



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

LumCAT: 4-1763-E
Luminaire: 92.76.233.00
Report No: NATA0100
Test No:
LampCAT: LUMENS EDC_57C_30W_230V
Lamp flux(lm): 2348.3
Number of Lamps: 1
Length(mm): 100
Phm Type: C

Voltage(V): 213.5000
Current(A): 0.1260
Power (W): 26.9000
PF: 1.0000
Ballast type:
Width(mm): 100
Height(mm): 0

Photometric Results

Lumens(lm): 2099.63
Efficiency(%): 89.41%
Lumens(lm)/Power(W): 79.01
Central intensity(cd): 4634.992
Maximum intensity(cd): 4634.992
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=34.5
 [C90/270]Total=34.5
Field angle(10%Imax): [C0/180]Total=71.3
 [C90/270]Total=71.3
Maximum s/h(1/2): C0_180=0.56 C90_270=0.56
Maximum s/h(1/4): C0_180=0.60 C90_270=0.60
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.51%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.587%

Equipment: GMS1980
Temperature(°C): 14.0

Date: 2016-1-22
Humidity(%): 60.0%

Operator: S
Distance(m): 7.42

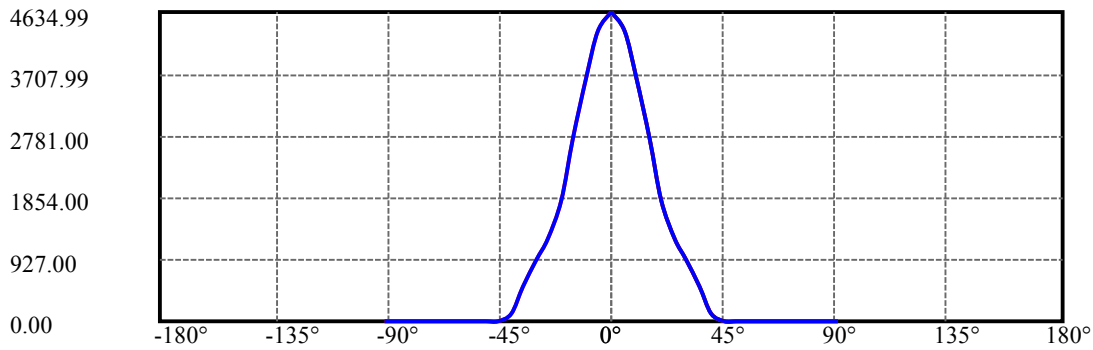
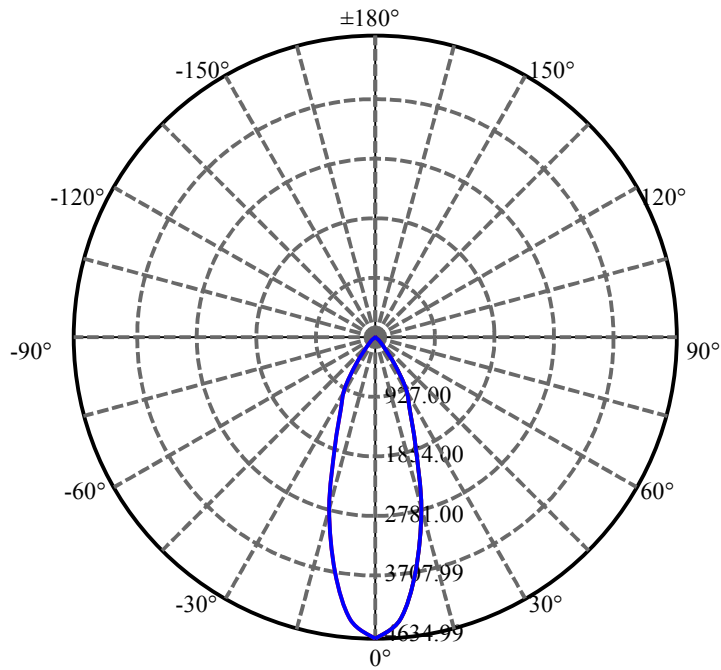
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4634.992	27.718	27.718	1.180%	1.320%
5.0	4354.858	208.046	235.764	8.860%	11.229%
10.0	3652.132	347.621	583.385	14.803%	27.785%
15.0	2733.826	387.843	971.229	16.516%	46.257%
20.0	1804.233	338.247	1309.475	14.404%	62.367%
25.0	1236.680	286.481	1595.956	12.200%	76.011%
30.0	924.917	253.491	1849.447	10.795%	88.085%
35.0	511.412	160.787	2010.234	6.847%	95.743%
40.0	129.362	45.579	2055.813	1.941%	97.913%
45.0	14.184	5.498	2061.31	.234%	98.175%
50.0	10.344	4.343	2065.654	.185%	98.382%
55.0	9.301	4.176	2069.83	.178%	98.581%
60.0	8.916	4.232	2074.062	.180%	98.783%
65.0	8.744	4.344	2078.406	.185%	98.989%
70.0	8.675	4.468	2082.874	.190%	99.202%
75.0	9.676	5.123	2087.997	.218%	99.446%
80.0	8.923	4.816	2092.814	.205%	99.676%
85.0	8.369	4.570	2097.383	.195%	99.893%
90.0	8.179	2.242	2099.625	.095%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1849.45	78.76%	88.08%
0-40	2055.81	87.55%	97.91%
0-60	2074.06	88.32%	98.78%
0-90	2097.38	89.32%	99.89%
0-120	2097.38	89.32%	99.89%
0-180	2099.63	89.41%	100.00%
60-90	27.55	1.17%	1.31%
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%
0-26.65	1679.70	71.53%	80.00%

ZONAL LUMEN SUMMARY

0-10	583.39
10-20	726.09
20-30	539.97
30-40	206.37
40-50	9.84
50-60	8.41
60-70	8.81
70-80	9.94
80-90	4.57
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: —————

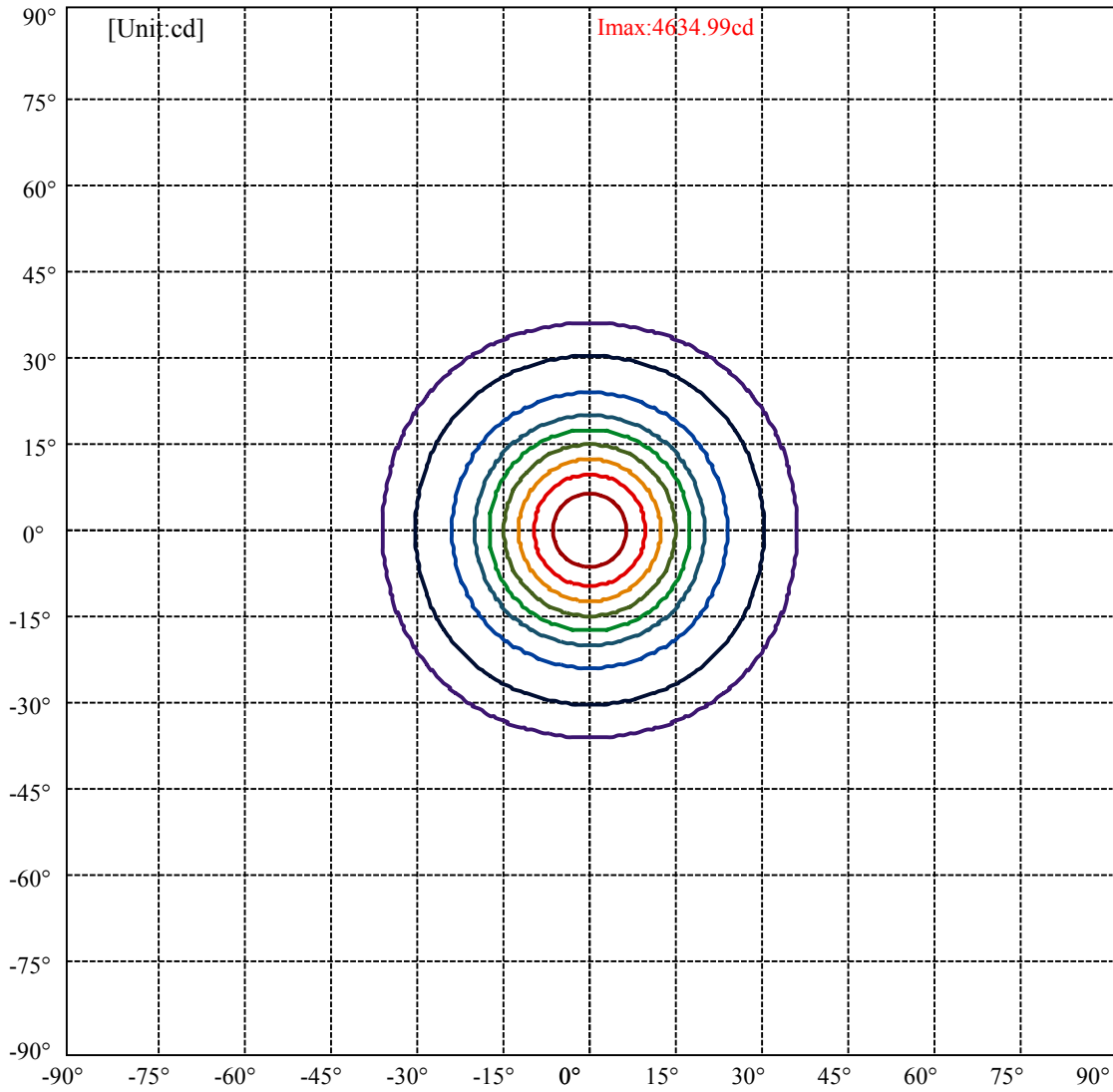
C90/C270: —————

Field angle(10%Imax):C0/180Left:35.6 Right:35.6

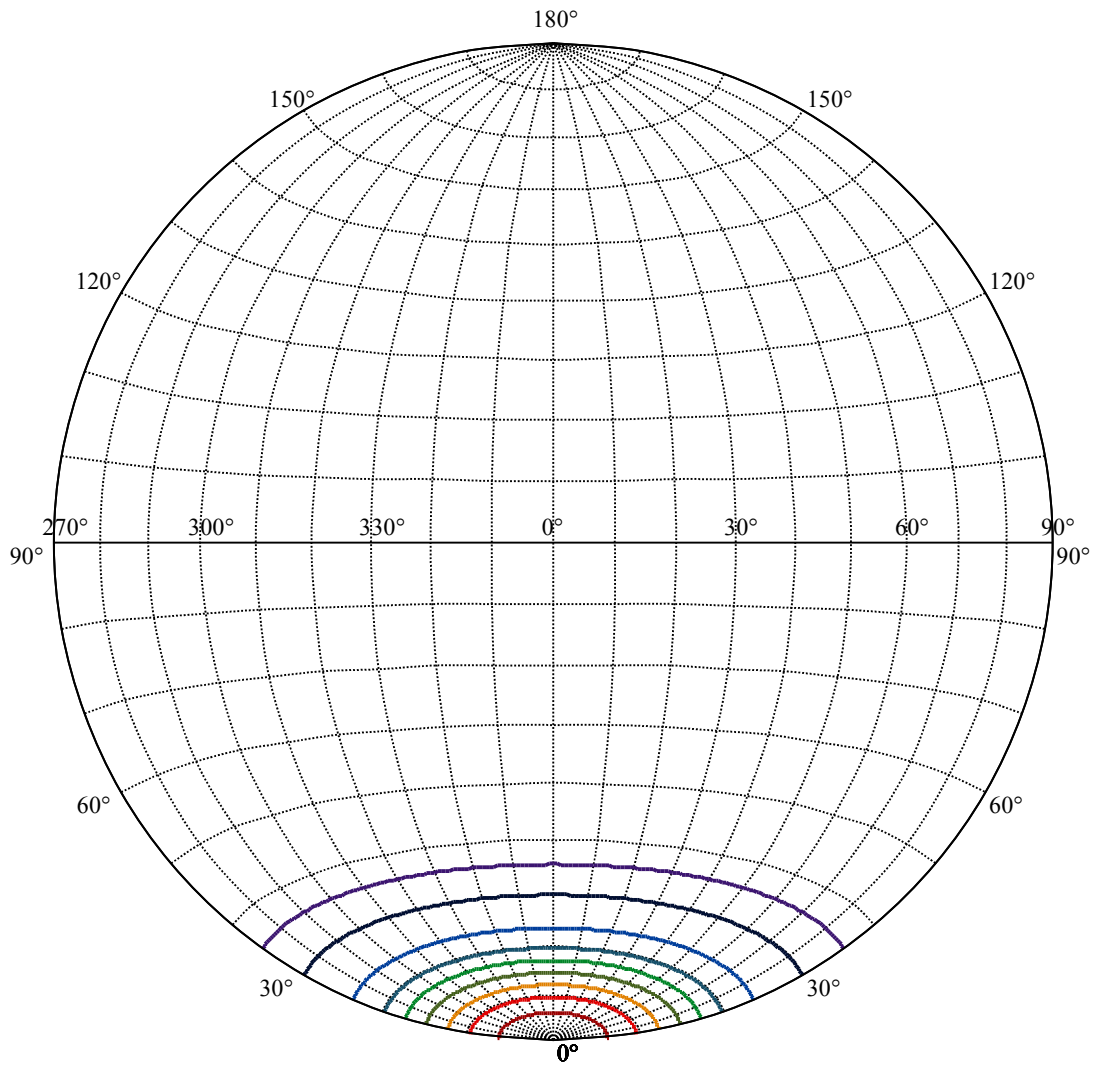
:C90/270Left:35.6 Right:35.6

Beam Angle(50%Imax):C0/180Left:17.2 Right:17.2

:C90/270Left:17.2 Right:17.2



(10%Imax) 463.499	—
(20%Imax) 926.998	—
(30%Imax) 1390.5	—
(40%Imax) 1854	—
(50%Imax) 2317.5	—
(60%Imax) 2781	—
(70%Imax) 3244.49	—
(80%Imax) 3707.99	—
(90%Imax) 4171.49	—



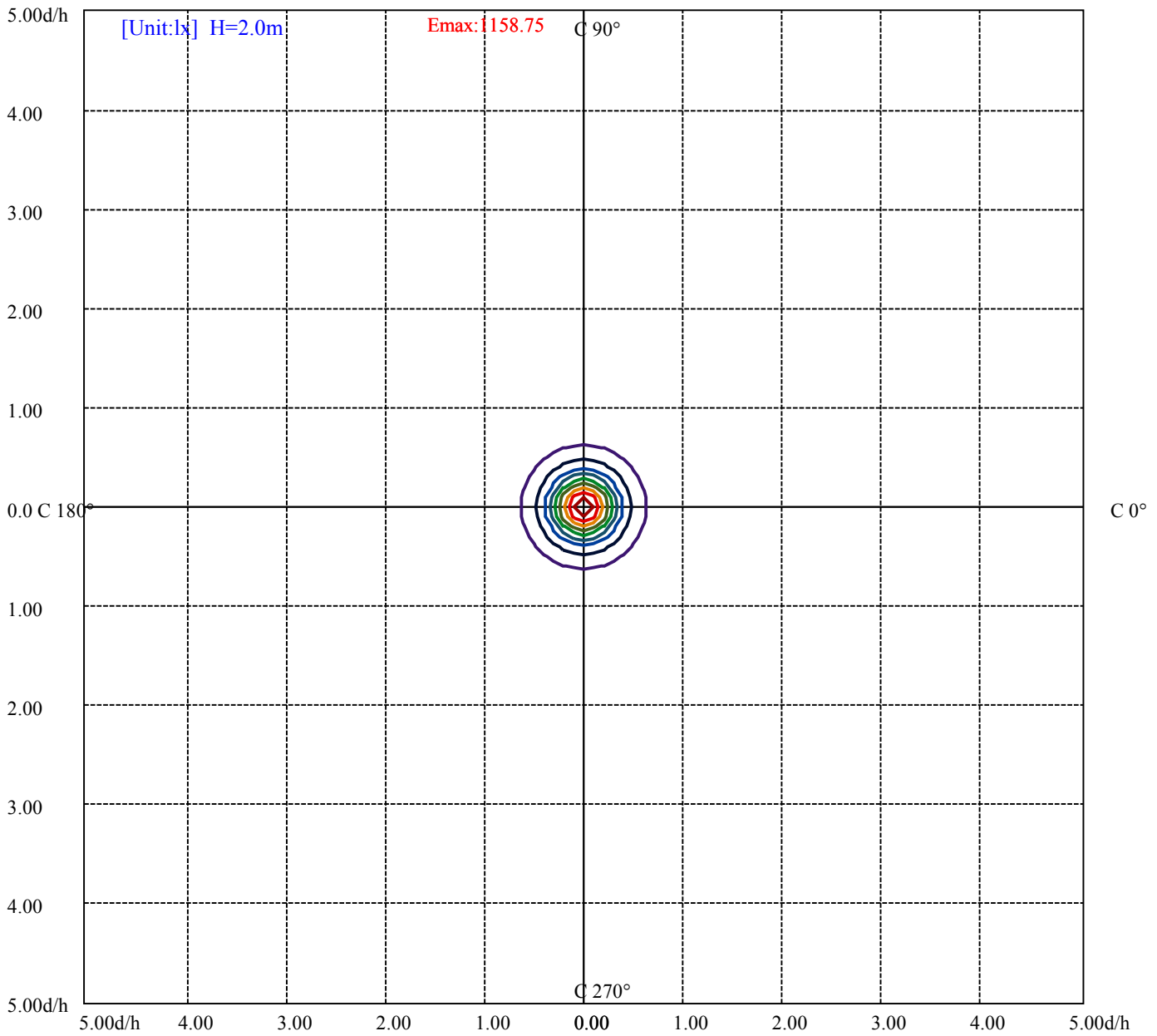
House

[Unit:cd]

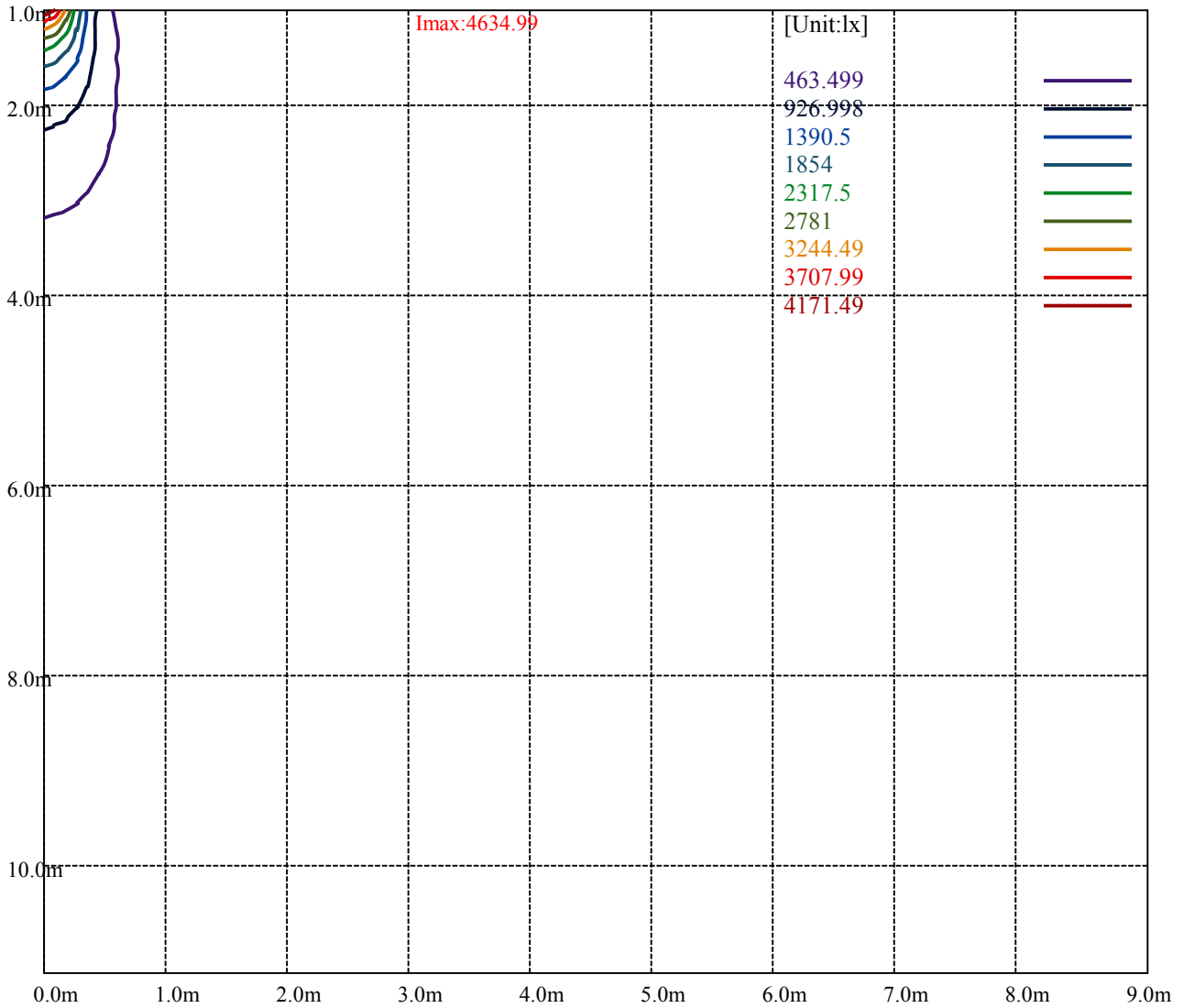
Road

Imax:4634.99

(10%Imax) 463.499	—
(20%Imax) 926.998	—
(30%Imax) 1390.5	—
(40%Imax) 1854	—
(50%Imax) 2317.5	—
(60%Imax) 2781	—
(70%Imax) 3244.49	—
(80%Imax) 3707.99	—
(90%Imax) 4171.49	—



- (10%Emax) 115.8745
- (20%Emax) 231.7493
- (30%Emax) 347.6225
- (40%Emax) 463.4975
- (50%Emax) 579.3725
- (60%Emax) 695.2475
- (70%Emax) 811.1225
- (80%Emax) 926.9975
- (90%Emax) 1042.87



Luminance Table

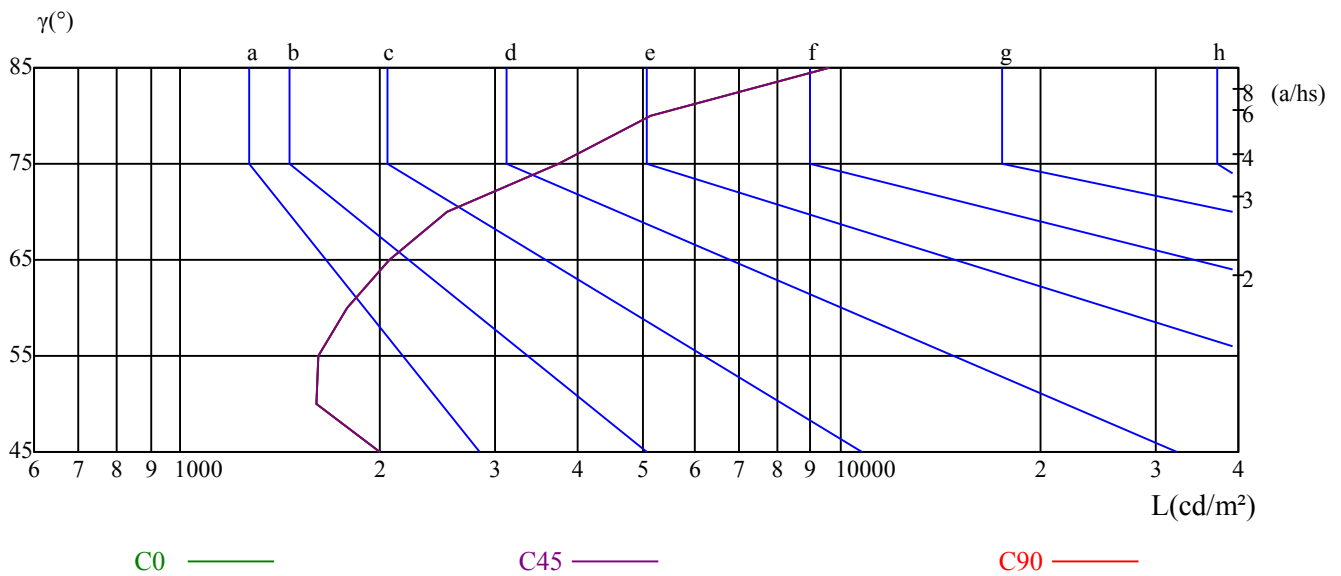
γ	45	50	55	60	65	70	75	80	85
C0	2006	1609	1622	1783	2069	2536	3739	5138	9602
C45	2006	1609	1622	1783	2069	2536	3739	5138	9602
C90	2006	1609	1622	1783	2069	2536	3739	5138	9602

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2069	2069	2069	3739	3739	3739	9602	9602	9602

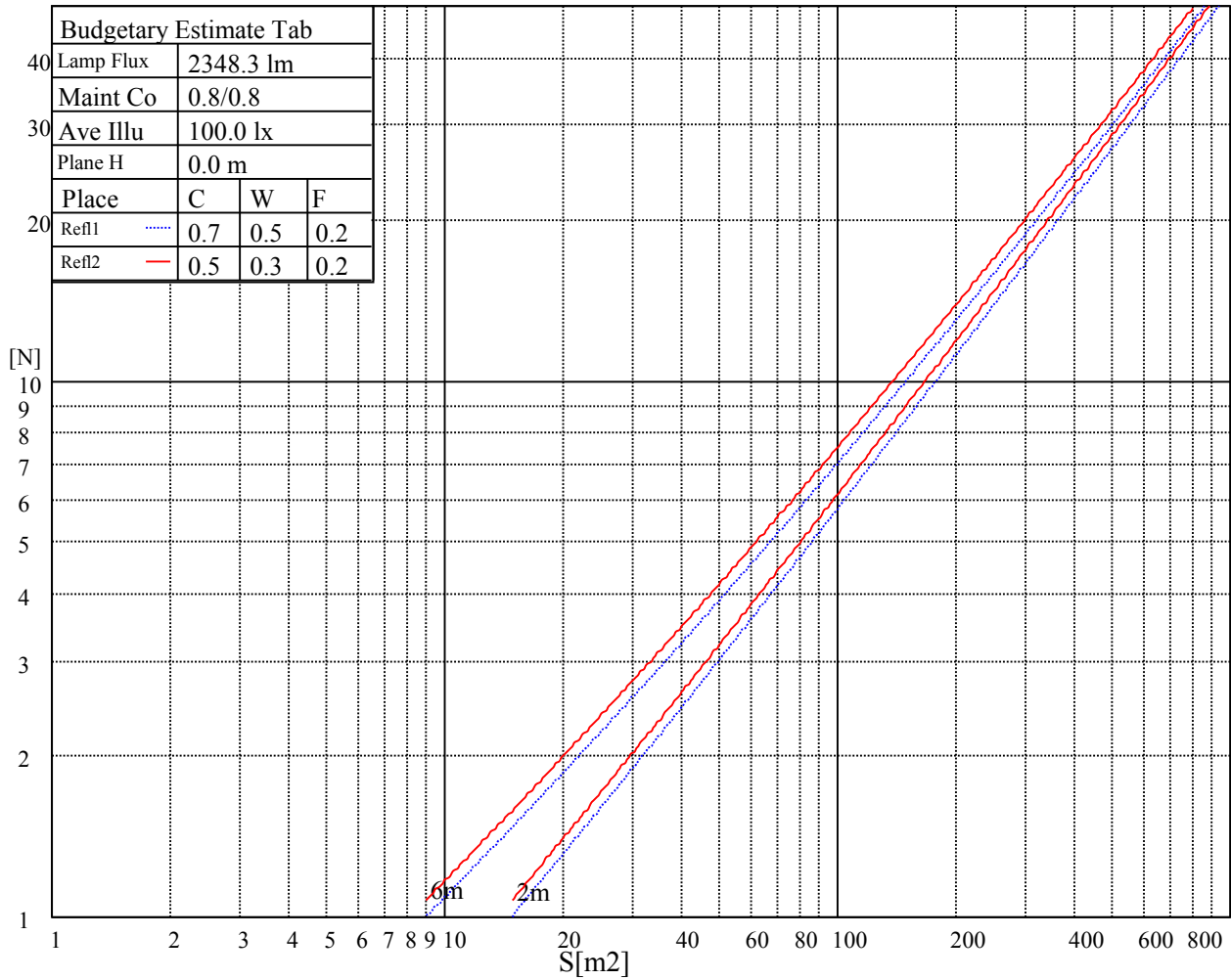
Glare Table

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

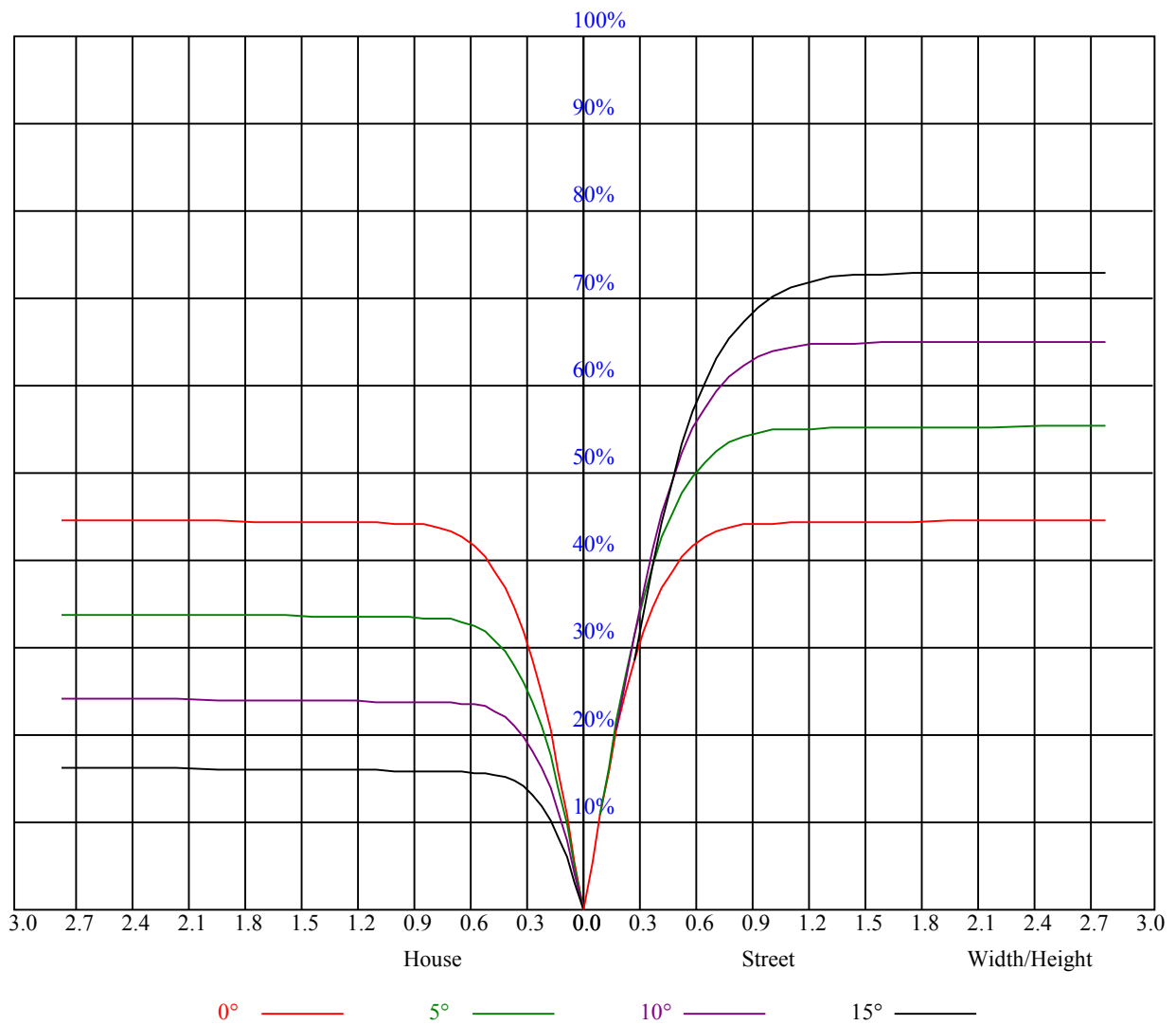
Luminance Limiting Curve



Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	-0.20	0.72	0.17	1.03	1.34	-0.34	0.57	0.02	0.88	1.19
	3H	3.07	3.87	3.45	4.21	4.58	2.97	3.78	3.36	4.11	4.48
	4H	5.11	5.85	5.52	6.21	6.60	5.12	5.87	5.53	6.22	6.61
	6H	7.13	7.82	7.55	8.19	8.59	7.24	7.92	7.66	8.29	8.69
	8H	8.18	8.82	8.62	9.22	9.63	8.29	8.92	8.72	9.32	9.73
	12H	9.88	10.49	10.31	10.87	11.30	9.93	10.54	10.36	10.92	11.35
4H	2H	0.71	1.46	1.12	1.81	2.20	0.61	1.35	1.02	1.71	2.10
	3H	4.27	4.89	4.69	5.30	5.70	4.22	4.83	4.64	5.24	5.65
	4H	6.51	7.06	6.95	7.48	7.93	6.56	7.10	7.00	7.53	7.98
	6H	8.63	9.09	9.10	9.55	10.02	8.72	9.19	9.19	9.64	10.12
	8H	9.77	10.21	10.25	10.66	11.13	9.86	10.29	10.34	10.75	11.22
	12H	11.36	11.73	11.85	12.22	12.70	11.40	11.77	11.89	12.26	12.74
8H	4H	7.32	7.76	7.80	8.21	8.68	7.36	7.79	7.83	8.24	8.72
	6H	9.68	10.02	10.19	10.52	11.01	9.76	10.10	10.27	10.60	11.09
	8H	10.99	11.29	11.52	11.82	12.31	11.06	11.36	11.60	11.89	12.39
	12H	12.69	12.95	13.21	13.45	14.03	12.71	12.97	13.24	13.47	14.05
12H	4H	7.53	7.90	8.02	8.39	8.87	7.56	7.93	8.05	8.42	8.90
	6H	10.19	10.29	10.53	10.77	11.32	10.26	10.36	10.60	10.84	11.39
	8H	11.43	11.69	11.95	12.19	12.77	11.49	11.75	12.01	12.25	12.83
Variation with the observer position at spacings:											
S = 1.0H	5.5/-8.1					5.5/-8.1					
S = 1.5H	7.8/-6.0					7.8/-6.0					
S = 2.0H	9.2/-4.5					9.2/-4.5					
Standard tables:	BK2					BK2					
Uncorrected UGR	-0.9					-0.9					



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	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.91
1	1.00	0.97	0.95	0.98	0.96	0.94	0.94	0.92	0.91	0.91	0.89	0.88	0.88	0.87	0.86	0.84
2	0.94	0.91	0.88	0.93	0.89	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.81	0.80
3	0.89	0.85	0.82	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.79	0.78	0.76
4	0.85	0.81	0.77	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.77	0.75	0.79	0.76	0.74	0.73
5	0.81	0.77	0.73	0.80	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.70
6	0.78	0.73	0.70	0.77	0.73	0.69	0.76	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.67
7	0.74	0.70	0.67	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.64
8	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.62
9	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.60
10	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.57



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	4633.55	4105.56	3243.92	2267.22	1498.08	1076.90	785.65	300.61	26.59
22.5	4678.69	4240.44	3470.20	2440.65	1584.52	1122.05	863.28	349.06	35.18
45.0	4630.24	4140.79	3294.02	2316.22	1489.28	1096.39	787.47	287.28	28.68
67.5	4671.54	4294.95	3526.36	2571.13	1665.46	1161.69	890.81	415.68	43.16
90.0	4632.45	4265.77	3493.88	2551.86	1619.76	1096.01	871.71	400.92	36.39
112.5	4623.64	4441.95	3801.09	2895.42	1908.25	1276.21	959.08	581.95	278.03
135.0	4634.65	4450.76	3799.44	2898.72	1868.06	1303.18	949.89	582.61	106.64
157.5	4575.19	4582.34	4096.20	3245.57	2240.80	1453.49	1058.18	755.92	292.90
180.0	4633.55	4598.86	4044.44	3185.01	2157.11	1467.25	1039.02	742.38	237.40
202.5	4678.69	4538.85	3923.87	3029.75	2018.92	1344.48	1002.08	675.87	153.28
225.0	4630.24	4577.39	4030.68	3165.74	2185.74	1428.16	1079.11	745.46	294.00
247.5	4671.54	4448.56	3801.64	2902.02	1888.43	1294.93	970.31	604.90	123.33
270.0	4632.45	4434.24	3792.84	2911.93	1961.11	1317.50	987.16	624.34	287.39
292.5	4623.64	4233.29	3475.16	2562.88	1656.10	1090.34	896.59	435.33	53.57
315.0	4634.65	4242.65	3471.86	2595.36	1682.52	1183.16	894.67	429.99	49.77
337.5	4575.19	4081.33	3168.50	2201.71	1443.58	1075.14	763.63	250.29	23.45
360.0	4633.55	4105.56	3243.92	2267.22	1498.08	1076.90	785.65	300.61	26.59
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	10.19	9.30	9.08	8.86	8.75	8.75	10.96	9.80	8.37
22.5	9.97	9.41	9.14	8.97	8.75	8.86	10.46	9.36	8.42
45.0	9.97	9.41	9.14	8.92	8.81	8.92	11.07	8.92	8.37
67.5	10.08	9.58	9.25	8.97	8.86	8.70	10.41	9.03	8.42
90.0	10.02	9.47	9.14	8.92	8.75	8.70	10.19	8.70	8.42
112.5	10.41	9.52	9.19	8.97	8.75	8.64	9.41	8.81	8.37
135.0	10.79	9.36	9.03	8.81	8.64	8.53	8.48	8.53	8.26
157.5	23.78	9.69	9.08	8.81	8.64	8.53	8.37	8.31	8.26
180.0	26.21	9.86	9.03	8.70	8.53	8.42	8.26	8.26	8.20
202.5	21.09	11.56	9.25	8.81	8.64	8.48	8.42	8.59	8.31
225.0	19.38	14.09	10.52	9.03	8.75	8.59	8.48	8.42	8.31
247.5	15.25	12.44	9.58	8.97	8.81	8.64	8.53	8.48	8.37
270.0	14.04	12.50	9.80	9.08	8.86	8.70	8.59	8.70	8.42
292.5	13.21	10.08	9.25	8.97	8.81	8.70	10.08	9.14	8.42
315.0	12.28	9.91	9.25	8.97	8.75	8.70	10.90	9.97	8.48
337.5	10.30	9.30	9.08	8.86	8.75	8.92	12.22	9.74	8.48
360.0	10.19	9.30	9.08	8.86	8.75	8.75	10.96	9.80	8.37
C/γ(°)	90.0								
0.0	8.09								
22.5	8.20								
45.0	8.20								
67.5	8.26								
90.0	8.20								
112.5	8.26								
135.0	8.15								
157.5	8.15								
180.0	8.04								
202.5	8.15								
225.0	8.20								
247.5	8.20								
270.0	8.20								
292.5	8.20								
315.0	8.20								
337.5	8.15								
360.0	8.09								