
Nata

Client:

LumCAT: 1709-M

Luminaire: 92.70.132.00

Report No: NT2017122407

Test No: GC2017122407

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): 1563.68, Efficiency(%): 90.96% , Luminous Efficacy(lm/W): 127.65

Central intensity(cd): 6996.705, Maximum intensity(cd): 6996.705

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=16.0

[C90/270]Total=16.0

Field angle(10%Imax): [C0/180]Total=47.0

[C90/270]Total=47.0

Maximum s/h(1/2): C0_180=0.28 C90_270=0.28

Maximum s/h(1/4): C0_180=0.30 C90_270=0.30

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 93.31%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.244%

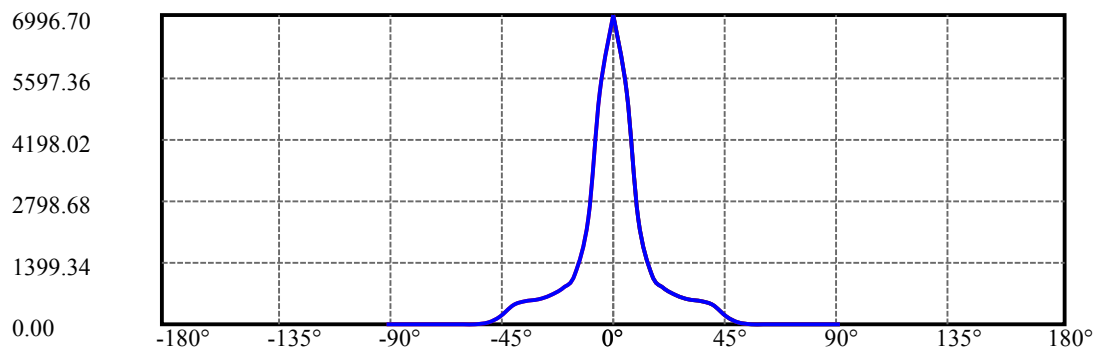
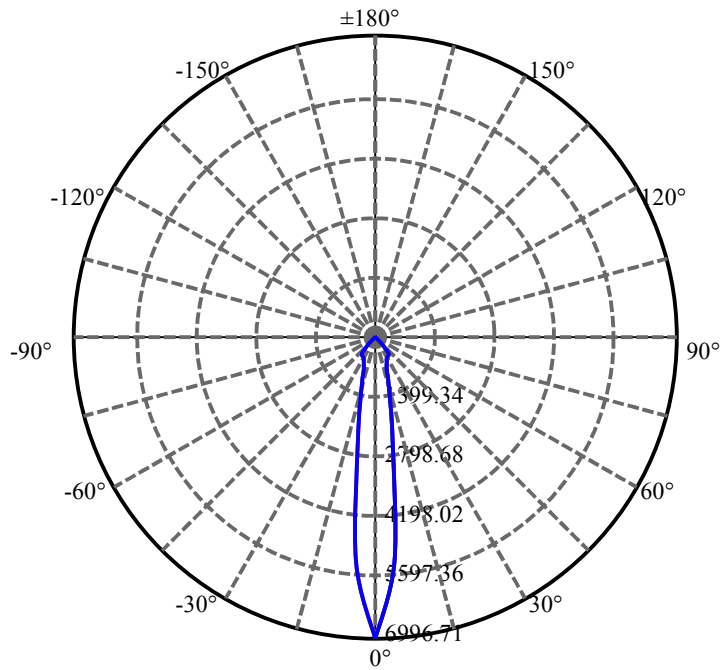
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6996.705	41.842	41.842	2.434%	2.676%
5.0	5240.956	250.378	292.22	14.565%	18.688%
10.0	2377.542	226.302	518.521	13.165%	33.160%
15.0	1143.515	162.229	680.75	9.437%	43.535%
20.0	825.557	154.770	835.52	9.004%	53.433%
25.0	645.536	149.540	985.061	8.699%	62.996%
30.0	566.111	155.153	1140.214	9.026%	72.919%
35.0	514.860	161.871	1302.085	9.417%	83.271%
40.0	424.485	149.561	1451.646	8.700%	92.835%
45.0	190.179	73.712	1525.358	4.288%	97.549%
50.0	23.151	9.721	1535.079	.566%	98.171%
55.0	10.323	4.635	1539.714	.270%	98.467%
60.0	8.582	4.074	1543.788	.237%	98.728%
65.0	7.618	3.785	1547.573	.220%	98.970%
70.0	7.123	3.669	1551.242	.213%	99.205%
75.0	6.779	3.589	1554.831	.209%	99.434%
80.0	6.600	3.563	1558.394	.207%	99.662%
85.0	6.476	3.536	1561.93	.206%	99.888%
90.0	6.387	1.750	1563.68	.102%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1140.21	66.33%	72.92%
0-40	1451.65	84.45%	92.84%
0-60	1543.79	89.81%	98.73%
0-90	1561.93	90.86%	99.89%
0-120	1561.93	90.86%	99.89%
0-180	1563.68	90.96%	100.00%
60-90	22.22	1.29%	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%
0-33.42	1250.94	72.77%	80.00%

ZONAL LUMEN SUMMARY

0-10	518.52
10-20	317.00
20-30	304.69
30-40	311.43
40-50	83.43
50-60	8.71
60-70	7.45
70-80	7.15
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:

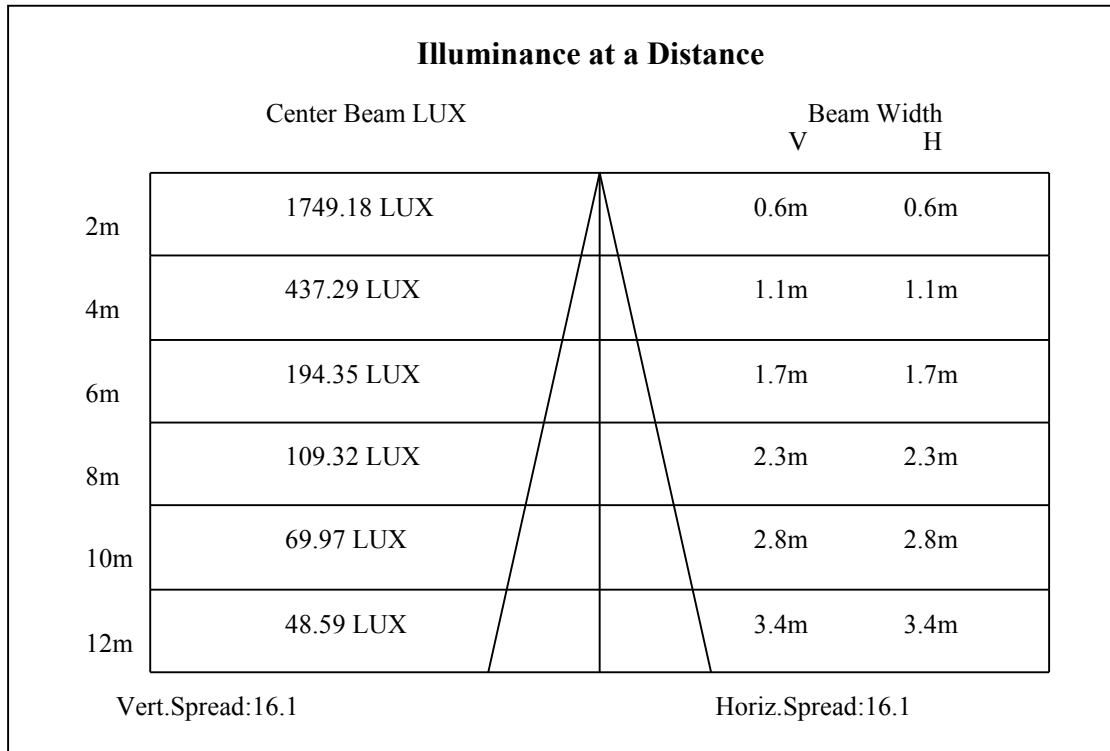
C90/C270:

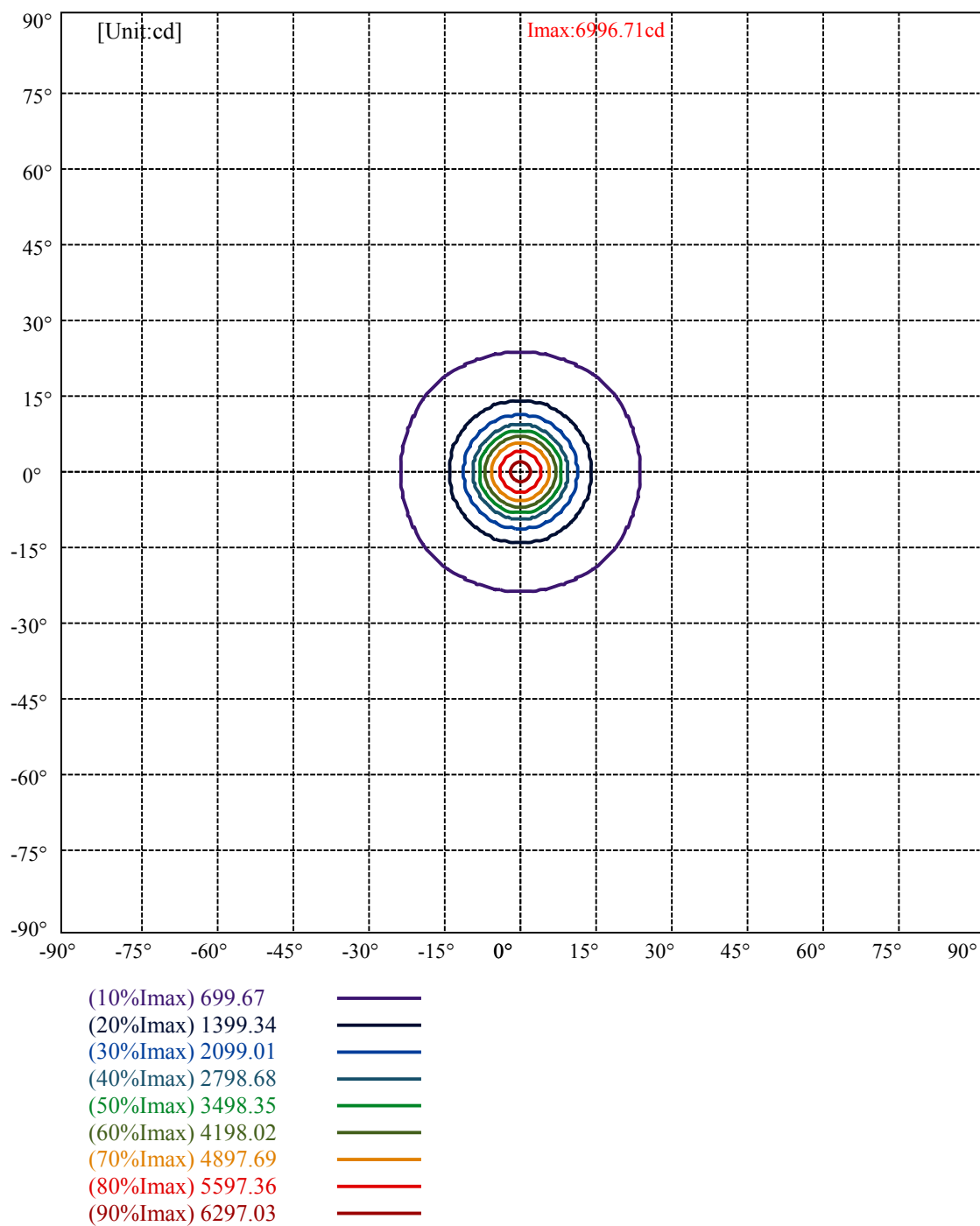
Field angle(10%Imax):C0/180Left:23.5 Right:23.5

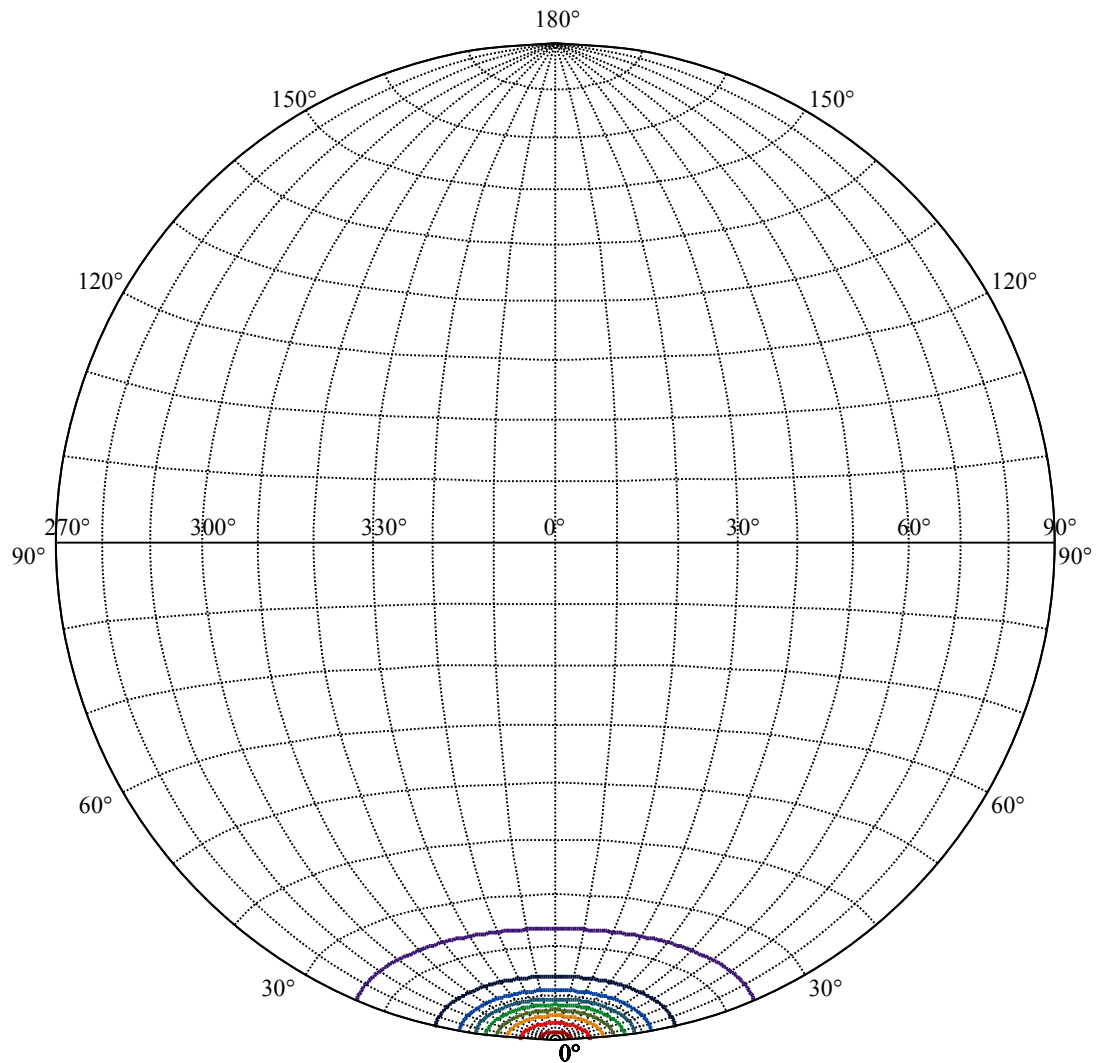
:C90/270Left:23.5 Right:23.5

Beam Angle(50%Imax):C0/180Left:8.0 Right:8.0

:C90/270Left:8.0 Right:8.0







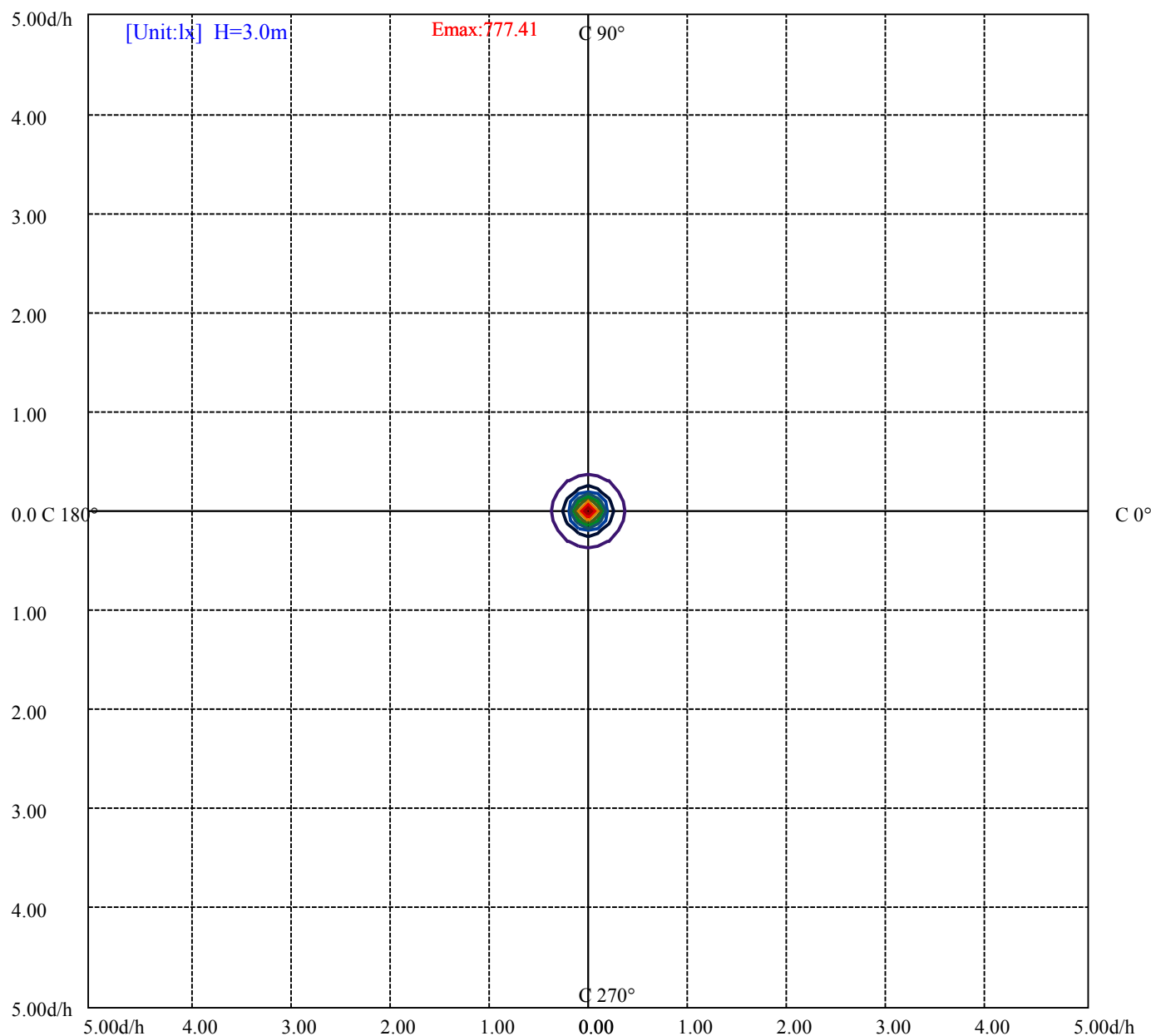
House

[Unit:cd]

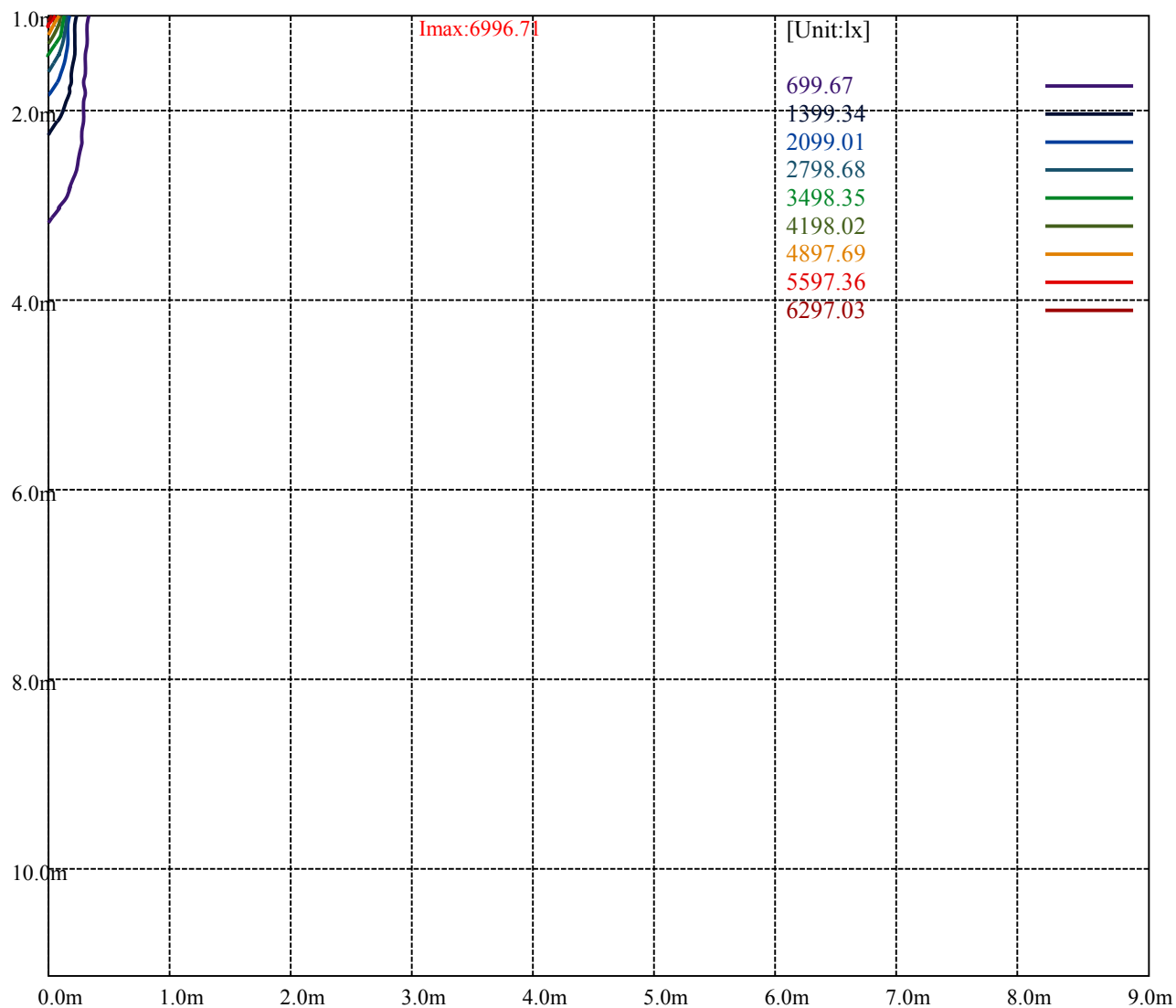
Road

Imax:6996.71

(10%Imax)	699.67	—
(20%Imax)	1399.34	—
(30%Imax)	2099.01	—
(40%Imax)	2798.68	—
(50%Imax)	3498.35	—
(60%Imax)	4198.02	—
(70%Imax)	4897.69	—
(80%Imax)	5597.36	—
(90%Imax)	6297.03	—



(10%Emax)	77.74055	—
(20%Emax)	155.4811	—
(30%Emax)	233.2222	—
(40%Emax)	310.9622	—
(50%Emax)	388.7033	—
(60%Emax)	466.4434	—
(70%Emax)	544.1844	—
(80%Emax)	621.9244	—
(90%Emax)	699.6656	—



Luminance Table

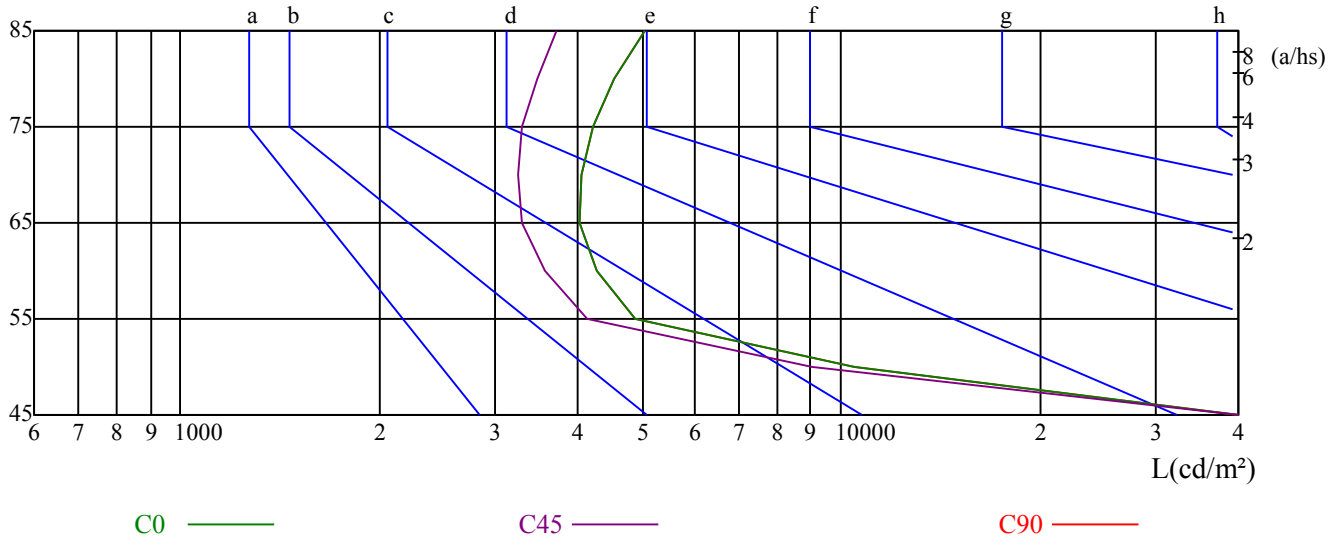
γ	45	50	55	60	65	70	75	80	85
C0	83526	10495	4874	4261	4021	4045	4200	4537	5043
C45	73139	9057	4141	3561	3299	3251	3297	3464	3722
C90	83526	10495	4874	4261	4021	4045	4200	4537	5043

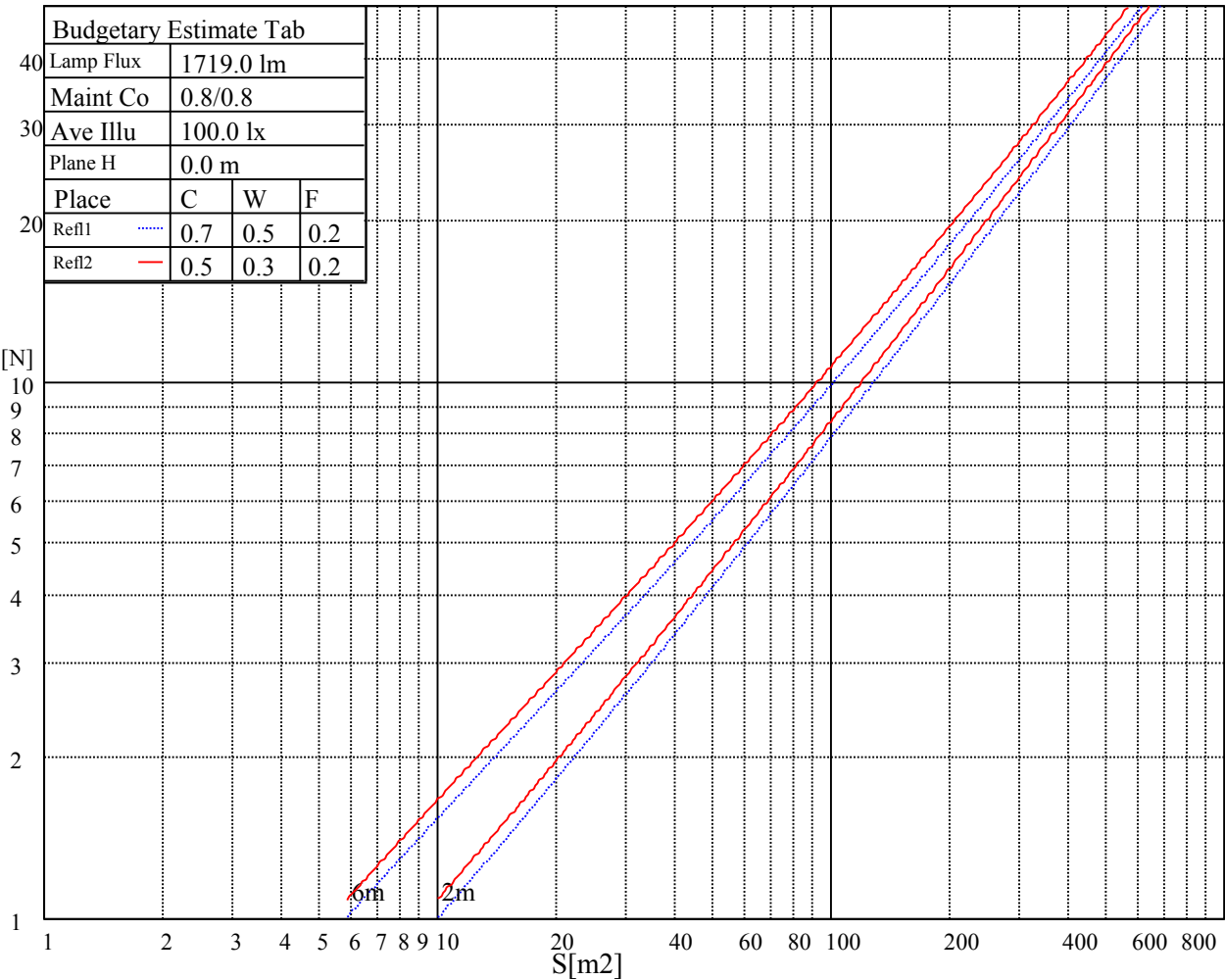
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8519	8519	8519	12378	12378	12378	35115	35115	35115

Glare Table

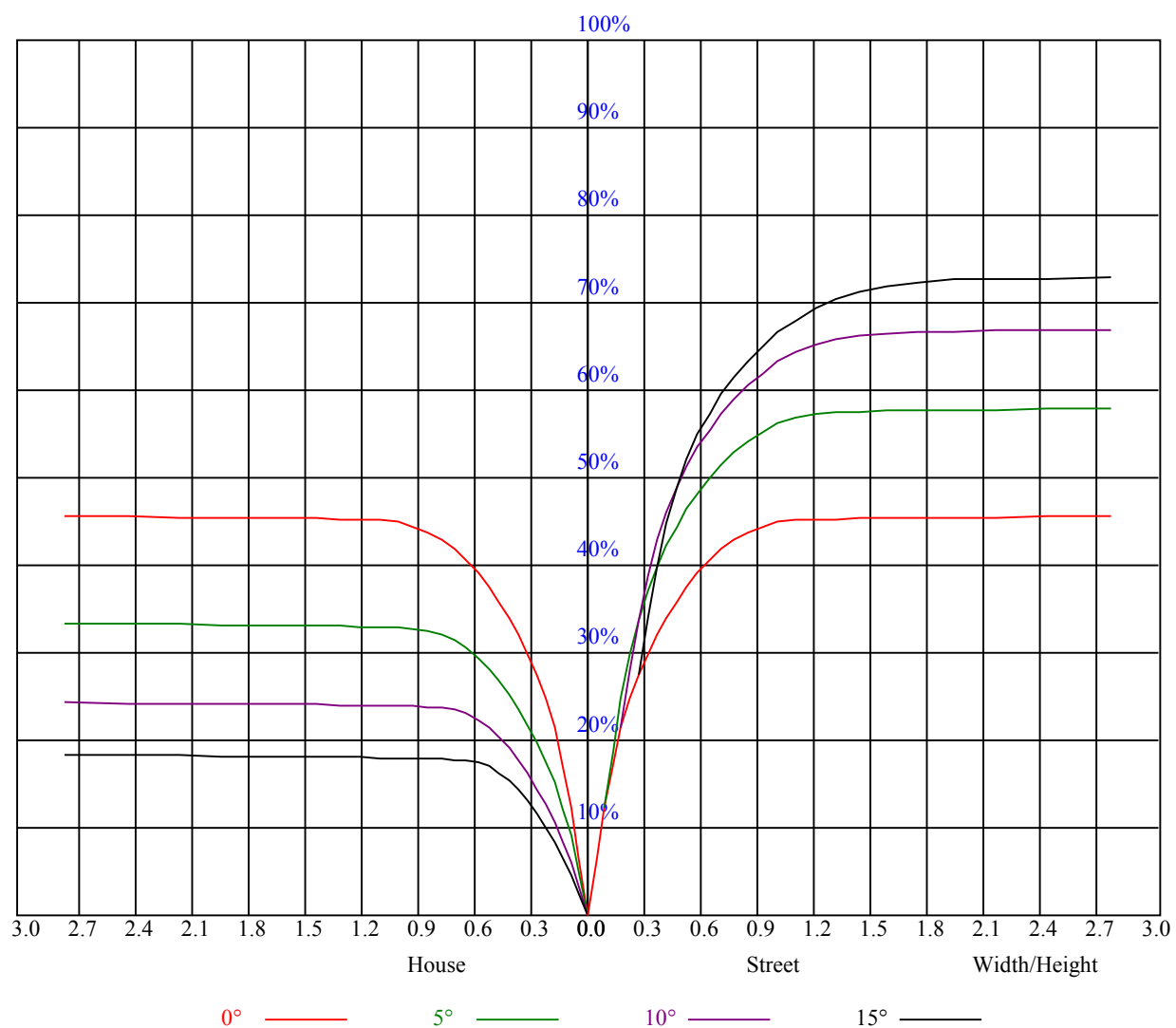
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

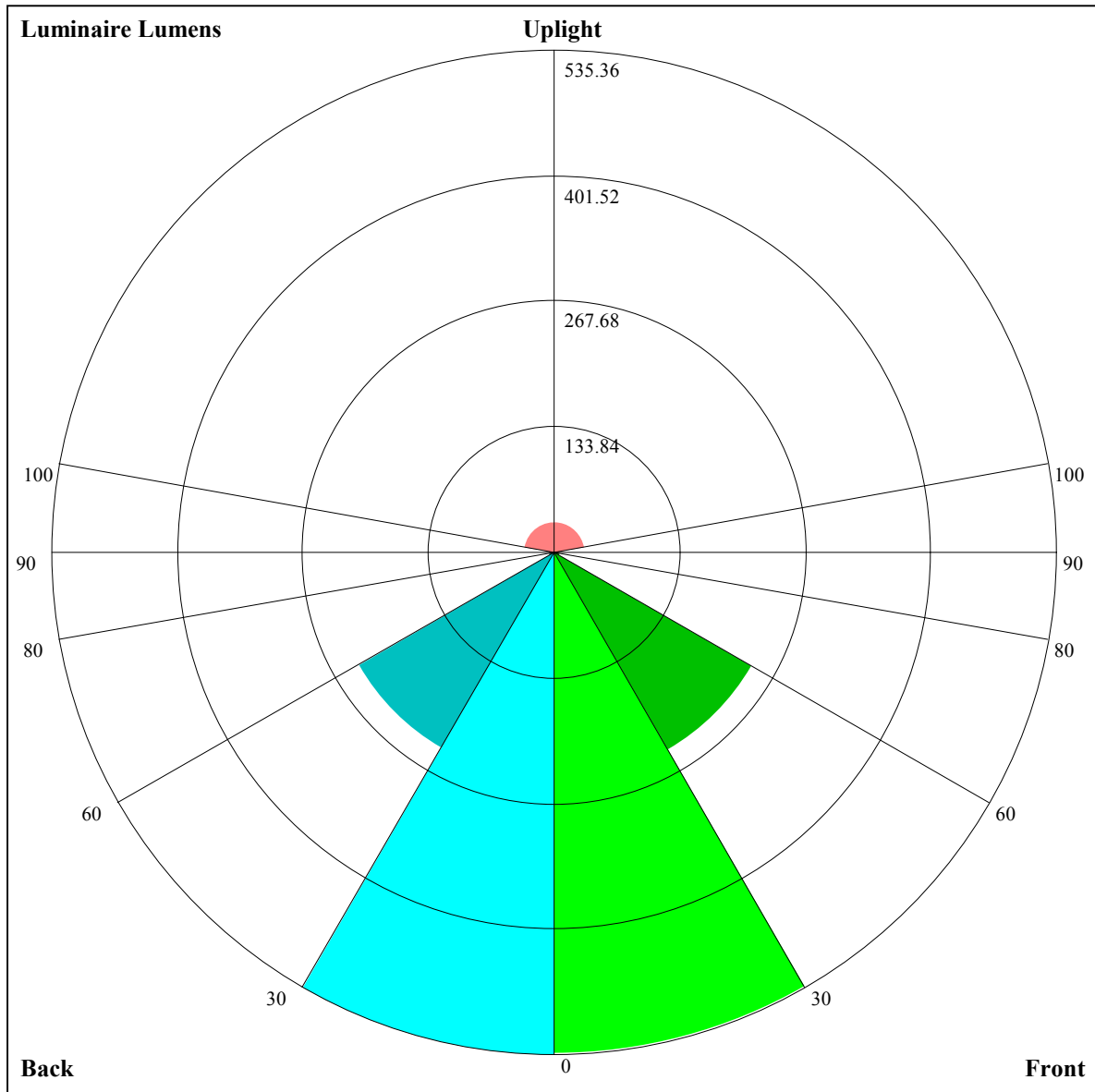
Luminance Limiting Curve

 $\gamma(^{\circ})$ 



RHOC	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	1.09	1.09	1.09	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.01	0.98	0.95	0.99	0.96	0.94	0.95	0.93	0.91	0.91	0.90	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	0.88	0.83	0.80	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.75
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	0.80	0.74	0.71	0.79	0.74	0.70	0.77	0.73	0.70	0.76	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	0.74	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.64
7	0.72	0.67	0.63	0.72	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	0.69	0.64	0.60	0.68	0.63	0.60	0.67	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	0.61	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.56
10	0.64	0.59	0.55	0.63	0.59	0.55	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.54





Luminaire Lumens:

FL=533.96,FM=242.84,FH=7.39,FVH=3.53

BL=535.36,BM=241.71,BH=7.49,BVH=3.54

UL=6.97,UH=33.16

BUG Rating:B2-U2-G0

Nata 1709-M

Intensity data(cd)										Appendix Page: 15 Total:15	
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	7011.98	5375.16	2426.89	1179.86	842.36	657.92	576.99	527.44	438.80		
45.0	7018.04	5550.24	2534.25	1196.93	843.46	661.78	572.59	516.98	433.84		
90.0	7015.84	5154.38	2219.32	1083.40	811.75	633.15	554.36	505.09	405.77		
135.0	6938.76	5703.29	2728.60	1250.33	847.87	655.72	567.08	516.98	452.56		
180.0	7016.39	5107.03	2287.59	1091.11	802.23	628.52	555.46	507.95	409.40		
225.0	7018.04	4940.76	2255.66	1081.58	820.07	635.30	561.13	508.01	398.28		
270.0	7015.84	5335.52	2512.77	1197.48	853.37	662.33	578.64	526.34	452.01		
315.0	6938.76	4761.28	2055.26	1067.43	783.34	629.57	562.62	510.10	405.22		
360.0	7011.98	5375.16	2426.89	1179.86	842.36	657.92	576.99	527.44	438.80		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	212.96	23.89	9.80	8.31	7.54	7.05	6.72	6.55	6.44		
45.0	215.44	23.84	10.85	8.59	7.76	7.21	6.83	6.66	6.50		
90.0	129.88	22.35	9.97	8.75	7.82	7.27	6.83	6.61	6.50		
135.0	280.24	25.99	11.51	9.03	8.04	7.38	6.94	6.66	6.44		
180.0	140.17	23.29	10.85	8.75	7.65	7.16	6.77	6.55	6.50		
225.0	134.12	22.02	9.74	8.59	7.49	7.05	6.77	6.66	6.55		
270.0	289.60	24.45	10.74	8.48	7.38	6.99	6.72	6.55	6.44		
315.0	119.03	19.38	9.14	8.15	7.27	6.88	6.66	6.55	6.44		
360.0	212.96	23.89	9.80	8.31	7.54	7.05	6.72	6.55	6.44		
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										