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Nata

Client:

LumCAT: 1681-S

Luminaire: 92.70.132.00

Report No: nata0100

Test No: GC2018042601

LampCAT: LUMILEDS 1203

Lamp flux(lm): 1237.8

Number of Lamps: 1

Length(mm): 47

Phm Type: C

Voltage(V): 36.1000

Current(A): 0.3300

Power (W): 11.9130

PF: 0.0000

Ballast type: DC

Width(mm): 47

Height(mm): 0

Photometric Results

Lumens(lm): 1116.09, Efficiency(%): 90.17% , Luminous Efficacy(lm/W): 93.69

Central intensity(cd): 1422.382, Maximum intensity(cd): 1422.382

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=57.6

[C90/270]Total=57.6

Field angle(10%Imax): [C0/180]Total=76.8

[C90/270]Total=76.8

Maximum s/h(1/2): C0_180=0.90 C90_270=0.90

Maximum s/h(1/4): C0_180=0.86 C90_270=0.86

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.77%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.168%

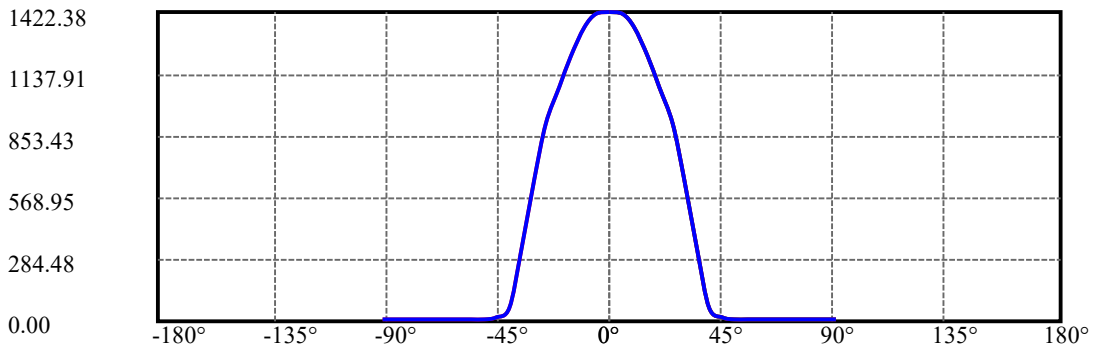
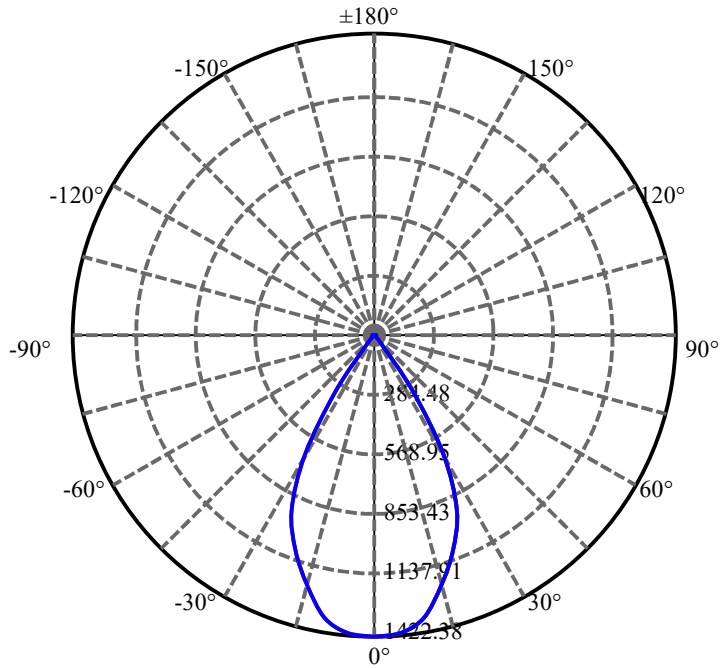
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1422.382	8.506	8.506	.687%	.762%
5.0	1411.371	67.426	75.932	5.447%	6.803%
10.0	1352.598	128.744	204.676	10.401%	18.339%
15.0	1222.183	173.389	378.066	14.008%	33.874%
20.0	1080.296	202.527	580.593	16.362%	52.020%
25.0	913.358	211.582	792.175	17.094%	70.978%
30.0	649.473	178.000	970.175	14.381%	86.926%
35.0	318.618	100.173	1070.348	8.093%	95.902%
40.0	57.658	20.315	1090.663	1.641%	97.722%
45.0	13.860	5.372	1096.036	.434%	98.203%
50.0	6.070	2.549	1098.584	.206%	98.432%
55.0	4.804	2.157	1100.741	.174%	98.625%
60.0	4.639	2.202	1102.943	.178%	98.822%
65.0	4.549	2.260	1105.203	.183%	99.025%
70.0	4.528	2.332	1107.535	.188%	99.234%
75.0	4.528	2.398	1109.933	.194%	99.449%
80.0	4.528	2.444	1112.378	.197%	99.668%
85.0	4.535	2.476	1114.854	.200%	99.889%
90.0	4.501	1.234	1116.088	.100%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	970.18	78.38%	86.93%
0-40	1090.66	88.11%	97.72%
0-60	1102.94	89.11%	98.82%
0-90	1114.85	90.07%	99.89%
0-120	1114.85	90.07%	99.89%
0-180	1116.09	90.17%	100.00%
60-90	14.11	1.14%	1.26%
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%
0-27.83	892.87	72.13%	80.00%

ZONAL LUMEN SUMMARY

0-10	204.68
10-20	375.92
20-30	389.58
30-40	120.49
40-50	7.92
50-60	4.36
60-70	4.59
70-80	4.84
80-90	2.48
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: ———

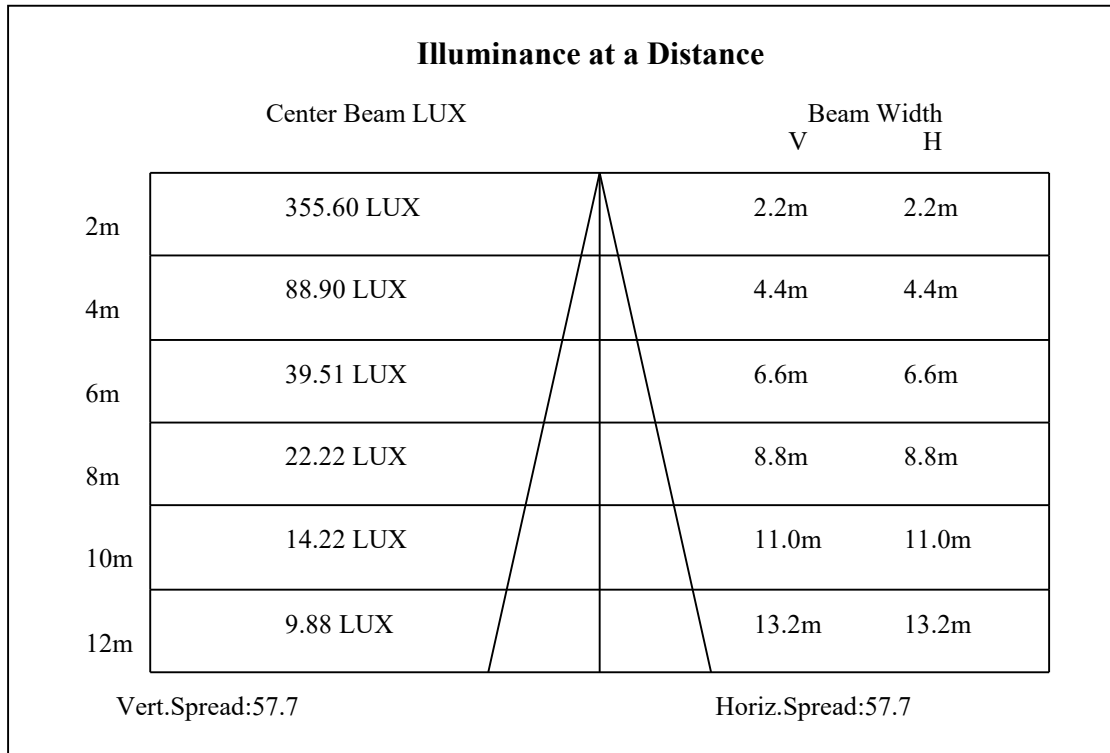
C90/C270: ———

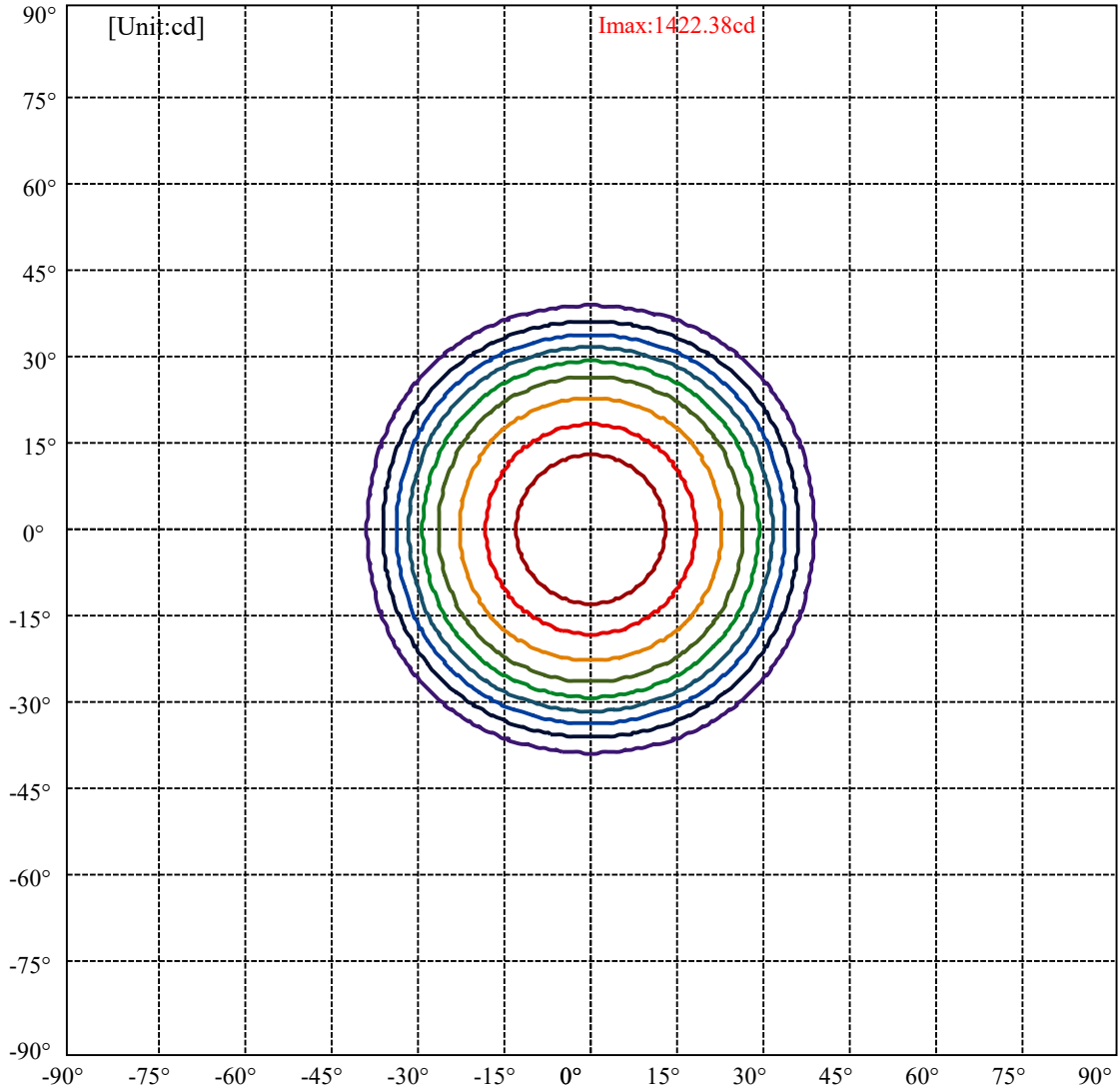
Field angle(10%Imax):C0/180Left:38.4 Right:38.4

:C90/270Left:38.4 Right:38.4

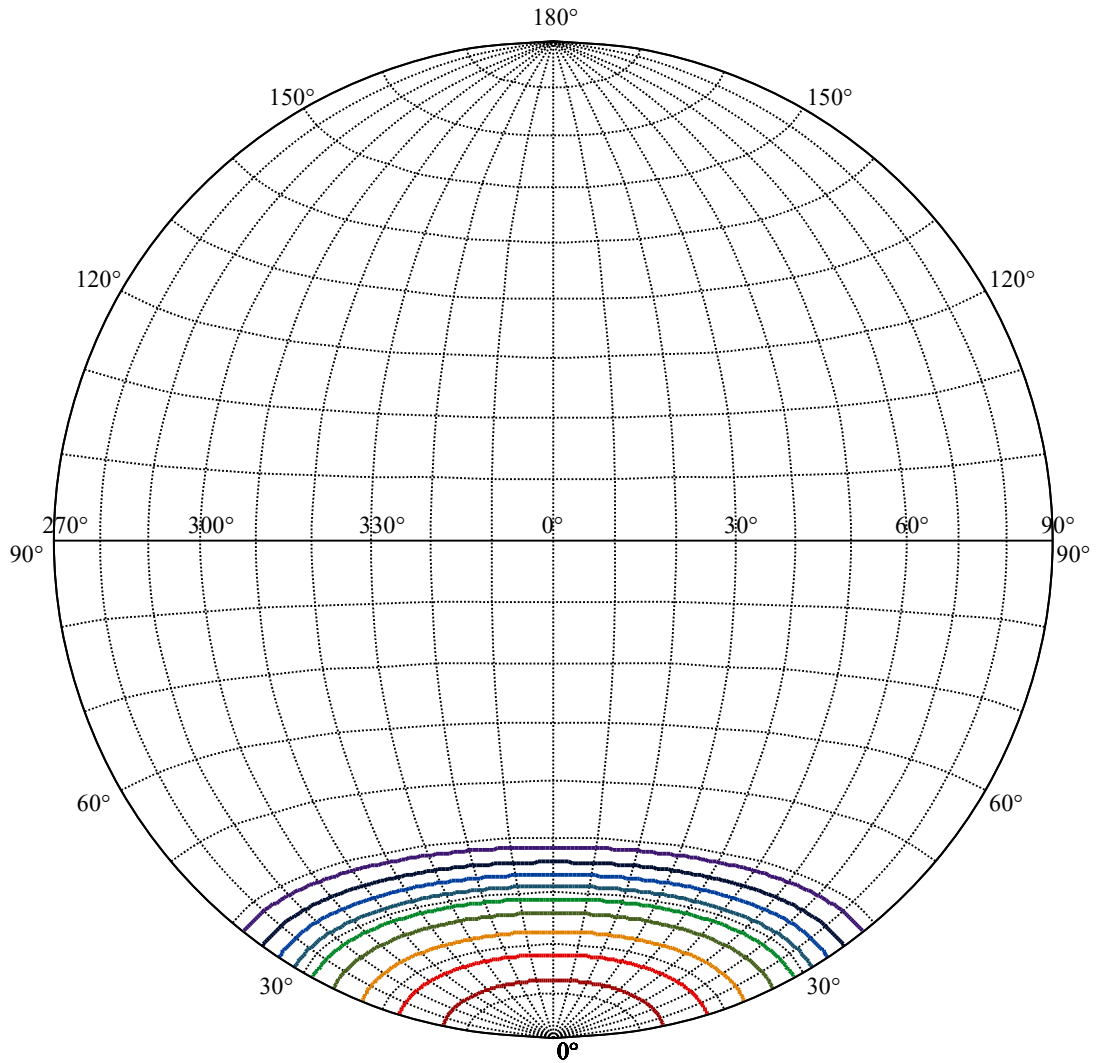
Beam Angle(50%Imax):C0/180Left:28.8 Right:28.8

:C90/270Left:28.8 Right:28.8





(10%Imax) 142.238	—
(20%Imax) 284.476	—
(30%Imax) 426.715	—
(40%Imax) 568.953	—
(50%Imax) 711.191	—
(60%Imax) 853.429	—
(70%Imax) 995.667	—
(80%Imax) 1137.91	—
(90%Imax) 1280.14	—



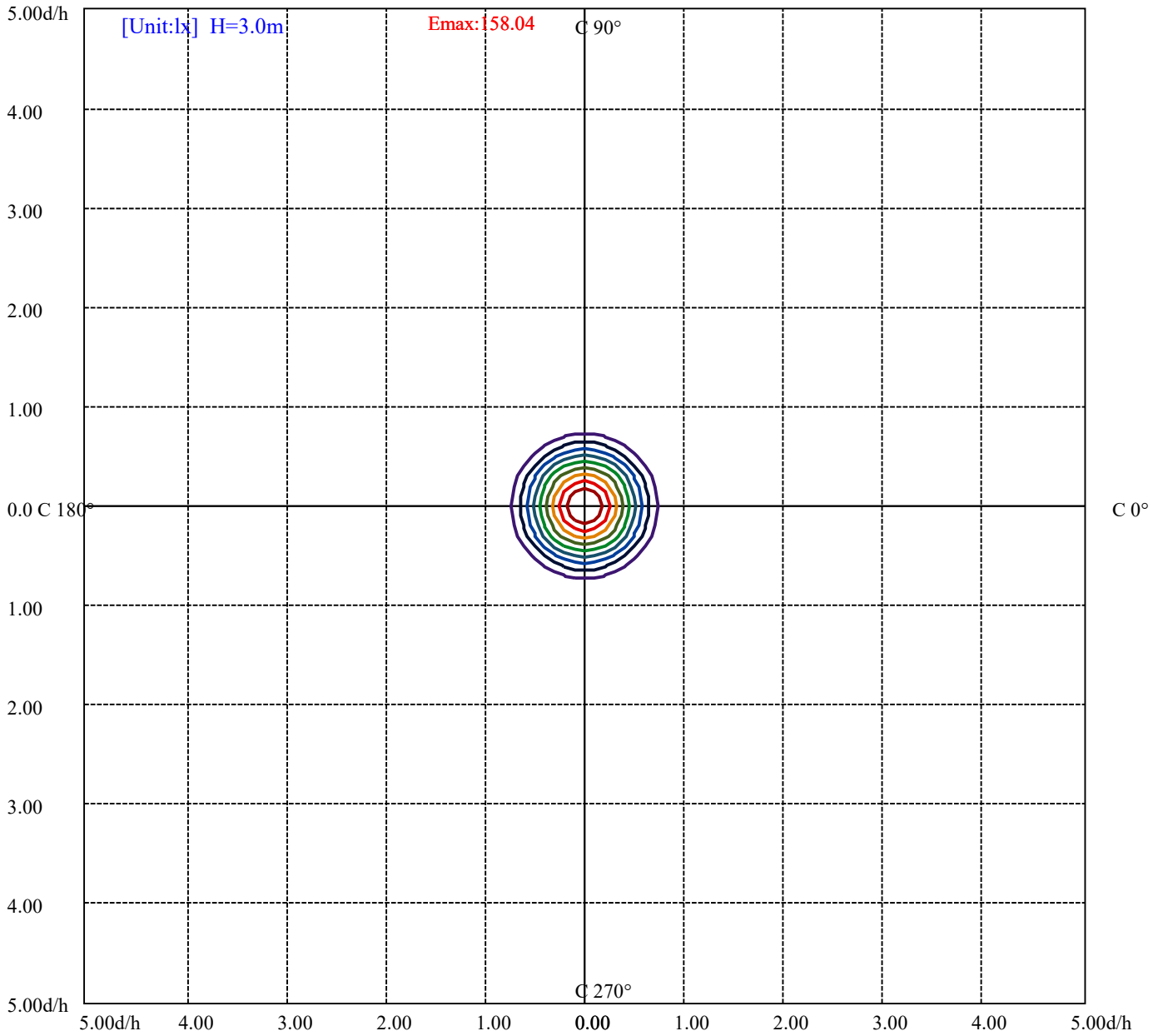
House

[Unit:cd]

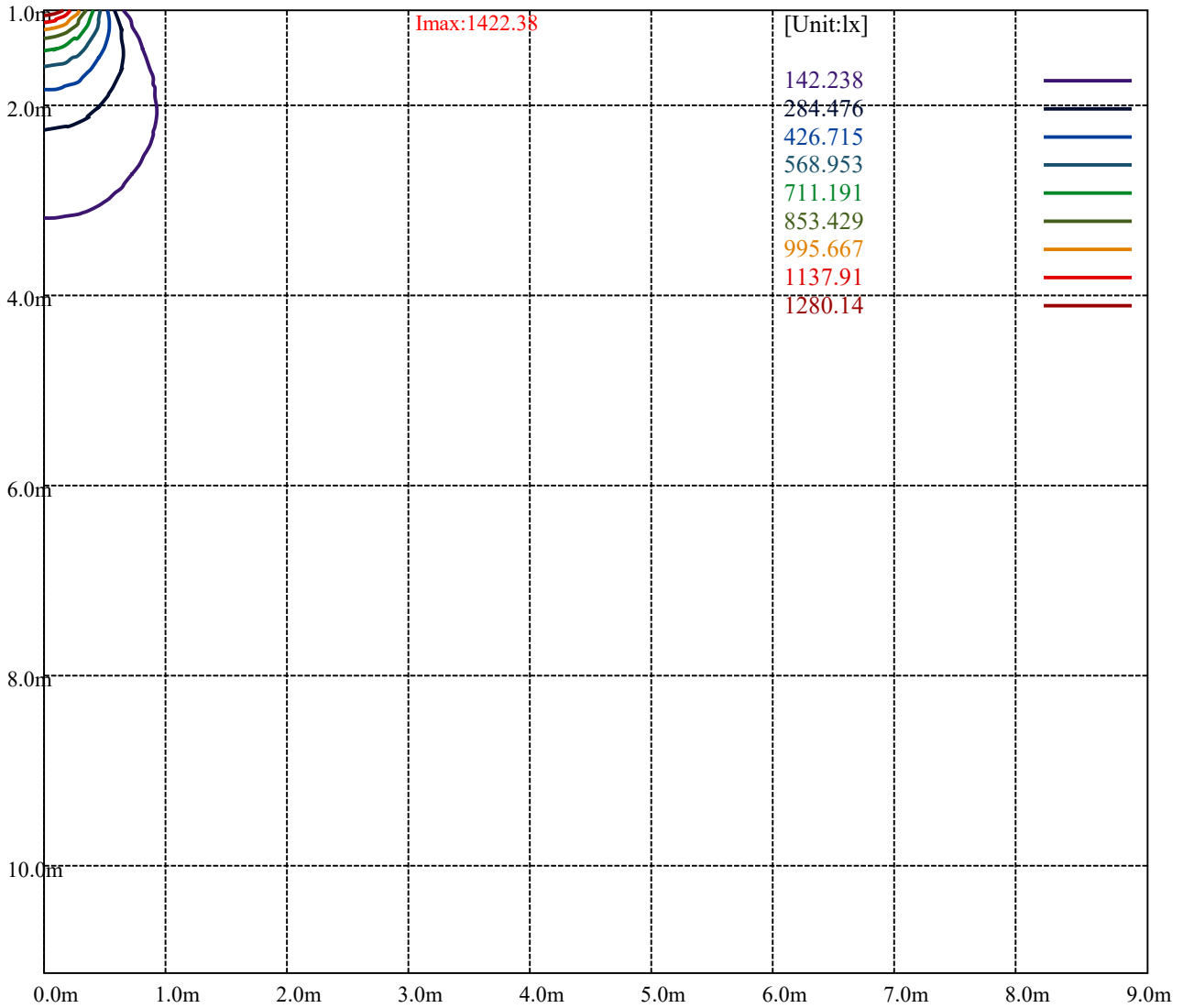
Road

Imax:1422.38

(10%Imax) 142.238	—
(20%Imax) 284.476	—
(30%Imax) 426.715	—
(40%Imax) 568.953	—
(50%Imax) 711.191	—
(60%Imax) 853.429	—
(70%Imax) 995.667	—
(80%Imax) 1137.91	—
(90%Imax) 1280.14	—



(10%Emax) 15.80422	—
(20%Emax) 31.60845	—
(30%Emax) 47.41278	—
(40%Emax) 63.217	—
(50%Emax) 79.02122	—
(60%Emax) 94.82545	—
(70%Emax) 110.6297	—
(80%Emax) 126.4344	—
(90%Emax) 142.2378	—



Luminance Table

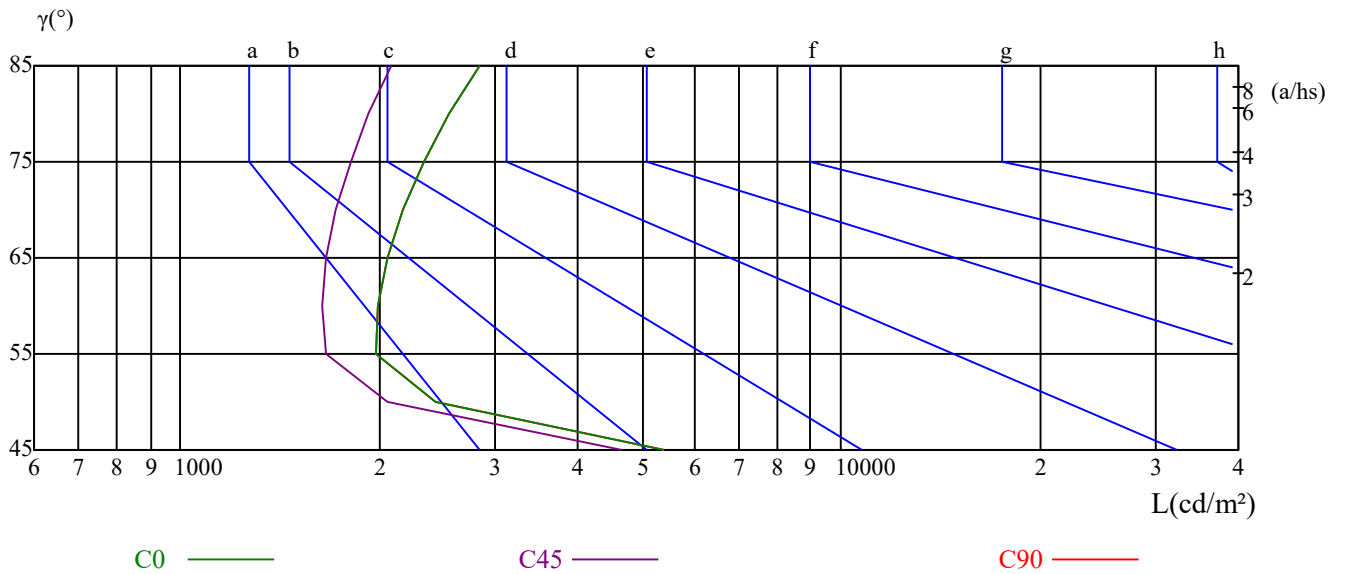
γ	45	50	55	60	65	70	75	80	85
C0	5416	2428	1983	1995	2057	2177	2342	2555	2840
C45	4664	2059	1656	1638	1660	1722	1813	1929	2081
C90	5416	2428	1983	1995	2057	2177	2342	2555	2840

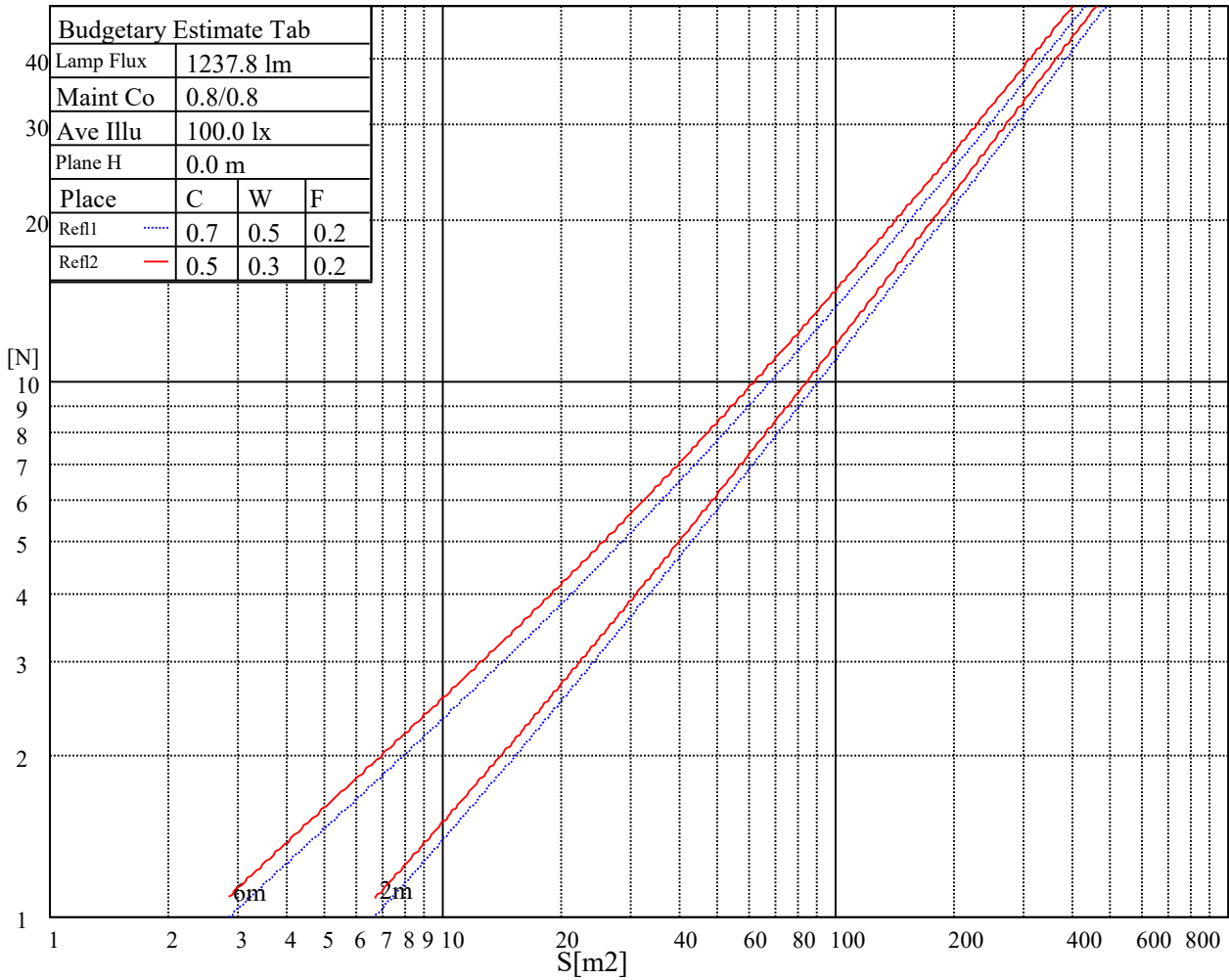
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4873	4873	4873	7920	7920	7920	23557	23557	23557

Glare Table

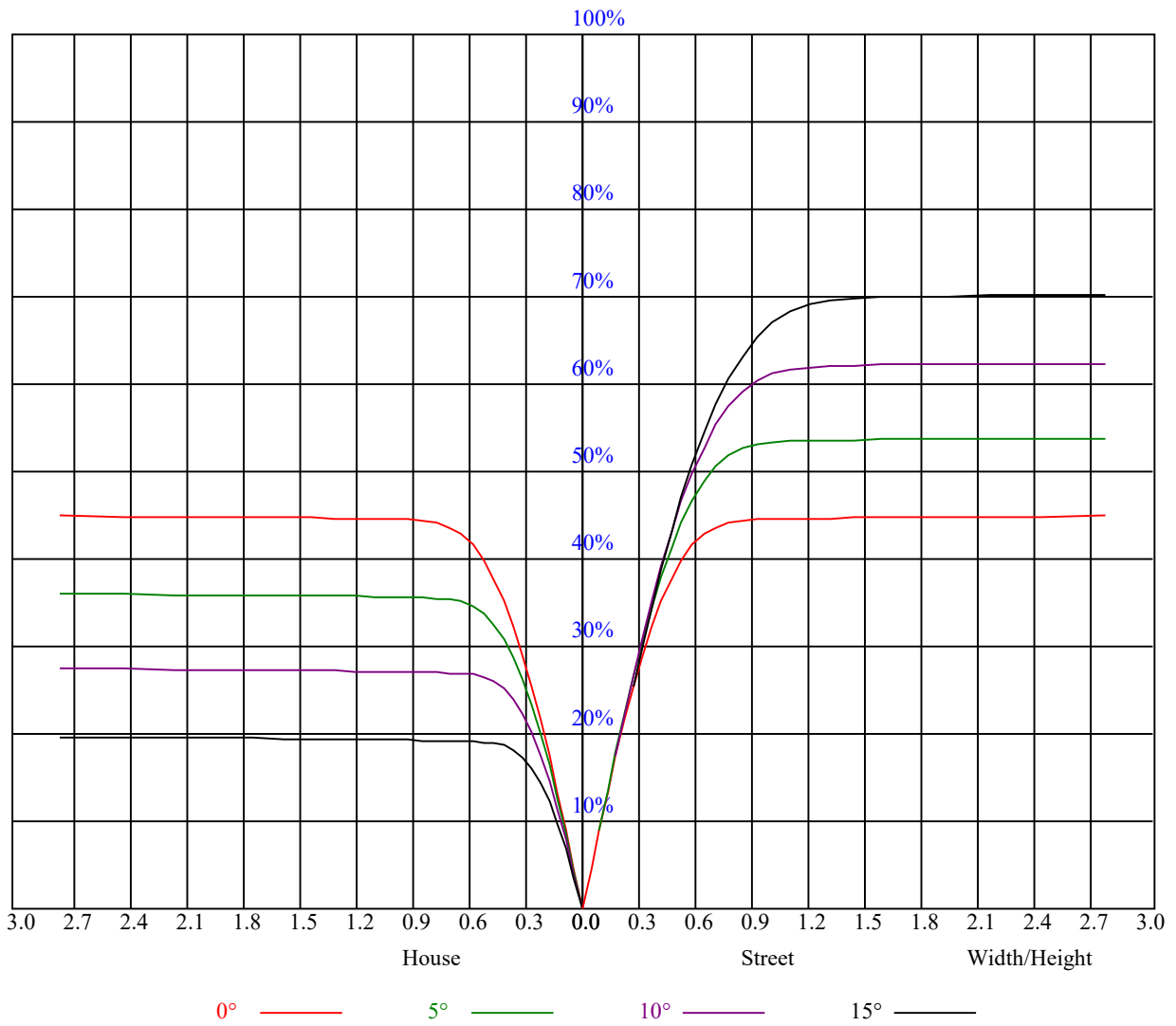
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

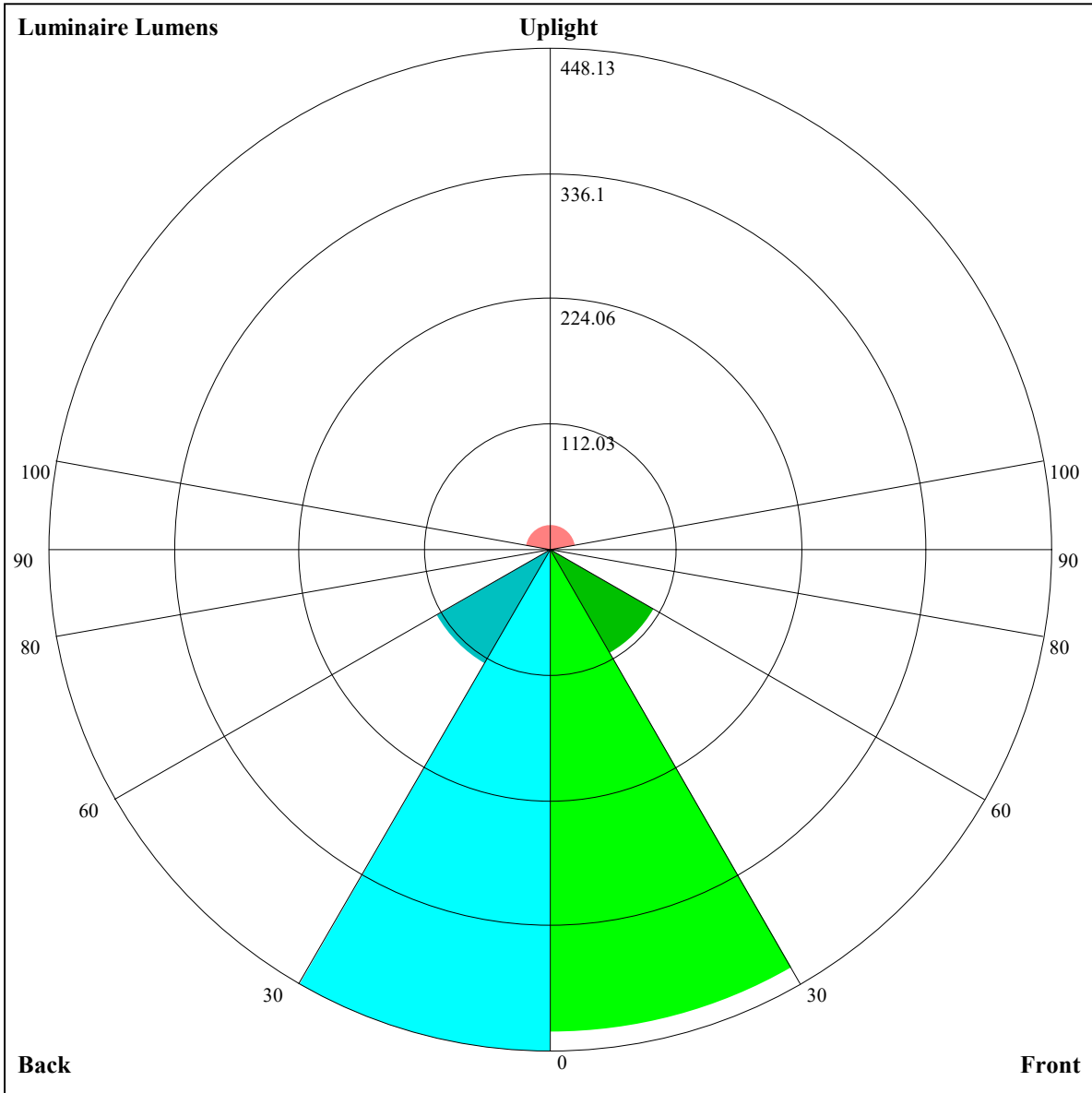
Luminance Limiting Curve





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	1.08	1.08	1.08	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.00	0.98	0.96	0.98	0.96	0.94	0.95	0.93	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.85
2	0.94	0.91	0.88	0.93	0.89	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.81	0.80
3	0.89	0.85	0.81	0.88	0.84	0.81	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.76
4	0.84	0.79	0.76	0.83	0.79	0.75	0.81	0.77	0.75	0.79	0.76	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.71	0.79	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.74	0.72	0.69	0.68
6	0.76	0.71	0.67	0.75	0.70	0.67	0.74	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
7	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.61
8	0.69	0.64	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.59
9	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.56
10	0.63	0.58	0.55	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.54	0.53





Luminaire Lumens:

FL=432.21,FM=106.33,FH=4.66,FVH=2.46

BL=448.13,BM=118.33,BH=4.67,BVH=2.47

UL=4.91,UH=23.37

BUG Rating:B1-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	1417.15	1396.23	1323.56	1174.35	1043.87	882.00	624.34	306.66	51.86
45.0	1430.37	1400.08	1326.86	1194.72	1051.58	886.96	621.59	291.80	47.79
90.0	1422.11	1402.84	1341.17	1205.74	1075.91	891.86	603.69	253.48	43.99
135.0	1419.90	1417.15	1378.06	1271.80	1128.11	971.19	713.53	372.18	76.58
180.0	1417.15	1414.40	1359.34	1228.86	1092.43	935.63	663.82	347.35	59.35
225.0	1430.37	1429.26	1378.06	1250.88	1098.10	939.10	681.49	341.07	65.74
270.0	1422.11	1425.96	1383.57	1268.50	1115.44	946.42	693.16	378.24	72.84
315.0	1419.90	1405.04	1330.16	1182.61	1036.93	853.70	594.17	258.16	43.11
360.0	1417.15	1396.23	1323.56	1174.35	1043.87	882.00	624.34	306.66	51.86
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	13.21	6.06	4.73	4.57	4.51	4.46	4.51	4.51	4.51
45.0	12.77	6.11	4.84	4.68	4.62	4.57	4.57	4.57	4.57
90.0	12.06	5.73	4.73	4.62	4.57	4.57	4.51	4.51	4.51
135.0	15.86	6.66	4.84	4.68	4.57	4.51	4.51	4.57	4.57
180.0	14.26	6.22	4.79	4.62	4.51	4.51	4.51	4.51	4.51
225.0	15.09	6.06	4.90	4.68	4.57	4.57	4.57	4.57	4.57
270.0	16.08	6.28	4.84	4.68	4.57	4.51	4.51	4.51	4.51
315.0	11.56	5.45	4.73	4.57	4.46	4.51	4.51	4.46	4.51
360.0	13.21	6.06	4.73	4.57	4.51	4.46	4.51	4.51	4.51
C/γ(°)	90.0								
0.0	4.46								
45.0	4.51								
90.0	4.51								
135.0	4.46								
180.0	4.46								
225.0	4.57								
270.0	4.51								
315.0	4.51								
360.0	4.46								