

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: 25489

Luminaire Tested: **104-CFL/2/13-120V-APX**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 25489
Test Lab: LIGHTING SCIENCES, INC.
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 104-CFL/2/13-120V-APX
Description: TAUPE FABRIC SHADE SQUARE WALL SCONCE

Light Source: TWO SYLVANIA 13 WATT CFL LAMPS

CFL13DS/E/830. LUMEN RATING = 1600 LMS.

Ballast/Driver: -

Summary

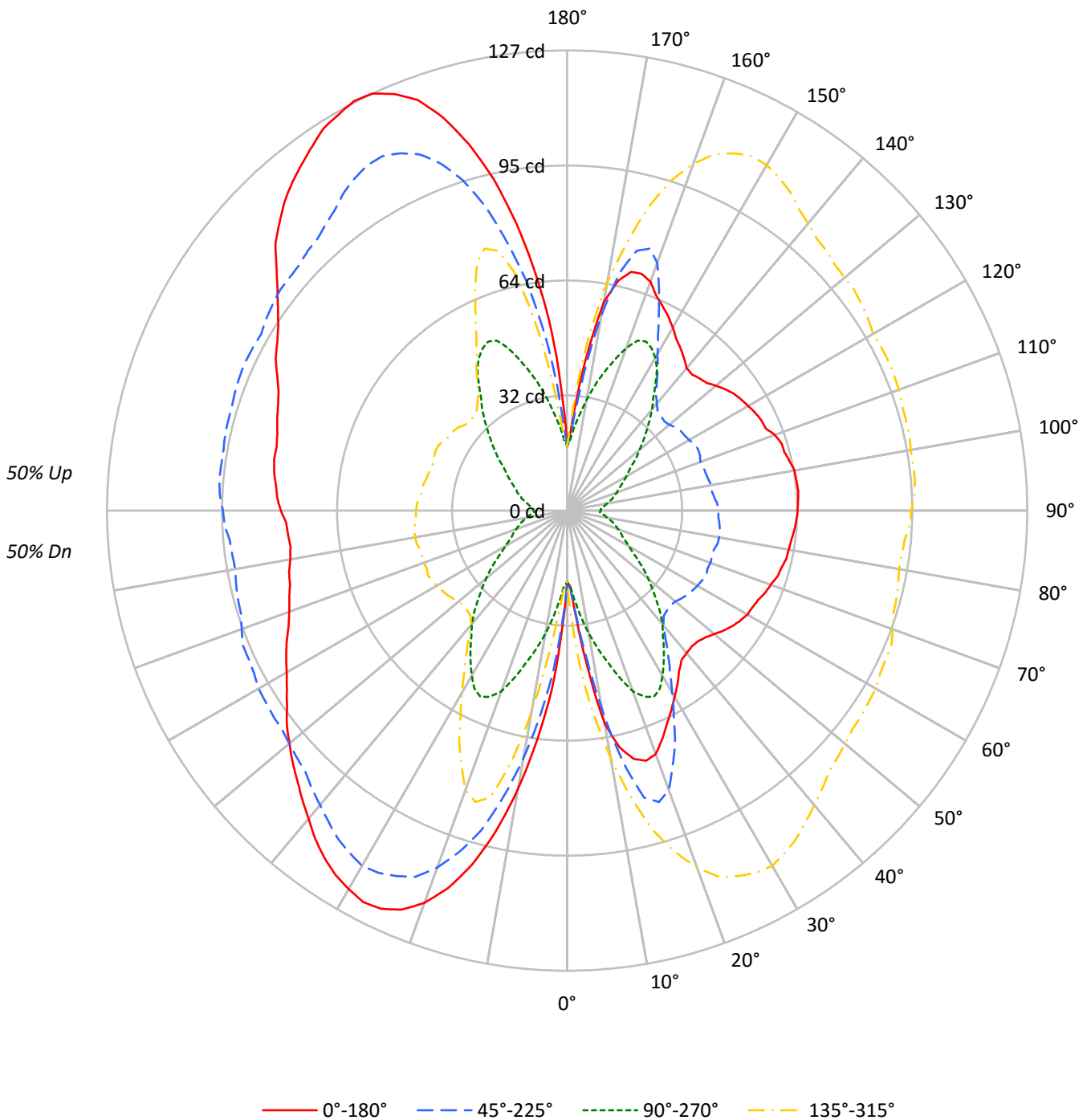
Lumens per Lamp: 1600 (1 lamp)
Luminaire Lumens: 830.7 lumens
Efficiency: 51.9%
Efficacy: 30.8 lumens/watt
Spacing Criteria (0/90/45): 3.36 / 2.18 / 3.11
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1' x H: 1')
CIE Type: General Diffuse

Input Watts (W): 27
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	56	56	56	56	51	51	51	51	43	43	43	36	36	36	29	29	29	26
1	49	46	43	41	45	42	40	37	35	33	32	29	27	26	23	22	21	18
2	44	39	35	32	40	36	32	29	30	27	25	24	22	20	19	17	16	14
3	40	34	29	26	36	31	27	24	26	23	20	21	18	16	16	15	13	11
4	36	30	25	21	33	27	23	20	23	19	17	18	16	14	14	12	11	9
5	33	26	21	18	30	24	20	17	20	17	14	16	14	12	13	11	9	7
6	30	23	19	15	27	21	17	14	18	15	12	15	12	10	11	9	8	6
7	28	21	16	13	25	19	15	12	16	13	10	13	11	9	10	8	7	5
8	26	19	15	12	23	17	13	11	15	11	9	12	9	8	9	7	6	5
9	24	17	13	10	22	16	12	9	13	10	8	11	8	7	9	7	5	4
10	22	16	12	9	20	14	11	8	12	9	7	10	8	6	8	6	5	4

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	643	643	643	643
5°	912	650	1508	650
10°	1681	743	2196	743
15°	1888	807	2693	807
20°	1820	876	2932	876
25°	1598	846	2977	846
30°	1416	721	2880	721
35°	1262	593	2738	593
40°	1188	492	2570	492
45°	1176	397	2429	397
50°	1227	321	2315	321
55°	1302	255	2211	255
60°	1371	206	2135	206
65°	1428	173	2096	173
70°	1522	153	2077	153
75°	1630	136	2109	136
80°	1749	117	2185	117
85°	1894	102	2327	102



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	4.0	0.5	0.3
10°-20°	21.8	2.6	1.4
20°-30°	40.2	4.8	2.5
30°-40°	48.6	5.9	3.0
40°-50°	52.6	6.3	3.3
50°-60°	57.3	6.9	3.6
60°-70°	61.5	7.4	3.8
70°-80°	63.7	7.7	4.0
80°-90°	65.6	7.9	4.1
90°-100°	67.5	8.1	4.2
100°-110°	66.0	7.9	4.1
110°-120°	62.9	7.6	3.9
120°-130°	57.7	7.0	3.6
130°-140°	52.3	6.3	3.3
140°-150°	46.9	5.6	2.9
150°-160°	37.9	4.6	2.4
160°-170°	20.5	2.5	1.3
170°-180°	3.8	0.5	0.2
0°-30°	66.1	8.0	4.1
0°-40°	114.7	13.8	7.2
0°-60°	224.5	27.0	14.0
0°-90°	415.3	50.0	26.0
90°-120°	196.4	23.6	12.3
90°-150°	353.3	42.5	22.1
90°-180°	415.0	50.0	25.9
0°-180°	830.7	100.0	51.9

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	20	20	20	20	20	
5°	30	25	50	25	30	4
15°	71	43	101	43	71	20
25°	65	57	121	57	65	30
35°	54	46	117	46	54	34
45°	51	35	105	35	51	40
55°	56	24	94	24	56	50
65°	58	17	85	17	58	58
75°	61	13	79	13	61	65
85°	63	10	77	10	63	51
90°	64	9	79	9	64	35
95°	64	10	81	10	64	52
105°	62	13	83	13	62	66
115°	59	16	88	16	59	59
125°	56	22	97	22	56	50
135°	52	31	112	31	52	40
145°	55	42	123	42	55	34
155°	62	52	127	52	62	29
165°	68	40	105	40	68	19
175°	31	23	50	23	31	4
180°	18	18	18	18	18	



TEST NUMBER: 25489

CATALOG NUMBER: 104-CFL/2/13-120V-APX

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7
2.5°	21.0	22.5	21.8	20.9	21.1	24.7	30.5	34.1	33.2	34.1	30.5
5°	30.3	31.5	29.2	26.1	25.1	33.6	44.6	50.5	50.1	50.5	44.6
7.5°	44.1	45.1	41.0	32.7	29.7	42.5	56.9	64.9	64.0	64.9	56.9
10°	59.7	61.6	56.1	42.0	34.4	52.4	69.3	78.6	78.0	78.6	69.3
12.5°	67.0	72.5	70.9	53.2	38.9	62.9	80.7	90.0	90.5	90.0	80.7
15°	70.9	76.9	82.0	65.1	43.3	72.4	91.2	100.7	101.1	100.7	91.2
17.5°	72.4	78.0	84.3	75.0	48.4	80.2	98.7	109.3	109.2	109.3	98.7
20°	71.5	76.5	82.0	82.0	53.1	88.1	104.8	115.9	115.2	115.9	104.8
22.5°	68.4	72.2	76.1	83.8	55.6	95.4	109.4	119.9	119.2	119.9	109.4
25°	65.1	67.0	70.5	81.3	56.7	100.6	111.3	122.8	121.3	122.8	111.3
27.5°	62.2	62.8	63.7	76.6	55.4	105.4	112.7	123.4	121.8	123.4	112.7
30°	59.3	59.0	57.9	70.2	52.6	106.1	113.2	122.1	120.6	122.1	113.2
32.5°	56.7	55.2	52.9	61.8	49.6	105.0	111.9	120.6	119.1	120.6	111.9
35°	53.9	52.0	48.5	53.5	46.5	105.3	110.4	118.6	116.9	118.6	110.4
37.5°	51.9	49.9	44.6	46.7	43.4	104.5	108.2	115.9	114.2	115.9	108.2
40°	51.3	48.9	41.3	41.5	40.9	103.0	106.1	113.2	111.0	113.2	106.1
42.5°	50.9	48.3	39.4	36.2	37.9	100.7	104.2	110.7	108.2	110.7	104.2
45°	51.0	47.9	39.0	31.9	34.7	98.4	102.1	108.6	105.3	108.6	102.1
47.5°	51.8	49.0	38.7	29.4	31.9	95.4	101.1	106.3	102.8	106.3	101.1
50°	53.0	50.2	39.0	27.3	29.2	93.8	100.1	103.6	100.0	103.6	100.1
52.5°	54.4	51.3	39.8	26.7	26.6	94.1	99.2	101.7	97.5	101.7	99.2
55°	55.6	52.2	40.5	26.3	23.9	94.6	99.0	99.2	94.4	99.2	99.0
57.5°	56.6	53.3	41.0	25.6	21.5	95.2	98.6	96.4	91.7	96.4	98.6
60°	57.4	54.0	41.5	25.7	19.7	96.3	98.3	93.9	89.4	93.9	98.3
62.5°	57.7	54.4	41.9	26.1	18.1	97.2	97.4	92.5	87.4	92.5	97.4
65°	58.2	54.8	42.4	26.0	16.8	97.3	97.0	90.3	85.4	90.3	97.0
67.5°	59.2	55.0	41.9	25.6	16.0	96.8	96.9	88.2	83.2	88.2	96.9
70°	59.8	55.9	42.1	25.6	15.0	96.3	95.6	86.8	81.6	86.8	95.6
72.5°	60.8	56.6	41.9	25.3	14.0	95.7	94.4	85.2	80.4	85.2	94.4
75°	61.2	56.7	41.9	24.8	13.3	95.9	94.1	83.8	79.2	83.8	94.1
77.5°	61.9	57.2	42.5	24.5	12.2	95.7	93.6	82.9	78.6	82.9	93.6
80°	62.1	58.1	42.6	24.2	11.3	95.0	93.0	82.4	77.6	82.4	93.0
82.5°	62.4	58.4	42.5	23.9	10.5	97.4	93.2	81.8	77.0	81.8	93.2
85°	62.9	58.2	42.2	24.1	9.7	100.3	93.5	81.8	77.3	81.8	93.5
87.5°	63.3	58.4	41.8	23.9	9.0	102.8	94.6	81.7	77.6	81.7	94.6
90°	63.6	58.6	41.7	23.7	9.3	108.6	95.0	82.9	79.0	82.9	95.0
92.5°	63.8	56.9	41.5	23.2	9.3	110.2	95.9	84.7	80.1	84.7	95.9
95°	64.0	56.7	40.8	23.1	9.7	110.5	96.4	85.5	80.7	85.5	96.4
97.5°	63.8	56.6	40.3	22.8	10.5	110.6	96.3	86.3	81.6	86.3	96.3
100°	63.7	56.2	40.4	22.9	11.1	110.6	96.3	86.5	82.1	86.5	96.3
102.5°	62.9	56.0	39.9	22.5	12.0	111.4	96.7	86.5	82.1	86.5	96.7
105°	62.1	55.5	39.6	22.9	13.0	111.7	96.8	87.1	82.8	87.1	96.8
107.5°	62.0	54.3	39.5	23.7	13.5	111.5	96.9	88.0	83.9	88.0	96.9
110°	61.0	53.5	39.1	23.6	14.7	112.1	97.4	89.0	84.9	89.0	97.4



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CATALOG NUMBER: 104-CFL/2/13-120V-APX

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	59.3	53.1	39.7	24.2	15.2	112.0	97.7	89.9	86.2	89.9	97.7
115°	59.1	52.4	39.9	24.3	16.4	112.1	97.8	91.3	88.3	91.3	97.8
117.5°	58.5	52.2	39.7	24.3	17.5	111.4	97.7	93.1	90.7	93.1	97.7
120°	57.7	51.5	38.9	24.3	18.9	109.7	97.5	94.9	92.4	94.9	97.5
122.5°	57.0	50.8	38.5	24.3	20.1	107.7	98.5	96.4	94.5	96.4	98.5
125°	56.2	50.4	38.3	23.8	21.8	105.4	99.2	97.9	97.4	97.9	99.2
127.5°	55.0	49.0	37.8	24.1	24.1	103.9	99.9	100.9	100.8	100.9	99.9
130°	53.6	48.5	36.8	24.5	26.1	104.3	100.0	103.8	104.7	103.8	100.0
132.5°	52.2	47.0	36.4	25.6	28.5	104.8	100.3	106.7	109.2	106.7	100.3
135°	51.6	46.5	36.7	28.1	30.9	105.2	101.3	108.8	112.3	108.8	101.3
137.5°	51.0	45.9	37.0	30.7	33.6	106.1	101.9	111.2	115.5	111.2	101.9
140°	51.3	46.4	38.5	35.2	36.4	105.8	103.4	113.3	118.1	113.3	103.4
142.5°	53.0	48.0	40.3	39.8	39.0	105.3	105.0	115.0	120.4	115.0	105.0
145°	54.6	49.7	43.1	45.0	42.4	104.4	107.3	117.3	122.7	117.3	107.3
147.5°	56.1	51.3	46.6	51.9	46.1	103.1	108.9	118.6	125.1	118.6	108.9
150°	58.3	53.9	49.8	59.3	48.7	103.4	110.1	119.7	126.2	119.7	110.1
152.5°	60.4	57.2	54.3	66.1	50.5	102.2	110.3	120.2	127.4	120.2	110.3
155°	62.3	60.2	59.8	72.4	51.5	96.5	108.8	118.6	127.0	118.6	108.8
157.5°	64.2	63.4	66.2	75.5	50.8	89.3	106.4	115.0	124.4	115.0	106.4
160°	67.2	67.5	72.7	77.1	47.8	82.1	101.9	110.2	120.6	110.2	101.9
162.5°	68.5	69.8	75.8	73.3	43.6	73.3	95.5	103.9	113.7	103.9	95.5
165°	68.2	69.6	74.2	64.3	39.5	64.2	86.7	94.9	104.6	94.9	86.7
167.5°	64.9	65.6	67.4	53.5	35.4	54.5	75.4	84.2	93.6	84.2	75.4
170°	58.4	57.5	54.9	43.2	31.0	44.7	63.9	72.6	80.3	72.6	63.9
172.5°	44.5	43.2	40.7	32.7	26.8	35.1	50.3	59.0	65.4	59.0	50.3
175°	31.4	30.1	28.4	24.8	23.3	27.6	36.7	43.8	49.9	43.8	36.7
177.5°	21.8	20.8	20.1	19.6	19.5	20.9	23.9	27.8	31.7	27.8	23.9
180°	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7



TEST NUMBER: 25489

CATALOG NUMBER: 104-CFL/2/13-120V-APX

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	19.7	19.7	19.7	19.7	19.7	19.7
2.5°	24.7	21.1	20.9	21.8	22.5	21.0
5°	33.6	25.1	26.1	29.2	31.5	30.3
7.5°	42.5	29.7	32.7	41.0	45.1	44.1
10°	52.4	34.4	42.0	56.1	61.6	59.7
12.5°	62.9	38.9	53.2	70.9	72.5	67.0
15°	72.4	43.3	65.1	82.0	76.9	70.9
17.5°	80.2	48.4	75.0	84.3	78.0	72.4
20°	88.1	53.1	82.0	82.0	76.5	71.5
22.5°	95.4	55.6	83.8	76.1	72.2	68.4
25°	100.6	56.7	81.3	70.5	67.0	65.1
27.5°	105.4	55.4	76.6	63.7	62.8	62.2
30°	106.1	52.6	70.2	57.9	59.0	59.3
32.5°	105.0	49.6	61.8	52.9	55.2	56.7
35°	105.3	46.5	53.5	48.5	52.0	53.9
37.5°	104.5	43.4	46.7	44.6	49.9	51.9
40°	103.0	40.9	41.5	41.3	48.9	51.3
42.5°	100.7	37.9	36.2	39.4	48.3	50.9
45°	98.4	34.7	31.9	39.0	47.9	51.0
47.5°	95.4	31.9	29.4	38.7	49.0	51.8
50°	93.8	29.2	27.3	39.0	50.2	53.0
52.5°	94.1	26.6	26.7	39.8	51.3	54.4
55°	94.6	23.9	26.3	40.5	52.2	55.6
57.5°	95.2	21.5	25.6	41.0	53.3	56.6
60°	96.3	19.7	25.7	41.5	54.0	57.4
62.5°	97.2	18.1	26.1	41.9	54.4	57.7
65°	97.3	16.8	26.0	42.4	54.8	58.2
67.5°	96.8	16.0	25.6	41.9	55.0	59.2
70°	96.3	15.0	25.6	42.1	55.9	59.8
72.5°	95.7	14.0	25.3	41.9	56.6	60.8
75°	95.9	13.3	24.8	41.9	56.7	61.2
77.5°	95.7	12.2	24.5	42.5	57.2	61.9
80°	95.0	11.3	24.2	42.6	58.1	62.1
82.5°	97.4	10.5	23.9	42.5	58.4	62.4
85°	100.3	9.7	24.1	42.2	58.2	62.9
87.5°	102.8	9.0	23.9	41.8	58.4	63.3
90°	108.6	9.3	23.7	41.7	58.6	63.6
92.5°	110.2	9.3	23.2	41.5	56.9	63.8
95°	110.5	9.7	23.1	40.8	56.7	64.0
97.5°	110.6	10.5	22.8	40.3	56.6	63.8
100°	110.6	11.1	22.9	40.4	56.2	63.7
102.5°	111.4	12.0	22.5	39.9	56.0	62.9
105°	111.7	13.0	22.9	39.6	55.5	62.1
107.5°	111.5	13.5	23.7	39.5	54.3	62.0
110°	112.1	14.7	23.6	39.1	53.5	61.0



TEST NUMBER: 25489

CATALOG NUMBER: 104-CFL/2/13-120V-APX

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	112.0	15.2	24.2	39.7	53.1	59.3
115°	112.1	16.4	24.3	39.9	52.4	59.1
117.5°	111.4	17.5	24.3	39.7	52.2	58.5
120°	109.7	18.9	24.3	38.9	51.5	57.7
122.5°	107.7	20.1	24.3	38.5	50.8	57.0
125°	105.4	21.8	23.8	38.3	50.4	56.2
127.5°	103.9	24.1	24.1	37.8	49.0	55.0
130°	104.3	26.1	24.5	36.8	48.5	53.6
132.5°	104.8	28.5	25.6	36.4	47.0	52.2
135°	105.2	30.9	28.1	36.7	46.5	51.6
137.5°	106.1	33.6	30.7	37.0	45.9	51.0
140°	105.8	36.4	35.2	38.5	46.4	51.3
142.5°	105.3	39.0	39.8	40.3	48.0	53.0
145°	104.4	42.4	45.0	43.1	49.7	54.6
147.5°	103.1	46.1	51.9	46.6	51.3	56.1
150°	103.4	48.7	59.3	49.8	53.9	58.3
152.5°	102.2	50.5	66.1	54.3	57.2	60.4
155°	96.5	51.5	72.4	59.8	60.2	62.3
157.5°	89.3	50.8	75.5	66.2	63.4	64.2
160°	82.1	47.8	77.1	72.7	67.5	67.2
162.5°	73.3	43.6	73.3	75.8	69.8	68.5
165°	64.2	39.5	64.3	74.2	69.6	68.2
167.5°	54.5	35.4	53.5	67.4	65.6	64.9
170°	44.7	31.0	43.2	54.9	57.5	58.4
172.5°	35.1	26.8	32.7	40.7	43.2	44.5
175°	27.6	23.3	24.8	28.4	30.1	31.4
177.5°	20.9	19.5	19.6	20.1	20.8	21.8
180°	17.7	17.7	17.7	17.7	17.7	17.7

(END OF REPORT)