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Nata

Client:

LumCAT: 7-0705-A

Luminaire: 92.70.231.00

Report No: GC2019091909

Voltage(V): 34.4800

Test No: GC20191008010

Current(A): 0.7270

Power (W): 25.0000

LampCAT: LUMILEDS LUXEON 3030 2D(ROUND LES) ARRAY 15W

Lamp flux(lm): 3724.9

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 184

Width(mm): 184

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2885.11, Efficiency(%): 77.46% , Luminous Efficacy(lm/W): 115.40

Central intensity(cd): 3104.297, Maximum intensity(cd): 3104.297

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=57.8

[C90/270]Total=57.8

Field angle(10%Imax): [C0/180]Total=86.8

[C90/270]Total=86.8

Maximum s/h(1/2): C0_180=0.90 C90_270=0.90

Maximum s/h(1/4): C0_180=0.88 C90_270=0.88

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 77.46%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.982%

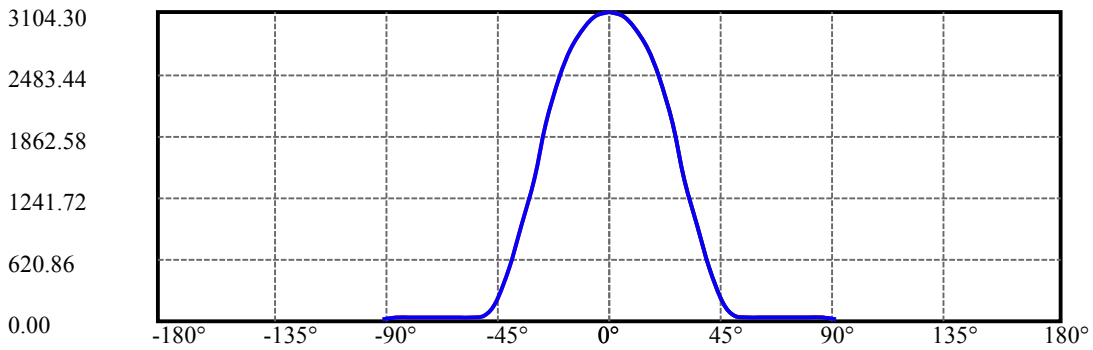
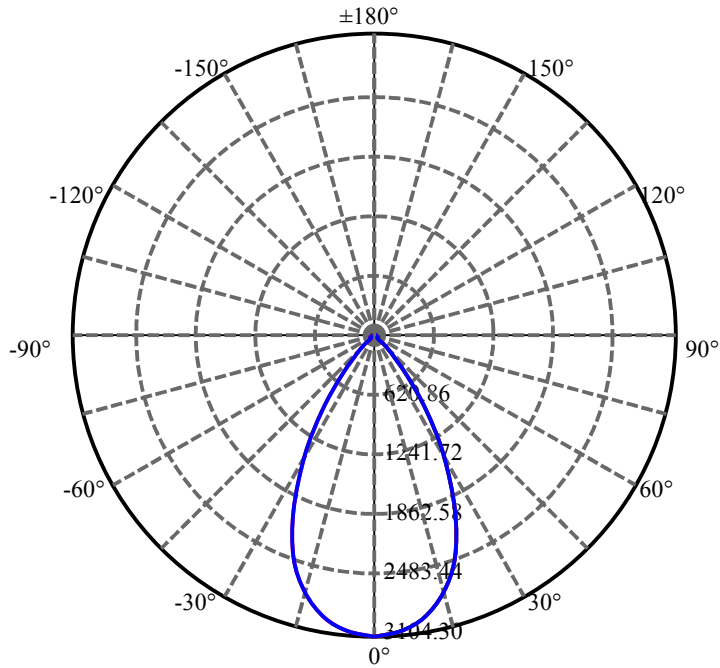
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3104.297	0.000	0	.000%	.000%
5.0	3065.555	73.759	73.759	1.980%	2.557%
10.0	2955.094	215.378	289.136	5.782%	10.022%
15.0	2740.430	337.855	626.991	9.070%	21.732%
20.0	2439.492	426.898	1053.889	11.461%	36.529%
25.0	1982.742	463.811	1517.7	12.452%	52.605%
30.0	1423.582	431.073	1948.773	11.573%	67.546%
35.0	943.741	348.605	2297.378	9.359%	79.629%
40.0	536.850	247.025	2544.404	6.632%	88.191%
45.0	199.990	136.432	2680.835	3.663%	92.920%
50.0	48.234	50.157	2730.993	1.347%	94.658%
55.0	40.507	19.295	2750.288	.518%	95.327%
60.0	41.175	18.881	2769.169	.507%	95.982%
65.0	40.402	19.831	2789	.532%	96.669%
70.0	41.231	20.670	2809.67	.555%	97.385%
75.0	42.138	21.791	2831.461	.585%	98.141%
80.0	40.943	22.230	2853.692	.597%	98.911%
85.0	30.656	19.455	2873.147	.522%	99.585%
90.0	13.022	11.959	2885.106	.321%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1948.77	52.32%	67.55%
0-40	2544.40	68.31%	88.19%
0-60	2769.17	74.34%	95.98%
0-90	2873.15	77.13%	99.59%
0-120	2873.15	77.13%	99.59%
0-180	2885.11	77.46%	100.00%
60-90	122.86	3.30%	4.26%
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%
0-35.22	2308.09	61.96%	80.00%

ZONAL LUMEN SUMMARY

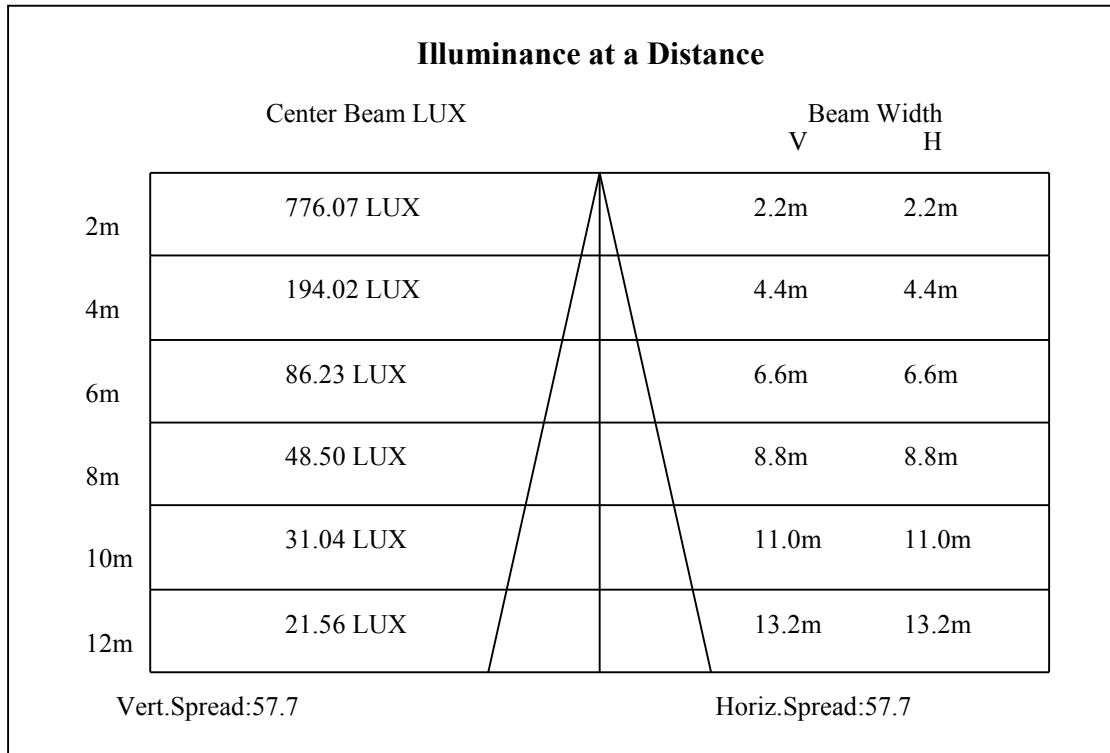
0-10	289.14
10-20	764.75
20-30	894.88
30-40	595.63
40-50	186.59
50-60	38.18
60-70	40.50
70-80	44.02
80-90	19.46
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

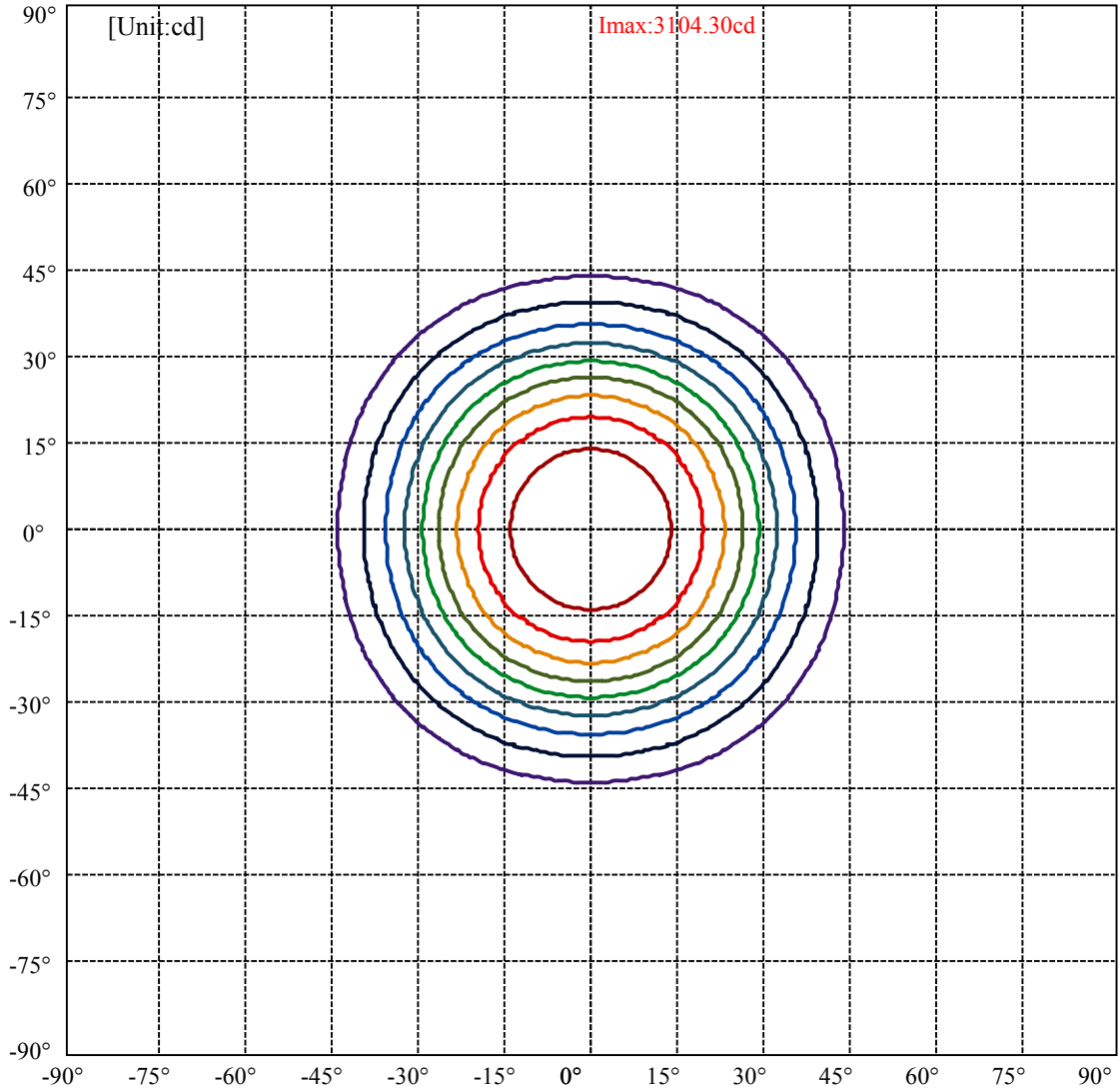


C0(Max): ———
C0/C180: ———
C90/C270: ———

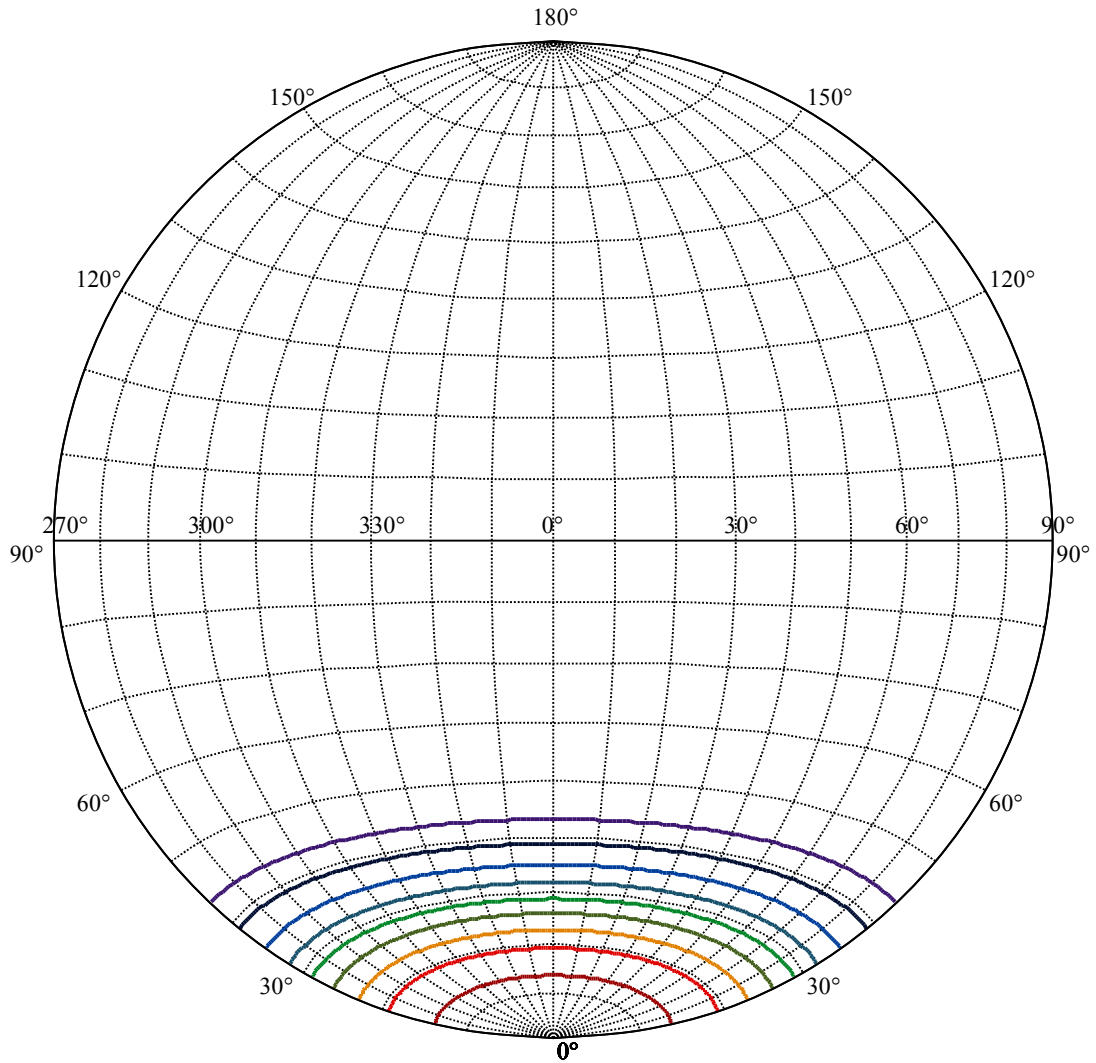
Field angle(10%Imax):C0/180Left:43.4 Right:43.4
:C90/270Left:43.4 Right:43.4

Beam Angle(50%Imax):C0/180Left:28.9 Right:28.9
:C90/270Left:28.9 Right:28.9





(10%Imax) 310.43	—
(20%Imax) 620.859	—
(30%Imax) 931.289	—
(40%Imax) 1241.72	—
(50%Imax) 1552.15	—
(60%Imax) 1862.58	—
(70%Imax) 2173.01	—
(80%Imax) 2483.44	—
(90%Imax) 2793.87	—



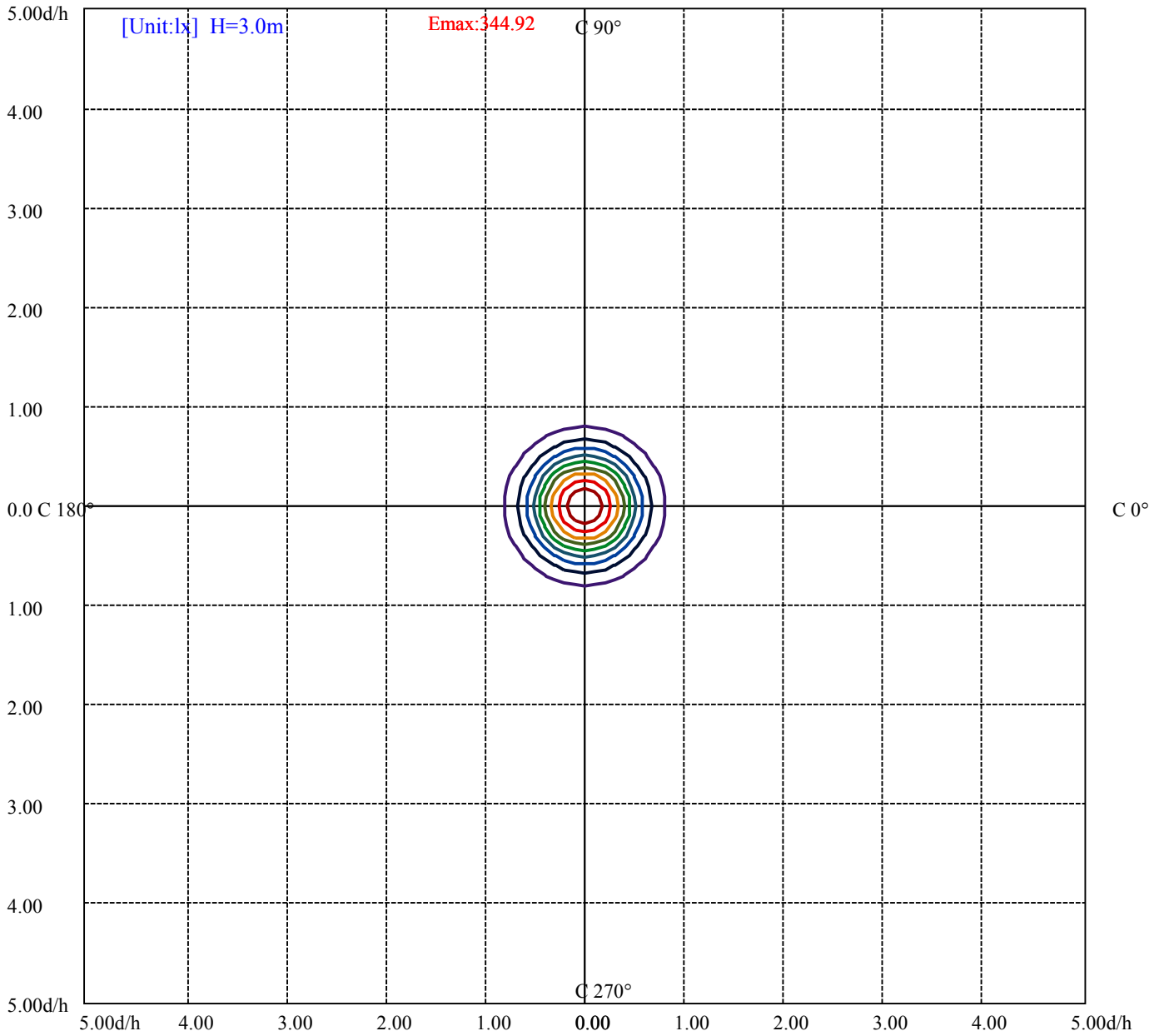
House

[Unit:cd]

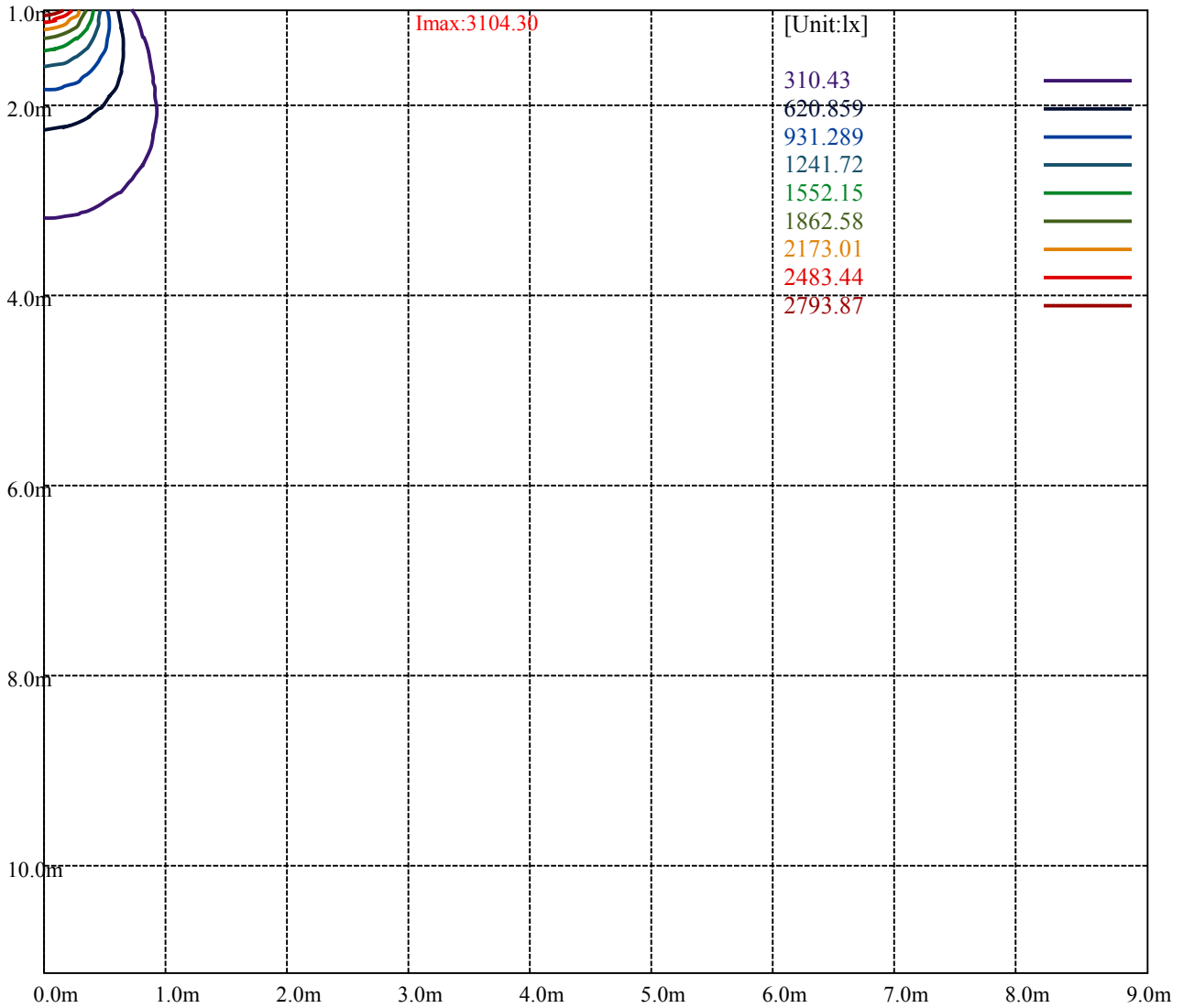
Road

Imax:3104.30

(10%Imax) 310.43	—
(20%Imax) 620.859	—
(30%Imax) 931.289	—
(40%Imax) 1241.72	—
(50%Imax) 1552.15	—
(60%Imax) 1862.58	—
(70%Imax) 2173.01	—
(80%Imax) 2483.44	—
(90%Imax) 2793.87	—



- (10%Emax) 34.49222
- (20%Emax) 68.98434
- (30%Emax) 103.4766
- (40%Emax) 137.9689
- (50%Emax) 172.4611
- (60%Emax) 206.9533
- (70%Emax) 241.4456
- (80%Emax) 275.9378
- (90%Emax) 310.43



Luminance Table

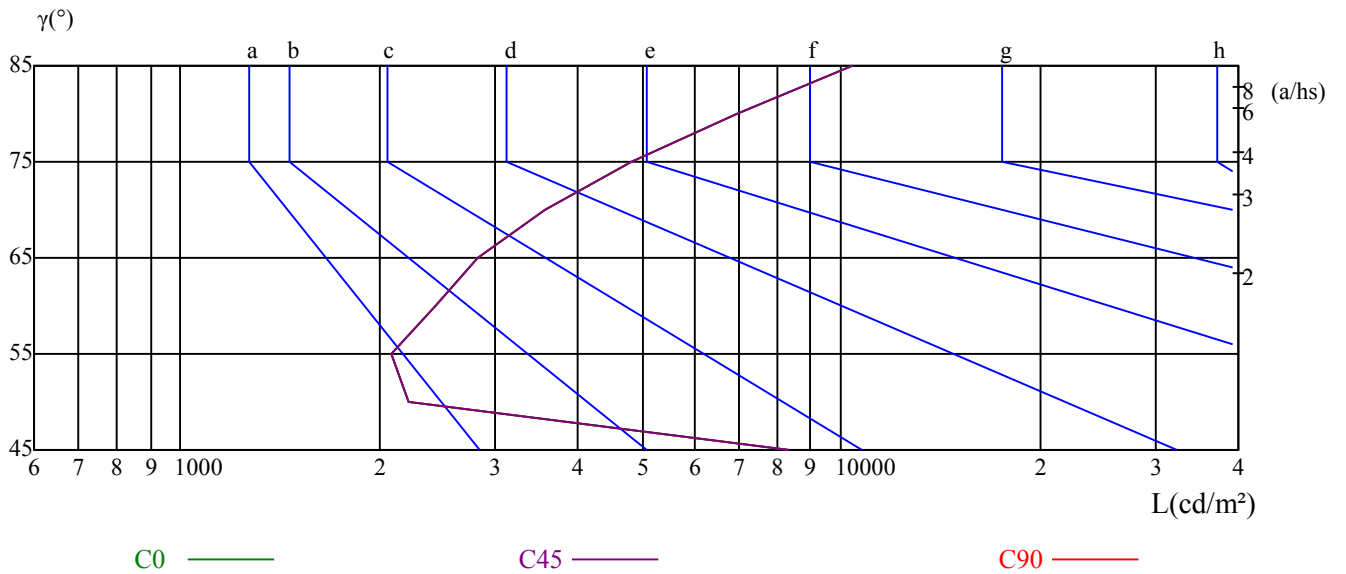
γ	45	50	55	60	65	70	75	80	85
C0	8354	2216	2086	2432	2824	3561	4809	6964	10389
C45	8354	2216	2086	2432	2824	3561	4809	6964	10389
C90	8354	2216	2086	2432	2824	3561	4809	6964	10389

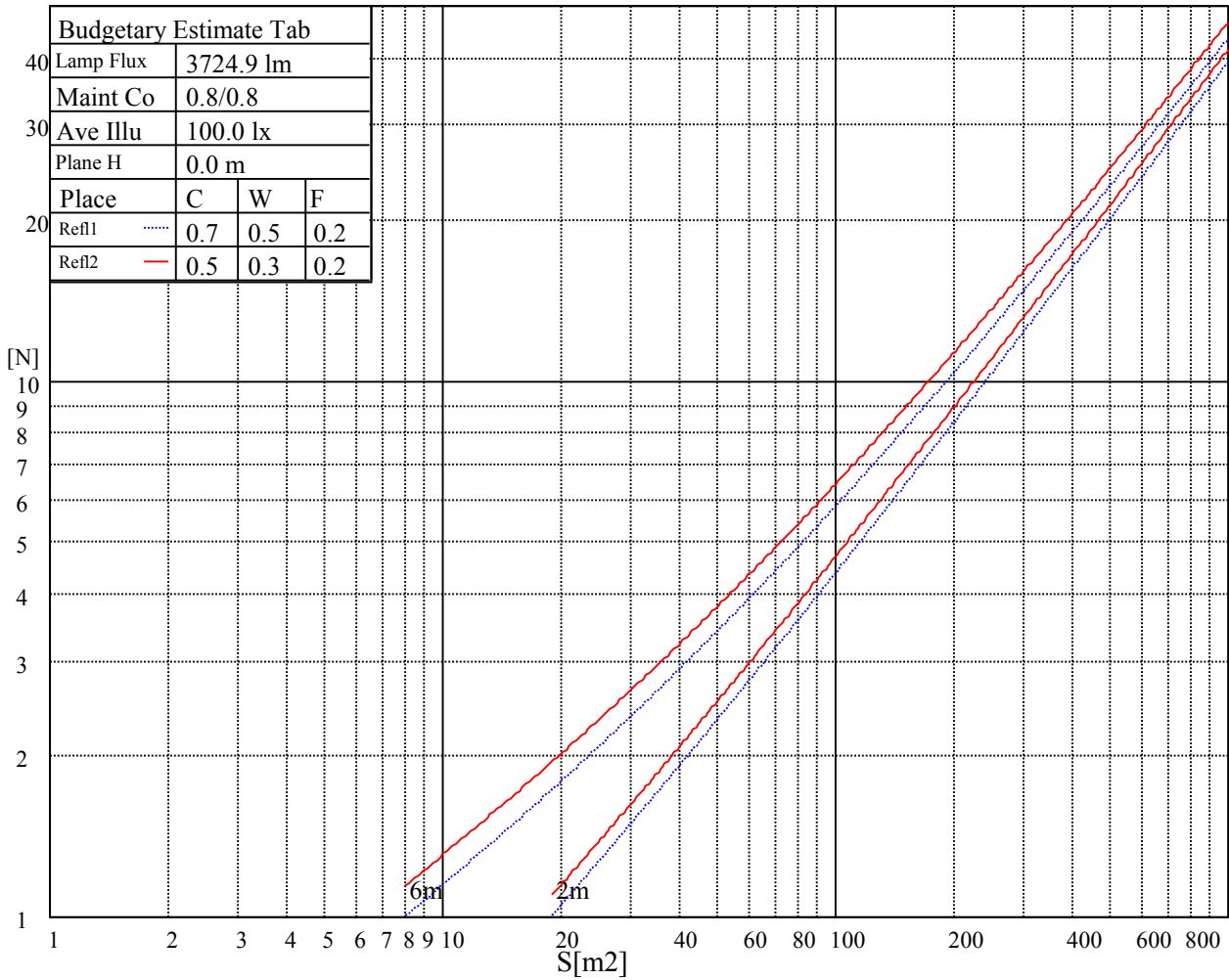
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2824	2824	2824	4809	4809	4809	10389	10389	10389

Glare Table

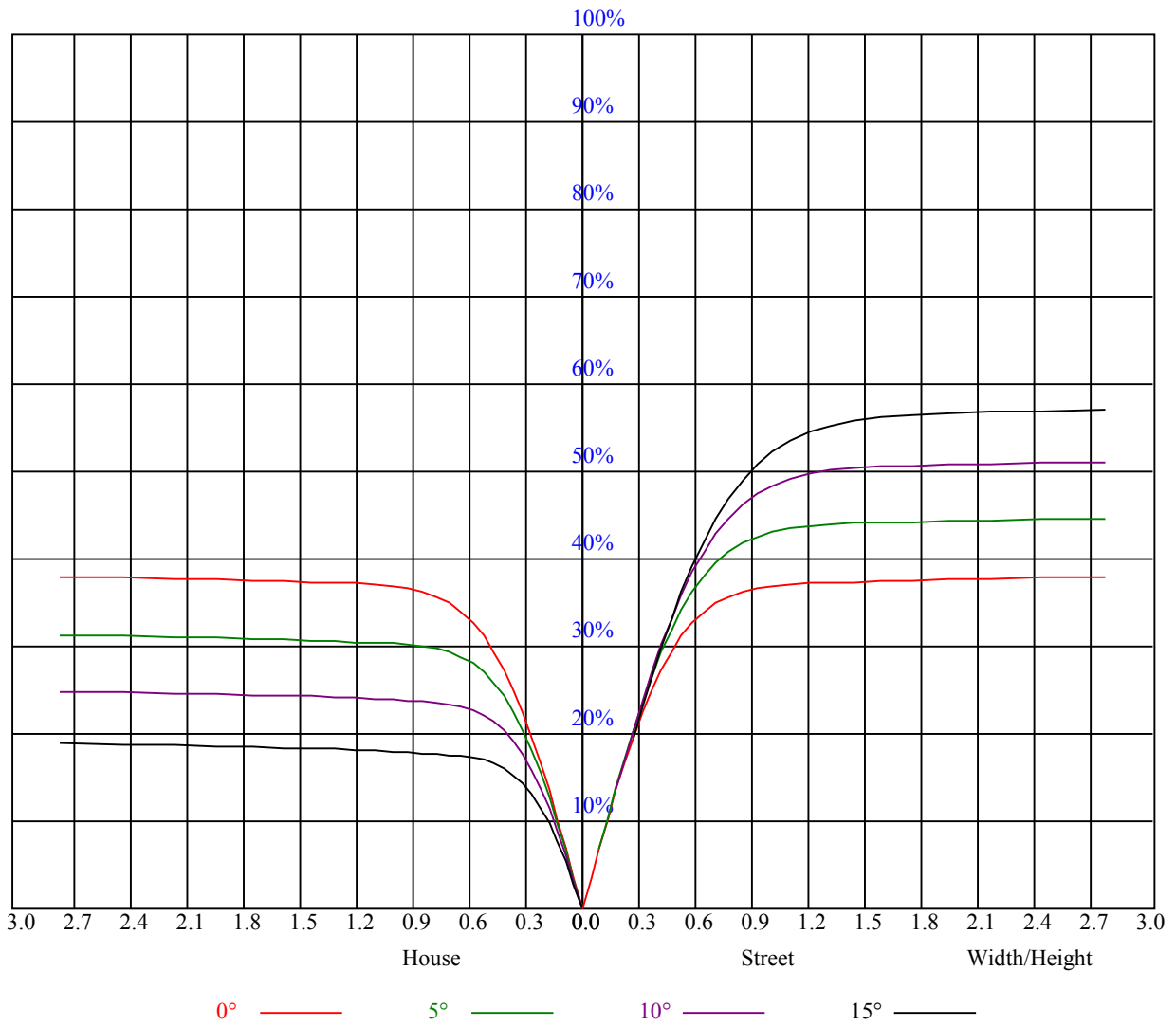
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

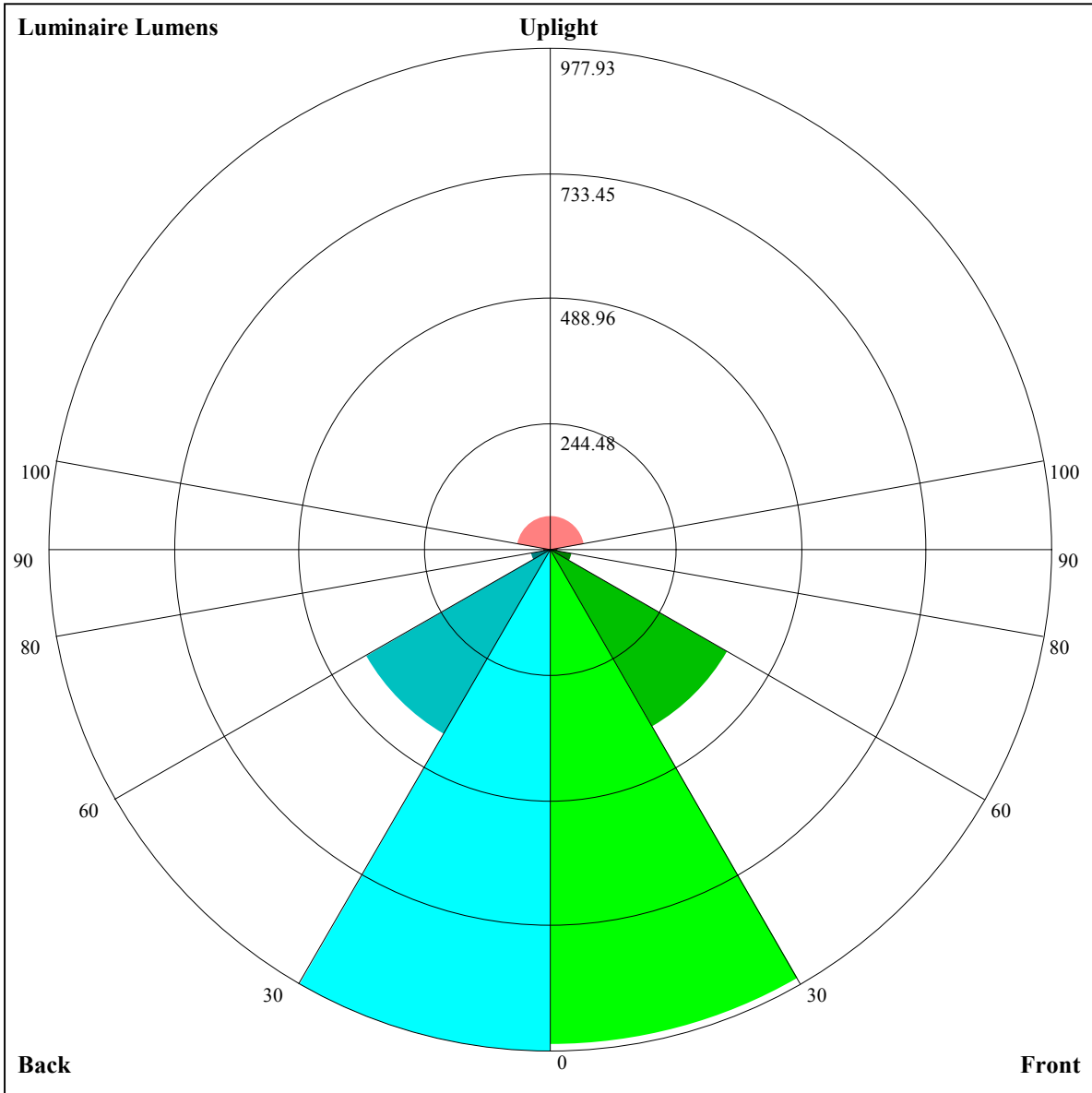
Luminance Limiting Curve





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	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86	0.82	0.82	0.82	0.79	0.79	0.79	0.77
1	0.85	0.83	0.81	0.83	0.81	0.79	0.80	0.78	0.77	0.77	0.76	0.75	0.74	0.73	0.73	0.71
2	0.78	0.75	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.72	0.70	0.68	0.70	0.68	0.67	0.65
3	0.73	0.69	0.65	0.72	0.68	0.65	0.70	0.66	0.64	0.68	0.65	0.63	0.66	0.64	0.62	0.61
4	0.68	0.63	0.60	0.67	0.63	0.59	0.65	0.62	0.59	0.64	0.61	0.58	0.62	0.60	0.57	0.56
5	0.63	0.59	0.55	0.63	0.58	0.55	0.61	0.57	0.54	0.60	0.57	0.54	0.59	0.56	0.53	0.52
6	0.59	0.55	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.56	0.53	0.50	0.55	0.52	0.50	0.49
7	0.56	0.51	0.47	0.55	0.51	0.47	0.54	0.50	0.47	0.53	0.50	0.47	0.52	0.49	0.47	0.45
8	0.52	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.50	0.47	0.44	0.50	0.46	0.44	0.43
9	0.49	0.45	0.42	0.49	0.45	0.41	0.48	0.44	0.41	0.48	0.44	0.41	0.47	0.44	0.41	0.40
10	0.47	0.42	0.39	0.46	0.42	0.39	0.46	0.42	0.39	0.45	0.41	0.39	0.45	0.41	0.39	0.38





Luminaire Lumens:

FL=965.41,FM=397.95,FH=42.74,FVH=15.13

BL=977.93,BM=417.17,BH=41.24,BVH=16.19

UL=14.21,UH=67.61

BUG Rating:B2-U2-G1

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	3105.00	3053.25	2935.13	2693.25	2377.69	1905.75	1361.25	857.25	468.56
45.0	3106.69	3098.25	3013.31	2828.25	2573.44	2165.63	1640.25	1132.88	674.44
90.0	3108.38	3096.00	2994.19	2794.50	2505.94	2102.06	1562.06	993.09	616.33
135.0	3097.13	3105.56	3023.44	2859.19	2582.44	2186.44	1690.31	1122.75	686.25
180.0	3105.00	3078.56	2976.75	2792.81	2503.13	2066.06	1556.44	1019.14	601.76
225.0	3106.69	3033.56	2890.69	2623.50	2296.69	1783.13	1111.89	789.24	403.48
270.0	3108.38	3040.88	2921.63	2692.69	2372.63	1878.19	1366.31	866.25	460.69
315.0	3097.13	3018.38	2885.63	2639.25	2304.00	1774.69	1100.14	769.33	383.29
360.0	3105.00	3053.25	2935.13	2693.25	2377.69	1905.75	1361.25	857.25	468.56
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	138.71	42.24	42.69	43.03	42.53	43.31	43.65	41.57	22.28
45.0	298.69	67.05	39.38	40.73	39.94	40.61	41.91	41.23	36.39
90.0	244.80	42.86	35.78	37.01	35.33	35.55	35.38	33.36	29.03
135.0	313.31	58.33	36.90	37.52	36.96	37.24	38.31	38.48	35.04
180.0	254.53	47.19	38.48	40.33	39.26	39.71	41.06	41.46	38.14
225.0	102.21	41.40	42.30	42.86	42.19	43.31	44.72	43.88	28.74
270.0	147.54	43.59	43.76	43.82	43.26	44.72	45.96	43.76	33.08
315.0	100.13	43.20	44.78	44.10	43.76	45.39	46.13	43.82	22.56
360.0	138.71	42.24	42.69	43.03	42.53	43.31	43.65	41.57	22.28
C/γ(°)	90.0								
0.0	12.88								
45.0	13.16								
90.0	13.05								
135.0	12.99								
180.0	12.99								
225.0	13.11								
270.0	12.99								
315.0	12.99								
360.0	12.88								