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Client:

LumCAT: 1406-N

Luminaire: 92.70.043.00

Report No: nt0100

Test No: GC2019120509

LampCAT: LUMINUS CXM-4-AC40

Lamp flux(lm): 598.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 34.6500

Current(A): 0.1470

Power (W): 5.0900

PF: 1.0000

Ballast type: DC

Width(mm): 0

Height(mm): 0

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Photometric Results

Lumens(lm): 524.22, Efficiency(%): 87.66% , Luminous Efficacy(lm/W): 102.99

Central intensity(cd): 792.197, Maximum intensity(cd): 792.197

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=35.8

[C90/270]Total=35.8

Field angle(10%Imax): [C0/180]Total=88.2

[C90/270]Total=88.2

Maximum s/h(1/2): C0\_180=0.58 C90\_270=0.58

Maximum s/h(1/4): C0\_180=0.63 C90\_270=0.63

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 87.66%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 94.678%

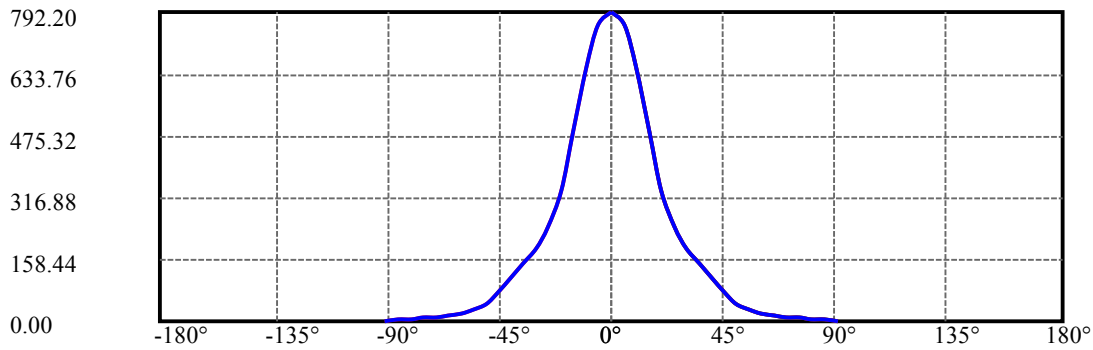
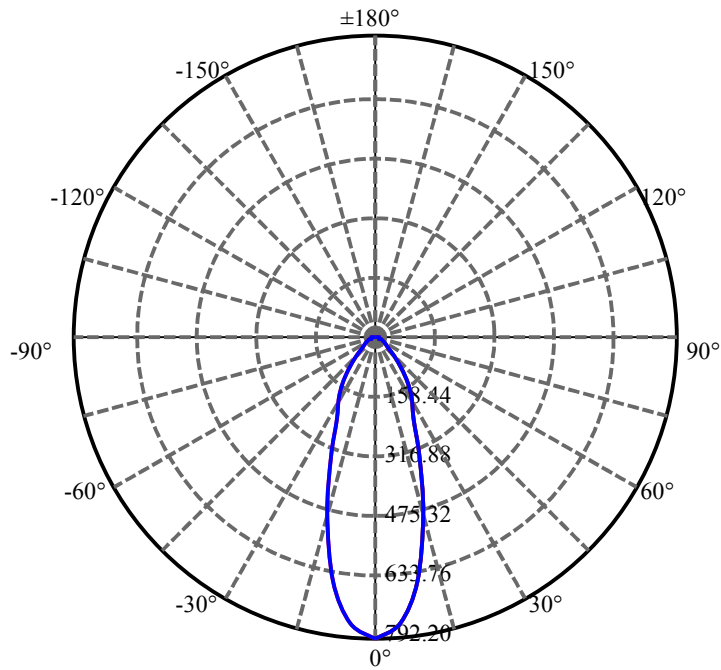
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	792.197	0.000	0	.000%	.000%
5.0	755.852	18.506	18.506	3.095%	3.530%
10.0	648.267	50.230	68.736	8.400%	13.112%
15.0	479.939	66.924	135.661	11.191%	25.879%
20.0	333.436	67.034	202.694	11.210%	38.666%
25.0	240.771	60.224	262.918	10.071%	50.154%
30.0	189.246	54.419	317.337	9.100%	60.535%
35.0	148.219	49.694	367.031	8.310%	70.015%
40.0	110.749	43.207	410.238	7.225%	78.257%
45.0	72.682	33.964	444.202	5.680%	84.736%
50.0	45.942	23.970	468.171	4.008%	89.309%
55.0	29.616	16.429	484.6	2.747%	92.443%
60.0	21.087	11.720	496.32	1.960%	94.678%
65.0	15.272	8.839	505.159	1.478%	96.365%
70.0	11.201	6.703	511.862	1.121%	97.643%
75.0	7.847	4.979	516.841	.833%	98.593%
80.0	5.288	3.514	520.355	.588%	99.263%
85.0	3.277	2.327	522.682	.389%	99.707%
90.0	2.327	1.534	524.216	.257%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	317.34	53.07%	60.54%
0-40	410.24	68.60%	78.26%
0-60	496.32	83.00%	94.68%
0-90	522.68	87.41%	99.71%
0-120	522.68	87.41%	99.71%
0-180	524.22	87.66%	100.00%
60-90	38.08	6.37%	7.26%
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%
0-41.34	419.37	70.13%	80.00%

## ZONAL LUMEN SUMMARY

0-10	68.74
10-20	133.96
20-30	114.64
30-40	92.90
40-50	57.93
50-60	28.15
60-70	15.54
70-80	8.49
80-90	2.33
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: —————

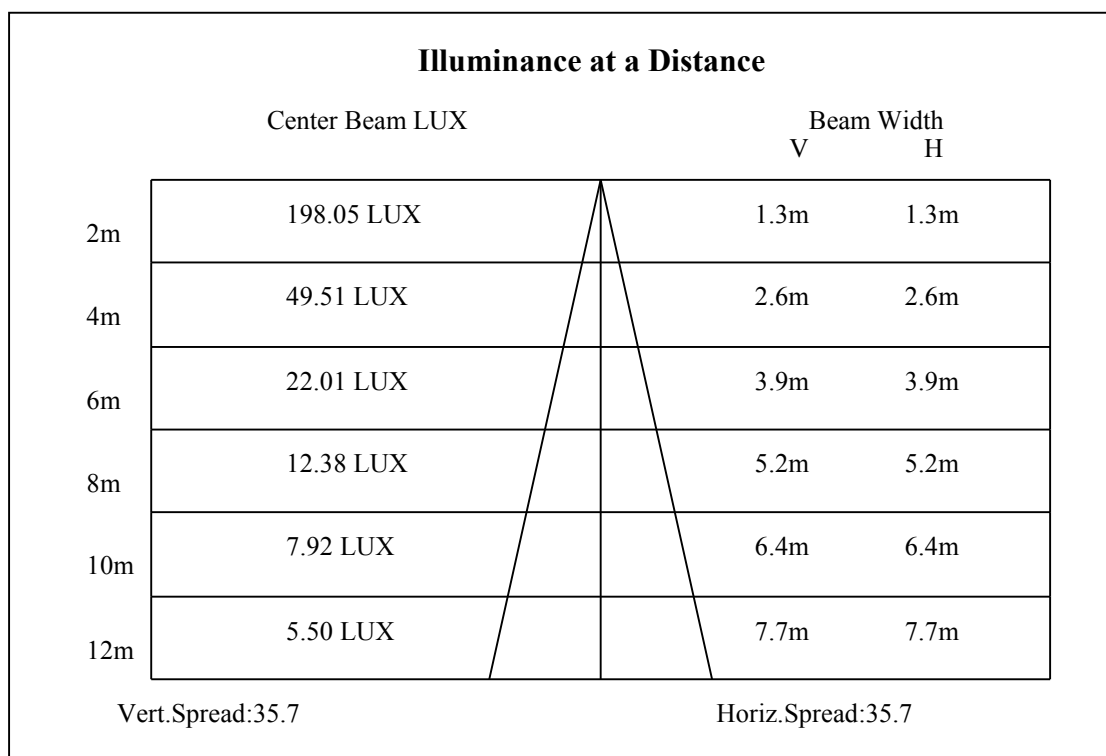
C90/C270: —————

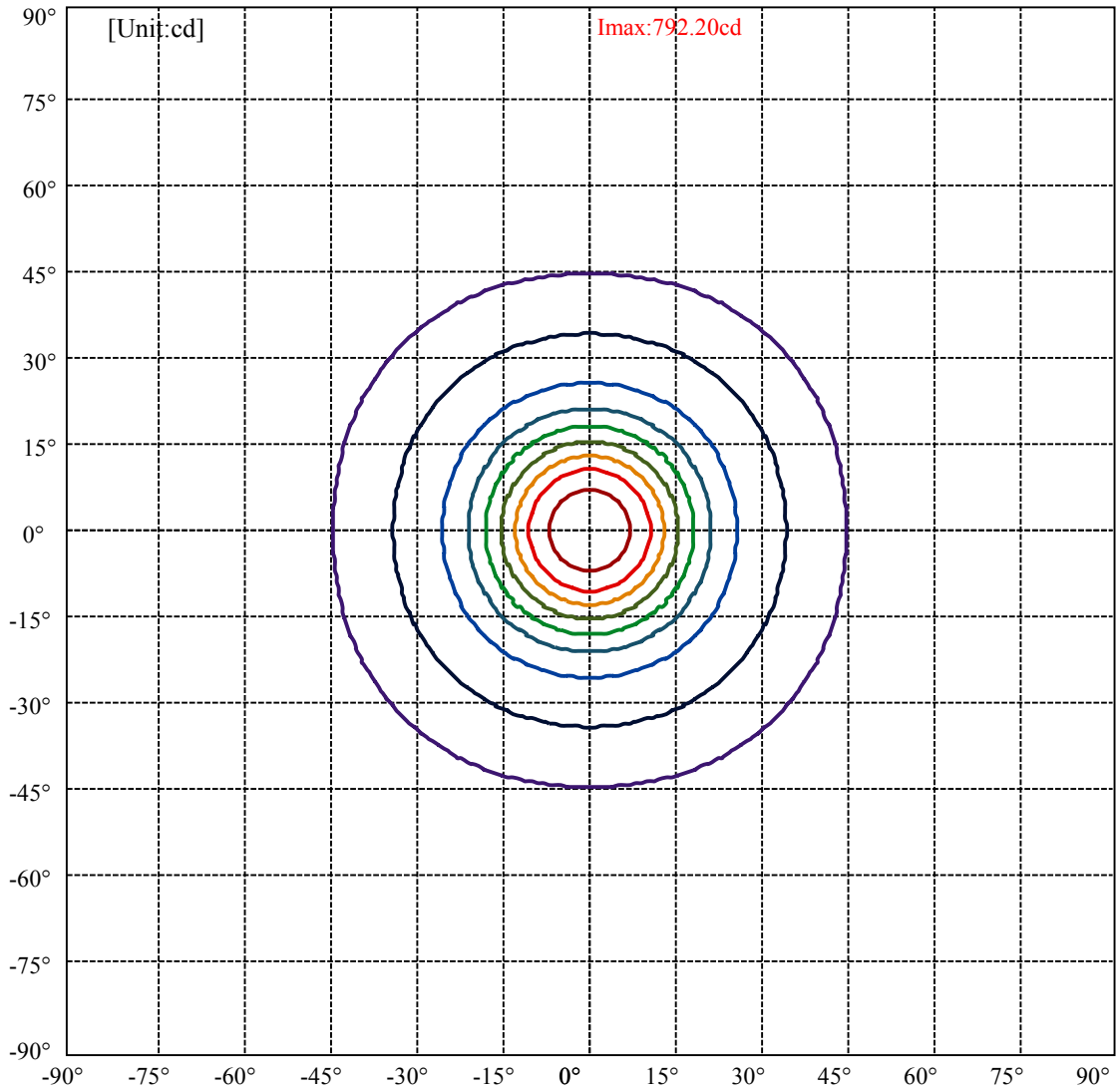
Field angle(10%Imax):C0/180Left:44.1 Right:44.1

:C90/270Left:44.1 Right:44.1

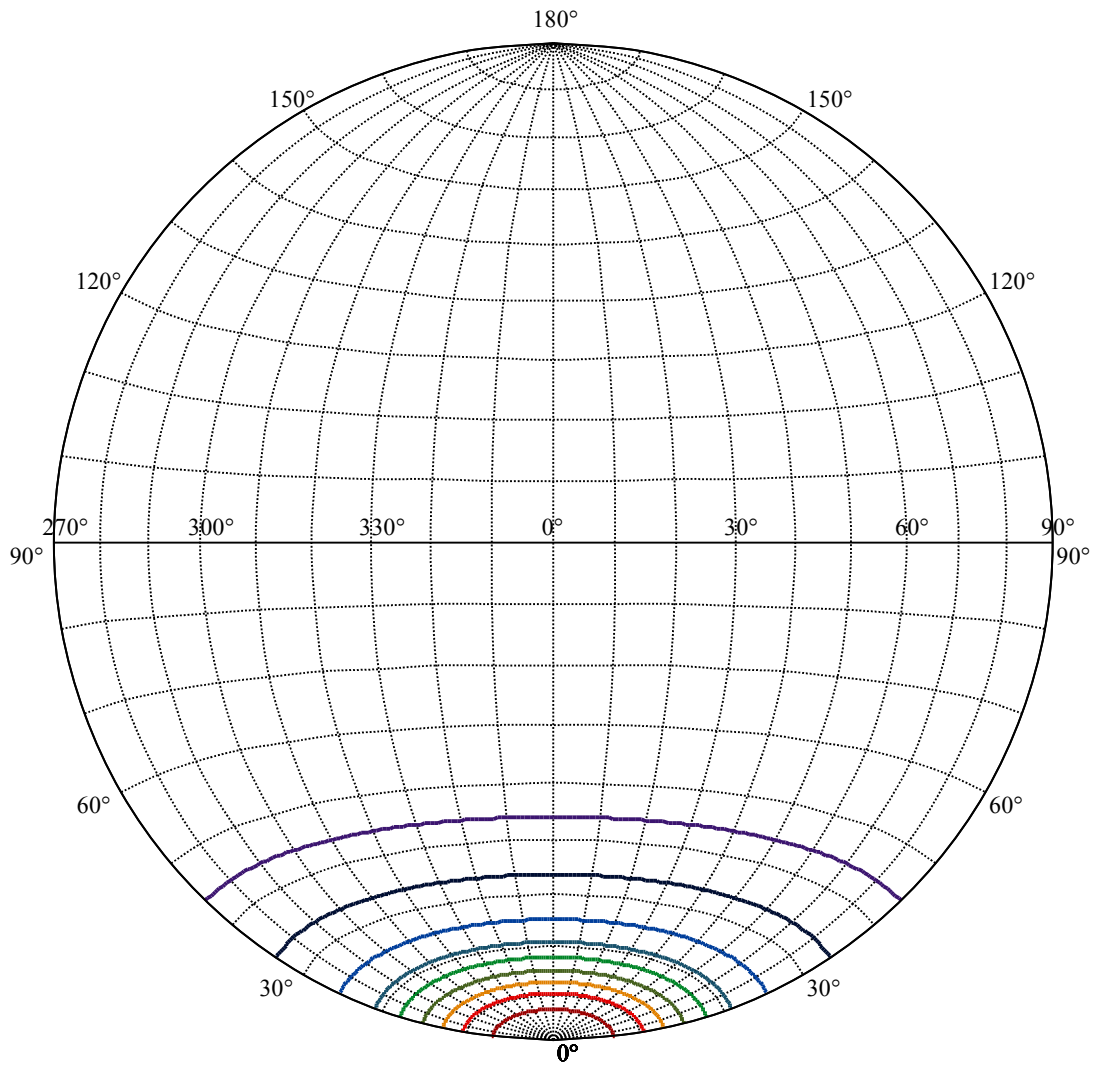
Beam Angle(50%Imax):C0/180Left:17.9 Right:17.9

:C90/270Left:17.9 Right:17.9





(10%Imax) 79.2197	—
(20%Imax) 158.439	—
(30%Imax) 237.659	—
(40%Imax) 316.879	—
(50%Imax) 396.098	—
(60%Imax) 475.318	—
(70%Imax) 554.538	—
(80%Imax) 633.758	—
(90%Imax) 712.977	—



House

[Unit:cd]

Road

**Imax:792.20**

(10%Imax) 79.2197

(20%Imax) 158.439

(30%Imax) 237.659

(40%Imax) 316.879

(50%Imax) 396.098

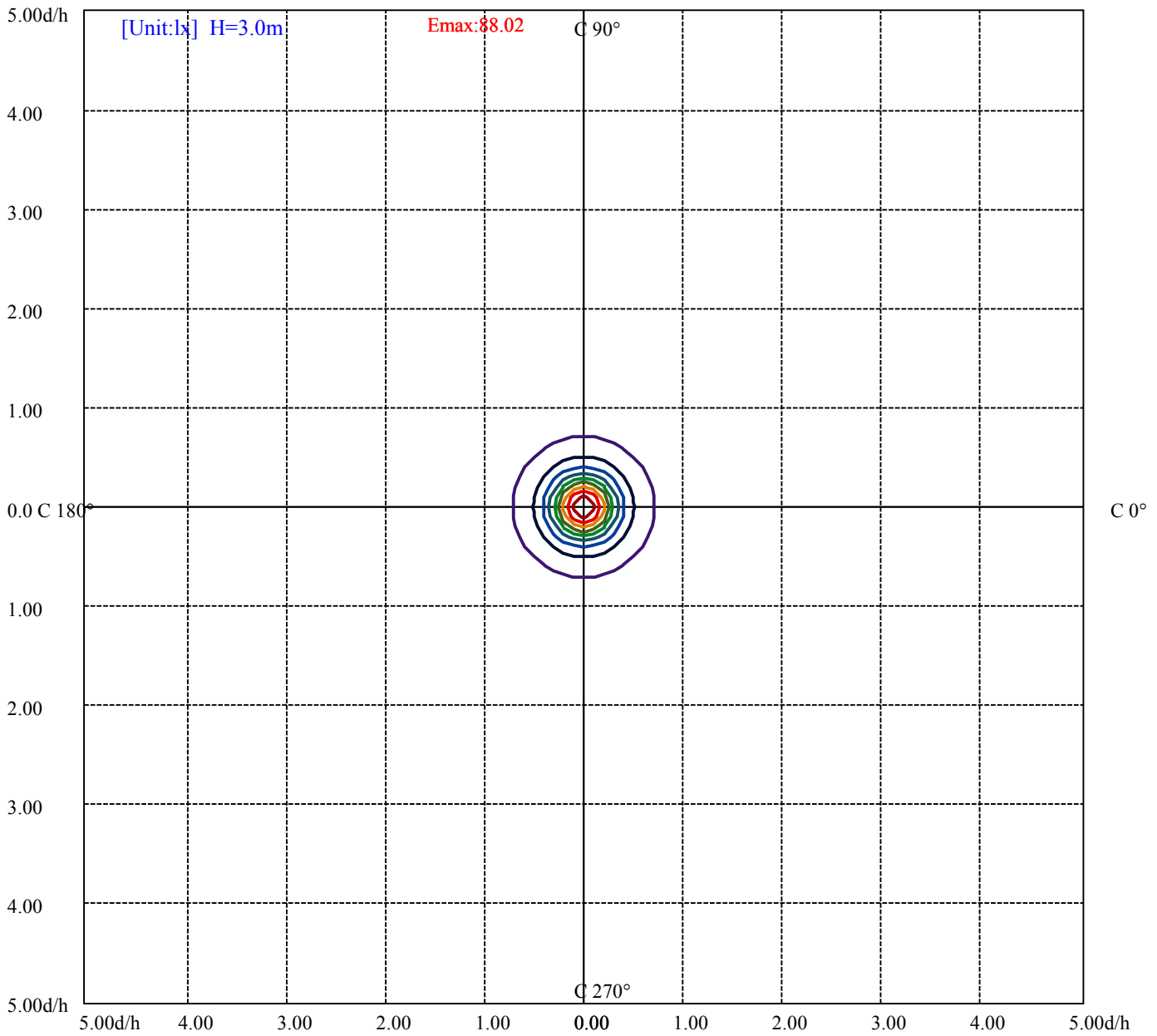
(60%Imax) 475.318

(70%Imax) 554.538

(80%Imax) 633.758

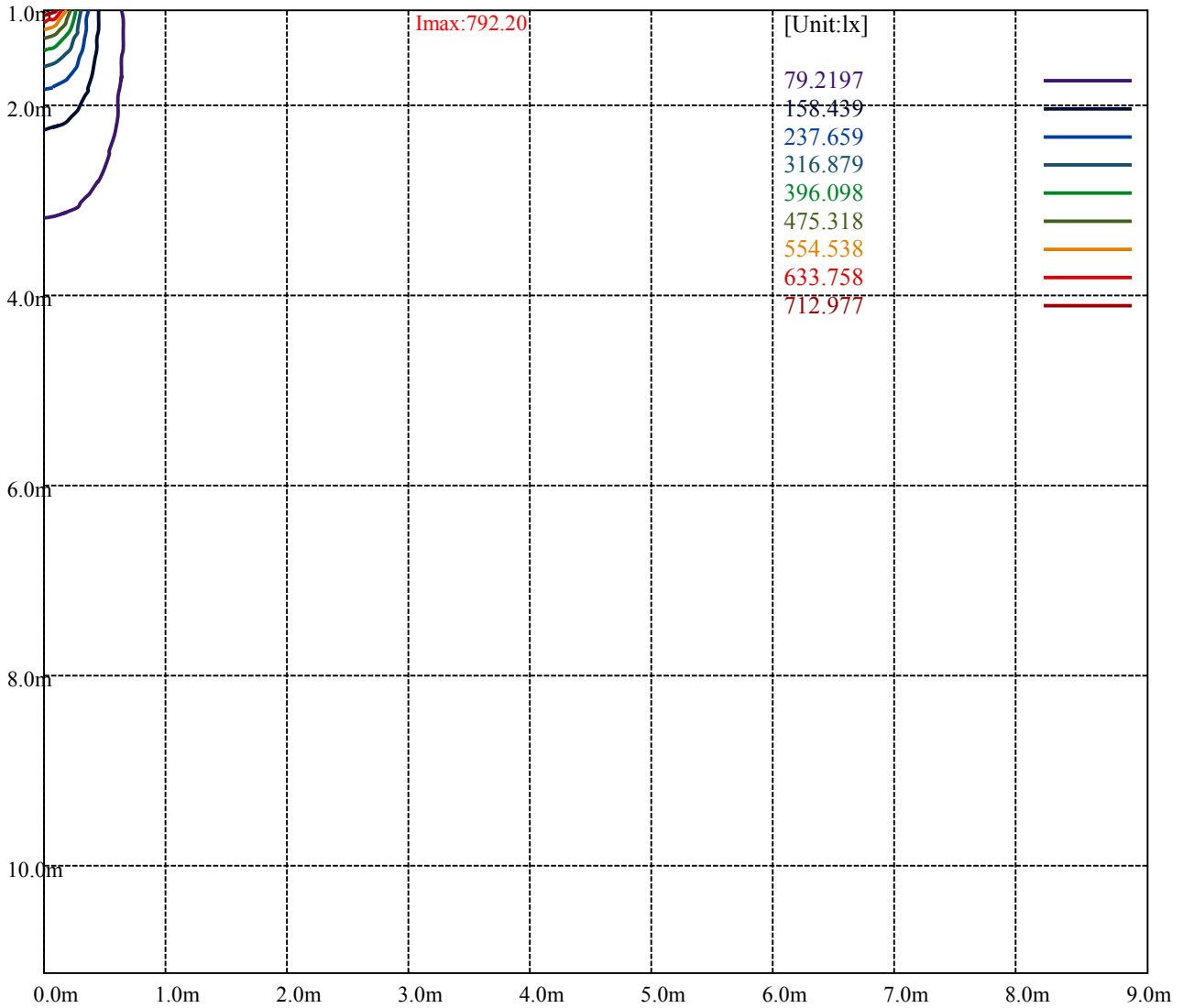
(90%Imax) 712.977





(10%Emax) 8.802177	—
(20%Emax) 17.60433	—
(30%Emax) 26.40656	—
(40%Emax) 35.20866	—
(50%Emax) 44.01089	—
(60%Emax) 52.813	—
(70%Emax) 61.61522	—
(80%Emax) 70.41745	—
(90%Emax) 79.21956	—





Luminance Table

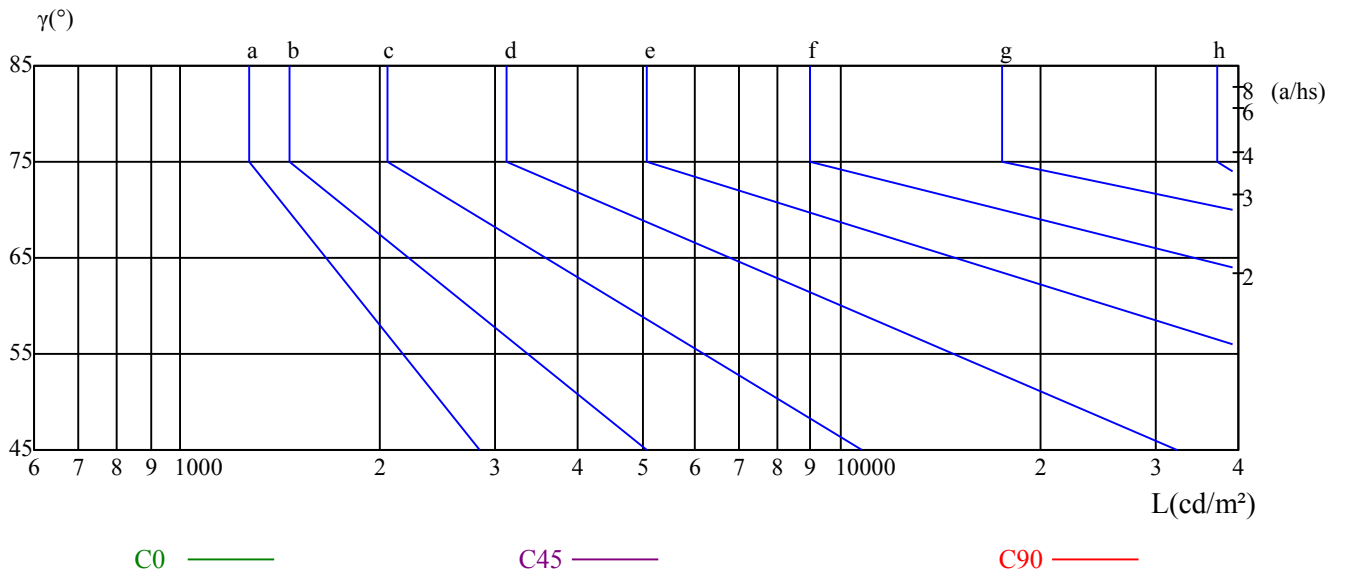
$\gamma$	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

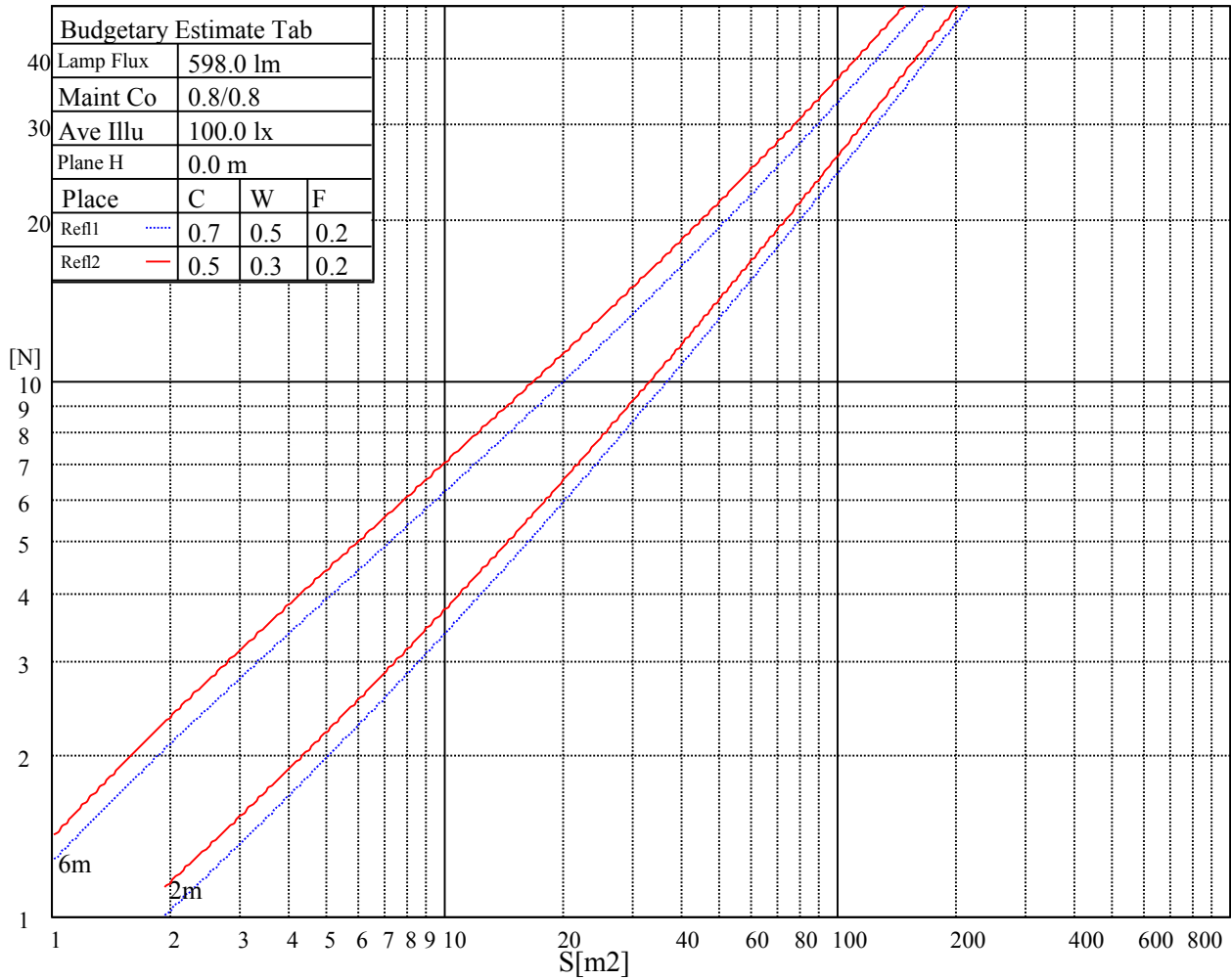
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

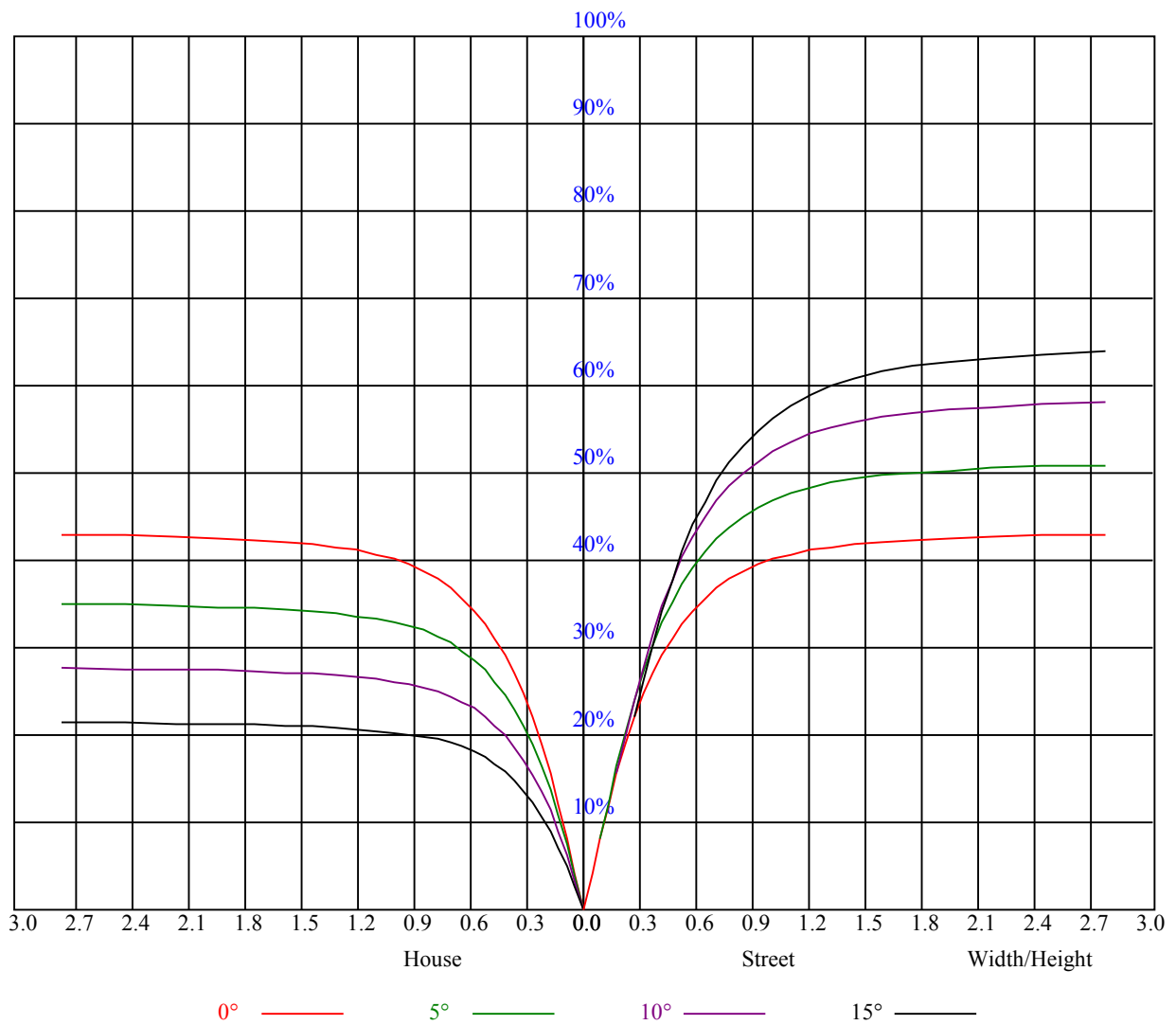
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

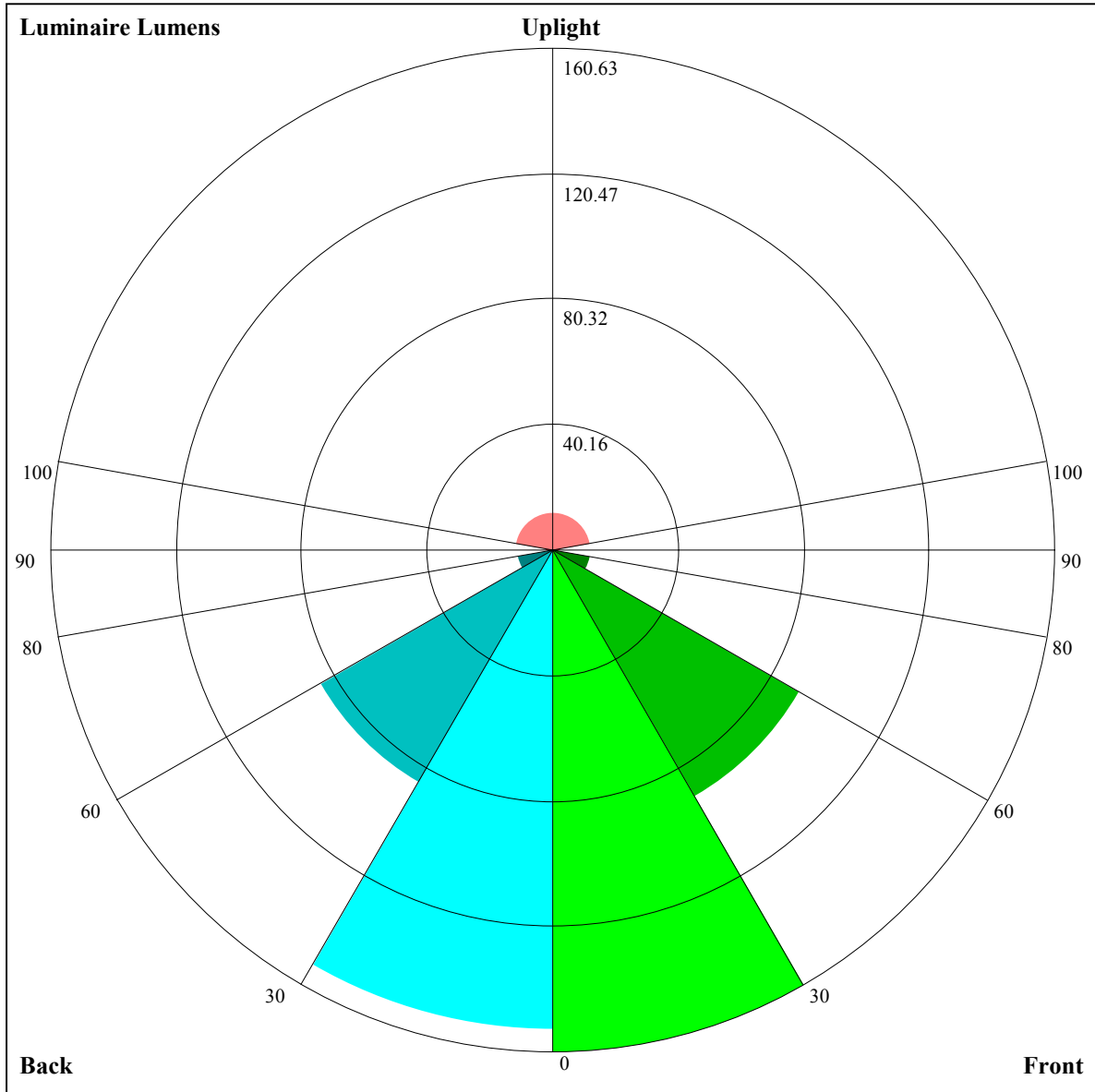
Luminance Limiting Curve





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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.88
1	0.96	0.93	0.91	0.94	0.92	0.89	0.90	0.88	0.87	0.87	0.85	0.84	0.84	0.83	0.82	0.80
2	0.88	0.84	0.80	0.86	0.83	0.80	0.84	0.80	0.78	0.81	0.78	0.76	0.78	0.76	0.74	0.73
3	0.81	0.76	0.72	0.80	0.75	0.72	0.78	0.74	0.70	0.75	0.72	0.69	0.73	0.71	0.68	0.67
4	0.75	0.70	0.66	0.74	0.69	0.65	0.72	0.68	0.64	0.70	0.67	0.64	0.69	0.66	0.63	0.61
5	0.70	0.64	0.60	0.69	0.64	0.60	0.68	0.63	0.59	0.66	0.62	0.59	0.65	0.61	0.58	0.57
6	0.65	0.60	0.56	0.65	0.59	0.55	0.63	0.59	0.55	0.62	0.58	0.55	0.61	0.57	0.54	0.53
7	0.61	0.56	0.52	0.61	0.55	0.52	0.60	0.55	0.51	0.59	0.54	0.51	0.57	0.54	0.51	0.49
8	0.58	0.52	0.48	0.57	0.52	0.48	0.56	0.51	0.48	0.55	0.51	0.48	0.54	0.50	0.48	0.46
9	0.55	0.49	0.45	0.54	0.49	0.45	0.53	0.48	0.45	0.52	0.48	0.45	0.52	0.48	0.45	0.43
10	0.52	0.46	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.50	0.45	0.42	0.49	0.45	0.42	0.41





Luminaire Lumens:

FL=160.63,FM=91.1,FH=12.21,FVH=1.96

BL=153.36,BM=85.77,BH=11.67,BVH=1.87

UL=2.54,UH=12.08

BUG Rating:B1-U2-G0

## Intensity data(cd)

<b>C/<math>\gamma</math>(°)</b>	<b>0.0</b>	<b>5.0</b>	<b>10.0</b>	<b>15.0</b>	<b>20.0</b>	<b>25.0</b>	<b>30.0</b>	<b>35.0</b>	<b>40.0</b>
<b>0.0</b>	791.49	779.40	692.33	526.11	365.91	262.13	202.84	161.16	124.03
<b>45.0</b>	791.49	773.94	687.38	520.26	362.70	263.25	202.67	162.23	127.18
<b>90.0</b>	794.70	757.29	651.66	480.60	324.90	238.50	181.97	136.91	102.38
<b>135.0</b>	791.10	759.83	656.49	487.29	345.43	247.44	194.18	156.43	115.99
<b>180.0</b>	791.49	734.29	606.54	442.01	306.51	225.56	179.61	136.91	98.38
<b>225.0</b>	791.49	735.41	609.58	443.25	309.66	224.94	182.53	140.01	101.14
<b>270.0</b>	794.70	754.93	642.32	475.48	326.42	232.31	186.41	144.17	105.64
<b>315.0</b>	791.10	751.73	639.84	464.51	325.97	232.03	183.77	147.94	111.26
<b>360.0</b>	791.49	779.40	692.33	526.11	365.91	262.13	202.84	161.16	124.03
<b>C/<math>\gamma</math>(°)</b>	<b>45.0</b>	<b>50.0</b>	<b>55.0</b>	<b>60.0</b>	<b>65.0</b>	<b>70.0</b>	<b>75.0</b>	<b>80.0</b>	<b>85.0</b>
<b>0.0</b>	80.61	48.94	31.67	22.44	16.20	12.15	8.61	5.85	3.60
<b>45.0</b>	83.93	51.58	31.78	22.67	16.31	11.93	8.72	5.79	3.54
<b>90.0</b>	68.12	43.59	28.07	20.36	14.68	10.58	7.54	5.01	3.09
<b>135.0</b>	75.49	48.49	30.66	21.71	15.69	11.70	8.16	5.46	3.32
<b>180.0</b>	63.34	41.96	27.73	19.97	14.57	10.58	7.31	4.95	3.15
<b>225.0</b>	67.05	43.14	28.35	19.91	14.46	10.46	7.09	4.95	3.15
<b>270.0</b>	71.16	45.51	29.48	20.87	15.24	11.08	7.59	5.18	3.09
<b>315.0</b>	71.78	44.33	29.19	20.76	15.02	11.14	7.76	5.12	3.26
<b>360.0</b>	80.61	48.94	31.67	22.44	16.20	12.15	8.61	5.85	3.60
<b>C/<math>\gamma</math>(°)</b>	<b>90.0</b>								
<b>0.0</b>	2.42								
<b>45.0</b>	2.36								
<b>90.0</b>	2.31								
<b>135.0</b>	2.31								
<b>180.0</b>	2.31								
<b>225.0</b>	2.25								
<b>270.0</b>	2.31								
<b>315.0</b>	2.36								
<b>360.0</b>	2.42								