



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

Nata

Client:

LumCAT: 1687-M

Luminaire: 92.70.125.00

Report No: NT2018010501

Test No: GC2018010501

LampCAT: BXRV-DR-1830-H-1000-A-13

Lamp flux(lm): 610.0

Number of Lamps: 1

Length(mm): 46

Phm Type: C

Voltage(V): 17.6000

Current(A): 0.4000

Power (W): 7.0400

PF: 0.0000

Ballast type: DC

Width(mm): 46

Height(mm): 0

Photometric Results

Lumens(lm): 559.46, Efficiency(%): 91.71% , Luminous Efficacy(lm/W): 79.47

Central intensity(cd): 1665.319, Maximum intensity(cd): 1665.319

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=23.8

[C90/270]Total=23.8

Field angle(10%Imax): [C0/180]Total=75.8

[C90/270]Total=75.8

Maximum s/h(1/2): C0_180=0.40 C90_270=0.40

Maximum s/h(1/4): C0_180=0.42 C90_270=0.42

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 93.26%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.069%

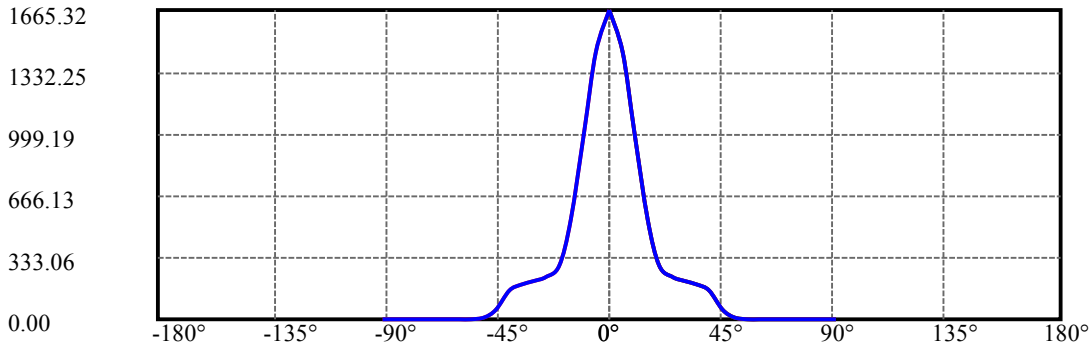
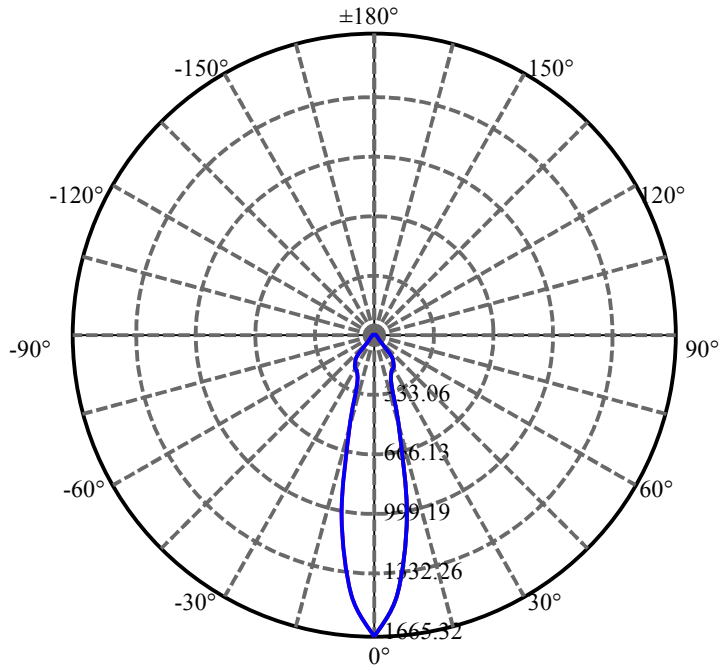
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1665.318	9.959	9.959	1.633%	1.780%
5.0	1441.652	68.872	78.831	11.291%	14.091%
10.0	1013.155	96.435	175.267	15.809%	31.328%
15.0	535.059	75.908	251.175	12.444%	44.896%
20.0	289.390	54.253	305.428	8.894%	54.593%
25.0	227.369	52.671	358.098	8.635%	64.008%
30.0	203.874	55.875	413.974	9.160%	73.995%
35.0	187.976	59.100	473.073	9.688%	84.559%
40.0	151.240	53.287	526.361	8.736%	94.084%
45.0	50.645	19.630	545.99	3.218%	97.592%
50.0	7.371	3.095	549.085	.507%	98.146%
55.0	3.696	1.659	550.744	.272%	98.442%
60.0	3.097	1.470	552.215	.241%	98.705%
65.0	2.794	1.388	553.603	.228%	98.953%
70.0	2.608	1.343	554.946	.220%	99.193%
75.0	2.484	1.315	556.262	.216%	99.428%
80.0	2.381	1.285	557.547	.211%	99.658%
85.0	2.347	1.281	558.828	.210%	99.887%
90.0	2.305	0.632	559.46	.104%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	413.97	67.86%	74.00%
0-40	526.36	86.29%	94.08%
0-60	552.21	90.53%	98.70%
0-90	558.83	91.61%	99.89%
0-120	558.83	91.61%	99.89%
0-180	559.46	91.71%	100.00%
60-90	8.08	1.33%	1.44%
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%
0-32.84	447.57	73.37%	80.00%

ZONAL LUMEN SUMMARY

0-10	175.27
10-20	130.16
20-30	108.55
30-40	112.39
40-50	22.72
50-60	3.13
60-70	2.73
70-80	2.60
80-90	1.28
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: —————

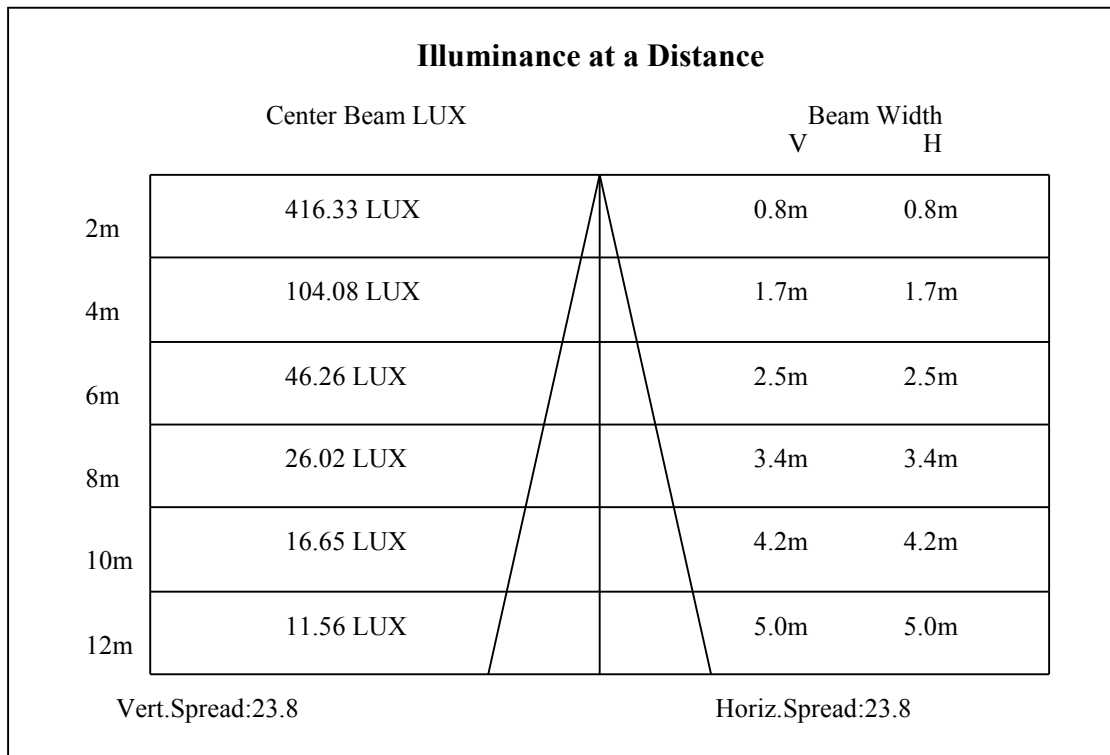
C90/C270: —————

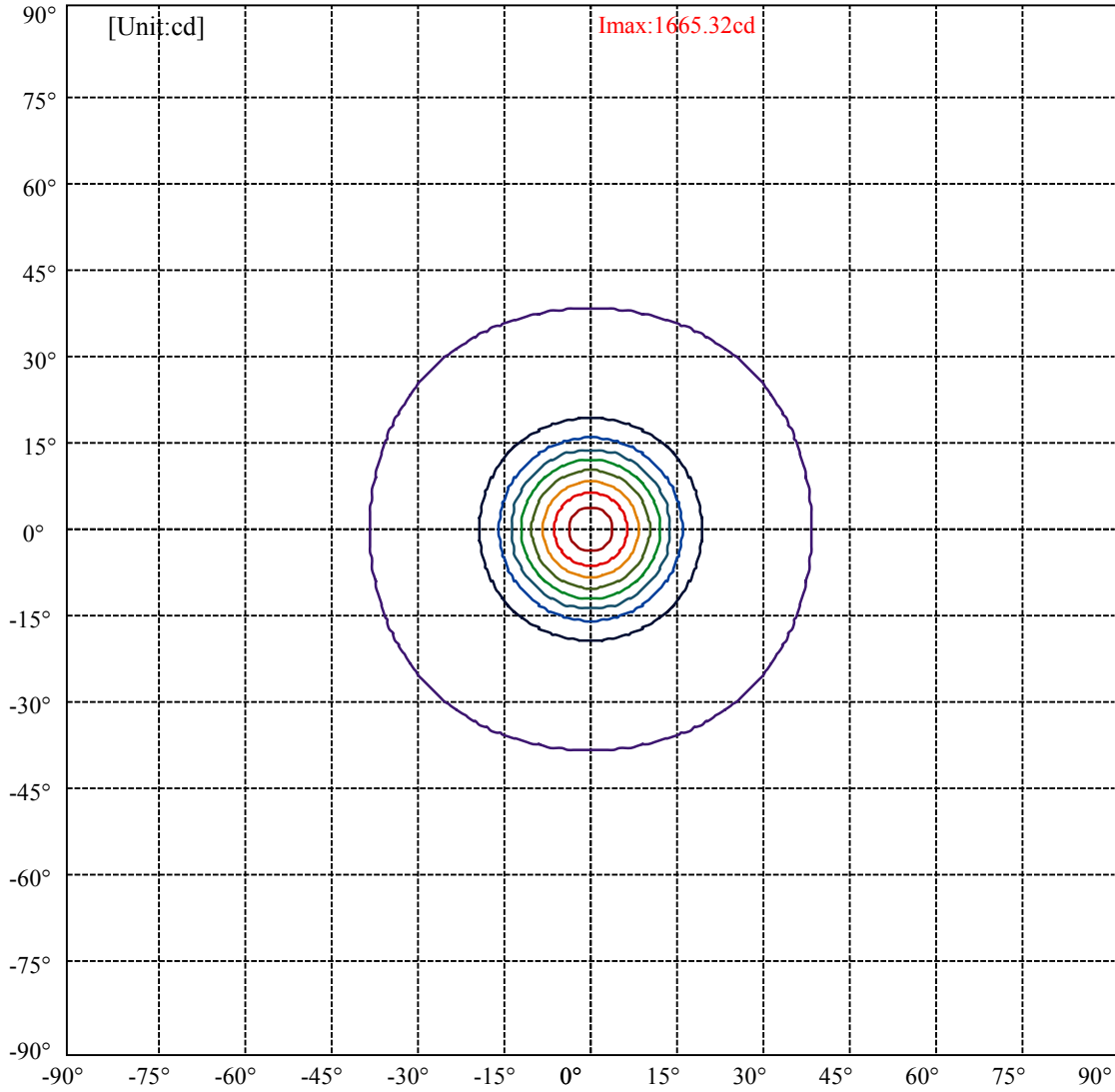
Field angle(10%Imax):C0/180Left:37.9 Right:37.9

:C90/270Left:37.9 Right:37.9

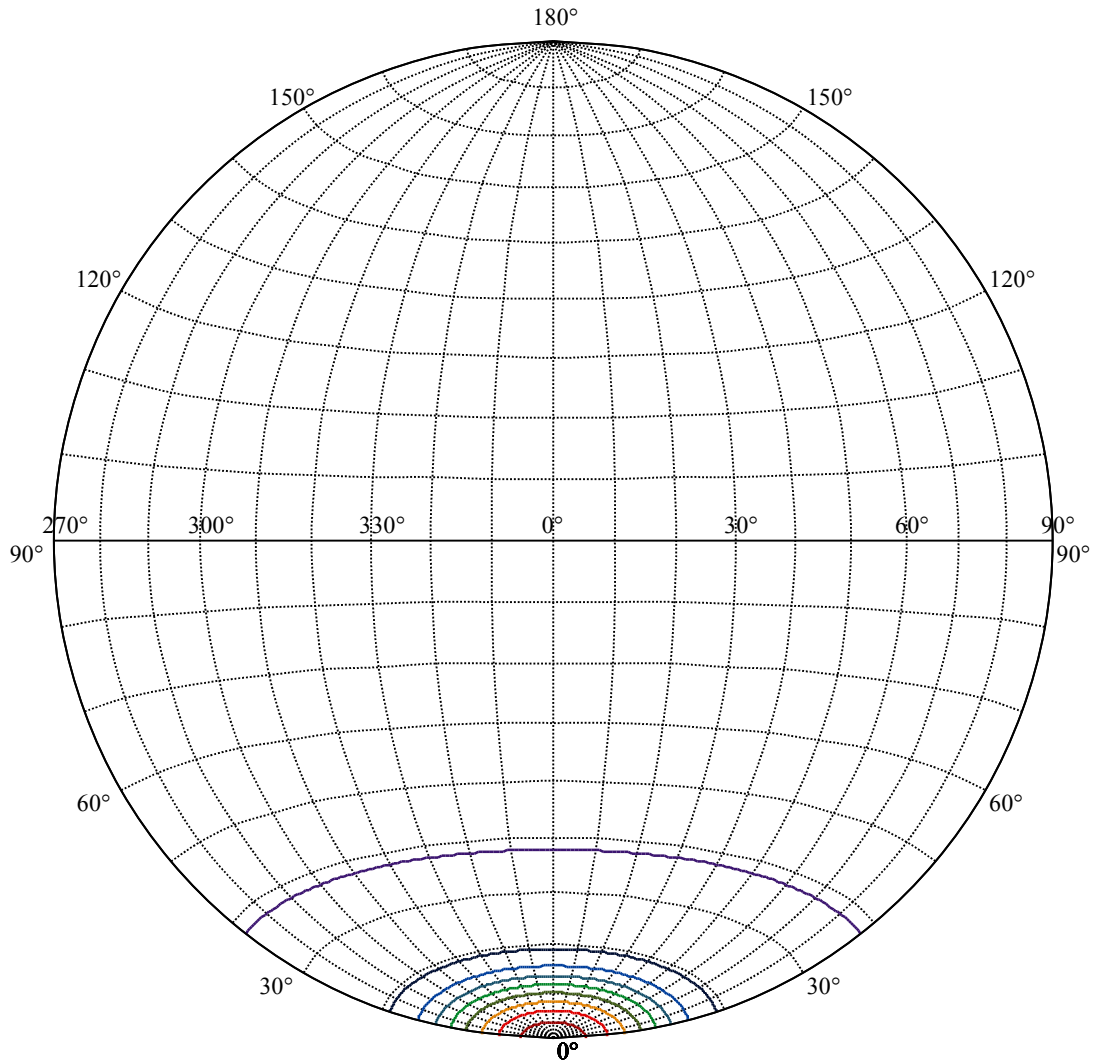
Beam Angle(50%Imax):C0/180Left:11.9 Right:11.9

:C90/270Left:11.9 Right:11.9





(10%Imax) 166.532	—
(20%Imax) 333.064	—
(30%Imax) 499.596	—
(40%Imax) 666.127	—
(50%Imax) 832.659	—
(60%Imax) 999.191	—
(70%Imax) 1165.72	—
(80%Imax) 1332.25	—
(90%Imax) 1498.79	—



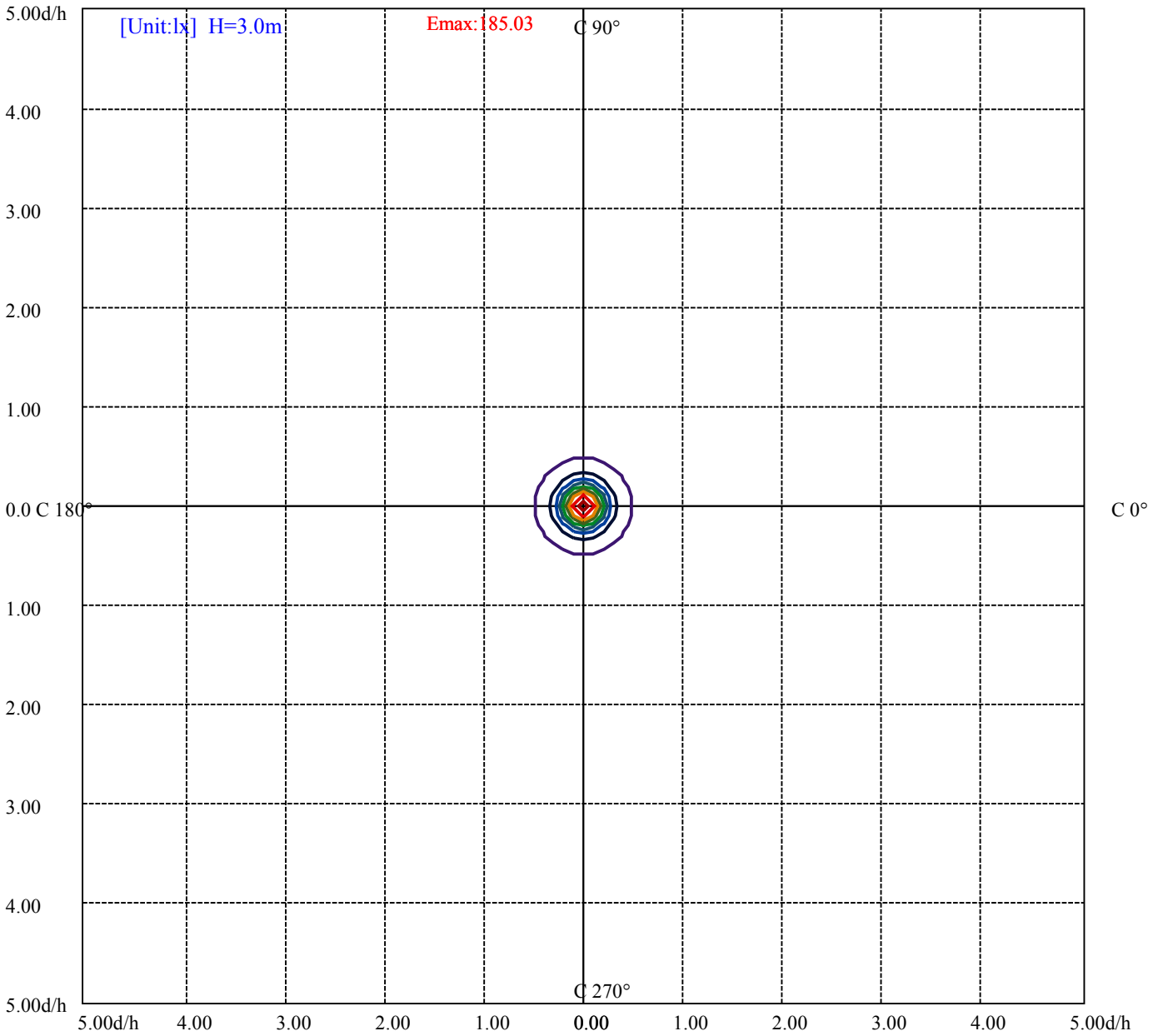
House

[Unit:cd]

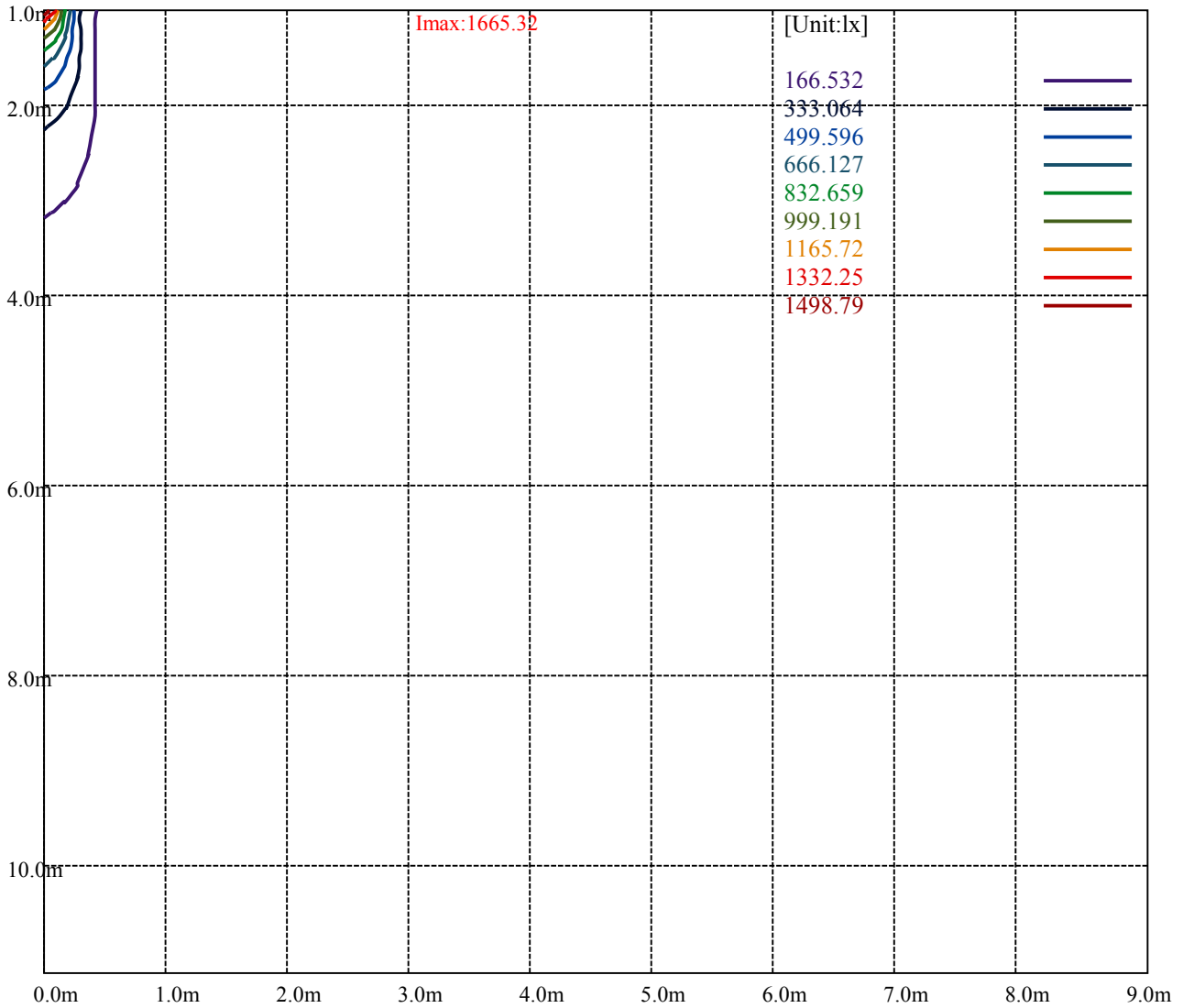
Road

Imax:1665.32

(10%Imax)	166.532	—
(20%Imax)	333.064	—
(30%Imax)	499.596	—
(40%Imax)	666.127	—
(50%Imax)	832.659	—
(60%Imax)	999.191	—
(70%Imax)	1165.72	—
(80%Imax)	1332.25	—
(90%Imax)	1498.79	—



(10%Emax) 18.50344	—
(20%Emax) 37.00689	—
(30%Emax) 55.51044	—
(40%Emax) 74.01389	—
(50%Emax) 92.51733	—
(60%Emax) 111.0208	—
(70%Emax) 129.5244	—
(80%Emax) 148.0278	—
(90%Emax) 166.5311	—



Luminance Table

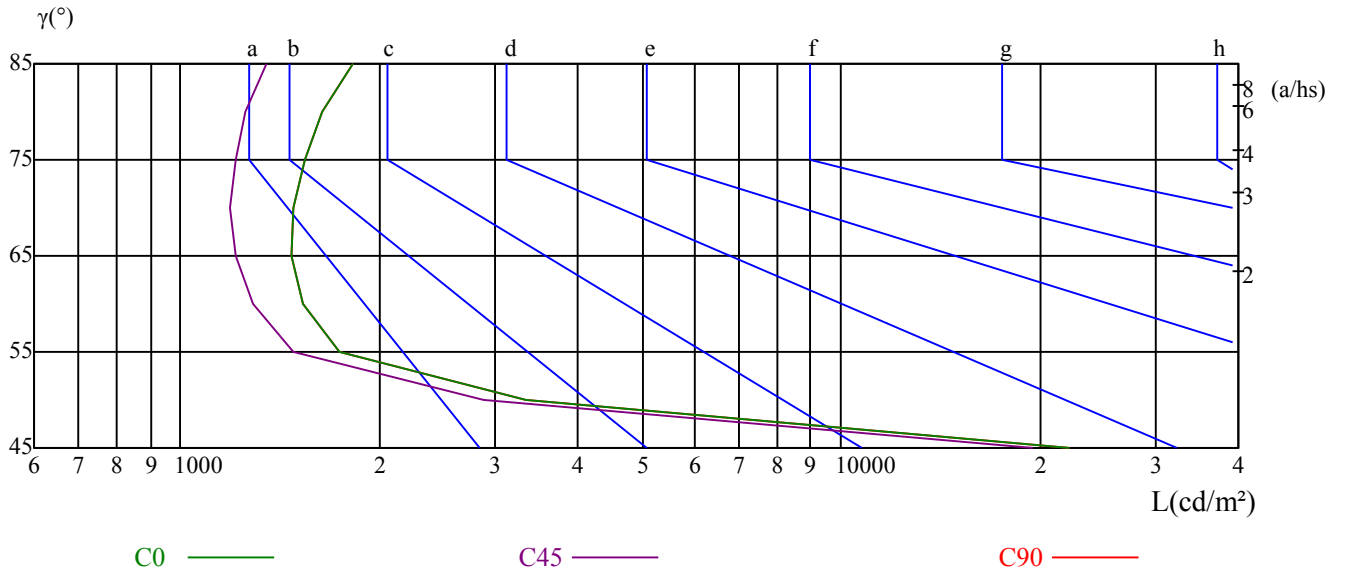
γ	45	50	55	60	65	70	75	80	85
C0	22243	3341	1745	1538	1475	1481	1539	1637	1827
C45	19477	2883	1483	1285	1210	1191	1209	1250	1349
C90	22243	3341	1745	1538	1475	1481	1539	1637	1827

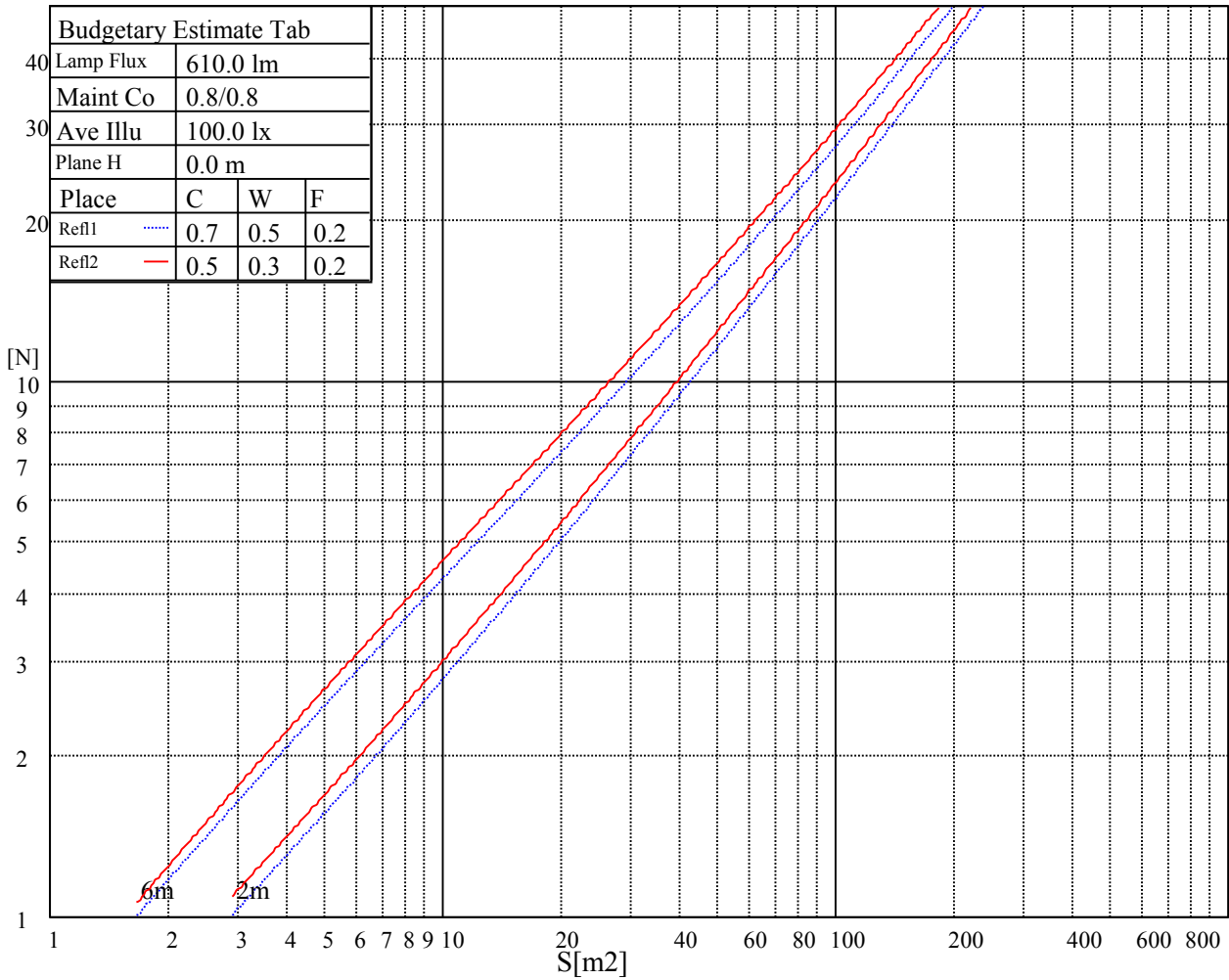
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3124	3124	3124	4536	4536	4536	12725	12725	12725

Glare Table

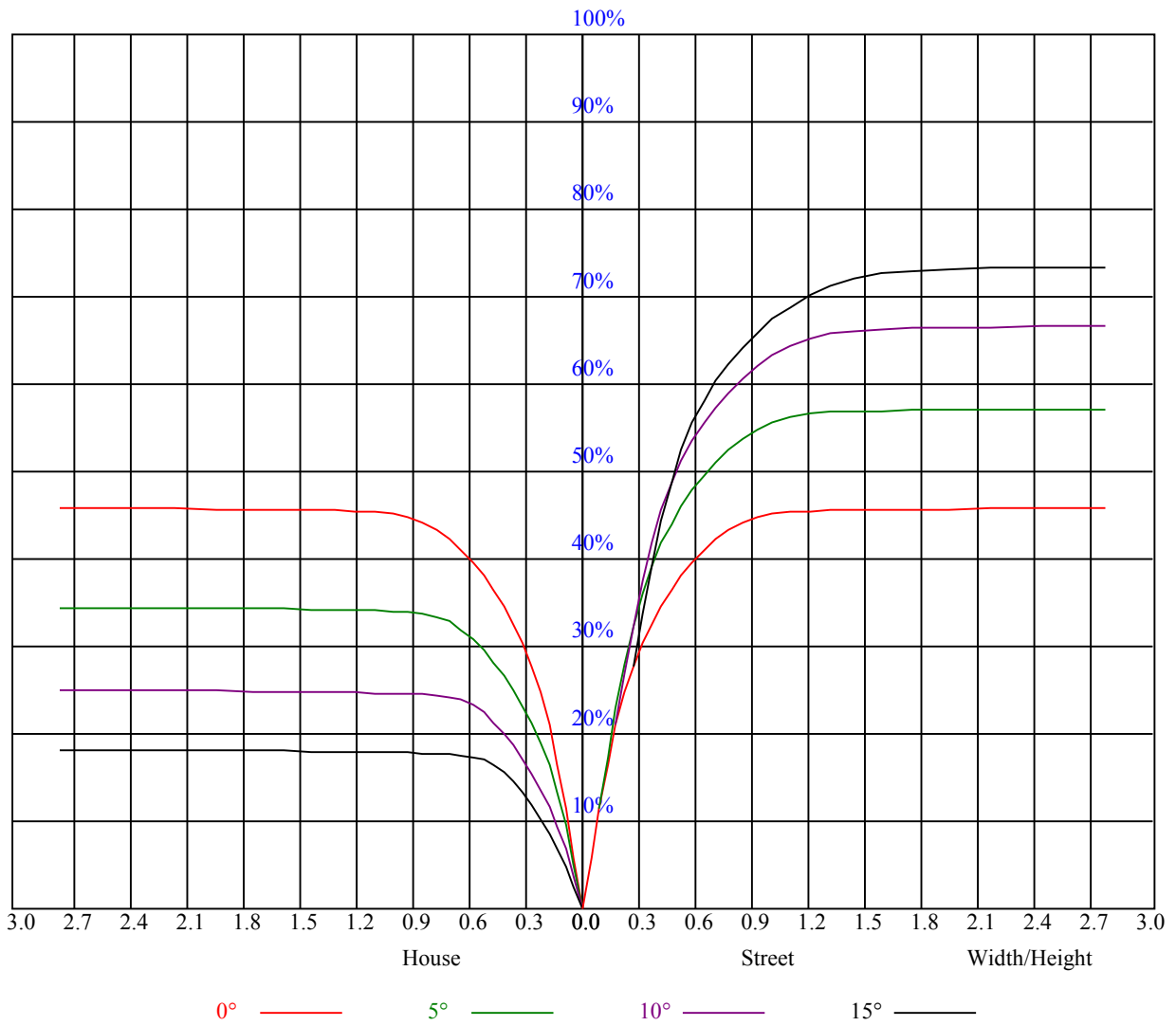
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

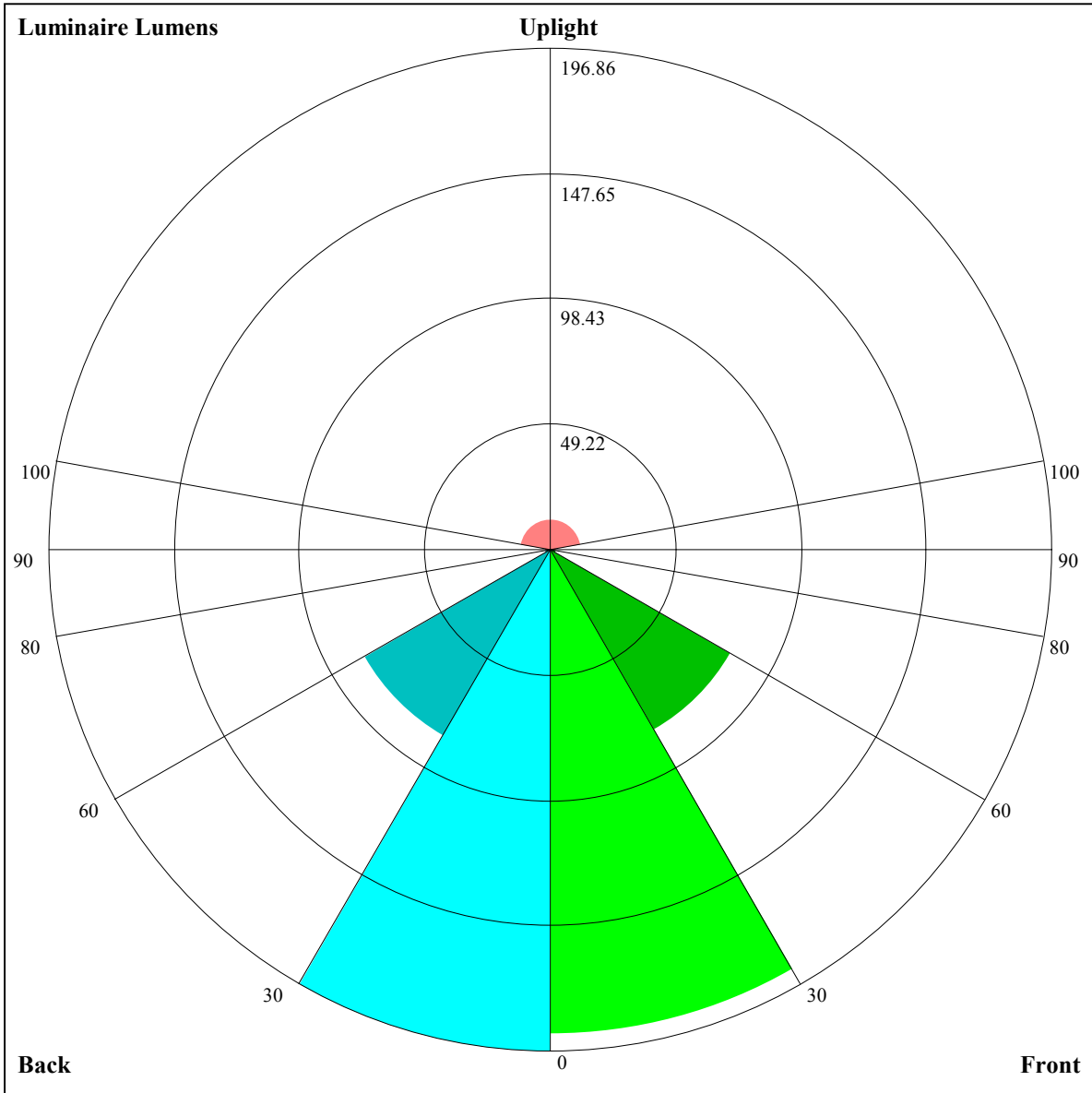
Luminance Limiting Curve





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	1.11	1.11	1.11	1.08	1.08	1.08	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.02	0.99	0.97	1.00	0.97	0.95	0.96	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.87	0.85
2	0.96	0.92	0.88	0.94	0.90	0.87	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.82	0.80
3	0.90	0.86	0.82	0.89	0.85	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.77	0.76
4	0.85	0.80	0.77	0.84	0.80	0.76	0.82	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.73	0.72
5	0.81	0.76	0.72	0.80	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.70	0.69
6	0.77	0.72	0.68	0.76	0.71	0.68	0.75	0.71	0.67	0.74	0.70	0.67	0.72	0.69	0.67	0.65
7	0.73	0.68	0.65	0.73	0.68	0.65	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.62
8	0.70	0.65	0.62	0.70	0.65	0.62	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.60
9	0.67	0.62	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.65	0.61	0.58	0.57
10	0.65	0.60	0.57	0.64	0.60	0.57	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.59	0.56	0.55





Luminaire Lumens:

FL=190.58,FM=81.94,FH=2.69,FVH=1.27

BL=196.86,BM=84.52,BH=2.74,BVH=1.28

UL=2.52,UH=11.97

BUG Rating:B1-U2-G0

Nata 1678-M

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	1663.80	1443.03	1007.53	529.64	286.29	229.70	207.01	190.44	152.67
45.0	1668.21	1470.56	1078.55	563.23	292.90	227.16	201.56	184.93	163.90
90.0	1676.47	1489.28	1055.98	580.73	299.78	225.90	201.51	185.76	156.31
135.0	1652.79	1568.01	1174.35	700.32	344.65	233.66	206.30	190.39	171.01
180.0	1663.80	1392.93	1002.74	520.06	271.54	223.58	200.85	185.26	153.50
225.0	1668.21	1411.10	953.19	481.69	276.05	227.44	205.64	189.34	144.69
270.0	1676.47	1433.12	968.99	491.10	283.54	229.70	206.19	190.99	145.18
315.0	1652.79	1325.21	863.89	413.69	260.36	221.82	201.95	186.70	122.67
360.0	1663.80	1443.03	1007.53	529.64	286.29	229.70	207.01	190.44	152.67

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	55.88	7.27	3.47	3.08	2.70	2.59	2.42	2.37	2.31
45.0	61.61	7.71	3.96	3.19	2.86	2.64	2.53	2.42	2.37
90.0	52.19	8.53	3.69	3.19	2.92	2.70	2.53	2.42	2.37
135.0	73.78	10.19	4.18	3.30	2.92	2.70	2.53	2.37	2.37
180.0	51.86	7.54	3.91	3.14	2.86	2.64	2.53	2.42	2.37
225.0	44.82	6.33	3.41	3.03	2.75	2.59	2.48	2.37	2.37
270.0	42.67	6.50	3.69	2.97	2.70	2.53	2.42	2.37	2.31
315.0	22.35	4.90	3.25	2.86	2.64	2.48	2.42	2.31	2.31
360.0	55.88	7.27	3.47	3.08	2.70	2.59	2.42	2.37	2.31

C/γ(°)	90.0
0.0	2.26
45.0	2.31
90.0	2.31
135.0	2.31
180.0	2.31
225.0	2.31
270.0	2.31
315.0	2.31
360.0	2.26