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NATA

Client:

LumCAT: 2-1285-N

Luminaire: 92.70.046.00

Report No: nt0100

Voltage(V): 34.1800

Test No: GC2020010819

Current(A): 0.3070

LampCAT: LUMINUS CLM-9-AA40

Power (W): 10.4900

Lamp flux(lm): 1288.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1061.17, Efficiency(%): 82.39% , Luminous Efficacy(lm/W): 101.16

Central intensity(cd): 2451.516, Maximum intensity(cd): 2451.516

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=33.2

[C90/270]Total=33.2

Field angle(10%Imax): [C0/180]Total=65.6

[C90/270]Total=65.6

Maximum s/h(1/2): C0_180=0.53 C90_270=0.53

Maximum s/h(1/4): C0_180=0.60 C90_270=0.60

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 82.39%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.649%

Zonal flux distribution table

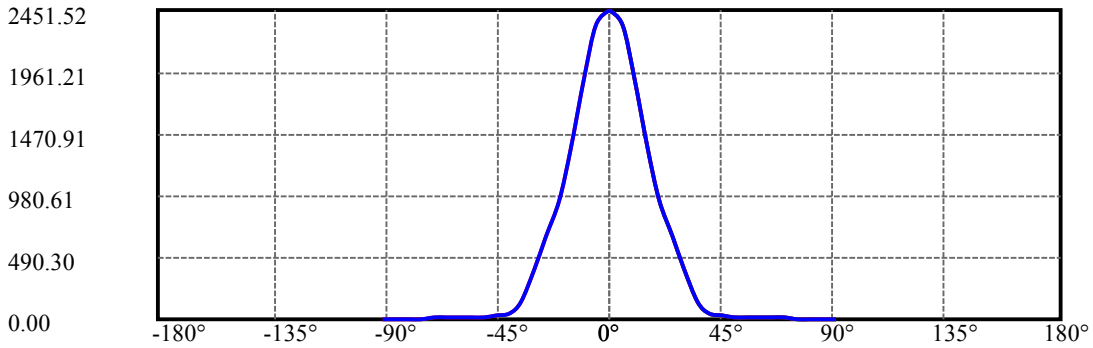
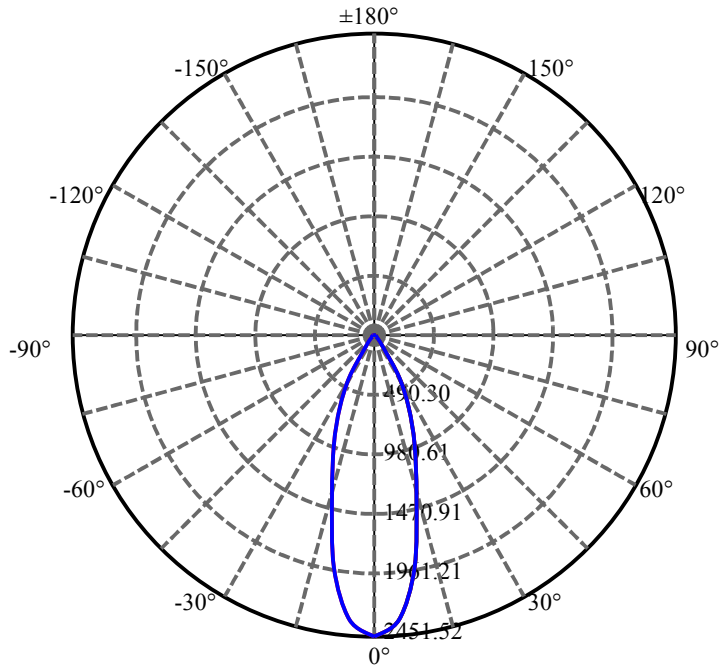
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2451.516	0.000	0	.000%	.000%
5.0	2323.758	57.087	57.087	4.432%	5.380%
10.0	1915.594	151.655	208.742	11.774%	19.671%
15.0	1351.287	193.789	402.531	15.046%	37.933%
20.0	947.890	189.484	592.016	14.712%	55.789%
25.0	658.568	168.488	760.503	13.081%	71.667%
30.0	393.961	133.198	893.702	10.341%	84.219%
35.0	129.797	77.127	970.829	5.988%	91.487%
40.0	38.363	28.056	998.885	2.178%	94.131%
45.0	26.698	12.046	1010.931	.935%	95.266%
50.0	21.635	9.766	1020.698	.758%	96.186%
55.0	17.311	8.468	1029.166	.657%	96.984%
60.0	13.226	7.058	1036.224	.548%	97.649%
65.0	10.484	5.764	1041.988	.447%	98.192%
70.0	9.084	4.955	1046.943	.385%	98.659%
75.0	7.509	4.337	1051.28	.337%	99.068%
80.0	6.518	3.753	1055.033	.291%	99.422%
85.0	5.583	3.288	1058.322	.255%	99.732%
90.0	4.816	2.847	1061.169	.221%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	893.70	69.39%	84.22%
0-40	998.88	77.55%	94.13%
0-60	1036.22	80.45%	97.65%
0-90	1058.32	82.17%	99.73%
0-120	1058.32	82.17%	99.73%
0-180	1061.17	82.39%	100.00%
60-90	29.16	2.26%	2.75%
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%
0-28.32	848.94	65.91%	80.00%

ZONAL LUMEN SUMMARY

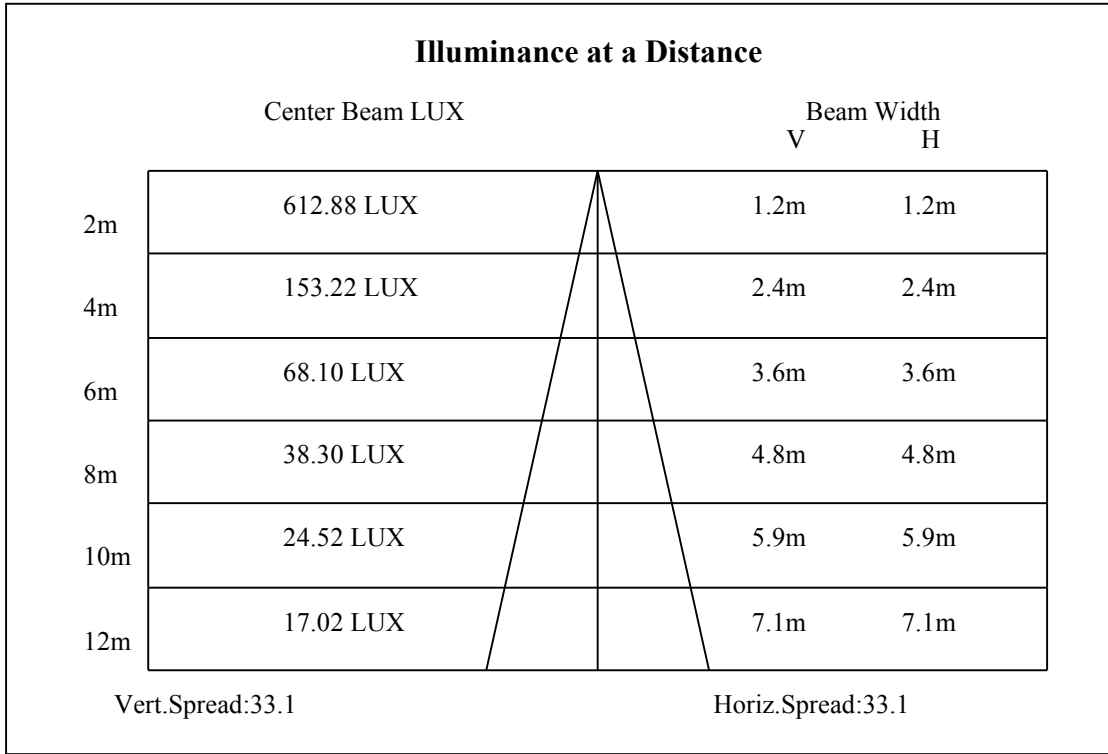
0-10	208.74
10-20	383.27
20-30	301.69
30-40	105.18
40-50	21.81
50-60	15.53
60-70	10.72
70-80	8.09
80-90	3.29
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

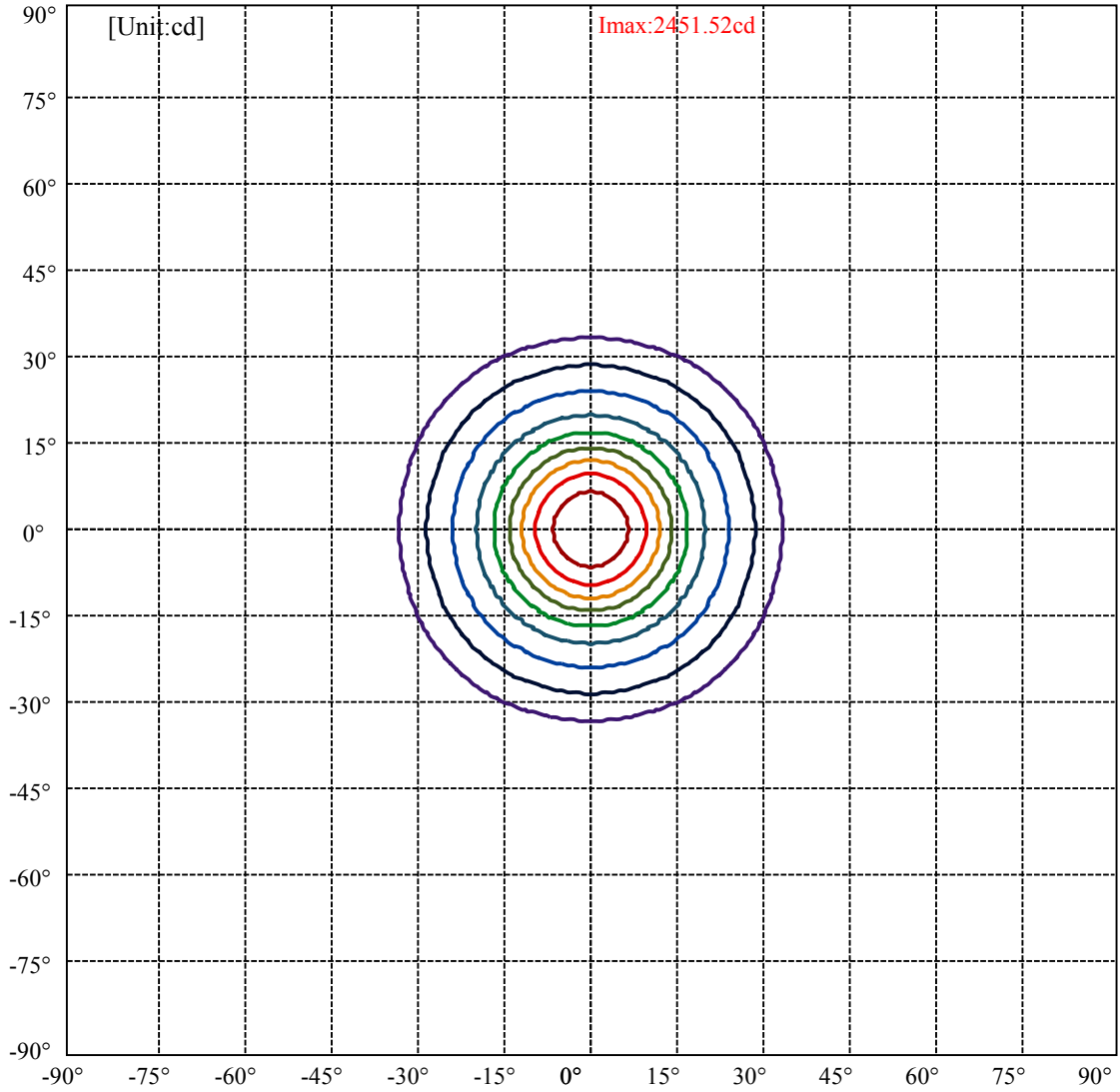


C0(Max): —————
C0/C180: —————
C90/C270: —————

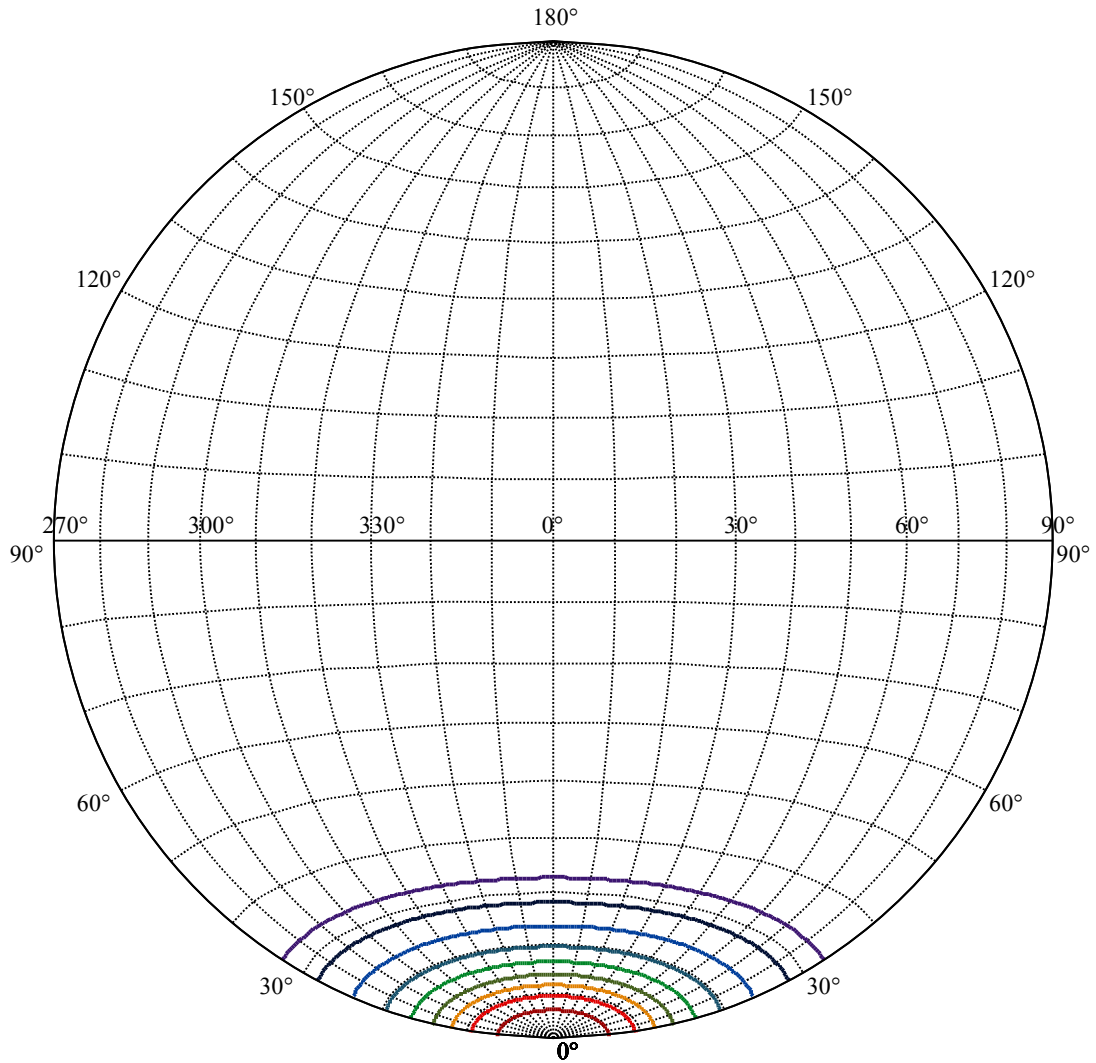
Field angle(10%Imax):C0/180Left:32.8 Right:32.8
:C90/270Left:32.8 Right:32.8

Beam Angle(50%Imax):C0/180Left:16.6 Right:16.6
:C90/270Left:16.6 Right:16.6





(10%Imax) 245.152	—
(20%Imax) 490.303	—
(30%Imax) 735.455	—
(40%Imax) 980.606	—
(50%Imax) 1225.76	—
(60%Imax) 1470.91	—
(70%Imax) 1716.06	—
(80%Imax) 1961.21	—
(90%Imax) 2206.36	—



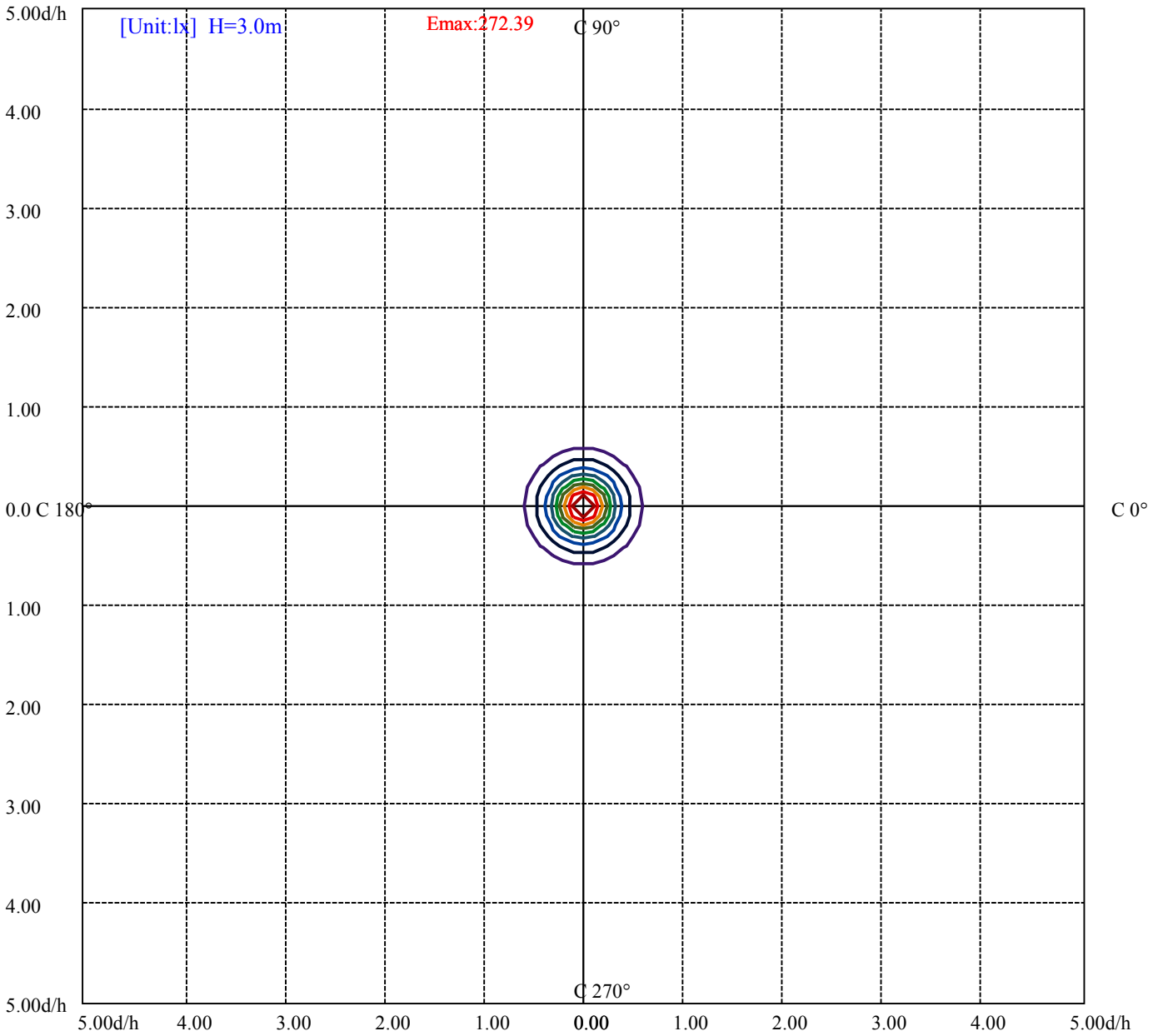
House

[Unit:cd]

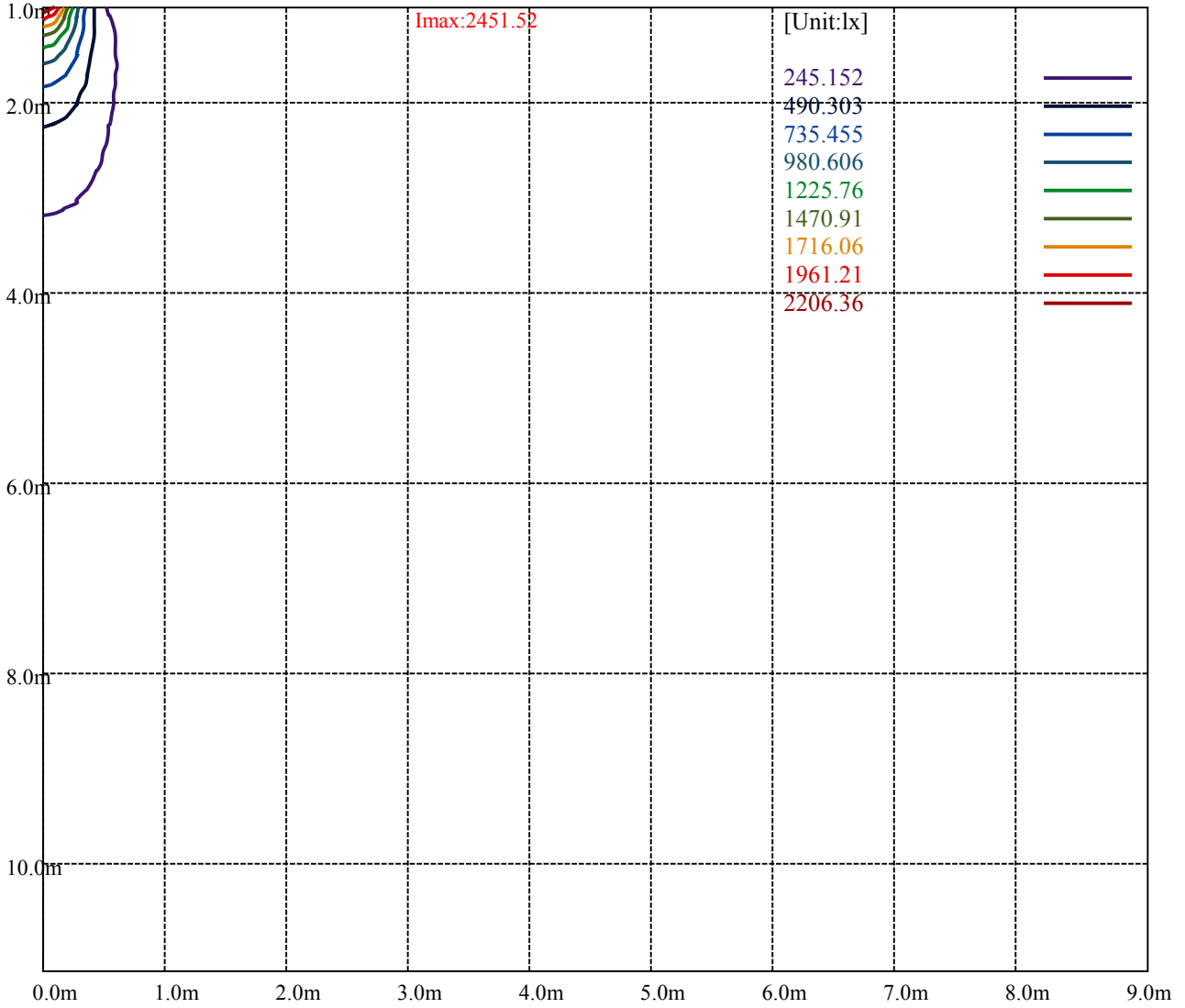
Road

Imax:2451.52

(10%Imax)	245.152	—
(20%Imax)	490.303	—
(30%Imax)	735.455	—
(40%Imax)	980.606	—
(50%Imax)	1225.76	—
(60%Imax)	1470.91	—
(70%Imax)	1716.06	—
(80%Imax)	1961.21	—
(90%Imax)	2206.36	—



(10%Emax) 27.239	—
(20%Emax) 54.478	—
(30%Emax) 81.71711	—
(40%Emax) 108.9561	—
(50%Emax) 136.1956	—
(60%Emax) 163.4344	—
(70%Emax) 190.6733	—
(80%Emax) 217.9122	—
(90%Emax) 245.1511	—



Luminance Table

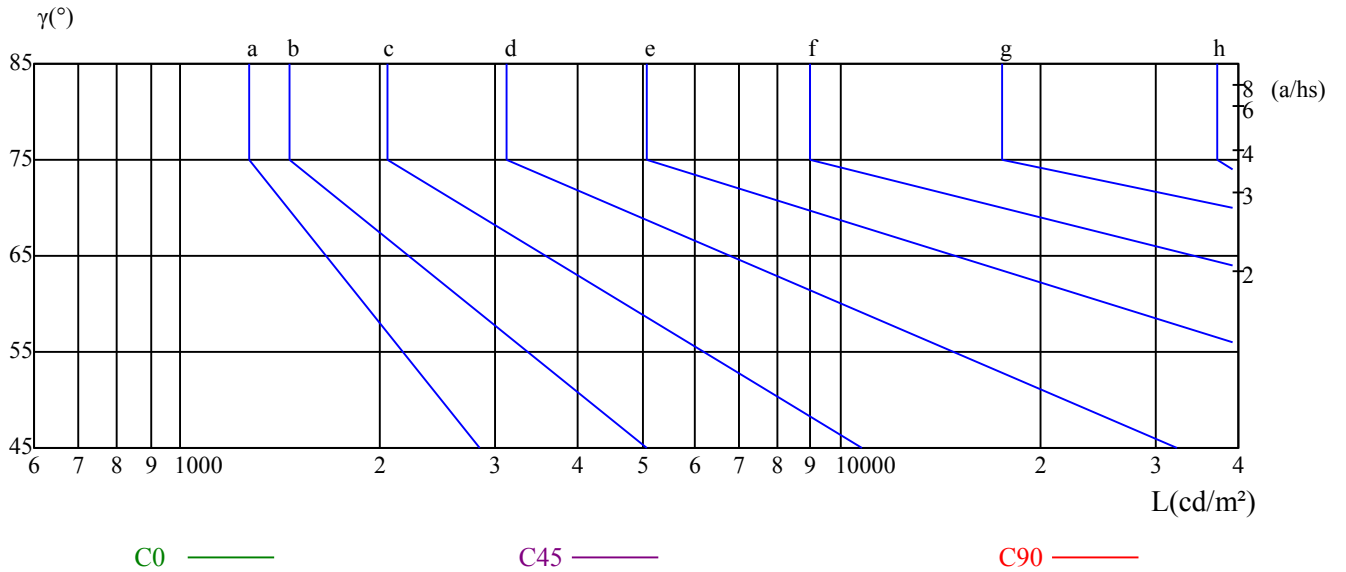
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

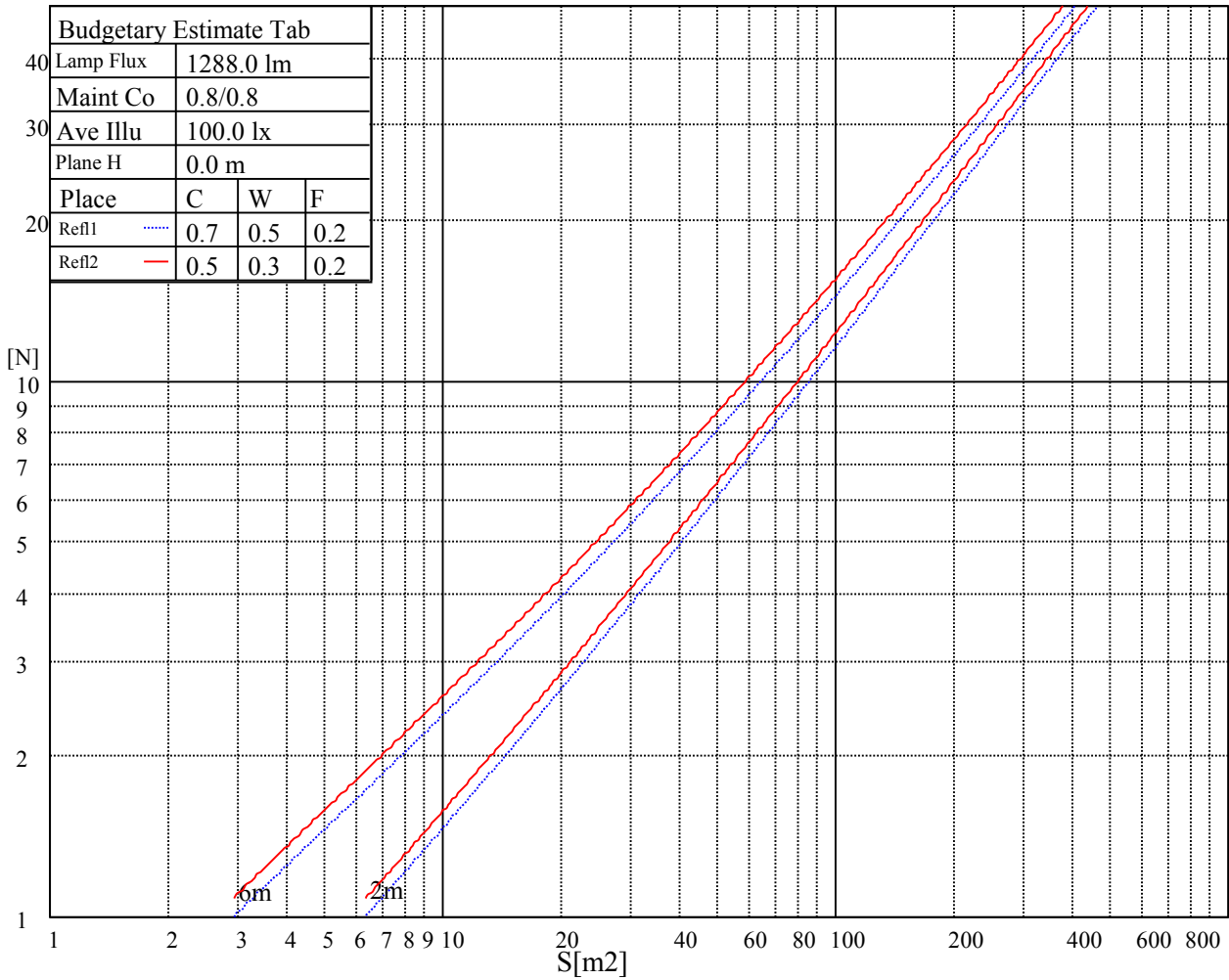
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

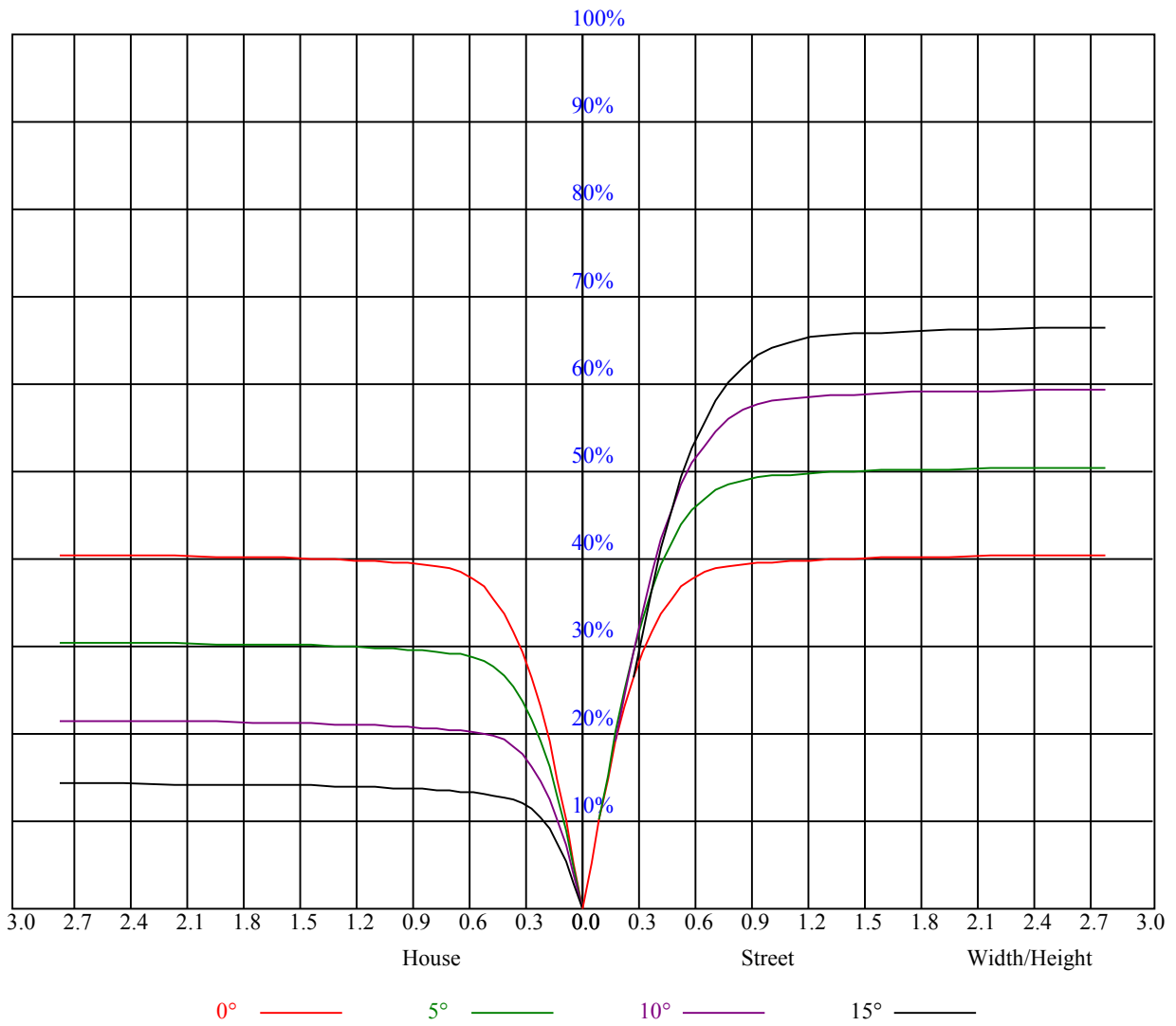
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

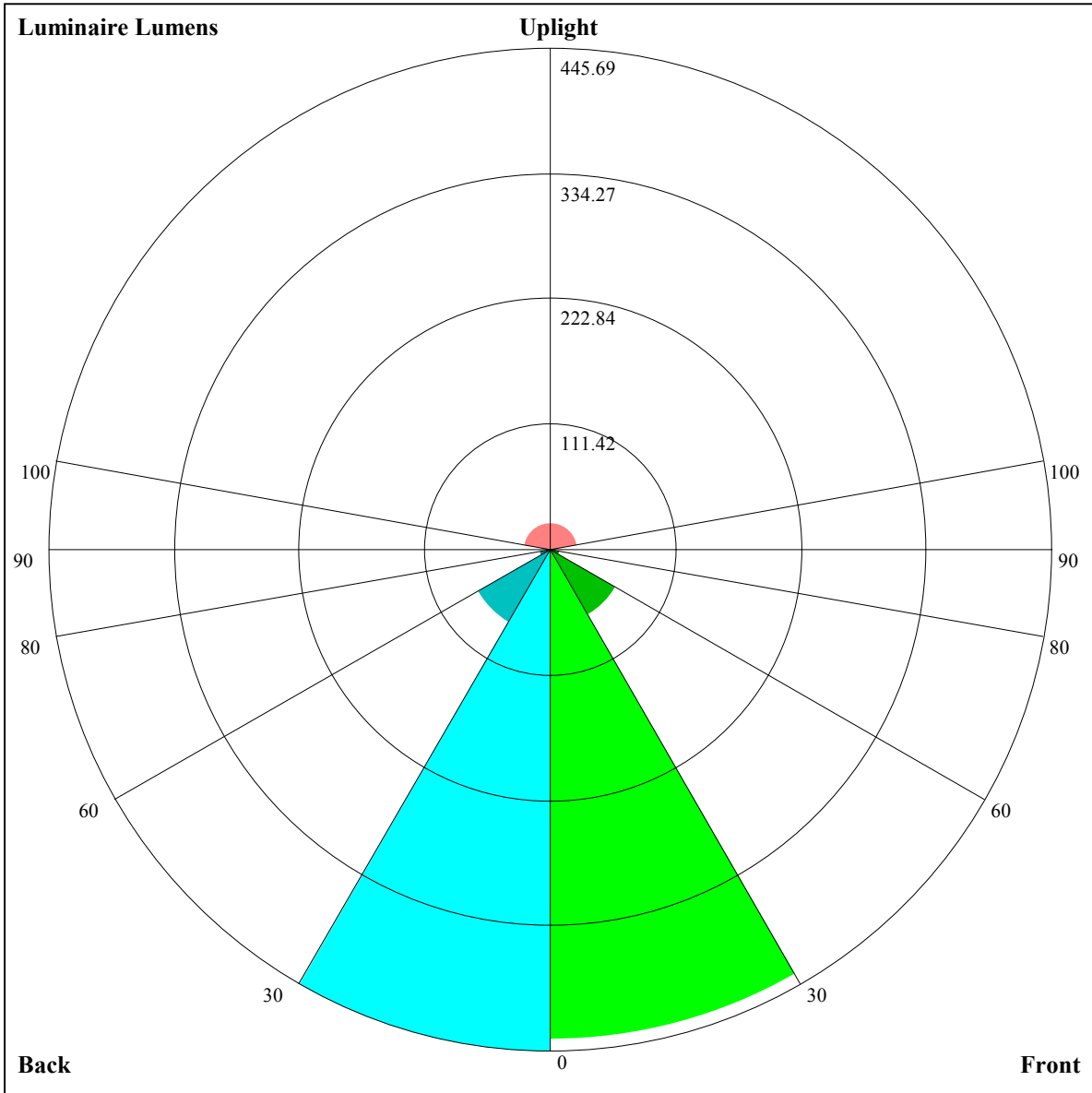
Luminance Limiting Curve





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	0.98	0.98	0.98	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.84	0.84	0.84	0.82
1	0.92	0.90	0.88	0.90	0.88	0.86	0.86	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.79	0.77
2	0.86	0.83	0.80	0.84	0.82	0.79	0.82	0.80	0.78	0.79	0.78	0.76	0.77	0.76	0.74	0.73
3	0.81	0.77	0.74	0.80	0.76	0.74	0.78	0.75	0.72	0.76	0.73	0.71	0.74	0.72	0.70	0.69
4	0.77	0.72	0.69	0.76	0.72	0.69	0.74	0.71	0.68	0.72	0.70	0.67	0.71	0.69	0.67	0.65
5	0.73	0.68	0.65	0.72	0.68	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.62
6	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.65	0.62	0.60	0.59
7	0.66	0.62	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.63	0.60	0.57	0.56
8	0.63	0.59	0.56	0.63	0.58	0.56	0.62	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.54
9	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.58	0.55	0.53	0.52
10	0.58	0.54	0.51	0.57	0.53	0.51	0.57	0.53	0.51	0.56	0.53	0.51	0.56	0.53	0.50	0.49





Luminaire Lumens:

FL=435.09,FM=66.39,FH=9.26,FVH=3.03

BL=445.69,BM=74.41,BH=9.54,BVH=3.1

UL=5.26,UH=25.01

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	2444.63	2345.06	1919.81	1409.06	950.63	662.06	399.38	120.43	32.12
45.0	2450.81	2336.63	1927.13	1366.88	910.69	641.81	362.25	99.39	31.44
90.0	2456.44	2300.06	1863.00	1106.61	888.64	614.59	326.93	91.01	34.09
135.0	2454.19	2364.75	1998.00	1413.00	968.06	653.63	406.69	149.29	42.24
180.0	2444.63	2290.50	1922.06	1387.69	961.82	700.43	425.48	136.69	39.21
225.0	2450.81	2291.63	1879.88	1423.69	992.14	696.66	451.86	162.56	45.00
270.0	2456.44	2352.38	1959.75	1461.38	985.50	655.31	412.88	170.83	47.59
315.0	2454.19	2309.06	1855.13	1242.00	925.65	644.06	366.24	108.17	35.21
360.0	2444.63	2345.06	1919.81	1409.06	950.63	662.06	399.38	120.43	32.12
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	24.69	20.36	16.65	12.77	10.18	9.06	7.37	6.41	5.40
45.0	23.34	19.24	15.64	12.21	10.01	8.55	7.37	6.41	5.46
90.0	25.14	20.81	16.14	12.26	10.13	8.33	7.20	6.24	5.34
135.0	27.84	22.39	17.61	13.22	10.46	9.00	7.43	6.53	5.57
180.0	27.11	22.61	18.51	13.89	10.63	9.45	7.54	6.47	5.68
225.0	29.42	22.89	18.34	14.29	11.14	9.56	7.88	6.86	5.96
270.0	30.15	23.46	18.73	14.23	11.03	9.56	7.93	6.81	5.74
315.0	25.88	21.32	16.88	12.94	10.29	9.17	7.37	6.41	5.51
360.0	24.69	20.36	16.65	12.77	10.18	9.06	7.37	6.41	5.40
C/ γ (°)	90.0								
0.0	4.73								
45.0	4.84								
90.0	4.78								
135.0	4.78								
180.0	4.78								
225.0	4.95								
270.0	4.89								
315.0	4.78								
360.0	4.73								