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Nata

Client:

LumCAT: 3-2020-A

Luminaire: 92.70.045.00+92.70.089.00

Report No: NT20180319111

Voltage(V): 36.6000

Test No: nata-0100

Current(A): 0.5000

LampCAT: LUMILEDS 1205

Power (W): 18.3000

Lamp flux(lm): 1941.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 86

Width(mm): 86

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1615.66, Efficiency(%): 83.24% , Luminous Efficacy(lm/W): 88.29

Central intensity(cd): 6439.672, Maximum intensity(cd): 6439.672

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=24.6

[C90/270]Total=24.6

Field angle(10%Imax): [C0/180]Total=48.4

[C90/270]Total=48.4

Maximum s/h(1/2): C0_180=0.42 C90_270=0.42

Maximum s/h(1/4): C0_180=0.43 C90_270=0.43

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 85.14%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.609%

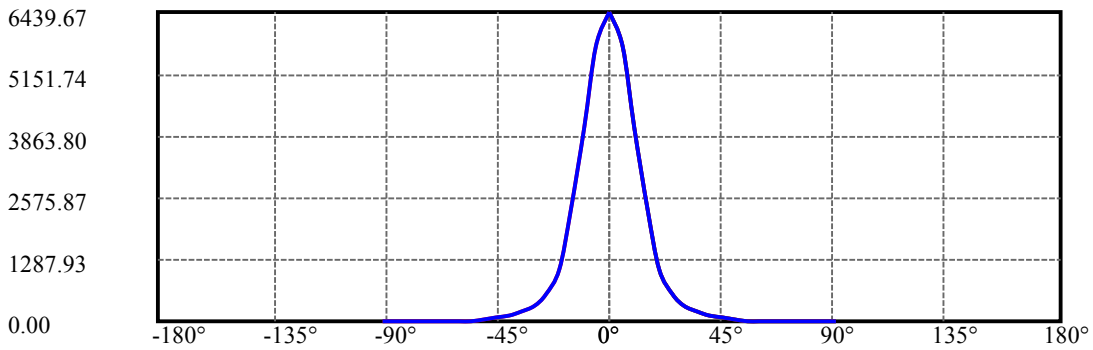
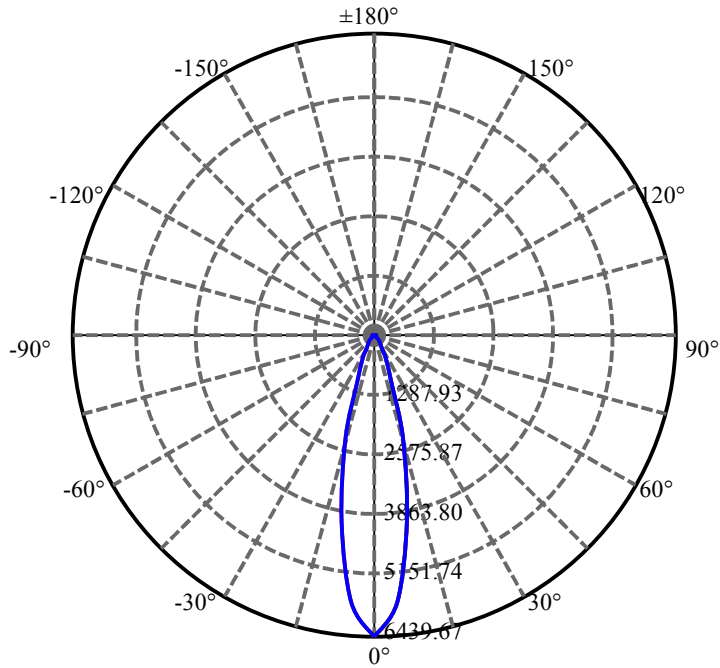
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6439.672	38.511	38.511	1.984%	2.384%
5.0	5714.510	273.001	311.512	14.065%	19.281%
10.0	4026.963	383.299	694.81	19.747%	43.005%
15.0	2306.244	327.183	1021.993	16.856%	63.255%
20.0	1098.396	205.921	1227.914	10.609%	76.001%
25.0	558.747	129.435	1357.349	6.668%	84.012%
30.0	324.523	88.942	1446.291	4.582%	89.517%
35.0	202.050	63.524	1509.815	3.273%	93.449%
40.0	119.872	42.235	1552.05	2.176%	96.063%
45.0	61.801	23.953	1576.004	1.234%	97.545%
50.0	29.070	12.206	1588.21	.629%	98.301%
55.0	11.300	5.074	1593.284	.261%	98.615%
60.0	6.972	3.309	1596.593	.170%	98.820%
65.0	6.648	3.303	1599.896	.170%	99.024%
70.0	6.538	3.368	1603.264	.173%	99.233%
75.0	6.531	3.458	1606.722	.178%	99.447%
80.0	6.559	3.540	1610.262	.182%	99.666%
85.0	6.655	3.634	1613.896	.187%	99.891%
90.0	6.448	1.767	1615.663	.091%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1446.29	74.51%	89.52%
0-40	1552.05	79.96%	96.06%
0-60	1596.59	82.26%	98.82%
0-90	1613.90	83.15%	99.89%
0-120	1613.90	83.15%	99.89%
0-180	1615.66	83.24%	100.00%
60-90	20.61	1.06%	1.28%
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%
0-22.50	1292.53	66.59%	80.00%

ZONAL LUMEN SUMMARY

0-10	694.81
10-20	533.10
20-30	218.38
30-40	105.76
40-50	36.16
50-60	8.38
60-70	6.67
70-80	7.00
80-90	3.63
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: —————

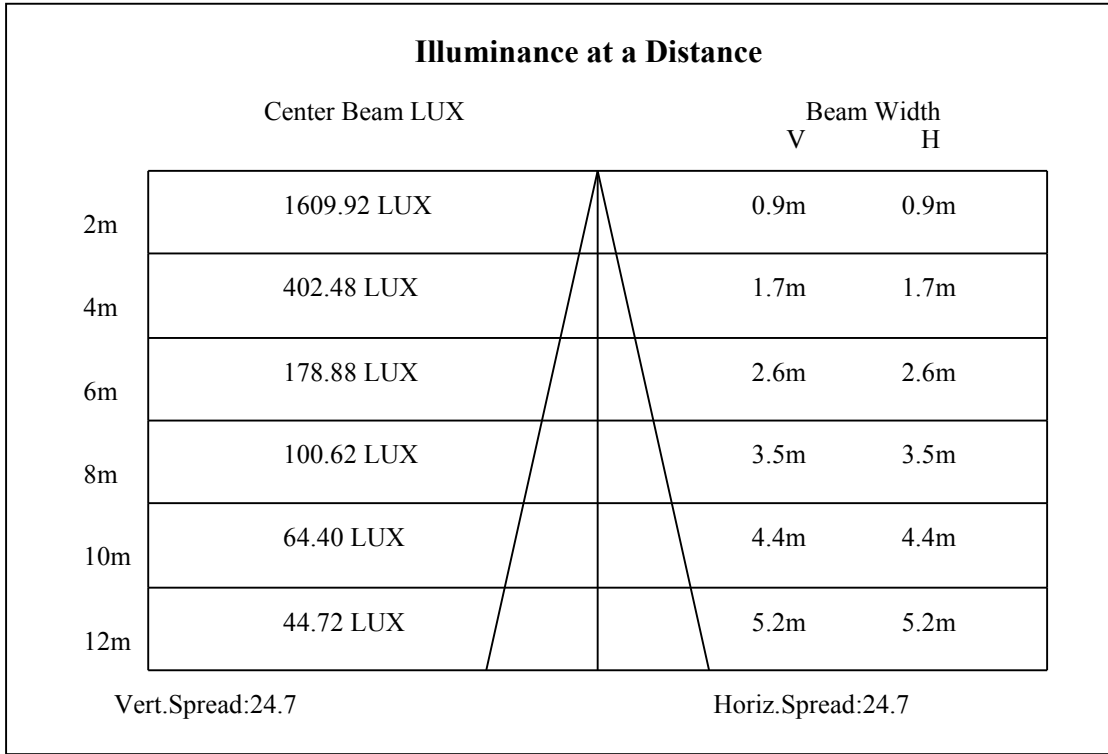
C90/C270: —————

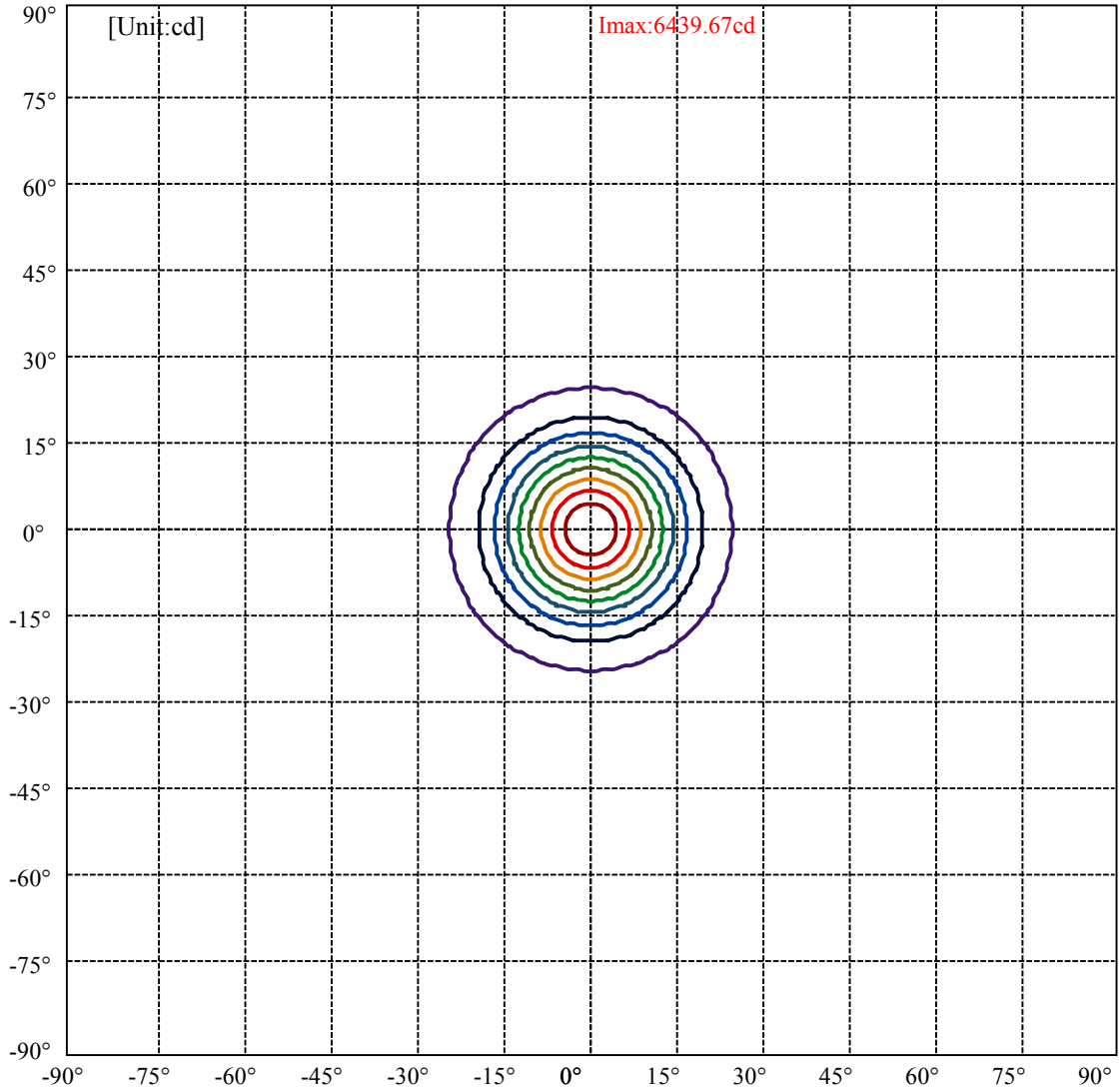
Field angle(10%Imax):C0/180Left:24.2 Right:24.2

:C90/270Left:24.2 Right:24.2

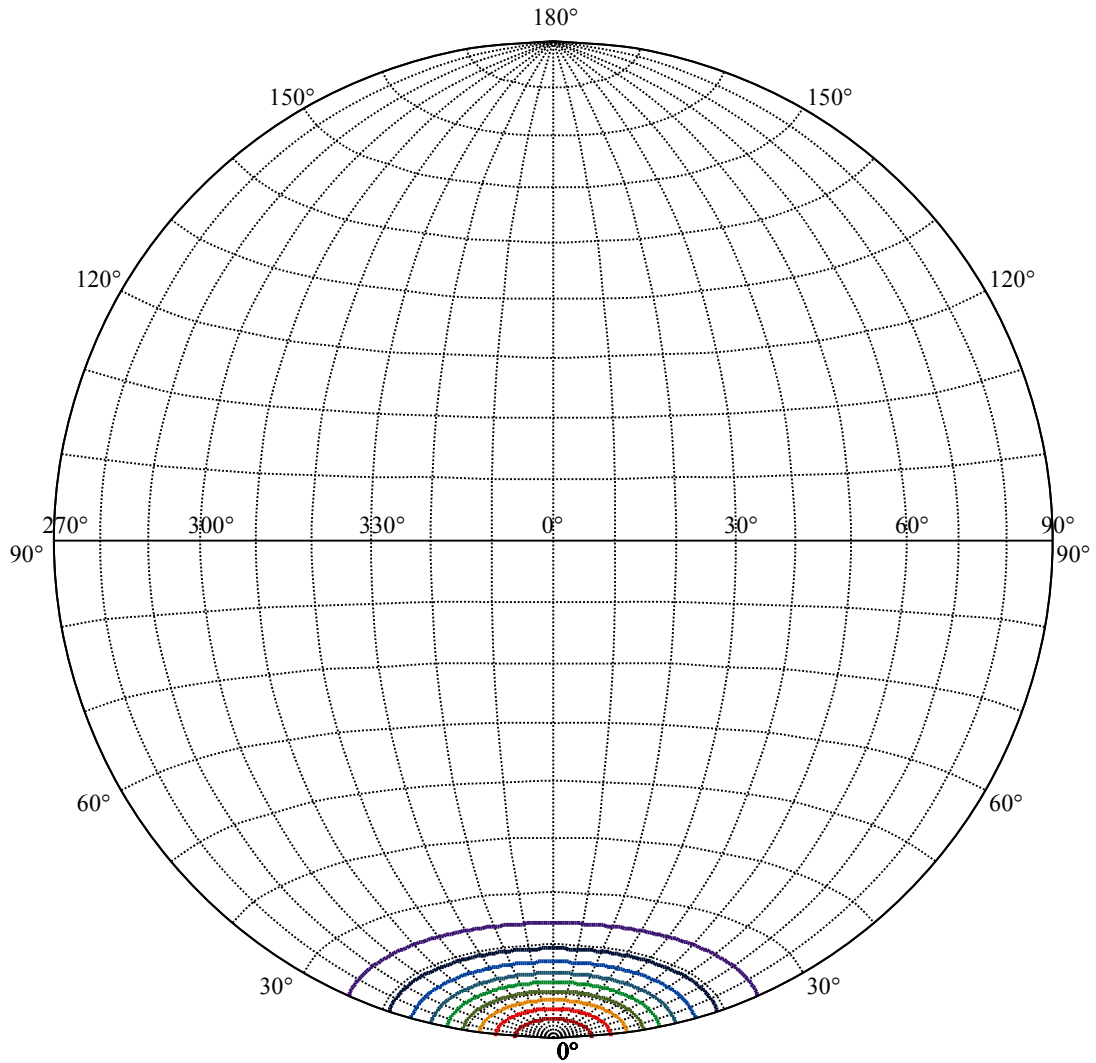
Beam Angle(50%Imax):C0/180Left:12.3 Right:12.3

:C90/270Left:12.3 Right:12.3





(10%Imax) 643.967	—
(20%Imax) 1287.93	—
(30%Imax) 1931.9	—
(40%Imax) 2575.87	—
(50%Imax) 3219.84	—
(60%Imax) 3863.8	—
(70%Imax) 4507.77	—
(80%Imax) 5151.74	—
(90%Imax) 5795.7	—



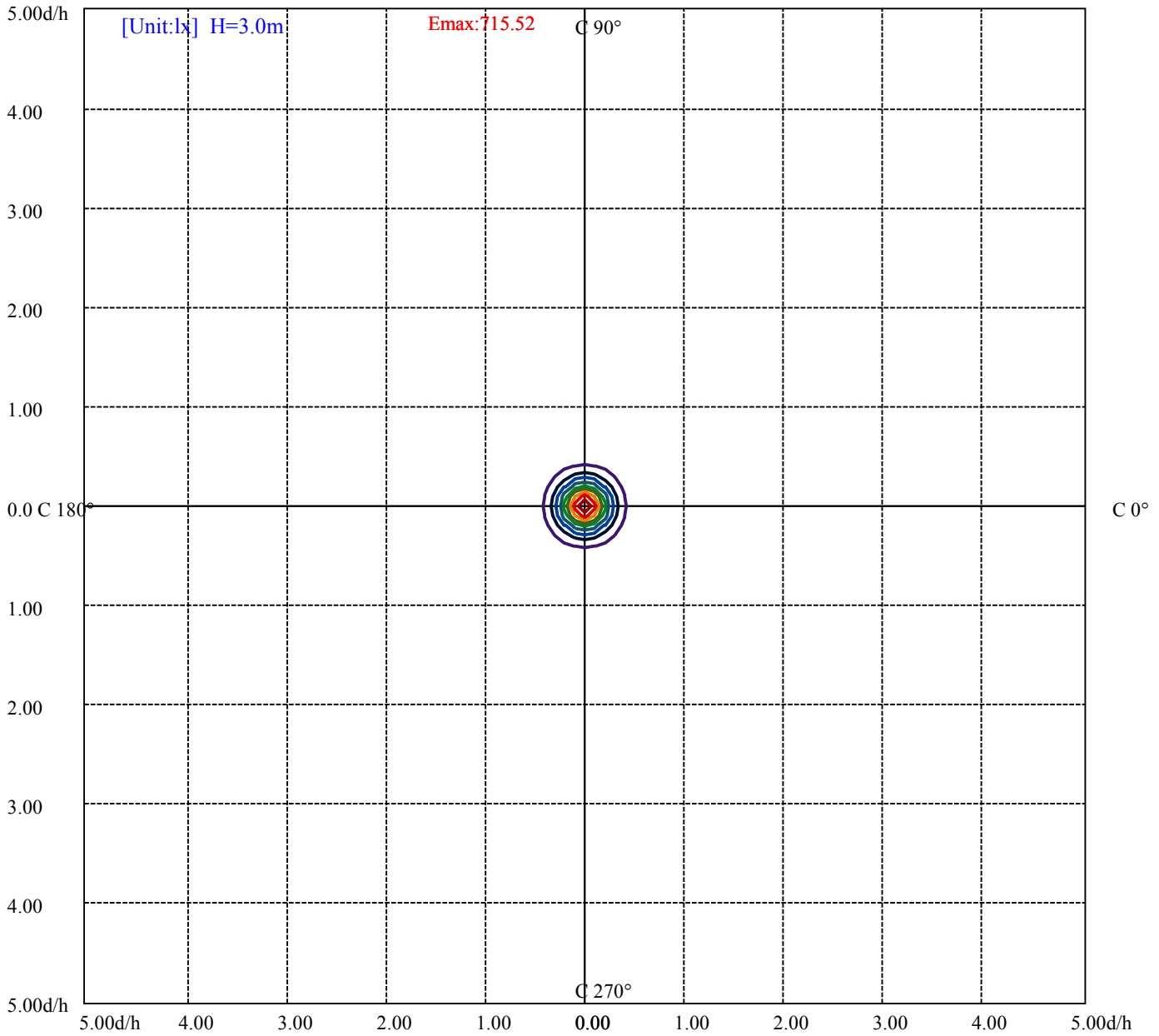
House

[Unit:cd]

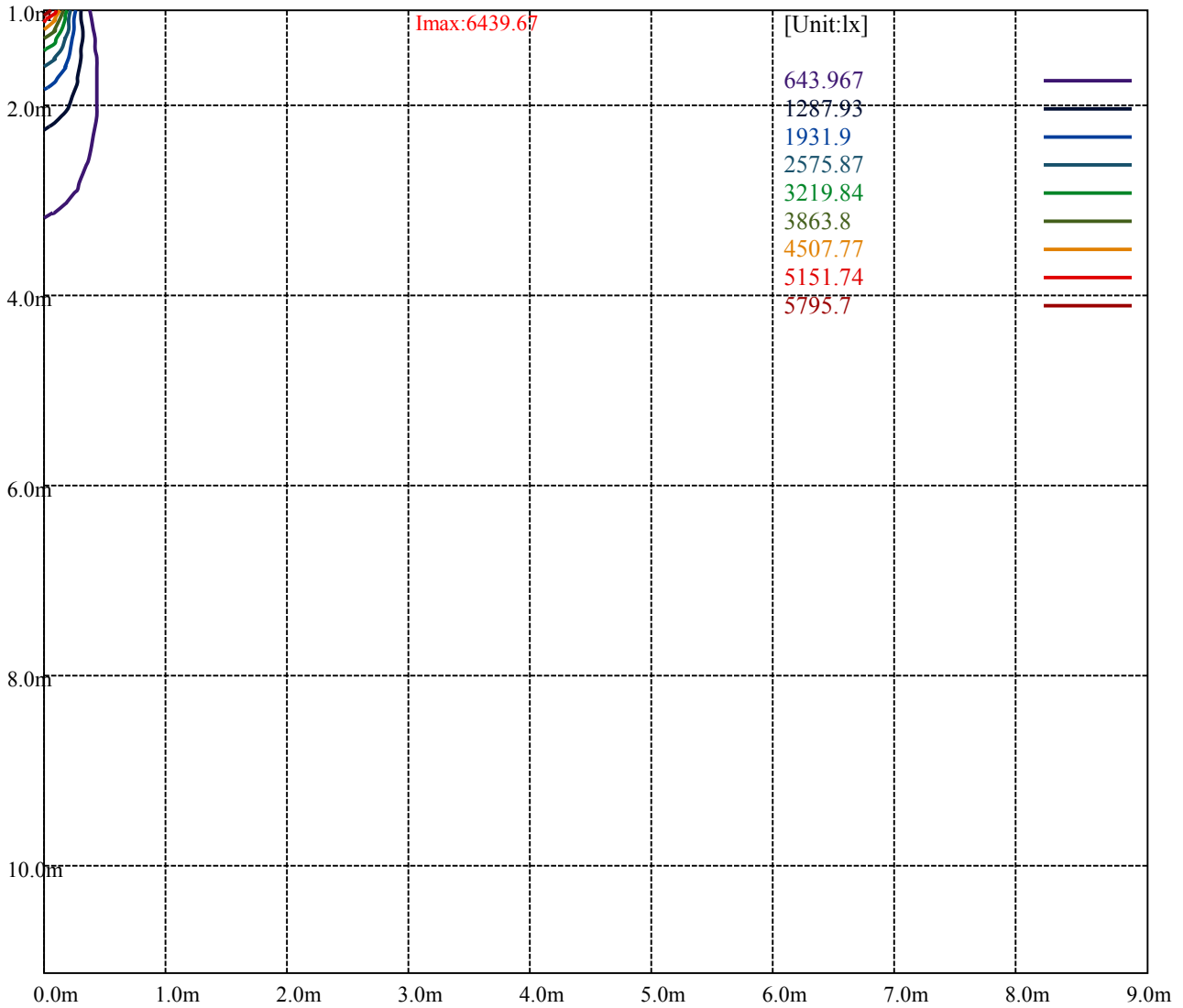
Road

Imax:6439.67

(10%Imax) 643.967	—
(20%Imax) 1287.93	—
(30%Imax) 1931.9	—
(40%Imax) 2575.87	—
(50%Imax) 3219.84	—
(60%Imax) 3863.8	—
(70%Imax) 4507.77	—
(80%Imax) 5151.74	—
(90%Imax) 5795.7	—



- (10%Emax) 71.55167
- (20%Emax) 143.1033
- (30%Emax) 214.6556
- (40%Emax) 286.2067
- (50%Emax) 357.7578
- (60%Emax) 429.31
- (70%Emax) 500.8611
- (80%Emax) 572.4133
- (90%Emax) 643.9656



Luminance Table

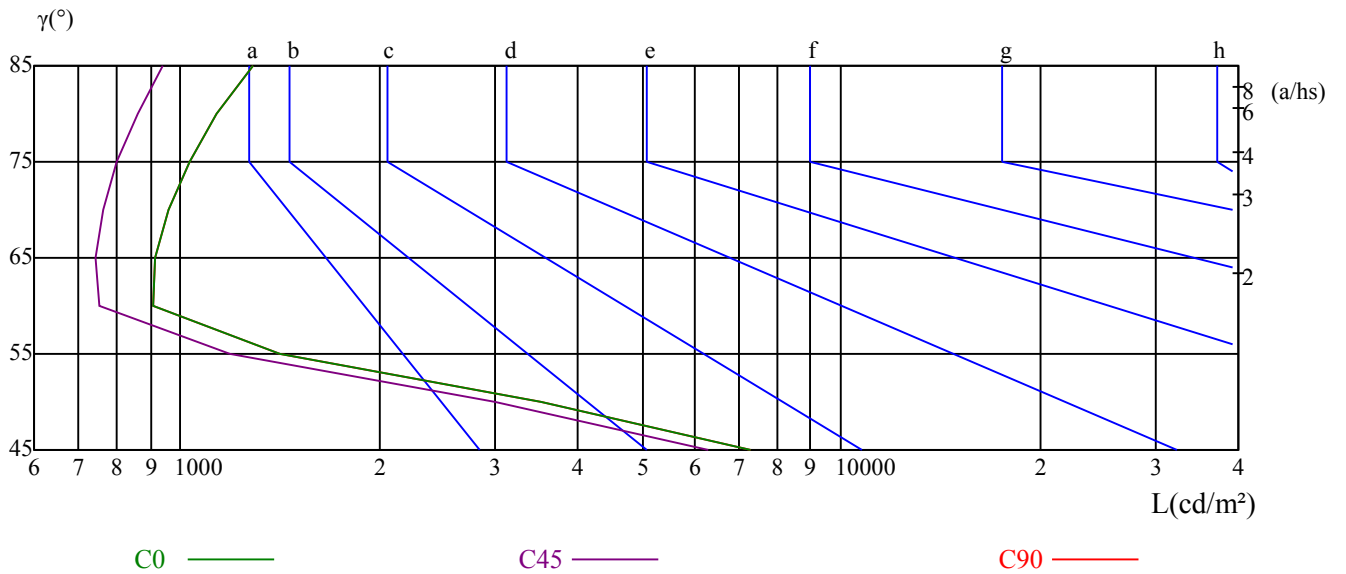
γ	45	50	55	60	65	70	75	80	85
C0	7311	3525	1417	912	916	960	1034	1136	1283
C45	6314	2999	1187	751	741	761	802	859	942
C90	7311	3525	1417	912	916	960	1034	1136	1283

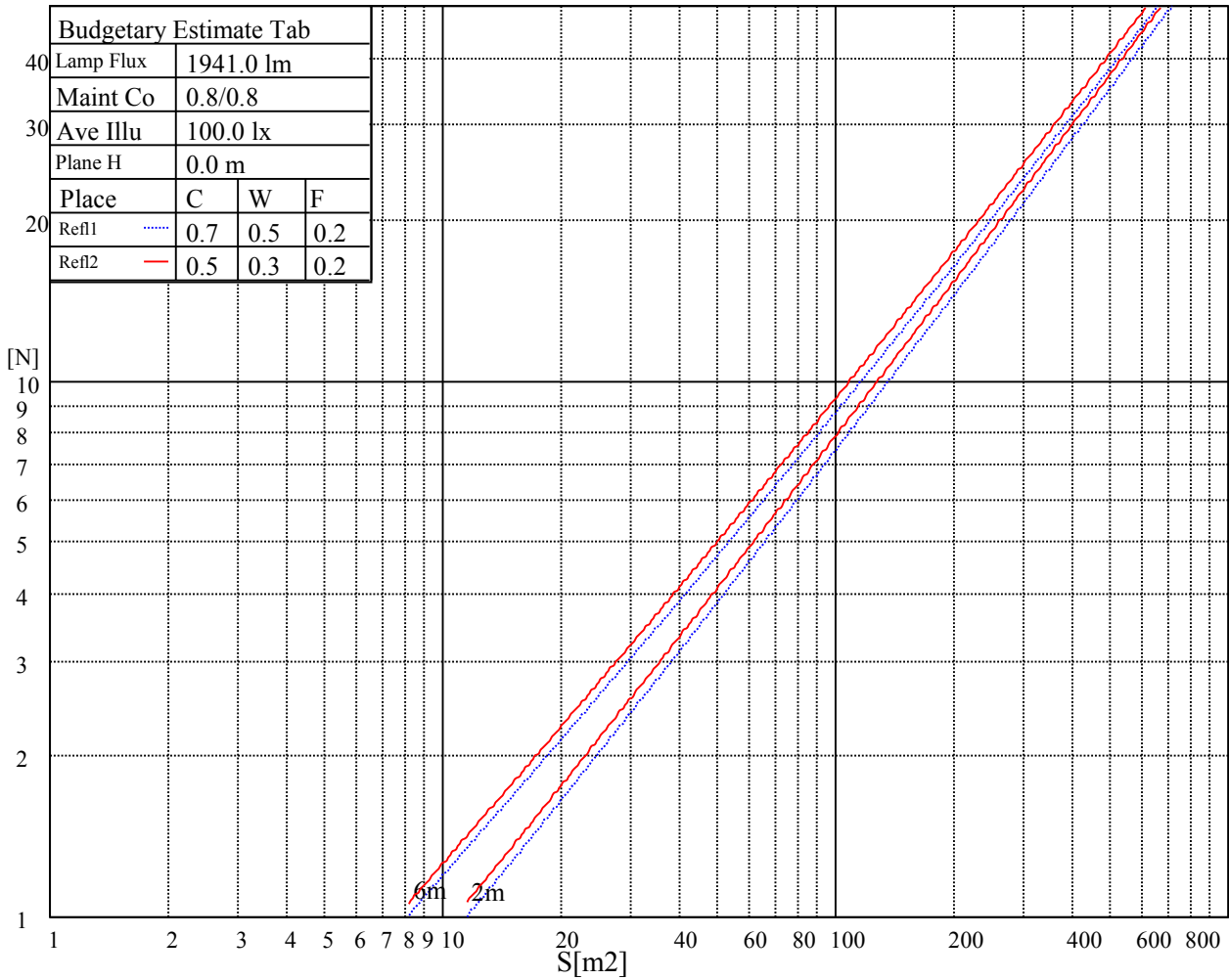
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2127	2127	2127	3412	3412	3412	10324	10324	10324

Glare Table

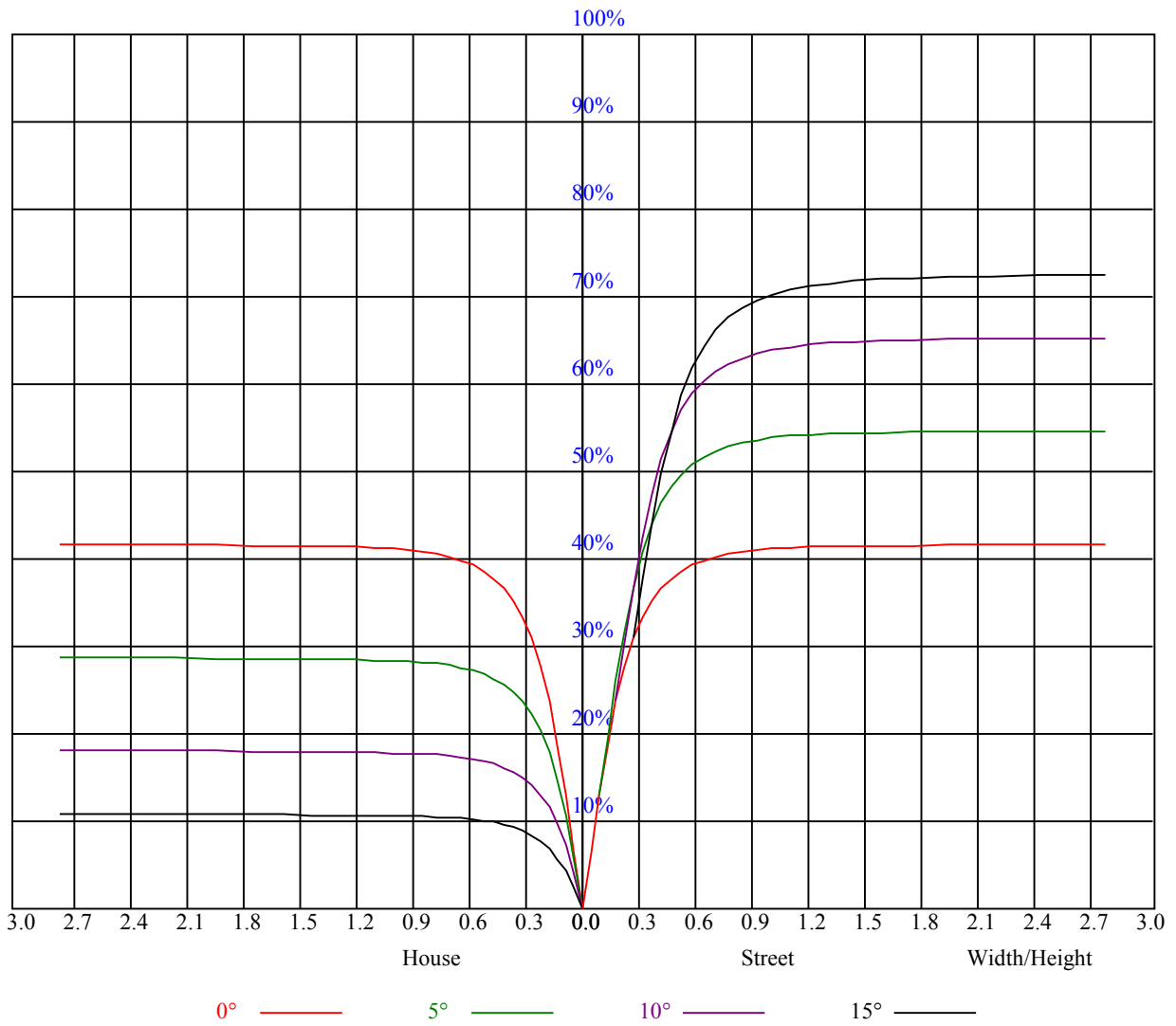
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

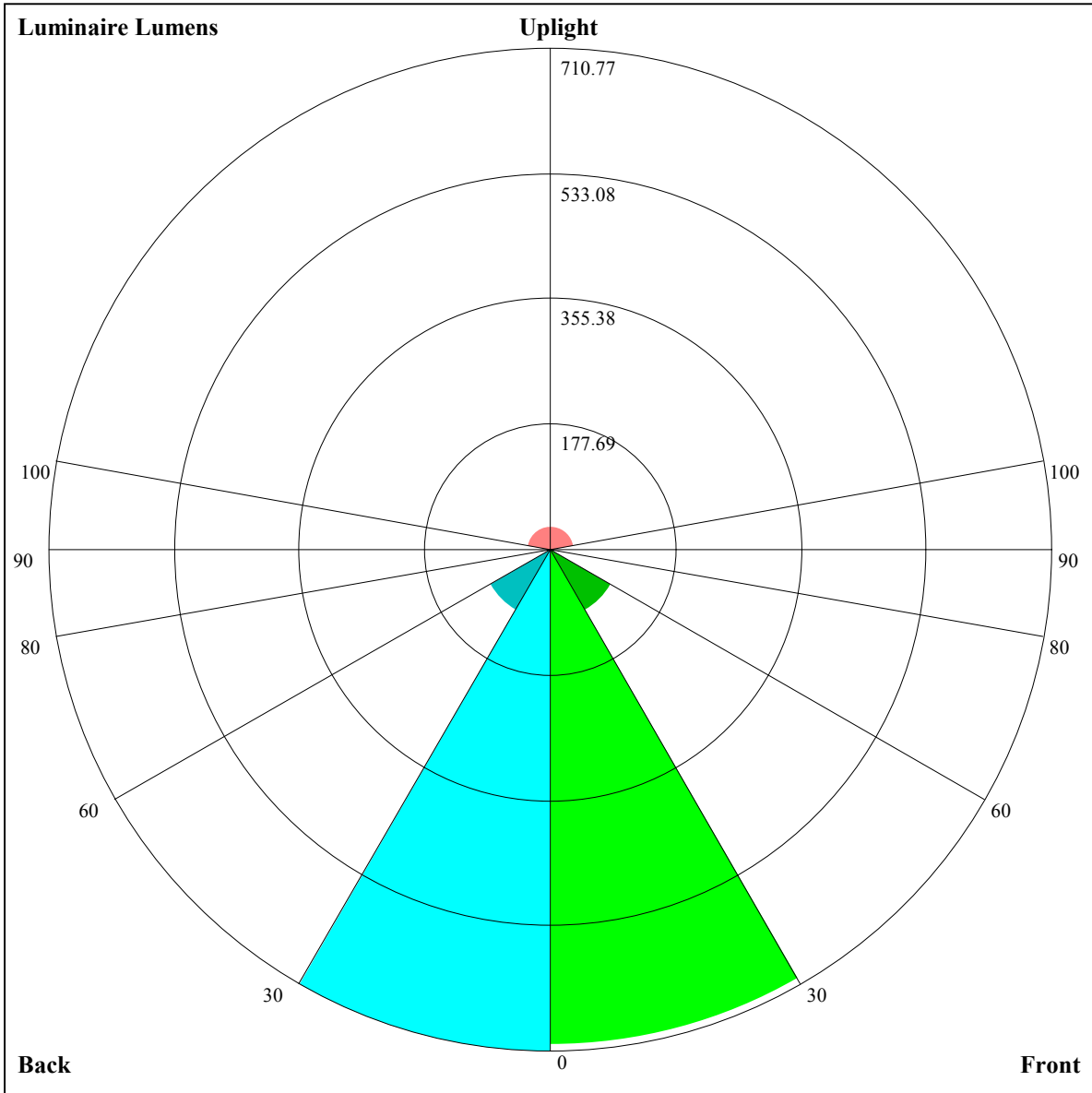
Luminance Limiting Curve





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	1.01	1.01	1.01	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.85
1	0.93	0.91	0.89	0.91	0.89	0.87	0.88	0.86	0.85	0.85	0.83	0.82	0.82	0.81	0.80	0.78
2	0.89	0.85	0.83	0.87	0.84	0.82	0.84	0.82	0.80	0.82	0.80	0.78	0.80	0.78	0.77	0.75
3	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.77	0.75	0.74	0.73
4	0.81	0.77	0.74	0.80	0.77	0.74	0.78	0.75	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.70
5	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.70	0.74	0.72	0.70	0.73	0.71	0.69	0.68
6	0.75	0.71	0.68	0.75	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.71	0.69	0.67	0.66
7	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.70	0.67	0.65	0.64
8	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
9	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.61
10	0.67	0.63	0.61	0.66	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=702.96,FM=98.33,FH=6.77,FVH=3.59

BL=710.77,BM=99.25,BH=6.81,BVH=3.61

UL=7.04,UH=33.48

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	6461.97	5866.26	4380.29	2440.10	1233.26	576.44	343.55	209.76	124.81
45.0	6454.26	5281.56	3567.10	1872.47	897.42	453.66	279.69	170.95	102.40
90.0	6367.27	5100.98	3173.45	1625.26	808.67	417.33	264.11	165.72	94.31
135.0	6475.18	5556.84	3797.24	2213.27	1040.57	499.36	301.16	184.38	109.56
180.0	6461.97	5584.37	3812.11	2120.22	1060.61	526.56	304.46	182.90	109.51
225.0	6454.26	6115.66	4411.67	2822.19	1076.68	664.15	370.69	219.56	135.22
270.0	6367.27	6253.31	4859.28	2966.99	1610.95	755.92	400.81	282.44	155.48
315.0	6475.18	5957.10	4214.57	2389.45	1059.01	576.55	331.71	200.68	127.68
360.0	6461.97	5866.26	4380.29	2440.10	1233.26	576.44	343.55	209.76	124.81
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	65.52	29.90	11.34	6.94	6.61	6.50	6.50	6.50	6.55
45.0	47.95	21.47	7.76	6.72	6.55	6.50	6.44	6.50	6.55
90.0	43.22	19.60	7.49	6.72	6.61	6.55	6.61	6.61	7.10
135.0	54.45	26.21	9.25	6.94	6.72	6.61	6.61	6.66	6.72
180.0	55.17	25.38	9.36	6.94	6.66	6.55	6.61	6.61	6.61
225.0	75.87	36.23	14.70	7.10	6.61	6.50	6.44	6.50	6.50
270.0	85.28	42.39	17.40	7.43	6.72	6.61	6.55	6.55	6.61
315.0	66.95	31.38	13.10	6.99	6.72	6.50	6.50	6.55	6.61
360.0	65.52	29.90	11.34	6.94	6.61	6.50	6.50	6.50	6.55
C/γ(°)	90.0								
0.0	6.44								
45.0	6.39								
90.0	6.44								
135.0	6.50								
180.0	6.44								
225.0	6.44								
270.0	6.44								
315.0	6.50								
360.0	6.44								