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Nata

Client:

LumCAT: 4-2202-L

Luminaire: 92.70.135.00

Report No: NT2018010908

Test No: GC2018010908

LampCAT: LUMILEDS 1208

Lamp flux(lm): 2981.0

Number of Lamps: 1

Length(mm): 102

Phm Type: C

Voltage(V): 35.0000

Current(A): 0.6400

Power (W): 22.4000

PF: 0.0000

Ballast type: DC

Width(mm): 102

Height(mm):0

Photometric Results

Lumens(lm): 2867.77, Efficiency(%): 96.20% , Luminous Efficacy(lm/W): 128.03

Central intensity(cd): 13878.340, Maximum intensity(cd): 13878.340

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=22.4

[C90/270]Total=22.4

Field angle(10%Imax): [C0/180]Total=40.2

[C90/270]Total=40.2

Maximum s/h(1/2): C0_180=0.38 C90_270=0.38

Maximum s/h(1/4): C0_180=0.36 C90_270=0.36

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 98.89%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.923%

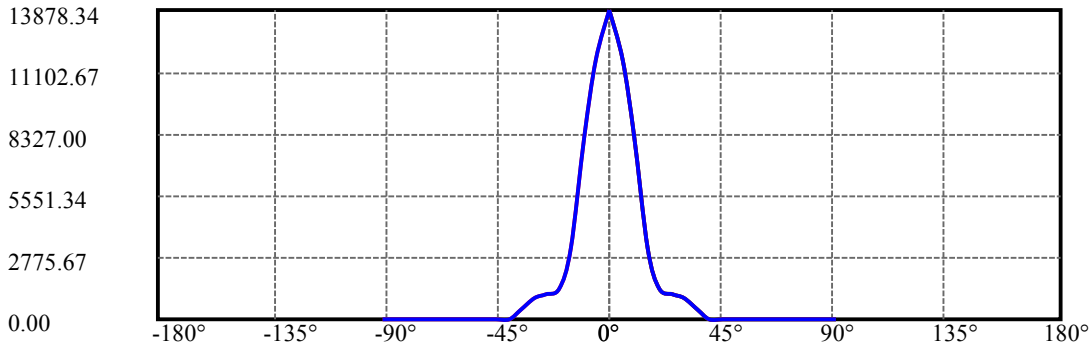
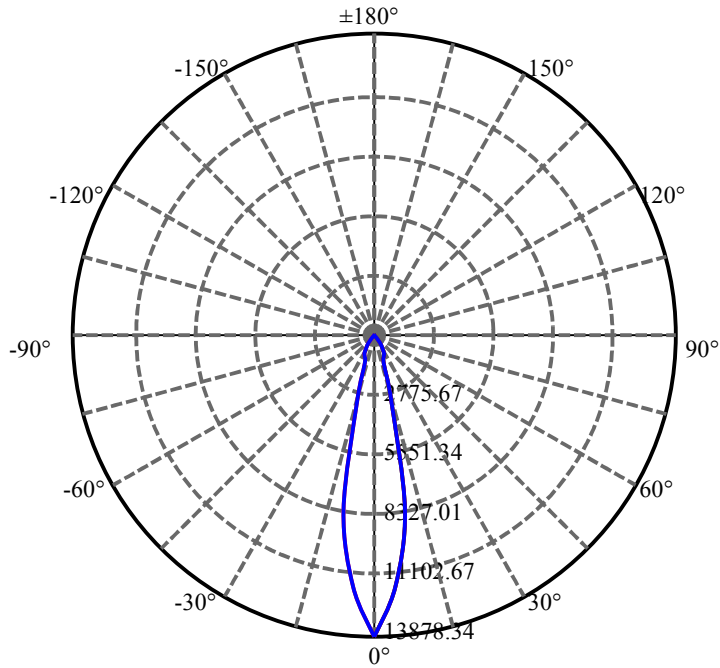
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	13878.342	82.995	82.995	2.784%	2.894%
5.0	11625.641	555.395	638.391	18.631%	22.261%
10.0	8156.330	776.344	1414.735	26.043%	49.332%
15.0	3181.916	451.413	1866.148	15.143%	65.073%
20.0	1393.684	261.280	2127.428	8.765%	74.184%
25.0	1096.751	254.066	2381.494	8.523%	83.043%
30.0	951.340	260.733	2642.226	8.746%	92.135%
35.0	462.900	145.535	2787.761	4.882%	97.210%
40.0	30.377	10.703	2798.464	.359%	97.583%
45.0	19.345	7.498	2805.963	.252%	97.845%
50.0	17.405	7.308	2813.271	.245%	98.100%
55.0	16.138	7.246	2820.517	.243%	98.352%
60.0	15.450	7.334	2827.851	.246%	98.608%
65.0	14.831	7.368	2835.219	.247%	98.865%
70.0	14.115	7.270	2842.489	.244%	99.119%
75.0	13.592	7.196	2849.686	.241%	99.369%
80.0	13.406	7.237	2856.923	.243%	99.622%
85.0	13.269	7.245	2864.168	.243%	99.874%
90.0	13.138	3.601	2867.769	.121%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2642.23	88.64%	92.14%
0-40	2798.46	93.88%	97.58%
0-60	2827.85	94.86%	98.61%
0-90	2864.17	96.08%	99.87%
0-120	2864.17	96.08%	99.87%
0-180	2867.77	96.20%	100.00%
60-90	43.65	1.46%	1.52%
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%
0-23.28	2294.22	76.96%	80.00%

ZONAL LUMEN SUMMARY

0-10	1414.74
10-20	712.69
20-30	514.80
30-40	156.24
40-50	14.81
50-60	14.58
60-70	14.64
70-80	14.43
80-90	7.25
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



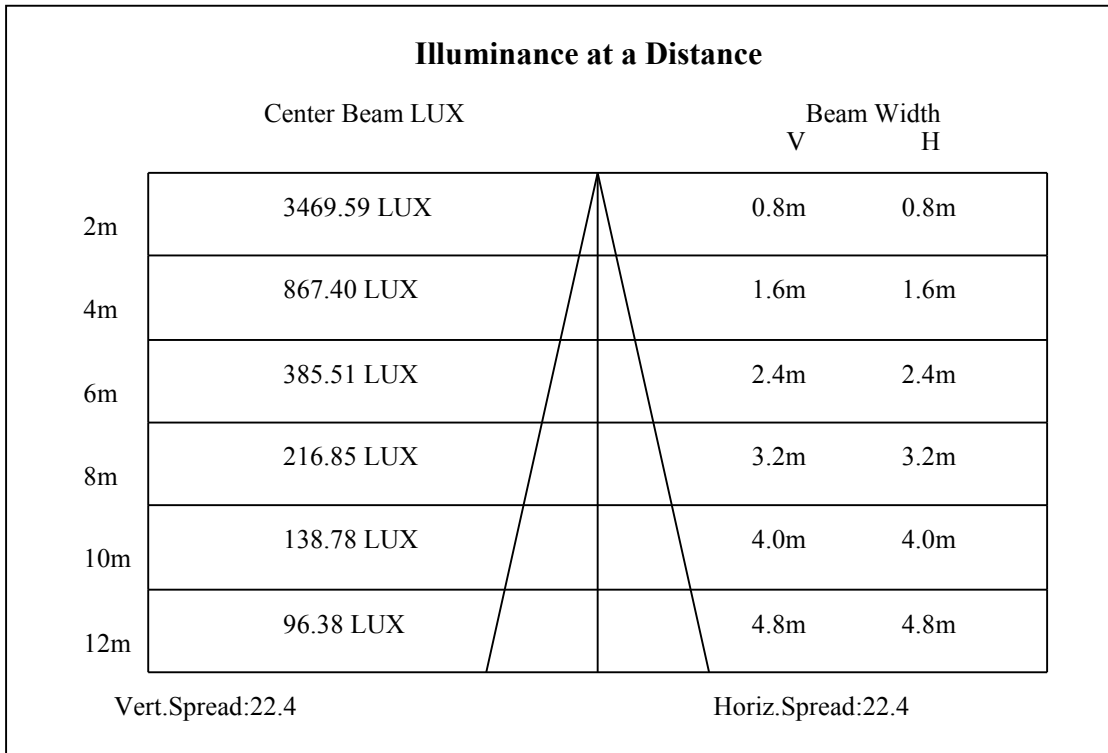
C0(Max): —————

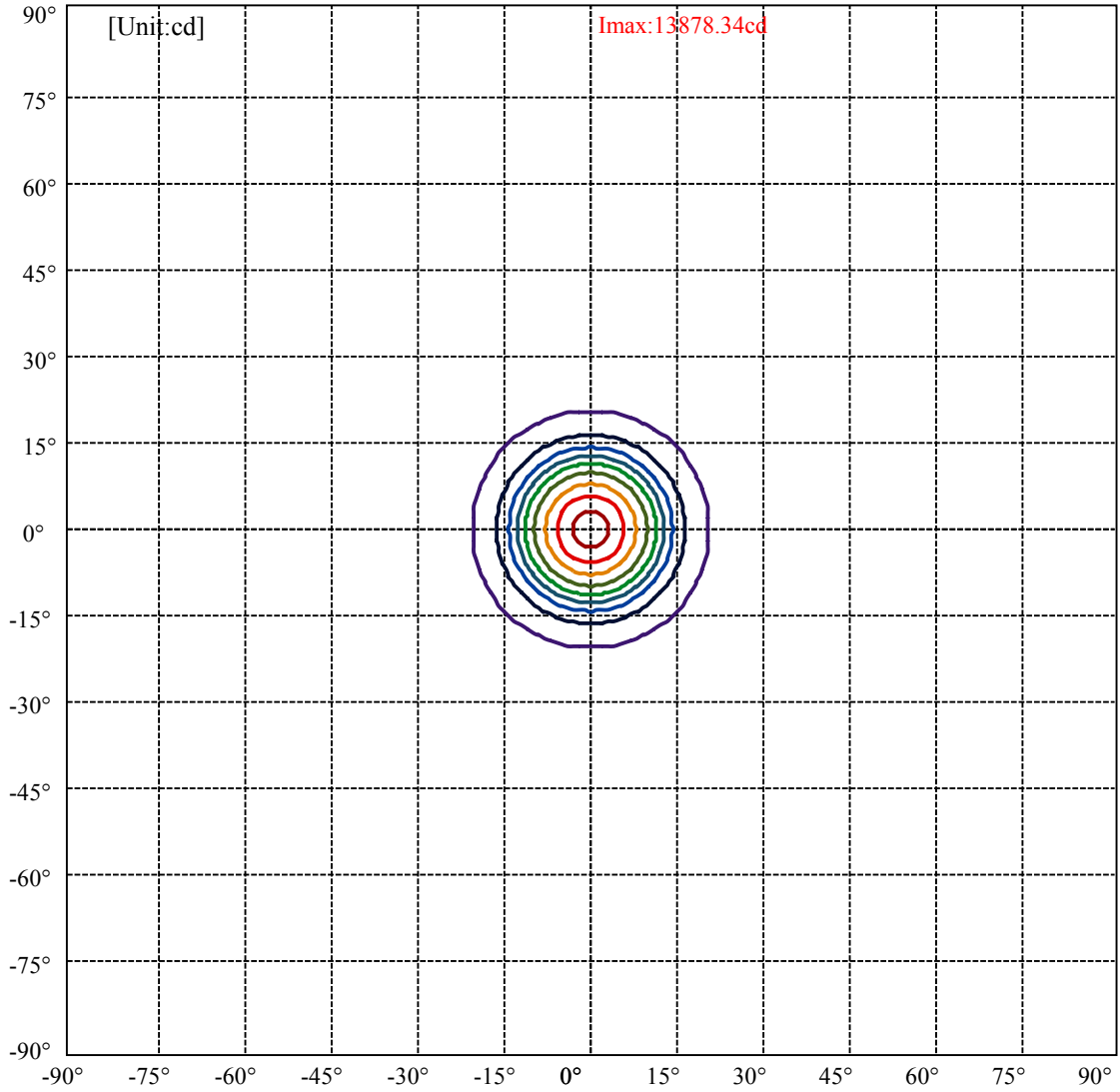
C0/C180: —————

C90/C270: —————

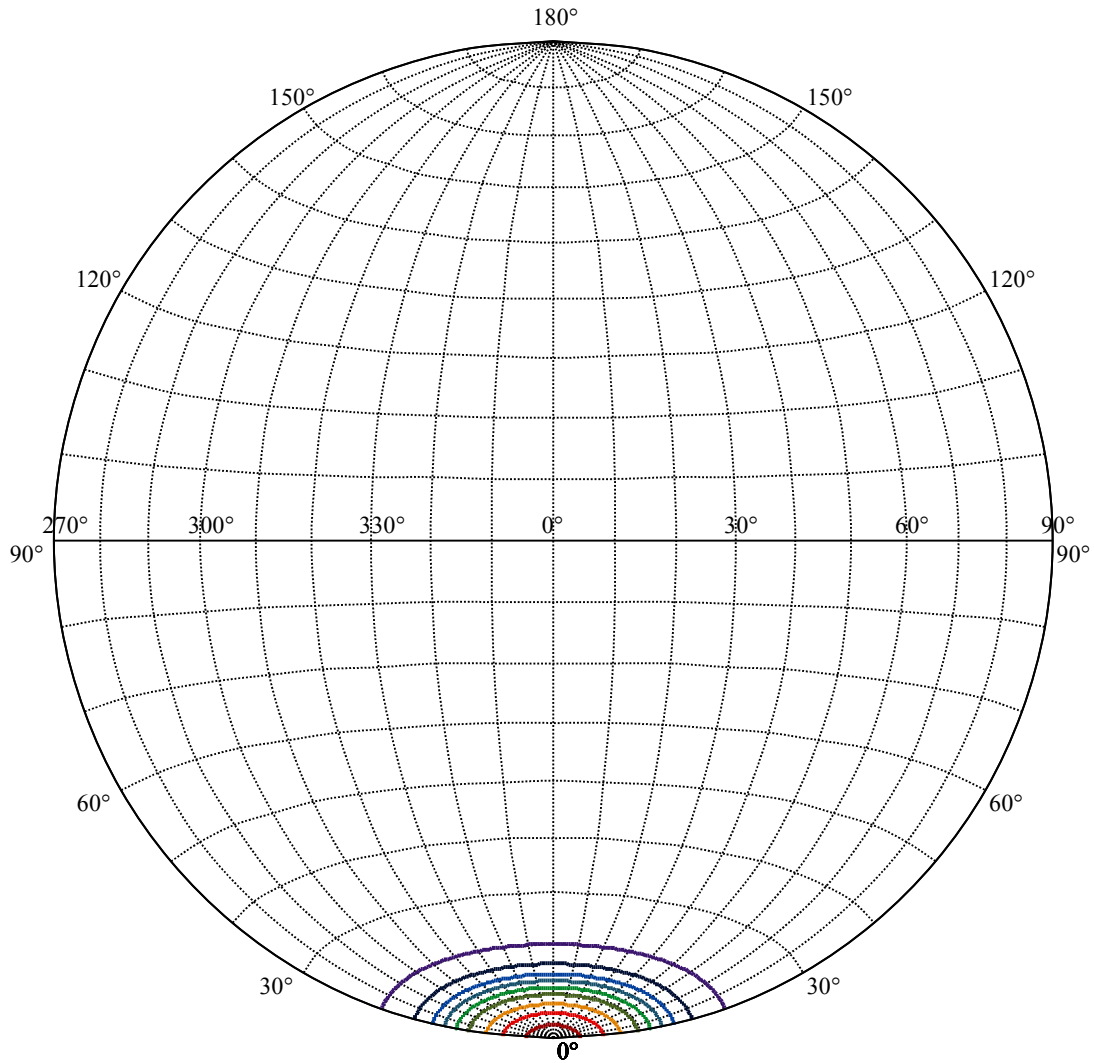
Field angle(10%Imax):C0/180Left:20.1 Right:20.1
:C90/270Left:20.1 Right:20.1

Beam Angle(50%Imax):C0/180Left:11.2 Right:11.2
:C90/270Left:11.2 Right:11.2





(10%I _{max}) 1387.83	—
(20%I _{max}) 2775.67	—
(30%I _{max}) 4163.5	—
(40%I _{max}) 5551.34	—
(50%I _{max}) 6939.17	—
(60%I _{max}) 8327	—
(70%I _{max}) 9714.84	—
(80%I _{max}) 11102.7	—
(90%I _{max}) 12490.5	—



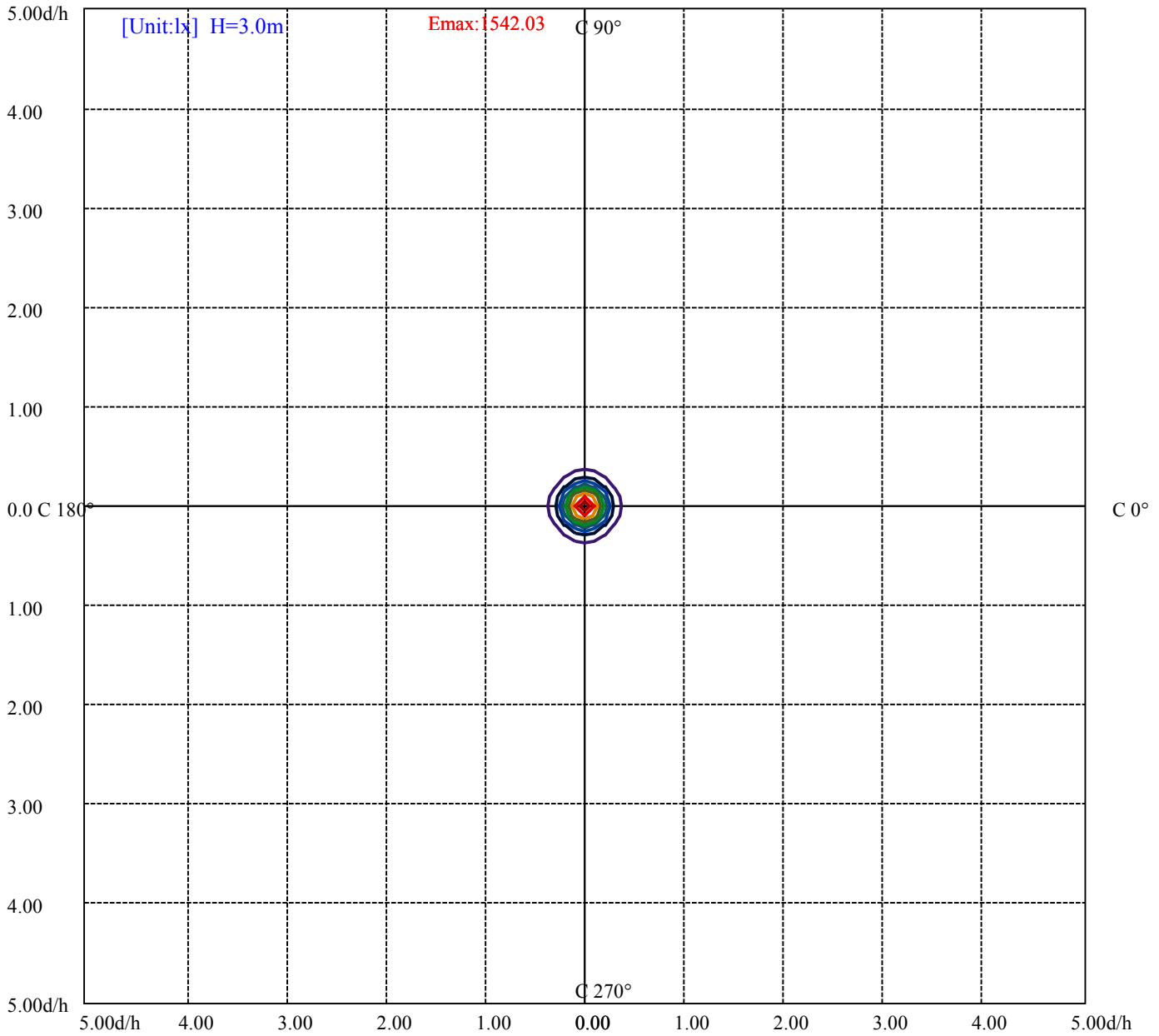
House

[Unit:cd]

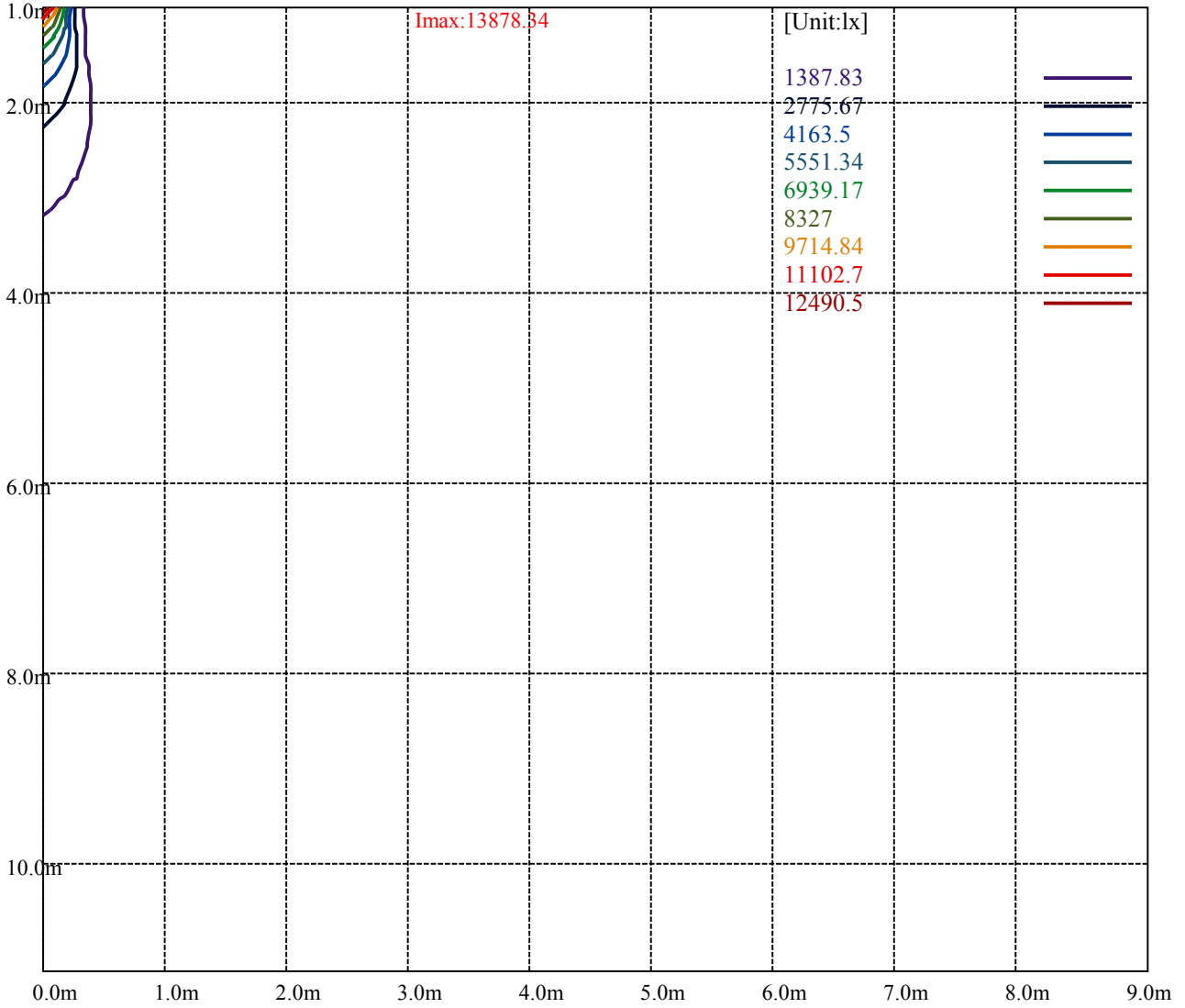
Road

Imax:13878.34

(10%Imax)	1387.83	—
(20%Imax)	2775.67	—
(30%Imax)	4163.5	—
(40%Imax)	5551.34	—
(50%Imax)	6939.17	—
(60%Imax)	8327	—
(70%Imax)	9714.84	—
(80%Imax)	11102.7	—
(90%Imax)	12490.5	—



(10%Emax) 154.2033	—
(20%Emax) 308.4055	—
(30%Emax) 462.6089	—
(40%Emax) 616.8123	—
(50%Emax) 771.0156	—
(60%Emax) 925.2178	—
(70%Emax) 1079.421	—
(80%Emax) 1233.622	—
(90%Emax) 1387.822	—



Luminance Table

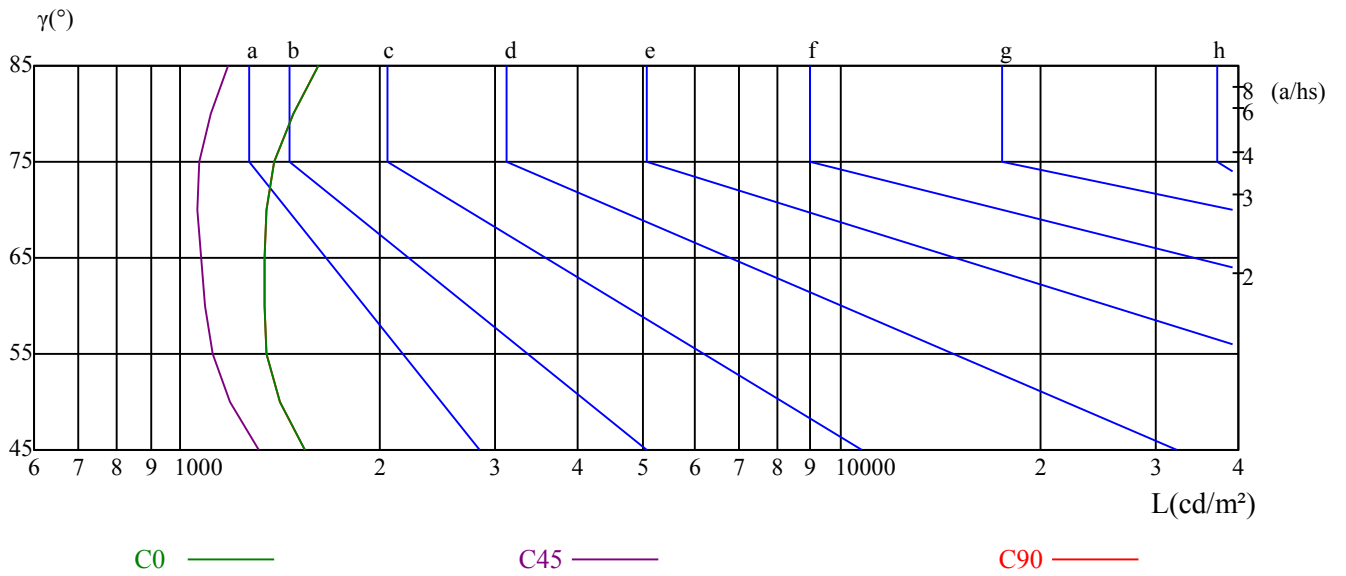
γ	45	50	55	60	65	70	75	80	85
C0	1542	1413	1347	1336	1342	1350	1389	1483	1614
C45	1316	1189	1115	1088	1074	1060	1068	1114	1179
C90	1542	1413	1347	1336	1342	1350	1389	1483	1614

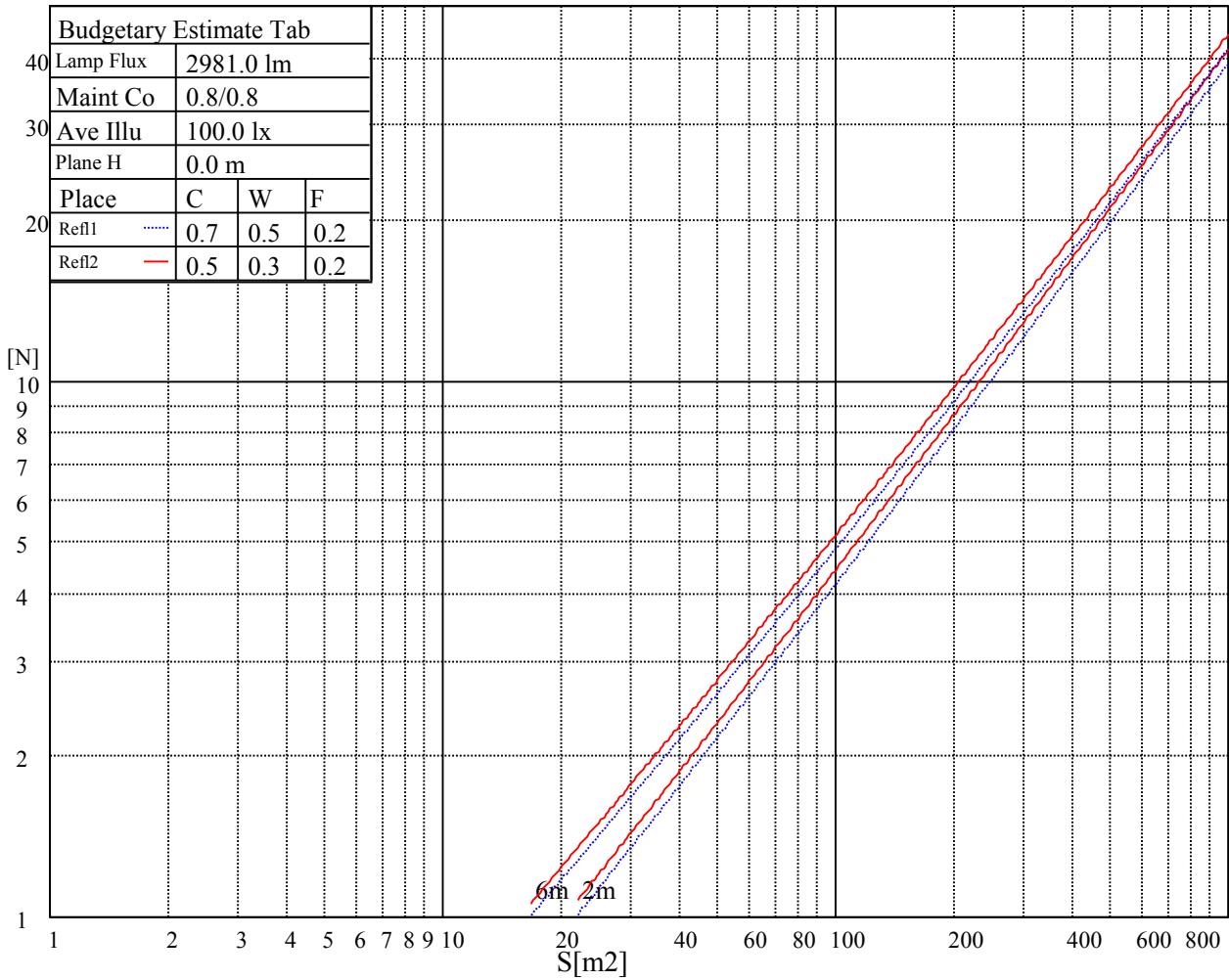
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3373	3373	3373	5048	5048	5048	14633	14633	14633

Glare Table

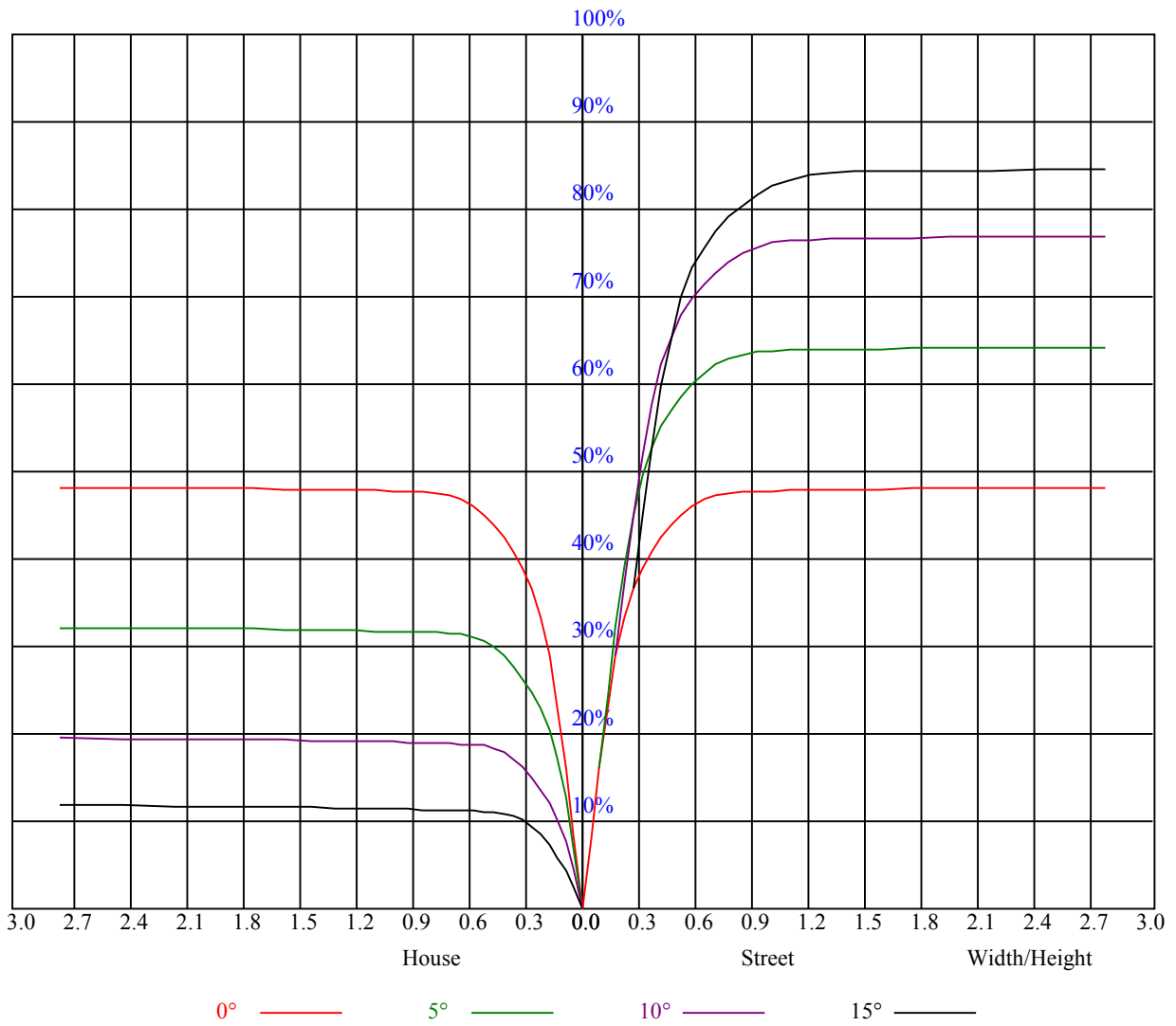
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

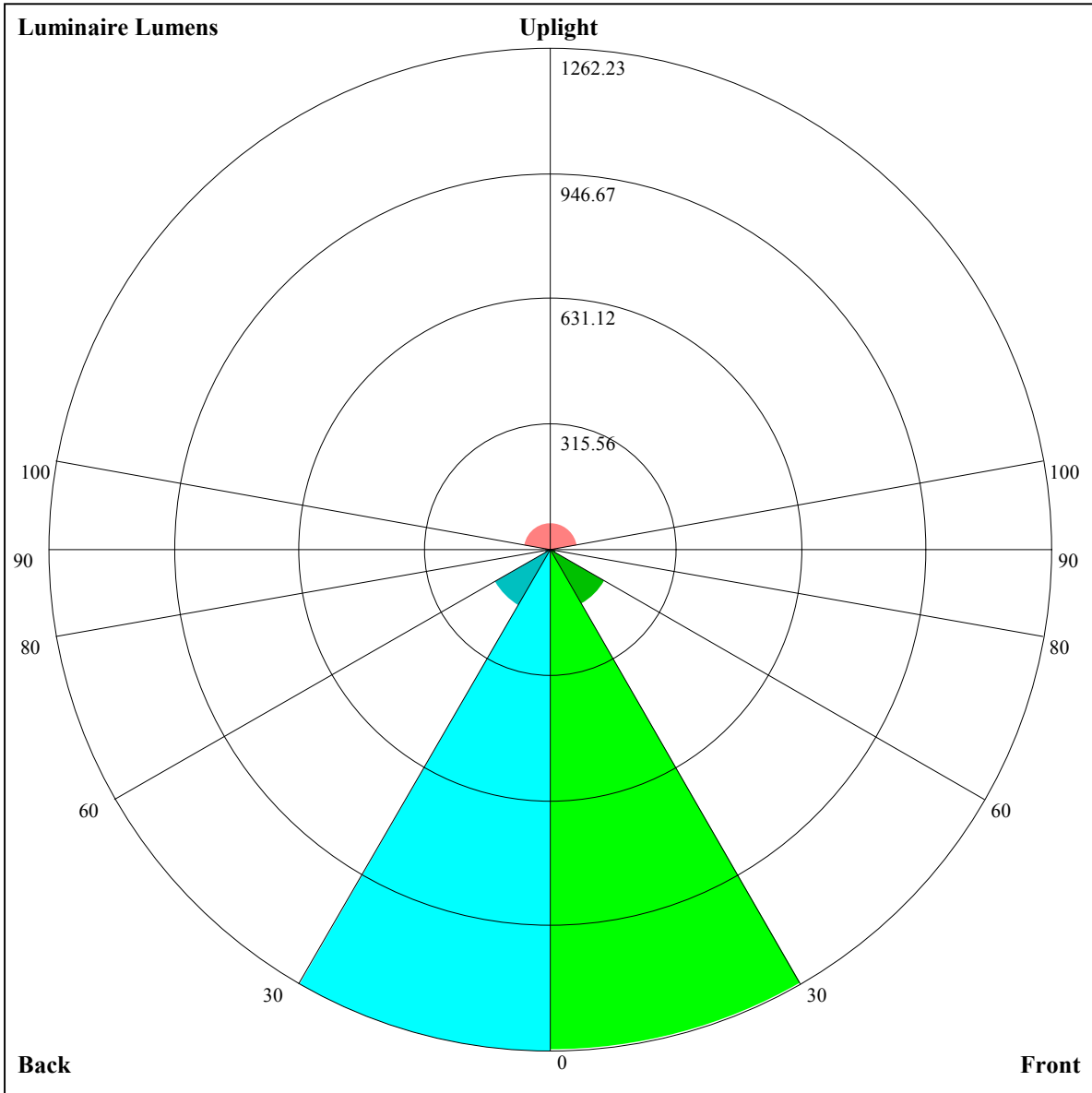
Luminance Limiting Curve





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	1.18	1.18	1.18	1.15	1.15	1.15	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	0.99
1	1.08	1.05	1.02	1.06	1.03	1.01	1.02	0.99	0.97	0.98	0.96	0.95	0.94	0.93	0.92	0.90
2	1.03	0.99	0.95	1.01	0.97	0.94	0.98	0.95	0.92	0.95	0.92	0.90	0.92	0.90	0.89	0.87
3	0.98	0.94	0.90	0.97	0.93	0.90	0.94	0.91	0.88	0.92	0.89	0.87	0.90	0.88	0.86	0.84
4	0.94	0.90	0.86	0.93	0.89	0.86	0.91	0.88	0.85	0.89	0.86	0.84	0.88	0.85	0.83	0.82
5	0.91	0.86	0.83	0.90	0.86	0.83	0.88	0.85	0.82	0.87	0.84	0.81	0.85	0.83	0.81	0.79
6	0.88	0.83	0.80	0.87	0.83	0.80	0.86	0.82	0.79	0.85	0.81	0.79	0.83	0.81	0.78	0.77
7	0.85	0.81	0.78	0.85	0.80	0.77	0.84	0.80	0.77	0.82	0.79	0.77	0.81	0.79	0.76	0.75
8	0.83	0.78	0.75	0.82	0.78	0.75	0.81	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.73
9	0.81	0.76	0.73	0.80	0.76	0.73	0.79	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.73	0.72
10	0.79	0.74	0.72	0.78	0.74	0.72	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.71	0.70





Luminaire Lumens:

FL=1261.24,FM=157.06,FH=14.53,FVH=7.25

BL=1262.23,BM=161.61,BH=14.6,BVH=7.24

UL=14.33,UH=68.21

BUG Rating:B3-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	13857.70	12123.42	8555.76	3655.74	1496.98	1123.70	962.94	514.78	33.42
45.0	13857.70	12228.03	8737.45	3457.54	1411.65	1119.85	962.39	510.92	30.61
90.0	13967.81	11886.68	8242.49	3062.79	1392.38	1090.06	954.18	491.98	30.06
135.0	13830.17	12541.85	8919.14	4217.32	1508.55	1144.07	993.22	622.69	41.73
180.0	13857.70	10966.13	7476.66	2788.06	1350.53	1087.42	939.37	416.89	28.24
225.0	13857.70	10959.53	7913.81	2837.06	1340.62	1077.89	939.10	398.33	25.88
270.0	13967.81	11605.89	8186.89	3033.61	1379.71	1079.11	937.61	458.62	27.64
315.0	13830.17	10693.60	7218.44	2403.21	1269.05	1051.91	921.92	288.99	25.44
360.0	13857.70	12123.42	8555.76	3655.74	1496.98	1123.70	962.94	514.78	33.42
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	20.21	17.73	16.24	15.47	15.03	14.20	13.54	13.38	13.21
45.0	18.39	16.68	15.58	14.92	14.37	13.98	13.65	13.49	13.38
90.0	18.11	16.63	15.53	15.03	14.59	14.04	13.54	13.43	13.32
135.0	21.69	19.05	17.18	15.97	15.09	14.31	13.71	13.38	13.27
180.0	19.32	17.51	16.46	15.80	15.03	14.04	13.43	13.32	13.16
225.0	18.44	16.74	15.64	15.20	14.81	14.15	13.65	13.49	13.32
270.0	18.33	16.68	15.75	15.47	14.87	14.15	13.60	13.38	13.32
315.0	20.26	18.22	16.74	15.75	14.87	14.04	13.60	13.38	13.16
360.0	20.21	17.73	16.24	15.47	15.03	14.20	13.54	13.38	13.21
C/ γ (°)	90.0								
0.0	13.05								
45.0	13.27								
90.0	13.16								
135.0	13.05								
180.0	12.99								
225.0	13.27								
270.0	13.21								
315.0	13.10								
360.0	13.05								