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NATA

Client:

LumCAT: 1-0928-M

Luminaire: 92.70.124.00

Report No: nt0100

Voltage(V): 33.5800

Test No: GC2019122304

Current(A): 0.1970

LampCAT: LUMINUS CXM-9-AC40

Power (W): 6.6100

Lamp flux(lm): 1036.0

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): 843.18, Efficiency(%): 81.39% , Luminous Efficacy(lm/W): 127.56

Central intensity(cd): 2530.828, Maximum intensity(cd): 2530.828

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=35.4

[C90/270]Total=35.4

Field angle(10%Imax): [C0/180]Total=49.8

[C90/270]Total=49.8

Maximum s/h(1/2): C0_180=0.59 C90_270=0.59

Maximum s/h(1/4): C0_180=0.55 C90_270=0.55

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 81.39%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.554%

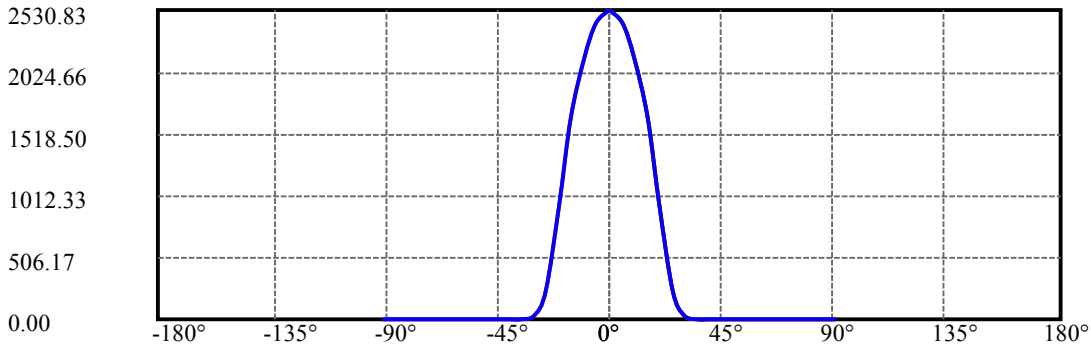
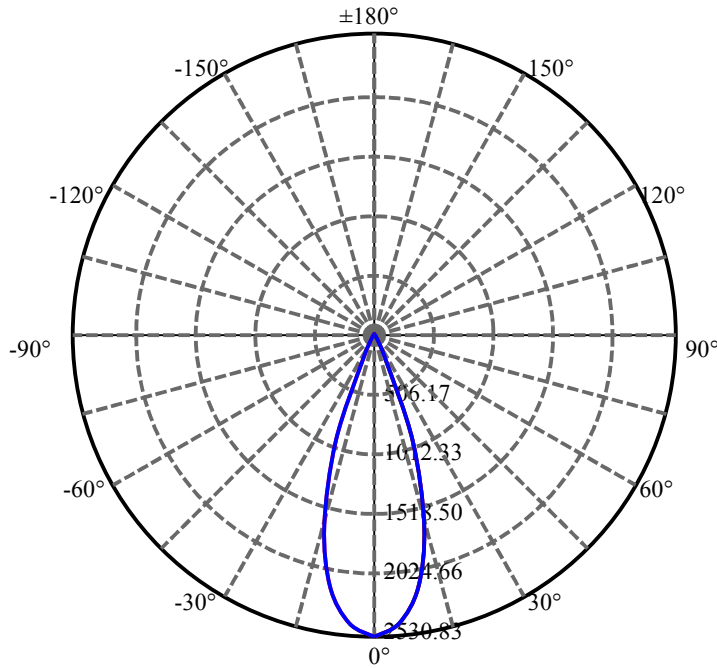
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2530.828	0.000	0	.000%	.000%
5.0	2426.133	59.259	59.259	5.720%	7.028%
10.0	2141.578	163.401	222.66	15.772%	26.407%
15.0	1646.648	224.715	447.375	21.691%	53.058%
20.0	944.374	213.537	660.912	20.612%	78.383%
25.0	232.952	123.480	784.392	11.919%	93.027%
30.0	24.124	32.533	816.925	3.140%	96.886%
35.0	7.594	4.671	821.596	.451%	97.440%
40.0	5.302	2.151	823.747	.208%	97.695%
45.0	4.528	1.820	825.567	.176%	97.911%
50.0	4.226	1.769	827.336	.171%	98.121%
55.0	4.057	1.801	829.137	.174%	98.334%
60.0	3.959	1.853	830.99	.179%	98.554%
65.0	3.916	1.914	832.904	.185%	98.781%
70.0	3.881	1.974	834.879	.191%	99.015%
75.0	3.867	2.025	836.904	.195%	99.255%
80.0	3.867	2.070	838.974	.200%	99.501%
85.0	3.867	2.102	841.075	.203%	99.750%
90.0	3.832	2.108	843.183	.203%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	816.93	78.85%	96.89%
0-40	823.75	79.51%	97.69%
0-60	830.99	80.21%	98.55%
0-90	841.08	81.18%	99.75%
0-120	841.08	81.18%	99.75%
0-180	843.18	81.39%	100.00%
60-90	11.94	1.15%	1.42%
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%
0-20.55	674.55	65.11%	80.00%

ZONAL LUMEN SUMMARY

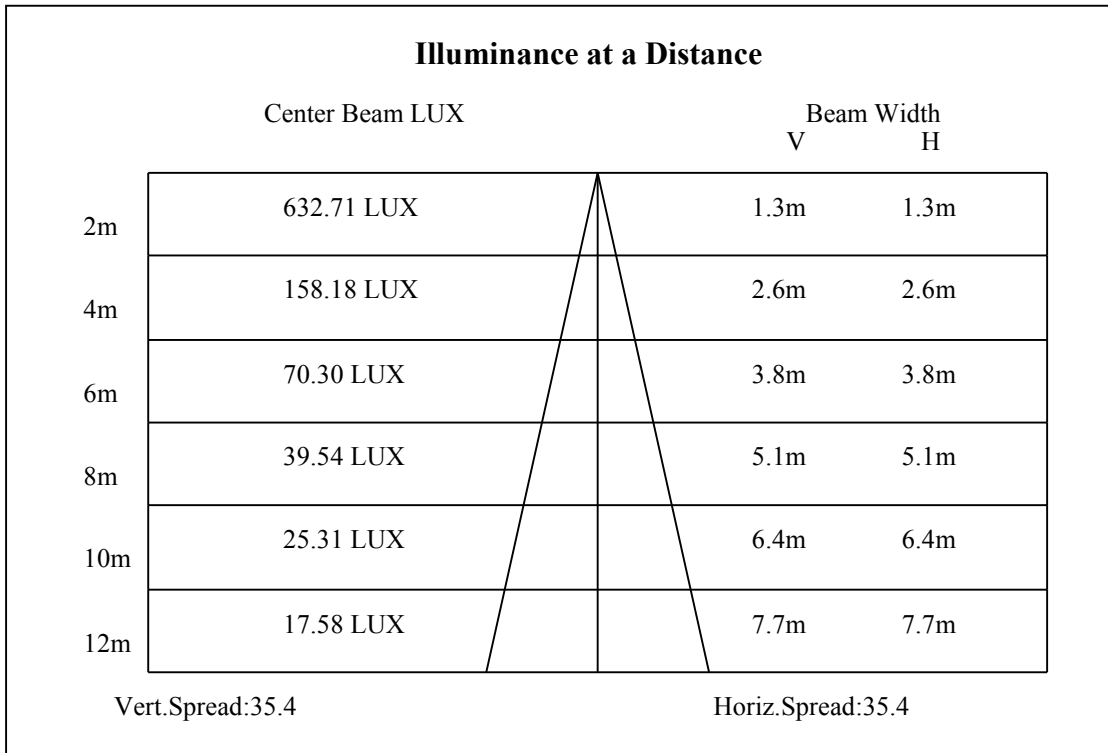
0-10	222.66
10-20	438.25
20-30	156.01
30-40	6.82
40-50	3.59
50-60	3.65
60-70	3.89
70-80	4.09
80-90	2.10
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

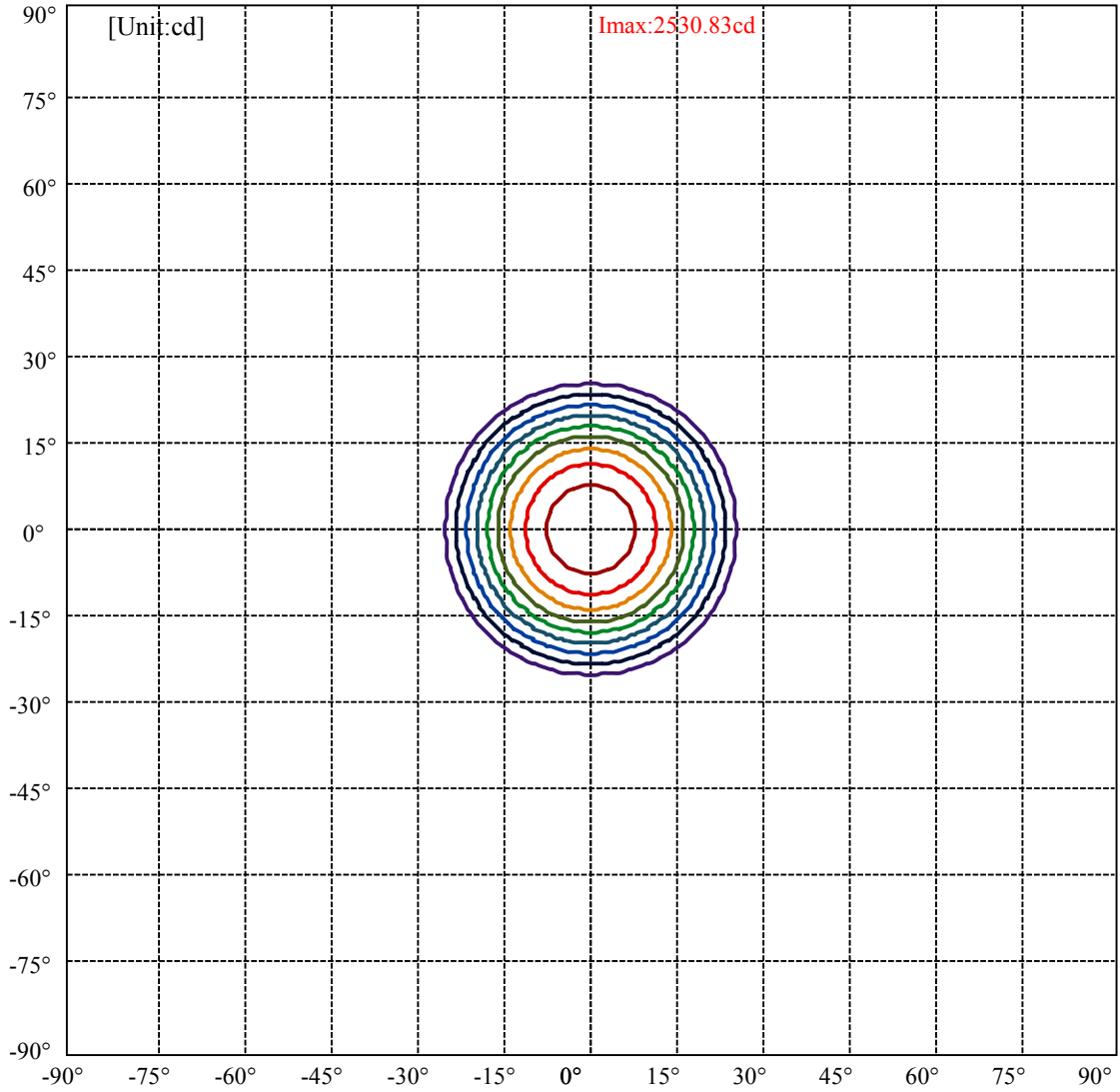


C0(Max): —————
C0/C180: —————
C90/C270: —————

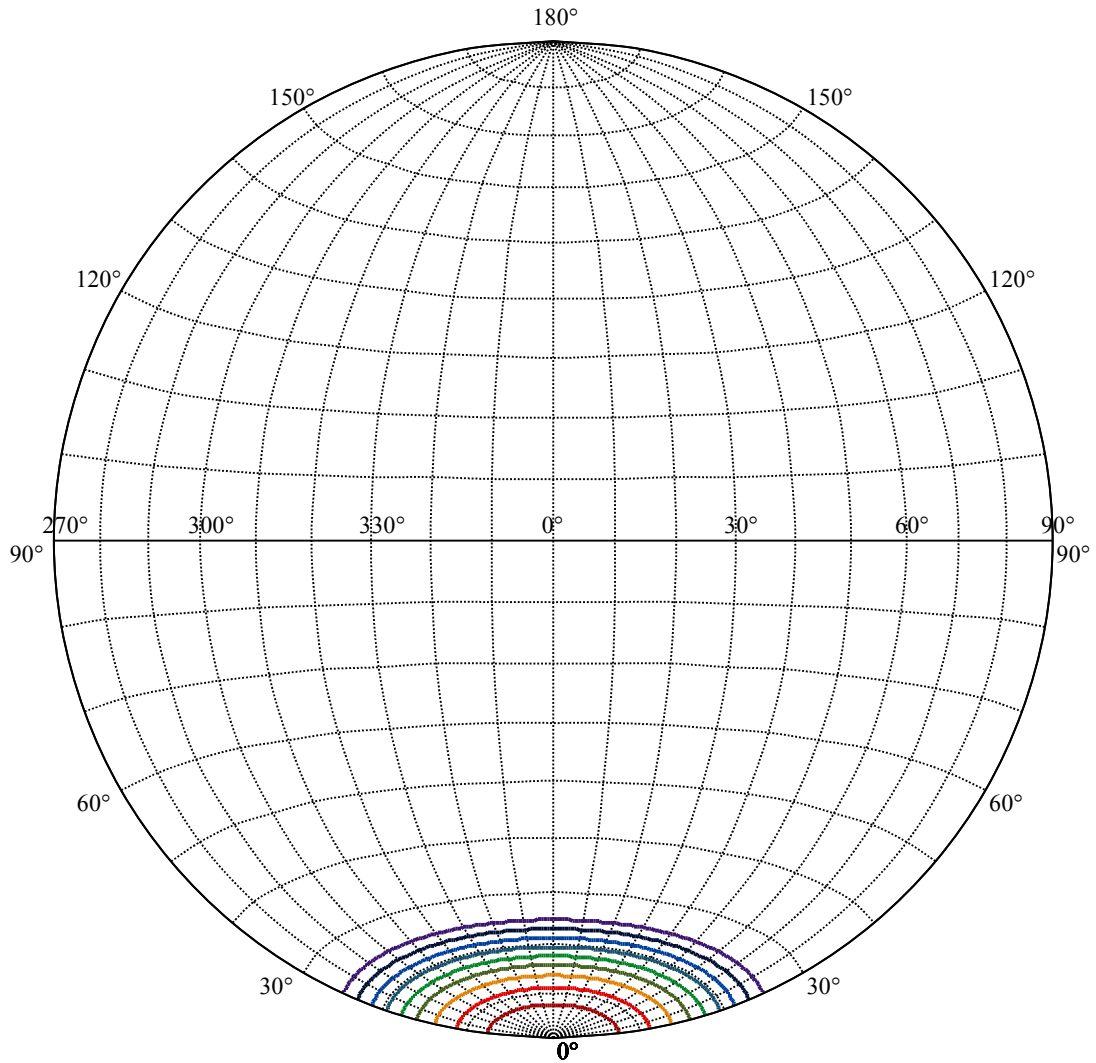
Field angle(10%Imax):C0/180Left:24.9 Right:24.9
:C90/270Left:24.9 Right:24.9

Beam Angle(50%Imax):C0/180Left:17.7 Right:17.7
:C90/270Left:17.7 Right:17.7





(10%Imax) 253.083	—
(20%Imax) 506.166	—
(30%Imax) 759.248	—
(40%Imax) 1012.33	—
(50%Imax) 1265.41	—
(60%Imax) 1518.5	—
(70%Imax) 1771.58	—
(80%Imax) 2024.66	—
(90%Imax) 2277.75	—



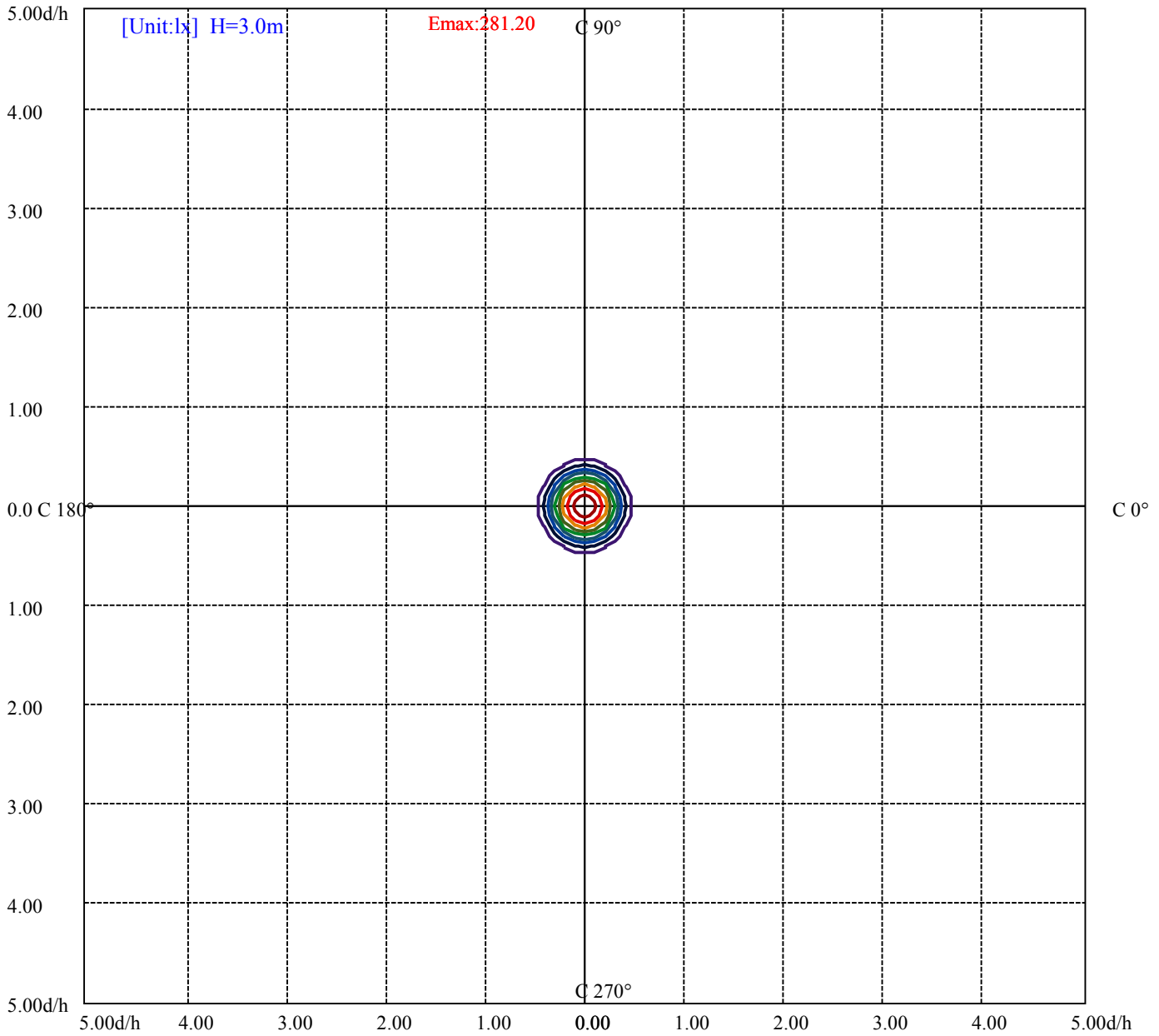
House

[Unit:cd]

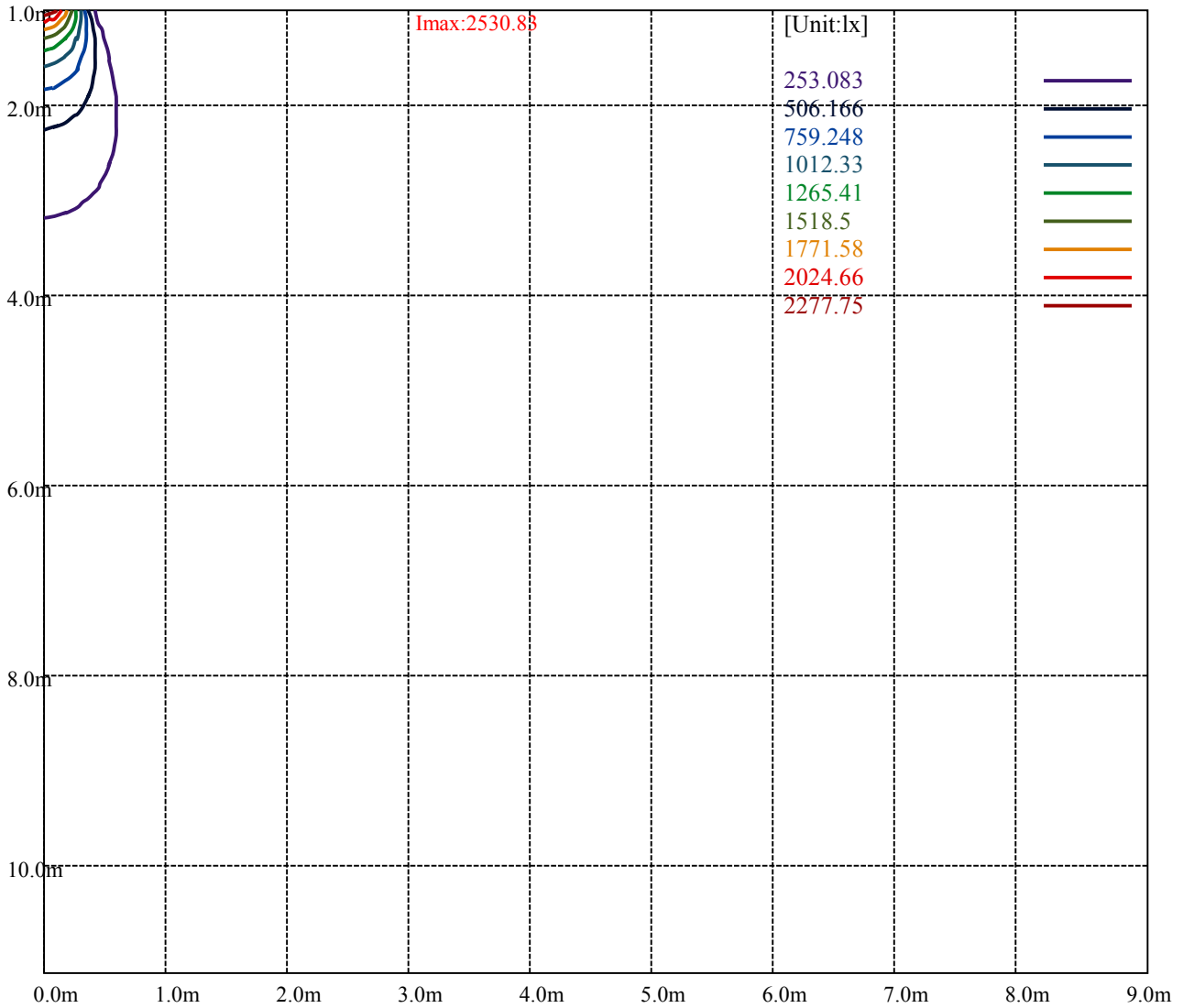
Road

Imax:2530.83

(10%Imax) 253.083	—
(20%Imax) 506.166	—
(30%Imax) 759.248	—
(40%Imax) 1012.33	—
(50%Imax) 1265.41	—
(60%Imax) 1518.5	—
(70%Imax) 1771.58	—
(80%Imax) 2024.66	—
(90%Imax) 2277.75	—



- (10%E_{max}) 28.12022
- (20%E_{max}) 56.24055
- (30%E_{max}) 84.36078
- (40%E_{max}) 112.4811
- (50%E_{max}) 140.6011
- (60%E_{max}) 168.7211
- (70%E_{max}) 196.8422
- (80%E_{max}) 224.9622
- (90%E_{max}) 253.0822



Luminance Table

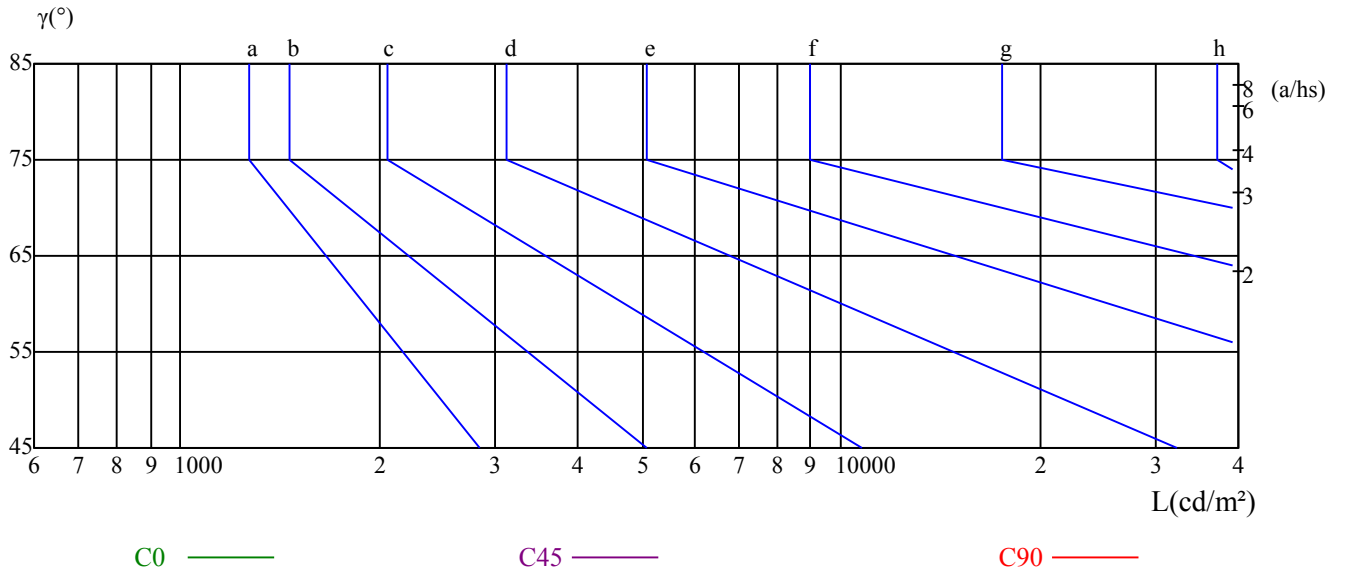
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

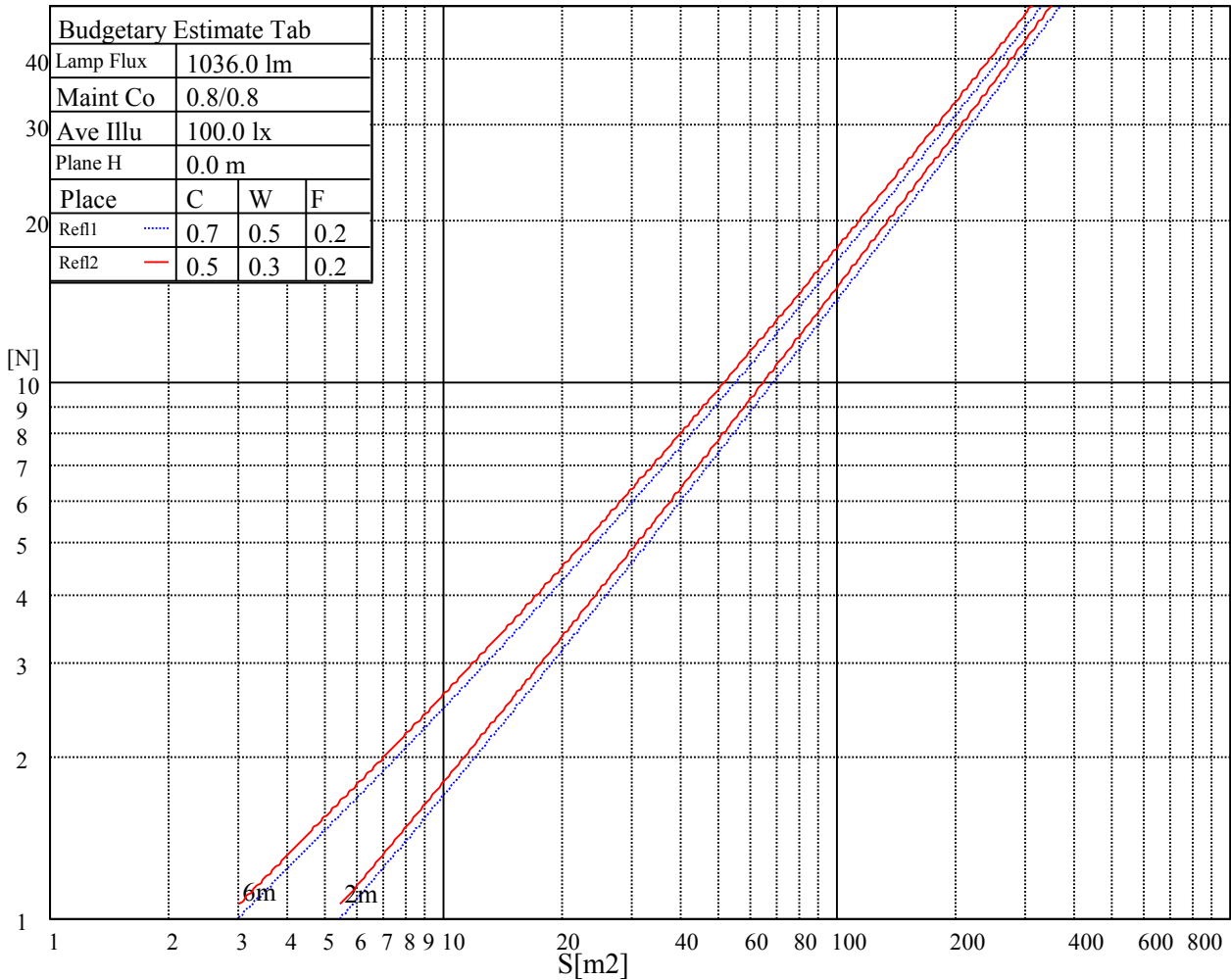
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

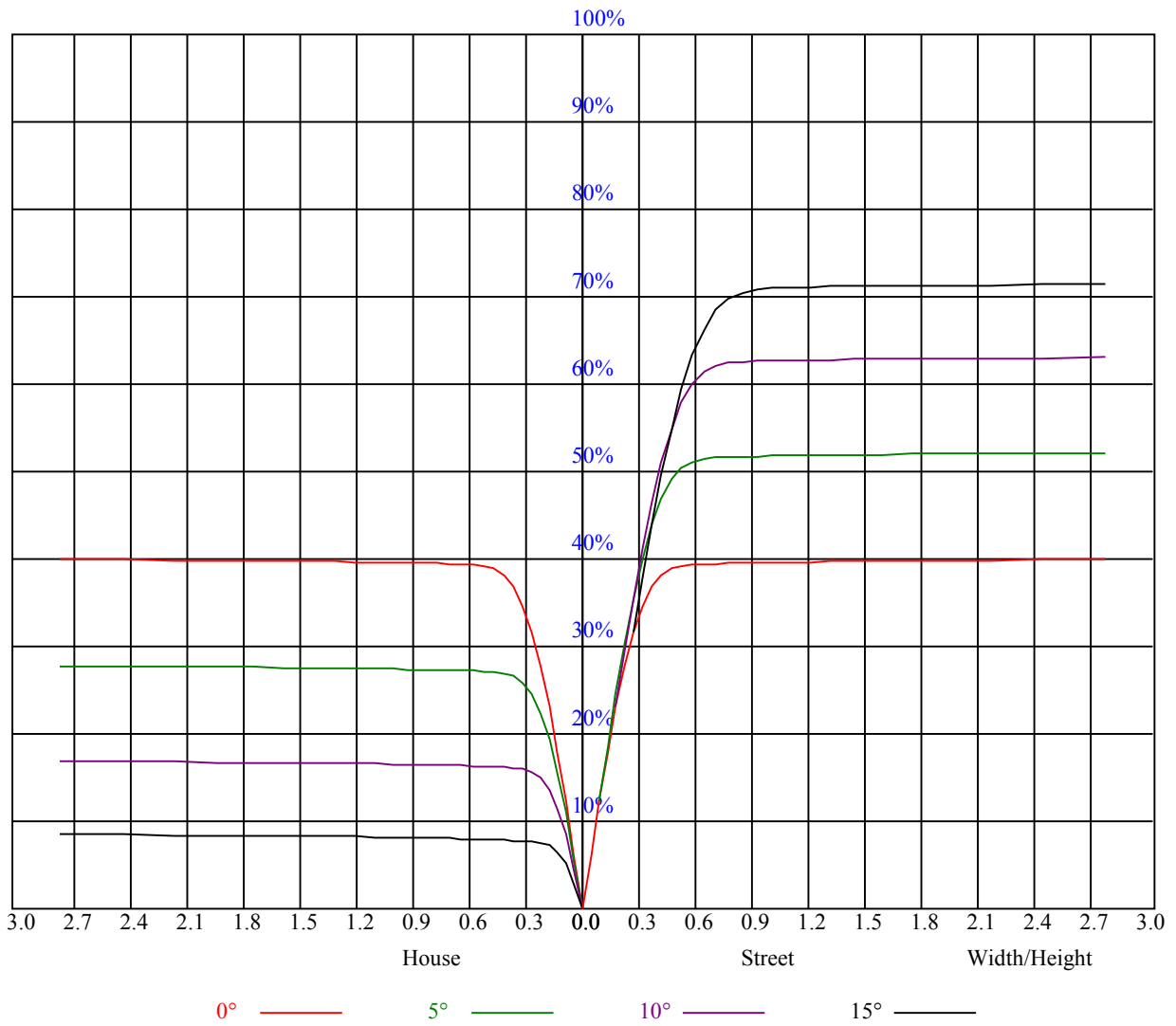
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

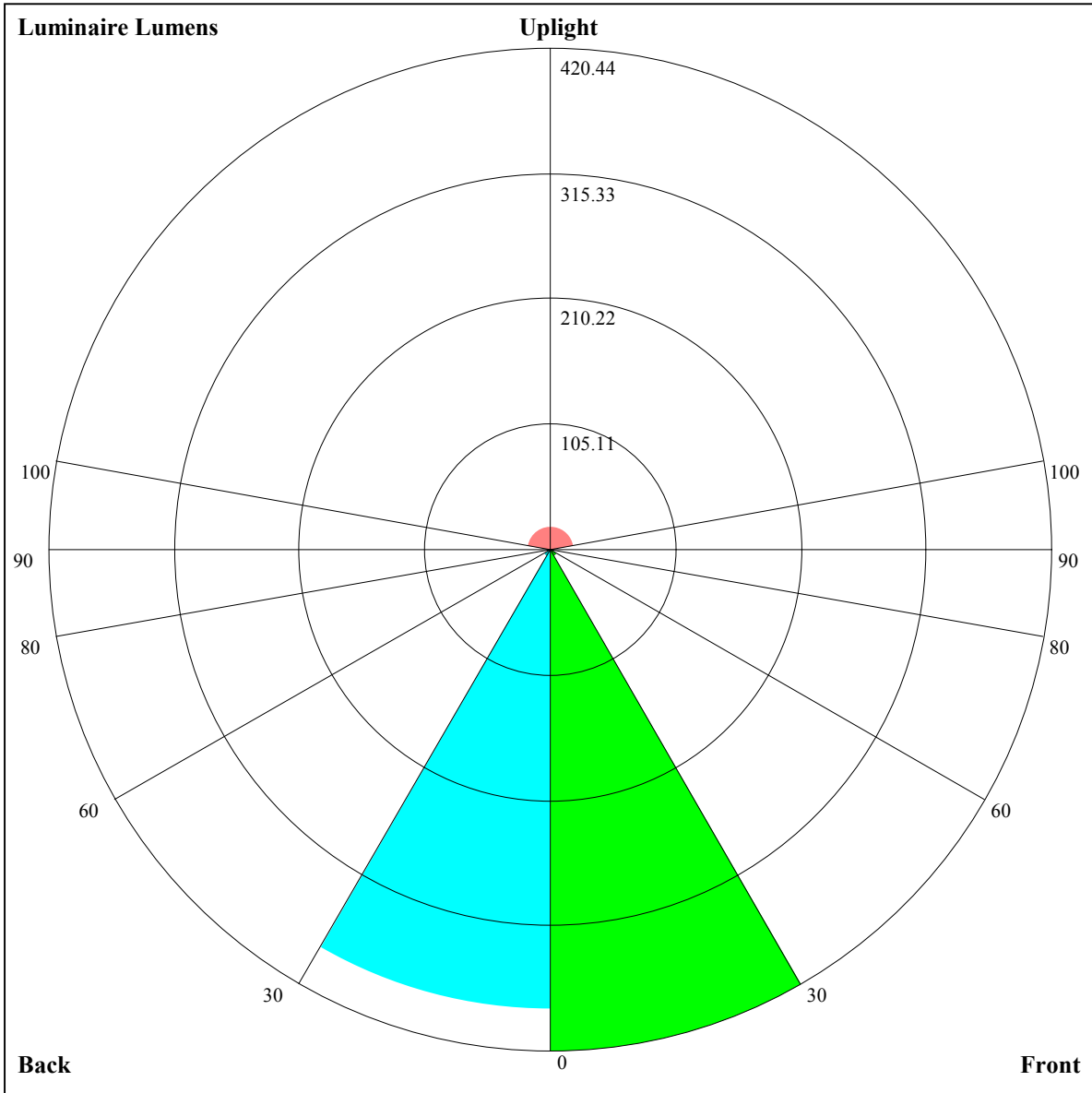
Luminance Limiting Curve





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





Luminaire Lumens:

FL=420.44,FM=7.32,FH=3.99,FVH=2.11

BL=385.31,BM=6.64,BH=3.99,BVH=2.1

UL=4.18,UH=19.9

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	2528.44	2476.13	2227.50	1812.94	1194.19	344.81	33.53	9.28	5.74
45.0	2531.25	2462.63	2228.63	1778.06	1064.25	306.56	32.79	8.44	5.57
90.0	2531.25	2393.44	2078.44	1569.38	825.24	137.48	22.50	7.14	5.18
135.0	2532.38	2420.44	2130.75	1607.63	912.38	294.75	23.01	7.31	5.23
180.0	2528.44	2369.25	2039.06	1501.31	746.83	109.52	17.16	6.53	5.01
225.0	2531.25	2381.63	2088.56	1536.75	781.93	142.88	17.27	6.69	5.01
270.0	2531.25	2469.38	2194.88	1721.81	1058.06	315.56	24.81	7.71	5.40
315.0	2532.38	2436.19	2144.81	1645.31	972.11	212.06	21.94	7.65	5.29
360.0	2528.44	2476.13	2227.50	1812.94	1194.19	344.81	33.53	9.28	5.74
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	4.67	4.28	4.16	3.99	3.94	3.94	3.88	3.94	3.88
45.0	4.61	4.28	4.05	3.99	3.94	3.88	3.83	3.83	3.83
90.0	4.50	4.22	4.05	3.94	3.88	3.88	3.88	3.88	3.88
135.0	4.50	4.22	4.05	3.94	3.94	3.88	3.88	3.83	3.83
180.0	4.44	4.22	4.05	3.99	3.99	3.88	3.88	3.88	3.88
225.0	4.44	4.16	3.99	3.94	3.88	3.83	3.83	3.83	3.88
270.0	4.56	4.22	4.05	3.94	3.88	3.88	3.88	3.88	3.88
315.0	4.50	4.22	4.05	3.94	3.88	3.88	3.88	3.88	3.88
360.0	4.67	4.28	4.16	3.99	3.94	3.94	3.88	3.94	3.88
C/ γ (°)	90.0								
0.0	3.88								
45.0	3.83								
90.0	3.77								
135.0	3.83								
180.0	3.88								
225.0	3.83								
270.0	3.83								
315.0	3.83								
360.0	3.88								