



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

Nata

LumCAT: 2-1131-E

Luminaire:

Report No: NT2014122601

Voltage(V): 219.9000

Test No: GC2014122601

Current(A): 0.0790

LampCAT: XICATO XTM19

Power (W): 14.4000

Lamp flux(lm): 1270.0

PF: 0.8260

Number of Lamps: 1

Ballast type: DC

Length(mm): 68

Width(mm): 68

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1101.20

Efficiency(%): 86.71%

Lumens(lm)/Power(W): 76.47

Central intensity(cd): 5317.037

Maximum intensity(cd): 5317.037

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=18.7

[C90/270]Total=18.7

Field angle(10%Imax): [C0/180]Total=48.3

[C90/270]Total=48.3

Maximum s/h(1/2): C0_180=0.32 C90_270=0.32

Maximum s/h(1/4): C0_180=0.35 C90_270=0.35

Up flux rate of lamp(%): 3.31%

Down flux rate of lamp(%): 85.83%

Up flux rate of LUM(%): 6.27%

Down flux rate of LUM(%): 96.29%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 91.888%

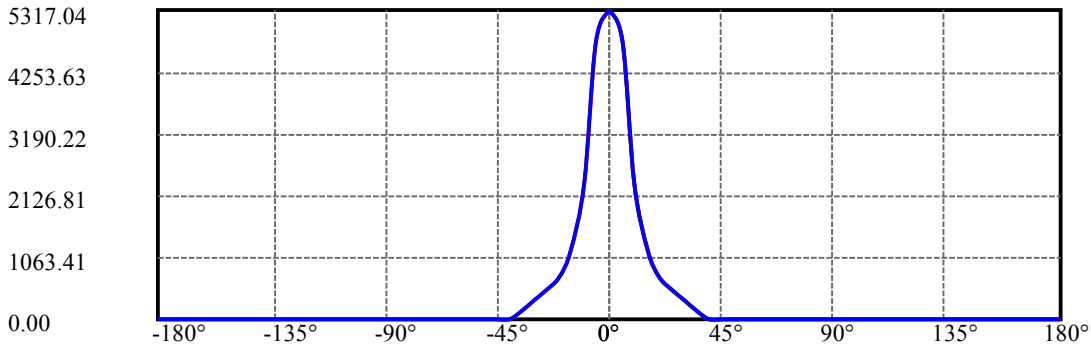
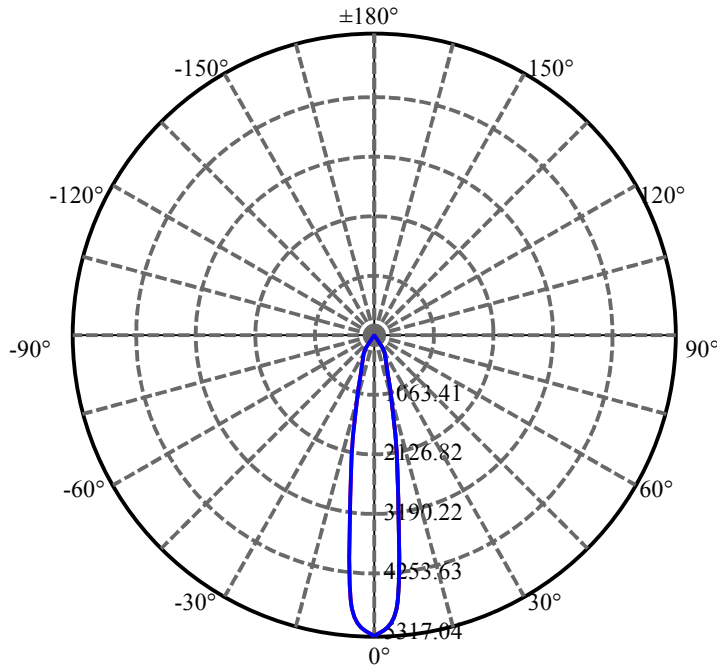
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5317.036	31.797	31.797	2.504%	2.887%
5.0	4757.190	227.267	259.064	17.895%	23.525%
10.0	2355.757	224.228	483.292	17.656%	43.888%
15.0	1181.491	167.616	650.908	13.198%	59.109%
20.0	715.836	134.201	785.109	10.567%	71.295%
25.0	494.888	114.642	899.751	9.027%	81.706%
30.0	316.987	86.876	986.627	6.841%	89.595%
35.0	118.986	37.409	1024.036	2.946%	92.992%
40.0	13.470	4.746	1028.782	.374%	93.423%
45.0	6.763	2.621	1031.403	.206%	93.661%
50.0	6.602	2.772	1034.176	.218%	93.913%
55.0	6.525	2.930	1037.105	.231%	94.179%
60.0	6.483	3.078	1040.183	.242%	94.459%
65.0	6.469	3.214	1043.397	.253%	94.751%
70.0	6.434	3.314	1046.711	.261%	95.052%
75.0	6.441	3.410	1050.121	.269%	95.361%
80.0	6.462	3.488	1053.61	.275%	95.678%
85.0	7.092	3.872	1057.482	.305%	96.030%
90.0	6.399	3.508	1060.99	.276%	96.348%
95.0	6.532	3.567	1064.557	.281%	96.672%
100.0	6.427	3.470	1068.026	.273%	96.987%
105.0	6.399	3.388	1071.415	.267%	97.295%
110.0	6.378	3.285	1074.7	.259%	97.593%
115.0	6.378	3.169	1077.869	.249%	97.881%
120.0	6.378	3.028	1080.896	.238%	98.156%
125.0	6.371	2.861	1083.757	.225%	98.416%
130.0	6.413	2.693	1086.45	.212%	98.660%
135.0	6.427	2.491	1088.941	.196%	98.886%
140.0	6.483	2.284	1091.226	.180%	99.094%
145.0	6.574	2.067	1093.293	.163%	99.282%
150.0	6.896	1.890	1095.183	.149%	99.453%
155.0	7.679	1.779	1096.961	.140%	99.615%
160.0	8.525	1.598	1098.56	.126%	99.760%
165.0	9.050	1.284	1099.844	.101%	99.876%
170.0	9.148	0.871	1100.714	.069%	99.956%
175.0	9.120	0.436	1101.15	.034%	99.995%
180.0	9.043	0.054	1101.204	.004%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	986.63	77.69%	89.60%
0-40	1028.78	81.01%	93.42%
0-60	1040.18	81.90%	94.46%
0-90	1060.99	83.54%	96.35%
0-120	1080.90	85.11%	98.16%
0-180	1101.20	86.71%	100.00%
60-90	23.88	1.88%	2.17%
90-120	23.41	1.84%	2.13%
90-130	28.97	2.28%	2.63%
90-150	37.70	2.97%	3.42%
90-180	43.67	3.44%	3.97%
0-24.18	880.96	69.37%	80.00%

ZONAL LUMEN SUMMARY

0-10	483.29
10-20	301.82
20-30	201.52
30-40	42.15
40-50	5.39
50-60	6.01
60-70	6.53
70-80	6.90
80-90	7.38
90-100	7.04
100-110	6.67
110-120	6.20
120-130	5.55
130-140	4.78
140-150	3.96
150-160	3.38
160-170	2.15
170-180	0.44



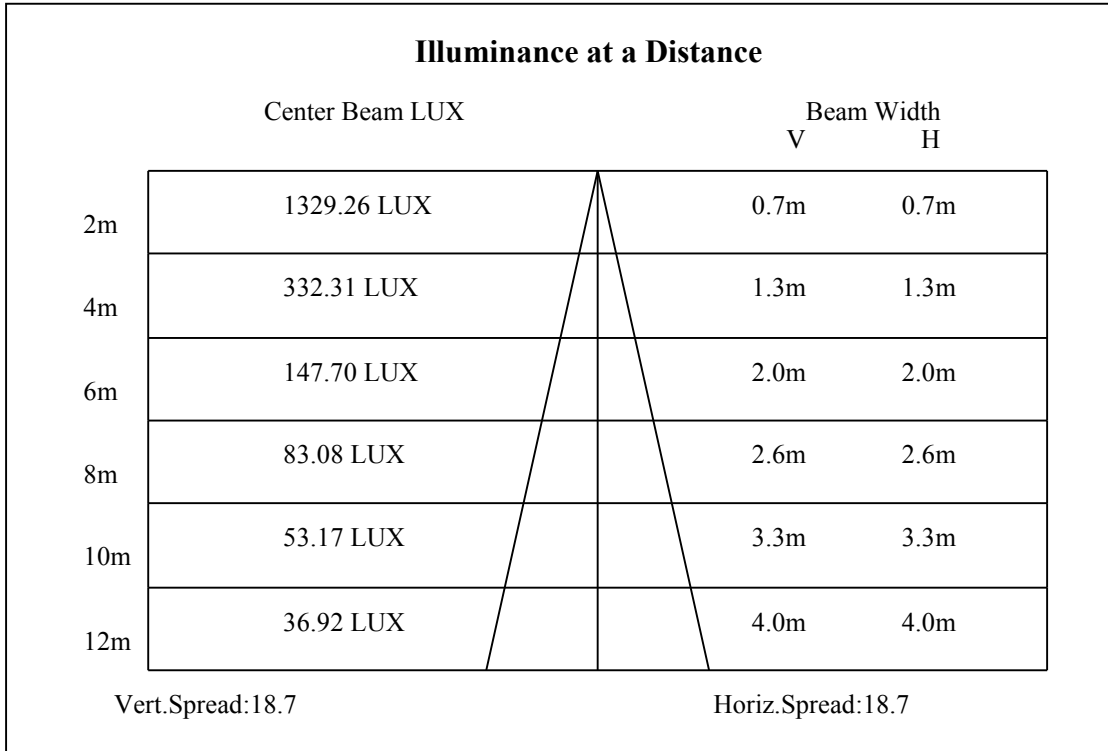
C0(Max): —————

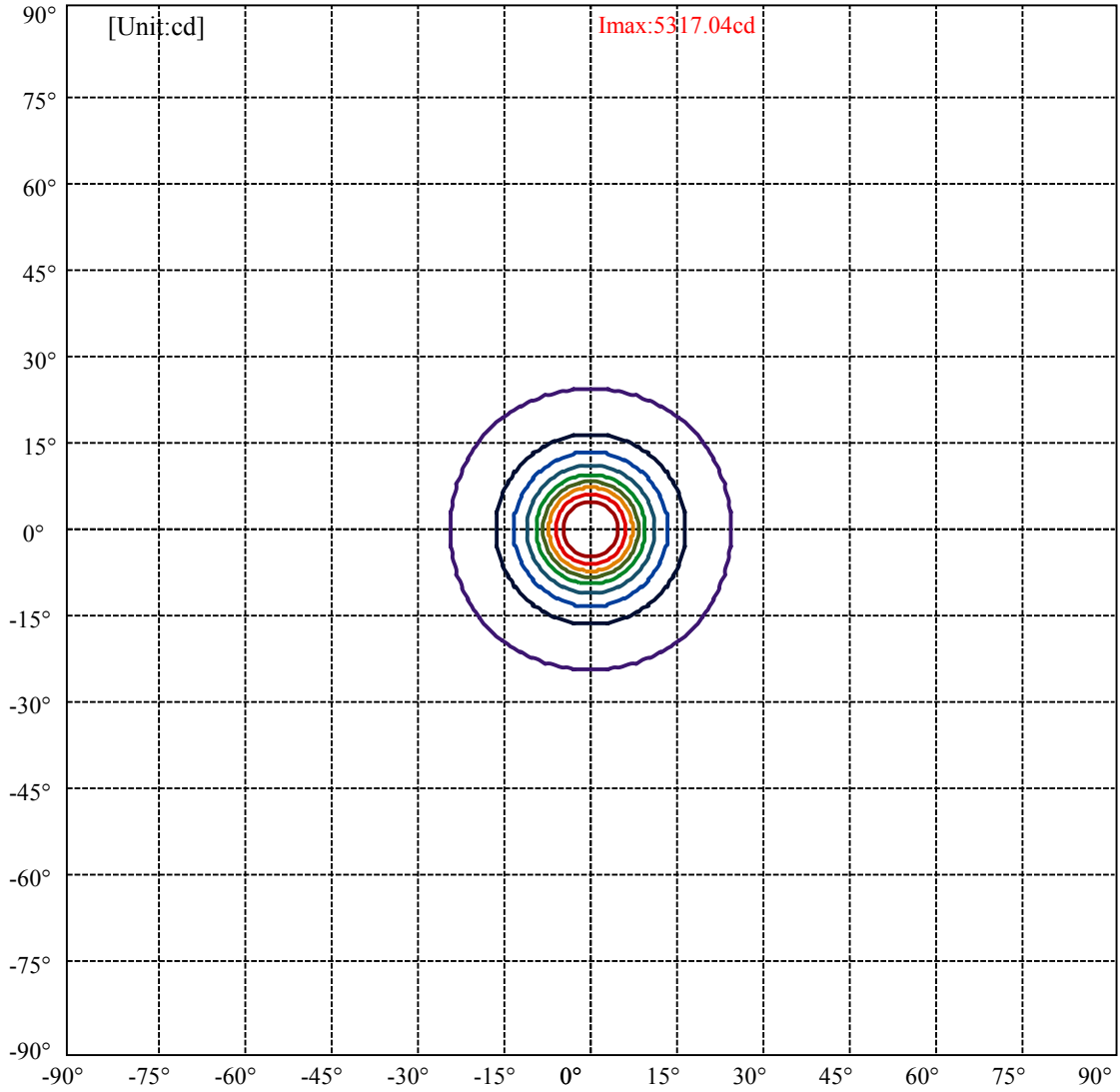
C0/C180: —————

C90/C270: —————

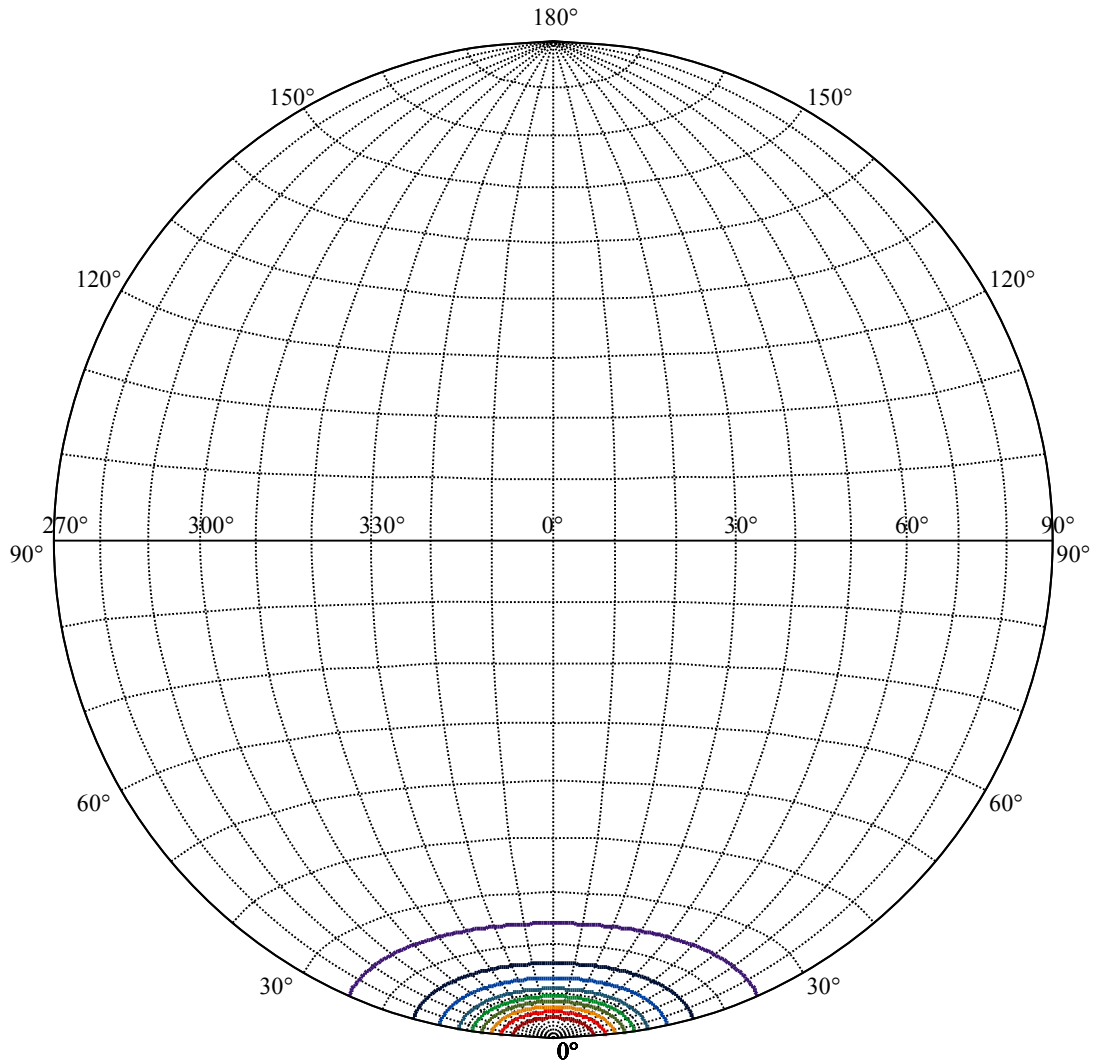
Field angle(10%Imax):C0/180Left:24.2 Right:24.2
:C90/270Left:24.2 Right:24.2

Beam Angle(50%Imax):C0/180Left:9.4 Right:9.4
:C90/270Left:9.4 Right:9.4





(10%Imax) 531.704	—
(20%Imax) 1063.41	—
(30%Imax) 1595.11	—
(40%Imax) 2126.81	—
(50%Imax) 2658.52	—
(60%Imax) 3190.22	—
(70%Imax) 3721.93	—
(80%Imax) 4253.63	—
(90%Imax) 4785.33	—



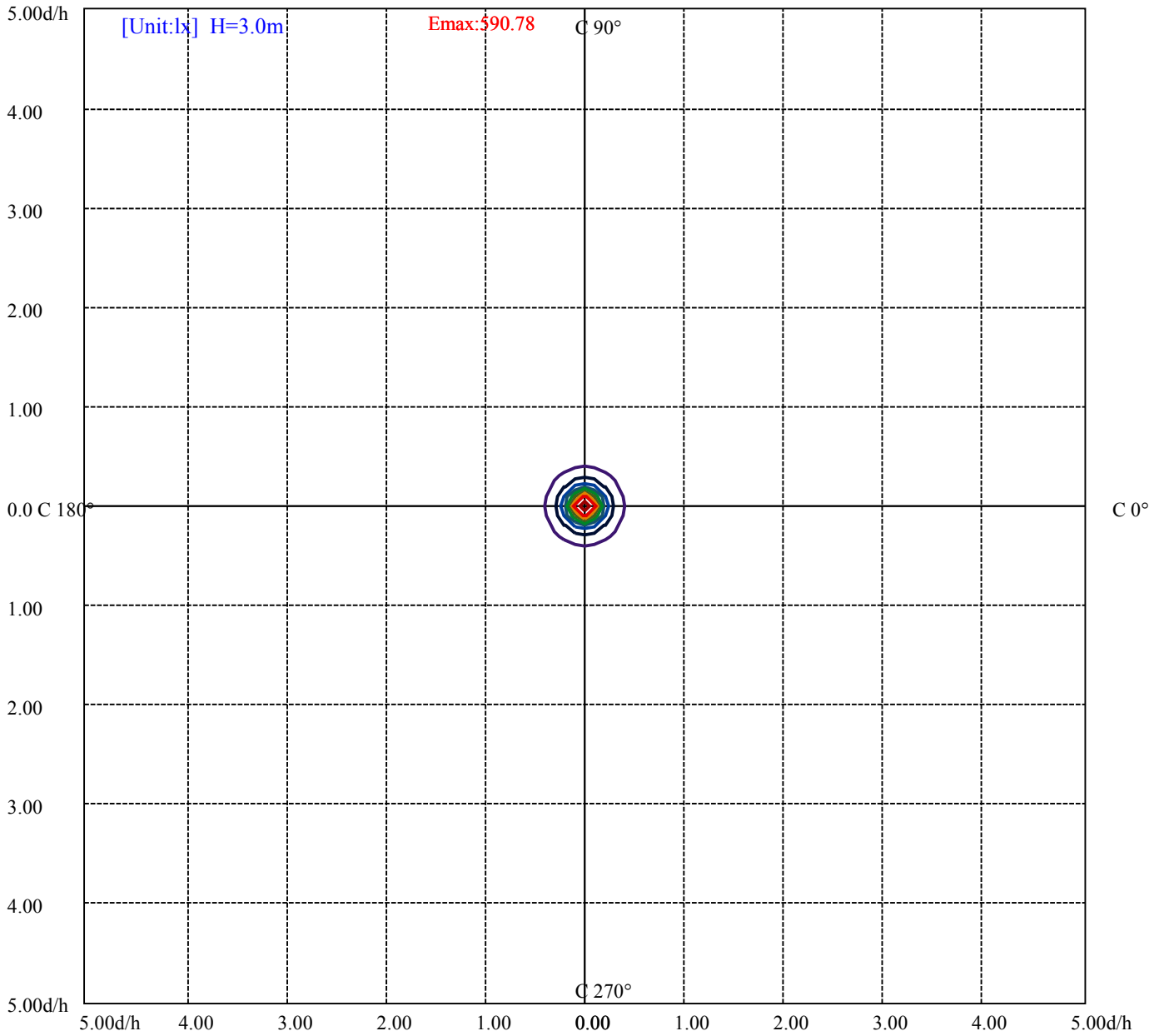
House

[Unit:cd]

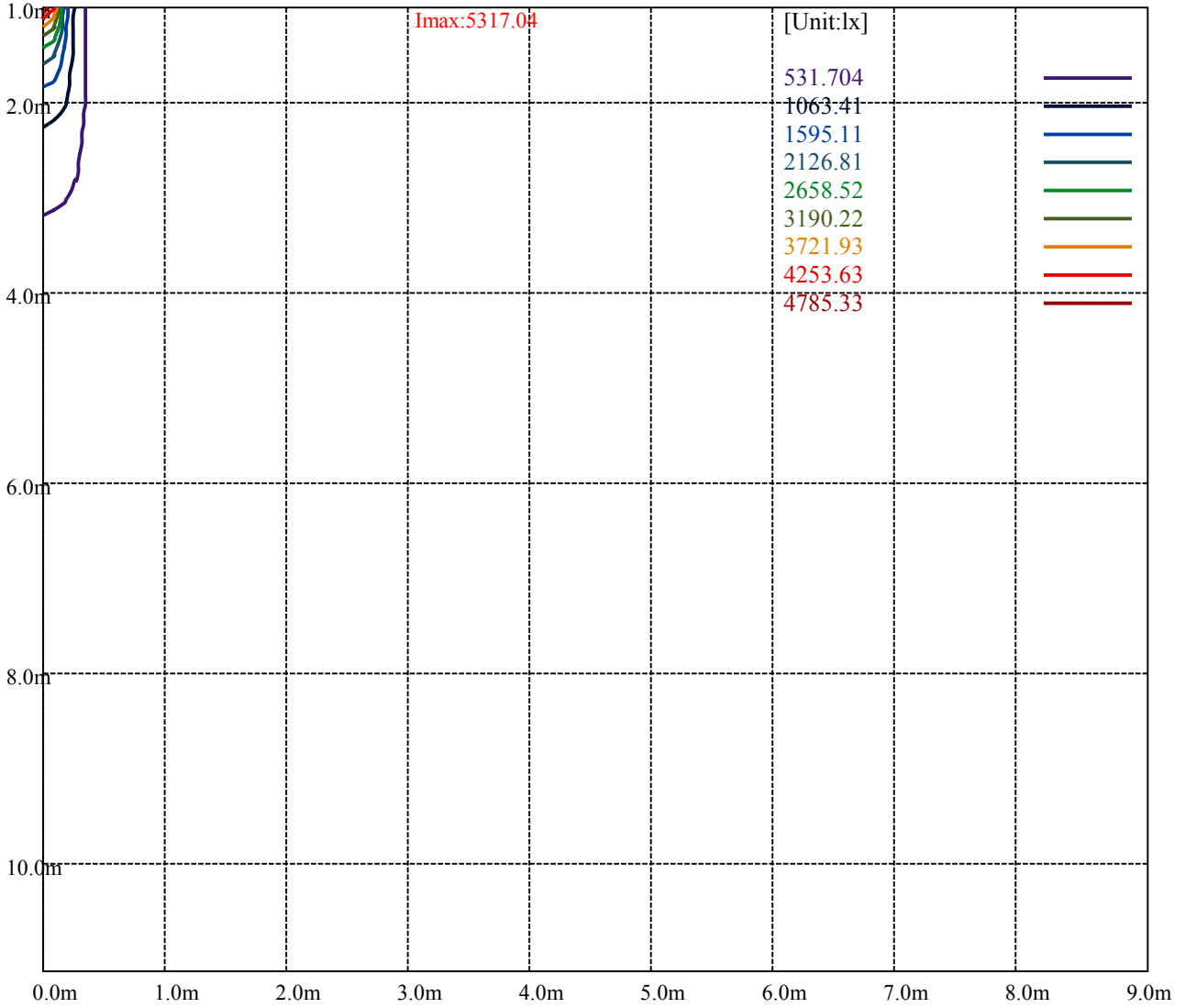
Road

Imax:5317.04

(10%Imax) 531.704	—
(20%Imax) 1063.41	—
(30%Imax) 1595.11	—
(40%Imax) 2126.81	—
(50%Imax) 2658.52	—
(60%Imax) 3190.22	—
(70%Imax) 3721.93	—
(80%Imax) 4253.63	—
(90%Imax) 4785.33	—



(10%E _{max}) 59.078	—
(20%E _{max}) 118.1556	—
(30%E _{max}) 177.2344	—
(40%E _{max}) 236.3122	—
(50%E _{max}) 295.39	—
(60%E _{max}) 354.4678	—
(70%E _{max}) 413.5455	—
(80%E _{max}) 472.6245	—
(90%E _{max}) 531.7022	—



Luminance Table

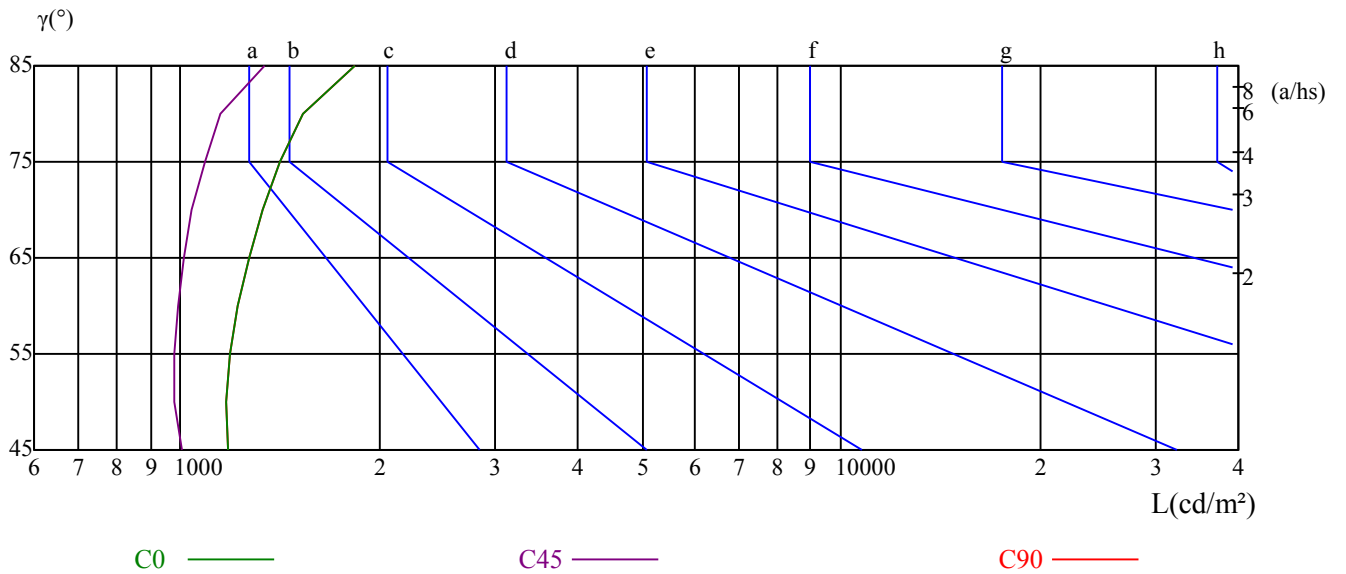
γ	45	50	55	60	65	70	75	80	85
C0	1182	1173	1188	1220	1269	1329	1417	1532	1838
C45	1004	981	978	988	1011	1039	1085	1147	1341
C90	1182	1173	1188	1220	1269	1329	1417	1532	1838

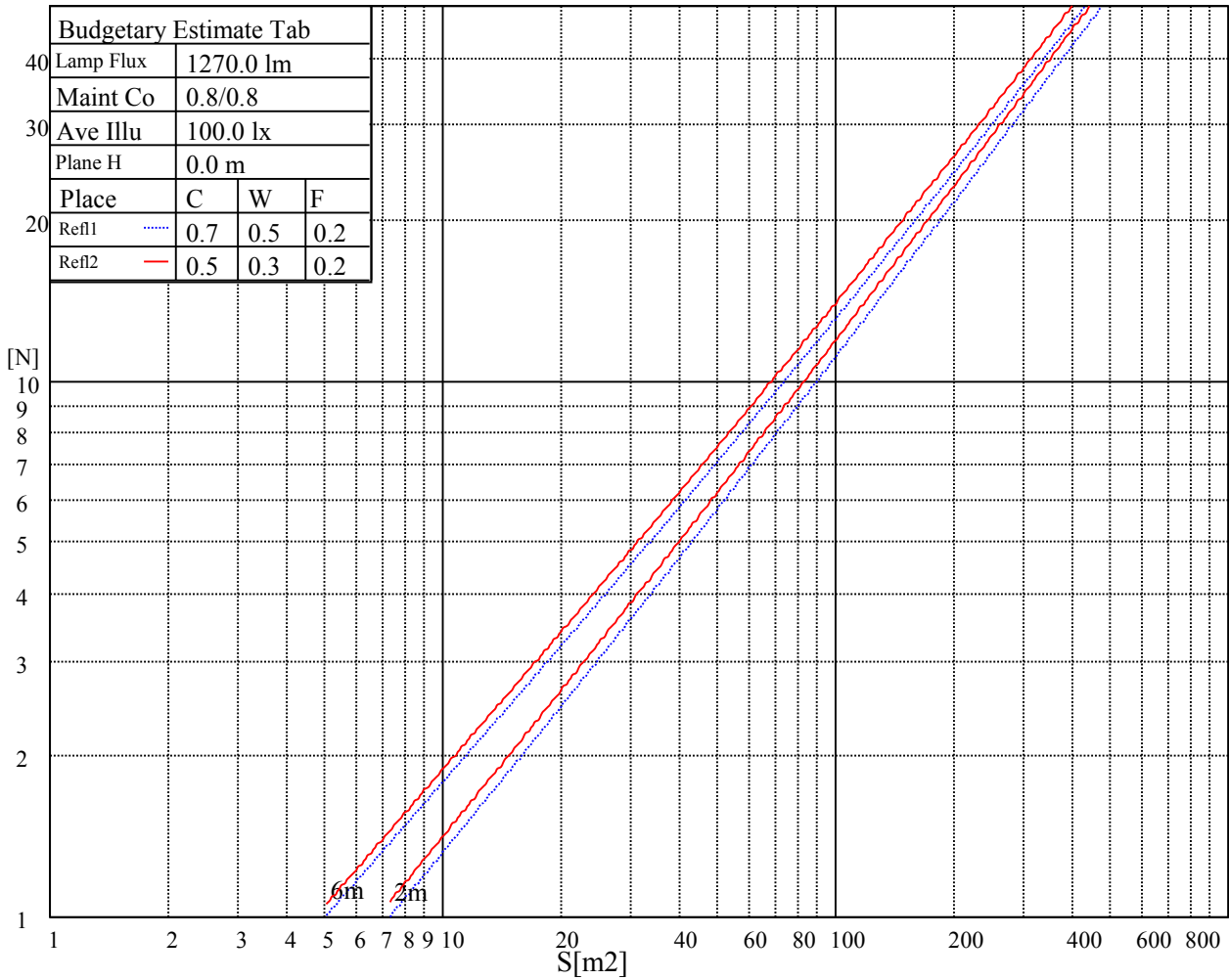
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3310	3310	3310	5382	5382	5382	17597	17597	17597

Glare Table

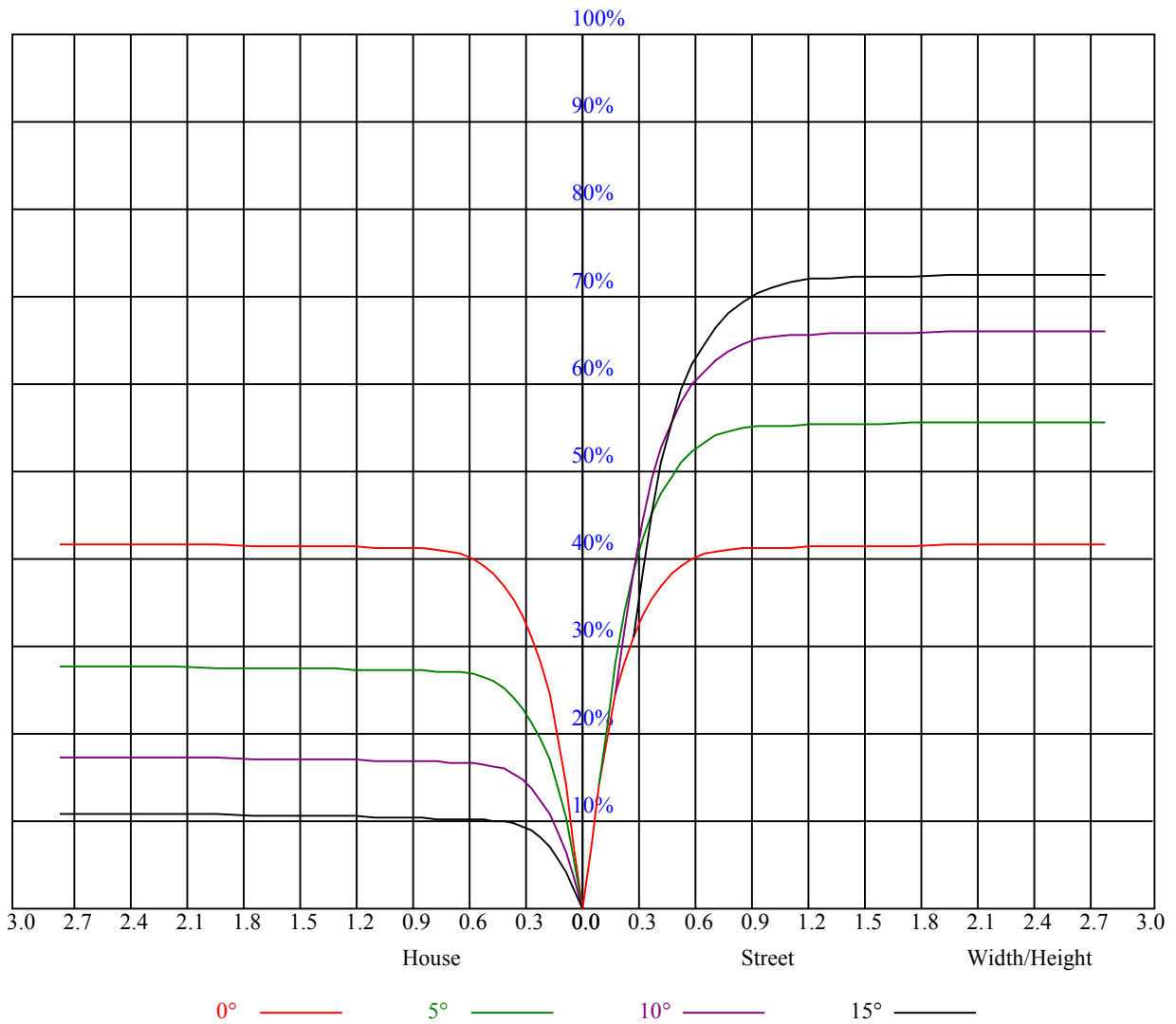
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.05	1.05	1.05	1.02	1.02	1.02	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.86
1	0.96	0.93	0.91	0.94	0.91	0.89	0.89	0.87	0.86	0.86	0.84	0.83	0.82	0.81	0.80	0.78
2	0.91	0.87	0.84	0.89	0.86	0.83	0.86	0.83	0.81	0.83	0.80	0.79	0.80	0.78	0.76	0.75
3	0.87	0.83	0.79	0.85	0.82	0.79	0.83	0.79	0.77	0.80	0.77	0.75	0.78	0.76	0.74	0.72
4	0.83	0.79	0.76	0.82	0.78	0.75	0.80	0.76	0.74	0.78	0.75	0.73	0.76	0.73	0.71	0.70
5	0.80	0.76	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.74	0.71	0.69	0.68
6	0.77	0.73	0.70	0.76	0.72	0.69	0.75	0.71	0.69	0.73	0.70	0.68	0.72	0.69	0.67	0.66
7	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.71	0.68	0.66	0.70	0.67	0.65	0.64
8	0.72	0.68	0.65	0.72	0.68	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.68	0.66	0.64	0.63
9	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.61
10	0.68	0.64	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.60



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	5297.38	4821.81	2310.19	1099.26	709.51	493.59	313.83	117.33	12.92
22.5	5360.05	4733.96	2372.02	1214.07	721.93	495.22	318.13	120.80	14.16
45.0	5341.03	4775.53	2352.99	1150.45	720.14	492.42	318.69	117.22	12.59
67.5	5328.72	4712.70	2381.53	1233.31	712.81	495.61	316.12	119.23	14.55
90.0	5316.97	4791.31	2322.78	1157.00	707.44	499.02	316.18	120.07	12.25
112.5	5300.74	4712.70	2381.53	1233.31	712.81	495.61	316.12	119.23	14.55
135.0	5304.10	4775.53	2352.99	1150.45	720.14	492.42	318.69	117.22	12.59
157.5	5287.31	4733.96	2372.02	1214.07	721.93	495.22	318.13	120.80	14.16
180.0	5297.38	4821.81	2310.19	1099.26	709.51	493.59	313.83	117.33	12.92
202.5	5360.05	4733.96	2372.02	1214.07	721.93	495.22	318.13	120.80	14.16
225.0	5341.03	4775.53	2352.99	1150.45	720.14	492.42	318.69	117.22	12.59
247.5	5328.72	4712.70	2381.53	1233.31	712.81	495.61	316.12	119.23	14.55
270.0	5316.97	4791.31	2322.78	1157.00	707.44	499.02	316.18	120.07	12.25
292.5	5300.74	4712.70	2381.53	1233.31	712.81	495.61	316.12	119.23	14.55
315.0	5304.10	4775.53	2352.99	1150.45	720.14	492.42	318.69	117.22	12.59
337.5	5287.31	4733.96	2372.02	1214.07	721.93	495.22	318.13	120.80	14.16
360.0	5297.38	4821.81	2310.19	1099.26	709.51	493.59	313.83	117.33	12.92
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	6.71	6.55	6.49	6.43	6.43	6.38	6.38	6.38	7.22
22.5	6.77	6.60	6.49	6.49	6.49	6.43	6.43	6.43	7.27
45.0	6.77	6.60	6.55	6.49	6.43	6.43	6.43	6.49	6.99
67.5	6.77	6.60	6.55	6.49	6.49	6.43	6.49	6.49	7.16
90.0	6.77	6.66	6.55	6.49	6.49	6.49	6.43	6.49	6.66
112.5	6.77	6.60	6.55	6.49	6.49	6.43	6.49	6.49	7.16
135.0	6.77	6.60	6.55	6.49	6.43	6.43	6.43	6.49	6.99
157.5	6.77	6.60	6.49	6.49	6.49	6.43	6.43	6.43	7.27
180.0	6.71	6.55	6.49	6.43	6.43	6.38	6.38	6.38	7.22
202.5	6.77	6.60	6.49	6.49	6.49	6.43	6.43	6.43	7.27
225.0	6.77	6.60	6.55	6.49	6.43	6.43	6.43	6.49	6.99
247.5	6.77	6.60	6.55	6.49	6.49	6.43	6.49	6.49	7.16
270.0	6.77	6.66	6.55	6.49	6.49	6.43	6.43	6.49	6.66
292.5	6.77	6.60	6.55	6.49	6.49	6.43	6.49	6.49	7.16
315.0	6.77	6.60	6.55	6.49	6.43	6.43	6.43	6.49	6.99
337.5	6.77	6.60	6.49	6.49	6.49	6.43	6.43	6.43	7.27
360.0	6.71	6.55	6.49	6.43	6.43	6.38	6.38	6.38	7.22
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	6.38	6.55	6.38	6.38	6.38	6.38	6.32	6.32	6.38
22.5	6.38	6.66	6.43	6.43	6.38	6.38	6.38	6.38	6.43
45.0	6.43	6.38	6.43	6.38	6.38	6.38	6.38	6.38	6.43
67.5	6.38	6.49	6.43	6.38	6.38	6.38	6.38	6.38	6.38
90.0	6.43	6.66	6.43	6.43	6.38	6.38	6.43	6.38	6.43
112.5	6.38	6.49	6.43	6.38	6.38	6.38	6.38	6.38	6.38
135.0	6.43	6.38	6.43	6.38	6.38	6.38	6.38	6.38	6.43
157.5	6.38	6.66	6.43	6.43	6.38	6.38	6.38	6.38	6.43
180.0	6.38	6.55	6.38	6.38	6.38	6.38	6.32	6.32	6.38
202.5	6.38	6.66	6.43	6.43	6.38	6.38	6.38	6.38	6.43
225.0	6.43	6.38	6.43	6.38	6.38	6.38	6.38	6.38	6.43
247.5	6.38	6.49	6.43	6.38	6.38	6.38	6.38	6.38	6.38
270.0	6.43	6.66	6.43	6.43	6.38	6.38	6.43	6.38	6.43
292.5	6.38	6.49	6.43	6.38	6.38	6.38	6.38	6.38	6.38
315.0	6.43	6.38	6.43	6.38	6.38	6.38	6.38	6.38	6.43
337.5	6.38	6.66	6.43	6.43	6.38	6.38	6.38	6.38	6.43
360.0	6.38	6.55	6.38	6.38	6.38	6.38	6.32	6.32	6.38

Intensity data(cd)

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	6.38	6.43	6.49	6.88	7.67	8.56	9.12	9.23	9.18
22.5	6.43	6.49	6.60	6.94	7.72	8.56	9.06	9.23	9.18
45.0	6.43	6.49	6.55	6.88	7.67	8.50	9.06	9.12	9.12
67.5	6.43	6.49	6.60	6.88	7.67	8.50	9.01	9.06	9.06
90.0	6.43	6.49	6.60	6.88	7.67	8.50	9.01	9.12	9.06
112.5	6.43	6.49	6.60	6.88	7.67	8.50	9.01	9.06	9.06
135.0	6.43	6.49	6.55	6.88	7.67	8.50	9.06	9.12	9.12
157.5	6.43	6.49	6.60	6.94	7.72	8.56	9.06	9.23	9.18
180.0	6.38	6.43	6.49	6.88	7.67	8.56	9.12	9.23	9.18
202.5	6.43	6.49	6.60	6.94	7.72	8.56	9.06	9.23	9.18
225.0	6.43	6.49	6.55	6.88	7.67	8.50	9.06	9.12	9.12
247.5	6.43	6.49	6.60	6.88	7.67	8.50	9.01	9.06	9.06
270.0	6.43	6.49	6.60	6.88	7.67	8.50	9.01	9.12	9.06
292.5	6.43	6.49	6.60	6.88	7.67	8.50	9.01	9.06	9.06
315.0	6.43	6.49	6.55	6.88	7.67	8.50	9.06	9.12	9.12
337.5	6.43	6.49	6.60	6.94	7.72	8.56	9.06	9.23	9.18
360.0	6.38	6.43	6.49	6.88	7.67	8.56	9.12	9.23	9.18
C/γ(°)	180.0								
0.0	9.12								
22.5	9.12								
45.0	9.06								
67.5	8.95								
90.0	8.95								
112.5	8.95								
135.0	9.06								
157.5	9.12								
180.0	9.12								
202.5	9.12								
225.0	9.06								
247.5	8.95								
270.0	8.95								
292.5	8.95								
315.0	9.06								
337.5	9.12								
360.0	9.12								