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Nata

Client:

LumCAT: 3-2021-A

Luminaire: 92.70.045.00+92.70.089.00

Report No: NT20180319112

Test No: nata-0100

LampCAT: LUMILEDS 1205

Lamp flux(lm): 1941.0

Number of Lamps: 1

Length(mm): 86

Phm Type: C

Voltage(V): 36.6000

Current(A): 0.5000

Power (W): 18.3000

PF: 0.0000

Ballast type: DC

Width(mm): 86

Height(mm): 0

Photometric Results

Lumens(lm): 1612.25, Efficiency(%): 83.06% , Luminous Efficacy(lm/W): 88.10

Central intensity(cd): 2530.943, Maximum intensity(cd): 2530.943

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=45.8

[C90/270]Total=45.8

Field angle(10%Imax): [C0/180]Total=75.6

[C90/270]Total=75.6

Maximum s/h(1/2): C0_180=0.75 C90_270=0.75

Maximum s/h(1/4): C0_180=0.71 C90_270=0.71

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 83.76%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.997%

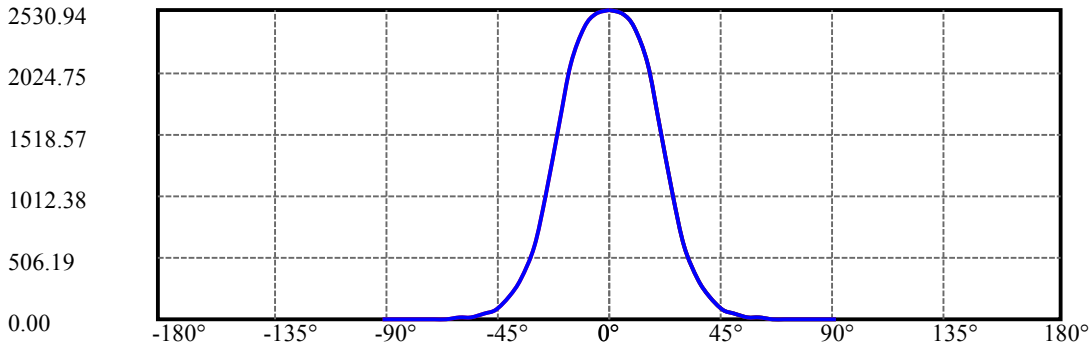
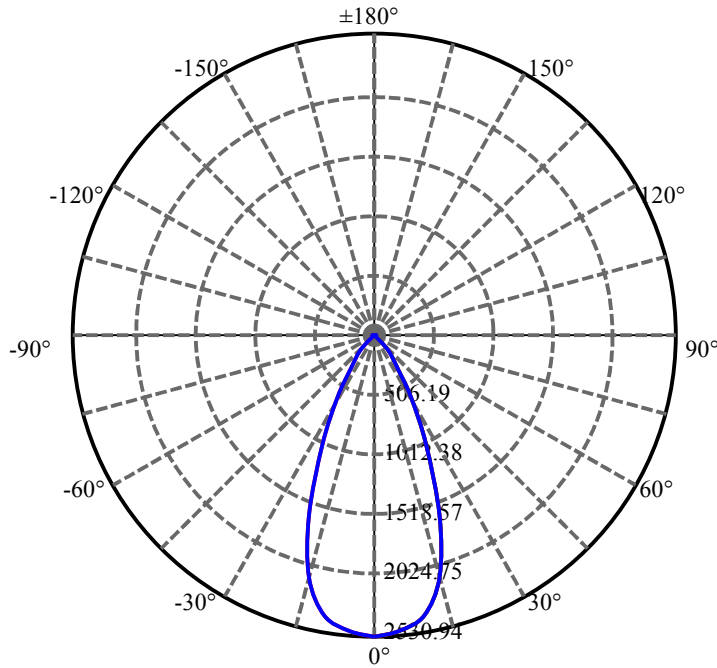
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2530.943	15.136	15.136	.780%	.939%
5.0	2492.747	119.087	134.222	6.135%	8.325%
10.0	2387.314	227.232	361.454	11.707%	22.419%
15.0	2098.475	297.707	659.161	15.338%	40.885%
20.0	1607.303	301.328	960.489	15.524%	59.574%
25.0	1014.745	235.068	1195.557	12.111%	74.155%
30.0	598.477	164.024	1359.581	8.450%	84.328%
35.0	331.742	104.299	1463.881	5.373%	90.797%
40.0	190.784	67.220	1531.101	3.463%	94.967%
45.0	82.137	31.836	1562.936	1.640%	96.941%
50.0	40.852	17.154	1580.09	.884%	98.005%
55.0	18.533	8.322	1588.412	.429%	98.522%
60.0	10.275	4.878	1593.289	.251%	98.824%
65.0	7.137	3.545	1596.835	.183%	99.044%
70.0	6.442	3.318	1600.152	.171%	99.250%
75.0	6.407	3.392	1603.545	.175%	99.460%
80.0	6.400	3.455	1607	.178%	99.674%
85.0	6.448	3.521	1610.521	.181%	99.893%
90.0	6.304	1.728	1612.249	.089%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1359.58	70.05%	84.33%
0-40	1531.10	78.88%	94.97%
0-60	1593.29	82.09%	98.82%
0-90	1610.52	82.97%	99.89%
0-120	1610.52	82.97%	99.89%
0-180	1612.25	83.06%	100.00%
60-90	22.11	1.14%	1.37%
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%
0-27.87	1289.80	66.45%	80.00%

ZONAL LUMEN SUMMARY

0-10	361.45
10-20	599.03
20-30	399.09
30-40	171.52
40-50	48.99
50-60	13.20
60-70	6.86
70-80	6.85
80-90	3.52
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: —————

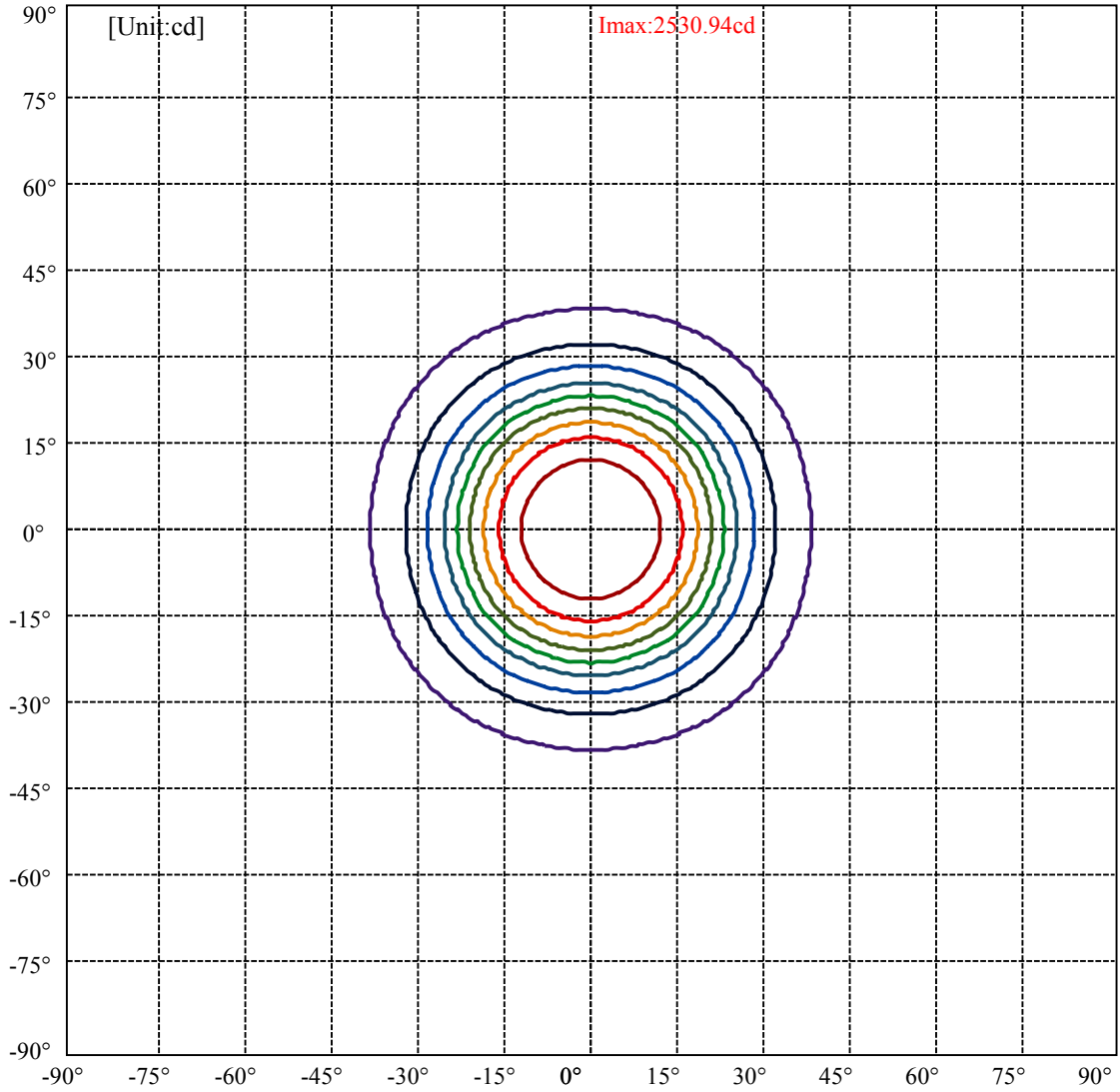
C90/C270: —————

Field angle(10%Imax):C0/180Left:37.8 Right:37.8

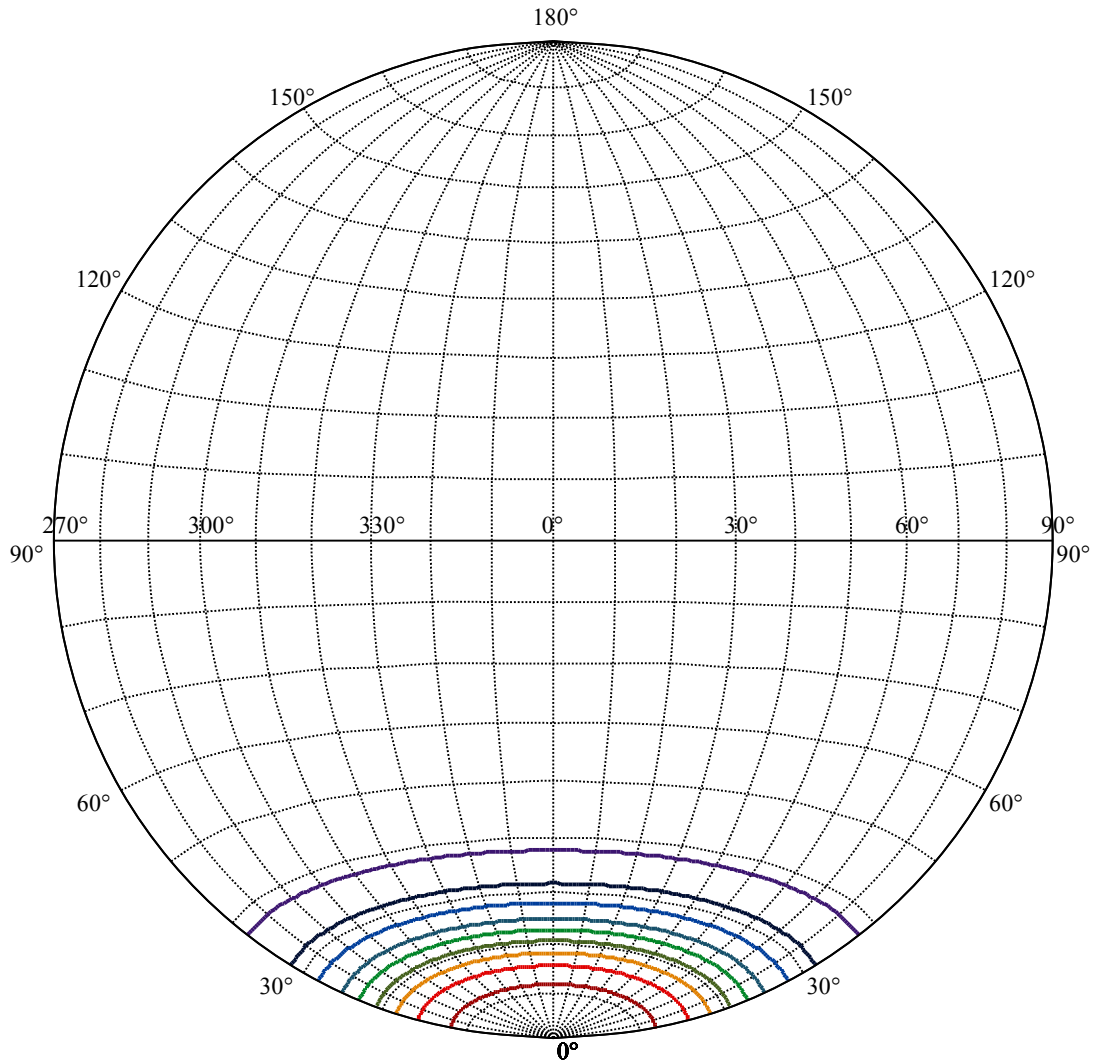
:C90/270Left:37.8 Right:37.8

Beam Angle(50%Imax):C0/180Left:22.9 Right:22.9

:C90/270Left:22.9 Right:22.9



(10%Imax) 253.094	—
(20%Imax) 506.189	—
(30%Imax) 759.283	—
(40%Imax) 1012.38	—
(50%Imax) 1265.47	—
(60%Imax) 1518.57	—
(70%Imax) 1771.66	—
(80%Imax) 2024.75	—
(90%Imax) 2277.85	—



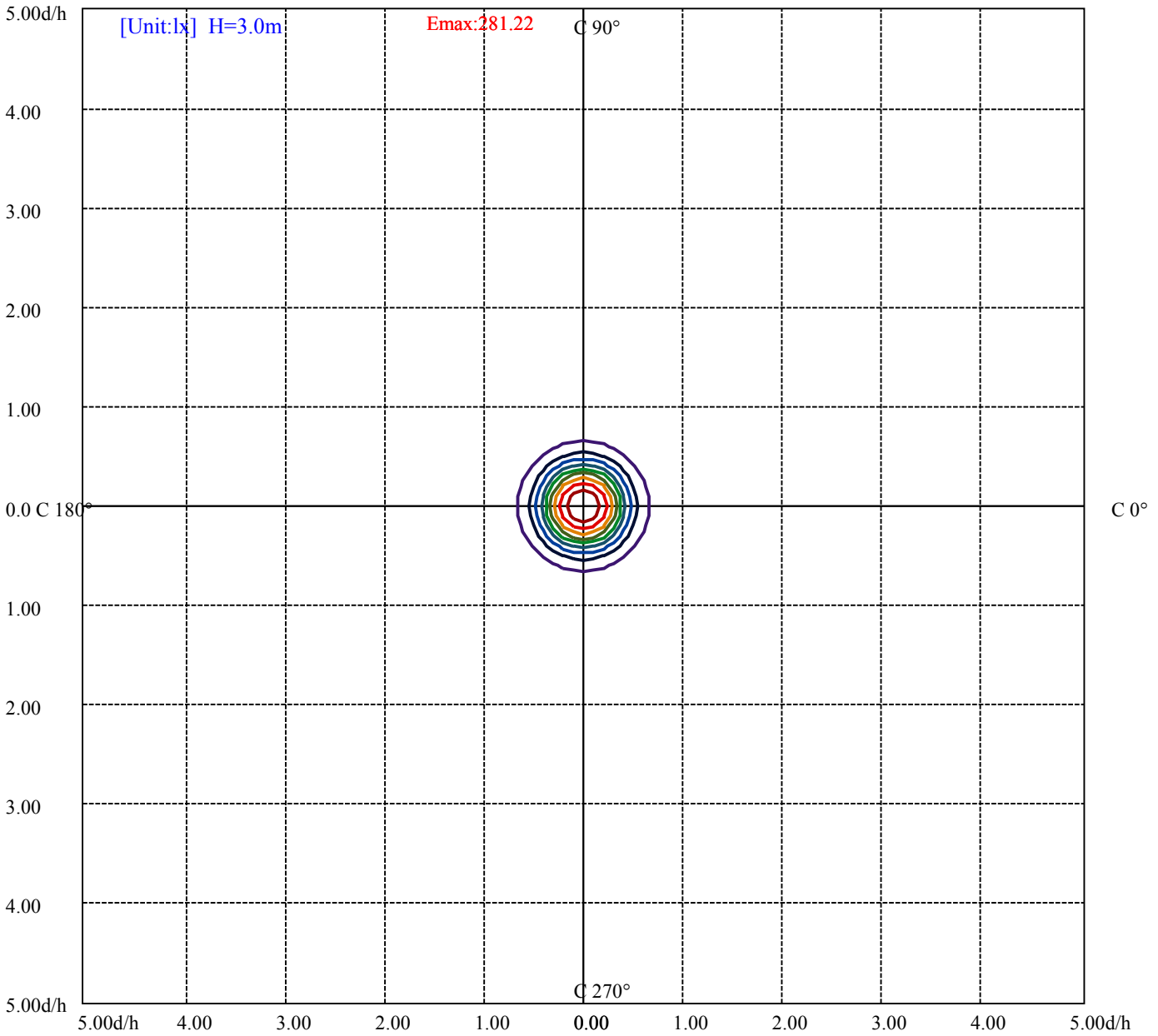
House

[Unit:cd]

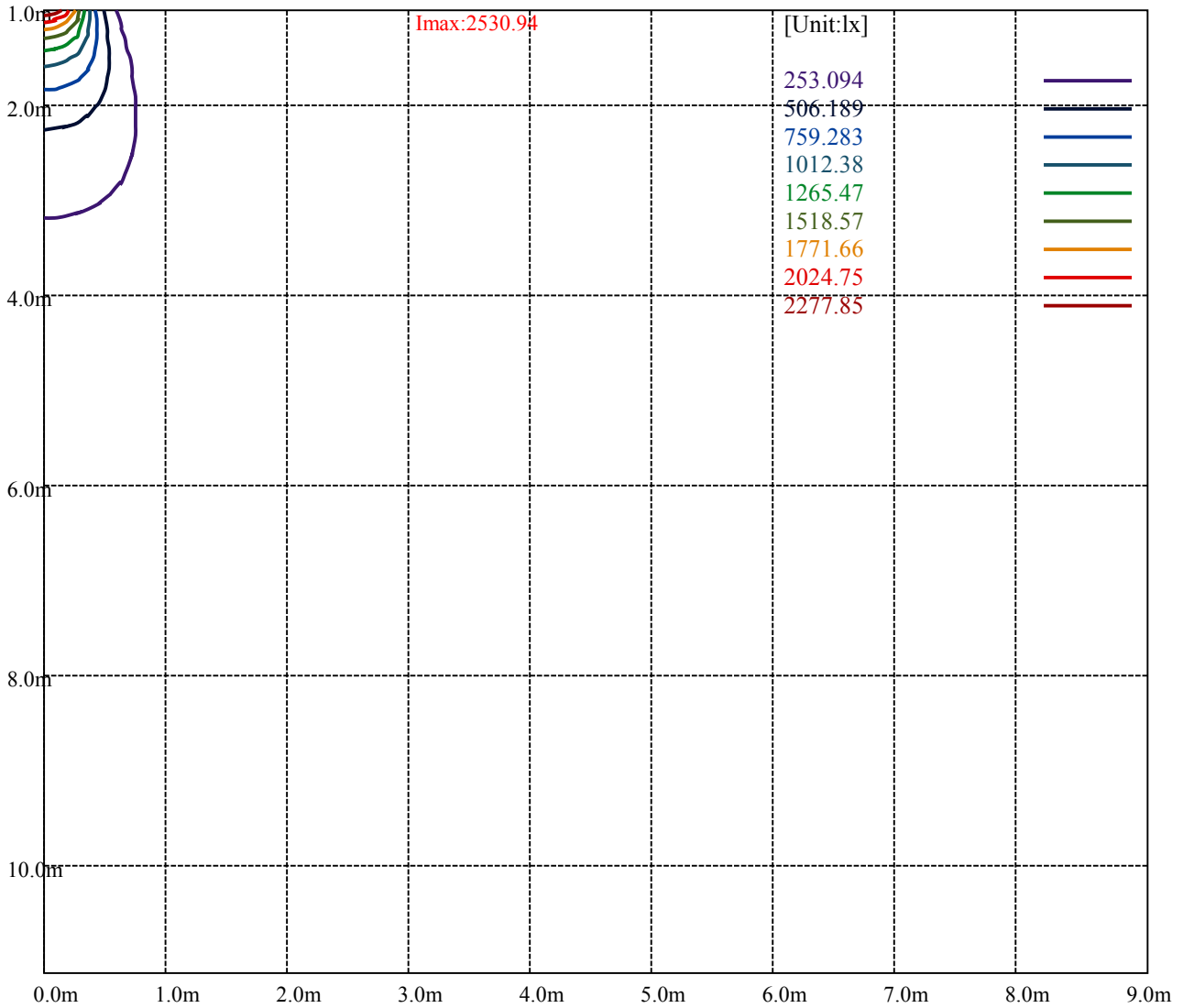
Road

Imax:2530.94

(10%Imax) 253.094	—
(20%Imax) 506.189	—
(30%Imax) 759.283	—
(40%Imax) 1012.38	—
(50%Imax) 1265.47	—
(60%Imax) 1518.57	—
(70%Imax) 1771.66	—
(80%Imax) 2024.75	—
(90%Imax) 2277.85	—



(10%E _{max}) 28.12156	—
(20%E _{max}) 56.24311	—
(30%E _{max}) 84.36466	—
(40%E _{max}) 112.4867	—
(50%E _{max}) 140.6078	—
(60%E _{max}) 168.7289	—
(70%E _{max}) 196.8511	—
(80%E _{max}) 224.9722	—
(90%E _{max}) 253.0945	—



Luminance Table

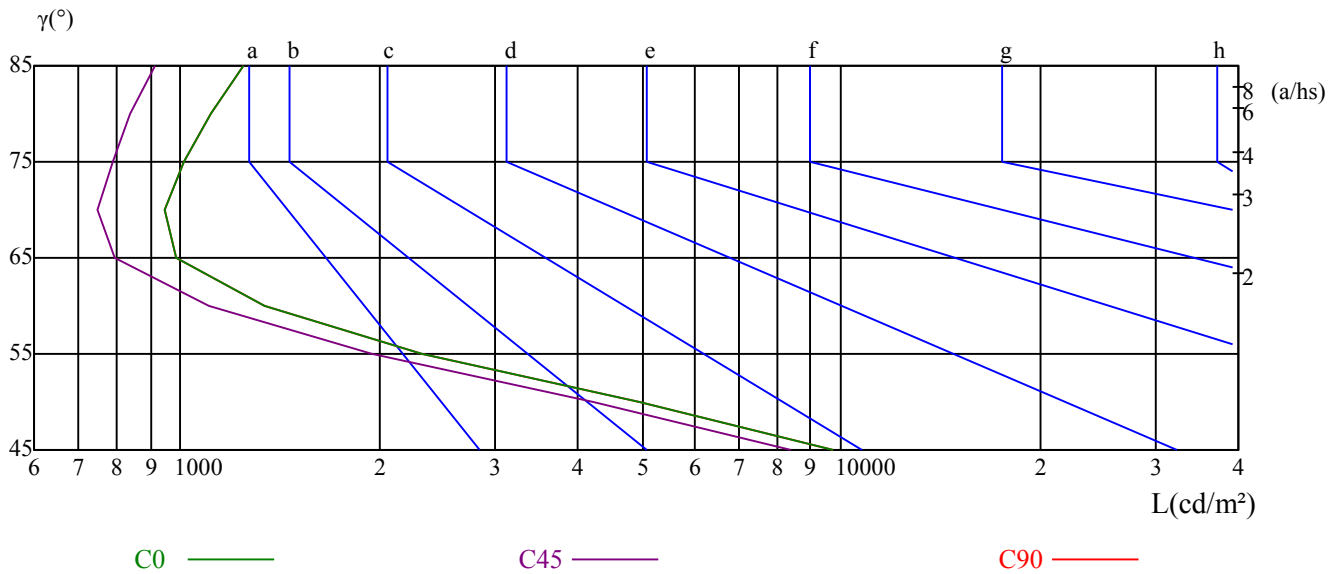
γ	45	50	55	60	65	70	75	80	85
C0	9717	4954	2324	1344	983	946	1014	1109	1244
C45	8392	4215	1946	1107	796	750	787	839	913
C90	9717	4954	2324	1344	983	946	1014	1109	1244

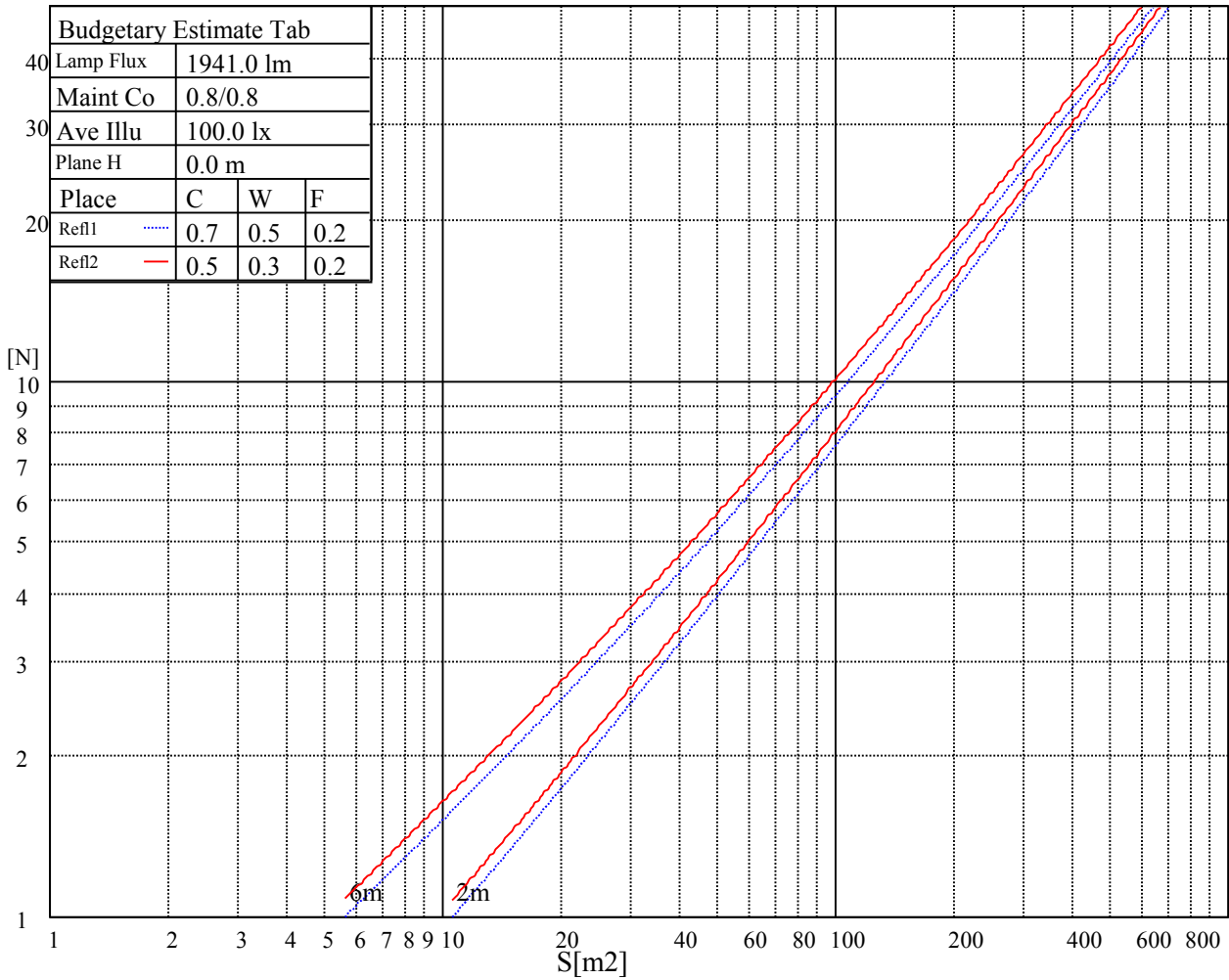
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2283	2283	2283	3347	3347	3347	10004	10004	10004

Glare Table

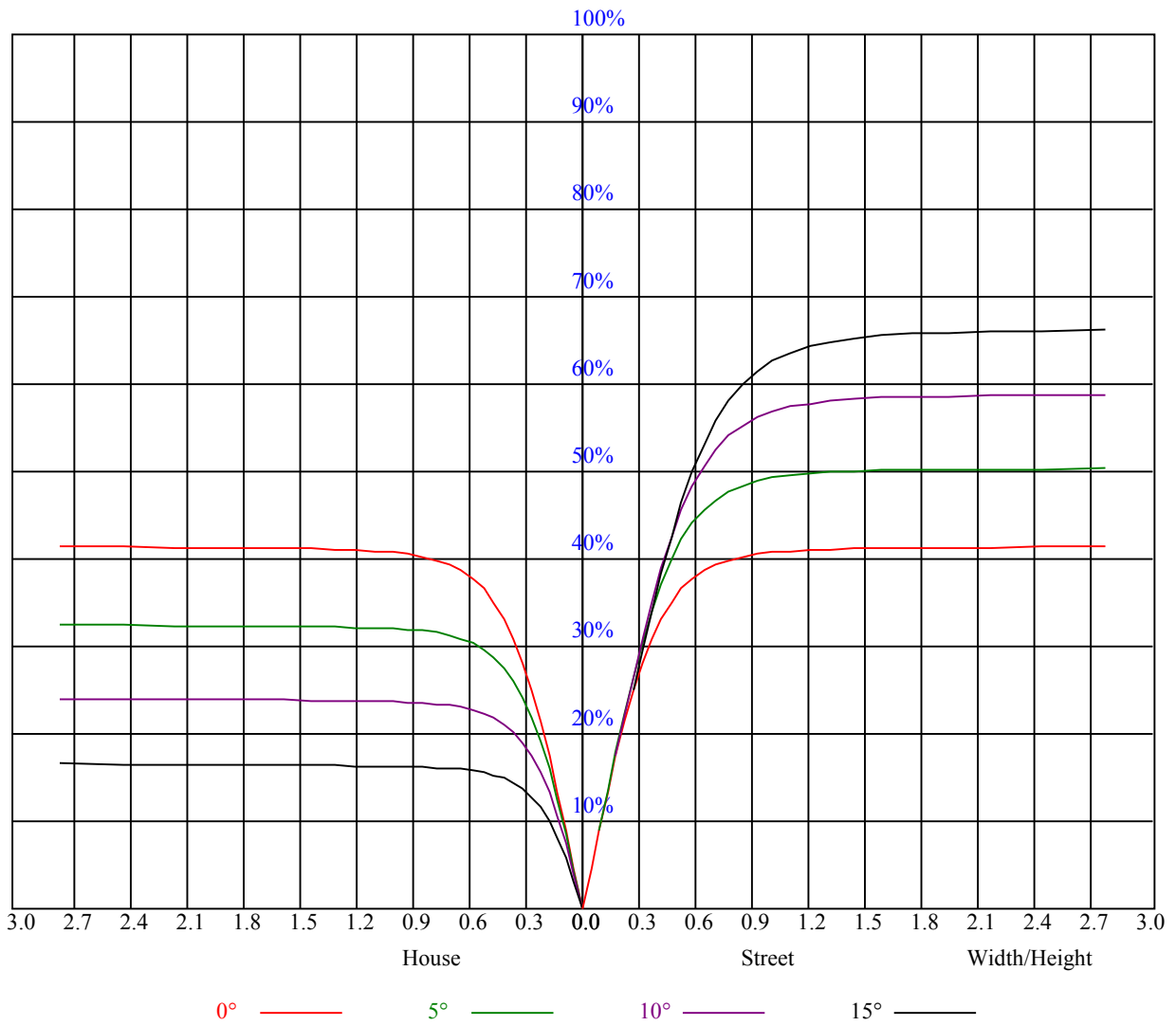
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

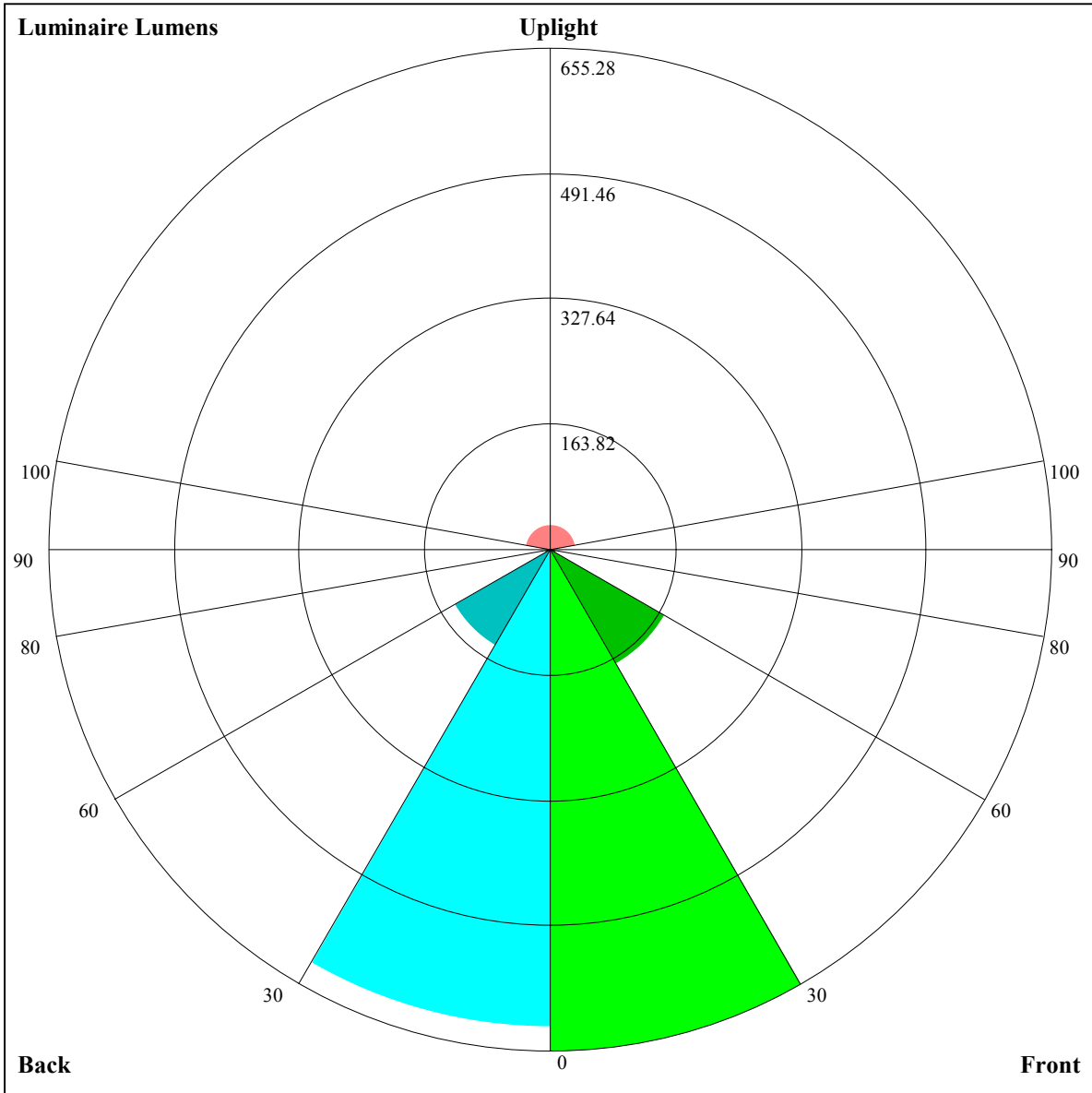
Luminance Limiting Curve





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	1.00	1.00	1.00	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	0.90	0.88	0.91	0.89	0.87	0.87	0.86	0.84	0.84	0.83	0.82	0.81	0.80	0.79	0.78
2	0.87	0.84	0.81	0.86	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	0.82	0.78	0.75	0.81	0.77	0.75	0.79	0.76	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.70
4	0.78	0.74	0.70	0.77	0.73	0.70	0.75	0.72	0.69	0.73	0.71	0.68	0.72	0.70	0.68	0.66
5	0.74	0.70	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.70	0.67	0.65	0.69	0.67	0.64	0.63
6	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.67	0.64	0.62	0.66	0.64	0.61	0.60
7	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.58
8	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.61	0.58	0.56	0.55
9	0.62	0.57	0.54	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.54	0.53
10	0.59	0.55	0.52	0.59	0.55	0.52	0.58	0.55	0.52	0.58	0.54	0.52	0.57	0.54	0.52	0.51





Luminaire Lumens:

FL=655.28,FM=171.9,FH=7.36,FVH=3.49

BL=622.89,BM=144.71,BH=7.07,BVH=3.49

UL=6.88,UH=32.73

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	2533.14	2489.10	2394.40	2189.59	1781.63	1194.17	722.34	412.37	281.89
45.0	2529.84	2478.64	2398.26	2177.48	1743.09	1130.86	691.51	381.54	238.83
90.0	2528.19	2491.85	2390.55	2128.48	1623.06	1004.12	612.12	337.06	183.89
135.0	2532.59	2519.93	2429.09	2145.00	1690.23	1051.58	598.46	328.69	181.91
180.0	2533.14	2502.86	2342.65	1931.38	1370.90	824.85	470.73	264.22	132.58
225.0	2529.84	2498.46	2389.45	2033.78	1470.01	904.80	517.81	282.99	153.00
270.0	2528.19	2487.45	2397.71	2110.86	1600.49	1026.80	591.86	328.69	180.97
315.0	2532.59	2473.68	2356.41	2071.22	1579.02	980.77	582.99	318.39	173.21
360.0	2533.14	2489.10	2394.40	2189.59	1781.63	1194.17	722.34	412.37	281.89

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	107.19	54.07	25.66	12.61	7.93	6.50	6.39	6.39	6.39
45.0	97.95	48.61	22.57	11.89	7.60	6.50	6.44	6.39	6.44
90.0	84.13	41.62	18.28	10.24	7.10	6.44	6.39	6.44	6.44
135.0	80.11	39.75	18.06	10.02	7.05	6.44	6.44	6.39	6.44
180.0	58.25	28.68	13.32	8.37	6.55	6.44	6.44	6.44	6.55
225.0	67.66	33.31	14.81	8.97	6.72	6.44	6.44	6.39	6.44
270.0	82.20	39.59	17.23	10.08	7.05	6.39	6.33	6.39	6.44
315.0	79.61	41.18	18.33	10.02	7.10	6.39	6.39	6.39	6.44
360.0	107.19	54.07	25.66	12.61	7.93	6.50	6.39	6.39	6.39

C/γ(°)	90.0
0.0	6.39
45.0	6.33
90.0	6.33
135.0	6.22
180.0	6.28
225.0	6.33
270.0	6.28
315.0	6.28
360.0	6.39