



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

Client:

LumCAT: CT01D03560AF

Luminaire:

Report No: GC2019091909

Voltage(V): 220.6000

Test No: NATA07

Current(A): 0.0180

LampCAT: CREE CXA1304

Power (W): 2.9800

Lamp flux(lm): 231.0

PF: 0.7290

Number of Lamps: 1

Ballast type: AC

Length(mm): 33

Width(mm): 33

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 194.52, Efficiency(%): 84.21% , Luminous Efficacy(lm/W): 65.27

Central intensity(cd): 162.145, Maximum intensity(cd): 162.145

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=56.0

[C90/270]Total=56.0

Field angle(10%Imax): [C0/180]Total=108.0

[C90/270]Total=108.0

Maximum s/h(1/2): C0_180=0.83 C90_270=0.83

Maximum s/h(1/4): C0_180=0.89 C90_270=0.89

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.21%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 86.184%

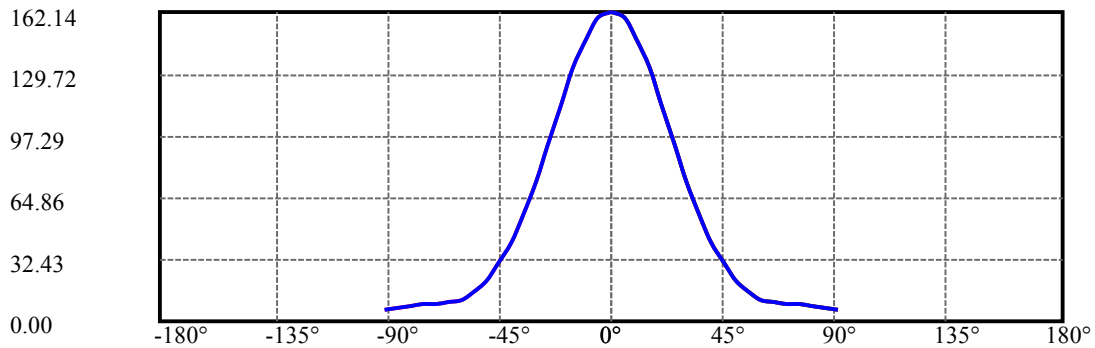
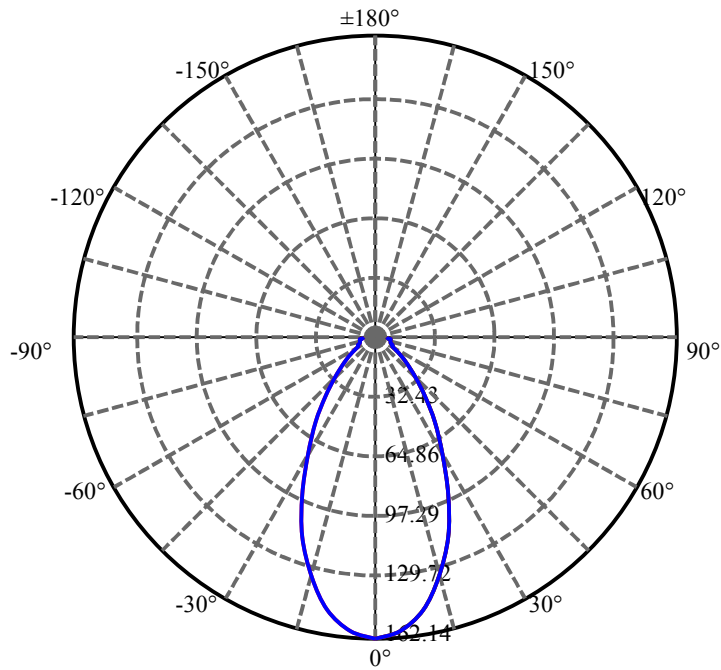
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	162.145	0.000	0	.000%	.000%
5.0	158.682	3.835	3.835	1.660%	1.972%
10.0	148.526	10.990	14.825	4.757%	7.622%
15.0	133.149	16.709	31.534	7.233%	16.211%
20.0	113.822	20.354	51.888	8.811%	26.675%
25.0	93.085	21.701	73.588	9.394%	37.831%
30.0	73.074	21.028	94.616	9.103%	48.641%
35.0	55.690	18.961	113.577	8.208%	58.389%
40.0	41.717	16.252	129.829	7.035%	66.744%
45.0	30.423	13.357	143.186	5.782%	73.611%
50.0	21.525	10.497	153.683	4.544%	79.007%
55.0	14.878	7.915	161.598	3.427%	83.076%
60.0	11.270	6.044	167.642	2.616%	86.184%
65.0	9.901	5.147	172.789	2.228%	88.830%
70.0	9.315	4.866	177.655	2.106%	91.331%
75.0	8.788	4.732	182.387	2.048%	93.764%
80.0	8.068	4.510	186.897	1.952%	96.082%
85.0	6.955	4.082	190.979	1.767%	98.181%
90.0	5.969	3.539	194.518	1.532%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	94.62	40.96%	48.64%
0-40	129.83	56.20%	66.74%
0-60	167.64	72.57%	86.18%
0-90	190.98	82.68%	98.18%
0-120	190.98	82.68%	98.18%
0-180	194.52	84.21%	100.00%
60-90	29.38	12.72%	15.10%
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%
0-51.22	155.61	67.37%	80.00%

ZONAL LUMEN SUMMARY

0-10	14.83
10-20	37.06
20-30	42.73
30-40	35.21
40-50	23.85
50-60	13.96
60-70	10.01
70-80	9.24
80-90	4.08
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:

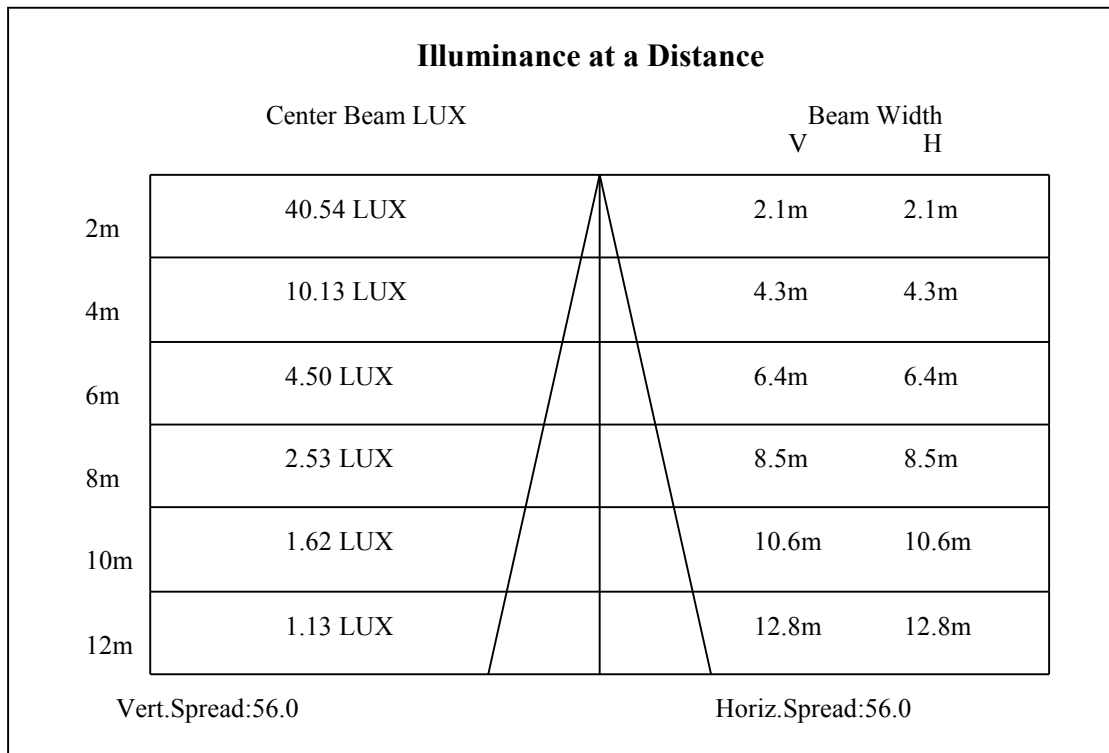
C90/C270:

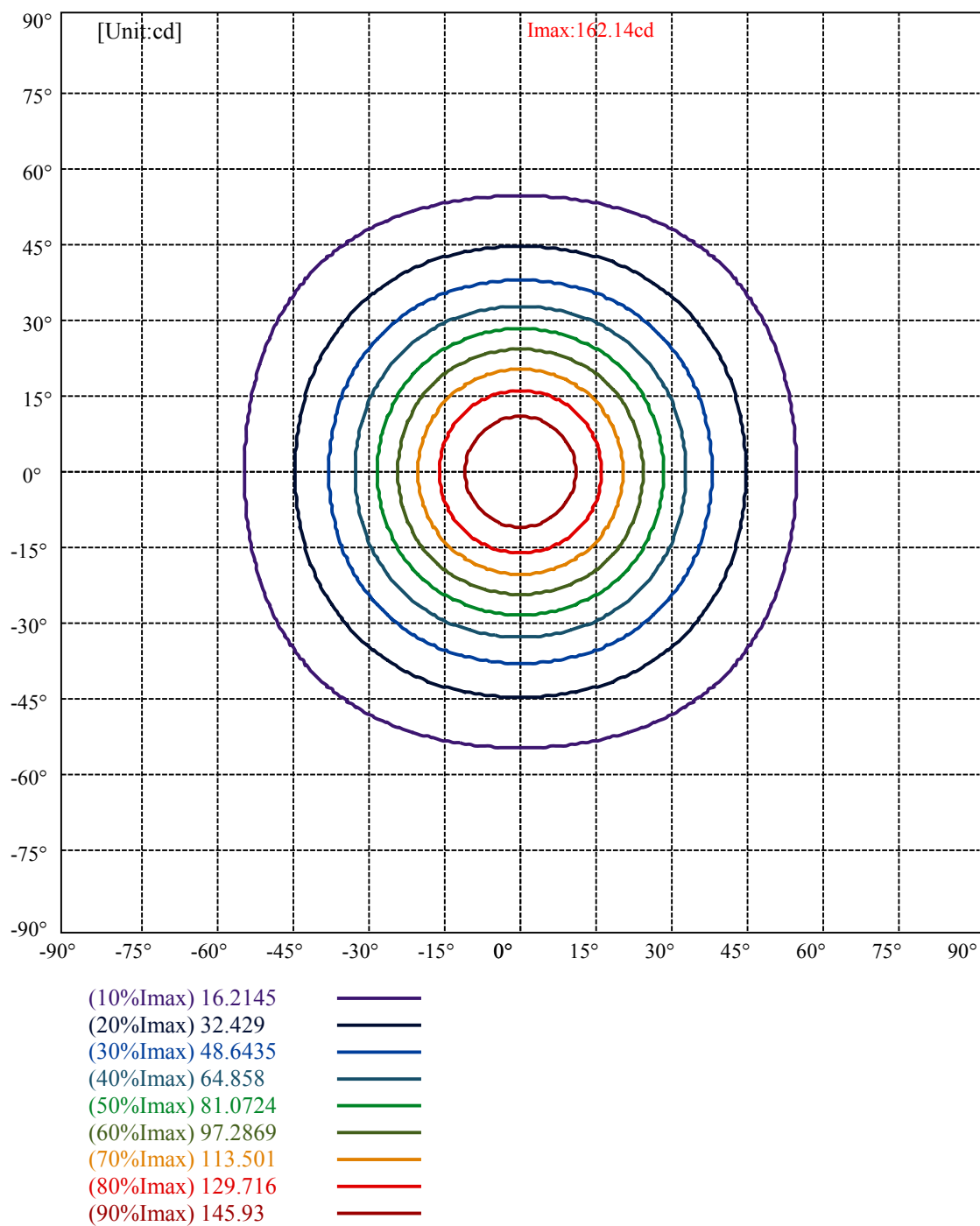
Field angle(10%Imax):C0/180Left:54.0 Right:54.0

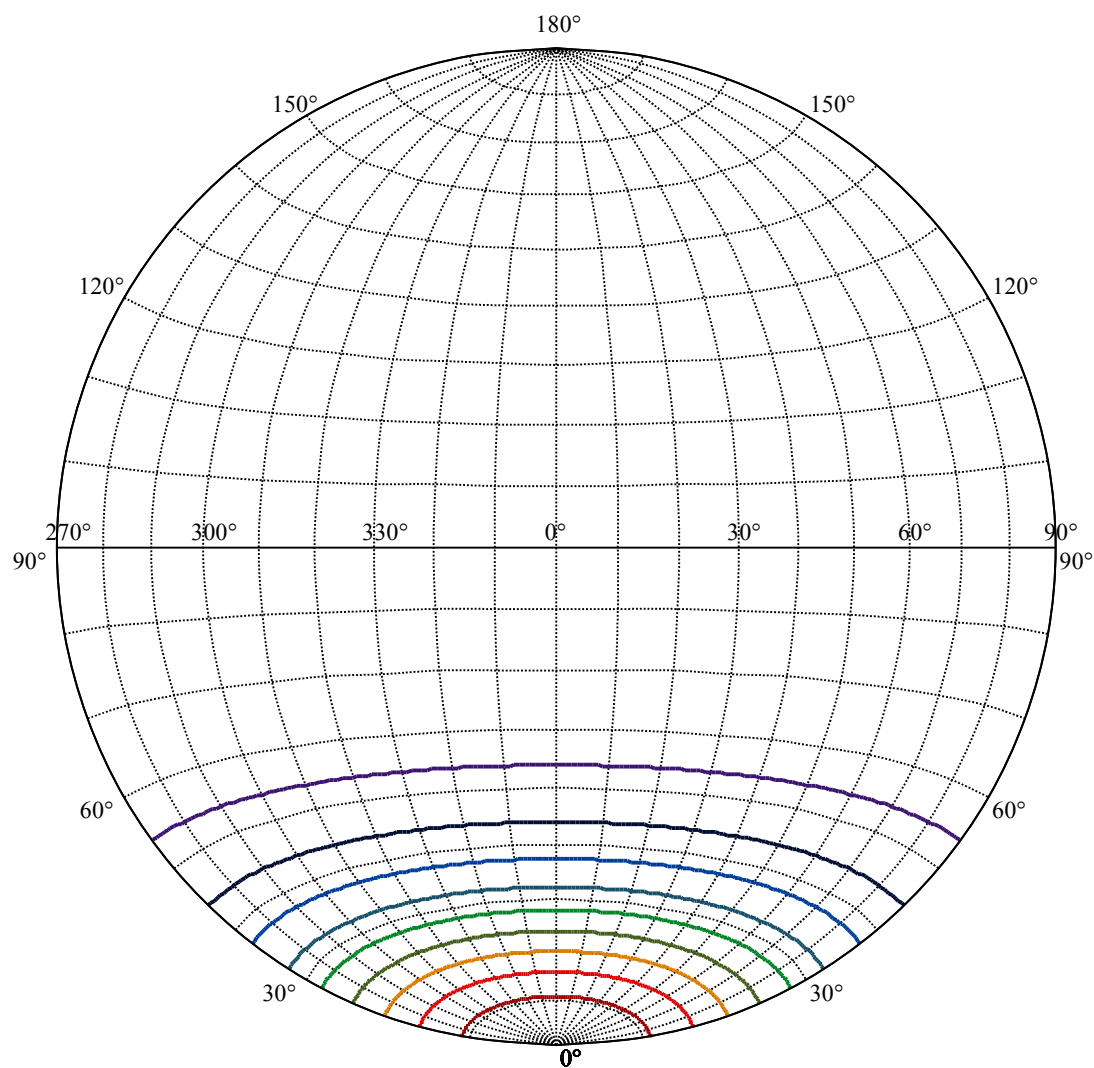
:C90/270Left:54.0 Right:54.0

Beam Angle(50%Imax):C0/180Left:28.0 Right:28.0

:C90/270Left:28.0 Right:28.0







House

[Unit:cd]

Road

I_{max}:162.14

(10%I_{max}) 16.2145

(20%I_{max}) 32.429

(30%I_{max}) 48.6435

(40%I_{max}) 64.858

(50%I_{max}) 81.0724

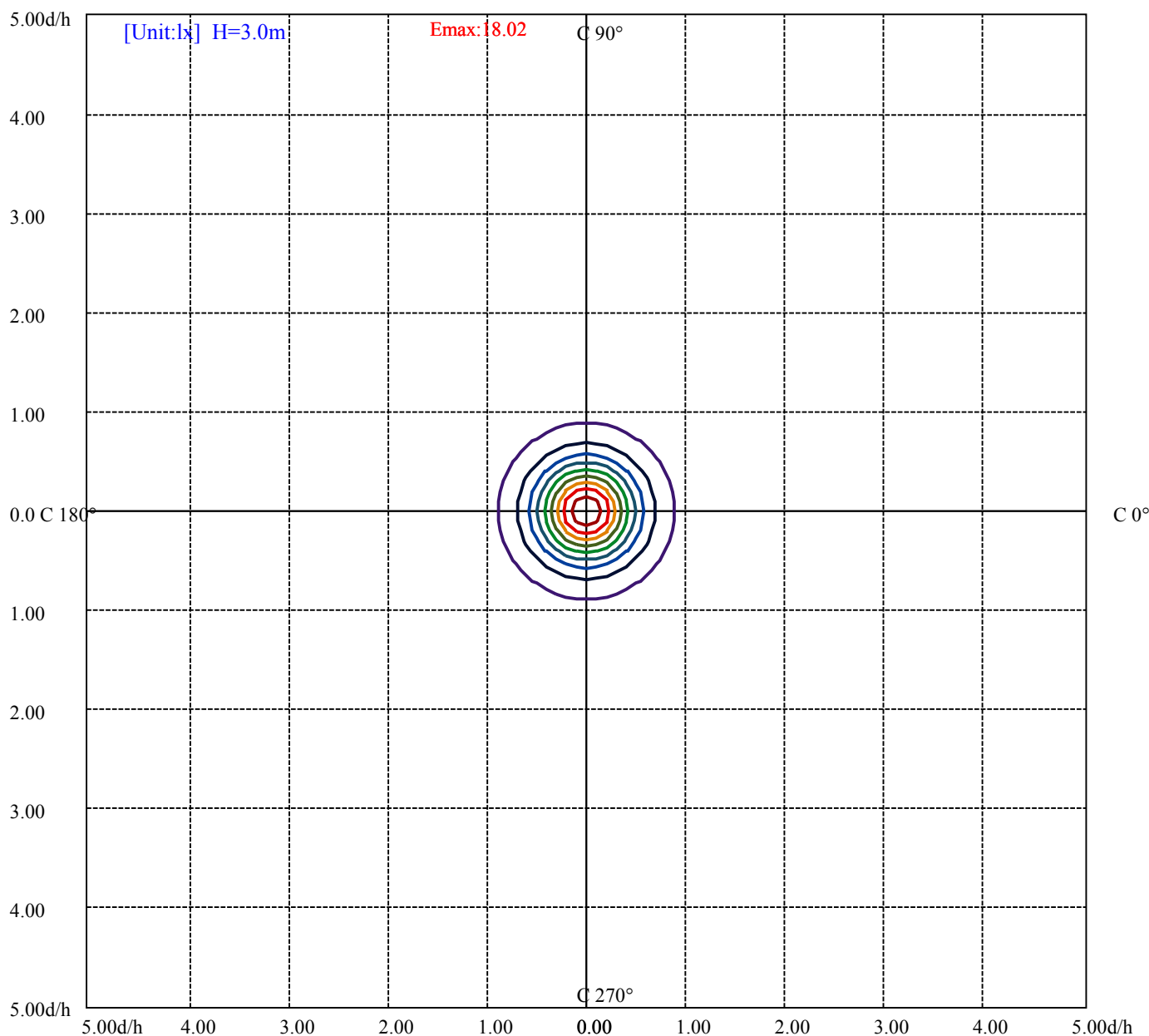
(60%I_{max}) 97.2869

(70%I_{max}) 113.501

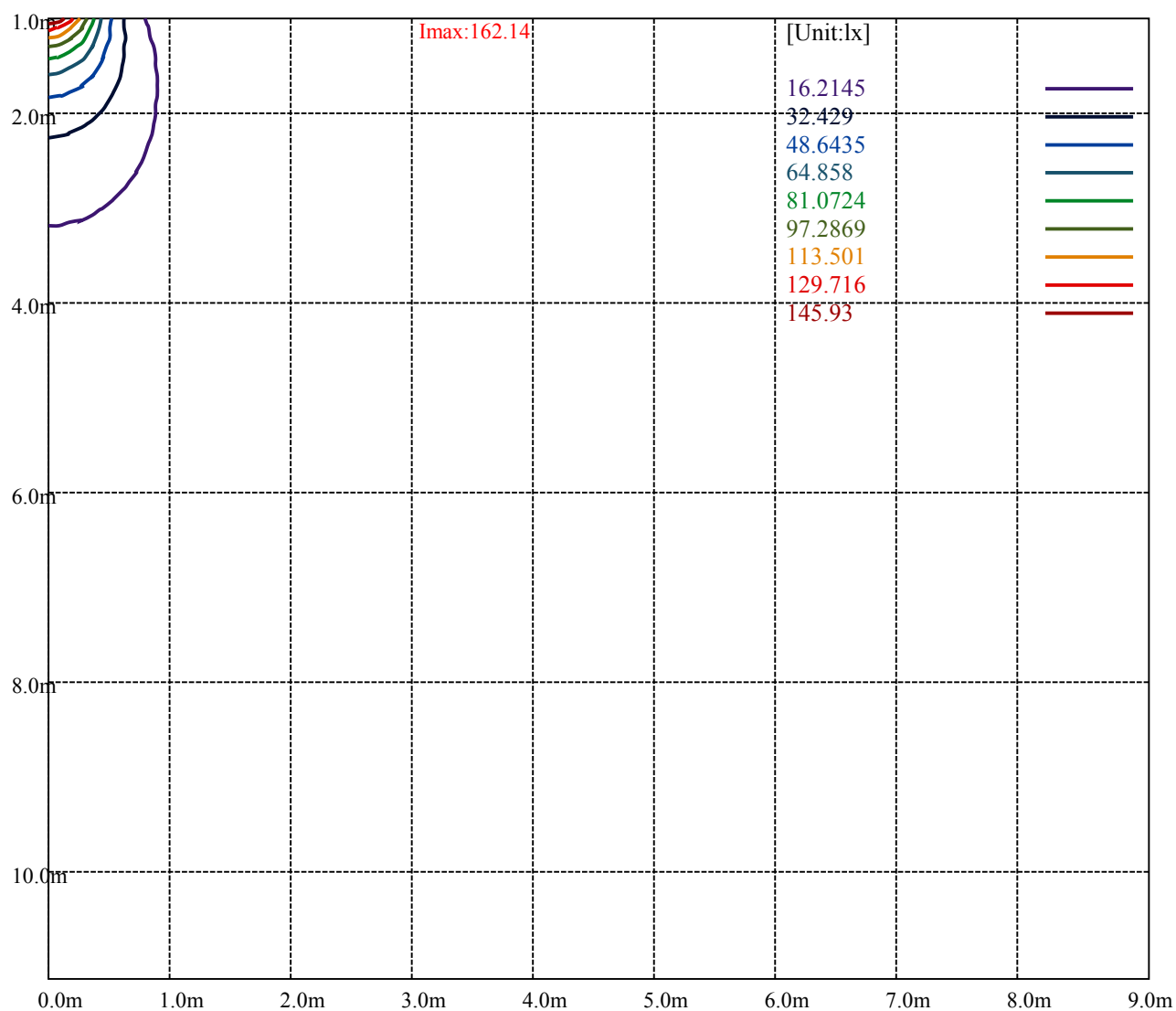
(80%I_{max}) 129.716

(90%I_{max}) 145.93





(10%Emax) 1.801611	—
(20%Emax) 3.603222	—
(30%Emax) 5.404822	—
(40%Emax) 7.206434	—
(50%Emax) 9.008045	—
(60%Emax) 10.80966	—
(70%Emax) 12.61122	—
(80%Emax) 14.41289	—
(90%Emax) 16.21444	—



Luminance Table

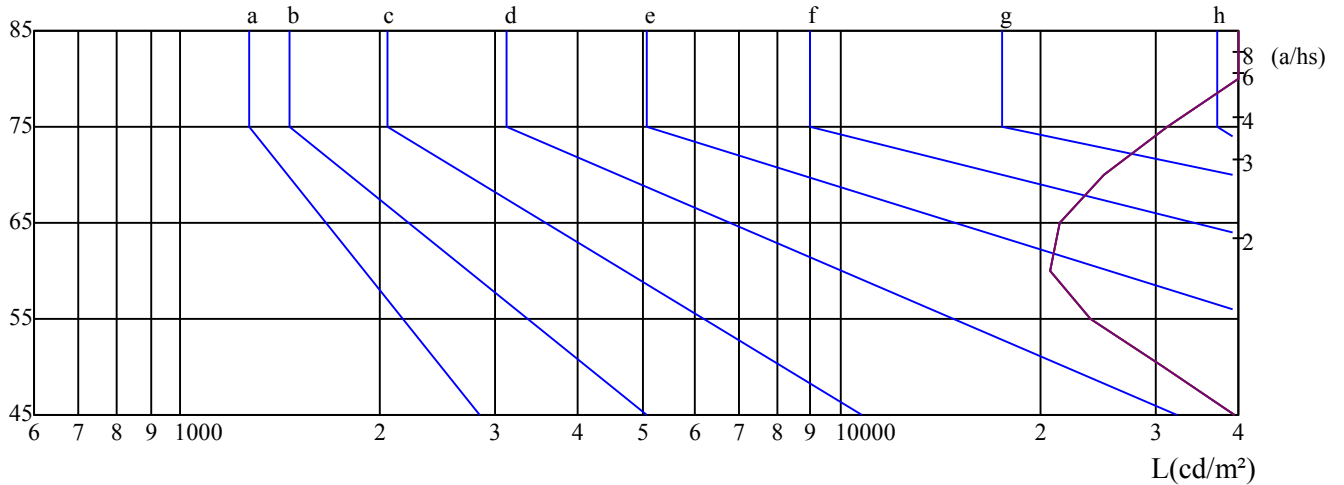
γ	45	50	55	60	65	70	75	80	85
C0	39509	30751	23819	20698	21514	25011	31178	42667	73275
C45	39509	30751	23819	20698	21514	25011	31178	42667	73275
C90	39509	30751	23819	20698	21514	25011	31178	42667	73275

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
21514	21514	21514	31178	31178	31178	73275	73275	73275

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

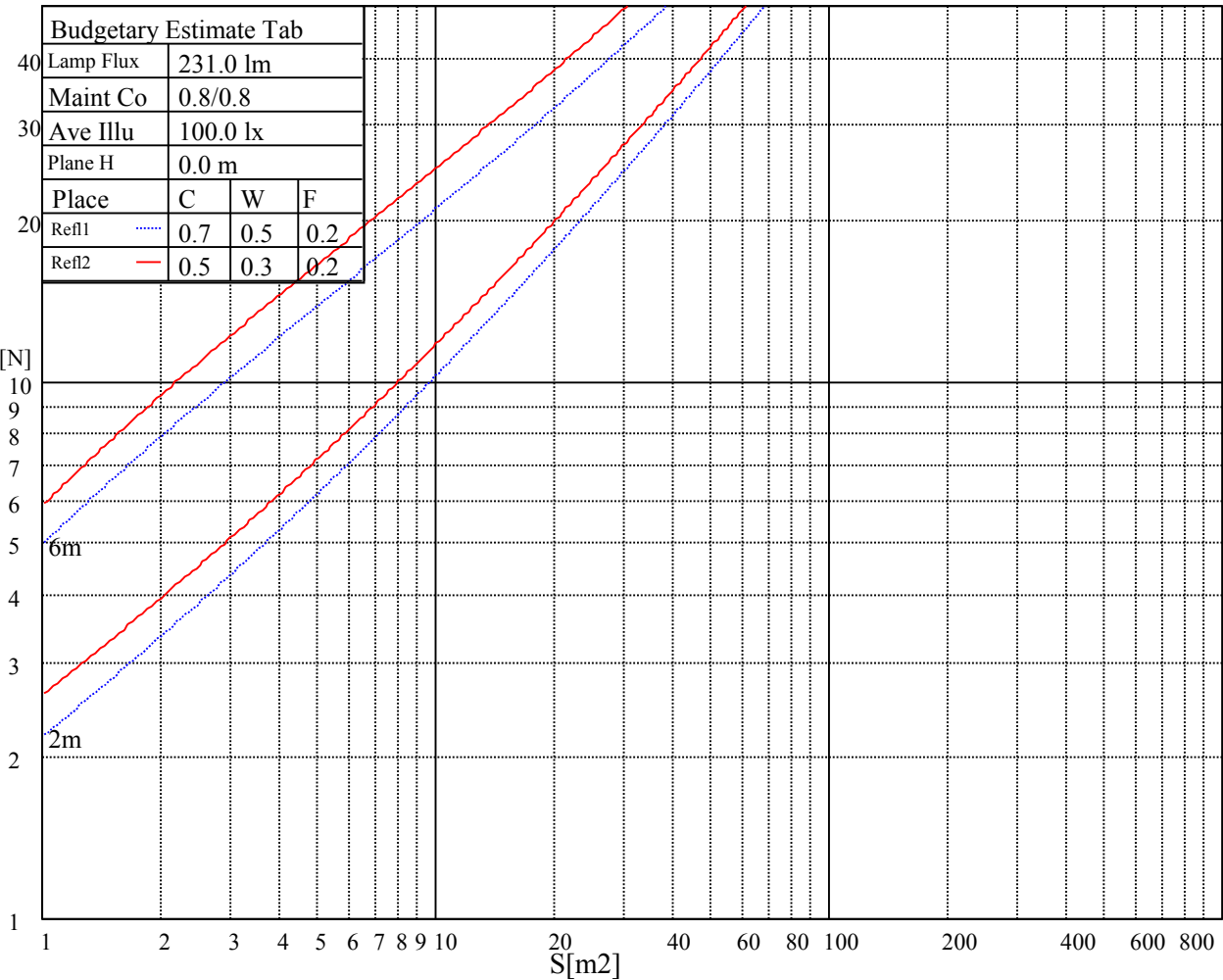
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

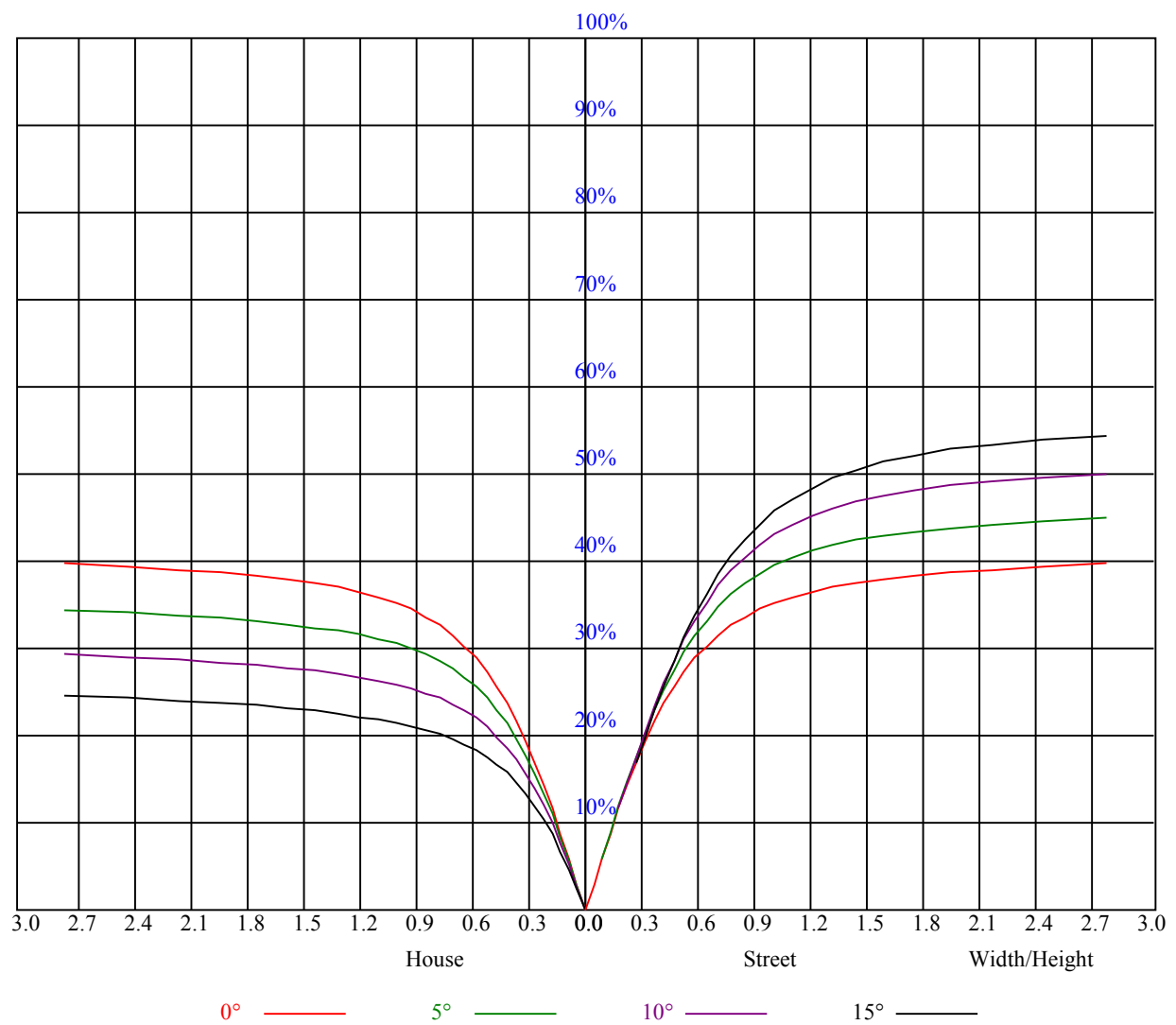
C0 ———

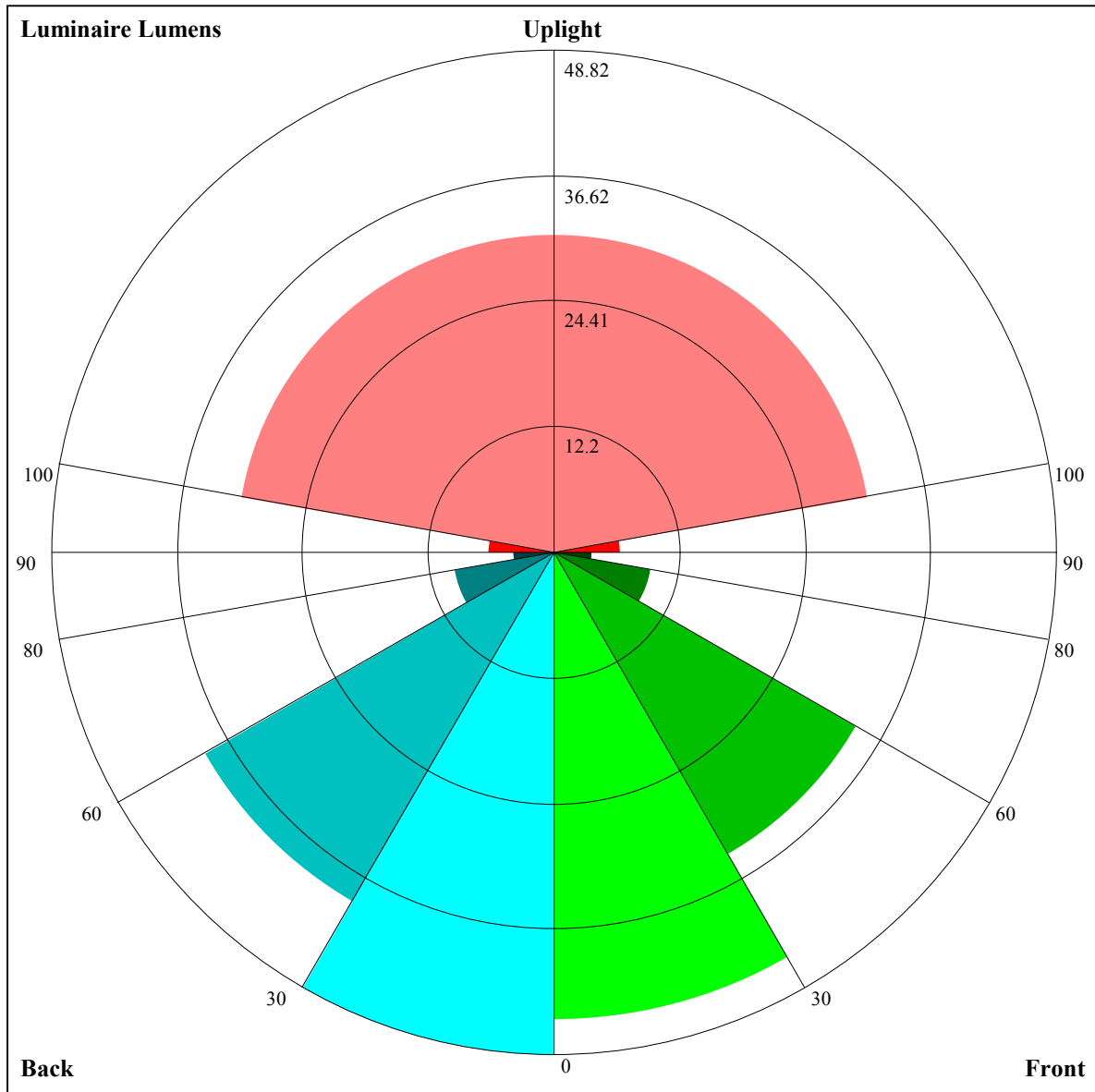
C45 ———

C90 ———



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	1.00	1.00	1.00	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.84
1	0.89	0.86	0.83	0.87	0.84	0.81	0.84	0.81	0.79	0.80	0.78	0.77	0.77	0.76	0.74	0.73
2	0.80	0.75	0.71	0.79	0.74	0.70	0.76	0.72	0.69	0.73	0.70	0.67	0.70	0.68	0.66	0.64
3	0.73	0.67	0.62	0.71	0.66	0.62	0.69	0.64	0.61	0.67	0.63	0.60	0.65	0.62	0.59	0.57
4	0.66	0.60	0.55	0.65	0.60	0.55	0.63	0.58	0.54	0.62	0.57	0.54	0.60	0.56	0.53	0.51
5	0.61	0.55	0.50	0.60	0.54	0.50	0.59	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.48	0.47
6	0.56	0.50	0.45	0.56	0.50	0.45	0.54	0.49	0.45	0.53	0.48	0.45	0.52	0.48	0.44	0.43
7	0.52	0.46	0.42	0.52	0.46	0.42	0.51	0.45	0.41	0.49	0.45	0.41	0.48	0.44	0.41	0.39
8	0.49	0.43	0.38	0.48	0.42	0.38	0.47	0.42	0.38	0.46	0.41	0.38	0.45	0.41	0.38	0.36
9	0.46	0.40	0.36	0.45	0.39	0.36	0.44	0.39	0.35	0.43	0.39	0.35	0.43	0.38	0.35	0.34
10	0.43	0.37	0.33	0.42	0.37	0.33	0.42	0.36	0.33	0.41	0.36	0.33	0.40	0.36	0.33	0.31





Luminaire Lumens:

FL=45.42,FM=33.92,FH=9.53,FVH=3.66

BL=48.82,BM=39.27,BH=9.86,BVH=4.09

UL=6.51,UH=30.99

BUG Rating:B0-U2-G0

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	161.95	153.41	140.93	122.50	101.62	78.65	59.91	45.66	32.30
45.0	163.48	156.94	144.41	125.38	104.73	85.24	65.06	47.01	34.01
90.0	160.65	151.74	136.70	117.96	95.41	75.36	56.47	42.83	32.90
135.0	162.50	158.56	147.84	132.06	115.03	92.06	74.66	57.49	42.41
180.0	161.95	162.27	154.66	142.78	125.80	104.50	84.41	65.75	51.23
225.0	163.48	163.06	156.05	144.36	123.57	104.92	83.85	62.55	46.26
270.0	160.65	164.08	160.14	149.37	131.55	111.74	89.14	69.51	52.71
315.0	162.50	159.40	147.47	130.76	112.85	92.20	71.09	54.71	41.90
360.0	161.95	153.41	140.93	122.50	101.62	78.65	59.91	45.66	32.30
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	24.64	15.82	11.83	10.26	9.61	9.05	8.45	7.84	6.45
45.0	23.48	16.24	11.83	9.98	9.28	8.77	8.07	7.24	6.40
90.0	22.51	15.41	11.42	10.16	9.51	9.00	8.45	7.61	7.05
135.0	31.14	22.18	14.11	10.81	9.84	9.23	8.82	8.12	7.47
180.0	36.75	27.61	18.89	12.53	10.39	9.70	9.28	8.63	8.07
225.0	33.64	25.01	15.87	11.65	9.65	9.19	8.77	8.17	7.10
270.0	40.70	28.68	20.56	13.97	10.95	10.16	9.74	9.00	8.21
315.0	30.53	21.25	14.52	10.81	9.98	9.42	8.72	7.93	4.87
360.0	24.64	15.82	11.83	10.26	9.61	9.05	8.45	7.84	6.45
C/ γ (°)	90.0								
0.0	4.83								
45.0	5.06								
90.0	5.94								
135.0	6.26								
180.0	6.59								
225.0	6.31								
270.0	7.47								
315.0	5.29								
360.0	4.83								