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Nata

Client:

LumCAT: 3-2017-A

Luminaire: 92.70.065.00+92.70.089.00

Report No: nt0100

Test No: NATA07

LampCAT: LUMINUS CXM-14-AC40

Lamp flux(lm): 1357.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 220.5000

Current(A): 0.0690

Power (W): 14.2600

PF: 0.9290

Ballast type: AC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 1192.58, Efficiency(%): 87.88% , Luminous Efficacy(lm/W): 83.63

Central intensity(cd): 4365.673, Maximum intensity(cd): 4365.673

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=49.0

[C90/270]Total=49.0

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(%): 87.88%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.652%

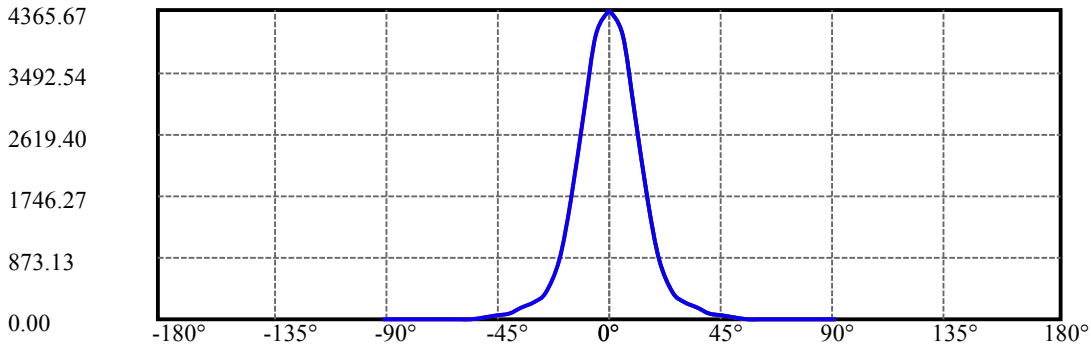
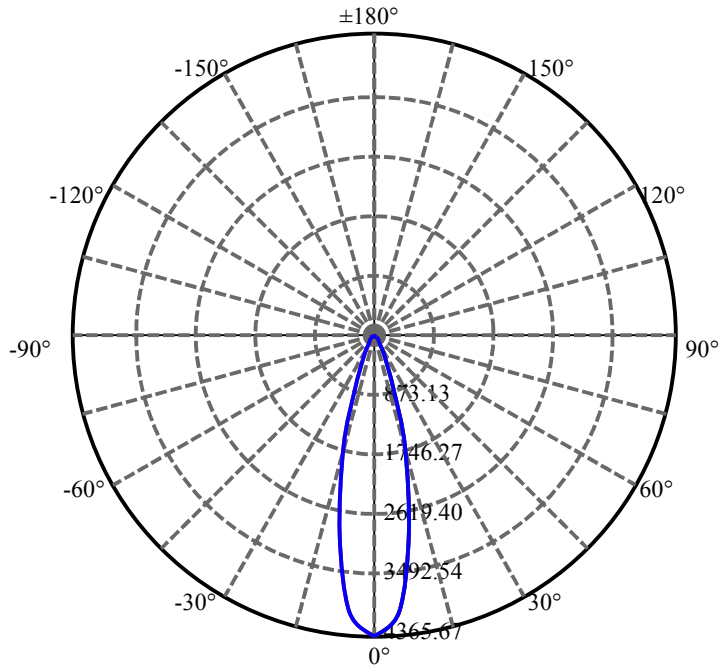
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4365.673	0.000	0	.000%	.000%
5.0	4014.342	100.181	100.181	7.383%	8.400%
10.0	2942.656	248.874	349.054	18.340%	29.269%
15.0	1674.888	273.910	622.964	20.185%	52.237%
20.0	840.631	207.314	830.278	15.277%	69.620%
25.0	387.514	128.810	959.088	9.492%	80.421%
30.0	235.282	78.815	1037.903	5.808%	87.030%
35.0	163.775	58.764	1096.667	4.330%	91.957%
40.0	87.731	41.962	1138.629	3.092%	95.476%
45.0	48.880	25.295	1163.924	1.864%	97.597%
50.0	24.066	14.740	1178.664	1.086%	98.833%
55.0	8.805	7.147	1185.811	.527%	99.432%
60.0	2.546	2.624	1188.435	.193%	99.652%
65.0	1.346	0.946	1189.381	.070%	99.732%
70.0	1.241	0.655	1190.036	.048%	99.786%
75.0	1.189	0.635	1190.671	.047%	99.840%
80.0	1.160	0.629	1191.3	.046%	99.892%
85.0	1.160	0.630	1191.93	.046%	99.945%
90.0	1.224	0.653	1192.583	.048%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1037.90	76.49%	87.03%
0-40	1138.63	83.91%	95.48%
0-60	1188.43	87.58%	99.65%
0-90	1191.93	87.84%	99.95%
0-120	1191.93	87.84%	99.95%
0-180	1192.58	87.88%	100.00%
60-90	6.12	0.45%	0.51%
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%
0-24.81	954.07	70.31%	80.00%

ZONAL LUMEN SUMMARY

0-10	349.05
10-20	481.22
20-30	207.63
30-40	100.73
40-50	40.03
50-60	9.77
60-70	1.60
70-80	1.26
80-90	0.63
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: —————

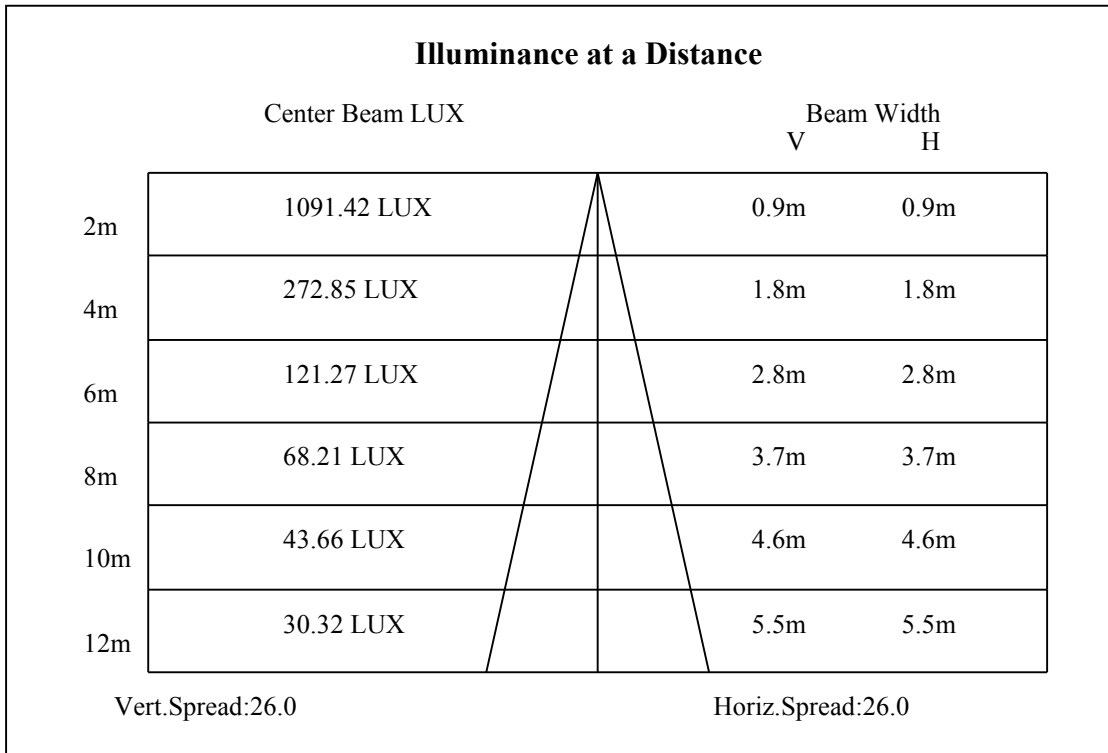
C90/C270: —————

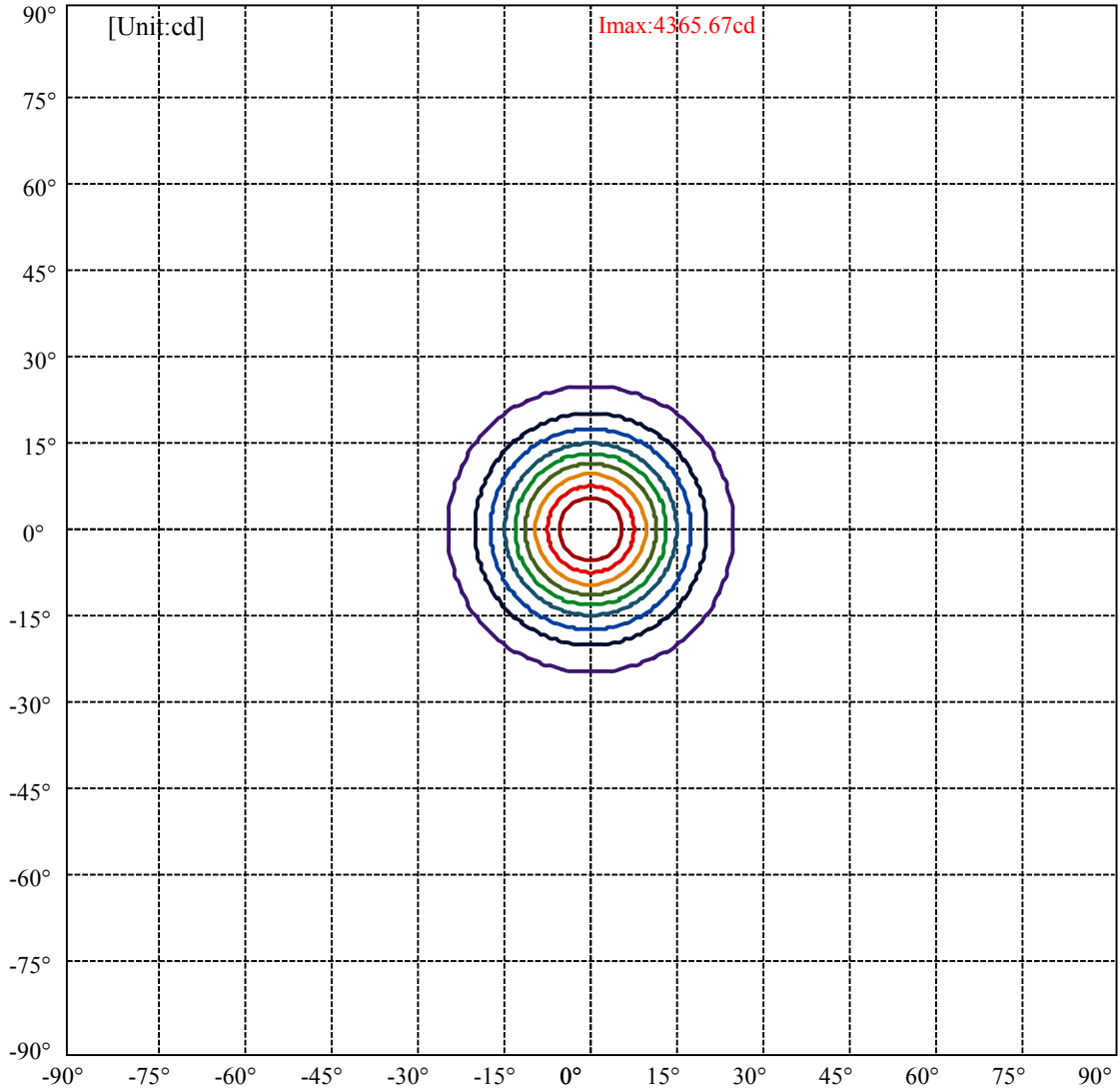
Field angle(10%Imax):C0/180Left:24.5 Right:24.5

:C90/270Left:24.5 Right:24.5

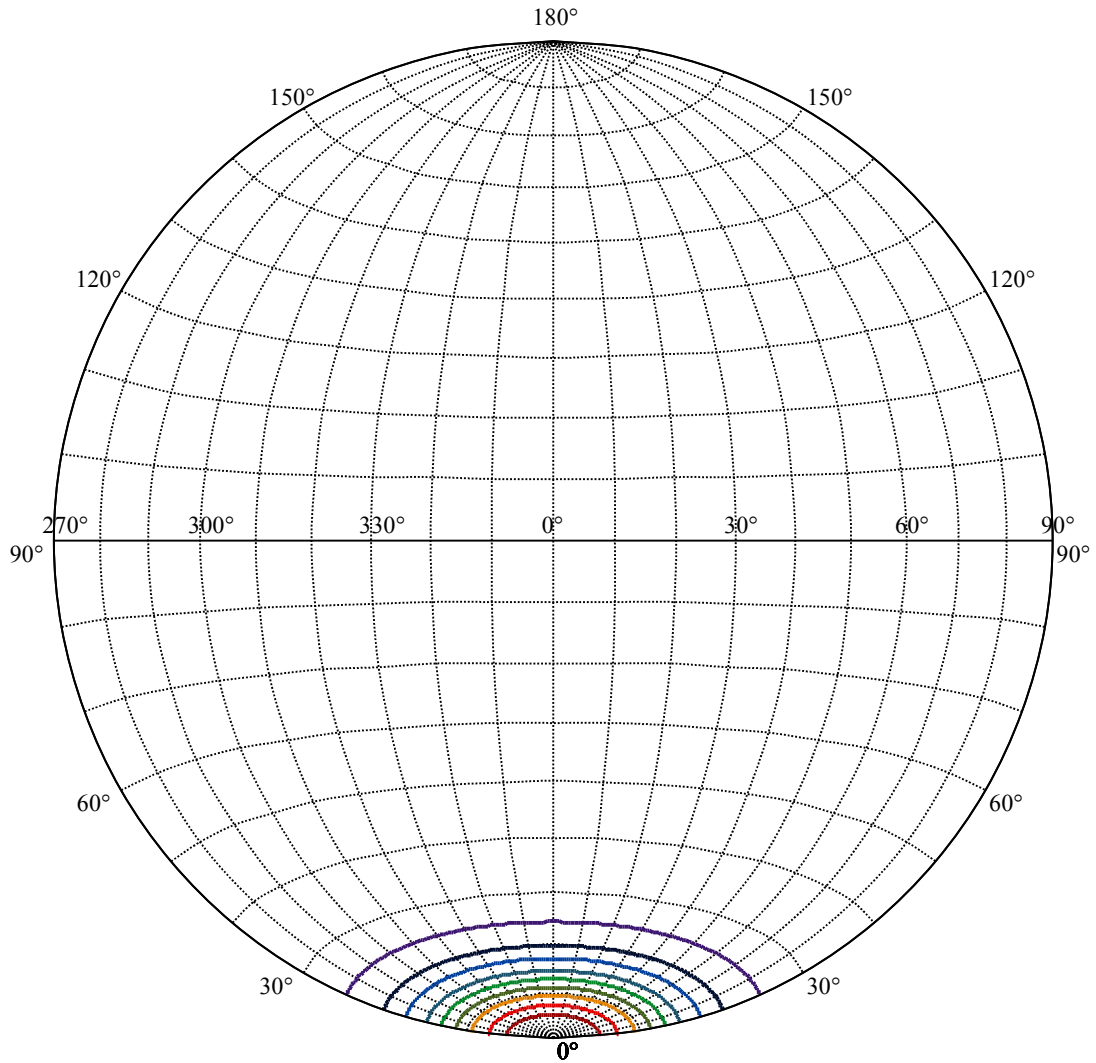
Beam Angle(50%Imax):C0/180Left:13.0 Right:13.0

:C90/270Left:13.0 Right:13.0





(10%Imax) 436.567	—
(20%Imax) 873.135	—
(30%Imax) 1309.7	—
(40%Imax) 1746.27	—
(50%Imax) 2182.84	—
(60%Imax) 2619.4	—
(70%Imax) 3055.97	—
(80%Imax) 3492.54	—
(90%Imax) 3929.11	—



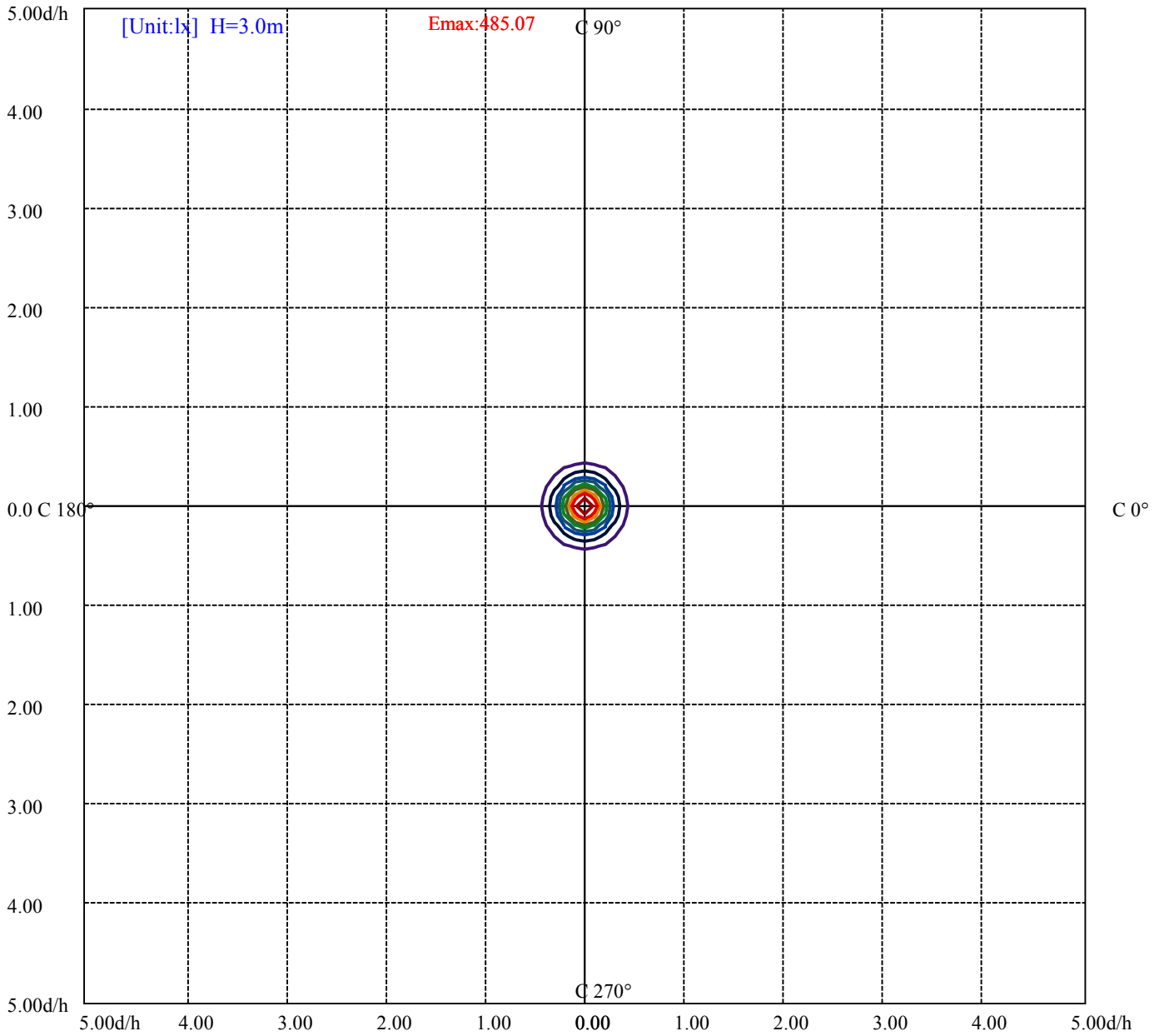
House

[Unit:cd]

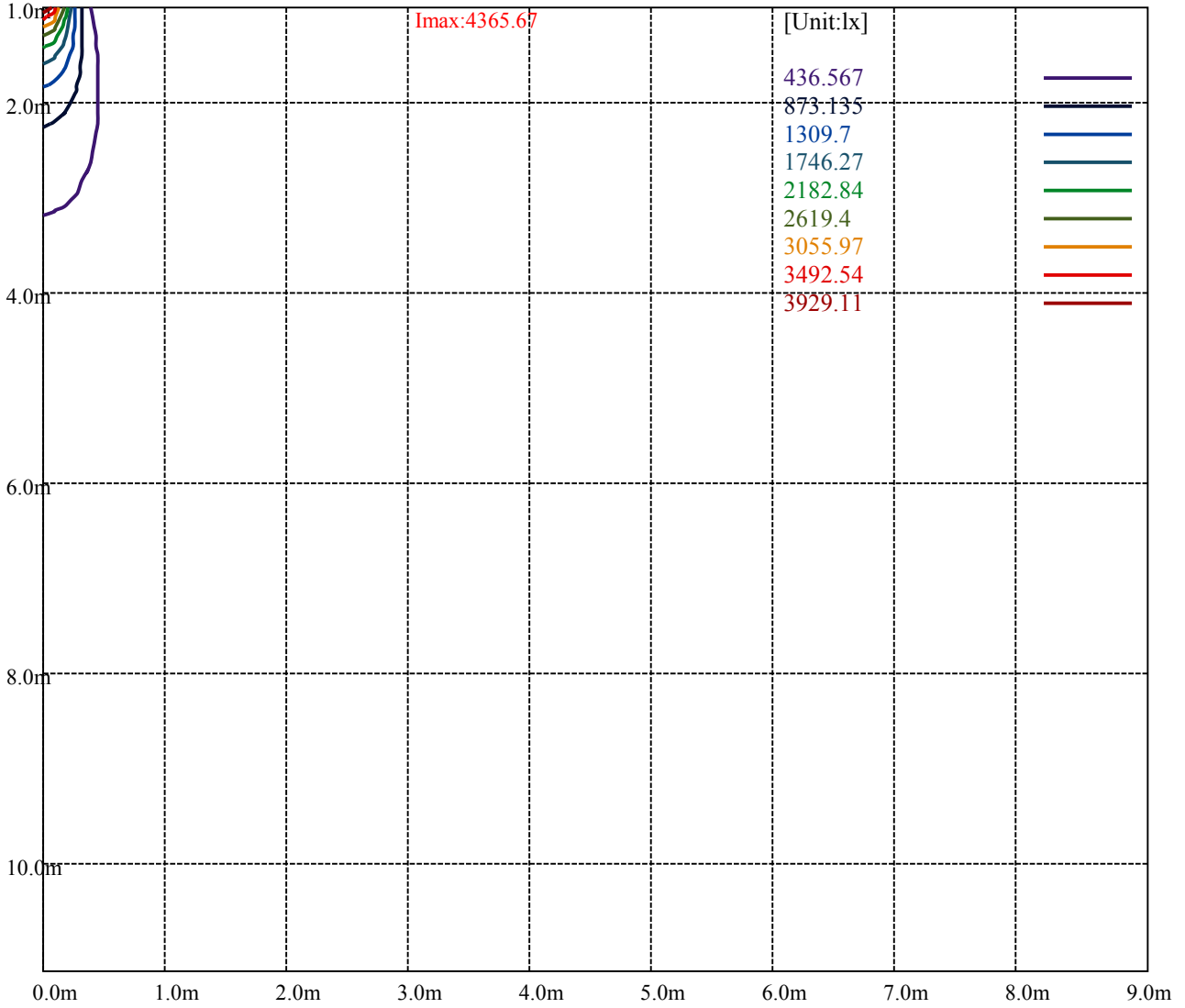
Road

Imax:4365.67

(10%Imax) 436.567	—
(20%Imax) 873.135	—
(30%Imax) 1309.7	—
(40%Imax) 1746.27	—
(50%Imax) 2182.84	—
(60%Imax) 2619.4	—
(70%Imax) 3055.97	—
(80%Imax) 3492.54	—
(90%Imax) 3929.11	—



(10%Emax) 48.50734	—
(20%Emax) 97.01467	—
(30%Emax) 145.5222	—
(40%Emax) 194.0289	—
(50%Emax) 242.5367	—
(60%Emax) 291.0444	—
(70%Emax) 339.5511	—
(80%Emax) 388.0589	—
(90%Emax) 436.5667	—



Luminance Table

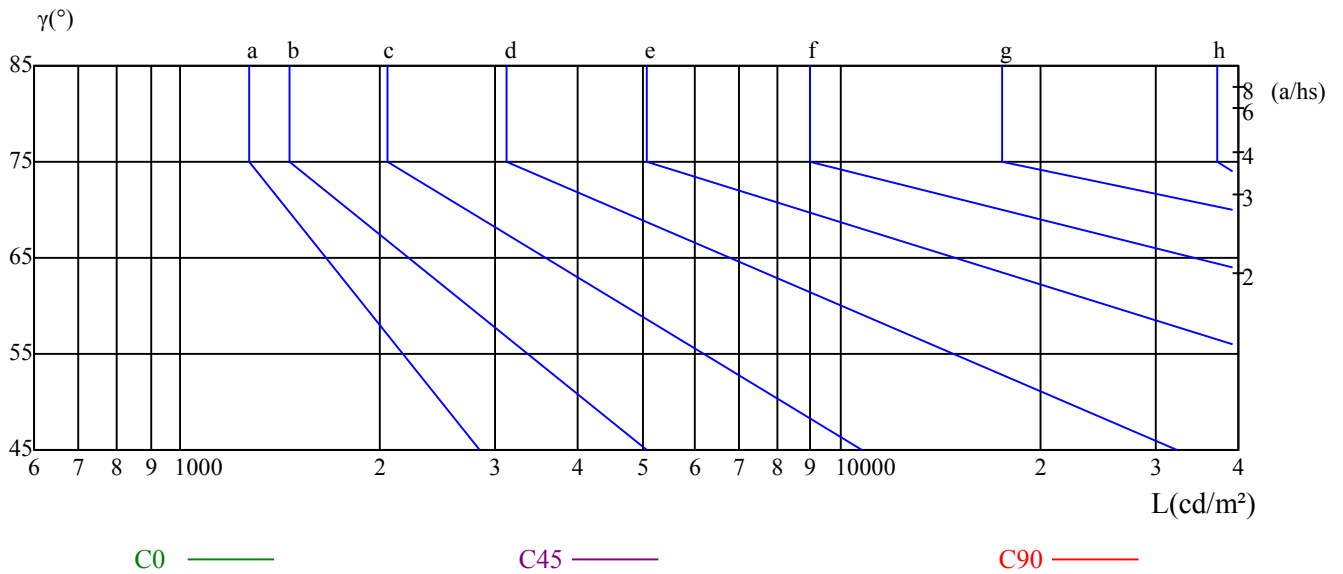
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

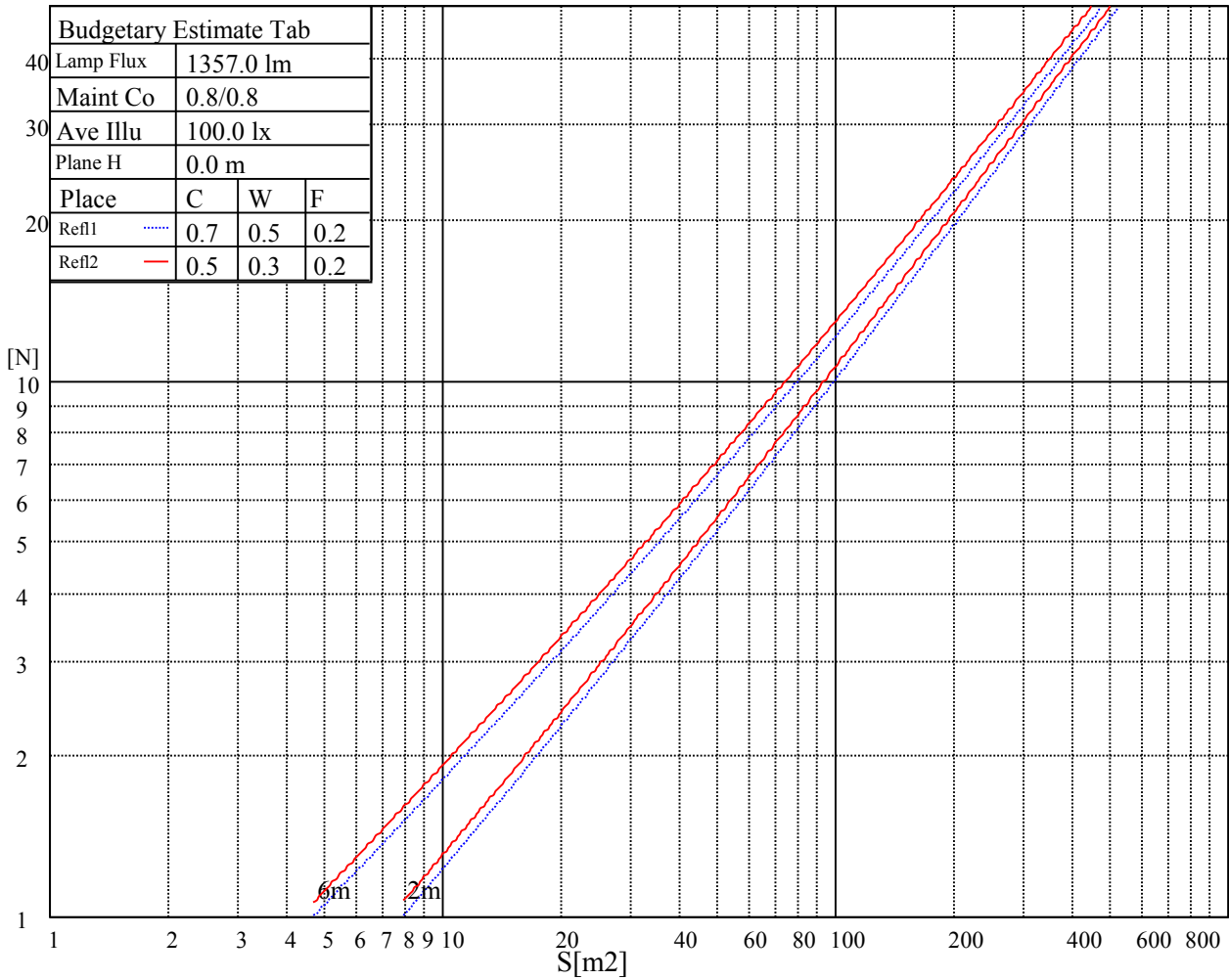
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

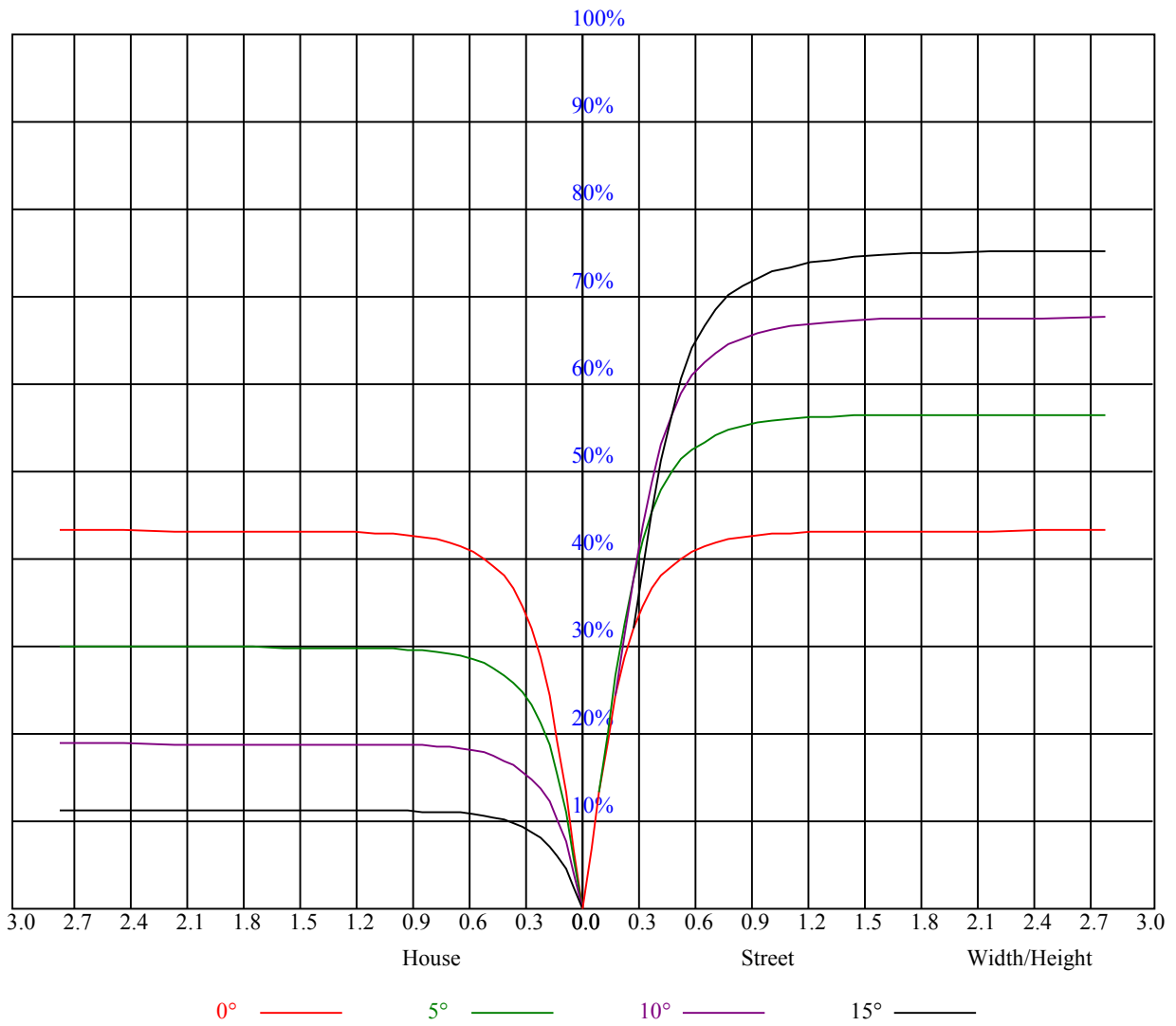
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

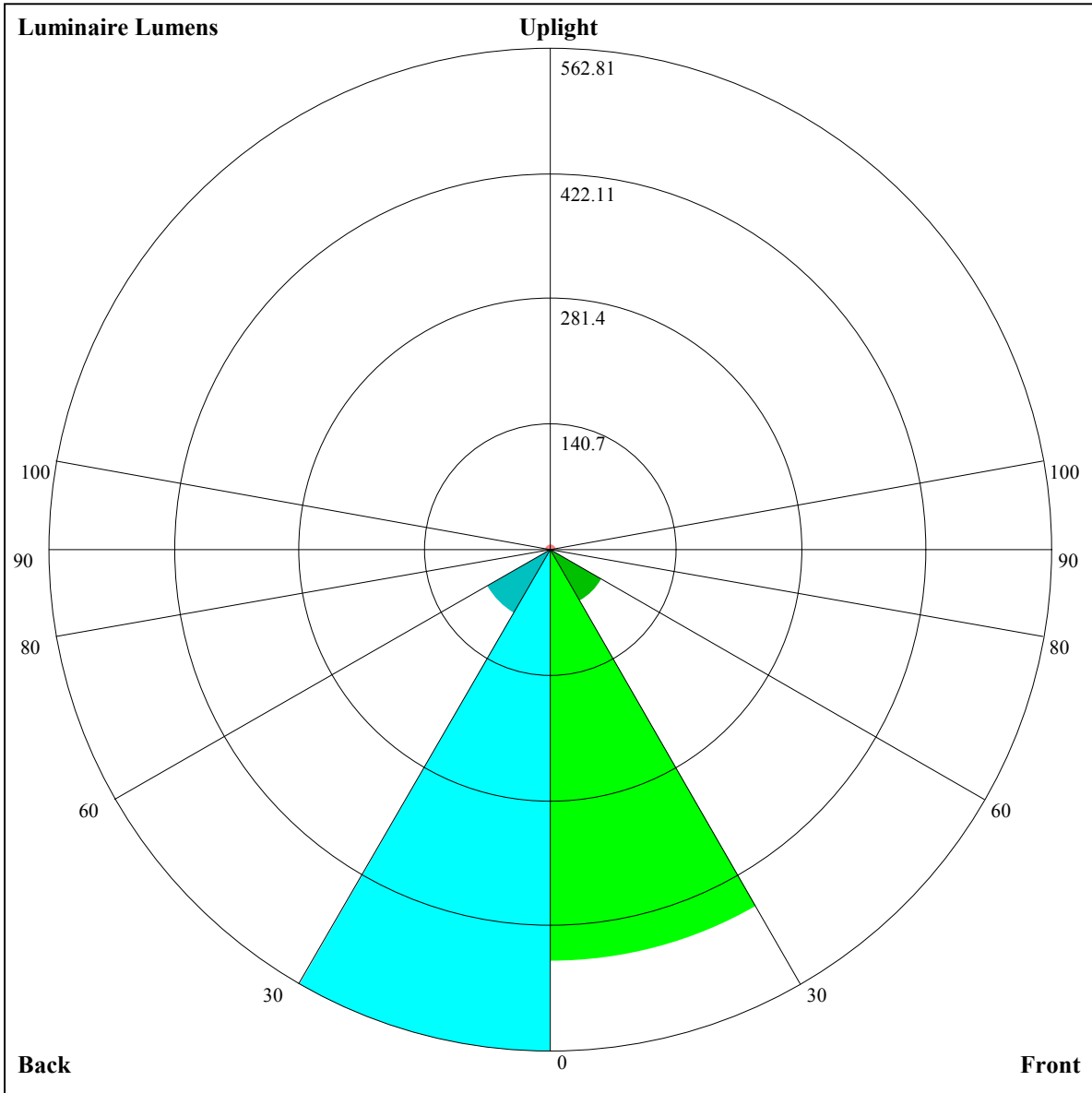
Luminance Limiting Curve





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	1.05	1.05	1.05	1.02	1.02	1.02	0.98	0.98	0.98	0.93	0.93	0.93	0.90	0.90	0.90	0.88
1	0.99	0.97	0.95	0.97	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.86	0.84
2	0.93	0.90	0.88	0.92	0.89	0.87	0.89	0.87	0.85	0.87	0.85	0.83	0.84	0.83	0.82	0.80
3	0.89	0.85	0.82	0.88	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.81	0.80	0.78	0.77
4	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.77	0.80	0.78	0.76	0.79	0.77	0.75	0.74
5	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.75	0.73	0.77	0.75	0.72	0.76	0.74	0.72	0.71
6	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
7	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.69	0.66	0.66
8	0.72	0.68	0.65	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.63
9	0.69	0.65	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61
10	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.59





Luminaire Lumens:

FL=462.07,FM=66.88,FH=1.38,FVH=0.64

BL=562.81,BM=82.97,BH=1.44,BVH=0.64

UL=1.34,UH=6.35

BUG Rating:B2-U1-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	4297.46	3529.95	2033.90	786.26	515.59	252.90	160.42	91.79	55.41
45.0	4385.16	4305.81	3286.33	2161.98	1097.02	465.47	275.68	233.46	110.02
90.0	4506.74	4378.20	3435.29	2066.85	823.57	435.68	273.64	183.01	101.34
135.0	4273.33	4656.16	4048.27	2805.13	1475.67	593.55	315.13	237.63	126.03
180.0	4297.46	4437.60	3687.72	2357.34	1118.37	484.03	282.18	239.02	106.77
225.0	4385.16	3722.99	2377.75	877.16	544.82	301.62	193.18	118.84	75.92
270.0	4506.74	3800.48	2738.77	1555.49	692.38	334.15	243.20	124.27	76.29
315.0	4273.33	3283.55	1933.21	788.90	457.63	232.71	138.84	82.18	50.07
360.0	4297.46	3529.95	2033.90	786.26	515.59	252.90	160.42	91.79	55.41
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	31.18	12.53	4.41	1.48	1.30	1.21	1.21	1.16	1.16
45.0	61.76	32.71	14.80	4.55	1.39	1.30	1.21	1.16	1.21
90.0	59.72	29.79	10.39	2.23	1.39	1.25	1.16	1.16	1.16
135.0	72.62	38.19	14.80	4.36	1.48	1.30	1.25	1.21	1.21
180.0	62.41	34.29	11.51	3.39	1.39	1.25	1.16	1.16	1.11
225.0	35.64	16.38	5.24	1.44	1.30	1.21	1.21	1.11	1.11
270.0	41.02	17.73	6.08	1.53	1.25	1.21	1.16	1.16	1.16
315.0	26.68	10.90	3.20	1.39	1.25	1.21	1.16	1.16	1.16
360.0	31.18	12.53	4.41	1.48	1.30	1.21	1.21	1.16	1.16
C/ γ (°)	90.0								
0.0	1.21								
45.0	1.21								
90.0	1.21								
135.0	1.25								
180.0	1.25								
225.0	1.21								
270.0	1.25								
315.0	1.21								
360.0	1.21								