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Nata

Client: NT

LumCAT: 11-0161-S5

Luminaire: 69-0030

Report No: 20260801-B012

Ballast type: DC

Test No: 20260801-C012

Voltage(V): 22.170

LampCAT: LUXEON 2835*2

Current(A): 0.454

Lamp flux(lm): 1120.0

Power (W): 10.065

Number of Lamps: 1

PF: 0.000

Length(mm): 280

Width(mm): 40

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 1046.12, Efficiency(%): 93.40% , Luminous Efficacy(lm/W): 103.94

Central intensity(cd): 1178.866, Maximum intensity(cd): 1190.377

Angle of maximum intensity: C=157.5 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=60.4

[C90/270]Total=60.2

Field angle(10%Imax): [C0/180]Total=79.0

[C90/270]Total=79.3

Maximum s/h(1/2): C0_180=0.95 C90_270=0.96

Maximum s/h(1/4): C0_180=0.86 C90_270=0.88

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 93.29%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.779%

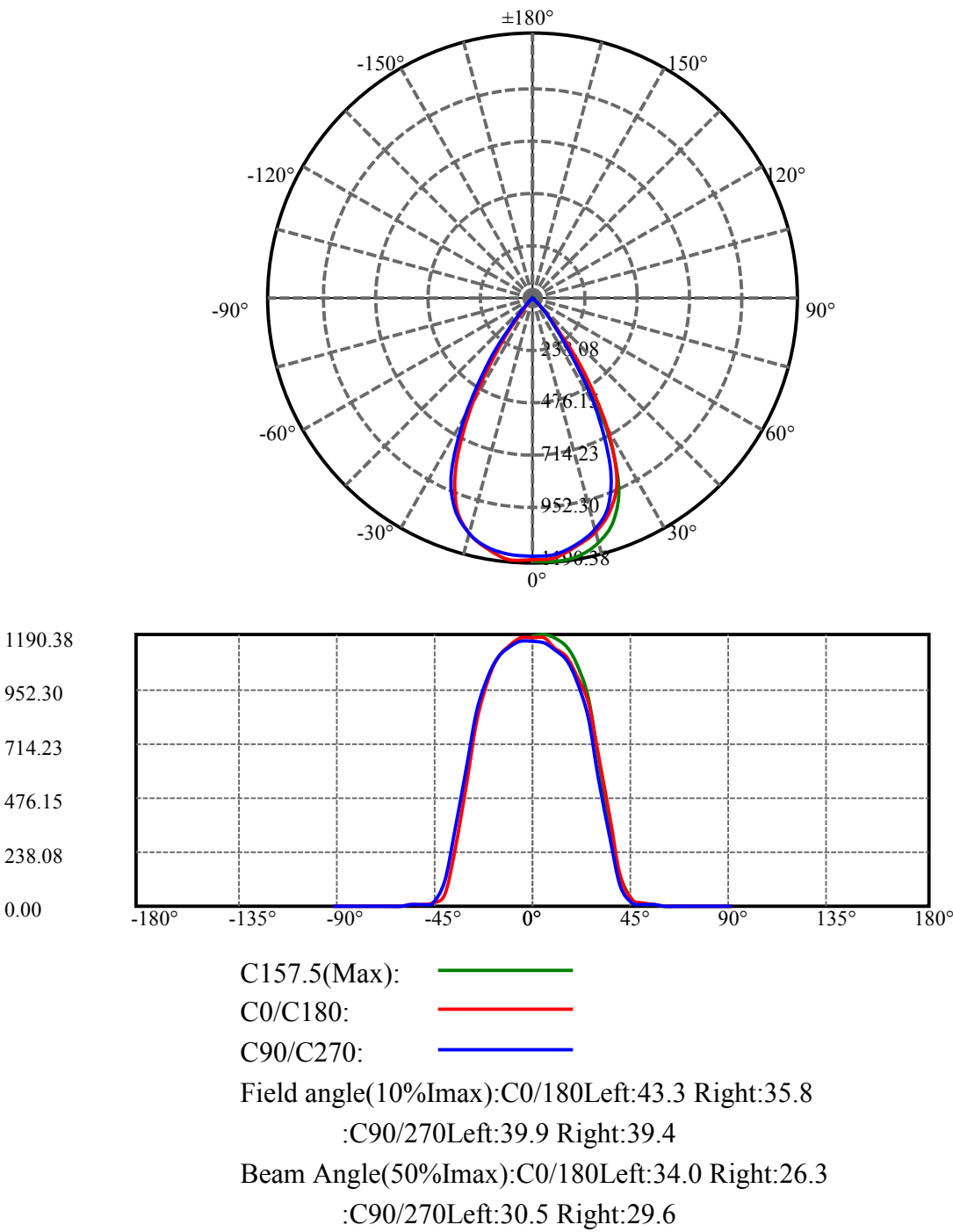
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1176.517	0.000	0	0.00%	0.00%
5.0	1172.878	28.086	28.086	2.51%	2.68%
10.0	1149.173	83.067	111.153	7.42%	10.63%
15.0	1103.864	133.649	244.802	11.93%	23.40%
20.0	1014.744	174.603	419.405	15.59%	40.09%
25.0	852.055	195.793	615.198	17.48%	58.81%
30.0	593.787	182.972	798.17	16.34%	76.30%
35.0	317.284	134.161	932.332	11.98%	89.12%
40.0	112.608	71.724	1004.056	6.40%	95.98%
45.0	26.984	25.847	1029.903	2.31%	98.45%
50.0	10.040	7.481	1037.384	0.67%	99.17%
55.0	5.195	3.313	1040.697	0.30%	99.48%
60.0	2.534	1.786	1042.483	0.16%	99.65%
65.0	1.301	0.932	1043.416	0.08%	99.74%
70.0	1.042	0.593	1044.009	0.05%	99.80%
75.0	0.995	0.532	1044.541	0.05%	99.85%
80.0	0.973	0.527	1045.068	0.05%	99.90%
85.0	0.957	0.525	1045.592	0.05%	99.95%
90.0	0.963	0.526	1046.118	0.05%	100.00%

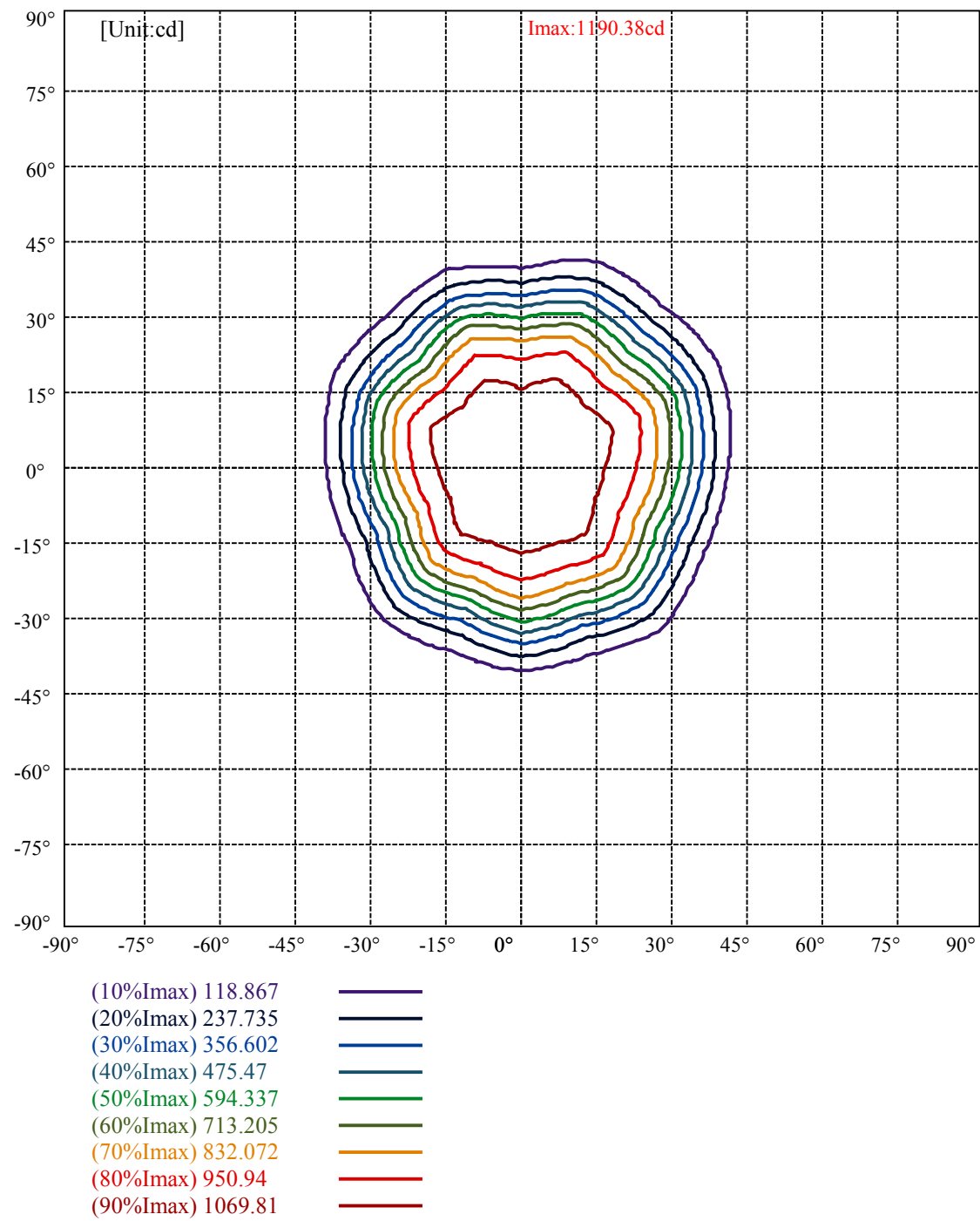
ZONAL LUMEN SUMMARY

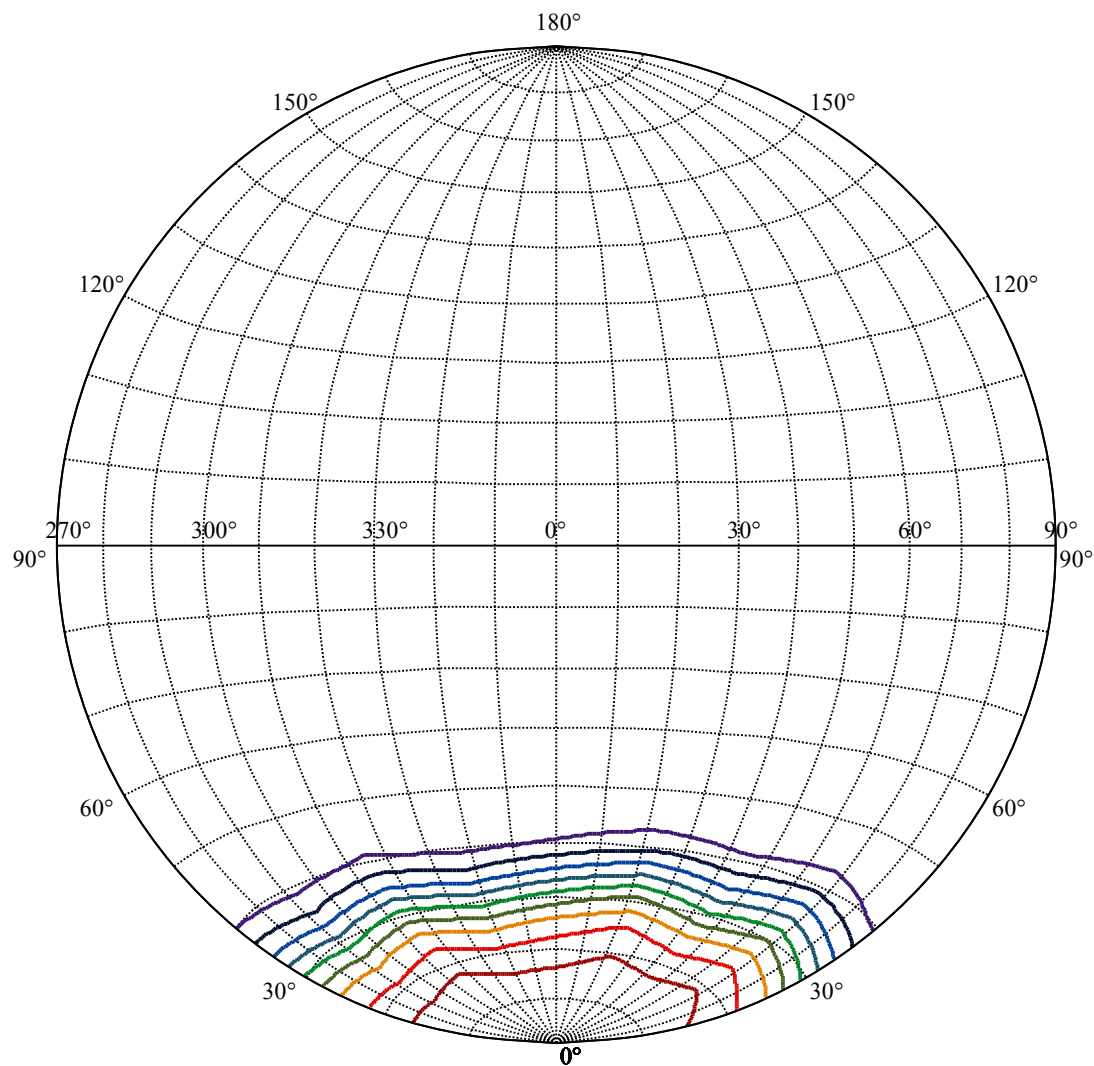
Zone	Lumens	%Lamp	%Fixt
0-30	798.17	71.27%	76.30%
0-40	1004.06	89.65%	95.98%
0-60	1042.48	93.08%	99.65%
0-90	1045.59	93.36%	99.95%
0-120	1045.59	93.36%	99.95%
0-180	1046.12	93.40%	100.00%
60-90	3.11	0.28%	0.30%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-31.44	836.89	74.72%	80.00%

ZONAL LUMEN SUMMARY

0-10	111.15
10-20	308.25
20-30	378.77
30-40	205.89
40-50	33.33
50-60	5.10
60-70	1.53
70-80	1.06
80-90	0.52
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





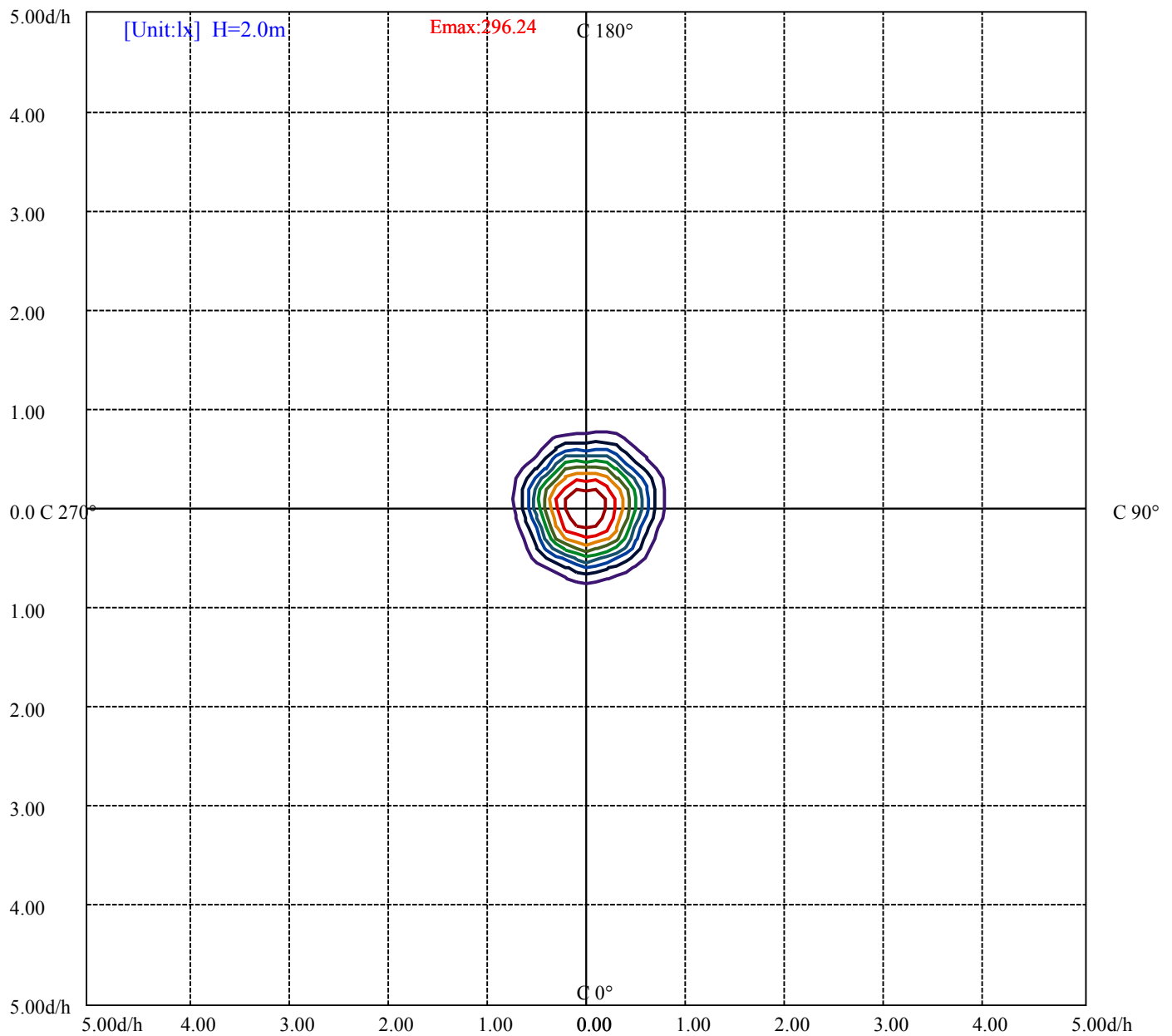


House

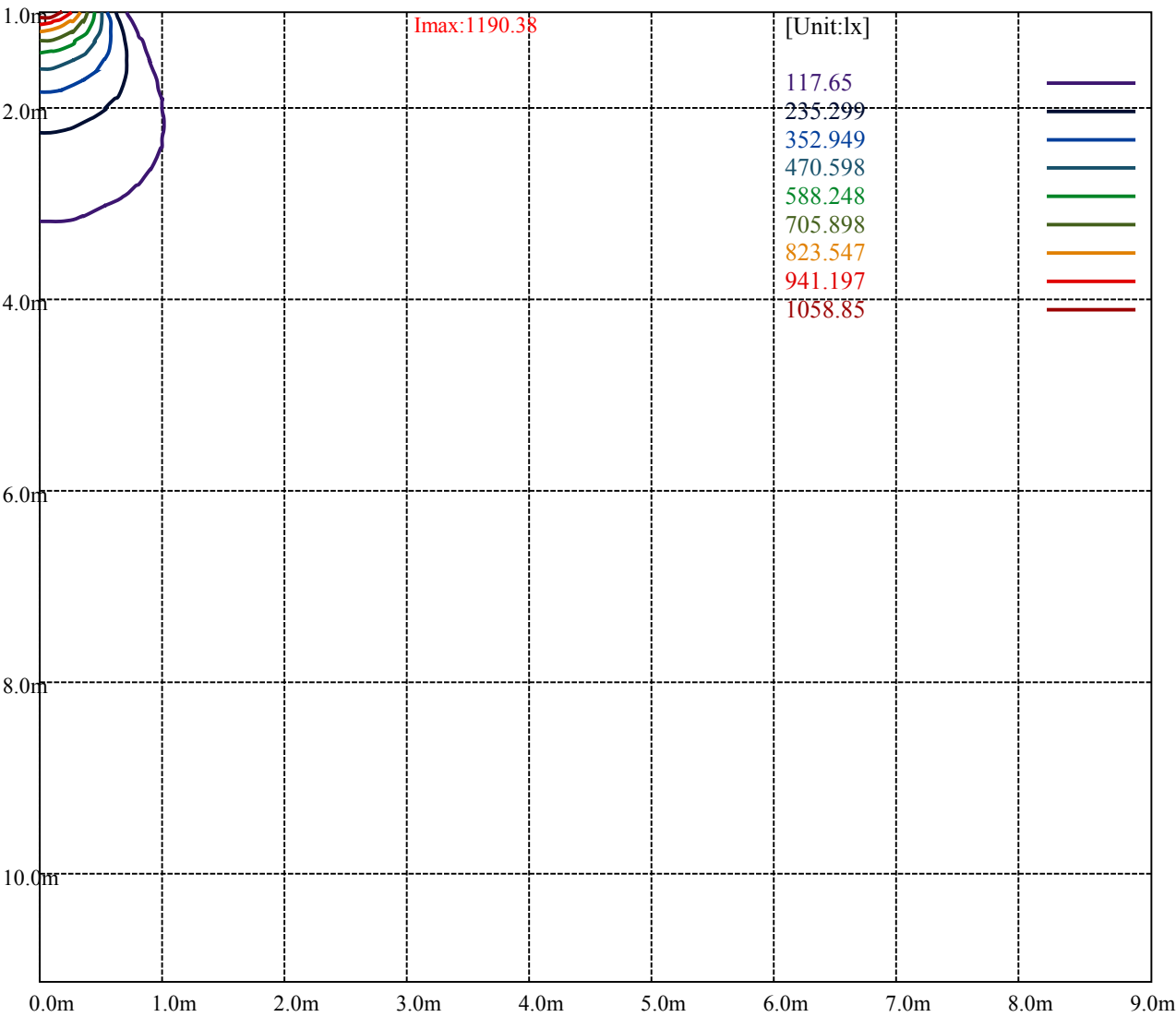
[Unit:cd]

Road

Imax:1190.38	
(10%Imax) 119.007	
(20%Imax) 238.014	
(30%Imax) 357.021	
(40%Imax) 476.027	
(50%Imax) 595.034	
(60%Imax) 714.041	
(70%Imax) 833.048	
(80%Imax) 952.055	
(90%Imax) 1071.06	



(10%Emax)	29.624	
(20%Emax)	59.248	
(30%Emax)	88.87175	
(40%Emax)	118.4958	
(50%Emax)	148.1198	
(60%Emax)	177.7437	
(70%Emax)	207.3675	
(80%Emax)	236.9915	
(90%Emax)	266.615	



Luminance Table

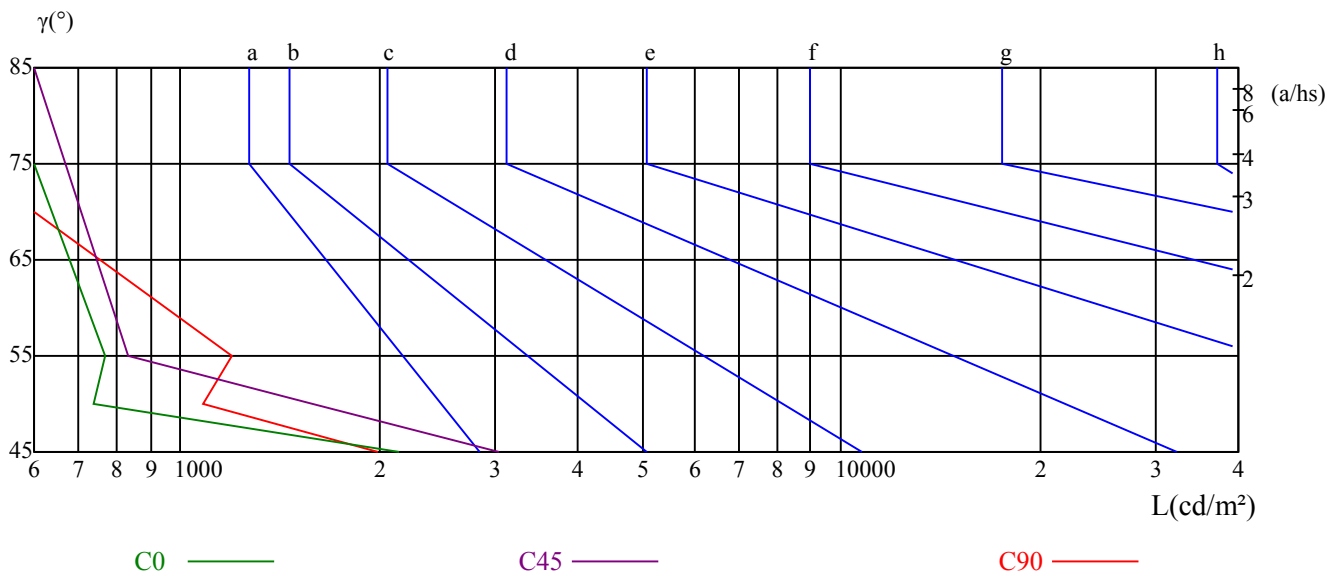
γ	45	50	55	60	65	70	75	80	85
C0	2137	737	769	0	0	0	122	136	0
C45	3045	1587	835	0	0	0	0	0	170
C90	1995	1083	1196	0	0	222	0	341	525

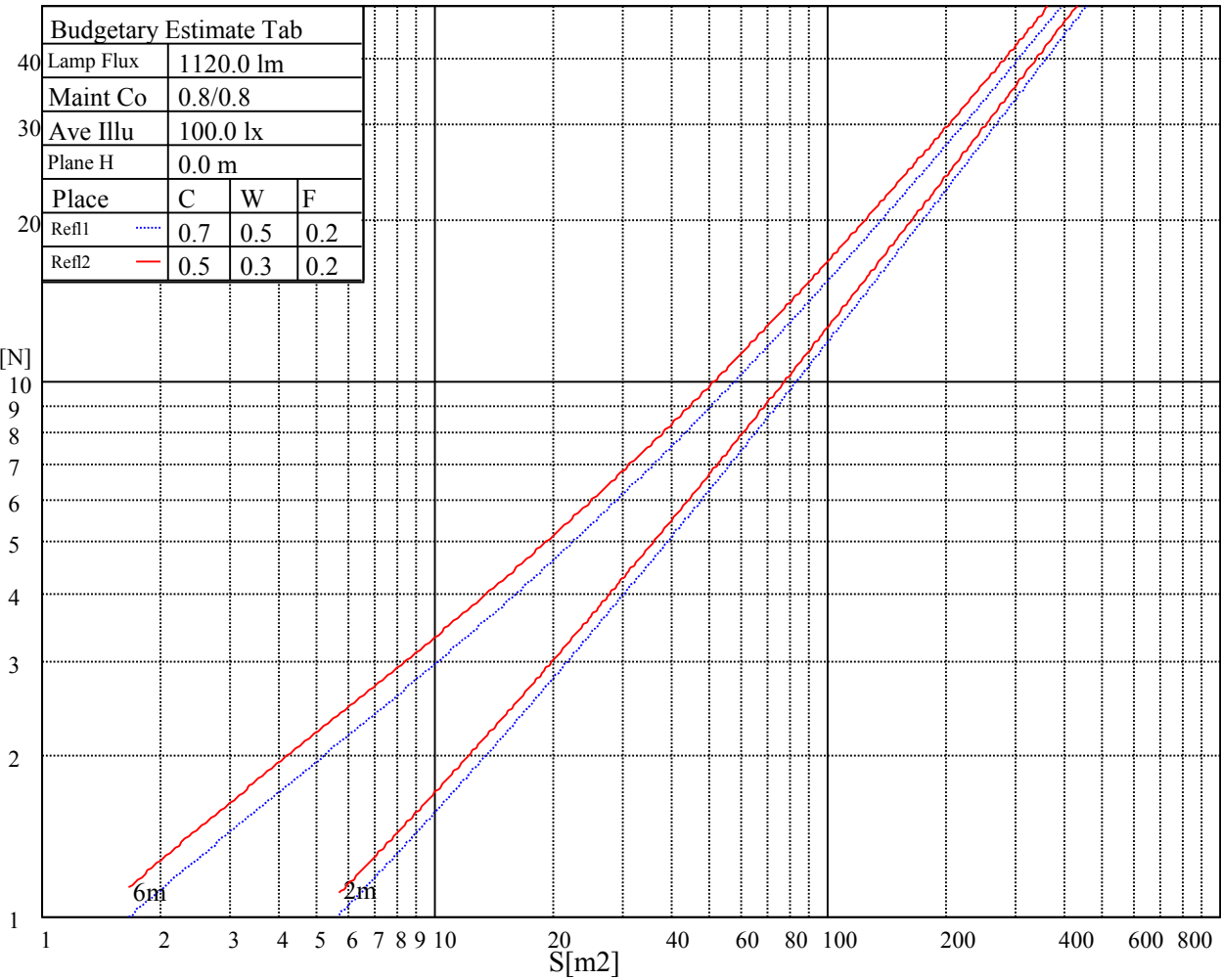
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	350	0	88	520	954	715

Glare Table

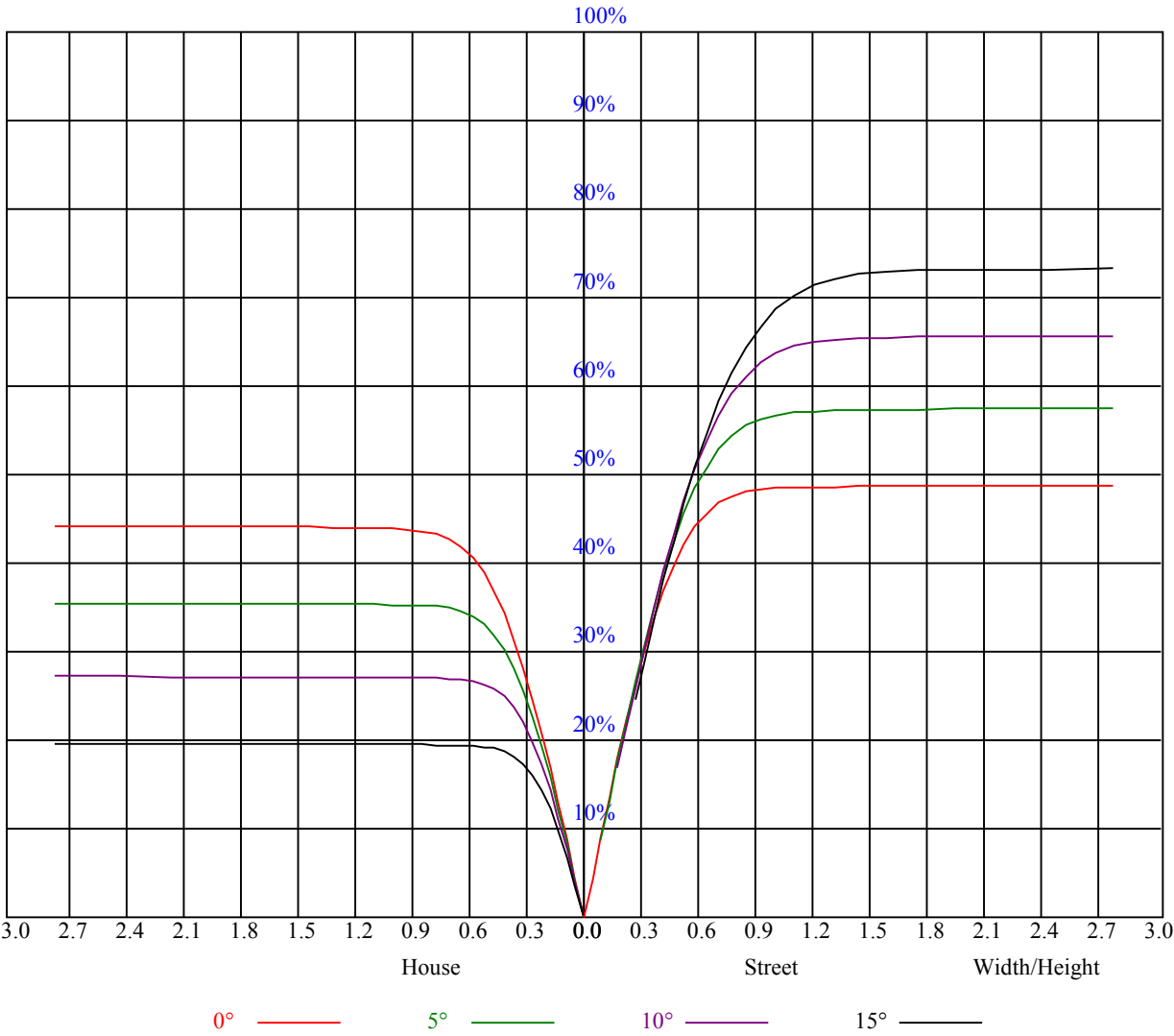
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

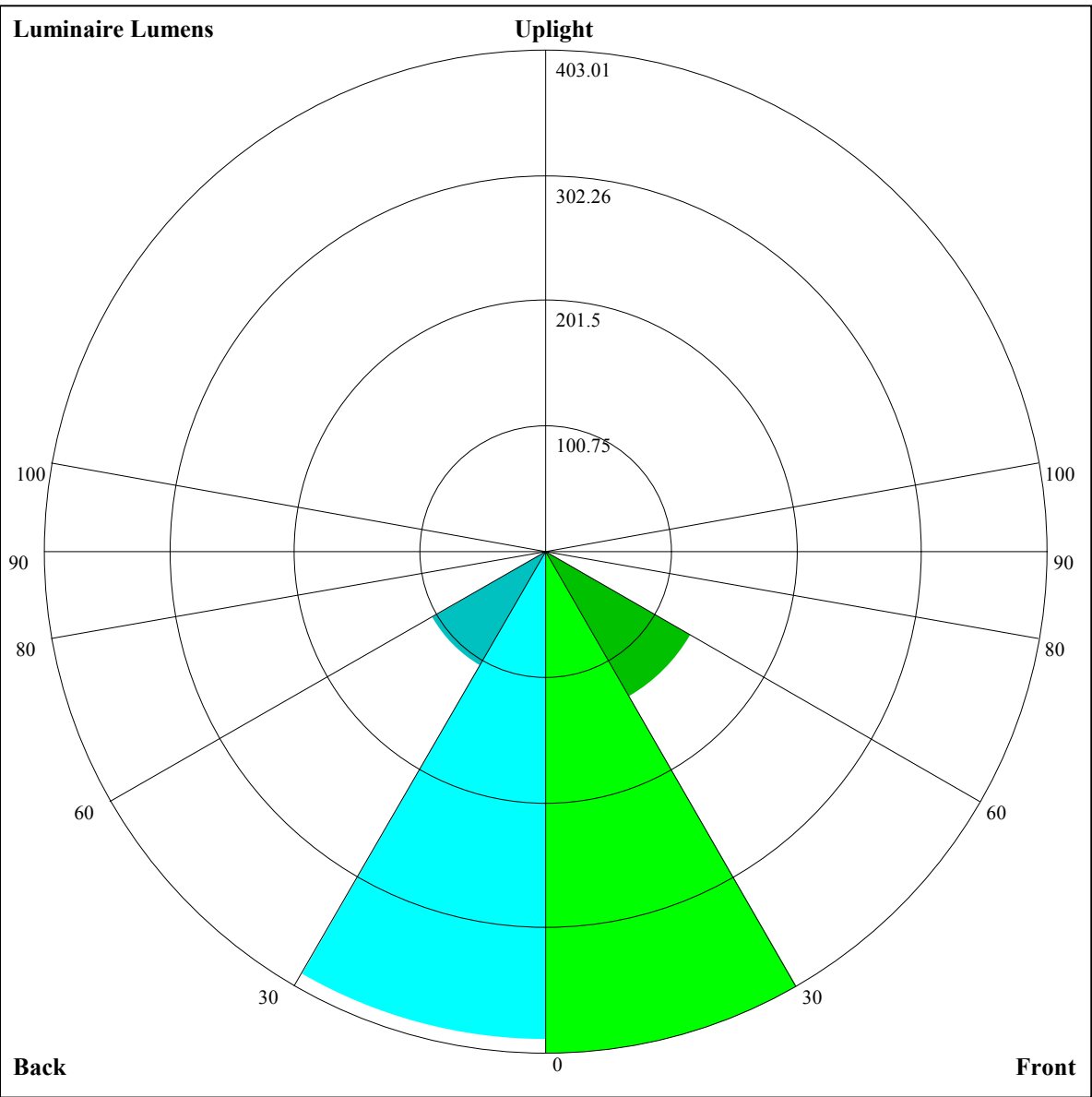
Luminance Limiting Curve





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	1.11	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	1.04	1.01	0.99	1.02	1.00	0.98	0.98	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88
2	0.97	0.93	0.90	0.95	0.92	0.89	0.92	0.89	0.87	0.89	0.87	0.85	0.87	0.85	0.83	0.82
3	0.90	0.86	0.82	0.89	0.85	0.82	0.87	0.83	0.80	0.84	0.82	0.79	0.82	0.80	0.78	0.77
4	0.85	0.80	0.76	0.84	0.79	0.76	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.72
5	0.80	0.74	0.70	0.79	0.74	0.70	0.77	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.68	0.67
6	0.75	0.70	0.66	0.74	0.69	0.65	0.73	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.64	0.63
7	0.71	0.65	0.61	0.70	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.59
8	0.67	0.61	0.58	0.66	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.55
9	0.63	0.58	0.54	0.63	0.57	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.53	0.52
10	0.60	0.54	0.51	0.59	0.54	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.50	0.49





Luminaire Lumens:

FL=403.01,FM=134.31,FH=1.36,FVH=0.53

BL=391.66,BM=106.51,BH=1.19,BVH=0.52

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	1178.87	1172.69	1134.68	1091.52	1015.34	891.60	662.99	384.10	132.55
22.5	1184.96	1180.47	1163.63	1125.03	1064.35	961.09	769.21	479.99	215.15
45.0	1181.24	1173.36	1154.57	1107.60	1027.78	872.55	622.10	365.31	143.72
67.5	1171.25	1169.72	1152.04	1125.03	1054.95	933.49	716.82	446.39	197.97
90.0	1159.48	1154.15	1126.39	1078.23	991.98	831.25	558.96	292.35	89.63
112.5	1176.67	1178.36	1163.46	1129.94	1045.64	922.49	700.23	381.30	145.83
135.0	1174.55	1174.55	1156.10	1100.49	1002.73	805.26	521.97	259.25	83.37
157.5	1185.13	1190.38	1174.63	1136.72	1062.15	916.65	654.01	330.18	131.53
180.0	1178.87	1176.83	1145.77	1097.36	1001.21	814.41	537.13	243.51	52.65
202.5	1184.96	1175.40	1139.93	1074.17	939.50	700.40	402.12	158.95	35.13
225.0	1181.24	1180.30	1160.33	1119.19	1027.28	840.73	555.66	289.64	97.84
247.5	1171.25	1166.93	1143.66	1086.10	967.69	766.50	451.98	217.95	61.79
270.0	1159.48	1158.55	1136.88	1097.70	1012.38	858.93	611.61	331.79	111.13
292.5	1176.67	1171.84	1144.33	1093.72	992.91	807.30	525.28	252.74	75.84
315.0	1174.55	1170.83	1149.83	1114.71	1041.58	902.52	664.42	366.15	143.97
337.5	1185.13	1171.67	1140.52	1084.32	988.43	807.72	546.10	276.94	83.62
360.0	1178.87	1172.69	1134.68	1091.52	1015.34	891.60	662.99	384.10	132.55

C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	27.17	11.76	6.69	3.05	1.35	1.10	1.02	1.02	1.02
22.5	57.30	14.73	7.96	4.74	2.29	1.18	1.02	1.02	0.93
45.0	34.36	13.88	6.01	3.05	1.44	1.02	0.93	0.93	0.93
67.5	52.98	12.10	6.52	3.55	1.52	1.02	1.02	0.93	0.93
90.0	15.74	7.96	4.40	1.86	1.10	1.02	0.93	0.93	0.93
112.5	35.13	10.66	5.92	3.30	1.35	1.02	1.02	1.02	0.93
135.0	26.24	10.33	4.49	2.12	1.10	1.02	1.02	1.02	0.93
157.5	29.71	9.65	5.50	2.79	1.35	1.10	1.02	1.02	1.02
180.0	13.71	7.87	3.81	1.52	1.18	1.02	1.02	0.93	1.02
202.5	10.24	6.18	3.30	1.35	1.02	0.93	0.93	0.93	0.93
225.0	28.35	9.90	4.32	2.12	1.10	1.02	1.02	0.93	0.93
247.5	12.87	6.52	3.55	1.52	1.02	1.02	0.93	0.93	0.93
270.0	18.45	8.29	4.57	1.95	1.18	1.02	1.02	0.93	0.93
292.5	15.74	7.62	4.23	1.69	1.02	1.02	0.93	1.02	0.93
315.0	36.82	14.56	6.35	3.30	1.52	1.10	1.10	1.02	1.02
337.5	16.93	8.63	5.50	2.62	1.27	1.10	1.02	1.02	1.02
360.0	27.17	11.76	6.69	3.05	1.35	1.10	1.02	1.02	1.02

C/ γ (°)	90.0
0.0	1.02
22.5	0.93
45.0	0.93
67.5	0.93
90.0	0.93
112.5	0.93
135.0	1.02
157.5	1.02
180.0	1.02
202.5	0.93
225.0	0.93
247.5	0.93
270.0	0.93
292.5	0.93
315.0	1.02
337.5	1.02
360.0	1.02