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NATA

Client:

LumCAT: 3-1699-N

Luminaire: 92.70.065.00+92.70.089.00

Report No: nt0100

Voltage(V): 33.9700

Test No: GC2020011018

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.3800

Lamp flux(lm): 2436.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1909.29, Efficiency(%): 78.38% , Luminous Efficacy(lm/W): 93.68

Central intensity(cd): 6968.531, Maximum intensity(cd): 6968.531

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=24.4

[C90/270]Total=24.4

Field angle(10%Imax): [C0/180]Total=49.0

[C90/270]Total=49.0

Maximum s/h(1/2): C0_180=0.41 C90_270=0.41

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(%): 78.38%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.483%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/1/10
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

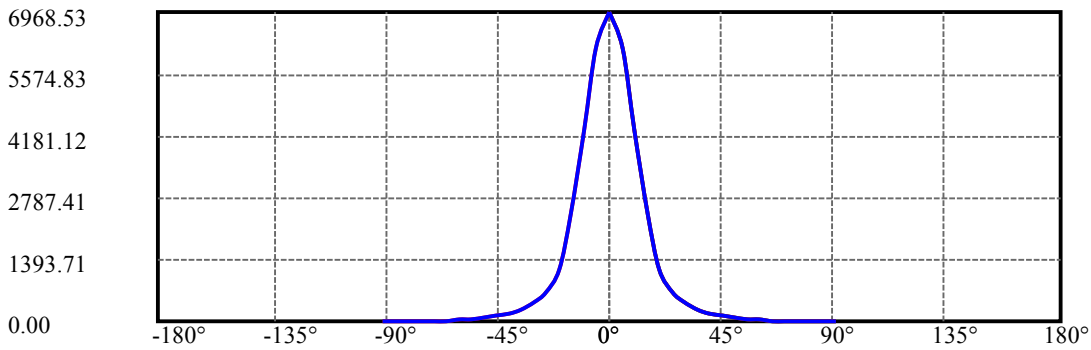
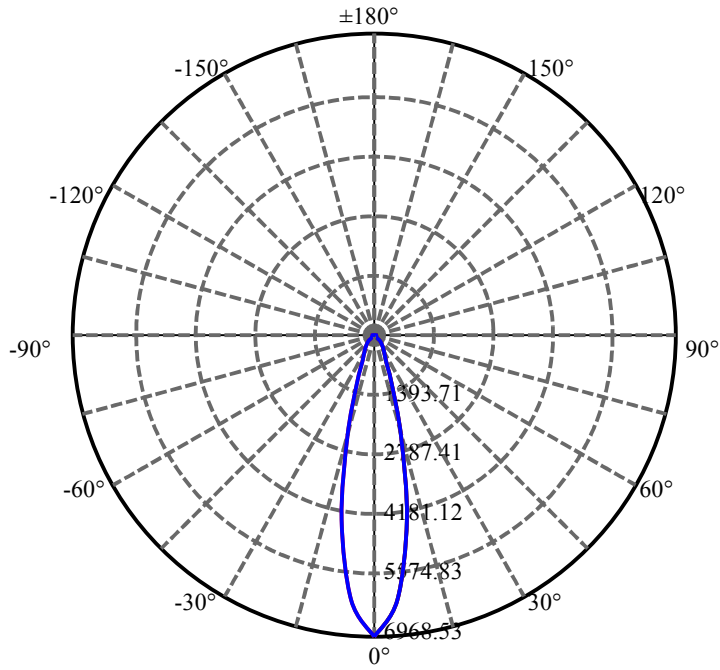
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6968.531	0.000	0	.000%	.000%
5.0	6153.539	156.871	156.871	6.440%	8.216%
10.0	4333.711	375.162	532.033	15.401%	27.865%
15.0	2426.273	400.998	933.03	16.461%	48.868%
20.0	1158.877	295.467	1228.497	12.129%	64.343%
25.0	643.345	189.020	1417.517	7.759%	74.243%
30.0	422.121	134.836	1552.352	5.535%	81.305%
35.0	274.683	102.609	1654.962	4.212%	86.679%
40.0	182.236	76.233	1731.195	3.129%	90.672%
45.0	109.399	53.999	1785.194	2.217%	93.500%
50.0	68.766	36.001	1821.194	1.478%	95.386%
55.0	42.117	24.110	1845.304	.990%	96.649%
60.0	26.803	15.931	1861.235	.654%	97.483%
65.0	20.623	11.529	1872.764	.473%	98.087%
70.0	17.761	9.719	1882.483	.399%	98.596%
75.0	15.026	8.570	1891.053	.352%	99.045%
80.0	12.382	7.334	1898.387	.301%	99.429%
85.0	9.724	6.007	1904.393	.247%	99.744%
90.0	8.156	4.896	1909.289	.201%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1552.35	63.73%	81.31%
0-40	1731.20	71.07%	90.67%
0-60	1861.23	76.41%	97.48%
0-90	1904.39	78.18%	99.74%
0-120	1904.39	78.18%	99.74%
0-180	1909.29	78.38%	100.00%
60-90	59.09	2.43%	3.09%
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%
0-29.08	1527.43	62.70%	80.00%

ZONAL LUMEN SUMMARY

0-10	532.03
10-20	696.46
20-30	323.86
30-40	178.84
40-50	90.00
50-60	40.04
60-70	21.25
70-80	15.90
80-90	6.01
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: —————

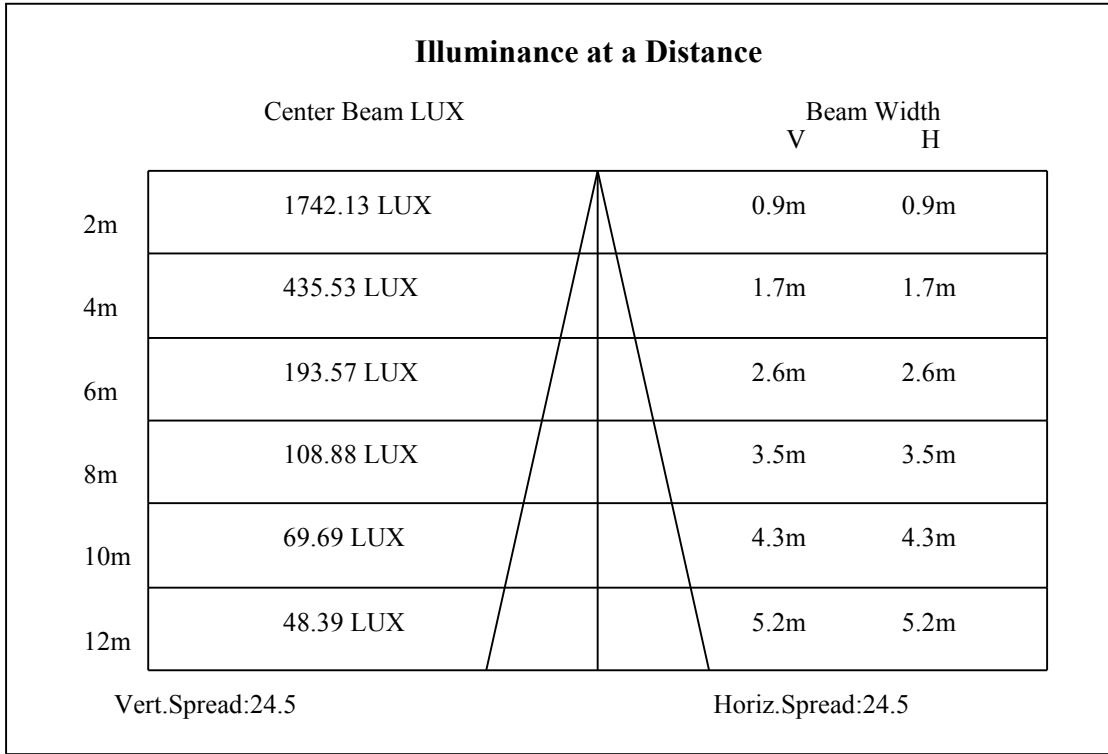
C90/C270: —————

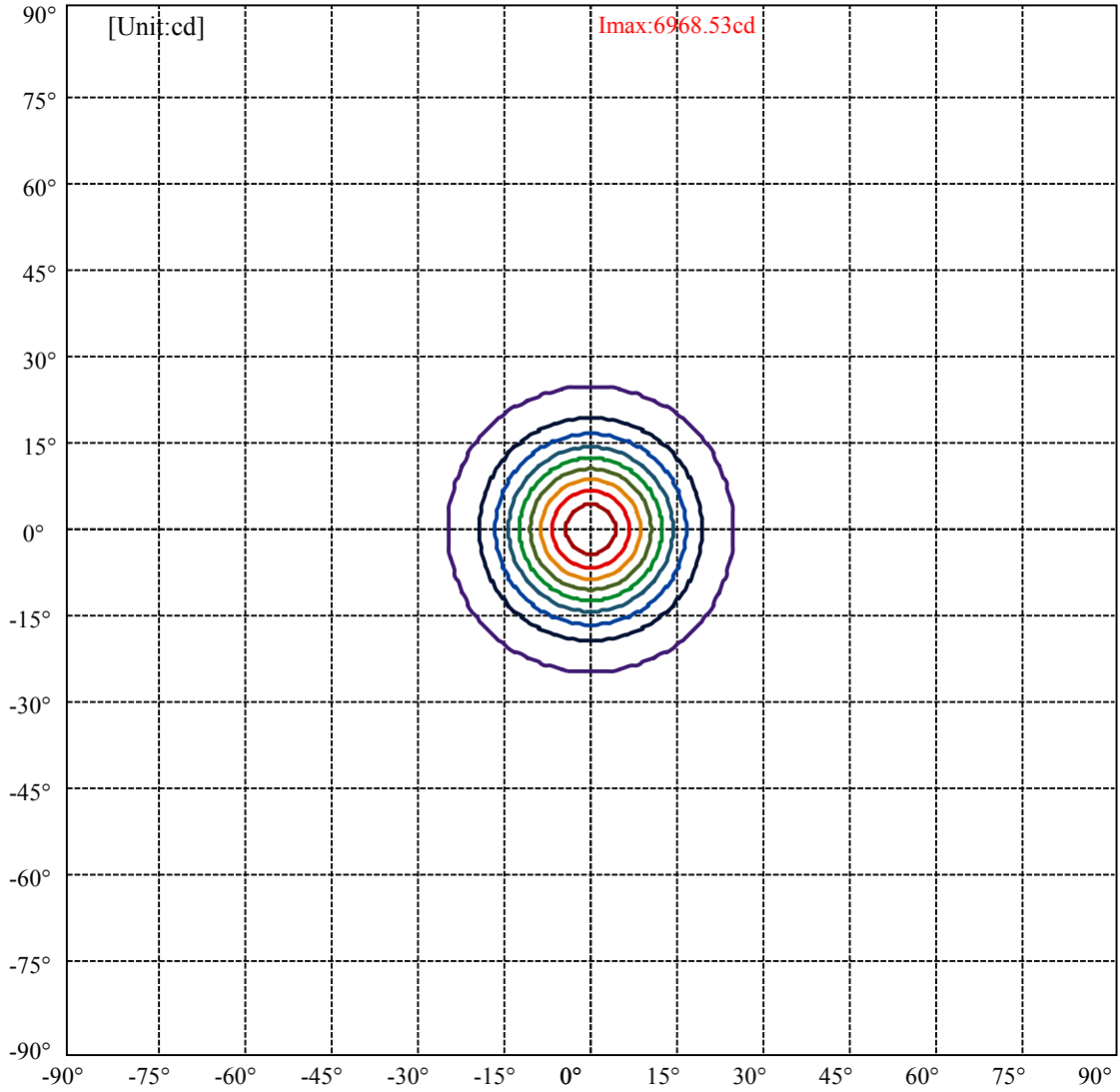
Field angle(10%Imax):C0/180Left:24.5 Right:24.5

:C90/270Left:24.5 Right:24.5

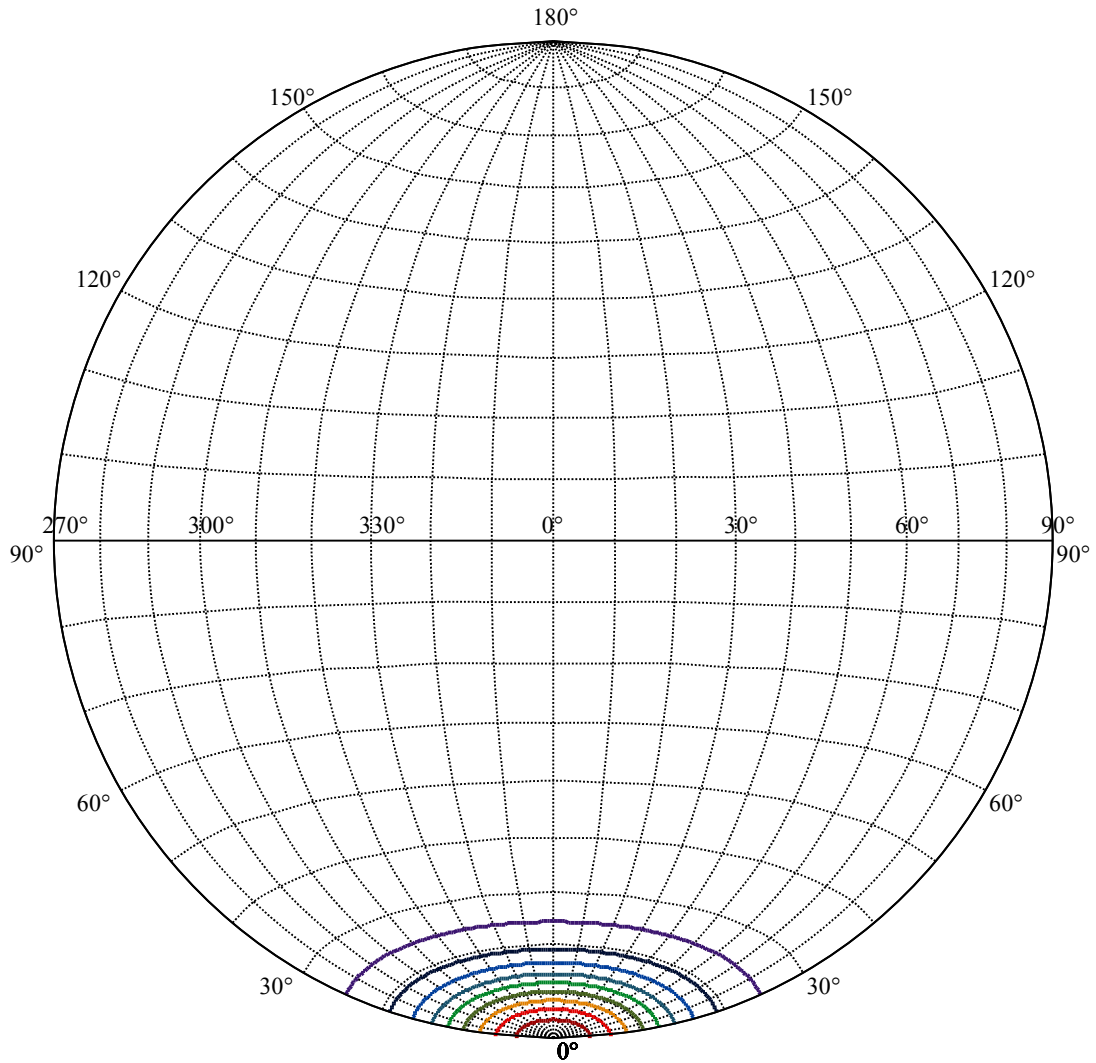
Beam Angle(50%Imax):C0/180Left:12.2 Right:12.2

:C90/270Left:12.2 Right:12.2





(10%Imax) 696.853	—
(20%Imax) 1393.71	—
(30%Imax) 2090.56	—
(40%Imax) 2787.41	—
(50%Imax) 3484.27	—
(60%Imax) 4181.12	—
(70%Imax) 4877.97	—
(80%Imax) 5574.83	—
(90%Imax) 6271.68	—



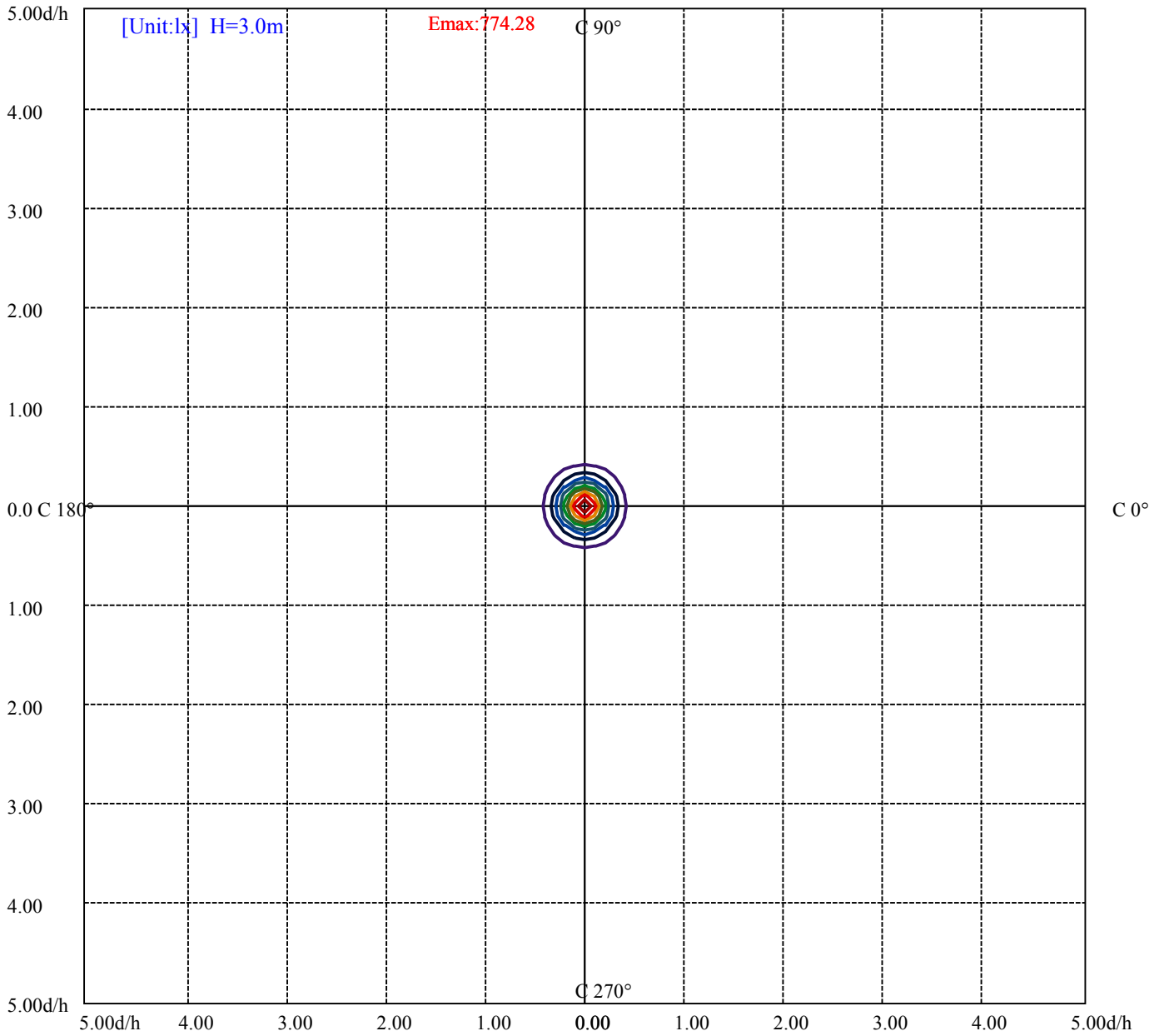
House

[Unit:cd]

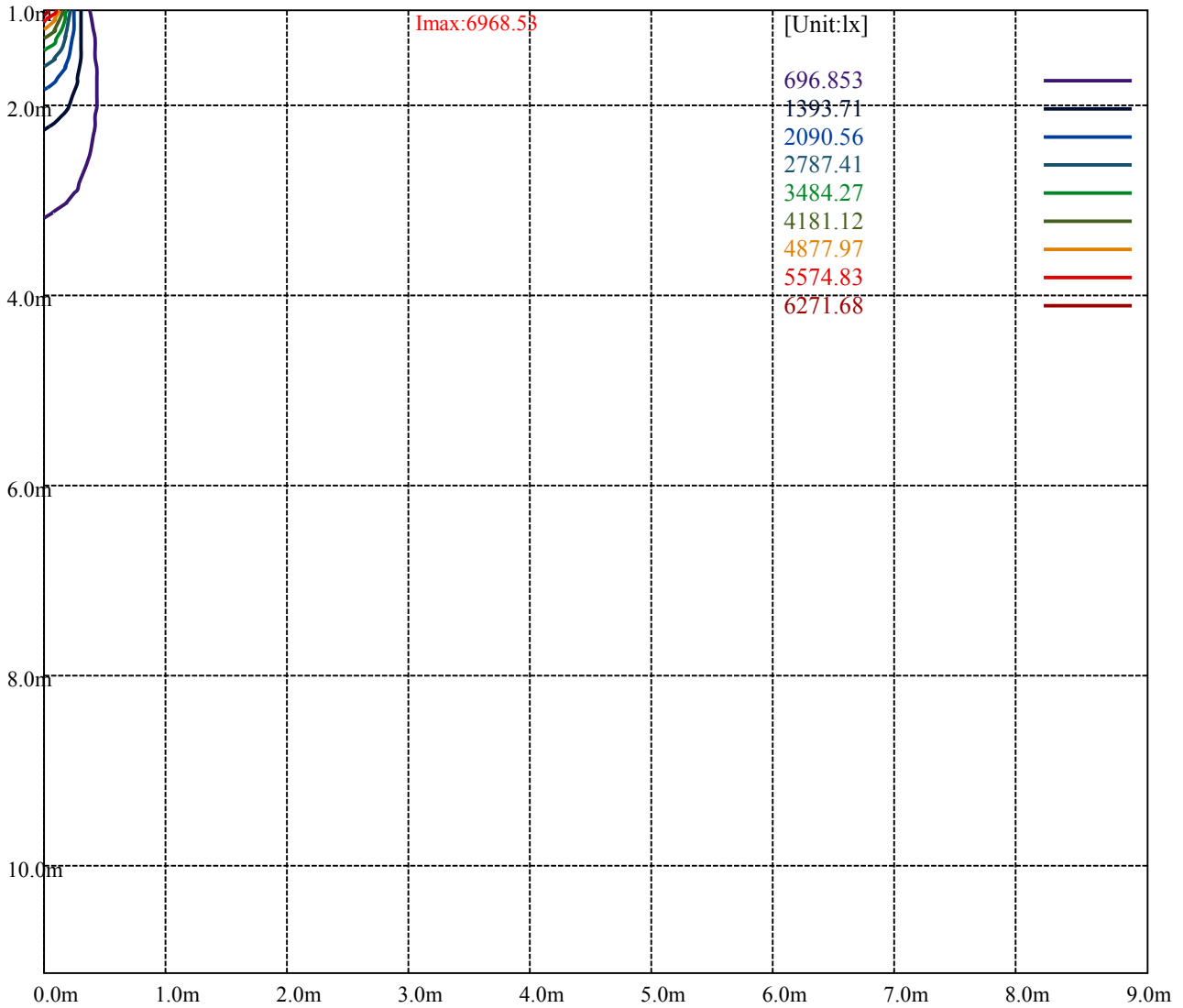
Road

Imax:6968.53

(10%Imax) 696.853	—
(20%Imax) 1393.71	—
(30%Imax) 2090.56	—
(40%Imax) 2787.41	—
(50%Imax) 3484.27	—
(60%Imax) 4181.12	—
(70%Imax) 4877.97	—
(80%Imax) 5574.83	—
(90%Imax) 6271.68	—



(10%Emax) 77.42789	—
(20%Emax) 154.8555	—
(30%Emax) 232.2833	—
(40%Emax) 309.7111	—
(50%Emax) 387.1389	—
(60%Emax) 464.5667	—
(70%Emax) 541.9944	—
(80%Emax) 619.4233	—
(90%Emax) 696.8511	—



Luminance Table

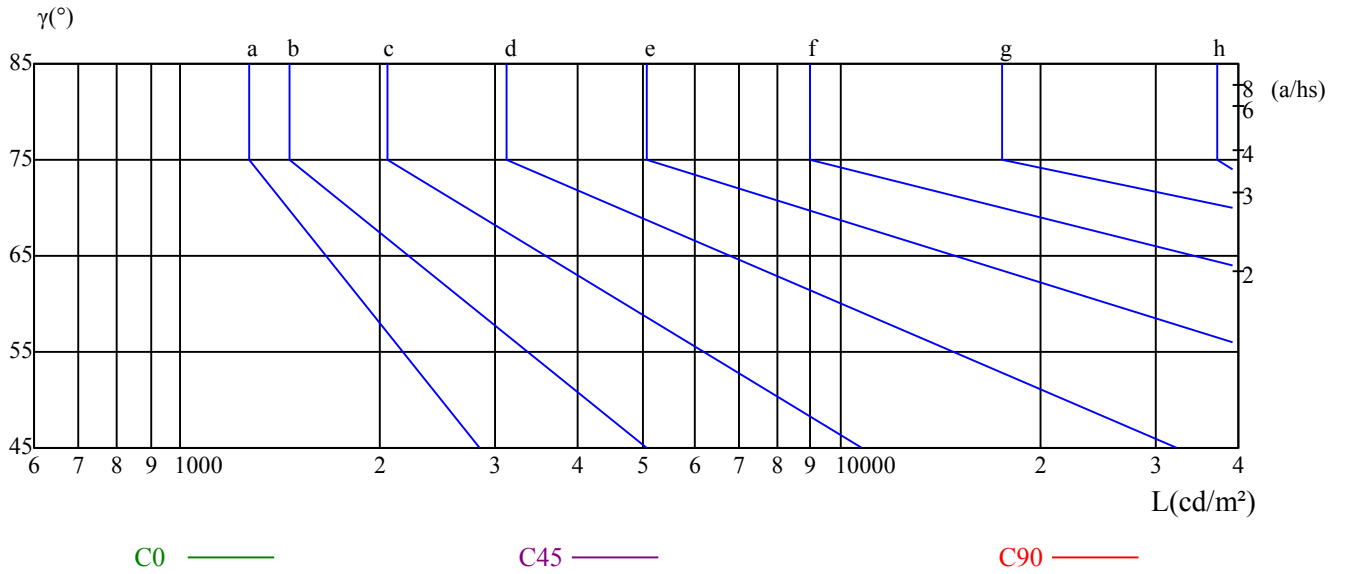
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

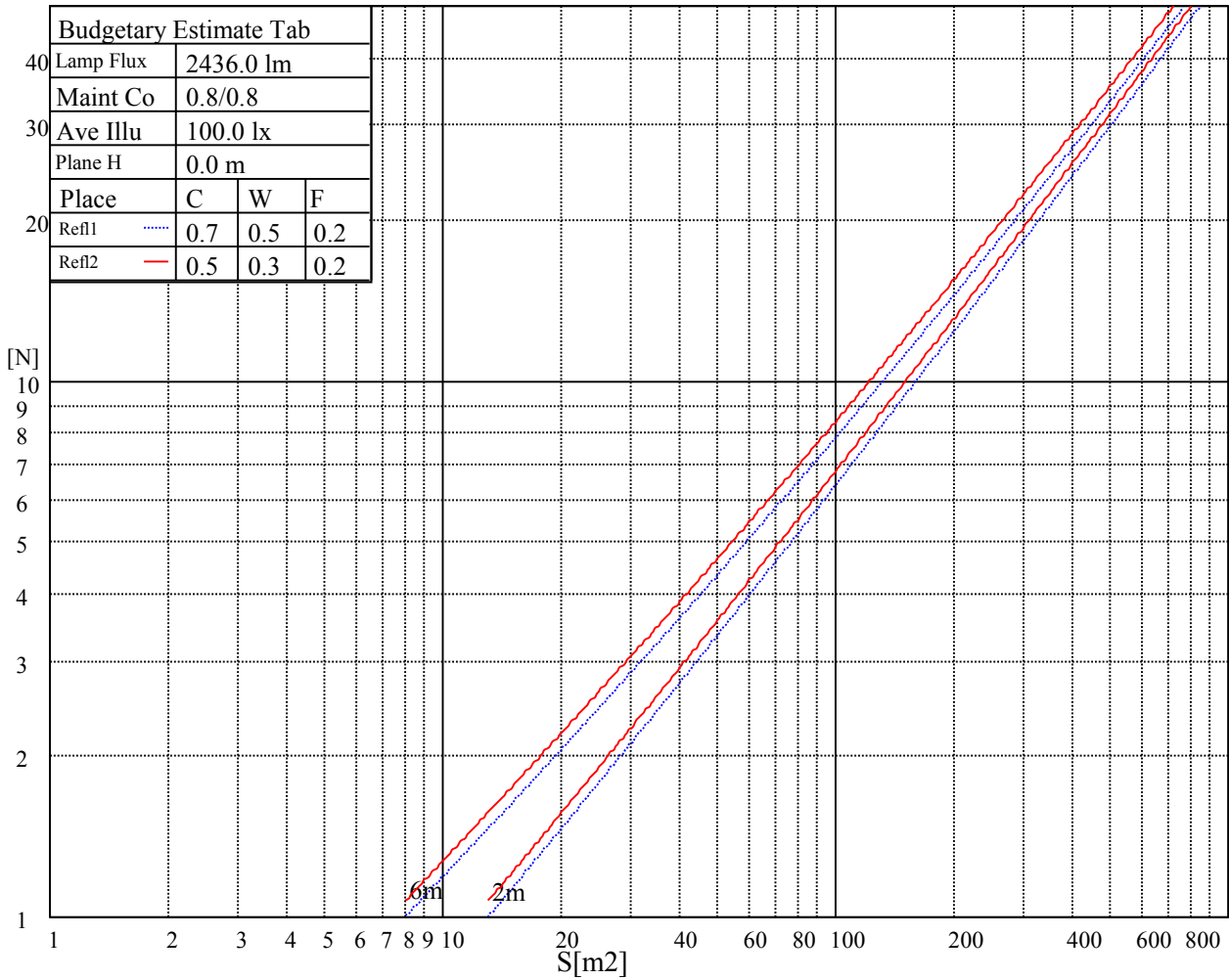
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

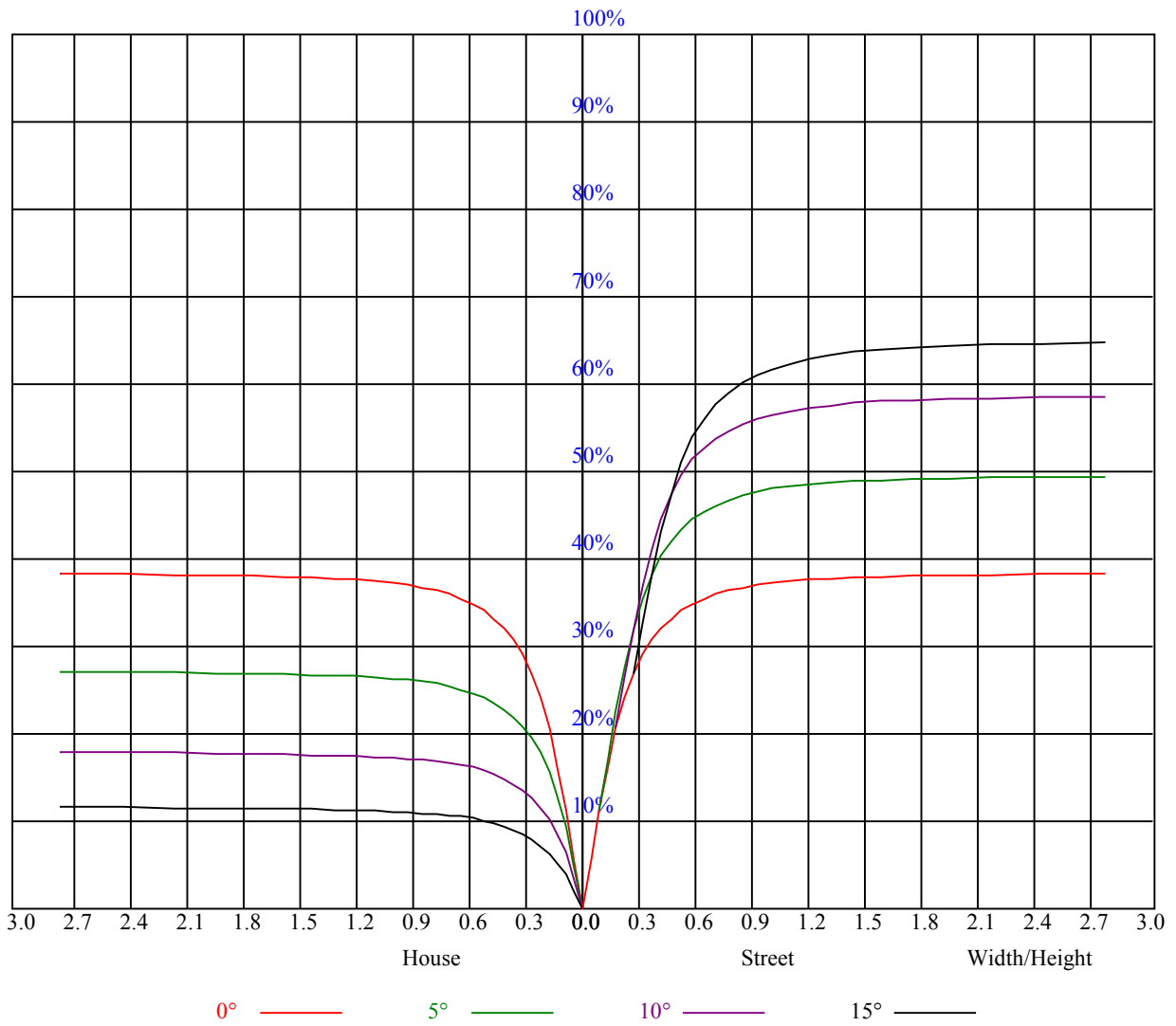
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

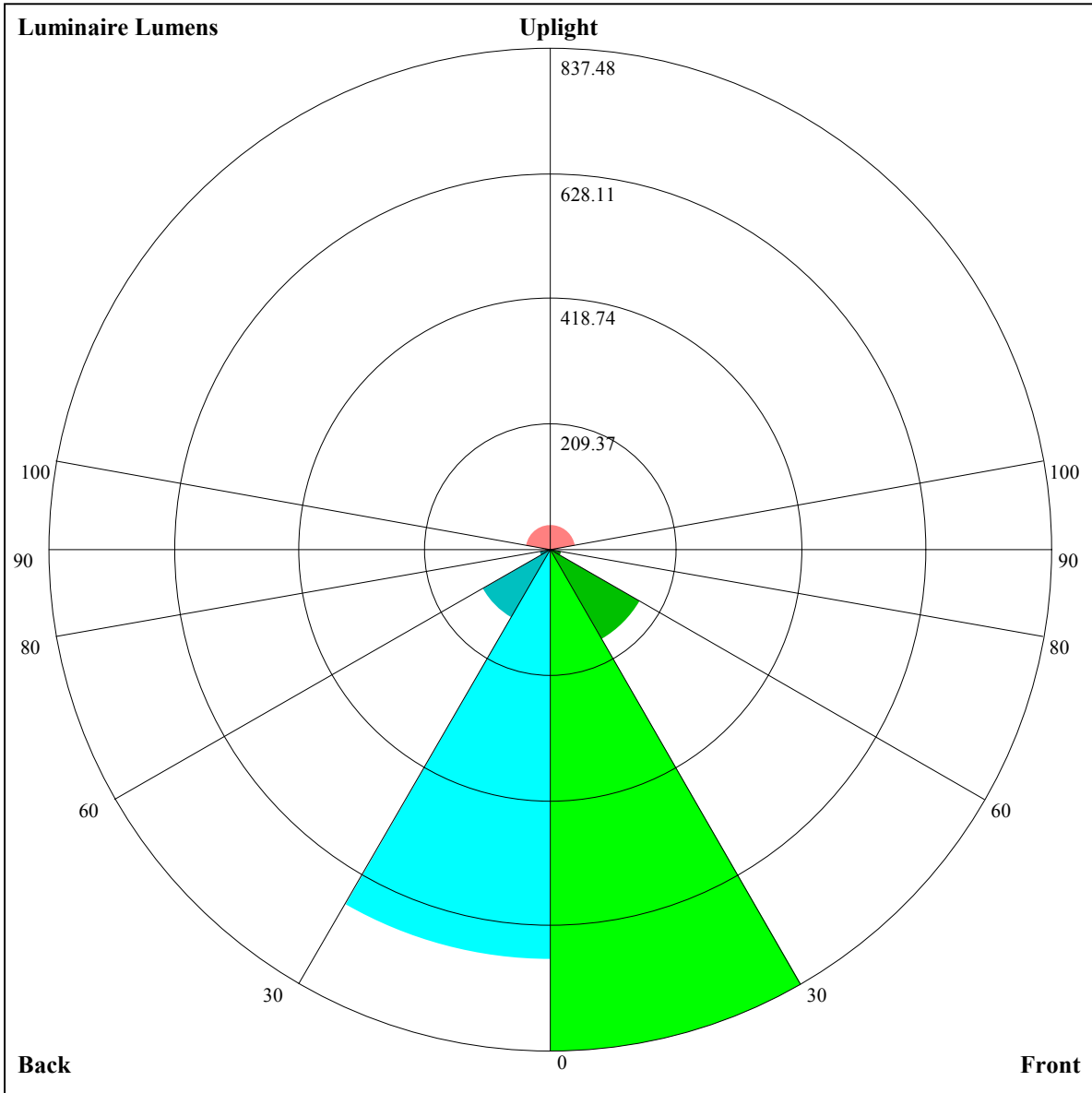
Luminance Limiting Curve





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	0.93	0.93	0.93	0.91	0.91	0.91	0.87	0.87	0.87	0.83	0.83	0.83	0.80	0.80	0.80	0.78
1	0.87	0.85	0.84	0.86	0.84	0.82	0.82	0.81	0.80	0.80	0.78	0.78	0.77	0.76	0.75	0.74
2	0.82	0.79	0.77	0.81	0.78	0.76	0.78	0.76	0.74	0.76	0.74	0.73	0.74	0.72	0.71	0.70
3	0.78	0.74	0.71	0.76	0.73	0.71	0.74	0.72	0.70	0.73	0.70	0.69	0.71	0.69	0.68	0.66
4	0.74	0.70	0.67	0.73	0.69	0.67	0.71	0.68	0.66	0.70	0.67	0.65	0.68	0.66	0.64	0.63
5	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.60
6	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.63	0.61	0.59	0.58
7	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.61	0.58	0.56	0.56
8	0.62	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.59	0.56	0.54	0.53
9	0.59	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.58	0.55	0.53	0.57	0.54	0.52	0.52
10	0.57	0.54	0.51	0.57	0.53	0.51	0.56	0.53	0.51	0.56	0.53	0.51	0.55	0.53	0.51	0.50





Luminaire Lumens:

FL=837.48,FM=173.47,FH=19.14,FVH=5.58

BL=684.33,BM=130.45,BH=17.97,BVH=5.3

UL=8.9,UH=42.35

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	6903.00	6782.06	5249.25	3387.94	1671.19	892.13	583.88	393.19	289.69
45.0	6969.38	6437.25	4653.56	2698.88	1320.19	735.75	495.00	318.94	208.24
90.0	6954.19	5623.88	3660.19	1903.50	925.99	528.75	361.97	228.26	146.76
135.0	7047.56	5900.63	3815.44	1910.81	929.25	517.50	337.50	221.12	139.16
180.0	6903.00	5582.81	3427.88	1731.94	803.42	459.56	305.94	202.11	129.43
225.0	6969.38	5695.88	3957.75	2028.38	904.67	516.88	339.53	221.29	146.93
270.0	6954.19	6598.69	4977.56	2903.06	1418.06	724.50	453.94	285.75	184.61
315.0	7047.56	6607.13	4928.06	2845.69	1298.25	771.69	499.22	326.81	213.08
360.0	6903.00	6782.06	5249.25	3387.94	1671.19	892.13	583.88	393.19	289.69

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	154.86	93.04	53.21	31.22	22.28	19.13	16.26	13.78	10.58
45.0	128.59	76.33	44.83	27.39	20.93	18.06	15.19	12.66	9.84
90.0	91.35	58.05	35.33	23.96	19.80	17.10	14.29	11.64	9.17
135.0	85.84	56.70	36.34	24.13	19.80	17.21	14.46	11.81	9.23
180.0	80.55	52.59	34.71	23.74	19.52	17.10	14.29	11.53	9.17
225.0	88.88	58.73	38.19	24.75	19.74	16.93	14.51	11.87	9.34
270.0	114.75	72.90	45.45	30.04	21.43	18.23	15.58	12.94	10.13
315.0	130.39	81.79	48.88	29.19	21.49	18.34	15.64	12.83	10.35
360.0	154.86	93.04	53.21	31.22	22.28	19.13	16.26	13.78	10.58

C/γ(°)	90.0
0.0	8.38
45.0	7.99
90.0	8.04
135.0	8.16
180.0	8.21
225.0	7.99
270.0	8.16
315.0	8.33
360.0	8.38