



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: 3-2016-A

Luminaire: 92.70.045.00+92.70.089.00

Report No: NT2018031907

Voltage(V): 36.6000

Test No: nata-0100

Current(A): 0.5000

LampCAT: LUMILEDS 1205

Power (W): 18.3000

Lamp flux(lm): 1941.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 82

Width(mm): 82

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1652.18, Efficiency(%): 85.12% , Luminous Efficacy(lm/W): 90.28

Central intensity(cd): 12925.870, Maximum intensity(cd): 12925.870

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=16.2

[C90/270]Total=16.2

Field angle(10%Imax): [C0/180]Total=30.2

[C90/270]Total=30.2

Maximum s/h(1/2): C0_180=0.28 C90_270=0.28

Maximum s/h(1/4): C0_180=0.29 C90_270=0.29

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.02%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 94.527%

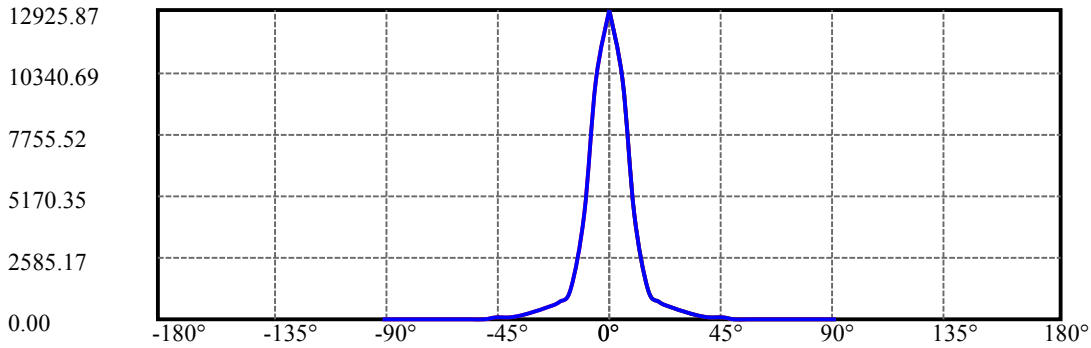
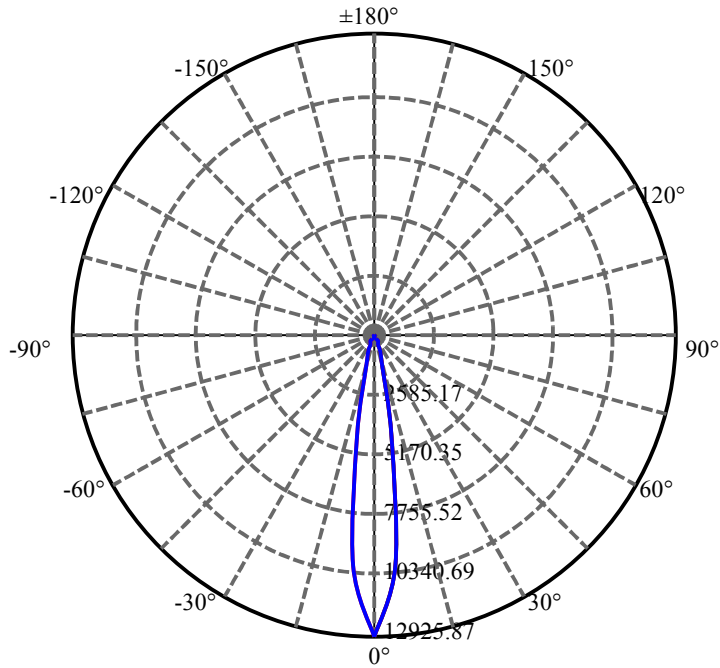
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	12925.866	77.299	77.299	3.982%	4.679%
5.0	9938.644	474.802	552.101	24.462%	33.417%
10.0	4406.095	419.386	971.487	21.607%	58.800%
15.0	1301.926	184.702	1156.189	9.516%	69.980%
20.0	713.311	133.727	1289.916	6.890%	78.074%
25.0	468.151	108.449	1398.365	5.587%	84.638%
30.0	303.980	83.311	1481.676	4.292%	89.680%
35.0	189.029	59.431	1541.107	3.062%	93.277%
40.0	115.281	40.618	1581.725	2.093%	95.736%
45.0	67.768	26.266	1607.991	1.353%	97.326%
50.0	35.449	14.885	1622.876	.767%	98.226%
55.0	15.361	6.897	1629.773	.355%	98.644%
60.0	7.522	3.571	1633.344	.184%	98.860%
65.0	6.621	3.289	1636.633	.169%	99.059%
70.0	6.490	3.343	1639.975	.172%	99.261%
75.0	6.455	3.418	1643.393	.176%	99.468%
80.0	6.448	3.481	1646.874	.179%	99.679%
85.0	6.517	3.559	1650.433	.183%	99.894%
90.0	6.366	1.745	1652.178	.090%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1481.68	76.34%	89.68%
0-40	1581.72	81.49%	95.74%
0-60	1633.34	84.15%	98.86%
0-90	1650.43	85.03%	99.89%
0-120	1650.43	85.03%	99.89%
0-180	1652.18	85.12%	100.00%
60-90	20.66	1.06%	1.25%
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%
0-21.47	1321.74	68.10%	80.00%

ZONAL LUMEN SUMMARY

0-10	971.49
10-20	318.43
20-30	191.76
30-40	100.05
40-50	41.15
50-60	10.47
60-70	6.63
70-80	6.90
80-90	3.56
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



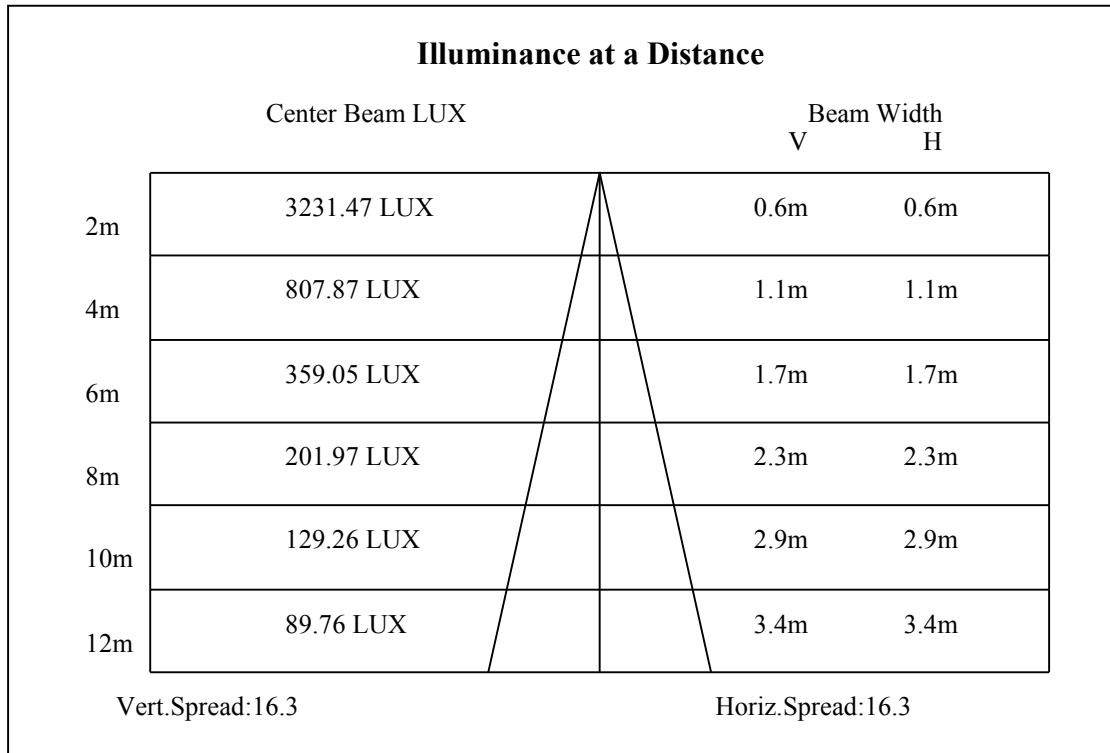
C0(Max): —————

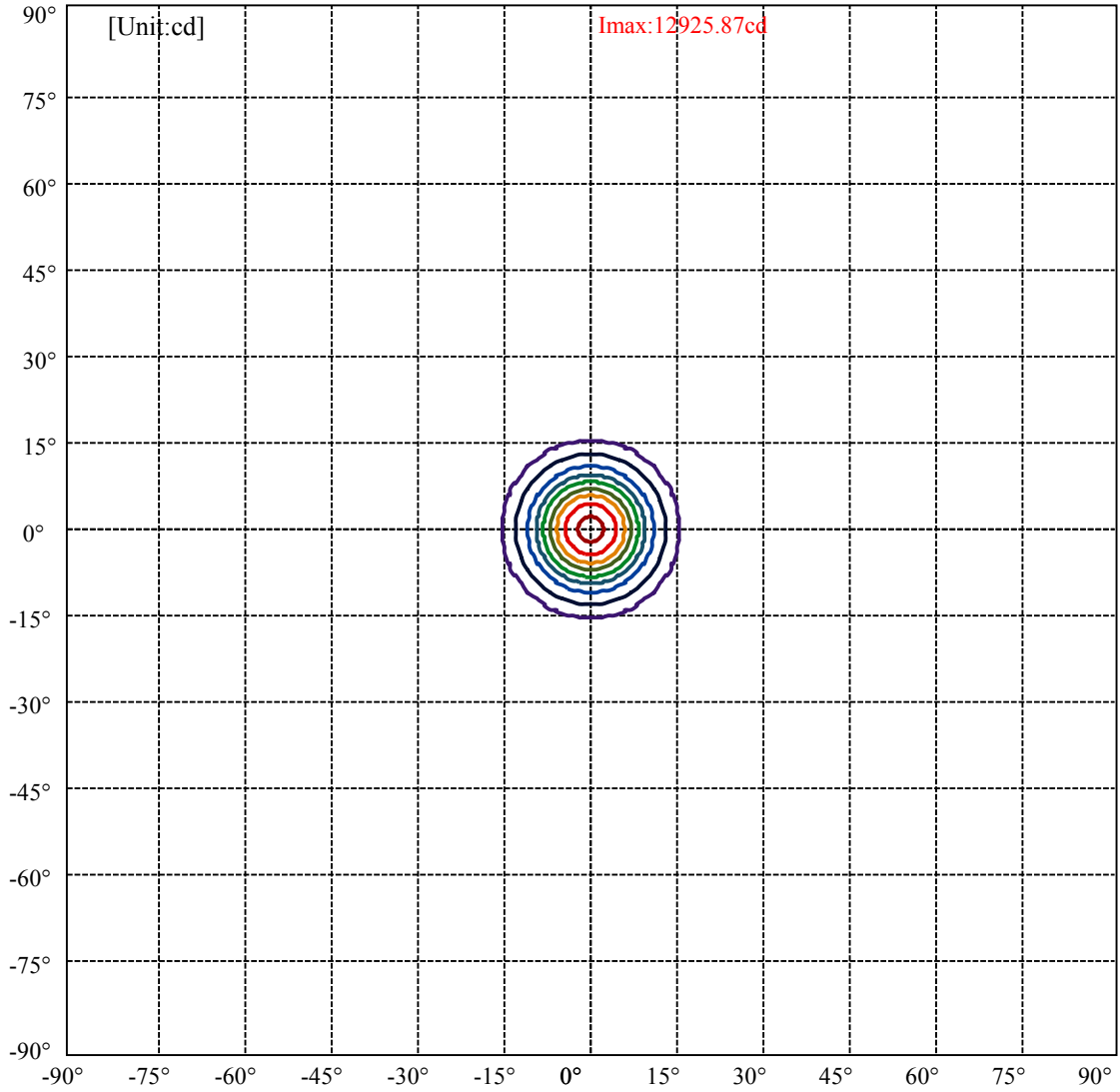
C0/C180: —————

C90/C270: —————

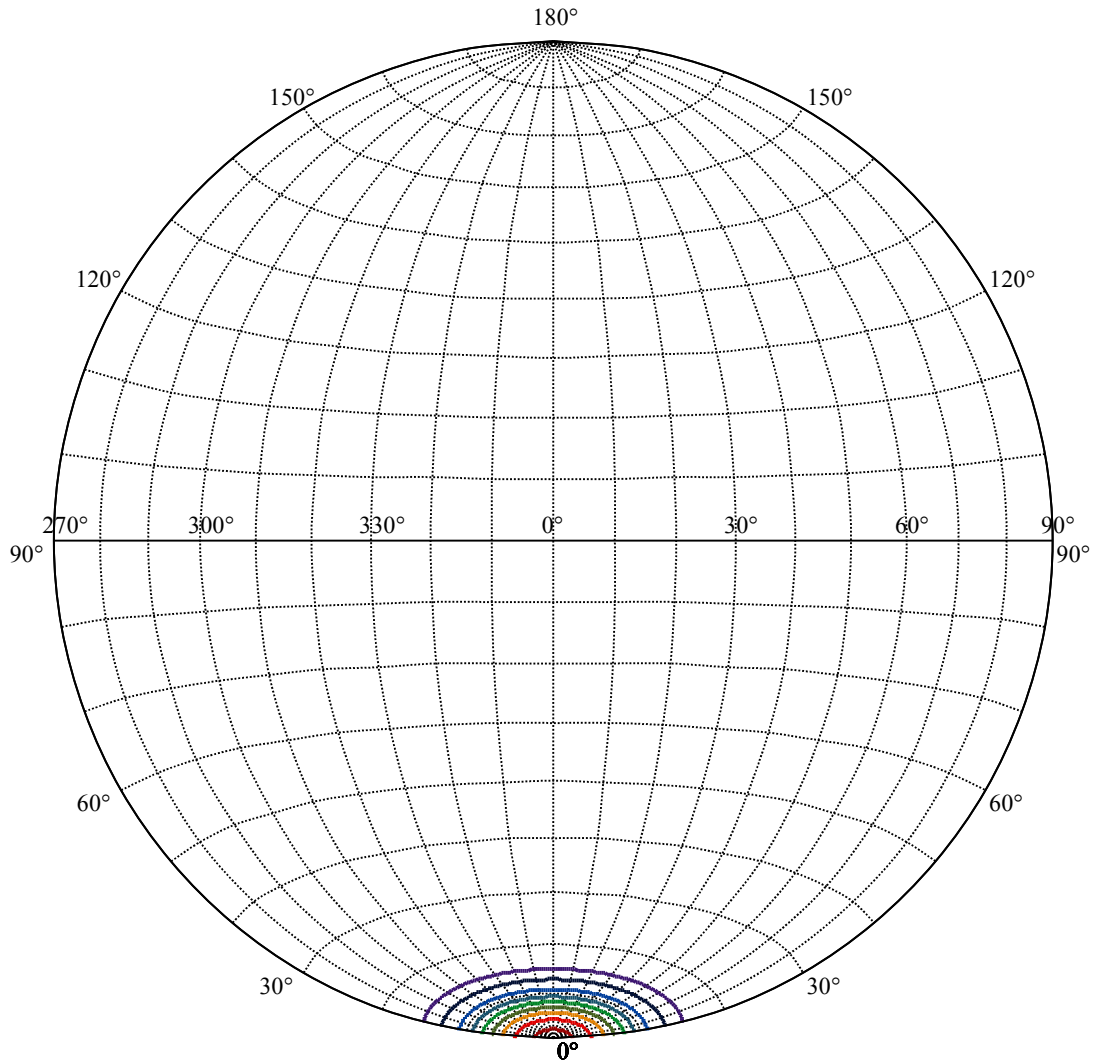
Field angle(10%Imax):C0/180Left:15.1 Right:15.1
:C90/270Left:15.1 Right:15.1

Beam Angle(50%Imax):C0/180Left:8.1 Right:8.1
:C90/270Left:8.1 Right:8.1





(10%I _{max}) 1292.59	—
(20%I _{max}) 2585.17	—
(30%I _{max}) 3877.76	—
(40%I _{max}) 5170.35	—
(50%I _{max}) 6462.93	—
(60%I _{max}) 7755.52	—
(70%I _{max}) 9048.11	—
(80%I _{max}) 10340.7	—
(90%I _{max}) 11633.3	—



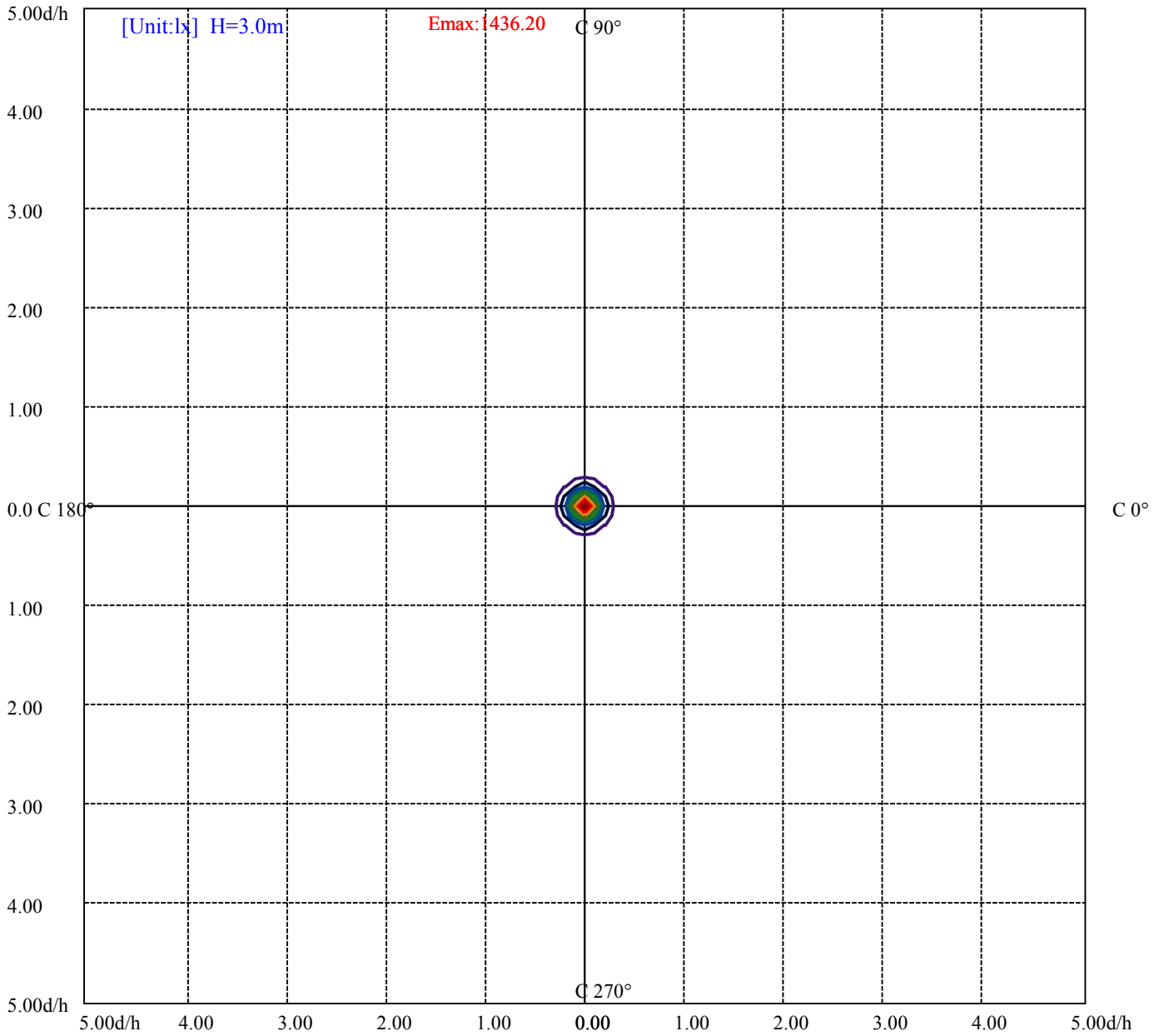
House

[Unit:cd]

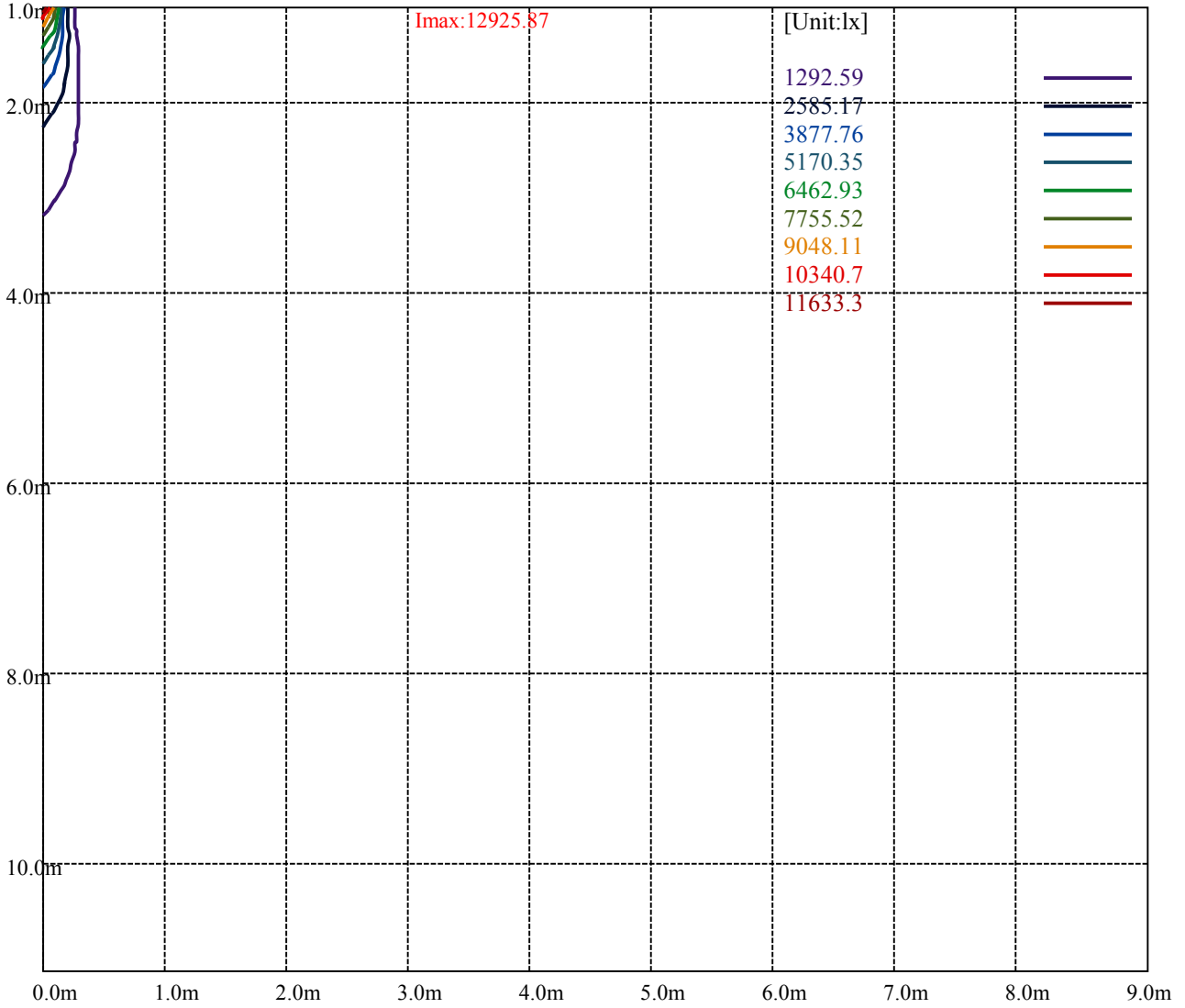
Road

Imax:12925.87

(10%Imax)	1292.59	—
(20%Imax)	2585.17	—
(30%Imax)	3877.76	—
(40%Imax)	5170.35	—
(50%Imax)	6462.93	—
(60%Imax)	7755.52	—
(70%Imax)	9048.11	—
(80%Imax)	10340.7	—
(90%Imax)	11633.3	—



(10%Emax) 143.62	—
(20%Emax) 287.24	—
(30%Emax) 430.8589	—
(40%Emax) 574.4789	—
(50%Emax) 718.0989	—
(60%Emax) 861.7189	—
(70%Emax) 1005.338	—
(80%Emax) 1148.956	—
(90%Emax) 1292.578	—



Luminance Table

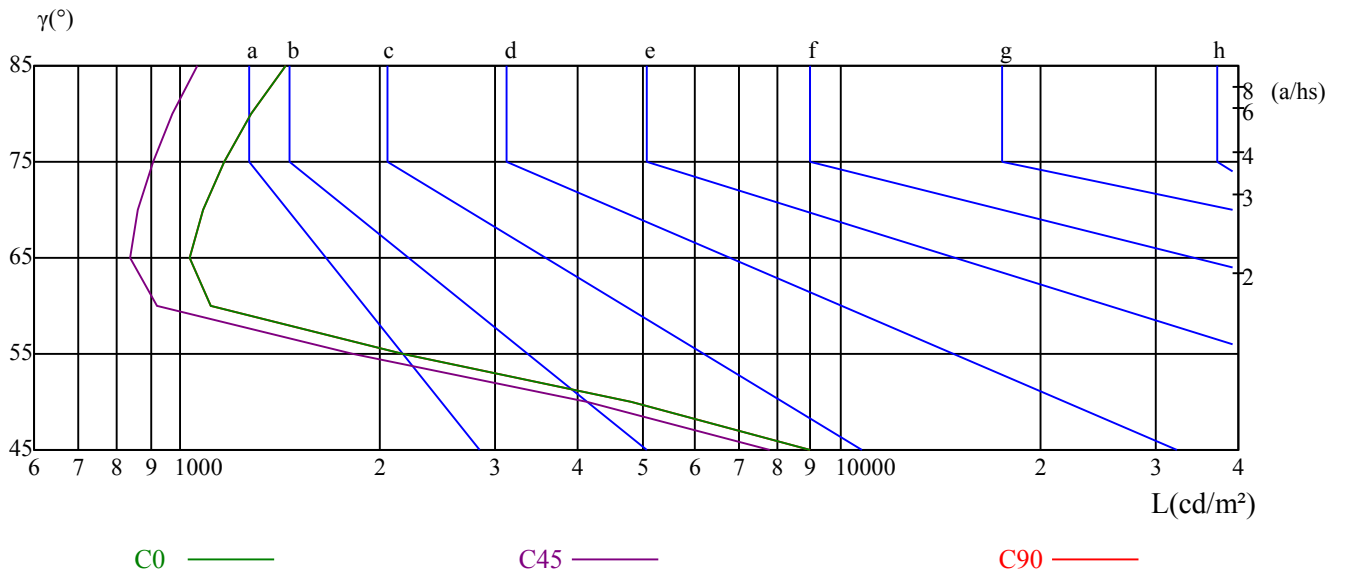
γ	45	50	55	60	65	70	75	80	85
C0	8990	4831	2169	1111	1033	1082	1165	1278	1446
C45	7798	4129	1825	919	839	862	907	970	1063
C90	8990	4831	2169	1111	1033	1082	1165	1278	1446

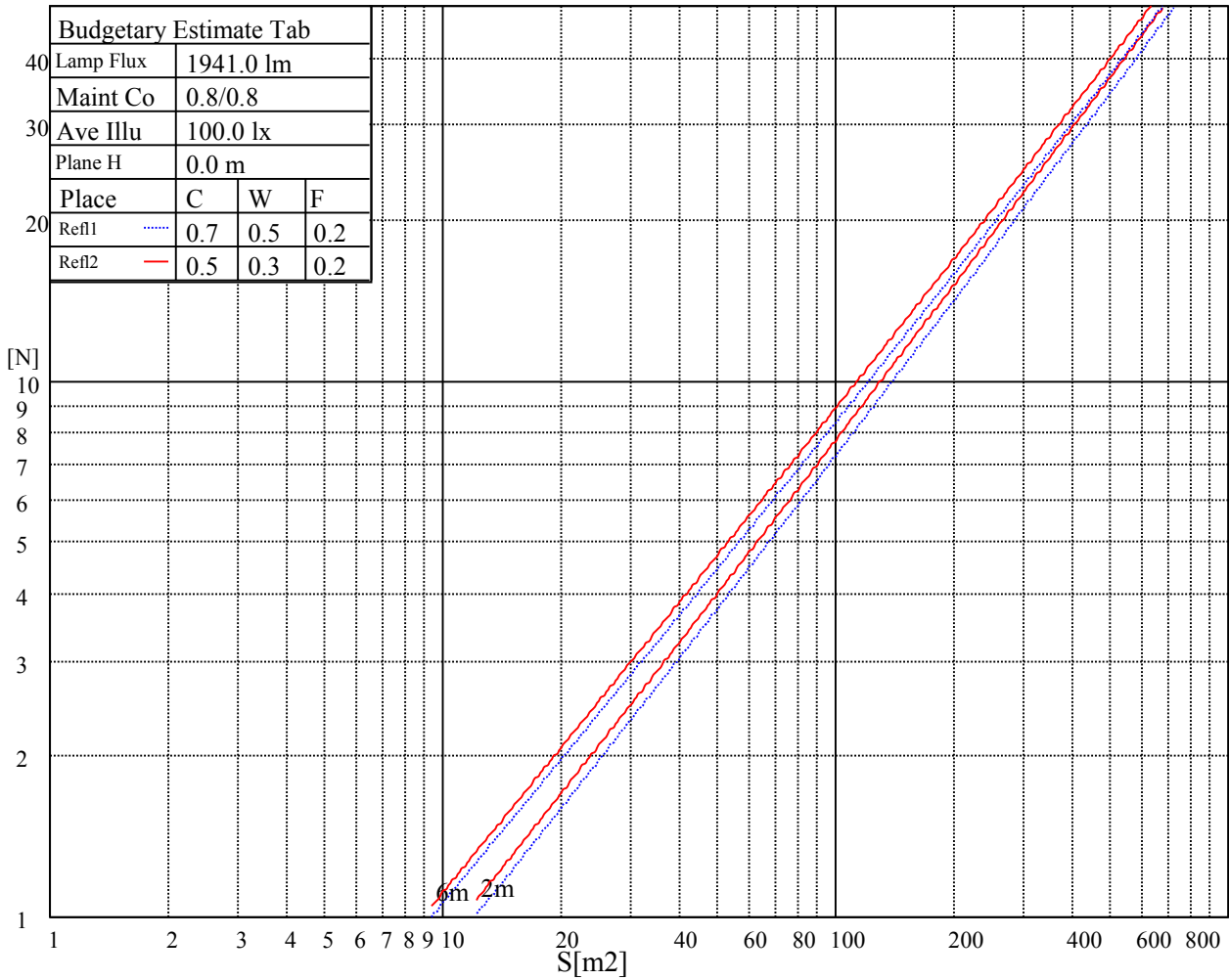
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2330	2330	2330	3709	3709	3709	11121	11121	11121

Glare Table

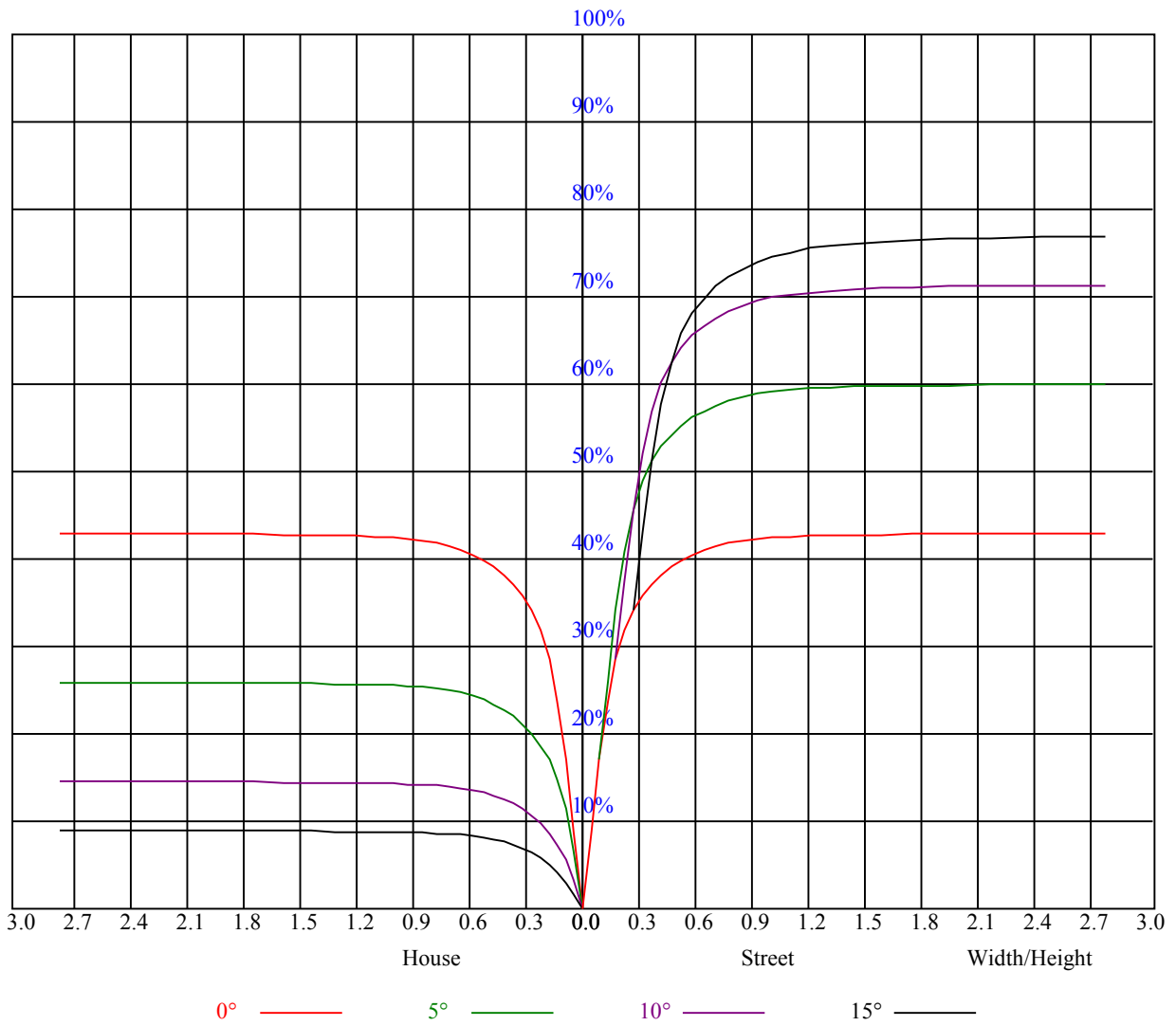
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

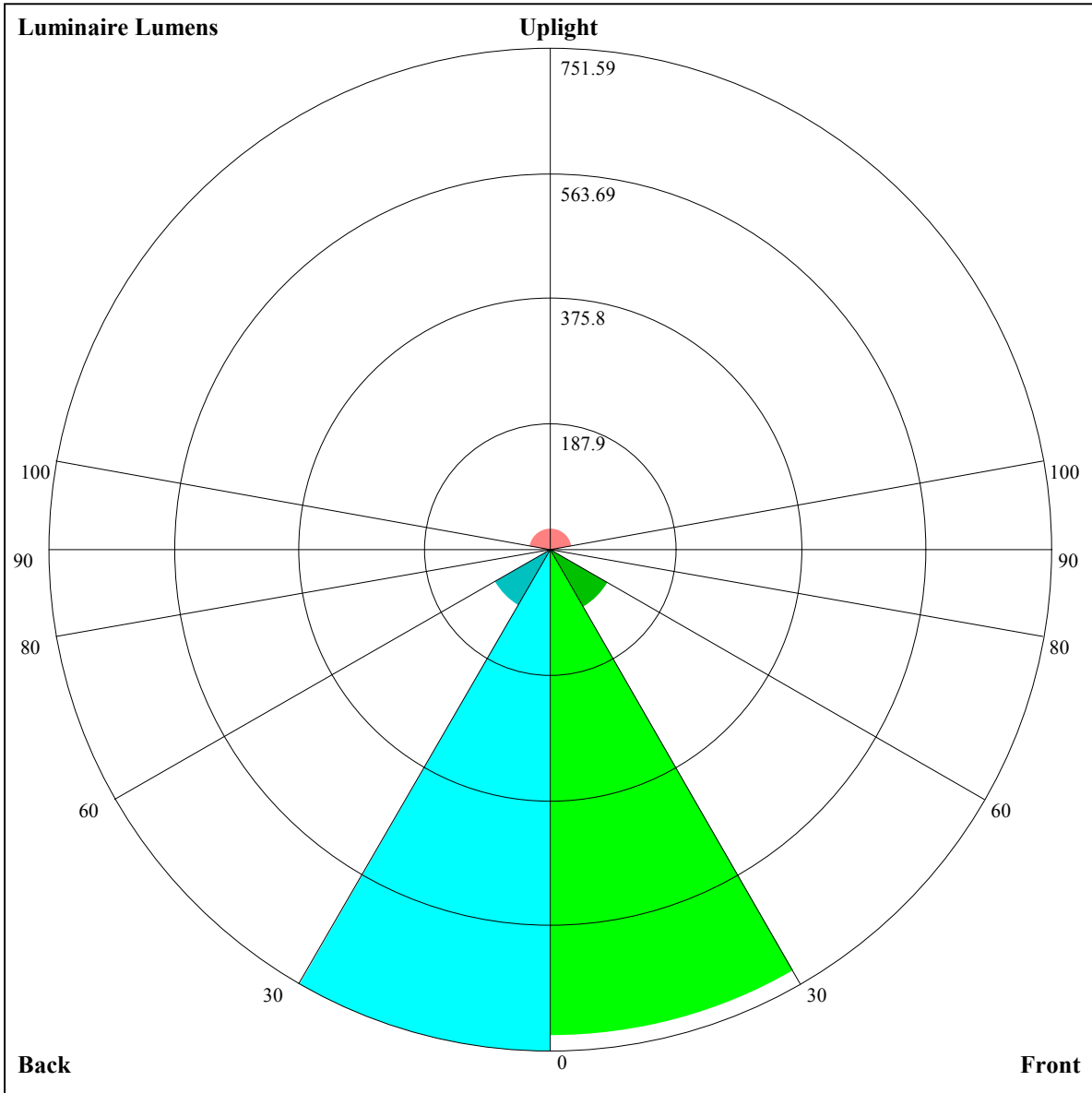
Luminance Limiting Curve





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	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	0.95	0.92	0.89	0.93	0.90	0.88	0.90	0.87	0.85	0.86	0.84	0.83	0.83	0.82	0.80	0.78
2	0.91	0.87	0.84	0.89	0.86	0.83	0.86	0.83	0.81	0.84	0.81	0.79	0.81	0.79	0.78	0.76
3	0.87	0.83	0.79	0.86	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.76	0.79	0.77	0.75	0.74
4	0.84	0.79	0.76	0.83	0.79	0.76	0.81	0.77	0.75	0.79	0.76	0.74	0.78	0.75	0.73	0.72
5	0.81	0.77	0.73	0.80	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.70
6	0.78	0.74	0.71	0.78	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.72	0.70	0.69
7	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
8	0.74	0.70	0.68	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.69	0.67	0.66
9	0.72	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.64
10	0.71	0.67	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.69	0.66	0.64	0.63





Luminaire Lumens:

FL=728.31,FM=98.49,FH=6.79,FVH=3.54

BL=751.59,BM=97.78,BH=6.85,BVH=3.54

UL=6.95,UH=33.05

BUG Rating:B2-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	13274.10	10543.30	4723.84	1213.44	741.06	486.70	325.38	199.47	121.67
45.0	13130.95	8236.44	2978.55	938.71	641.96	409.07	285.19	157.85	103.84
90.0	12084.88	7325.25	1907.15	862.79	596.26	376.75	245.99	152.51	96.57
135.0	13213.54	9728.47	3496.08	1027.90	676.09	437.70	281.89	164.95	104.44
180.0	13274.10	10002.10	3734.48	1060.72	648.56	448.49	280.18	165.94	103.23
225.0	13130.95	10938.61	6653.57	1065.89	804.32	529.31	332.60	203.49	125.25
270.0	12084.88	12596.90	7140.82	3176.75	875.95	575.34	367.78	280.24	145.02
315.0	13213.54	10138.09	4614.28	1069.20	722.28	481.85	312.83	187.80	122.23
360.0	13274.10	10543.30	4723.84	1213.44	741.06	486.70	325.38	199.47	121.67

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	70.75	34.63	15.14	6.83	6.61	6.44	6.44	6.44	6.44
45.0	55.50	25.93	11.07	6.66	6.55	6.44	6.44	6.44	6.39
90.0	51.37	24.83	10.08	6.77	6.61	6.50	6.44	6.44	6.99
135.0	62.65	32.48	14.04	6.99	6.72	6.61	6.55	6.55	6.55
180.0	60.18	31.00	13.05	6.83	6.61	6.50	6.44	6.44	6.44
225.0	77.46	43.99	19.60	8.70	6.55	6.39	6.39	6.39	6.33
270.0	90.84	51.97	22.96	9.91	6.72	6.55	6.50	6.44	6.50
315.0	73.39	38.76	16.96	7.49	6.61	6.50	6.44	6.44	6.50
360.0	70.75	34.63	15.14	6.83	6.61	6.44	6.44	6.44	6.44

C/γ(°)	90.0
0.0	6.33
45.0	6.28
90.0	6.39
135.0	6.44
180.0	6.39
225.0	6.28
270.0	6.39
315.0	6.44
360.0	6.33