



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: 2-2078-M
Luminaire: 92.70.131.00
Report No: NATA0100
Test No: GC2020011401
LampCAT: LUMINUS CXM-14-AC40 LES14.5
Lamp flux(lm): 2541.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C
Voltage(V): 34.2200
Current(A): 0.5970
Power (W): 20.4300
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 1868.35
Efficiency(%): 73.53%
Lumens(lm)/Power(W): 91.45
Central intensity(cd): 6561.844
Maximum intensity(cd): 6561.844
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=31.8
[C90/270]Total=31.8
Field angle(10%Imax): [C0/180]Total=48.7
[C90/270]Total=48.7
Maximum s/h(1/2): C0_180=0.53 C90_270=0.53
Maximum s/h(1/4): C0_180=0.50 C90_270=0.50
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 73.53%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.522%

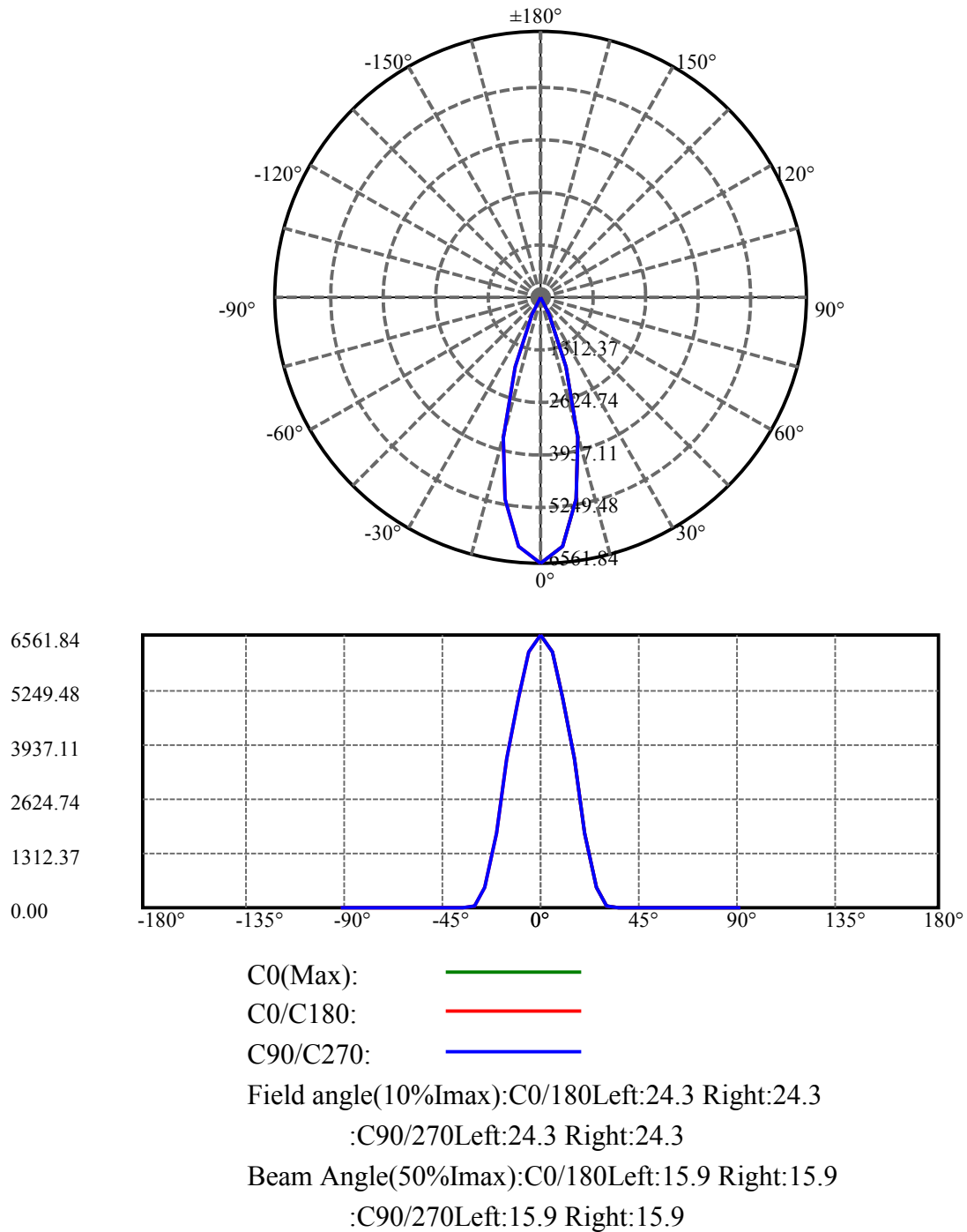
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6561.844	0.000	0	.000%	.000%
5.0	6149.883	151.965	151.965	5.981%	8.134%
10.0	5047.523	400.566	552.532	15.764%	29.573%
15.0	3605.273	513.278	1065.81	20.200%	57.045%
20.0	1808.557	446.176	1511.985	17.559%	80.926%
25.0	480.832	240.115	1752.1	9.450%	93.778%
30.0	23.154	63.780	1815.88	2.510%	97.191%
35.0	12.438	5.241	1821.121	.206%	97.472%
40.0	10.561	3.837	1824.958	.151%	97.677%
45.0	9.731	3.757	1828.716	.148%	97.878%
50.0	9.323	3.850	1832.566	.152%	98.085%
55.0	9.070	3.999	1836.565	.157%	98.299%
60.0	8.951	4.166	1840.731	.164%	98.522%
65.0	8.859	4.330	1845.06	.170%	98.753%
70.0	8.796	4.470	1849.531	.176%	98.993%
75.0	8.768	4.591	1854.122	.181%	99.238%
80.0	8.782	4.696	1858.818	.185%	99.490%
85.0	8.782	4.773	1863.59	.188%	99.745%
90.0	8.613	4.763	1868.353	.187%	100.000%

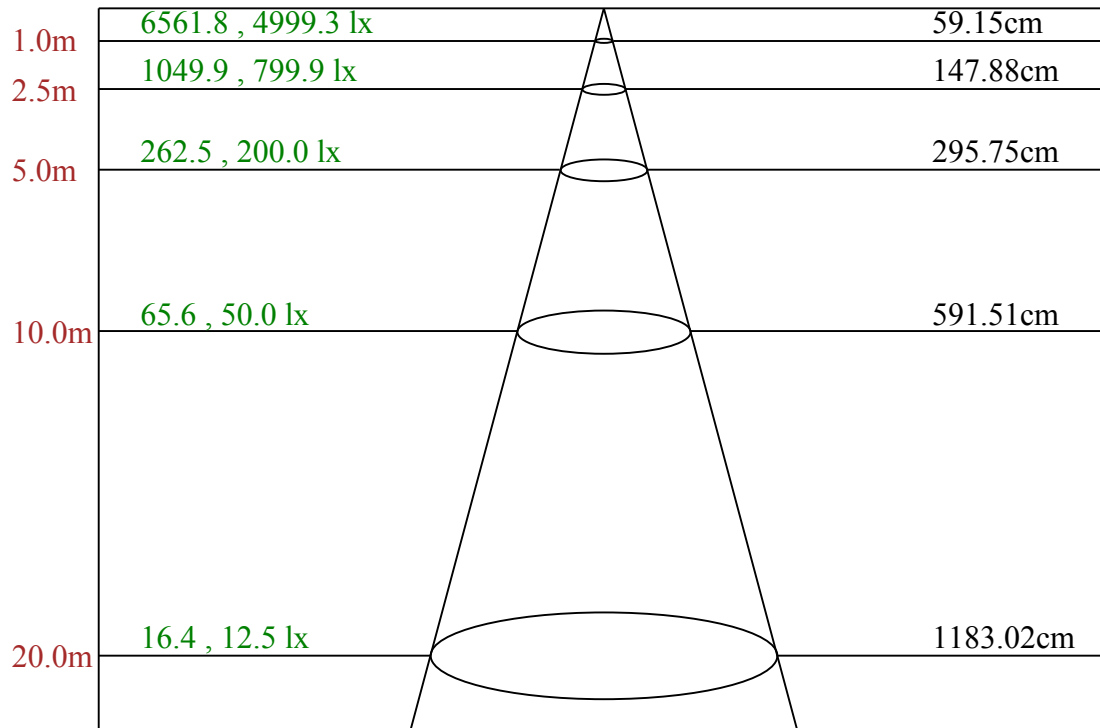
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1815.88	71.46%	97.19%
0-40	1824.96	71.82%	97.68%
0-60	1840.73	72.44%	98.52%
0-90	1863.59	73.34%	99.75%
0-120	1863.59	73.34%	99.75%
0-180	1868.35	73.53%	100.00%
60-90	27.03	1.06%	1.45%
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%
0-19.81	1494.68	58.82%	80.00%

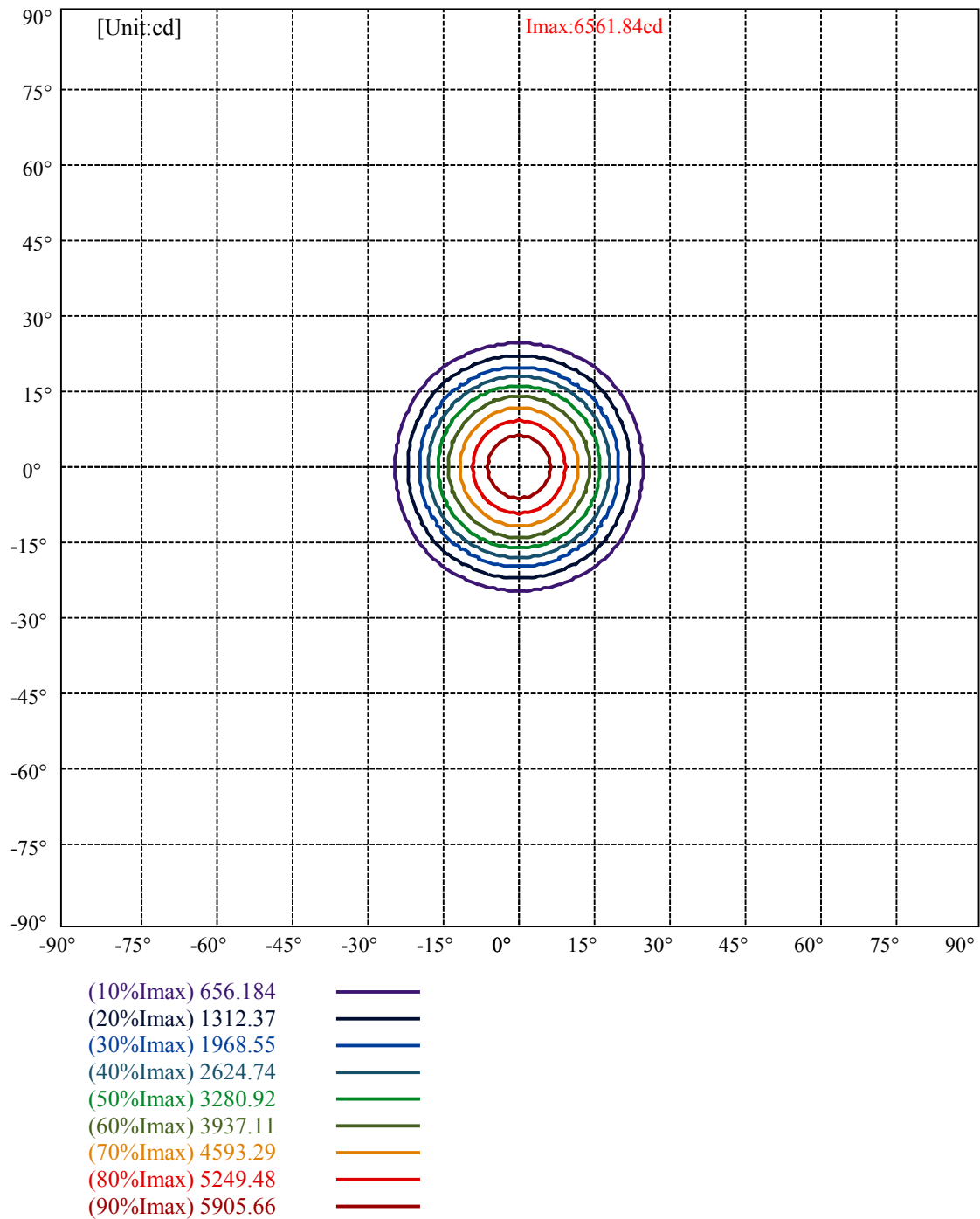
ZONAL LUMEN SUMMARY

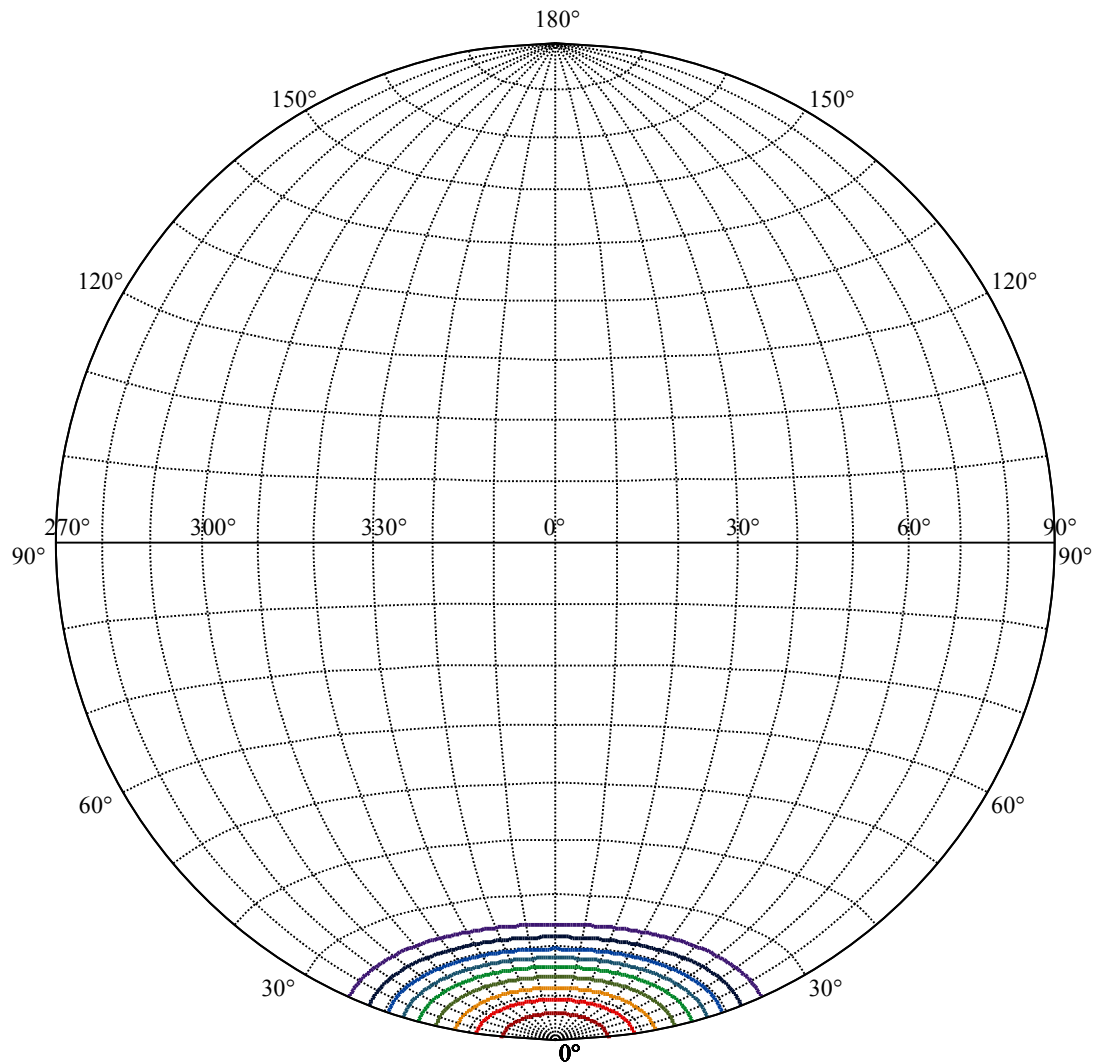
0-10	552.53
10-20	959.45
20-30	303.89
30-40	9.08
40-50	7.61
50-60	8.16
60-70	8.80
70-80	9.29
80-90	4.77
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C0 plane 32.95





House

[Unit:cd]

Road

Imax:6561.84

(10%Imax) 656.184

(20%Imax) 1312.37

(30%Imax) 1968.55

(40%Imax) 2624.74

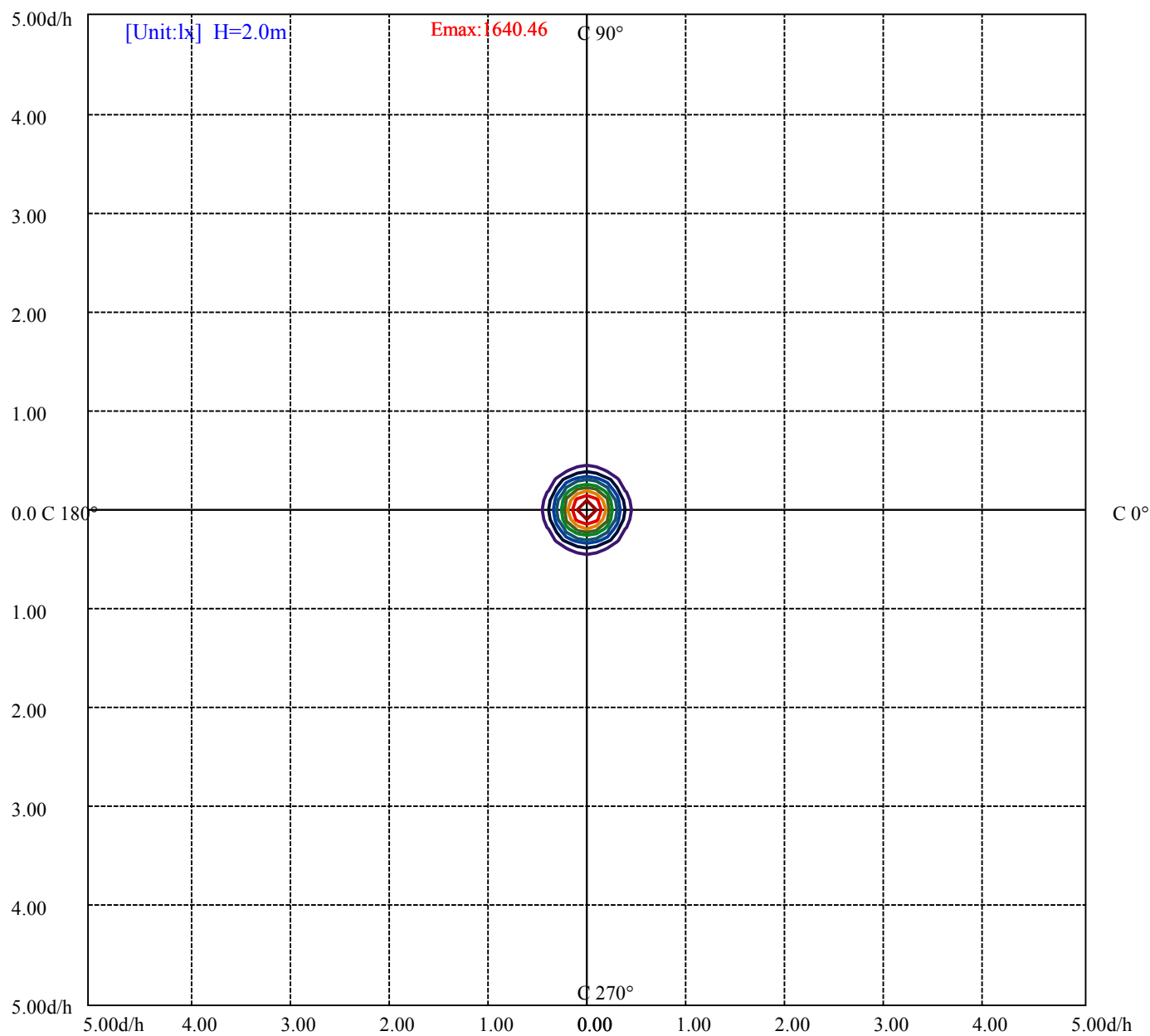
(50%Imax) 3280.92

(60%Imax) 3937.11

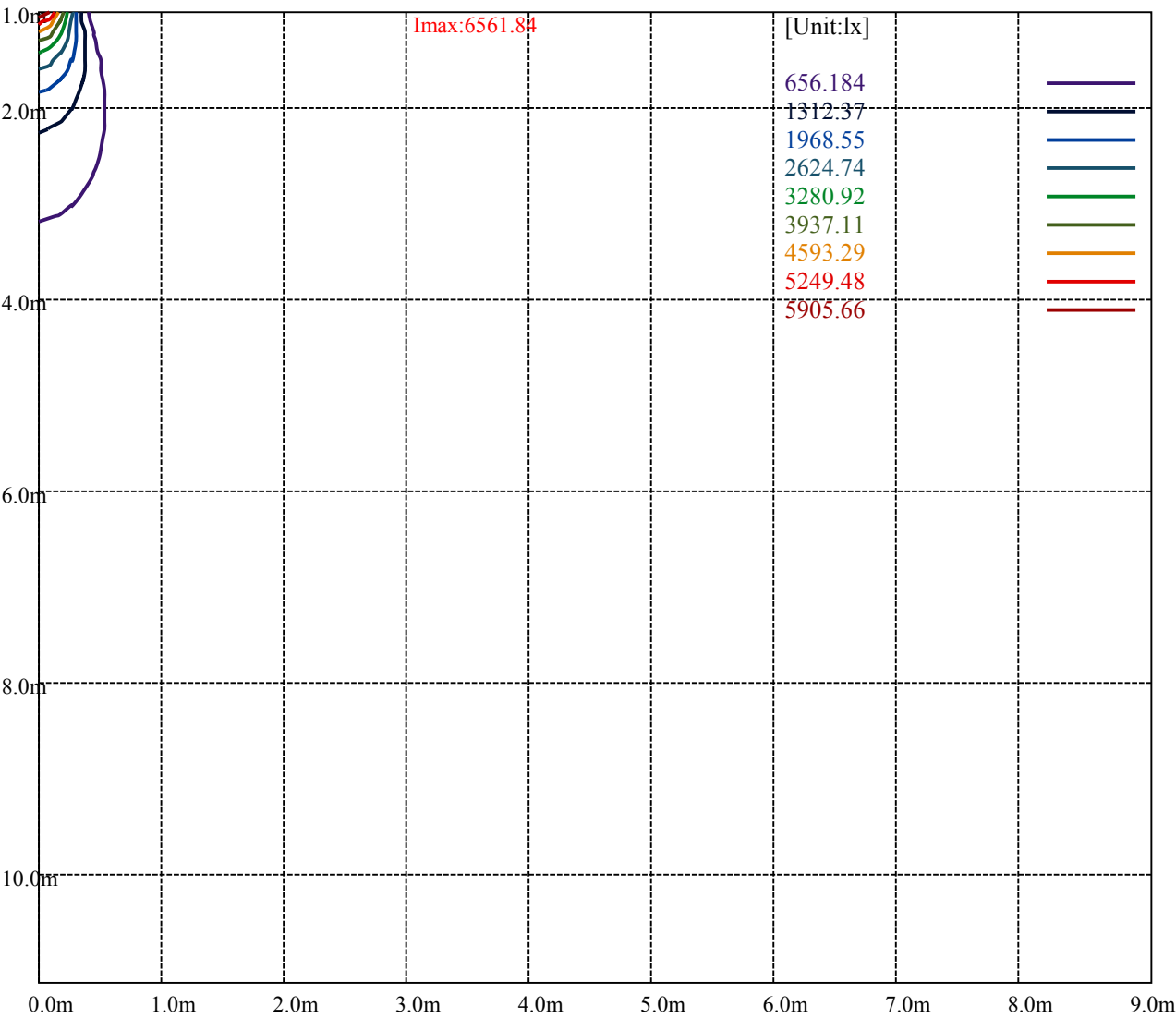
(70%Imax) 4593.29

(80%Imax) 5249.48

(90%Imax) 5905.66



(10%E _{max}) 164.0457	—
(20%E _{max}) 328.0925	—
(30%E _{max}) 492.1375	—
(40%E _{max}) 656.1825	—
(50%E _{max}) 820.23	—
(60%E _{max}) 984.275	—
(70%E _{max}) 1148.32	—
(80%E _{max}) 1312.365	—
(90%E _{max}) 1476.412	—



Luminance Table

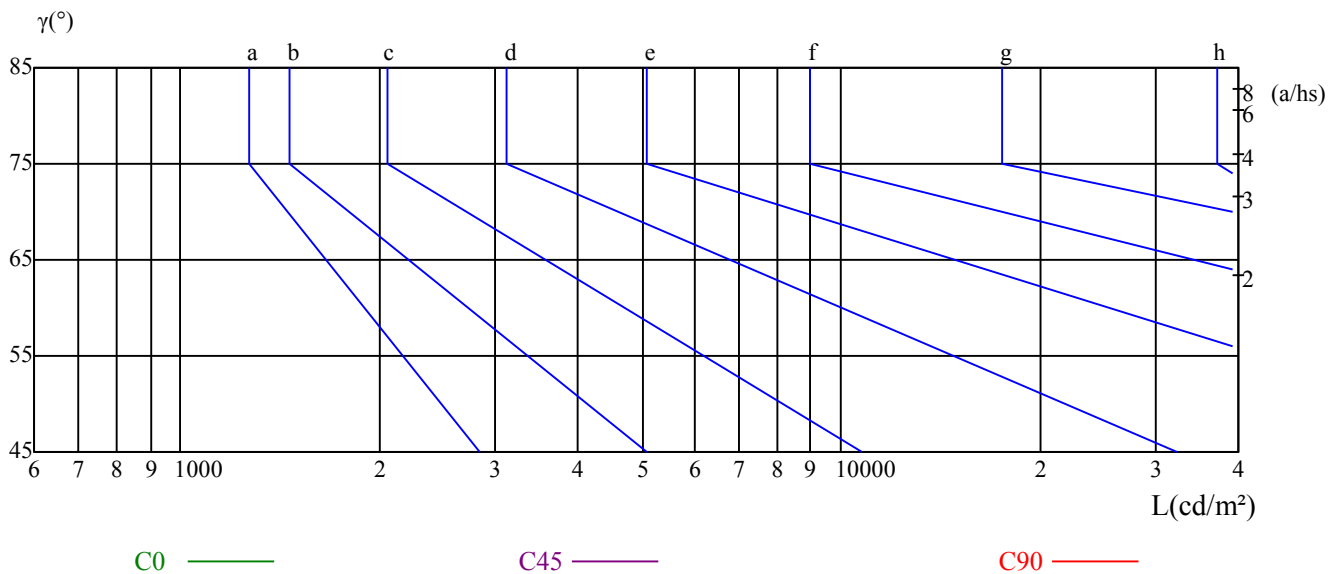
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

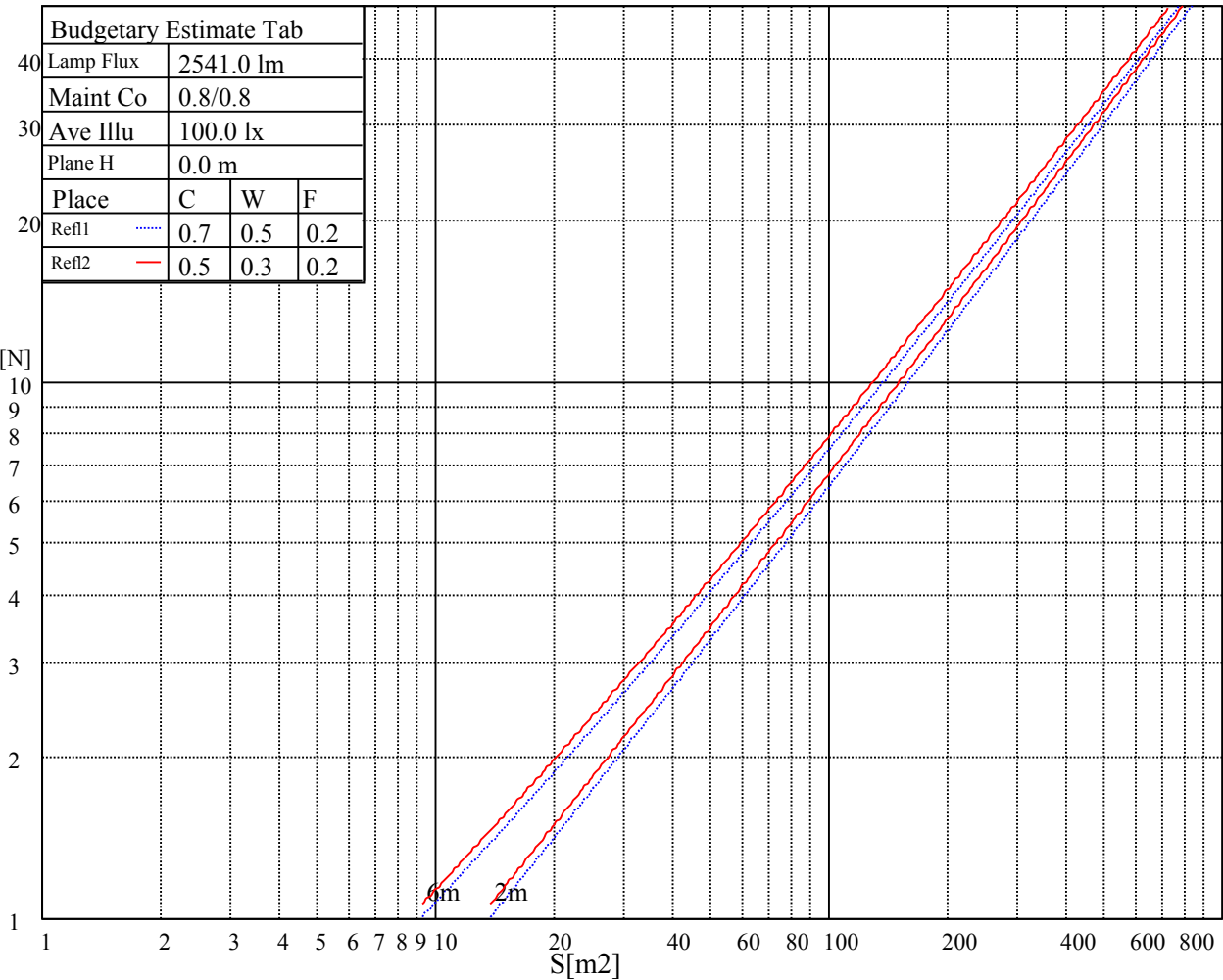
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

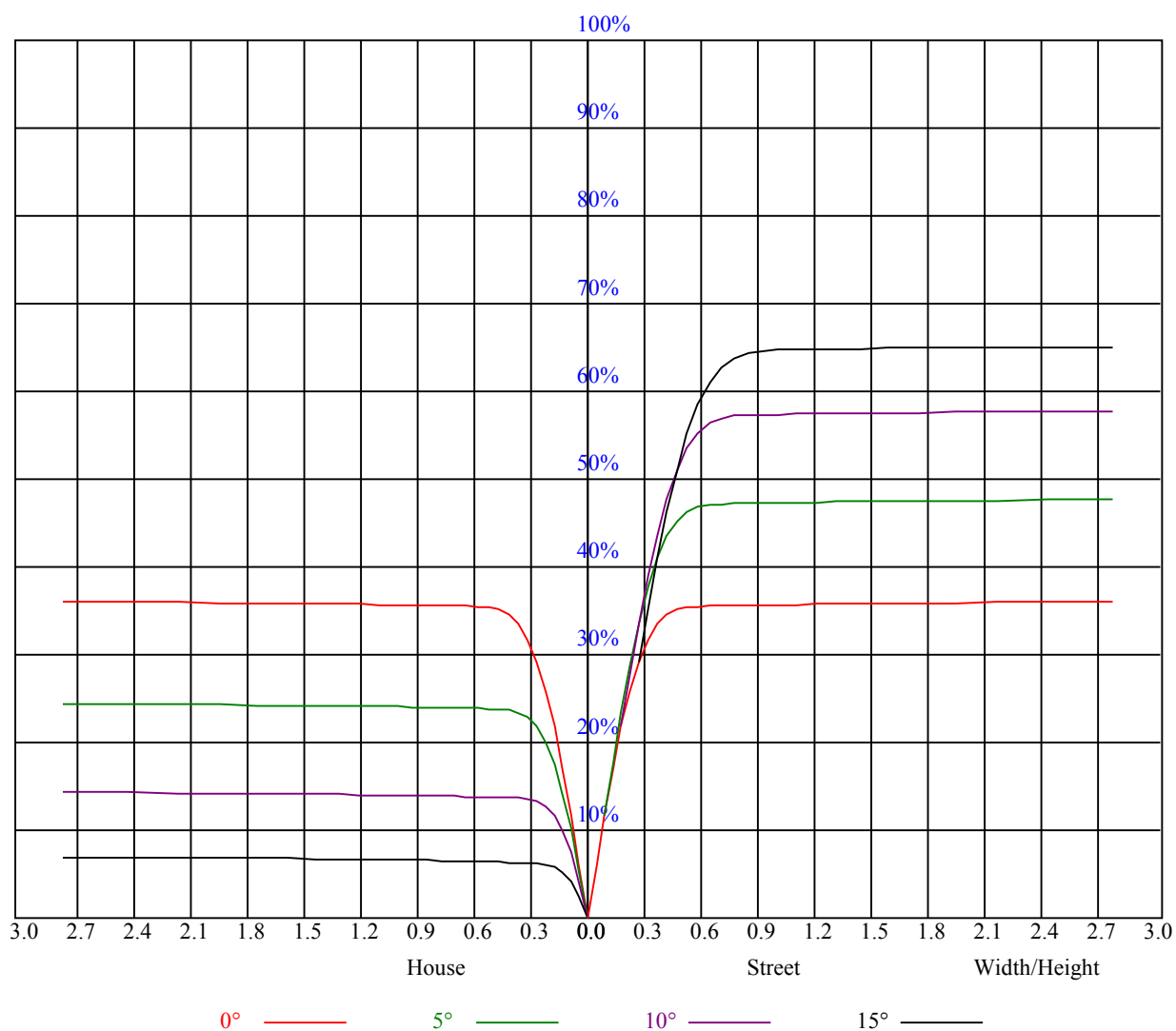
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	0.88	0.88	0.88	0.85	0.85	0.85	0.82	0.82	0.82	0.78	0.78	0.78	0.75	0.75	0.75	0.74
1	0.83	0.81	0.80	0.81	0.80	0.79	0.78	0.77	0.76	0.75	0.75	0.74	0.73	0.72	0.72	0.70
2	0.79	0.76	0.74	0.77	0.75	0.74	0.75	0.73	0.72	0.73	0.72	0.70	0.71	0.70	0.69	0.68
3	0.75	0.72	0.70	0.74	0.72	0.70	0.72	0.70	0.69	0.71	0.69	0.68	0.69	0.68	0.67	0.66
4	0.72	0.69	0.67	0.71	0.69	0.66	0.70	0.68	0.66	0.69	0.67	0.65	0.67	0.66	0.64	0.63
5	0.69	0.66	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.67	0.64	0.63	0.65	0.64	0.62	0.61
6	0.67	0.64	0.62	0.66	0.64	0.61	0.65	0.63	0.61	0.65	0.62	0.61	0.64	0.62	0.60	0.59
7	0.65	0.62	0.59	0.64	0.61	0.59	0.64	0.61	0.59	0.63	0.60	0.59	0.62	0.60	0.58	0.58
8	0.63	0.60	0.57	0.62	0.59	0.57	0.62	0.59	0.57	0.61	0.59	0.57	0.60	0.58	0.57	0.56
9	0.61	0.58	0.56	0.60	0.58	0.56	0.60	0.57	0.55	0.59	0.57	0.55	0.59	0.57	0.55	0.54
10	0.59	0.56	0.54	0.59	0.56	0.54	0.58	0.56	0.54	0.58	0.55	0.54	0.57	0.55	0.54	0.53



NATA 2-2078-M

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	6559.88	6241.50	5123.25	3738.94	2073.94	527.06	24.24	12.88	10.74		
45.0	6566.63	6130.69	4990.50	3575.25	1792.69	479.25	17.72	11.81	10.41		
90.0	6545.81	5857.88	4590.56	3112.31	1089.96	190.29	15.13	11.42	10.18		
135.0	6575.06	6158.81	4968.56	3623.63	1834.88	385.31	17.89	11.87	10.41		
180.0	6559.88	5995.13	4942.13	3429.56	1117.13	380.36	17.10	11.87	10.52		
225.0	6566.63	6184.13	5155.31	3675.38	1994.63	534.88	22.73	12.66	10.41		
270.0	6545.81	6424.31	5475.38	4043.81	2511.00	834.19	47.87	14.06	11.08		
315.0	6575.06	6206.63	5134.50	3643.31	2054.25	515.31	22.56	12.94	10.74		
360.0	6559.88	6241.50	5123.25	3738.94	2073.94	527.06	24.24	12.88	10.74		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	9.90	9.51	9.17	9.06	8.94	8.89	8.83	8.83	8.83		
45.0	9.56	9.17	8.94	8.83	8.72	8.61	8.55	8.55	8.49		
90.0	9.56	9.23	9.06	8.94	8.83	8.89	8.89	8.94	8.72		
135.0	9.73	9.34	9.11	9.00	8.94	8.78	8.78	8.78	8.72		
180.0	9.79	9.39	9.17	9.00	8.94	8.89	8.83	8.78	8.78		
225.0	9.56	9.17	8.89	8.78	8.66	8.61	8.55	8.55	8.61		
270.0	9.96	9.39	9.11	9.00	8.94	8.89	8.94	9.00	9.23		
315.0	9.79	9.39	9.11	9.00	8.89	8.83	8.78	8.83	8.89		
360.0	9.90	9.51	9.17	9.06	8.94	8.89	8.83	8.83	8.83		
C/ γ (°)	90.0										
0.0	8.72										
45.0	8.44										
90.0	8.55										
135.0	8.72										
180.0	8.78										
225.0	8.44										
270.0	8.55										
315.0	8.72										
360.0	8.72										