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Nata

Client:

LumCAT: 3-2017-A

Luminaire: 92.70.045.00+92.70.089.00

Report No: NT2018032102

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): 82

Width(mm): 82

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2500.78, Efficiency(%): 81.86% , Luminous Efficacy(lm/W): 114.19

Central intensity(cd): 9077.286, Maximum intensity(cd): 9077.286

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=26.0

[C90/270]Total=26.0

Field angle(10%Imax): [C0/180]Total=49.2

[C90/270]Total=49.2

Maximum s/h(1/2): C0_180=0.44 C90_270=0.44

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(%): 83.56%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.820%

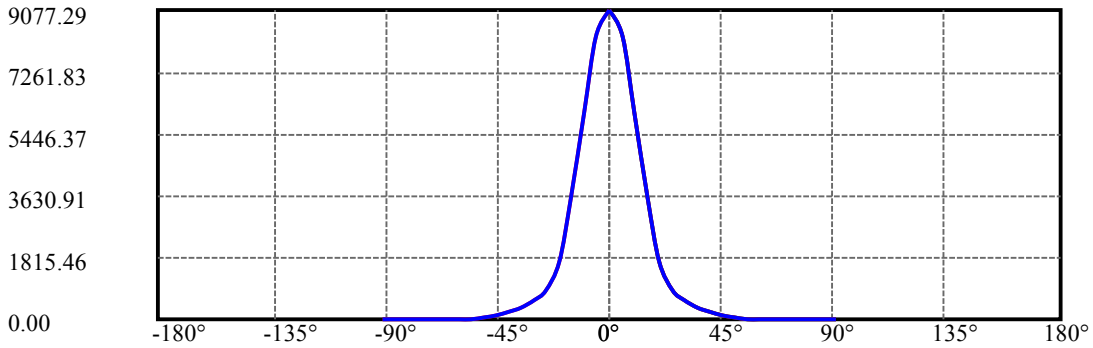
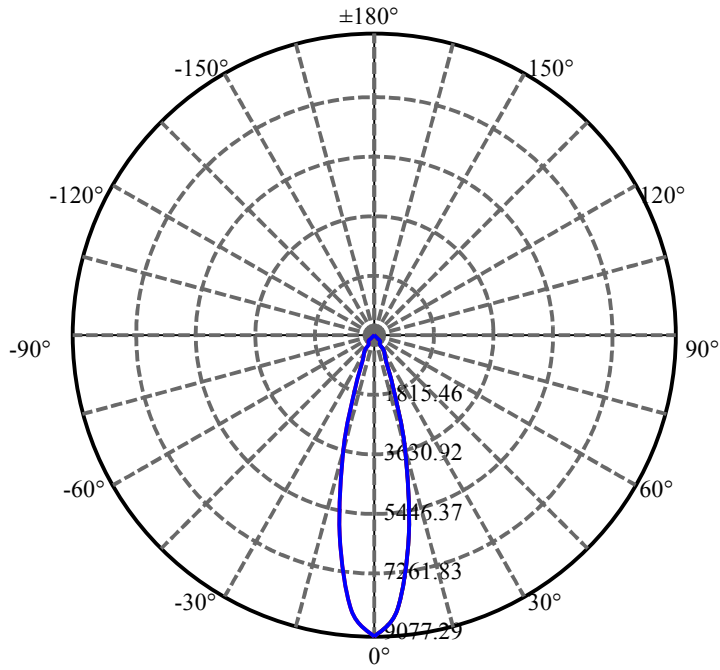
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9077.286	54.284	54.284	1.777%	2.171%
5.0	8270.917	395.129	449.413	12.934%	17.971%
10.0	6081.461	578.852	1028.265	18.948%	41.118%
15.0	3526.087	500.240	1528.506	16.374%	61.121%
20.0	1702.261	319.130	1847.635	10.446%	73.882%
25.0	843.767	195.461	2043.096	6.398%	81.698%
30.0	543.021	148.825	2191.921	4.872%	87.649%
35.0	342.231	107.597	2299.518	3.522%	91.952%
40.0	226.956	79.965	2379.483	2.618%	95.150%
45.0	122.693	47.555	2427.038	1.557%	97.051%
50.0	63.666	26.733	2453.771	.875%	98.120%
55.0	26.847	12.054	2465.826	.395%	98.602%
60.0	11.961	5.678	2471.503	.186%	98.829%
65.0	10.351	5.142	2476.645	.168%	99.035%
70.0	10.158	5.232	2481.878	.171%	99.244%
75.0	10.062	5.327	2487.205	.174%	99.457%
80.0	10.020	5.409	2492.614	.177%	99.673%
85.0	9.993	5.457	2498.07	.179%	99.892%
90.0	9.896	2.712	2500.783	.089%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2191.92	71.75%	87.65%
0-40	2379.48	77.89%	95.15%
0-60	2471.50	80.90%	98.83%
0-90	2498.07	81.77%	99.89%
0-120	2498.07	81.77%	99.89%
0-180	2500.78	81.86%	100.00%
60-90	32.24	1.06%	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%
0-23.91	2000.63	65.49%	80.00%

ZONAL LUMEN SUMMARY

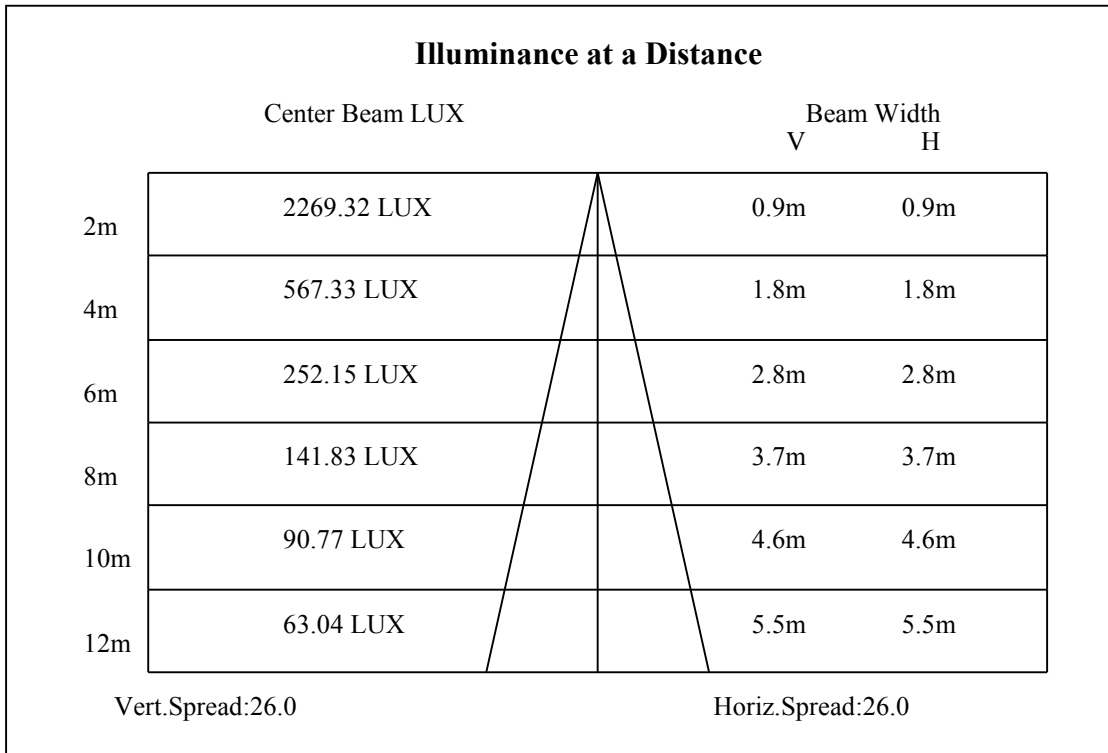
0-10	1028.27
10-20	819.37
20-30	344.29
30-40	187.56
40-50	74.29
50-60	17.73
60-70	10.37
70-80	10.74
80-90	5.46
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

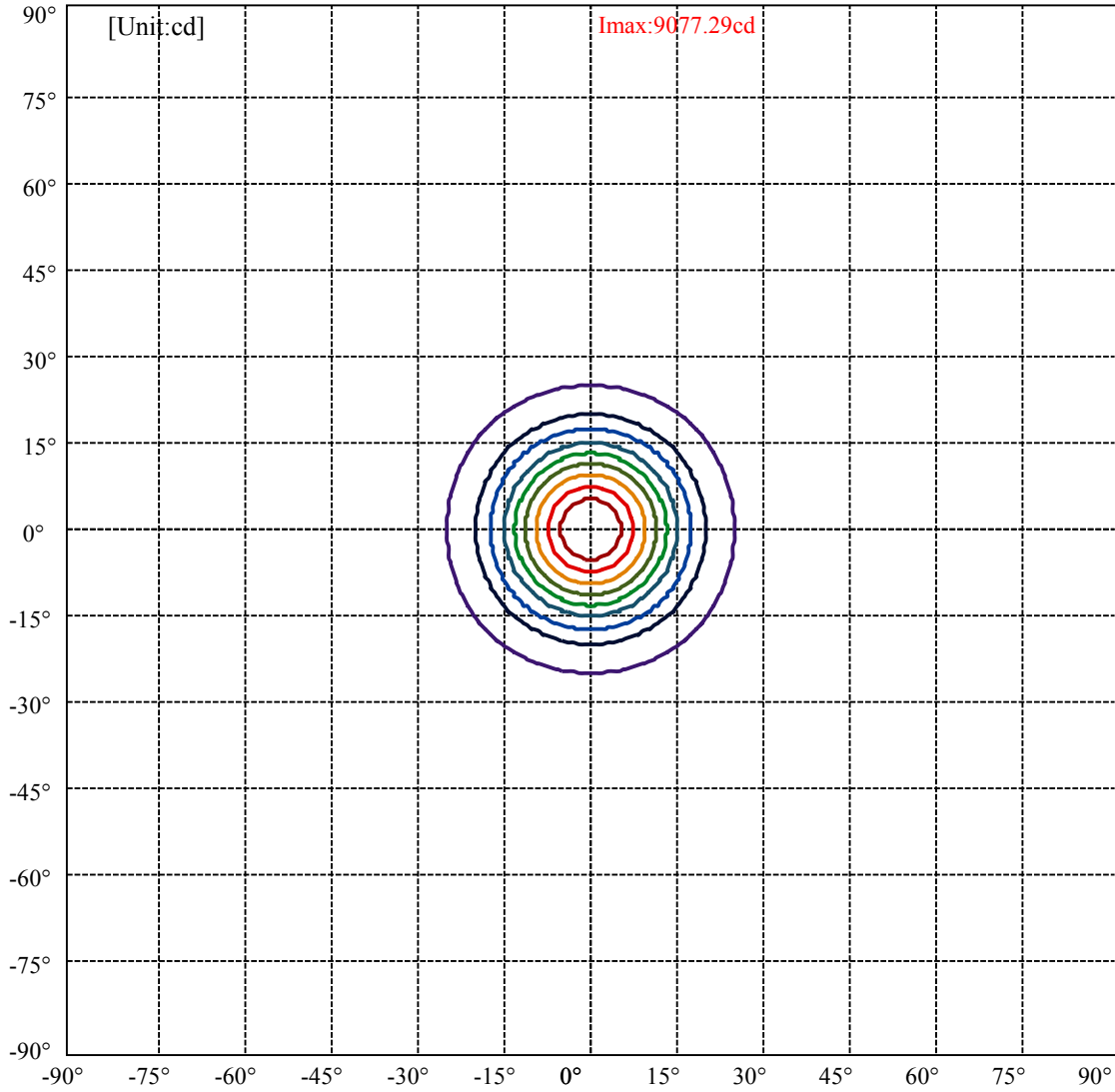


C0(Max): ———
C0/C180: ———
C90/C270: ———

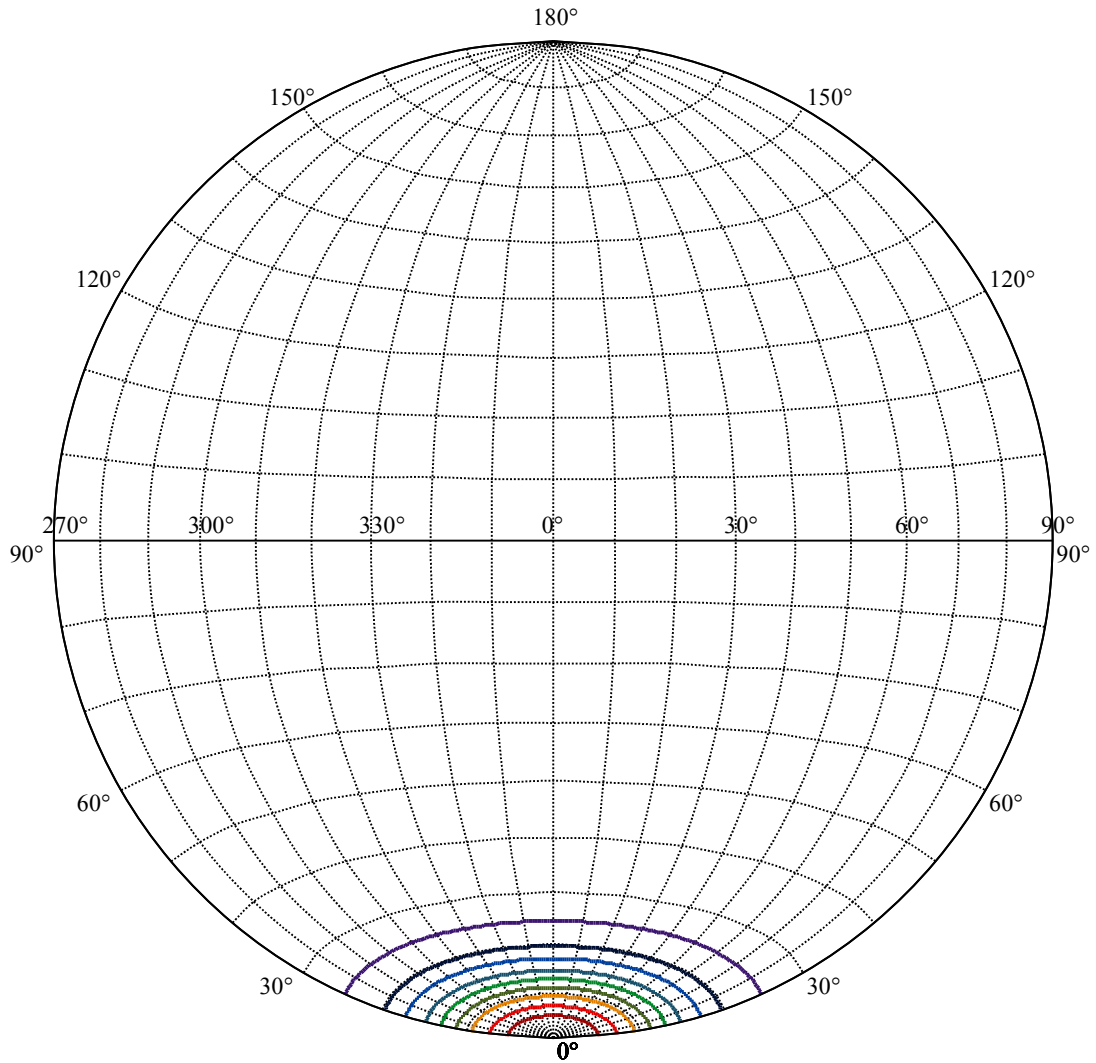
Field angle(10%Imax):C0/180Left:24.6 Right:24.6
:C90/270Left:24.6 Right:24.6

Beam Angle(50%Imax):C0/180Left:13.0 Right:13.0
:C90/270Left:13.0 Right:13.0





(10%Imax) 907.729	—
(20%Imax) 1815.46	—
(30%Imax) 2723.19	—
(40%Imax) 3630.91	—
(50%Imax) 4538.64	—
(60%Imax) 5446.37	—
(70%Imax) 6354.1	—
(80%Imax) 7261.83	—
(90%Imax) 8169.56	—



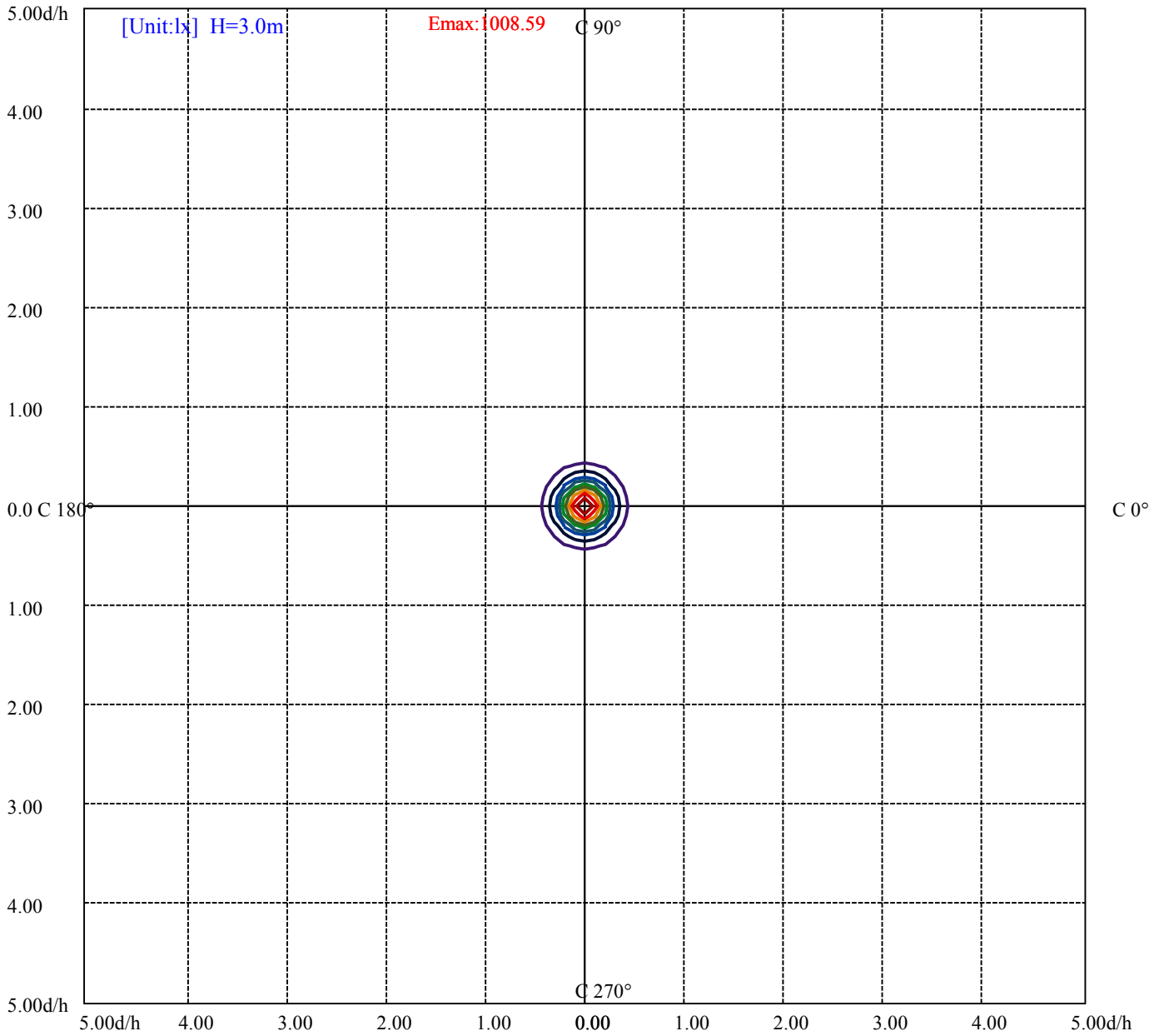
House

[Unit:cd]

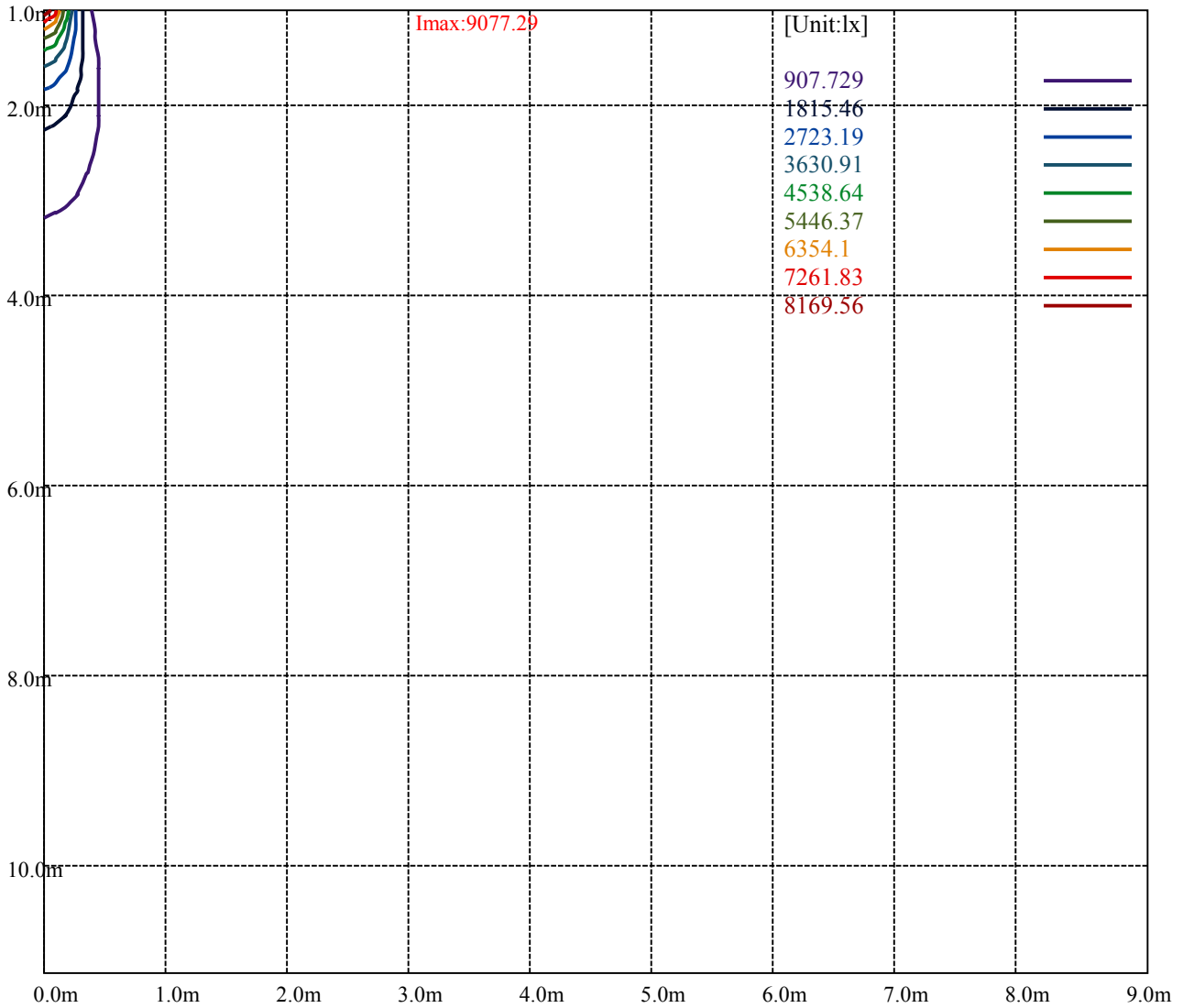
Road

Imax:9077.29

(10%Imax) 907.729	—
(20%Imax) 1815.46	—
(30%Imax) 2723.19	—
(40%Imax) 3630.91	—
(50%Imax) 4538.64	—
(60%Imax) 5446.37	—
(70%Imax) 6354.1	—
(80%Imax) 7261.83	—
(90%Imax) 8169.56	—



(10%Emax) 100.8584	—
(20%Emax) 201.7167	—
(30%Emax) 302.5756	—
(40%Emax) 403.4333	—
(50%Emax) 504.2922	—
(60%Emax) 605.1511	—
(70%Emax) 706.0089	—
(80%Emax) 806.8678	—
(90%Emax) 907.7267	—



Luminance Table

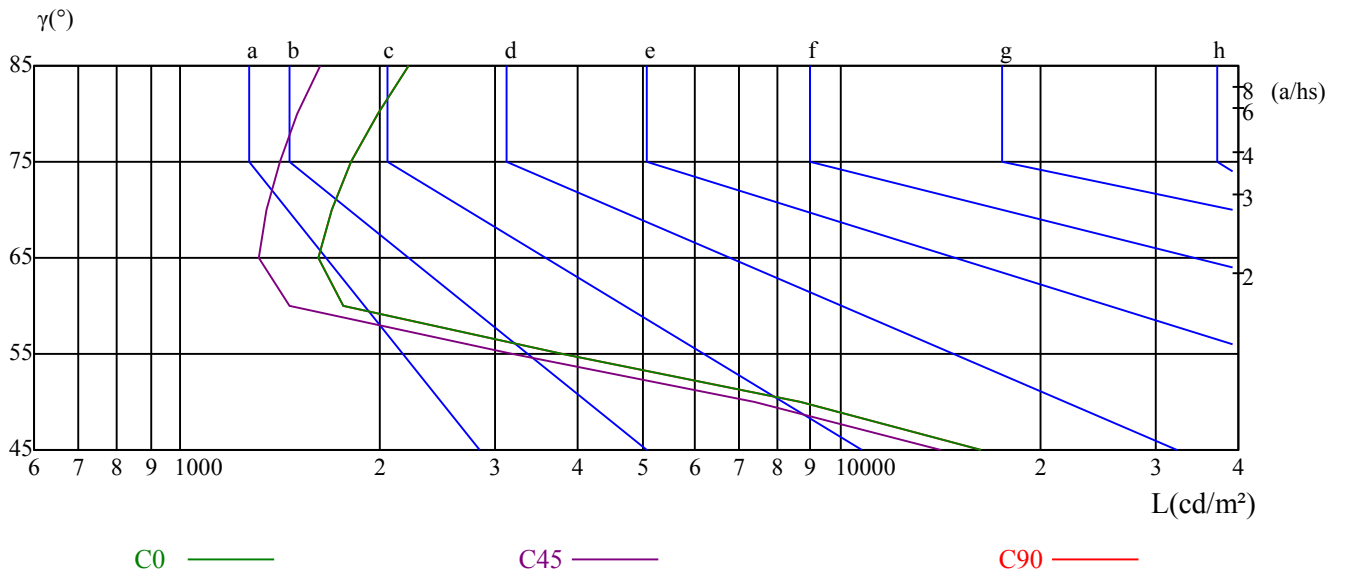
γ	45	50	55	60	65	70	75	80	85
C0	16277	8677	3791	1767	1615	1693	1815	1987	2217
C45	14118	7415	3190	1462	1312	1349	1414	1507	1630
C90	16277	8677	3791	1767	1615	1693	1815	1987	2217

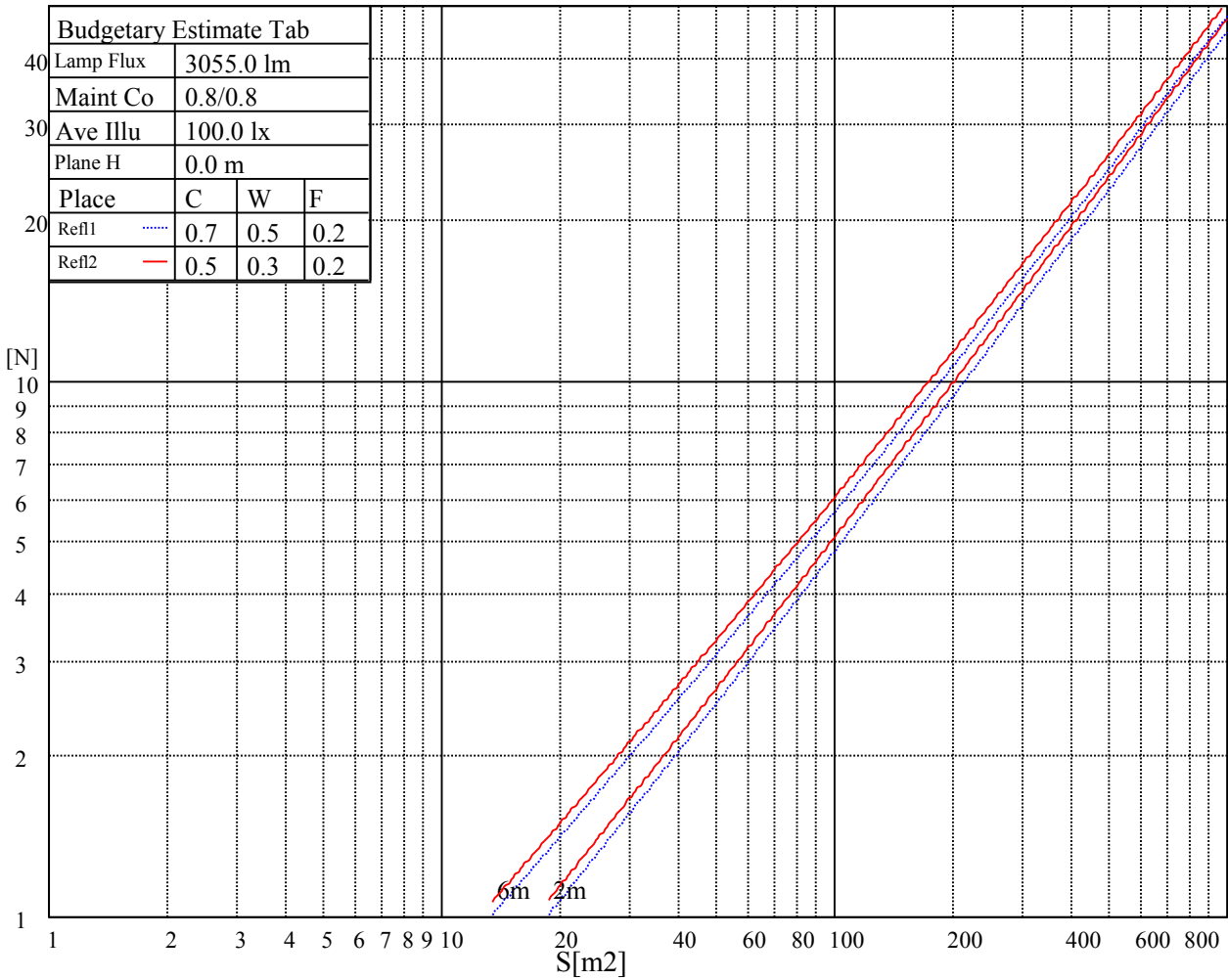
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3642	3642	3642	5782	5782	5782	17051	17051	17051

Glare Table

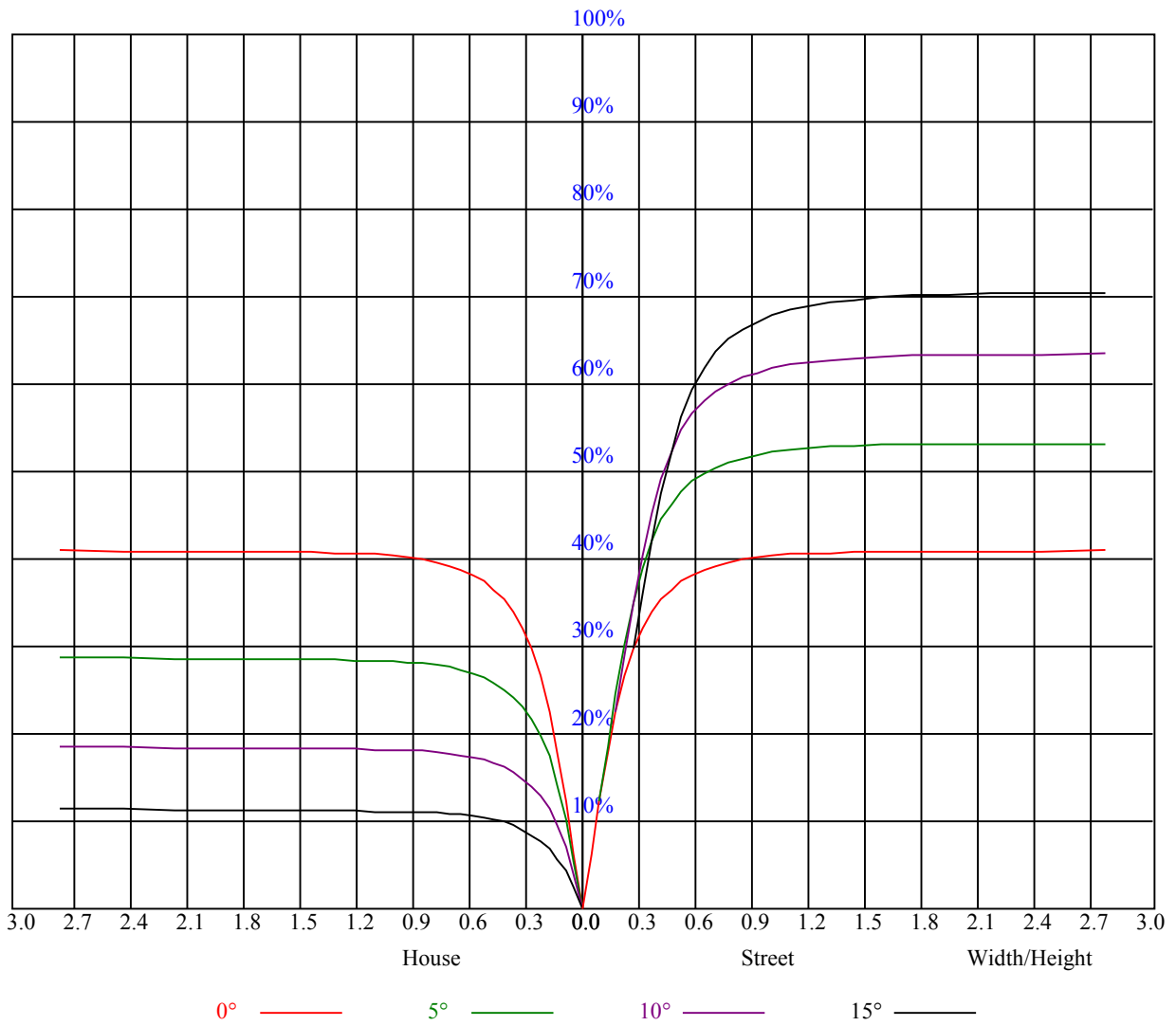
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

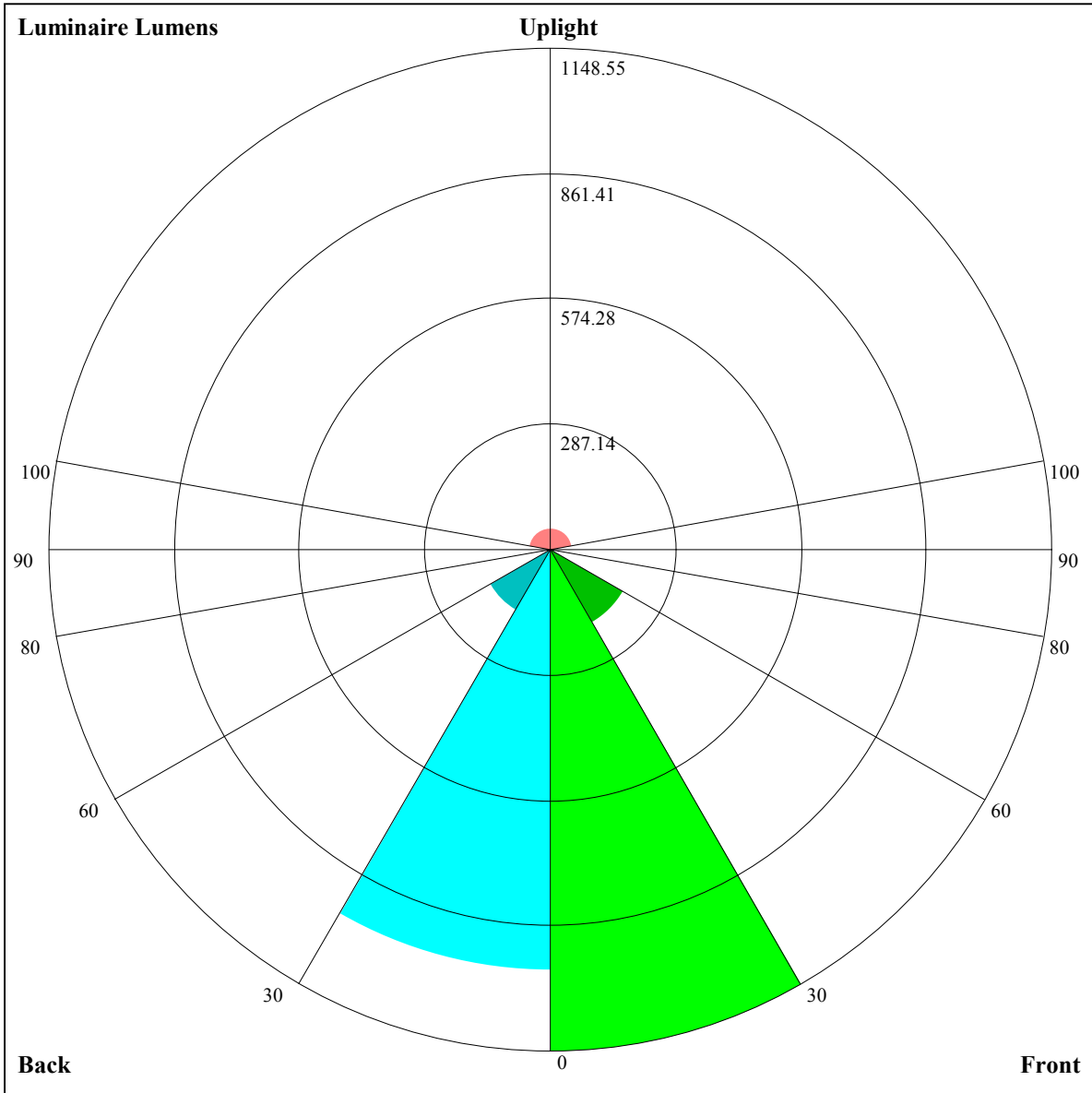
Luminance Limiting Curve





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	0.99	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	0.92	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	0.83	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	0.80	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	0.66	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	0.61	0.60	0.59
10	0.65	0.61	0.58	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=1148.55,FM=193.43,FH=10.72,FVH=5.42

BL=963.32,BM=160.9,BH=10.52,BVH=5.45

UL=10.8,UH=51.38

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	8963.18	9058.98	7457.39	4924.79	2587.10	1149.03	650.22	425.04	279.69
45.0	9141.01	8739.65	6750.47	3983.33	2125.18	919.44	586.35	369.98	281.89
90.0	9104.68	8077.32	5614.10	3008.83	1054.05	752.40	507.90	322.13	206.35
135.0	9100.27	7954.55	5796.34	3045.72	1455.69	753.72	518.08	318.23	198.86
180.0	8963.18	7298.28	4723.84	2504.52	1084.78	648.95	437.09	271.21	161.87
225.0	9141.01	8027.77	5543.63	3147.57	1529.47	751.96	513.24	310.63	193.36
270.0	9104.68	8517.78	6325.43	3814.86	1895.59	875.40	561.58	360.07	249.85
315.0	9100.27	8493.00	6440.50	3779.07	1886.23	899.24	569.72	360.56	243.79
360.0	8963.18	9058.98	7457.39	4924.79	2587.10	1149.03	650.22	425.04	279.69
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	164.62	88.64	41.73	16.57	10.52	10.24	10.13	10.02	10.02
45.0	137.09	70.31	30.50	11.45	10.35	10.19	10.08	10.02	9.97
90.0	114.35	57.04	23.78	10.68	10.35	10.19	10.02	9.91	10.02
135.0	111.16	54.23	20.87	10.68	10.35	10.19	10.13	10.19	10.08
180.0	87.54	41.24	15.47	10.63	10.30	10.19	10.19	10.19	9.97
225.0	102.40	54.67	21.80	10.68	10.30	10.13	10.02	10.02	10.13
270.0	129.27	71.52	31.16	12.33	10.35	10.08	9.97	9.91	9.86
315.0	135.11	71.68	29.46	12.66	10.30	10.08	9.97	9.91	9.91
360.0	164.62	88.64	41.73	16.57	10.52	10.24	10.13	10.02	10.02
C/γ(°)	90.0								
0.0	10.02								
45.0	9.91								
90.0	9.86								
135.0	9.86								
180.0	9.91								
225.0	9.91								
270.0	9.86								
315.0	9.86								
360.0	10.02								