

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: 20061A

Luminaire Tested: **698-RD-CF2/26**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 20061A
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 698-RD-CF2/26
Description: INTERIOR WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC LENS
Light Source: TWO 26 WATT CPFL LAMPS. LUMEN RATING = 3600 LMS.

Ballast/Driver: -

Summary

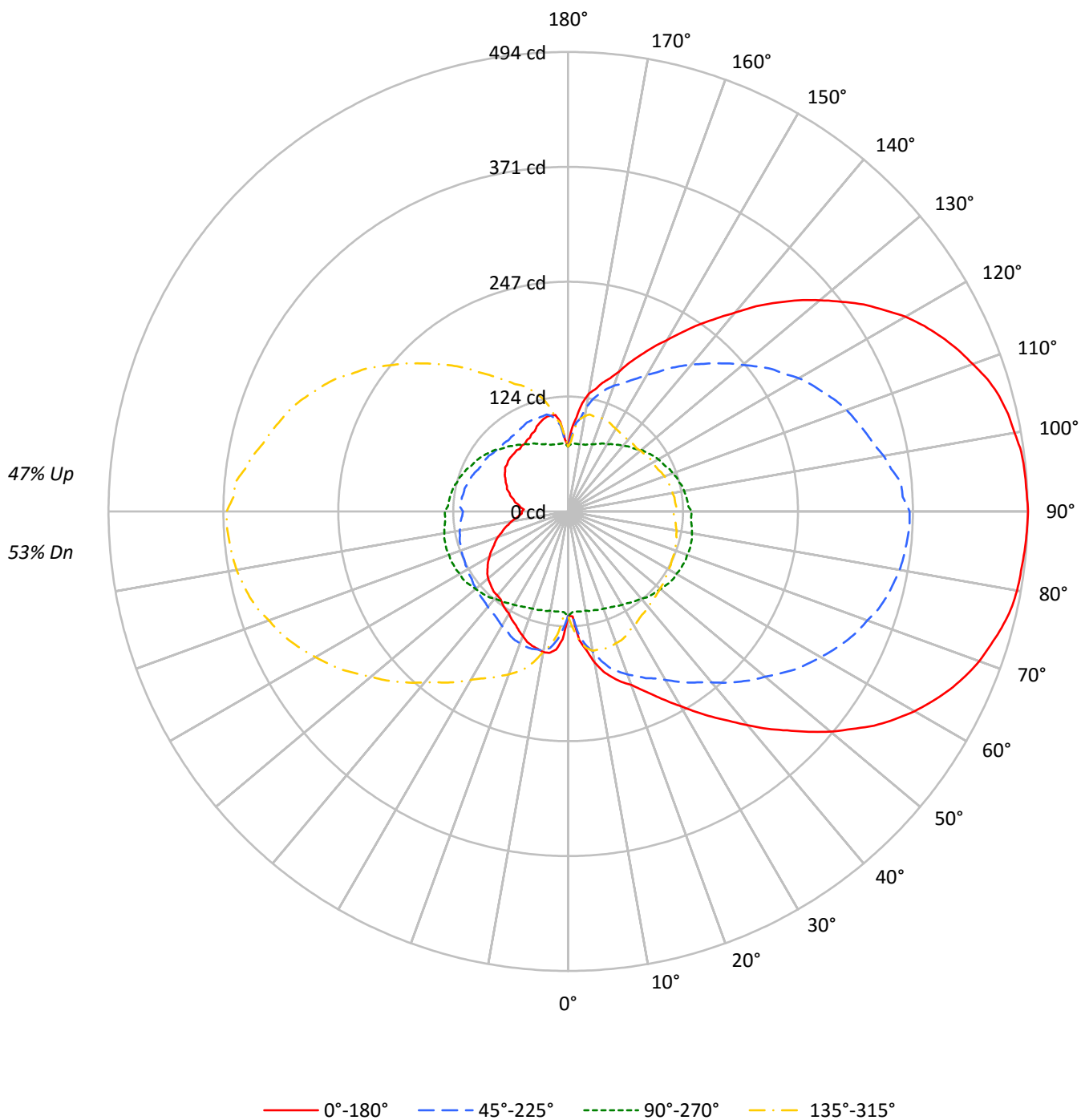
Lumens per Lamp: 3600 (1 lamp)
Luminaire Lumens: 2442.8 lumens
Efficiency: 67.9%
Efficacy: -
Spacing Criteria (0/90/45): 2.59 / 1.64 / 2.43
Luminous Opening: Rectangular w/ Sides (W: 0.21' x L: 0.83' x H: 0.83')
CIE Type: General Diffuse

Input Watts (W): 0
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

TEST NUMBER: 20061A

CATALOG NUMBER: 698-RD-CF2/26

Luminous Intensity Polar Plot



TEST NUMBER: 20061A

CATALOG NUMBER: 698-RD-CF2/26

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	73	73	73	73	68	68	68	68	58	58	58	48	48	48	40	40	40
1	63	59	55	51	58	54	51	47	45	43	40	37	35	33	30	28	27
2	56	50	44	39	51	45	40	36	38	34	31	31	28	25	24	22	20
3	51	42	36	31	46	39	33	29	32	28	24	26	23	20	20	18	16
4	46	37	30	25	42	34	28	24	28	23	20	23	19	16	18	15	13
5	42	32	26	21	38	30	24	20	25	20	16	20	16	13	16	13	10
6	38	29	23	18	35	26	21	17	22	17	14	18	14	11	14	11	9
7	35	26	20	15	32	24	18	14	20	15	12	16	12	10	13	10	8
8	33	23	17	13	30	21	16	12	18	14	10	15	11	9	11	9	7
9	30	21	16	12	28	19	14	11	16	12	9	13	10	7	11	8	6
10	28	19	14	10	26	18	13	10	15	11	8	12	9	7	10	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	6935	6935	6935	6935
5°	7924	4970	8505	4970
10°	8796	4002	8188	4002
15°	9323	3406	7538	3406
20°	9564	3000	6861	3000
25°	10126	2711	6232	2711
30°	10918	2520	5741	2520
35°	11950	2385	5423	2385
40°	13146	2280	5172	2280
45°	14537	2236	5065	2236
50°	16144	2182	4918	2182
55°	17799	2160	4682	2160
60°	19426	2116	4408	2116
65°	21042	2096	4103	2096
70°	22669	2074	3864	2074
75°	24329	2068	3570	2068
80°	26121	2052	3294	2052
85°	28069	2038	3021	2038

TEST NUMBER: 20061A

CATALOG NUMBER: 698-RD-CF2/26

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	13.0	0.5	0.4
10°-20°	43.9	1.8	1.2
20°-30°	76.1	3.1	2.1
30°-40°	110.5	4.5	3.1
40°-50°	148.6	6.1	4.1
50°-60°	187.1	7.7	5.2
60°-70°	219.5	9.0	6.1
70°-80°	241.1	9.9	6.7
80°-90°	249.1	10.2	6.9
90°-100°	245.6	10.1	6.8
100°-110°	228.6	9.4	6.3
110°-120°	201.5	8.2	5.6
120°-130°	165.5	6.8	4.6
130°-140°	125.6	5.1	3.5
140°-150°	88.7	3.6	2.5
150°-160°	57.7	2.4	1.6
160°-170°	31.8	1.3	0.9
170°-180°	8.9	0.4	0.2
0°-30°	132.9	5.4	3.7
0°-40°	243.4	10.0	6.8
0°-60°	579.1	23.7	16.1
0°-90°	1288.9	52.8	35.8
90°-120°	675.7	27.7	18.8
90°-150°	1055.5	43.2	29.3
90°-180°	1154.0	47.2	32.1
0°-180°	2442.8	100.0	67.9

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	112	112	112	112	112	
5°	139	108	149	108	139	14
15°	185	110	150	110	185	53
25°	218	113	134	113	218	102
35°	270	119	122	119	270	170
45°	333	127	116	127	333	259
55°	401	133	106	133	401	360
65°	453	136	88	136	453	449
75°	482	136	71	136	482	510
85°	492	133	53	133	492	402
90°	494	133	50	133	494	271
95°	492	129	51	129	492	401
105°	480	123	64	123	480	506
115°	443	115	74	115	443	439
125°	388	108	83	108	388	348
135°	318	97	85	97	318	246
145°	245	88	87	88	245	155
155°	186	80	92	80	186	87
165°	143	74	103	74	143	41
175°	101	73	97	73	101	11
180°	70	70	70	70	70	

TEST NUMBER: 20061A

CATALOG NUMBER: 698-RD-CF2/26

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
2.5°	113.0	114.5	112.7	109.6	108.3	115.0	126.8	135.0	137.4	135.0	126.8
5°	139.0	139.9	133.2	120.0	107.9	124.3	139.4	147.0	149.2	147.0	139.4
7.5°	150.4	150.2	144.8	132.4	108.4	131.8	148.0	152.0	153.3	152.0	148.0
10°	165.0	165.1	153.1	140.8	108.3	139.0	152.0	153.7	153.6	153.7	152.0
12.5°	176.6	175.8	164.4	145.7	109.7	144.1	152.0	153.4	151.2	153.4	152.0
15°	184.9	183.9	174.2	150.2	109.7	147.6	152.8	152.0	149.5	152.0	152.8
17.5°	192.3	190.7	180.6	157.0	110.9	150.2	152.3	149.5	146.9	149.5	152.3
20°	198.5	196.5	186.5	164.1	111.3	151.7	150.7	145.7	142.4	145.7	150.7
22.5°	207.8	203.3	191.3	169.9	112.0	152.3	149.8	141.5	138.5	141.5	149.8
25°	217.9	211.5	197.7	174.8	113.1	152.0	147.3	137.5	134.1	137.5	147.3
27.5°	229.6	223.3	202.3	179.1	114.6	153.4	143.8	134.7	131.1	134.7	143.8
30°	241.5	233.9	209.1	182.5	116.0	153.6	142.2	131.4	127.0	131.4	142.2
32.5°	255.5	244.8	216.7	187.3	117.1	153.4	139.3	128.0	125.0	128.0	139.3
35°	269.5	256.9	224.6	190.2	119.2	153.4	136.9	125.6	122.3	125.6	136.9
37.5°	283.8	271.7	231.5	195.3	120.8	153.4	135.7	122.3	119.1	122.3	135.7
40°	299.9	285.3	239.8	198.7	122.1	153.4	134.1	120.7	118.0	120.7	134.1
42.5°	316.9	298.5	249.8	202.5	125.3	152.2	132.3	120.3	117.7	120.3	132.3
45°	332.9	313.9	258.9	206.6	126.8	152.0	131.3	119.6	116.0	119.6	131.3
47.5°	350.6	328.8	268.2	210.4	128.1	151.6	130.2	118.8	114.0	118.8	130.2
50°	368.3	344.0	276.5	213.4	129.7	151.7	129.0	117.2	112.2	117.2	129.0
52.5°	384.1	359.0	286.2	217.4	131.2	150.7	128.3	116.3	109.5	116.3	128.3
55°	401.4	374.6	296.6	220.8	133.3	150.3	126.5	114.2	105.6	114.2	126.5
57.5°	416.0	388.5	305.1	224.0	134.4	150.4	126.2	112.6	102.2	112.6	126.2
60°	429.7	402.3	313.4	227.2	134.4	149.5	124.7	110.2	97.5	110.2	124.7
62.5°	441.6	415.0	321.7	230.0	135.6	149.1	124.4	108.1	93.5	108.1	124.4
65°	452.8	425.5	329.7	231.8	135.9	147.8	123.0	105.4	88.3	105.4	123.0
67.5°	462.3	435.7	336.8	233.7	136.7	147.9	122.8	102.9	84.6	102.9	122.8
70°	470.5	444.8	342.3	236.5	136.2	146.9	122.3	99.7	80.2	99.7	122.3
72.5°	476.4	452.4	349.5	237.5	136.8	146.0	121.2	97.5	74.8	97.5	121.2
75°	482.5	458.9	354.5	238.4	136.5	144.1	120.7	95.0	70.8	95.0	120.7
77.5°	487.3	464.7	358.1	240.3	136.2	143.6	119.1	93.7	65.8	93.7	119.1
80°	490.0	468.7	361.8	240.7	135.1	141.2	118.3	91.1	61.8	91.1	118.3
82.5°	491.0	471.1	364.0	240.7	134.2	140.6	116.7	88.9	56.7	88.9	116.7
85°	492.4	473.2	365.6	240.4	132.8	138.8	115.8	87.7	53.0	87.7	115.8
87.5°	493.4	475.3	367.1	240.1	132.3	137.2	114.0	85.7	49.7	85.7	114.0
90°	494.3	475.6	367.0	239.4	132.7	136.2	113.0	84.9	49.7	84.9	113.0
92.5°	493.1	474.8	359.9	234.1	129.3	147.9	116.3	86.7	47.6	86.7	116.3
95°	492.5	469.2	359.1	227.5	128.7	146.0	115.4	87.0	51.3	87.0	115.4
97.5°	491.3	460.3	350.2	225.9	127.6	144.8	115.2	86.7	53.6	86.7	115.2
100°	487.3	455.2	344.4	223.8	126.7	144.8	114.0	87.7	58.0	87.7	114.0
102.5°	484.3	450.6	336.1	221.9	125.7	142.2	113.9	87.6	60.0	87.6	113.9
105°	479.7	443.8	330.6	217.7	123.1	141.8	112.4	89.1	64.2	89.1	112.4
107.5°	472.7	436.3	324.3	214.9	122.2	139.4	111.6	88.6	66.1	88.6	111.6
110°	462.9	428.3	318.7	212.6	119.7	138.2	110.2	88.9	69.9	88.9	110.2

TEST NUMBER: 20061A

CATALOG NUMBER: 698-RD-CF2/26

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	453.7	418.8	311.4	209.2	118.3	137.4	108.8	90.3	71.1	90.3	108.8
115°	443.2	407.8	302.8	204.8	115.3	136.5	106.6	91.3	74.1	91.3	106.6
117.5°	431.7	395.8	295.1	202.1	113.6	134.8	105.6	91.9	75.9	91.9	105.6
120°	418.7	382.7	286.5	197.5	112.0	133.4	105.7	91.6	78.7	91.6	105.7
122.5°	402.9	367.6	275.4	193.7	109.8	131.8	104.7	91.9	80.3	91.9	104.7
125°	387.9	353.1	267.1	188.4	107.5	129.2	104.2	91.9	82.7	91.9	104.2
127.5°	370.3	336.1	255.9	184.5	105.0	128.9	102.3	91.6	82.7	91.6	102.3
130°	353.2	320.6	245.1	179.7	102.9	126.7	101.7	90.6	84.3	90.6	101.7
132.5°	336.0	303.6	235.4	175.1	99.1	126.5	100.1	90.8	84.9	90.8	100.1
135°	317.5	287.7	225.2	170.4	96.7	123.7	100.5	89.1	85.1	89.1	100.5
137.5°	299.1	271.7	215.2	165.6	94.9	121.9	100.7	88.2	85.2	88.2	100.7
140°	278.9	257.0	206.0	159.3	92.1	120.6	99.8	87.0	86.0	87.0	99.8
142.5°	261.4	241.8	196.6	155.3	90.2	118.8	100.8	87.9	84.9	87.9	100.8
145°	245.1	227.7	187.4	149.8	87.7	117.3	100.7	88.0	86.6	88.0	100.7
147.5°	228.7	213.1	177.3	146.6	85.9	116.6	101.7	90.3	86.3	90.3	101.7
150°	212.8	200.2	169.3	141.8	83.4	114.6	102.6	90.6	88.5	90.6	102.6
152.5°	199.7	186.5	161.4	137.7	82.3	113.7	103.6	92.7	89.3	92.7	103.6
155°	185.9	174.8	154.7	132.1	80.4	112.1	105.4	94.3	92.2	94.3	105.4
157.5°	173.5	163.5	148.0	125.0	78.4	112.2	105.3	98.0	93.5	98.0	105.3
160°	159.9	155.4	143.9	119.7	76.8	110.3	106.6	100.9	97.7	100.9	106.6
162.5°	150.2	147.2	138.1	111.8	76.1	109.3	105.6	102.9	100.2	102.9	105.6
165°	143.2	139.7	131.0	104.7	74.2	106.9	105.9	105.1	102.8	105.1	105.9
167.5°	134.5	133.2	124.0	102.9	73.7	102.5	106.8	104.1	104.5	104.1	106.8
170°	128.6	126.4	113.7	99.5	73.2	98.6	104.2	105.3	104.7	105.3	104.2
172.5°	117.7	112.7	100.8	88.9	73.2	91.9	100.2	102.3	104.5	102.3	100.2
175°	101.4	97.8	95.2	80.2	73.4	83.7	92.4	94.7	96.7	94.7	92.4
177.5°	89.1	86.1	80.2	72.2	72.5	72.9	75.7	75.3	77.5	75.3	75.7
180°	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7

TEST NUMBER: 20061A

CATALOG NUMBER: 698-RD-CF2/26

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	112.3	112.3	112.3	112.3	112.3	112.3
2.5°	115.0	108.3	109.6	112.7	114.5	113.0
5°	124.3	107.9	120.0	133.2	139.9	139.0
7.5°	131.8	108.4	132.4	144.8	150.2	150.4
10°	139.0	108.3	140.8	153.1	165.1	165.0
12.5°	144.1	109.7	145.7	164.4	175.8	176.6
15°	147.6	109.7	150.2	174.2	183.9	184.9
17.5°	150.2	110.9	157.0	180.6	190.7	192.3
20°	151.7	111.3	164.1	186.5	196.5	198.5
22.5°	152.3	112.0	169.9	191.3	203.3	207.8
25°	152.0	113.1	174.8	197.7	211.5	217.9
27.5°	153.4	114.6	179.1	202.3	223.3	229.6
30°	153.6	116.0	182.5	209.1	233.9	241.5
32.5°	153.4	117.1	187.3	216.7	244.8	255.5
35°	153.4	119.2	190.2	224.6	256.9	269.5
37.5°	153.4	120.8	195.3	231.5	271.7	283.8
40°	153.4	122.1	198.7	239.8	285.3	299.9
42.5°	152.2	125.3	202.5	249.8	298.5	316.9
45°	152.0	126.8	206.6	258.9	313.9	332.9
47.5°	151.6	128.1	210.4	268.2	328.8	350.6
50°	151.7	129.7	213.4	276.5	344.0	368.3
52.5°	150.7	131.2	217.4	286.2	359.0	384.1
55°	150.3	133.3	220.8	296.6	374.6	401.4
57.5°	150.4	134.4	224.0	305.1	388.5	416.0
60°	149.5	134.4	227.2	313.4	402.3	429.7
62.5°	149.1	135.6	230.0	321.7	415.0	441.6
65°	147.8	135.9	231.8	329.7	425.5	452.8
67.5°	147.9	136.7	233.7	336.8	435.7	462.3
70°	146.9	136.2	236.5	342.3	444.8	470.5
72.5°	146.0	136.8	237.5	349.5	452.4	476.4
75°	144.1	136.5	238.4	354.5	458.9	482.5
77.5°	143.6	136.2	240.3	358.1	464.7	487.3
80°	141.2	135.1	240.7	361.8	468.7	490.0
82.5°	140.6	134.2	240.7	364.0	471.1	491.0
85°	138.8	132.8	240.4	365.6	473.2	492.4
87.5°	137.2	132.3	240.1	367.1	475.3	493.4
90°	136.2	132.7	239.4	367.0	475.6	494.3
92.5°	147.9	129.3	234.1	359.9	474.8	493.1
95°	146.0	128.7	227.5	359.1	469.2	492.5
97.5°	144.8	127.6	225.9	350.2	460.3	491.3
100°	144.8	126.7	223.8	344.4	455.2	487.3
102.5°	142.2	125.7	221.9	336.1	450.6	484.3
105°	141.8	123.1	217.7	330.6	443.8	479.7
107.5°	139.4	122.2	214.9	324.3	436.3	472.7
110°	138.2	119.7	212.6	318.7	428.3	462.9

TEST NUMBER: 20061A

CATALOG NUMBER: 698-RD-CF2/26

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	137.4	118.3	209.2	311.4	418.8	453.7
115°	136.5	115.3	204.8	302.8	407.8	443.2
117.5°	134.8	113.6	202.1	295.1	395.8	431.7
120°	133.4	112.0	197.5	286.5	382.7	418.7
122.5°	131.8	109.8	193.7	275.4	367.6	402.9
125°	129.2	107.5	188.4	267.1	353.1	387.9
127.5°	128.9	105.0	184.5	255.9	336.1	370.3
130°	126.7	102.9	179.7	245.1	320.6	353.2
132.5°	126.5	99.1	175.1	235.4	303.6	336.0
135°	123.7	96.7	170.4	225.2	287.7	317.5
137.5°	121.9	94.9	165.6	215.2	271.7	299.1
140°	120.6	92.1	159.3	206.0	257.0	278.9
142.5°	118.8	90.2	155.3	196.6	241.8	261.4
145°	117.3	87.7	149.8	187.4	227.7	245.1
147.5°	116.6	85.9	146.6	177.3	213.1	228.7
150°	114.6	83.4	141.8	169.3	200.2	212.8
152.5°	113.7	82.3	137.7	161.4	186.5	199.7
155°	112.1	80.4	132.1	154.7	174.8	185.9
157.5°	112.2	78.4	125.0	148.0	163.5	173.5
160°	110.3	76.8	119.7	143.9	155.4	159.9
162.5°	109.3	76.1	111.8	138.1	147.2	150.2
165°	106.9	74.2	104.7	131.0	139.7	143.2
167.5°	102.5	73.7	102.9	124.0	133.2	134.5
170°	98.6	73.2	99.5	113.7	126.4	128.6
172.5°	91.9	73.2	88.9	100.8	112.7	117.7
175°	83.7	73.4	80.2	95.2	97.8	101.4
177.5°	72.9	72.5	72.2	80.2	86.1	89.1
180°	69.7	69.7	69.7	69.7	69.7	69.7

(END OF REPORT)