

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: 19362A

Luminaire Tested: **633-WP-CF2/13**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 19362A
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 633-WP-CF2/13
Description: EXTERIOR WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC LENS
Light Source: TWO 13 WATT CPFL LAMPS. LUMEN RATING = 1800 LMS.

Ballast/Driver: -

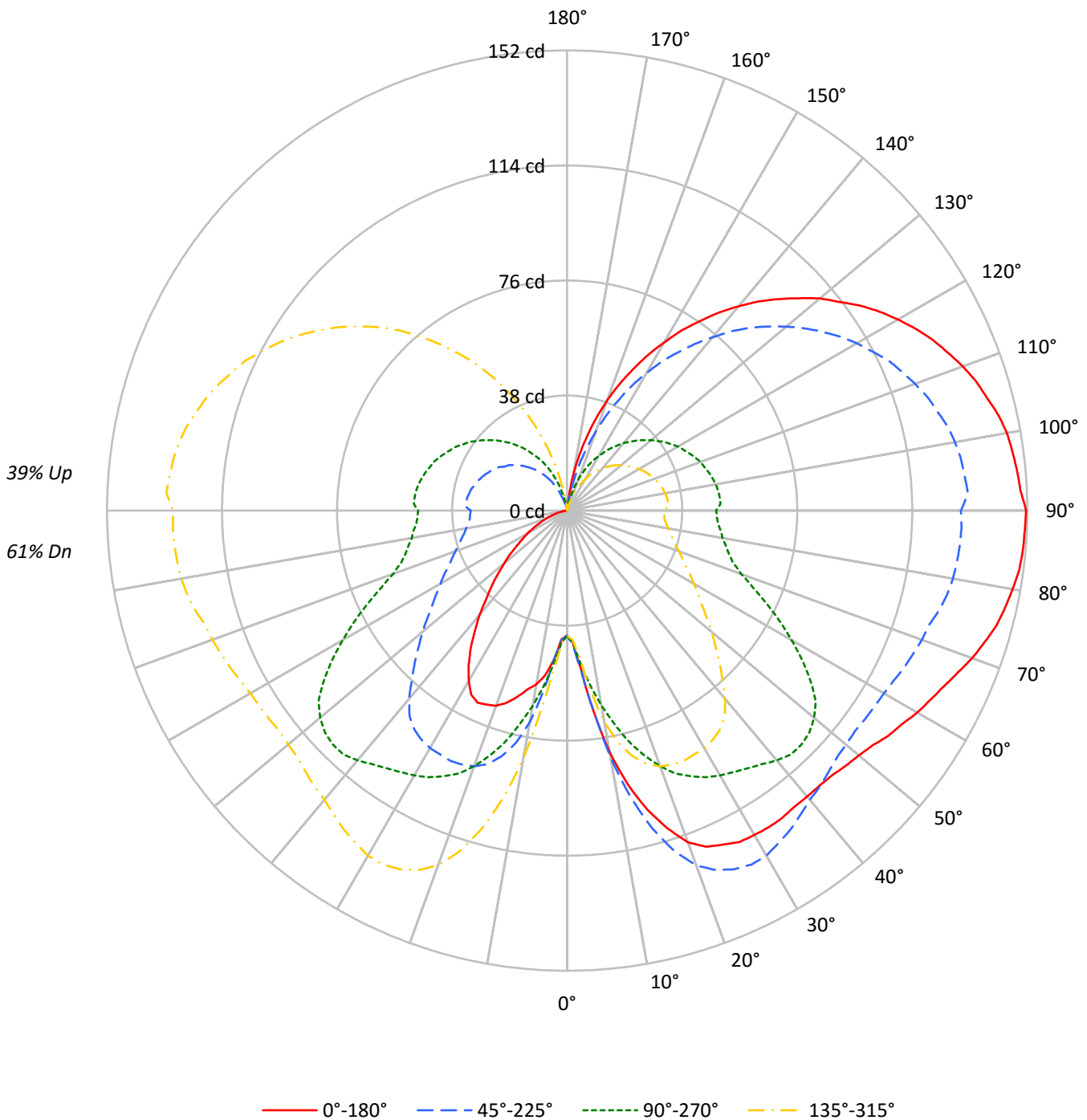
Summary

Lumens per Lamp: 1800 (1 lamp)
Luminaire Lumens: 883.7 lumens
Efficiency: 49.1%
Efficacy: -
Spacing Criteria (0/90/45): 2.36 / 2.74 / 2.51
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 0.65' x H: 0.73')
CIE Type: Semi-Direct

Input Watts (W): 0
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





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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	54	54	54	54	50	50	50	50	44	44	44	38	38	38	32	32	32	30
1	47	44	41	39	44	41	39	36	35	33	32	30	29	27	25	24	23	21
2	42	37	33	30	39	35	31	28	30	27	25	25	23	21	21	20	18	16
3	38	32	28	24	35	30	26	23	26	23	20	22	19	17	18	16	15	13
4	34	28	24	20	32	26	22	19	23	19	16	19	16	14	16	14	12	10
5	31	25	20	17	29	23	19	16	20	16	14	17	14	12	14	12	10	9
6	29	22	18	14	27	21	16	13	18	14	12	15	12	10	13	10	9	7
7	27	20	15	12	25	18	14	12	16	13	10	14	11	9	11	9	8	6
8	25	18	14	11	23	17	13	10	14	11	9	12	10	8	10	8	7	5
9	23	16	12	9	21	15	11	9	13	10	8	11	9	7	10	7	6	5
10	21	15	11	8	20	14	10	8	12	9	7	10	8	6	9	7	5	4

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	2974	2974	2974	2974
5°	3468	2862	3238	2862
10°	4943	3066	3552	3066
15°	5856	3186	3650	3186
20°	6342	3192	3731	3192
25°	6345	3101	3650	3101
30°	6239	2965	3278	2965
35°	6096	2834	2731	2834
40°	5966	2763	2173	2763
45°	5933	2669	1688	2669
50°	6026	2494	1298	2494
55°	6248	2228	974	2228
60°	6527	1897	733	1897
65°	6863	1584	520	1584
70°	7337	1325	345	1325
75°	7866	1198	209	1198
80°	8406	1137	73	1137
85°	9021	1108	60	1108



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	5.5	0.6	0.3
10°-20°	25.3	2.9	1.4
20°-30°	48.8	5.5	2.7
30°-40°	65.8	7.4	3.7
40°-50°	75.7	8.6	4.2
50°-60°	79.8	9.0	4.4
60°-70°	78.6	8.9	4.4
70°-80°	78.9	8.9	4.4
80°-90°	80.1	9.1	4.4
90°-100°	80.6	9.1	4.5
100°-110°	75.1	8.5	4.2
110°-120°	65.0	7.4	3.6
120°-130°	51.6	5.8	2.9
130°-140°	36.9	4.2	2.0
140°-150°	22.6	2.6	1.3
150°-160°	10.6	1.2	0.6
160°-170°	2.7	0.3	0.2
170°-180°	0.2	0.0	0.0
0°-30°	79.7	9.0	4.4
0°-40°	145.5	16.5	8.1
0°-60°	300.9	34.0	16.7
0°-90°	538.4	60.9	29.9
90°-120°	220.7	25.0	12.3
90°-150°	331.8	37.5	18.4
90°-180°	345.0	39.0	19.2
0°-180°	883.7	100.0	49.1

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	41	41	41	41	41	
5°	53	51	49	51	53	6
15°	102	79	64	79	102	29
25°	122	97	70	97	122	56
35°	124	104	56	104	124	78
45°	124	109	35	109	124	96
55°	130	98	20	98	130	116
65°	137	73	10	73	137	137
75°	147	55	4	55	147	155
85°	151	50	1	50	151	123
90°	152	49	0	49	152	83
95°	149	51	0	51	149	122
105°	144	48	0	48	144	152
115°	133	45	0	45	133	132
125°	118	40	0	40	118	106
135°	99	33	0	33	99	77
145°	76	25	0	25	76	48
155°	51	16	0	16	51	24
165°	25	6	0	6	25	8
175°	0	1	0	1	0	0
180°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3
2.5°	43.6	43.9	44.3	44.3	43.7	42.7	42.8	42.5	42.5	42.5	42.8
5°	52.7	53.2	53.2	51.7	50.6	49.6	49.2	49.2	49.2	49.2	49.2
7.5°	66.8	67.8	66.5	61.0	58.1	57.4	60.2	56.6	54.7	56.6	60.2
10°	81.0	83.9	82.8	71.1	65.4	66.5	70.8	63.5	58.2	63.5	70.8
12.5°	92.7	97.8	97.0	81.6	72.2	75.5	78.7	68.5	60.5	68.5	78.7
15°	102.2	108.6	108.7	91.5	79.1	83.9	84.1	72.6	63.7	72.6	84.1
17.5°	110.0	116.3	118.0	101.2	84.8	90.8	87.8	75.9	66.6	75.9	87.8
20°	116.6	121.8	124.7	110.9	89.8	96.5	89.9	78.4	68.6	78.4	89.9
22.5°	120.2	124.9	128.5	118.8	94.1	100.6	90.8	79.9	69.4	79.9	90.8
25°	121.7	126.3	130.7	124.9	96.8	102.9	91.2	80.0	70.0	80.0	91.2
27.5°	123.4	126.2	131.8	128.7	99.3	104.2	90.8	79.7	68.6	79.7	90.8
30°	123.7	126.2	131.6	131.3	101.0	104.7	90.6	78.0	65.0	78.0	90.6
32.5°	124.0	125.5	130.1	133.4	102.4	104.3	89.7	73.1	60.5	73.1	89.7
35°	123.9	124.7	128.6	133.9	103.9	103.7	88.1	68.1	55.5	68.1	88.1
37.5°	123.3	124.5	126.6	133.7	105.6	102.9	85.5	62.6	50.0	62.6	85.5
40°	123.3	124.1	124.7	132.8	107.7	102.0	81.2	57.2	44.9	57.2	81.2
42.5°	123.3	124.1	123.6	130.7	109.3	101.4	75.9	51.4	39.5	51.4	75.9
45°	123.7	124.7	122.1	128.6	109.4	100.3	71.2	46.8	35.2	46.8	71.2
47.5°	124.8	125.6	120.8	126.4	108.5	98.6	66.5	42.7	31.0	42.7	66.5
50°	125.8	126.9	120.2	123.6	106.5	95.4	62.3	39.4	27.1	39.4	62.3
52.5°	127.3	128.5	119.8	120.3	103.5	91.5	58.1	36.3	23.8	36.3	58.1
55°	129.6	130.2	120.1	115.5	98.2	86.9	54.3	33.1	20.2	33.1	54.3
57.5°	131.2	132.2	120.4	109.5	92.1	81.2	51.2	30.6	17.4	30.6	51.2
60°	133.5	134.2	120.8	103.9	85.6	74.2	48.3	28.0	15.0	28.0	48.3
62.5°	135.3	135.9	121.6	98.9	79.2	68.2	45.8	26.1	12.7	26.1	45.8
65°	137.3	138.0	122.8	94.3	72.6	62.2	43.1	24.0	10.4	24.0	43.1
67.5°	139.7	139.8	123.7	90.9	66.4	57.6	41.1	22.4	8.5	22.4	41.1
70°	142.4	142.3	124.7	89.3	61.2	53.7	39.3	20.9	6.7	20.9	39.3
72.5°	144.6	144.4	125.4	88.4	57.5	50.8	37.4	19.7	5.2	19.7	37.4
75°	146.8	146.5	127.2	88.1	55.3	49.0	36.2	18.5	3.9	18.5	36.2
77.5°	148.2	148.3	128.5	87.8	53.7	47.2	34.8	17.7	2.5	17.7	34.8
80°	149.4	149.5	129.4	87.7	52.1	46.0	33.9	16.6	1.3	16.6	33.9
82.5°	150.6	150.3	129.9	87.7	51.2	44.8	33.0	16.2	1.1	16.2	33.0
85°	151.1	150.8	130.2	87.5	50.0	43.8	32.3	16.2	1.0	16.2	32.3
87.5°	151.3	151.3	130.4	87.2	49.5	43.5	32.1	16.0	0.7	16.0	32.1
90°	151.6	151.4	130.1	87.0	49.2	43.2	31.8	15.7	0.3	15.7	31.8
92.5°	149.9	150.6	132.5	90.9	50.7	46.4	33.8	15.6	0.3	15.6	33.8
95°	149.2	150.4	131.8	90.6	50.6	46.1	33.4	15.5	0.1	15.5	33.4
97.5°	148.4	149.4	131.2	89.9	50.3	45.9	33.3	15.1	0.3	15.1	33.3
100°	147.5	148.2	130.1	89.4	49.9	45.2	32.8	15.0	0.0	15.0	32.8
102.5°	145.9	146.5	128.7	88.4	49.2	44.8	32.5	14.7	0.0	14.7	32.5
105°	143.6	144.2	126.6	86.8	48.5	44.0	31.8	14.3	0.0	14.3	31.8
107.5°	141.7	142.0	124.8	85.4	47.6	43.5	31.4	14.1	0.0	14.1	31.4
110°	139.1	139.6	122.3	83.9	46.9	42.4	30.6	13.7	0.0	13.7	30.6



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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°	136.2	136.7	119.7	82.0	45.8	41.7	30.0	13.3	0.0	13.3	30.0
115°	133.3	133.6	117.2	79.7	44.6	40.8	29.2	12.6	0.0	12.6	29.2
117.5°	129.9	129.9	113.7	77.8	43.4	39.6	28.4	12.4	0.0	12.4	28.4
120°	126.2	126.2	110.5	75.5	42.3	38.3	27.4	11.6	0.0	11.6	27.4
122.5°	122.3	121.7	106.9	72.6	40.7	37.2	26.7	11.3	0.0	11.3	26.7
125°	118.1	117.6	102.9	69.8	39.5	35.6	25.3	10.7	0.0	10.7	25.3
127.5°	113.2	112.7	98.9	66.7	37.7	34.3	24.6	10.3	0.0	10.3	24.6
130°	109.0	108.0	94.5	63.7	36.2	32.6	23.4	9.6	0.0	9.6	23.4
132.5°	103.8	103.1	90.0	60.1	34.4	31.3	22.2	9.2	0.0	9.2	22.2
135°	98.8	97.8	85.3	56.7	32.8	29.4	21.0	8.2	0.0	8.2	21.0
137.5°	93.7	92.2	80.3	53.3	30.8	27.7	19.6	7.5	0.0	7.5	19.6
140°	88.1	85.9	74.7	49.8	29.1	25.9	18.2	7.1	0.0	7.1	18.2
142.5°	82.5	79.9	69.4	45.9	27.1	24.4	16.9	6.1	0.0	6.1	16.9
145°	76.3	73.6	63.7	42.0	25.1	22.3	15.3	5.6	0.0	5.6	15.3
147.5°	70.6	67.3	58.5	38.0	22.9	20.5	13.7	4.6	0.0	4.6	13.7
150°	64.1	60.6	52.4	33.9	20.7	18.1	12.0	4.0	0.0	4.0	12.0
152.5°	58.1	54.5	46.7	29.4	18.7	16.3	10.3	3.0	0.0	3.0	10.3
155°	51.4	47.8	40.4	25.1	16.4	13.7	8.4	2.7	0.0	2.7	8.4
157.5°	45.3	41.5	34.3	20.5	13.8	11.6	6.3	1.9	0.0	1.9	6.3
160°	38.7	35.0	28.0	16.4	11.1	8.8	4.5	1.4	0.0	1.4	4.5
162.5°	32.2	28.6	21.7	11.8	8.6	6.4	3.0	0.6	0.0	0.6	3.0
165°	25.4	23.1	16.0	7.1	5.8	4.0	1.4	0.6	0.0	0.6	1.4
167.5°	18.8	16.9	10.3	3.6	3.3	1.7	0.9	0.3	0.0	0.3	0.9
170°	12.9	11.2	6.1	1.5	1.5	0.8	0.4	0.0	0.0	0.0	0.4
172.5°	6.2	5.4	2.5	1.1	1.1	0.6	0.6	0.0	0.0	0.0	0.6
175°	0.0	1.4	1.0	1.1	0.9	0.7	0.3	0.1	0.0	0.1	0.3
177.5°	0.0	0.4	0.8	1.0	0.8	0.7	0.6	0.0	0.0	0.0	0.6
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	41.3	41.3	41.3	41.3	41.3	41.3
2.5°	42.7	43.7	44.3	44.3	43.9	43.6
5°	49.6	50.6	51.7	53.2	53.2	52.7
7.5°	57.4	58.1	61.0	66.5	67.8	66.8
10°	66.5	65.4	71.1	82.8	83.9	81.0
12.5°	75.5	72.2	81.6	97.0	97.8	92.7
15°	83.9	79.1	91.5	108.7	108.6	102.2
17.5°	90.8	84.8	101.2	118.0	116.3	110.0
20°	96.5	89.8	110.9	124.7	121.8	116.6
22.5°	100.6	94.1	118.8	128.5	124.9	120.2
25°	102.9	96.8	124.9	130.7	126.3	121.7
27.5°	104.2	99.3	128.7	131.8	126.2	123.4
30°	104.7	101.0	131.3	131.6	126.2	123.7
32.5°	104.3	102.4	133.4	130.1	125.5	124.0
35°	103.7	103.9	133.9	128.6	124.7	123.9
37.5°	102.9	105.6	133.7	126.6	124.5	123.3
40°	102.0	107.7	132.8	124.7	124.1	123.3
42.5°	101.4	109.3	130.7	123.6	124.1	123.3
45°	100.3	109.4	128.6	122.1	124.7	123.7
47.5°	98.6	108.5	126.4	120.8	125.6	124.8
50°	95.4	106.5	123.6	120.2	126.9	125.8
52.5°	91.5	103.5	120.3	119.8	128.5	127.3
55°	86.9	98.2	115.5	120.1	130.2	129.6
57.5°	81.2	92.1	109.5	120.4	132.2	131.2
60°	74.2	85.6	103.9	120.8	134.2	133.5
62.5°	68.2	79.2	98.9	121.6	135.9	135.3
65°	62.2	72.6	94.3	122.8	138.0	137.3
67.5°	57.6	66.4	90.9	123.7	139.8	139.7
70°	53.7	61.2	89.3	124.7	142.3	142.4
72.5°	50.8	57.5	88.4	125.4	144.4	144.6
75°	49.0	55.3	88.1	127.2	146.5	146.8
77.5°	47.2	53.7	87.8	128.5	148.3	148.2
80°	46.0	52.1	87.7	129.4	149.5	149.4
82.5°	44.8	51.2	87.7	129.9	150.3	150.6
85°	43.8	50.0	87.5	130.2	150.8	151.1
87.5°	43.5	49.5	87.2	130.4	151.3	151.3
90°	43.2	49.2	87.0	130.1	151.4	151.6
92.5°	46.4	50.7	90.9	132.5	150.6	149.9
95°	46.1	50.6	90.6	131.8	150.4	149.2
97.5°	45.9	50.3	89.9	131.2	149.4	148.4
100°	45.2	49.9	89.4	130.1	148.2	147.5
102.5°	44.8	49.2	88.4	128.7	146.5	145.9
105°	44.0	48.5	86.8	126.6	144.2	143.6
107.5°	43.5	47.6	85.4	124.8	142.0	141.7
110°	42.4	46.9	83.9	122.3	139.6	139.1



TEST NUMBER: 19362A

CATALOG NUMBER: 633-WP-CF2/13

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	41.7	45.8	82.0	119.7	136.7	136.2
115°	40.8	44.6	79.7	117.2	133.6	133.3
117.5°	39.6	43.4	77.8	113.7	129.9	129.9
120°	38.3	42.3	75.5	110.5	126.2	126.2
122.5°	37.2	40.7	72.6	106.9	121.7	122.3
125°	35.6	39.5	69.8	102.9	117.6	118.1
127.5°	34.3	37.7	66.7	98.9	112.7	113.2
130°	32.6	36.2	63.7	94.5	108.0	109.0
132.5°	31.3	34.4	60.1	90.0	103.1	103.8
135°	29.4	32.8	56.7	85.3	97.8	98.8
137.5°	27.7	30.8	53.3	80.3	92.2	93.7
140°	25.9	29.1	49.8	74.7	85.9	88.1
142.5°	24.4	27.1	45.9	69.4	79.9	82.5
145°	22.3	25.1	42.0	63.7	73.6	76.3
147.5°	20.5	22.9	38.0	58.5	67.3	70.6
150°	18.1	20.7	33.9	52.4	60.6	64.1
152.5°	16.3	18.7	29.4	46.7	54.5	58.1
155°	13.7	16.4	25.1	40.4	47.8	51.4
157.5°	11.6	13.8	20.5	34.3	41.5	45.3
160°	8.8	11.1	16.4	28.0	35.0	38.7
162.5°	6.4	8.6	11.8	21.7	28.6	32.2
165°	4.0	5.8	7.1	16.0	23.1	25.4
167.5°	1.7	3.3	3.6	10.3	16.9	18.8
170°	0.8	1.5	1.5	6.1	11.2	12.9
172.5°	0.6	1.1	1.1	2.5	5.4	6.2
175°	0.7	0.9	1.1	1.0	1.4	0.0
177.5°	0.7	0.8	1.0	0.8	0.4	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)