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## Nata

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Client:

LumCAT: 1709-M

Luminaire: 92.70.125.00

Report No: NT2018010507

Test No: GC2018010507

LampCAT: BXRV-DR-1830-H-1000-B-13

Lamp flux(lm): 1472.0

Number of Lamps: 1

Length(mm): 46

Phm Type: C

Voltage(V): 35.3000

Current(A): 0.5000

Power (W): 17.6500

PF: 0.0000

Ballast type: DC

Width(mm): 46

Height(mm): 0

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## Photometric Results

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Lumens(lm): 1335.21, Efficiency(%): 90.71% , Luminous Efficacy(lm/W): 75.65

Central intensity(cd): 5504.814, Maximum intensity(cd): 5504.814

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=17.0

[C90/270]Total=17.0

Field angle(10%Imax): [C0/180]Total=51.4

[C90/270]Total=51.4

Maximum s/h(1/2): C0\_180=0.29 C90\_270=0.29

Maximum s/h(1/4): C0\_180=0.32 C90\_270=0.32

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.86%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 96.446%

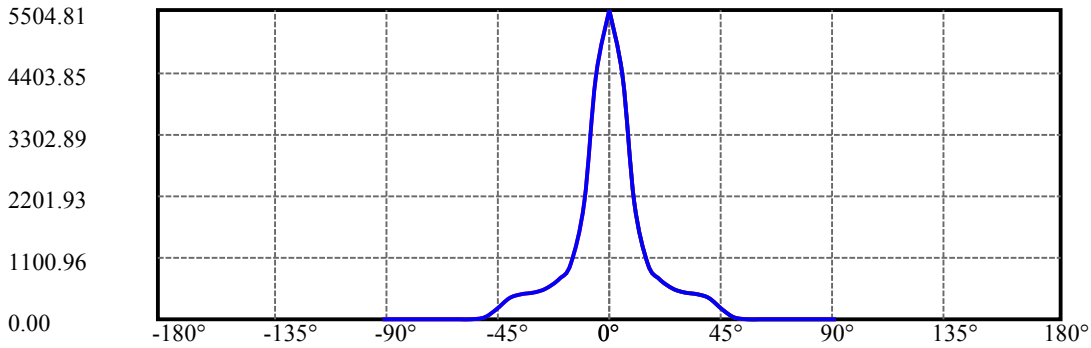
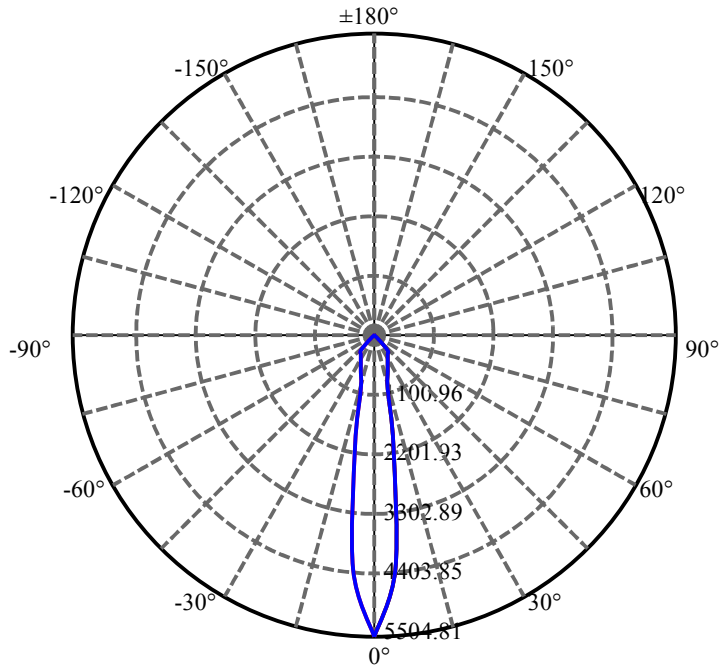
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5504.814	32.920	32.92	2.236%	2.466%
5.0	4295.156	205.194	238.114	13.940%	17.833%
10.0	2074.181	197.427	435.541	13.412%	32.620%
15.0	1008.083	143.015	578.556	9.716%	43.331%
20.0	708.301	132.788	711.344	9.021%	53.276%
25.0	559.944	129.713	841.056	8.812%	62.991%
30.0	490.635	134.468	975.524	9.135%	73.062%
35.0	445.984	140.217	1115.741	9.526%	83.563%
40.0	362.588	127.753	1243.494	8.679%	93.131%
45.0	154.096	59.726	1303.22	4.057%	97.604%
50.0	18.423	7.736	1310.956	.526%	98.184%
55.0	8.603	3.863	1314.818	.262%	98.473%
60.0	7.281	3.456	1318.275	.235%	98.732%
65.0	6.490	3.224	1321.499	.219%	98.973%
70.0	6.036	3.109	1324.608	.211%	99.206%
75.0	5.774	3.057	1327.665	.208%	99.435%
80.0	5.630	3.039	1330.704	.206%	99.663%
85.0	5.540	3.025	1333.729	.206%	99.889%
90.0	5.389	1.477	1335.206	.100%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	975.52	66.27%	73.06%
0-40	1243.49	84.48%	93.13%
0-60	1318.27	89.56%	98.73%
0-90	1333.73	90.61%	99.89%
0-120	1333.73	90.61%	99.89%
0-180	1335.21	90.71%	100.00%
60-90	18.91	1.28%	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%
0-33.30	1068.17	72.57%	80.00%

ZONAL LUMEN SUMMARY

0-10	435.54
10-20	275.80
20-30	264.18
30-40	267.97
40-50	67.46
50-60	7.32
60-70	6.33
70-80	6.10
80-90	3.03
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

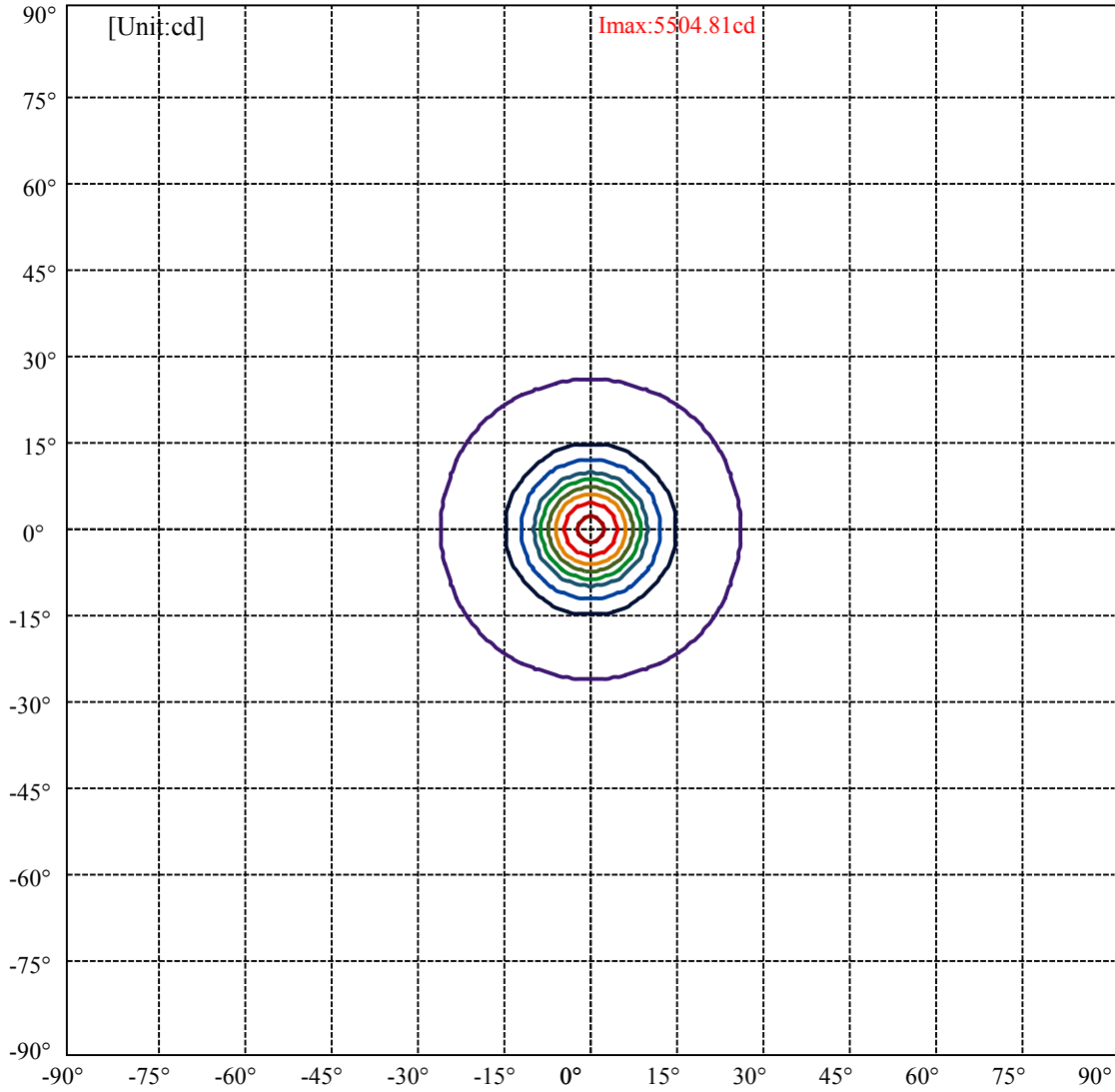


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

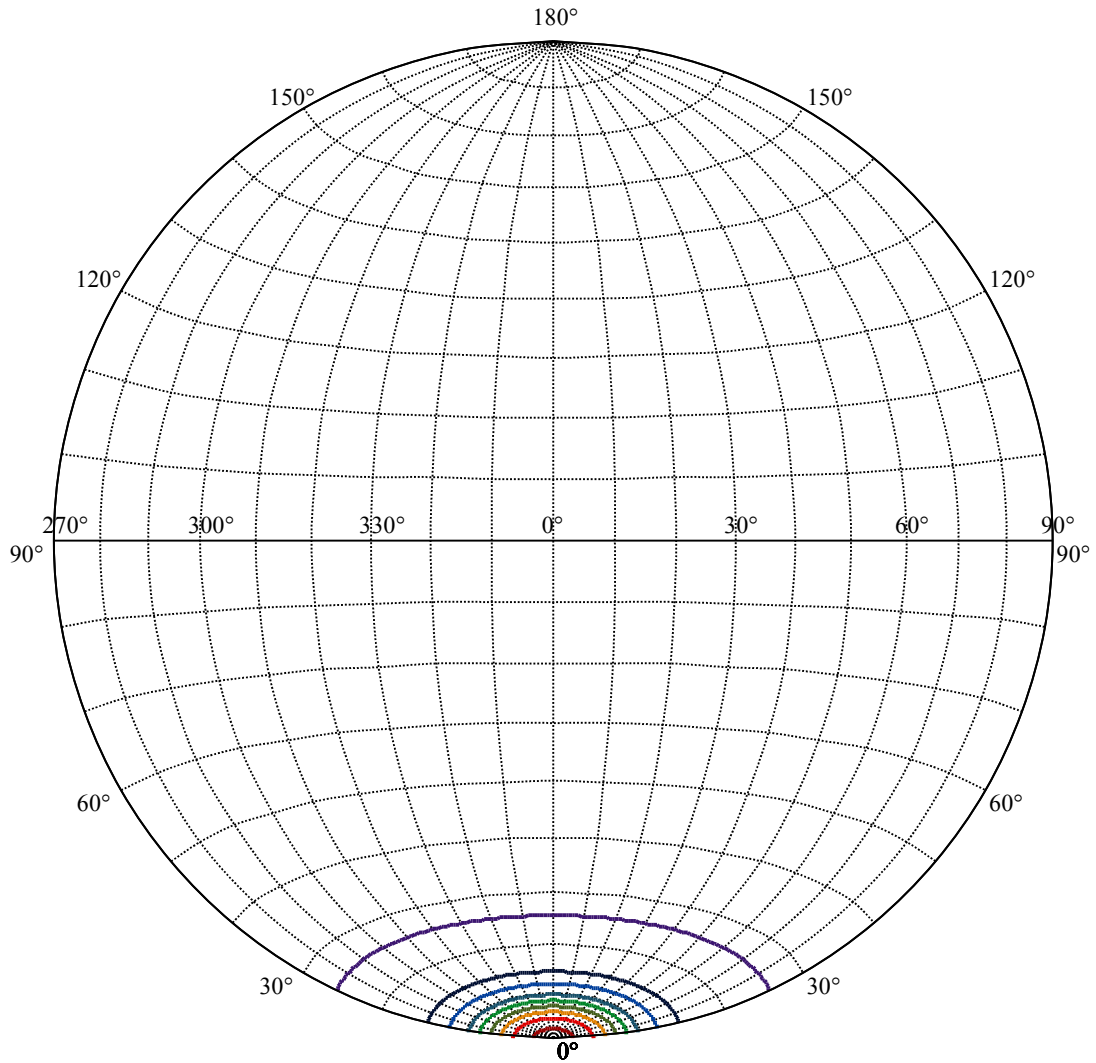
Field angle(10%Imax):C0/180Left:25.7 Right:25.7  
:C90/270Left:25.7 Right:25.7

Beam Angle(50%Imax):C0/180Left:8.5 Right:8.5  
:C90/270Left:8.5 Right:8.5





(10%Imax) 550.481	—
(20%Imax) 1100.96	—
(30%Imax) 1651.44	—
(40%Imax) 2201.93	—
(50%Imax) 2752.41	—
(60%Imax) 3302.89	—
(70%Imax) 3853.37	—
(80%Imax) 4403.85	—
(90%Imax) 4954.33	—



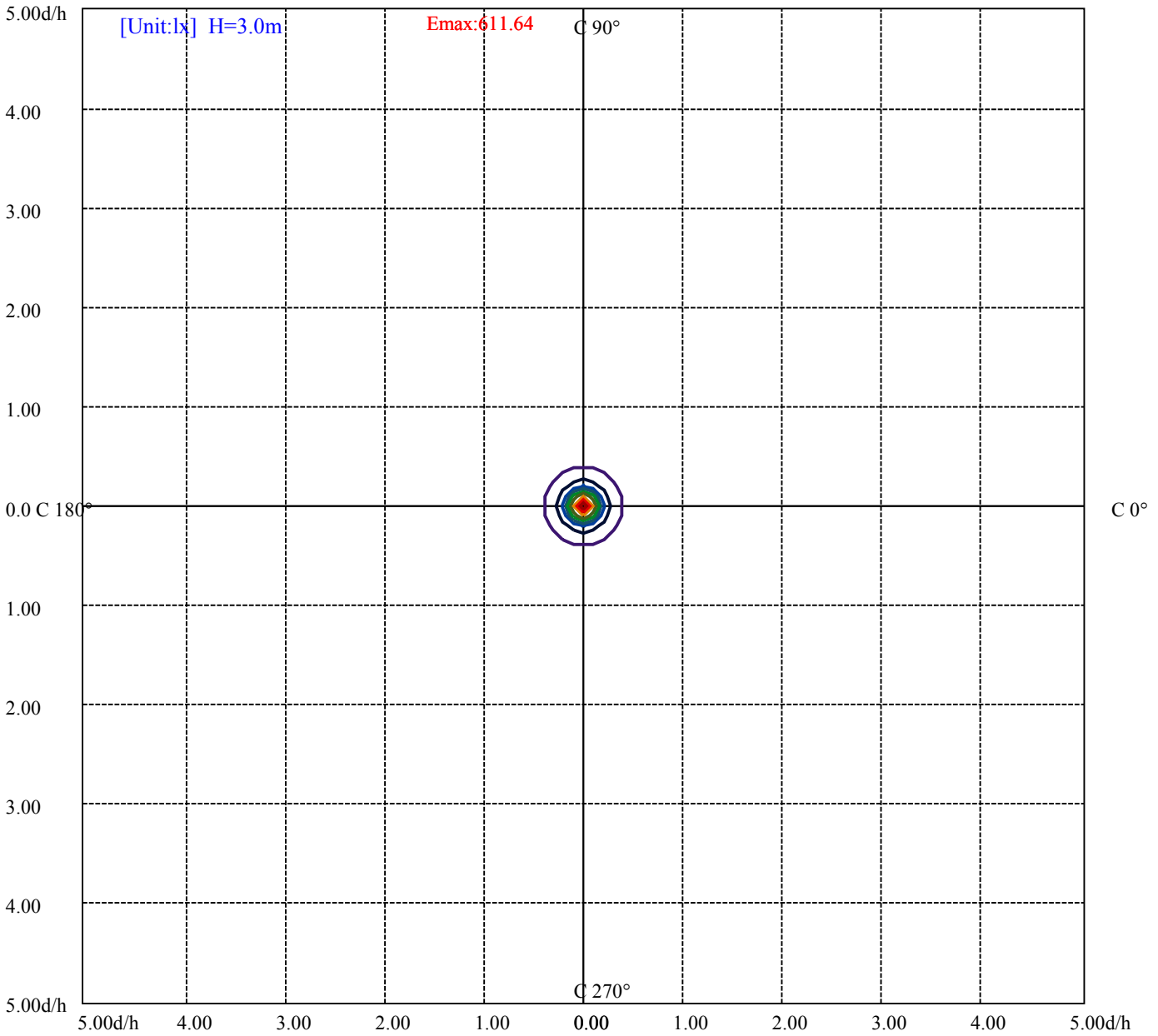
House

[Unit:cd]

Road

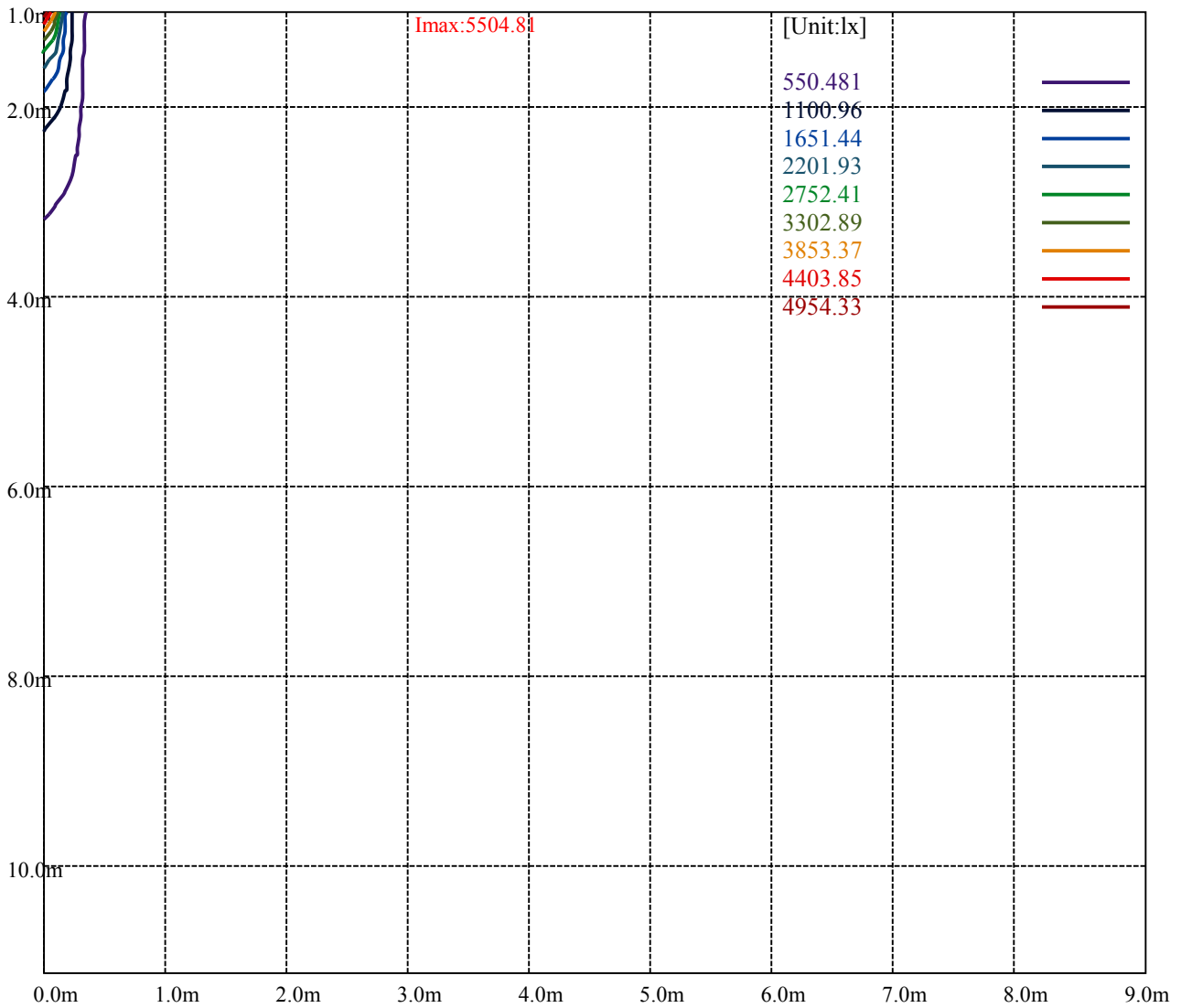
**Imax:5504.81**

(10%Imax) 550.481	—
(20%Imax) 1100.96	—
(30%Imax) 1651.44	—
(40%Imax) 2201.93	—
(50%Imax) 2752.41	—
(60%Imax) 3302.89	—
(70%Imax) 3853.37	—
(80%Imax) 4403.85	—
(90%Imax) 4954.33	—



- (10%Emax) 61.16423
- (20%Emax) 122.3289
- (30%Emax) 183.4922
- (40%Emax) 244.6567
- (50%Emax) 305.8211
- (60%Emax) 366.9856
- (70%Emax) 428.1489
- (80%Emax) 489.3133
- (90%Emax) 550.4778





Luminance Table

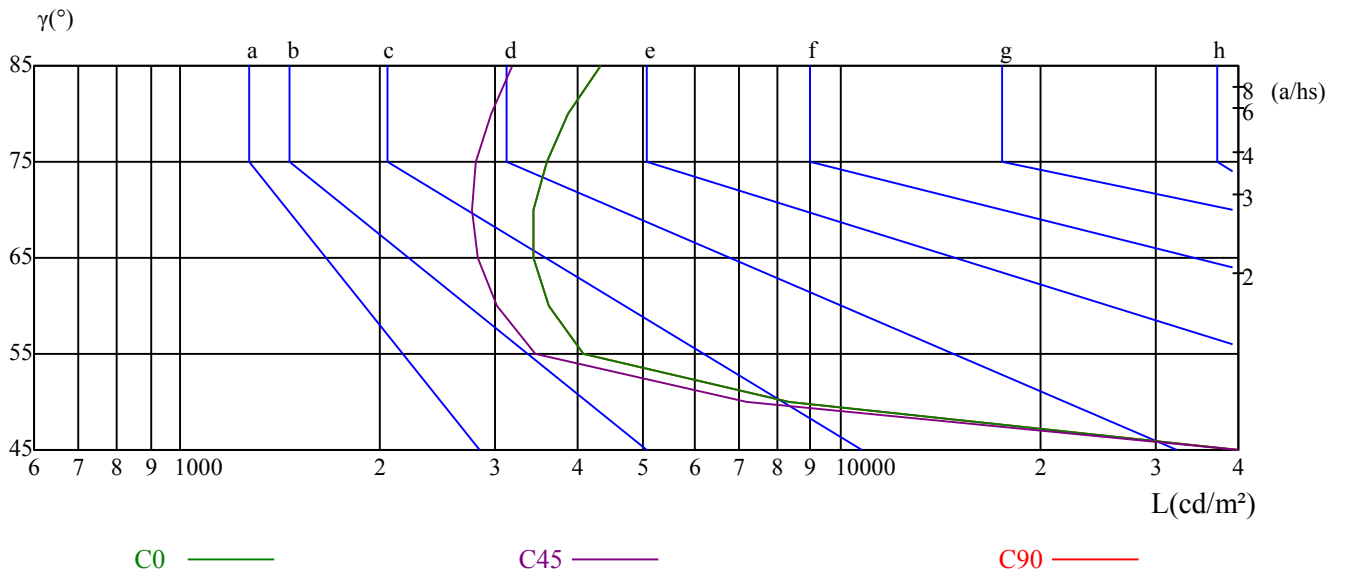
$\gamma$	45	50	55	60	65	70	75	80	85
C0	67678	8352	4062	3615	3425	3427	3577	3870	4314
C45	59262	7207	3451	3021	2810	2755	2809	2955	3184
C90	67678	8352	4062	3615	3425	3427	3577	3870	4314

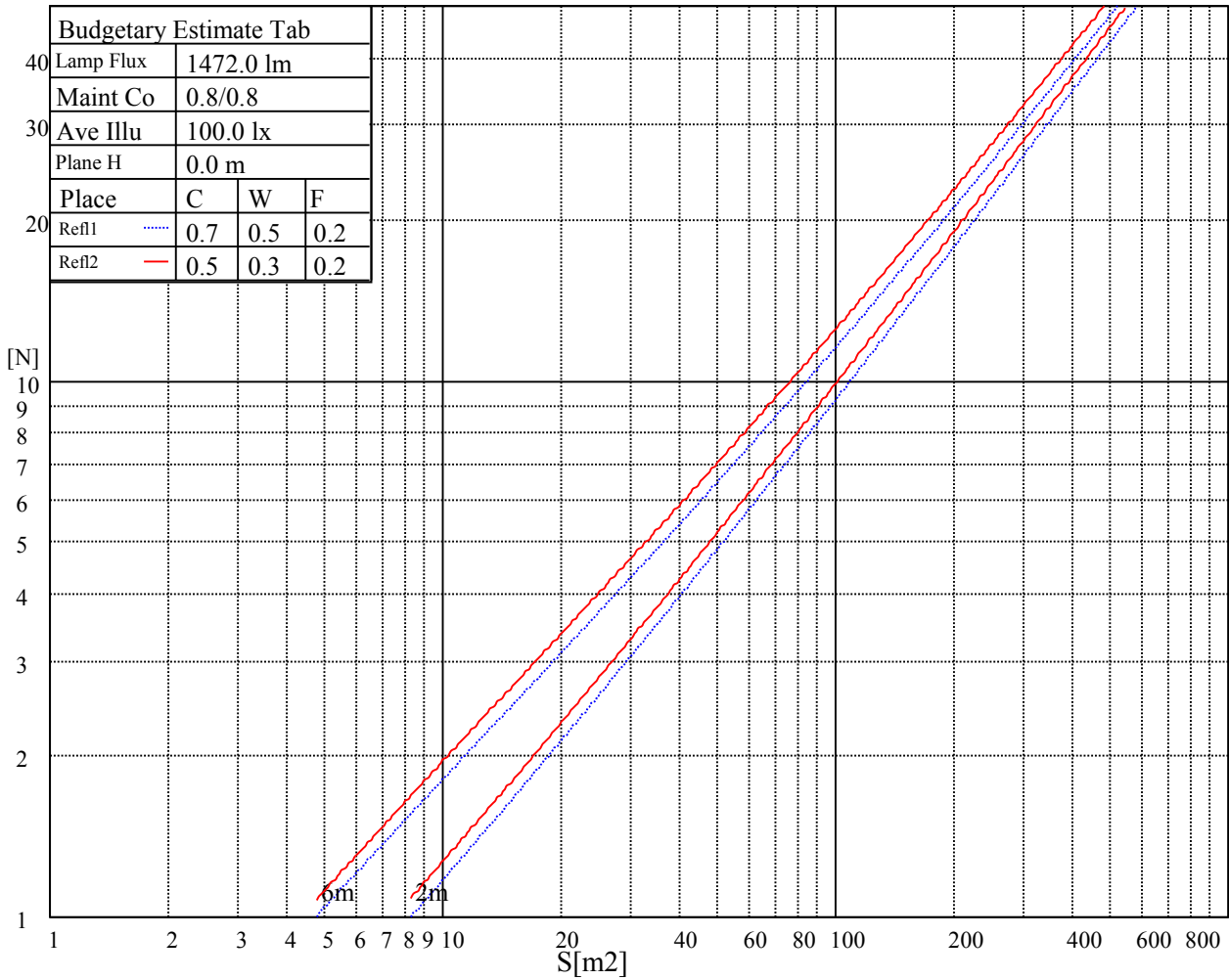
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7257	7257	7257	10543	10543	10543	30040	30040	30040

Glare Table

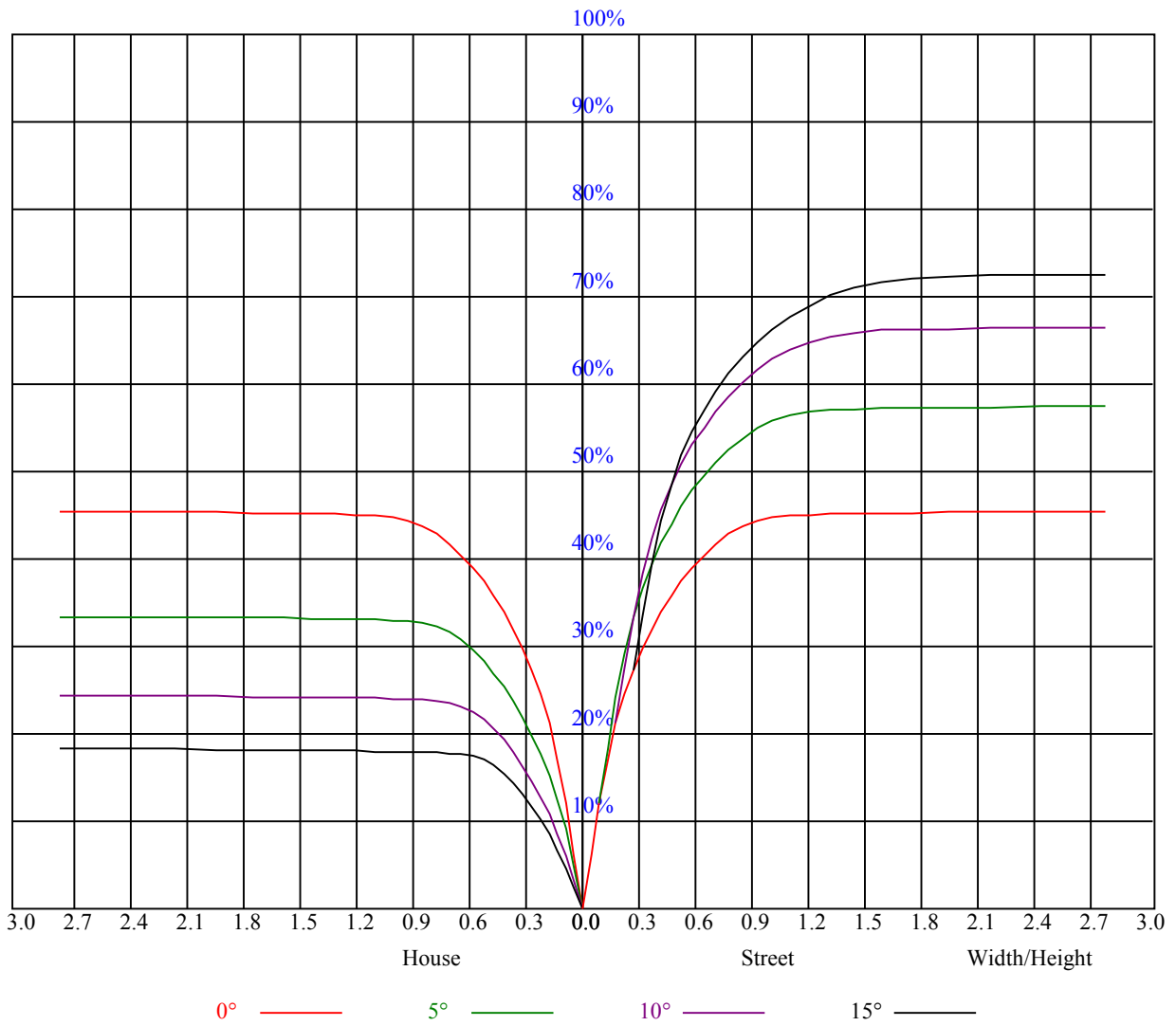
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

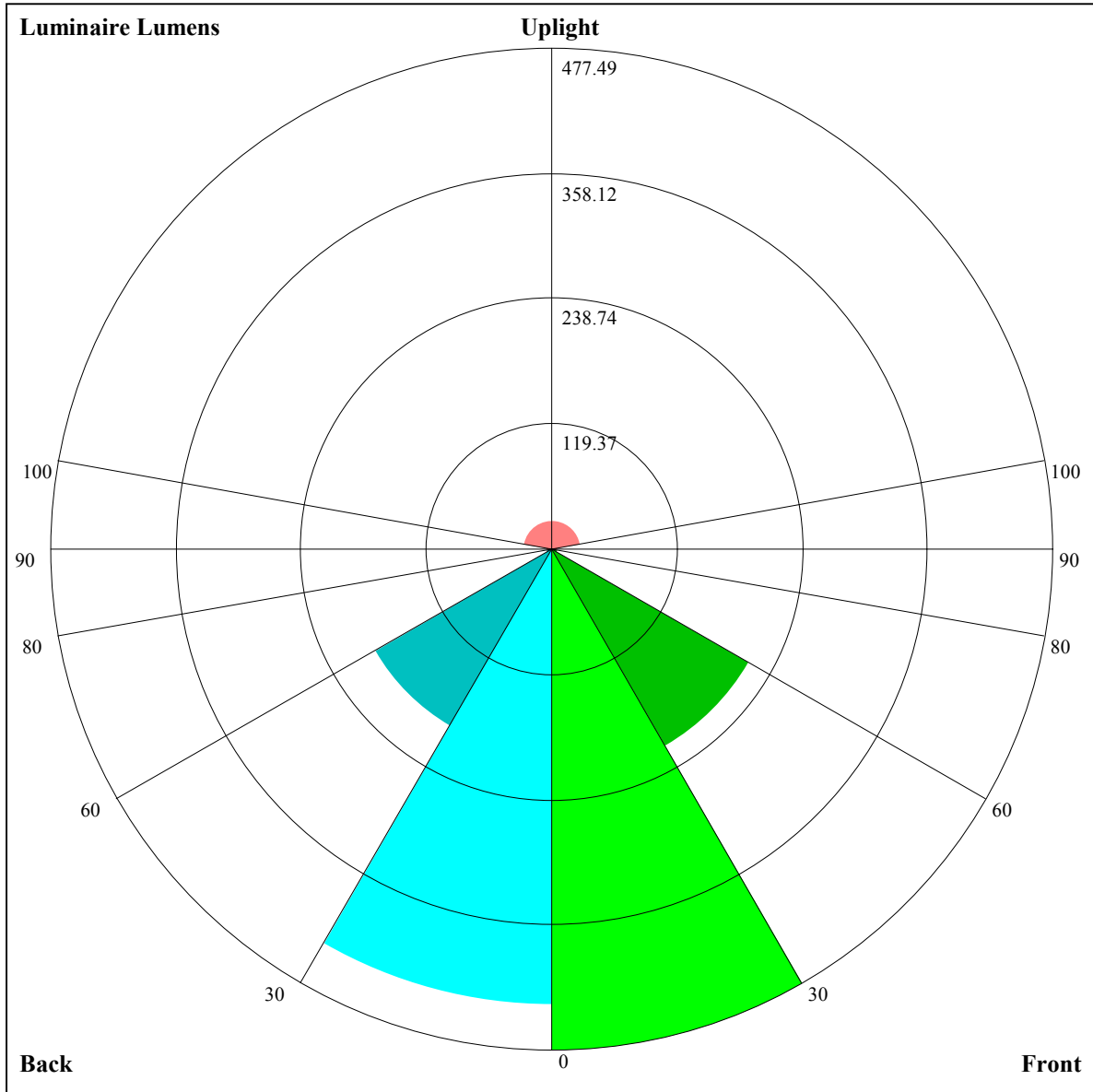
Luminance Limiting Curve





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	1.11	1.11	1.11	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.01	0.98	0.95	0.98	0.96	0.93	0.95	0.93	0.91	0.91	0.89	0.88	0.88	0.87	0.85	0.84
2	0.94	0.90	0.87	0.93	0.89	0.86	0.90	0.87	0.84	0.87	0.84	0.82	0.84	0.82	0.80	0.79
3	0.89	0.84	0.80	0.87	0.83	0.80	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.74
4	0.84	0.79	0.75	0.83	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.77	0.74	0.72	0.71
5	0.79	0.74	0.70	0.79	0.74	0.70	0.77	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.68	0.67
6	0.76	0.70	0.67	0.75	0.70	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.64
7	0.72	0.67	0.63	0.71	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.61
8	0.69	0.64	0.60	0.68	0.64	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.59	0.58
9	0.66	0.61	0.58	0.66	0.61	0.58	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.56
10	0.63	0.59	0.55	0.63	0.58	0.55	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.54





Luminaire Lumens:

FL=477.49,FM=216.73,FH=6.35,FVH=3.03

BL=434.99,BM=194.85,BH=6.3,BVH=2.98

UL=5.88,UH=27.98

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	5451.68	4825.14	2710.98	1195.83	772.44	605.62	512.02	463.57	423.38
45.0	5539.77	4606.57	2282.64	1048.27	743.81	581.40	497.71	449.81	385.39
90.0	5479.21	3980.03	1718.31	902.32	683.19	544.45	480.42	438.85	332.54
135.0	5548.58	4067.02	1980.38	955.78	683.80	545.61	488.35	444.31	345.20
180.0	5451.68	3672.26	1494.23	873.63	648.23	522.15	471.89	429.38	291.47
225.0	5539.77	4093.99	1829.52	958.53	689.86	545.39	484.61	440.84	337.66
270.0	5479.21	4649.51	2339.90	1104.98	743.26	576.44	498.81	453.66	399.16
315.0	5548.58	4466.73	2237.49	1025.32	701.80	558.49	491.27	447.44	385.89
360.0	5451.68	4825.14	2710.98	1195.83	772.44	605.62	512.02	463.57	423.38
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	289.60	24.89	9.25	7.38	6.66	6.22	6.00	5.89	6.00
45.0	150.74	18.33	9.19	7.38	6.61	6.11	5.78	5.62	5.51
90.0	90.35	14.31	8.31	7.32	6.55	6.11	5.78	5.56	5.45
135.0	127.68	18.11	8.64	7.43	6.61	6.11	5.78	5.62	5.45
180.0	88.75	14.76	8.15	7.21	6.44	6.06	5.78	5.67	5.40
225.0	101.19	15.03	8.09	7.10	6.22	5.89	5.67	5.56	5.51
270.0	219.84	21.97	8.92	7.27	6.55	5.89	5.67	5.51	5.45
315.0	164.62	19.99	8.26	7.16	6.28	5.89	5.73	5.62	5.56
360.0	289.60	24.89	9.25	7.38	6.66	6.22	6.00	5.89	6.00
C/γ(°)	90.0								
0.0	5.40								
45.0	5.40								
90.0	5.40								
135.0	5.34								
180.0	5.40								
225.0	5.40								
270.0	5.40								
315.0	5.40								
360.0	5.40								