

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: 18651A

Luminaire Tested: **658-CF2/26**

Issue Date: 3/3/2020

**Test Information**

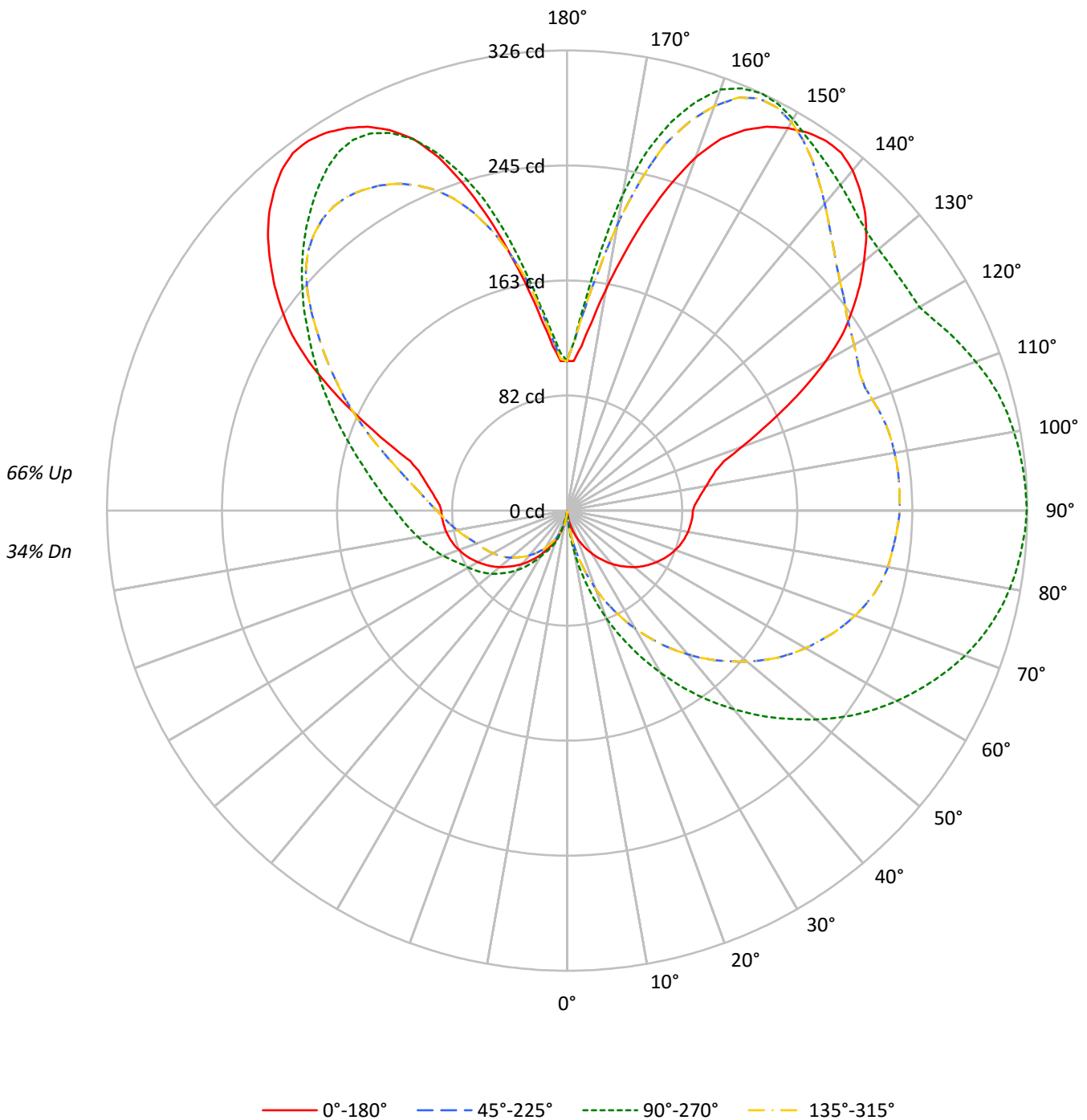
Test Method: LM-66-11  
Report Number: 18651A  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 658-CF2/26  
Description: FLUORESCENT WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND CURVED  
WHITE PLASTIC LENS  
Light Source: TWO 26 WATT CPFL LAMPS. LUMEN RATING = 3600 LMS.  
  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 3600 (1 lamp)  
Luminaire Lumens: 2111.5 lumens  
Efficiency: 58.7%  
Efficacy: -  
Spacing Criteria (0/90/45): 12.42 / 16.92 / 13.64  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Semi-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

TEST NUMBER: 18651A  
CATALOG NUMBER: 658-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	61	61	61	61	55	55	55	55	44	44	44	34	34	34	24	24	24	20
1	53	49	46	43	47	44	41	39	35	33	31	26	24	23	18	17	16	12
2	47	42	37	33	42	37	33	30	29	26	24	21	19	17	14	13	11	8
3	42	36	31	27	38	32	28	24	25	21	19	18	16	14	12	10	9	6
4	38	31	26	22	34	28	23	20	21	18	15	16	13	11	10	8	7	4
5	35	27	22	18	31	24	20	16	19	15	13	14	11	9	9	7	6	3
6	32	24	19	15	28	22	17	14	17	13	11	12	10	8	8	6	5	3
7	29	22	17	13	26	19	15	12	15	12	9	11	8	6	7	5	4	2
8	27	19	15	11	24	17	13	10	14	10	8	10	7	6	6	5	3	2
9	25	18	13	10	22	16	12	9	12	9	7	9	7	5	6	4	3	1
10	23	16	12	9	21	14	10	8	11	8	6	8	6	4	5	4	2	1

**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°	0.6	0.0	0.0
10°-20°	7.5	0.4	0.2
20°-30°	23.1	1.1	0.6
30°-40°	46.5	2.2	1.3
40°-50°	75.1	3.6	2.1
50°-60°	105.1	5.0	2.9
60°-70°	132.5	6.3	3.7
70°-80°	155.4	7.4	4.3
80°-90°	170.6	8.1	4.7
90°-100°	180.2	8.5	5.0
100°-110°	189.6	9.0	5.3
110°-120°	201.4	9.5	5.6
120°-130°	211.8	10.0	5.9
130°-140°	209.7	9.9	5.8
140°-150°	185.4	8.8	5.2
150°-160°	135.5	6.4	3.8
160°-170°	67.3	3.2	1.9
170°-180°	14.1	0.7	0.4
0°-30°	31.2	1.5	0.9
0°-40°	77.7	3.7	2.2
0°-60°	257.9	12.2	7.2
0°-90°	716.4	33.9	19.9
90°-120°	571.2	27.0	15.9
90°-150°	1178.1	55.8	32.7
90°-180°	1395.0	66.1	38.8
0°-180°	2111.5	100.0	58.7

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1	1	1	1	1	
5°	1	6	1	1	1	0
15°	14	55	14	12	14	4
25°	28	107	28	30	28	13
35°	42	159	42	46	42	27
45°	56	208	56	62	56	43
55°	68	252	68	76	68	61
65°	78	286	78	86	78	77
75°	85	311	85	100	85	89
85°	88	323	88	114	88	72
90°	89	326	89	122	89	49
95°	93	324	93	131	93	78
105°	109	317	109	155	109	118
115°	169	298	169	187	169	168
125°	246	288	246	224	246	220
135°	298	292	298	264	298	230
145°	320	310	320	296	320	200
155°	297	326	297	295	297	137
165°	214	285	214	228	214	62
175°	117	150	117	127	117	13
180°	106	106	106	106	106	



TEST NUMBER: 18651A  
 CATALOG NUMBER: 658-CF2/26

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
2.5°	0.6	0.5	0.6	0.9	0.9	0.9	0.6	0.5	0.6	0.6	0.9
5°	1.3	2.4	4.7	6.5	5.9	6.5	4.7	2.4	1.3	2.1	3.1
7.5°	3.7	6.7	12.6	15.8	17.7	15.8	12.6	6.7	3.7	4.3	5.7
10°	7.1	12.2	21.2	26.9	30.5	26.9	21.2	12.2	7.1	7.1	8.3
12.5°	10.4	17.7	29.4	39.4	42.6	39.4	29.4	17.7	10.4	9.6	10.9
15°	13.8	23.4	39.1	51.7	55.1	51.7	39.1	23.4	13.8	12.4	13.6
17.5°	17.3	29.1	48.9	63.4	67.9	63.4	48.9	29.1	17.3	15.0	16.4
20°	21.0	35.1	58.9	75.8	80.9	75.8	58.9	35.1	21.0	17.9	19.1
22.5°	24.5	41.4	68.4	87.6	94.1	87.6	68.4	41.4	24.5	20.5	21.9
25°	28.0	47.2	77.5	99.4	106.6	99.4	77.5	47.2	28.0	23.4	24.6
27.5°	31.6	53.4	87.1	111.8	120.0	111.8	87.1	53.4	31.6	26.2	27.4
30°	35.1	59.3	96.5	123.8	132.8	123.8	96.5	59.3	35.1	29.1	30.3
32.5°	38.8	65.4	105.8	135.9	146.1	135.9	105.8	65.4	38.8	32.0	33.0
35°	42.3	71.3	115.1	147.6	158.8	147.6	115.1	71.3	42.3	34.8	35.9
37.5°	45.9	77.0	124.2	159.5	171.5	159.5	124.2	77.0	45.9	37.5	38.7
40°	49.3	82.5	132.8	170.7	183.6	170.7	132.8	82.5	49.3	40.4	41.4
42.5°	52.7	88.2	141.8	182.1	195.7	182.1	141.8	88.2	52.7	43.0	44.2
45°	55.8	93.5	150.2	192.8	207.6	192.8	150.2	93.5	55.8	45.7	46.6
47.5°	59.0	98.9	158.1	203.1	218.7	203.1	158.1	98.9	59.0	48.4	49.3
50°	62.3	104.0	166.6	213.7	230.3	213.7	166.6	104.0	62.3	51.0	51.9
52.5°	65.2	108.9	174.1	223.6	241.0	223.6	174.1	108.9	65.2	53.2	54.3
55°	68.0	113.8	181.7	233.4	251.5	233.4	181.7	113.8	68.0	55.5	56.5
57.5°	70.5	118.0	188.6	242.0	260.8	242.0	188.6	118.0	70.5	57.7	58.6
60°	73.1	122.1	195.0	250.5	269.8	250.5	195.0	122.1	73.1	59.8	60.6
62.5°	75.4	125.9	200.8	257.8	278.0	257.8	200.8	125.9	75.4	61.7	62.5
65°	77.7	129.6	206.9	265.2	285.9	265.2	206.9	129.6	77.7	63.6	64.4
67.5°	79.7	132.8	212.3	272.2	293.3	272.2	212.3	132.8	79.7	65.3	66.3
70°	81.5	135.9	217.2	278.4	300.1	278.4	217.2	135.9	81.5	66.8	68.2
72.5°	83.3	138.7	221.7	284.2	306.0	284.2	221.7	138.7	83.3	68.2	70.6
75°	84.7	140.9	225.5	289.0	310.9	289.0	225.5	140.9	84.7	69.6	73.4
77.5°	85.9	142.8	228.5	293.2	315.2	293.2	228.5	142.8	85.9	71.1	76.3
80°	87.0	144.4	230.8	296.4	318.5	296.4	230.8	144.4	87.0	72.8	79.2
82.5°	87.7	145.6	231.9	298.9	321.1	298.9	231.9	145.6	87.7	75.1	82.3
85°	88.3	146.4	233.2	300.7	323.0	300.7	233.2	146.4	88.3	77.3	85.5
87.5°	88.9	147.3	234.6	302.6	324.7	302.6	234.6	147.3	88.9	79.7	88.8
90°	89.1	147.6	235.7	303.5	325.6	303.5	235.7	147.6	89.1	82.1	92.3
92.5°	90.5	148.0	235.8	303.5	325.2	303.5	235.8	148.0	90.5	85.6	96.6
95°	93.2	148.8	236.0	303.0	324.4	303.0	236.0	148.8	93.2	91.1	101.1
97.5°	96.3	149.5	236.0	302.1	323.2	302.1	236.0	149.5	96.3	99.6	106.1
100°	100.0	150.4	235.5	300.7	321.4	300.7	235.5	150.4	100.0	109.9	112.5
102.5°	104.1	151.2	235.0	299.2	319.4	299.2	235.0	151.2	104.1	120.9	119.4
105°	108.9	152.3	233.9	296.8	316.6	296.8	233.9	152.3	108.9	132.3	127.3
107.5°	116.6	153.8	232.2	293.7	312.8	293.7	232.2	153.8	116.6	144.0	136.3
110°	131.4	156.9	230.1	289.6	308.1	289.6	230.1	156.9	131.4	156.9	146.4



TEST NUMBER: 18651A  
 CATALOG NUMBER: 658-CF2/26

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	149.1	161.6	228.3	285.4	303.3	285.4	228.3	161.6	149.1	170.0	156.9
115°	168.8	169.0	228.9	281.3	298.3	281.3	228.9	169.0	168.8	183.6	167.9
117.5°	190.3	178.1	231.7	277.0	292.7	277.0	231.7	178.1	190.3	196.0	179.7
120°	211.6	187.8	234.8	276.1	288.2	276.1	234.8	187.8	211.6	207.7	190.9
122.5°	230.9	198.1	237.9	277.0	287.7	277.0	237.9	198.1	230.9	219.8	202.9
125°	246.4	208.1	241.7	277.9	287.5	277.9	241.7	208.1	246.4	230.5	215.0
127.5°	261.1	221.8	247.2	279.2	287.5	279.2	247.2	221.8	261.1	240.6	227.6
130°	274.6	236.9	252.3	281.3	288.0	281.3	252.3	236.9	274.6	249.9	240.0
132.5°	287.5	253.2	258.7	284.4	289.4	284.4	258.7	253.2	287.5	257.7	251.1
135°	298.5	268.9	266.2	289.2	292.5	289.2	266.2	268.9	298.5	263.7	259.6
137.5°	307.3	284.2	274.6	293.9	296.8	293.9	274.6	284.2	307.3	267.7	265.5
140°	314.7	298.9	283.9	299.5	301.3	299.5	283.9	298.9	314.7	270.1	269.6
142.5°	319.3	310.4	293.2	305.0	305.6	305.0	293.2	310.4	319.3	271.5	271.7
145°	319.8	319.2	302.8	311.5	310.0	311.5	302.8	319.2	319.8	272.0	271.5
147.5°	317.4	322.6	311.1	318.2	314.7	318.2	311.1	322.6	317.4	271.8	269.3
150°	312.9	321.1	317.7	324.4	320.1	324.4	317.7	321.1	312.9	270.6	265.8
152.5°	306.6	317.1	322.0	329.4	324.4	329.4	322.0	317.1	306.6	268.6	261.1
155°	297.4	308.5	322.1	329.7	326.1	329.7	322.1	308.5	297.4	265.0	254.4
157.5°	285.0	295.6	316.6	325.4	323.7	325.4	316.6	295.6	285.0	258.9	246.1
160°	266.3	279.1	304.9	317.0	317.5	317.0	304.9	279.1	266.3	249.2	235.3
162.5°	241.6	255.4	289.0	302.1	303.7	302.1	289.0	255.4	241.6	233.2	221.5
165°	214.3	228.1	268.9	283.5	285.1	283.5	268.9	228.1	214.3	213.7	205.1
167.5°	185.7	199.3	239.1	257.7	260.3	257.7	239.1	199.3	185.7	190.2	186.2
170°	159.5	172.7	206.0	225.8	227.6	225.8	206.0	172.7	159.5	165.9	166.2
172.5°	135.4	147.3	171.7	187.8	186.9	187.8	171.7	147.3	135.4	140.7	143.5
175°	117.1	127.1	143.3	152.3	149.5	152.3	143.3	127.1	117.1	119.9	122.6
177.5°	106.1	113.0	120.2	123.1	120.6	123.1	120.2	113.0	106.1	106.6	107.5
180°	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8



TEST NUMBER: 18651A  
 CATALOG NUMBER: 658-CF2/26

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	0.7	0.7	0.7	0.7	0.7	0.7
2.5°	1.2	1.0	1.2	0.9	0.6	0.6
5°	1.7	0.9	1.7	3.1	2.1	1.3
7.5°	3.7	1.0	3.7	5.7	4.3	3.7
10°	7.4	1.9	7.4	8.3	7.1	7.1
12.5°	10.2	5.0	10.2	10.9	9.6	10.4
15°	12.7	12.1	12.7	13.6	12.4	13.8
17.5°	15.3	18.9	15.3	16.4	15.0	17.3
20°	17.9	23.9	17.9	19.1	17.9	21.0
22.5°	20.7	27.2	20.7	21.9	20.5	24.5
25°	23.9	30.1	23.9	24.6	23.4	28.0
27.5°	27.7	33.7	27.7	27.4	26.2	31.6
30°	31.5	37.7	31.5	30.3	29.1	35.1
32.5°	35.6	42.0	35.6	33.0	32.0	38.8
35°	39.6	46.5	39.6	35.9	34.8	42.3
37.5°	43.5	51.0	43.5	38.7	37.5	45.9
40°	47.2	55.0	47.2	41.4	40.4	49.3
42.5°	50.8	58.9	50.8	44.2	43.0	52.7
45°	54.1	62.5	54.1	46.6	45.7	55.8
47.5°	57.2	66.1	57.2	49.3	48.4	59.0
50°	60.1	69.6	60.1	51.9	51.0	62.3
52.5°	63.0	72.7	63.0	54.3	53.2	65.2
55°	65.6	75.6	65.6	56.5	55.5	68.0
57.5°	67.9	78.2	67.9	58.6	57.7	70.5
60°	70.4	80.8	70.4	60.6	59.8	73.1
62.5°	72.3	83.2	72.3	62.5	61.7	75.4
65°	74.7	86.4	74.7	64.4	63.6	77.7
67.5°	77.7	89.9	77.7	66.3	65.3	79.7
70°	80.9	93.5	80.9	68.2	66.8	81.5
72.5°	84.3	97.0	84.3	70.6	68.2	83.3
75°	87.5	100.4	87.5	73.4	69.6	84.7
77.5°	91.0	103.9	91.0	76.3	71.1	85.9
80°	94.1	107.3	94.1	79.2	72.8	87.0
82.5°	97.5	110.8	97.5	82.3	75.1	87.7
85°	101.1	114.4	101.1	85.5	77.3	88.3
87.5°	104.7	118.0	104.7	88.8	79.7	88.9
90°	108.3	121.9	108.3	92.3	82.1	89.1
92.5°	112.8	126.4	112.8	96.6	85.6	90.5
95°	117.6	131.4	117.6	101.1	91.1	93.2
97.5°	123.0	136.4	123.0	106.1	99.6	96.3
100°	129.0	142.3	129.0	112.5	109.9	100.0
102.5°	135.8	148.3	135.8	119.4	120.9	104.1
105°	143.5	155.4	143.5	127.3	132.3	108.9
107.5°	151.6	162.6	151.6	136.3	144.0	116.6
110°	160.4	170.7	160.4	146.4	156.9	131.4





TEST NUMBER: 18651A  
 CATALOG NUMBER: 658-CF2/26

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	169.0	178.8	169.0	156.9	170.0	149.1
115°	178.0	187.3	178.0	167.9	183.6	168.8
117.5°	187.1	196.7	187.1	179.7	196.0	190.3
120°	195.7	205.5	195.7	190.9	207.7	211.6
122.5°	204.5	215.0	204.5	202.9	219.8	230.9
125°	213.5	224.5	213.5	215.0	230.5	246.4
127.5°	222.9	235.1	222.9	227.6	240.6	261.1
130°	232.2	244.9	232.2	240.0	249.9	274.6
132.5°	241.7	254.9	241.7	251.1	257.7	287.5
135°	250.1	264.3	250.1	259.6	263.7	298.5
137.5°	257.7	273.2	257.7	265.5	267.7	307.3
140°	264.4	281.6	264.4	269.6	270.1	314.7
142.5°	269.6	289.4	269.6	271.7	271.5	319.3
145°	273.9	296.3	273.9	271.5	272.0	319.8
147.5°	276.5	301.3	276.5	269.3	271.8	317.4
150°	277.0	303.3	277.0	265.8	270.6	312.9
152.5°	275.5	301.3	275.5	261.1	268.6	306.6
155°	270.6	295.1	270.6	254.4	265.0	297.4
157.5°	263.1	284.7	263.1	246.1	258.9	285.0
160°	251.3	269.6	251.3	235.3	249.2	266.3
162.5°	234.1	250.6	234.1	221.5	233.2	241.6
165°	213.5	228.4	213.5	205.1	213.7	214.3
167.5°	190.5	201.4	190.5	186.2	190.2	185.7
170°	167.4	173.1	167.4	166.2	165.9	159.5
172.5°	145.6	146.9	145.6	143.5	140.7	135.4
175°	125.5	127.1	125.5	122.6	119.9	117.1
177.5°	109.9	112.0	109.9	107.5	106.6	106.1
180°	105.8	105.8	105.8	105.8	105.8	105.8

(END OF REPORT)