
Nata

Client:

LumCAT: 2-1299-N

Luminaire: 92.70.045.00+92.70.059.00

Report No: nata-0100

Test No: GC2018060103

LampCAT: NICHIA NFCWD084B-V3

Lamp flux(lm): 2152.5

Number of Lamps: 1

Length(mm): 70

Phm Type: C

Voltage(V): 34.2000

Current(A): 0.5000

Power (W): 17.1000

PF: 0.0000

Ballast type: DC

Width(mm): 70

Height(mm):0

Photometric Results

Lumens(lm): 1655.60, Efficiency(%): 76.91% , Luminous Efficacy(lm/W): 96.82

Central intensity(cd): 7490.287, Maximum intensity(cd): 7490.287

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=21.4

[C90/270]Total=21.4

Field angle(10%Imax): [C0/180]Total=44.2

[C90/270]Total=44.2

Maximum s/h(1/2): C0_180=0.36 C90_270=0.36

Maximum s/h(1/4): C0_180=0.37 C90_270=0.37

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 78.92%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.538%

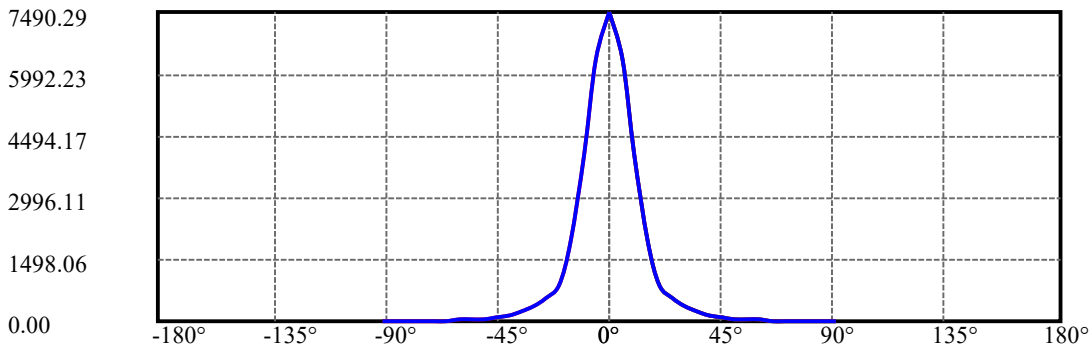
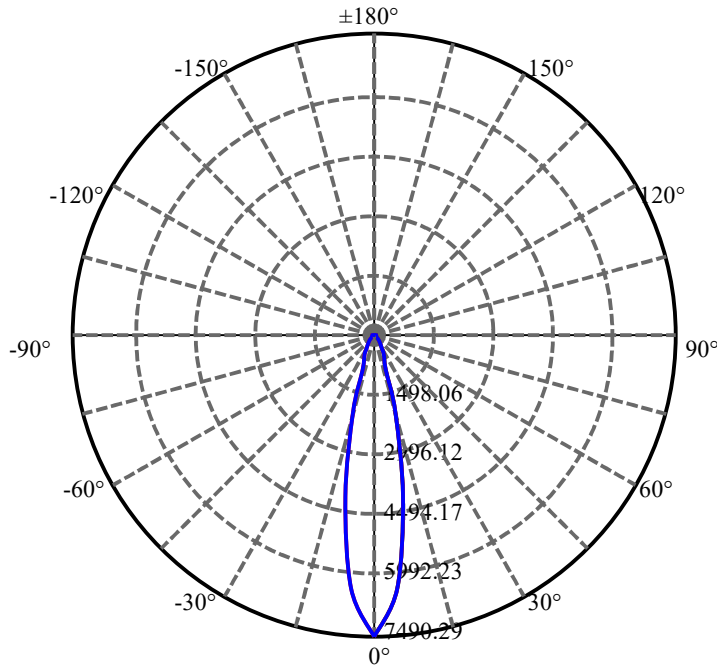
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7490.286	44.793	44.793	2.081%	2.706%
5.0	6328.940	302.354	347.148	14.047%	20.968%
10.0	4058.620	386.312	733.46	17.947%	44.302%
15.0	1951.268	276.823	1010.283	12.860%	61.022%
20.0	903.186	169.324	1179.607	7.866%	71.249%
25.0	537.227	124.450	1304.057	5.782%	78.766%
30.0	358.569	98.272	1402.329	4.565%	84.702%
35.0	242.255	76.165	1478.494	3.538%	89.303%
40.0	152.410	53.699	1532.194	2.495%	92.546%
45.0	96.177	37.277	1569.471	1.732%	94.798%
50.0	61.023	25.623	1595.094	1.190%	96.345%
55.0	37.452	16.816	1611.911	.781%	97.361%
60.0	23.385	11.101	1623.012	.516%	98.032%
65.0	15.457	7.679	1630.69	.357%	98.495%
70.0	13.220	6.810	1637.5	.316%	98.907%
75.0	11.686	6.187	1643.687	.287%	99.280%
80.0	10.103	5.454	1649.141	.253%	99.610%
85.0	8.403	4.588	1653.729	.213%	99.887%
90.0	6.834	1.873	1655.602	.087%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1402.33	65.15%	84.70%
0-40	1532.19	71.18%	92.55%
0-60	1623.01	75.40%	98.03%
0-90	1653.73	76.83%	99.89%
0-120	1653.73	76.83%	99.89%
0-180	1655.60	76.91%	100.00%
60-90	41.82	1.94%	2.53%
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%
0-26.04	1324.48	61.53%	80.00%

ZONAL LUMEN SUMMARY

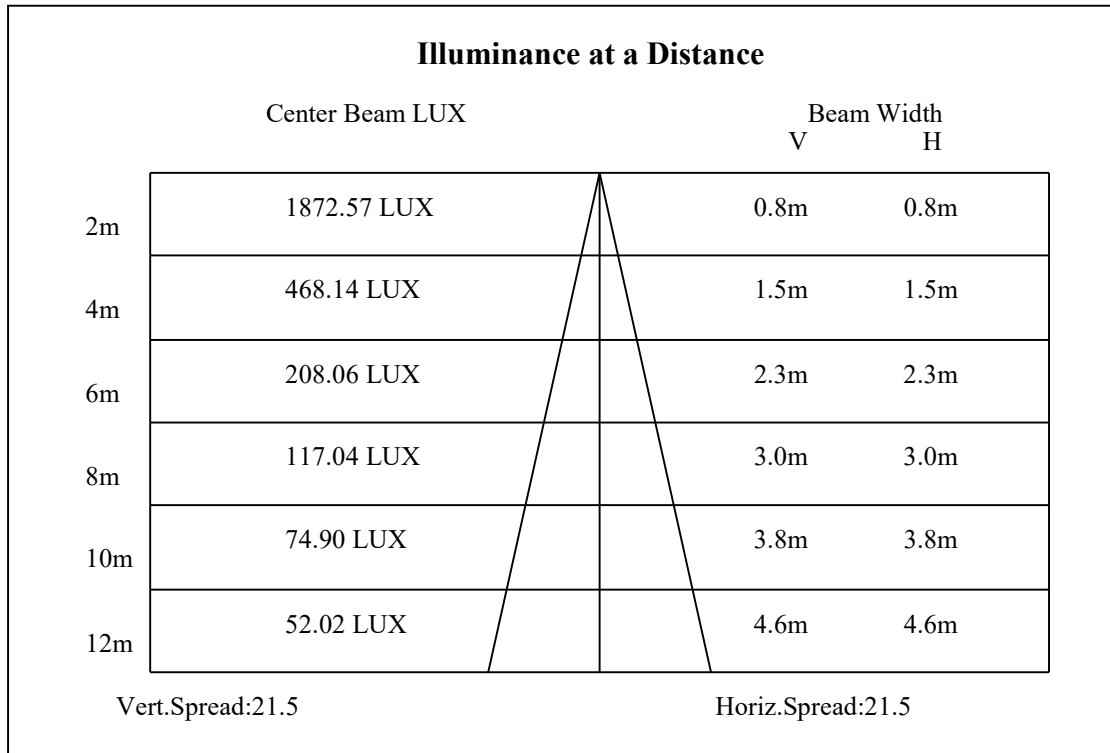
0-10	733.46
10-20	446.15
20-30	222.72
30-40	129.86
40-50	62.90
50-60	27.92
60-70	14.49
70-80	11.64
80-90	4.59
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

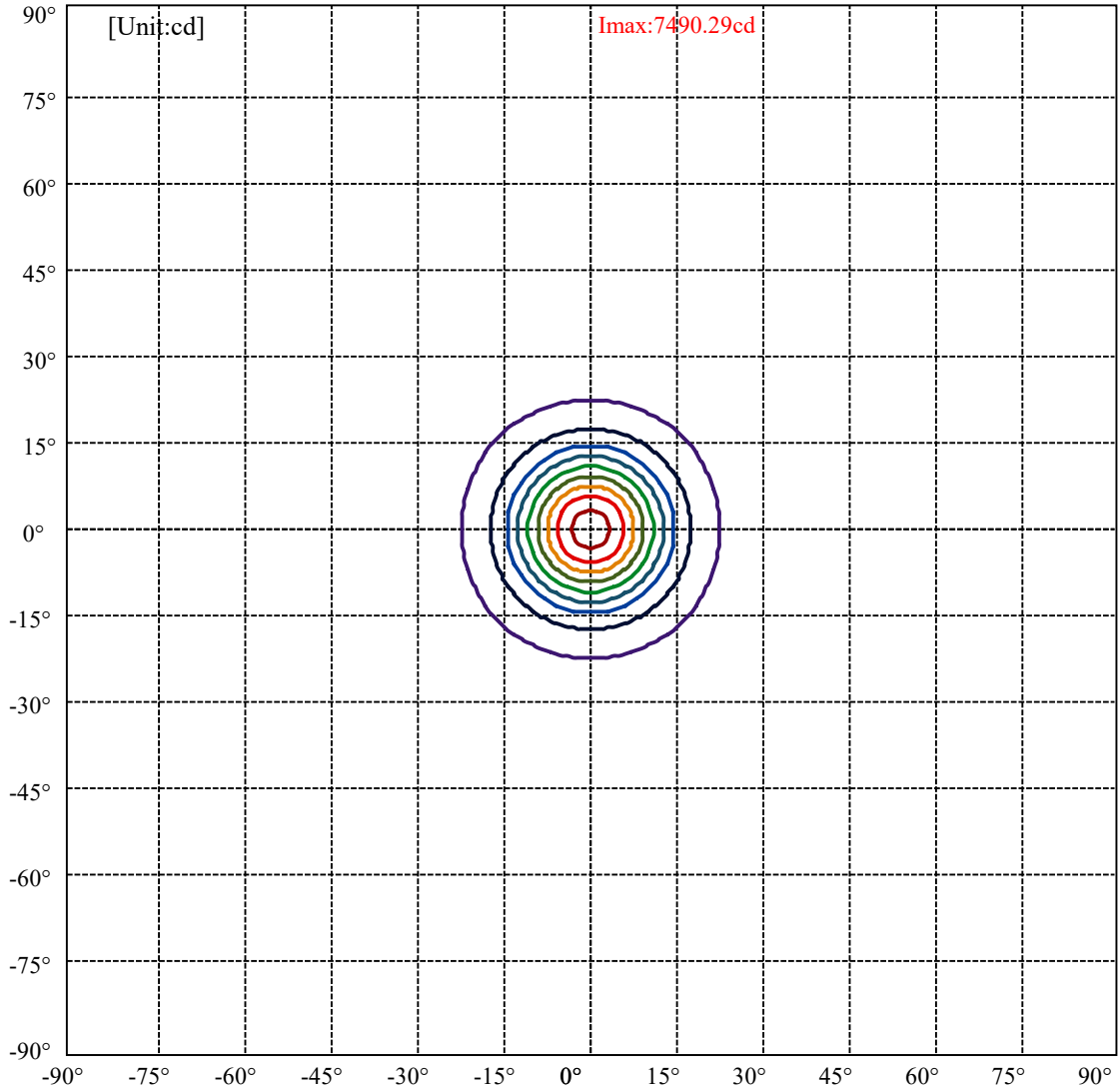


C0(Max): —————
 C0/C180: —————
 C90/C270: —————

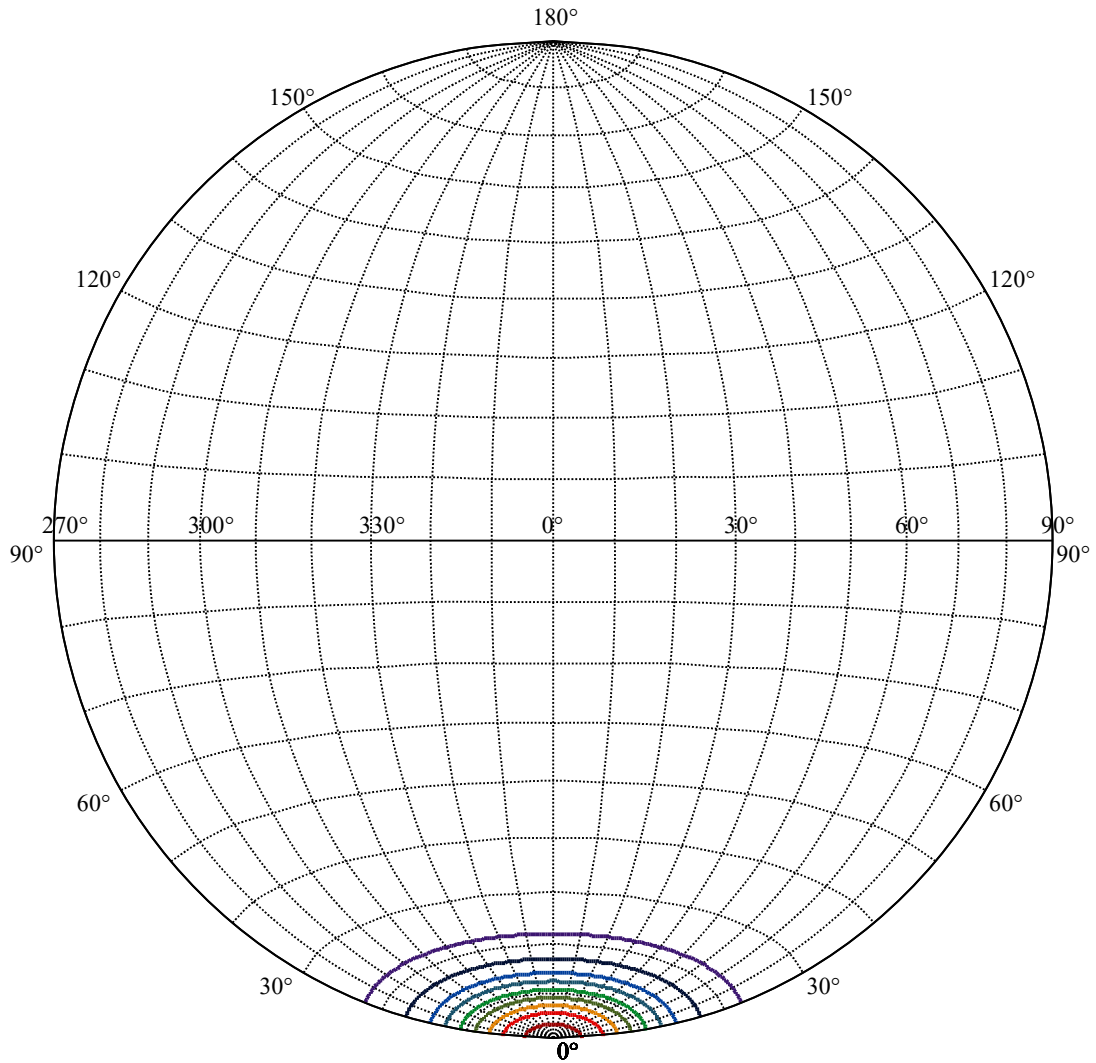
Field angle(10%Imax):C0/180Left:22.1 Right:22.1
 :C90/270Left:22.1 Right:22.1

Beam Angle(50%Imax):C0/180Left:10.7 Right:10.7
 :C90/270Left:10.7 Right:10.7





(10%Imax) 749.029	—
(20%Imax) 1498.06	—
(30%Imax) 2247.09	—
(40%Imax) 2996.11	—
(50%Imax) 3745.14	—
(60%Imax) 4494.17	—
(70%Imax) 5243.2	—
(80%Imax) 5992.23	—
(90%Imax) 6741.26	—



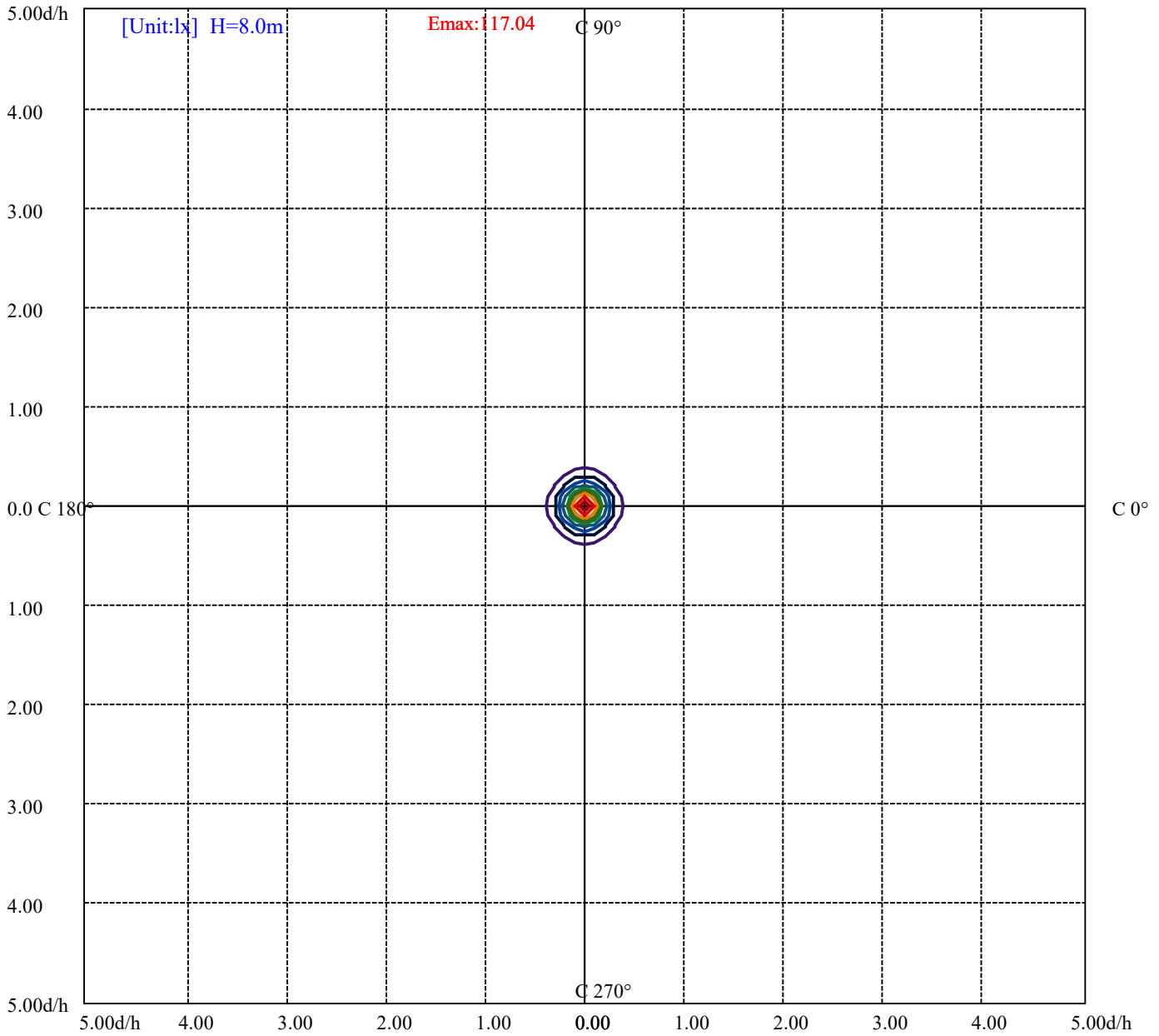
House

[Unit:cd]

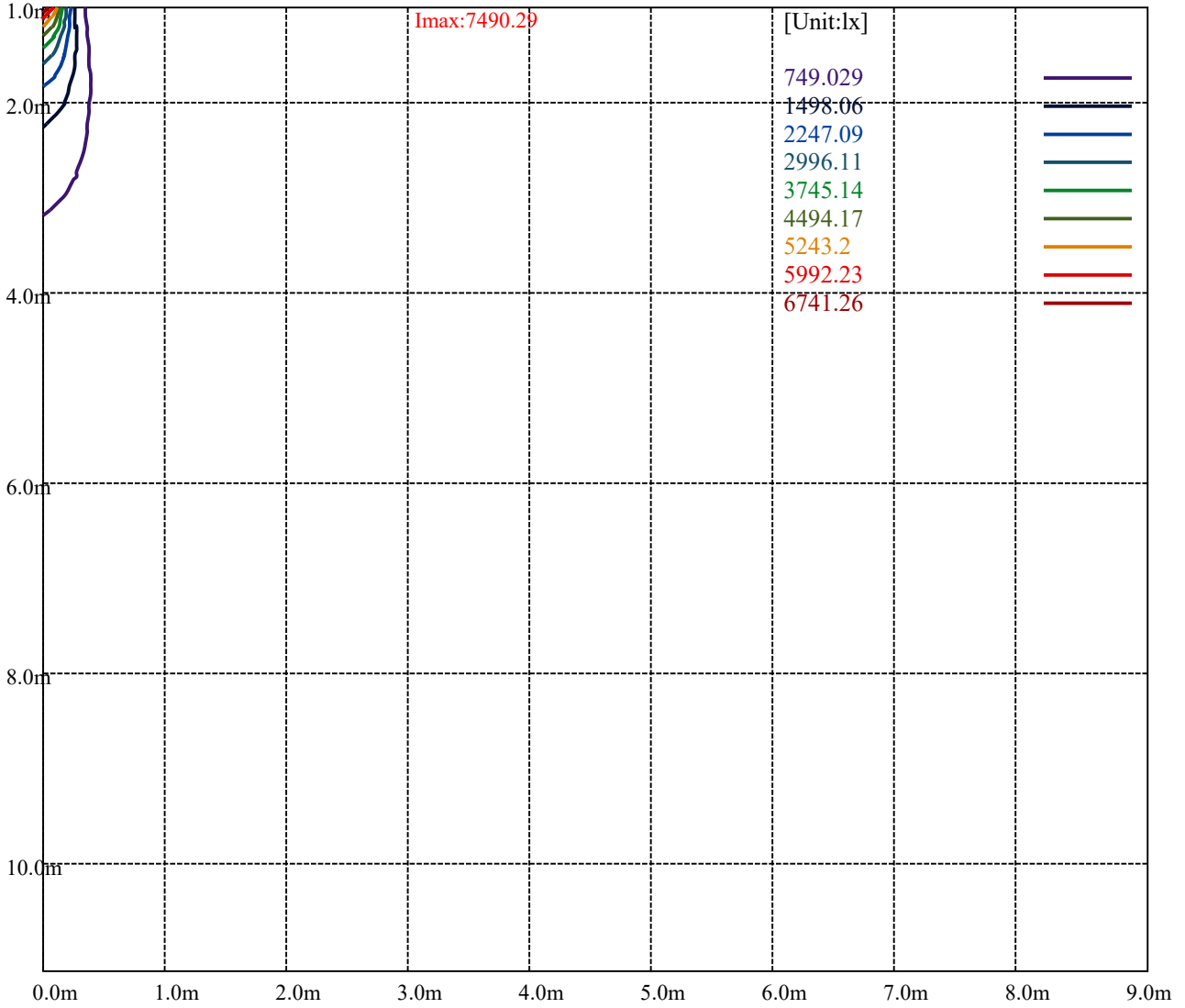
Road

Imax:7490.29

(10%Imax) 749.029	—
(20%Imax) 1498.06	—
(30%Imax) 2247.09	—
(40%Imax) 2996.11	—
(50%Imax) 3745.14	—
(60%Imax) 4494.17	—
(70%Imax) 5243.2	—
(80%Imax) 5992.23	—
(90%Imax) 6741.26	—



- (10%Emax) 11.70352
- (20%Emax) 23.40703
- (30%Emax) 35.11063
- (40%Emax) 46.81406
- (50%Emax) 58.51765
- (60%Emax) 70.22109
- (70%Emax) 81.92469
- (80%Emax) 93.62813
- (90%Emax) 105.3317



Luminance Table

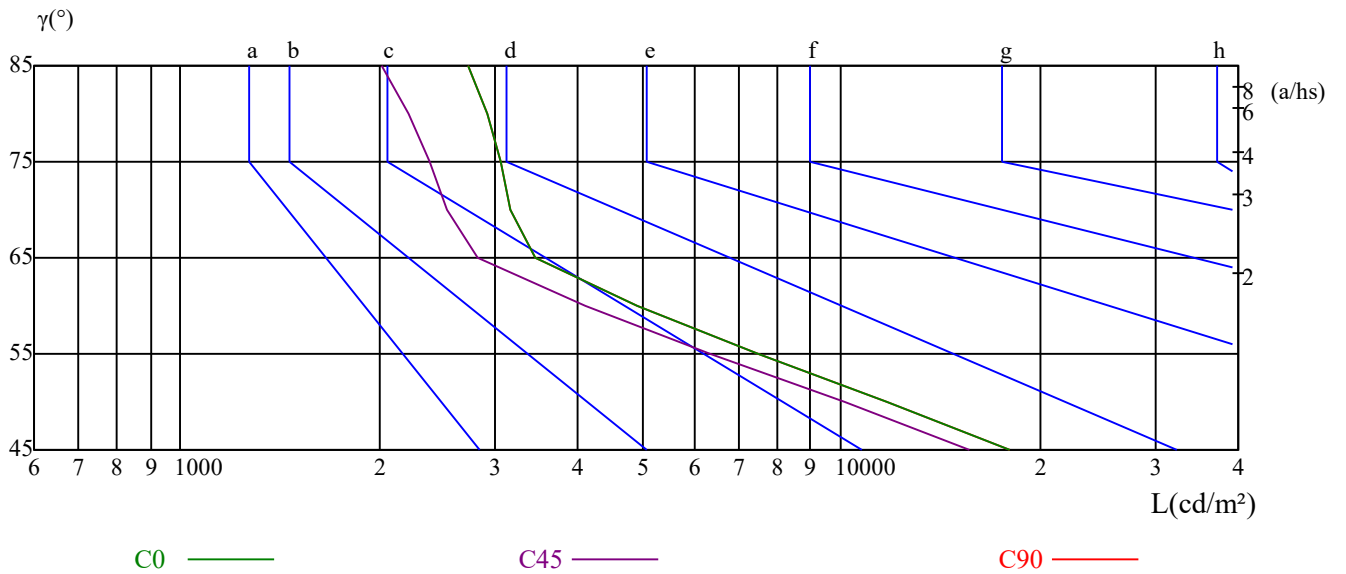
γ	45	50	55	60	65	70	75	80	85
C0	17991	11764	7506	4919	3449	3166	3045	2911	2731
C45	15703	10118	6356	4097	2821	2537	2384	2218	2013
C90	17991	11764	7506	4919	3449	3166	3045	2911	2731

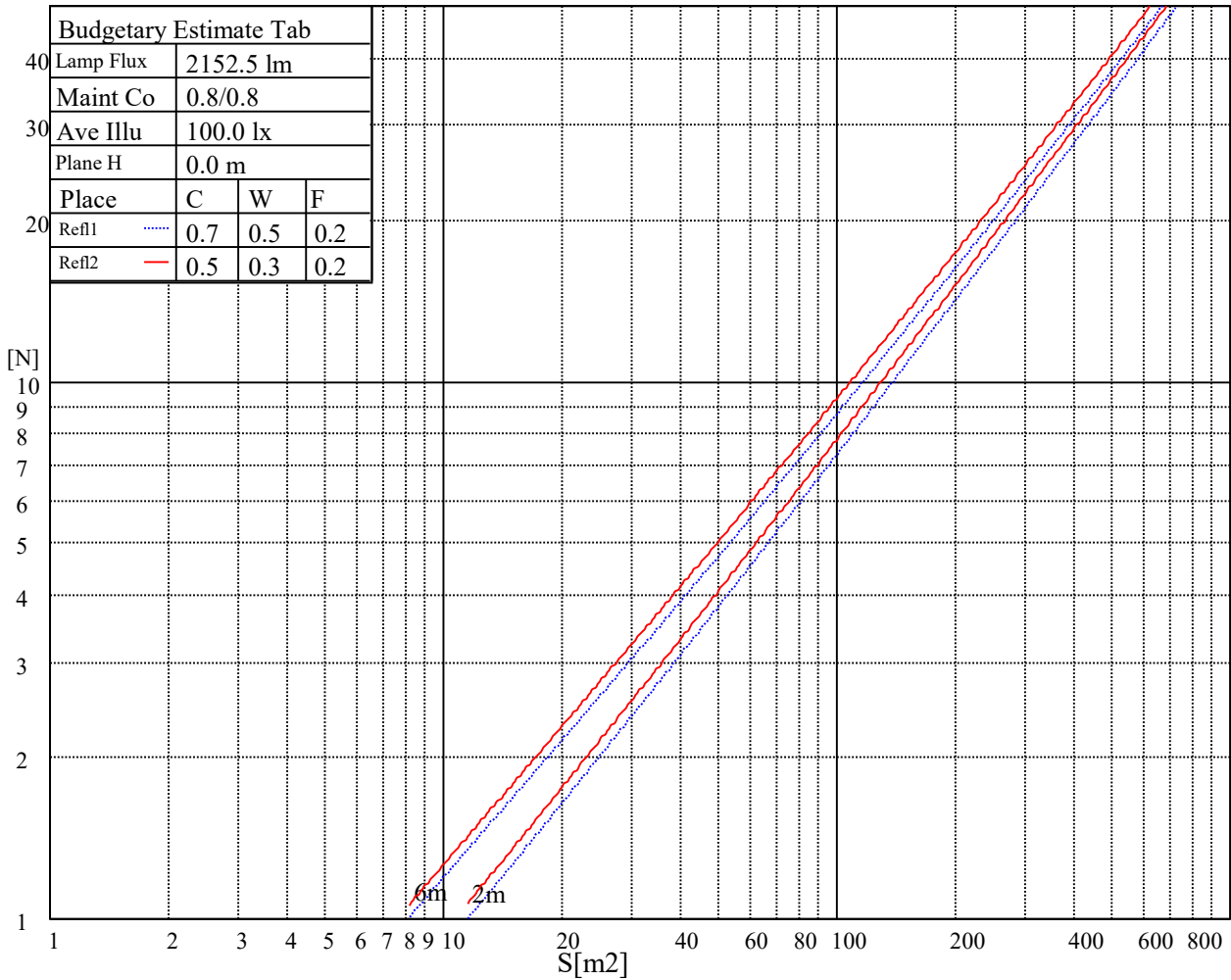
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7464	7464	7464	9214	9214	9214	19676	19676	19676

Glare Table

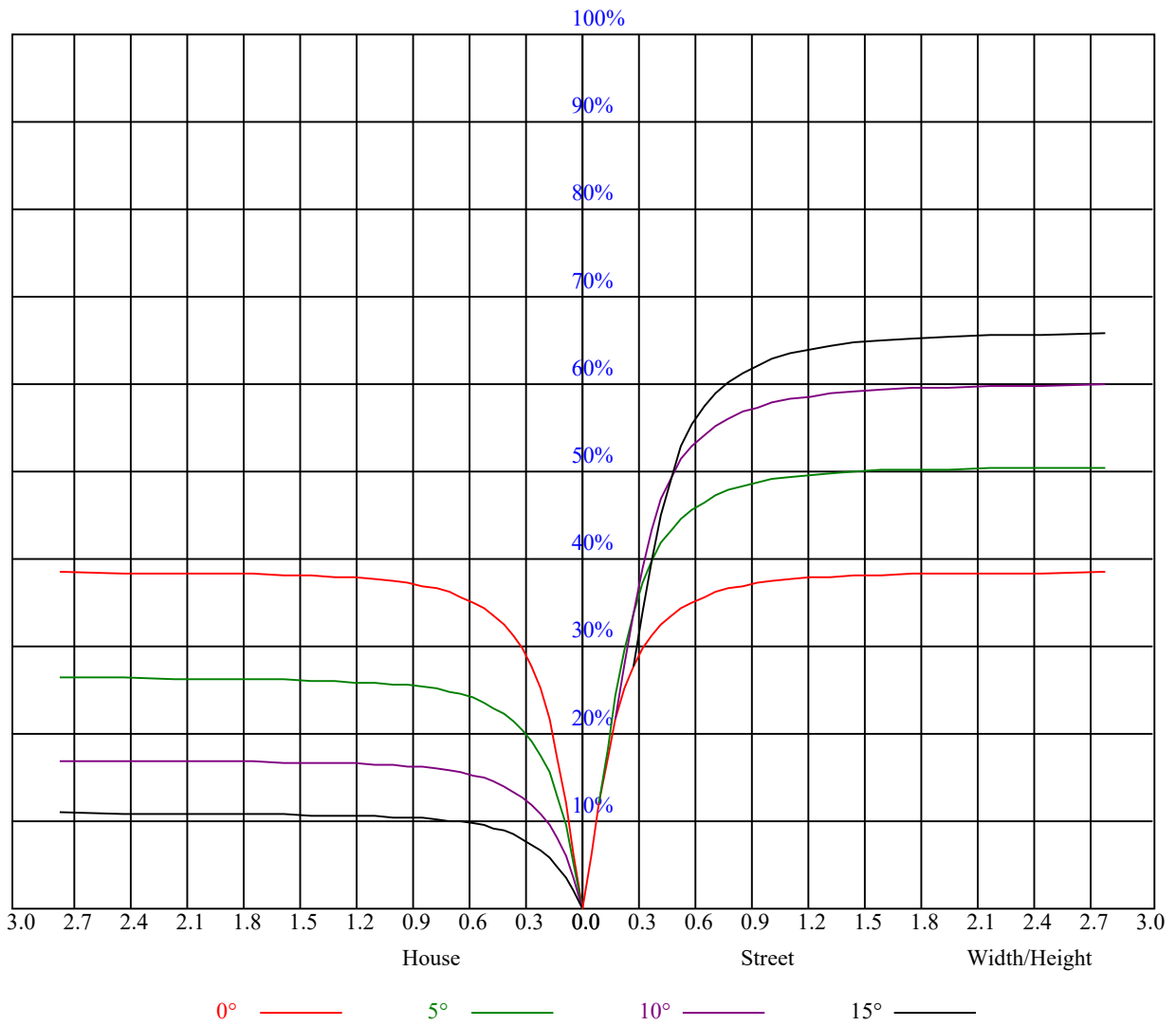
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

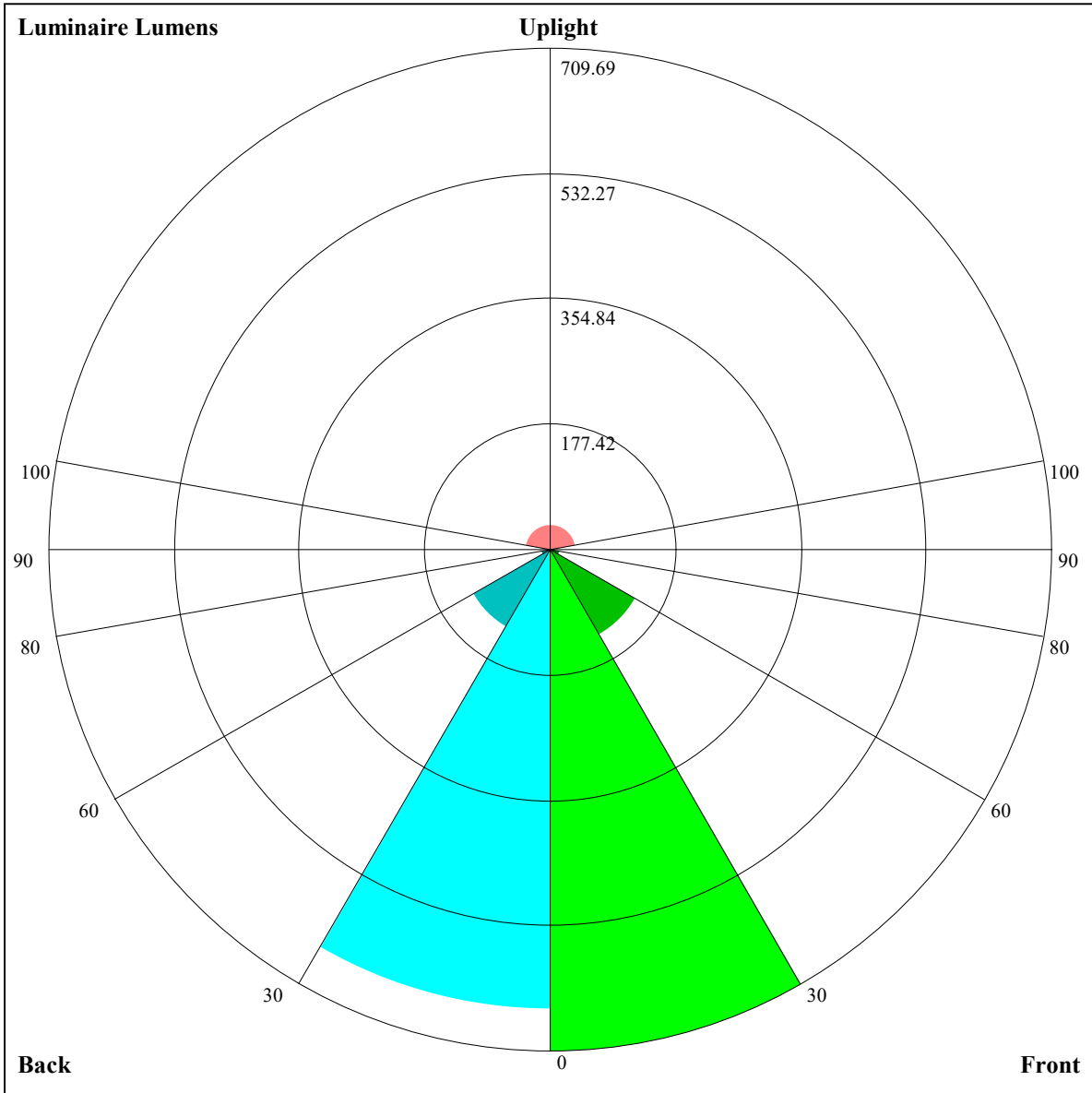
Luminance Limiting Curve





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





Luminaire Lumens:

FL=709.69,FM=138.31,FH=14.83,FVH=4.69

BL=650.04,BM=127.05,BH=14.16,BVH=4.5

UL=7.46,UH=35.48

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	7505.29	6638.70	4572.43	2280.99	1044.42	603.97	395.86	282.44	170.29
45.0	7402.88	6924.44	4775.59	2522.13	1133.06	614.98	408.52	278.03	175.85
90.0	7534.47	6370.03	4175.48	1999.10	907.99	545.44	365.46	234.54	158.67
135.0	7518.50	6578.69	4354.96	2198.40	950.82	558.82	369.98	280.24	159.28
180.0	7505.29	6007.75	3662.90	1662.15	781.58	493.80	323.40	210.21	132.47
225.0	7402.88	5761.10	3299.53	1307.04	732.03	460.44	310.02	203.16	129.99
270.0	7534.47	6275.88	3992.14	1841.09	837.96	509.27	348.51	224.24	146.51
315.0	7518.50	6074.92	3635.92	1799.24	837.63	511.09	346.80	225.18	146.23
360.0	7505.29	6638.70	4572.43	2280.99	1044.42	603.97	395.86	282.44	170.29
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	105.93	67.39	41.02	25.99	16.19	13.71	12.17	10.68	8.97
45.0	112.65	72.29	43.71	26.87	16.90	13.87	12.28	10.68	9.08
90.0	98.66	62.65	37.77	24.00	15.64	13.38	11.84	10.30	8.59
135.0	99.16	63.37	40.52	24.33	15.75	13.38	11.84	10.13	8.31
180.0	87.32	55.61	33.80	21.36	14.81	12.83	11.40	9.69	7.98
225.0	80.71	50.98	32.04	19.71	14.26	12.50	10.96	9.41	7.82
270.0	92.00	57.59	35.24	22.35	14.98	12.99	11.45	9.97	8.15
315.0	92.99	58.30	35.51	22.46	15.14	13.10	11.56	9.97	8.31
360.0	105.93	67.39	41.02	25.99	16.19	13.71	12.17	10.68	8.97
C/ γ (°)	90.0								
0.0	6.88								
45.0	6.99								
90.0	6.77								
135.0	6.77								
180.0	6.83								
225.0	6.83								
270.0	6.83								
315.0	6.77								
360.0	6.88								