



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: 2-1538-E	
Luminaire: 92.76.323.00	
Report No: NATA0100	Voltage(V): 218.0000
Test No: GC2019111513	Current(A): 0.0810
LampCAT: LUMENS EDC-57-20W	Power (W): 17.6000
Lamp flux(lm): 1515.0	PF: 0.9940
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1349.80
Efficiency(%): 89.10%
Lumens(lm)/Power(W): 76.69
Central intensity(cd): 1455.750
Maximum intensity(cd): 1455.750
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=62.2
[C90/270]Total=62.2
Field angle(10%Imax): [C0/180]Total=84.0
[C90/270]Total=84.0
Maximum s/h(1/2): C0_180=0.95 C90_270=0.95
Maximum s/h(1/4): C0_180=0.93 C90_270=0.93
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 89.10%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.454%

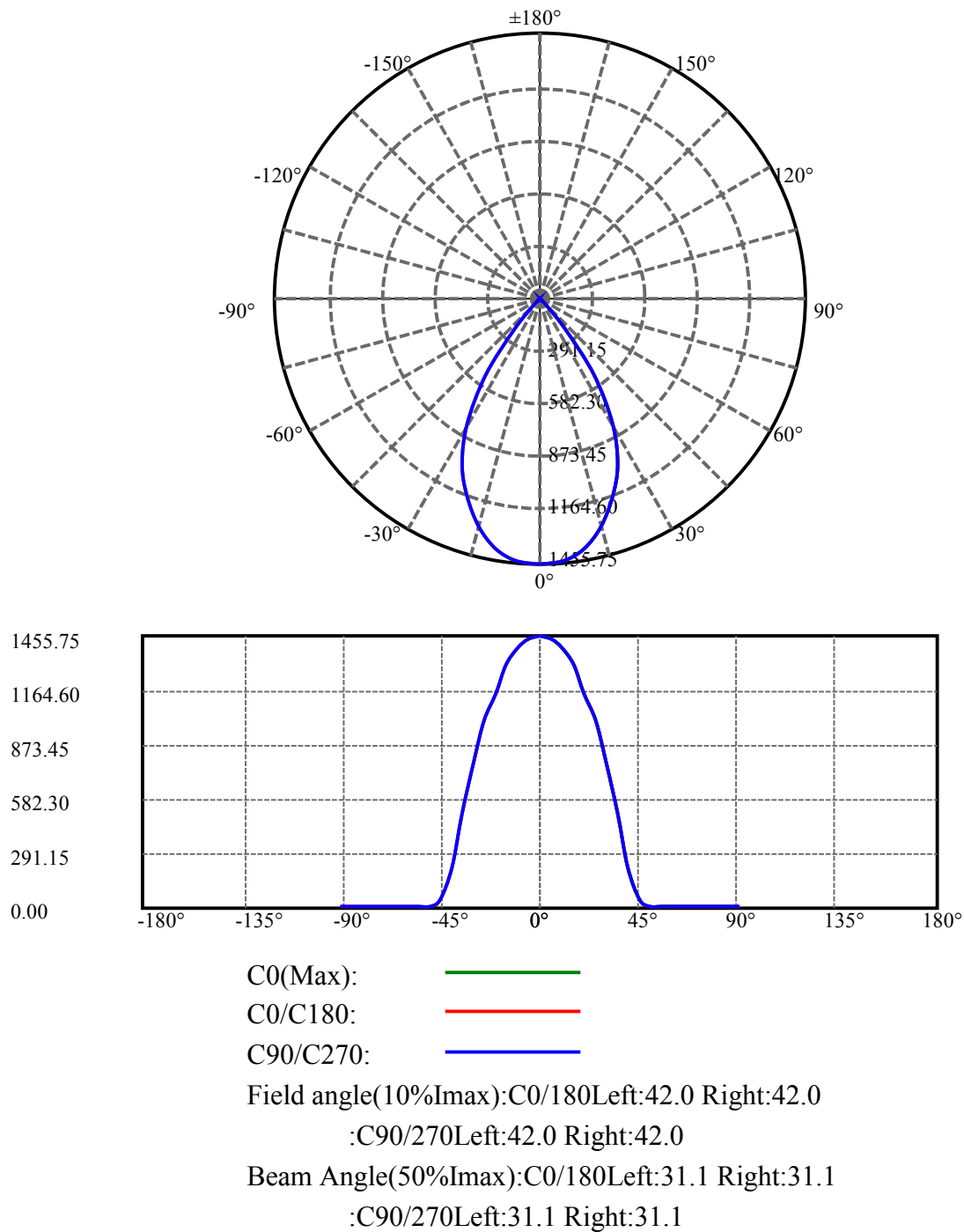
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1455.750	0.000	0	.000%	.000%
5.0	1438.875	34.604	34.604	2.284%	2.564%
10.0	1391.555	101.253	135.858	6.683%	10.065%
15.0	1297.617	159.520	295.378	10.529%	21.883%
20.0	1152.253	201.904	497.281	13.327%	36.841%
25.0	1004.843	226.240	723.521	14.933%	53.602%
30.0	789.230	227.041	950.562	14.986%	70.423%
35.0	509.562	191.256	1141.819	12.624%	84.592%
40.0	214.784	120.852	1262.67	7.977%	93.545%
45.0	40.739	47.312	1309.982	3.123%	97.050%
50.0	12.874	10.833	1320.815	.715%	97.853%
55.0	8.262	4.596	1325.411	.303%	98.193%
60.0	6.968	3.520	1328.931	.232%	98.454%
65.0	6.785	3.343	1332.275	.221%	98.702%
70.0	6.736	3.424	1335.698	.226%	98.955%
75.0	7.868	3.817	1339.516	.252%	99.238%
80.0	6.166	3.755	1343.271	.248%	99.516%
85.0	5.984	3.301	1346.572	.218%	99.761%
90.0	5.801	3.227	1349.799	.213%	100.000%

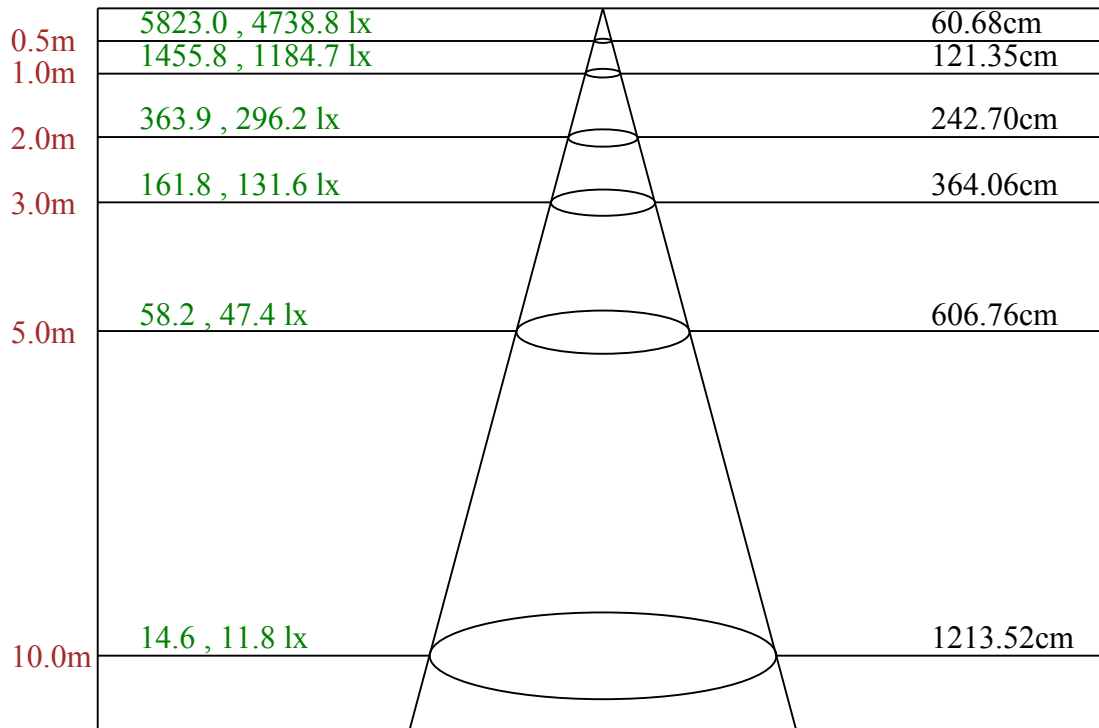
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	950.56	62.74%	70.42%
0-40	1262.67	83.34%	93.55%
0-60	1328.93	87.72%	98.45%
0-90	1346.57	88.88%	99.76%
0-120	1346.57	88.88%	99.76%
0-180	1349.80	89.10%	100.00%
60-90	21.16	1.40%	1.57%
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%
0-33.38	1079.84	71.28%	80.00%

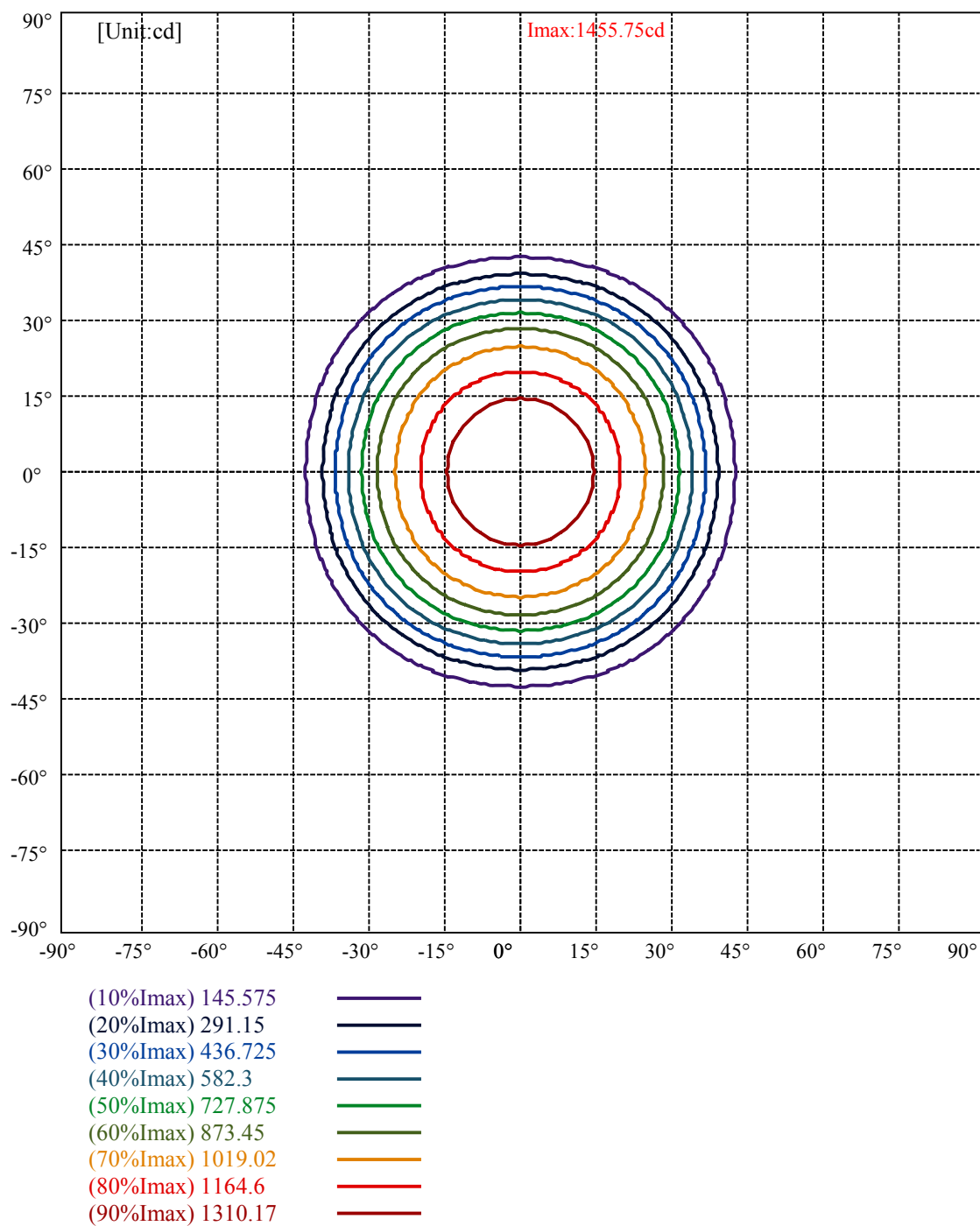
ZONAL LUMEN SUMMARY

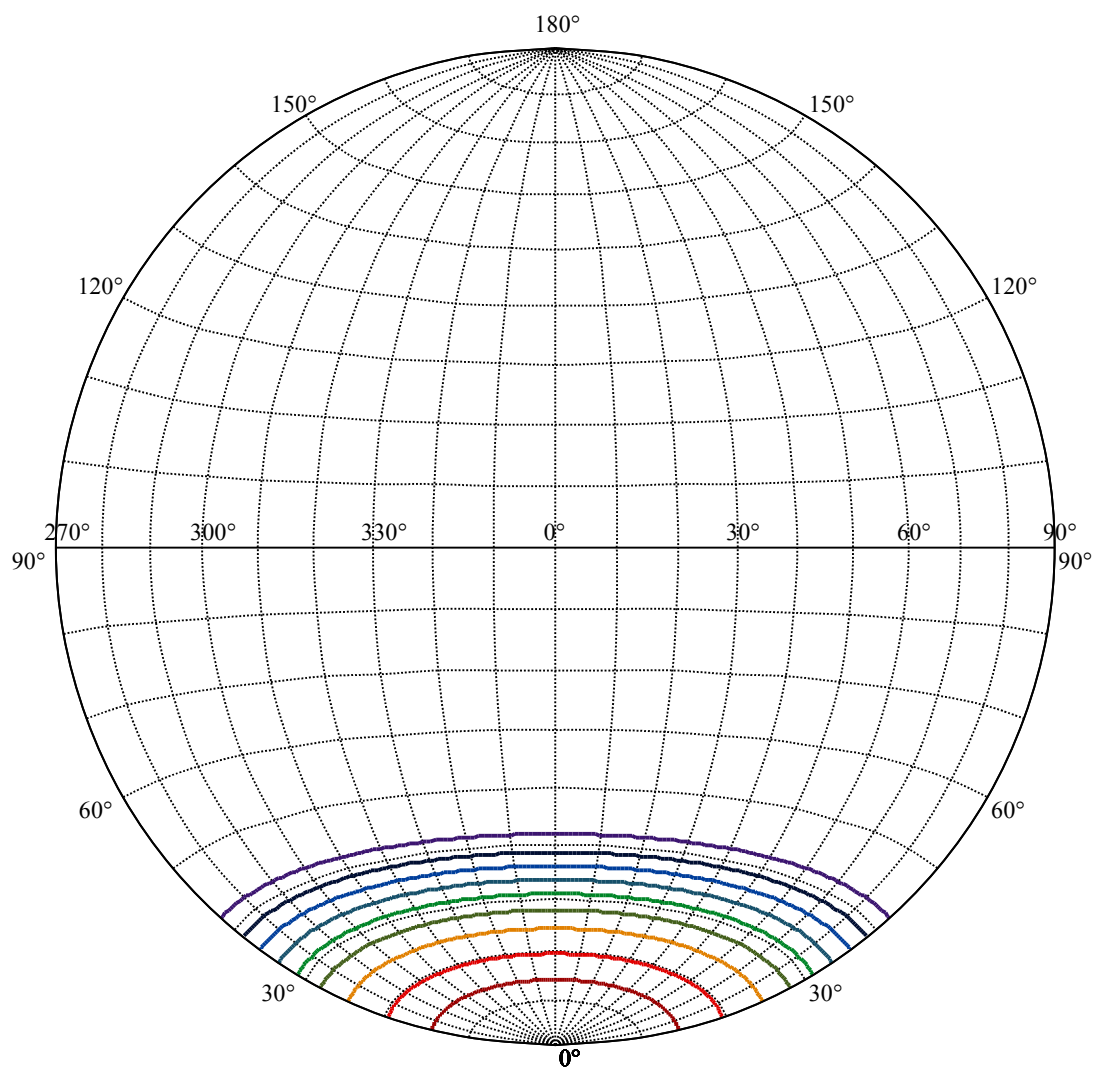
0-10	135.86
10-20	361.42
20-30	453.28
30-40	312.11
40-50	58.15
50-60	8.12
60-70	6.77
70-80	7.57
80-90	3.30
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C0 plane 62.50





House

[Unit:cd]

Road

Imax:1455.75

(10%Imax) 145.575

(20%Imax) 291.15

(30%Imax) 436.725

(40%Imax) 582.3

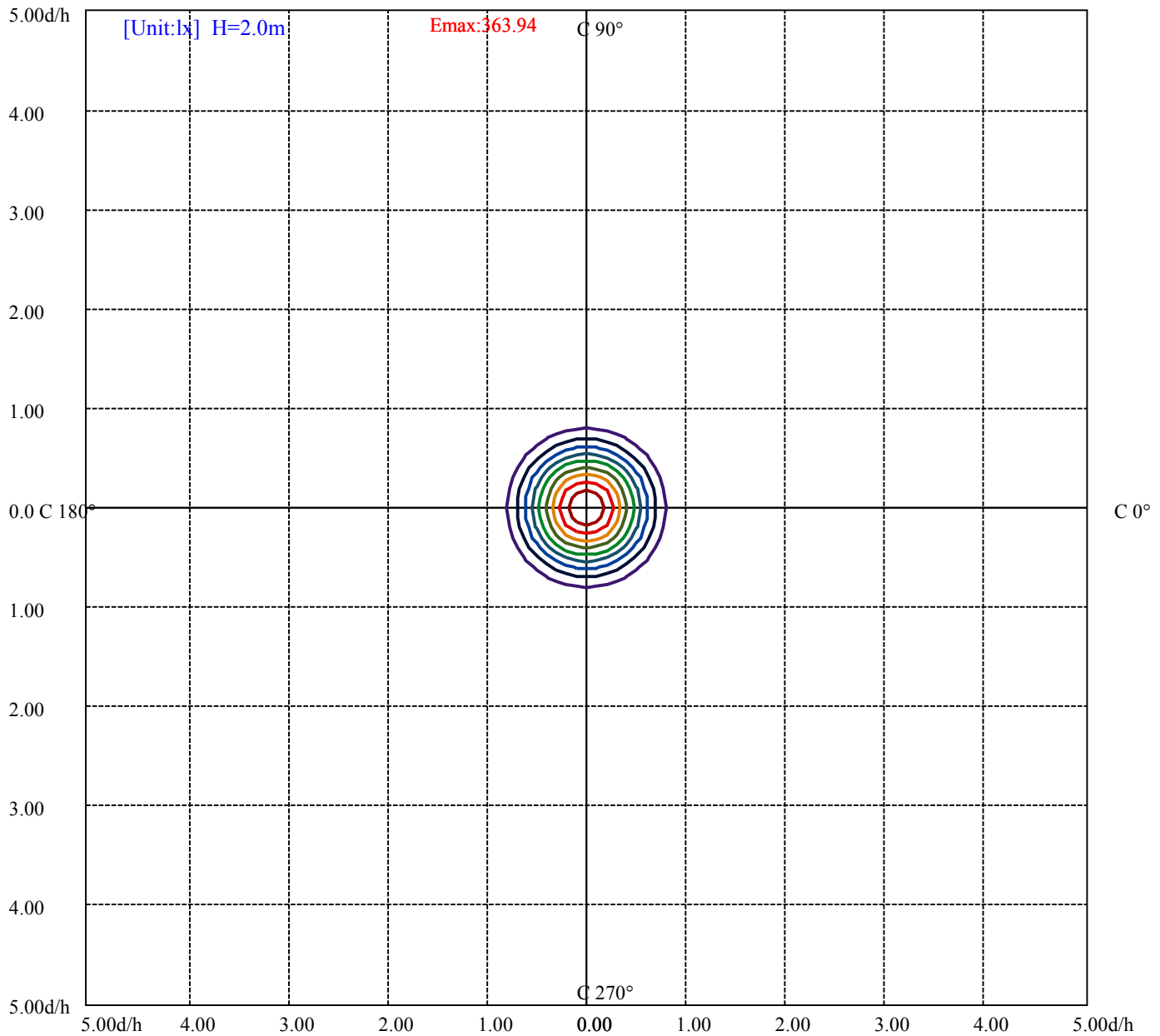
(50%Imax) 727.875

(60%Imax) 873.45

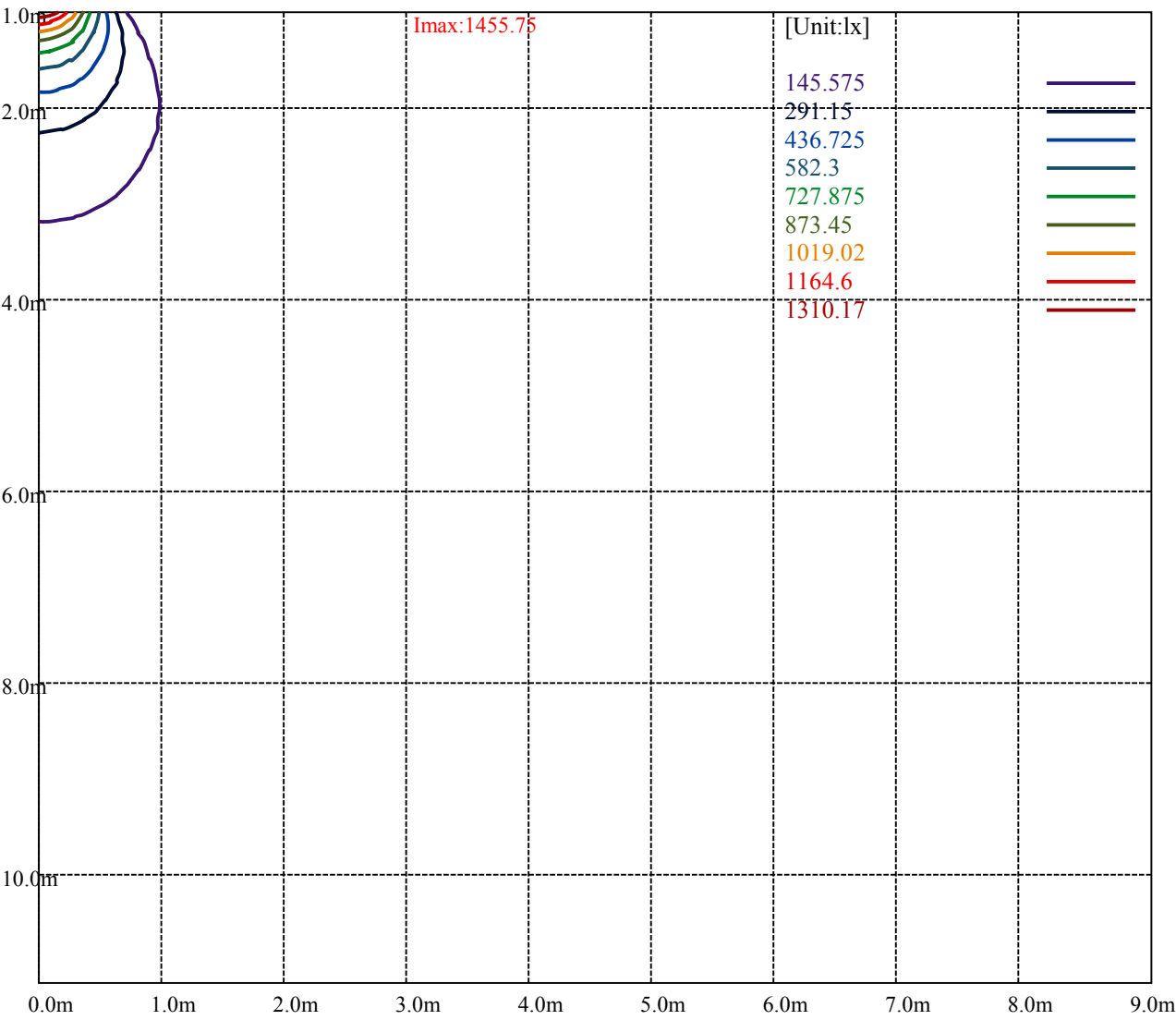
(70%Imax) 1019.02

(80%Imax) 1164.6

(90%Imax) 1310.17



(10%Emax) 36.39375	—
(20%Emax) 72.7875	—
(30%Emax) 109.1813	—
(40%Emax) 145.575	—
(50%Emax) 181.9688	—
(60%Emax) 218.3625	—
(70%Emax) 254.755	—
(80%Emax) 291.15	—
(90%Emax) 327.5425	—



Luminance Table

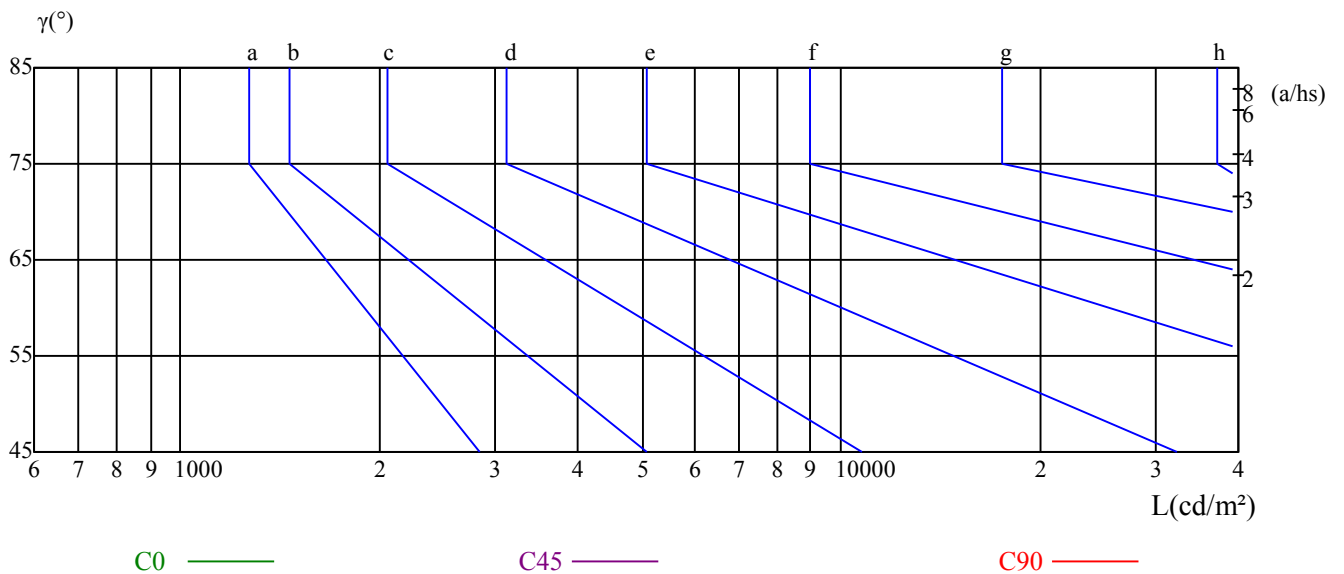
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

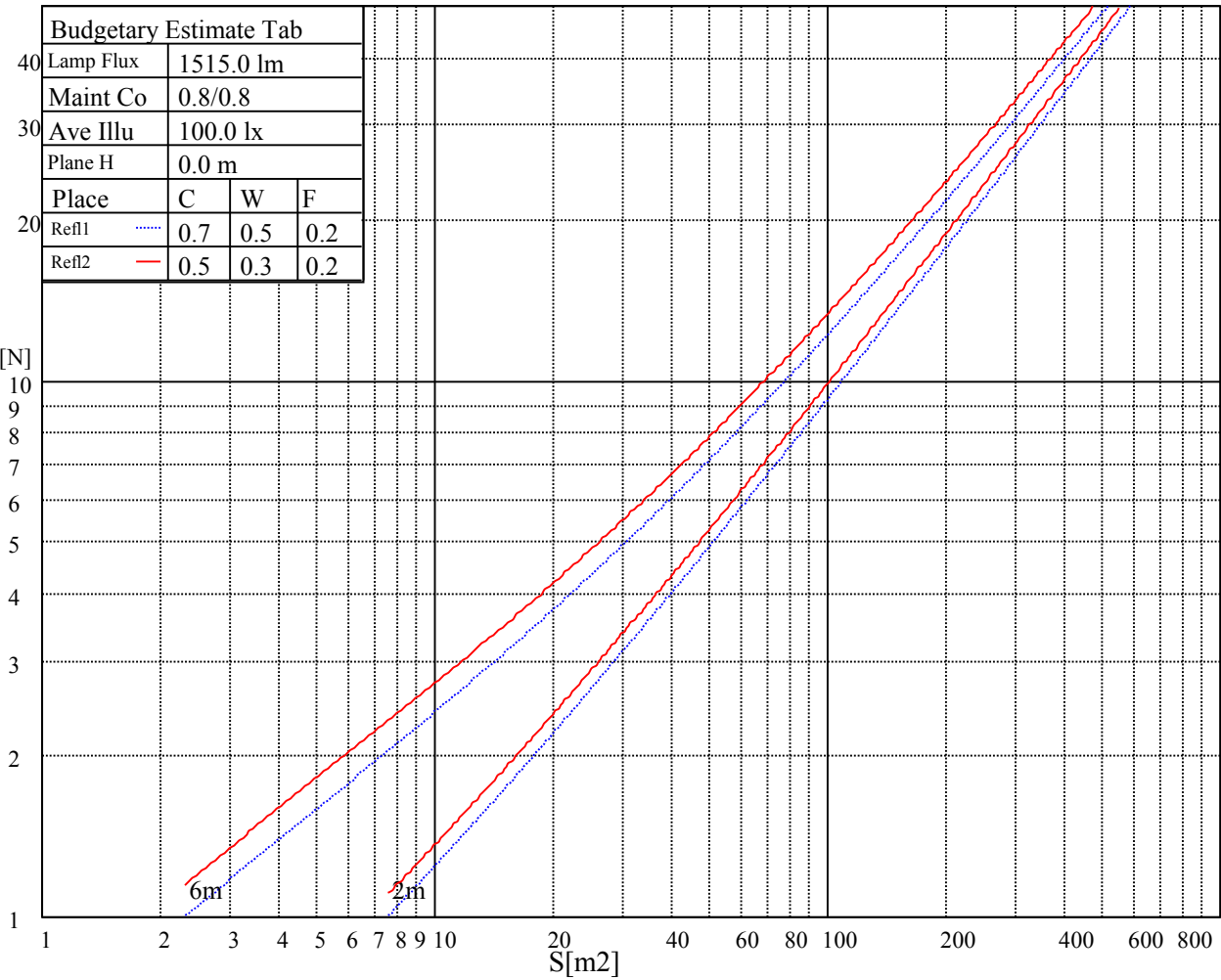
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

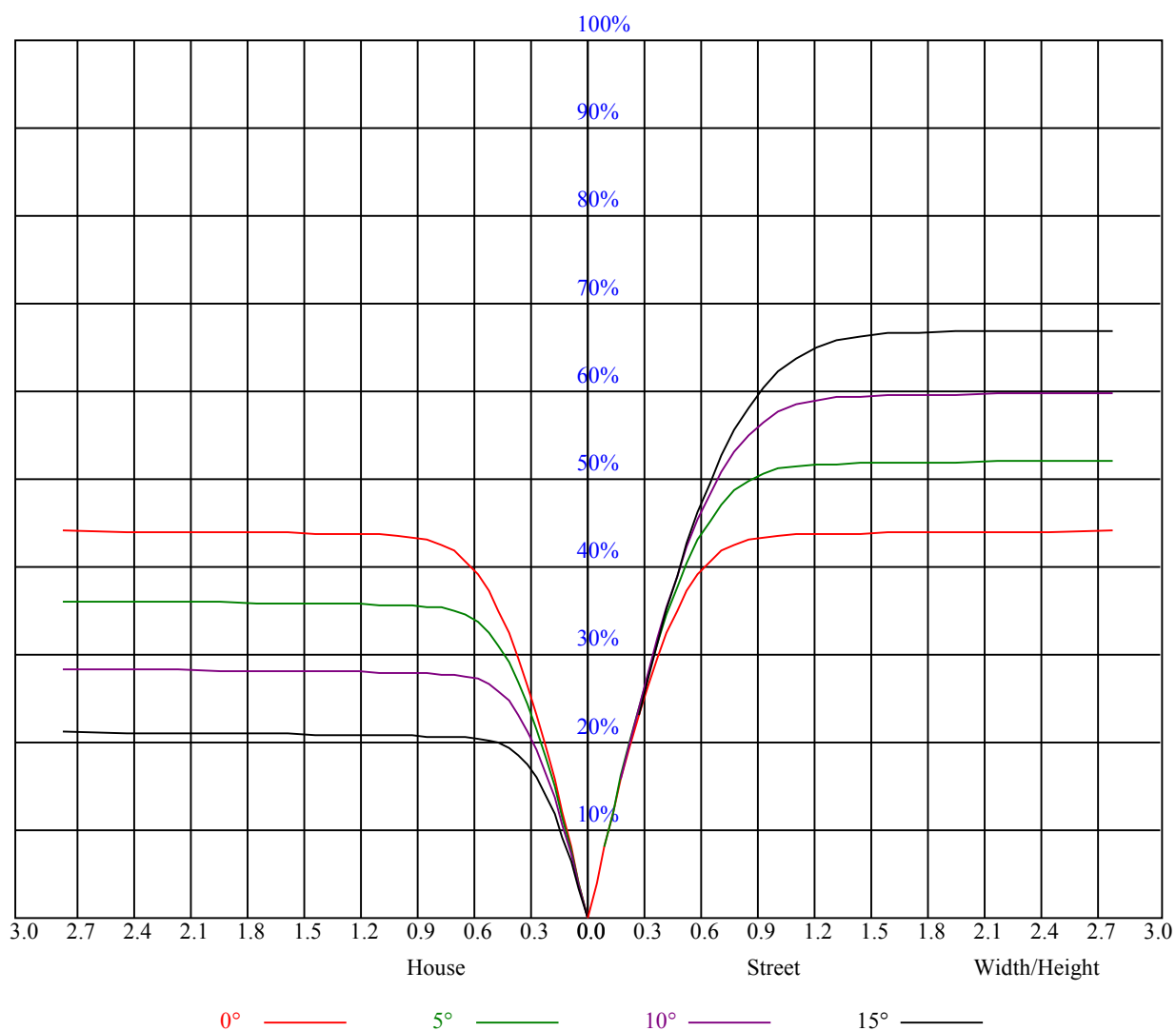
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	1.06	1.06	1.06	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	0.98	0.96	0.94	0.96	0.94	0.92	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83
2	0.91	0.88	0.85	0.90	0.87	0.84	0.87	0.84	0.82	0.84	0.82	0.80	0.82	0.80	0.78	0.77
3	0.85	0.81	0.77	0.84	0.80	0.76	0.82	0.78	0.75	0.79	0.77	0.74	0.77	0.75	0.73	0.71
4	0.80	0.75	0.71	0.79	0.74	0.70	0.77	0.73	0.69	0.75	0.71	0.69	0.73	0.70	0.68	0.67
5	0.74	0.69	0.65	0.74	0.69	0.65	0.72	0.68	0.64	0.71	0.67	0.64	0.69	0.66	0.63	0.62
6	0.70	0.64	0.61	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.63	0.60	0.65	0.62	0.59	0.58
7	0.66	0.60	0.56	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.54
8	0.62	0.56	0.53	0.61	0.56	0.53	0.60	0.56	0.52	0.59	0.55	0.52	0.59	0.55	0.52	0.51
9	0.58	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.55	0.52	0.49	0.48
10	0.55	0.50	0.46	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.53	0.49	0.46	0.45



Nata 2-1538-E

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	1449.00	1438.31	1401.75	1309.50	1190.81	1033.31	813.38	544.50	304.31		
45.0	1455.19	1441.13	1396.69	1313.44	1193.63	1026.56	808.88	529.88	300.94		
90.0	1458.56	1437.75	1385.44	1284.19	1119.71	987.92	771.98	483.64	142.09		
135.0	1460.25	1436.06	1392.19	1297.69	1171.13	1012.50	807.75	555.19	286.31		
180.0	1449.00	1422.56	1361.81	1276.31	1117.86	974.31	767.59	480.26	130.73		
225.0	1455.19	1437.19	1386.56	1284.19	1119.09	982.58	770.85	480.83	128.19		
270.0	1458.56	1449.00	1406.25	1328.06	1193.63	1027.13	804.38	550.13	303.75		
315.0	1460.25	1449.00	1401.75	1287.56	1112.18	994.44	769.05	452.08	121.95		
360.0	1449.00	1438.31	1401.75	1309.50	1190.81	1033.31	813.38	544.50	304.31		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	43.99	13.89	8.78	6.92	6.81	6.75	7.43	6.30	5.96		
45.0	44.10	12.60	8.27	6.92	6.69	6.58	6.58	6.08	5.96		
90.0	42.36	12.09	8.21	7.09	6.81	6.53	6.36	6.13	6.02		
135.0	47.31	13.22	8.10	6.81	6.58	6.58	6.41	6.13	5.96		
180.0	40.61	12.60	8.16	7.09	6.98	6.75	8.38	6.19	5.96		
225.0	36.51	13.44	8.55	7.20	6.98	6.75	9.45	6.13	5.96		
270.0	39.60	13.61	8.27	6.75	6.64	6.64	6.53	6.24	6.02		
315.0	31.44	11.53	7.76	6.98	6.81	7.31	11.81	6.13	6.02		
360.0	43.99	13.89	8.78	6.92	6.81	6.75	7.43	6.30	5.96		
C/ γ (°)	90.0										
0.0	5.79										
45.0	5.79										
90.0	5.79										
135.0	5.79										
180.0	5.79										
225.0	5.85										
270.0	5.79										
315.0	5.79										
360.0	5.79										