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Nata

Client: NT

LumCAT: 11-0161-S4

Luminaire: 69-0030

Report No: 20260801-B013

Ballast type: DC

Test No: 20260801-C013

Voltage(V): 22.130

LampCAT: LUXEON 2835*2

Current(A): 0.454

Lamp flux(lm): 1120.0

Power (W): 10.047

Number of Lamps: 1

PF: 0.000

Length(mm): 280

Width(mm): 40

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 1018.05, Efficiency(%): 90.90% , Luminous Efficacy(lm/W): 101.33

Central intensity(cd): 1162.107, Maximum intensity(cd): 1169.048

Angle of maximum intensity: C=22.5 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=60.2

[C90/270]Total=60.7

Field angle(10%Imax): [C0/180]Total=78.0

[C90/270]Total=79.0

Maximum s/h(1/2): C0_180=0.94 C90_270=0.96

Maximum s/h(1/4): C0_180=0.85 C90_270=0.88

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.78%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.839%

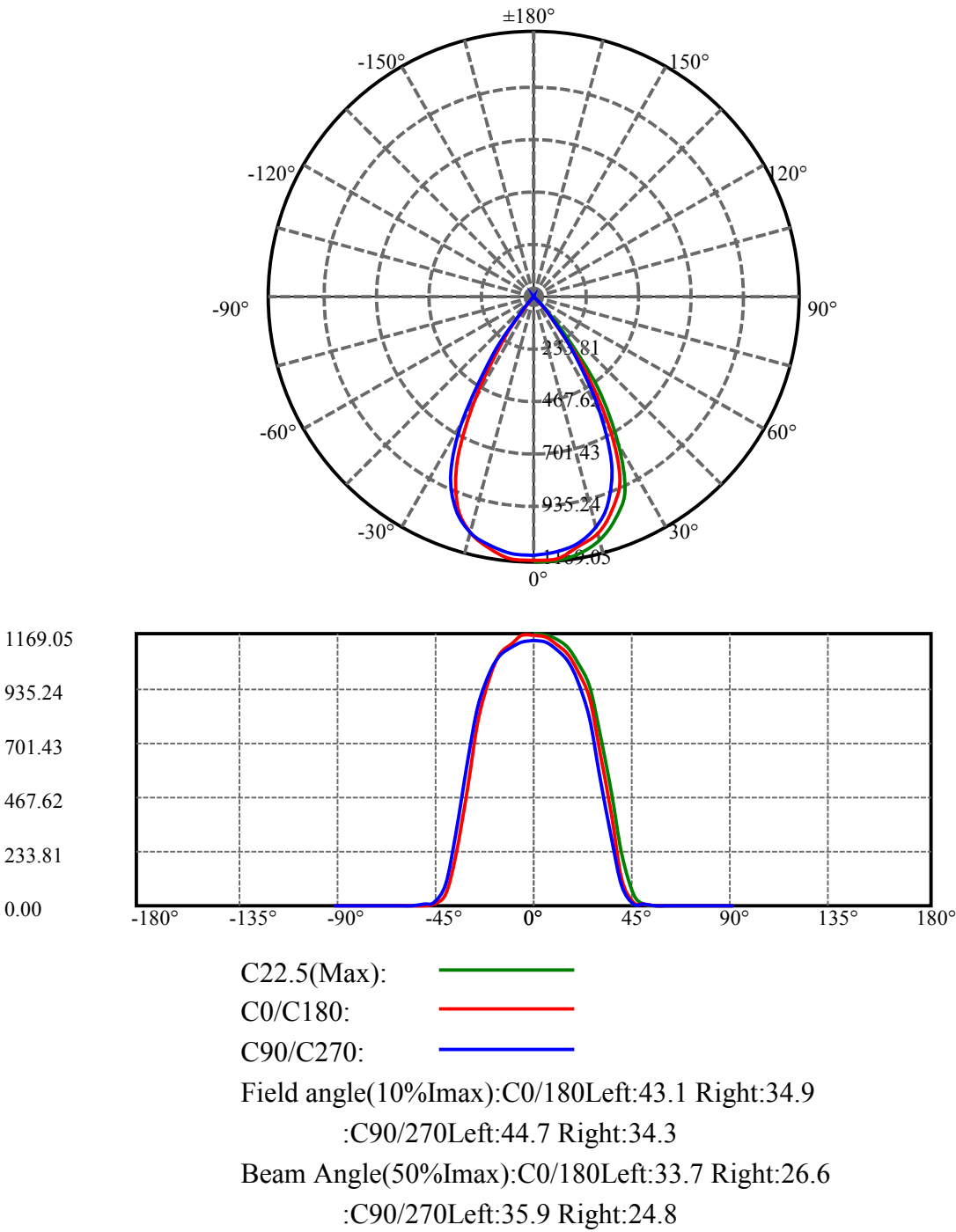
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1155.685	0.000	0	0.00%	0.00%
5.0	1151.411	27.581	27.581	2.46%	2.71%
10.0	1127.823	81.535	109.116	7.28%	10.72%
15.0	1086.148	131.331	240.447	11.73%	23.62%
20.0	998.107	171.772	412.219	15.34%	40.49%
25.0	838.571	192.634	604.853	17.20%	59.41%
30.0	579.165	179.416	784.268	16.02%	77.04%
35.0	308.344	130.692	914.96	11.67%	89.87%
40.0	104.811	68.932	983.892	6.15%	96.64%
45.0	21.165	23.325	1007.217	2.08%	98.94%
50.0	5.406	5.369	1012.587	0.48%	99.46%
55.0	2.354	1.687	1014.274	0.15%	99.63%
60.0	1.270	0.838	1015.112	0.07%	99.71%
65.0	0.942	0.538	1015.649	0.05%	99.76%
70.0	0.905	0.467	1016.117	0.04%	99.81%
75.0	0.910	0.474	1016.591	0.04%	99.86%
80.0	0.905	0.486	1017.076	0.04%	99.90%
85.0	0.883	0.486	1017.562	0.04%	99.95%
90.0	0.894	0.487	1018.049	0.04%	100.00%

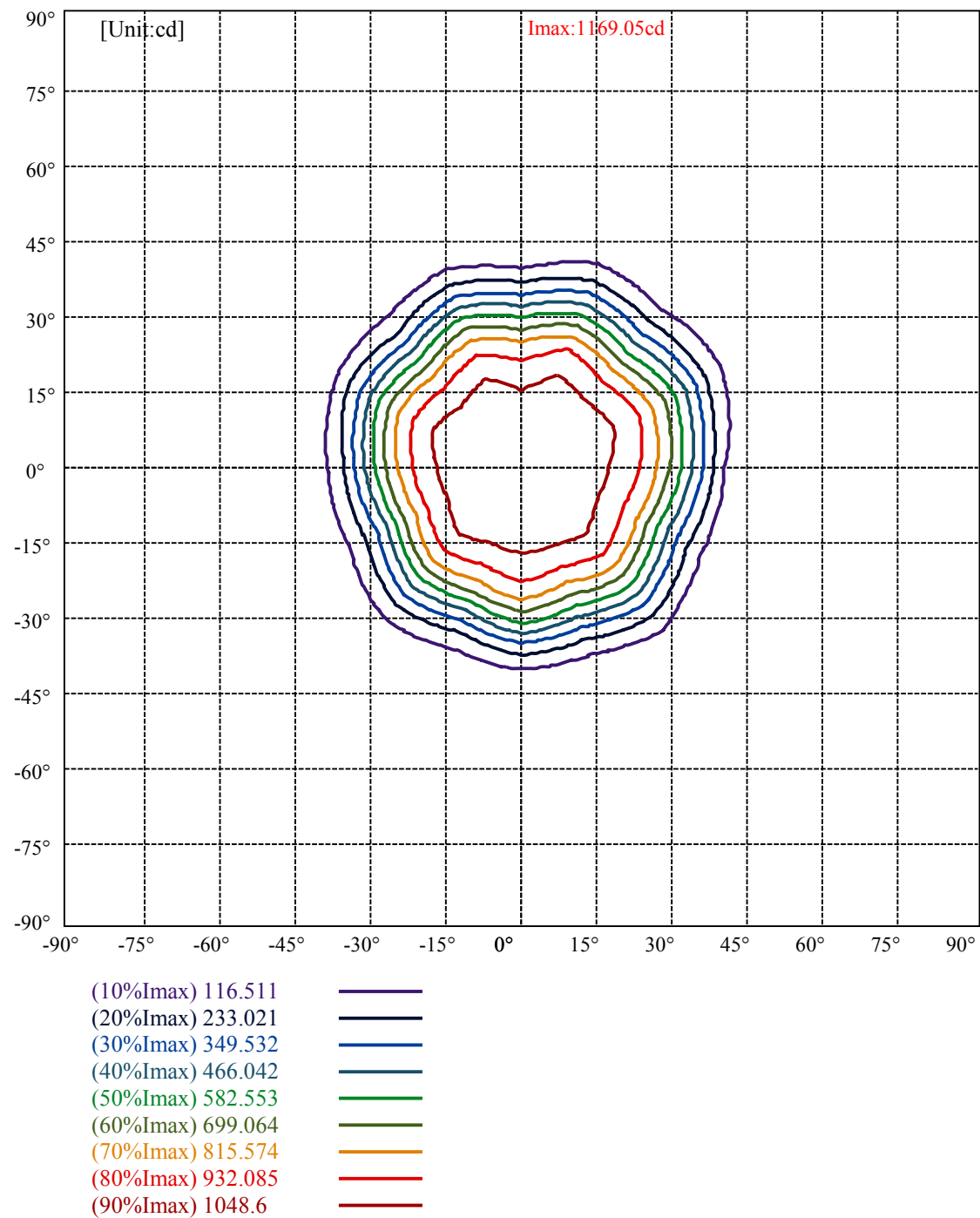
ZONAL LUMEN SUMMARY

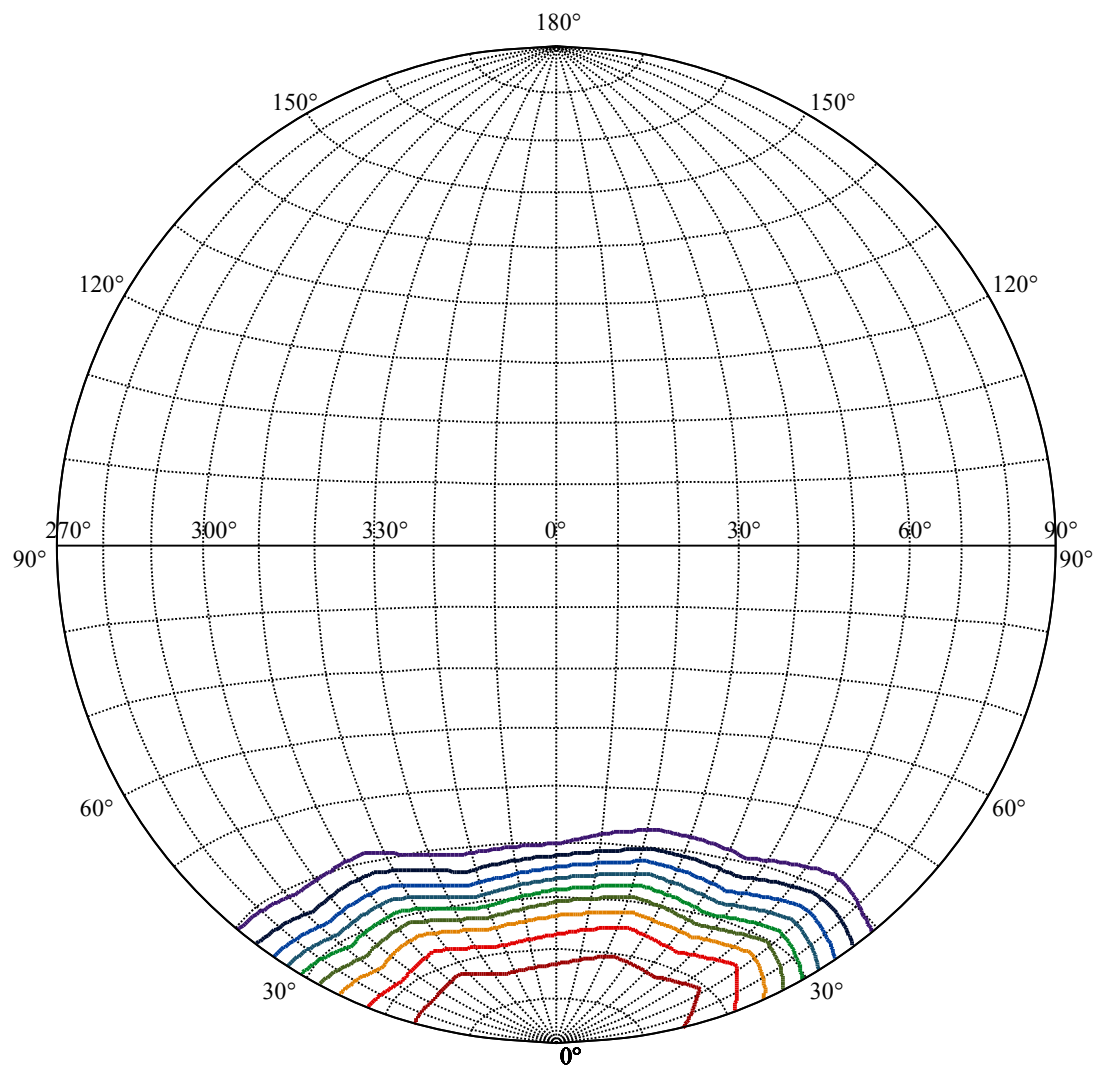
Zone	Lumens	%Lamp	%Fixt
0-30	784.27	70.02%	77.04%
0-40	983.89	87.85%	96.64%
0-60	1015.11	90.63%	99.71%
0-90	1017.56	90.85%	99.95%
0-120	1017.56	90.85%	99.95%
0-180	1018.05	90.90%	100.00%
60-90	2.45	0.22%	0.24%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-31.15	814.44	72.72%	80.00%

ZONAL LUMEN SUMMARY

0-10	109.12
10-20	303.10
20-30	372.05
30-40	199.62
40-50	28.69
50-60	2.52
60-70	1.01
70-80	0.96
80-90	0.49
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





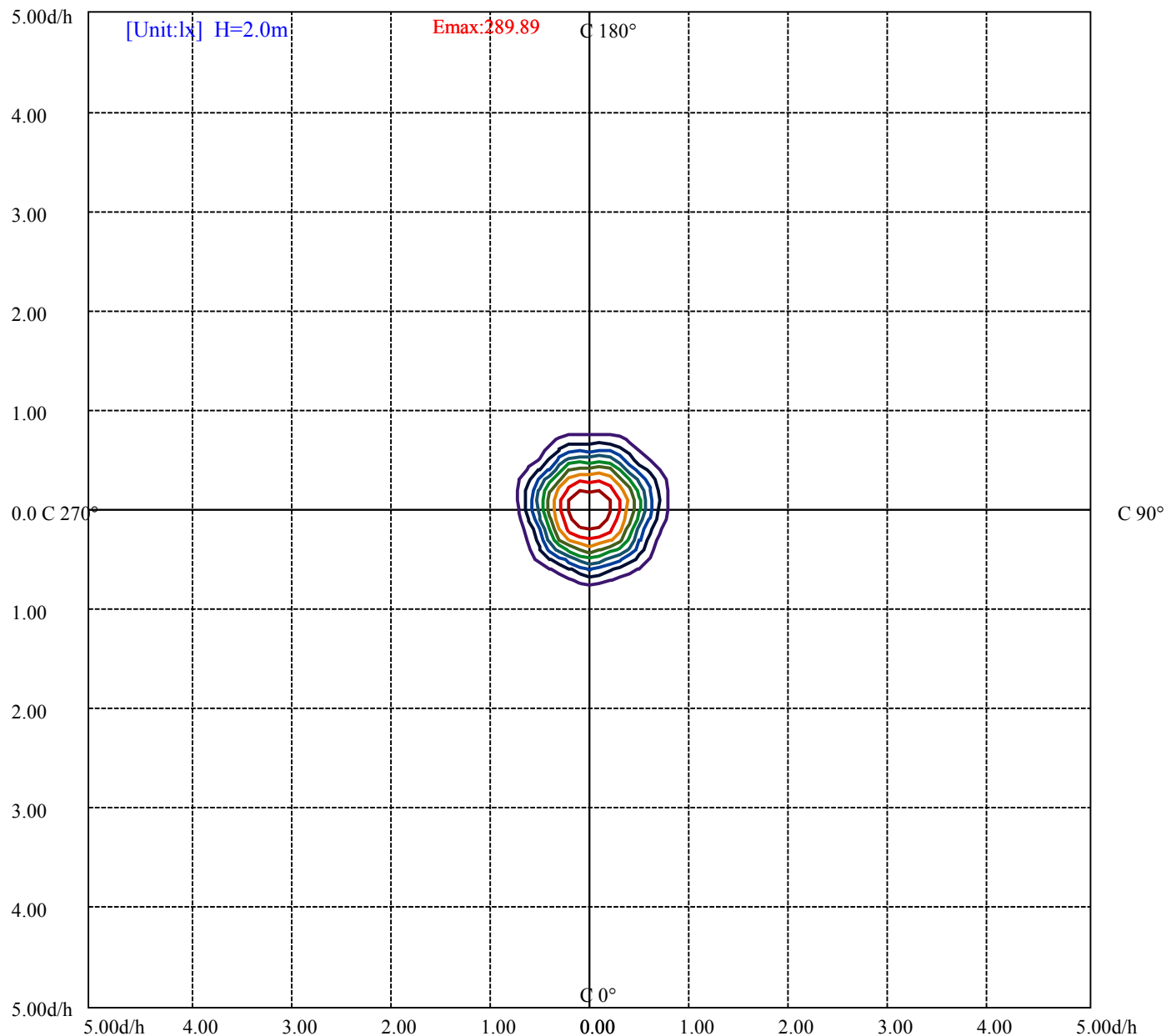


House

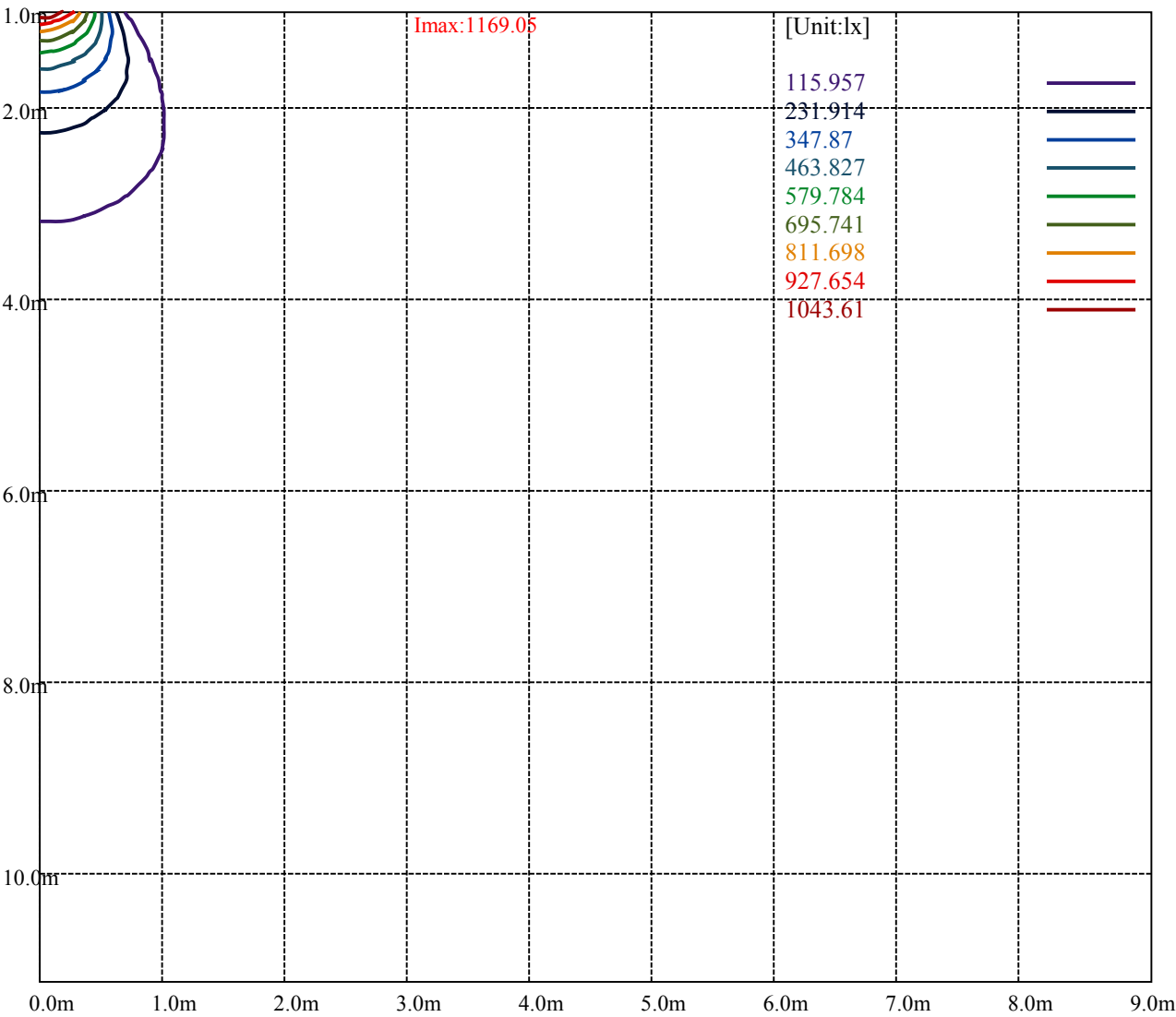
[Unit:cd]

Road

Imax:1169.05	
(10%Imax)	116.884
(20%Imax)	233.767
(30%Imax)	350.651
(40%Imax)	467.535
(50%Imax)	584.419
(60%Imax)	701.302
(70%Imax)	818.186
(80%Imax)	935.07
(90%Imax)	1051.95



(10%Emax)	28.98925	—
(20%Emax)	57.97825	—
(30%Emax)	86.9675	—
(40%Emax)	115.9567	—
(50%Emax)	144.9458	—
(60%Emax)	173.935	—
(70%Emax)	202.9243	—
(80%Emax)	231.9133	—
(90%Emax)	260.9025	—



Luminance Table

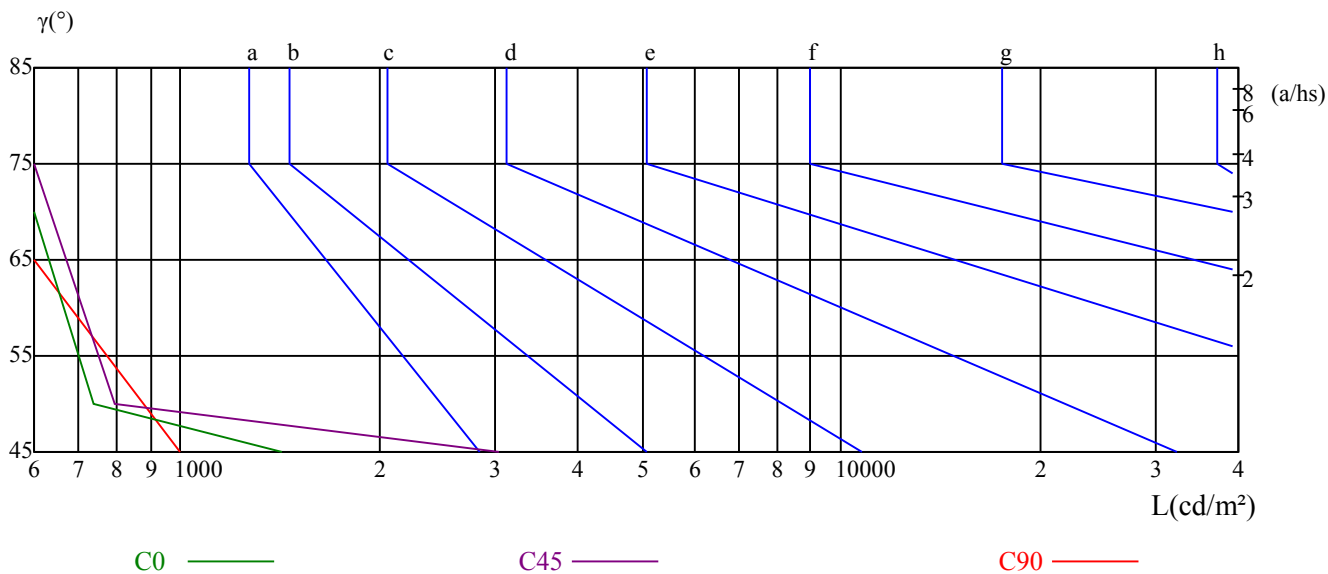
γ	45	50	55	60	65	70	75	80	85
C0	1425	737	0	0	0	102	112	125	142
C45	3045	794	0	0	0	0	128	0	0
C90	997	0	0	0	171	185	231	0	0

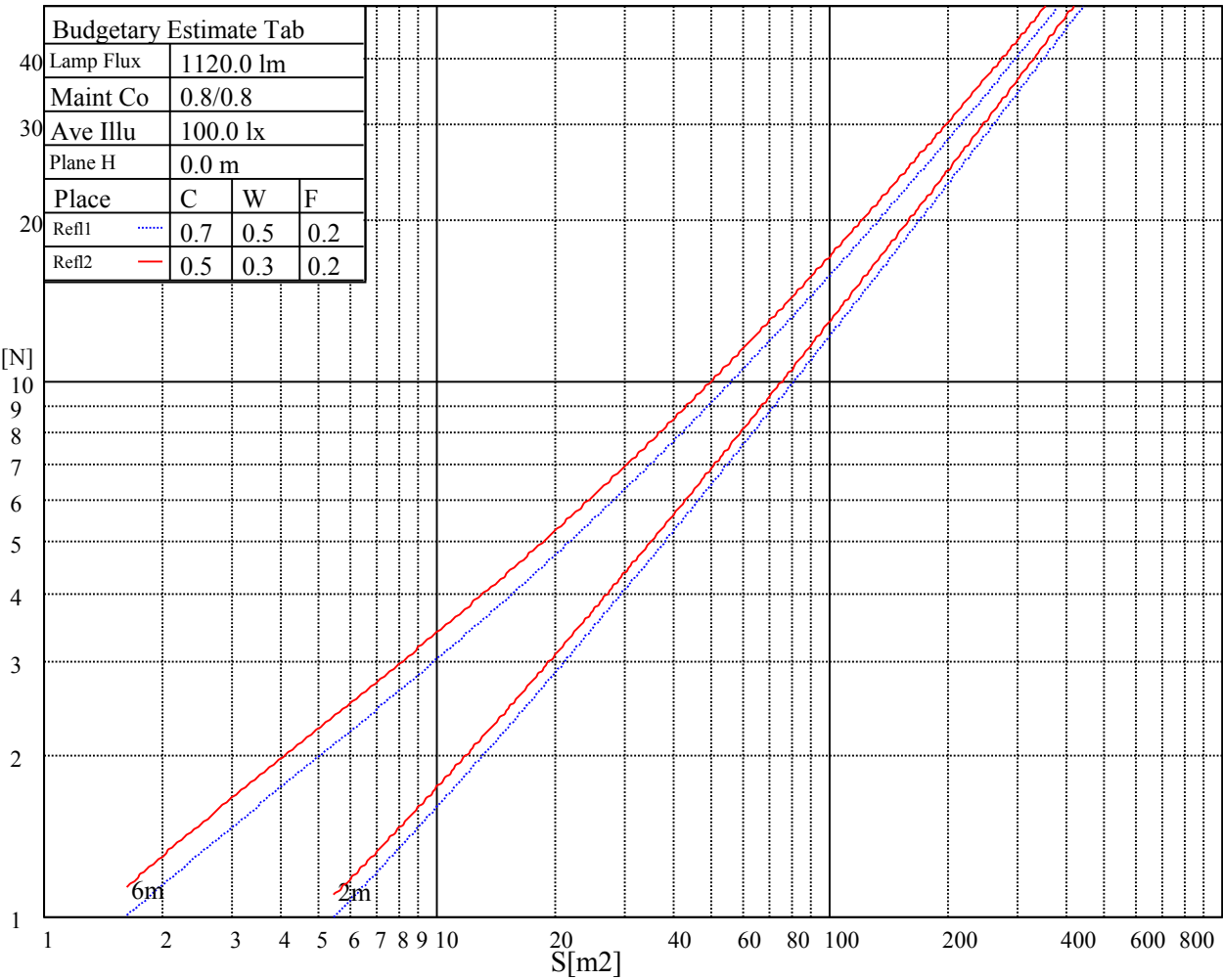
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	188	49	321	307	161	477	434	217

Glare Table

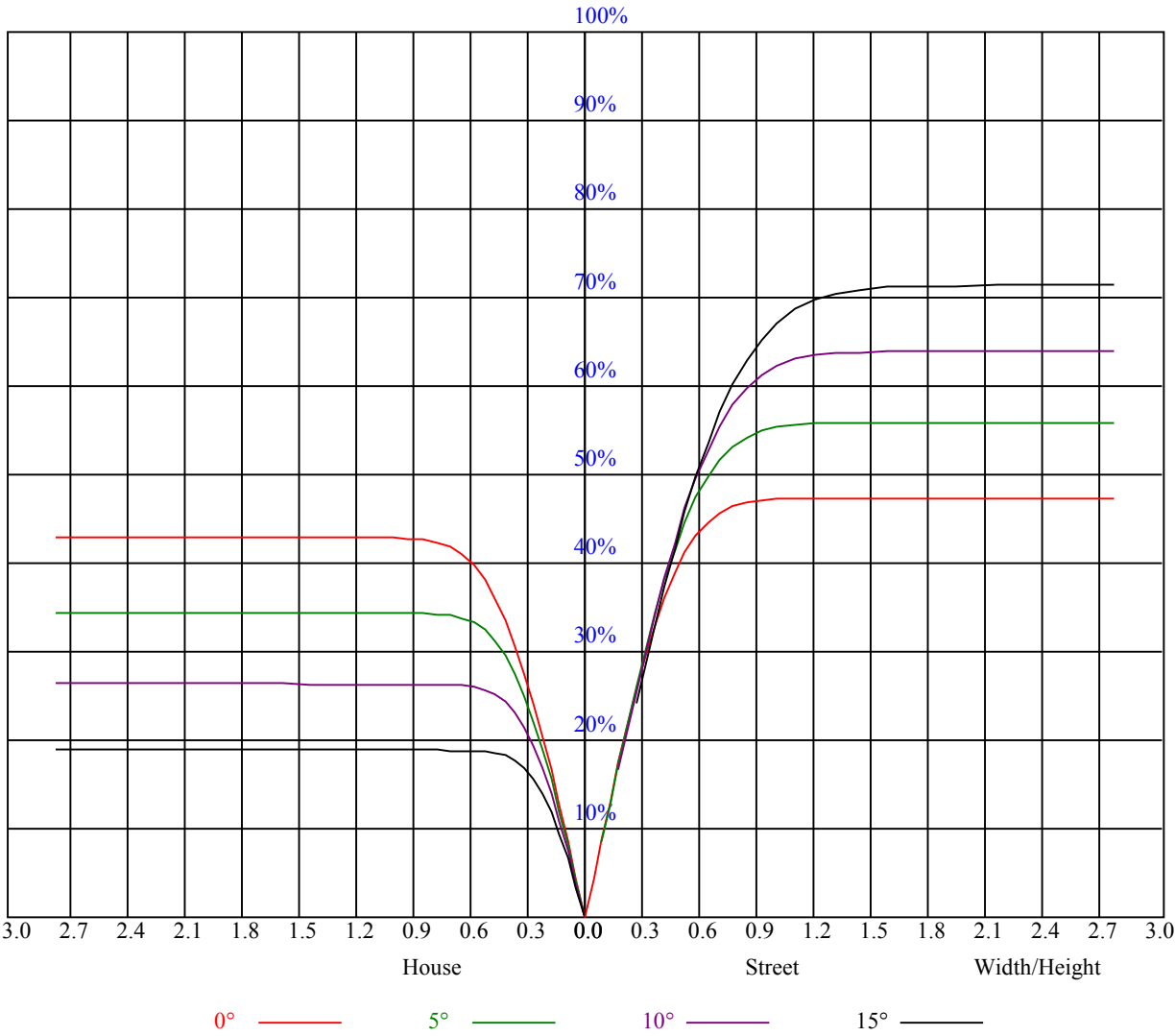
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

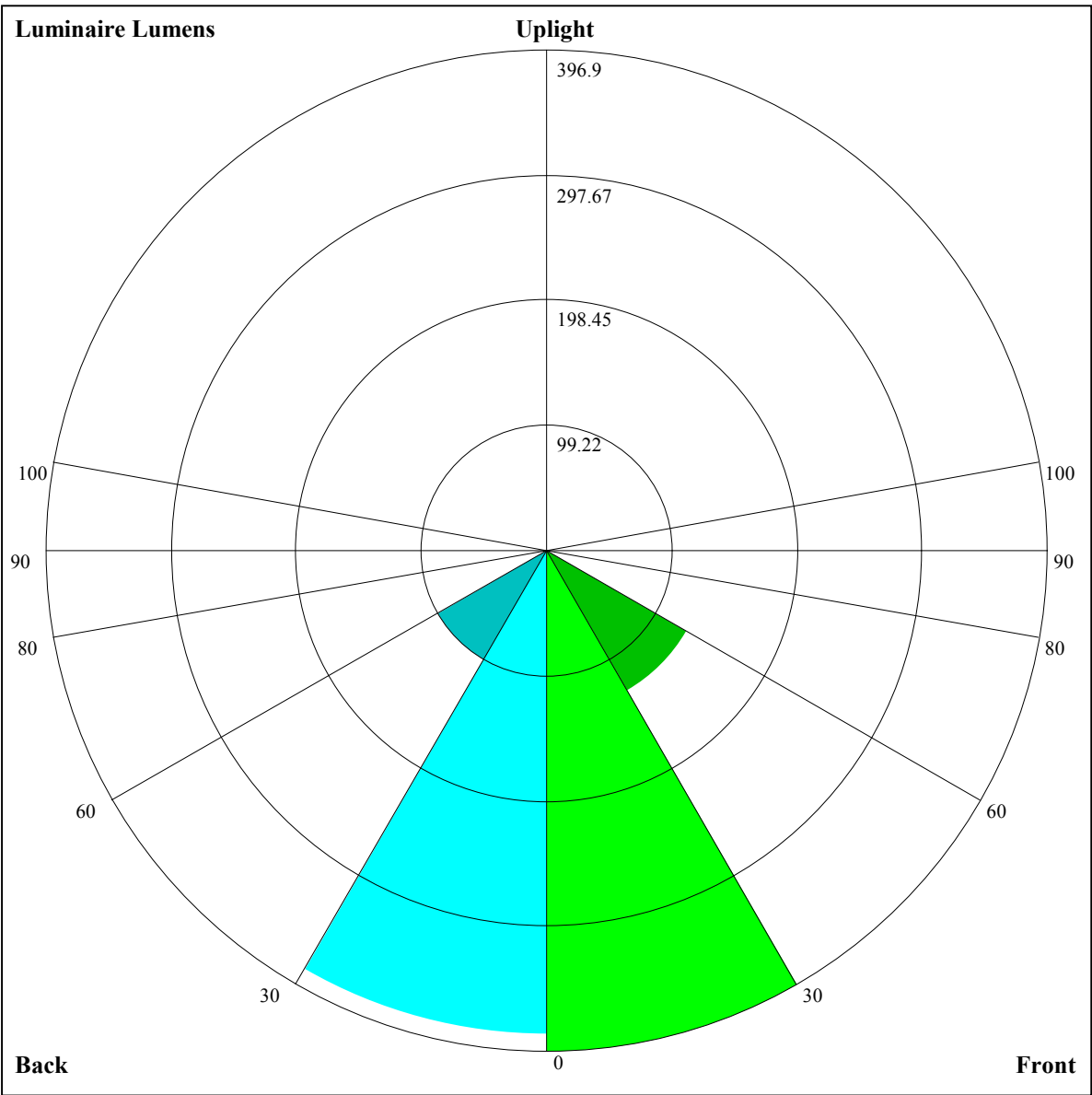
Luminance Limiting Curve





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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.08	1.08	1.08	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.01	0.99	0.97	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.91	0.90	0.89	0.88	0.87	0.85
2	0.94	0.91	0.88	0.93	0.89	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.81	0.80
3	0.88	0.84	0.80	0.87	0.83	0.80	0.85	0.81	0.79	0.82	0.80	0.77	0.80	0.78	0.76	0.75
4	0.83	0.78	0.74	0.82	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.71	0.70
5	0.78	0.73	0.69	0.77	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.67	0.72	0.69	0.67	0.66
6	0.73	0.68	0.64	0.72	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.65	0.63	0.61
7	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.58
8	0.65	0.60	0.56	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.54
9	0.62	0.56	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.60	0.55	0.53	0.59	0.55	0.52	0.51
10	0.58	0.53	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.57	0.52	0.50	0.56	0.52	0.49	0.48





Luminaire Lumens:

FL=396.9,FM=128.18,FH=0.99,FVH=0.48

BL=383.93,BM=99.63,BH=0.96,BVH=0.48

UL=0,UH=0

BUG Rating:B1-U0-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	1162.11	1156.77	1122.33	1080.26	1008.49	890.33	666.62	388.84	113.08
22.5	1169.05	1163.29	1146.36	1111.83	1046.40	943.82	745.51	488.63	221.93
45.0	1161.68	1155.42	1133.92	1094.73	1019.40	871.20	599.00	340.85	125.44
67.5	1151.53	1148.65	1132.23	1101.84	1044.03	933.92	696.67	425.99	181.30
90.0	1138.32	1131.30	1101.59	1051.40	965.07	803.06	559.47	293.11	88.11
112.5	1153.22	1154.49	1137.39	1103.87	1030.92	898.79	668.15	384.35	146.51
135.0	1150.26	1147.80	1128.08	1080.26	987.75	797.39	518.34	233.69	79.98
157.5	1159.31	1164.98	1149.83	1113.69	1030.41	878.99	619.65	330.60	112.66
180.0	1162.11	1160.84	1127.57	1078.31	979.62	789.44	511.06	221.42	50.70
202.5	1169.05	1156.94	1120.63	1064.18	935.78	701.58	374.87	160.90	31.32
225.0	1161.68	1160.75	1144.16	1106.92	1004.59	814.58	529.85	267.21	83.62
247.5	1151.53	1147.13	1124.53	1073.74	943.40	765.15	455.62	195.26	48.67
270.0	1138.32	1134.51	1114.03	1076.03	1000.19	855.71	623.37	312.91	97.84
292.5	1153.22	1146.36	1120.21	1079.24	970.06	783.17	531.37	258.49	75.84
315.0	1150.26	1143.82	1126.39	1093.13	1023.04	881.95	646.40	375.72	151.00
337.5	1159.31	1149.50	1115.89	1068.92	980.55	808.06	520.71	255.53	68.98
360.0	1162.11	1156.77	1122.33	1080.26	1008.49	890.33	666.62	388.84	113.08

C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	16.42	4.66	2.37	1.10	0.93	0.93	0.93	0.93	0.93
22.5	54.42	7.79	3.39	1.69	1.02	0.93	0.93	0.93	0.93
45.0	30.05	9.73	3.47	1.95	1.10	0.85	0.93	0.85	0.85
67.5	43.00	7.96	3.30	1.44	0.93	0.85	0.85	0.93	0.93
90.0	9.23	3.89	1.95	0.93	0.93	0.85	0.85	0.85	0.85
112.5	31.23	5.76	2.62	1.27	0.93	0.85	0.93	0.85	0.85
135.0	21.58	5.92	2.54	1.52	0.93	0.93	0.93	0.93	0.93
157.5	20.40	4.91	2.29	1.18	1.02	0.93	0.93	0.93	0.93
180.0	7.28	2.88	1.44	1.02	0.93	0.93	0.93	0.93	0.85
202.5	5.25	2.37	1.18	0.93	0.93	0.93	0.85	0.93	0.93
225.0	21.41	6.69	2.54	1.52	0.85	0.93	0.93	0.93	0.85
247.5	8.63	3.22	1.61	0.93	0.85	0.85	0.93	0.93	0.85
270.0	14.81	3.98	1.86	0.93	0.85	0.93	0.93	0.85	0.85
292.5	9.65	3.64	1.78	0.93	0.85	0.93	0.85	0.85	0.85
315.0	33.86	9.31	3.39	1.86	1.10	0.93	0.93	0.93	0.85
337.5	11.43	3.81	1.95	1.10	0.93	0.93	0.93	0.93	0.93
360.0	16.42	4.66	2.37	1.10	0.93	0.93	0.93	0.93	0.93

C/ γ (°)	90.0
0.0	0.93
22.5	0.93
45.0	0.85
67.5	0.85
90.0	0.85
112.5	0.85
135.0	0.93
157.5	0.93
180.0	0.93
202.5	0.93
225.0	0.93
247.5	0.85
270.0	0.85
292.5	0.85
315.0	0.93
337.5	0.93
360.0	0.93