

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: 25492

Luminaire Tested: **104-CFL/2/18-120V-APX**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 25492
Test Lab: LIGHTING SCIENCES, INC.
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 104-CFL/2/18-120V-APX
Description: TAUPE FABRIC SHADE SQUARE WALL SCONCE

Light Source: TWO SYLVANIA 18 WATT CFL LAMPS

CF18DD/E/830/ECO. LUMEN RATING = 2300 LMS.

Ballast/Driver: -

Summary

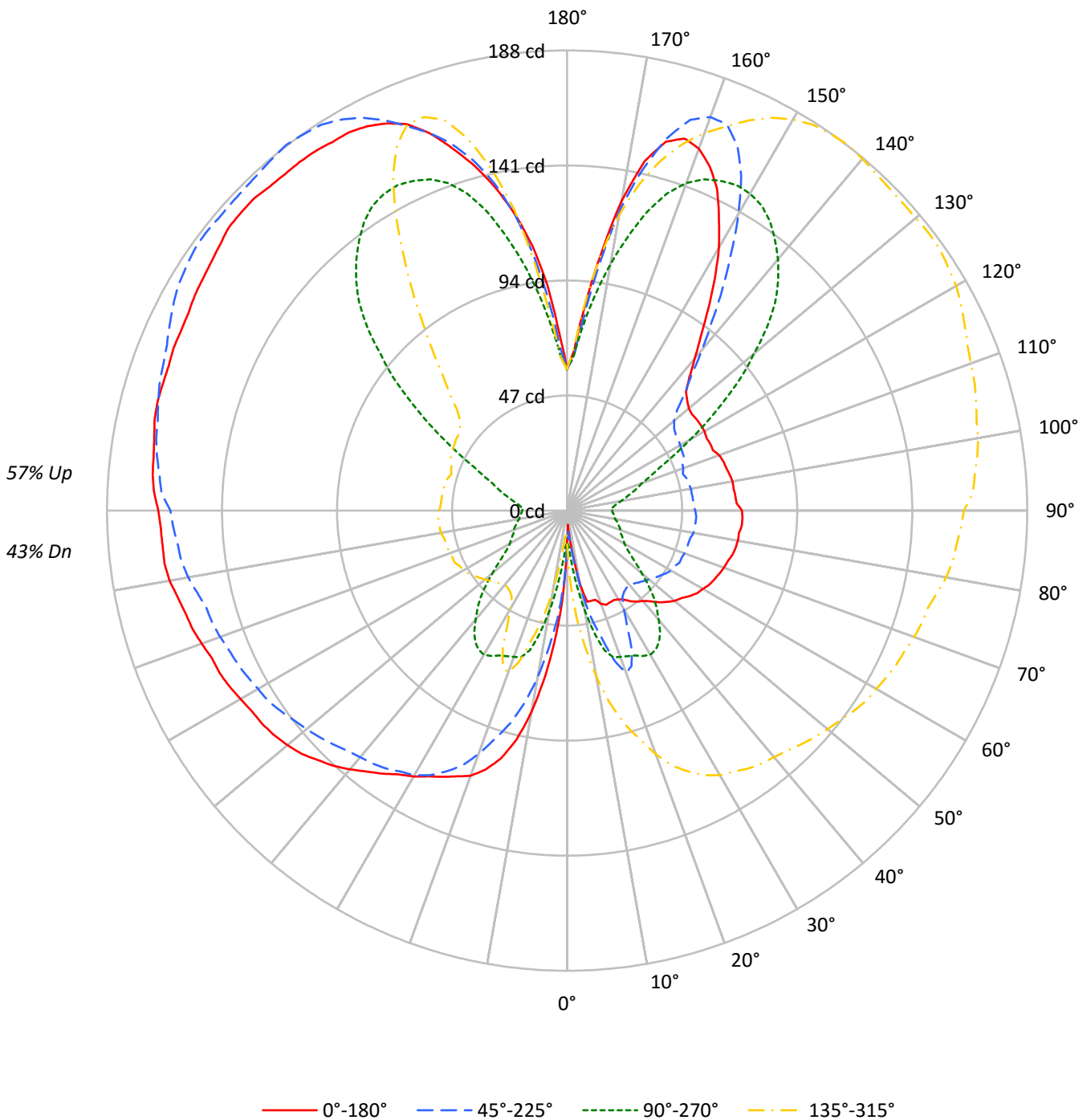
Lumens per Lamp: 2300 (1 lamp)
Luminaire Lumens: 1277.0 lumens
Efficiency: 55.5%
Efficacy: 38.7 lumens/watt
Spacing Criteria (0/90/45): 4.79 / 2.8 / 4.22
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1' x H: 1')
CIE Type: General Diffuse

Input Watts (W): 33
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	59	59	59	59	53	53	53	53	44	44	44	35	35	35	27	27	27	24
1	51	48	45	42	46	44	41	39	35	33	32	28	26	25	21	20	19	15
2	46	41	36	33	41	37	33	30	30	27	25	23	21	19	17	16	14	11
3	41	35	30	26	37	32	28	24	26	22	20	20	17	15	15	13	11	9
4	37	31	26	22	34	28	23	20	22	19	16	17	15	13	13	11	9	7
5	34	27	22	18	31	24	20	17	20	16	14	15	13	11	11	9	8	6
6	31	24	19	15	28	22	17	14	18	14	12	14	11	9	10	8	7	5
7	29	21	17	13	26	19	15	12	16	12	10	12	10	8	9	7	6	4
8	27	19	15	12	24	18	13	11	14	11	9	11	9	7	8	6	5	3
9	25	18	13	10	22	16	12	9	13	10	8	10	8	6	8	6	4	3
10	23	16	12	9	21	15	11	8	12	9	7	9	7	5	7	5	4	3

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	418	418	418	418
5°	313	569	1523	569
10°	870	894	2348	894
15°	1015	1101	2794	1101
20°	1031	1050	2934	1050
25°	1016	974	2945	974
30°	1000	931	2994	931
35°	1059	835	3073	835
40°	1116	700	3195	700
45°	1222	572	3324	572
50°	1329	438	3452	438
55°	1426	338	3560	338
60°	1528	282	3677	282
65°	1630	254	3846	254
70°	1736	237	4044	237
75°	1862	221	4301	221
80°	1993	206	4643	206
85°	2156	202	4995	202



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	3.3	0.3	0.1
10°-20°	19.7	1.5	0.9
20°-30°	38.8	3.0	1.7
30°-40°	53.5	4.2	2.3
40°-50°	65.6	5.1	2.9
50°-60°	77.5	6.1	3.4
60°-70°	88.0	6.9	3.8
70°-80°	96.4	7.6	4.2
80°-90°	102.1	8.0	4.4
90°-100°	105.0	8.2	4.6
100°-110°	105.4	8.3	4.6
110°-120°	103.5	8.1	4.5
120°-130°	101.7	8.0	4.4
130°-140°	98.8	7.7	4.3
140°-150°	92.7	7.3	4.0
150°-160°	74.7	5.9	3.2
160°-170°	41.3	3.2	1.8
170°-180°	9.0	0.7	0.4
0°-30°	61.8	4.8	2.7
0°-40°	115.3	9.0	5.0
0°-60°	258.4	20.2	11.2
0°-90°	544.9	42.7	23.7
90°-120°	313.9	24.6	13.6
90°-150°	607.1	47.5	26.4
90°-180°	732.0	57.3	31.8
0°-180°	1277.0	100.0	55.5

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	13	13	13	13	13	
5°	10	22	51	22	10	2
15°	38	59	105	59	38	11
25°	41	65	120	65	41	19
35°	45	66	131	66	45	28
45°	53	50	144	50	53	41
55°	61	32	152	32	61	55
65°	66	25	157	25	66	66
75°	70	22	162	22	70	74
85°	72	19	166	19	72	58
90°	71	18	167	18	71	39
95°	69	19	170	19	69	56
105°	67	27	173	27	67	71
115°	64	42	174	42	64	64
125°	65	78	177	78	65	58
135°	69	120	181	120	69	54
145°	100	144	179	144	100	63
155°	145	149	174	149	145	66
165°	156	126	146	126	156	43
175°	84	76	92	76	84	9
180°	58	58	58	58	58	



TEST NUMBER: 25492

CATALOG NUMBER: 104-CFL/2/18-120V-APX

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
2.5°	5.8	8.0	8.6	9.3	14.8	22.6	28.7	32.8	31.7	32.8	28.7
5°	10.4	11.9	11.5	13.1	22.0	33.0	43.3	50.7	50.6	50.7	43.3
7.5°	18.8	20.7	19.3	20.9	31.2	45.2	55.9	67.1	67.5	67.1	55.9
10°	30.9	33.4	32.3	32.0	41.4	57.7	69.0	81.6	83.4	81.6	69.0
12.5°	38.2	44.4	44.3	43.9	51.1	68.3	80.4	93.0	95.9	93.0	80.4
15°	38.1	49.7	53.3	52.1	59.1	78.2	90.0	101.9	104.9	101.9	90.0
17.5°	38.2	50.5	64.3	58.7	62.9	87.7	97.6	108.4	110.9	108.4	97.6
20°	40.5	48.2	70.5	66.9	63.6	95.7	105.9	112.7	115.3	112.7	105.9
22.5°	41.7	46.4	68.7	74.5	64.4	100.8	112.9	115.5	117.5	115.5	112.9
25°	41.4	44.1	62.2	80.6	65.3	104.9	117.7	116.9	120.0	116.9	117.7
27.5°	41.2	42.8	52.9	86.1	67.0	108.5	121.9	118.7	122.4	118.7	121.9
30°	41.9	42.5	46.2	86.1	68.0	112.6	124.8	121.2	125.4	121.2	124.8
32.5°	43.1	43.3	42.0	78.9	67.3	116.3	126.5	123.6	127.8	123.6	126.5
35°	45.2	44.0	40.5	69.7	65.5	120.1	128.7	125.8	131.2	125.8	128.7
37.5°	46.9	45.8	39.8	59.2	62.3	123.1	130.3	128.6	134.4	128.6	130.3
40°	48.2	47.3	39.5	49.6	58.2	124.5	131.5	130.7	138.0	130.7	131.5
42.5°	50.2	49.0	40.4	42.1	54.1	125.8	133.0	133.2	141.4	133.2	133.0
45°	53.0	50.3	41.5	38.3	50.0	126.7	135.1	136.2	144.1	136.2	135.1
47.5°	55.2	53.1	42.5	36.6	44.8	126.5	137.1	138.6	147.1	138.6	137.1
50°	57.4	55.1	43.8	35.7	39.8	126.6	138.9	140.5	149.1	140.5	138.9
52.5°	58.8	56.9	45.1	34.4	35.4	127.5	140.7	141.4	150.8	141.4	140.7
55°	60.9	58.5	46.3	34.3	31.7	128.0	142.8	141.9	152.0	141.9	142.8
57.5°	62.9	60.3	47.8	34.7	28.9	128.3	144.8	142.5	152.7	142.5	144.8
60°	64.0	61.6	49.0	34.7	27.0	129.2	145.8	142.8	154.0	142.8	145.8
62.5°	65.5	62.1	49.3	35.3	25.9	129.9	147.2	144.1	155.6	144.1	147.2
65°	66.4	62.8	50.6	35.4	24.7	131.5	148.5	144.8	156.7	144.8	148.5
67.5°	67.3	63.9	50.6	35.2	23.6	133.4	149.4	145.4	157.2	145.4	149.4
70°	68.2	64.6	51.0	35.5	23.2	134.0	150.9	147.0	158.9	147.0	150.9
72.5°	68.8	65.3	51.2	35.3	22.4	135.4	152.1	148.0	160.5	148.0	152.1
75°	69.9	66.2	51.3	35.0	21.6	137.1	152.7	148.6	161.5	148.6	152.7
77.5°	70.5	66.8	51.6	34.7	20.9	138.3	154.8	150.3	163.0	150.3	154.8
80°	70.8	67.0	52.4	34.4	19.9	139.7	157.2	151.8	164.9	151.8	157.2
82.5°	70.8	67.3	52.5	34.3	19.5	141.4	158.9	152.7	165.9	152.7	158.9
85°	71.6	67.8	52.7	34.3	19.2	143.1	159.7	153.4	165.9	153.4	159.7
87.5°	71.7	68.0	52.8	34.3	18.6	144.8	161.0	154.0	166.2	154.0	161.0
90°	71.4	67.5	52.3	33.9	18.4	147.5	162.1	154.4	167.0	154.4	162.1
92.5°	69.3	64.7	51.7	33.6	17.9	157.7	165.9	152.3	168.9	152.3	165.9
95°	69.0	64.6	51.6	33.8	19.1	160.2	167.2	153.4	170.0	153.4	167.2
97.5°	68.6	64.7	51.4	34.4	20.3	162.7	169.0	154.9	170.4	154.9	169.0
100°	68.6	64.1	51.3	34.7	22.3	165.0	170.5	155.9	171.3	155.9	170.5
102.5°	68.0	64.2	50.9	34.6	24.4	167.6	171.3	156.6	172.6	156.6	171.3
105°	67.3	63.5	50.6	35.7	27.0	170.4	173.0	157.5	173.2	157.5	173.0
107.5°	66.9	62.8	49.6	37.2	29.7	172.4	174.5	158.0	173.1	158.0	174.5
110°	66.1	62.1	50.4	38.0	32.5	174.5	175.5	158.7	173.2	158.7	175.5



TEST NUMBER: 25492

CATALOG NUMBER: 104-CFL/2/18-120V-APX

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	64.5	60.7	50.9	39.6	36.8	175.5	177.0	160.2	174.0	160.2	177.0
115°	64.5	61.2	52.5	40.2	41.9	177.4	179.2	161.1	174.0	161.1	179.2
117.5°	64.2	61.2	52.9	41.3	49.5	179.2	181.5	163.1	174.5	163.1	181.5
120°	64.8	62.0	53.3	41.7	58.0	180.8	183.6	164.5	175.7	164.5	183.6
122.5°	64.8	62.2	53.9	45.2	68.0	182.8	184.7	166.4	176.4	166.4	184.7
125°	64.7	62.3	54.1	51.5	78.5	183.9	185.9	168.6	177.4	168.6	185.9
127.5°	64.4	63.3	55.1	58.8	89.7	185.8	186.2	170.4	178.7	170.4	186.2
130°	64.9	63.3	57.0	67.8	99.6	187.4	185.9	171.1	180.3	171.1	185.9
132.5°	66.5	64.7	61.0	78.5	110.7	189.0	186.0	171.7	180.5	171.7	186.0
135°	68.6	68.4	67.9	89.3	120.2	191.0	186.2	172.8	180.6	172.8	186.2
137.5°	73.9	74.2	75.2	102.0	127.6	191.6	186.7	172.7	179.7	172.7	186.7
140°	81.1	81.6	85.7	114.7	134.0	191.4	187.6	173.7	179.4	173.7	187.6
142.5°	89.5	90.0	96.9	126.3	139.5	191.1	188.4	174.0	179.5	174.0	188.4
145°	100.3	101.0	110.7	137.9	144.4	189.5	187.7	175.2	179.3	175.2	187.7
147.5°	112.2	113.2	124.8	146.6	147.8	186.7	186.9	176.4	178.5	176.4	186.9
150°	124.0	125.0	140.0	151.9	149.5	184.2	184.5	177.0	178.4	177.0	184.5
152.5°	134.3	138.0	154.0	155.2	149.9	180.4	180.9	177.0	177.0	177.0	180.9
155°	145.0	149.7	164.5	154.9	148.6	174.9	175.9	175.3	174.5	175.3	175.9
157.5°	152.2	159.2	170.7	154.2	146.5	167.4	169.8	171.5	170.9	171.5	169.8
160°	157.4	165.0	171.1	150.3	142.4	159.6	164.1	166.7	164.0	166.7	164.1
162.5°	159.4	165.4	167.4	144.2	135.8	150.4	157.1	159.1	155.0	159.1	157.1
165°	156.0	160.0	157.5	136.1	126.4	139.5	148.1	150.8	145.7	150.8	148.1
167.5°	146.2	146.6	142.8	123.9	114.6	126.6	136.7	140.1	135.0	140.1	136.7
170°	128.5	128.0	125.0	109.3	102.3	112.3	122.6	126.6	122.9	126.6	122.6
172.5°	105.7	104.5	101.9	92.8	89.2	95.7	105.2	109.9	109.1	109.9	105.2
175°	84.1	81.6	79.8	76.5	76.1	80.0	85.8	91.0	92.3	91.0	85.8
177.5°	65.5	63.5	62.9	62.8	63.5	64.0	66.7	69.3	72.1	69.3	66.7
180°	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6



TEST NUMBER: 25492

CATALOG NUMBER: 104-CFL/2/18-120V-APX

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	12.8	12.8	12.8	12.8	12.8	12.8
2.5°	22.6	14.8	9.3	8.6	8.0	5.8
5°	33.0	22.0	13.1	11.5	11.9	10.4
7.5°	45.2	31.2	20.9	19.3	20.7	18.8
10°	57.7	41.4	32.0	32.3	33.4	30.9
12.5°	68.3	51.1	43.9	44.3	44.4	38.2
15°	78.2	59.1	52.1	53.3	49.7	38.1
17.5°	87.7	62.9	58.7	64.3	50.5	38.2
20°	95.7	63.6	66.9	70.5	48.2	40.5
22.5°	100.8	64.4	74.5	68.7	46.4	41.7
25°	104.9	65.3	80.6	62.2	44.1	41.4
27.5°	108.5	67.0	86.1	52.9	42.8	41.2
30°	112.6	68.0	86.1	46.2	42.5	41.9
32.5°	116.3	67.3	78.9	42.0	43.3	43.1
35°	120.1	65.5	69.7	40.5	44.0	45.2
37.5°	123.1	62.3	59.2	39.8	45.8	46.9
40°	124.5	58.2	49.6	39.5	47.3	48.2
42.5°	125.8	54.1	42.1	40.4	49.0	50.2
45°	126.7	50.0	38.3	41.5	50.3	53.0
47.5°	126.5	44.8	36.6	42.5	53.1	55.2
50°	126.6	39.8	35.7	43.8	55.1	57.4
52.5°	127.5	35.4	34.4	45.1	56.9	58.8
55°	128.0	31.7	34.3	46.3	58.5	60.9
57.5°	128.3	28.9	34.7	47.8	60.3	62.9
60°	129.2	27.0	34.7	49.0	61.6	64.0
62.5°	129.9	25.9	35.3	49.3	62.1	65.5
65°	131.5	24.7	35.4	50.6	62.8	66.4
67.5°	133.4	23.6	35.2	50.6	63.9	67.3
70°	134.0	23.2	35.5	51.0	64.6	68.2
72.5°	135.4	22.4	35.3	51.2	65.3	68.8
75°	137.1	21.6	35.0	51.3	66.2	69.9
77.5°	138.3	20.9	34.7	51.6	66.8	70.5
80°	139.7	19.9	34.4	52.4	67.0	70.8
82.5°	141.4	19.5	34.3	52.5	67.3	70.8
85°	143.1	19.2	34.3	52.7	67.8	71.6
87.5°	144.8	18.6	34.3	52.8	68.0	71.7
90°	147.5	18.4	33.9	52.3	67.5	71.4
92.5°	157.7	17.9	33.6	51.7	64.7	69.3
95°	160.2	19.1	33.8	51.6	64.6	69.0
97.5°	162.7	20.3	34.4	51.4	64.7	68.6
100°	165.0	22.3	34.7	51.3	64.1	68.6
102.5°	167.6	24.4	34.6	50.9	64.2	68.0
105°	170.4	27.0	35.7	50.6	63.5	67.3
107.5°	172.4	29.7	37.2	49.6	62.8	66.9
110°	174.5	32.5	38.0	50.4	62.1	66.1



TEST NUMBER: 25492

CATALOG NUMBER: 104-CFL/2/18-120V-APX

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	175.5	36.8	39.6	50.9	60.7	64.5
115°	177.4	41.9	40.2	52.5	61.2	64.5
117.5°	179.2	49.5	41.3	52.9	61.2	64.2
120°	180.8	58.0	41.7	53.3	62.0	64.8
122.5°	182.8	68.0	45.2	53.9	62.2	64.8
125°	183.9	78.5	51.5	54.1	62.3	64.7
127.5°	185.8	89.7	58.8	55.1	63.3	64.4
130°	187.4	99.6	67.8	57.0	63.3	64.9
132.5°	189.0	110.7	78.5	61.0	64.7	66.5
135°	191.0	120.2	89.3	67.9	68.4	68.6
137.5°	191.6	127.6	102.0	75.2	74.2	73.9
140°	191.4	134.0	114.7	85.7	81.6	81.1
142.5°	191.1	139.5	126.3	96.9	90.0	89.5
145°	189.5	144.4	137.9	110.7	101.0	100.3
147.5°	186.7	147.8	146.6	124.8	113.2	112.2
150°	184.2	149.5	151.9	140.0	125.0	124.0
152.5°	180.4	149.9	155.2	154.0	138.0	134.3
155°	174.9	148.6	154.9	164.5	149.7	145.0
157.5°	167.4	146.5	154.2	170.7	159.2	152.2
160°	159.6	142.4	150.3	171.1	165.0	157.4
162.5°	150.4	135.8	144.2	167.4	165.4	159.4
165°	139.5	126.4	136.1	157.5	160.0	156.0
167.5°	126.6	114.6	123.9	142.8	146.6	146.2
170°	112.3	102.3	109.3	125.0	128.0	128.5
172.5°	95.7	89.2	92.8	101.9	104.5	105.7
175°	80.0	76.1	76.5	79.8	81.6	84.1
177.5°	64.0	63.5	62.8	62.9	63.5	65.5
180°	57.6	57.6	57.6	57.6	57.6	57.6

(END OF REPORT)