



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

Nata

LumCAT: 3-2117-N	
Luminaire: 92.70.135	
Report No: NATA0100	Voltage(V): 33.8000
Test No: GC2018061916	Current(A): 0.4900
LampCAT: NFCW108B-V3	Power (W): 16.5620
Lamp flux(lm): 2263.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 74	Width(mm): 74
Phm Type: C	Height(mm): 64

Photometric Results

Lumens(lm): 1811.80
Efficiency(%): 80.06%
Lumens(lm)/Power(W): 110.95
Central intensity(cd): 4585.510
Maximum intensity(cd): 4585.510
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=35.8
[C90/270]Total=35.8
Field angle(10%Imax): [C0/180]Total=59.2
[C90/270]Total=59.2
Maximum s/h(1/2): C0_180=0.60 C90_270=0.60
Maximum s/h(1/4): C0_180=0.57 C90_270=0.57
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 81.20%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.692%

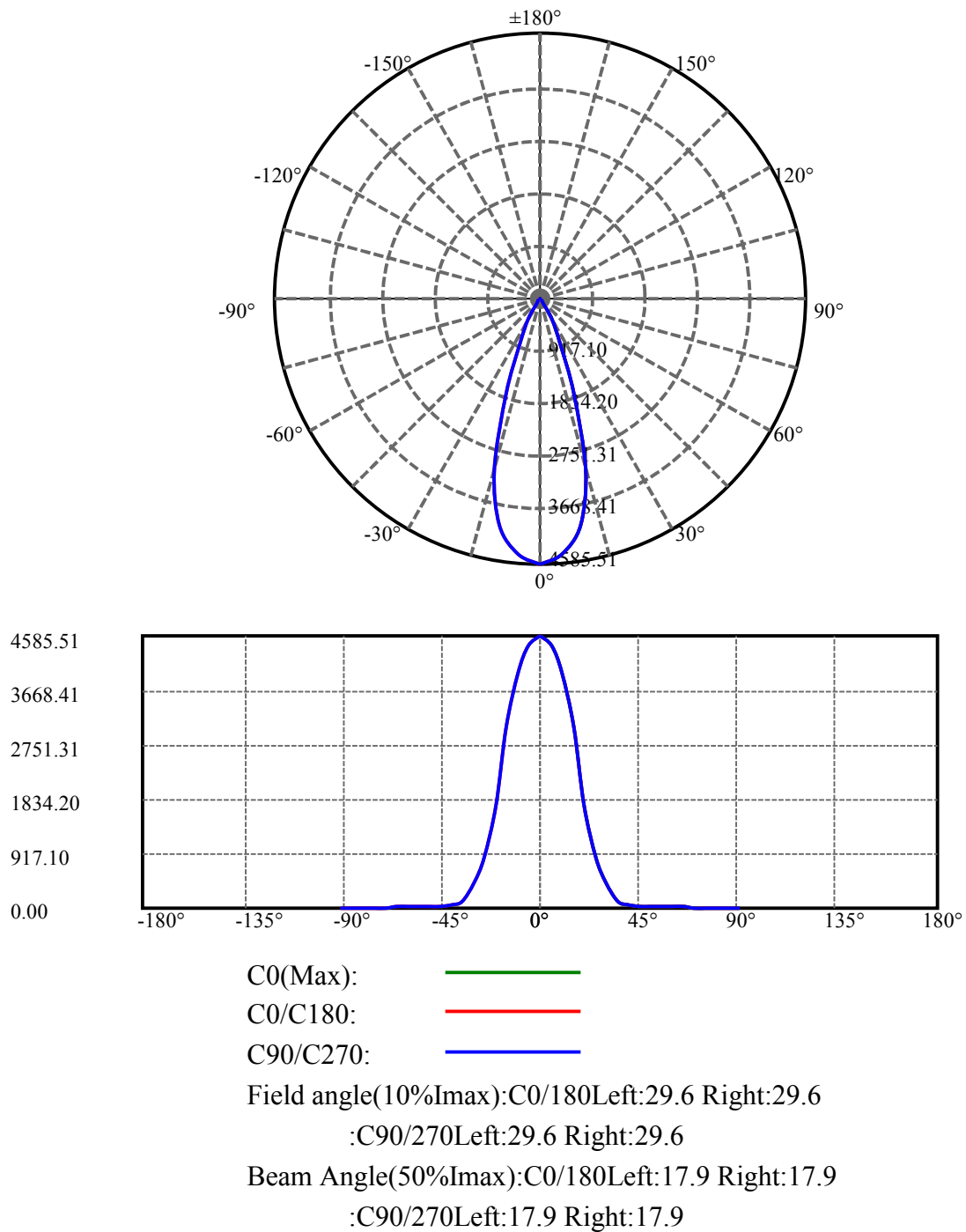
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4585.510	27.422	27.422	1.212%	1.514%
5.0	4420.960	211.204	238.626	9.333%	13.171%
10.0	3970.668	377.940	616.566	16.701%	34.031%
15.0	3057.488	433.761	1050.327	19.168%	57.972%
20.0	1728.957	324.134	1374.462	14.323%	75.862%
25.0	861.750	199.627	1574.089	8.821%	86.880%
30.0	421.202	115.438	1689.527	5.101%	93.252%
35.0	105.419	33.144	1722.671	1.465%	95.081%
40.0	45.401	15.996	1738.667	.707%	95.964%
45.0	30.157	11.689	1750.356	.517%	96.609%
50.0	23.151	9.721	1760.077	.430%	97.145%
55.0	19.180	8.612	1768.689	.381%	97.621%
60.0	16.909	8.027	1776.716	.355%	98.064%
65.0	15.154	7.528	1784.244	.333%	98.479%
70.0	13.812	7.114	1791.359	.314%	98.872%
75.0	12.457	6.595	1797.954	.291%	99.236%
80.0	11.121	6.003	1803.957	.265%	99.567%
85.0	9.972	5.445	1809.403	.241%	99.868%
90.0	8.733	2.394	1811.796	.106%	100.000%

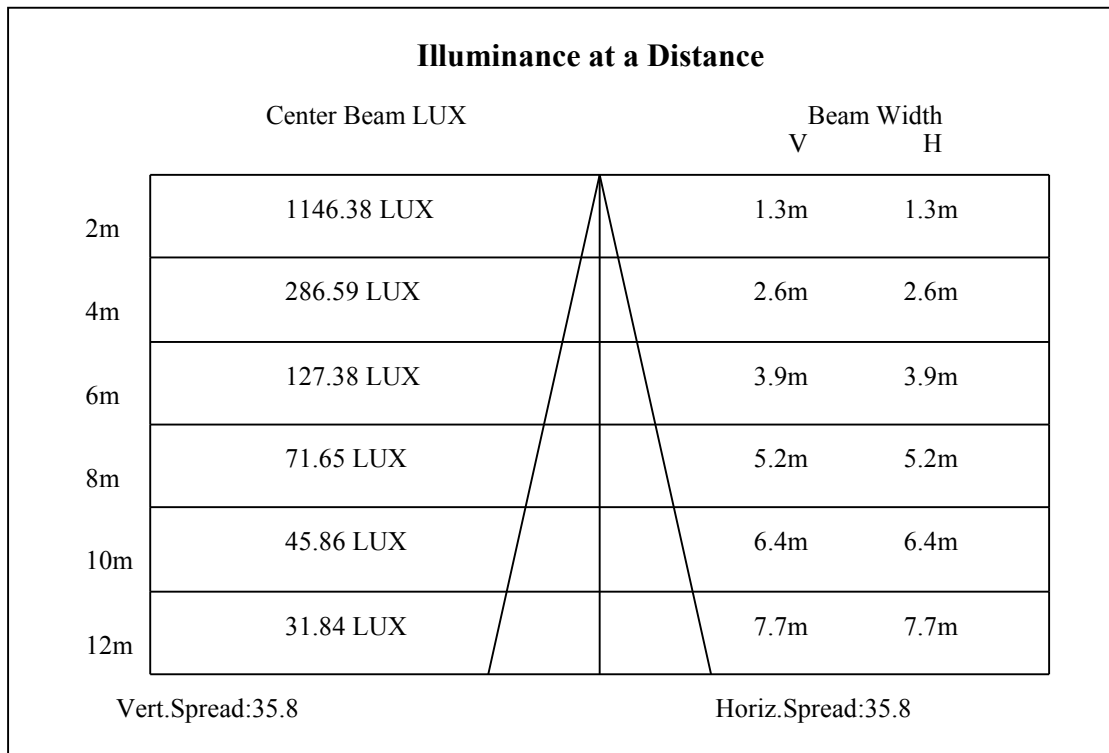
ZONAL LUMEN SUMMARY

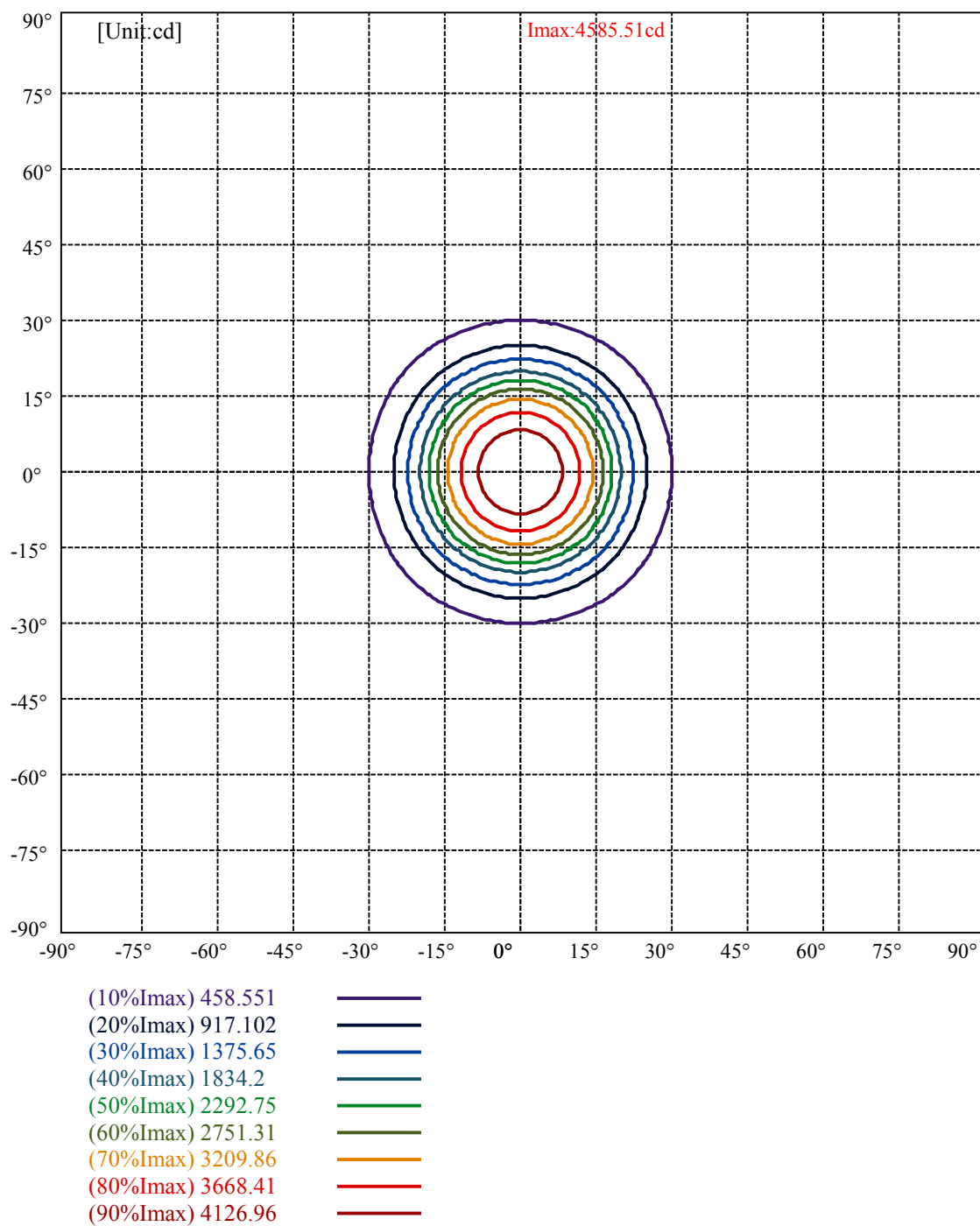
Zone	Lumens	%Lamp	%Fixt
0-30	1689.53	74.66%	93.25%
0-40	1738.67	76.83%	95.96%
0-60	1776.72	78.51%	98.06%
0-90	1809.40	79.96%	99.87%
0-120	1809.40	79.96%	99.87%
0-180	1811.80	80.06%	100.00%
60-90	40.71	1.80%	2.25%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-21.88	1449.44	64.05%	80.00%

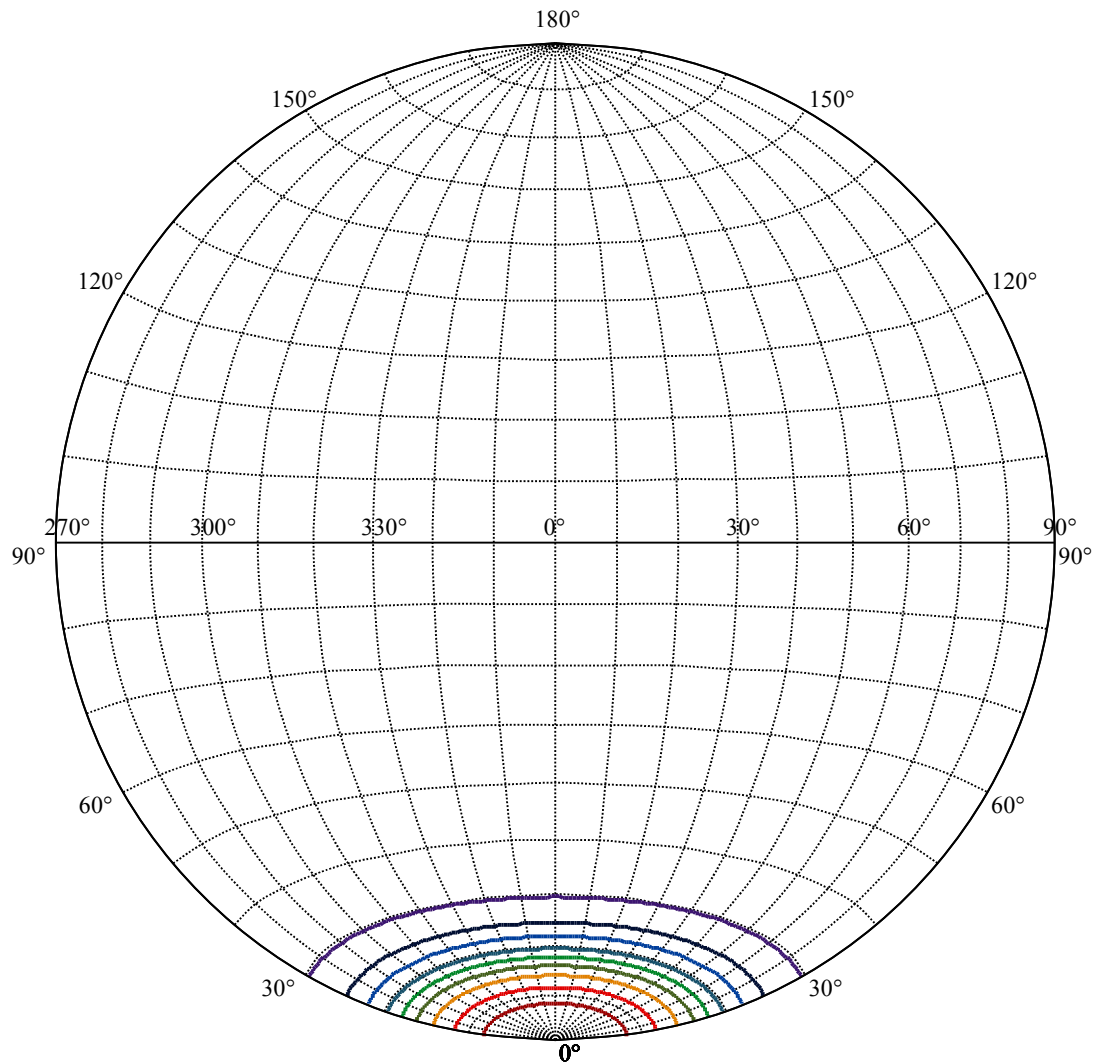
ZONAL LUMEN SUMMARY

0-10	616.57
10-20	757.90
20-30	315.07
30-40	49.14
40-50	21.41
50-60	16.64
60-70	14.64
70-80	12.60
80-90	5.45
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









House

[Unit:cd]

Road

Imax:4585.51

(10%Imax) 458.551

(20%Imax) 917.102

(30%Imax) 1375.65

(40%Imax) 1834.2

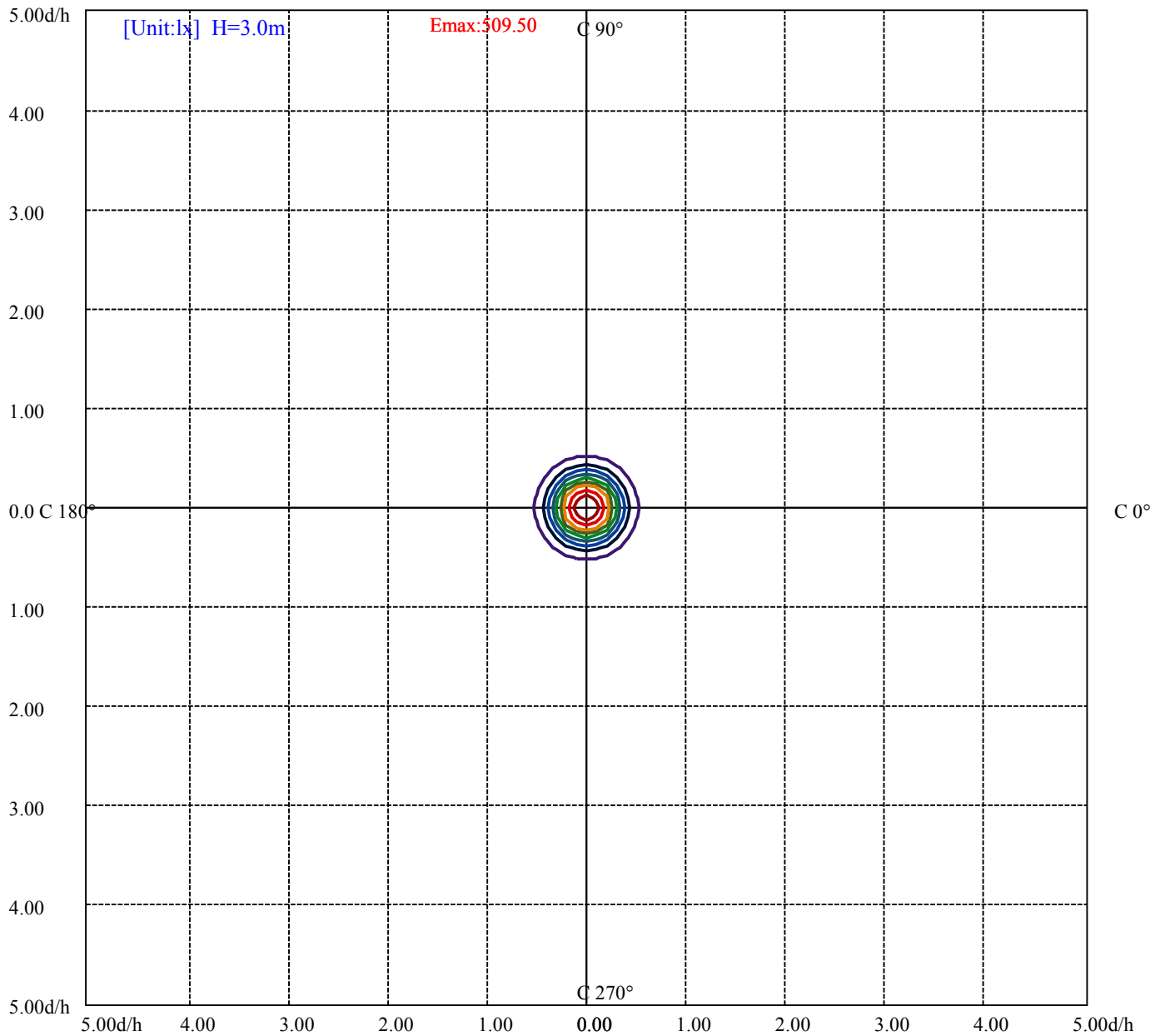
(50%Imax) 2292.75

(60%Imax) 2751.31

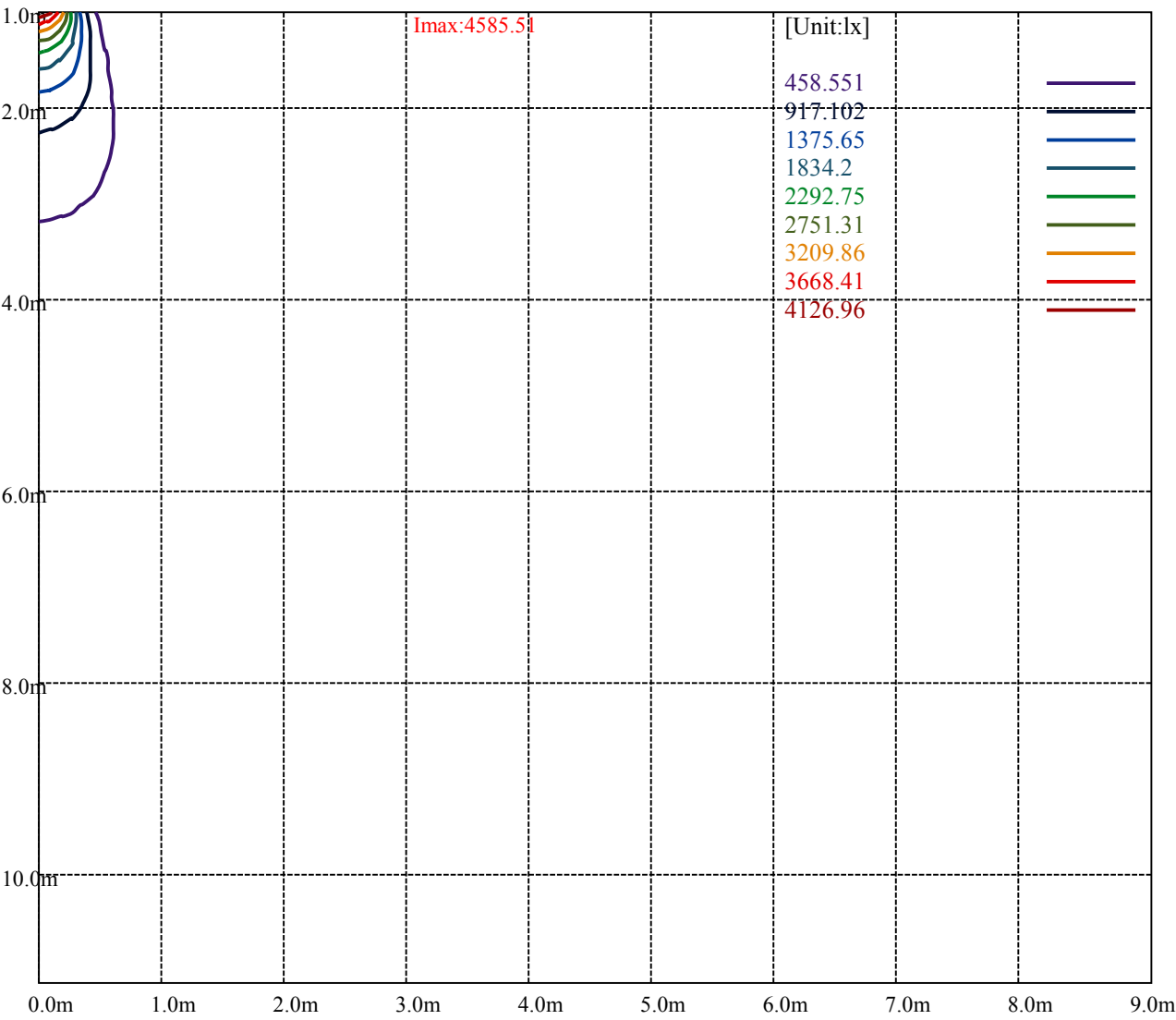
(70%Imax) 3209.86

(80%Imax) 3668.41

(90%Imax) 4126.96



(10%Emax) 50.95	—
(20%Emax) 101.9001	—
(30%Emax) 152.85	—
(40%Emax) 203.8	—
(50%Emax) 254.75	—
(60%Emax) 305.7	—
(70%Emax) 356.65	—
(80%Emax) 407.6	—
(90%Emax) 458.55	—



Luminance Table

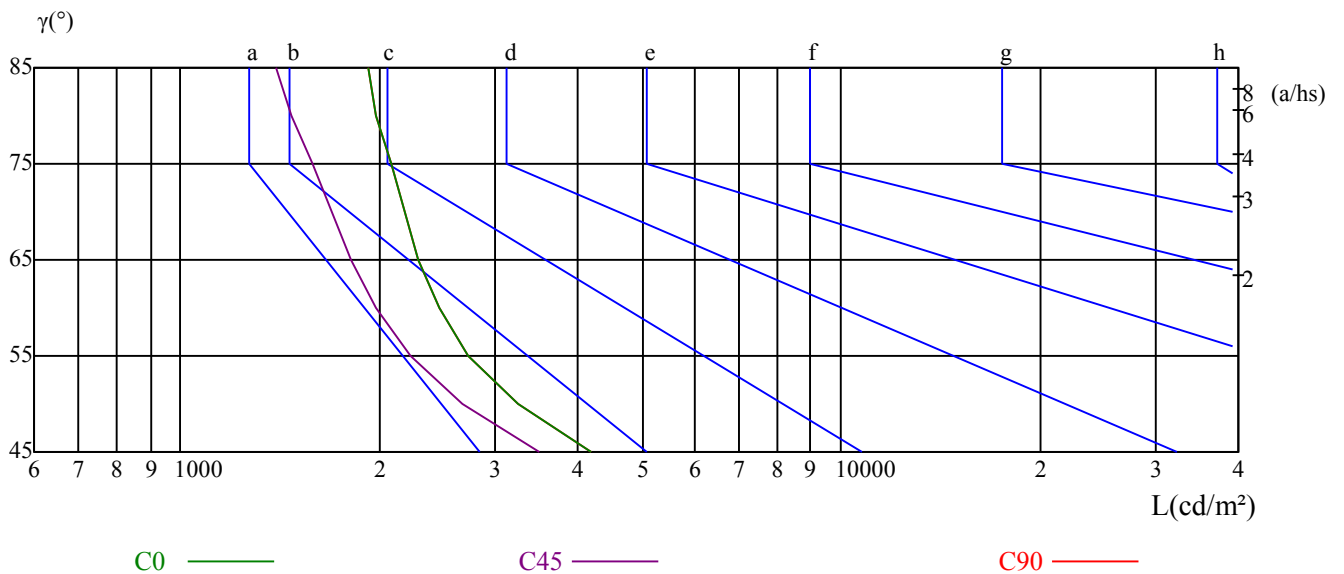
γ	45	50	55	60	65	70	75	80	85
C0	4176	3239	2732	2472	2294	2184	2079	1981	1919
C45	3503	2676	2223	1980	1807	1691	1579	1474	1395
C90	4176	3239	2732	2472	2294	2184	2079	1981	1919

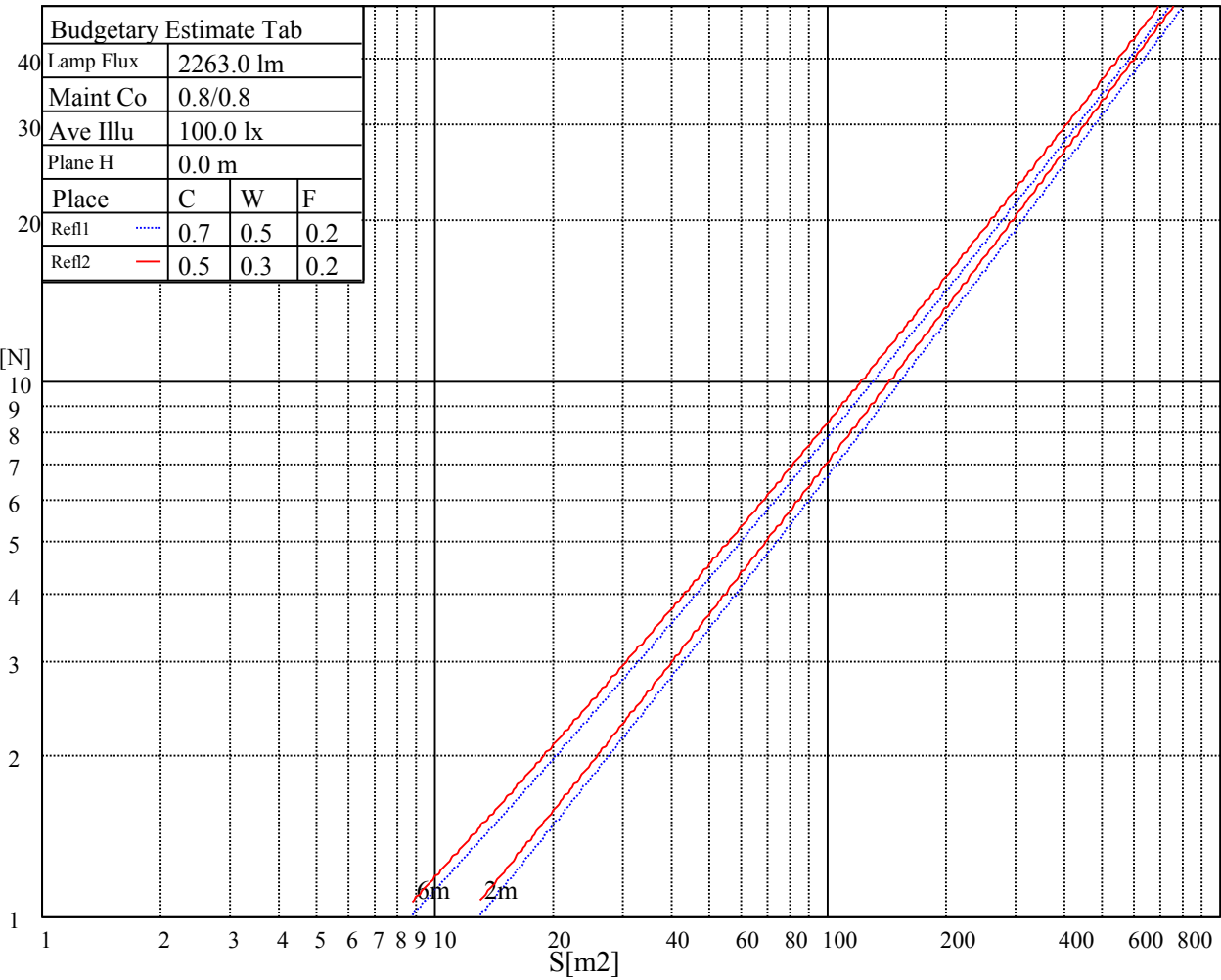
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6548	6548	6548	8789	8789	8789	20894	20894	20894

Glare Table

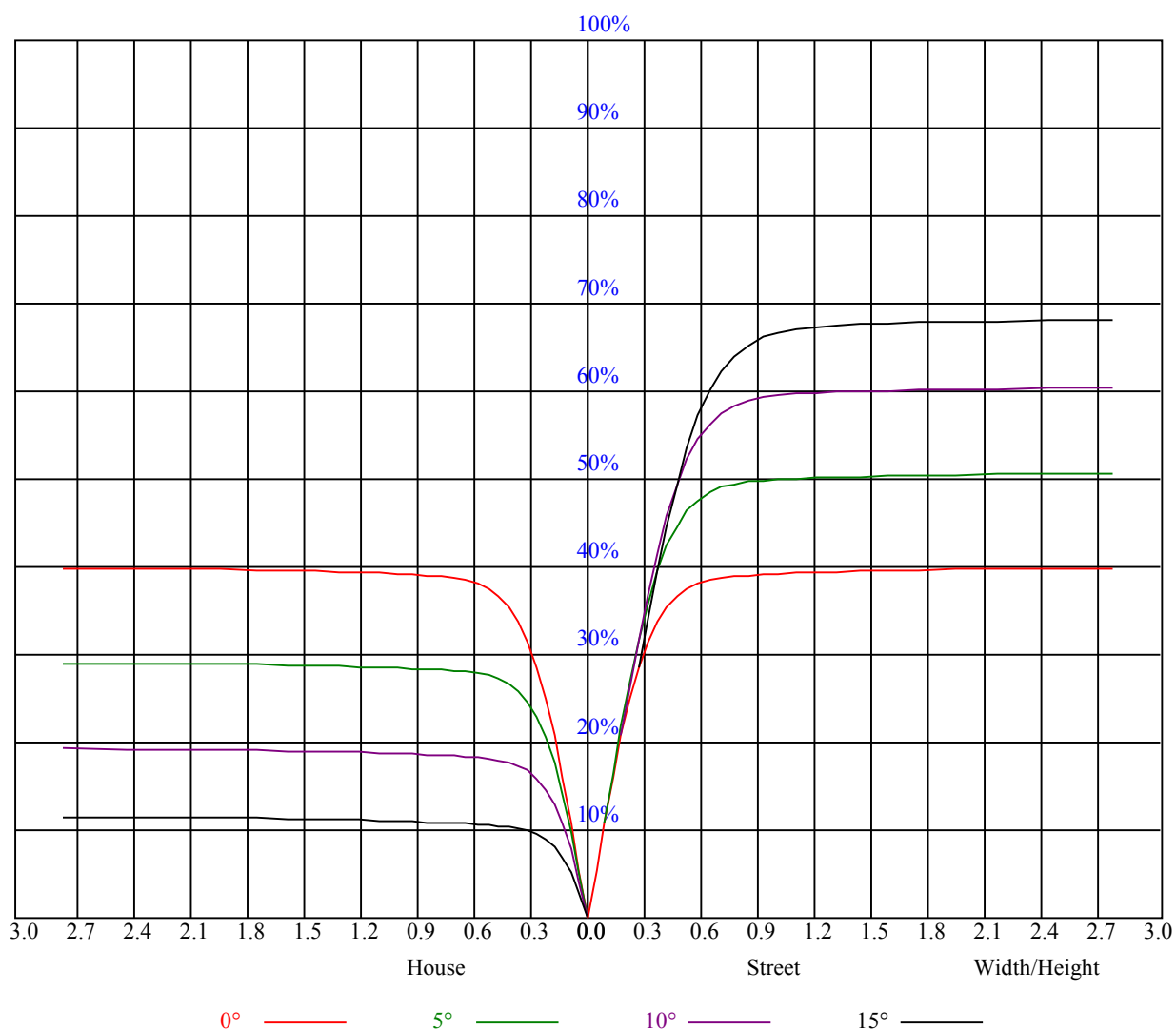
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	0.97	0.97	0.97	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.83	0.83	0.83	0.81
1	0.90	0.87	0.86	0.88	0.86	0.84	0.84	0.83	0.82	0.81	0.80	0.79	0.79	0.78	0.77	0.75
2	0.85	0.82	0.79	0.84	0.81	0.78	0.81	0.79	0.77	0.79	0.77	0.75	0.76	0.75	0.74	0.72
3	0.81	0.77	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.74	0.72	0.71	0.70
4	0.77	0.74	0.71	0.77	0.73	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.72	0.70	0.68	0.67
5	0.74	0.71	0.68	0.74	0.70	0.68	0.72	0.69	0.67	0.71	0.68	0.66	0.70	0.68	0.66	0.65
6	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.68	0.66	0.64	0.63
7	0.69	0.65	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.61
8	0.67	0.63	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.65	0.62	0.60	0.64	0.62	0.60	0.59
9	0.65	0.61	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.63	0.60	0.58	0.63	0.60	0.58	0.57
10	0.63	0.59	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.62	0.59	0.57	0.61	0.58	0.57	0.56



Intensity data(cd)										Appendix Page: 14 Total:14	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	4591.70	4552.06	4249.25	3494.98	2242.45	1058.18	591.31	289.05	53.51		
45.0	4590.05	4402.31	4008.11	3217.50	1929.73	899.07	460.82	90.68	47.02		
90.0	4561.97	4276.23	3797.24	2837.06	1329.06	803.00	364.80	73.06	43.33		
135.0	4598.31	4380.84	3960.21	3012.14	1784.38	867.69	408.52	73.17	43.22		
180.0	4591.70	4324.13	3739.98	2616.83	1082.24	747.67	256.56	61.99	37.49		
225.0	4590.05	4430.94	3899.64	2892.11	1683.07	827.83	378.68	75.43	42.72		
270.0	4561.97	4506.37	4060.41	3186.66	1902.75	836.31	448.16	95.85	49.33		
315.0	4598.31	4494.80	4050.50	3202.63	1877.97	854.26	460.77	84.13	46.58		
360.0	4591.70	4552.06	4249.25	3494.98	2242.45	1058.18	591.31	289.05	53.51		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	35.07	26.70	21.80	19.16	17.34	16.08	14.76	13.49	12.61		
45.0	30.94	23.89	19.60	17.07	15.25	13.71	12.28	11.01	9.80		
90.0	28.79	22.19	18.28	16.35	14.59	13.16	11.84	10.41	9.25		
135.0	28.63	22.08	18.66	16.24	14.53	13.21	12.06	10.74	9.58		
180.0	25.99	20.87	17.67	15.75	14.15	13.05	11.78	10.46	9.47		
225.0	28.30	21.64	18.17	16.08	14.53	13.38	11.95	10.63	9.47		
270.0	31.88	23.78	19.43	17.18	15.36	13.87	12.39	10.90	9.52		
315.0	31.66	24.06	19.82	17.45	15.47	14.04	12.61	11.34	10.08		
360.0	35.07	26.70	21.80	19.16	17.34	16.08	14.76	13.49	12.61		
C/γ(°)	90.0										
0.0	10.63										
45.0	8.59										
90.0	8.26										
135.0	8.37										
180.0	8.37										
225.0	8.48										
270.0	8.37										
315.0	8.81										
360.0	10.63										