



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: 3-2020-A

Luminaire: 92.70.045.00+92.70.089.00

Report No: NT2018032105

Voltage(V): 43.8000

Test No: nata-0100

Current(A): 0.5000

LampCAT: NICHIA NEVWJ048Z-V1

Power (W): 21.9000

Lamp flux(lm): 3055.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 86

Width(mm): 86

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2498.12, Efficiency(%): 81.77% , Luminous Efficacy(lm/W): 114.07

Central intensity(cd): 9306.459, Maximum intensity(cd): 9306.459

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=25.2

[C90/270]Total=25.2

Field angle(10%Imax): [C0/180]Total=49.8

[C90/270]Total=49.8

Maximum s/h(1/2): C0_180=0.43 C90_270=0.43

Maximum s/h(1/4): C0_180=0.45 C90_270=0.45

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 83.52%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.748%

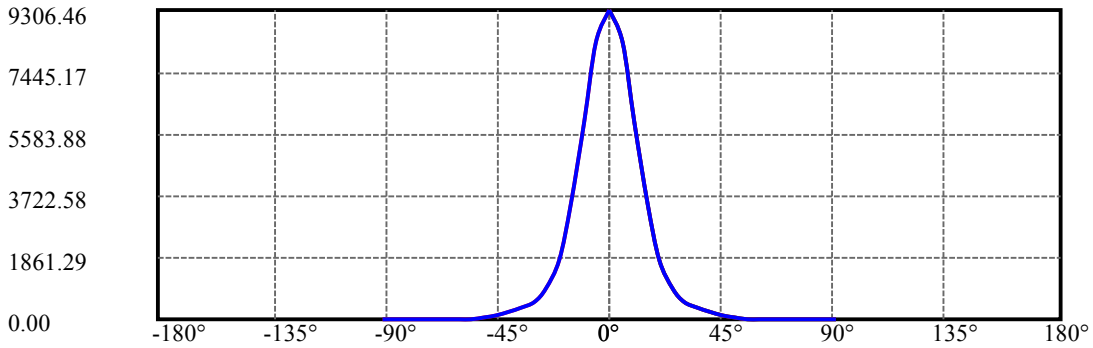
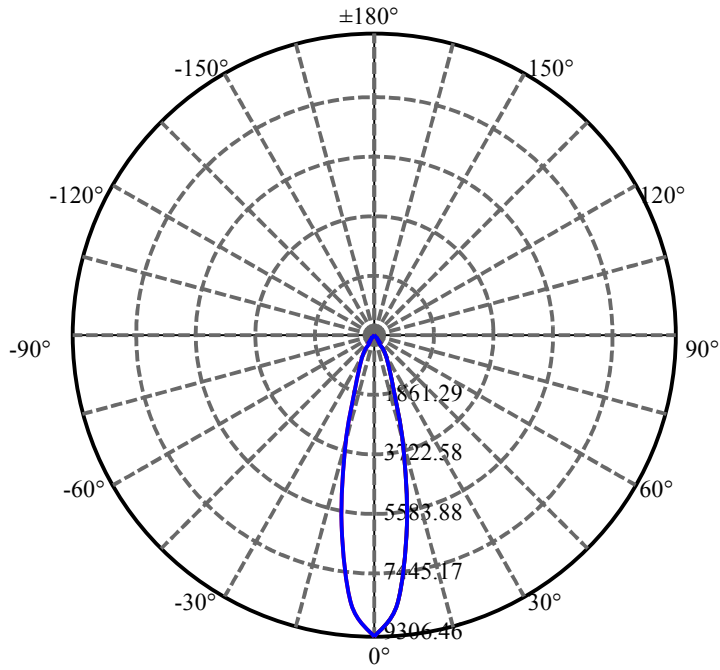
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9306.459	55.654	55.654	1.822%	2.228%
5.0	8328.519	397.881	453.536	13.024%	18.155%
10.0	5941.962	565.574	1019.11	18.513%	40.795%
15.0	3494.017	495.691	1514.8	16.226%	60.638%
20.0	1787.688	335.145	1849.945	10.970%	74.053%
25.0	916.792	212.378	2062.323	6.952%	82.555%
30.0	538.266	147.522	2209.845	4.829%	88.460%
35.0	337.207	106.017	2315.862	3.470%	92.704%
40.0	214.651	75.629	2391.491	2.476%	95.732%
45.0	108.730	42.143	2433.634	1.379%	97.419%
50.0	51.099	21.456	2455.09	.702%	98.277%
55.0	18.175	8.161	2463.251	.267%	98.604%
60.0	10.881	5.165	2468.416	.169%	98.811%
65.0	10.392	5.162	2473.579	.169%	99.018%
70.0	10.247	5.278	2478.857	.173%	99.229%
75.0	10.227	5.415	2484.272	.177%	99.446%
80.0	10.213	5.513	2489.785	.180%	99.666%
85.0	10.227	5.584	2495.369	.183%	99.890%
90.0	10.041	2.752	2498.121	.090%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2209.84	72.34%	88.46%
0-40	2391.49	78.28%	95.73%
0-60	2468.42	80.80%	98.81%
0-90	2495.37	81.68%	99.89%
0-120	2495.37	81.68%	99.89%
0-180	2498.12	81.77%	100.00%
60-90	32.12	1.05%	1.29%
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%
0-23.50	1998.50	65.42%	80.00%

ZONAL LUMEN SUMMARY

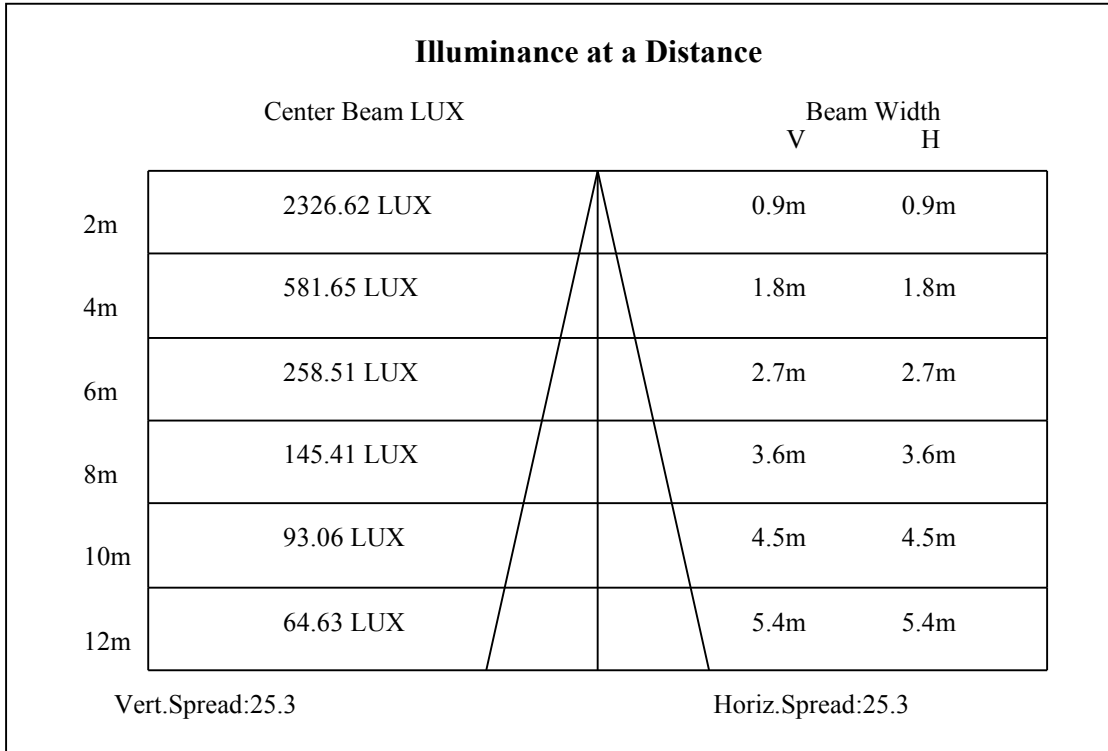
0-10	1019.11
10-20	830.84
20-30	359.90
30-40	181.65
40-50	63.60
50-60	13.33
60-70	10.44
70-80	10.93
80-90	5.58
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

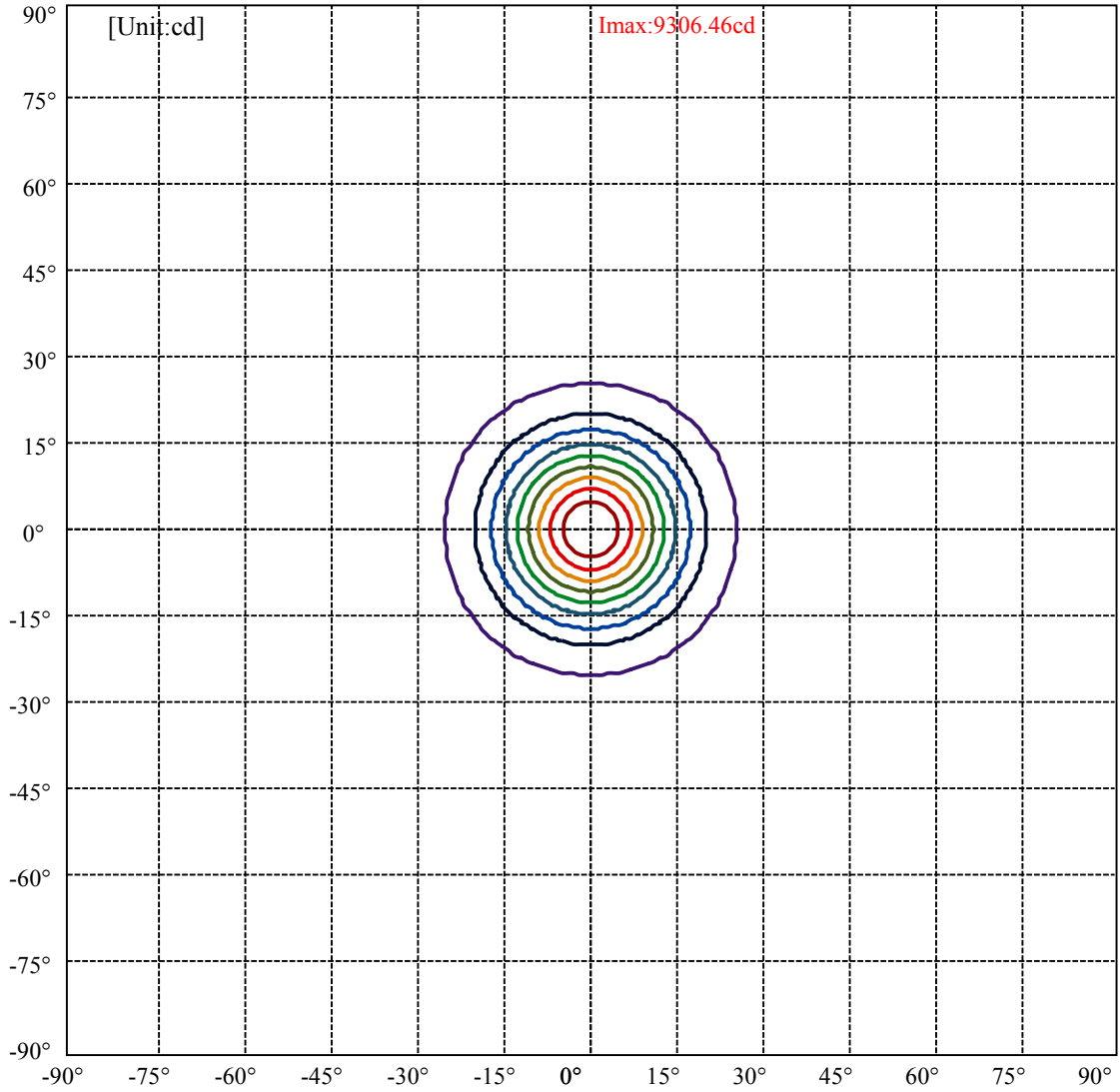


C0(Max): ———
C0/C180: ———
C90/C270: ———

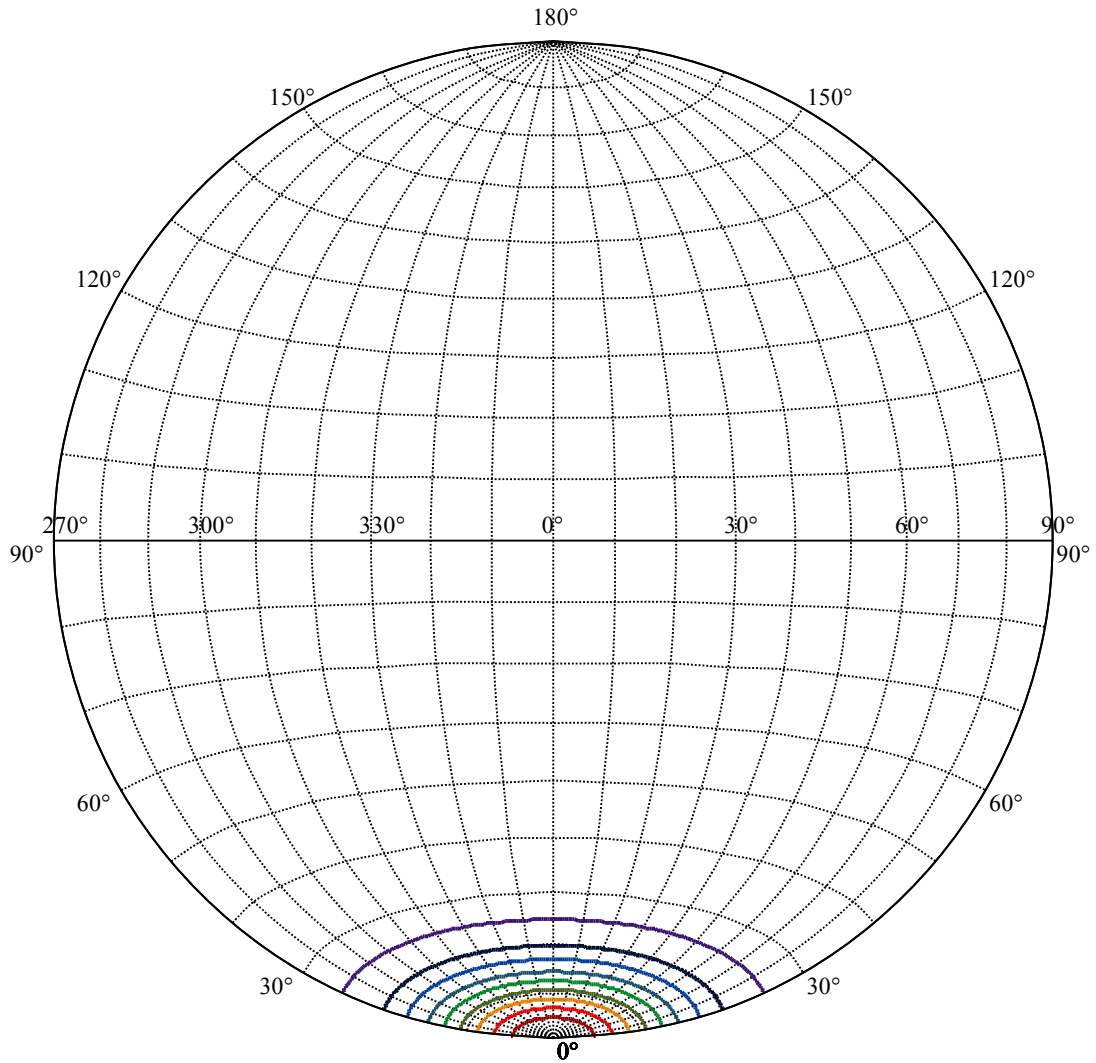
Field angle(10%Imax):C0/180Left:24.9 Right:24.9
:C90/270Left:24.9 Right:24.9

Beam Angle(50%Imax):C0/180Left:12.6 Right:12.6
:C90/270Left:12.6 Right:12.6





(10%Imax) 930.646	—
(20%Imax) 1861.29	—
(30%Imax) 2791.94	—
(40%Imax) 3722.58	—
(50%Imax) 4653.23	—
(60%Imax) 5583.88	—
(70%Imax) 6514.52	—
(80%Imax) 7445.17	—
(90%Imax) 8375.81	—



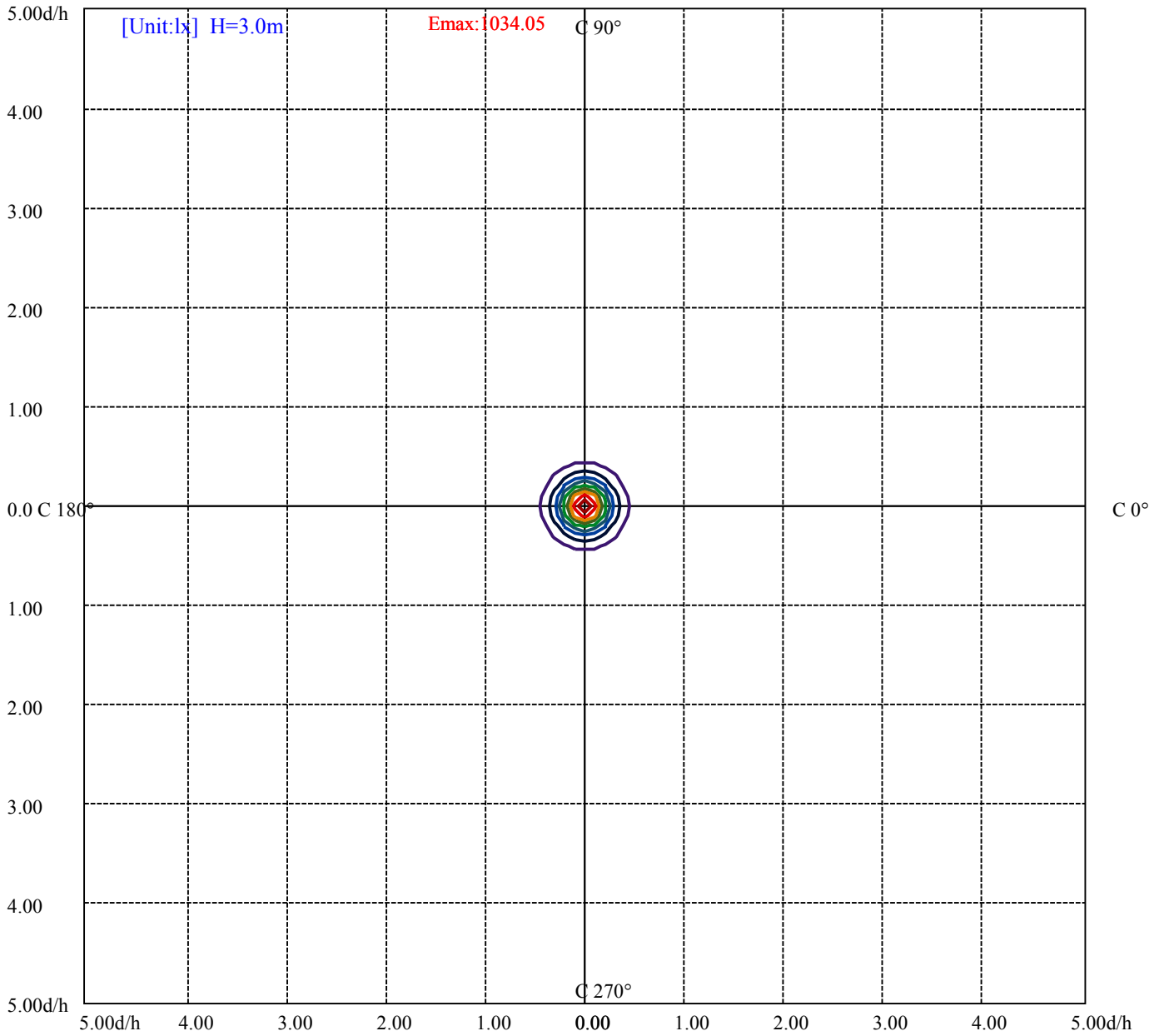
House

[Unit:cd]

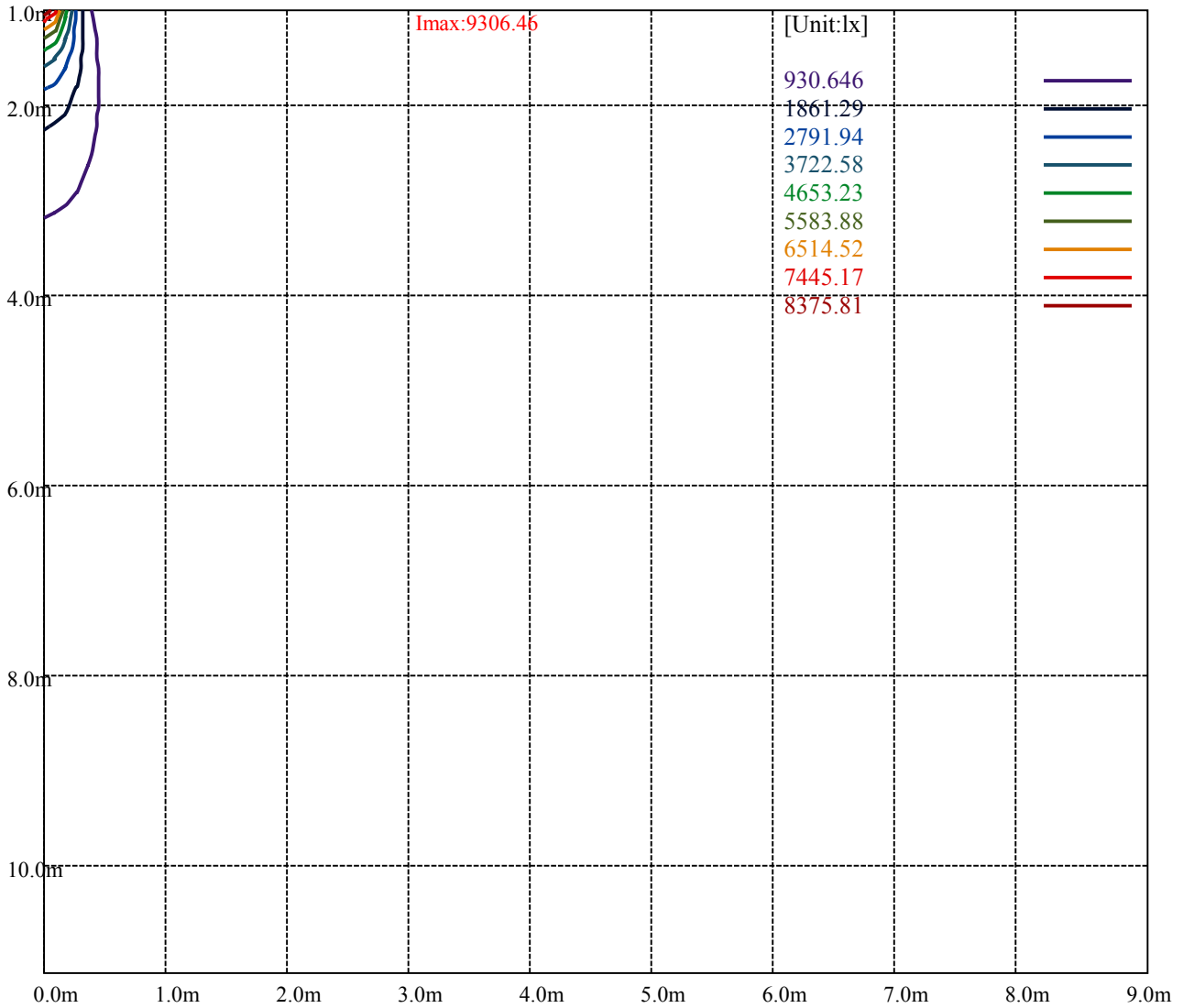
Road

Imax:9306.46

(10%Imax)	930.646	—
(20%Imax)	1861.29	—
(30%Imax)	2791.94	—
(40%Imax)	3722.58	—
(50%Imax)	4653.23	—
(60%Imax)	5583.88	—
(70%Imax)	6514.52	—
(80%Imax)	7445.17	—
(90%Imax)	8375.81	—



- (10%Emax) 103.4048
- (20%Emax) 206.81
- (30%Emax) 310.2144
- (40%Emax) 413.6189
- (50%Emax) 517.0233
- (60%Emax) 620.4289
- (70%Emax) 723.8333
- (80%Emax) 827.2378
- (90%Emax) 930.6433



Luminance Table

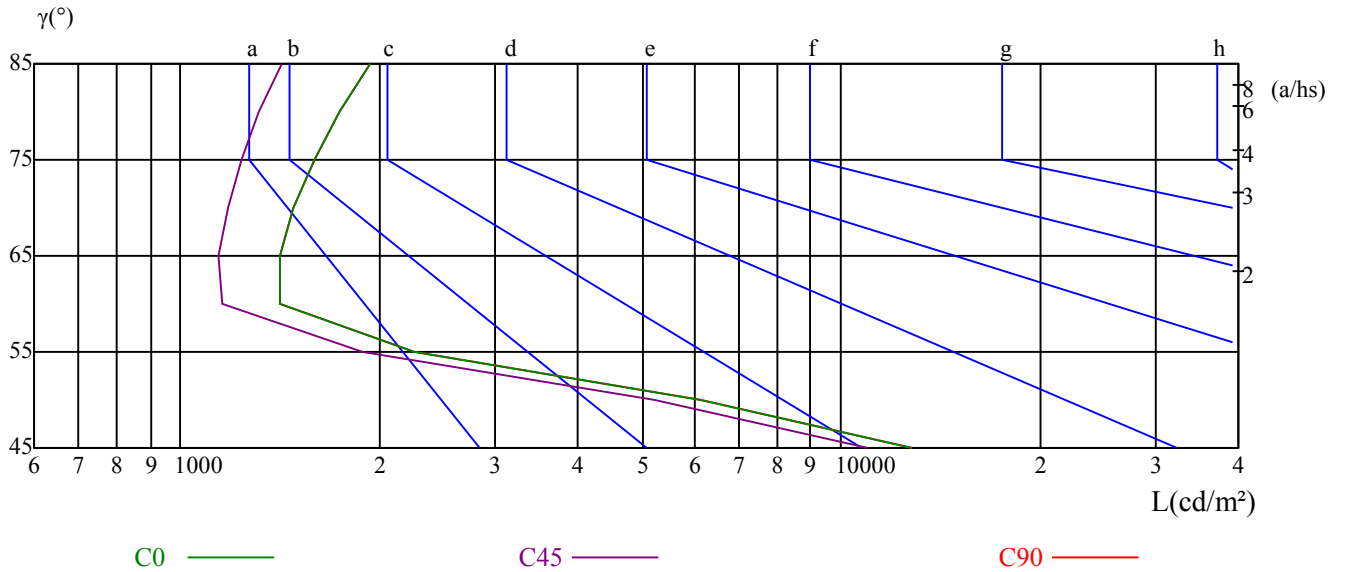
γ	45	50	55	60	65	70	75	80	85
C0	12771	6148	2259	1409	1417	1487	1598	1743	1940
C45	11012	5222	1889	1159	1145	1178	1238	1317	1423
C90	12771	6148	2259	1409	1417	1487	1598	1743	1940

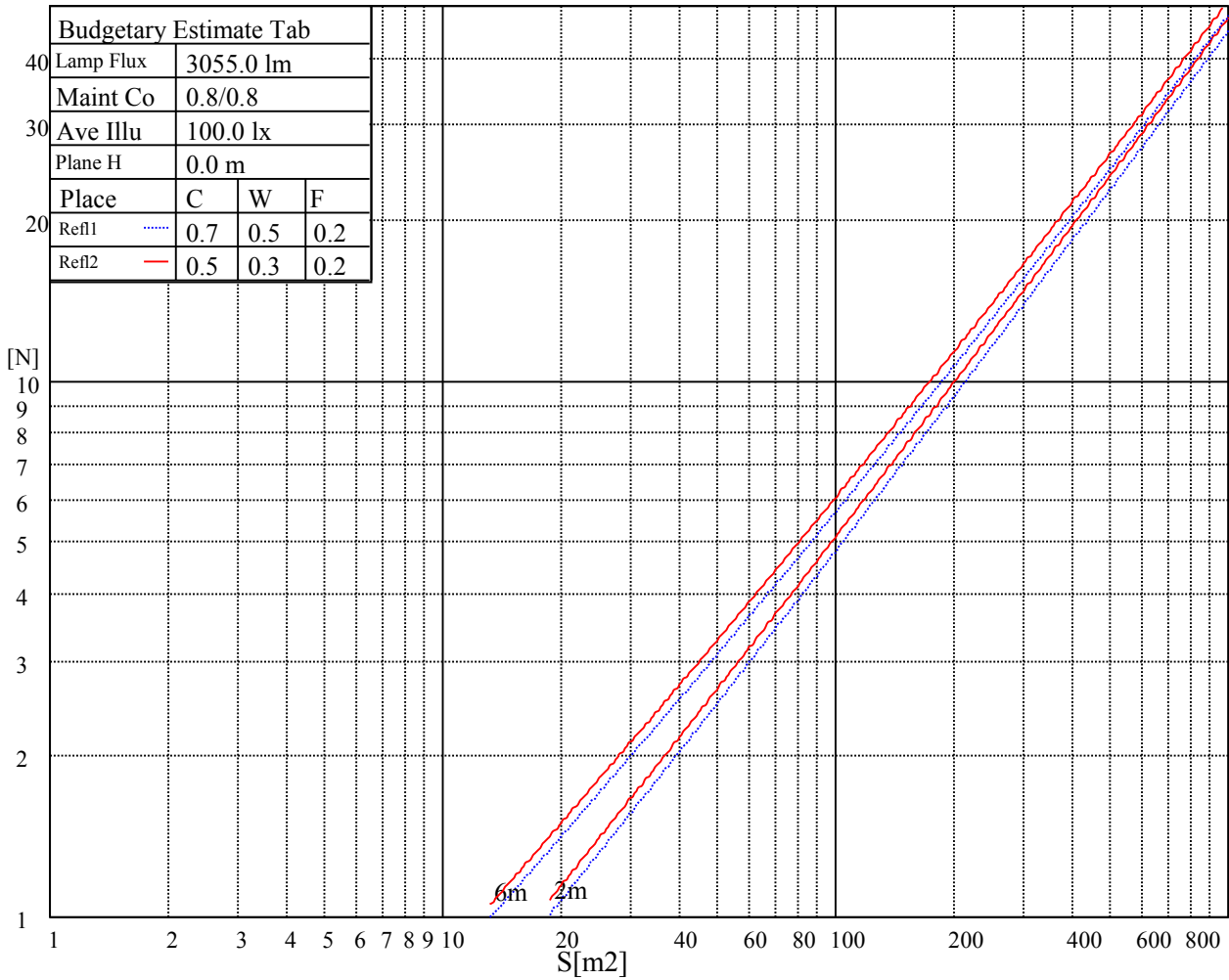
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3325	3325	3325	5342	5342	5342	15865	15865	15865

Glare Table

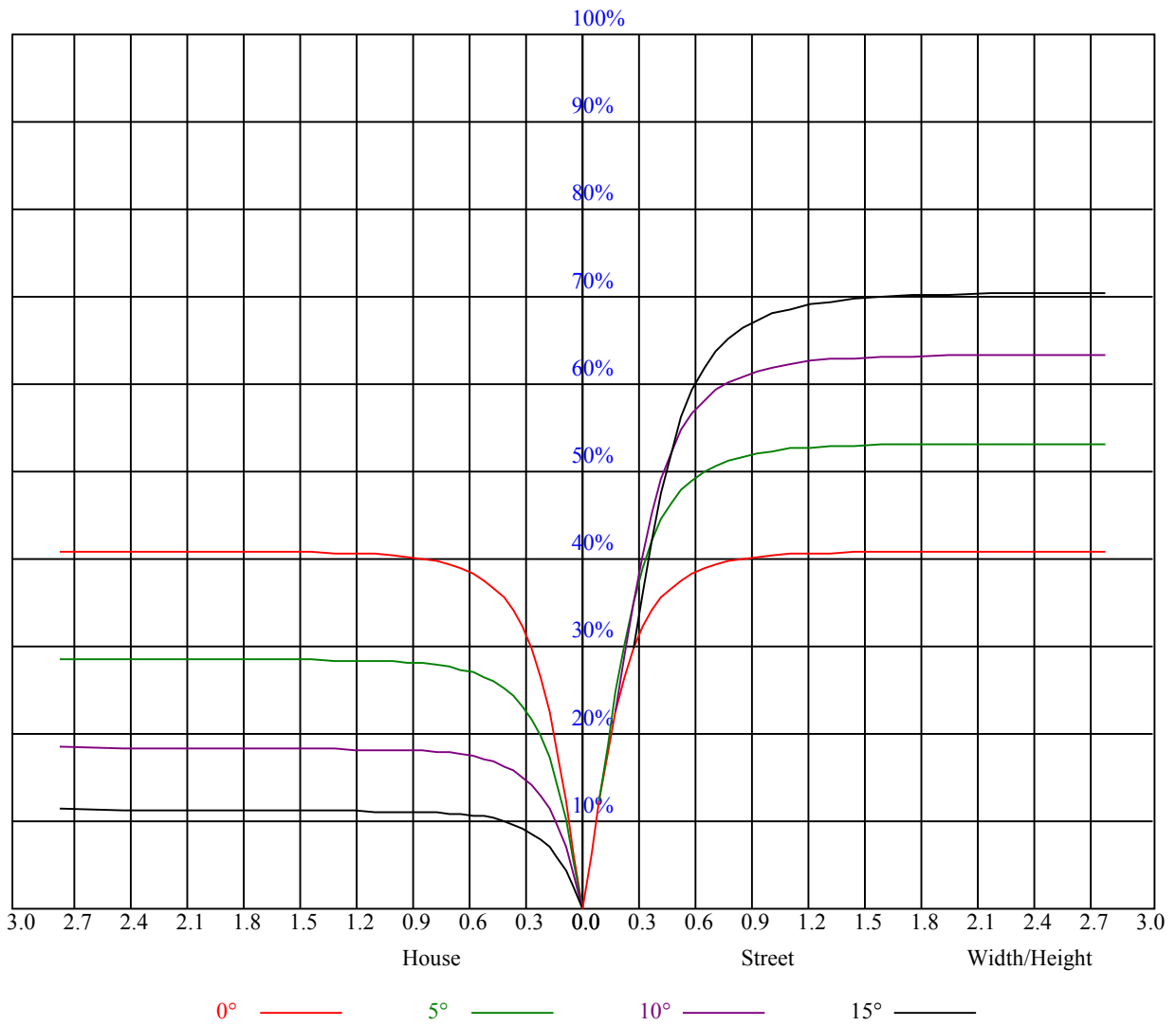
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

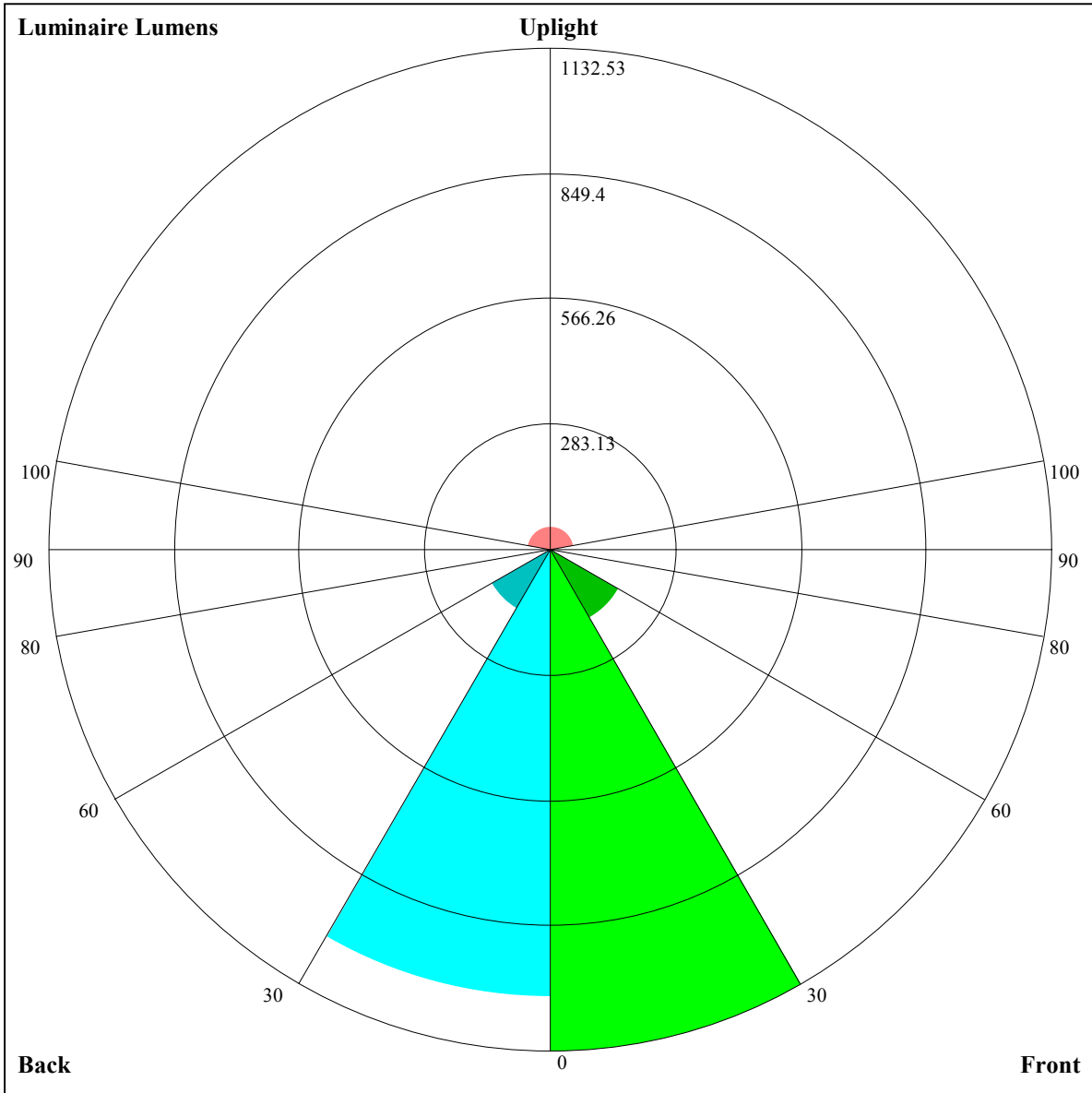
Luminance Limiting Curve





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	0.99	0.99	0.99	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85	0.84
1	0.91	0.89	0.87	0.90	0.88	0.86	0.86	0.85	0.83	0.83	0.82	0.81	0.80	0.79	0.78	0.77
2	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.80	0.78	0.80	0.78	0.77	0.78	0.76	0.75	0.74
3	0.83	0.79	0.76	0.82	0.78	0.76	0.79	0.77	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.71
4	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.74	0.71	0.70	0.68
5	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.71	0.69	0.67	0.66
6	0.73	0.69	0.67	0.73	0.69	0.66	0.72	0.68	0.66	0.70	0.68	0.65	0.69	0.67	0.65	0.64
7	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.66	0.63	0.68	0.65	0.63	0.62
8	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.60
9	0.66	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.64	0.62	0.60	0.59
10	0.65	0.61	0.59	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.57





Luminaire Lumens:

FL=1132.53,FM=178.49,FH=10.65,FVH=5.57

BL=1012.47,BM=155.08,BH=10.56,BVH=5.53

UL=10.96,UH=52.13

BUG Rating:B3-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	9231.86	8948.87	6956.93	4304.86	2350.91	1199.68	655.72	406.32	279.69
45.0	9344.17	8568.43	6085.38	3542.33	1911.01	936.51	553.32	354.56	223.91
90.0	9313.34	7872.51	5445.63	3055.63	1490.93	795.34	486.81	303.64	192.48
135.0	9336.46	8121.37	5757.25	3284.11	1688.03	885.31	509.27	317.68	193.14
180.0	9231.86	7640.18	4922.04	2771.54	1067.60	696.46	435.39	272.20	160.93
225.0	9344.17	8213.86	5750.64	3286.32	1767.31	852.16	504.21	320.48	201.40
270.0	9313.34	8720.93	6370.58	4016.91	2062.96	1003.68	584.70	366.13	247.92
315.0	9336.46	8542.00	6247.25	3690.43	1962.76	965.19	576.72	356.66	217.75
360.0	9231.86	8948.87	6956.93	4304.86	2350.91	1199.68	655.72	406.32	279.69

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	140.39	66.78	26.92	11.56	10.52	10.35	10.30	10.30	10.35
45.0	110.06	53.85	17.95	10.79	10.41	10.24	10.24	10.24	10.19
90.0	94.86	43.38	14.31	10.63	10.35	10.24	10.19	10.08	10.19
135.0	98.66	45.48	14.65	10.68	10.35	10.24	10.24	10.24	10.13
180.0	80.49	35.95	12.22	10.52	10.30	10.19	10.19	10.19	10.08
225.0	100.31	48.95	17.40	10.74	10.35	10.19	10.19	10.19	10.24
270.0	128.50	59.52	22.46	11.12	10.41	10.24	10.19	10.19	10.24
315.0	116.55	54.89	19.49	11.01	10.46	10.30	10.30	10.30	10.41
360.0	140.39	66.78	26.92	11.56	10.52	10.35	10.30	10.30	10.35

C/γ(°)	90.0
0.0	10.08
45.0	10.08
90.0	10.02
135.0	10.02
180.0	10.02
225.0	10.08
270.0	10.02
315.0	10.02
360.0	10.08