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Nata

Client:

LumCAT: 1687-M

Luminaire: 92.70.132.00

Report No: NT2017122405

Test No: GC2017122405

LampCAT: NICHIA NFCWL036B-V2

Lamp flux(lm): 1719.0

Number of Lamps: 1

Length(mm): 46

Phm Type: C

Voltage(V): 35.0000

Current(A): 0.3500

Power (W): 12.2500

PF: 0.0000

Ballast type: DC

Width(mm): 46

Height(mm): 0

Photometric Results

Lumens(lm): 1522.36, Efficiency(%): 88.56% , Luminous Efficacy(lm/W): 124.27

Central intensity(cd): 4522.471, Maximum intensity(cd): 4522.471

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=23.4

[C90/270]Total=23.4

Field angle(10%Imax): [C0/180]Total=75.6

[C90/270]Total=75.6

Maximum s/h(1/2): C0_180=0.40 C90_270=0.40

Maximum s/h(1/4): C0_180=0.40 C90_270=0.40

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.05%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.041%

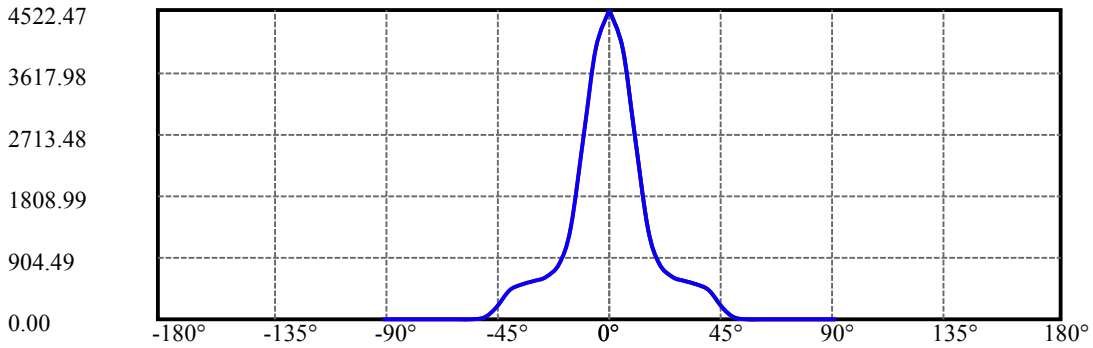
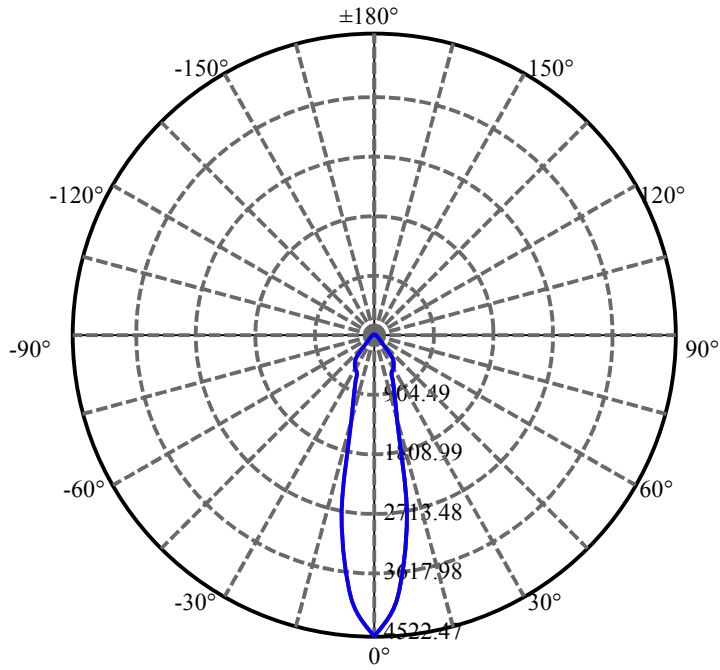
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4522.470	27.045	27.045	1.573%	1.777%
5.0	3970.530	189.685	216.731	11.035%	14.236%
10.0	2755.366	262.264	478.995	15.257%	31.464%
15.0	1339.791	190.074	669.069	11.057%	43.949%
20.0	805.585	151.026	820.095	8.786%	53.870%
25.0	627.037	145.255	965.35	8.450%	63.411%
30.0	555.203	152.164	1117.514	8.852%	73.407%
35.0	507.365	159.515	1277.029	9.280%	83.885%
40.0	408.931	144.081	1421.11	8.382%	93.349%
45.0	161.825	62.722	1483.832	3.649%	97.469%
50.0	22.360	9.389	1493.221	.546%	98.086%
55.0	10.681	4.796	1498.016	.279%	98.401%
60.0	8.706	4.133	1502.149	.240%	98.672%
65.0	7.859	3.904	1506.053	.227%	98.929%
70.0	7.302	3.761	1509.815	.219%	99.176%
75.0	6.896	3.651	1513.466	.212%	99.416%
80.0	6.669	3.600	1517.065	.209%	99.652%
85.0	6.490	3.544	1520.609	.206%	99.885%
90.0	6.387	1.750	1522.36	.102%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1117.51	65.01%	73.41%
0-40	1421.11	82.67%	93.35%
0-60	1502.15	87.39%	98.67%
0-90	1520.61	88.46%	99.89%
0-120	1520.61	88.46%	99.89%
0-180	1522.36	88.56%	100.00%
60-90	22.59	1.31%	1.48%
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%
0-33.15	1217.89	70.85%	80.00%

ZONAL LUMEN SUMMARY

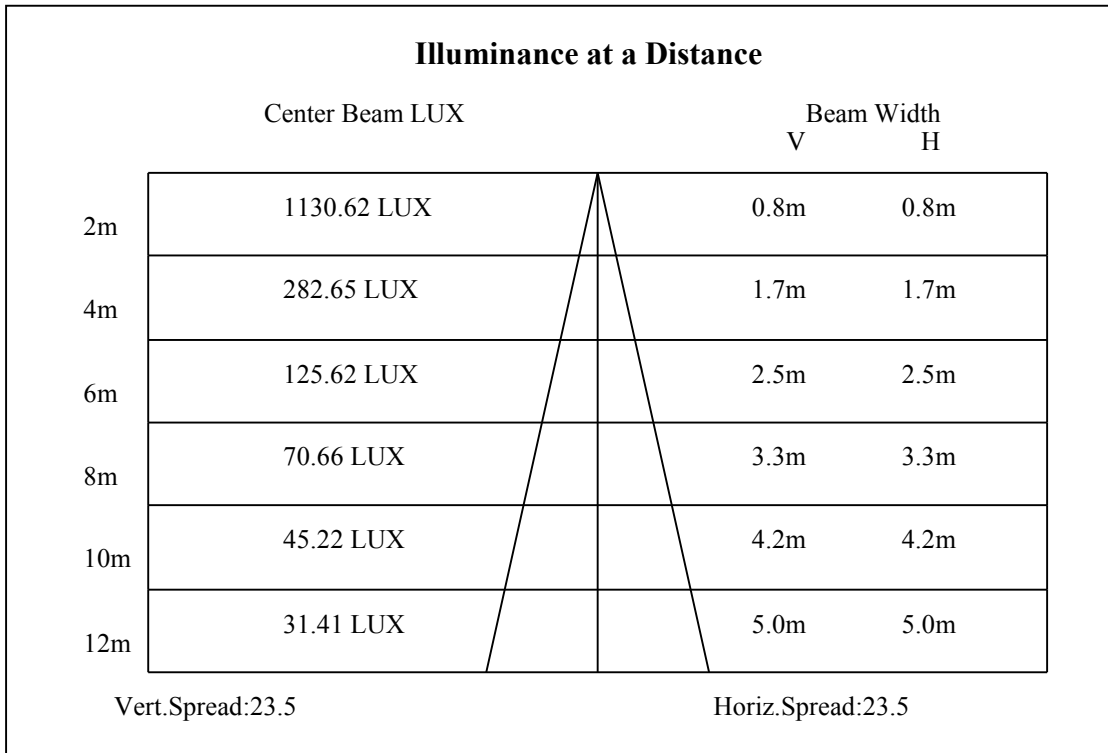
0-10	478.99
10-20	341.10
20-30	297.42
30-40	303.60
40-50	72.11
50-60	8.93
60-70	7.67
70-80	7.25
80-90	3.54
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

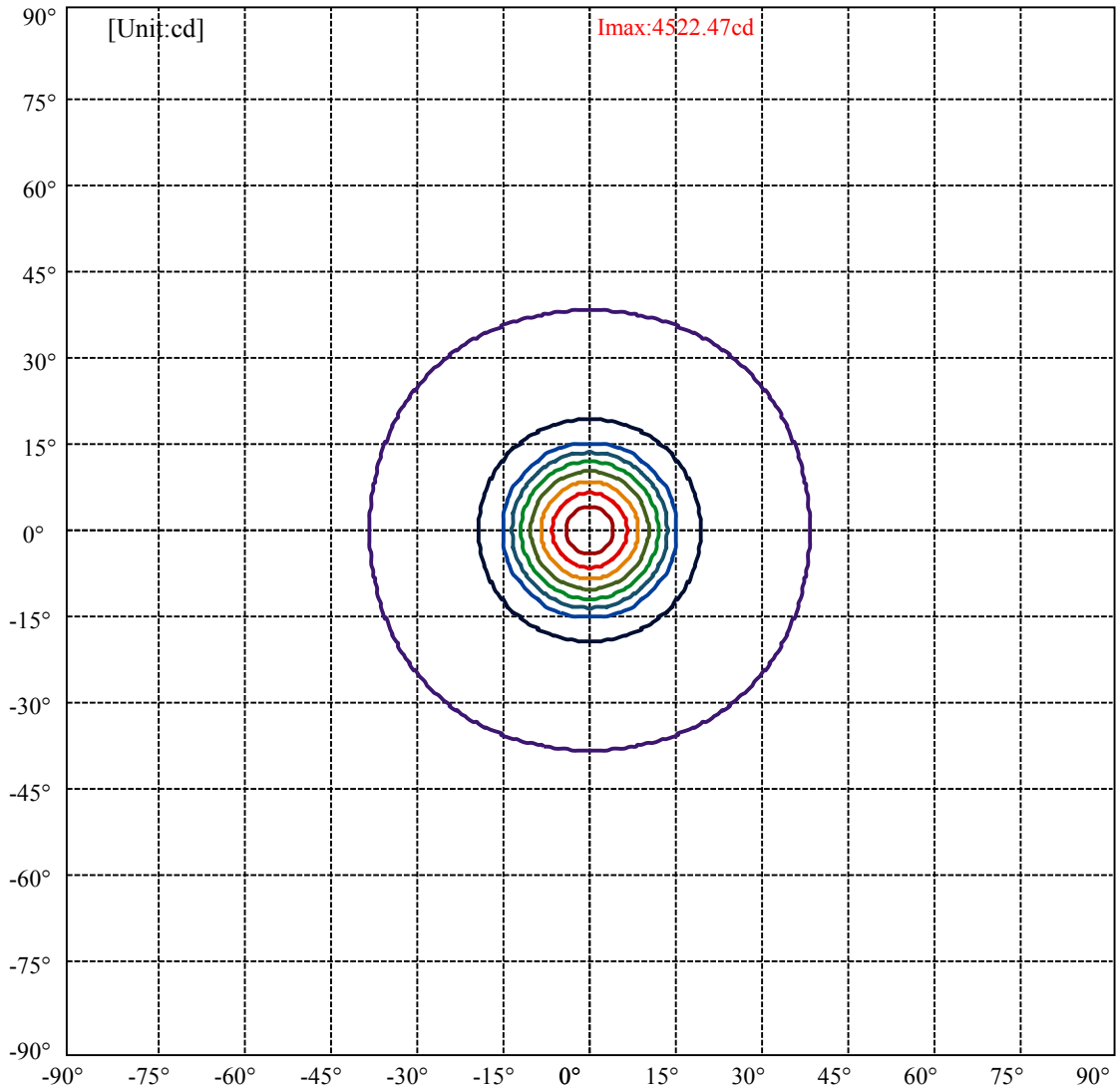


C0(Max): —————
C0/C180: —————
C90/C270: —————

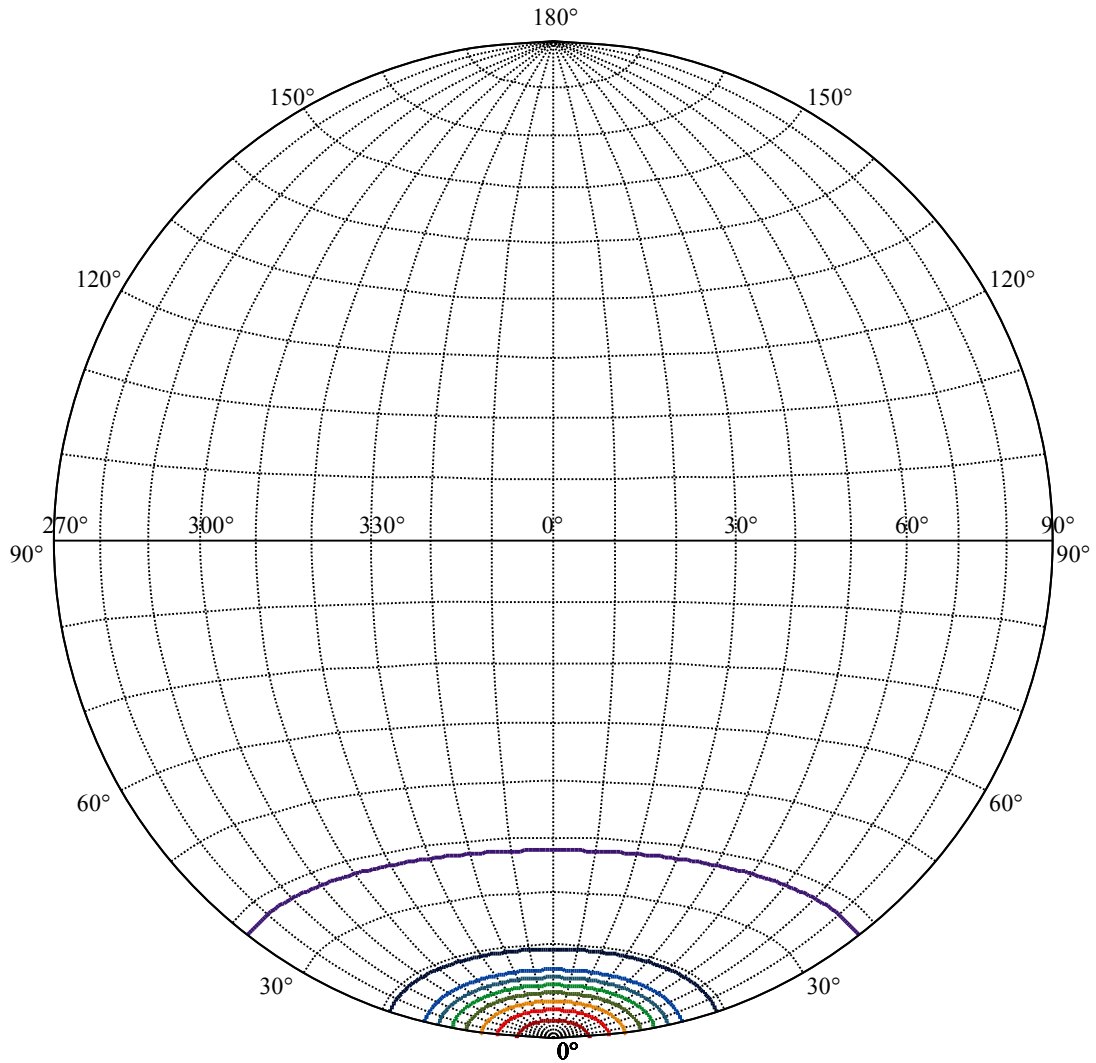
Field angle(10%Imax):C0/180Left:37.8 Right:37.8
:C90/270Left:37.8 Right:37.8

Beam Angle(50%Imax):C0/180Left:11.7 Right:11.7
:C90/270Left:11.7 Right:11.7





(10%Imax) 452.247	—
(20%Imax) 904.494	—
(30%Imax) 1356.74	—
(40%Imax) 1808.99	—
(50%Imax) 2261.24	—
(60%Imax) 2713.48	—
(70%Imax) 3165.73	—
(80%Imax) 3617.98	—
(90%Imax) 4070.22	—



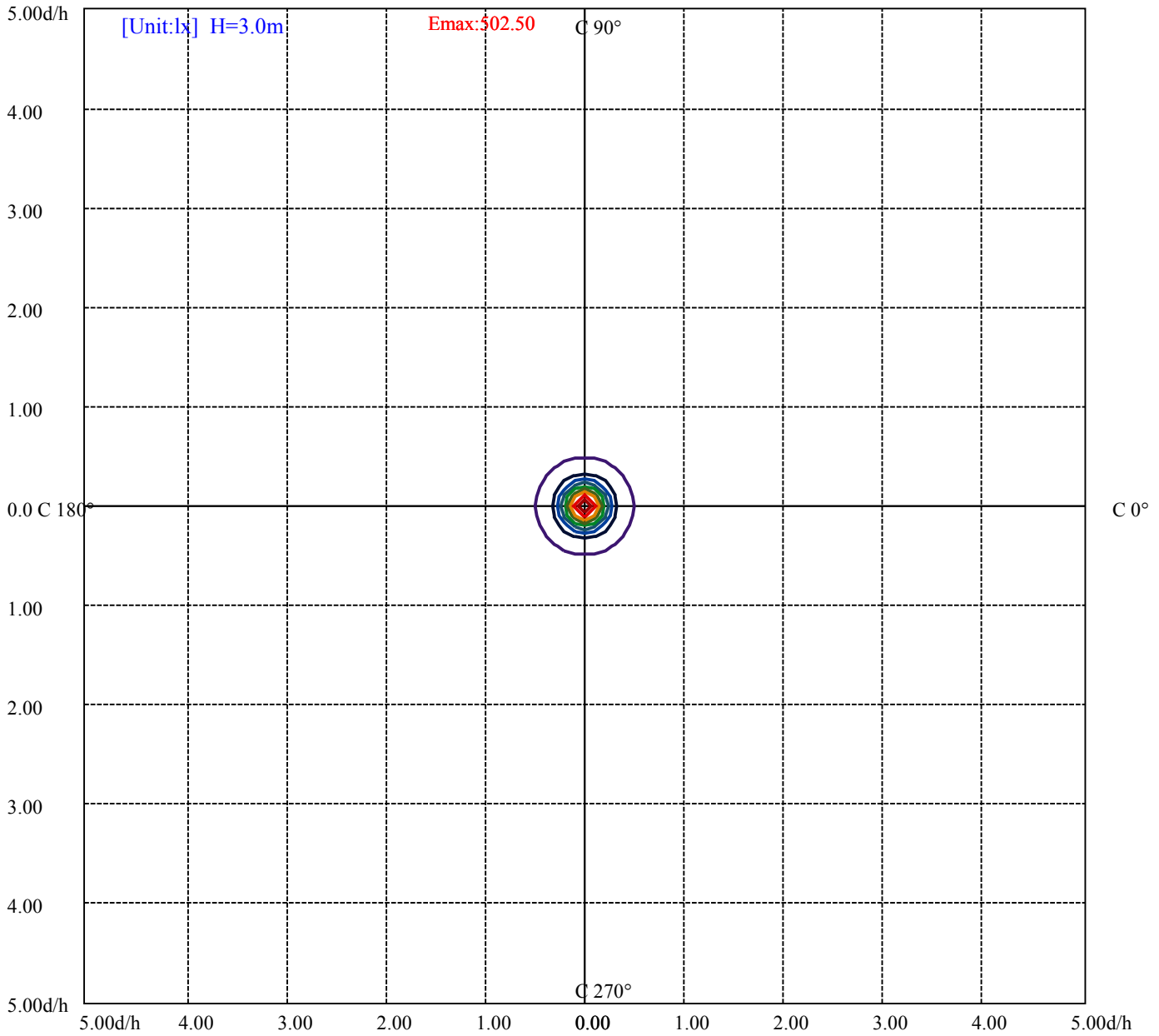
House

[Unit:cd]

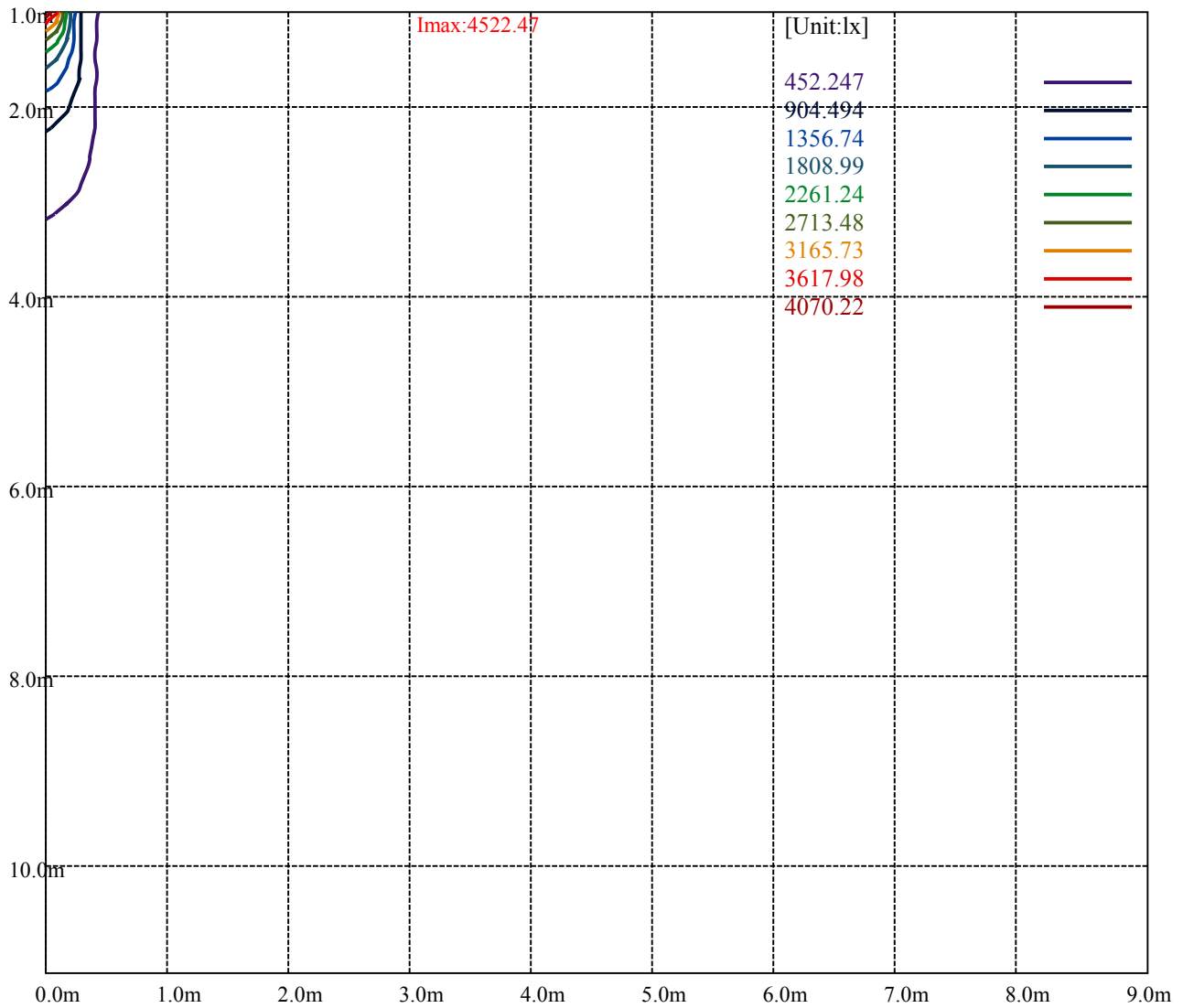
Road

Imax:4522.47

(10%Imax)	452.247	—
(20%Imax)	904.494	—
(30%Imax)	1356.74	—
(40%Imax)	1808.99	—
(50%Imax)	2261.24	—
(60%Imax)	2713.48	—
(70%Imax)	3165.73	—
(80%Imax)	3617.98	—
(90%Imax)	4070.22	—



(10%Emax) 50.24944	—
(20%Emax) 100.499	—
(30%Emax) 150.7489	—
(40%Emax) 200.9978	—
(50%Emax) 251.2478	—
(60%Emax) 301.4967	—
(70%Emax) 351.7467	—
(80%Emax) 401.9955	—
(90%Emax) 452.2455	—



Luminance Table

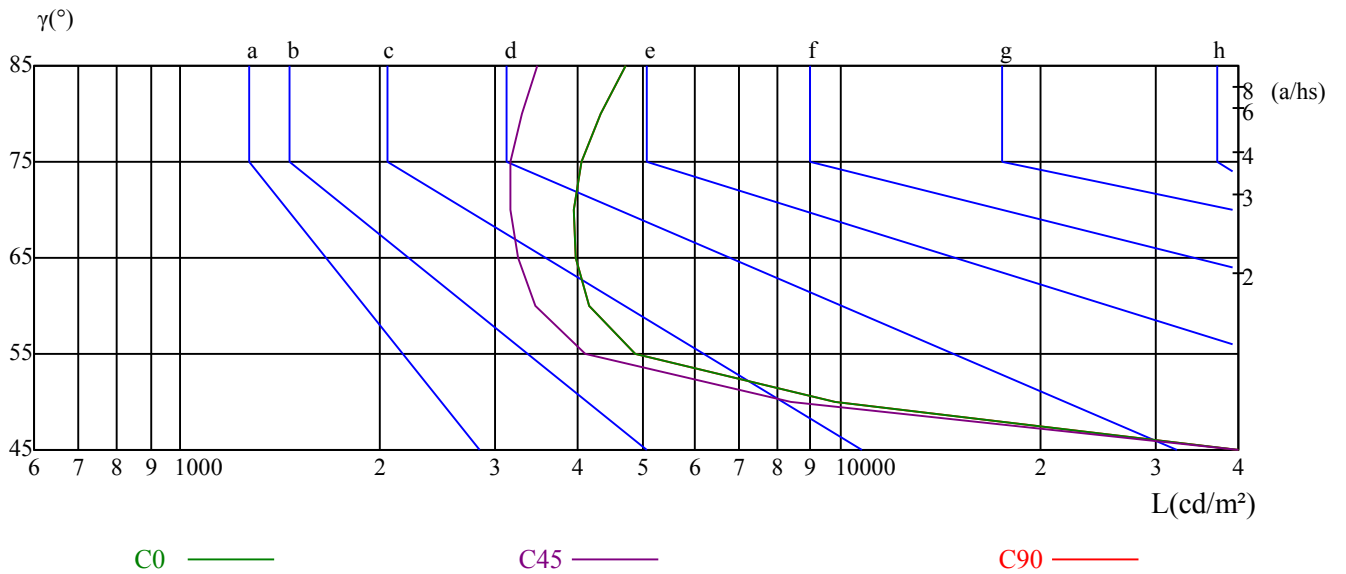
γ	45	50	55	60	65	70	75	80	85
C0	69099	9823	4870	4158	3973	3952	4049	4316	4717
C45	60108	8419	4109	3451	3238	3157	3161	3280	3472
C90	69099	9823	4870	4158	3973	3952	4049	4316	4717

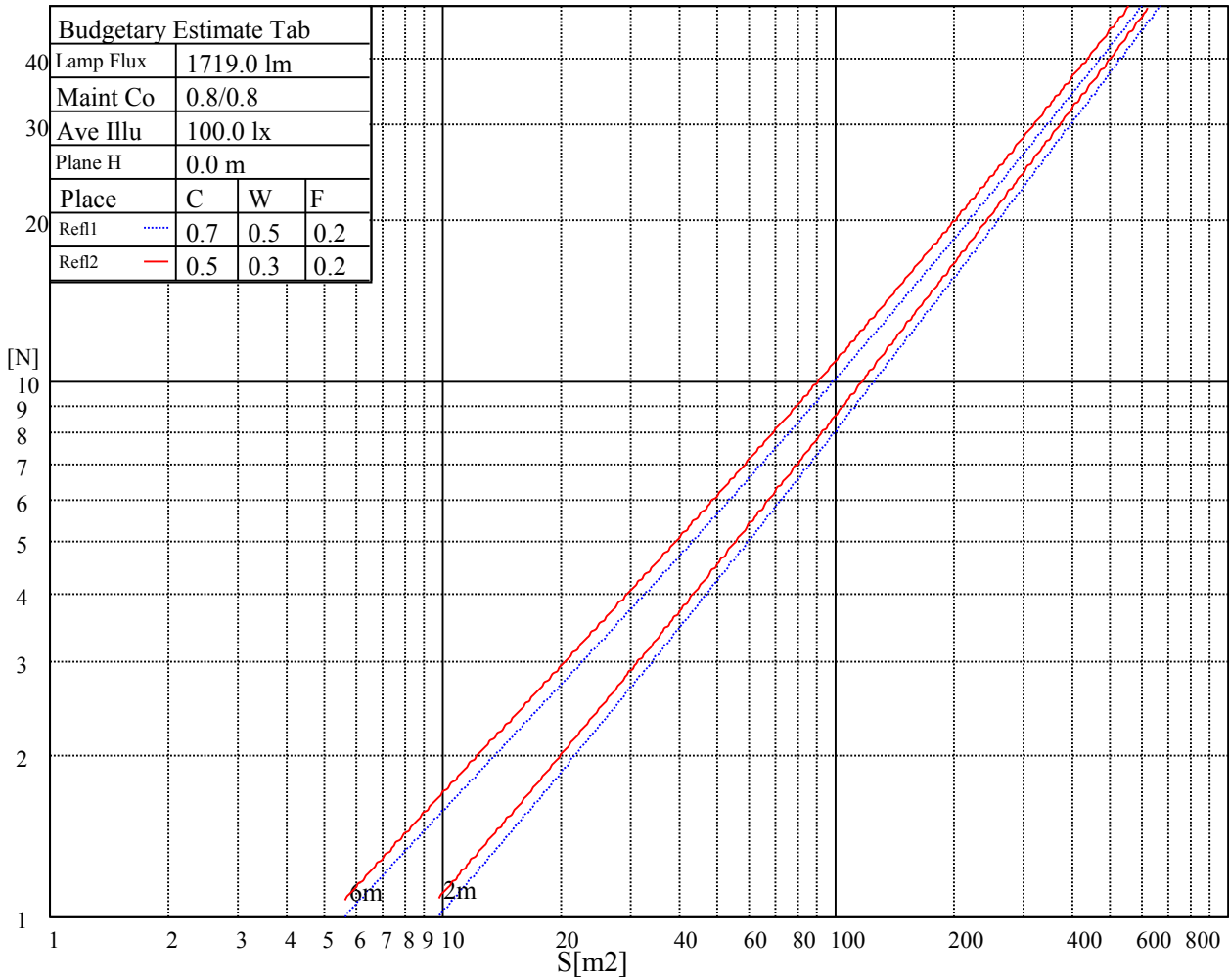
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8789	8789	8789	12591	12591	12591	35190	35190	35190

Glare Table

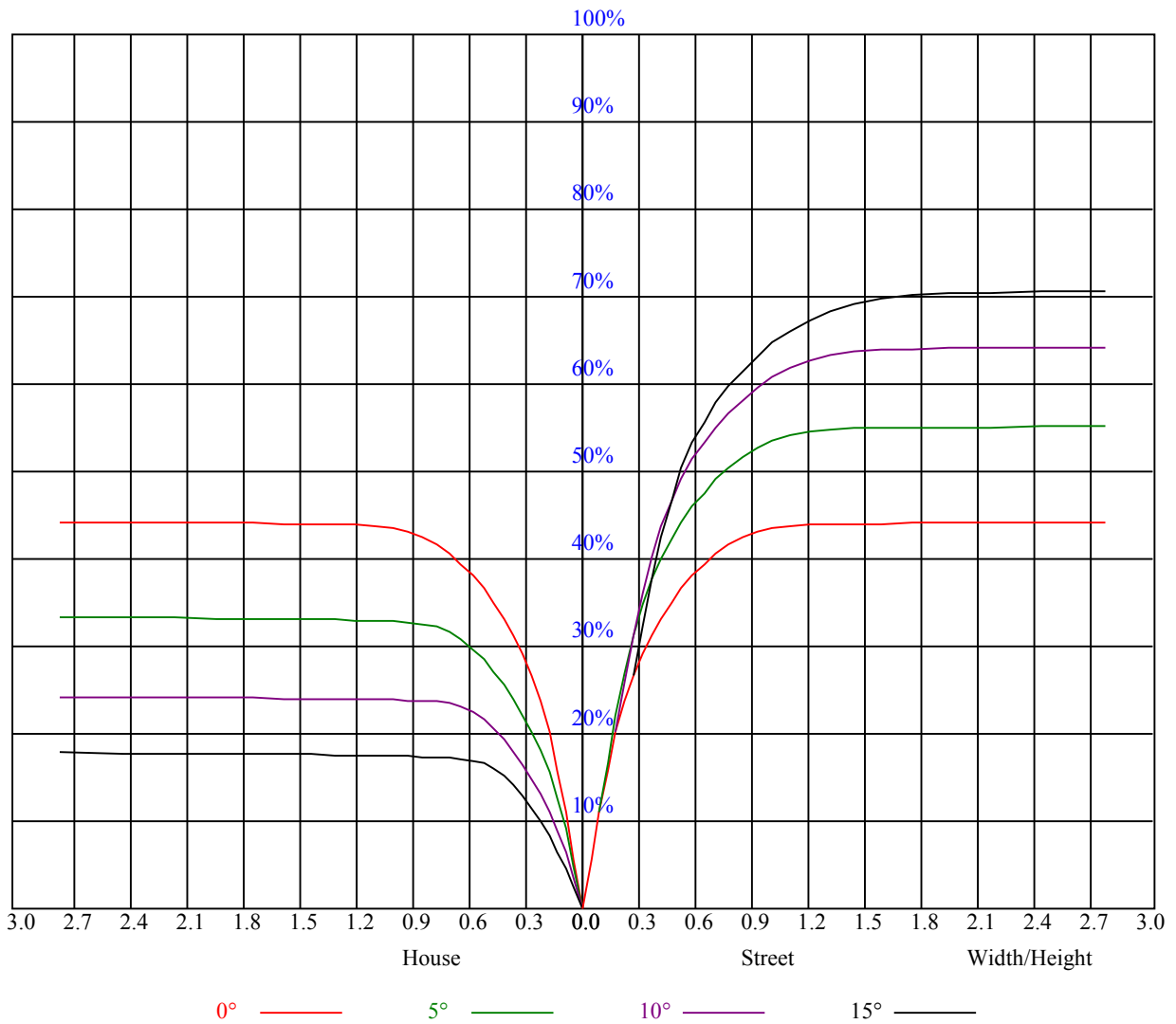
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

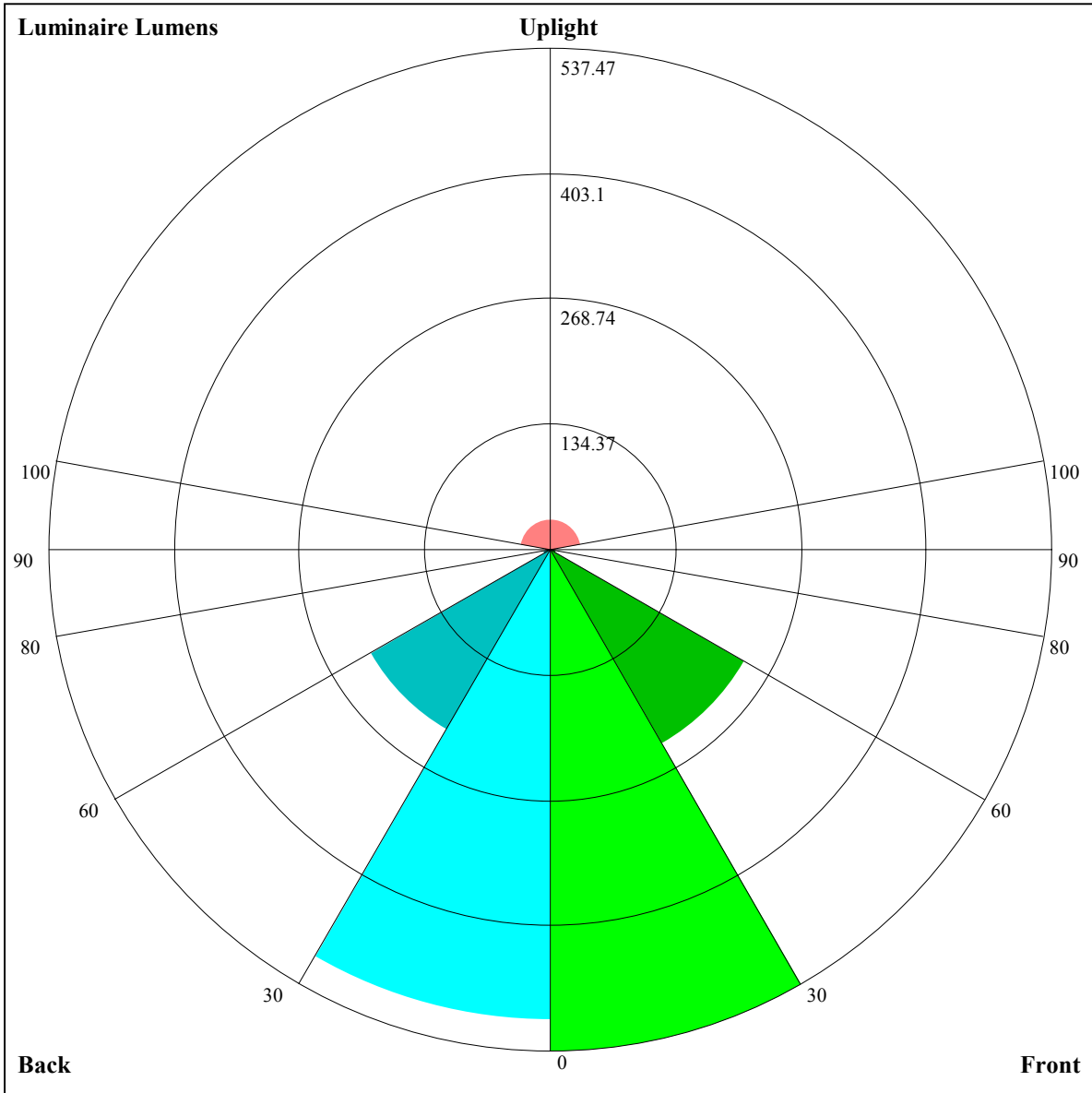
Luminance Limiting Curve





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	1.07	1.07	1.07	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	0.98	0.96	0.93	0.96	0.94	0.92	0.93	0.91	0.89	0.89	0.88	0.86	0.86	0.85	0.84	0.82
2	0.92	0.88	0.85	0.91	0.87	0.84	0.88	0.85	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.78
3	0.87	0.82	0.79	0.86	0.82	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.73
4	0.82	0.77	0.74	0.81	0.77	0.73	0.79	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.69
5	0.78	0.73	0.69	0.77	0.72	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.67	0.66
6	0.74	0.69	0.66	0.73	0.69	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.66	0.64	0.63
7	0.71	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.60
8	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.57
9	0.65	0.60	0.57	0.64	0.60	0.57	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.59	0.56	0.55
10	0.62	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.60	0.56	0.54	0.53





Luminaire Lumens:

FL=537.47,FM=239.96,FH=7.58,FVH=3.55

BL=504.54,BM=222.97,BH=7.63,BVH=3.55

UL=6.97,UH=33.16

BUG Rating:B2-U2-G0

Nata 1687-M

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	4520.68	4180.98	3102.43	1734.28	888.61	649.11	563.23	513.68	453.66
45.0	4515.18	4205.21	3041.32	1703.45	875.95	640.31	558.27	506.52	435.50
90.0	4520.68	3874.32	2637.20	1096.45	766.22	608.32	540.49	495.95	397.89
135.0	4533.34	3994.89	2776.49	1487.07	804.37	623.24	556.07	507.62	420.63
180.0	4520.68	3747.69	2455.52	1062.09	741.66	601.49	544.56	499.09	357.04
225.0	4515.18	3771.36	2506.17	1082.30	763.85	622.74	558.05	510.15	366.29
270.0	4520.68	4070.87	2811.18	1471.66	834.66	646.36	569.28	522.49	436.05
315.0	4533.34	3918.91	2712.63	1081.03	769.36	624.72	551.67	503.44	404.39
360.0	4520.68	4180.98	3102.43	1734.28	888.61	649.11	563.23	513.68	453.66
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	278.03	25.00	11.95	8.70	7.76	7.27	6.88	6.66	6.50
45.0	219.73	24.56	11.45	8.75	7.87	7.32	6.88	6.72	6.55
90.0	121.23	21.69	11.01	8.64	7.82	7.27	6.88	6.61	6.44
135.0	148.60	23.12	10.13	8.97	8.04	7.43	6.99	6.72	6.50
180.0	97.12	19.43	9.80	8.70	7.87	7.32	6.88	6.66	6.50
225.0	98.22	20.32	10.52	8.64	7.82	7.27	6.88	6.66	6.50
270.0	205.75	23.67	10.24	8.75	7.98	7.38	6.94	6.72	6.44
315.0	125.91	21.09	10.35	8.48	7.71	7.16	6.83	6.61	6.50
360.0	278.03	25.00	11.95	8.70	7.76	7.27	6.88	6.66	6.50
C/ γ (°)	90.0								
0.0	6.39								
45.0	6.39								
90.0	6.39								
135.0	6.39								
180.0	6.39								
225.0	6.39								
270.0	6.39								
315.0	6.39								
360.0	6.39								