



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.cn
Tel:+86 750 3770000 Fax:+86 750 3771111
Address:380Jinou Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

Client:

LumCAT: 3-2017-A

Luminaire: 92.70.045.00+92.70.089.00

Report No: NT2018031902

Voltage(V): 36.0000

Test No: nata-0100

Current(A): 0.8000

LampCAT: CREE CXA2520

Power (W): 28.8000

Lamp flux(lm): 2355.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 82

Width(mm): 82

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1905.64, Efficiency(%): 80.92% , Luminous Efficacy(lm/W): 66.17

Central intensity(cd): 6292.809, Maximum intensity(cd): 6292.809

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=27.0

[C90/270]Total=27.0

Field angle(10%Imax): [C0/180]Total=53.0

[C90/270]Total=53.0

Maximum s/h(1/2): C0_180=0.45 C90_270=0.45

Maximum s/h(1/4): C0_180=0.46 C90_270=0.46

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 82.44%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.988%

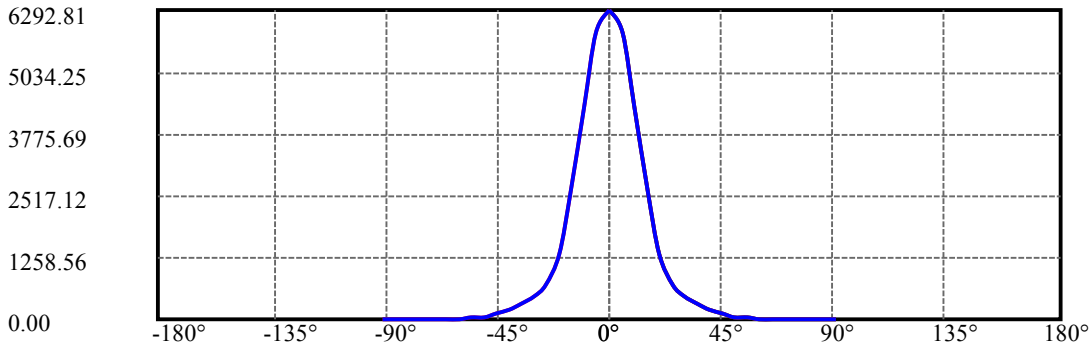
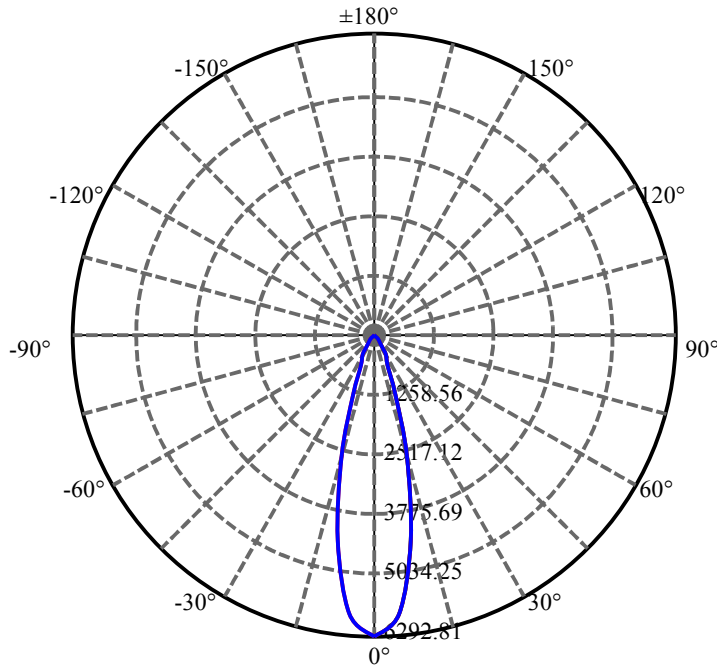
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6292.809	37.632	37.632	1.598%	1.975%
5.0	5814.713	277.788	315.42	11.796%	16.552%
10.0	4336.999	412.809	728.229	17.529%	38.214%
15.0	2615.041	370.992	1099.221	15.753%	57.683%
20.0	1322.014	247.843	1347.064	10.524%	70.688%
25.0	701.852	162.586	1509.65	6.904%	79.220%
30.0	463.031	126.902	1636.553	5.389%	85.880%
35.0	310.903	97.748	1734.3	4.151%	91.009%
40.0	200.392	70.605	1804.905	2.998%	94.714%
45.0	104.924	40.668	1845.573	1.727%	96.848%
50.0	54.630	22.939	1868.512	.974%	98.052%
55.0	22.642	10.166	1878.678	.432%	98.585%
60.0	9.057	4.299	1882.978	.183%	98.811%
65.0	7.949	3.949	1886.926	.168%	99.018%
70.0	7.839	4.038	1890.964	.171%	99.230%
75.0	7.770	4.114	1895.078	.175%	99.446%
80.0	7.790	4.205	1899.283	.179%	99.667%
85.0	7.846	4.284	1903.567	.182%	99.891%
90.0	7.550	2.069	1905.636	.088%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1636.55	69.49%	85.88%
0-40	1804.91	76.64%	94.71%
0-60	1882.98	79.96%	98.81%
0-90	1903.57	80.83%	99.89%
0-120	1903.57	80.83%	99.89%
0-180	1905.64	80.92%	100.00%
60-90	24.89	1.06%	1.31%
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%
0-25.59	1524.51	64.73%	80.00%

ZONAL LUMEN SUMMARY

0-10	728.23
10-20	618.84
20-30	289.49
30-40	168.35
40-50	63.61
50-60	14.47
60-70	7.99
70-80	8.32
80-90	4.28
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: ———

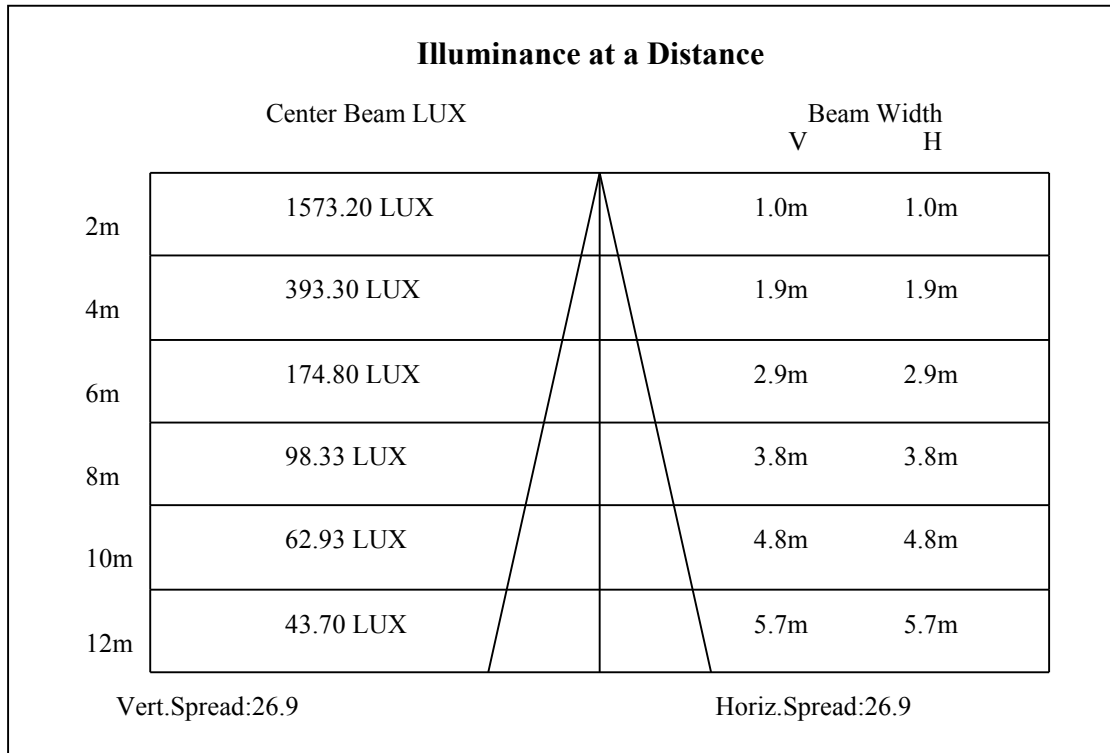
C90/C270: ———

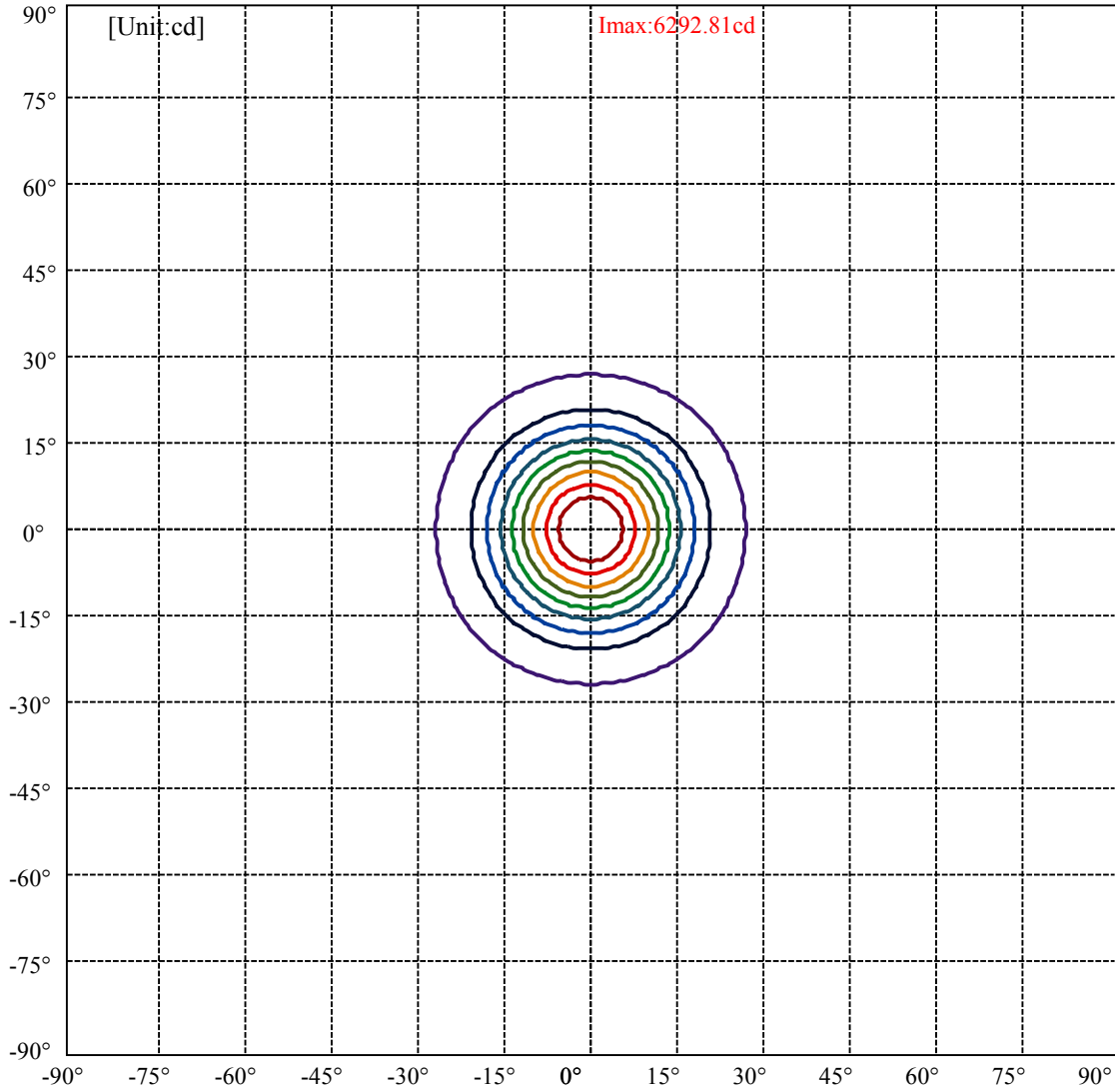
Field angle(10%Imax):C0/180Left:26.5 Right:26.5

:C90/270Left:26.5 Right:26.5

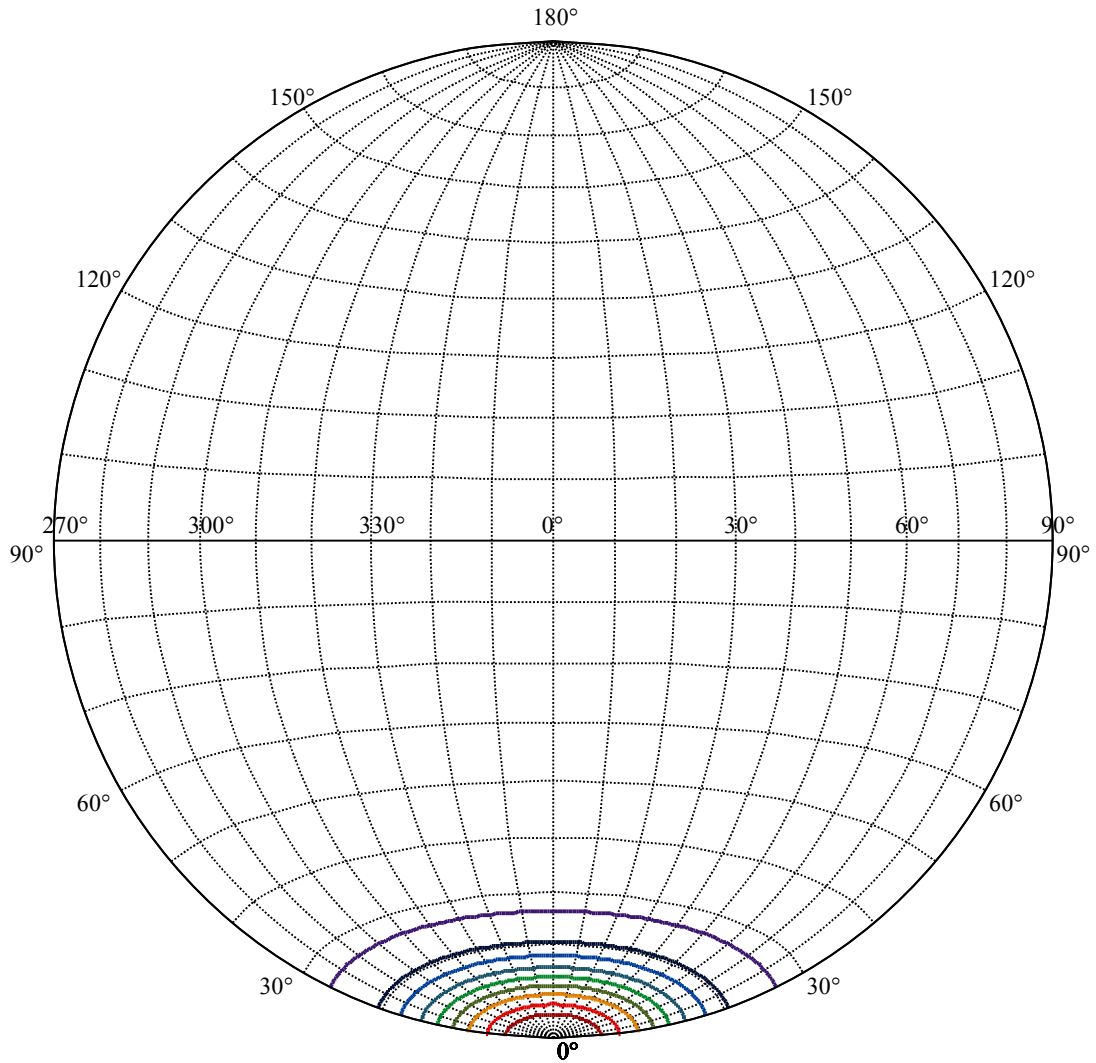
Beam Angle(50%Imax):C0/180Left:13.5 Right:13.5

:C90/270Left:13.5 Right:13.5





(10%Imax) 629.281	—
(20%Imax) 1258.56	—
(30%Imax) 1887.84	—
(40%Imax) 2517.12	—
(50%Imax) 3146.4	—
(60%Imax) 3775.69	—
(70%Imax) 4404.97	—
(80%Imax) 5034.25	—
(90%Imax) 5663.53	—



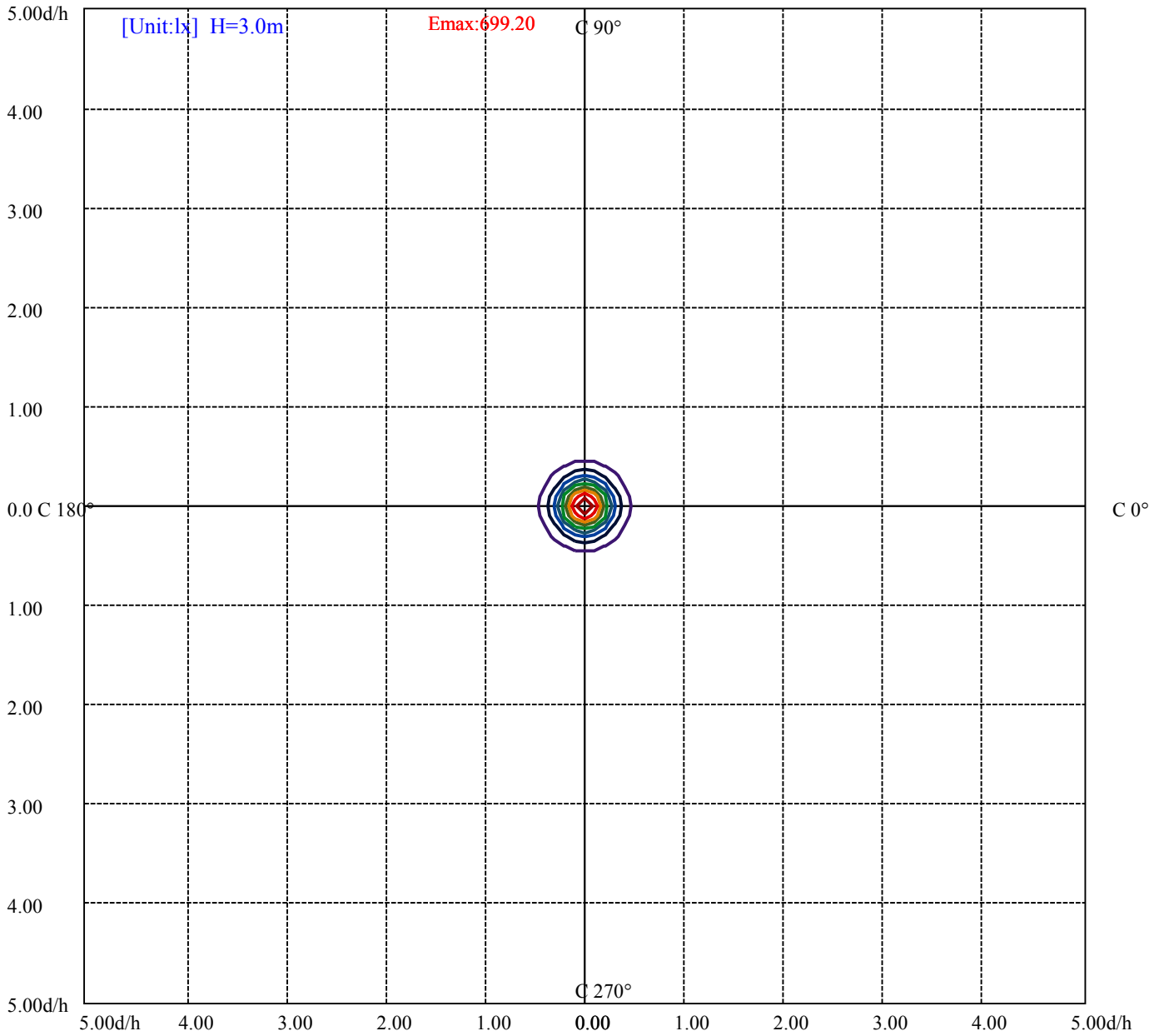
House

[Unit:cd]

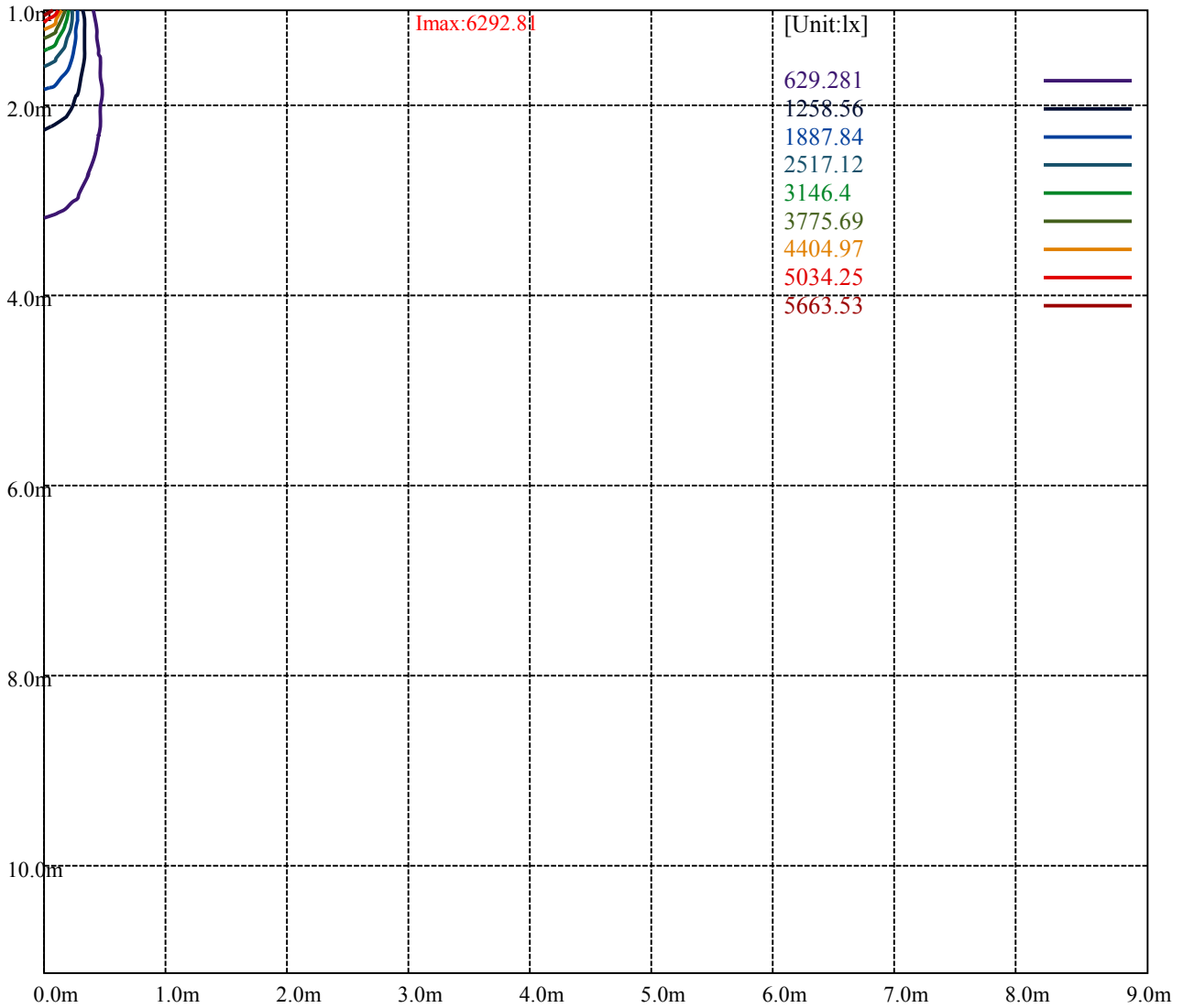
Road

Imax:6292.81

(10%Imax) 629.281	—
(20%Imax) 1258.56	—
(30%Imax) 1887.84	—
(40%Imax) 2517.12	—
(50%Imax) 3146.4	—
(60%Imax) 3775.69	—
(70%Imax) 4404.97	—
(80%Imax) 5034.25	—
(90%Imax) 5663.53	—



- (10%Emax) 69.91989
- (20%Emax) 139.84
- (30%Emax) 209.76
- (40%Emax) 279.68
- (50%Emax) 349.6
- (60%Emax) 419.52
- (70%Emax) 489.44
- (80%Emax) 559.36
- (90%Emax) 629.28



Luminance Table

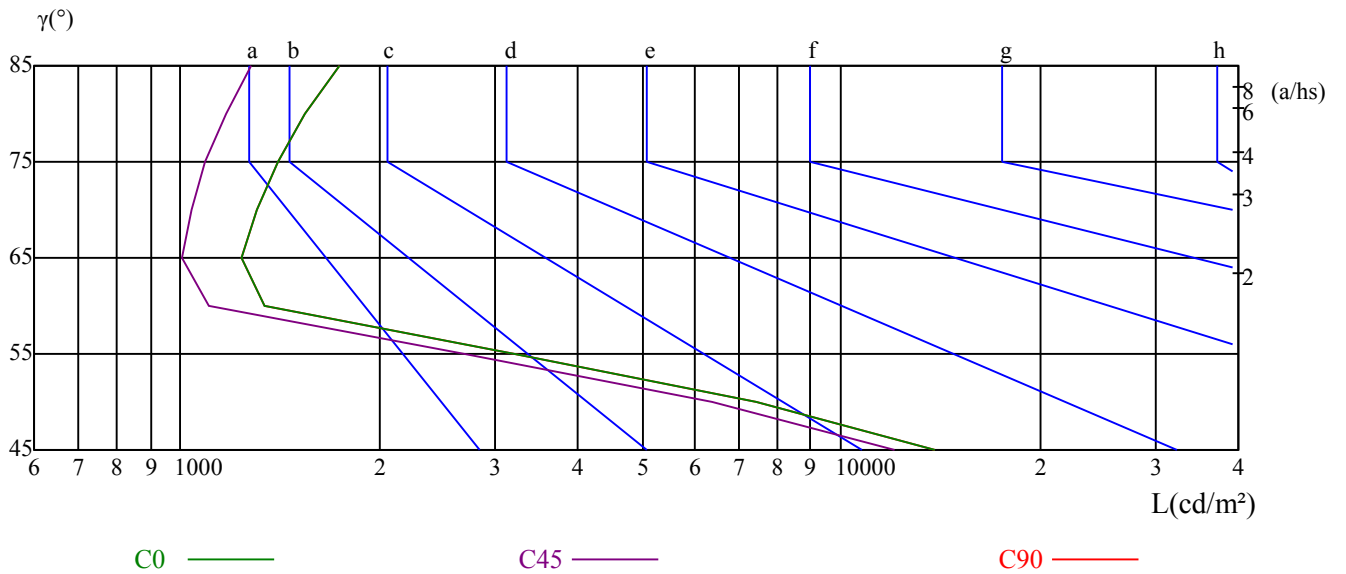
γ	45	50	55	60	65	70	75	80	85
C0	13920	7446	3198	1338	1240	1307	1402	1545	1741
C45	12073	6363	2690	1107	1008	1041	1092	1172	1280
C90	13920	7446	3198	1338	1240	1307	1402	1545	1741

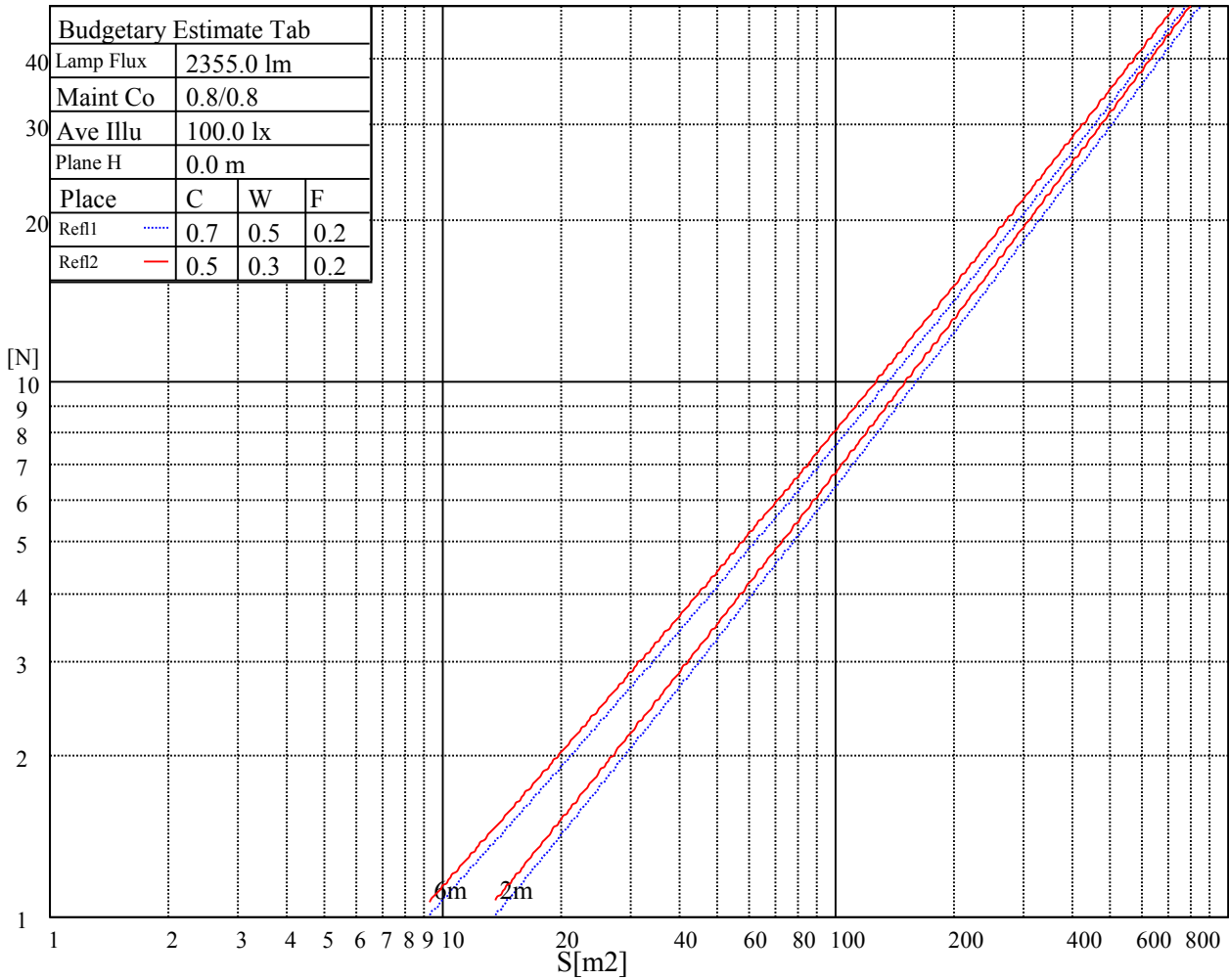
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2797	2797	2797	4465	4465	4465	13387	13387	13387

Glare Table

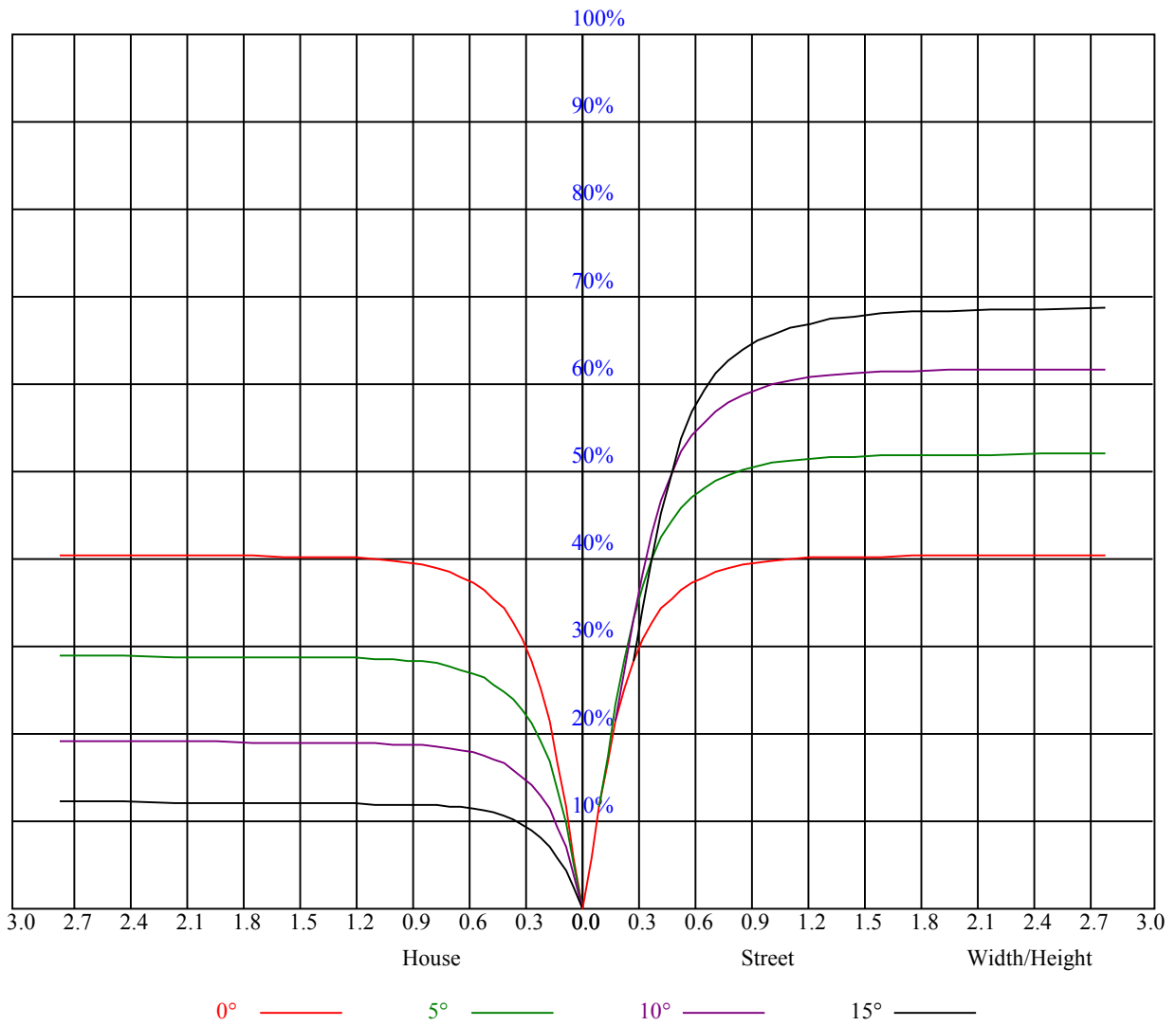
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

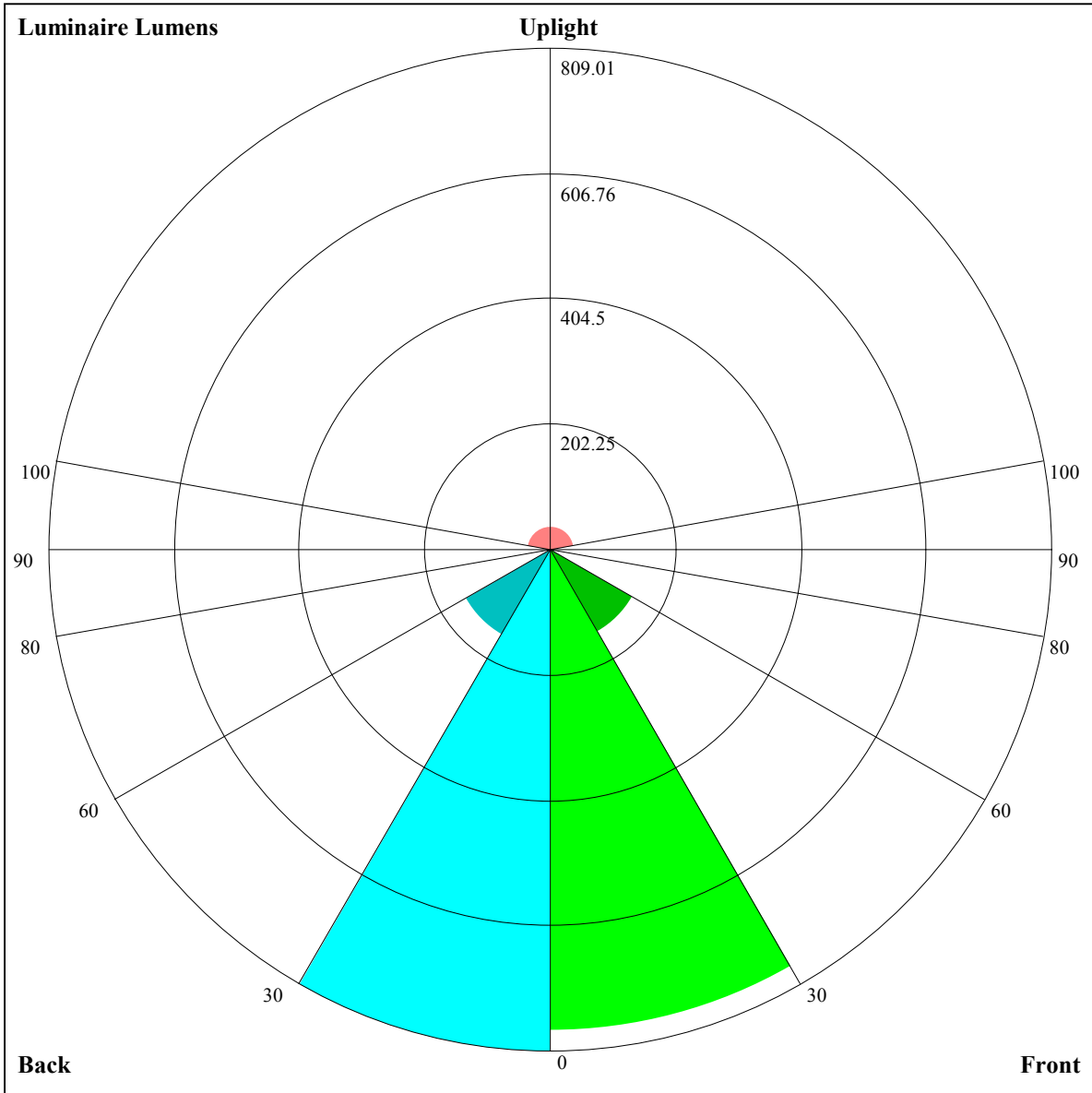
Luminance Limiting Curve





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	0.98	0.98	0.98	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.84	0.84	0.84	0.82
1	0.90	0.88	0.86	0.89	0.87	0.85	0.85	0.84	0.82	0.82	0.81	0.80	0.79	0.78	0.77	0.76
2	0.86	0.82	0.80	0.84	0.81	0.79	0.82	0.79	0.77	0.79	0.77	0.75	0.77	0.75	0.74	0.73
3	0.81	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.74	0.72	0.71	0.70
4	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.72	0.70	0.68	0.67
5	0.74	0.70	0.68	0.74	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.70	0.67	0.66	0.64
6	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.62
7	0.69	0.65	0.62	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.60
8	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.58
9	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.62	0.59	0.57	0.57
10	0.63	0.59	0.56	0.62	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.55





Luminaire Lumens:

FL=777.09,FM=153.36,FH=8.22,FVH=4.25

BL=809.01,BM=159.69,BH=8.22,BVH=4.21

UL=8.24,UH=39.2

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	6316.07	5832.12	4422.68	2632.80	1454.04	733.90	480.09	319.33	198.20
45.0	6289.64	5633.37	3967.36	2316.22	1187.02	616.63	419.53	279.14	167.59
90.0	6259.91	5572.81	3826.42	2169.22	1092.98	604.13	418.92	269.01	162.03
135.0	6305.61	5877.27	4397.35	2670.24	1323.01	681.05	454.22	303.91	198.04
180.0	6316.07	5820.01	4233.29	2479.74	1057.52	674.94	456.03	310.74	186.37
225.0	6289.64	6035.83	4812.48	2995.07	1656.10	799.47	496.61	340.85	220.01
270.0	6259.91	6051.25	4877.45	3172.35	1745.84	851.72	530.74	365.02	281.89
315.0	6305.61	5695.03	4158.96	2484.70	1059.62	652.97	448.10	299.23	189.01
360.0	6316.07	5832.12	4422.68	2632.80	1454.04	733.90	480.09	319.33	198.20

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	108.96	55.11	23.29	8.53	7.87	7.76	7.71	7.82	7.98
45.0	90.07	45.64	17.45	8.26	7.98	7.93	7.87	7.87	7.87
90.0	86.82	41.79	16.30	8.20	7.93	7.87	7.76	7.87	7.71
135.0	105.98	55.28	23.29	8.59	7.98	7.76	7.76	7.71	7.76
180.0	98.61	52.25	20.81	8.20	7.87	7.76	7.71	7.65	7.76
225.0	117.82	65.24	28.30	10.30	7.93	7.82	7.71	7.71	7.76
270.0	126.02	67.94	29.12	11.73	8.09	7.93	7.82	7.82	7.93
315.0	105.10	53.79	22.57	8.64	7.93	7.87	7.82	7.87	7.98
360.0	108.96	55.11	23.29	8.53	7.87	7.76	7.71	7.82	7.98

C/γ(°)	90.0
0.0	7.49
45.0	7.60
90.0	7.54
135.0	7.54
180.0	7.49
225.0	7.60
270.0	7.60
315.0	7.54
360.0	7.49