
Nata

Client:

LumCAT: 3-1699-N

Luminaire: 92.70.045.00+92.70.089.00

Report No: nata-0100

Test No: GC2018052902

LampCAT: NICHIA NFDWJ130B-V=3

Lamp flux(lm): 2390.3

Number of Lamps: 1

Length(mm): 79

Phm Type: C

Voltage(V): 36.2000

Current(A): 0.5000

Power (W): 18.1000

PF: 0.0000

Ballast type: DC

Width(mm): 79

Height(mm): 0

Photometric Results

Lumens(lm): 1890.44, Efficiency(%): 79.09% , Luminous Efficacy(lm/W): 104.44

Central intensity(cd): 7718.770, Maximum intensity(cd): 7718.770

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=46.8

[C90/270]Total=46.8

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

Maximum s/h(1/4): C0_180=0.41 C90_270=0.41

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 80.94%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.884%

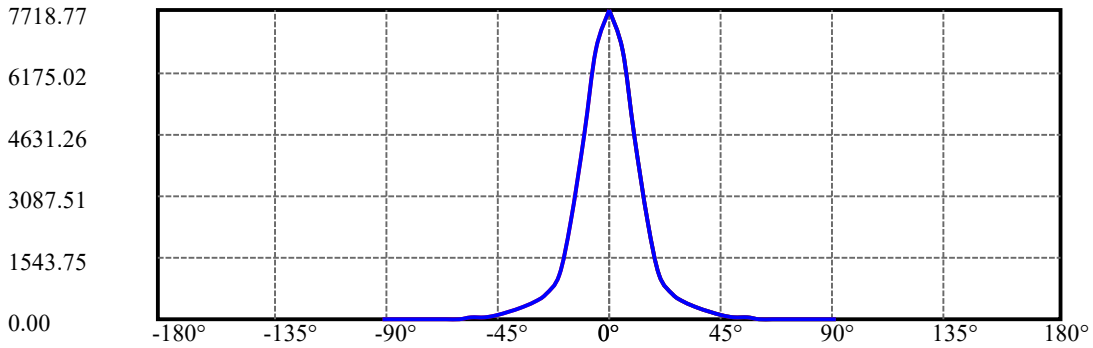
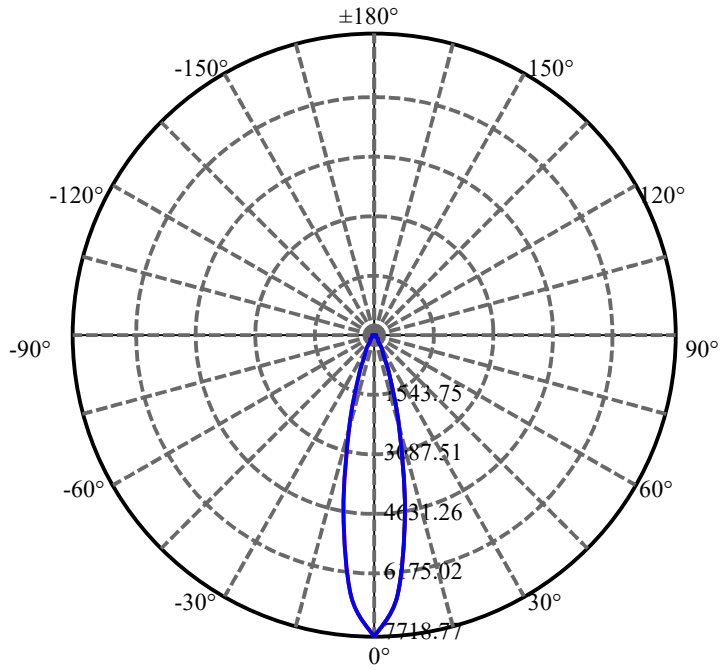
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7718.770	46.160	46.16	1.931%	2.442%
5.0	6701.121	320.135	366.295	13.393%	19.376%
10.0	4595.833	437.445	803.74	18.301%	42.516%
15.0	2440.925	346.290	1150.03	14.487%	60.834%
20.0	1097.288	205.713	1355.743	8.606%	71.716%
25.0	617.458	143.036	1498.779	5.984%	79.282%
30.0	414.348	113.560	1612.339	4.751%	85.289%
35.0	273.637	86.031	1698.37	3.599%	89.840%
40.0	177.165	62.421	1760.791	2.611%	93.142%
45.0	107.023	41.481	1802.272	1.735%	95.336%
50.0	64.134	26.930	1829.202	1.127%	96.761%
55.0	36.069	16.195	1845.397	.678%	97.618%
60.0	20.550	9.755	1855.152	.408%	98.134%
65.0	16.021	7.959	1863.111	.333%	98.555%
70.0	14.225	7.327	1870.439	.307%	98.942%
75.0	12.752	6.752	1877.19	.282%	99.299%
80.0	11.108	5.996	1883.186	.251%	99.617%
85.0	9.318	5.088	1888.275	.213%	99.886%
90.0	7.887	2.162	1890.436	.090%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1612.34	67.45%	85.29%
0-40	1760.79	73.66%	93.14%
0-60	1855.15	77.61%	98.13%
0-90	1888.27	79.00%	99.89%
0-120	1888.27	79.00%	99.89%
0-180	1890.44	79.09%	100.00%
60-90	42.88	1.79%	2.27%
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%
0-25.60	1512.35	63.27%	80.00%

ZONAL LUMEN SUMMARY

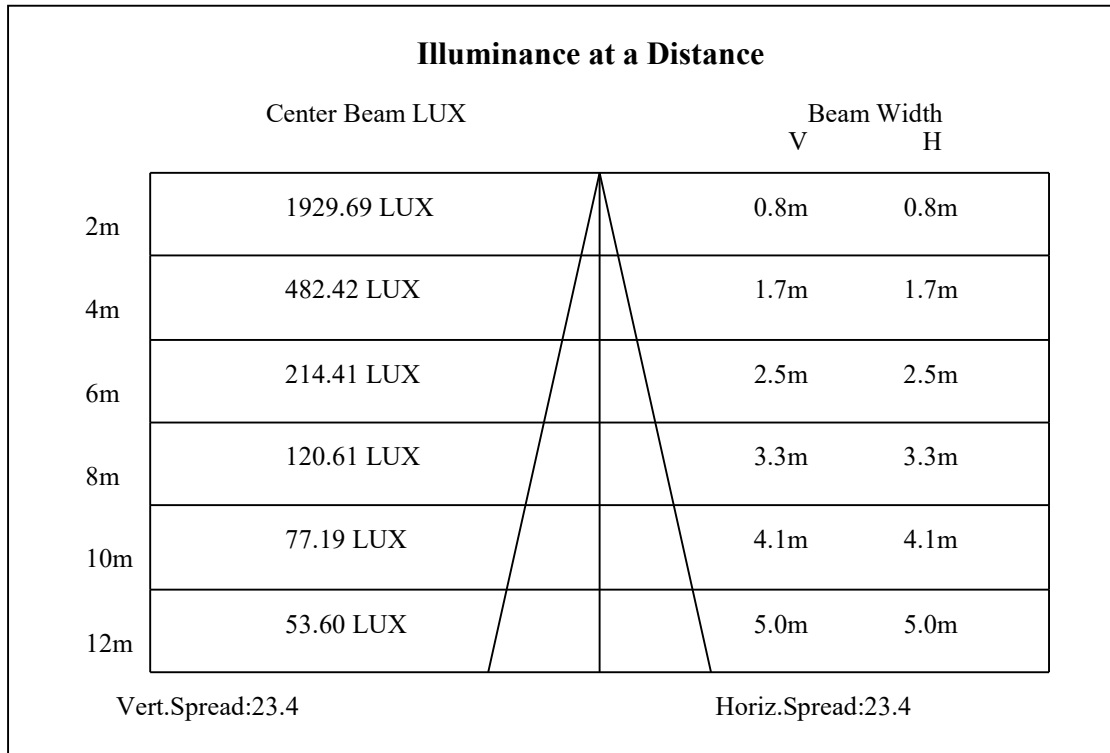
0-10	803.74
10-20	552.00
20-30	256.60
30-40	148.45
40-50	68.41
50-60	25.95
60-70	15.29
70-80	12.75
80-90	5.09
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

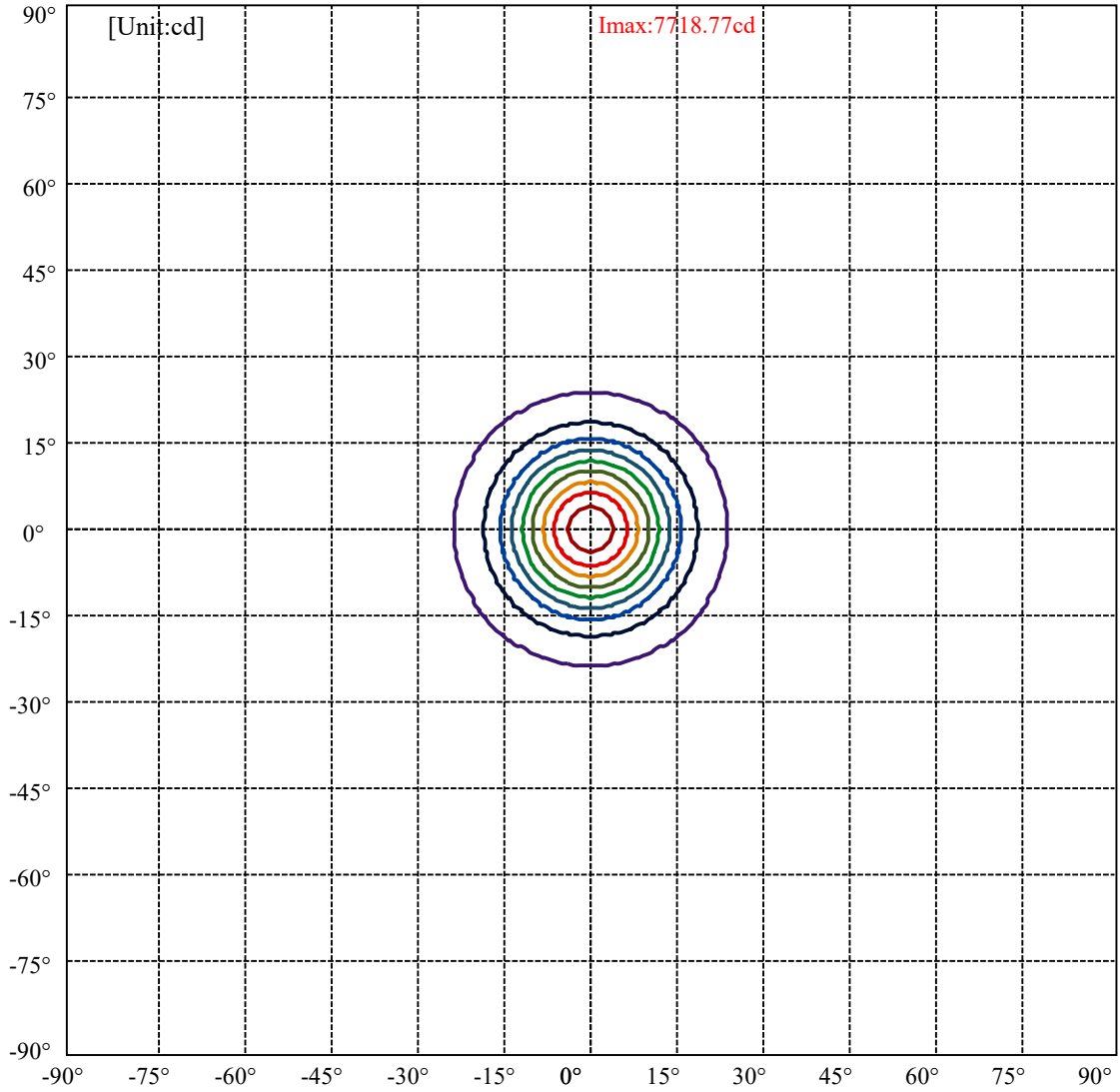


C0(Max): —————
C0/C180: —————
C90/C270: —————

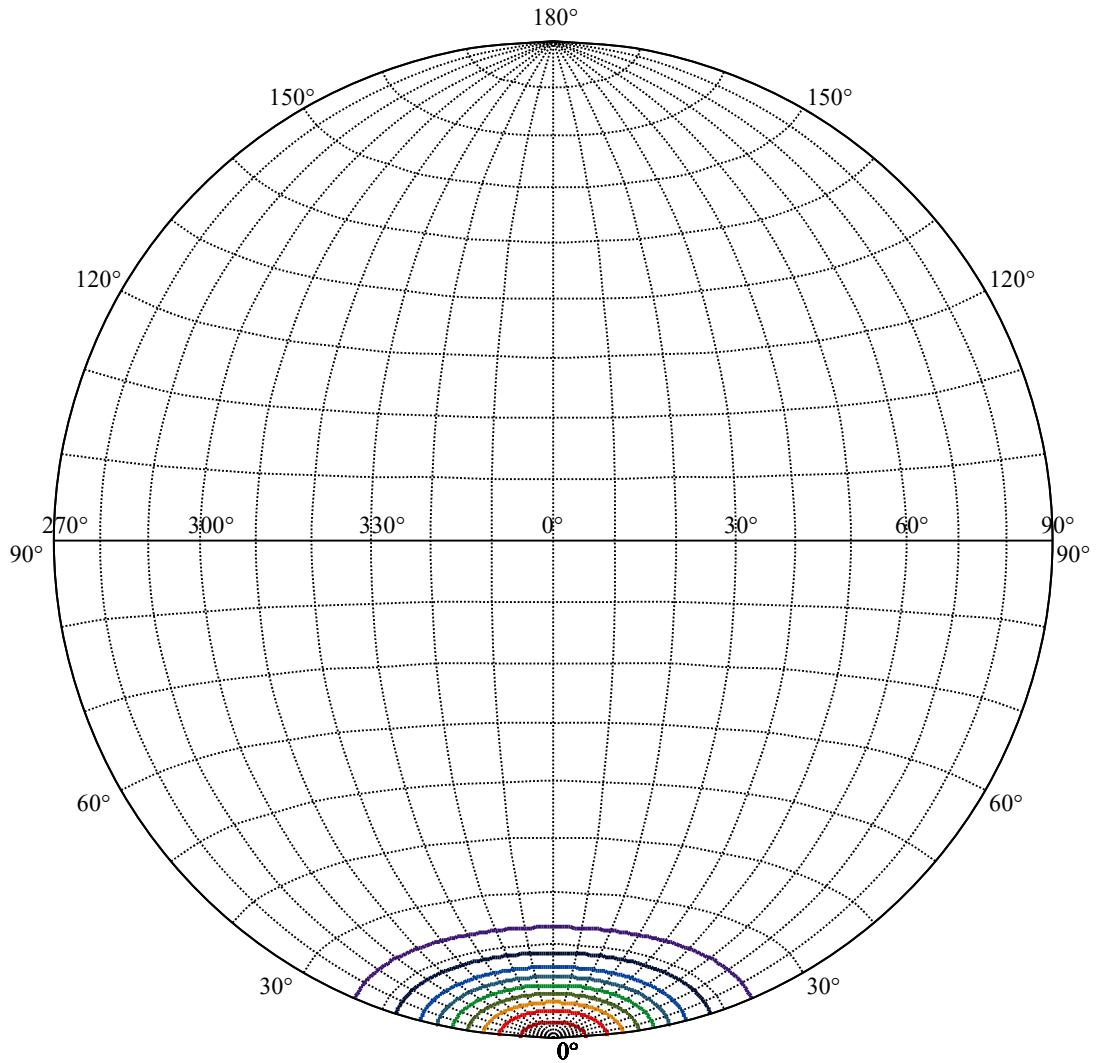
Field angle(10%Imax):C0/180Left:23.4 Right:23.4
:C90/270Left:23.4 Right:23.4

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





(10%Imax) 771.877	—
(20%Imax) 1543.75	—
(30%Imax) 2315.63	—
(40%Imax) 3087.51	—
(50%Imax) 3859.39	—
(60%Imax) 4631.26	—
(70%Imax) 5403.14	—
(80%Imax) 6175.02	—
(90%Imax) 6946.89	—



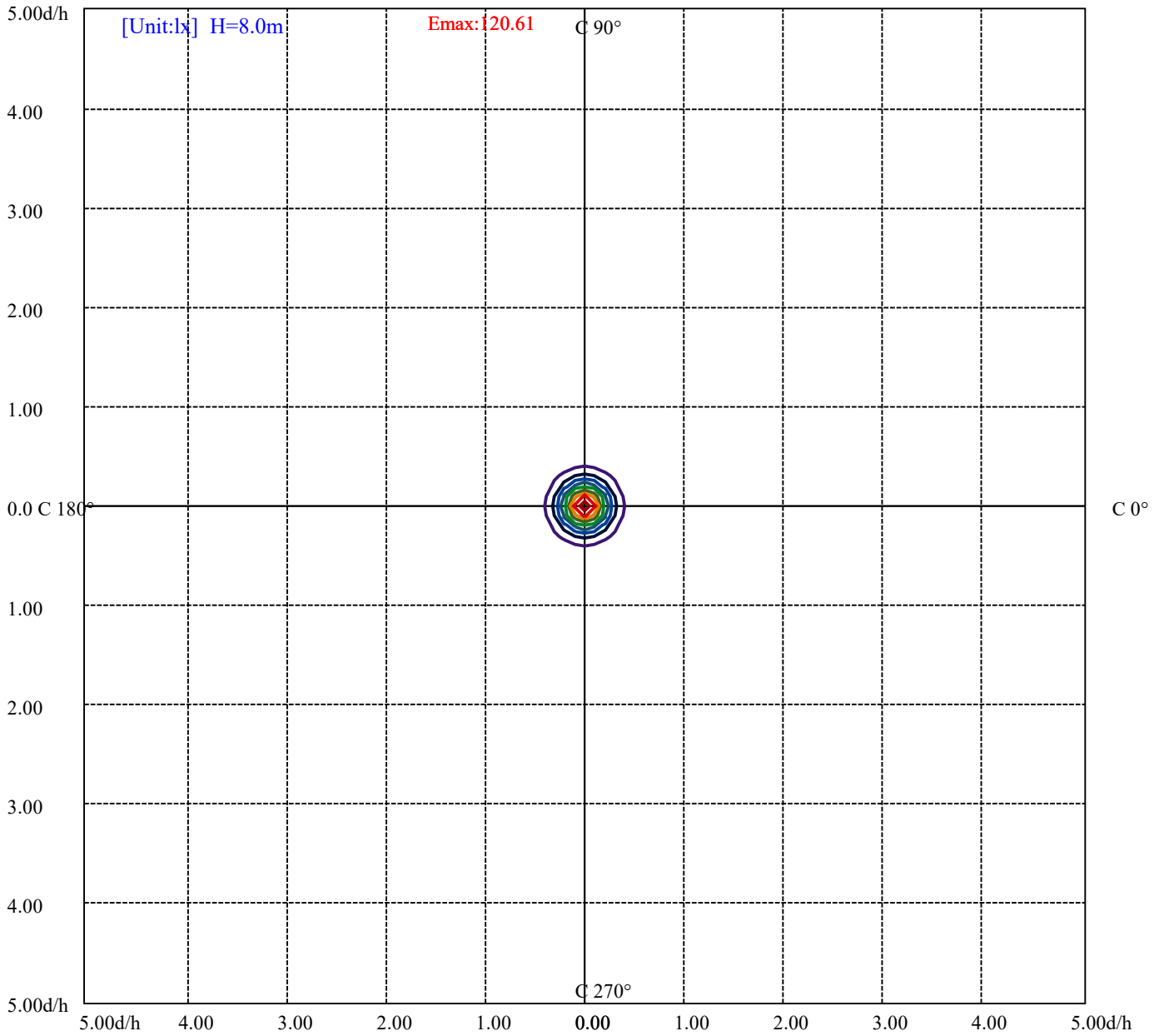
House

[Unit:cd]

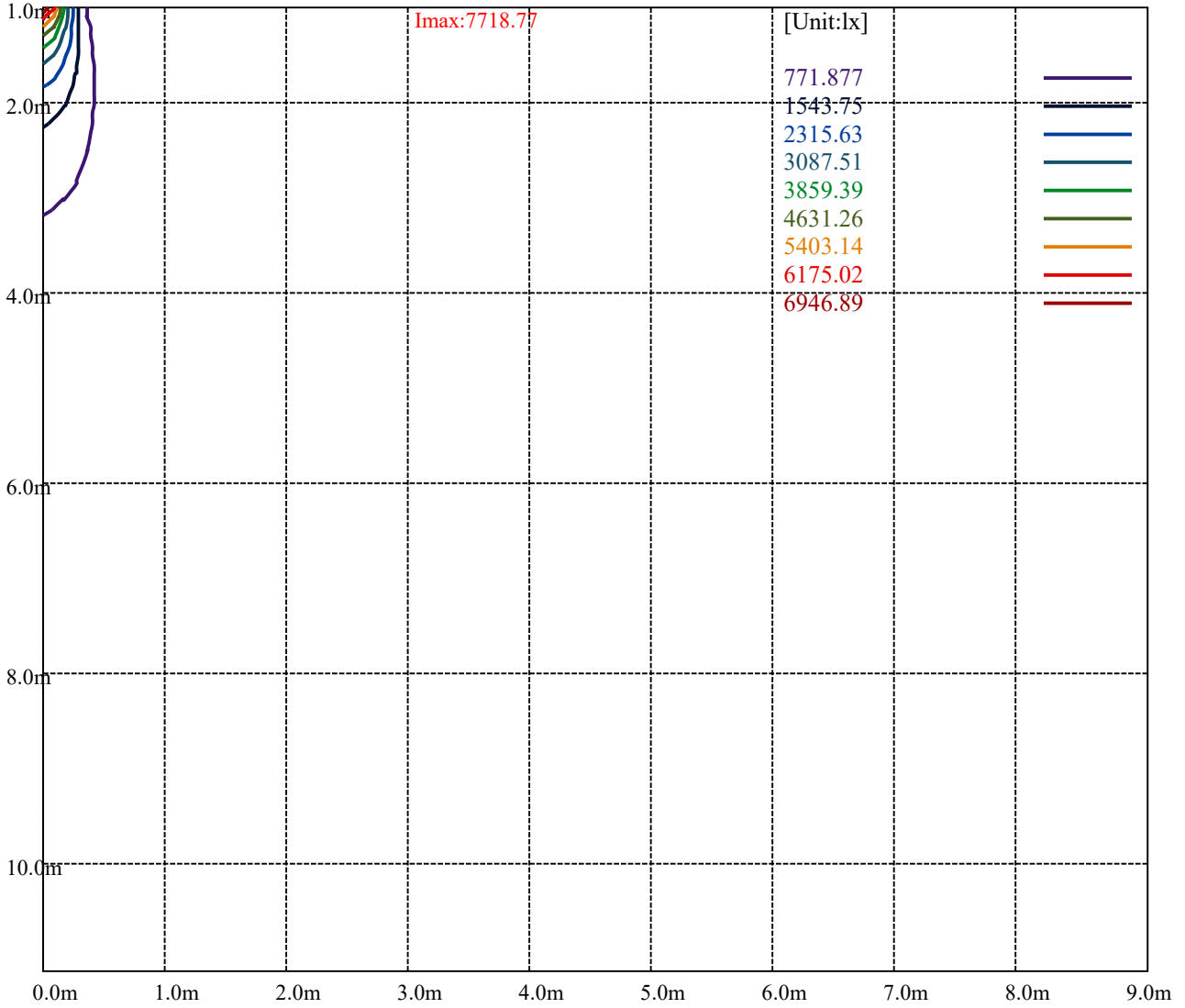
Road

Imax:7718.77

(10%Imax) 771.877	—
(20%Imax) 1543.75	—
(30%Imax) 2315.63	—
(40%Imax) 3087.51	—
(50%Imax) 3859.39	—
(60%Imax) 4631.26	—
(70%Imax) 5403.14	—
(80%Imax) 6175.02	—
(90%Imax) 6946.89	—



- (10%Emax) 12.06053
- (20%Emax) 24.12109
- (30%Emax) 36.18156
- (40%Emax) 48.24219
- (50%Emax) 60.30266
- (60%Emax) 72.36313
- (70%Emax) 84.42375
- (80%Emax) 96.48422
- (90%Emax) 108.5448



Luminance Table

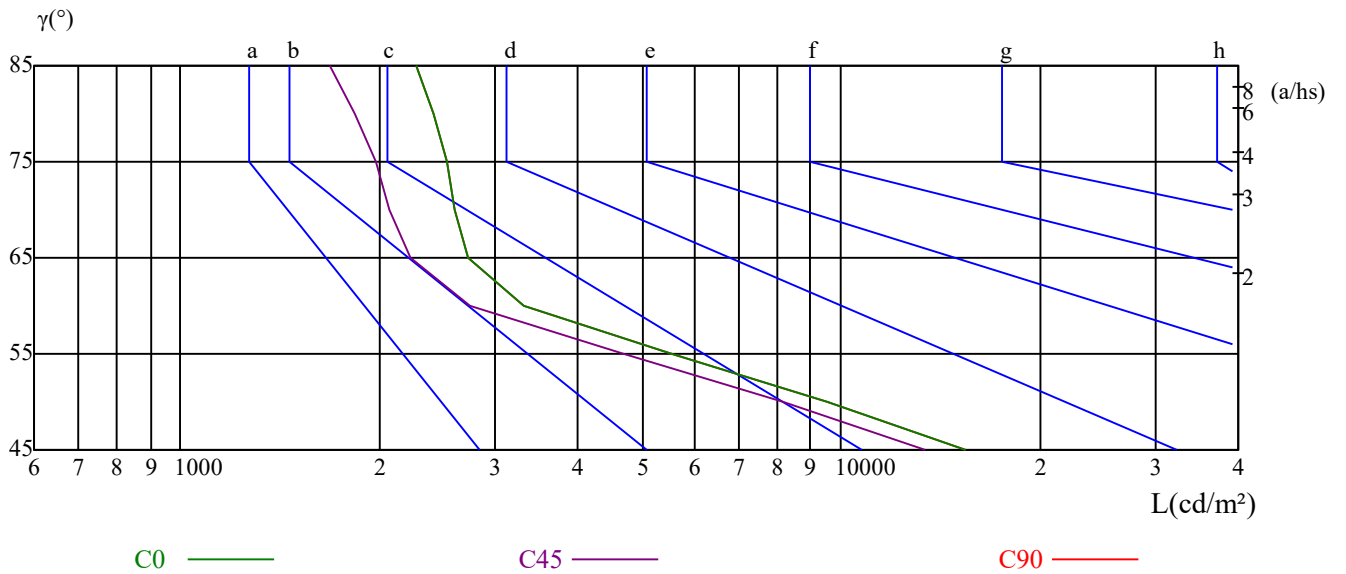
γ	45	50	55	60	65	70	75	80	85
C0	15450	9523	5556	3315	2734	2598	2526	2423	2281
C45	13431	8156	4685	2749	2227	2074	1971	1841	1678
C90	15450	9523	5556	3315	2734	2598	2526	2423	2281

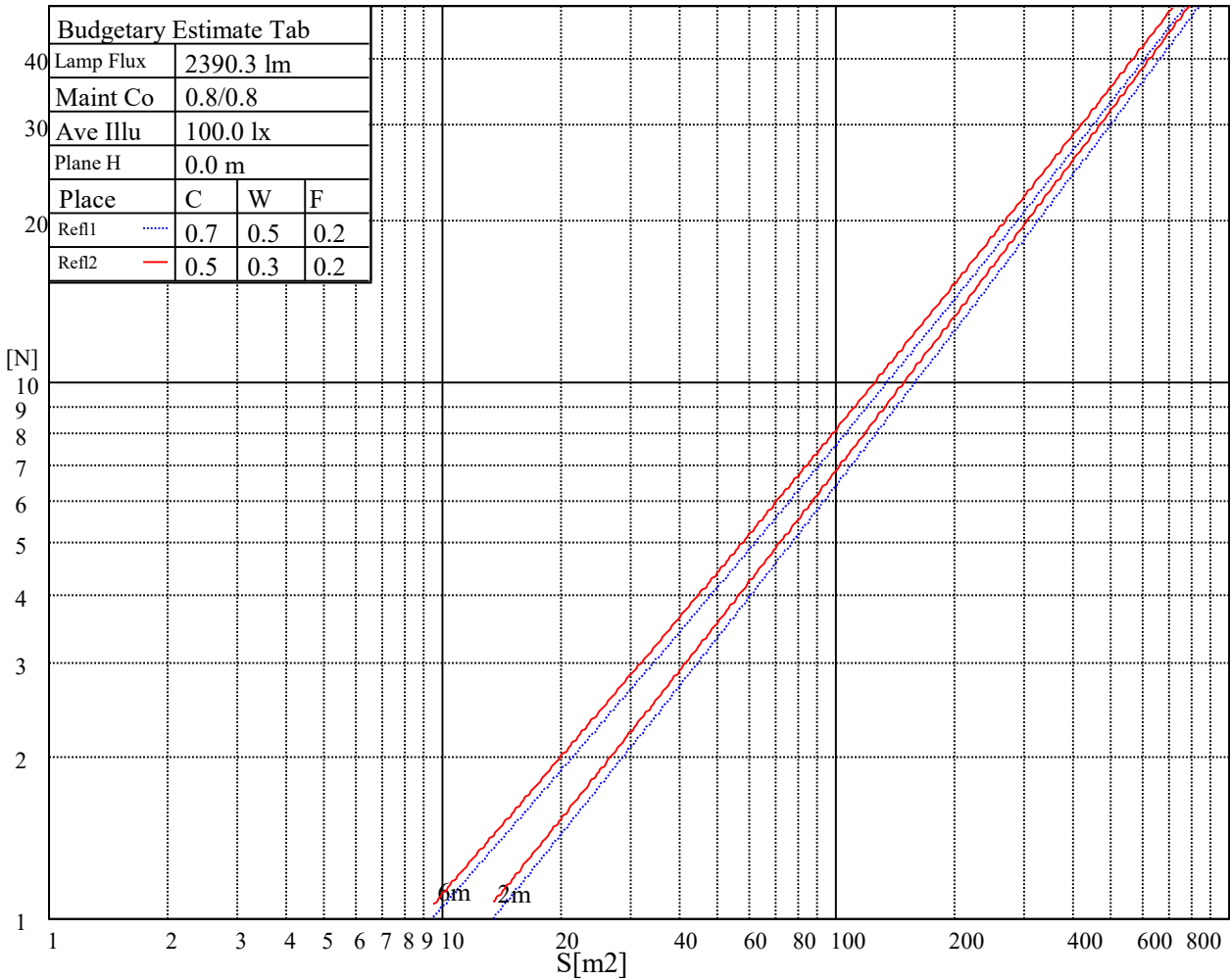
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6074	6074	6074	7895	7895	7895	17131	17131	17131

Glare Table

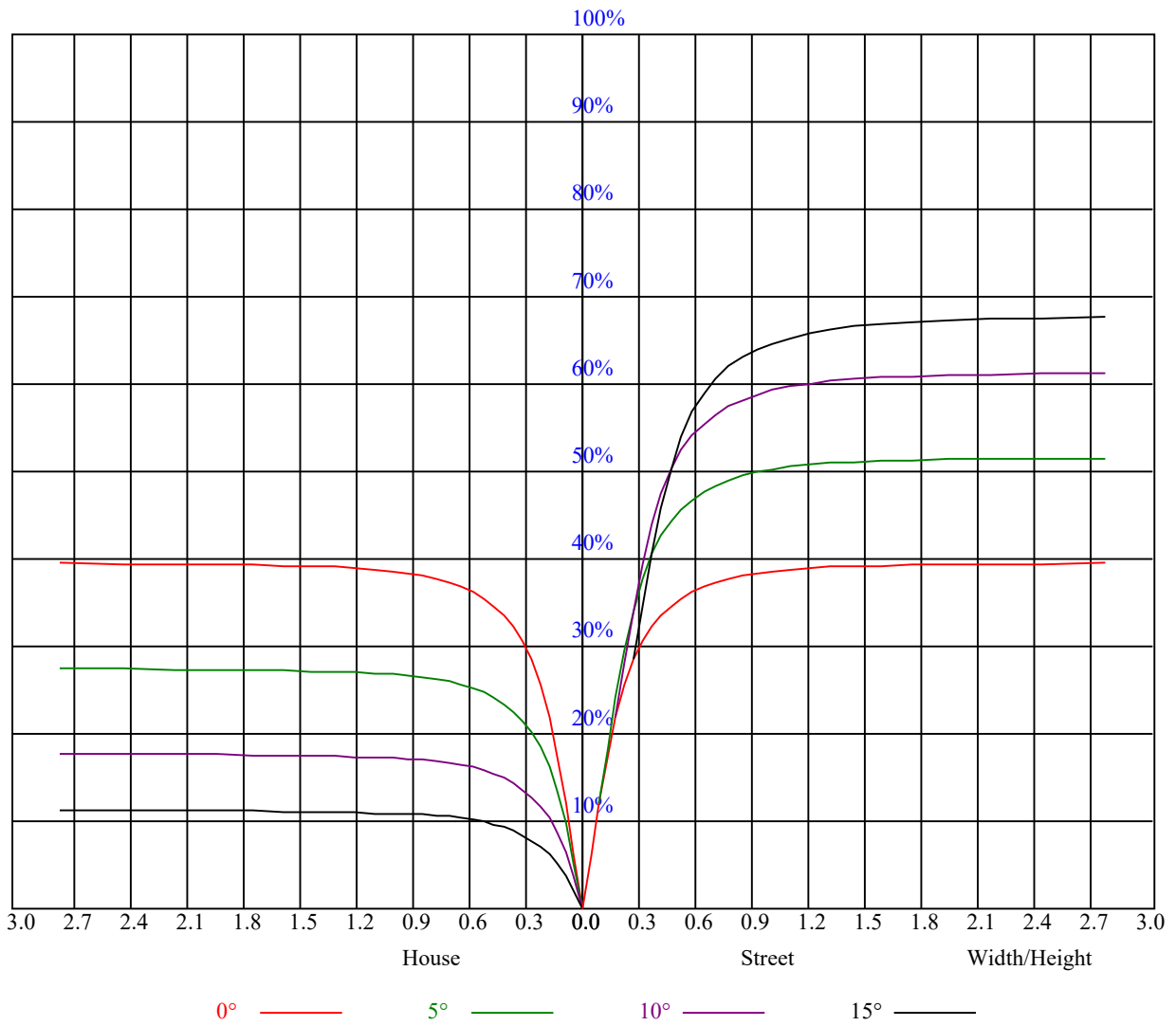
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

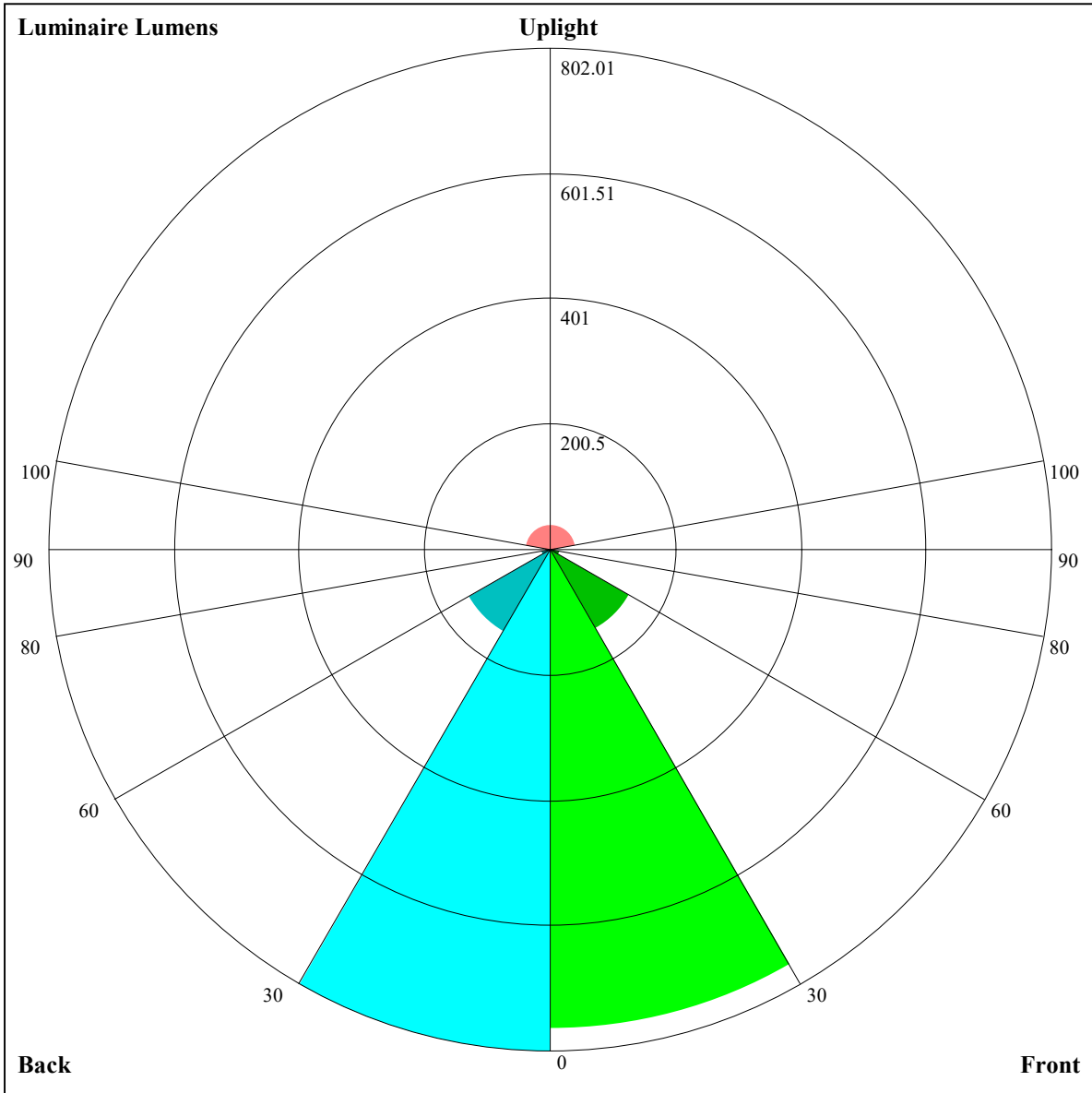
Luminance Limiting Curve





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





Luminaire Lumens:

FL=765.99,FM=146.83,FH=14.92,FVH=5.14

BL=802.01,BM=151.6,BH=15.12,BVH=5.13

UL=8.61,UH=40.95

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	7739.28	6634.30	4532.24	2303.56	1153.98	609.47	405.22	278.03	173.65
45.0	7765.71	6448.76	4278.43	2172.53	999.27	589.65	389.80	278.59	171.17
90.0	7650.64	6057.86	3948.65	1880.18	911.79	576.88	388.31	250.95	165.33
135.0	7719.46	6732.85	4771.19	2476.99	1113.79	638.65	423.38	278.59	185.10
180.0	7739.28	6793.41	4678.69	2644.91	1054.99	609.64	408.90	266.31	175.85
225.0	7765.71	7110.53	5000.77	2682.90	1074.26	644.71	430.60	278.20	183.17
270.0	7650.64	7177.70	5265.04	3053.43	1417.70	699.22	472.93	305.56	195.73
315.0	7719.46	6653.57	4291.65	2312.92	1052.51	571.43	395.64	252.87	167.32
360.0	7739.28	6634.30	4532.24	2303.56	1153.98	609.47	405.22	278.03	173.65
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	104.44	61.22	34.74	19.55	15.91	14.26	12.72	11.18	9.36
45.0	100.75	60.89	32.81	18.66	15.75	14.04	12.50	11.07	9.03
90.0	95.74	55.28	29.29	18.39	15.53	13.93	12.39	10.74	8.92
135.0	110.88	65.63	37.16	20.37	16.08	14.31	12.83	10.96	9.14
180.0	106.64	65.68	36.50	20.65	16.13	14.31	12.83	10.96	9.25
225.0	112.81	68.77	40.74	22.08	16.19	14.26	12.83	11.12	9.52
270.0	121.51	73.94	42.28	24.67	16.74	14.59	13.27	11.62	9.80
315.0	103.40	61.66	35.02	20.04	15.86	14.09	12.66	11.23	9.52
360.0	104.44	61.22	34.74	19.55	15.91	14.26	12.72	11.18	9.36
C/ γ (°)	90.0								
0.0	7.82								
45.0	7.82								
90.0	7.82								
135.0	7.87								
180.0	7.87								
225.0	8.04								
270.0	8.04								
315.0	7.82								
360.0	7.82								