

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: 20430

Luminaire Tested: **635-LS-14-CFL/2/26**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 20430
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 635-LS-14-CFL/2/26
Description: INTERIOR WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC LENS
Light Source: TWO SYLVANIA 26 WATT CPFL LAMPS

CF26DD/E/841. LUMEN RATING = 3600 LMS.

Ballast/Driver: -

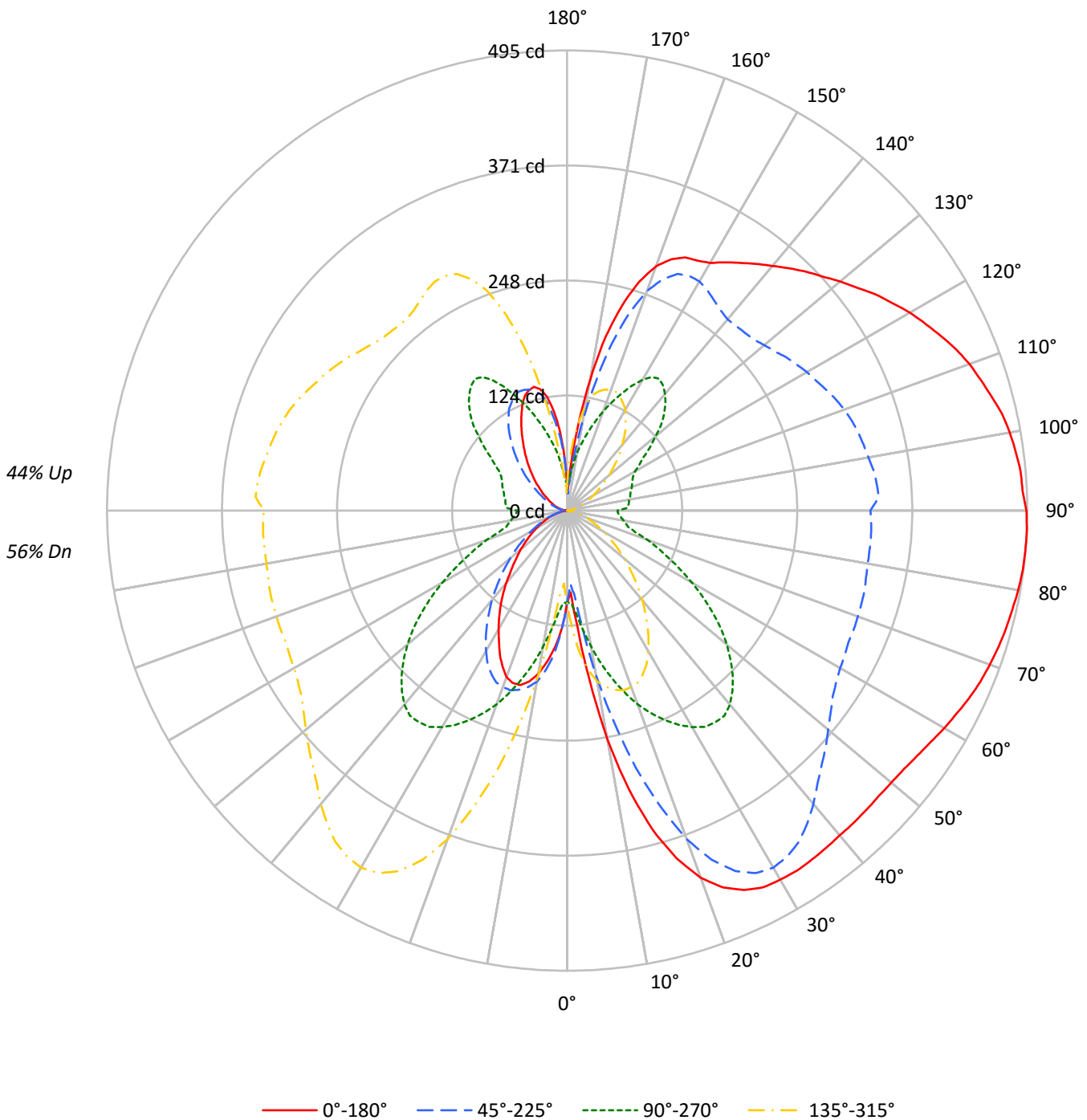
Summary

Lumens per Lamp: 3600 (1 lamp)
Luminaire Lumens: 2358.5 lumens
Efficiency: 65.5%
Efficacy: 41.4 lumens/watt
Spacing Criteria (0/90/45): 2.82 / 2.56 / 2.43
Luminous Opening: Rectangular w/ Sides (W: 0.21' x L: 1.08' x H: 0.75')
CIE Type: General Diffuse

Input Watts (W): 57
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	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	71	71	71	71	66	66	66	66	57	57	57	48	48	48	40	40	40	36	36	36	36	36	36	36	36	36	36	36	36	36																
1	63	59	55	52	58	55	52	49	46	44	42	39	37	36	32	31	30	26	26	26	26	26	26	26	26	26	26	26	26	26																
2	56	50	45	41	52	47	42	38	40	36	33	33	30	28	27	25	23	20	20	20	20	20	20	20	20	20	20	20	20	20																
3	51	44	38	33	47	40	35	31	34	30	27	29	25	23	23	21	19	16	16	16	16	16	16	16	16	16	16	16	16	16																
4	46	38	32	28	42	35	30	26	30	26	22	25	22	19	20	18	16	13	13	13	13	13	13	13	13	13	13	13	13	13																
5	42	34	28	23	39	31	26	22	27	22	19	22	19	16	18	16	13	11	11	11	11	11	11	11	11	11	11	11	11	11																
6	39	30	24	20	36	28	23	19	24	19	16	20	16	14	16	14	12	10	10	10	10	10	10	10	10	10	10	10	10	10																
7	36	27	21	17	33	25	20	16	21	17	14	18	15	12	15	12	10	8	8	8	8	8	8	8	8	8	8	8	8	8																
8	33	24	19	15	30	23	18	14	19	15	12	16	13	11	13	11	9	7	7	7	7	7	7	7	7	7	7	7	7	7																
9	31	22	17	13	28	21	16	12	18	14	11	15	12	9	12	10	8	6	6	6	6	6	6	6	6	6	6	6	6	6																
10	29	20	15	12	26	19	14	11	16	12	10	14	11	8	11	9	7	6	6	6	6	6	6	6	6	6	6	6	6	6																

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	4689	4689	4689	4689
5°	5583	4018	6602	4018
10°	10729	4388	7642	4388
15°	14735	4700	8049	4700
20°	16941	4869	7684	4869
25°	17812	4886	6772	4886
30°	17932	4813	5770	4813
35°	17877	4599	4857	4599
40°	17858	4224	3997	4224
45°	18031	3698	3224	3698
50°	18390	3148	2638	3148
55°	19101	2588	2110	2588
60°	20183	2045	1650	2045
65°	21528	1555	1245	1555
70°	23096	1174	921	1174
75°	24960	870	597	870
80°	27274	796	310	796
85°	30147	734	12	734



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	13.6	0.6	0.4
10°-20°	67.2	2.8	1.9
20°-30°	135.2	5.7	3.8
30°-40°	180.6	7.7	5.0
40°-50°	195.0	8.3	5.4
50°-60°	190.3	8.1	5.3
60°-70°	181.8	7.7	5.1
70°-80°	175.9	7.5	4.9
80°-90°	172.8	7.3	4.8
90°-100°	175.9	7.5	4.9
100°-110°	170.8	7.2	4.7
110°-120°	159.4	6.8	4.4
120°-130°	146.9	6.2	4.1
130°-140°	136.1	5.8	3.8
140°-150°	119.7	5.1	3.3
150°-160°	88.3	3.7	2.5
160°-170°	42.2	1.8	1.2
170°-180°	6.7	0.3	0.2
0°-30°	216.0	9.2	6.0
0°-40°	396.6	16.8	11.0
0°-60°	781.9	33.2	21.7
0°-90°	1312.4	55.6	36.5
90°-120°	506.2	21.5	14.1
90°-150°	908.8	38.5	25.2
90°-180°	1046.0	44.4	29.1
0°-180°	2358.5	100.0	65.5

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	99	99	99	99	99	
5°	124	111	147	111	124	16
15°	356	187	194	187	356	101
25°	450	249	171	249	450	207
35°	459	278	125	278	459	288
45°	455	252	81	252	455	353
55°	460	191	51	191	460	413
65°	477	120	28	120	477	473
75°	489	68	12	68	489	517
85°	495	56	0	56	495	404
90°	494	54	0	54	494	270
95°	490	66	1	66	490	398
105°	473	70	8	70	473	500
115°	444	78	17	78	444	441
125°	405	100	31	100	405	363
135°	363	147	52	147	363	282
145°	325	173	80	173	325	205
155°	300	139	116	139	300	138
165°	229	88	138	88	229	65
175°	54	39	84	39	54	8
180°	28	28	28	28	28	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8
2.5°	88.0	82.8	78.7	80.9	99.6	120.9	126.8	129.0	125.8	129.0	126.8
5°	124.3	108.7	91.4	84.8	110.7	144.8	153.1	152.9	147.0	152.9	153.1
7.5°	182.9	158.3	128.0	102.4	128.7	165.1	172.4	170.0	163.6	170.0	172.4
10°	249.9	218.4	180.7	129.5	148.4	182.9	186.8	182.2	178.0	182.2	186.8
12.5°	307.1	278.5	233.1	160.7	168.3	197.2	194.5	192.6	188.4	192.6	194.5
15°	355.7	329.1	287.0	196.7	187.2	209.4	199.4	198.4	194.3	198.4	199.4
17.5°	392.4	370.1	333.5	234.3	205.0	216.5	202.8	199.4	194.5	199.4	202.8
20°	420.2	404.8	376.2	270.9	221.7	220.9	201.8	195.7	190.6	195.7	201.8
22.5°	438.8	429.7	406.5	304.1	235.8	220.6	199.9	188.2	181.5	188.2	199.9
25°	450.3	445.4	427.8	333.5	248.7	217.9	193.5	177.3	171.2	177.3	193.5
27.5°	456.9	454.7	439.6	359.4	259.8	213.1	185.4	166.3	158.8	166.3	185.4
30°	458.4	457.4	443.5	374.8	268.9	206.0	174.4	153.6	147.5	153.6	174.4
32.5°	459.6	456.4	441.0	384.5	275.8	199.1	162.9	142.4	136.1	142.4	162.9
35°	458.6	452.8	434.8	388.5	277.9	190.6	150.5	130.9	124.6	130.9	150.5
37.5°	457.4	448.4	424.3	384.8	278.0	179.3	137.8	118.2	113.1	118.2	137.8
40°	456.2	443.7	412.1	376.2	272.5	168.3	125.8	107.5	102.1	107.5	125.8
42.5°	455.9	438.8	398.5	363.1	263.1	156.6	113.1	96.3	90.6	96.3	113.1
45°	455.2	435.1	387.2	346.2	251.9	143.1	101.6	85.8	81.4	85.8	101.6
47.5°	454.7	431.7	377.0	327.9	238.7	129.2	90.4	76.2	72.6	76.2	90.4
50°	455.2	429.0	366.5	307.5	224.1	115.5	79.9	68.2	65.3	68.2	79.9
52.5°	456.7	427.5	357.2	288.7	208.7	102.4	70.1	60.0	57.6	60.0	70.1
55°	459.8	428.0	348.7	269.2	190.8	89.2	61.0	51.7	50.8	51.7	61.0
57.5°	463.5	429.5	343.3	250.7	173.2	77.9	52.5	45.9	44.4	45.9	52.5
60°	468.4	431.9	339.1	232.1	154.8	67.9	45.1	39.0	38.3	39.0	45.1
62.5°	472.5	434.6	336.7	218.4	137.4	57.6	37.8	33.7	33.2	33.7	37.8
65°	477.2	436.5	334.0	208.2	119.9	48.3	32.0	27.8	27.6	27.8	32.0
67.5°	481.1	439.3	333.8	201.3	105.6	41.0	25.8	23.2	23.4	23.2	25.8
70°	484.0	441.8	332.8	195.0	91.5	33.7	21.2	19.3	19.3	19.3	21.2
72.5°	486.7	443.7	332.1	190.6	76.8	26.8	16.1	14.6	15.1	14.6	16.1
75°	488.9	444.9	331.3	186.6	68.0	21.7	12.2	11.7	11.7	11.7	12.2
77.5°	490.6	445.9	329.4	183.2	64.6	16.8	8.5	7.5	7.5	7.5	8.5
80°	492.8	446.7	328.4	181.0	61.9	13.4	5.3	4.9	5.6	4.9	5.3
82.5°	494.3	447.1	328.1	178.5	58.7	9.5	2.2	1.7	1.9	1.7	2.2
85°	494.8	447.4	328.1	176.8	56.4	7.3	0.0	0.0	0.2	0.0	0.0
87.5°	495.0	447.9	327.4	175.8	54.6	4.9	0.0	0.0	0.0	0.0	0.0
90°	494.0	446.4	326.2	174.6	54.1	5.3	0.0	0.0	0.0	0.0	0.0
92.5°	490.4	449.3	335.5	183.9	64.6	11.0	2.7	0.0	0.0	0.0	2.7
95°	489.6	447.9	334.3	184.4	66.0	12.7	4.1	2.2	0.7	2.2	4.1
97.5°	486.7	445.7	332.5	183.9	67.1	14.9	5.6	2.9	2.9	2.9	5.6
100°	483.5	441.3	329.1	182.9	67.6	16.1	7.8	5.3	4.6	5.3	7.8
102.5°	479.4	437.5	326.7	182.2	69.4	19.3	9.0	6.6	6.6	6.6	9.0
105°	472.8	432.9	324.2	180.5	70.4	21.9	11.7	8.8	8.5	8.8	11.7
107.5°	466.7	426.8	321.1	180.0	71.9	26.1	14.4	11.7	10.7	11.7	14.4
110°	460.6	421.9	317.4	179.0	74.1	30.7	16.6	13.6	13.2	13.6	16.6



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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°	453.0	415.1	312.8	177.8	75.4	35.6	20.7	16.8	15.6	16.8	20.7
115°	444.0	406.5	307.5	175.8	77.5	40.5	23.9	19.5	17.3	19.5	23.9
117.5°	434.8	398.7	302.2	174.9	80.0	47.1	28.0	22.4	20.7	22.4	28.0
120°	425.8	390.4	297.8	174.9	84.4	55.4	32.2	25.1	23.2	25.1	32.2
122.5°	415.1	382.3	292.6	176.1	92.1	63.3	37.6	29.8	27.1	29.8	37.6
125°	405.3	372.3	287.5	178.8	100.5	71.1	44.6	33.4	31.2	33.4	44.6
127.5°	393.6	363.3	281.4	182.0	112.7	80.4	50.5	39.0	35.4	39.0	50.5
130°	383.3	354.0	276.8	188.4	124.0	88.7	58.6	43.9	40.3	43.9	58.6
132.5°	372.6	344.8	272.4	197.7	137.4	98.2	66.0	50.0	46.4	50.0	66.0
135°	363.3	336.9	270.4	207.0	147.4	105.3	74.8	56.9	51.7	56.9	74.8
137.5°	353.5	329.4	269.2	217.7	156.4	112.9	83.6	64.0	58.1	64.0	83.6
140°	343.5	321.1	268.5	230.4	163.8	120.2	92.1	71.1	65.5	71.1	92.1
142.5°	334.5	315.2	271.4	238.4	169.4	126.8	101.1	80.1	72.6	80.1	101.1
145°	325.2	308.3	275.8	242.1	173.0	131.7	109.9	88.7	80.4	88.7	109.9
147.5°	316.7	303.9	280.9	241.6	170.3	136.8	117.0	96.5	88.9	96.5	117.0
150°	307.5	299.5	284.6	236.5	162.4	140.7	125.3	106.0	97.7	106.0	125.3
152.5°	303.1	299.2	284.6	228.9	151.6	144.4	130.2	114.8	107.0	114.8	130.2
155°	300.5	295.3	280.9	214.5	139.0	146.8	134.6	123.1	115.8	123.1	134.6
157.5°	292.6	285.1	269.5	194.7	126.1	145.6	138.0	131.2	125.1	131.2	138.0
160°	279.7	267.5	251.1	171.5	113.8	141.9	138.0	138.0	132.1	138.0	138.0
162.5°	258.2	241.9	222.8	145.1	100.1	133.4	136.5	141.9	135.8	141.9	136.5
165°	228.7	209.9	186.3	119.7	87.8	122.9	132.9	142.2	137.8	142.2	132.9
167.5°	191.8	168.0	141.9	93.1	75.6	108.2	127.5	137.3	133.6	137.3	127.5
170°	143.4	122.9	99.9	69.6	64.6	92.6	115.3	126.8	124.3	126.8	115.3
172.5°	94.8	81.1	61.2	44.9	51.1	73.3	95.0	109.4	106.8	109.4	95.0
175°	54.4	46.8	35.4	27.8	39.1	58.1	75.8	84.1	83.6	84.1	75.8
177.5°	23.4	20.5	18.3	21.5	31.7	44.4	51.0	53.2	53.9	53.2	51.0
180°	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	98.8	98.8	98.8	98.8	98.8	98.8
2.5°	120.9	99.6	80.9	78.7	82.8	88.0
5°	144.8	110.7	84.8	91.4	108.7	124.3
7.5°	165.1	128.7	102.4	128.0	158.3	182.9
10°	182.9	148.4	129.5	180.7	218.4	249.9
12.5°	197.2	168.3	160.7	233.1	278.5	307.1
15°	209.4	187.2	196.7	287.0	329.1	355.7
17.5°	216.5	205.0	234.3	333.5	370.1	392.4
20°	220.9	221.7	270.9	376.2	404.8	420.2
22.5°	220.6	235.8	304.1	406.5	429.7	438.8
25°	217.9	248.7	333.5	427.8	445.4	450.3
27.5°	213.1	259.8	359.4	439.6	454.7	456.9
30°	206.0	268.9	374.8	443.5	457.4	458.4
32.5°	199.1	275.8	384.5	441.0	456.4	459.6
35°	190.6	277.9	388.5	434.8	452.8	458.6
37.5°	179.3	278.0	384.8	424.3	448.4	457.4
40°	168.3	272.5	376.2	412.1	443.7	456.2
42.5°	156.6	263.1	363.1	398.5	438.8	455.9
45°	143.1	251.9	346.2	387.2	435.1	455.2
47.5°	129.2	238.7	327.9	377.0	431.7	454.7
50°	115.5	224.1	307.5	366.5	429.0	455.2
52.5°	102.4	208.7	288.7	357.2	427.5	456.7
55°	89.2	190.8	269.2	348.7	428.0	459.8
57.5°	77.9	173.2	250.7	343.3	429.5	463.5
60°	67.9	154.8	232.1	339.1	431.9	468.4
62.5°	57.6	137.4	218.4	336.7	434.6	472.5
65°	48.3	119.9	208.2	334.0	436.5	477.2
67.5°	41.0	105.6	201.3	333.8	439.3	481.1
70°	33.7	91.5	195.0	332.8	441.8	484.0
72.5°	26.8	76.8	190.6	332.1	443.7	486.7
75°	21.7	68.0	186.6	331.3	444.9	488.9
77.5°	16.8	64.6	183.2	329.4	445.9	490.6
80°	13.4	61.9	181.0	328.4	446.7	492.8
82.5°	9.5	58.7	178.5	328.1	447.1	494.3
85°	7.3	56.4	176.8	328.1	447.4	494.8
87.5°	4.9	54.6	175.8	327.4	447.9	495.0
90°	5.3	54.1	174.6	326.2	446.4	494.0
92.5°	11.0	64.6	183.9	335.5	449.3	490.4
95°	12.7	66.0	184.4	334.3	447.9	489.6
97.5°	14.9	67.1	183.9	332.5	445.7	486.7
100°	16.1	67.6	182.9	329.1	441.3	483.5
102.5°	19.3	69.4	182.2	326.7	437.5	479.4
105°	21.9	70.4	180.5	324.2	432.9	472.8
107.5°	26.1	71.9	180.0	321.1	426.8	466.7
110°	30.7	74.1	179.0	317.4	421.9	460.6



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	35.6	75.4	177.8	312.8	415.1	453.0
115°	40.5	77.5	175.8	307.5	406.5	444.0
117.5°	47.1	80.0	174.9	302.2	398.7	434.8
120°	55.4	84.4	174.9	297.8	390.4	425.8
122.5°	63.3	92.1	176.1	292.6	382.3	415.1
125°	71.1	100.5	178.8	287.5	372.3	405.3
127.5°	80.4	112.7	182.0	281.4	363.3	393.6
130°	88.7	124.0	188.4	276.8	354.0	383.3
132.5°	98.2	137.4	197.7	272.4	344.8	372.6
135°	105.3	147.4	207.0	270.4	336.9	363.3
137.5°	112.9	156.4	217.7	269.2	329.4	353.5
140°	120.2	163.8	230.4	268.5	321.1	343.5
142.5°	126.8	169.4	238.4	271.4	315.2	334.5
145°	131.7	173.0	242.1	275.8	308.3	325.2
147.5°	136.8	170.3	241.6	280.9	303.9	316.7
150°	140.7	162.4	236.5	284.6	299.5	307.5
152.5°	144.4	151.6	228.9	284.6	299.2	303.1
155°	146.8	139.0	214.5	280.9	295.3	300.5
157.5°	145.6	126.1	194.7	269.5	285.1	292.6
160°	141.9	113.8	171.5	251.1	267.5	279.7
162.5°	133.4	100.1	145.1	222.8	241.9	258.2
165°	122.9	87.8	119.7	186.3	209.9	228.7
167.5°	108.2	75.6	93.1	141.9	168.0	191.8
170°	92.6	64.6	69.6	99.9	122.9	143.4
172.5°	73.3	51.1	44.9	61.2	81.1	94.8
175°	58.1	39.1	27.8	35.4	46.8	54.4
177.5°	44.4	31.7	21.5	18.3	20.5	23.4
180°	28.5	28.5	28.5	28.5	28.5	28.5

(END OF REPORT)