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Nata

Client:

LumCAT: 3-2328-M

Luminaire: 92.70.131.00

Report No: GC2019091909

Test No: NATA07

LampCAT: BRIDGELEX V13B

Lamp flux(lm): 1760.0

Number of Lamps: 1

Length(mm): 78

Phm Type: C

Voltage(V): 220.4000

Current(A): 0.0690

Power (W): 14.0200

PF: 0.9160

Ballast type: AC

Width(mm): 78

Height(mm): 0

Photometric Results

Lumens(lm): 1536.15, Efficiency(%): 87.28% , Luminous Efficacy(lm/W): 109.57

Central intensity(cd): 1894.927, Maximum intensity(cd): 1894.927

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=57.4

[C90/270]Total=57.4

Field angle(10%Imax): [C0/180]Total=79.2

[C90/270]Total=79.2

Maximum s/h(1/2): C0_180=0.89 C90_270=0.89

Maximum s/h(1/4): C0_180=0.87 C90_270=0.87

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 87.28%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.712%

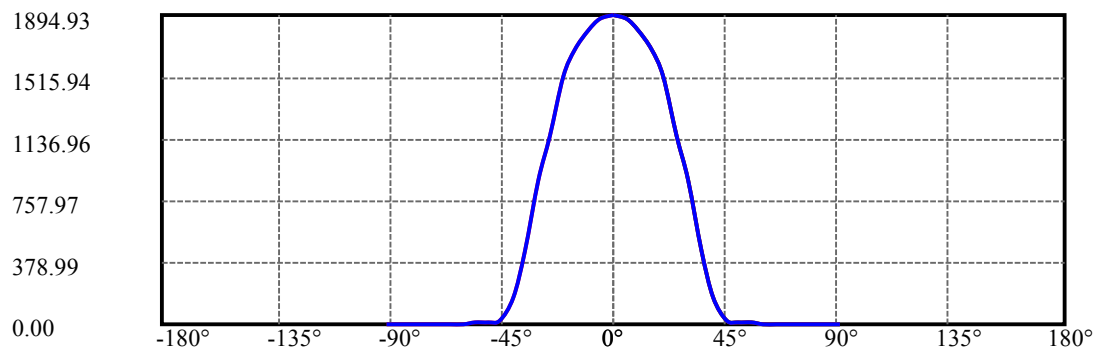
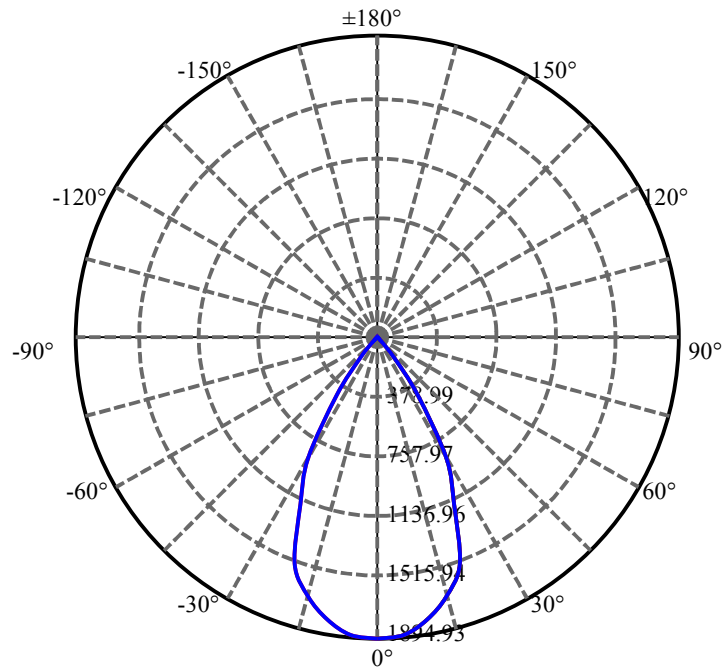
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1894.927	0.000	0	.000%	.000%
5.0	1876.830	45.090	45.09	2.562%	2.935%
10.0	1805.601	131.732	176.822	7.485%	11.511%
15.0	1684.372	207.023	383.845	11.763%	24.987%
20.0	1514.188	263.606	647.451	14.978%	42.148%
25.0	1155.965	280.050	927.501	15.912%	60.378%
30.0	877.510	257.338	1184.839	14.621%	77.130%
35.0	447.984	195.188	1380.027	11.090%	89.837%
40.0	165.619	102.375	1482.402	5.817%	96.501%
45.0	26.641	35.599	1518.001	2.023%	98.819%
50.0	12.129	7.834	1525.835	.445%	99.329%
55.0	5.899	3.920	1529.755	.223%	99.584%
60.0	2.622	1.970	1531.724	.112%	99.712%
65.0	1.456	0.991	1532.716	.056%	99.776%
70.0	1.299	0.698	1533.413	.040%	99.822%
75.0	1.253	0.667	1534.08	.038%	99.865%
80.0	1.259	0.672	1534.752	.038%	99.909%
85.0	1.264	0.686	1535.438	.039%	99.954%
90.0	1.334	0.712	1536.15	.040%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1184.84	67.32%	77.13%
0-40	1482.40	84.23%	96.50%
0-60	1531.72	87.03%	99.71%
0-90	1535.44	87.24%	99.95%
0-120	1535.44	87.24%	99.95%
0-180	1536.15	87.28%	100.00%
60-90	5.68	0.32%	0.37%
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%
0-31.13	1228.92	69.82%	80.00%

ZONAL LUMEN SUMMARY

0-10	176.82
10-20	470.63
20-30	537.39
30-40	297.56
40-50	43.43
50-60	5.89
60-70	1.69
70-80	1.34
80-90	0.69
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: —————

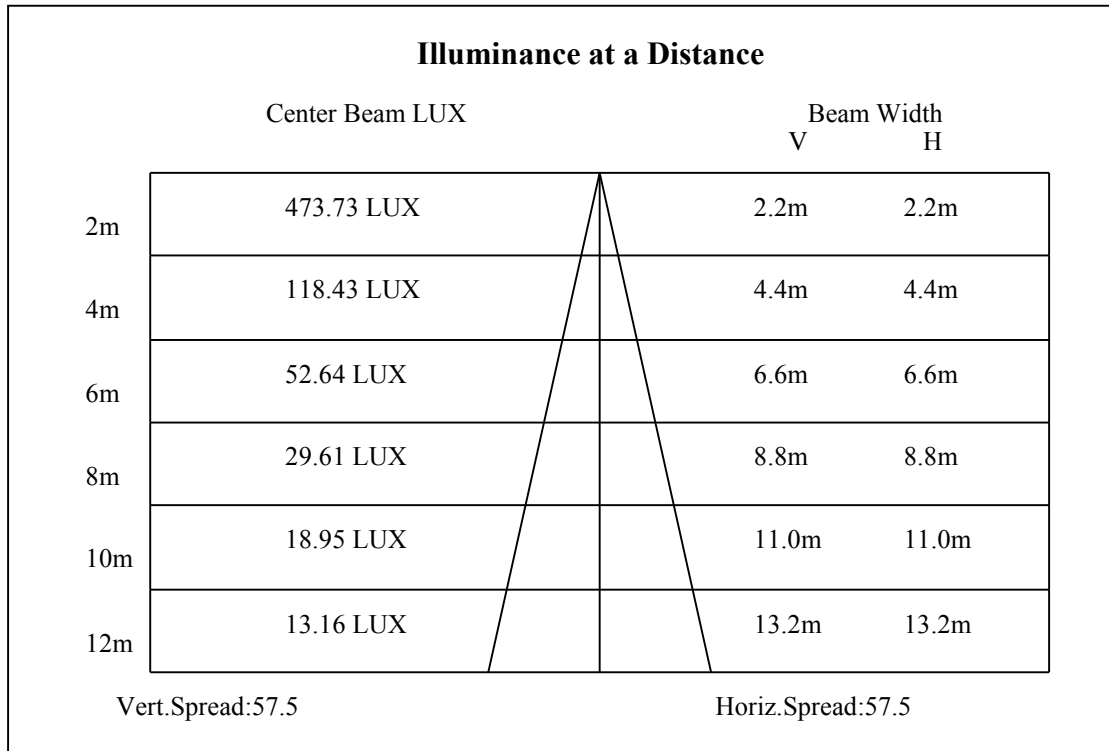
C90/C270: —————

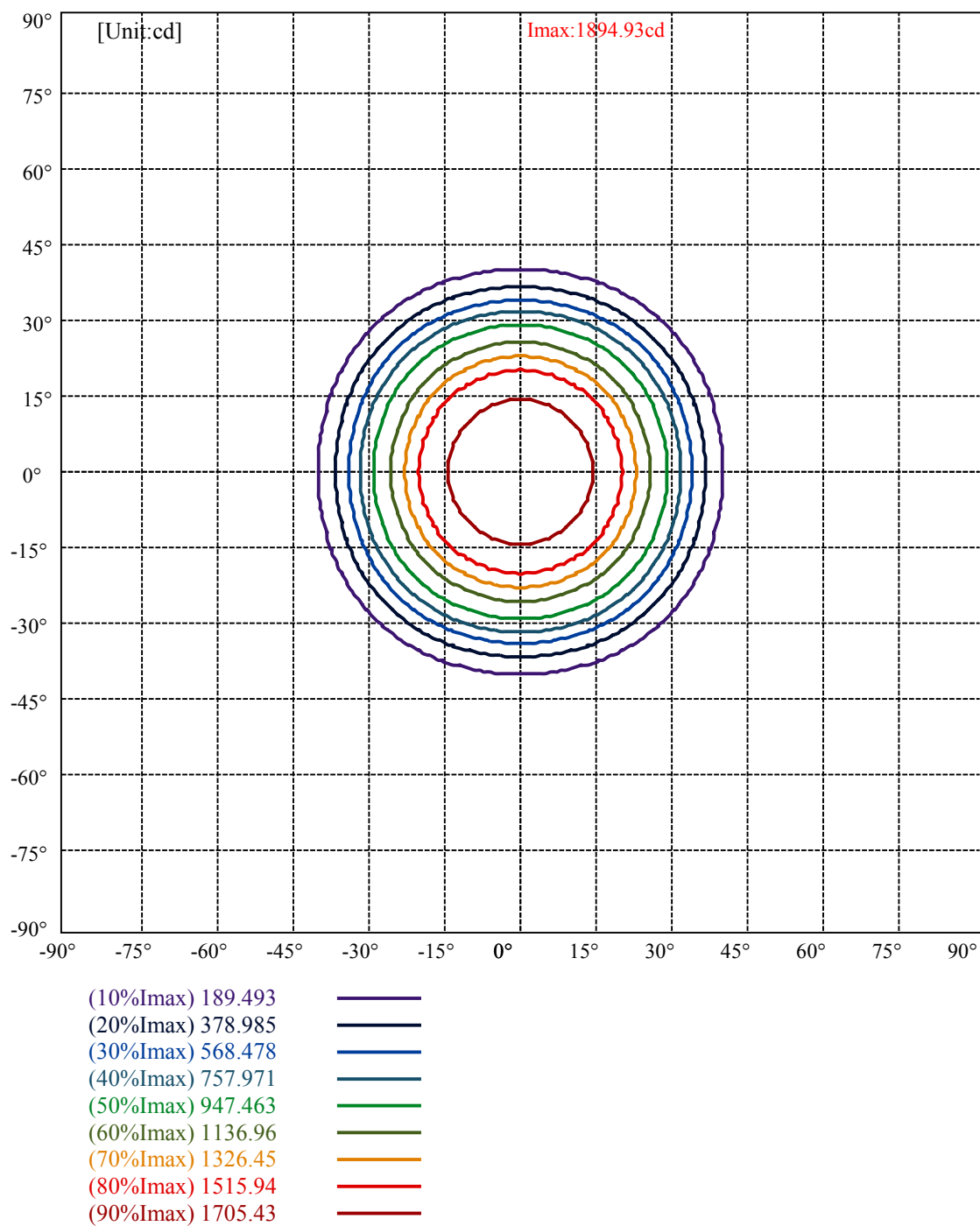
Field angle(10%Imax):C0/180Left:39.6 Right:39.6

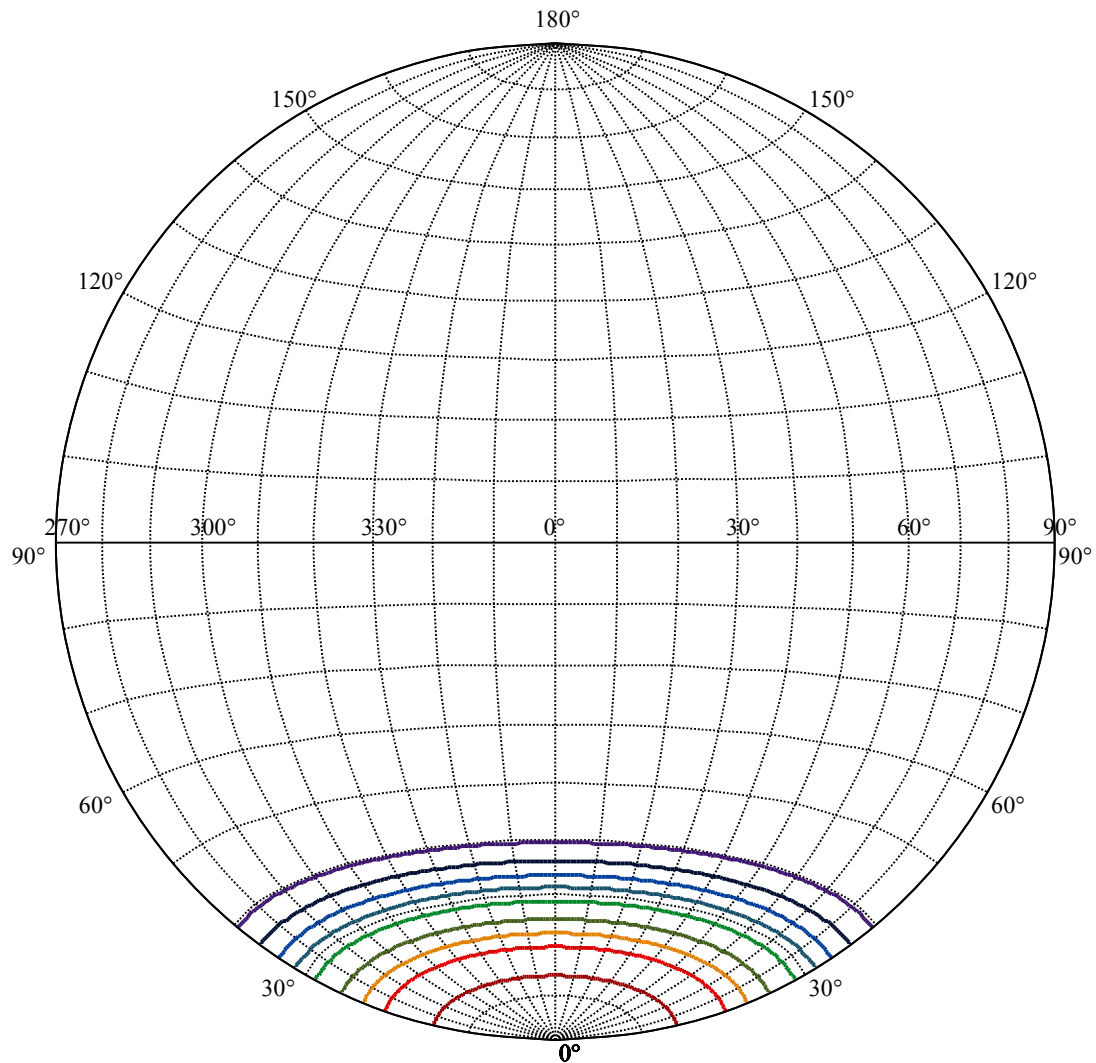
:C90/270Left:39.6 Right:39.6

Beam Angle(50%Imax):C0/180Left:28.7 Right:28.7

:C90/270Left:28.7 Right:28.7







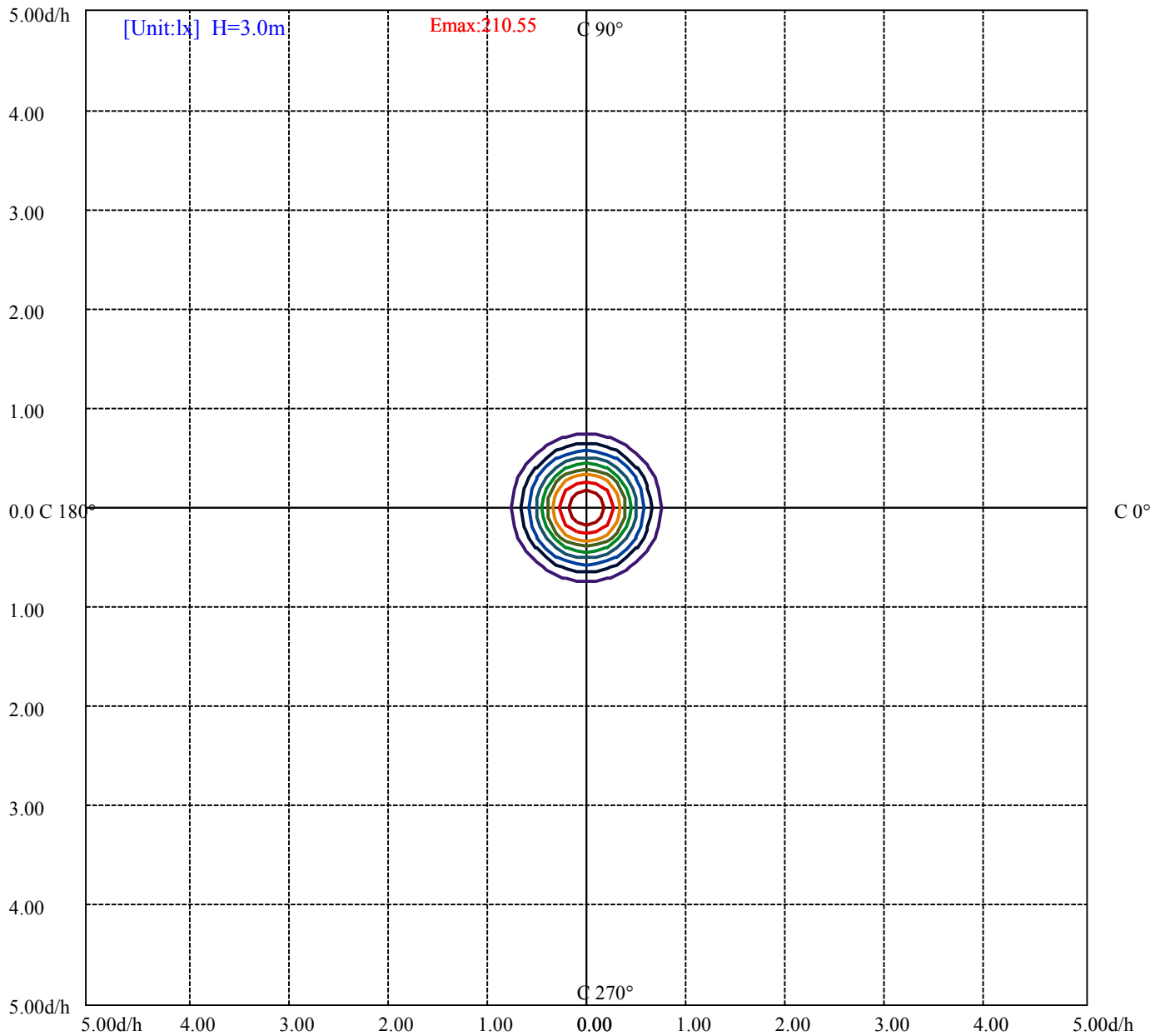
House

[Unit:cd]

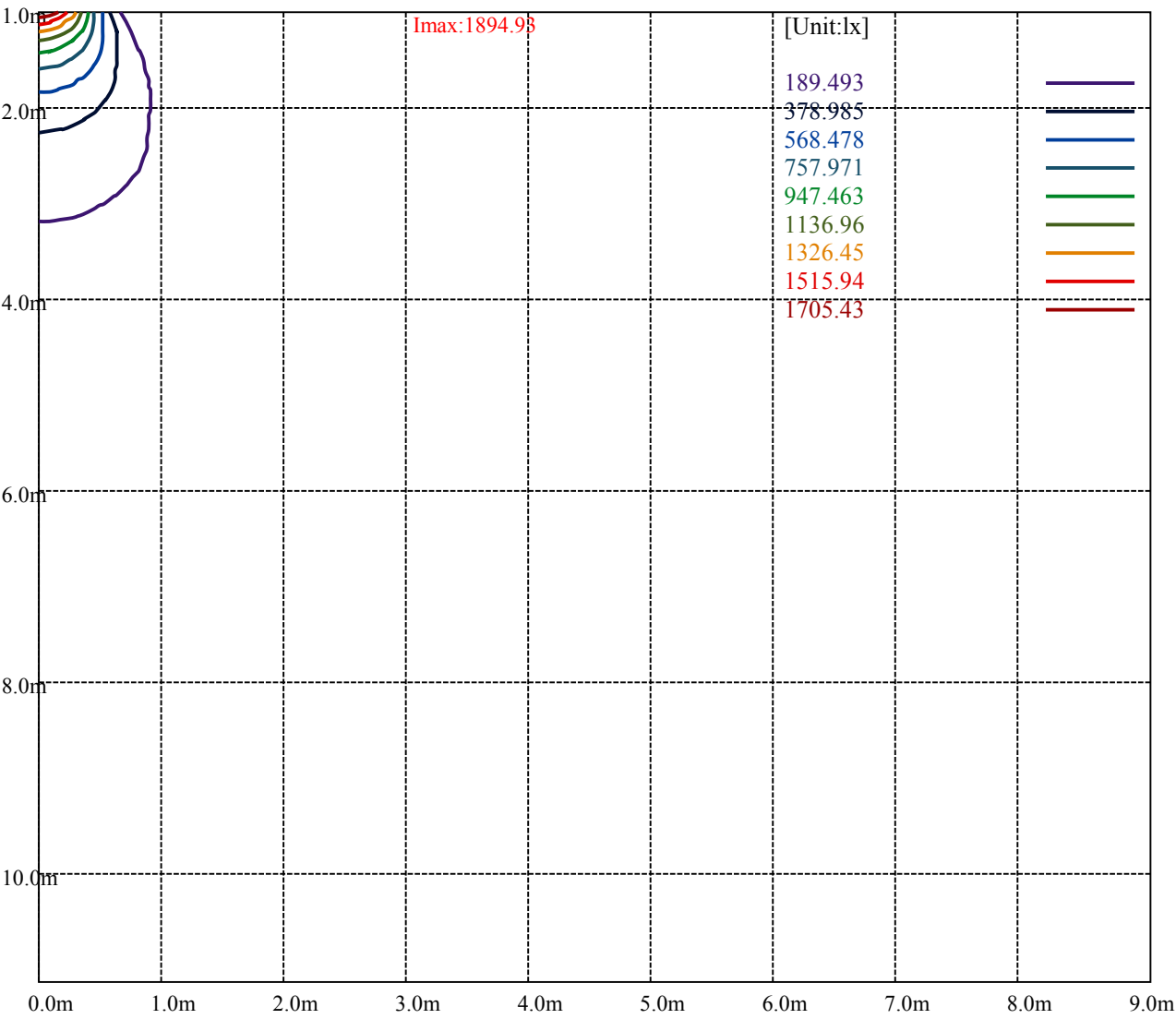
Road

Imax:1894.93

(10%Imax)	189.493	—
(20%Imax)	378.985	—
(30%Imax)	568.478	—
(40%Imax)	757.971	—
(50%Imax)	947.463	—
(60%Imax)	1136.96	—
(70%Imax)	1326.45	—
(80%Imax)	1515.94	—
(90%Imax)	1705.43	—



(10%Emax) 21.05478	—
(20%Emax) 42.10944	—
(30%Emax) 63.16423	—
(40%Emax) 84.219	—
(50%Emax) 105.2737	—
(60%Emax) 126.3289	—
(70%Emax) 147.3833	—
(80%Emax) 168.4378	—
(90%Emax) 189.4922	—



Luminance Table

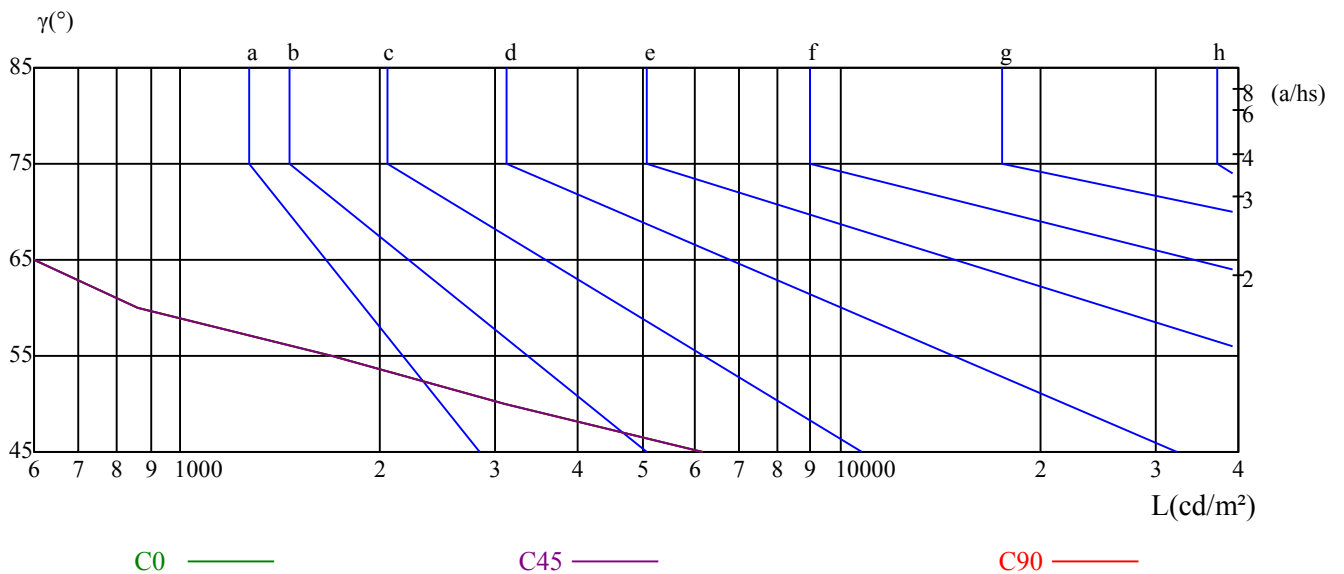
γ	45	50	55	60	65	70	75	80	85
C0	6193	3101	1690	862	566	624	796	1191	2385
C45	6193	3101	1690	862	566	624	796	1191	2385
C90	6193	3101	1690	862	566	624	796	1191	2385

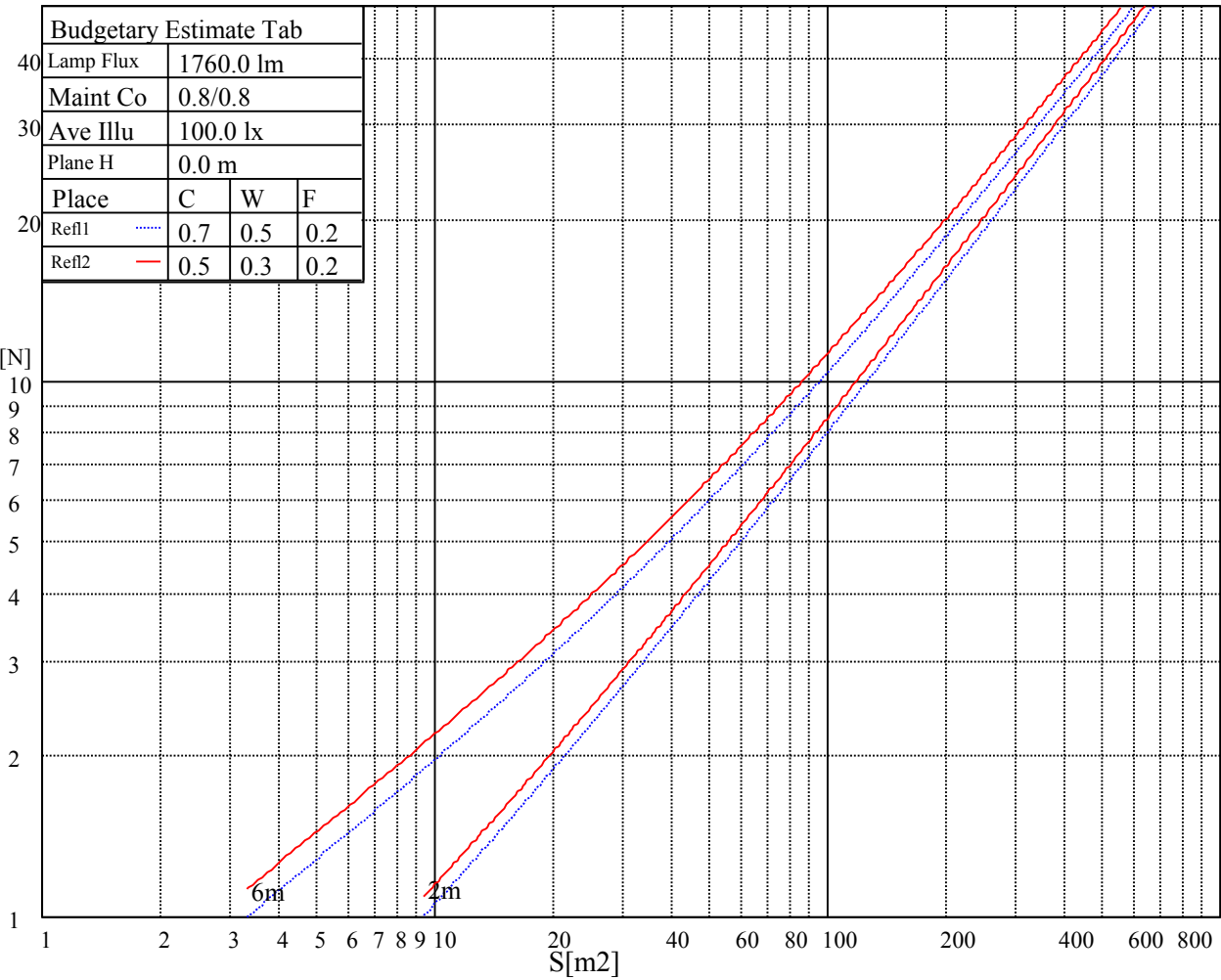
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
566	566	566	796	796	796	2385	2385	2385

Glare Table

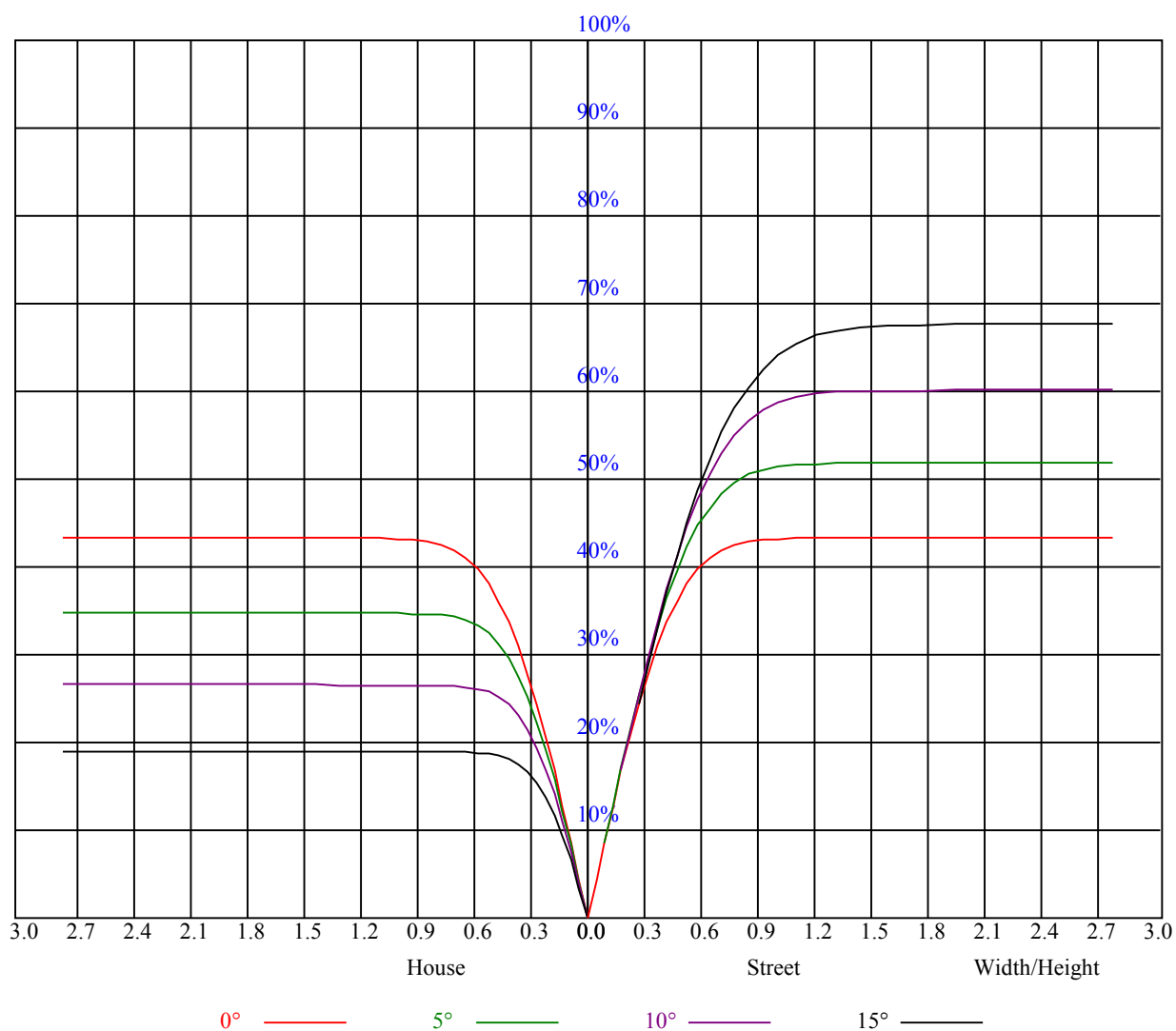
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

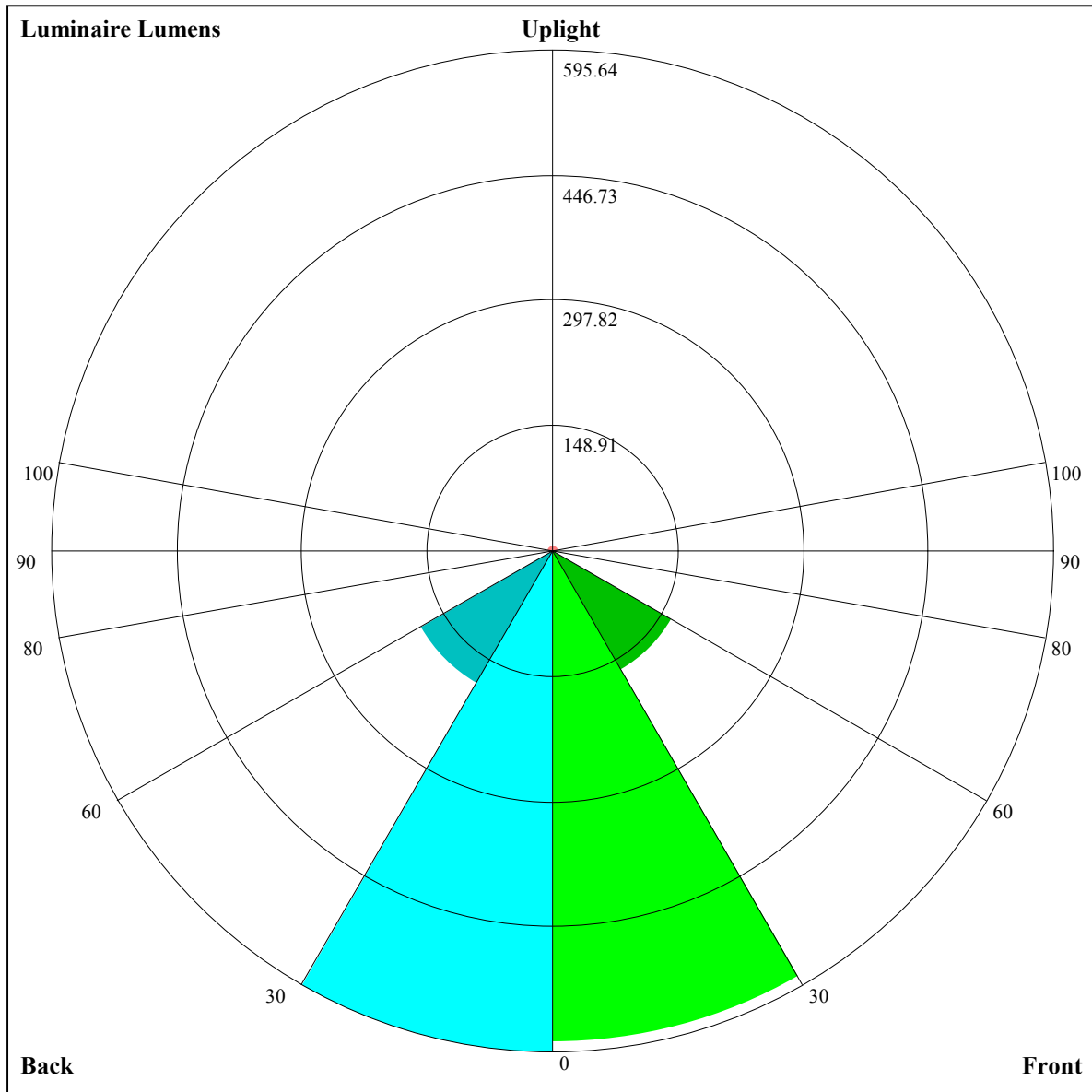
Luminance Limiting Curve





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	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.87
1	0.97	0.95	0.93	0.95	0.93	0.92	0.92	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.82
2	0.91	0.87	0.84	0.89	0.86	0.83	0.86	0.84	0.82	0.84	0.82	0.80	0.81	0.80	0.78	0.77
3	0.85	0.81	0.77	0.84	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.74	0.77	0.75	0.73	0.72
4	0.80	0.75	0.72	0.79	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.69	0.73	0.71	0.69	0.67
5	0.75	0.70	0.66	0.74	0.70	0.66	0.73	0.69	0.66	0.71	0.68	0.65	0.70	0.67	0.64	0.63
6	0.71	0.66	0.62	0.70	0.65	0.62	0.69	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.59
7	0.67	0.62	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.63	0.60	0.57	0.56
8	0.63	0.58	0.55	0.62	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.53
9	0.60	0.55	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.51	0.50
10	0.57	0.52	0.48	0.56	0.52	0.48	0.55	0.51	0.48	0.55	0.51	0.48	0.54	0.51	0.48	0.47





Luminaire Lumens:

FL=583.05,FM=164,FH=1.5,FVH=0.7

BL=595.64,BM=181.57,BH=1.52,BVH=0.7

UL=1.46,UH=6.93

BUG Rating:B2-U1-G0

Nata 3-2328-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	1897.02	1867.32	1794.46	1645.97	1466.86	1068.72	807.19	329.70	53.50		
45.0	1895.16	1882.17	1827.87	1709.08	1567.55	1337.85	980.09	578.23	232.53		
90.0	1891.91	1861.28	1764.77	1642.72	1439.48	919.90	784.17	374.01	50.95		
135.0	1895.62	1883.09	1817.20	1709.08	1567.55	1295.63	946.67	575.45	269.65		
180.0	1897.02	1886.34	1835.76	1724.86	1568.48	1306.76	977.30	536.93	307.70		
225.0	1895.16	1867.78	1775.44	1663.61	1445.05	1063.15	798.14	285.43	49.61		
270.0	1891.91	1889.59	1840.87	1713.26	1586.11	1337.39	945.28	571.27	300.28		
315.0	1895.62	1877.06	1788.43	1666.39	1472.42	918.32	781.25	332.85	60.74		
360.0	1897.02	1867.32	1794.46	1645.97	1466.86	1068.72	807.19	329.70	53.50		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	21.58	9.88	4.73	2.23	1.35	1.25	1.25	1.30	1.30		
45.0	32.39	14.57	6.68	3.11	1.62	1.30	1.25	1.30	1.25		
90.0	21.62	10.49	4.83	2.18	1.39	1.30	1.30	1.30	1.30		
135.0	32.48	15.08	7.89	3.20	1.58	1.35	1.25	1.21	1.25		
180.0	32.62	12.90	6.73	3.16	1.53	1.30	1.25	1.25	1.25		
225.0	19.63	9.61	4.41	1.95	1.35	1.25	1.25	1.21	1.30		
270.0	31.32	13.41	6.64	2.88	1.44	1.35	1.25	1.25	1.25		
315.0	21.48	11.09	5.29	2.27	1.39	1.30	1.21	1.25	1.21		
360.0	21.58	9.88	4.73	2.23	1.35	1.25	1.25	1.30	1.30		
C/γ(°)	90.0										
0.0	1.35										
45.0	1.39										
90.0	1.39										
135.0	1.30										
180.0	1.39										
225.0	1.25										
270.0	1.25										
315.0	1.35										
360.0	1.35										