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Nata

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Client:

LumCAT: 2-1259-N

Luminaire: 92.70.045.00+92.70.059.00

Report No: nata-0100

Test No: GC20180601002

LampCAT: NICHIA NFCWD084B-V3

Lamp flux(lm): 2152.5

Number of Lamps: 1

Length(mm): 70

Phm Type: C

Voltage(V): 34.2000

Current(A): 0.5000

Power (W): 17.1000

PF: 0.0000

Ballast type: DC

Width(mm): 70

Height(mm): 0

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Photometric Results

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Lumens(lm): 1601.72, Efficiency(%): 74.41% , Luminous Efficacy(lm/W): 93.67

Central intensity(cd): 3405.238, Maximum intensity(cd): 3405.238

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=65.8

[C90/270]Total=65.8

Maximum s/h(1/2): C0\_180=0.60 C90\_270=0.60

Maximum s/h(1/4): C0\_180=0.58 C90\_270=0.58

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 75.29%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 96.556%

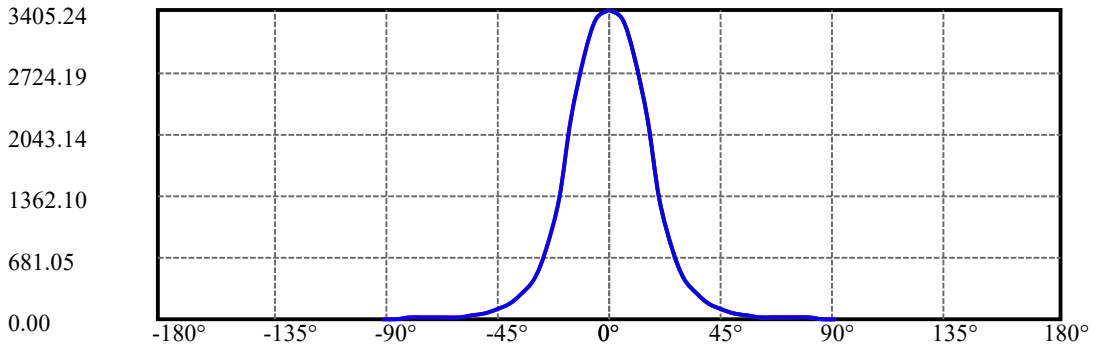
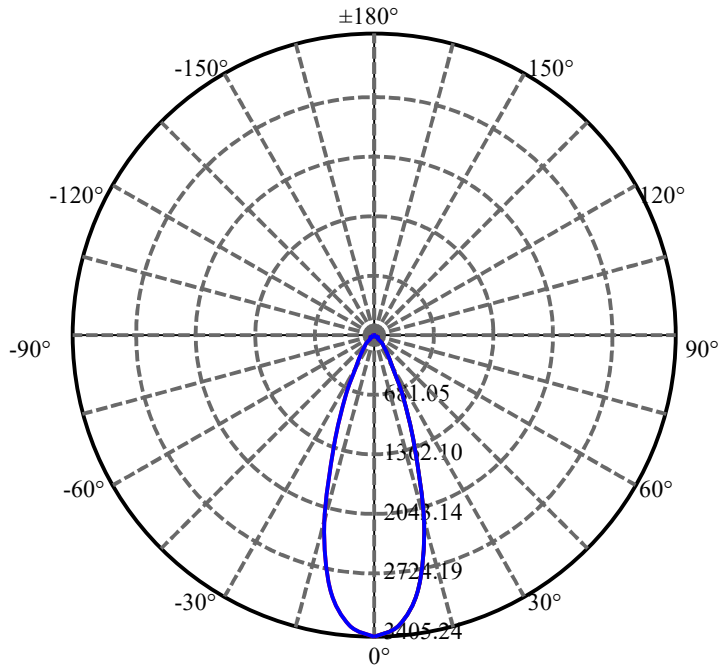
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3405.238	20.364	20.364	.946%	1.271%
5.0	3292.097	157.274	177.638	7.307%	11.091%
10.0	2902.780	276.295	453.934	12.836%	28.340%
15.0	2203.701	312.636	766.569	14.524%	47.859%
20.0	1328.986	249.150	1015.72	11.575%	63.414%
25.0	767.720	177.845	1193.564	8.262%	74.518%
30.0	438.359	120.140	1313.705	5.581%	82.019%
35.0	267.946	84.242	1397.947	3.914%	87.278%
40.0	174.894	61.621	1459.568	2.863%	91.125%
45.0	109.624	42.489	1502.057	1.974%	93.778%
50.0	70.183	29.470	1531.527	1.369%	95.618%
55.0	43.735	19.638	1551.165	.912%	96.844%
60.0	28.616	13.584	1564.748	.631%	97.692%
65.0	19.222	9.549	1574.297	.444%	98.288%
70.0	15.767	8.121	1582.419	.377%	98.795%
75.0	13.124	6.949	1589.367	.323%	99.229%
80.0	10.764	5.810	1595.177	.270%	99.592%
85.0	8.541	4.664	1599.841	.217%	99.883%
90.0	6.841	1.875	1601.716	.087%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1313.70	61.03%	82.02%
0-40	1459.57	67.81%	91.13%
0-60	1564.75	72.69%	97.69%
0-90	1599.84	74.32%	99.88%
0-120	1599.84	74.32%	99.88%
0-180	1601.72	74.41%	100.00%
60-90	48.68	2.26%	3.04%
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%
0-28.65	1281.37	59.53%	80.00%

ZONAL LUMEN SUMMARY

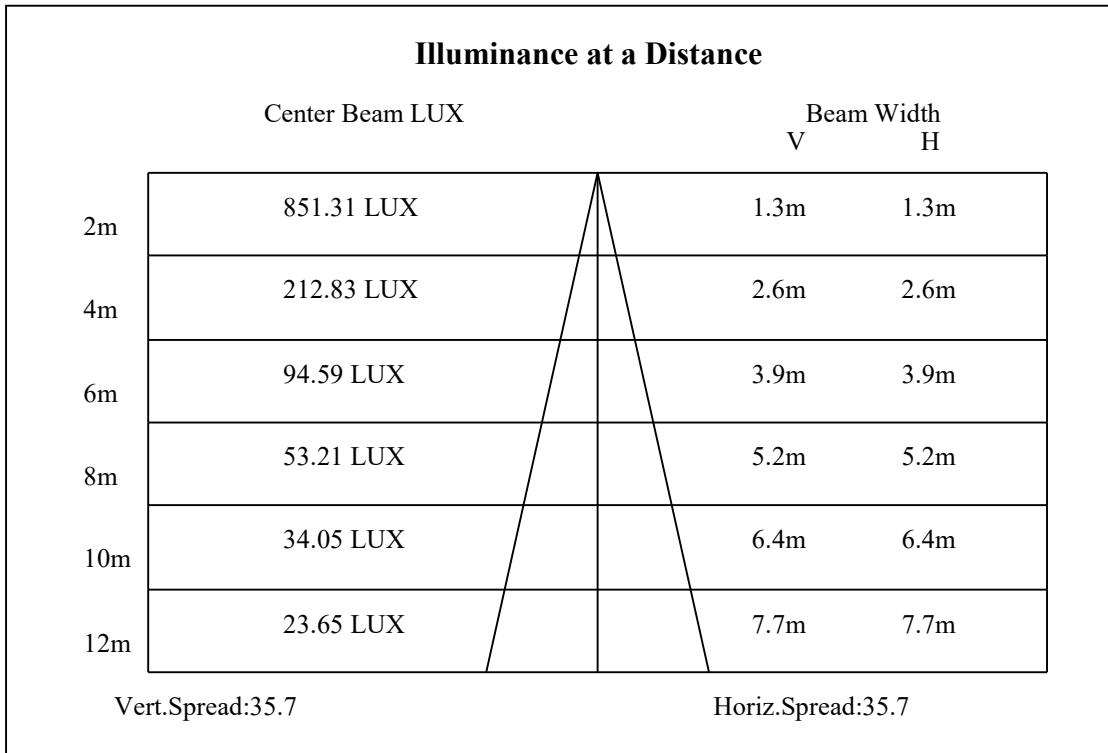
0-10	453.93
10-20	561.79
20-30	297.99
30-40	145.86
40-50	71.96
50-60	33.22
60-70	17.67
70-80	12.76
80-90	4.66
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

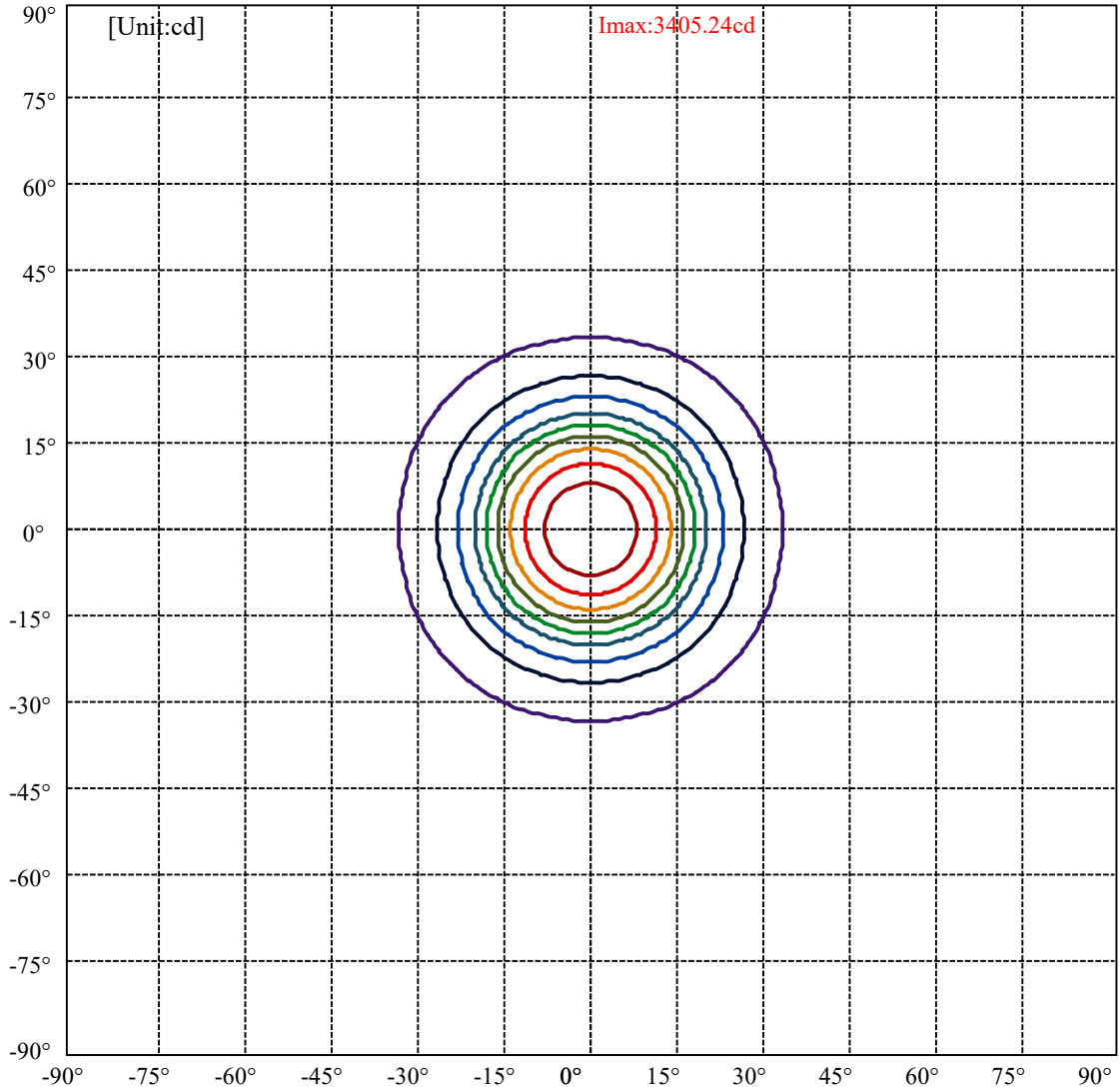


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

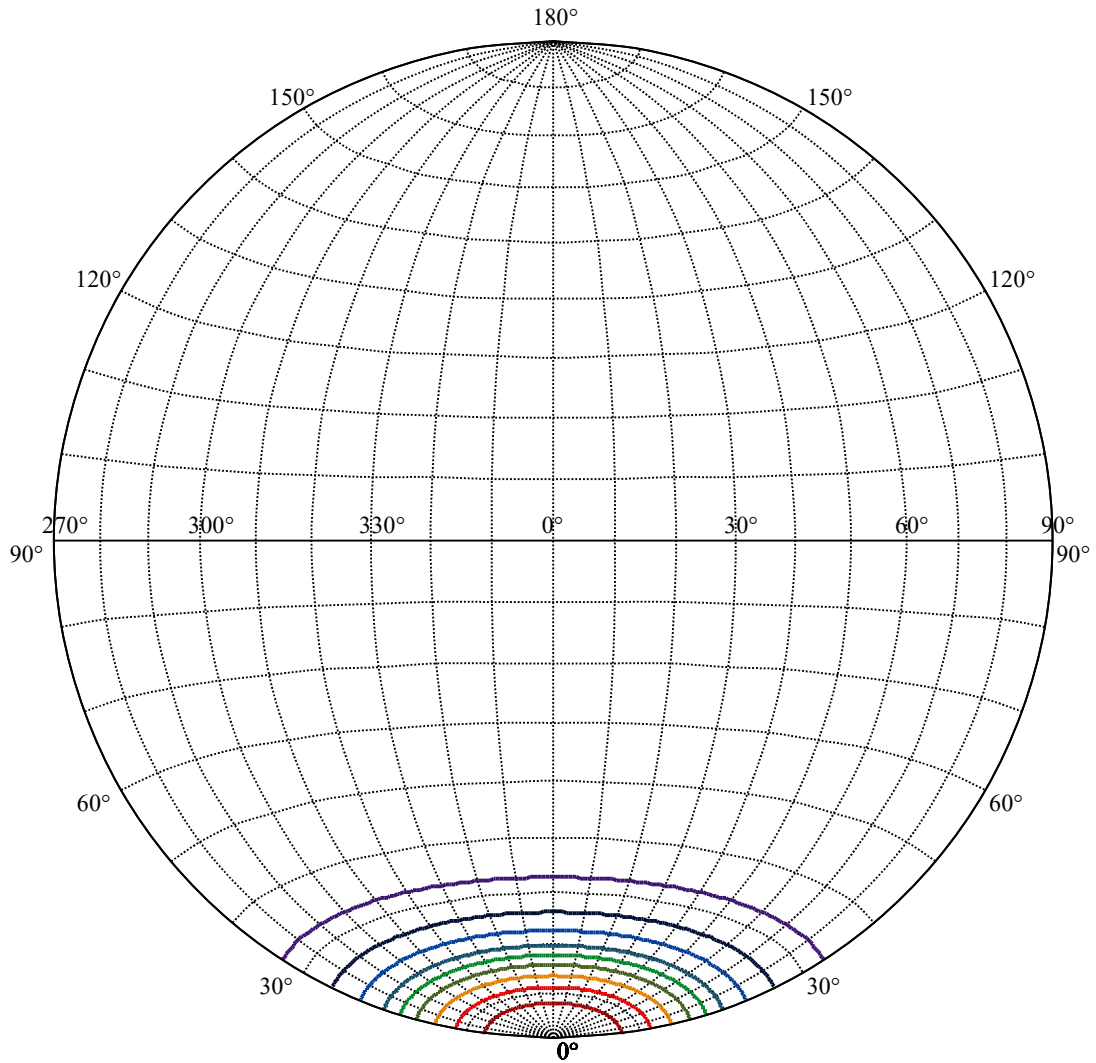
Field angle(10%Imax):C0/180Left:32.9 Right:32.9  
:C90/270Left:32.9 Right:32.9

Beam Angle(50%Imax):C0/180Left:17.9 Right:17.9  
:C90/270Left:17.9 Right:17.9





(10%Imax) 340.524	—
(20%Imax) 681.048	—
(30%Imax) 1021.57	—
(40%Imax) 1362.1	—
(50%Imax) 1702.62	—
(60%Imax) 2043.14	—
(70%Imax) 2383.67	—
(80%Imax) 2724.19	—
(90%Imax) 3064.71	—



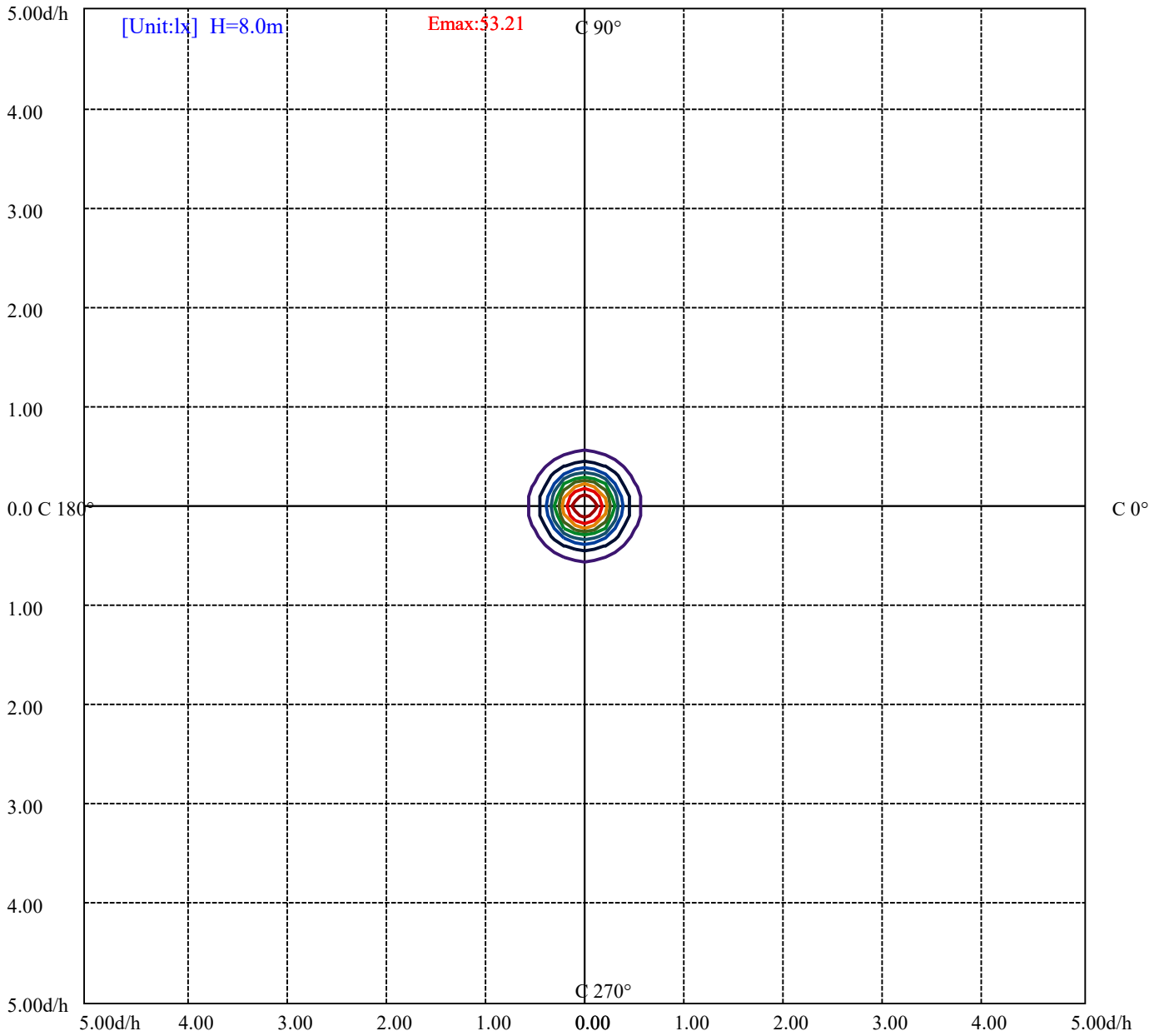
House

[Unit:cd]

Road

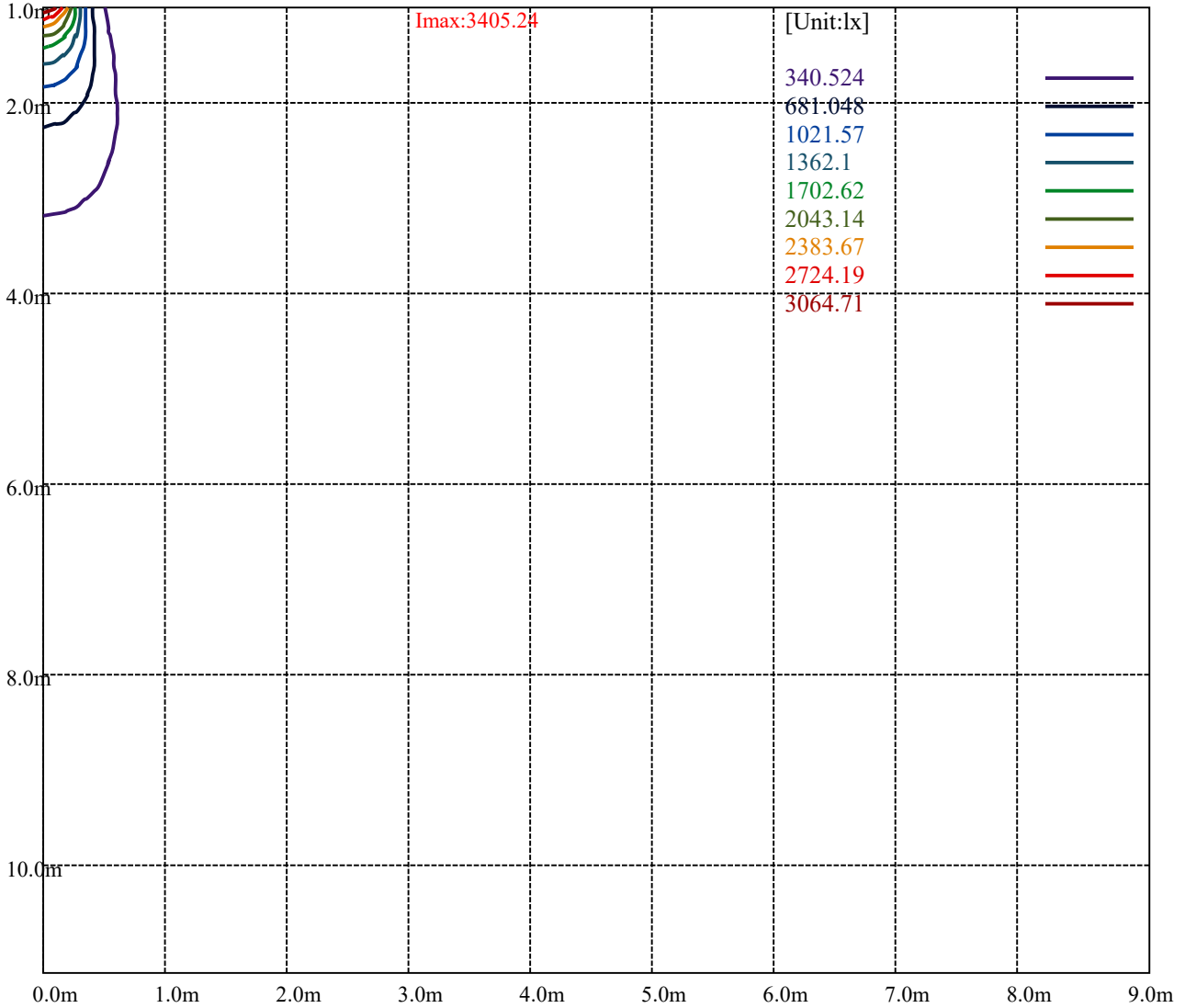
Imax:3405.24

(10%Imax)	340.524	—
(20%Imax)	681.048	—
(30%Imax)	1021.57	—
(40%Imax)	1362.1	—
(50%Imax)	1702.62	—
(60%Imax)	2043.14	—
(70%Imax)	2383.67	—
(80%Imax)	2724.19	—
(90%Imax)	3064.71	—



- (10%Emax) 5.320672
- (20%Emax) 10.64136
- (30%Emax) 15.96203
- (40%Emax) 21.28266
- (50%Emax) 26.60344
- (60%Emax) 31.92406
- (70%Emax) 37.24469
- (80%Emax) 42.56547
- (90%Emax) 47.88609





Luminance Table

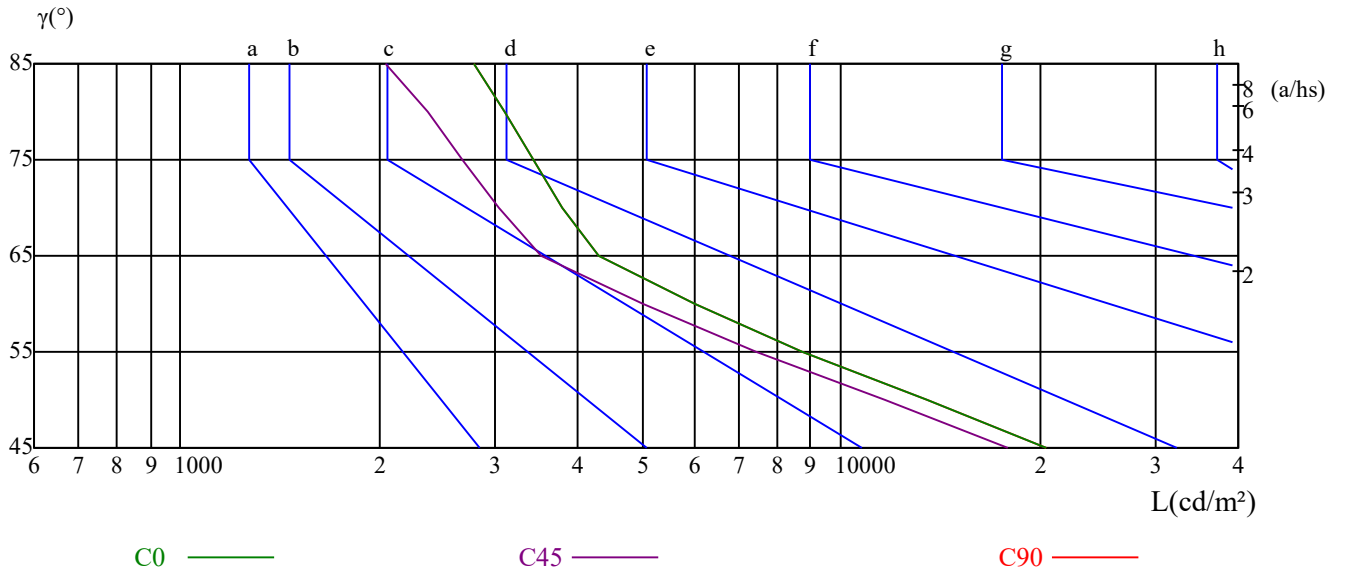
$\gamma$	45	50	55	60	65	70	75	80	85
C0	20507	13530	8766	6020	4289	3776	3420	3101	2776
C45	17898	11636	7423	5013	3507	3026	2677	2363	2046
C90	20507	13530	8766	6020	4289	3776	3420	3101	2776

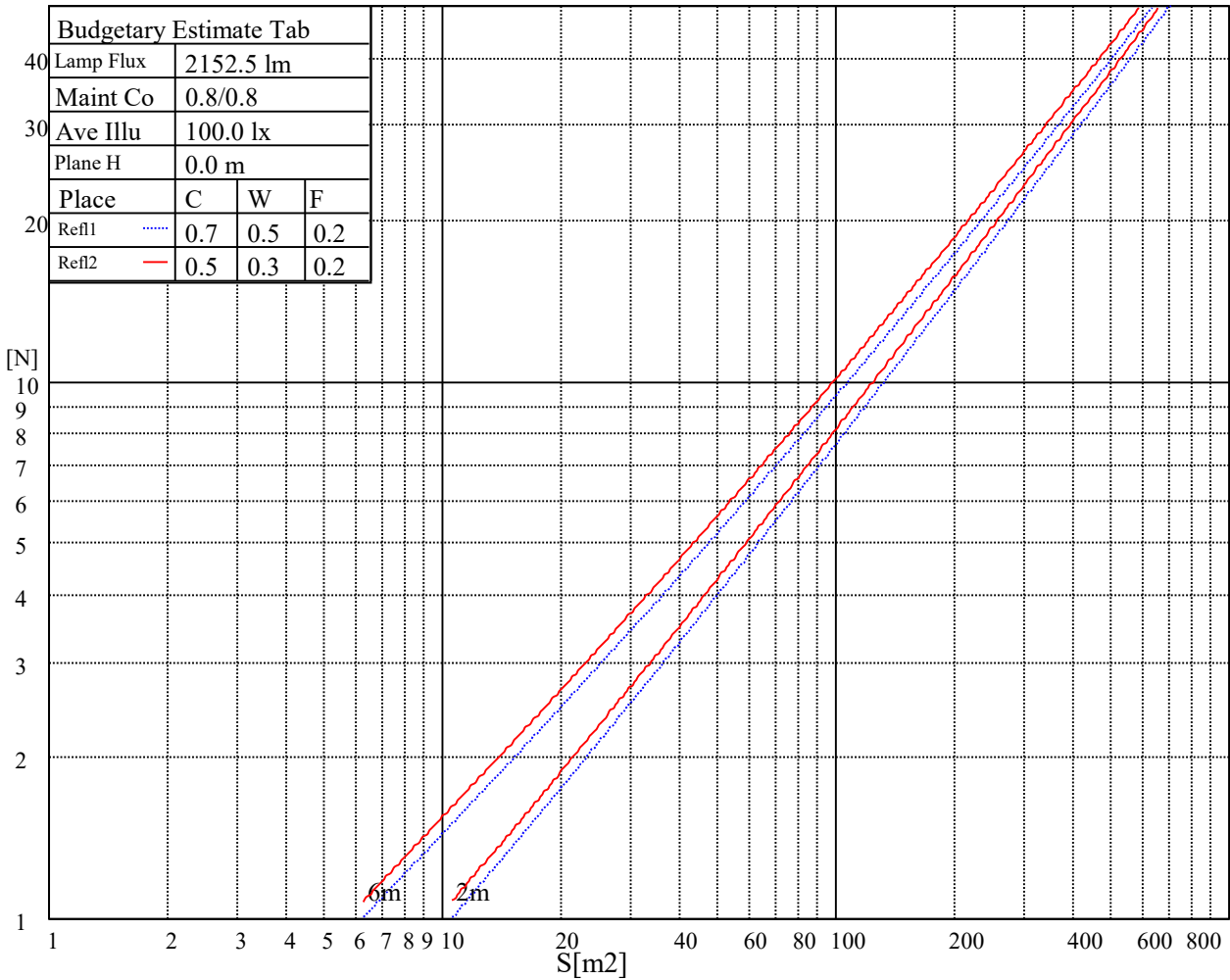
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9282	9282	9282	10348	10348	10348	19999	19999	19999

Glare Table

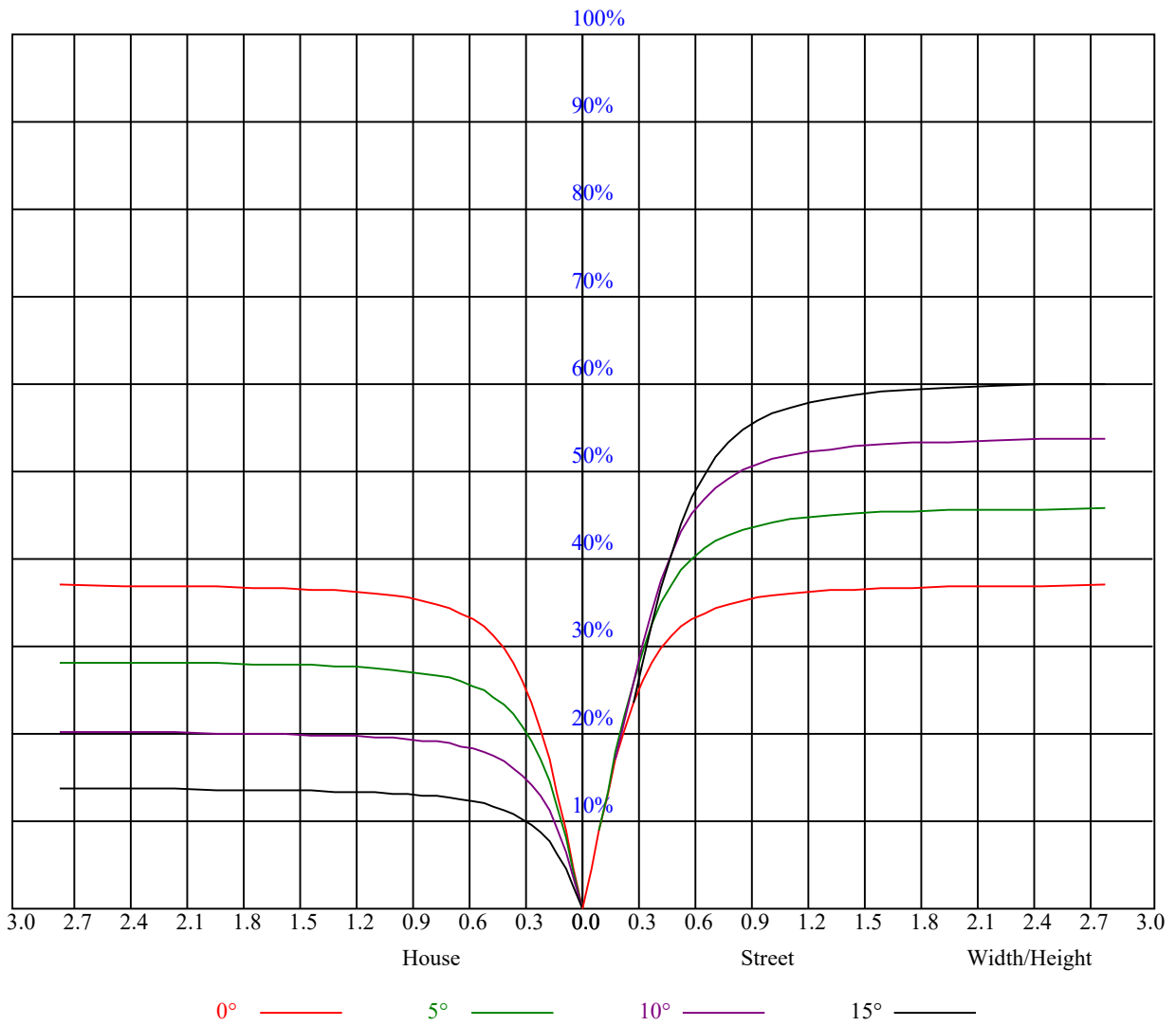
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

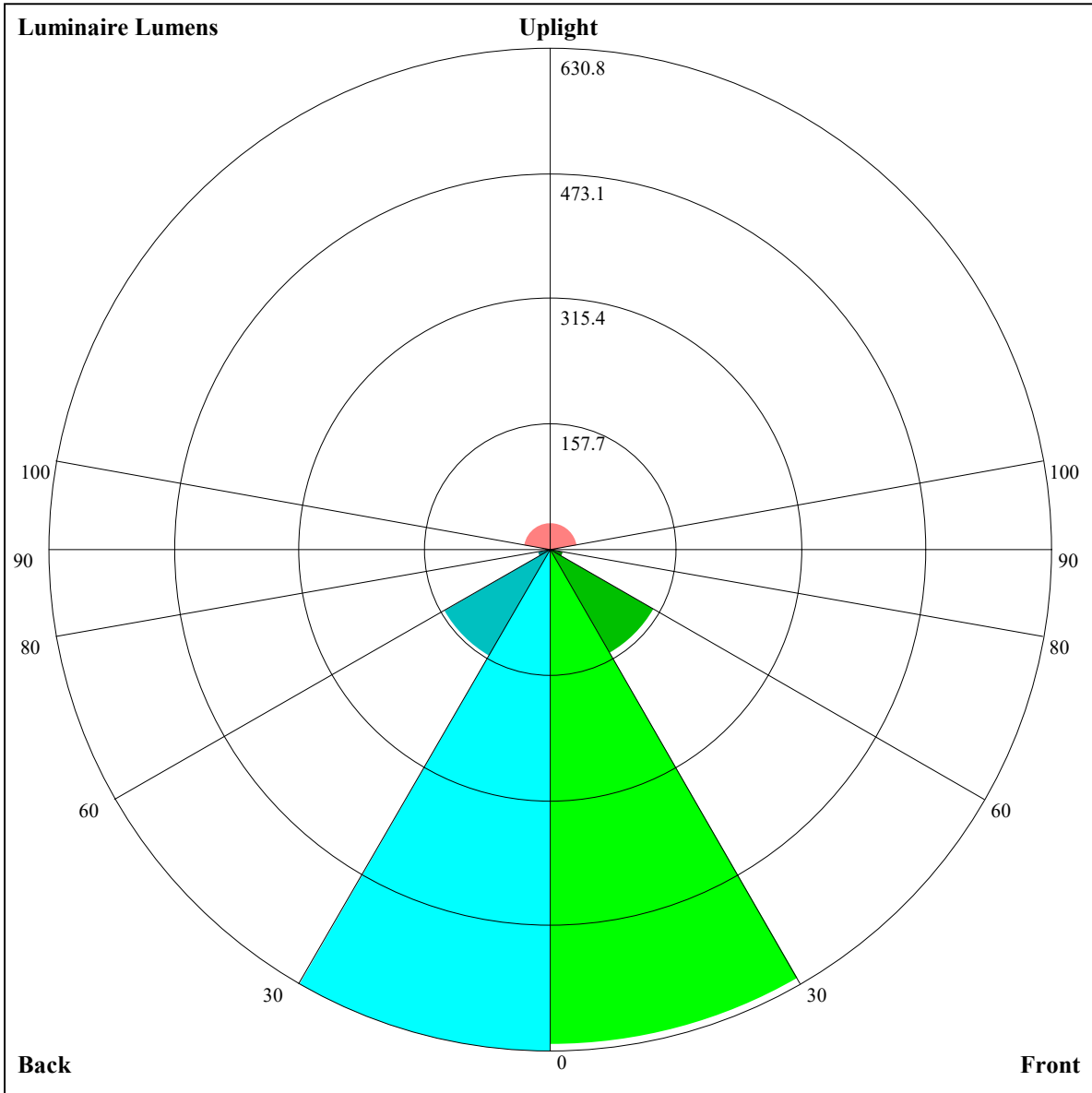
Luminance Limiting Curve





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	0.90	0.90	0.90	0.88	0.88	0.88	0.84	0.84	0.84	0.80	0.80	0.80	0.77	0.77	0.77	0.75
1	0.83	0.81	0.79	0.81	0.79	0.78	0.78	0.76	0.75	0.75	0.74	0.73	0.73	0.72	0.71	0.69
2	0.78	0.75	0.72	0.76	0.74	0.71	0.74	0.72	0.70	0.72	0.70	0.68	0.70	0.68	0.67	0.66
3	0.73	0.70	0.67	0.72	0.69	0.66	0.70	0.68	0.65	0.69	0.66	0.64	0.67	0.65	0.63	0.62
4	0.70	0.66	0.63	0.69	0.65	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.64	0.62	0.60	0.59
5	0.66	0.62	0.59	0.66	0.62	0.59	0.64	0.61	0.59	0.63	0.60	0.58	0.62	0.59	0.58	0.57
6	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.55	0.60	0.57	0.55	0.54
7	0.61	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.53	0.58	0.55	0.53	0.57	0.55	0.53	0.52
8	0.58	0.54	0.52	0.58	0.54	0.51	0.57	0.54	0.51	0.56	0.53	0.51	0.56	0.53	0.51	0.50
9	0.56	0.52	0.50	0.56	0.52	0.49	0.55	0.52	0.49	0.54	0.51	0.49	0.54	0.51	0.49	0.48
10	0.54	0.50	0.48	0.54	0.50	0.48	0.53	0.50	0.48	0.52	0.49	0.47	0.52	0.49	0.47	0.46





Luminaire Lumens:

FL=622.46,FM=151.52,FH=17.08,FVH=4.71

BL=630.8,BM=155.08,BH=17.32,BVH=4.75

UL=7.46,UH=35.52

BUG Rating:B2-U2-G0

Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	3405.79	3301.73	2959.28	2209.96	1423.21	768.59	434.39	279.69	170.18
45.0	3405.24	3313.84	2949.37	2243.55	1487.62	791.71	445.96	278.59	180.31
90.0	3407.44	3260.44	2862.38	2129.03	1075.42	712.82	407.31	250.56	172.05
135.0	3402.49	3349.63	2969.19	2366.87	1532.22	822.54	486.70	285.74	186.81
180.0	3405.79	3279.16	2887.71	2201.71	1288.87	791.55	452.40	267.30	178.66
225.0	3405.24	3280.26	2849.72	2131.23	1272.35	744.86	425.64	261.08	170.12
270.0	3407.44	3294.02	2930.65	2281.54	1499.74	802.72	461.37	278.59	177.12
315.0	3402.49	3257.69	2813.93	2065.72	1052.46	706.98	393.10	242.03	163.90
360.0	3405.79	3301.73	2959.28	2209.96	1423.21	768.59	434.39	279.69	170.18
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	109.51	69.70	43.33	28.41	18.99	15.64	13.10	10.68	8.48
45.0	111.05	72.29	44.71	28.96	19.55	15.91	13.16	10.79	8.37
90.0	105.60	66.78	41.24	27.25	18.72	15.25	12.83	10.35	8.20
135.0	116.06	75.43	46.74	30.06	19.99	16.19	13.38	11.18	8.53
180.0	111.60	71.19	43.11	29.35	19.43	15.86	13.27	10.85	8.64
225.0	106.37	69.21	43.38	27.97	18.94	15.75	13.05	10.68	8.64
270.0	114.02	73.06	45.59	30.17	19.71	16.13	13.38	11.12	8.92
315.0	102.79	63.81	41.79	26.76	18.44	15.42	12.83	10.46	8.53
360.0	109.51	69.70	43.33	28.41	18.99	15.64	13.10	10.68	8.48
C/ $\gamma$ (°)	90.0								
0.0	6.83								
45.0	6.88								
90.0	6.83								
135.0	6.83								
180.0	6.83								
225.0	6.83								
270.0	6.88								
315.0	6.83								
360.0	6.83								