

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P232028

Luminaire Tested: **FVS4M-3-LD4-30-1LO-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232028
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-3-LD4-30-1LO-PFS125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
3FT LENGTH, 1-MODULE LED WITH PFS125 LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

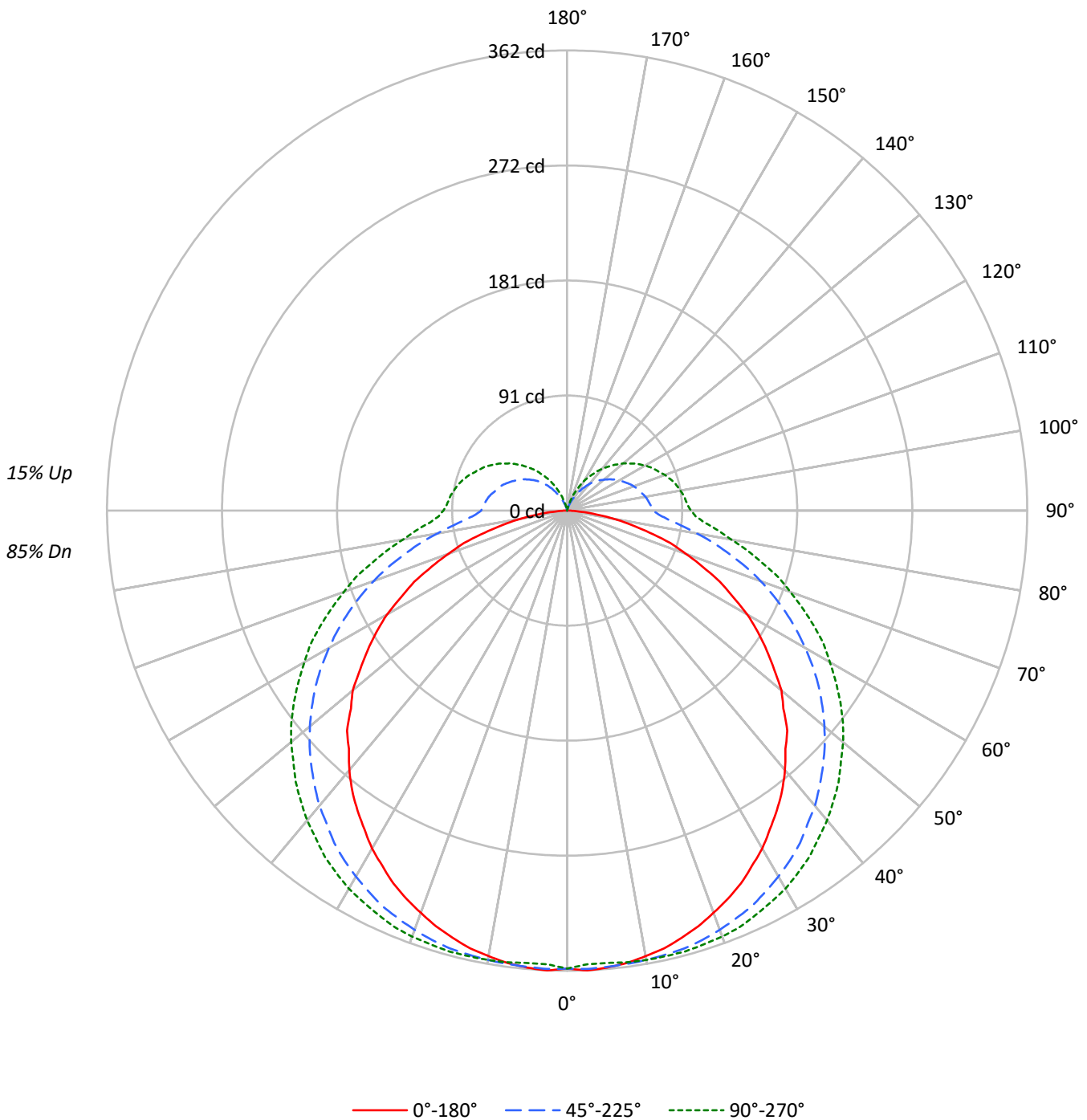
Lumens per Lamp: N/A
Luminaire Lumens: 1545.0 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.42 / 1.5
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 2.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 21.3
Input Voltage (V): 120
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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	115	115	115	115	111	111	111	111	103	103	103	95	95	95	88	88	88	85
1	103	98	93	88	99	94	89	85	87	83	80	80	77	75	74	72	70	67
2	93	84	76	70	89	81	74	68	75	69	64	69	64	60	64	60	57	54
3	84	73	64	57	80	70	62	56	65	58	53	60	55	50	56	51	47	44
4	77	64	55	48	73	62	53	47	57	50	44	53	47	42	49	44	40	37
5	70	57	48	41	67	55	46	40	51	44	38	47	41	36	44	39	34	32
6	65	51	42	35	62	49	41	34	46	38	33	43	36	31	40	34	30	27
7	60	46	37	31	57	44	36	30	41	34	29	39	32	28	36	31	26	24
8	56	42	33	27	53	40	32	27	38	31	26	35	29	24	33	28	23	21
9	52	38	30	24	50	37	29	24	35	28	23	33	26	22	30	25	21	19
10	48	35	27	22	46	34	26	21	32	25	21	30	24	20	28	23	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4255	4255	4255
5°	4254	4103	4023
10°	4220	3976	3893
15°	4181	3872	3781
20°	4135	3767	3678
25°	4095	3672	3574
30°	4037	3566	3479
35°	3969	3465	3374
40°	3900	3353	3262
45°	3843	3234	3152
50°	3756	3112	3036
55°	3613	2980	2908
60°	3479	2818	2765
65°	3259	2642	2614
70°	2911	2439	2434
75°	2466	2189	2235
80°	1854	1923	2020
85°	875	1689	1871



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.3	2.2
10°-20°	100.3	6.5
20°-30°	157.0	10.2
30°-40°	197.1	12.8
40°-50°	215.6	14.0
50°-60°	210.4	13.6
60°-70°	180.9	11.7
70°-80°	131.6	8.5
80°-90°	80.8	5.2
90°-100°	62.7	4.1
100°-110°	55.3	3.6
110°-120°	45.3	2.9
120°-130°	34.0	2.2
130°-140°	22.5	1.5
140°-150°	12.2	0.8
150°-160°	4.5	0.3
160°-170°	0.6	0.0
170°-180°	0.0	0.0
0°-30°	291.6	18.9
0°-40°	488.7	31.6
0°-60°	914.6	59.2
0°-90°	1308.0	84.7
90°-120°	163.3	10.6
90°-150°	231.9	15.0
90°-180°	237.0	15.3
0°-180°	1545.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	360	360	360	360	360	
5°	361	360	360	360	357	34
15°	348	350	357	359	359	98
25°	324	331	344	350	351	149
35°	288	301	319	330	332	180
45°	245	262	285	299	302	188
55°	192	214	242	258	262	172
65°	133	158	190	209	214	130
75°	67	98	132	153	159	72
85°	11	44	79	102	108	15
90°	0	32	68	90	97	1
95°	0	30	65	87	94	0
105°	0	26	59	80	87	0
115°	0	22	52	71	76	0
125°	0	17	43	60	64	0
135°	0	12	33	46	50	0
145°	0	6	21	32	35	0
155°	0	2	10	17	19	0
165°	1	0	1	2	4	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	360.3	360.3	360.3	360.3	360.3	360.3	360.3	360.3	360.3	360.3	360.3
2.5°	362.1	360.9	360.3	360.3	360.9	360.9	361.5	362.1	361.5	360.9	360.3
5°	360.9	359.7	359.0	359.0	359.7	360.3	360.3	360.9	360.9	360.3	360.3
7.5°	359.0	357.8	357.2	357.2	357.8	358.4	359.7	360.3	360.3	359.7	360.3
10°	355.9	354.7	354.1	354.7	355.3	356.6	357.8	358.4	359.0	359.0	359.0
12.5°	352.8	351.6	351.0	351.6	352.8	354.1	355.3	356.6	357.2	357.8	358.4
15°	347.9	347.3	346.6	347.9	349.1	351.0	352.8	354.1	355.3	356.6	357.2
17.5°	342.9	342.3	342.3	342.9	344.8	346.6	349.1	351.6	352.8	354.1	354.7
20°	336.7	336.1	336.1	338.0	339.8	342.3	344.8	347.9	349.1	351.0	352.2
22.5°	330.5	329.9	330.5	332.4	334.9	338.0	341.1	343.5	345.4	347.3	349.1
25°	323.7	323.1	323.7	326.2	328.7	332.4	336.1	338.6	341.1	343.5	345.4
27.5°	315.0	315.0	315.6	318.1	321.8	326.2	329.3	333.0	335.5	338.0	340.4
30°	307.0	306.3	307.6	310.7	314.4	319.4	323.1	326.8	329.9	332.4	334.9
32.5°	297.0	297.0	299.5	302.6	307.0	311.3	315.6	320.0	323.1	326.2	329.3
35°	287.7	287.7	289.0	293.9	298.3	303.2	308.2	311.9	315.6	319.4	321.8
37.5°	277.8	277.8	280.3	284.0	289.0	294.5	298.9	303.9	307.0	310.7	314.4
40°	266.6	267.3	269.7	274.1	279.7	284.6	290.2	295.2	299.5	303.2	306.3
42.5°	254.2	254.9	258.6	263.5	269.1	274.7	279.7	285.2	289.6	293.9	297.0
45°	244.9	243.7	248.0	253.0	258.6	264.8	270.4	275.9	280.3	284.6	288.3
47.5°	230.7	231.9	236.3	241.2	247.4	253.0	259.8	265.4	270.4	274.7	279.0
50°	220.1	220.1	223.9	229.4	235.6	241.8	248.7	254.2	259.2	264.2	268.5
52.5°	205.3	206.5	211.5	217.7	223.2	229.4	236.3	243.1	248.0	253.0	257.3
55°	191.6	192.9	198.4	204.0	210.2	218.3	224.5	230.1	236.3	241.8	246.2
57.5°	178.0	179.2	184.2	191.0	197.2	204.6	212.1	218.3	223.9	229.4	234.4
60°	163.7	164.9	169.9	176.7	183.6	191.0	197.8	204.6	210.8	216.4	222.0
62.5°	147.0	150.1	155.0	161.2	169.9	177.3	184.8	191.0	198.4	203.4	209.6
65°	132.7	134.6	140.1	147.0	154.4	162.5	170.5	177.3	183.6	189.8	195.3
67.5°	115.3	118.4	124.6	132.1	140.1	147.6	156.3	163.7	169.9	176.1	181.1
70°	99.2	102.3	109.1	117.2	124.0	132.7	140.8	148.2	155.0	161.8	166.8
72.5°	85.0	86.2	93.0	101.1	109.1	117.8	125.3	133.9	140.1	147.6	152.5
75°	67.0	71.3	76.9	85.6	93.6	102.9	110.4	118.4	125.3	132.1	137.0
77.5°	51.5	55.2	62.6	70.1	79.4	87.4	96.7	104.2	111.0	118.4	124.0
80°	37.2	40.9	47.1	56.4	63.9	73.8	81.9	89.9	97.4	103.6	109.8
82.5°	22.9	26.7	34.1	42.2	51.5	60.8	68.2	76.3	84.3	90.5	96.7
85°	11.2	15.5	22.3	31.0	39.1	49.0	57.7	65.1	73.2	79.4	86.2
87.5°	3.7	6.8	14.3	22.3	31.6	40.9	49.6	57.0	65.1	71.9	78.1
90°	0.0	3.1	10.5	18.6	27.9	36.6	45.3	53.3	60.8	67.6	73.8
92.5°	0.0	3.1	9.3	18.0	26.7	35.3	44.0	52.1	59.5	66.4	72.6
95°	0.0	2.5	8.7	17.4	26.0	34.7	42.8	50.8	58.3	65.1	71.3
97.5°	0.0	2.5	8.7	16.7	24.8	33.5	42.2	49.6	57.0	63.9	70.1
100°	0.0	2.5	8.1	15.5	24.2	32.2	40.9	48.4	55.8	62.6	68.8
102.5°	0.0	1.9	7.4	14.9	22.9	31.6	39.7	47.1	54.6	60.8	67.0
105°	0.0	1.9	7.4	14.3	22.3	30.4	38.4	45.9	52.7	58.9	65.1
107.5°	0.0	1.2	6.8	13.6	21.1	29.1	37.2	44.0	51.5	57.7	63.3
110°	0.0	1.2	6.2	13.0	20.5	27.9	35.3	42.8	49.6	55.8	61.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	1.2	5.6	12.4	19.2	26.7	34.1	40.9	47.7	53.9	58.9
115°	0.0	1.2	5.6	11.8	18.6	25.4	32.9	39.7	45.9	51.5	57.0
117.5°	0.0	0.6	5.0	10.5	17.4	24.2	31.0	37.8	44.0	49.6	54.6
120°	0.0	0.6	4.3	9.9	16.1	22.9	29.8	36.0	42.2	47.1	52.1
122.5°	0.0	0.6	3.7	9.3	15.5	21.7	27.9	34.1	39.7	45.3	50.2
125°	0.0	0.6	3.7	8.7	14.3	20.5	26.0	32.2	37.8	42.8	47.1
127.5°	0.0	0.6	3.1	7.4	13.0	18.6	24.8	30.4	35.3	40.3	44.6
130°	0.0	0.6	2.5	6.8	11.8	17.4	22.9	27.9	32.9	37.8	42.2
132.5°	0.0	0.0	1.9	5.6	10.5	16.1	21.1	26.0	31.0	35.3	39.1
135°	0.0	0.0	1.9	5.0	9.3	14.3	19.2	24.2	28.5	32.9	36.6
137.5°	0.0	0.0	1.2	4.3	8.1	12.4	17.4	21.7	26.0	30.4	33.5
140°	0.0	0.0	1.2	3.7	6.8	10.5	14.9	19.2	23.6	27.3	31.0
142.5°	0.0	0.0	0.6	2.5	5.6	9.3	13.0	16.7	20.5	24.2	27.9
145°	0.0	0.0	0.6	1.9	4.3	7.4	11.2	14.3	18.0	21.1	24.8
147.5°	0.0	0.0	0.6	1.2	3.7	6.2	9.3	11.8	14.9	18.0	21.1
150°	0.0	0.0	0.0	1.2	2.5	5.0	7.4	9.9	12.4	14.9	17.4
152.5°	0.0	0.0	0.0	0.6	1.9	3.7	5.6	8.1	9.9	11.8	14.3
155°	0.0	0.0	0.0	0.6	1.2	2.5	4.3	6.2	7.4	9.9	11.2
157.5°	0.6	0.0	0.0	0.6	0.6	1.9	3.1	4.3	5.6	6.8	8.1
160°	0.6	0.0	0.0	0.0	0.6	1.2	1.9	2.5	3.7	5.0	6.2
162.5°	0.6	0.6	0.0	0.0	0.0	0.6	1.2	1.9	2.5	3.1	3.7
165°	0.6	0.6	0.0	0.0	0.0	0.0	0.6	0.6	1.2	1.2	1.9
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	360.3	360.3	360.3	360.3	360.3	360.3	360.3	360.3
2.5°	360.3	359.7	359.7	359.0	359.0	358.4	357.8	357.2
5°	360.3	359.7	359.7	359.7	359.0	358.4	357.8	357.2
7.5°	360.3	360.3	360.3	359.7	359.7	359.0	358.4	358.4
10°	359.7	359.7	360.3	360.3	360.3	359.7	359.0	359.0
12.5°	359.0	359.7	360.3	360.3	360.3	360.3	359.7	359.0
15°	357.8	359.0	359.0	359.7	359.7	359.7	359.0	359.0
17.5°	355.9	357.2	357.8	358.4	359.0	358.4	357.8	357.8
20°	353.5	355.3	355.9	356.6	357.2	357.2	356.6	356.6
22.5°	351.0	352.2	353.5	354.1	355.3	355.3	354.7	354.7
25°	347.3	348.5	349.7	351.0	351.6	351.6	351.6	351.0
27.5°	342.3	344.2	346.0	347.3	347.9	347.9	347.9	347.3
30°	337.3	339.2	341.1	342.3	343.5	343.5	343.5	343.5
32.5°	331.1	333.6	335.5	336.7	338.0	338.6	338.0	338.0
35°	324.9	327.4	329.3	330.5	331.8	332.4	331.8	332.4
37.5°	317.5	320.0	321.8	324.3	324.9	324.9	324.9	324.9
40°	309.4	311.9	314.4	316.3	317.5	317.5	318.1	318.1
42.5°	300.7	303.2	306.3	308.8	308.8	309.4	310.1	310.1
45°	292.1	294.5	297.6	299.5	300.7	302.0	301.4	302.0
47.5°	282.8	285.9	288.3	290.8	291.4	292.7	292.7	292.1
50°	272.8	275.9	278.4	280.9	282.8	282.8	283.4	283.4
52.5°	261.7	265.4	268.5	271.6	271.6	273.5	274.1	273.5
55°	250.5	253.6	256.7	259.8	261.1	261.7	262.3	262.3
57.5°	238.7	242.5	244.9	248.0	249.9	249.9	251.1	250.5
60°	226.3	230.1	233.2	235.6	238.1	238.7	240.0	238.7
62.5°	213.9	218.3	220.8	223.2	225.1	226.3	227.6	227.6
65°	200.9	204.6	207.7	210.8	212.1	212.7	214.6	213.9
67.5°	186.7	190.4	193.5	197.2	199.7	200.3	201.5	200.3
70°	172.4	176.7	180.4	182.9	184.2	186.7	186.0	186.7
72.5°	157.5	161.8	165.6	168.7	171.1	173.0	173.6	174.2
75°	142.6	148.2	151.3	153.8	156.9	157.5	159.4	158.7
77.5°	129.6	133.9	137.7	140.1	143.2	144.5	145.1	145.1
80°	114.7	119.7	123.4	127.1	128.4	130.2	132.1	130.8
82.5°	102.3	107.3	111.6	114.7	117.2	118.4	119.1	119.7
85°	91.2	96.1	100.5	103.6	106.0	107.9	109.1	108.5
87.5°	83.7	88.7	92.4	96.1	99.2	99.8	101.1	101.1
90°	79.4	84.3	88.7	91.8	94.3	96.1	96.7	97.4
92.5°	77.5	82.5	86.8	89.9	92.4	93.6	94.9	94.9
95°	76.3	81.2	85.0	88.7	91.2	92.4	93.6	93.6
97.5°	75.7	80.0	84.3	86.8	89.3	91.2	91.8	92.4
100°	73.8	78.8	82.5	85.6	88.1	89.3	90.5	90.5
102.5°	71.9	76.9	80.6	83.7	86.2	87.4	88.1	88.7
105°	70.1	75.0	78.8	81.9	83.7	85.6	86.2	86.8
107.5°	68.2	72.6	76.3	79.4	81.9	83.1	83.7	84.3
110°	66.4	70.7	74.4	77.5	79.4	80.6	81.9	81.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	63.9	68.2	71.9	75.0	76.9	78.1	78.8	78.8
115°	62.0	65.7	69.5	71.9	74.4	75.7	76.3	76.3
117.5°	59.5	63.3	67.0	69.5	71.3	72.6	73.2	73.8
120°	57.0	60.8	63.9	66.4	68.8	70.1	70.7	70.7
122.5°	53.9	57.7	61.4	63.9	65.7	67.0	67.6	67.6
125°	51.5	55.2	58.3	60.8	62.6	63.3	63.9	64.5
127.5°	48.4	52.1	55.2	57.7	58.9	60.1	60.8	60.8
130°	45.9	49.0	52.1	53.9	55.8	57.0	57.7	57.7
132.5°	42.8	45.9	49.0	50.8	52.1	53.3	53.9	53.9
135°	39.7	42.8	45.3	47.1	49.0	49.6	50.2	50.2
137.5°	36.6	39.7	42.2	44.0	45.3	45.9	46.5	46.5
140°	33.5	36.6	38.4	40.3	41.5	42.2	42.8	42.8
142.5°	30.4	32.9	35.3	36.6	37.8	38.4	39.1	39.1
145°	27.3	29.8	31.0	32.9	34.1	34.7	34.7	34.7
147.5°	23.6	26.7	27.9	29.1	30.4	30.4	31.0	31.0
150°	19.8	22.3	24.2	25.4	26.0	26.7	27.3	27.3
152.5°	16.1	18.6	20.5	21.7	22.3	22.9	23.6	22.9
155°	13.0	14.3	16.1	18.0	18.6	18.6	19.2	18.6
157.5°	9.3	10.5	12.4	13.6	14.9	14.9	14.9	14.9
160°	6.8	7.4	8.7	9.3	10.5	11.2	11.2	11.2
162.5°	4.3	5.0	5.6	6.2	6.2	7.4	7.4	6.8
165°	1.9	1.9	2.5	2.5	3.1	3.7	3.7	3.7
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)