

Scaled data based on original data using
LM-66-11 Electrical and Photometric Measurements of Single-Ended Compact
Fluorescent Lamps

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: SHAPER

Report Number: 18652

Luminaire Tested: **638-12-CF2/26**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 18652
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 638-12-CF2/26
Description: FLUORESCENT WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND NO LENS

Light Source: TWO SYLVANIA 26 WATT CPFL LAMPS

CF26DD/E841. LUMEN RATING = 3600 LMS.

Ballast/Driver: -

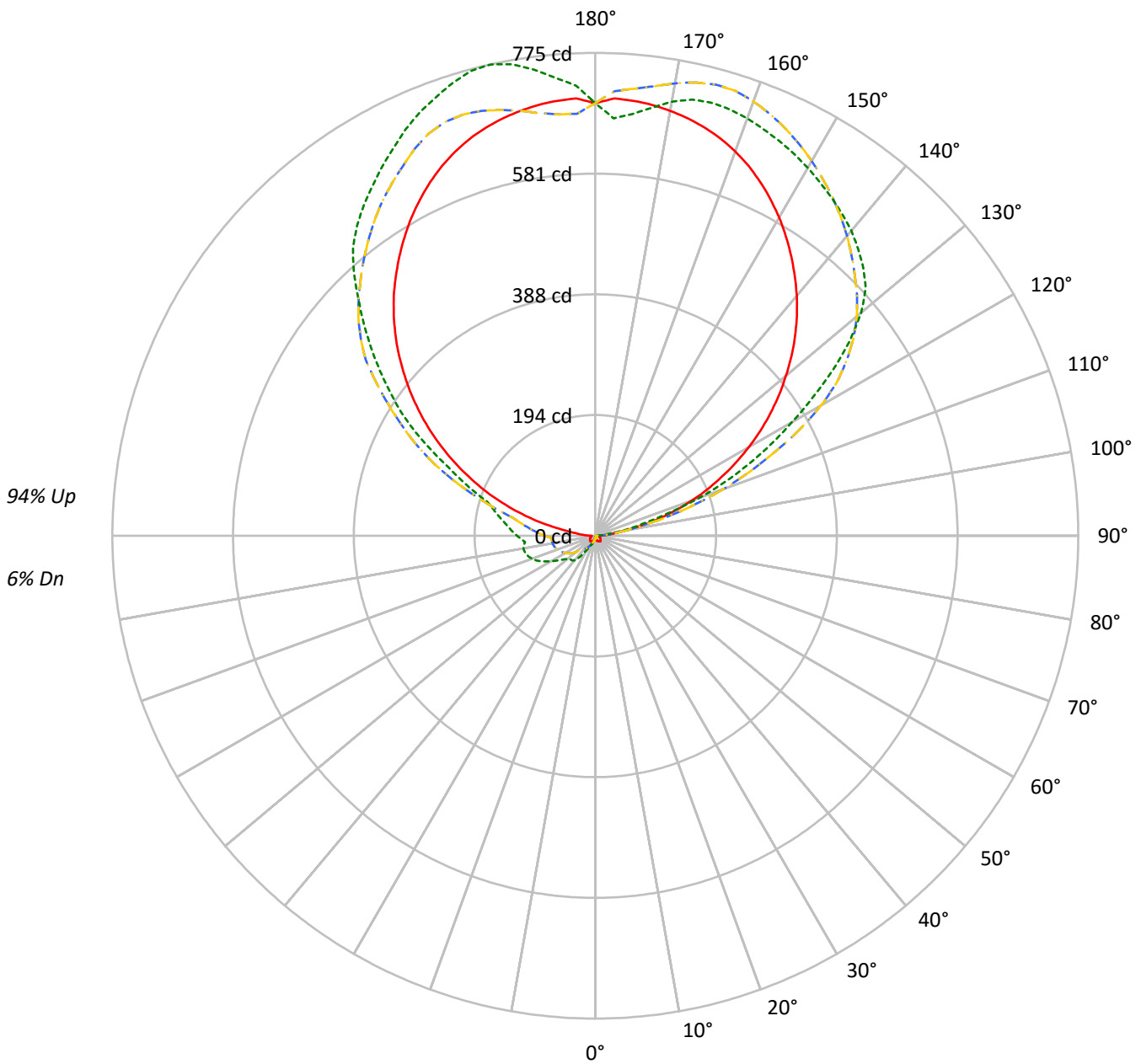
Summary

Lumens per Lamp: 3600 (1 lamp)
Luminaire Lumens: 2388.2 lumens
Efficiency: 66.3%
Efficacy: 49.8 lumens/watt
Spacing Criteria (0/90/45): 3.31 / 6.66 / 5.15
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Indirect

Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - - - 90°-270° - - - 135°-315°



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	64	64	64	64	55	55	55	55	39	39	39	24	24	24	11	11	11	4
1	58	55	52	50	50	47	45	43	33	32	31	20	20	19	8	8	8	2
2	52	48	44	40	45	41	38	35	29	27	25	18	16	15	7	7	6	2
3	48	42	37	33	41	36	32	29	25	23	21	15	14	13	6	6	5	1
4	43	37	32	28	37	32	27	24	22	20	17	14	12	11	5	5	4	1
5	40	32	27	23	34	28	24	21	20	17	15	12	10	9	5	4	4	1
6	36	29	24	20	31	25	21	18	18	15	13	11	9	8	4	4	3	1
7	33	26	21	17	29	22	18	15	16	13	11	10	8	7	4	3	3	0
8	31	23	18	15	26	20	16	13	14	11	9	9	7	6	3	3	2	0
9	29	21	16	13	25	18	14	11	13	10	8	8	6	5	3	2	2	0
10	27	19	15	12	23	17	13	10	12	9	7	7	6	4	3	2	2	0

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	Luminaire represents a point source (luminous area is zero).			
5°	No luminance values can be calculated.			
10°				
15°				
20°				
25°				
30°				
35°				
40°				
45°				
50°				
55°				
60°				
65°				
70°				
75°				
80°				
85°				



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	0.4	0.0	0.0
10°-20°	2.0	0.1	0.1
20°-30°	4.6	0.2	0.1
30°-40°	9.4	0.4	0.3
40°-50°	15.6	0.7	0.4
50°-60°	20.7	0.9	0.6
60°-70°	27.6	1.2	0.8
70°-80°	33.1	1.4	0.9
80°-90°	36.0	1.5	1.0
90°-100°	58.4	2.4	1.6
100°-110°	142.6	6.0	4.0
110°-120°	276.1	11.6	7.7
120°-130°	377.7	15.8	10.5
130°-140°	414.6	17.4	11.5
140°-150°	388.0	16.2	10.8
150°-160°	313.8	13.1	8.7
160°-170°	200.8	8.4	5.6
170°-180°	66.7	2.8	1.9
0°-30°	7.0	0.3	0.2
0°-40°	16.4	0.7	0.5
0°-60°	52.7	2.2	1.5
0°-90°	149.5	6.3	4.2
90°-120°	477.0	20.0	13.3
90°-150°	1657.3	69.4	46.0
90°-180°	2239.0	93.8	62.2
0°-180°	2388.2	100.0	66.3

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3	3	3	3	3	
5°	5	2	5	2	5	0
15°	7	3	7	10	7	2
25°	10	3	10	16	10	4
35°	11	3	11	37	11	7
45°	12	2	12	55	12	9
55°	10	0	10	67	10	9
65°	9	0	9	97	9	9
75°	7	1	7	115	7	8
85°	6	0	6	113	6	5
90°	6	0	6	126	6	4
95°	22	7	22	138	22	23
105°	105	90	105	171	105	111
115°	224	270	224	260	224	222
125°	343	467	343	402	343	306
135°	453	608	453	538	453	349
145°	548	662	548	648	548	343
155°	627	699	627	720	627	289
165°	678	720	678	772	678	191
175°	701	679	701	738	701	67
180°	694	694	694	694	694	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
2.5°	4.2	3.6	2.7	1.8	2.0	1.8	2.7	3.6	4.2	4.1	3.0
5°	4.6	3.8	3.3	1.8	2.3	1.8	3.3	3.8	4.6	5.1	4.8
7.5°	5.4	4.3	3.6	2.5	2.3	2.5	3.6	4.3	5.4	6.1	6.1
10°	6.1	4.6	3.8	3.0	2.3	3.0	3.8	4.6	6.1	7.7	7.2
12.5°	6.9	5.1	4.1	3.3	2.3	3.3	4.1	5.1	6.9	8.8	8.2
15°	7.3	5.1	4.3	3.3	3.0	3.3	4.3	5.1	7.3	9.5	9.5
17.5°	8.0	5.4	4.3	3.0	3.3	3.0	4.3	5.4	8.0	10.6	11.1
20°	8.5	5.6	4.3	3.0	3.3	3.0	4.3	5.6	8.5	11.3	12.6
22.5°	9.0	5.9	4.3	3.3	3.3	3.3	4.3	5.9	9.0	12.6	14.2
25°	9.5	5.9	4.3	3.0	3.0	3.0	4.3	5.9	9.5	13.8	16.0
27.5°	9.9	5.9	4.3	3.0	3.0	3.0	4.3	5.9	9.9	14.9	17.8
30°	10.2	5.9	4.1	2.7	3.0	2.7	4.1	5.9	10.2	16.2	19.9
32.5°	10.8	6.1	4.1	3.0	3.0	3.0	4.1	6.1	10.8	17.2	21.9
35°	11.2	6.1	4.1	3.0	2.7	3.0	4.1	6.1	11.2	18.3	24.0
37.5°	11.6	6.1	4.3	2.5	2.3	2.5	4.3	6.1	11.6	19.3	26.5
40°	11.9	6.1	4.1	2.3	1.8	2.3	4.1	6.1	11.9	20.6	28.9
42.5°	12.1	5.9	3.6	2.0	1.5	2.0	3.6	5.9	12.1	21.9	31.4
45°	11.8	5.4	3.3	1.8	1.5	1.8	3.3	5.4	11.8	22.9	33.3
47.5°	11.4	5.1	2.7	1.5	1.2	1.5	2.7	5.1	11.4	23.1	35.6
50°	11.2	4.8	2.5	1.5	0.9	1.5	2.5	4.8	11.2	23.5	40.2
52.5°	10.7	4.3	2.3	0.9	0.7	0.9	2.3	4.3	10.7	23.7	45.7
55°	10.4	4.1	2.0	0.9	0.5	0.9	2.0	4.1	10.4	24.2	49.5
57.5°	9.9	3.8	1.8	0.7	0.5	0.7	1.8	3.8	9.9	24.5	52.4
60°	9.6	3.6	1.8	0.7	0.5	0.7	1.8	3.6	9.6	24.7	55.2
62.5°	9.1	3.3	1.5	0.5	0.5	0.5	1.5	3.3	9.1	24.9	57.8
65°	8.9	3.0	1.2	0.5	0.5	0.5	1.2	3.0	8.9	25.5	60.4
67.5°	8.4	2.7	1.2	0.7	0.7	0.7	1.2	2.7	8.4	25.8	62.4
70°	7.9	2.5	0.9	0.7	0.7	0.7	0.9	2.5	7.9	26.3	64.5
72.5°	7.7	2.3	0.9	0.7	0.7	0.7	0.9	2.3	7.7	26.3	66.1
75°	7.3	2.0	0.7	0.7	0.7	0.7	0.7	2.0	7.3	26.5	67.9
77.5°	6.9	2.0	0.7	0.5	0.5	0.5	0.7	2.0	6.9	26.3	68.9
80°	6.7	1.8	0.5	0.5	0.5	0.5	0.5	1.8	6.7	26.3	69.7
82.5°	6.3	1.5	0.5	0.5	0.5	0.5	0.5	1.5	6.3	25.8	69.9
85°	5.9	1.5	0.5	0.5	0.5	0.5	0.5	1.5	5.9	25.5	70.2
87.5°	5.6	1.2	0.5	0.5	0.5	0.5	0.5	1.2	5.6	25.3	71.7
90°	6.5	1.5	0.5	0.5	0.5	0.5	0.5	1.5	6.5	29.1	80.8
92.5°	13.8	7.4	2.0	0.5	0.5	0.5	2.0	7.4	13.8	35.1	90.1
95°	21.9	19.6	14.7	10.6	7.2	10.6	14.7	19.6	21.9	41.2	100.4
97.5°	31.5	34.1	30.5	26.5	22.6	26.5	30.5	34.1	31.5	49.8	111.0
100°	49.8	57.0	50.6	45.7	40.2	45.7	50.6	57.0	49.8	68.1	122.6
102.5°	75.5	93.4	81.0	68.4	60.4	68.4	81.0	93.4	75.5	93.7	137.1
105°	105.2	142.3	123.2	102.7	89.8	102.7	123.2	142.3	105.2	125.5	163.5
107.5°	134.3	190.1	169.2	146.1	126.8	146.1	169.2	190.1	134.3	159.9	190.6
110°	164.3	238.2	218.0	197.0	178.2	197.0	218.0	238.2	164.3	200.4	226.0



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 CATALOG NUMBER: 638-12-CF2/26

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	194.4	280.3	267.1	241.0	224.8	241.0	267.1	280.3	194.4	239.0	260.7
115°	223.8	315.7	317.5	282.7	270.5	282.7	317.5	315.7	223.8	273.0	295.1
117.5°	254.6	348.0	370.7	328.4	317.3	328.4	370.7	348.0	254.6	305.3	329.1
120°	284.0	376.7	418.6	374.3	364.1	374.3	418.6	376.7	284.0	336.9	361.2
122.5°	314.2	404.6	460.2	427.6	414.4	427.6	460.2	404.6	314.2	368.4	394.5
125°	343.0	430.6	492.7	475.4	466.6	475.4	492.7	430.6	343.0	398.4	429.4
127.5°	371.9	457.0	522.7	519.9	514.9	519.9	522.7	457.0	371.9	429.2	464.3
130°	399.1	483.3	547.7	551.1	556.8	551.1	547.7	483.3	399.1	457.0	491.2
132.5°	427.1	509.5	569.4	574.4	588.3	574.4	569.4	509.5	427.1	485.2	515.7
135°	453.2	534.0	589.3	594.8	608.2	594.8	589.3	534.0	453.2	512.6	536.9
137.5°	478.5	558.1	608.8	612.9	624.2	612.9	608.8	558.1	478.5	539.4	557.3
140°	503.0	580.3	628.3	626.8	639.2	626.8	628.3	580.3	503.0	565.6	578.2
142.5°	525.5	600.7	646.2	639.8	650.6	639.8	646.2	600.7	525.5	589.1	597.9
145°	548.0	621.1	663.5	652.7	661.7	652.7	663.5	621.1	548.0	610.6	617.8
147.5°	569.3	639.8	679.0	664.8	671.7	664.8	679.0	639.8	569.3	627.6	636.1
150°	590.0	657.3	694.5	676.9	681.8	676.9	694.5	657.3	590.0	642.3	652.9
152.5°	608.7	671.5	708.5	687.5	690.9	687.5	708.5	671.5	608.7	654.0	668.9
155°	626.6	684.1	721.4	696.6	698.9	696.6	721.4	684.1	626.6	663.3	685.5
157.5°	642.6	693.8	732.7	705.4	705.9	705.4	732.7	693.8	642.6	670.3	698.6
160°	656.4	700.9	742.0	712.1	712.8	712.1	742.0	700.9	656.4	675.3	706.3
162.5°	668.5	706.1	748.5	717.0	717.5	717.0	748.5	706.1	668.5	679.0	708.5
165°	678.1	708.7	749.5	718.5	719.6	718.5	749.5	708.7	678.1	681.6	705.9
167.5°	686.2	709.0	745.2	715.1	717.0	715.1	745.2	709.0	686.2	684.1	699.9
170°	692.4	708.7	737.4	705.6	707.4	705.6	737.4	708.7	692.4	687.0	692.5
172.5°	697.6	708.1	727.6	691.4	692.7	691.4	727.6	708.1	697.6	690.4	684.1
175°	700.8	707.2	720.3	678.2	679.3	678.2	720.3	707.2	700.8	694.0	678.7
177.5°	702.6	704.5	714.4	669.4	670.5	669.4	714.4	704.5	702.6	697.6	678.0
180°	694.2	694.2	694.2	694.2	694.2	694.2	694.2	694.2	694.2	694.2	694.2



TEST NUMBER: 18652
 CATALOG NUMBER: 638-12-CF2/26

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2.7	2.7	2.7	2.7	2.7	2.7
2.5°	3.3	2.0	3.3	3.0	4.1	4.2
5°	3.6	2.3	3.6	4.8	5.1	4.6
7.5°	4.3	2.5	4.3	6.1	6.1	5.4
10°	6.1	3.6	6.1	7.2	7.7	6.1
12.5°	7.2	6.4	7.2	8.2	8.8	6.9
15°	8.8	9.5	8.8	9.5	9.5	7.3
17.5°	10.6	11.1	10.6	11.1	10.6	8.0
20°	12.6	12.6	12.6	12.6	11.3	8.5
22.5°	14.2	14.4	14.2	14.2	12.6	9.0
25°	16.2	16.2	16.2	16.0	13.8	9.5
27.5°	18.8	19.3	18.8	17.8	14.9	9.9
30°	21.4	23.1	21.4	19.9	16.2	10.2
32.5°	24.9	29.9	24.9	21.9	17.2	10.8
35°	30.1	37.4	30.1	24.0	18.3	11.2
37.5°	39.2	46.4	39.2	26.5	19.3	11.6
40°	48.0	50.9	48.0	28.9	20.6	11.9
42.5°	54.5	54.2	54.5	31.4	21.9	12.1
45°	55.7	54.7	55.7	33.3	22.9	11.8
47.5°	55.5	55.7	55.5	35.6	23.1	11.4
50°	55.5	57.8	55.5	40.2	23.5	11.2
52.5°	56.5	62.0	56.5	45.7	23.7	10.7
55°	59.3	67.4	59.3	49.5	24.2	10.4
57.5°	62.7	74.1	62.7	52.4	24.5	9.9
60°	66.3	81.6	66.3	55.2	24.7	9.6
62.5°	70.5	89.3	70.5	57.8	24.9	9.1
65°	75.1	97.1	75.1	60.4	25.5	8.9
67.5°	79.0	103.1	79.0	62.4	25.8	8.4
70°	82.3	107.9	82.3	64.5	26.3	7.9
72.5°	85.7	111.8	85.7	66.1	26.3	7.7
75°	88.8	114.7	88.8	67.9	26.5	7.3
77.5°	91.6	116.5	91.6	68.9	26.3	6.9
80°	93.7	117.0	93.7	69.7	26.3	6.7
82.5°	95.0	116.0	95.0	69.9	25.8	6.3
85°	95.5	113.1	95.5	70.2	25.5	5.9
87.5°	101.8	119.0	101.8	71.7	25.3	5.6
90°	111.8	125.8	111.8	80.8	29.1	6.5
92.5°	120.3	132.0	120.3	90.1	35.1	13.8
95°	128.4	138.4	128.4	100.4	41.2	21.9
97.5°	136.4	145.2	136.4	111.0	49.8	31.5
100°	144.7	152.9	144.7	122.6	68.1	49.8
102.5°	152.9	161.7	152.9	137.1	93.7	75.5
105°	162.2	170.7	162.2	163.5	125.5	105.2
107.5°	178.0	182.3	178.0	190.6	159.9	134.3
110°	202.5	206.1	202.5	226.0	200.4	164.3



TEST NUMBER: 18652
 CATALOG NUMBER: 638-12-CF2/26

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	226.3	232.0	226.3	260.7	239.0	194.4
115°	256.5	260.1	256.5	295.1	273.0	223.8
117.5°	290.4	295.6	290.4	329.1	305.3	254.6
120°	322.9	333.3	322.9	361.2	336.9	284.0
122.5°	353.9	369.7	353.9	394.5	368.4	314.2
125°	384.0	401.5	384.0	429.4	398.4	343.0
127.5°	415.0	435.8	415.0	464.3	429.2	371.9
130°	445.1	469.5	445.1	491.2	457.0	399.1
132.5°	477.9	503.6	477.9	515.7	485.2	427.1
135°	509.3	537.6	509.3	536.9	512.6	453.2
137.5°	535.6	573.8	535.6	557.3	539.4	478.5
140°	557.0	604.8	557.0	578.2	565.6	503.0
142.5°	574.6	627.8	574.6	597.9	589.1	525.5
145°	591.4	647.7	591.4	617.8	610.6	548.0
147.5°	608.8	665.3	608.8	636.1	627.6	569.3
150°	626.8	684.1	626.8	652.9	642.3	590.0
152.5°	643.9	701.5	643.9	668.9	654.0	608.7
155°	660.4	719.8	660.4	685.5	663.3	626.6
157.5°	673.5	735.6	673.5	698.6	670.3	642.6
160°	687.3	748.8	687.3	706.3	675.3	656.4
162.5°	699.1	761.7	699.1	708.5	679.0	668.5
165°	704.0	772.3	704.0	705.9	681.6	678.1
167.5°	702.0	774.8	702.0	699.9	684.1	686.2
170°	693.2	768.4	693.2	692.5	687.0	692.4
172.5°	680.5	754.5	680.5	684.1	690.4	697.6
175°	667.6	737.9	667.6	678.7	694.0	700.8
177.5°	660.9	723.5	660.9	678.0	697.6	702.6
180°	694.2	694.2	694.2	694.2	694.2	694.2

(END OF REPORT)