

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: 18667

Luminaire Tested: **683-CF1/13**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 18667
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 683-CF1/13
Description: FLUORESCENT WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND NO LENS

Light Source: ONE SYLVANIA 13 WATT CPFL LAMP

CF13DS/E830. LUMEN RATING = 800 LMS.

Ballast/Driver: -

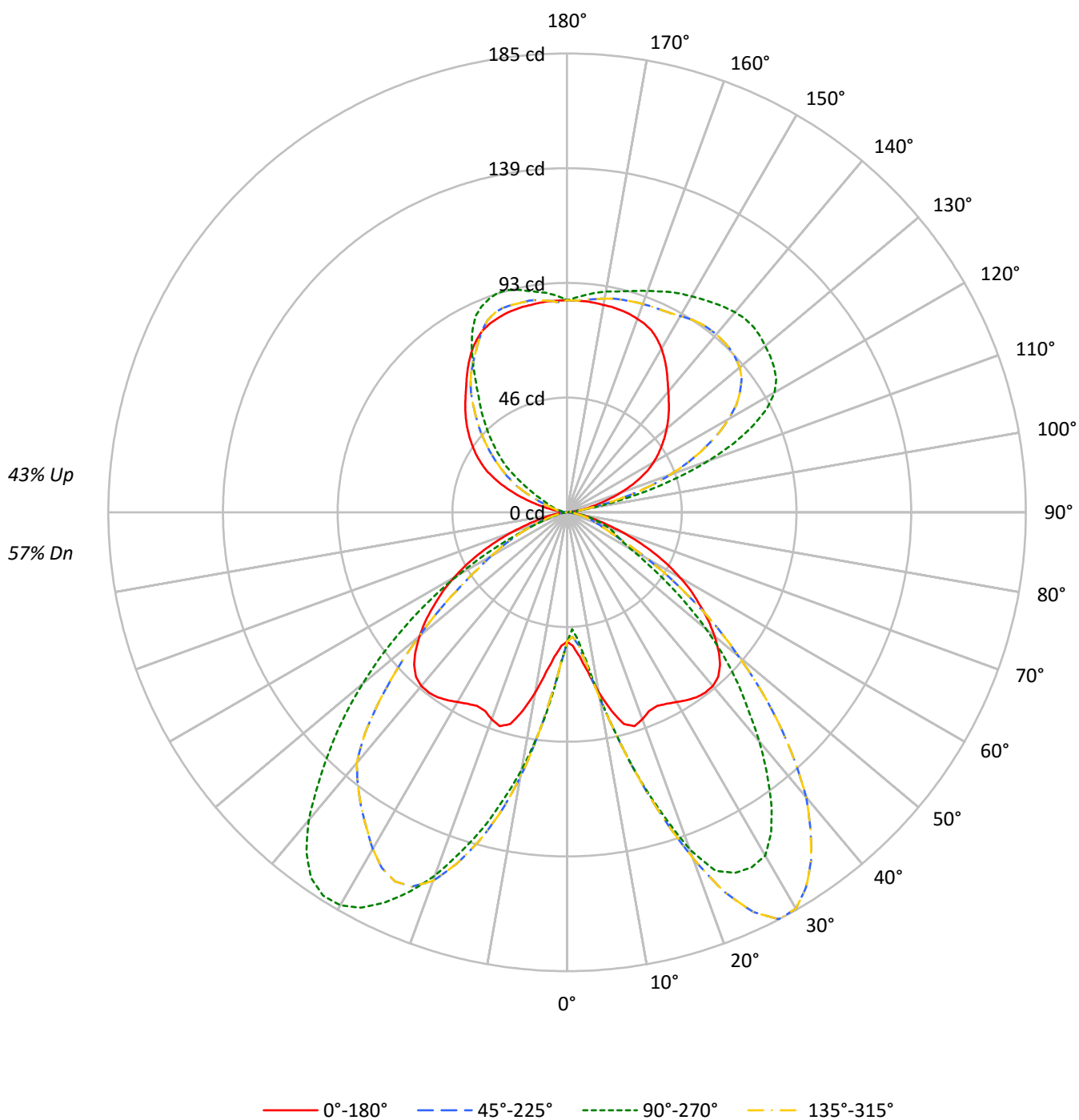
Summary

Lumens per Lamp: 800 (1 lamp)
Luminaire Lumens: 673.0 lumens
Efficiency: 84.1%
Efficacy: 48.1 lumens/watt
Spacing Criteria (0/90/45): 2.16 / 2.33 / 1.96
Luminous Opening: Rectangular (W 0.35' x L: 0.38' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 14
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	92	92	92	92	85	85	85	85	74	74	74	63	63	63	53	53	53
1	84	81	78	75	78	76	73	71	66	64	62	56	55	54	48	47	46
2	77	71	66	62	72	67	62	59	58	55	52	50	48	46	43	41	39
3	71	63	57	52	66	59	54	49	51	47	44	44	41	39	38	36	34
4	65	56	49	44	60	52	46	42	46	41	38	40	36	33	34	31	29
5	59	50	43	38	55	47	41	36	41	36	32	36	32	29	31	28	25
6	55	44	38	33	51	42	36	31	37	32	28	32	28	25	28	25	22
7	50	40	33	29	47	38	32	27	33	28	25	29	25	22	25	22	20
8	47	36	30	25	43	34	28	24	30	25	22	26	22	20	23	20	17
9	43	33	27	22	40	31	25	21	27	23	19	24	20	17	21	18	16
10	40	30	24	20	38	28	23	19	25	21	17	22	18	16	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	4217	4217	4217	4217
5°	4744	4200	4744	6174
10°	6048	6213	6048	8654
15°	7398	9208	7398	11077
20°	7648	12454	7648	13427
25°	7689	14323	7689	15493
30°	8252	14934	8252	17092
35°	8991	14197	8991	17774
40°	9656	12741	9656	17126
45°	9980	11125	9980	15474
50°	9770	9216	9770	13560
55°	9242	6843	9242	11133
60°	8514	4840	8514	8223
65°	7354	4213	7354	4979
70°	5726	4141	5726	2603
75°	4003	3659	4003	1532
80°	2703	2890	2703	1025
85°	1950	1579	1950	929

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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	6.8	1.0	0.8
10°-20°	32.9	4.9	4.1
20°-30°	68.5	10.2	8.6
30°-40°	90.9	13.5	11.4
40°-50°	86.7	12.9	10.8
50°-60°	59.6	8.8	7.4
60°-70°	29.3	4.4	3.7
70°-80°	10.2	1.5	1.3
80°-90°	2.0	0.3	0.3
90°-100°	1.5	0.2	0.2
100°-110°	17.2	2.6	2.1
110°-120°	39.1	5.8	4.9
120°-130°	52.0	7.7	6.5
130°-140°	54.2	8.1	6.8
140°-150°	49.4	7.3	6.2
150°-160°	39.6	5.9	5.0
160°-170°	25.0	3.7	3.1
170°-180°	8.3	1.2	1.0
0°-30°	108.1	16.1	13.5
0°-40°	199.0	29.6	24.9
0°-60°	345.2	51.3	43.1
0°-90°	386.7	57.5	48.3
90°-120°	57.8	8.6	7.2
90°-150°	213.4	31.7	26.7
90°-180°	286.0	42.5	35.8
0°-180°	673.0	100.0	84.1

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	52	52	52	52	52	
5°	58	52	58	76	58	6
15°	88	110	88	132	88	24
25°	86	160	86	174	86	40
35°	91	144	91	180	91	57
45°	87	97	87	135	87	67
55°	66	48	66	79	66	59
65°	38	22	38	26	38	38
75°	13	12	13	5	13	14
85°	2	2	2	1	2	2
90°	0	0	0	0	0	0
95°	0	0	0	0	0	2
105°	13	34	13	4	13	14
115°	32	83	32	9	32	32
125°	46	102	46	26	46	42
135°	58	106	58	45	58	45
145°	70	103	70	64	70	44
155°	81	98	81	87	81	37
165°	84	92	84	93	84	24
175°	85	88	85	89	85	8
180°	86	86	86	86	86	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	52.1	52.1	52.1	52.1	52.1	52.1	52.1	52.1	52.1	52.1	52.1
2.5°	53.9	51.4	50.2	48.4	47.1	48.4	50.2	51.4	53.9	57.8	61.6
5°	58.4	54.2	53.9	52.8	51.7	52.8	53.9	54.2	58.4	66.5	74.5
7.5°	65.0	60.4	62.3	62.8	60.8	62.8	62.3	60.4	65.0	77.5	91.0
10°	73.6	69.3	75.9	77.9	75.6	77.9	75.9	69.3	73.6	91.0	108.3
12.5°	81.7	79.2	91.8	94.7	91.8	94.7	91.8	79.2	81.7	104.9	123.8
15°	88.3	90.3	110.3	114.0	109.9	114.0	110.3	90.3	88.3	118.7	137.3
17.5°	90.4	100.2	129.2	132.4	127.3	132.4	129.2	100.2	90.4	127.9	148.7
20°	88.8	107.9	148.4	151.1	144.6	151.1	148.4	107.9	88.8	130.4	158.1
22.5°	86.6	112.7	165.6	167.0	156.4	167.0	165.6	112.7	86.6	128.6	163.3
25°	86.1	115.8	177.8	175.4	160.4	175.4	177.8	115.8	86.1	125.2	164.2
27.5°	87.0	118.2	184.9	177.0	161.3	177.0	184.9	118.2	87.0	122.5	161.7
30°	88.3	120.3	184.5	175.3	159.8	175.3	184.5	120.3	88.3	120.7	156.7
32.5°	89.8	122.3	179.3	170.3	153.1	170.3	179.3	122.3	89.8	119.0	150.6
35°	91.0	123.2	171.5	161.6	143.7	161.6	171.5	123.2	91.0	116.7	144.8
37.5°	91.6	123.8	161.3	149.6	132.2	149.6	161.3	123.8	91.6	113.1	138.6
40°	91.4	123.2	150.0	136.8	120.6	136.8	150.0	123.2	91.4	109.0	131.9
42.5°	90.1	121.8	135.9	123.0	108.2	123.0	135.9	121.8	90.1	104.1	120.6
45°	87.2	119.0	121.0	109.1	97.2	109.1	121.0	119.0	87.2	98.8	106.4
47.5°	82.9	114.4	105.7	96.3	85.5	96.3	105.7	114.4	82.9	92.6	91.9
50°	77.6	106.6	90.2	81.9	73.2	81.9	90.2	106.6	77.6	85.3	78.0
52.5°	71.9	97.7	76.2	68.2	60.7	68.2	76.2	97.7	71.9	77.5	65.1
55°	65.5	86.6	61.8	54.1	48.5	54.1	61.8	86.6	65.5	68.5	53.0
57.5°	59.5	75.9	49.0	41.1	37.9	41.1	49.0	75.9	59.5	59.7	42.8
60°	52.6	65.7	36.8	29.8	29.9	29.8	36.8	65.7	52.6	51.6	35.2
62.5°	45.7	56.5	26.4	22.5	24.7	22.5	26.4	56.5	45.7	43.7	29.0
65°	38.4	46.5	19.2	18.1	22.0	18.1	19.2	46.5	38.4	35.1	22.9
67.5°	31.2	36.7	15.3	16.3	19.9	16.3	15.3	36.7	31.2	27.2	17.5
70°	24.2	27.3	12.6	14.8	17.5	14.8	12.6	27.3	24.2	20.0	12.8
72.5°	17.8	18.5	10.4	12.8	14.4	12.8	10.4	18.5	17.8	14.1	8.8
75°	12.8	12.0	8.4	10.3	11.7	10.3	8.4	12.0	12.8	9.9	6.1
77.5°	8.7	7.6	6.5	7.9	8.8	7.9	6.5	7.6	8.7	6.6	4.1
80°	5.8	4.8	4.6	5.4	6.2	5.4	4.6	4.8	5.8	4.4	2.8
82.5°	3.5	3.0	2.7	3.1	3.4	3.1	2.7	3.0	3.5	2.7	1.8
85°	2.1	1.8	1.5	1.5	1.7	1.5	1.5	1.8	2.1	1.7	1.3
87.5°	1.1	1.0	0.8	0.8	0.8	0.8	0.8	1.0	1.1	0.9	0.8
90°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
92.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
95°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.5
97.5°	2.8	2.4	1.7	2.1	2.6	2.1	1.7	2.4	2.8	2.1	1.0
100°	5.6	7.9	7.0	8.5	9.2	8.5	7.0	7.9	5.6	3.9	2.4
102.5°	8.8	15.3	14.7	17.6	19.7	17.6	14.7	15.3	8.8	6.8	3.8
105°	12.9	23.6	24.7	29.6	33.5	29.6	24.7	23.6	12.9	11.0	5.4
107.5°	17.6	31.3	34.7	41.5	47.1	41.5	34.7	31.3	17.6	14.5	7.1
110°	22.8	38.2	44.1	52.6	60.6	52.6	44.1	38.2	22.8	18.2	9.8

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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°	27.7	45.0	52.9	63.0	72.7	63.0	52.9	45.0	27.7	21.9	13.4
115°	32.3	51.3	61.0	72.4	82.8	72.4	61.0	51.3	32.3	25.7	17.7
117.5°	36.7	57.5	68.8	81.0	90.9	81.0	68.8	57.5	36.7	29.6	22.6
120°	40.2	62.7	75.2	87.4	96.6	87.4	75.2	62.7	40.2	33.3	26.4
122.5°	43.5	67.1	81.0	92.6	100.0	92.6	81.0	67.1	43.5	37.6	30.3
125°	46.5	70.5	85.2	96.5	101.9	96.5	85.2	70.5	46.5	41.6	34.2
127.5°	49.5	73.4	88.7	99.1	103.3	99.1	88.7	73.4	49.5	45.6	38.4
130°	52.4	75.3	90.9	100.6	104.3	100.6	90.9	75.3	52.4	49.1	42.5
132.5°	55.3	77.4	92.1	101.5	105.4	101.5	92.1	77.4	55.3	52.7	46.8
135°	58.0	79.1	93.0	102.1	106.0	102.1	93.0	79.1	58.0	56.0	50.9
137.5°	60.7	80.6	93.4	102.4	106.0	102.4	93.4	80.6	60.7	59.2	55.1
140°	63.5	82.0	93.7	102.2	105.3	102.2	93.7	82.0	63.5	62.1	59.7
142.5°	66.6	82.9	93.5	101.6	104.3	101.6	93.5	82.9	66.6	64.7	63.9
145°	70.0	83.5	93.2	100.6	103.0	100.6	93.2	83.5	70.0	67.2	67.6
147.5°	73.2	83.9	92.4	99.1	101.8	99.1	92.4	83.9	73.2	69.9	70.7
150°	76.2	84.4	91.4	97.8	100.5	97.8	91.4	84.4	76.2	73.0	74.0
152.5°	78.7	85.1	90.5	96.6	99.4	96.6	90.5	85.1	78.7	76.2	77.4
155°	80.8	85.8	90.0	95.3	98.0	95.3	90.0	85.8	80.8	79.4	81.0
157.5°	82.1	86.4	89.7	94.1	96.4	94.1	89.7	86.4	82.1	81.9	83.8
160°	83.0	86.7	89.4	93.0	95.0	93.0	89.4	86.7	83.0	83.8	85.5
162.5°	83.8	86.7	89.0	91.8	93.6	91.8	89.0	86.7	83.8	84.9	86.4
165°	84.3	86.5	88.6	90.7	92.3	90.7	88.6	86.5	84.3	85.5	86.5
167.5°	84.7	86.1	88.2	89.8	91.2	89.8	88.2	86.1	84.7	85.8	86.5
170°	84.9	85.8	87.5	89.2	90.4	89.2	87.5	85.8	84.9	85.9	86.7
172.5°	85.2	85.5	86.7	88.4	89.3	88.4	86.7	85.5	85.2	85.8	86.3
175°	85.4	85.3	86.0	87.3	88.0	87.3	86.0	85.3	85.4	85.6	85.6
177.5°	85.4	85.3	85.4	86.3	86.7	86.3	85.4	85.3	85.4	85.3	84.8
180°	85.5	85.5	85.5	85.5	85.5	85.5	85.5	85.5	85.5	85.5	85.5

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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	52.1	52.1	52.1	52.1	52.1	52.1
2.5°	62.4	61.5	62.4	61.6	57.8	53.9
5°	77.4	76.0	77.4	74.5	66.5	58.4
7.5°	93.4	90.6	93.4	91.0	77.5	65.0
10°	109.4	105.3	109.4	108.3	91.0	73.6
12.5°	123.2	118.6	123.2	123.8	104.9	81.7
15°	136.8	132.2	136.8	137.3	118.7	88.3
17.5°	148.9	144.1	148.9	148.7	127.9	90.4
20°	161.2	155.9	161.2	158.1	130.4	88.8
22.5°	171.8	165.5	171.8	163.3	128.6	86.6
25°	181.8	173.5	181.8	164.2	125.2	86.1
27.5°	191.1	179.7	191.1	161.7	122.5	87.0
30°	199.0	182.9	199.0	156.7	120.7	88.3
32.5°	203.9	183.2	203.9	150.6	119.0	89.8
35°	202.5	179.9	202.5	144.8	116.7	91.0
37.5°	193.5	172.7	193.5	138.6	113.1	91.6
40°	180.7	162.1	180.7	131.9	109.0	91.4
42.5°	164.4	148.6	164.4	120.6	104.1	90.1
45°	146.5	135.2	146.5	106.4	98.8	87.2
47.5°	127.7	121.8	127.7	91.9	92.6	82.9
50°	109.0	107.7	109.0	78.0	85.3	77.6
52.5°	92.5	93.5	92.5	65.1	77.5	71.9
55°	76.8	78.9	76.8	53.0	68.5	65.5
57.5°	62.5	64.9	62.5	42.8	59.7	59.5
60°	48.6	50.8	48.6	35.2	51.6	52.6
62.5°	36.6	38.2	36.6	29.0	43.7	45.7
65°	25.4	26.0	25.4	22.9	35.1	38.4
67.5°	17.0	16.8	17.0	17.5	27.2	31.2
70°	11.1	11.0	11.1	12.8	20.0	24.2
72.5°	7.3	7.3	7.3	8.8	14.1	17.8
75°	4.9	4.9	4.9	6.1	9.9	12.8
77.5°	3.3	3.3	3.3	4.1	6.6	8.7
80°	2.2	2.2	2.2	2.8	4.4	5.8
82.5°	1.5	1.5	1.5	1.8	2.7	3.5
85°	1.1	1.0	1.1	1.3	1.7	2.1
87.5°	0.8	0.7	0.8	0.8	0.9	1.1
90°	0.5	0.5	0.5	0.5	0.5	0.5
92.5°	0.5	0.5	0.5	0.5	0.5	0.5
95°	0.5	0.5	0.5	0.5	0.8	0.5
97.5°	0.5	0.5	0.5	1.0	2.1	2.8
100°	1.5	1.3	1.5	2.4	3.9	5.6
102.5°	2.7	2.4	2.7	3.8	6.8	8.8
105°	4.0	3.7	4.0	5.4	11.0	12.9
107.5°	5.3	5.0	5.3	7.1	14.5	17.6
110°	6.9	6.4	6.9	9.8	18.2	22.8

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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	8.3	7.8	8.3	13.4	21.9	27.7
115°	10.7	9.4	10.7	17.7	25.7	32.3
117.5°	14.5	12.3	14.5	22.6	29.6	36.7
120°	18.7	16.3	18.7	26.4	33.3	40.2
122.5°	23.8	20.8	23.8	30.3	37.6	43.5
125°	29.2	25.9	29.2	34.2	41.6	46.5
127.5°	33.5	31.7	33.5	38.4	45.6	49.5
130°	37.8	35.7	37.8	42.5	49.1	52.4
132.5°	42.8	40.2	42.8	46.8	52.7	55.3
135°	47.4	44.7	47.4	50.9	56.0	58.0
137.5°	52.0	49.2	52.0	55.1	59.2	60.7
140°	56.7	53.9	56.7	59.7	62.1	63.5
142.5°	61.0	58.5	61.0	63.9	64.7	66.6
145°	65.3	64.1	65.3	67.6	67.2	70.0
147.5°	70.2	70.4	70.2	70.7	69.9	73.2
150°	75.2	77.0	75.2	74.0	73.0	76.2
152.5°	80.0	82.6	80.0	77.4	76.2	78.7
155°	84.1	87.3	84.1	81.0	79.4	80.8
157.5°	87.4	89.9	87.4	83.8	81.9	82.1
160°	89.7	91.7	89.7	85.5	83.8	83.0
162.5°	90.9	92.8	90.9	86.4	84.9	83.8
165°	90.8	92.8	90.8	86.5	85.5	84.3
167.5°	90.0	91.9	90.0	86.5	85.8	84.7
170°	89.3	90.6	89.3	86.7	85.9	84.9
172.5°	88.7	89.6	88.7	86.3	85.8	85.2
175°	87.8	88.7	87.8	85.6	85.6	85.4
177.5°	86.6	87.3	86.6	84.8	85.3	85.4
180°	85.5	85.5	85.5	85.5	85.5	85.5

(END OF REPORT)