
Nata

Client:

LumCAT: 1689-M

Luminaire: 92.70.125.00

Report No: NT2018010502

Test No: GC2017010502

LampCAT: BXRV-DR-1830-H-1000-A-13

Lamp flux(lm): 610.0

Number of Lamps: 1

Length(mm): 46

Phm Type: C

Voltage(V): 17.6000

Current(A): 0.4000

Power (W): 7.0400

PF: 0.0000

Ballast type: DC

Width(mm): 46

Height(mm): 0

Photometric Results

Lumens(lm): 561.00, Efficiency(%): 91.97% , Luminous Efficacy(lm/W): 79.69

Central intensity(cd): 505.294, Maximum intensity(cd): 505.294

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=69.0

[C90/270]Total=69.0

Field angle(10%Imax): [C0/180]Total=93.8

[C90/270]Total=93.8

Maximum s/h(1/2): C0_180=0.97 C90_270=0.97

Maximum s/h(1/4): C0_180=1.02 C90_270=1.02

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.38%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.237%

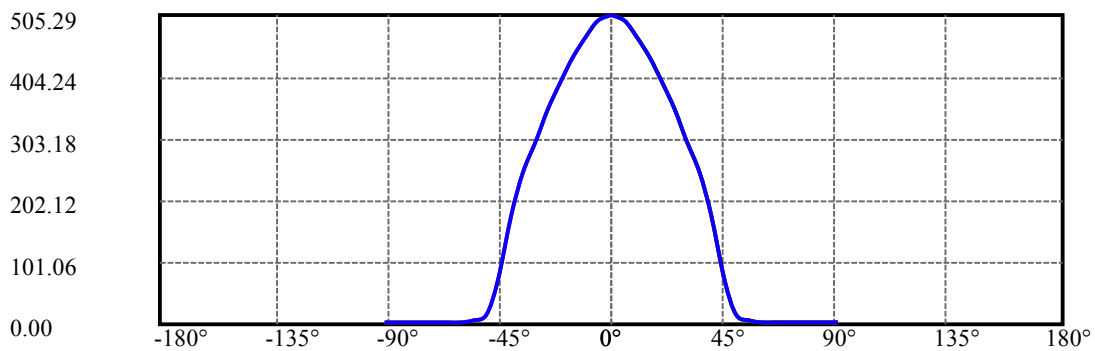
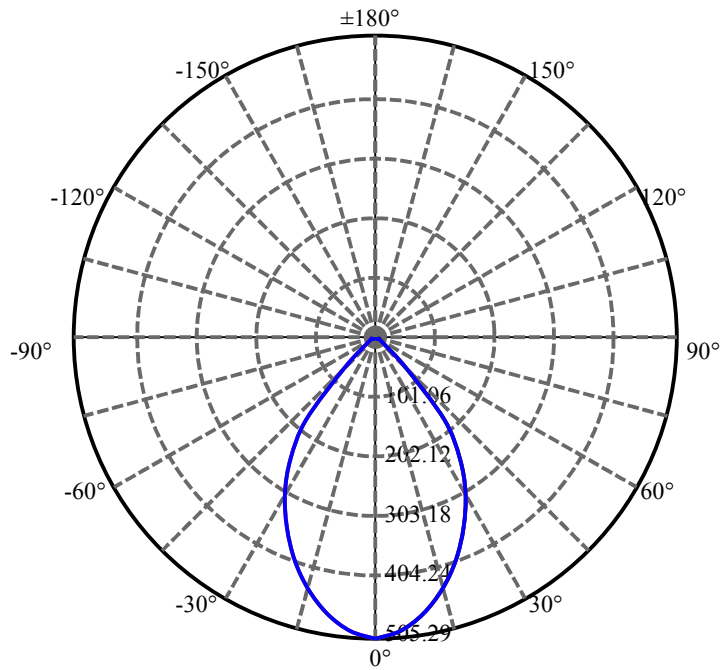
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	505.294	3.022	3.022	.495%	.539%
5.0	495.666	23.680	26.701	3.882%	4.760%
10.0	471.723	44.900	71.601	7.361%	12.763%
15.0	436.728	61.958	133.559	10.157%	23.807%
20.0	398.959	74.795	208.354	12.261%	37.140%
25.0	353.015	81.777	290.131	13.406%	51.717%
30.0	301.785	82.710	372.84	13.559%	66.460%
35.0	247.423	77.790	450.63	12.752%	80.326%
40.0	179.601	63.280	513.91	10.374%	91.606%
45.0	72.055	27.928	541.838	4.578%	96.584%
50.0	16.276	6.834	548.672	1.120%	97.802%
55.0	6.476	2.908	551.58	.477%	98.321%
60.0	4.157	1.973	553.553	.323%	98.672%
65.0	3.228	1.603	555.157	.263%	98.958%
70.0	2.780	1.432	556.589	.235%	99.213%
75.0	2.505	1.326	557.915	.217%	99.450%
80.0	2.333	1.259	559.174	.206%	99.674%
85.0	2.230	1.218	560.392	.200%	99.891%
90.0	2.223	0.609	561.001	.100%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	372.84	61.12%	66.46%
0-40	513.91	84.25%	91.61%
0-60	553.55	90.75%	98.67%
0-90	560.39	91.87%	99.89%
0-120	560.39	91.87%	99.89%
0-180	561.00	91.97%	100.00%
60-90	8.81	1.44%	1.57%
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%
0-34.88	448.80	73.57%	80.00%

ZONAL LUMEN SUMMARY

0-10	71.60
10-20	136.75
20-30	164.49
30-40	141.07
40-50	34.76
50-60	4.88
60-70	3.04
70-80	2.59
80-90	1.22
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: —————

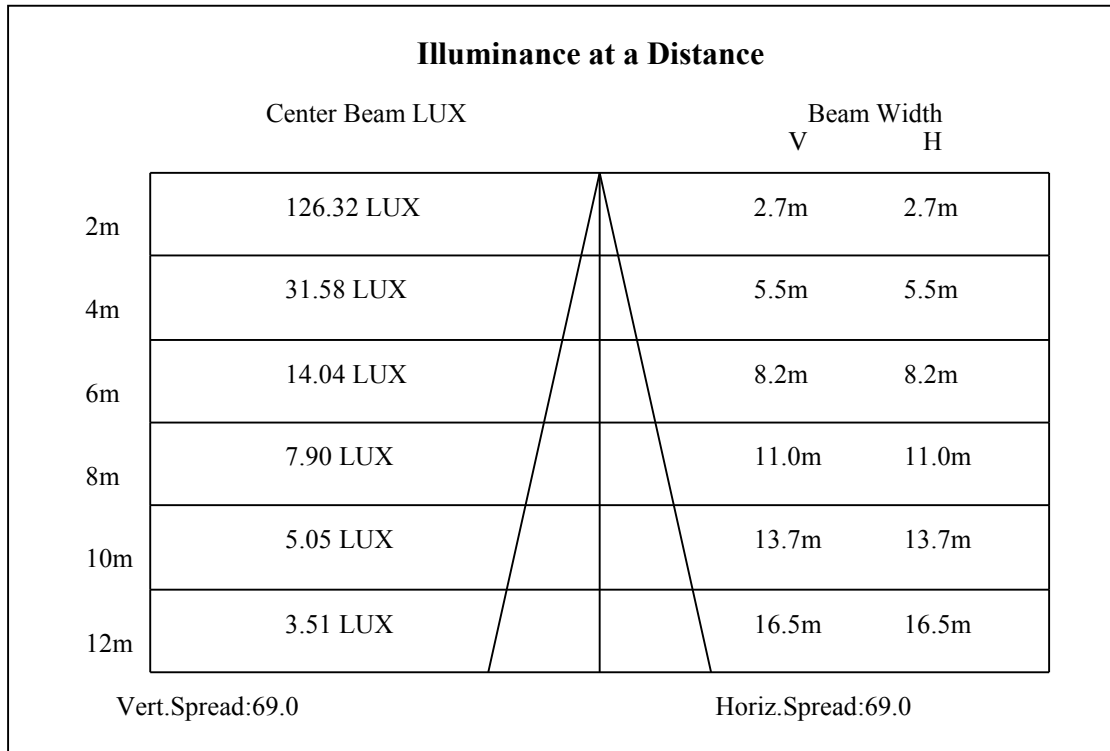
C90/C270: —————

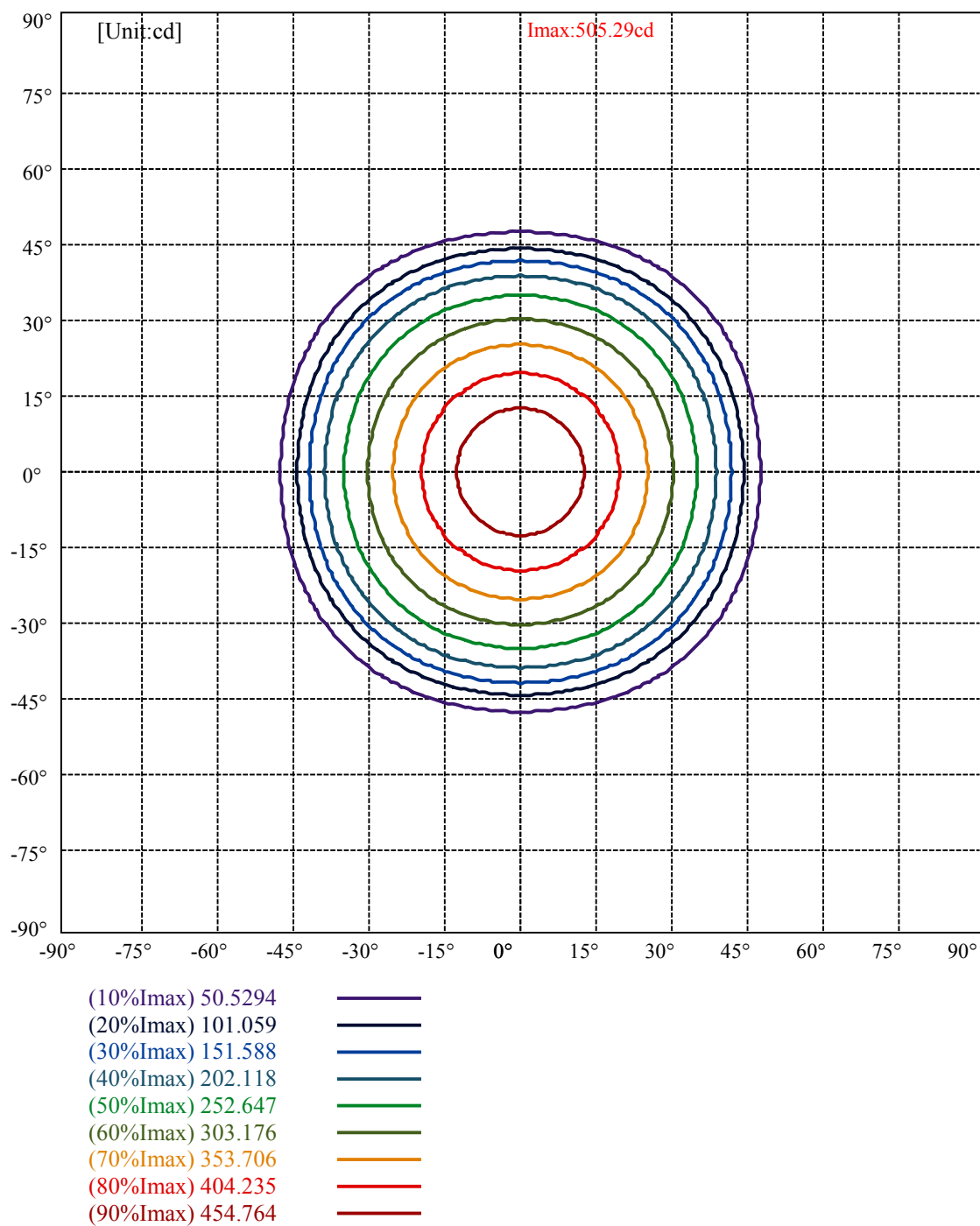
Field angle(10%Imax):C0/180Left:46.9 Right:46.9

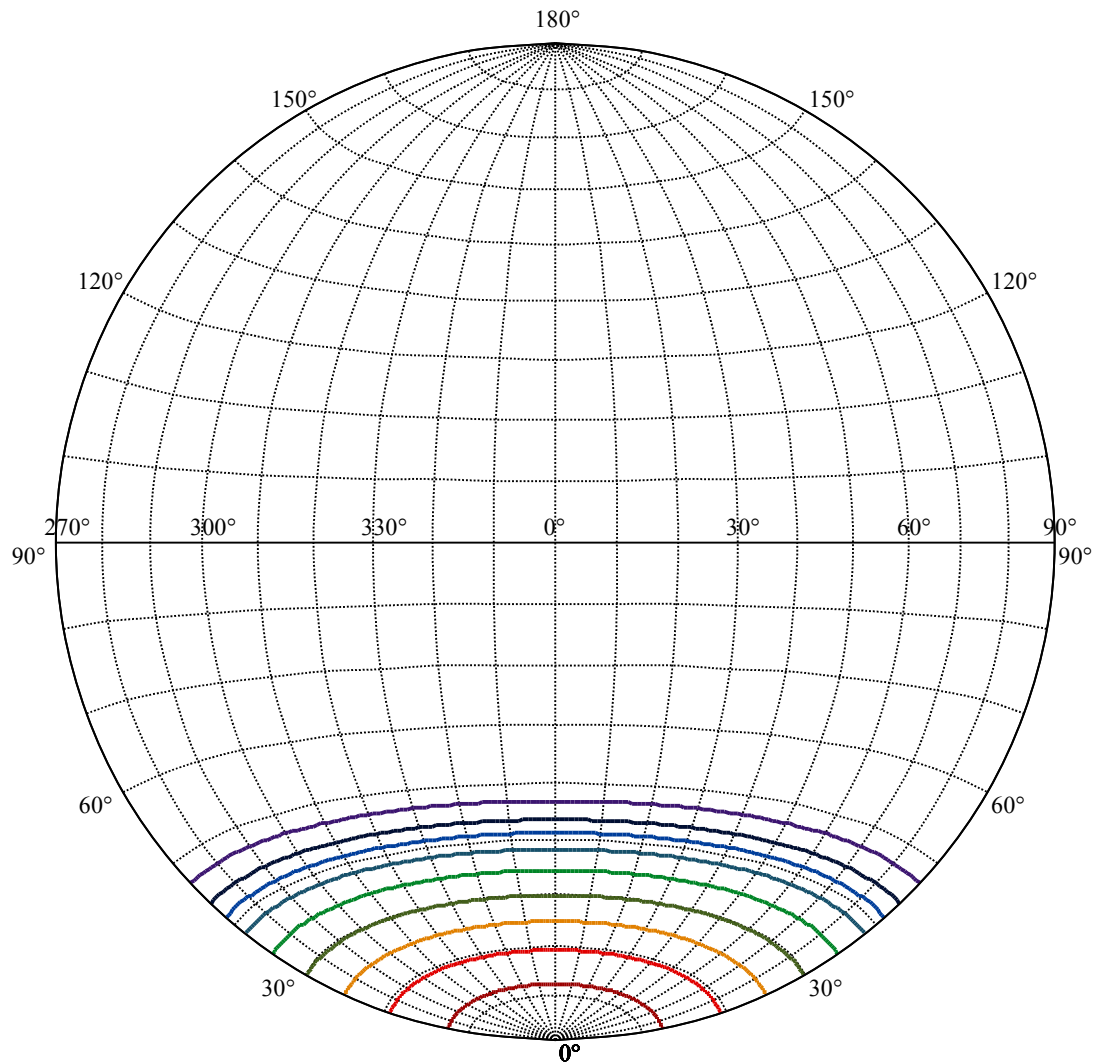
:C90/270Left:46.9 Right:46.9

Beam Angle(50%Imax):C0/180Left:34.5 Right:34.5

:C90/270Left:34.5 Right:34.5







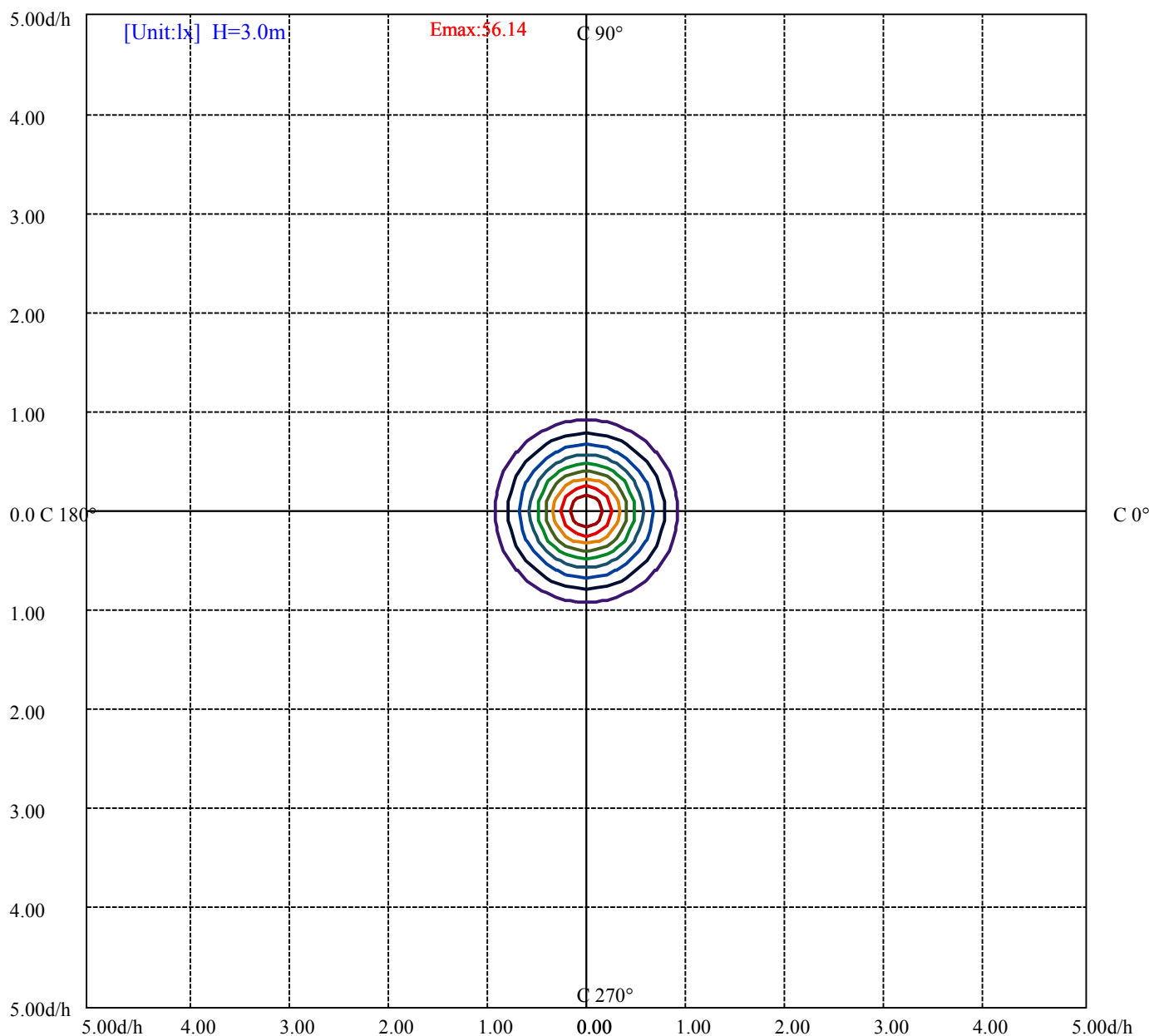
House

[Unit:cd]

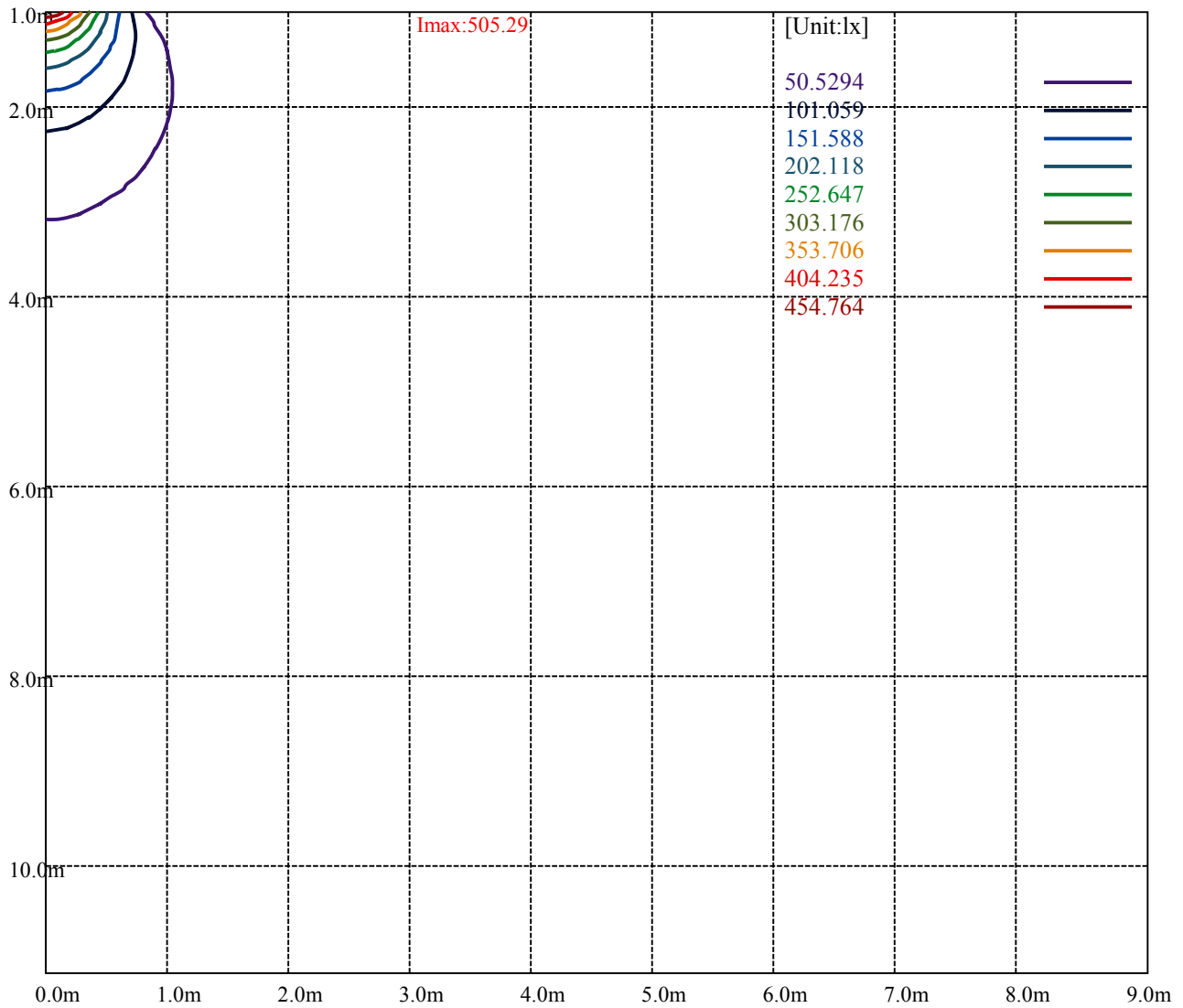
Road

Imax:505.29
 (10%Imax) 50.5294
 (20%Imax) 101.059
 (30%Imax) 151.588
 (40%Imax) 202.118
 (50%Imax) 252.647
 (60%Imax) 303.176
 (70%Imax) 353.706
 (80%Imax) 404.235
 (90%Imax) 454.764





(10%Emax) 5.614378	—
(20%Emax) 11.22878	—
(30%Emax) 16.84311	—
(40%Emax) 22.45745	—
(50%Emax) 28.07189	—
(60%Emax) 33.68622	—
(70%Emax) 39.30055	—
(80%Emax) 44.915	—
(90%Emax) 50.52934	—



Luminance Table

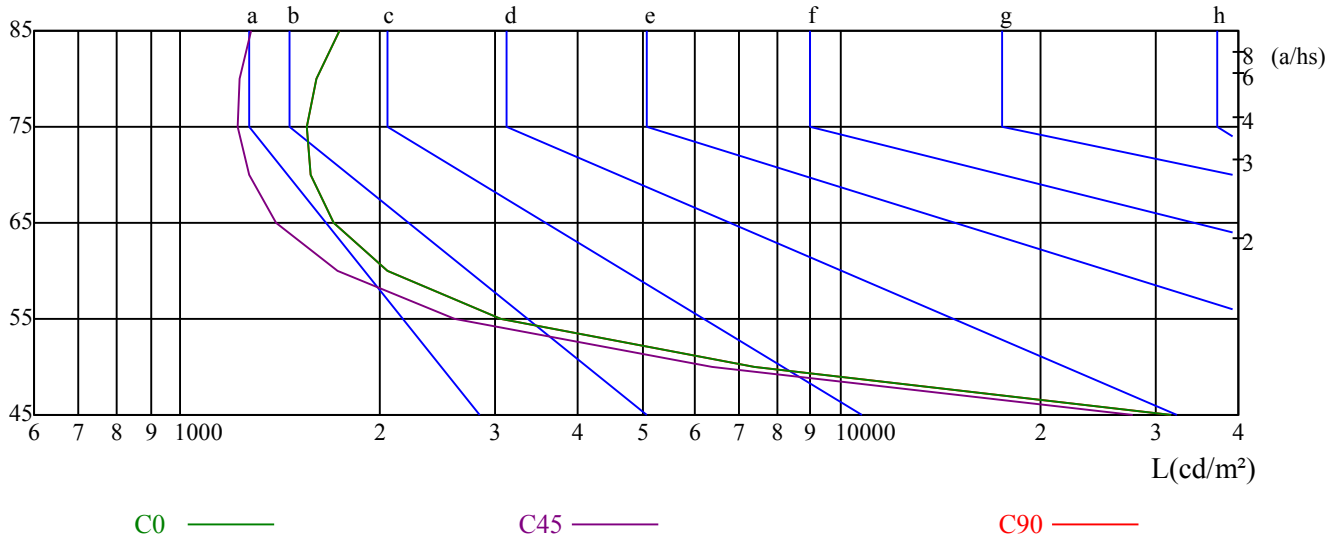
γ	45	50	55	60	65	70	75	80	85
C0	31646	7379	3058	2064	1703	1579	1552	1604	1736
C45	27711	6367	2598	1725	1398	1269	1219	1225	1282
C90	31646	7379	3058	2064	1703	1579	1552	1604	1736

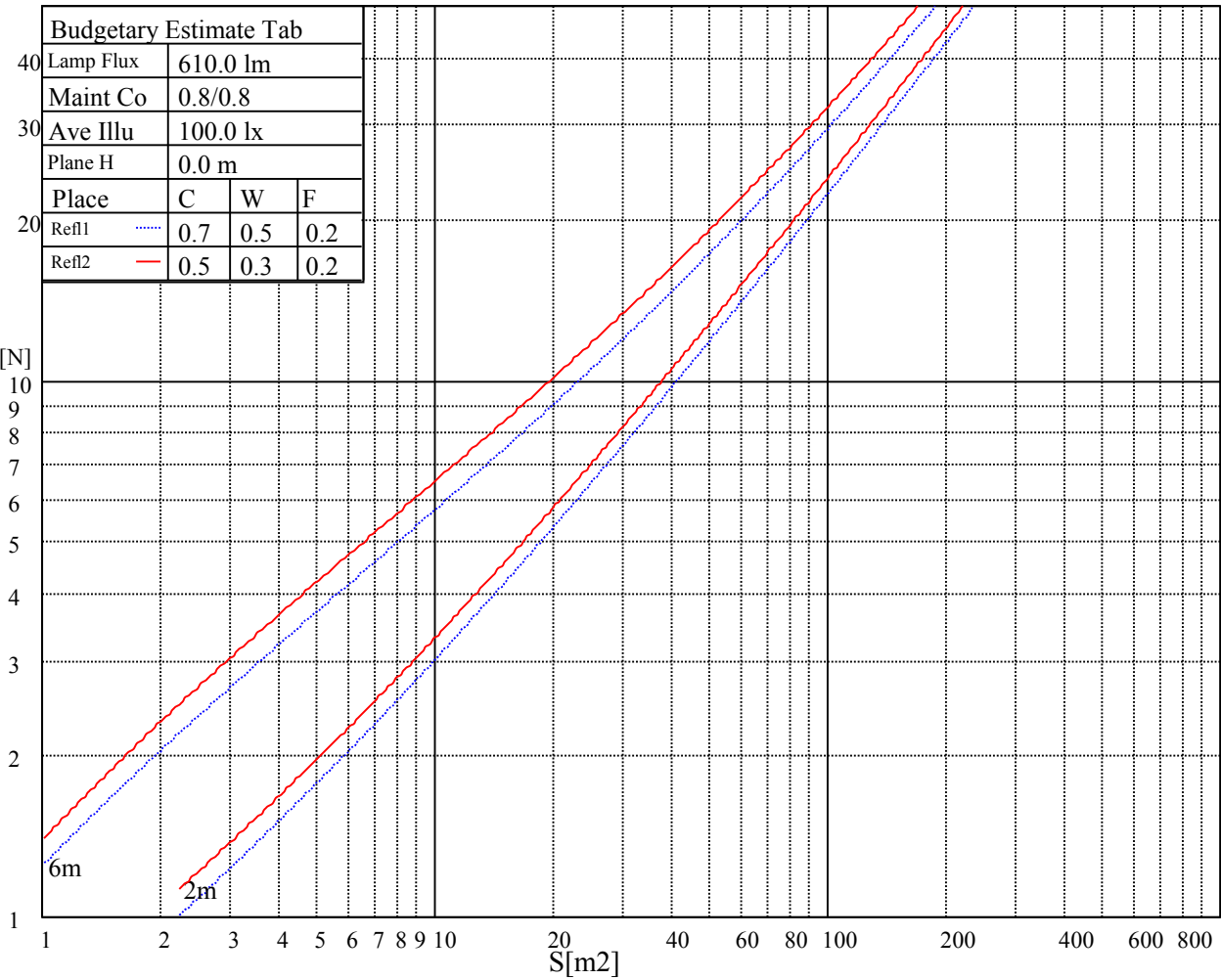
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3609	3609	3609	4574	4574	4574	12091	12091	12091

Glare Table

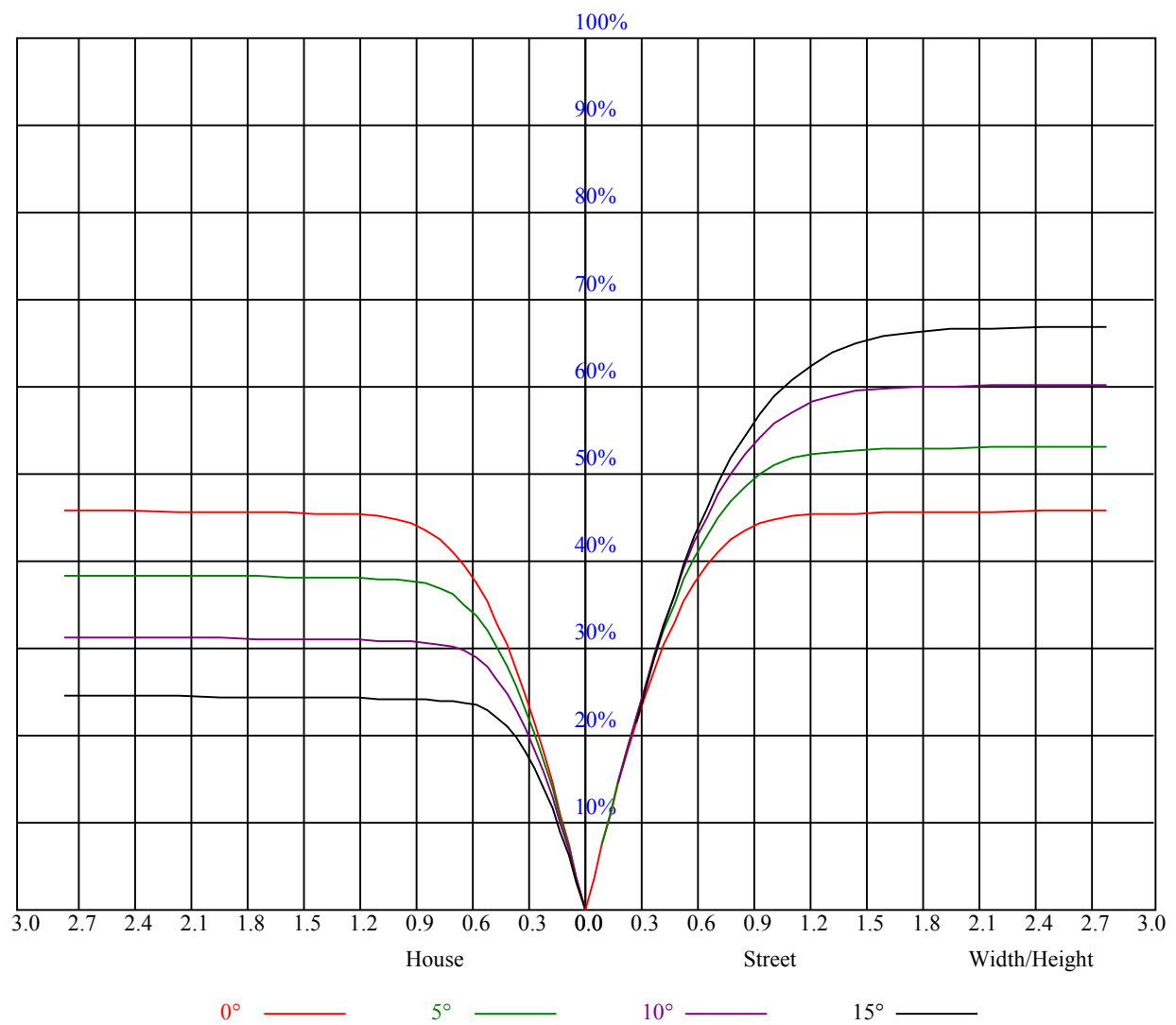
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

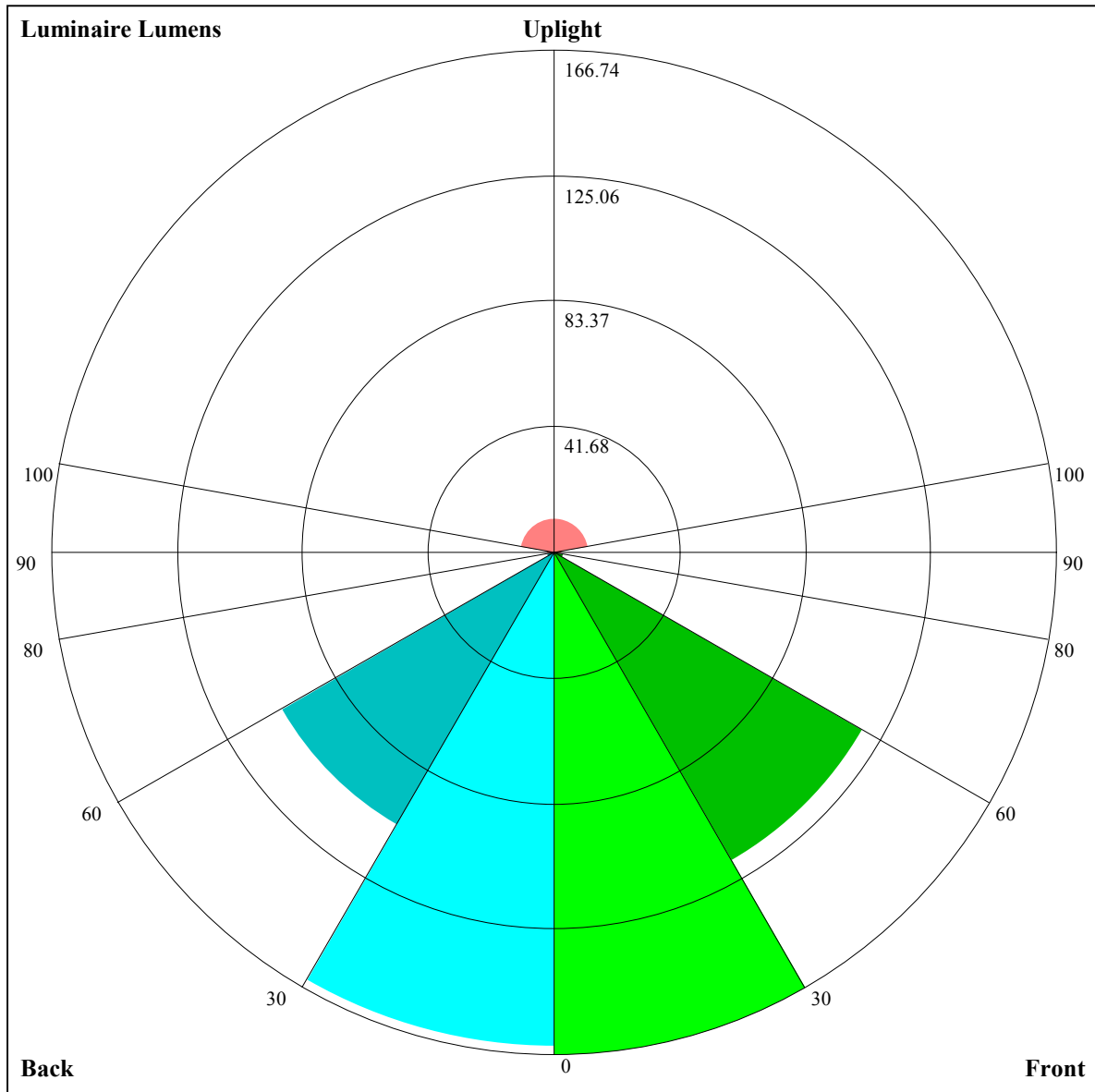
Luminance Limiting Curve

 $\gamma(^{\circ})$ 



RHOC	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	1.10	1.10	1.10	1.07	1.07	1.07	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.01	0.99	0.97	0.99	0.97	0.95	0.96	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.87	0.85
2	0.94	0.90	0.87	0.93	0.89	0.86	0.90	0.87	0.84	0.87	0.84	0.82	0.84	0.82	0.80	0.79
3	0.88	0.83	0.79	0.86	0.82	0.78	0.84	0.80	0.77	0.82	0.78	0.76	0.80	0.77	0.75	0.73
4	0.82	0.76	0.72	0.81	0.76	0.72	0.79	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.69	0.68
5	0.76	0.71	0.67	0.76	0.70	0.66	0.74	0.69	0.66	0.72	0.68	0.65	0.71	0.67	0.65	0.63
6	0.72	0.66	0.62	0.71	0.66	0.62	0.69	0.65	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.59
7	0.67	0.62	0.58	0.67	0.61	0.57	0.65	0.61	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.55
8	0.63	0.58	0.54	0.63	0.57	0.54	0.62	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.52
9	0.60	0.54	0.50	0.59	0.54	0.50	0.58	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.49
10	0.56	0.51	0.47	0.56	0.51	0.47	0.55	0.51	0.47	0.55	0.50	0.47	0.54	0.50	0.47	0.46





Luminaire Lumens:

FL=166.74,FM=118.21,FH=3.09,FVH=1.23

BL=163.88,BM=104.81,BH=2.88,BVH=1.23

UL=2.43,UH=11.54

BUG Rating:B1-U2-G0

Nata 1689-M

Intensity data(cd)										Appendix Page: 15 Total:15	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	505.20	502.61	485.38	446.34	408.13	364.75	317.29	264.11	213.56		
45.0	506.08	494.90	467.87	425.42	386.77	339.15	290.26	243.07	176.02		
90.0	504.04	488.30	459.23	419.20	380.38	326.76	275.83	222.43	136.54		
135.0	505.86	486.86	459.50	425.26	383.58	332.49	286.62	233.27	147.17		
180.0	505.20	485.98	457.30	420.63	381.93	333.42	279.69	227.55	145.62		
225.0	506.08	497.16	477.89	449.15	417.22	370.14	312.28	253.42	187.85		
270.0	504.04	505.86	485.87	459.61	425.20	384.73	330.61	272.31	217.09		
315.0	505.86	503.66	480.75	448.21	408.46	372.68	321.69	263.22	212.96		
360.0	505.20	502.61	485.38	446.34	408.13	364.75	317.29	264.11	213.56		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	115.78	22.57	8.59	5.29	3.80	3.08	2.64	2.42	2.20		
45.0	64.03	16.35	7.21	4.62	3.41	2.86	2.53	2.31	2.20		
90.0	32.15	11.23	6.28	4.24	3.19	2.70	2.42	2.26	2.20		
135.0	38.15	12.22	6.17	4.18	3.25	2.75	2.48	2.31	2.26		
180.0	37.00	10.35	5.07	3.69	2.97	2.64	2.42	2.26	2.26		
225.0	72.78	12.22	4.90	3.30	2.86	2.59	2.42	2.31	2.26		
270.0	113.47	25.11	6.55	3.80	3.08	2.75	2.53	2.37	2.26		
315.0	103.07	20.15	7.05	4.13	3.25	2.86	2.59	2.42	2.20		
360.0	115.78	22.57	8.59	5.29	3.80	3.08	2.64	2.42	2.20		
C/γ(°)	90.0										
0.0	2.20										
45.0	2.20										
90.0	2.26										
135.0	2.26										
180.0	2.20										
225.0	2.20										
270.0	2.26										
315.0	2.20										
360.0	2.20										