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Nata

Client:

LumCAT: 3-1884-L

Luminaire: 92.70.131.00

Report No: NT2018011021

Test No: GC2018011021

LampCAT: LUMINUS CXM-14

Lamp flux(lm): 2422.0

Number of Lamps: 1

Length(mm): 74

Phm Type: C

Voltage(V): 34.5000

Current(A): 0.6400

Power (W): 22.0800

PF: 0.0000

Ballast type: DC

Width(mm): 74

Height(mm): 0

Photometric Results

Lumens(lm): 2354.29, Efficiency(%): 97.20% , Luminous Efficacy(lm/W): 106.63

Central intensity(cd): 5907.552, Maximum intensity(cd): 5907.552

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=34.4

[C90/270]Total=34.4

Field angle(10%Imax): [C0/180]Total=64.8

[C90/270]Total=64.8

Maximum s/h(1/2): C0_180=0.57 C90_270=0.57

Maximum s/h(1/4): C0_180=0.56 C90_270=0.56

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 98.57%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.096%

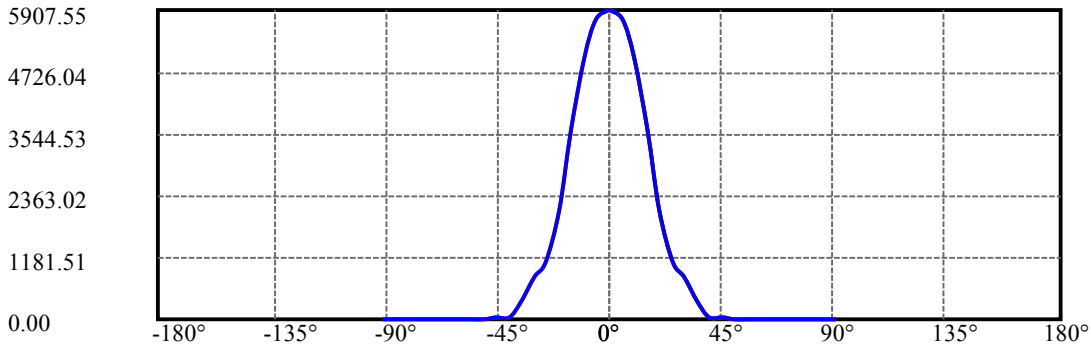
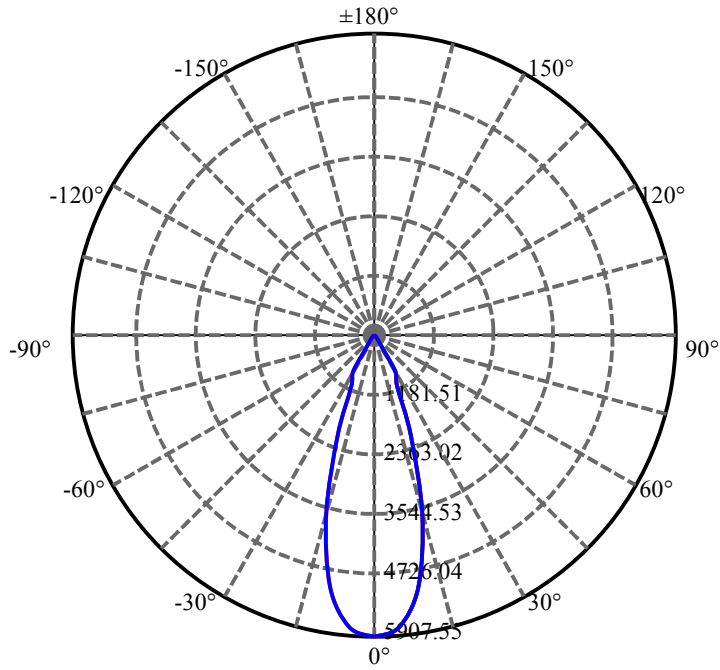
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5907.552	35.328	35.328	1.459%	1.501%
5.0	5728.343	273.662	308.99	11.299%	13.125%
10.0	4986.183	474.600	783.59	19.595%	33.283%
15.0	3609.153	512.025	1295.615	21.141%	55.032%
20.0	2101.640	394.003	1689.618	16.268%	71.768%
25.0	1108.733	256.841	1946.459	10.605%	82.677%
30.0	808.207	221.504	2167.964	9.146%	92.086%
35.0	348.418	109.542	2277.506	4.523%	96.738%
40.0	35.326	12.446	2289.952	.514%	97.267%
45.0	19.022	7.373	2297.325	.304%	97.580%
50.0	16.324	6.855	2304.179	.283%	97.871%
55.0	15.189	6.820	2310.999	.282%	98.161%
60.0	14.851	7.050	2318.049	.291%	98.461%
65.0	14.645	7.275	2325.325	.300%	98.770%
70.0	13.737	7.075	2332.4	.292%	99.070%
75.0	12.216	6.468	2338.868	.267%	99.345%
80.0	11.534	6.226	2345.094	.257%	99.609%
85.0	11.314	6.178	2351.272	.255%	99.872%
90.0	11.018	3.020	2354.292	.125%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2167.96	89.51%	92.09%
0-40	2289.95	94.55%	97.27%
0-60	2318.05	95.71%	98.46%
0-90	2351.27	97.08%	99.87%
0-120	2351.27	97.08%	99.87%
0-180	2354.29	97.20%	100.00%
60-90	40.27	1.66%	1.71%
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%
0-23.77	1883.43	77.76%	80.00%

ZONAL LUMEN SUMMARY

0-10	783.59
10-20	906.03
20-30	478.35
30-40	121.99
40-50	14.23
50-60	13.87
60-70	14.35
70-80	12.69
80-90	6.18
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: —————

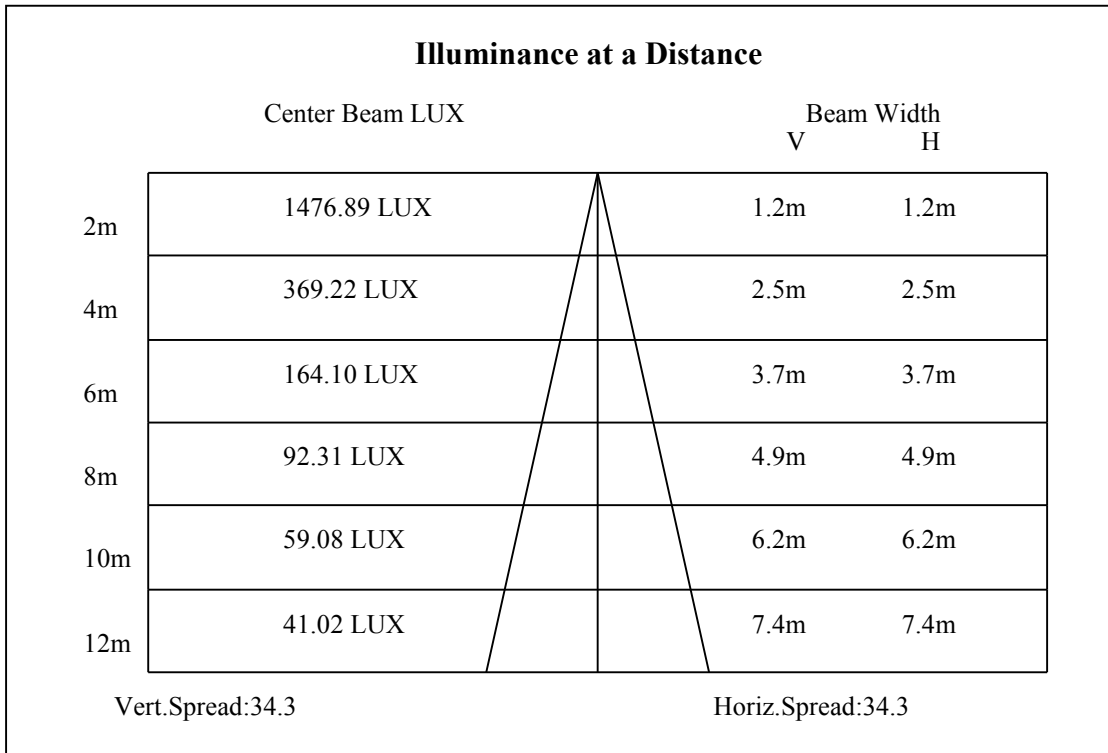
C90/C270: —————

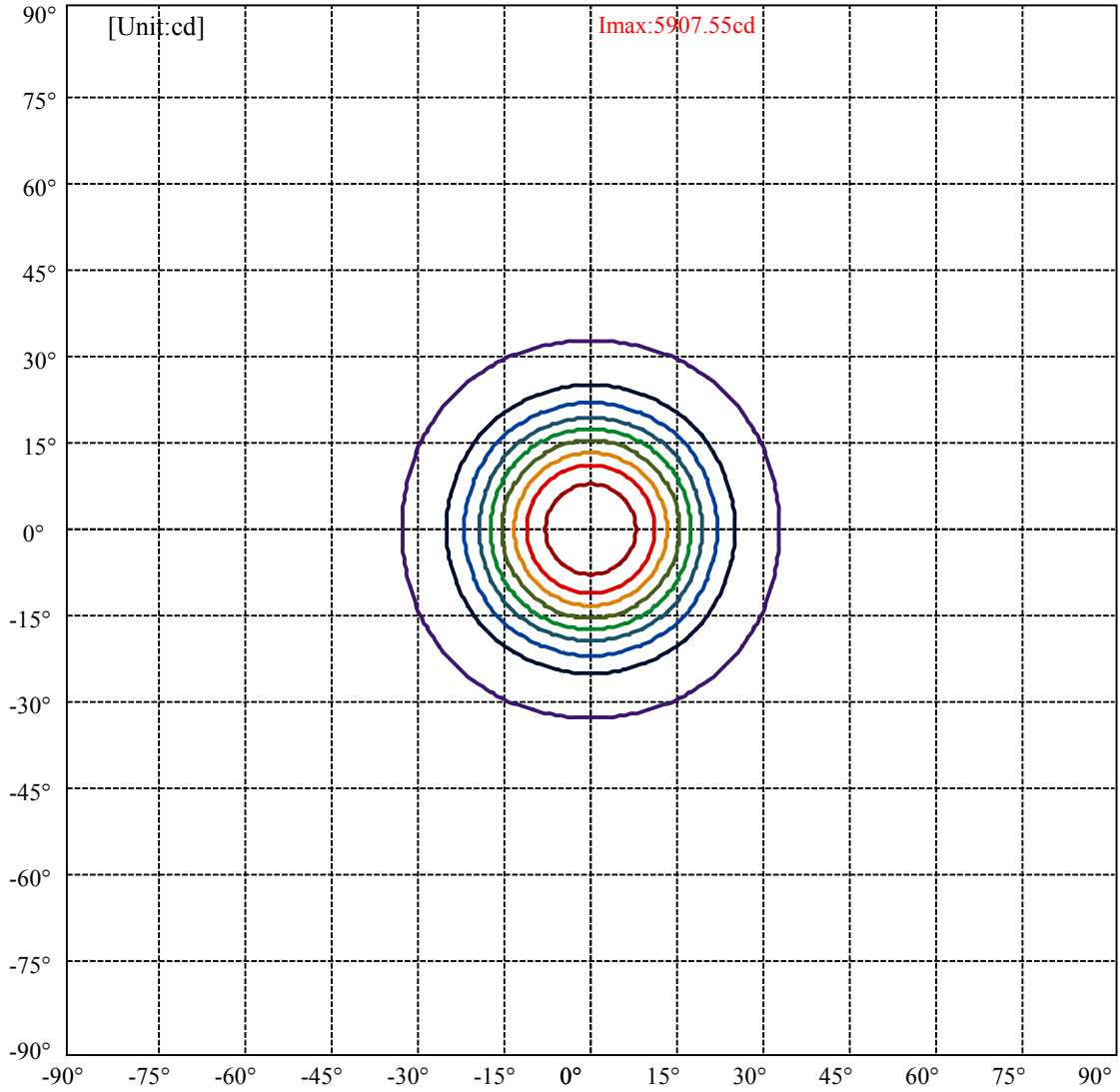
Field angle(10%Imax):C0/180Left:32.4 Right:32.4

:C90/270Left:32.4 Right:32.4

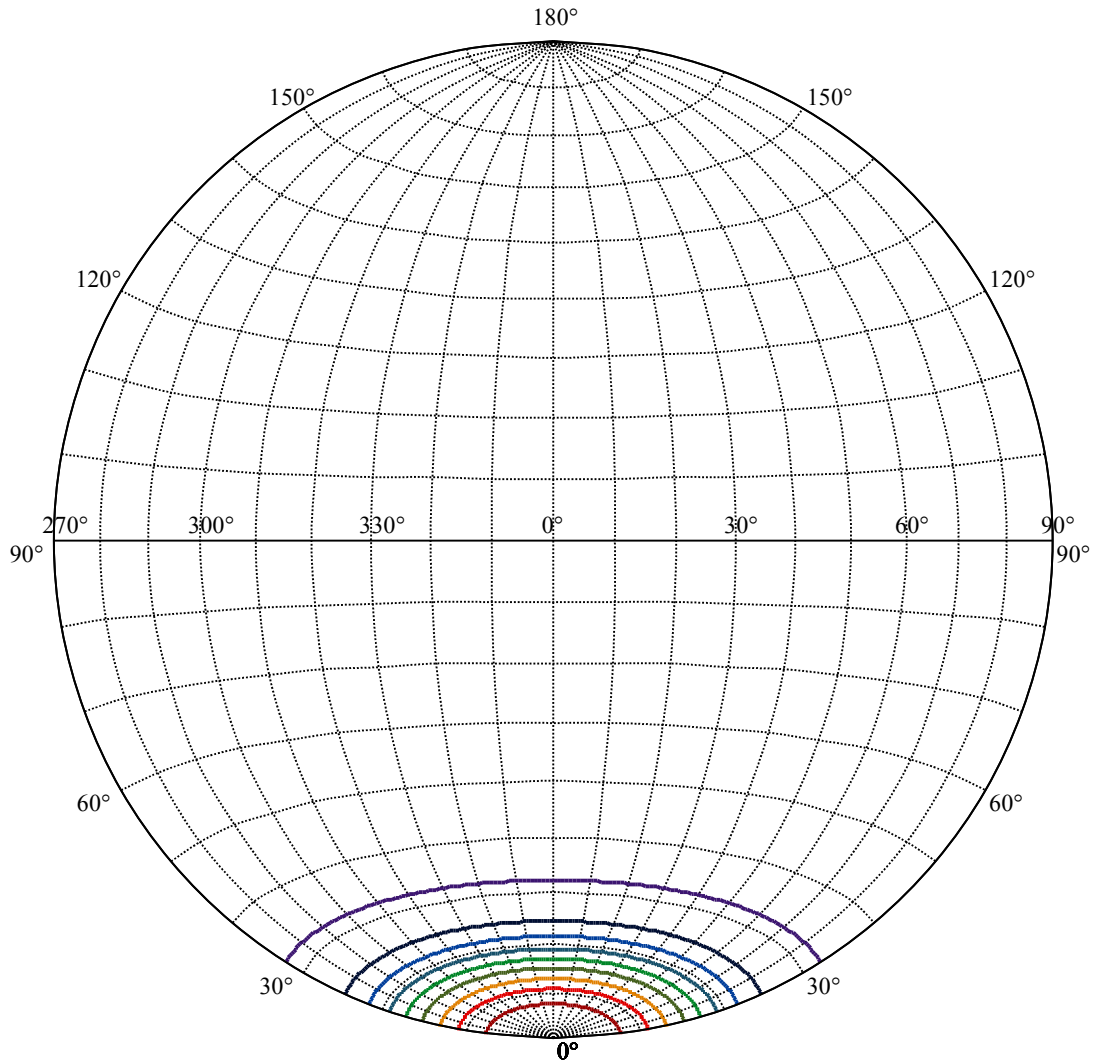
Beam Angle(50%Imax):C0/180Left:17.2 Right:17.2

:C90/270Left:17.2 Right:17.2





(10%Imax) 590.755	—
(20%Imax) 1181.51	—
(30%Imax) 1772.27	—
(40%Imax) 2363.02	—
(50%Imax) 2953.78	—
(60%Imax) 3544.53	—
(70%Imax) 4135.29	—
(80%Imax) 4726.04	—
(90%Imax) 5316.8	—



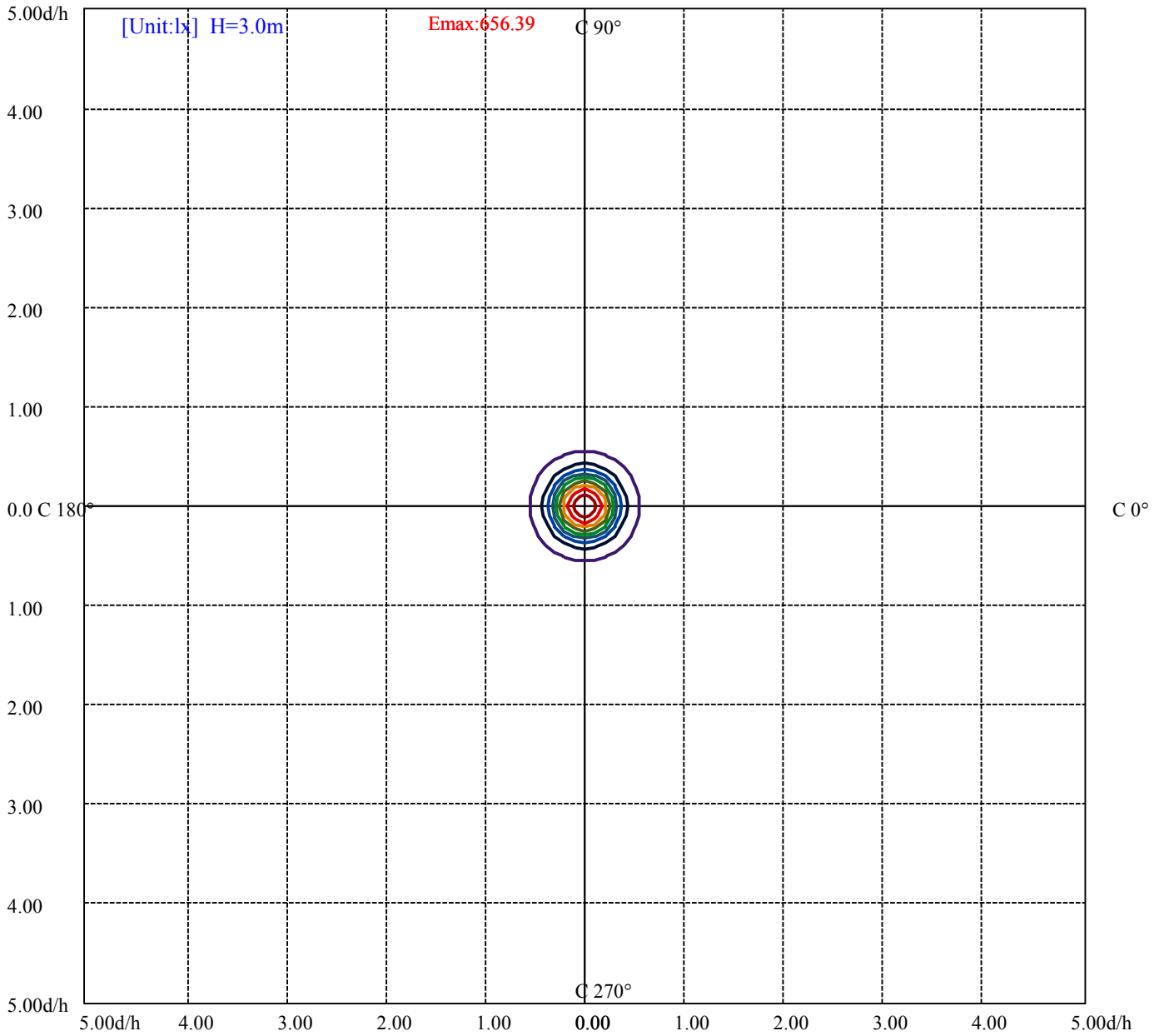
House

[Unit:cd]

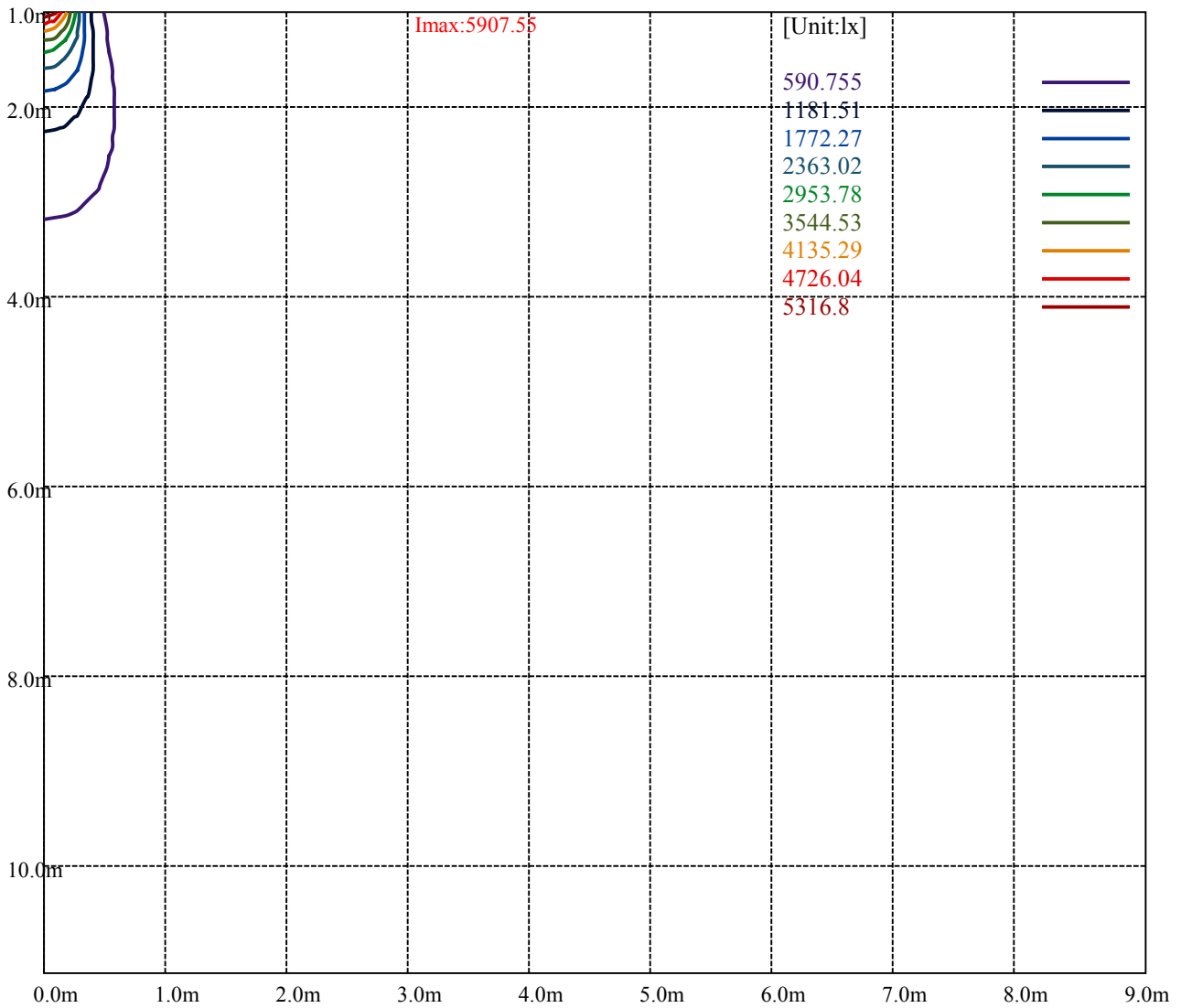
Road

Imax:5907.55

(10%Imax) 590.755	—
(20%Imax) 1181.51	—
(30%Imax) 1772.27	—
(40%Imax) 2363.02	—
(50%Imax) 2953.78	—
(60%Imax) 3544.53	—
(70%Imax) 4135.29	—
(80%Imax) 4726.04	—
(90%Imax) 5316.8	—



- (10%Emax) 65.63944
- (20%Emax) 131.2789
- (30%Emax) 196.9178
- (40%Emax) 262.5578
- (50%Emax) 328.1967
- (60%Emax) 393.8367
- (70%Emax) 459.4755
- (80%Emax) 525.1155
- (90%Emax) 590.7545



Luminance Table

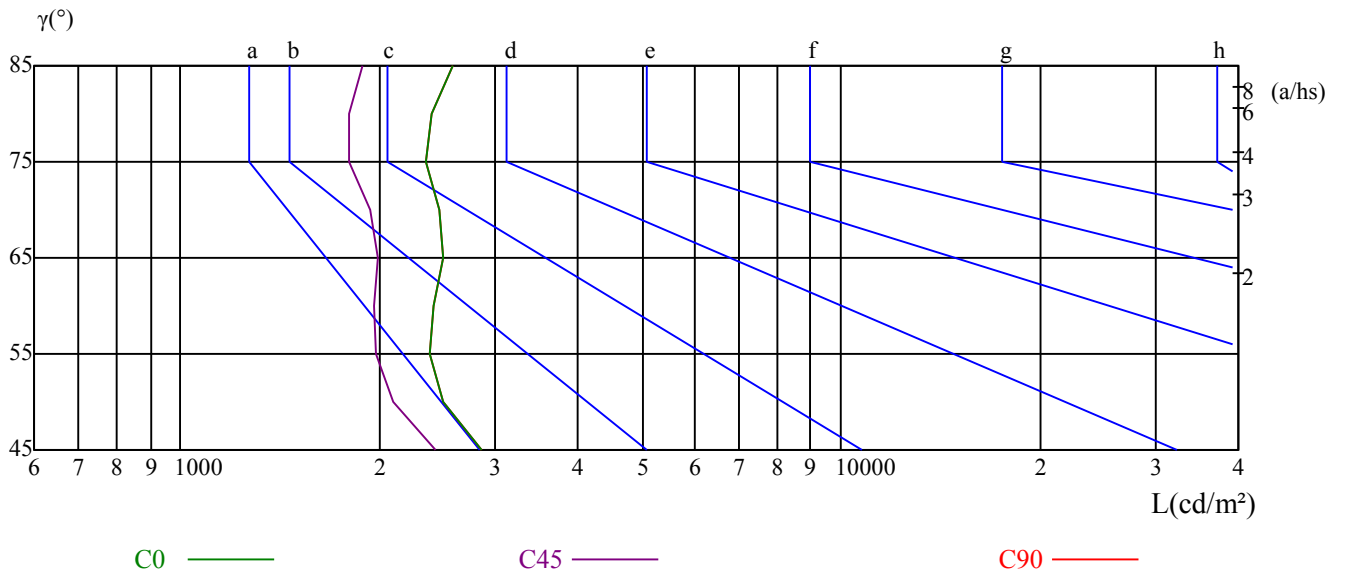
γ	45	50	55	60	65	70	75	80	85
C0	2862	2502	2391	2421	2495	2471	2347	2396	2581
C45	2441	2101	1977	1969	1995	1939	1803	1799	1885
C90	2862	2502	2391	2421	2495	2471	2347	2396	2581

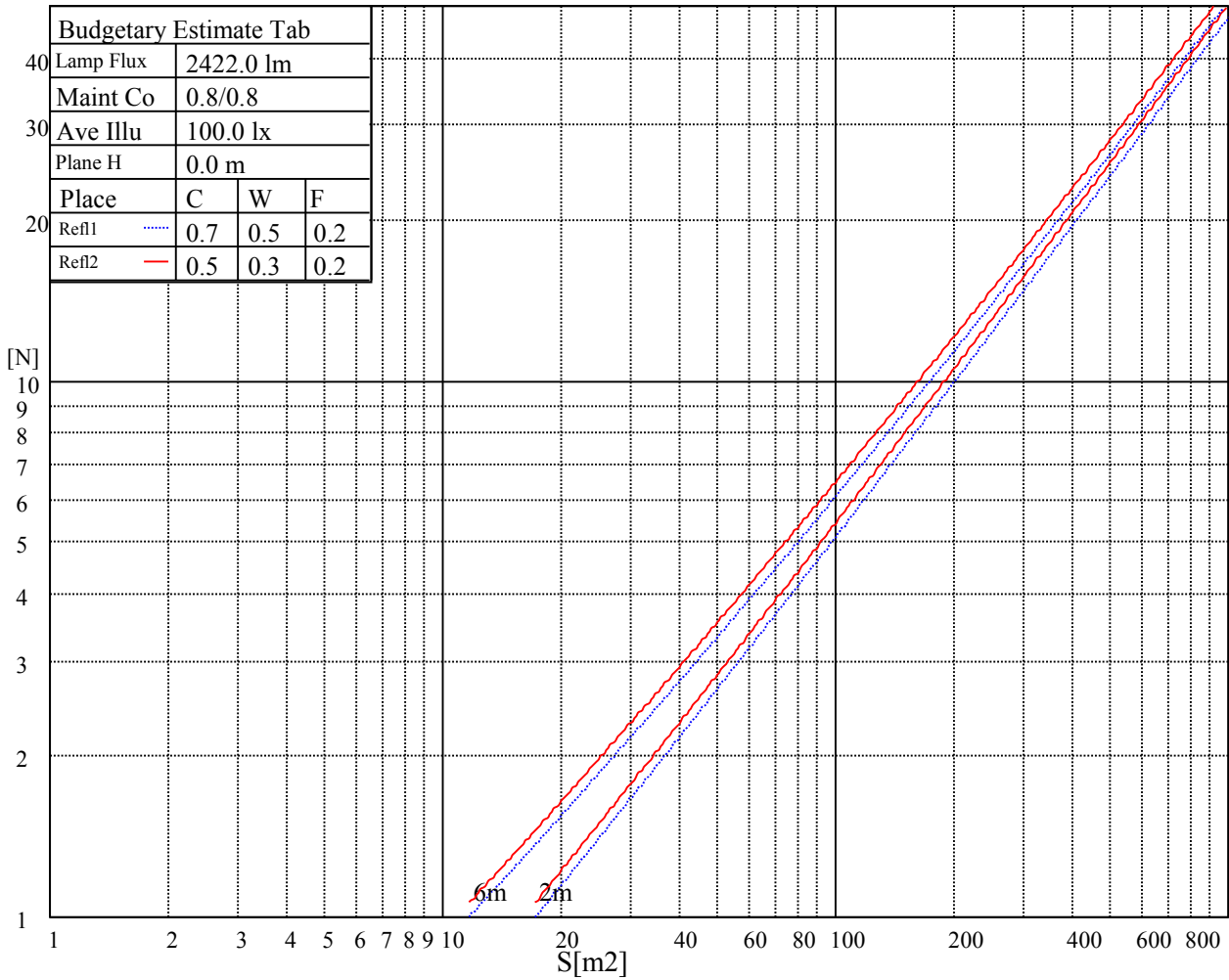
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6328	6328	6328	8619	8619	8619	23706	23706	23706

Glare Table

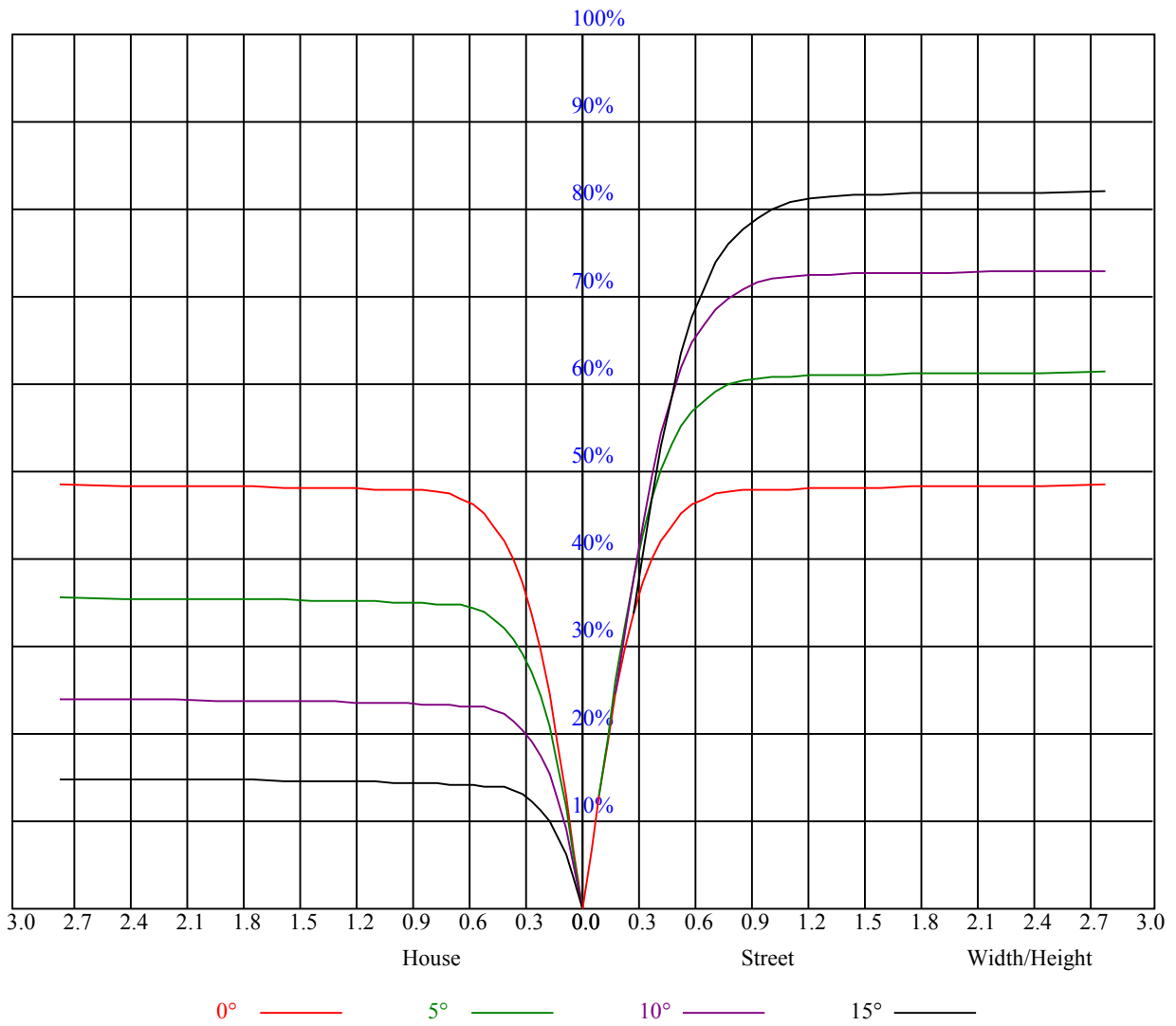
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

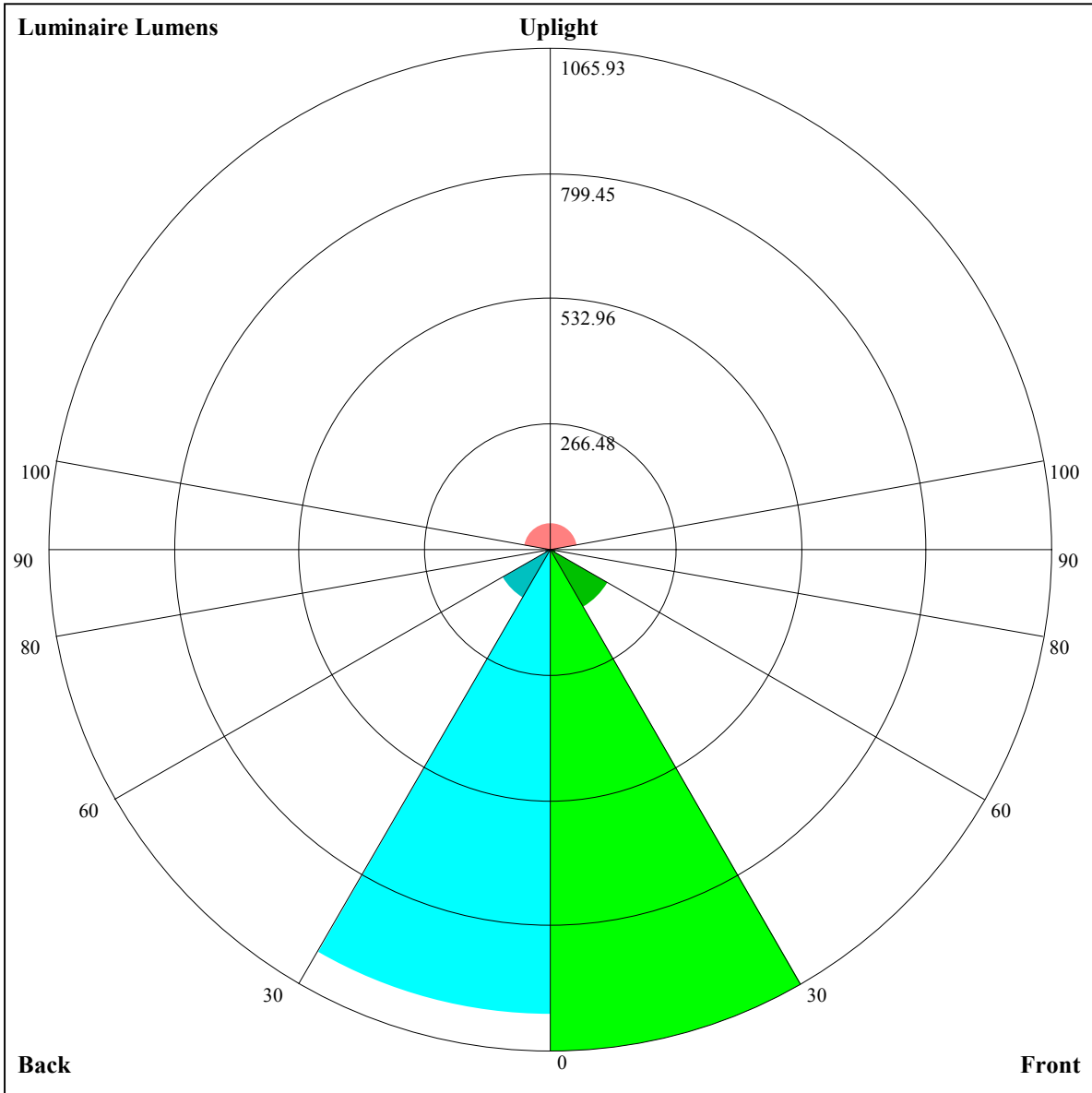
Luminance Limiting Curve





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	1.17	1.17	1.17	1.15	1.15	1.15	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	0.99
1	1.09	1.06	1.04	1.07	1.04	1.02	1.03	1.01	0.99	0.99	0.97	0.96	0.95	0.94	0.93	0.92
2	1.03	0.99	0.96	1.01	0.98	0.95	0.98	0.95	0.93	0.95	0.93	0.91	0.93	0.91	0.89	0.88
3	0.98	0.94	0.91	0.97	0.93	0.90	0.94	0.91	0.88	0.92	0.89	0.87	0.90	0.88	0.86	0.84
4	0.94	0.89	0.86	0.93	0.89	0.85	0.91	0.87	0.84	0.89	0.86	0.83	0.87	0.85	0.82	0.81
5	0.90	0.85	0.82	0.89	0.85	0.82	0.87	0.84	0.81	0.86	0.83	0.80	0.85	0.82	0.80	0.78
6	0.87	0.82	0.79	0.86	0.81	0.78	0.84	0.81	0.78	0.83	0.80	0.77	0.82	0.79	0.77	0.76
7	0.83	0.79	0.76	0.83	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.73
8	0.81	0.76	0.73	0.80	0.76	0.73	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.71
9	0.78	0.73	0.70	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.69
10	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.67





Luminaire Lumens:

FL=1065.93,FM=142.44,FH=13.98,FVH=6.19

BL=987.43,BM=116.79,BH=13.27,BVH=6.13

UL=12.02,UH=57.21

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	5904.25	5722.01	5102.63	3925.52	2679.59	1476.61	998.17	551.11	79.78
45.0	5900.94	5842.03	5386.72	4067.02	2439.55	1207.39	837.41	407.97	40.47
90.0	5930.12	5909.20	5309.64	3568.76	1861.46	951.15	734.34	293.78	26.04
135.0	5894.89	5909.75	5237.52	3731.72	2016.17	1085.16	827.50	349.61	28.24
180.0	5904.25	5662.55	4631.89	3013.24	1651.14	1025.15	717.55	202.50	26.81
225.0	5900.94	5597.58	4682.55	3389.27	1831.18	1004.39	729.00	260.20	21.75
270.0	5930.12	5643.83	4840.01	3710.25	2152.71	1042.77	784.00	380.99	25.71
315.0	5894.89	5539.77	4698.51	3467.45	2181.33	1077.23	837.68	341.18	33.80
360.0	5904.25	5722.01	5102.63	3925.52	2679.59	1476.61	998.17	551.11	79.78

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	28.85	21.80	18.61	17.18	16.57	14.98	12.66	11.73	11.40
45.0	18.77	17.01	16.19	15.58	15.09	14.09	12.55	11.56	11.23
90.0	18.83	16.13	14.04	13.49	13.54	13.10	11.95	11.40	11.18
135.0	16.68	14.70	14.20	14.26	14.15	13.38	11.95	11.45	11.18
180.0	17.07	15.03	14.70	14.81	14.59	13.32	11.78	11.45	11.18
225.0	14.98	13.93	13.71	13.98	13.93	13.16	11.84	11.45	11.23
270.0	15.69	14.04	13.43	13.43	13.60	13.32	12.28	11.56	11.51
315.0	21.31	17.95	16.63	16.08	15.69	14.53	12.72	11.67	11.62
360.0	28.85	21.80	18.61	17.18	16.57	14.98	12.66	11.73	11.40

C/γ(°)	90.0
0.0	11.01
45.0	11.01
90.0	10.96
135.0	10.90
180.0	10.96
225.0	11.07
270.0	11.18
315.0	11.07
360.0	11.01