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NATA

Client:

LumCAT: 1450-E

Luminaire: 92.70.043.00

Report No: GC20200115118

Voltage(V): 34.8000

Test No: GC20200115117

Current(A): 0.1970

LampCAT: LUMINUS CXM-6-AC40

Power (W): 6.8600

Lamp flux(lm): 850.2

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 763.41, Efficiency(%): 89.79% , Luminous Efficacy(lm/W): 111.28

Central intensity(cd): 2190.656, Maximum intensity(cd): 2190.656

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=70.6

[C90/270]Total=70.6

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

Maximum s/h(1/4): C0_180=0.47 C90_270=0.47

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.79%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.350%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/1/15
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

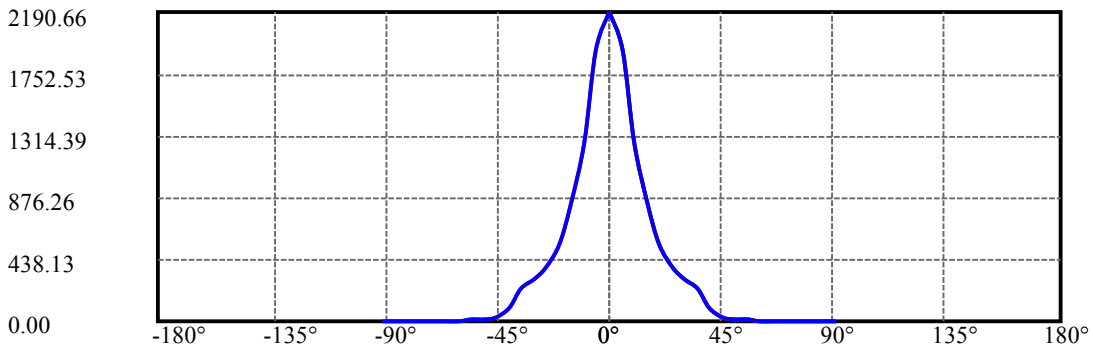
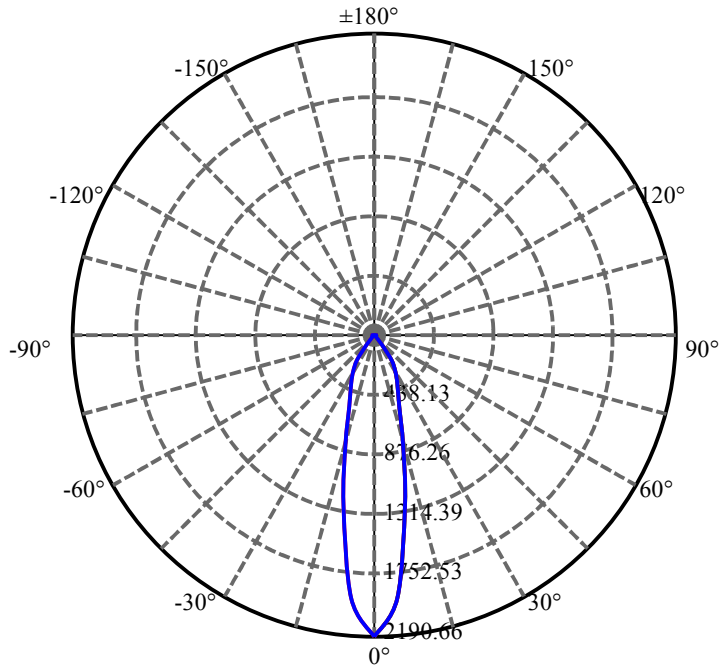
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2190.656	0.000	0	.000%	.000%
5.0	1917.492	49.112	49.112	5.777%	6.433%
10.0	1260.555	113.689	162.801	13.372%	21.326%
15.0	829.666	123.991	286.791	14.584%	37.567%
20.0	545.527	113.335	400.126	13.331%	52.413%
25.0	383.091	97.395	497.521	11.456%	65.171%
30.0	301.395	86.622	584.143	10.189%	76.518%
35.0	225.935	77.653	661.796	9.134%	86.690%
40.0	95.639	53.652	715.448	6.311%	93.718%
45.0	22.852	21.940	737.388	2.581%	96.592%
50.0	10.666	6.773	744.161	.797%	97.479%
55.0	6.848	3.808	747.969	.448%	97.978%
60.0	5.442	2.841	750.81	.334%	98.350%
65.0	4.535	2.426	753.236	.285%	98.668%
70.0	4.212	2.215	755.45	.261%	98.958%
75.0	3.959	2.136	757.586	.251%	99.238%
80.0	3.691	2.047	759.633	.241%	99.506%
85.0	3.459	1.943	761.576	.229%	99.760%
90.0	3.227	1.831	763.407	.215%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	584.14	68.71%	76.52%
0-40	715.45	84.15%	93.72%
0-60	750.81	88.31%	98.35%
0-90	761.58	89.58%	99.76%
0-120	761.58	89.58%	99.76%
0-180	763.41	89.79%	100.00%
60-90	13.61	1.60%	1.78%
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%
0-31.71	610.73	71.84%	80.00%

ZONAL LUMEN SUMMARY

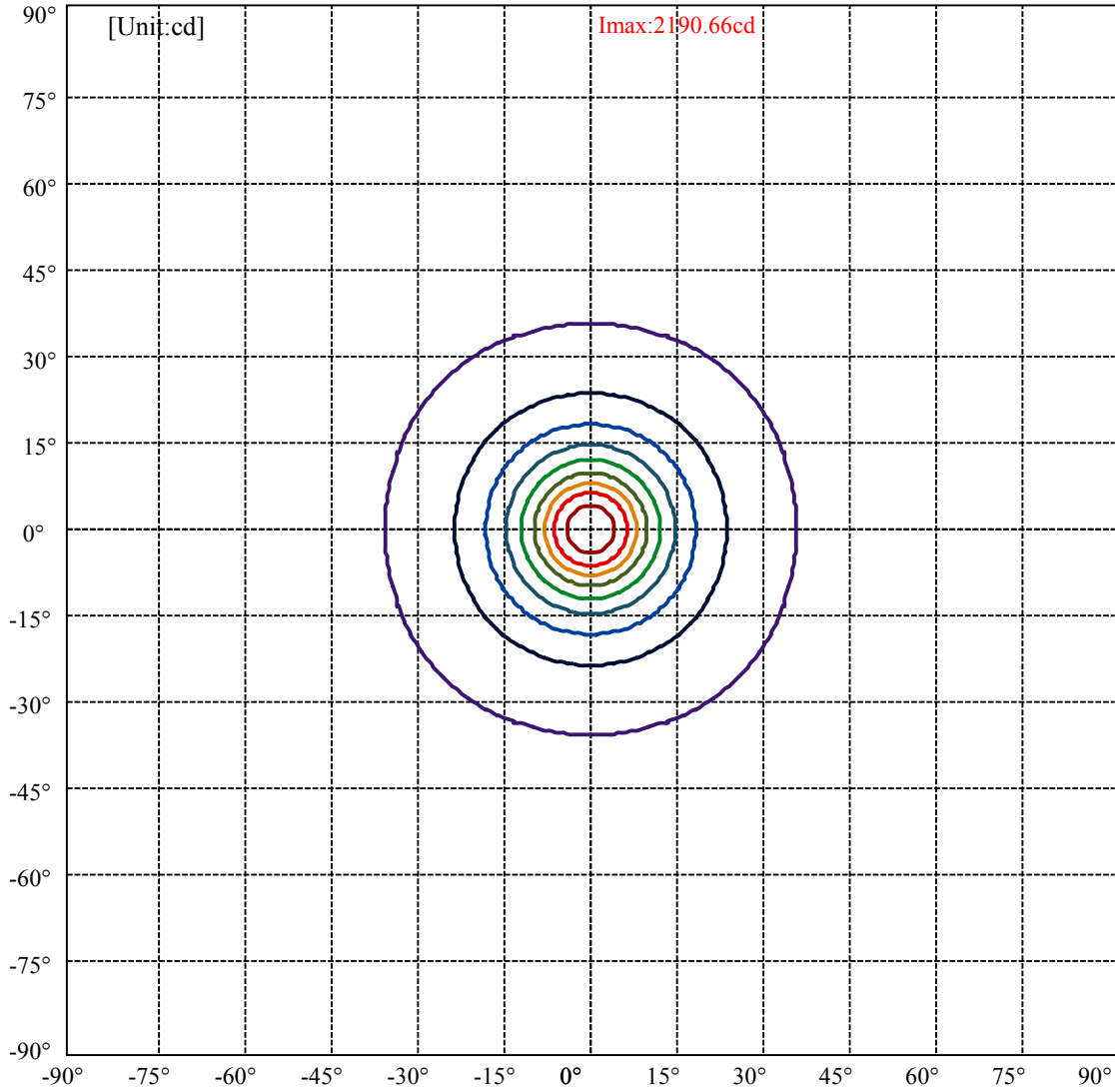
0-10	162.80
10-20	237.33
20-30	184.02
30-40	131.31
40-50	28.71
50-60	6.65
60-70	4.64
70-80	4.18
80-90	1.94
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



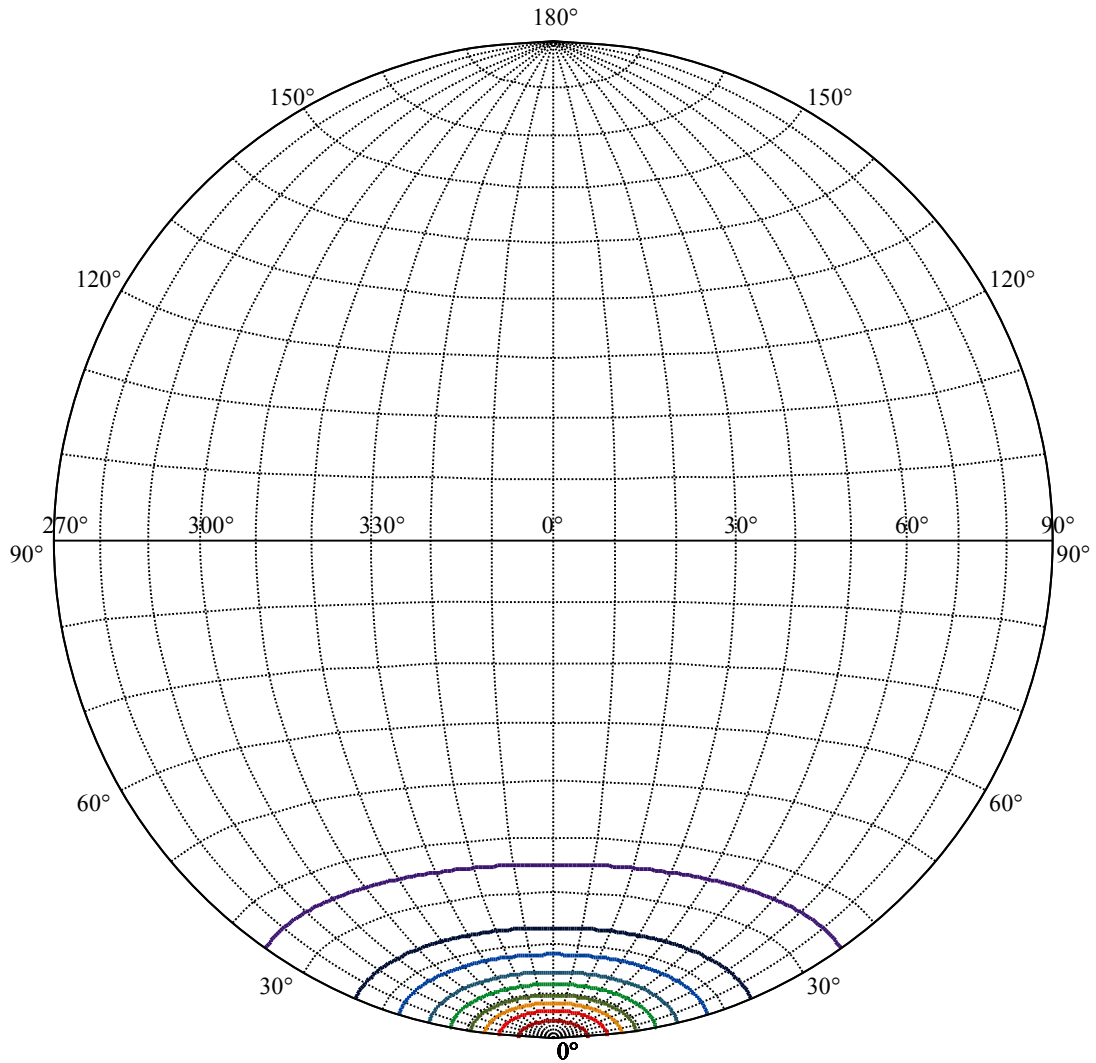
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:35.3 Right:35.3
:C90/270Left:35.3 Right:35.3

Beam Angle(50%Imax):C0/180Left:11.9 Right:11.9
:C90/270Left:11.9 Right:11.9



(10%Imax) 219.066	—
(20%Imax) 438.131	—
(30%Imax) 657.197	—
(40%Imax) 876.263	—
(50%Imax) 1095.33	—
(60%Imax) 1314.39	—
(70%Imax) 1533.46	—
(80%Imax) 1752.53	—
(90%Imax) 1971.59	—



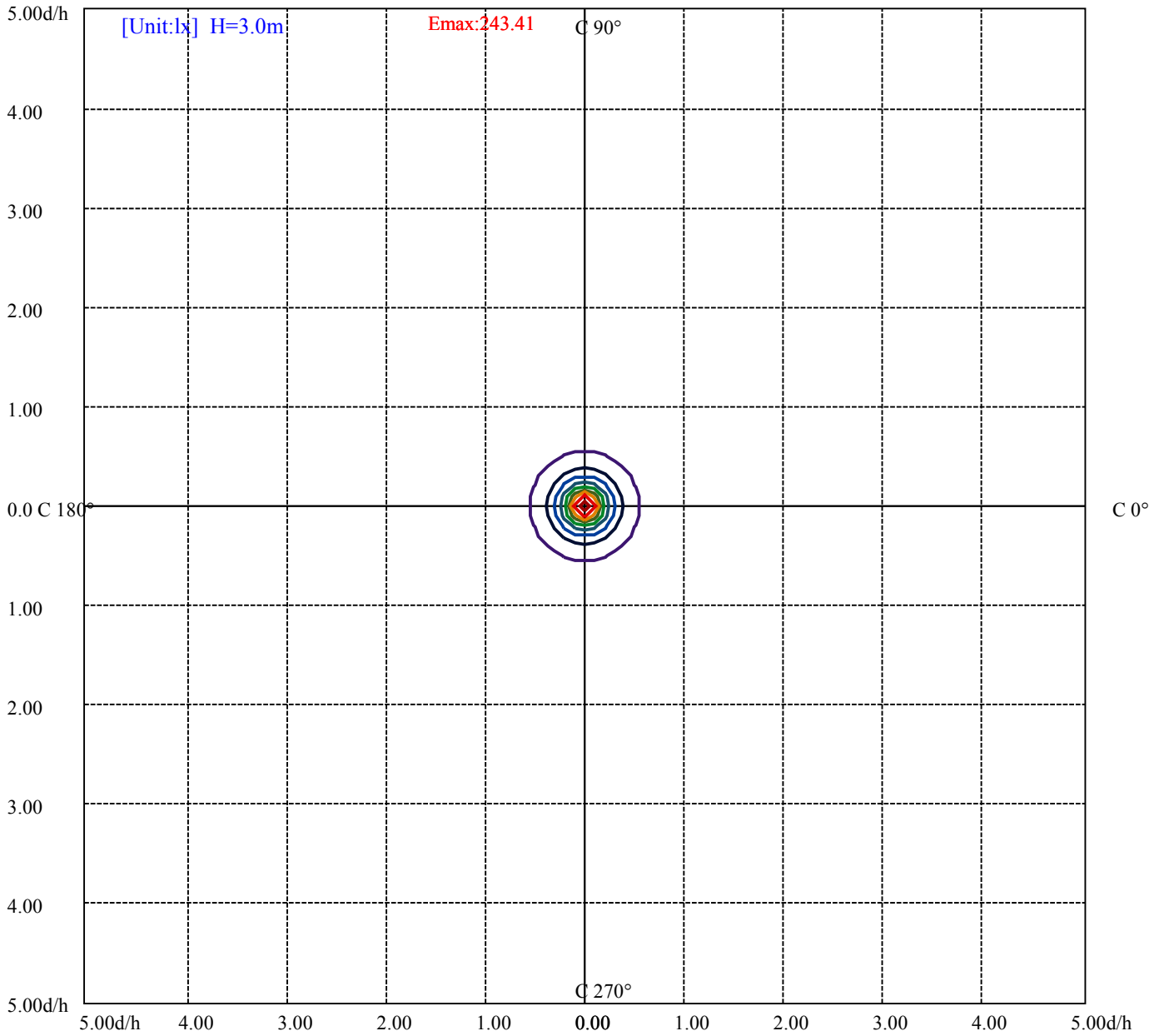
House

[Unit:cd]

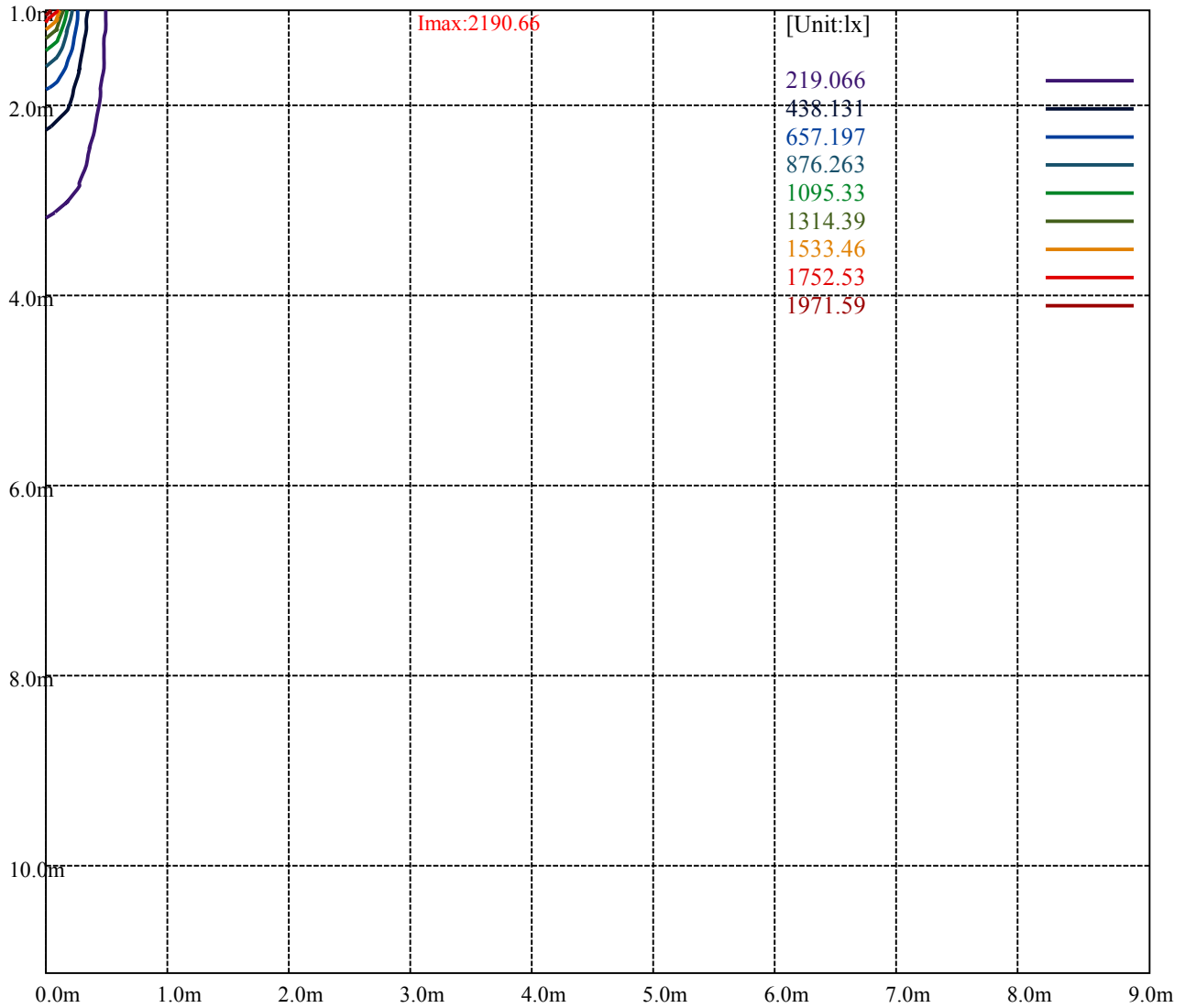
Road

Imax:2190.66

(10%Imax)	219.066	—
(20%Imax)	438.131	—
(30%Imax)	657.197	—
(40%Imax)	876.263	—
(50%Imax)	1095.33	—
(60%Imax)	1314.39	—
(70%Imax)	1533.46	—
(80%Imax)	1752.53	—
(90%Imax)	1971.59	—



- (10%Emax) 24.34056
- (20%Emax) 48.68111
- (30%Emax) 73.02155
- (40%Emax) 97.36211
- (50%Emax) 121.7022
- (60%Emax) 146.0433
- (70%Emax) 170.3833
- (80%Emax) 194.7244
- (90%Emax) 219.0644



Luminance Table

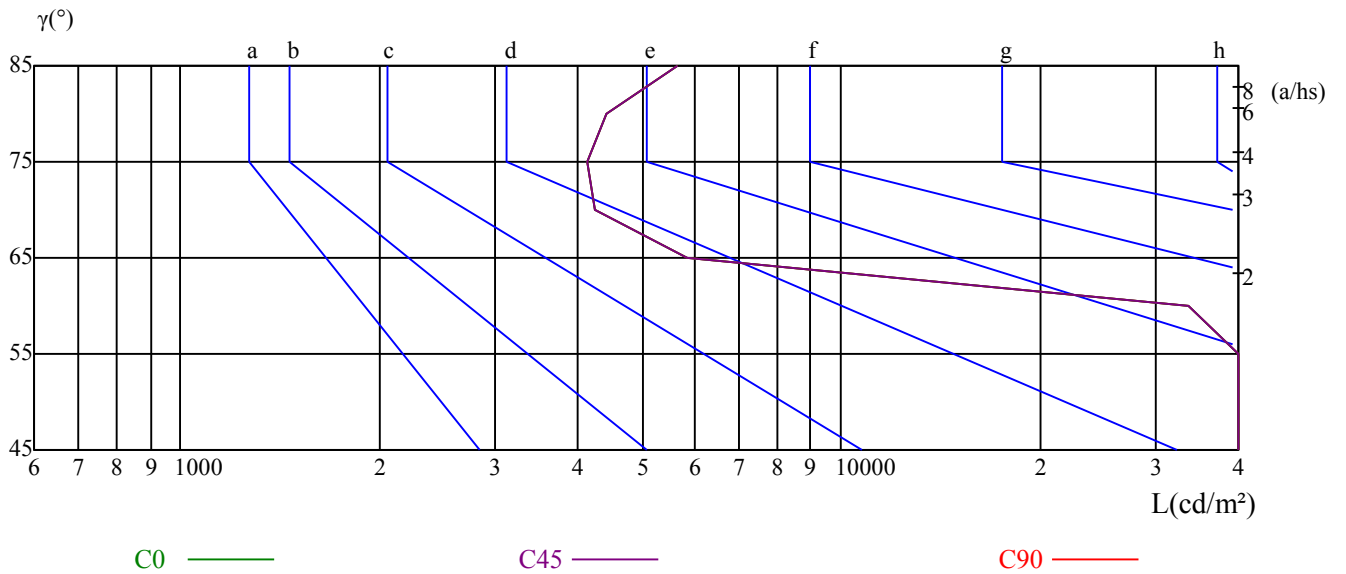
γ	45	50	55	60	65	70	75	80	85
C0	46650	52836	53885	33658	5848	4245	4131	4405	5640
C45	46650	52836	53885	33658	5848	4245	4131	4405	5640
C90	46650	52836	53885	33658	5848	4245	4131	4405	5640

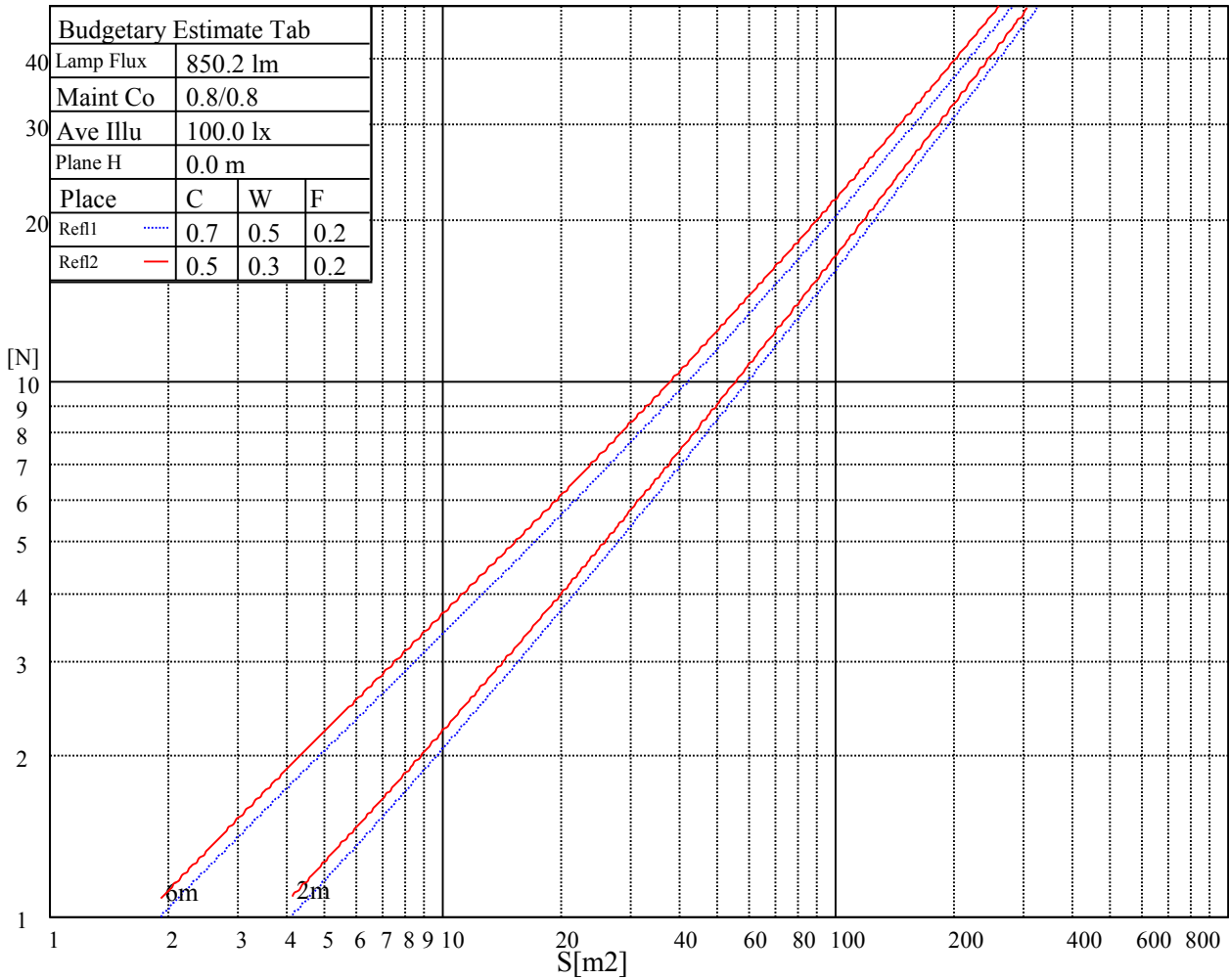
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5848	5848	5848	4131	4131	4131	5640	5640	5640

Glare Table

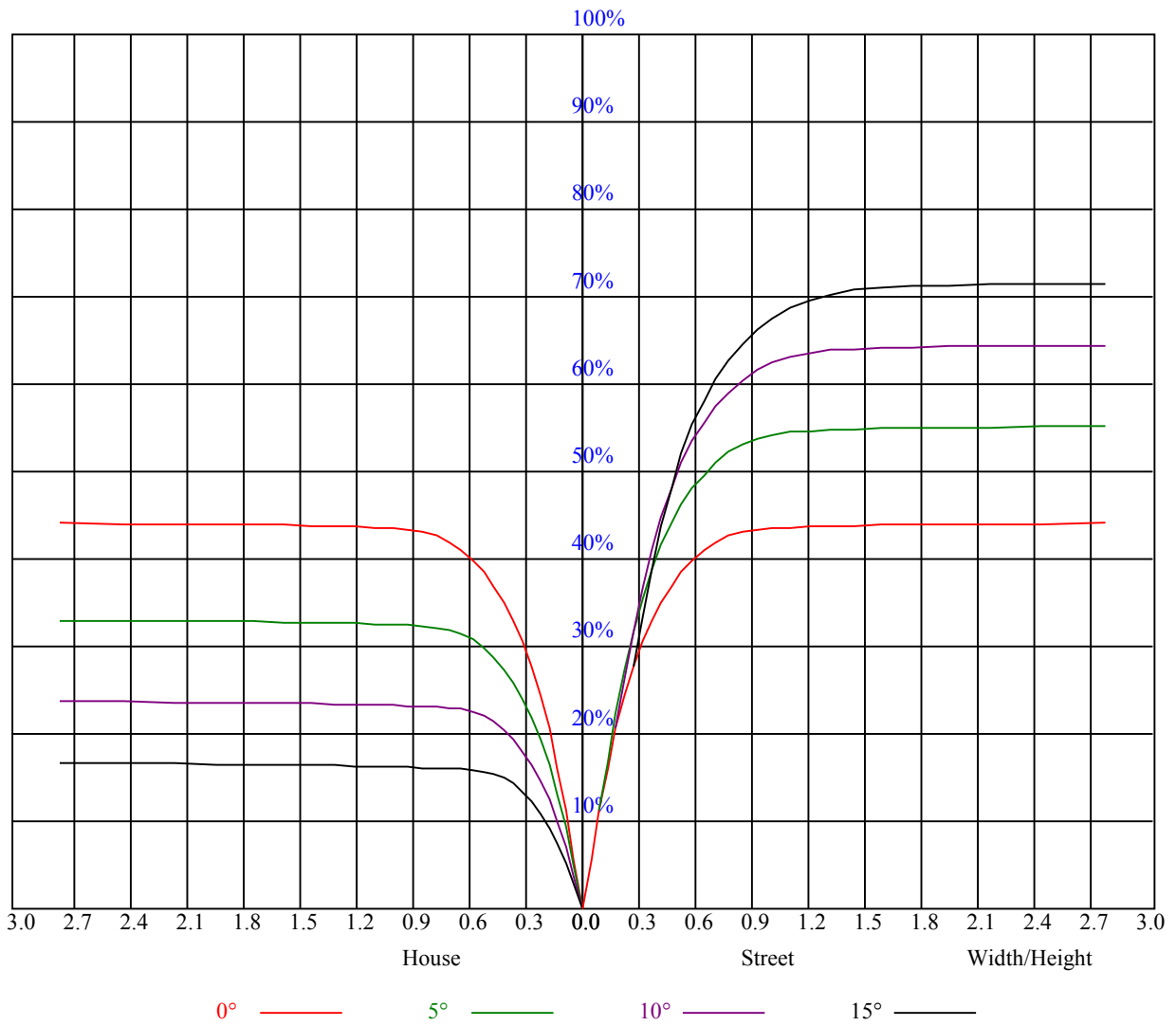
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

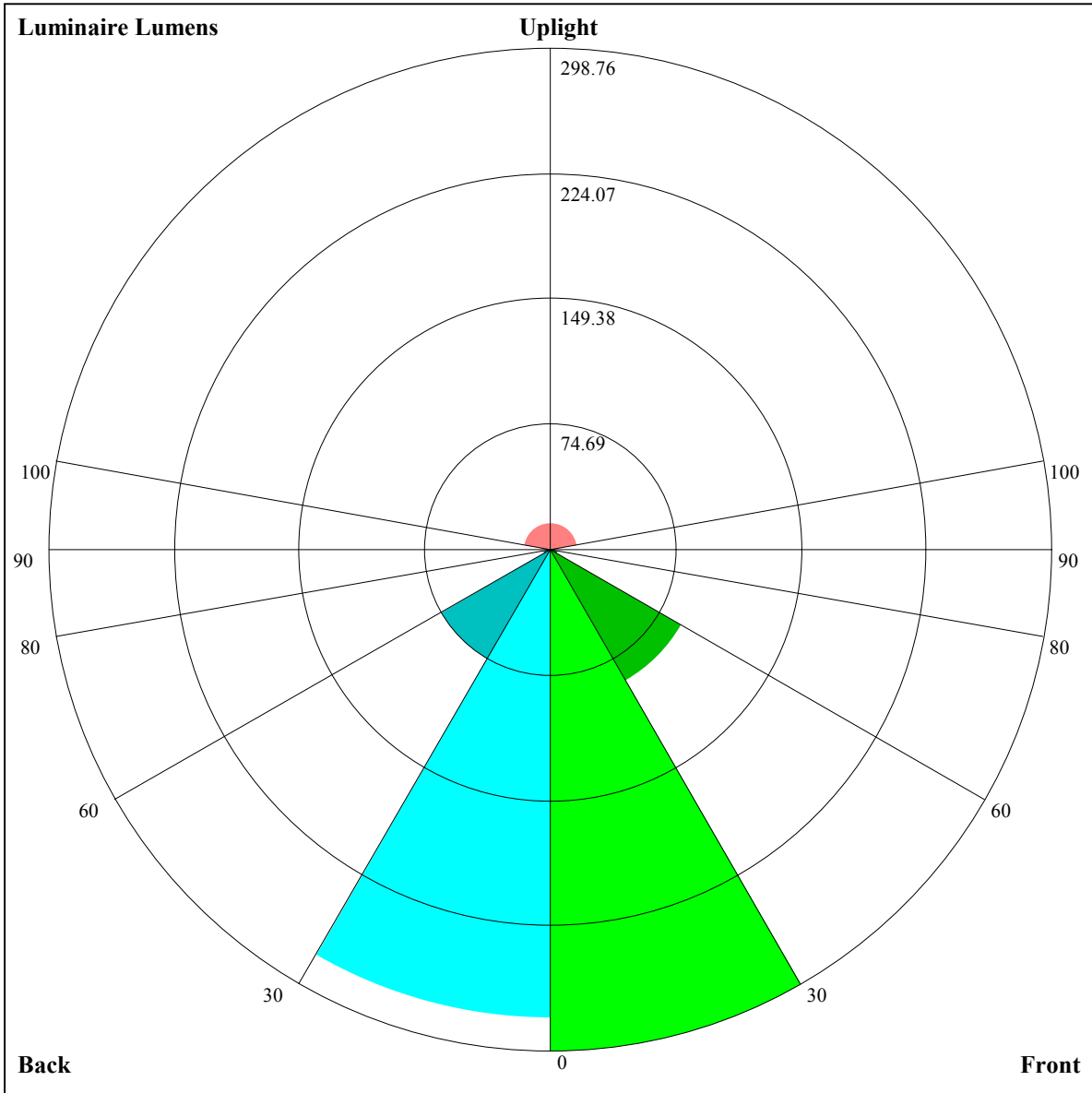
Luminance Limiting Curve





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	1.07	1.07	1.07	1.04	1.04	1.04	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.00	0.98	0.96	0.98	0.96	0.94	0.94	0.93	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.84
2	0.93	0.90	0.87	0.92	0.89	0.86	0.89	0.87	0.84	0.86	0.84	0.83	0.84	0.82	0.81	0.79
3	0.88	0.84	0.80	0.87	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.77	0.80	0.78	0.76	0.75
4	0.83	0.78	0.75	0.82	0.78	0.75	0.80	0.76	0.74	0.78	0.75	0.73	0.77	0.74	0.72	0.71
5	0.79	0.74	0.70	0.78	0.73	0.70	0.76	0.72	0.69	0.75	0.71	0.69	0.73	0.70	0.68	0.67
6	0.75	0.70	0.66	0.74	0.69	0.66	0.73	0.69	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.63
7	0.71	0.66	0.63	0.70	0.66	0.62	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.61	0.60
8	0.68	0.63	0.59	0.67	0.63	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.57
9	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.55
10	0.62	0.57	0.54	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.54	0.53





Luminaire Lumens:

FL=298.76,FM=89.84,FH=4.44,FVH=1.89

BL=279.21,BM=75.69,BH=4.26,BVH=1.87

UL=3.52,UH=16.76

BUG Rating:B1-U2-G0

NATA 1450-E

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	2181.94	2003.63	1463.06	910.69	588.94	393.19	298.13	238.28	129.83
45.0	2185.88	1991.25	1427.06	902.25	597.94	414.56	327.94	286.88	135.79
90.0	2193.75	1875.94	1108.52	792.56	531.34	388.18	298.91	216.06	82.24
135.0	2201.06	1920.38	1319.06	819.56	519.75	366.75	300.38	219.38	83.42
180.0	2181.94	1795.50	1097.55	722.25	472.50	336.32	272.93	180.56	53.21
225.0	2185.88	1850.06	1113.24	757.74	509.23	366.64	295.65	196.14	67.78
270.0	2193.75	1987.88	1440.56	897.19	588.38	404.44	310.50	237.99	109.35
315.0	2201.06	1915.31	1115.38	835.09	556.14	394.65	306.73	232.20	103.50
360.0	2181.94	2003.63	1463.06	910.69	588.94	393.19	298.13	238.28	129.83

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	31.95	18.45	8.72	6.75	5.68	5.23	4.73	4.33	3.49
45.0	35.21	15.08	7.09	5.34	4.22	3.94	3.71	3.49	3.43
90.0	28.91	7.14	5.63	4.84	4.05	3.83	3.66	3.49	3.54
135.0	19.41	8.78	6.69	5.01	4.28	4.05	3.77	3.60	3.60
180.0	15.02	8.61	6.86	5.63	5.06	4.67	4.33	3.77	3.49
225.0	15.13	8.16	6.64	4.89	4.11	3.94	3.77	3.49	3.32
270.0	17.27	9.51	6.02	5.63	4.50	3.83	3.66	3.49	3.43
315.0	19.91	9.62	7.14	5.46	4.39	4.22	4.05	3.88	3.38
360.0	31.95	18.45	8.72	6.75	5.68	5.23	4.73	4.33	3.49

C/γ(°)	90.0
0.0	3.21
45.0	3.21
90.0	3.21
135.0	3.26
180.0	3.21
225.0	3.21
270.0	3.26
315.0	3.26
360.0	3.21