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Nata

Client:

LumCAT: 1657-S

Luminaire: 92.76.124.00

Report No: NT2017083102

Test No: nata-0100

LampCAT: CITIZEN CLU028

Lamp flux(lm): 1645.0

Number of Lamps: 1

Length(mm): 46

Phm Type: C

Voltage(V): 35.7000

Current(A): 0.3500

Power (W): 12.4950

PF: 0.0000

Ballast type: DC

Width(mm): 46

Height(mm): 0

Photometric Results

Lumens(lm): 1545.29, Efficiency(%): 93.94% , Luminous Efficacy(lm/W): 123.67

Central intensity(cd): 6175.539, Maximum intensity(cd): 6175.539

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=23.6

[C90/270]Total=23.6

Field angle(10%Imax): [C0/180]Total=52.4

[C90/270]Total=52.4

Maximum s/h(1/2): C0_180=0.40 C90_270=0.40

Maximum s/h(1/4): C0_180=0.41 C90_270=0.41

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 96.09%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.502%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/8/31
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

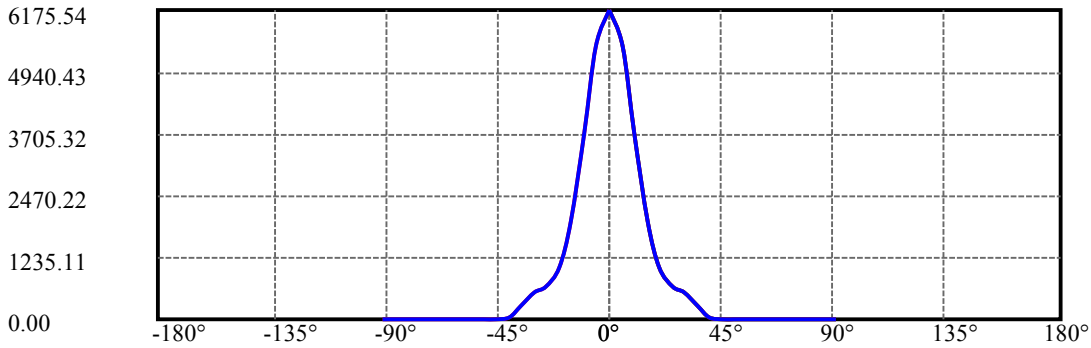
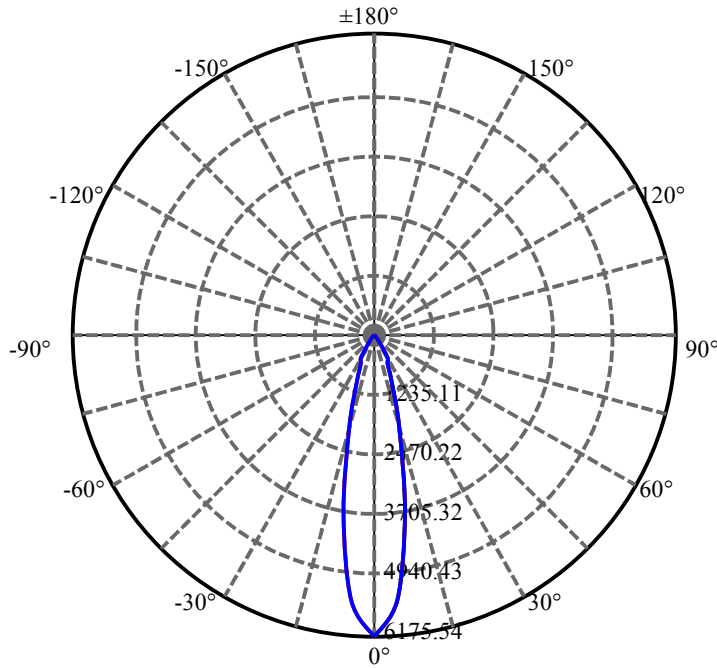
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6175.539	36.931	36.931	2.245%	2.390%
5.0	5461.801	260.928	297.859	15.862%	19.275%
10.0	3717.202	353.815	651.674	21.508%	42.172%
15.0	1972.946	279.899	931.573	17.015%	60.285%
20.0	1024.889	192.140	1123.713	11.680%	72.718%
25.0	647.133	149.910	1273.623	9.113%	82.420%
30.0	527.688	144.623	1418.246	8.792%	91.778%
35.0	267.498	84.101	1502.347	5.113%	97.221%
40.0	32.002	11.275	1513.622	.685%	97.950%
45.0	7.350	2.849	1516.471	.173%	98.135%
50.0	6.779	2.846	1519.317	.173%	98.319%
55.0	6.669	2.994	1522.312	.182%	98.513%
60.0	6.641	3.153	1525.464	.192%	98.717%
65.0	6.593	3.275	1528.739	.199%	98.929%
70.0	6.593	3.396	1532.135	.206%	99.149%
75.0	6.593	3.491	1535.626	.212%	99.374%
80.0	6.820	3.682	1539.308	.224%	99.613%
85.0	7.852	4.288	1543.596	.261%	99.890%
90.0	6.194	1.698	1545.293	.103%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1418.25	86.22%	91.78%
0-40	1513.62	92.01%	97.95%
0-60	1525.46	92.73%	98.72%
0-90	1543.60	93.84%	99.89%
0-120	1543.60	93.84%	99.89%
0-180	1545.29	93.94%	100.00%
60-90	21.28	1.29%	1.38%
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%
0-23.75	1236.23	75.15%	80.00%

ZONAL LUMEN SUMMARY

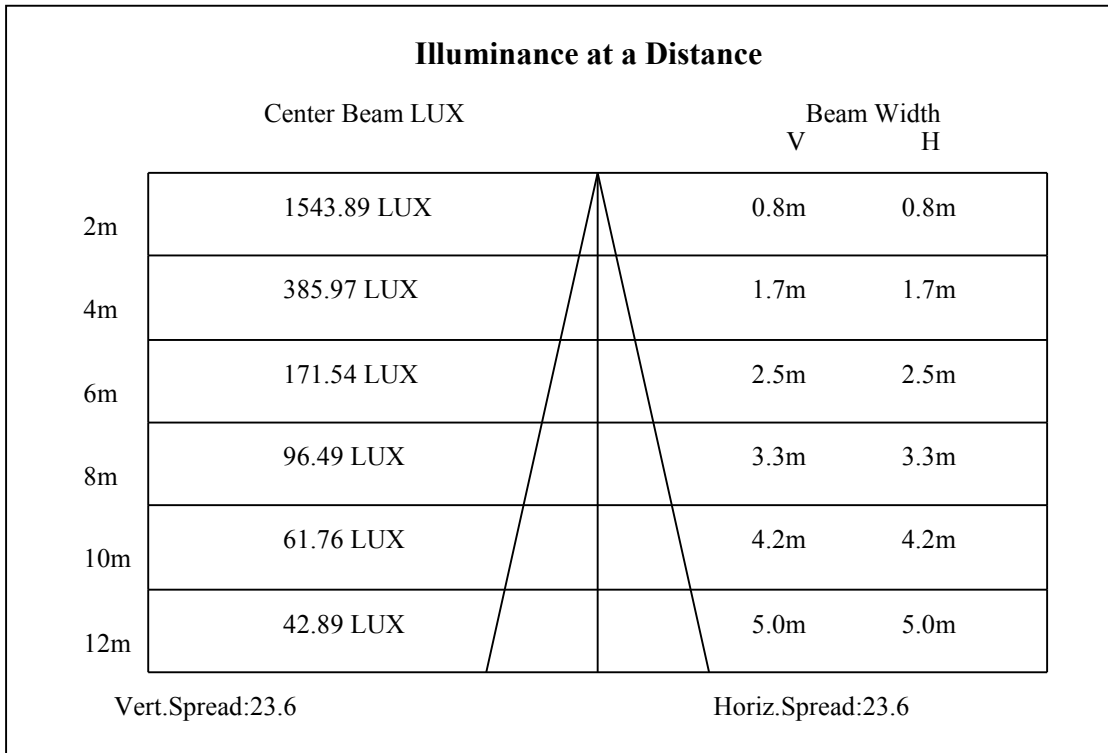
0-10	651.67
10-20	472.04
20-30	294.53
30-40	95.38
40-50	5.70
50-60	6.15
60-70	6.67
70-80	7.17
80-90	4.29
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

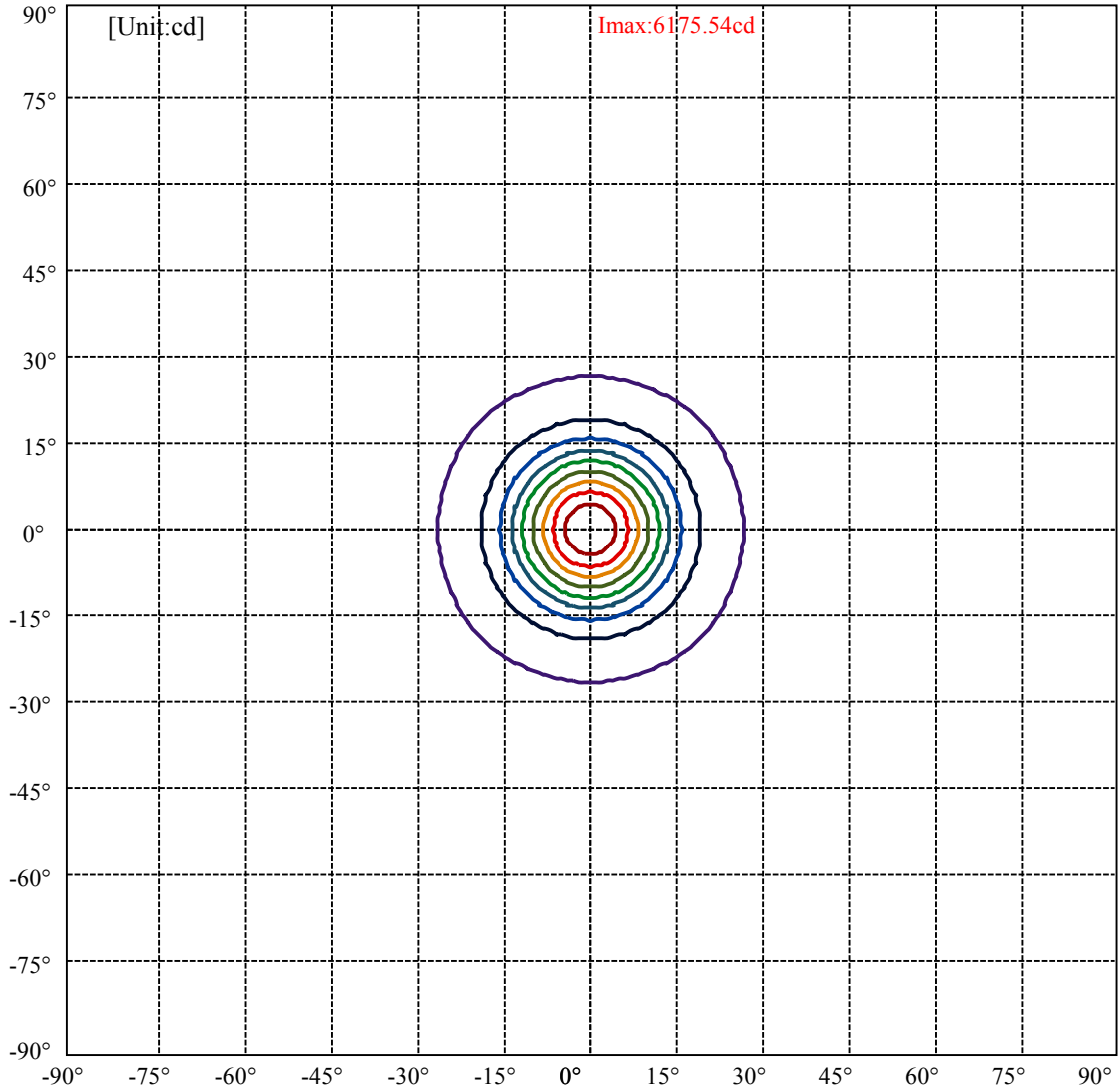


C0(Max): —————
C0/C180: —————
C90/C270: —————

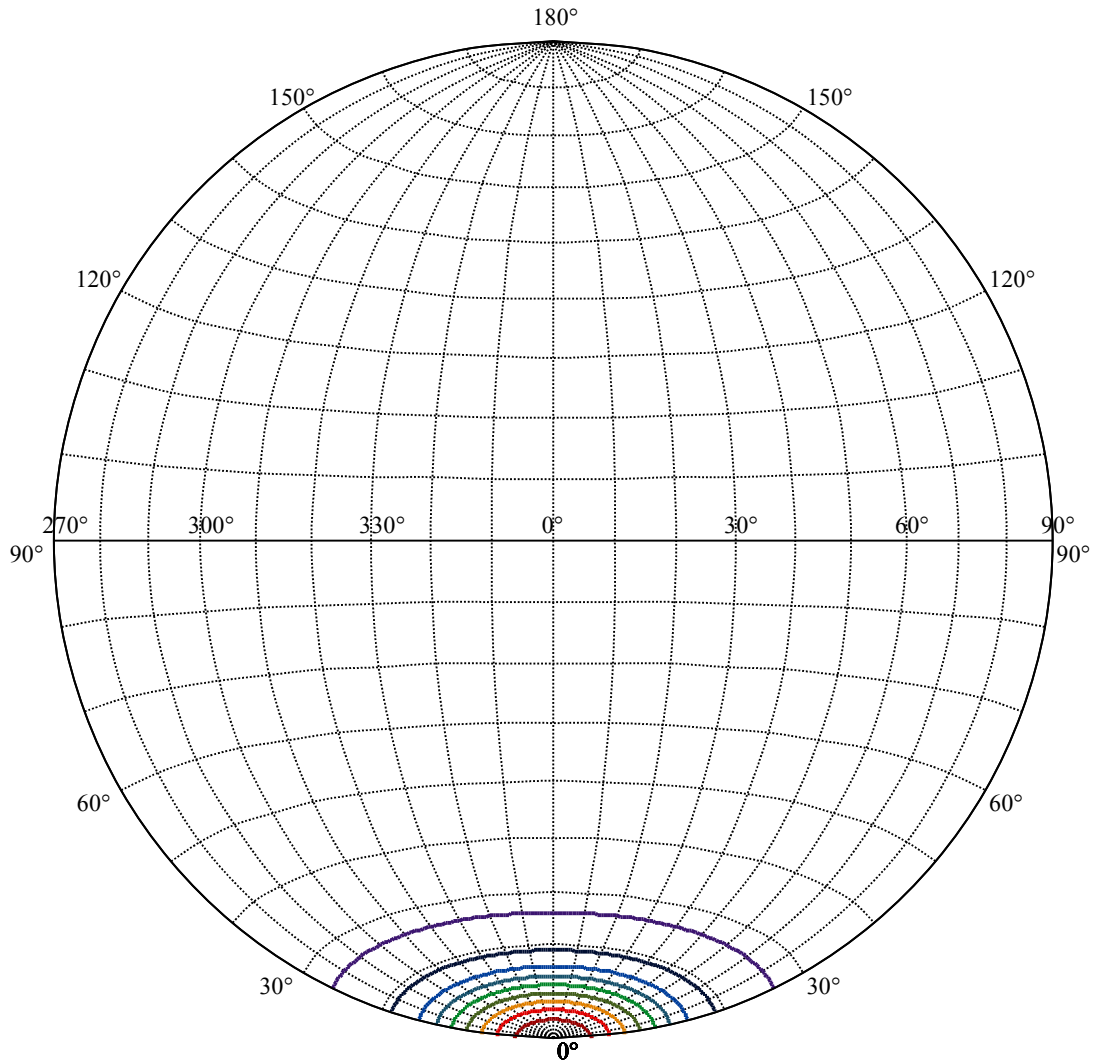
Field angle(10%Imax):C0/180Left:26.2 Right:26.2
:C90/270Left:26.2 Right:26.2

Beam Angle(50%Imax):C0/180Left:11.8 Right:11.8
:C90/270Left:11.8 Right:11.8





(10%Imax) 617.554	—
(20%Imax) 1235.11	—
(30%Imax) 1852.66	—
(40%Imax) 2470.22	—
(50%Imax) 3087.77	—
(60%Imax) 3705.32	—
(70%Imax) 4322.88	—
(80%Imax) 4940.43	—
(90%Imax) 5557.98	—



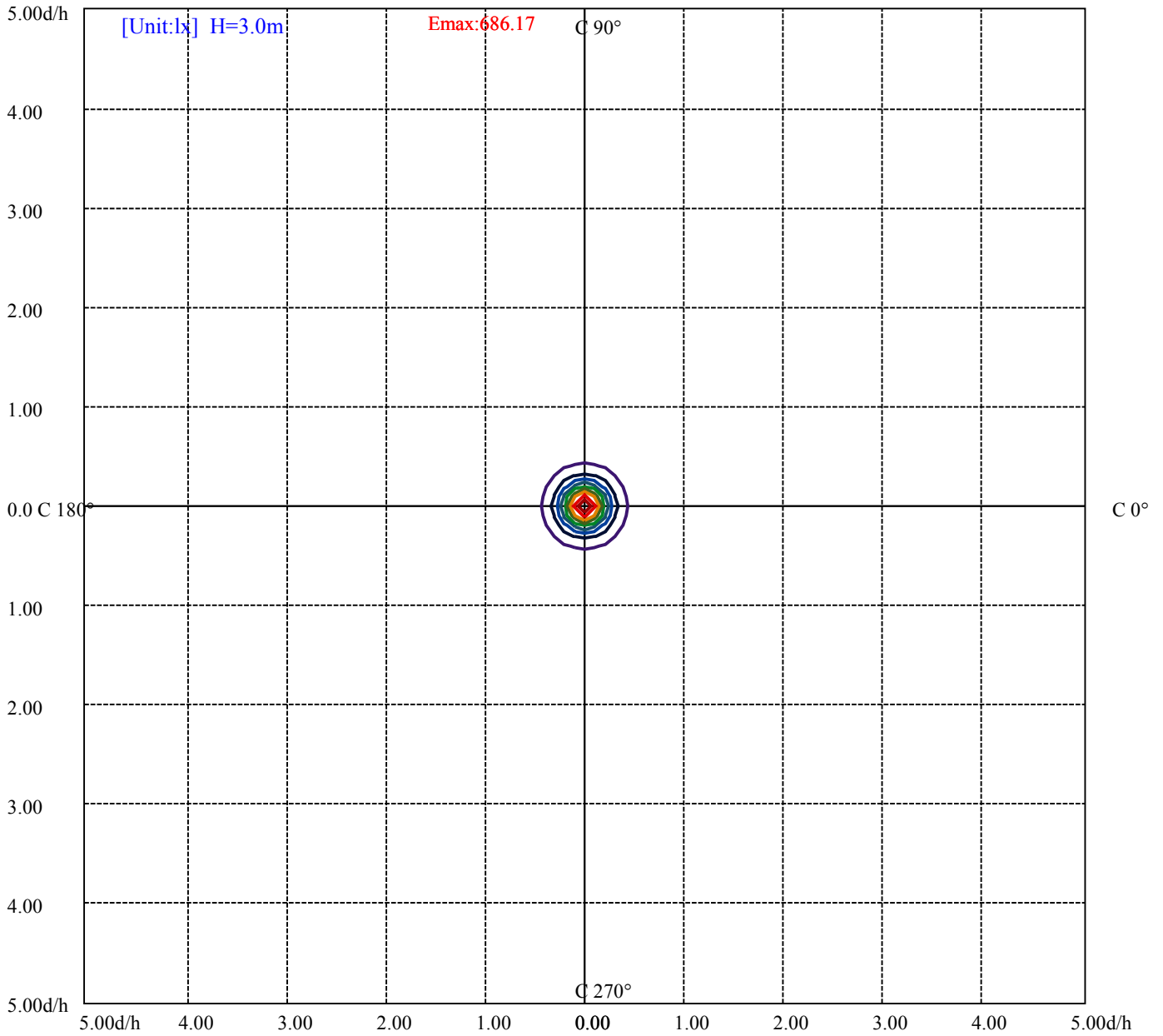
House

[Unit:cd]

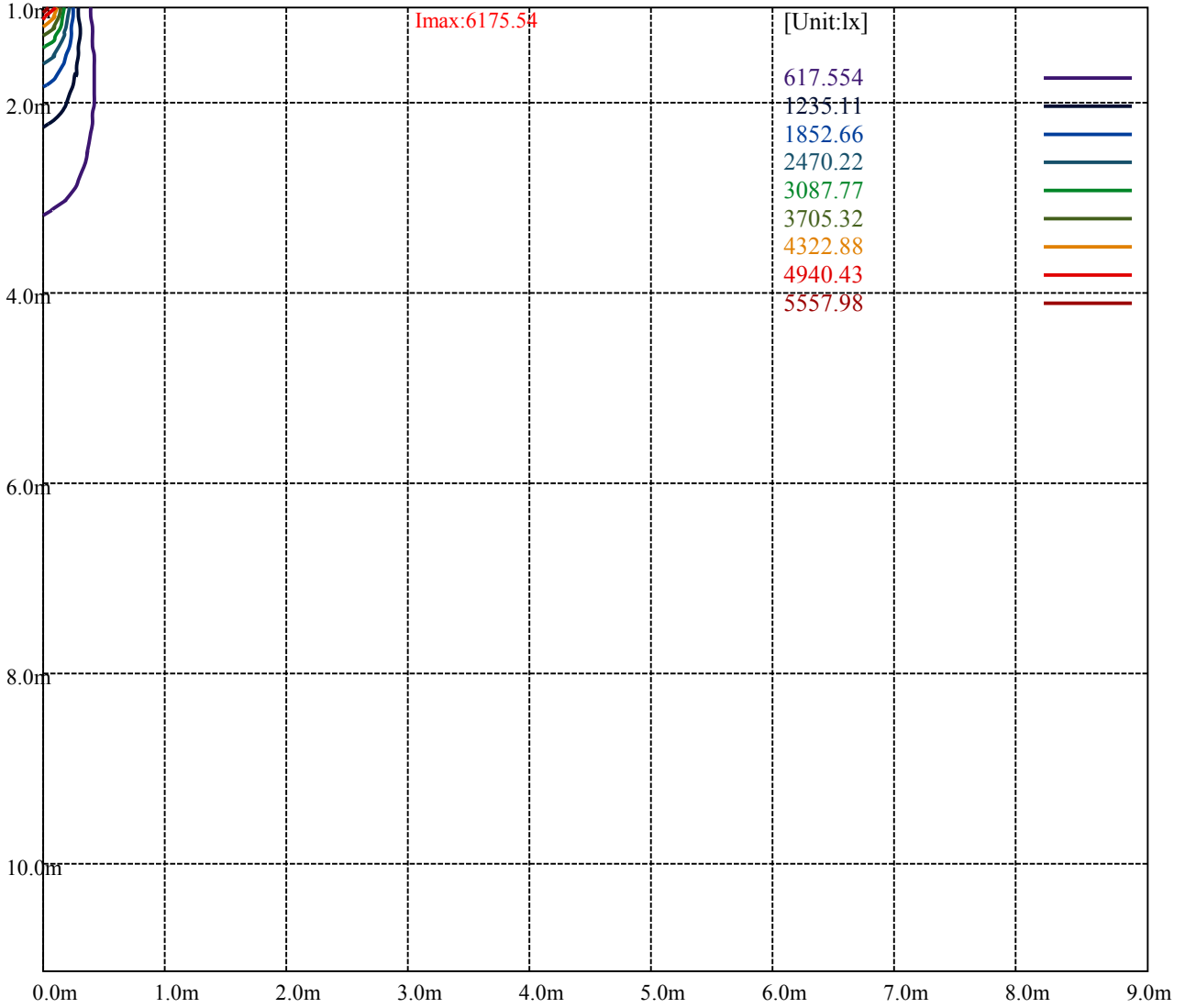
Road

Imax:6175.54

(10%Imax) 617.554	—
(20%Imax) 1235.11	—
(30%Imax) 1852.66	—
(40%Imax) 2470.22	—
(50%Imax) 3087.77	—
(60%Imax) 3705.32	—
(70%Imax) 4322.88	—
(80%Imax) 4940.43	—
(90%Imax) 5557.98	—



- (10%Emax) 68.61689
- (20%Emax) 137.2333
- (30%Emax) 205.8511
- (40%Emax) 274.4678
- (50%Emax) 343.0844
- (60%Emax) 411.7011
- (70%Emax) 480.3177
- (80%Emax) 548.9344
- (90%Emax) 617.5522



Luminance Table

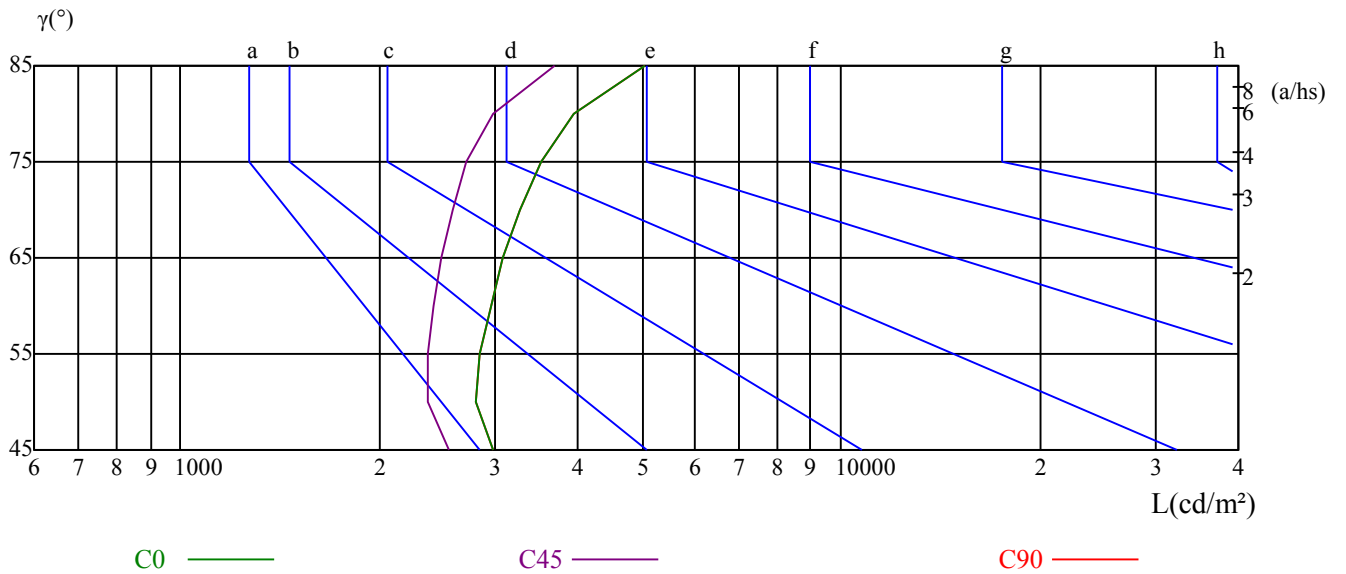
γ	45	50	55	60	65	70	75	80	85
C0	2973	2804	2845	2948	3074	3263	3506	3950	5036
C45	2555	2374	2371	2417	2476	2578	2710	2979	3689
C90	2973	2804	2845	2948	3074	3263	3506	3950	5036

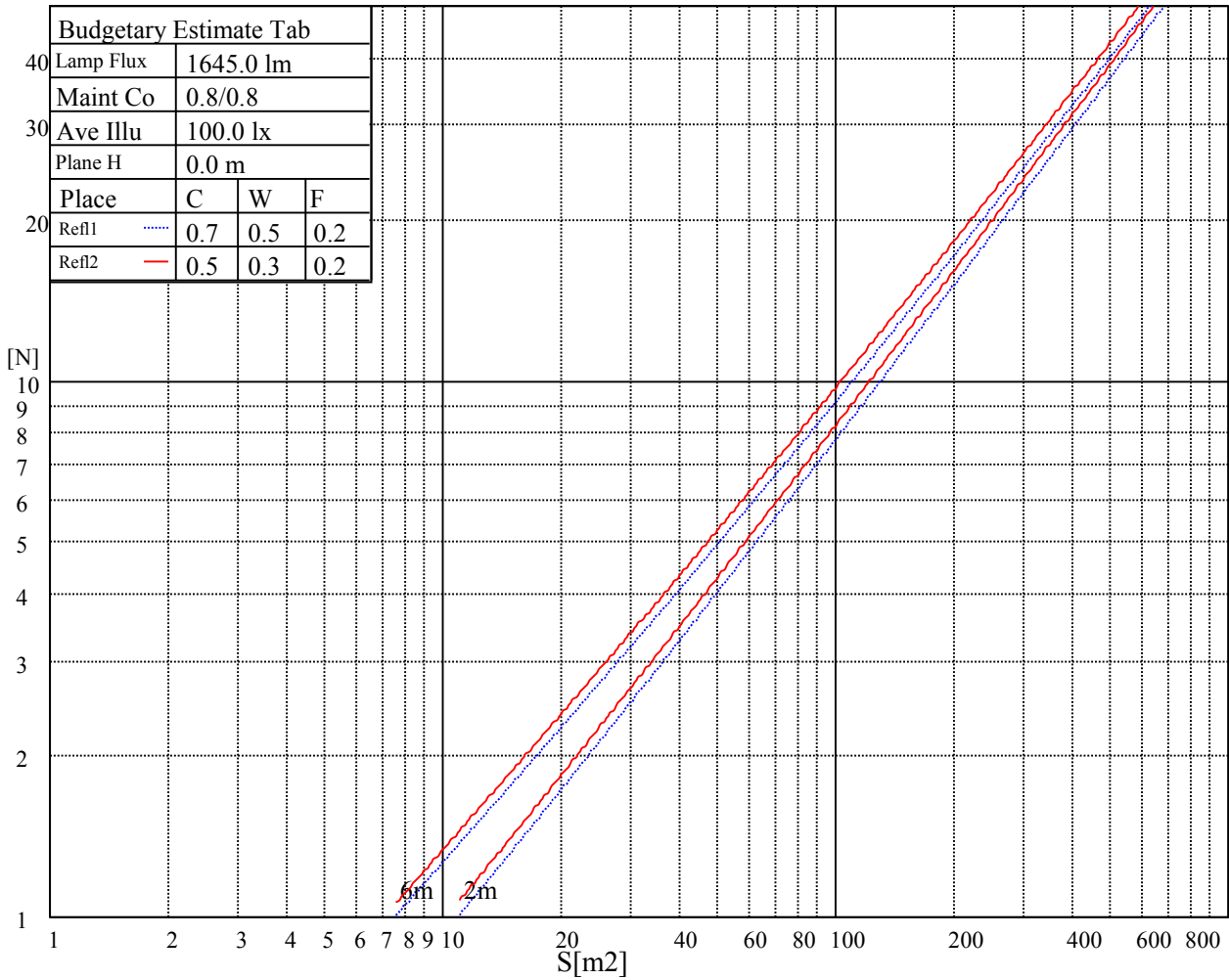
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7373	7373	7373	12038	12038	12038	42579	42579	42579

Glare Table

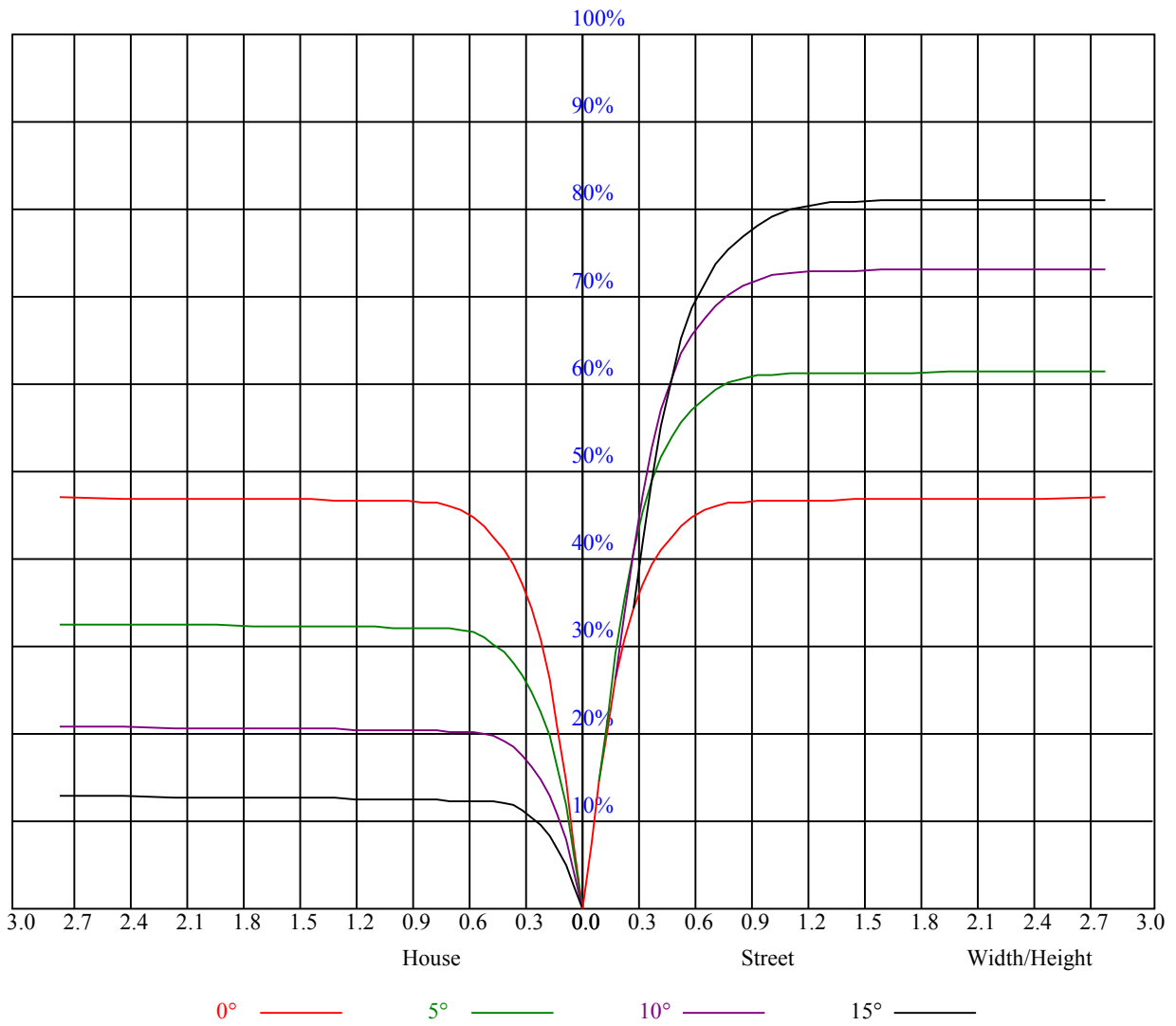
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

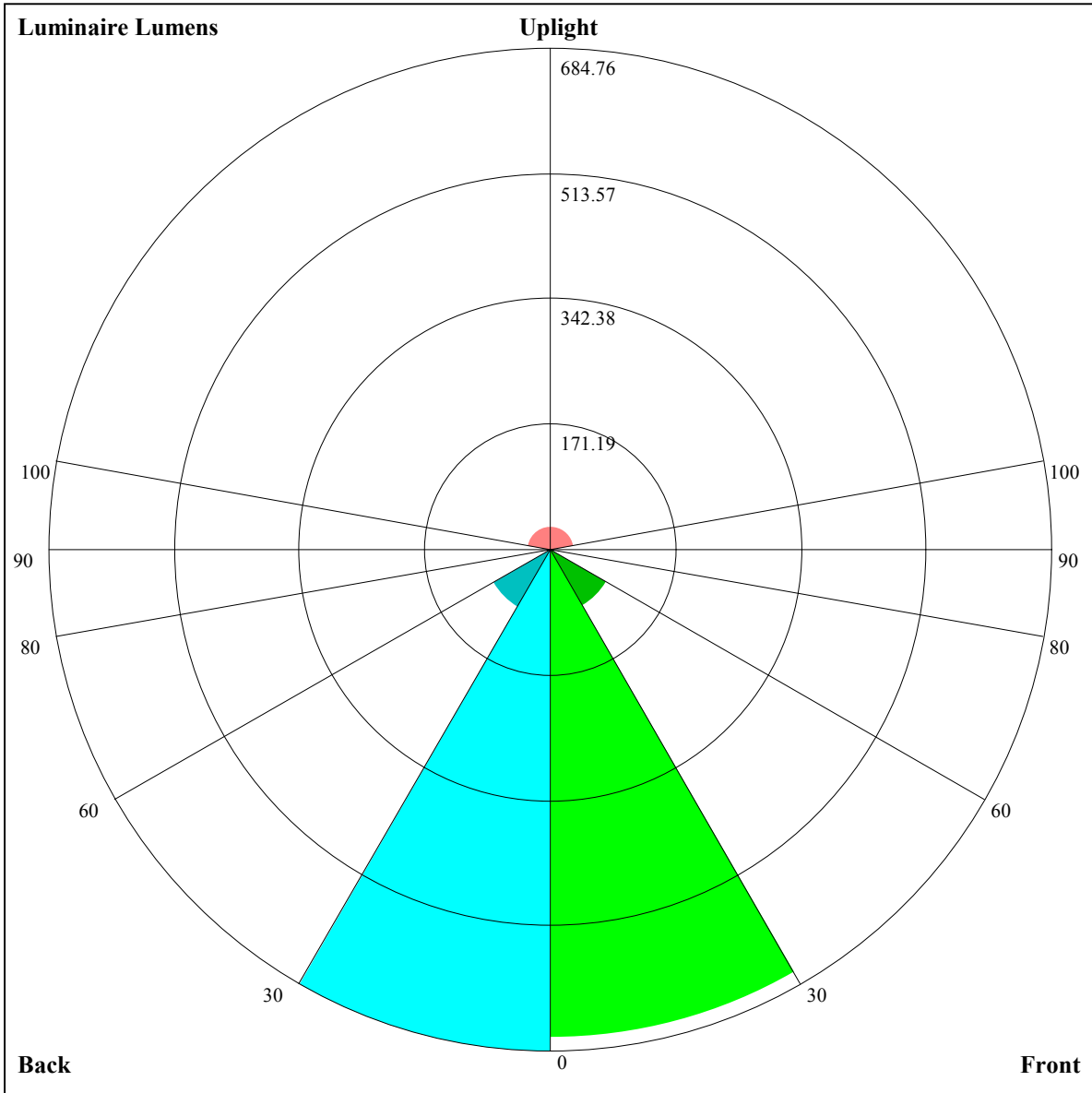
Luminance Limiting Curve





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	1.14	1.14	1.14	1.12	1.12	1.12	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.96
1	1.05	1.02	1.00	1.03	1.01	0.98	0.99	0.97	0.95	0.96	0.94	0.92	0.92	0.91	0.90	0.88
2	1.00	0.96	0.93	0.98	0.95	0.92	0.95	0.92	0.90	0.92	0.90	0.88	0.90	0.88	0.86	0.85
3	0.95	0.91	0.88	0.94	0.90	0.87	0.92	0.88	0.86	0.89	0.87	0.84	0.87	0.85	0.83	0.82
4	0.91	0.87	0.84	0.90	0.86	0.83	0.88	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.79
5	0.88	0.83	0.80	0.87	0.83	0.80	0.85	0.82	0.79	0.84	0.81	0.78	0.83	0.80	0.78	0.77
6	0.85	0.80	0.77	0.84	0.80	0.77	0.83	0.79	0.76	0.82	0.78	0.76	0.80	0.78	0.75	0.74
7	0.82	0.78	0.74	0.81	0.77	0.74	0.80	0.77	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.72
8	0.79	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
9	0.77	0.73	0.70	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
10	0.75	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.73	0.70	0.67	0.67





Luminaire Lumens:

FL=667.21,FM=88.9,FH=6.88,FVH=3.97

BL=684.76,BM=91.66,BH=6.71,BVH=3.77

UL=6.76,UH=32.16

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	6172.37	5491.33	3751.54	2042.04	1024.60	641.96	527.99	289.05	27.20
45.0	6181.18	5409.84	3600.69	1903.30	965.14	645.26	511.47	292.35	30.01
90.0	6172.37	5168.14	3291.27	1709.50	907.60	611.79	492.15	198.53	18.66
135.0	6176.23	5665.85	3904.05	2122.42	1074.70	669.49	551.11	296.20	40.69
180.0	6172.37	5399.38	3705.85	1927.52	979.45	645.87	532.84	252.10	32.59
225.0	6181.18	5511.15	3890.84	2045.90	1046.90	653.85	546.88	277.26	33.42
270.0	6172.37	5740.73	4089.59	2225.93	1212.34	683.80	557.17	308.87	51.26
315.0	6176.23	5307.99	3503.79	1806.95	988.37	625.06	501.89	225.62	22.19
360.0	6172.37	5491.33	3751.54	2042.04	1024.60	641.96	527.99	289.05	27.20
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	7.38	6.88	6.77	6.72	6.72	6.66	6.72	6.88	8.42
45.0	7.43	7.05	6.94	6.99	6.94	6.99	6.94	8.42	9.58
90.0	7.21	6.88	6.83	6.72	6.72	6.61	6.66	6.72	6.39
135.0	7.54	6.72	6.66	6.66	6.55	6.55	6.50	6.50	8.37
180.0	7.32	6.55	6.50	6.44	6.39	6.44	6.39	6.39	7.38
225.0	7.27	6.66	6.50	6.50	6.44	6.50	6.61	6.66	7.32
270.0	7.49	6.77	6.55	6.55	6.55	6.55	6.55	6.55	7.76
315.0	7.16	6.72	6.61	6.55	6.44	6.44	6.39	6.44	7.60
360.0	7.38	6.88	6.77	6.72	6.72	6.66	6.72	6.88	8.42
C/ γ (°)	90.0								
0.0	6.17								
45.0	6.17								
90.0	6.17								
135.0	6.22								
180.0	6.22								
225.0	6.17								
270.0	6.22								
315.0	6.22								
360.0	6.17								