

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: 19862

Luminaire Tested: **660-WP-CF1/32**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 19862
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 660-WP-CF1/32
Description: INTERIOR WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC
LENS WITH WHITE OUTER SHIELD
Light Source: ONE SYLVANIA 26 WATT CPFL LAMP

CF32DT/E/841. LUMEN RATING = 2400 LMS.

Ballast/Driver: -

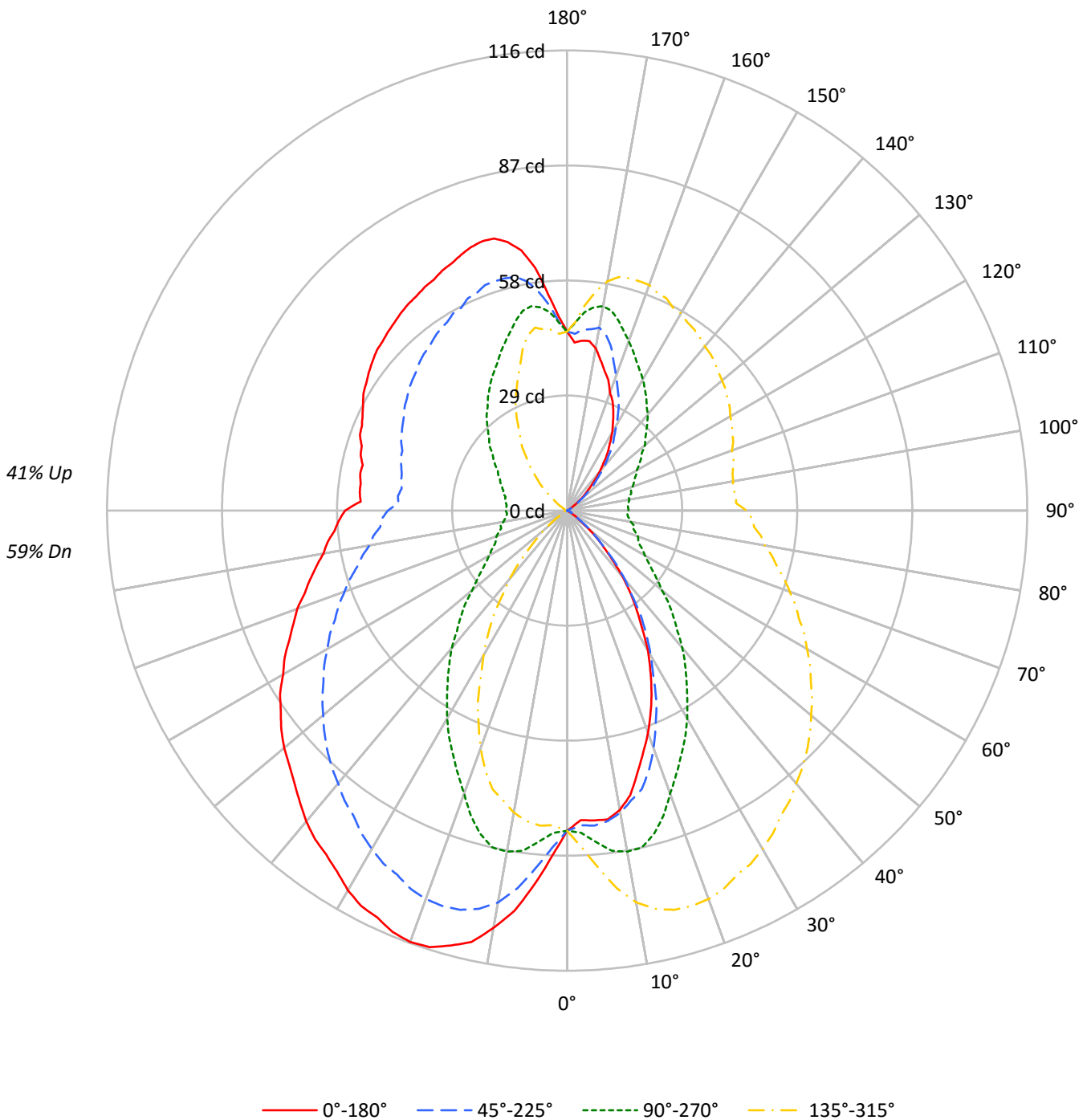
Summary

Lumens per Lamp: 2400 (1 lamp)
Luminaire Lumens: 442.4 lumens
Efficiency: 18.4%
Efficacy: 14.7 lumens/watt
Spacing Criteria (0/90/45): 1.33 / 1.13 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 0.33' x H: 0.4')
CIE Type: General Diffuse

Input Watts (W): 30
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	20	20	20	20	19	19	19	19	16	16	16	14	14	14	12	12	12	11
1	18	17	16	15	17	16	15	14	14	13	13	12	11	11	10	10	9	8
2	16	15	13	12	15	14	13	12	12	11	10	10	9	9	9	8	8	7
3	15	13	11	10	14	12	11	10	10	9	8	9	8	7	8	7	6	6
4	14	11	10	9	13	11	9	8	9	8	7	8	7	6	7	6	5	5
5	12	10	9	7	12	9	8	7	8	7	6	7	6	5	6	5	5	4
6	11	9	8	6	11	9	7	6	7	6	5	6	6	5	5	5	4	4
7	11	8	7	6	10	8	6	5	7	6	5	6	5	4	5	4	4	3
8	10	7	6	5	9	7	6	5	6	5	4	5	4	4	5	4	3	3
9	9	7	5	4	9	6	5	4	6	5	4	5	4	3	4	4	3	3
10	9	6	5	4	8	6	5	4	5	4	3	5	4	3	4	3	3	2

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	6927	6927	6927	6927
5°	6108	6620	7370	6620
10°	5501	6418	7670	6418
15°	4588	5850	7613	5850
20°	3778	5013	7333	5013
25°	3044	4320	6850	4320
30°	2373	3730	6443	3730
35°	1734	3167	6002	3167
40°	1211	2689	5683	2689
45°	713	2241	5334	2241
50°	355	1848	5086	1848
55°	153	1566	4827	1566
60°	0	1374	4581	1374
65°	0	1253	4362	1253
70°	0	1225	4196	1225
75°	0	1157	4029	1157
80°	0	1156	3917	1156
85°	0	1156	3905	1156



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	8.3	1.9	0.3
10°-20°	24.7	5.6	1.0
20°-30°	35.0	7.9	1.5
30°-40°	38.6	8.7	1.6
40°-50°	37.1	8.4	1.5
50°-60°	33.6	7.6	1.4
60°-70°	30.9	7.0	1.3
70°-80°	28.0	6.3	1.2
80°-90°	25.1	5.7	1.0
90°-100°	22.9	5.2	1.0
100°-110°	22.9	5.2	1.0
110°-120°	23.2	5.3	1.0
120°-130°	23.8	5.4	1.0
130°-140°	24.5	5.5	1.0
140°-150°	23.8	5.4	1.0
150°-160°	20.6	4.7	0.9
160°-170°	14.5	3.3	0.6
170°-180°	4.8	1.1	0.2
0°-30°	67.9	15.4	2.8
0°-40°	106.5	24.1	4.4
0°-60°	177.3	40.1	7.4
0°-90°	261.4	59.1	10.9
90°-120°	69.1	15.6	2.9
90°-150°	141.2	31.9	5.9
90°-180°	181.0	40.9	7.5
0°-180°	442.4	100.0	18.4

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	81	81	81	81	81	
5°	78	84	95	84	78	7
15°	68	84	114	84	68	19
25°	50	68	113	68	50	23
35°	31	52	106	52	31	19
45°	13	38	97	38	13	10
55°	3	26	88	26	3	2
65°	0	20	77	20	0	0
75°	0	17	67	17	0	0
85°	0	15	59	15	0	0
90°	0	16	56	16	0	0
95°	0	15	52	15	0	0
105°	0	17	54	17	0	0
115°	0	19	57	19	0	0
125°	1	23	61	23	1	2
135°	8	28	64	28	8	6
145°	18	35	66	35	18	11
155°	28	41	69	41	28	13
165°	36	50	71	50	36	10
175°	43	50	55	50	43	4
180°	45	45	45	45	45	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7
2.5°	78.1	79.0	79.4	80.4	81.3	83.1	85.0	86.1	87.1	86.1	85.0
5°	78.4	78.0	79.7	81.6	83.9	88.2	90.4	92.7	94.6	92.7	90.4
7.5°	78.5	77.9	78.9	82.0	86.5	92.1	96.0	98.8	101.7	98.8	96.0
10°	76.6	77.1	77.3	81.3	87.3	94.6	100.3	104.4	106.8	104.4	100.3
12.5°	73.5	73.9	74.8	80.4	87.0	95.5	102.8	108.4	111.4	108.4	102.8
15°	68.4	68.6	72.7	76.2	84.4	95.4	104.2	111.7	113.5	111.7	104.2
17.5°	63.8	64.0	68.6	71.8	80.7	93.4	104.5	113.4	115.4	113.4	104.5
20°	59.6	59.7	63.7	66.8	75.9	91.2	104.2	113.8	115.7	113.8	104.2
22.5°	55.0	55.0	58.3	61.4	71.9	88.5	103.2	113.4	115.0	113.4	103.2
25°	50.3	50.2	53.3	56.0	68.0	85.8	101.3	112.2	113.2	112.2	101.3
27.5°	45.4	45.2	47.0	50.9	64.4	83.4	100.3	110.8	112.4	110.8	100.3
30°	40.7	40.4	42.1	45.8	60.5	80.5	98.5	109.2	110.5	109.2	98.5
32.5°	35.1	35.1	37.2	40.7	56.3	77.6	96.5	107.5	107.9	107.5	96.5
35°	30.6	30.6	32.3	36.0	52.5	74.8	93.9	105.5	105.9	105.5	93.9
37.5°	26.2	25.4	26.7	31.2	48.8	71.8	92.2	103.0	104.4	103.0	92.2
40°	21.8	21.2	22.5	26.2	45.2	69.2	89.8	101.0	102.3	101.0	89.8
42.5°	16.7	17.4	18.3	22.2	41.1	65.8	87.8	98.5	99.7	98.5	87.8
45°	13.0	13.7	13.4	18.3	37.9	63.5	85.5	96.0	97.2	96.0	85.5
47.5°	9.9	10.4	10.0	14.8	34.8	61.1	83.0	93.6	95.0	93.6	83.0
50°	6.5	7.1	7.4	10.8	31.2	58.3	80.3	91.6	93.1	91.6	80.3
52.5°	3.8	4.8	4.9	8.3	28.6	56.0	77.8	89.0	90.8	89.0	77.8
55°	2.8	2.9	2.6	6.8	26.2	52.9	75.0	86.6	88.1	86.6	75.0
57.5°	1.5	1.1	1.4	5.5	24.3	51.3	72.6	84.0	85.8	84.0	72.6
60°	0.0	0.8	1.6	3.7	22.6	49.2	69.8	81.1	82.7	81.1	69.8
62.5°	0.0	0.1	1.2	3.2	21.5	47.6	67.4	78.3	80.3	78.3	67.4
65°	0.0	0.3	1.1	3.5	20.1	45.4	64.5	75.5	77.3	75.5	64.5
67.5°	0.0	0.2	0.9	3.0	19.4	43.8	62.3	72.8	74.7	72.8	62.3
70°	0.0	0.2	0.8	2.5	19.0	42.1	59.7	69.9	72.4	69.9	59.7
72.5°	0.0	0.0	0.0	2.4	18.0	40.5	57.4	67.2	69.4	67.2	57.4
75°	0.0	0.1	0.0	2.1	17.2	39.0	54.8	64.6	67.1	64.6	54.8
77.5°	0.0	0.0	0.4	1.0	17.2	37.7	52.9	62.1	64.7	62.1	52.9
80°	0.0	0.0	0.3	0.8	16.3	36.3	50.6	59.8	62.4	59.8	50.6
82.5°	0.0	0.2	0.2	1.1	15.8	35.2	49.3	57.4	60.9	57.4	49.3
85°	0.0	0.2	0.2	0.9	15.3	34.1	47.3	55.7	58.9	55.7	47.3
87.5°	0.0	0.0	0.0	0.9	15.2	33.6	46.7	53.7	57.6	53.7	46.7
90°	0.0	0.0	0.0	0.4	15.5	33.1	45.2	52.7	56.0	52.7	45.2
92.5°	0.0	0.0	0.0	3.1	15.4	29.6	42.6	50.2	52.1	50.2	42.6
95°	0.0	0.0	0.0	2.6	15.3	29.9	42.8	50.4	52.5	50.4	42.8
97.5°	0.0	0.0	0.0	2.8	15.6	29.6	42.1	50.6	52.5	50.6	42.1
100°	0.0	0.0	0.0	3.1	15.9	30.2	42.5	50.5	53.0	50.5	42.5
102.5°	0.0	0.0	0.0	3.4	15.9	30.4	42.7	51.0	52.8	51.0	42.7
105°	0.0	0.0	0.0	3.7	16.7	30.9	43.3	51.7	53.9	51.7	43.3
107.5°	0.0	0.0	0.0	4.0	16.9	31.3	44.0	52.6	54.3	52.6	44.0
110°	0.0	0.0	0.3	3.7	17.5	31.7	44.2	53.4	55.6	53.4	44.2



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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°	0.0	0.0	0.4	4.2	18.2	32.7	45.3	54.3	56.0	54.3	45.3
115°	0.0	0.0	0.4	4.9	18.7	33.5	46.0	54.8	56.9	54.8	46.0
117.5°	0.0	0.0	0.8	5.1	19.6	34.2	46.8	56.2	58.0	56.2	46.8
120°	0.2	0.3	1.1	5.8	20.2	35.1	47.5	57.1	59.3	57.1	47.5
122.5°	0.3	0.7	1.5	6.3	21.5	36.2	48.6	58.5	60.0	58.5	48.6
125°	1.4	2.1	2.8	8.1	22.7	36.8	49.3	59.4	61.0	59.4	49.3
127.5°	3.0	3.0	3.7	9.4	23.7	38.1	50.3	60.1	61.8	60.1	50.3
130°	4.6	5.1	5.6	11.3	25.6	38.6	51.0	61.0	62.7	61.0	51.0
132.5°	6.1	6.4	7.6	13.0	26.7	40.1	51.7	61.4	63.1	61.4	51.7
135°	7.9	8.5	9.8	14.9	28.2	41.0	52.7	62.3	63.8	62.3	52.7
137.5°	10.1	10.7	11.8	17.0	29.9	41.9	53.5	62.7	64.4	62.7	53.5
140°	12.8	12.9	14.6	19.6	31.6	43.0	54.0	63.3	65.1	63.3	54.0
142.5°	15.0	15.0	16.9	21.6	32.9	43.6	55.0	64.6	65.7	64.6	55.0
145°	17.8	17.5	19.9	24.1	34.8	45.1	55.8	65.4	66.1	65.4	55.8
147.5°	20.0	20.5	22.0	26.6	36.4	45.7	56.3	65.9	66.8	65.9	56.3
150°	22.7	23.0	24.7	28.9	38.2	47.0	57.4	66.1	67.2	66.1	57.4
152.5°	25.0	25.0	27.9	31.6	39.7	48.2	57.7	67.3	68.2	67.3	57.7
155°	27.5	27.6	30.8	34.1	41.4	49.3	59.1	67.6	68.8	67.6	59.1
157.5°	29.9	30.0	33.3	36.1	43.5	50.9	59.4	68.8	69.8	68.8	59.4
160°	31.6	33.1	36.0	38.9	45.4	52.6	60.5	69.2	70.7	69.2	60.5
162.5°	34.5	35.6	39.1	41.7	47.4	54.2	60.6	69.4	71.2	69.4	60.6
165°	36.5	38.7	42.8	44.2	49.7	55.1	60.6	68.5	71.0	68.5	60.6
167.5°	38.9	41.5	45.3	47.3	51.6	55.3	60.3	66.8	69.3	66.8	60.3
170°	41.5	43.3	46.8	49.4	52.3	54.3	58.7	63.9	66.6	63.9	58.7
172.5°	43.1	43.6	46.1	49.9	51.7	52.9	55.7	59.3	61.7	59.3	55.7
175°	43.0	43.4	45.8	48.5	50.2	50.2	52.0	54.0	54.6	54.0	52.0
177.5°	42.4	43.4	44.6	47.0	47.4	46.8	47.6	48.4	48.9	48.4	47.6
180°	45.1	45.1	45.1	45.1	45.1	45.1	45.1	45.1	45.1	45.1	45.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	80.7	80.7	80.7	80.7	80.7	80.7
2.5°	83.1	81.3	80.4	79.4	79.0	78.1
5°	88.2	83.9	81.6	79.7	78.0	78.4
7.5°	92.1	86.5	82.0	78.9	77.9	78.5
10°	94.6	87.3	81.3	77.3	77.1	76.6
12.5°	95.5	87.0	80.4	74.8	73.9	73.5
15°	95.4	84.4	76.2	72.7	68.6	68.4
17.5°	93.4	80.7	71.8	68.6	64.0	63.8
20°	91.2	75.9	66.8	63.7	59.7	59.6
22.5°	88.5	71.9	61.4	58.3	55.0	55.0
25°	85.8	68.0	56.0	53.3	50.2	50.3
27.5°	83.4	64.4	50.9	47.0	45.2	45.4
30°	80.5	60.5	45.8	42.1	40.4	40.7
32.5°	77.6	56.3	40.7	37.2	35.1	35.1
35°	74.8	52.5	36.0	32.3	30.6	30.6
37.5°	71.8	48.8	31.2	26.7	25.4	26.2
40°	69.2	45.2	26.2	22.5	21.2	21.8
42.5°	65.8	41.1	22.2	18.3	17.4	16.7
45°	63.5	37.9	18.3	13.4	13.7	13.0
47.5°	61.1	34.8	14.8	10.0	10.4	9.9
50°	58.3	31.2	10.8	7.4	7.1	6.5
52.5°	56.0	28.6	8.3	4.9	4.8	3.8
55°	52.9	26.2	6.8	2.6	2.9	2.8
57.5°	51.3	24.3	5.5	1.4	1.1	1.5
60°	49.2	22.6	3.7	1.6	0.8	0.0
62.5°	47.6	21.5	3.2	1.2	0.1	0.0
65°	45.4	20.1	3.5	1.1	0.3	0.0
67.5°	43.8	19.4	3.0	0.9	0.2	0.0
70°	42.1	19.0	2.5	0.8	0.2	0.0
72.5°	40.5	18.0	2.4	0.0	0.0	0.0
75°	39.0	17.2	2.1	0.0	0.1	0.0
77.5°	37.7	17.2	1.0	0.4	0.0	0.0
80°	36.3	16.3	0.8	0.3	0.0	0.0
82.5°	35.2	15.8	1.1	0.2	0.2	0.0
85°	34.1	15.3	0.9	0.2	0.2	0.0
87.5°	33.6	15.2	0.9	0.0	0.0	0.0
90°	33.1	15.5	0.4	0.0	0.0	0.0
92.5°	29.6	15.4	3.1	0.0	0.0	0.0
95°	29.9	15.3	2.6	0.0	0.0	0.0
97.5°	29.6	15.6	2.8	0.0	0.0	0.0
100°	30.2	15.9	3.1	0.0	0.0	0.0
102.5°	30.4	15.9	3.4	0.0	0.0	0.0
105°	30.9	16.7	3.7	0.0	0.0	0.0
107.5°	31.3	16.9	4.0	0.0	0.0	0.0
110°	31.7	17.5	3.7	0.3	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	32.7	18.2	4.2	0.4	0.0	0.0
115°	33.5	18.7	4.9	0.4	0.0	0.0
117.5°	34.2	19.6	5.1	0.8	0.0	0.0
120°	35.1	20.2	5.8	1.1	0.3	0.2
122.5°	36.2	21.5	6.3	1.5	0.7	0.3
125°	36.8	22.7	8.1	2.8	2.1	1.4
127.5°	38.1	23.7	9.4	3.7	3.0	3.0
130°	38.6	25.6	11.3	5.6	5.1	4.6
132.5°	40.1	26.7	13.0	7.6	6.4	6.1
135°	41.0	28.2	14.9	9.8	8.5	7.9
137.5°	41.9	29.9	17.0	11.8	10.7	10.1
140°	43.0	31.6	19.6	14.6	12.9	12.8
142.5°	43.6	32.9	21.6	16.9	15.0	15.0
145°	45.1	34.8	24.1	19.9	17.5	17.8
147.5°	45.7	36.4	26.6	22.0	20.5	20.0
150°	47.0	38.2	28.9	24.7	23.0	22.7
152.5°	48.2	39.7	31.6	27.9	25.0	25.0
155°	49.3	41.4	34.1	30.8	27.6	27.5
157.5°	50.9	43.5	36.1	33.3	30.0	29.9
160°	52.6	45.4	38.9	36.0	33.1	31.6
162.5°	54.2	47.4	41.7	39.1	35.6	34.5
165°	55.1	49.7	44.2	42.8	38.7	36.5
167.5°	55.3	51.6	47.3	45.3	41.5	38.9
170°	54.3	52.3	49.4	46.8	43.3	41.5
172.5°	52.9	51.7	49.9	46.1	43.6	43.1
175°	50.2	50.2	48.5	45.8	43.4	43.0
177.5°	46.8	47.4	47.0	44.6	43.4	42.4
180°	45.1	45.1	45.1	45.1	45.1	45.1

(END OF REPORT)