

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: 18646A

Luminaire Tested: **638-14-CF2/26-RB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 18646A
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 638-14-CF2/26-RB
Description: FLUORESCENT WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND NO LENS

Light Source: TWO 26 WATT CPFL LAMPS. LUMEN RATING = 3600 LMS.

Ballast/Driver: -

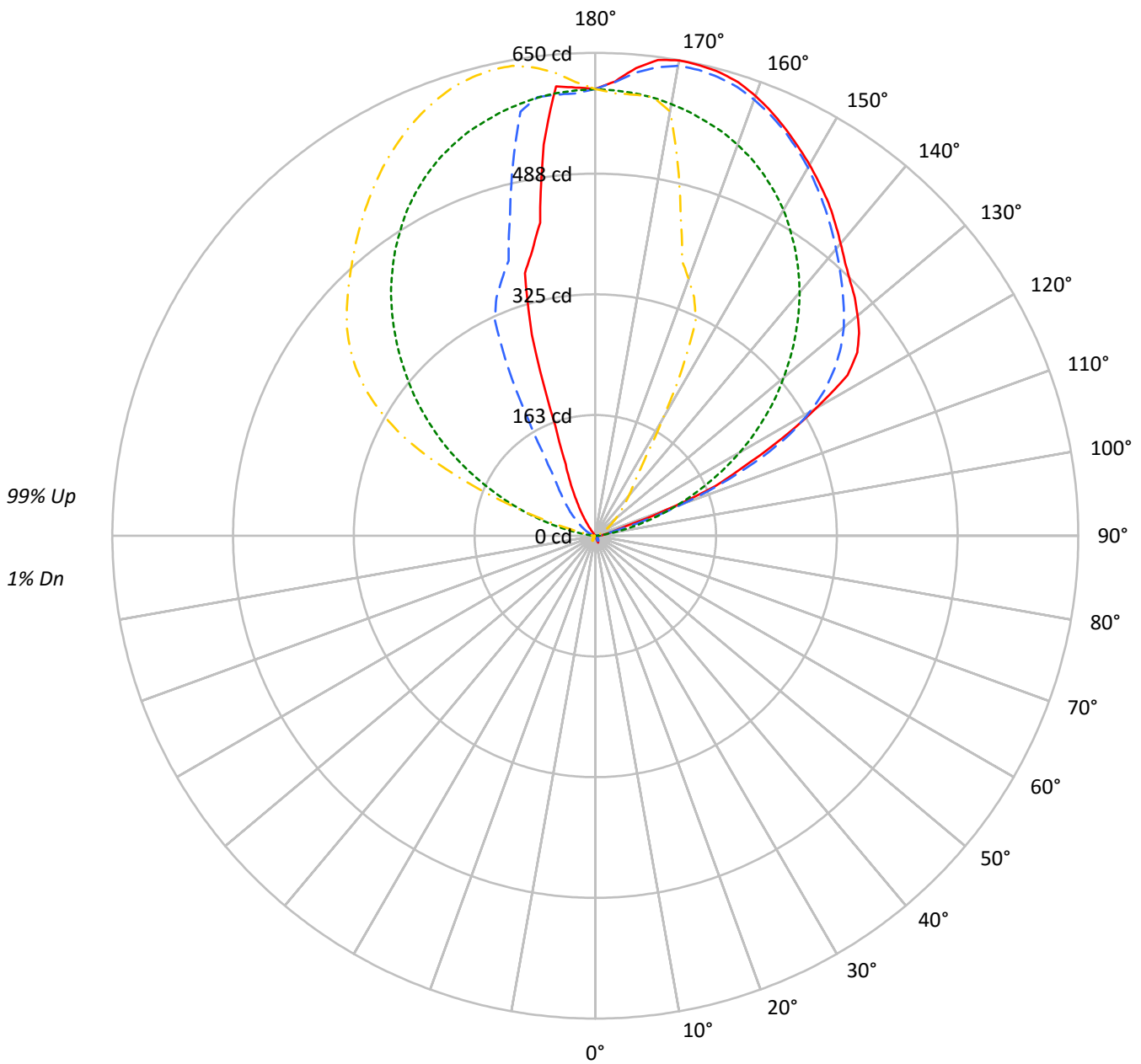
Summary

Lumens per Lamp: 3600 (1 lamp)
Luminaire Lumens: 1252.3 lumens
Efficiency: 34.8%
Efficacy: -
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Indirect

Input Watts (W): 0
Input Voltage (V): NR
Input Current (Ain): 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	33	33	33	33	28	28	28	28	19	19	19	11	11	11	4	4	4	0
1	30	29	28	26	26	25	24	23	17	16	16	10	9	9	3	3	3	0
2	27	25	23	21	23	21	20	19	15	14	13	9	8	8	3	3	3	0
3	25	22	20	18	21	19	17	15	13	12	11	8	7	6	2	2	2	0
4	23	19	17	15	19	17	15	13	11	10	9	7	6	5	2	2	2	0
5	21	17	15	13	18	15	13	11	10	9	8	6	5	5	2	2	2	0
6	19	15	13	11	16	13	11	9	9	8	7	5	5	4	2	2	1	0
7	18	14	11	9	15	12	10	8	8	7	6	5	4	3	2	1	1	0
8	16	12	10	8	14	11	9	7	7	6	5	4	4	3	1	1	1	0
9	15	11	9	7	13	10	8	6	7	5	4	4	3	3	1	1	1	0
10	14	10	8	6	12	9	7	5	6	5	4	4	3	2	1	1	1	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°	0.0	0.0	0.0
10°-20°	0.1	0.0	0.0
20°-30°	1.1	0.1	0.0
30°-40°	1.3	0.1	0.0
40°-50°	1.0	0.1	0.0
50°-60°	0.8	0.1	0.0
60°-70°	0.7	0.1	0.0
70°-80°	0.7	0.1	0.0
80°-90°	1.1	0.1	0.0
90°-100°	5.9	0.5	0.2
100°-110°	36.9	2.9	1.0
110°-120°	133.1	10.6	3.7
120°-130°	205.9	16.4	5.7
130°-140°	225.0	18.0	6.2
140°-150°	222.0	17.7	6.2
150°-160°	205.5	16.4	5.7
160°-170°	153.8	12.3	4.3
170°-180°	57.5	4.6	1.6
0°-30°	1.2	0.1	0.0
0°-40°	2.5	0.2	0.1
0°-60°	4.3	0.3	0.1
0°-90°	6.8	0.5	0.2
90°-120°	175.9	14.0	4.9
90°-150°	828.7	66.2	23.0
90°-180°	1245.0	99.4	34.6
0°-180°	1252.3	100.0	34.8

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	0	0	0	0	0	
5°	0	0	0	0	0	0
15°	0	0	0	0	0	1
25°	9	0	0	0	9	4
35°	4	0	0	0	4	2
45°	1	0	0	0	1	1
55°	0	0	0	0	0	0
65°	1	0	0	0	1	1
75°	2	0	0	0	2	2
85°	4	0	0	0	4	3
90°	5	0	0	0	5	3
95°	9	6	0	6	9	8
105°	29	64	0	64	29	39
115°	221	167	0	167	221	222
125°	430	279	0	279	430	376
135°	485	381	0	381	485	376
145°	547	470	16	470	547	342
155°	605	536	81	536	605	279
165°	646	577	366	577	646	182
175°	632	598	607	598	632	61
180°	601	601	601	601	601	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	2.3	2.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	6.5	4.6	1.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	10.1	8.3	3.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	9.3	9.3	5.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	8.3	8.3	7.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	6.8	7.4	7.8	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	5.1	5.9	7.8	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	3.6	4.6	7.4	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	2.3	3.2	6.5	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	1.3	2.3	5.5	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.9	1.9	4.6	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.9	1.3	3.6	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.4	0.9	2.7	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.4	2.3	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.4	2.3	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.4	0.0	1.9	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.4	0.0	1.9	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.4	0.0	1.9	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.9	0.4	1.3	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.9	0.4	1.3	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	1.3	0.4	1.3	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	1.3	0.9	1.3	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	1.9	1.3	0.9	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.9	1.3	0.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	2.3	1.9	0.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	2.7	2.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	3.2	2.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	3.6	2.7	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.2	3.2	1.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	5.1	4.2	2.7	1.3	0.5	4.6	0.0	0.0	0.0	0.0	0.0
92.5°	6.5	5.1	3.2	2.3	2.8	8.7	0.0	0.0	0.0	0.0	0.0
95°	8.7	6.8	4.6	3.6	6.0	12.5	0.9	0.0	0.0	0.0	0.9
97.5°	11.6	9.3	6.5	5.9	10.9	16.1	1.3	0.0	0.0	0.0	1.3
100°	14.8	12.5	9.7	12.9	22.7	21.2	2.3	0.0	0.0	0.0	2.3
102.5°	20.9	18.0	16.1	27.3	42.3	28.3	3.2	0.0	0.0	0.0	3.2
105°	28.6	25.8	34.7	59.2	64.1	37.0	4.2	0.0	0.0	0.0	4.2
107.5°	41.5	51.8	73.6	101.9	87.3	46.7	5.1	0.0	0.0	0.0	5.1
110°	101.3	110.2	124.1	148.2	113.0	59.8	6.8	0.0	0.0	0.0	6.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	174.5	168.5	183.5	191.6	139.3	74.0	8.7	0.0	0.0	0.0	8.7
115°	220.8	229.2	242.7	230.7	166.9	90.3	10.6	0.0	0.0	0.0	10.6
117.5°	282.1	292.7	294.4	267.1	196.1	108.7	13.5	0.0	0.0	0.0	13.5
120°	343.2	350.6	333.5	297.9	224.3	128.3	16.7	0.0	0.0	0.0	16.7
122.5°	402.4	392.3	366.7	325.9	252.1	150.1	20.3	0.0	0.0	0.0	20.3
125°	430.3	421.9	393.1	350.6	278.8	171.7	24.5	0.0	0.0	0.0	24.5
127.5°	447.4	444.5	416.4	373.4	305.6	194.5	29.6	0.0	0.0	0.0	29.6
130°	460.8	461.2	436.4	394.0	330.5	215.7	35.7	0.0	0.0	0.0	35.7
132.5°	473.7	475.6	453.4	415.5	356.1	236.2	43.1	0.0	0.0	0.0	43.1
135°	484.9	489.5	470.1	437.1	380.7	254.2	50.5	3.2	0.0	3.2	50.5
137.5°	497.8	503.9	486.8	458.9	404.6	271.3	59.2	8.3	0.0	8.3	59.2
140°	513.6	519.3	503.9	481.7	427.7	288.9	69.8	15.7	0.0	15.7	69.8
142.5°	530.3	533.5	521.5	502.6	448.8	307.5	82.0	24.1	4.6	24.1	82.0
145°	547.0	548.9	538.6	522.9	469.5	329.7	98.1	35.1	16.1	35.1	98.1
147.5°	561.8	563.7	555.3	541.5	488.1	356.7	126.4	49.1	27.3	49.1	126.4
150°	576.6	578.8	572.4	559.5	506.5	395.0	180.6	66.2	40.8	66.2	180.6
152.5°	590.6	594.2	587.2	575.2	522.0	433.5	252.9	84.2	58.2	84.2	252.9
155°	604.8	609.0	601.6	589.6	536.5	469.6	319.5	107.0	80.6	107.0	319.5
157.5°	618.3	622.1	614.1	601.2	549.2	508.1	347.4	163.9	104.2	163.9	347.4
160°	630.2	633.1	624.7	609.9	560.0	546.0	367.3	272.2	157.8	272.2	367.3
162.5°	640.1	642.0	633.7	616.4	569.7	565.9	388.2	354.8	283.8	354.8	388.2
165°	646.0	647.5	639.2	620.2	577.0	573.0	444.1	379.8	365.8	379.8	444.1
167.5°	648.8	650.7	642.4	620.6	584.2	579.4	512.2	406.6	392.3	406.6	512.2
170°	649.8	650.7	642.4	619.6	590.0	584.5	579.8	495.5	428.0	495.5	579.8
172.5°	646.0	646.9	635.9	616.4	594.9	588.1	595.5	579.8	531.2	579.8	595.5
175°	632.1	634.0	625.7	610.9	598.2	591.9	596.1	602.9	607.1	602.9	596.1
177.5°	612.2	616.0	611.3	604.8	600.0	595.5	596.1	600.7	603.9	600.7	596.1
180°	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3



TEST NUMBER: 18646A

CATALOG NUMBER: 638-14-CF2/26-RB

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.9	0.4
17.5°	0.0	0.0	0.0	0.9	2.3	2.3
20°	0.0	0.0	0.4	1.9	4.6	6.5
22.5°	0.0	0.0	0.4	3.6	8.3	10.1
25°	0.0	0.0	0.9	5.9	9.3	9.3
27.5°	0.0	0.0	1.3	7.8	8.3	8.3
30°	0.0	0.0	1.9	7.8	7.4	6.8
32.5°	0.0	0.0	1.9	7.8	5.9	5.1
35°	0.0	0.0	2.7	7.4	4.6	3.6
37.5°	0.0	0.0	3.2	6.5	3.2	2.3
40°	0.0	0.0	4.2	5.5	2.3	1.3
42.5°	0.0	0.0	4.6	4.6	1.9	0.9
45°	0.0	0.0	5.1	3.6	1.3	0.9
47.5°	0.0	0.0	5.1	2.7	0.9	0.4
50°	0.0	0.0	5.1	2.3	0.4	0.0
52.5°	0.0	0.0	5.1	2.3	0.4	0.0
55°	0.0	0.0	4.6	1.9	0.0	0.4
57.5°	0.0	0.0	4.6	1.9	0.0	0.4
60°	0.0	0.0	4.2	1.9	0.0	0.4
62.5°	0.0	0.0	3.6	1.3	0.4	0.9
65°	0.0	0.0	3.2	1.3	0.4	0.9
67.5°	0.0	0.0	2.7	1.3	0.4	1.3
70°	0.0	0.0	2.7	1.3	0.9	1.3
72.5°	0.0	0.0	2.3	0.9	1.3	1.9
75°	0.0	0.0	1.9	0.9	1.3	1.9
77.5°	0.0	0.0	1.3	0.9	1.9	2.3
80°	0.0	0.0	1.3	1.3	2.3	2.7
82.5°	0.0	0.0	1.3	1.3	2.3	3.2
85°	0.0	0.0	1.3	1.3	2.7	3.6
87.5°	0.0	0.0	1.3	1.9	3.2	4.2
90°	4.6	0.5	1.3	2.7	4.2	5.1
92.5°	8.7	2.8	2.3	3.2	5.1	6.5
95°	12.5	6.0	3.6	4.6	6.8	8.7
97.5°	16.1	10.9	5.9	6.5	9.3	11.6
100°	21.2	22.7	12.9	9.7	12.5	14.8
102.5°	28.3	42.3	27.3	16.1	18.0	20.9
105°	37.0	64.1	59.2	34.7	25.8	28.6
107.5°	46.7	87.3	101.9	73.6	51.8	41.5
110°	59.8	113.0	148.2	124.1	110.2	101.3



TEST NUMBER: 18646A

CATALOG NUMBER: 638-14-CF2/26-RB

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	74.0	139.3	191.6	183.5	168.5	174.5
115°	90.3	166.9	230.7	242.7	229.2	220.8
117.5°	108.7	196.1	267.1	294.4	292.7	282.1
120°	128.3	224.3	297.9	333.5	350.6	343.2
122.5°	150.1	252.1	325.9	366.7	392.3	402.4
125°	171.7	278.8	350.6	393.1	421.9	430.3
127.5°	194.5	305.6	373.4	416.4	444.5	447.4
130°	215.7	330.5	394.0	436.4	461.2	460.8
132.5°	236.2	356.1	415.5	453.4	475.6	473.7
135°	254.2	380.7	437.1	470.1	489.5	484.9
137.5°	271.3	404.6	458.9	486.8	503.9	497.8
140°	288.9	427.7	481.7	503.9	519.3	513.6
142.5°	307.5	448.8	502.6	521.5	533.5	530.3
145°	329.7	469.5	522.9	538.6	548.9	547.0
147.5°	356.7	488.1	541.5	555.3	563.7	561.8
150°	395.0	506.5	559.5	572.4	578.8	576.6
152.5°	433.5	522.0	575.2	587.2	594.2	590.6
155°	469.6	536.5	589.6	601.6	609.0	604.8
157.5°	508.1	549.2	601.2	614.1	622.1	618.3
160°	546.0	560.0	609.9	624.7	633.1	630.2
162.5°	565.9	569.7	616.4	633.7	642.0	640.1
165°	573.0	577.0	620.2	639.2	647.5	646.0
167.5°	579.4	584.2	620.6	642.4	650.7	648.8
170°	584.5	590.0	619.6	642.4	650.7	649.8
172.5°	588.1	594.9	616.4	635.9	646.9	646.0
175°	591.9	598.2	610.9	625.7	634.0	632.1
177.5°	595.5	600.0	604.8	611.3	616.0	612.2
180°	601.3	601.3	601.3	601.3	601.3	601.3

(END OF REPORT)