

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: 18664A

Luminaire Tested: **632-CF1/13**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 18664A
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 632-CF1/13
Description: FLUORESCENT WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC WRAP LENS
Light Source: ONE 13 WATT CPFL LAMP. LUMEN RATING = 800 LMS.

Ballast/Driver: -

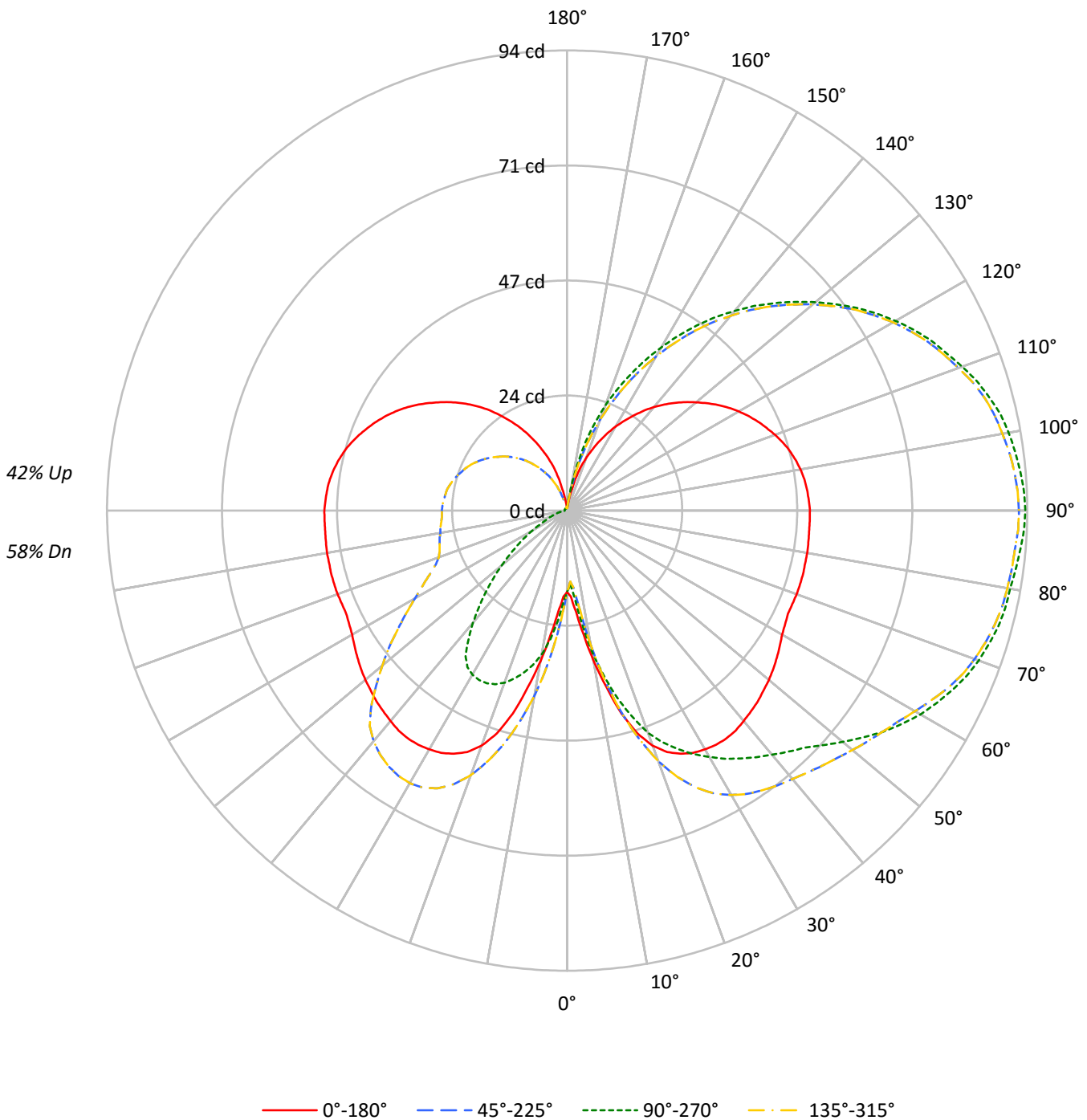
Summary

Lumens per Lamp: 800 (1 lamp)
Luminaire Lumens: 594.5 lumens
Efficiency: 74.3%
Efficacy: -
Spacing Criteria (0/90/45): 3.09 / 2.91 / 3.07
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 0.38' x H: 0.71')
CIE Type: General Diffuse

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





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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	81	81	81	81	75	75	75	75	65	65	65	56	56	56	47	47	47	43
1	70	66	61	57	65	61	57	53	52	49	46	43	41	39	36	34	33	29
2	63	55	49	44	58	51	46	41	43	39	35	36	33	30	30	27	25	21
3	56	48	41	35	52	44	38	33	37	32	28	31	27	24	25	22	20	17
4	51	41	34	29	47	38	32	27	32	27	23	27	23	20	22	19	16	13
5	47	36	29	24	43	34	27	22	29	23	19	24	20	16	19	16	13	11
6	43	32	25	20	39	30	24	19	25	20	16	21	17	14	17	14	11	9
7	39	29	22	18	36	27	21	16	23	18	14	19	15	12	16	12	10	8
8	36	26	20	15	33	24	18	14	21	16	12	17	13	10	14	11	9	7
9	34	24	18	13	31	22	16	12	19	14	11	16	12	9	13	10	8	6
10	31	22	16	12	29	20	15	11	17	13	10	15	11	8	12	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	1742	1742	1742	1742
5°	1874	1533	1874	1952
10°	2492	2125	2492	2169
15°	3105	2523	3105	2185
20°	3396	2755	3396	2134
25°	3390	2797	3390	2023
30°	3281	2795	3281	1862
35°	3152	2786	3152	1632
40°	2992	2780	2992	1277
45°	2850	2800	2850	957
50°	2721	2902	2721	687
55°	2608	3031	2608	477
60°	2511	3147	2511	310
65°	2469	3245	2469	191
70°	2496	3338	2496	127
75°	2537	3419	2537	82
80°	2595	3489	2595	49
85°	2671	3601	2671	27



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	2.3	0.4	0.3
10°-20°	12.3	2.1	1.5
20°-30°	26.4	4.4	3.3
30°-40°	37.9	6.4	4.7
40°-50°	45.0	7.6	5.6
50°-60°	49.6	8.3	6.2
60°-70°	53.5	9.0	6.7
70°-80°	57.4	9.7	7.2
80°-90°	59.4	10.0	7.4
90°-100°	58.9	9.9	7.4
100°-110°	54.8	9.2	6.8
110°-120°	47.1	7.9	5.9
120°-130°	37.3	6.3	4.7
130°-140°	26.5	4.5	3.3
140°-150°	16.2	2.7	2.0
150°-160°	7.7	1.3	1.0
160°-170°	2.1	0.3	0.3
170°-180°	0.1	0.0	0.0
0°-30°	41.1	6.9	5.1
0°-40°	78.9	13.3	9.9
0°-60°	173.5	29.2	21.7
0°-90°	343.8	57.8	43.0
90°-120°	160.8	27.1	20.1
90°-150°	240.8	40.5	30.1
90°-180°	251.0	42.2	31.4
0°-180°	594.5	100.0	74.3

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	17	17	17	17	17	
5°	21	18	21	23	21	2
15°	43	40	43	34	43	12
25°	55	54	55	39	55	25
35°	57	62	57	36	57	36
45°	55	68	55	23	55	43
55°	52	79	52	12	52	47
65°	50	87	50	5	50	50
75°	50	91	50	2	50	53
85°	50	93	50	1	50	41
90°	50	94	50	0	50	27
95°	49	93	49	0	49	40
105°	47	89	47	0	47	50
115°	43	82	43	0	43	43
125°	38	72	38	0	38	34
135°	31	60	31	0	31	24
145°	24	46	24	0	24	15
155°	16	31	16	0	16	7
165°	7	14	7	0	7	2
175°	1	2	1	0	1	0
180°	0	0	0	0	0	



TEST NUMBER: 18664A
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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
2.5°	17.6	14.7	14.5	14.7	15.0	14.7	14.5	14.7	17.6	20.9	20.8
5°	20.7	15.8	16.0	16.8	17.9	16.8	16.0	15.8	20.7	26.3	26.3
7.5°	25.4	19.7	20.7	21.7	23.3	21.7	20.7	19.7	25.4	32.3	32.3
10°	31.1	25.3	28.0	28.0	29.2	28.0	28.0	25.3	31.1	38.9	38.3
12.5°	36.9	31.8	35.4	34.1	34.4	34.1	35.4	31.8	36.9	45.5	43.8
15°	42.9	38.9	42.5	40.4	39.6	40.4	42.5	38.9	42.9	52.3	49.1
17.5°	47.7	45.5	48.9	45.8	44.1	45.8	48.9	45.5	47.7	57.9	53.6
20°	51.1	51.3	54.5	50.9	48.3	50.9	54.5	51.3	51.1	62.3	57.5
22.5°	53.4	55.4	58.9	54.9	51.3	54.9	58.9	55.4	53.4	65.2	60.5
25°	54.8	58.3	62.4	57.9	53.8	57.9	62.4	58.3	54.8	66.9	62.6
27.5°	55.8	60.4	65.2	60.5	56.1	60.5	65.2	60.4	55.8	67.8	63.8
30°	56.3	61.9	67.1	62.7	58.1	62.7	67.1	61.9	56.3	68.1	64.3
32.5°	56.7	62.9	68.6	64.7	60.1	64.7	68.6	62.9	56.7	67.7	64.2
35°	56.8	63.7	69.7	66.5	61.8	66.5	69.7	63.7	56.8	66.7	63.7
37.5°	56.6	64.4	70.7	68.0	63.5	68.0	70.7	64.4	56.6	65.3	62.8
40°	56.1	64.7	71.6	69.7	65.1	69.7	71.6	64.7	56.1	63.3	61.5
42.5°	55.6	65.0	72.6	71.3	66.8	71.3	72.6	65.0	55.6	61.2	59.7
45°	55.1	65.4	73.7	72.9	68.5	72.9	73.7	65.4	55.1	58.9	56.6
47.5°	54.4	65.6	74.8	74.7	70.9	74.7	74.8	65.6	54.4	56.7	52.9
50°	53.8	65.9	76.1	77.4	73.5	77.4	76.1	65.9	53.8	54.4	49.3
52.5°	53.1	66.4	77.4	79.9	76.1	79.9	77.4	66.4	53.1	52.0	45.8
55°	52.3	66.9	78.7	82.6	78.8	82.6	78.7	66.9	52.3	49.7	42.2
57.5°	51.5	67.5	80.2	85.1	81.1	85.1	80.2	67.5	51.5	47.4	38.9
60°	50.7	67.9	82.0	87.6	83.3	87.6	82.0	67.9	50.7	45.1	35.9
62.5°	50.2	68.5	83.9	89.7	85.1	89.7	83.9	68.5	50.2	43.2	33.3
65°	49.8	69.4	85.8	91.6	86.8	91.6	85.8	69.4	49.8	41.5	31.0
67.5°	49.8	70.4	87.4	93.4	88.3	93.4	87.4	70.4	49.8	40.2	29.1
70°	49.9	71.3	88.6	94.7	89.5	94.7	88.6	71.3	49.9	39.5	27.9
72.5°	49.9	72.1	89.6	95.7	90.4	95.7	89.6	72.1	49.9	39.2	27.3
75°	49.9	72.8	90.4	96.6	91.2	96.6	90.4	72.8	49.9	38.8	27.0
77.5°	49.8	73.3	91.0	97.2	91.7	97.2	91.0	73.3	49.8	38.6	26.7
80°	49.8	73.5	91.3	97.6	91.9	97.6	91.3	73.5	49.8	38.3	26.3
82.5°	49.7	73.7	91.6	98.0	92.4	98.0	91.6	73.7	49.7	38.1	26.1
85°	49.6	73.8	91.8	98.5	92.9	98.5	91.8	73.8	49.6	37.9	25.8
87.5°	49.6	73.9	92.2	98.9	93.4	98.9	92.2	73.9	49.6	37.7	25.6
90°	49.6	73.8	92.3	99.0	93.6	99.0	92.3	73.8	49.6	37.7	25.6
92.5°	49.4	73.7	92.1	99.0	93.4	99.0	92.1	73.7	49.4	37.6	25.5
95°	49.2	73.3	91.7	98.5	92.9	98.5	91.7	73.3	49.2	37.4	25.3
97.5°	48.9	72.8	91.1	97.9	92.3	97.9	91.1	72.8	48.9	37.1	25.1
100°	48.4	72.1	90.3	97.1	91.6	97.1	90.3	72.1	48.4	36.7	24.9
102.5°	47.8	71.3	89.5	96.1	90.7	96.1	89.5	71.3	47.8	36.2	24.5
105°	47.1	70.2	88.4	94.9	89.3	94.9	88.4	70.2	47.1	35.5	24.1
107.5°	46.2	69.0	86.9	93.3	87.8	93.3	86.9	69.0	46.2	34.8	23.6
110°	45.2	67.4	85.1	91.3	85.9	91.3	85.1	67.4	45.2	34.0	23.0



TEST NUMBER: 18664A
 CATALOG NUMBER: 632-CF1/13

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	44.1	65.8	83.3	89.4	83.9	89.4	83.3	65.8	44.1	33.2	22.5
115°	43.0	64.1	81.4	87.4	82.1	87.4	81.4	64.1	43.0	32.3	21.9
117.5°	41.8	62.3	79.2	85.1	79.9	85.1	79.2	62.3	41.8	31.3	21.2
120°	40.5	60.3	76.9	82.6	77.5	82.6	76.9	60.3	40.5	30.3	20.5
122.5°	39.1	58.0	74.3	79.8	74.9	79.8	74.3	58.0	39.1	29.2	19.7
125°	37.6	55.8	71.6	76.9	72.2	76.9	71.6	55.8	37.6	28.0	18.9
127.5°	36.0	53.2	68.6	73.7	69.2	73.7	68.6	53.2	36.0	26.8	18.0
130°	34.4	50.7	65.5	70.5	66.2	70.5	65.5	50.7	34.4	25.6	17.2
132.5°	32.8	48.0	62.3	67.0	63.1	67.0	62.3	48.0	32.8	24.3	16.3
135°	31.1	45.3	59.0	63.6	59.9	63.6	59.0	45.3	31.1	23.1	15.3
137.5°	29.4	42.6	55.6	60.1	56.7	60.1	55.6	42.6	29.4	21.7	14.4
140°	27.6	39.6	51.9	56.3	53.2	56.3	51.9	39.6	27.6	20.3	13.4
142.5°	25.7	36.6	48.3	52.5	49.8	52.5	48.3	36.6	25.7	18.9	12.3
145°	23.7	33.5	44.4	48.4	46.1	48.4	44.4	33.5	23.7	17.3	11.2
147.5°	21.8	30.5	40.4	44.4	42.4	44.4	40.4	30.5	21.8	15.8	10.1
150°	19.8	27.3	36.3	40.1	38.5	40.1	36.3	27.3	19.8	14.2	8.9
152.5°	17.8	24.2	32.3	35.9	34.7	35.9	32.3	24.2	17.8	12.7	7.8
155°	15.7	21.0	28.1	31.5	30.7	31.5	28.1	21.0	15.7	11.1	6.5
157.5°	13.6	17.8	23.9	27.2	26.8	27.2	23.9	17.8	13.6	9.5	5.2
160°	11.5	14.6	19.8	23.0	22.9	23.0	19.8	14.6	11.5	7.9	3.8
162.5°	9.4	11.3	15.6	18.5	18.7	18.5	15.6	11.3	9.4	6.2	2.1
165°	7.0	8.0	11.6	14.2	14.4	14.2	11.6	8.0	7.0	4.5	0.8
167.5°	4.4	5.2	7.5	9.4	9.6	9.4	7.5	5.2	4.4	2.5	0.5
170°	2.4	3.5	4.0	5.2	5.4	5.2	4.0	3.5	2.4	0.9	0.5
172.5°	1.1	2.1	2.1	2.7	3.0	2.7	2.1	2.1	1.1	0.5	0.5
175°	0.6	0.9	1.0	1.3	1.9	1.3	1.0	0.9	0.6	0.5	0.5
177.5°	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
180°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5



TEST NUMBER: 18664A
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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	16.6	16.6	16.6	16.6	16.6	16.6
2.5°	20.1	18.9	20.1	20.8	20.9	17.6
5°	24.8	22.8	24.8	26.3	26.3	20.7
7.5°	29.5	26.5	29.5	32.3	32.3	25.4
10°	33.9	29.8	33.9	38.3	38.9	31.1
12.5°	37.6	32.3	37.6	43.8	45.5	36.9
15°	40.8	34.3	40.8	49.1	52.3	42.9
17.5°	43.4	36.0	43.4	53.6	57.9	47.7
20°	45.6	37.4	45.6	57.5	62.3	51.1
22.5°	47.4	38.4	47.4	60.5	65.2	53.4
25°	48.7	38.9	48.7	62.6	66.9	54.8
27.5°	49.6	39.0	49.6	63.8	67.8	55.8
30°	49.8	38.7	49.8	64.3	68.1	56.3
32.5°	49.7	37.9	49.7	64.2	67.7	56.7
35°	49.1	36.2	49.1	63.7	66.7	56.8
37.5°	46.8	33.1	46.8	62.8	65.3	56.6
40°	43.4	29.9	43.4	61.5	63.3	56.1
42.5°	39.7	26.6	39.7	59.7	61.2	55.6
45°	36.3	23.4	36.3	56.6	58.9	55.1
47.5°	32.9	20.4	32.9	52.9	56.7	54.4
50°	29.6	17.4	29.6	49.3	54.4	53.8
52.5°	26.7	14.8	26.7	45.8	52.0	53.1
55°	23.8	12.4	23.8	42.2	49.7	52.3
57.5°	21.3	10.2	21.3	38.9	47.4	51.5
60°	18.9	8.2	18.9	35.9	45.1	50.7
62.5°	16.8	6.5	16.8	33.3	43.2	50.2
65°	15.2	5.1	15.2	31.0	41.5	49.8
67.5°	14.2	4.2	14.2	29.1	40.2	49.8
70°	13.5	3.4	13.5	27.9	39.5	49.9
72.5°	12.9	2.7	12.9	27.3	39.2	49.9
75°	12.4	2.2	12.4	27.0	38.8	49.9
77.5°	12.0	1.7	12.0	26.7	38.6	49.8
80°	11.6	1.3	11.6	26.3	38.3	49.8
82.5°	11.3	0.9	11.3	26.1	38.1	49.7
85°	11.0	0.7	11.0	25.8	37.9	49.6
87.5°	10.8	0.5	10.8	25.6	37.7	49.6
90°	10.8	0.5	10.8	25.6	37.7	49.6
92.5°	10.7	0.5	10.7	25.5	37.6	49.4
95°	10.6	0.5	10.6	25.3	37.4	49.2
97.5°	10.5	0.5	10.5	25.1	37.1	48.9
100°	10.3	0.5	10.3	24.9	36.7	48.4
102.5°	10.2	0.5	10.2	24.5	36.2	47.8
105°	9.9	0.5	9.9	24.1	35.5	47.1
107.5°	9.7	0.5	9.7	23.6	34.8	46.2
110°	9.4	0.5	9.4	23.0	34.0	45.2



TEST NUMBER: 18664A
 CATALOG NUMBER: 632-CF1/13

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	9.1	0.5	9.1	22.5	33.2	44.1
115°	8.8	0.5	8.8	21.9	32.3	43.0
117.5°	8.4	0.5	8.4	21.2	31.3	41.8
120°	8.1	0.5	8.1	20.5	30.3	40.5
122.5°	7.7	0.5	7.7	19.7	29.2	39.1
125°	7.3	0.5	7.3	18.9	28.0	37.6
127.5°	6.9	0.5	6.9	18.0	26.8	36.0
130°	6.5	0.5	6.5	17.2	25.6	34.4
132.5°	6.0	0.5	6.0	16.3	24.3	32.8
135°	5.6	0.5	5.6	15.3	23.1	31.1
137.5°	5.1	0.5	5.1	14.4	21.7	29.4
140°	4.6	0.5	4.6	13.4	20.3	27.6
142.5°	4.1	0.5	4.1	12.3	18.9	25.7
145°	3.5	0.5	3.5	11.2	17.3	23.7
147.5°	2.9	0.5	2.9	10.1	15.8	21.8
150°	2.3	0.5	2.3	8.9	14.2	19.8
152.5°	1.7	0.5	1.7	7.8	12.7	17.8
155°	1.1	0.5	1.1	6.5	11.1	15.7
157.5°	0.8	0.5	0.8	5.2	9.5	13.6
160°	0.5	0.5	0.5	3.8	7.9	11.5
162.5°	0.5	0.5	0.5	2.1	6.2	9.4
165°	0.5	0.5	0.5	0.8	4.5	7.0
167.5°	0.5	0.5	0.5	0.5	2.5	4.4
170°	0.5	0.5	0.5	0.5	0.9	2.4
172.5°	0.5	0.5	0.5	0.5	0.5	1.1
175°	0.5	0.5	0.5	0.5	0.5	0.6
177.5°	0.5	0.5	0.5	0.5	0.5	0.5
180°	0.5	0.5	0.5	0.5	0.5	0.5

(END OF REPORT)