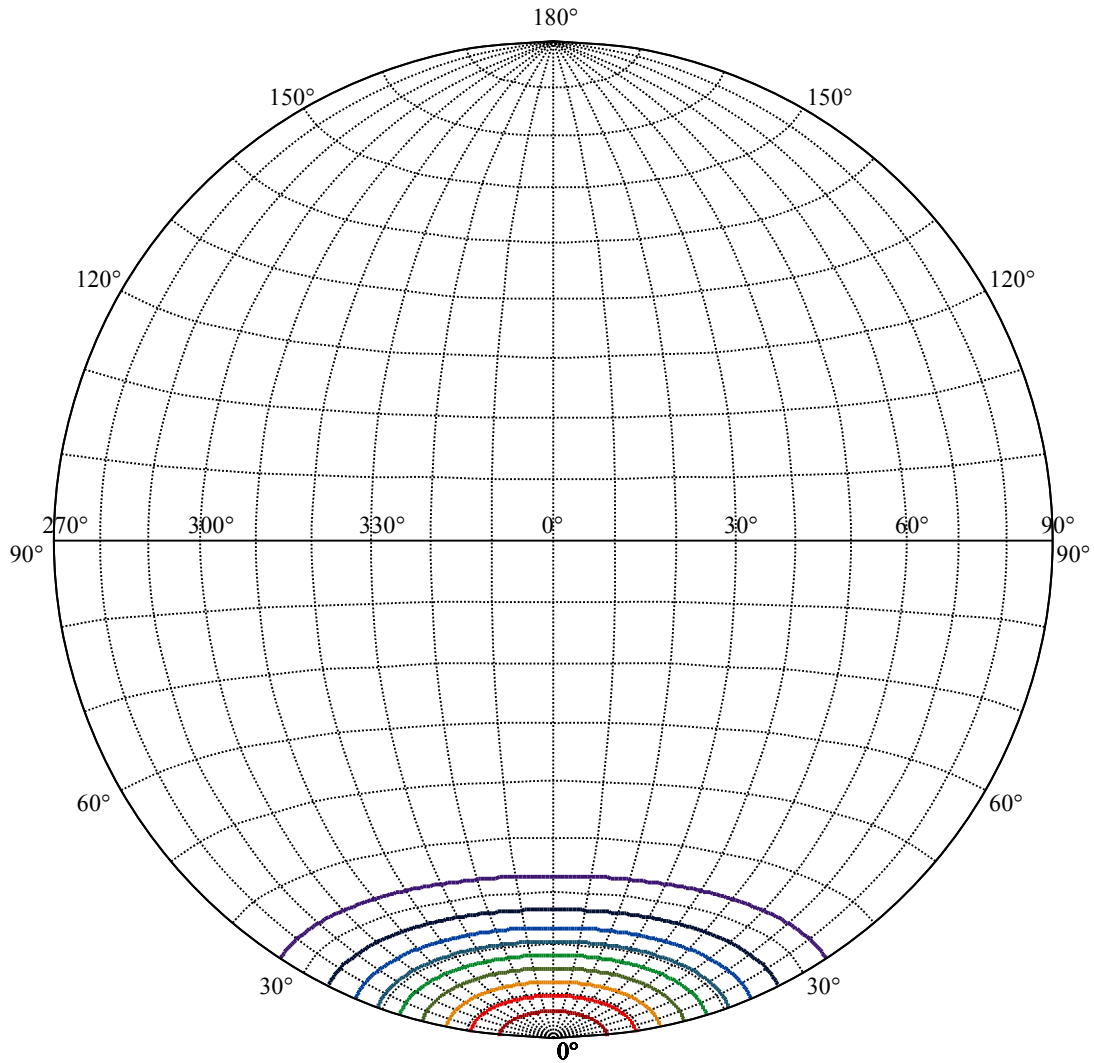
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:33.1 Right:33.1
:C90/270Left:33.1 Right:33.1

Beam Angle(50%Imax):C0/180Left:17.9 Right:17.9
:C90/270Left:17.9 Right:17.9



(10%Imax) 395.592	—
(20%Imax) 791.184	—
(30%Imax) 1186.78	—
(40%Imax) 1582.37	—
(50%Imax) 1977.96	—
(60%Imax) 2373.55	—
(70%Imax) 2769.15	—
(80%Imax) 3164.74	—
(90%Imax) 3560.33	—



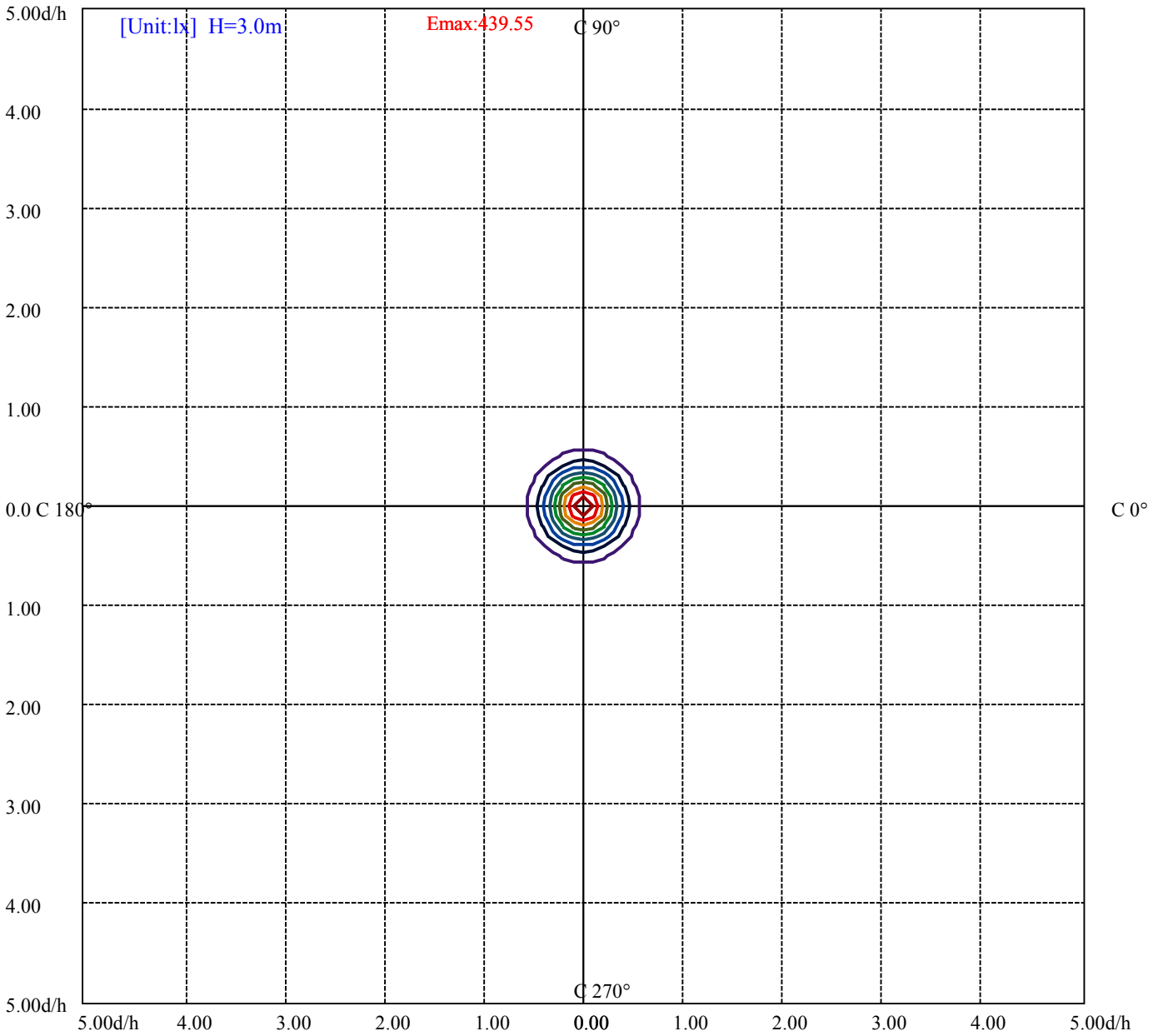
House

[Unit:cd]

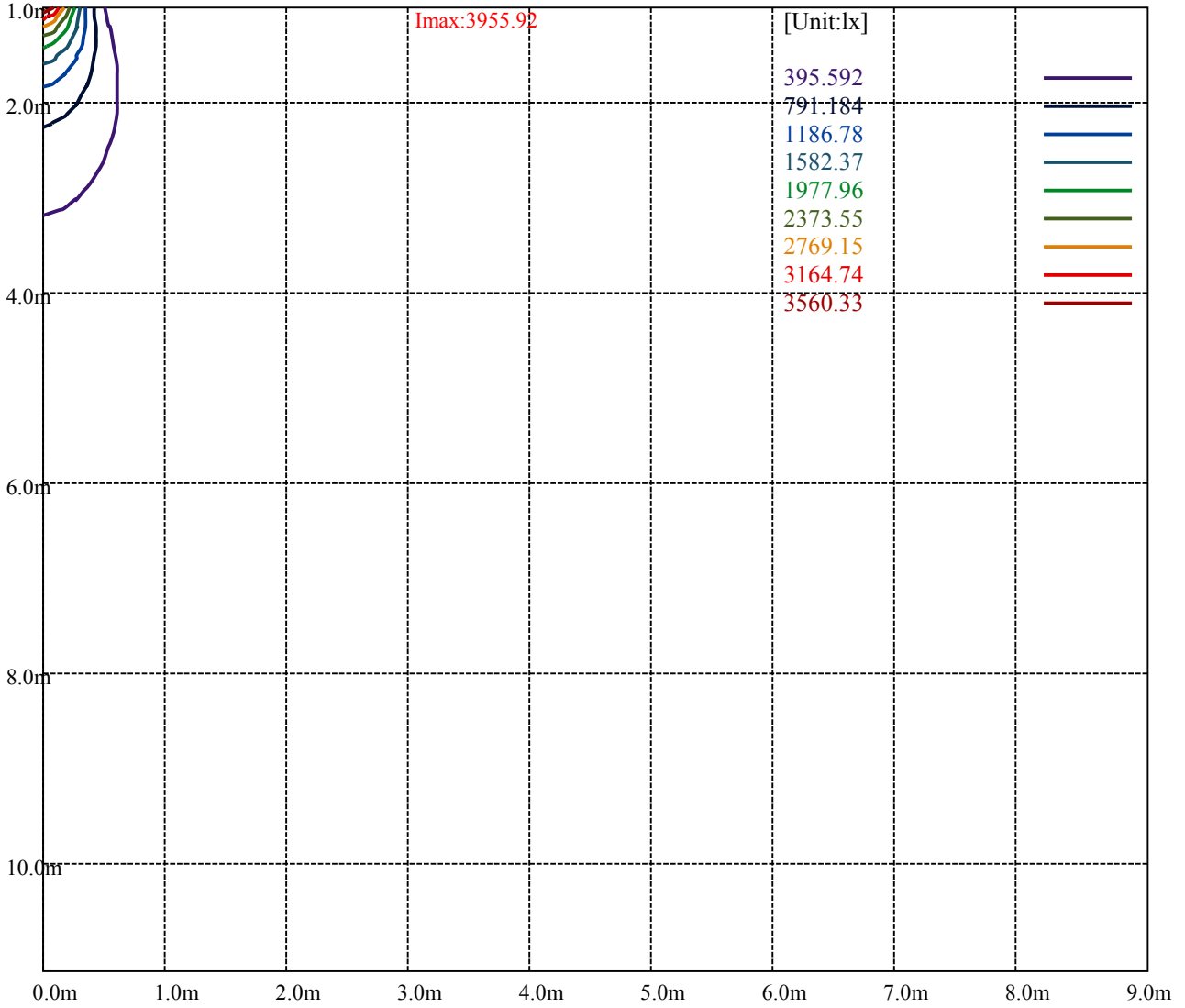
Road

Imax:3955.92

(10%Imax) 395.592	—
(20%Imax) 791.184	—
(30%Imax) 1186.78	—
(40%Imax) 1582.37	—
(50%Imax) 1977.96	—
(60%Imax) 2373.55	—
(70%Imax) 2769.15	—
(80%Imax) 3164.74	—
(90%Imax) 3560.33	—



- (10%Emax) 43.95456
- (20%Emax) 87.90922
- (30%Emax) 131.8633
- (40%Emax) 175.8189
- (50%Emax) 219.7733
- (60%Emax) 263.7278
- (70%Emax) 307.6822
- (80%Emax) 351.6367
- (90%Emax) 395.5911



Luminance Table

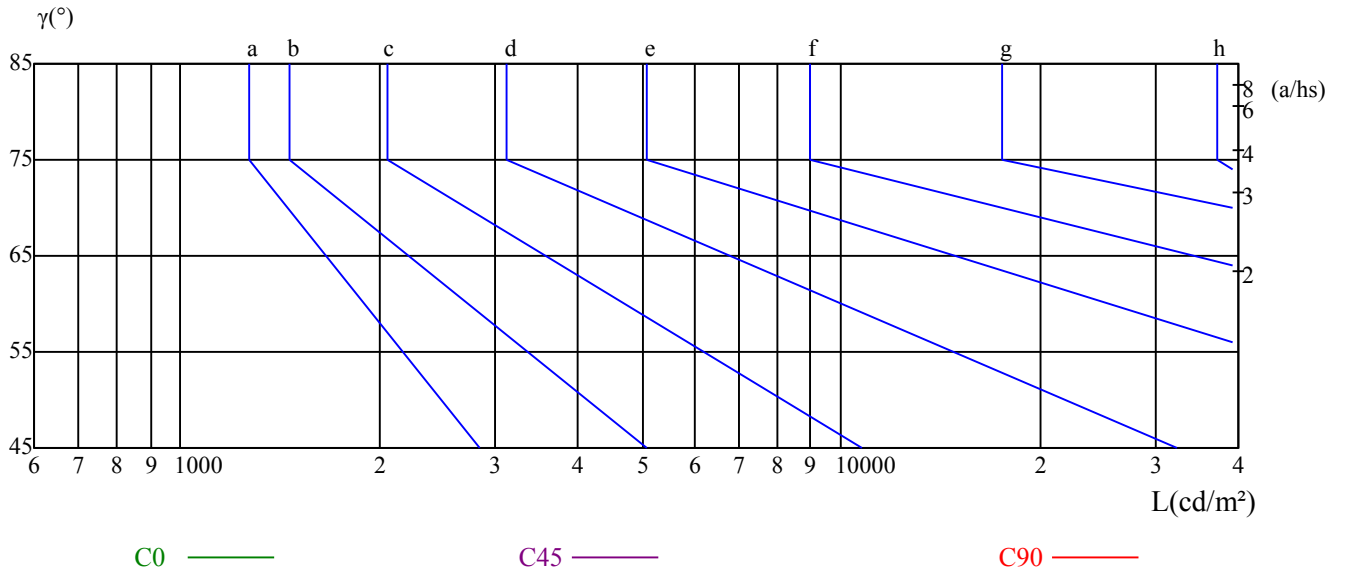
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

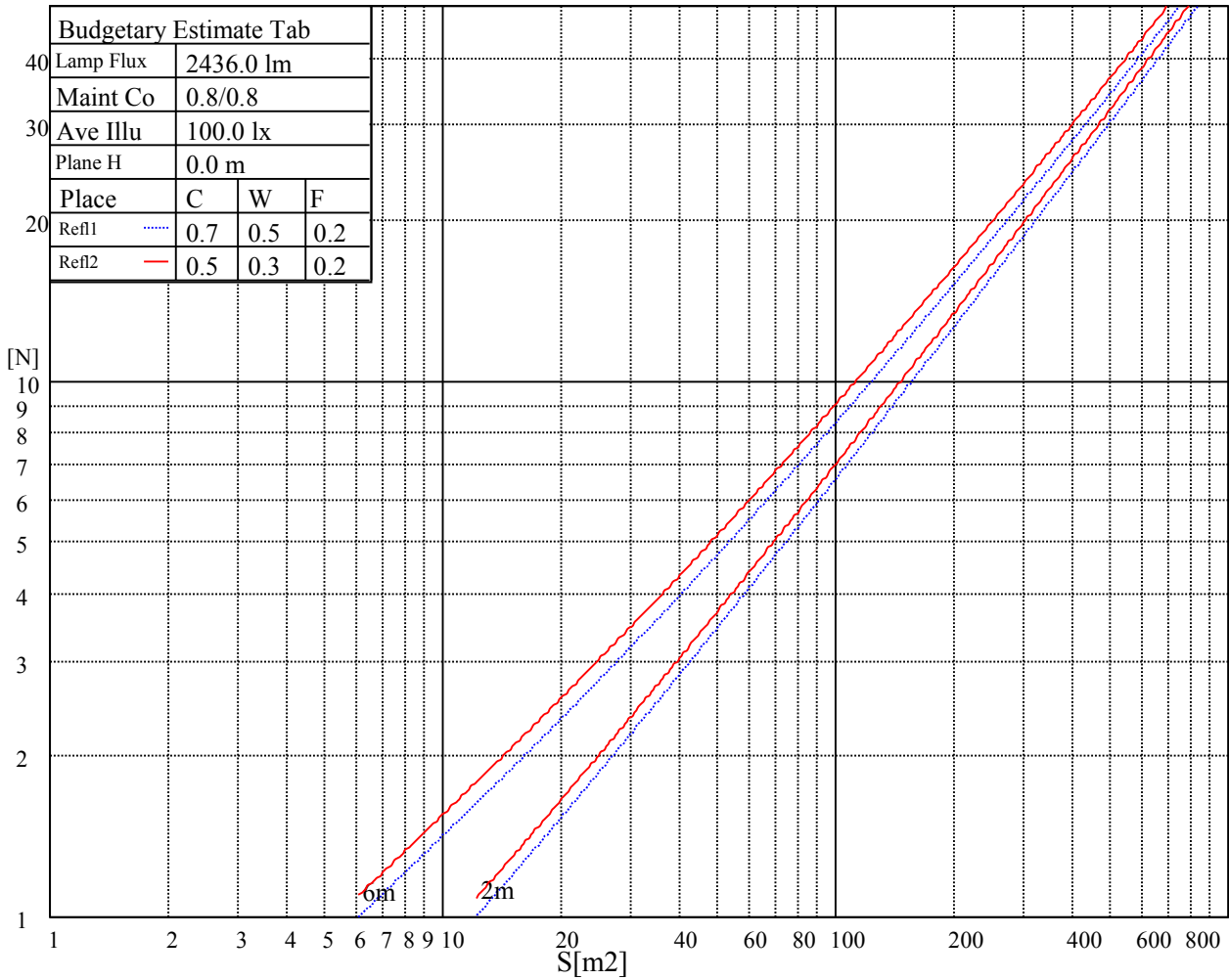
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

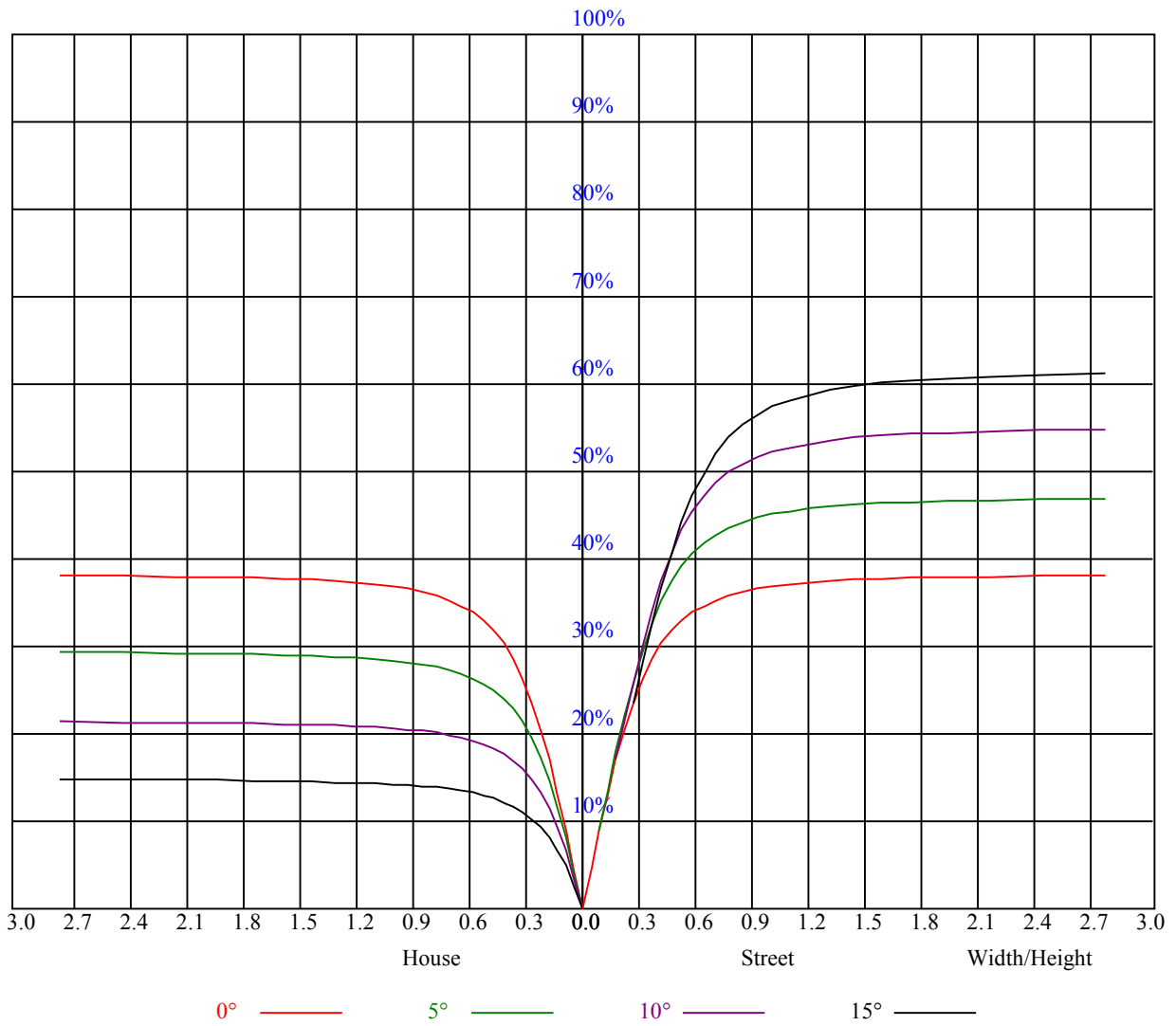
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

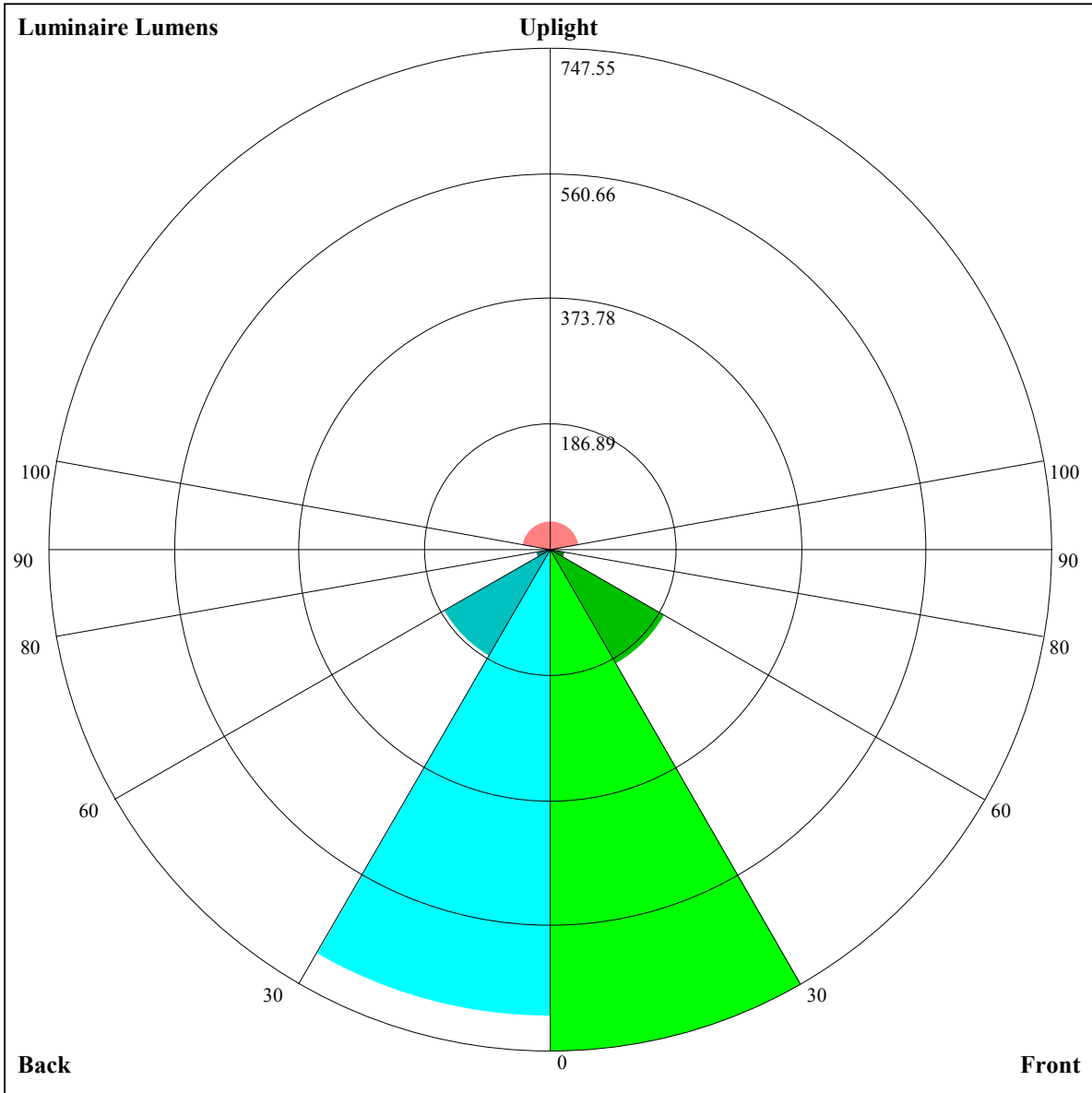
Luminance Limiting Curve





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	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86	0.83	0.83	0.83	0.79	0.79	0.79	0.78
1	0.86	0.84	0.82	0.84	0.82	0.81	0.81	0.80	0.78	0.78	0.77	0.76	0.75	0.75	0.74	0.72
2	0.80	0.77	0.74	0.79	0.76	0.74	0.76	0.74	0.72	0.74	0.72	0.70	0.72	0.70	0.69	0.68
3	0.75	0.71	0.68	0.74	0.71	0.68	0.72	0.69	0.67	0.70	0.68	0.66	0.68	0.66	0.65	0.63
4	0.71	0.67	0.63	0.70	0.66	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.65	0.63	0.61	0.60
5	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.58	0.63	0.60	0.58	0.62	0.60	0.57	0.56
6	0.63	0.59	0.56	0.63	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.59	0.57	0.54	0.53
7	0.60	0.56	0.53	0.59	0.55	0.52	0.58	0.55	0.52	0.58	0.54	0.52	0.57	0.54	0.52	0.51
8	0.57	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.49	0.55	0.52	0.49	0.54	0.51	0.49	0.48
9	0.54	0.50	0.47	0.54	0.50	0.47	0.53	0.50	0.47	0.53	0.49	0.47	0.52	0.49	0.47	0.46
10	0.52	0.48	0.45	0.52	0.48	0.45	0.51	0.48	0.45	0.51	0.47	0.45	0.50	0.47	0.45	0.44





Luminaire Lumens:

FL=747.55,FM=196.62,FH=22.29,FVH=5.77

BL=695.47,BM=182.34,BH=21.29,BVH=5.57

UL=8.96,UH=42.64

BUG Rating:B2-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	3944.25	3844.69	3368.81	2618.44	1870.31	1099.69	590.06	356.63	233.10
45.0	3956.06	3769.31	3217.50	2525.63	1699.88	975.94	519.19	315.00	217.74
90.0	3951.00	3546.00	2907.56	2164.50	1446.19	760.50	438.30	283.39	193.44
135.0	3972.38	3622.50	2933.44	2291.06	1518.19	837.56	478.69	299.25	200.93
180.0	3944.25	3514.50	2907.00	2192.63	1460.81	810.68	459.17	287.78	198.84
225.0	3956.06	3648.94	3024.56	2383.31	1632.38	897.36	513.00	315.51	211.84
270.0	3951.00	3844.69	3301.88	2613.38	1918.13	1147.50	610.88	376.88	284.06
315.0	3972.38	3787.31	3193.31	2477.25	1782.56	1036.01	550.97	337.39	232.03
360.0	3944.25	3844.69	3368.81	2618.44	1870.31	1099.69	590.06	356.63	233.10

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	156.99	98.04	59.23	37.97	26.21	21.71	17.83	14.23	10.69
45.0	141.86	88.82	54.73	34.59	24.64	20.48	16.71	13.16	9.84
90.0	120.94	76.95	45.45	29.70	23.34	19.29	15.47	11.98	9.17
135.0	126.73	80.61	47.59	30.94	23.96	19.91	15.98	12.83	9.34
180.0	124.14	77.40	45.96	30.60	23.63	19.69	15.98	12.49	9.51
225.0	138.43	86.40	52.20	33.98	24.58	20.42	16.37	13.22	10.18
270.0	160.14	102.94	62.10	38.76	26.21	22.05	18.00	14.40	10.97
315.0	151.48	94.50	58.22	36.45	25.71	21.49	17.49	13.78	10.80
360.0	156.99	98.04	59.23	37.97	26.21	21.71	17.83	14.23	10.69

C/γ(°)	90.0
0.0	8.33
45.0	8.10
90.0	8.16
135.0	8.16
180.0	8.21
225.0	8.10
270.0	8.33
315.0	8.33
360.0	8.33