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NATA

Client:

LumCAT: 2-1259-N

Luminaire: 92.70.065.00+92.70.059.00

Report No: nt0100

Voltage(V): 34.0100

Test No: GC2020011018

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.4000

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): 1806.79, Efficiency(%): 74.17% , Luminous Efficacy(lm/W): 88.57

Central intensity(cd): 3721.781, Maximum intensity(cd): 3721.781

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=36.0

[C90/270]Total=36.0

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

[C90/270]Total=66.2

Maximum s/h(1/2): C0_180=0.60 C90_270=0.60

Maximum s/h(1/4): C0_180=0.59 C90_270=0.59

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 74.17%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.888%

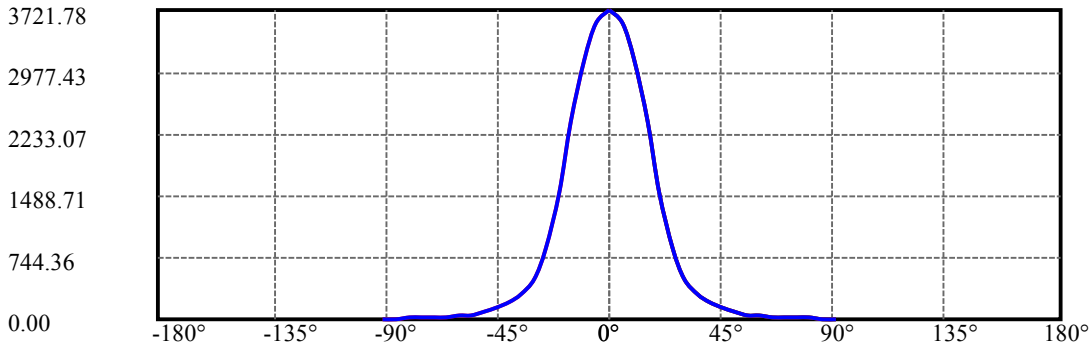
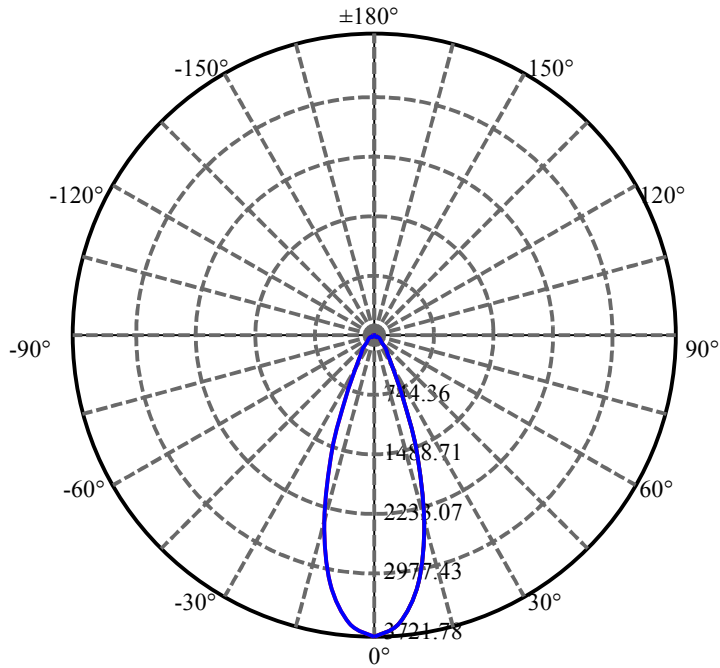
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3721.781	0.000	0	.000%	.000%
5.0	3564.633	87.107	87.107	3.576%	4.821%
10.0	3110.133	238.777	325.884	9.802%	18.037%
15.0	2381.344	325.751	651.635	13.372%	36.066%
20.0	1514.686	321.088	972.723	13.181%	53.837%
25.0	861.441	249.212	1221.934	10.230%	67.630%
30.0	489.473	170.959	1392.894	7.018%	77.092%
35.0	301.437	116.467	1509.361	4.781%	83.538%
40.0	205.052	84.504	1593.865	3.469%	88.215%
45.0	128.883	61.831	1655.695	2.538%	91.638%
50.0	84.748	43.167	1698.863	1.772%	94.027%
55.0	54.970	30.379	1729.242	1.247%	95.708%
60.0	37.223	21.310	1750.552	.875%	96.888%
65.0	25.945	15.356	1765.909	.630%	97.737%
70.0	20.953	11.875	1777.784	.487%	98.395%
75.0	16.805	9.869	1787.653	.405%	98.941%
80.0	13.219	8.033	1795.686	.330%	99.386%
85.0	9.788	6.251	1801.938	.257%	99.732%
90.0	7.924	4.850	1806.787	.199%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1392.89	57.18%	77.09%
0-40	1593.86	65.43%	88.22%
0-60	1750.55	71.86%	96.89%
0-90	1801.94	73.97%	99.73%
0-120	1801.94	73.97%	99.73%
0-180	1806.79	74.17%	100.00%
60-90	72.70	2.98%	4.02%
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%
0-32.26	1445.43	59.34%	80.00%

ZONAL LUMEN SUMMARY

0-10	325.88
10-20	646.84
20-30	420.17
30-40	200.97
40-50	105.00
50-60	51.69
60-70	27.23
70-80	17.90
80-90	6.25
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: —————

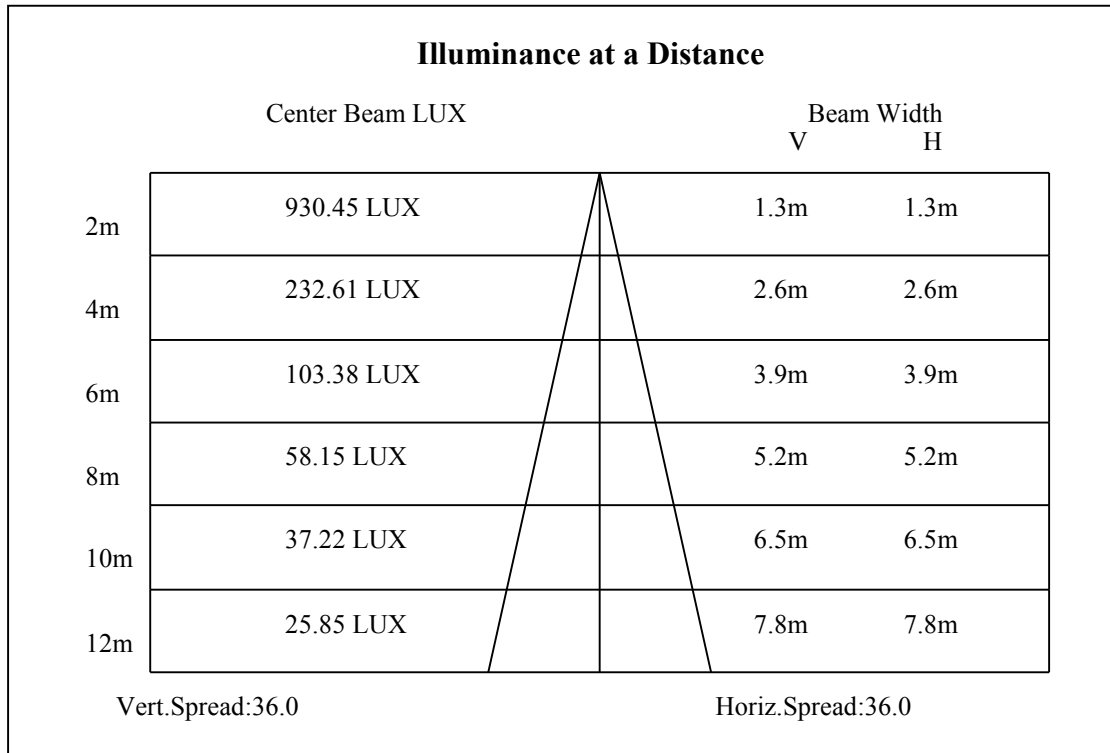
C90/C270: —————

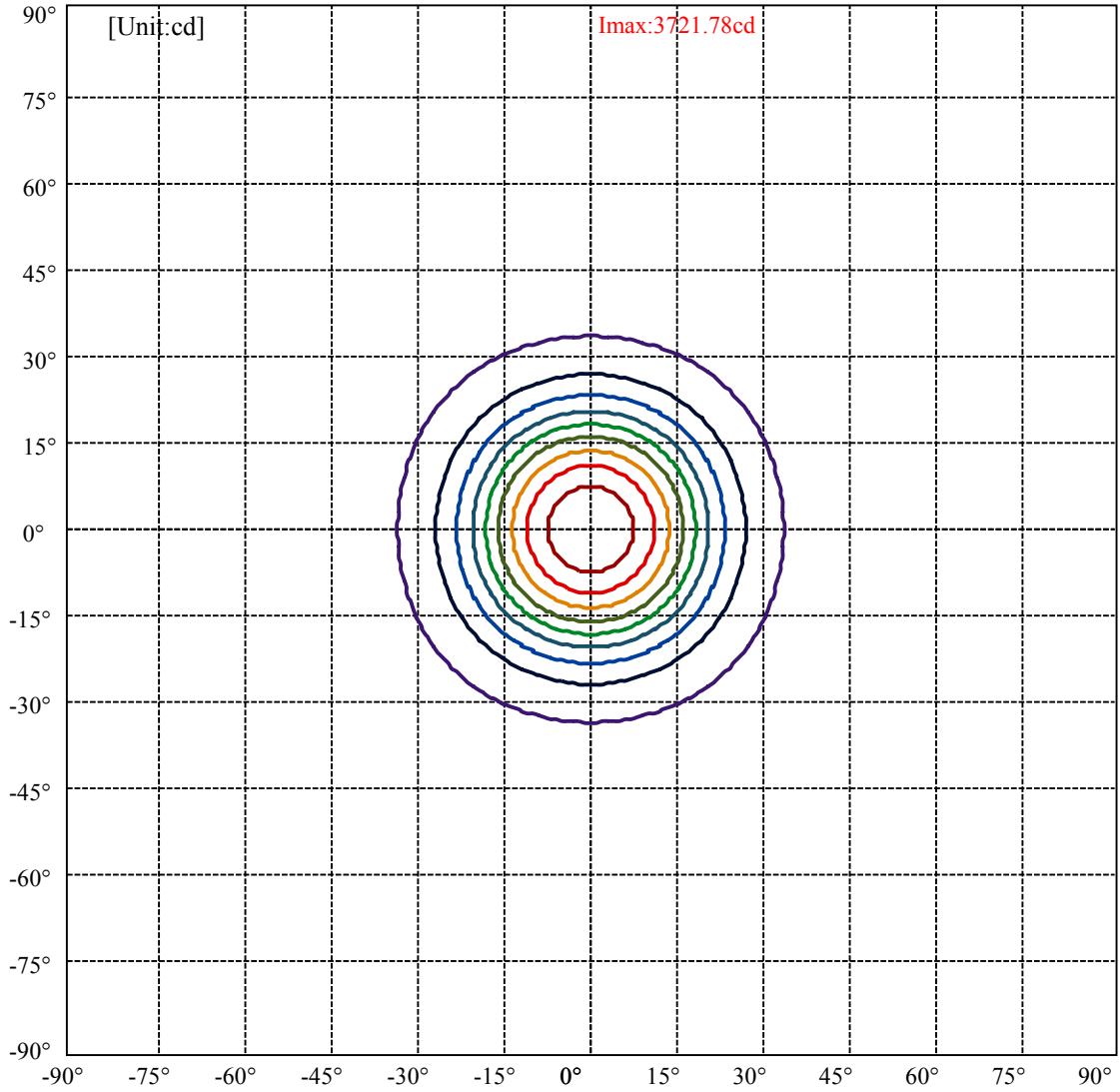
Field angle(10%Imax):C0/180Left:33.1 Right:33.1

:C90/270Left:33.1 Right:33.1

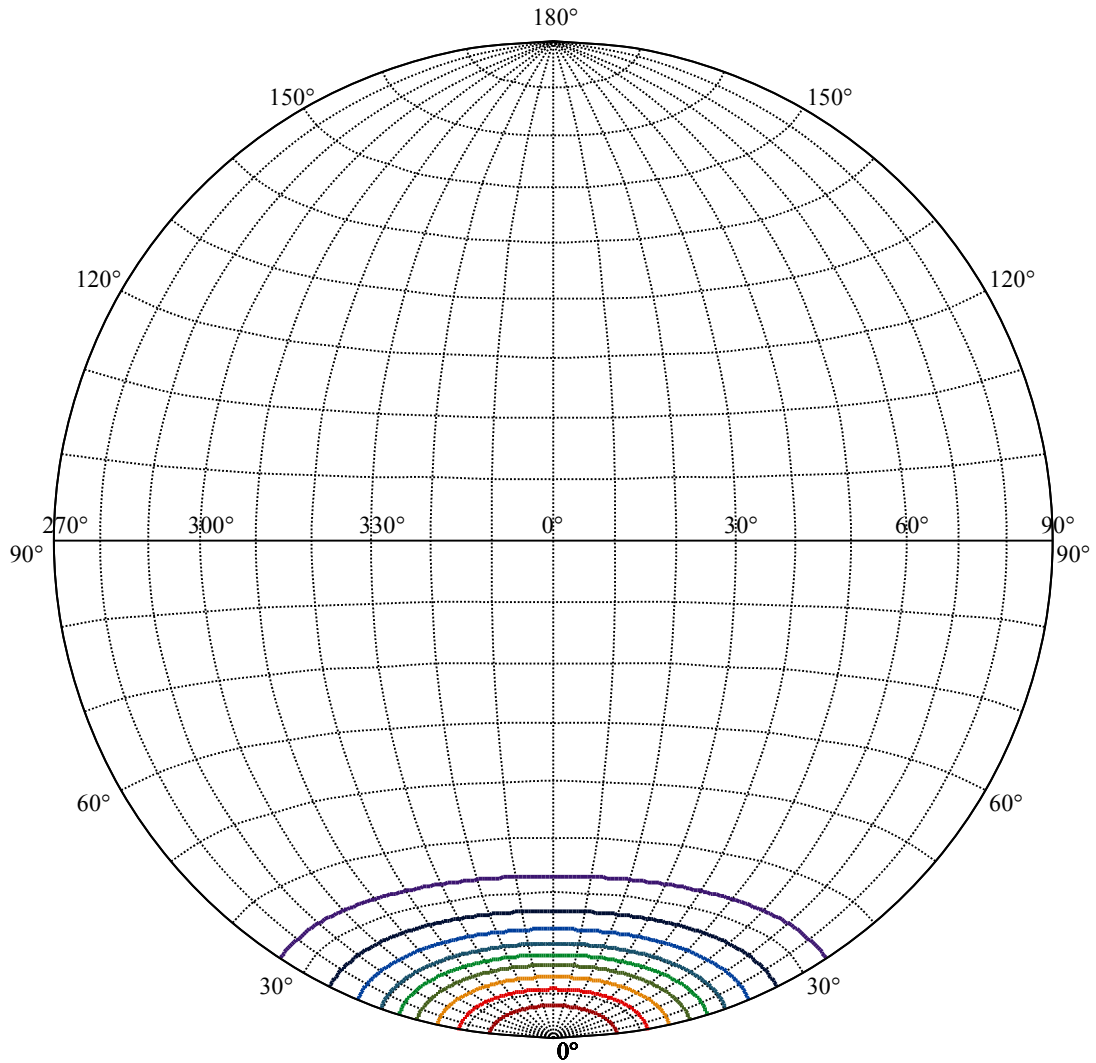
Beam Angle(50%Imax):C0/180Left:18.0 Right:18.0

:C90/270Left:18.0 Right:18.0





(10%Imax) 372.178	—
(20%Imax) 744.356	—
(30%Imax) 1116.53	—
(40%Imax) 1488.71	—
(50%Imax) 1860.89	—
(60%Imax) 2233.07	—
(70%Imax) 2605.25	—
(80%Imax) 2977.43	—
(90%Imax) 3349.6	—



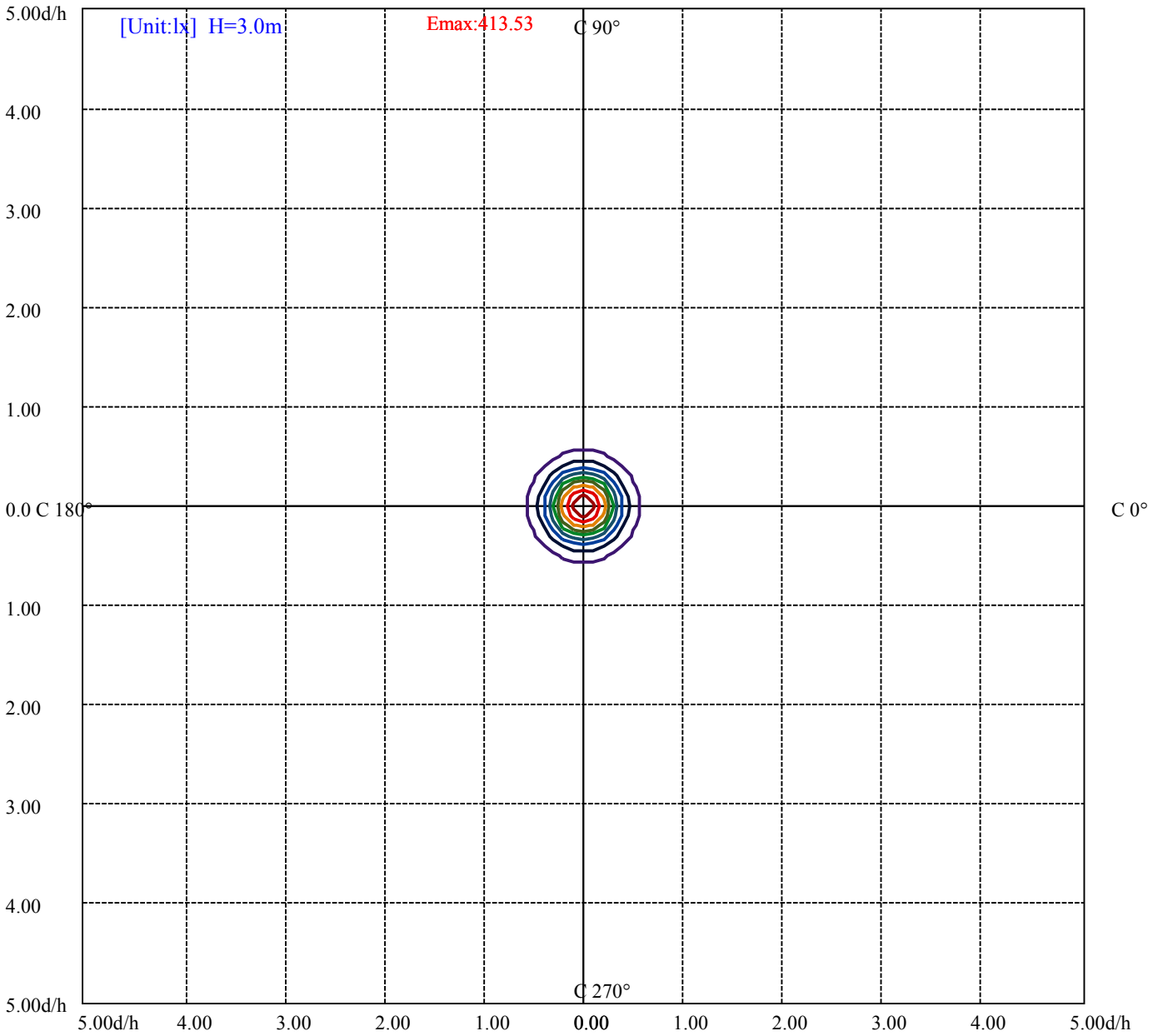
House

[Unit:cd]

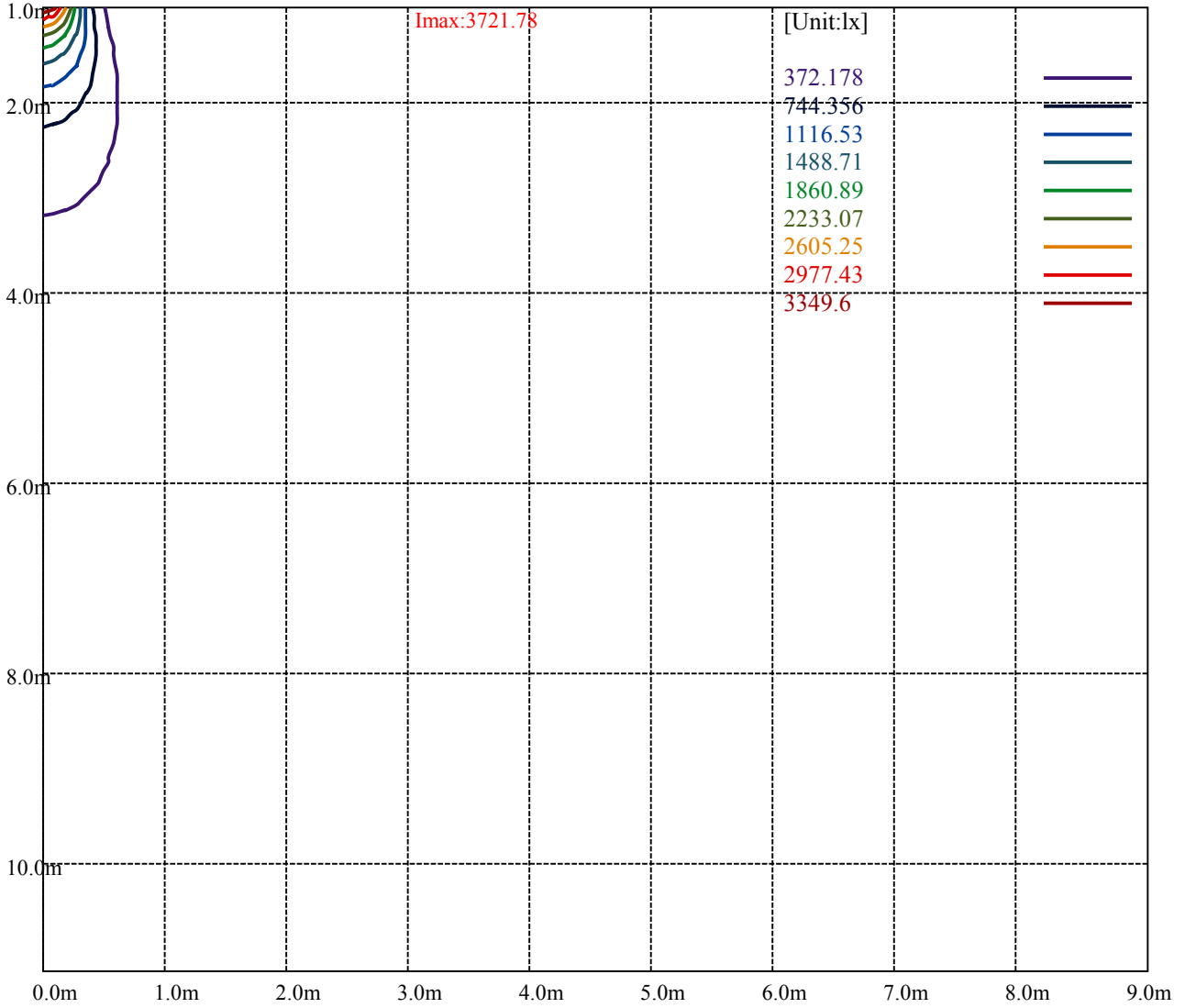
Road

Imax:3721.78

(10%Imax) 372.178	—
(20%Imax) 744.356	—
(30%Imax) 1116.53	—
(40%Imax) 1488.71	—
(50%Imax) 1860.89	—
(60%Imax) 2233.07	—
(70%Imax) 2605.25	—
(80%Imax) 2977.43	—
(90%Imax) 3349.6	—



- (10%Emax) 41.35311
- (20%Emax) 82.70611
- (30%Emax) 124.0589
- (40%Emax) 165.4122
- (50%Emax) 206.7656
- (60%Emax) 248.1189
- (70%Emax) 289.4711
- (80%Emax) 330.8244
- (90%Emax) 372.1778



Luminance Table

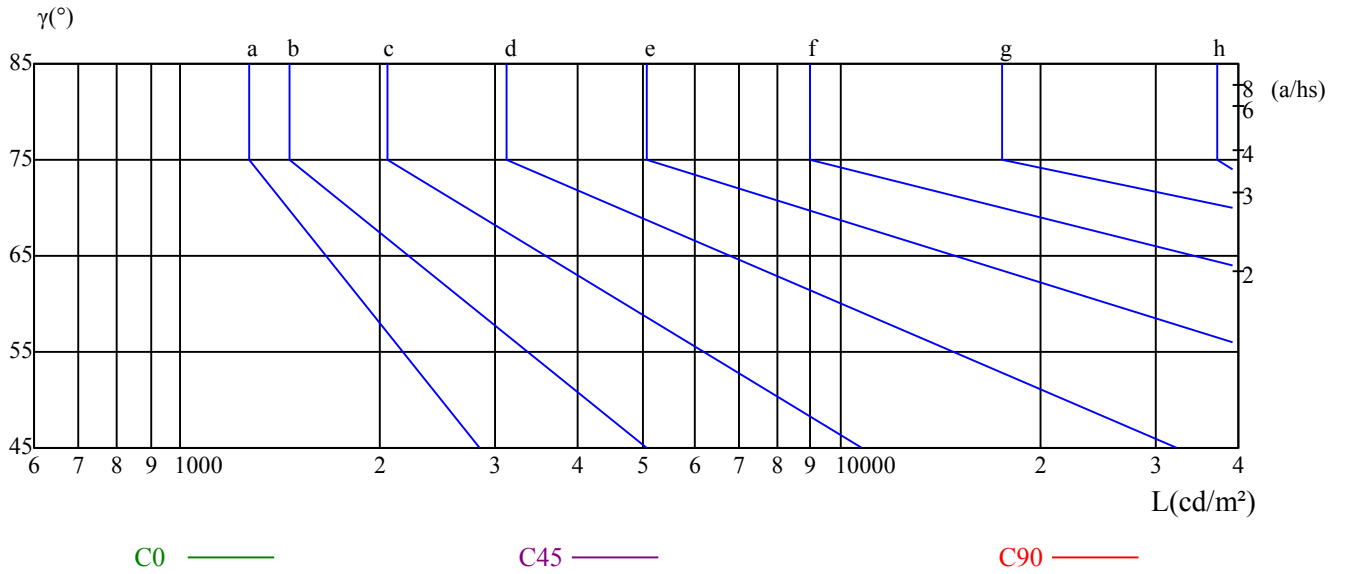
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

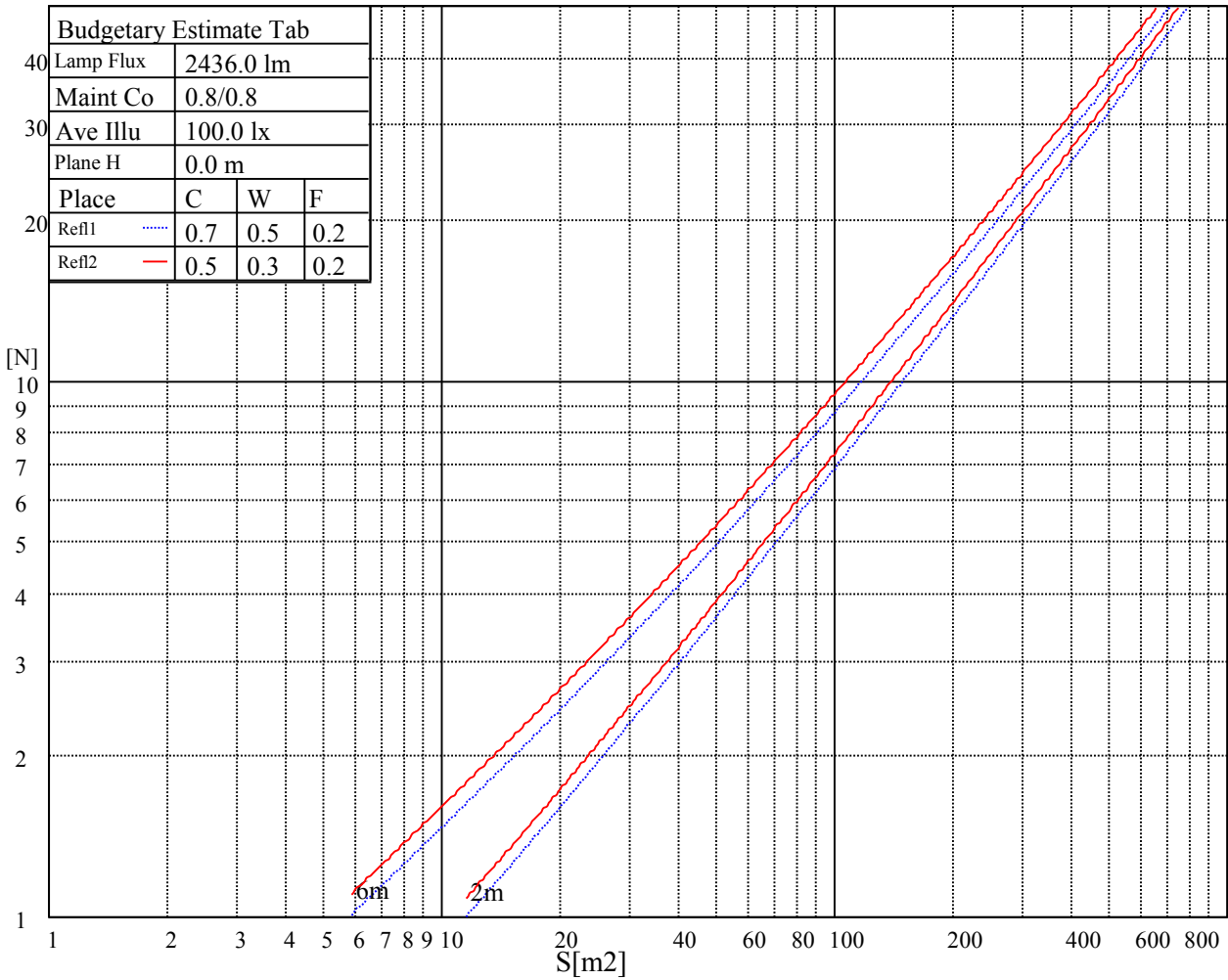
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

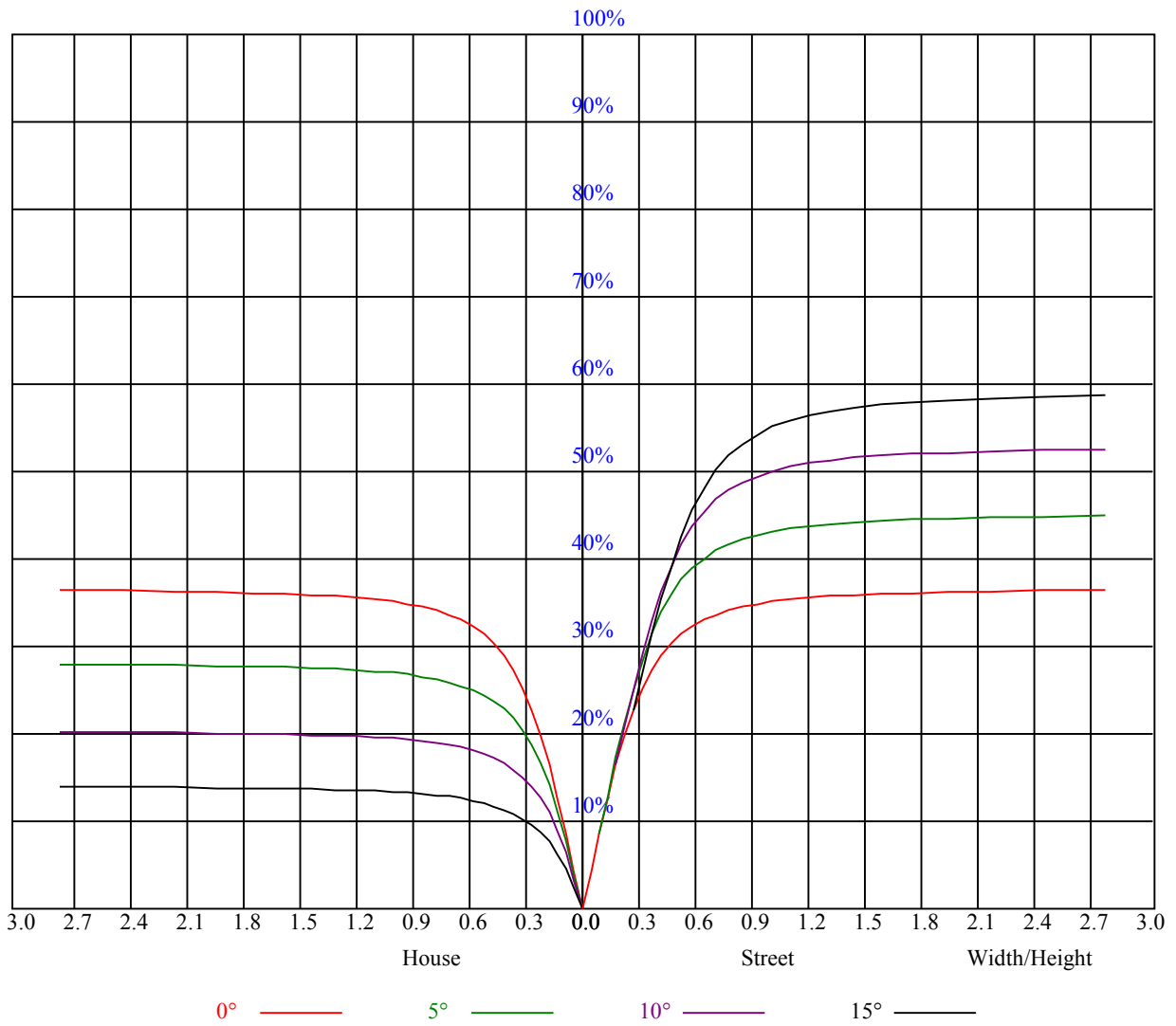
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

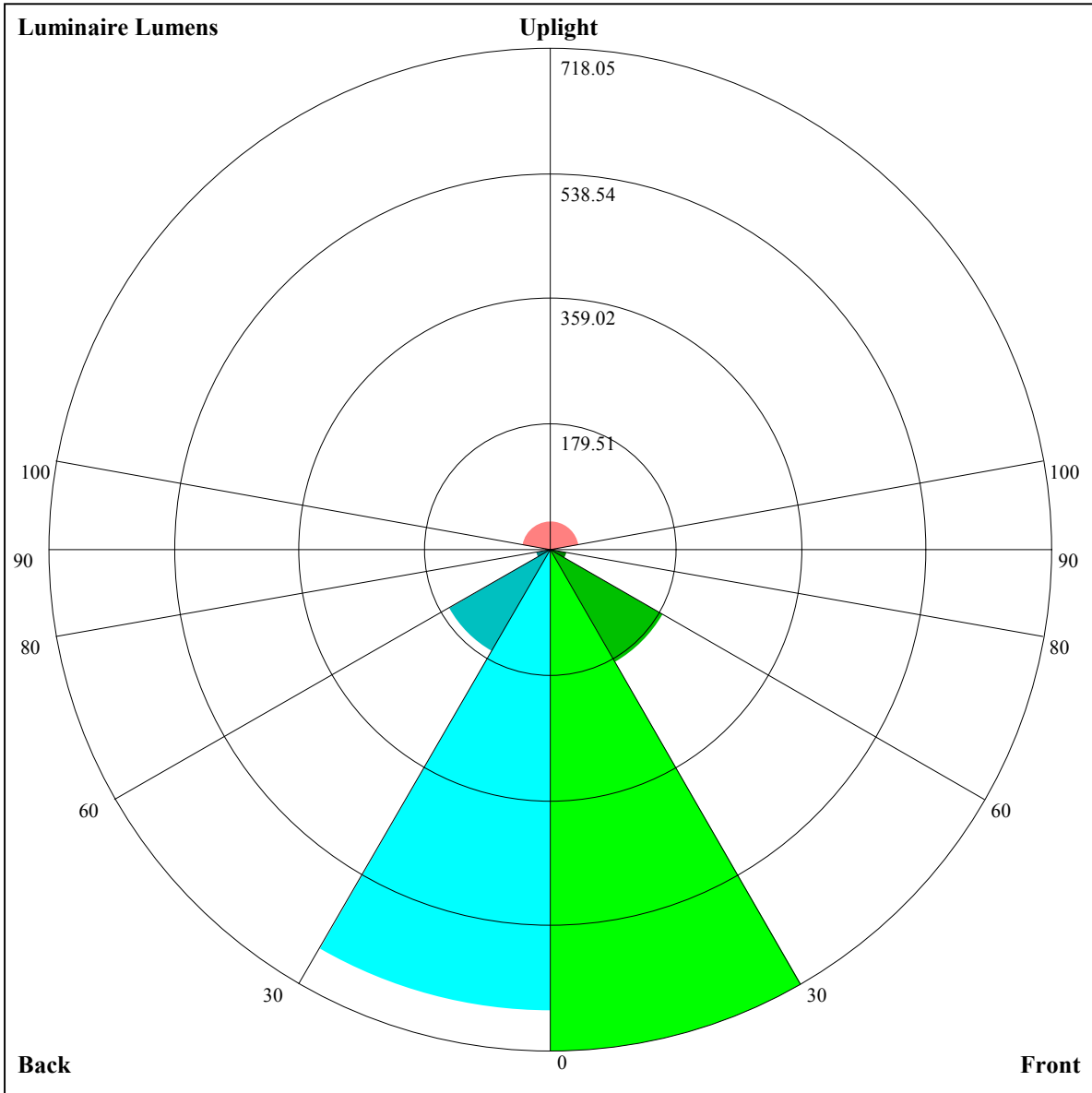
Luminance Limiting Curve





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	0.88	0.88	0.88	0.86	0.86	0.86	0.82	0.82	0.82	0.79	0.79	0.79	0.76	0.76	0.76	0.74
1	0.82	0.80	0.78	0.80	0.79	0.77	0.77	0.76	0.75	0.75	0.74	0.73	0.72	0.71	0.71	0.69
2	0.77	0.74	0.71	0.75	0.73	0.70	0.73	0.71	0.69	0.71	0.69	0.67	0.69	0.67	0.66	0.65
3	0.72	0.68	0.65	0.71	0.67	0.65	0.69	0.66	0.64	0.67	0.65	0.63	0.65	0.63	0.62	0.61
4	0.68	0.64	0.61	0.67	0.63	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.62	0.60	0.58	0.57
5	0.64	0.60	0.57	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.55	0.59	0.57	0.55	0.54
6	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.52	0.57	0.54	0.52	0.51
7	0.57	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.54	0.52	0.49	0.48
8	0.55	0.51	0.48	0.54	0.50	0.48	0.53	0.50	0.47	0.53	0.50	0.47	0.52	0.49	0.47	0.46
9	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
10	0.50	0.46	0.43	0.50	0.46	0.43	0.49	0.46	0.43	0.49	0.45	0.43	0.48	0.45	0.43	0.42





Luminaire Lumens:

FL=718.05,FM=186.77,FH=23.15,FVH=5.68

BL=659.94,BM=169.86,BH=22.02,BVH=5.42

UL=8.65,UH=41.14

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	3724.88	3638.81	3288.94	2608.31	1798.31	1032.19	572.63	337.50	230.63
45.0	3724.31	3582.56	3141.56	2392.31	1618.88	893.81	509.06	299.81	206.78
90.0	3701.25	3467.81	2903.63	2086.31	1110.94	708.69	405.06	263.59	176.06
135.0	3736.69	3531.94	2994.19	2280.38	1399.50	742.50	433.69	288.56	183.83
180.0	3724.88	3469.50	2919.94	2160.56	1085.18	677.93	409.44	262.35	179.27
225.0	3724.31	3554.44	3077.44	2358.00	1533.94	823.56	471.32	293.57	201.26
270.0	3701.25	3667.50	3307.50	2628.56	1857.38	1047.94	576.00	347.06	235.46
315.0	3736.69	3604.50	3247.88	2536.31	1713.38	964.91	538.59	319.05	227.14
360.0	3724.88	3638.81	3288.94	2608.31	1798.31	1032.19	572.63	337.50	230.63
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	146.70	94.67	60.69	41.06	27.39	22.11	17.94	14.29	10.52
45.0	129.38	84.77	55.69	37.58	25.76	21.09	16.88	13.16	9.56
90.0	110.59	74.81	48.83	32.79	23.91	19.74	15.58	11.93	8.89
135.0	117.73	77.01	49.78	35.10	24.58	20.03	15.92	12.49	9.11
180.0	115.03	75.15	48.38	33.53	24.36	19.91	15.64	12.38	9.11
225.0	120.94	82.86	53.55	36.00	25.59	20.76	16.71	12.99	9.73
270.0	148.11	97.09	62.66	41.79	29.08	22.56	18.11	14.46	10.69
315.0	142.59	91.63	60.19	39.94	26.89	21.43	17.66	14.06	10.69
360.0	146.70	94.67	60.69	41.06	27.39	22.11	17.94	14.29	10.52
C/γ(°)	90.0								
0.0	8.04								
45.0	7.82								
90.0	7.82								
135.0	7.93								
180.0	7.88								
225.0	7.82								
270.0	7.99								
315.0	8.10								
360.0	8.04								