

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: 18650

Luminaire Tested: **642/A-CF2/26**

Issue Date: 3/3/2020

**Test Information**

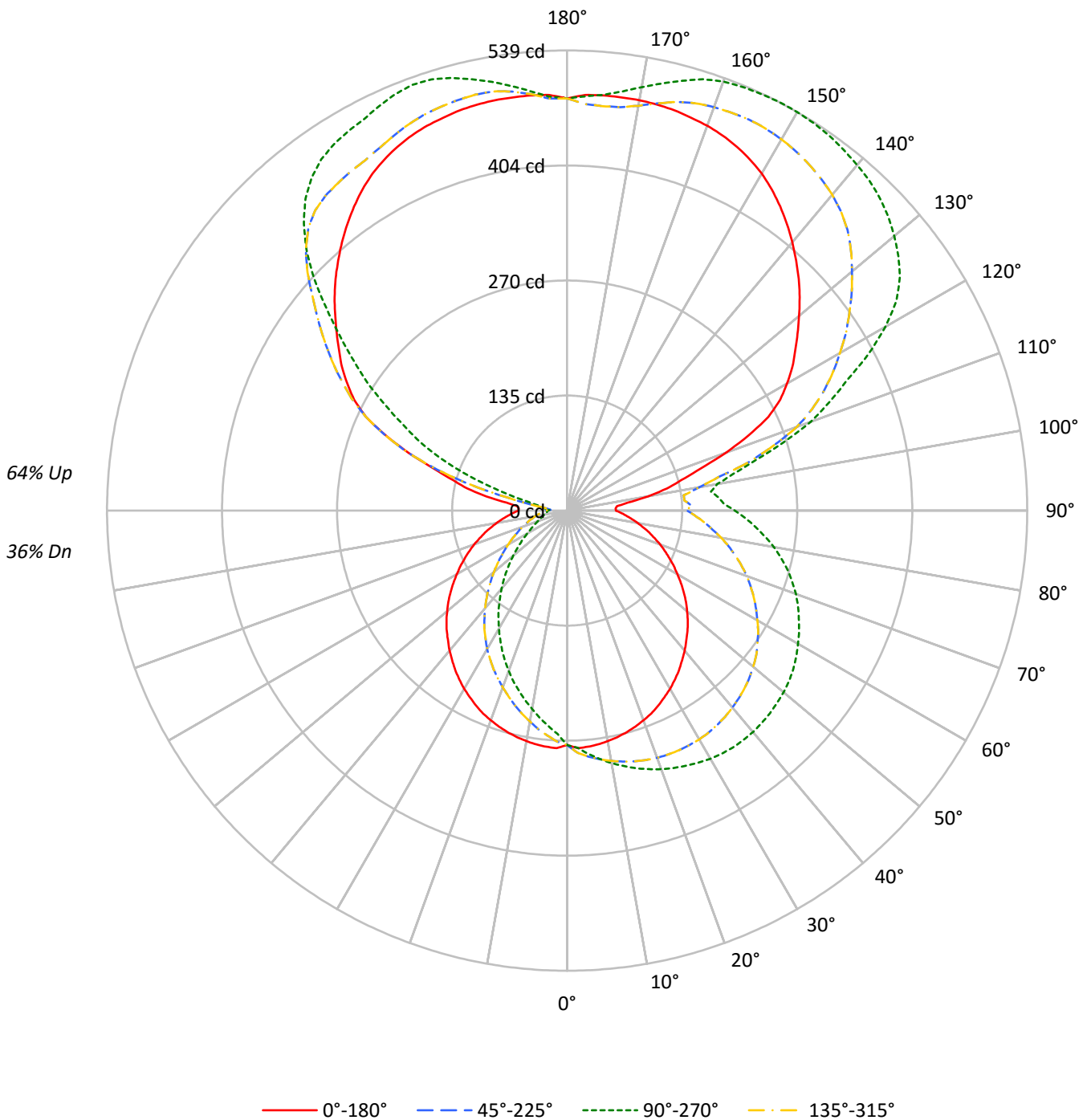
Test Method: LM-66-11  
Report Number: 18650  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 642/A-CF2/26  
Description: FLUORESCENT WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE  
PLASTIC BOWL LENS  
Light Source: TWO SYLVANIA 26 WATT CPFL LAMPS  
  
CF26DD/E841. LUMEN RATING = 3600 LMS.  
  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 3600 (1 lamp)  
Luminaire Lumens: 2997.5 lumens  
Efficiency: 83.3%  
Efficacy: 63.8 lumens/watt  
Spacing Criteria (0/90/45): 1.3 / 1.35 / 1.47  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Semi-Indirect  
  
Input Watts (W): 47  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

TEST NUMBER: 18650  
CATALOG NUMBER: 642/A-CF2/26

### Luminous Intensity Polar Plot





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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	86	86	86	86	78	78	78	78	63	63	63	49	49	49	36	36	36	30
1	77	73	70	66	70	66	63	60	53	51	49	41	39	38	30	29	28	22
2	70	63	58	53	63	57	52	48	46	42	39	35	33	31	25	24	22	18
3	64	55	49	44	57	50	44	40	40	36	32	31	28	25	22	20	18	15
4	58	49	42	36	52	44	38	33	35	31	27	27	24	21	19	17	16	12
5	53	43	36	31	47	39	33	28	31	27	23	24	21	18	17	15	13	10
6	49	38	31	27	44	35	29	24	28	23	20	22	18	16	16	13	12	9
7	45	34	28	23	40	31	25	21	25	21	17	20	16	14	14	12	10	8
8	41	31	25	20	37	28	23	19	23	18	15	18	15	12	13	11	9	7
9	39	28	22	18	35	26	20	16	21	17	14	16	13	11	12	10	8	6
10	36	26	20	16	32	24	18	15	19	15	12	15	12	10	11	9	7	6

**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°	26.1	0.9	0.7
10°-20°	75.6	2.5	2.1
20°-30°	117.3	3.9	3.3
30°-40°	147.0	4.9	4.1
40°-50°	161.9	5.4	4.5
50°-60°	162.6	5.4	4.5
60°-70°	151.2	5.0	4.2
70°-80°	131.3	4.4	3.6
80°-90°	104.9	3.5	2.9
90°-100°	92.9	3.1	2.6
100°-110°	172.0	5.7	4.8
110°-120°	275.5	9.2	7.7
120°-130°	326.0	10.9	9.1
130°-140°	335.9	11.2	9.3
140°-150°	299.4	10.0	8.3
150°-160°	229.6	7.7	6.4
160°-170°	141.7	4.7	3.9
170°-180°	46.6	1.6	1.3
0°-30°	219.1	7.3	6.1
0°-40°	366.0	12.2	10.2
0°-60°	690.5	23.0	19.2
0°-90°	1077.9	36.0	29.9
90°-120°	540.4	18.0	15.0
90°-150°	1501.7	50.1	41.7
90°-180°	1920.0	64.1	53.3
0°-180°	2997.5	100.0	83.3

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	275	275	275	275	275	
5°	278	286	278	253	278	26
15°	269	312	269	218	269	76
25°	252	330	252	180	252	116
35°	228	339	228	140	228	143
45°	199	336	199	100	199	154
55°	167	323	167	67	167	149
65°	132	300	132	44	132	131
75°	99	267	99	31	99	105
85°	70	222	70	24	70	60
90°	57	196	57	23	57	32
95°	59	178	59	25	59	56
105°	138	229	138	68	138	150
115°	260	362	260	190	260	252
125°	326	476	326	304	326	292
135°	384	518	384	432	384	296
145°	435	536	435	502	435	272
155°	470	538	470	522	470	217
165°	485	521	485	525	485	137
175°	488	489	488	493	488	47
180°	483	483	483	483	483	



TEST NUMBER: 18650  
 CATALOG NUMBER: 642/A-CF2/26

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	274.6	274.6	274.6	274.6	274.6	274.6	274.6	274.6	274.6	274.6	274.6
2.5°	278.5	283.7	284.1	274.3	278.0	274.3	284.1	283.7	278.5	278.0	270.9
5°	277.7	285.9	289.4	281.3	286.2	281.3	289.4	285.9	277.7	273.9	264.5
7.5°	276.3	287.5	293.7	287.5	293.5	287.5	293.7	287.5	276.3	269.9	258.2
10°	274.2	288.6	297.8	293.5	300.3	293.5	297.8	288.6	274.2	265.3	250.9
12.5°	271.8	288.8	301.1	299.0	306.5	299.0	301.1	288.8	271.8	260.4	243.8
15°	268.8	289.2	304.1	303.5	312.5	303.5	304.1	289.2	268.8	254.9	236.2
17.5°	265.4	288.4	306.3	307.9	317.6	307.9	306.3	288.4	265.4	249.2	228.3
20°	261.4	287.3	308.2	311.7	322.3	311.7	308.2	287.3	261.4	243.0	220.4
22.5°	257.2	285.6	309.3	314.6	326.3	314.6	309.3	285.6	257.2	236.4	212.3
25°	252.2	283.5	309.7	317.1	329.7	317.1	309.7	283.5	252.2	229.1	204.4
27.5°	246.6	280.5	309.7	319.3	332.9	319.3	309.7	280.5	246.6	222.1	195.7
30°	241.1	277.2	309.5	321.0	335.6	321.0	309.5	277.2	241.1	215.0	187.3
32.5°	234.8	273.4	308.4	322.0	337.4	322.0	308.4	273.4	234.8	206.9	178.0
35°	228.3	269.0	306.5	322.5	338.6	322.5	306.5	269.0	228.3	199.0	169.1
37.5°	221.1	264.1	304.1	322.0	338.9	322.0	304.1	264.1	221.1	190.6	159.0
40°	214.2	259.2	301.1	321.0	338.6	321.0	301.1	259.2	214.2	181.9	149.6
42.5°	206.6	253.6	297.8	319.5	337.4	319.5	297.8	253.6	206.6	172.7	139.8
45°	199.4	248.1	294.1	317.1	335.9	317.1	294.1	248.1	199.4	163.7	130.3
47.5°	191.8	242.2	289.7	314.4	333.4	314.4	289.7	242.2	191.8	154.7	121.1
50°	183.4	235.4	284.5	311.2	331.0	311.2	284.5	235.4	183.4	146.0	111.9
52.5°	175.4	228.3	279.2	307.3	327.8	307.3	279.2	228.3	175.4	137.1	103.2
55°	166.6	220.4	272.0	302.2	323.4	302.2	272.0	220.4	166.6	128.4	94.9
57.5°	158.0	212.5	265.3	296.7	318.2	296.7	265.3	212.5	158.0	120.0	87.2
60°	149.1	203.8	257.4	290.3	312.2	290.3	257.4	203.8	149.1	111.5	79.8
62.5°	140.9	195.5	249.5	283.5	306.3	283.5	249.5	195.5	140.9	103.6	73.0
65°	132.3	186.8	241.3	276.2	299.5	276.2	241.3	186.8	132.3	95.8	66.5
67.5°	124.0	178.0	232.7	268.5	292.7	268.5	232.7	178.0	124.0	88.7	60.8
70°	115.7	169.4	223.8	260.7	285.1	260.7	223.8	169.4	115.7	81.7	55.6
72.5°	107.3	160.1	214.2	251.5	276.4	251.5	214.2	160.1	107.3	74.9	50.4
75°	99.4	150.7	204.2	242.2	267.1	242.2	204.2	150.7	99.4	68.7	45.8
77.5°	91.3	141.4	193.8	231.5	256.6	231.5	193.8	141.4	91.3	62.3	41.4
80°	83.9	131.9	183.3	221.0	246.0	221.0	183.3	131.9	83.9	56.7	38.0
82.5°	76.5	122.4	172.1	209.6	233.8	209.6	172.1	122.4	76.5	51.2	34.1
85°	69.7	113.2	161.8	198.4	221.5	198.4	161.8	113.2	69.7	46.3	31.2
87.5°	63.2	104.5	150.9	186.5	209.3	186.5	150.9	104.5	63.2	41.8	28.2
90°	57.1	95.8	140.3	174.8	196.5	174.8	140.3	95.8	57.1	38.0	26.5
92.5°	56.8	100.2	145.0	174.3	183.5	174.3	145.0	100.2	56.8	28.8	19.5
95°	58.6	96.1	137.7	167.5	177.8	167.5	137.7	96.1	58.6	30.9	22.7
97.5°	71.4	108.3	137.7	160.5	169.9	160.5	137.7	108.3	71.4	51.0	28.4
100°	96.1	130.3	156.7	171.6	178.4	171.6	156.7	130.3	96.1	97.9	45.6
102.5°	119.8	161.0	181.6	194.1	199.3	194.1	181.6	161.0	119.8	146.3	73.5
105°	138.5	193.6	221.0	227.0	228.9	227.0	221.0	193.6	138.5	178.4	117.0
107.5°	163.5	219.1	253.9	267.9	265.6	267.9	253.9	219.1	163.5	199.3	159.4
110°	197.3	242.4	286.2	305.2	303.5	305.2	286.2	242.4	197.3	222.1	198.2



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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°	230.1	262.8	310.6	333.1	332.7	333.1	310.6	262.8	230.1	240.0	230.5
115°	260.1	281.3	331.8	357.0	361.9	357.0	331.8	281.3	260.1	257.1	260.4
117.5°	281.3	299.2	351.1	383.9	398.6	383.9	351.1	299.2	281.3	275.6	284.8
120°	297.3	316.3	369.0	404.9	430.3	404.9	369.0	316.3	297.3	293.5	305.4
122.5°	312.8	332.9	387.2	425.2	457.3	425.2	387.2	332.9	312.8	313.1	326.7
125°	326.1	348.9	403.5	442.0	475.7	442.0	403.5	348.9	326.1	331.0	347.0
127.5°	340.2	366.0	420.1	456.5	489.1	456.5	420.1	366.0	340.2	349.5	367.9
130°	354.5	381.7	435.6	468.7	500.2	468.7	435.6	381.7	354.5	365.7	389.1
132.5°	369.5	394.3	451.0	481.2	510.0	481.2	451.0	394.3	369.5	381.7	412.4
135°	383.7	405.4	464.6	494.0	517.9	494.0	464.6	405.4	383.7	395.6	432.8
137.5°	397.0	415.2	474.9	504.3	524.1	504.3	474.9	415.2	397.0	407.9	448.8
140°	410.4	424.4	483.1	511.3	528.4	511.3	483.1	424.4	410.4	419.5	459.1
142.5°	422.9	432.6	489.3	516.4	532.4	516.4	489.3	432.6	422.9	429.0	464.9
145°	435.0	440.5	494.5	521.3	535.8	521.3	494.5	440.5	435.0	438.6	468.2
147.5°	446.1	447.2	498.9	526.0	537.9	526.0	498.9	447.2	446.1	448.0	471.2
150°	455.9	453.5	502.1	528.4	539.0	528.4	502.1	453.5	455.9	457.6	473.6
152.5°	463.6	458.6	504.3	530.9	539.2	530.9	504.3	458.6	463.6	466.8	477.9
155°	470.3	462.9	505.1	532.2	538.2	532.2	505.1	462.9	470.3	474.9	483.4
157.5°	475.6	467.0	504.3	531.7	537.1	531.7	504.3	467.0	475.6	481.4	488.7
160°	479.7	470.0	502.9	530.0	534.7	530.0	502.9	470.0	479.7	486.8	492.8
162.5°	482.6	471.2	500.2	527.1	529.8	527.1	500.2	471.2	482.6	491.0	495.5
165°	485.4	470.3	495.5	521.3	521.1	521.3	495.5	470.3	485.4	493.6	497.4
167.5°	487.1	468.7	488.5	511.1	512.4	511.1	488.5	468.7	487.1	495.5	498.9
170°	488.1	467.6	481.4	500.4	503.7	500.4	481.4	467.6	488.1	495.1	498.5
172.5°	488.2	468.4	476.5	491.7	495.1	491.7	476.5	468.4	488.2	492.3	495.1
175°	488.1	470.3	475.5	487.4	488.7	487.4	475.5	470.3	488.1	488.2	489.6
177.5°	487.3	472.7	476.5	486.1	485.7	486.1	476.5	472.7	487.3	484.2	483.1
180°	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7



TEST NUMBER: 18650  
 CATALOG NUMBER: 642/A-CF2/26

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	274.6	274.6	274.6	274.6	274.6	274.6
2.5°	259.8	261.7	259.8	270.9	278.0	278.5
5°	251.9	253.3	251.9	264.5	273.9	277.7
7.5°	244.1	244.9	244.1	258.2	269.9	276.3
10°	235.7	235.9	235.7	250.9	265.3	274.2
12.5°	227.2	227.5	227.2	243.8	260.4	271.8
15°	218.5	218.3	218.5	236.2	254.9	268.8
17.5°	210.4	209.6	210.4	228.3	249.2	265.4
20°	201.2	199.8	201.2	220.4	243.0	261.4
22.5°	192.2	190.3	192.2	212.3	236.4	257.2
25°	182.9	180.3	182.9	204.4	229.1	252.2
27.5°	173.1	169.9	173.1	195.7	222.1	246.6
30°	163.7	159.9	163.7	187.3	215.0	241.1
32.5°	153.9	149.6	153.9	178.0	206.9	234.8
35°	144.1	139.8	144.1	169.1	199.0	228.3
37.5°	134.3	129.4	134.3	159.0	190.6	221.1
40°	124.9	119.6	124.9	149.6	181.9	214.2
42.5°	115.1	109.6	115.1	139.8	172.7	206.6
45°	105.6	100.4	105.6	130.3	163.7	199.4
47.5°	96.6	91.2	96.6	121.1	154.7	191.8
50°	87.9	82.5	87.9	111.9	146.0	183.4
52.5°	80.0	74.6	80.0	103.2	137.1	175.4
55°	72.7	67.0	72.7	94.9	128.4	166.6
57.5°	65.9	60.2	65.9	87.2	120.0	158.0
60°	59.3	54.0	59.3	79.8	111.5	149.1
62.5°	53.7	48.8	53.7	73.0	103.6	140.9
65°	48.8	43.9	48.8	66.5	95.8	132.3
67.5°	44.2	40.1	44.2	60.8	88.7	124.0
70°	40.4	36.5	40.4	55.6	81.7	115.7
72.5°	36.9	33.6	36.9	50.4	74.9	107.3
75°	33.6	31.2	33.6	45.8	68.7	99.4
77.5°	30.9	29.0	30.9	41.4	62.3	91.3
80°	28.8	27.3	28.8	38.0	56.7	83.9
82.5°	26.5	25.8	26.5	34.1	51.2	76.5
85°	24.6	24.4	24.6	31.2	46.3	69.7
87.5°	23.0	23.0	23.0	28.2	41.8	63.2
90°	22.4	23.3	22.4	26.5	38.0	57.1
92.5°	20.3	20.5	20.3	19.5	28.8	56.8
95°	24.6	25.2	24.6	22.7	30.9	58.6
97.5°	29.2	29.5	29.2	28.4	51.0	71.4
100°	35.0	34.4	35.0	45.6	97.9	96.1
102.5°	46.9	45.8	46.9	73.5	146.3	119.8
105°	72.5	68.4	72.5	117.0	178.4	138.5
107.5°	106.1	95.5	106.1	159.4	199.3	163.5
110°	144.7	129.2	144.7	198.2	222.1	197.3





TEST NUMBER: 18650  
 CATALOG NUMBER: 642/A-CF2/26

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	181.0	161.0	181.0	230.5	240.0	230.1
115°	211.7	190.1	211.7	260.4	257.1	260.1
117.5°	241.3	215.3	241.3	284.8	275.6	281.3
120°	275.0	244.7	275.0	305.4	293.5	297.3
122.5°	301.4	276.2	301.4	326.7	313.1	312.8
125°	325.9	304.4	325.9	347.0	331.0	326.1
127.5°	352.7	335.3	352.7	367.9	349.5	340.2
130°	379.0	367.6	379.0	389.1	365.7	354.5
132.5°	410.0	401.9	410.0	412.4	381.7	369.5
135°	441.0	431.8	441.0	432.8	395.6	383.7
137.5°	468.4	456.5	468.4	448.8	407.9	397.0
140°	488.2	476.8	488.2	459.1	419.5	410.4
142.5°	500.7	491.5	500.7	464.9	429.0	422.9
145°	508.1	502.1	508.1	468.2	438.6	435.0
147.5°	511.9	508.6	511.9	471.2	448.0	446.1
150°	513.0	513.0	513.0	473.6	457.6	455.9
152.5°	514.3	516.4	514.3	477.9	466.8	463.6
155°	517.9	522.2	517.9	483.4	474.9	470.3
157.5°	520.0	527.6	520.0	488.7	481.4	475.6
160°	520.0	530.6	520.0	492.8	486.8	479.7
162.5°	518.3	529.6	518.3	495.5	491.0	482.6
165°	515.7	524.7	515.7	497.4	493.6	485.4
167.5°	513.0	517.5	513.0	498.9	495.5	487.1
170°	510.5	510.0	510.5	498.5	495.1	488.1
172.5°	505.6	501.5	505.6	495.1	492.3	488.2
175°	498.3	493.1	498.3	489.6	488.2	488.1
177.5°	491.2	485.3	491.2	483.1	484.2	487.3
180°	482.7	482.7	482.7	482.7	482.7	482.7

(END OF REPORT)