

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: P232029

Luminaire Tested: **FVS4M-3-LD4-35-1LO-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232029
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-LD4-35-1LO-PFS125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
3FT LENGTH, 1-MODULE LED WITH PFS125 LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

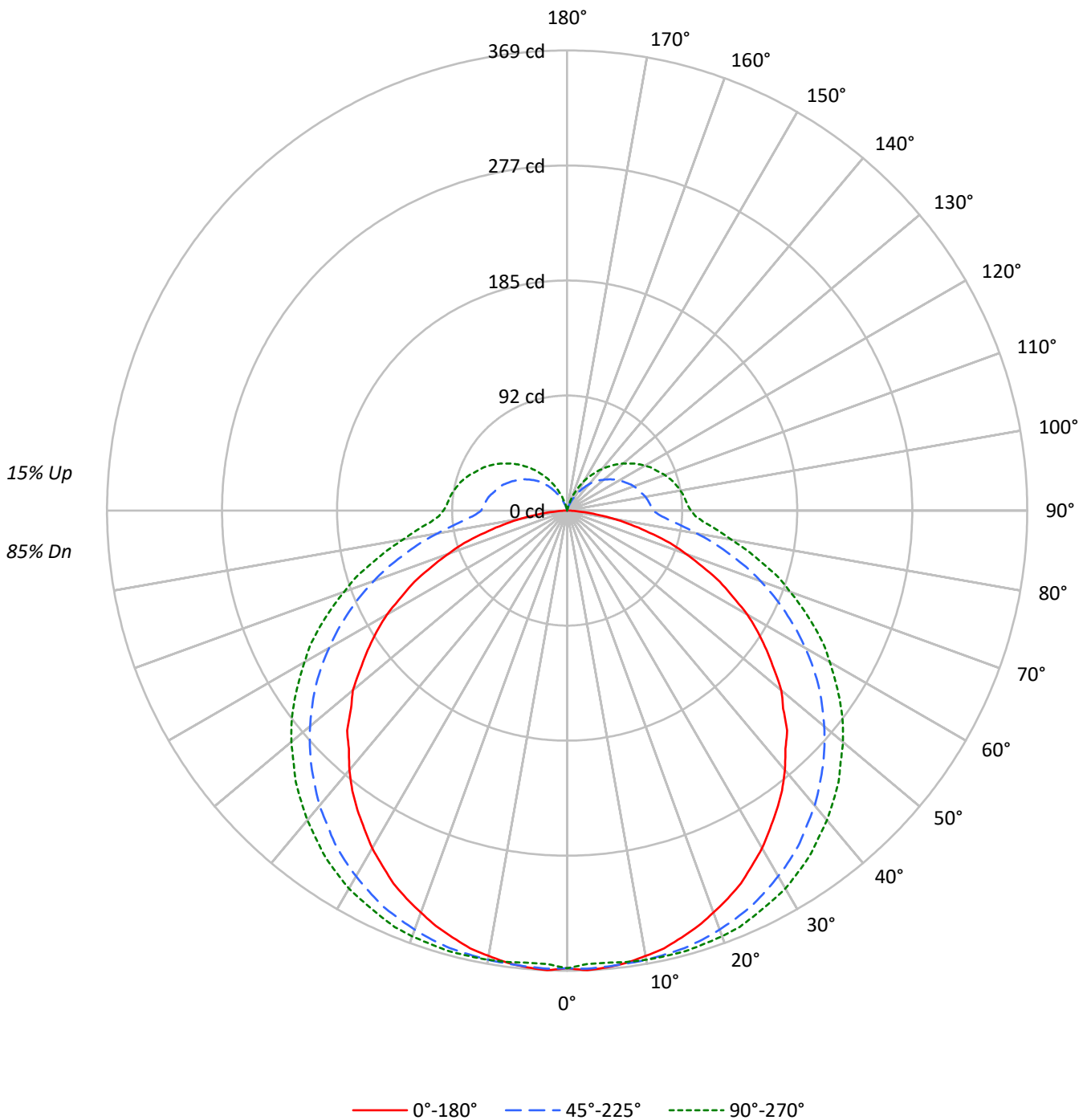
Lumens per Lamp: N/A
Luminaire Lumens: 1574.0 lumens
Efficiency: N/A
Efficacy: 73.9 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.42 / 1.5
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 2.92' x H: 0.19')
CIE Type: Semi-Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4334	4334	4334
5°	4335	4179	4099
10°	4299	4051	3967
15°	4260	3945	3853
20°	4212	3838	3747
25°	4172	3741	3641
30°	4112	3632	3545
35°	4044	3529	3437
40°	3973	3416	3323
45°	3915	3295	3212
50°	3828	3170	3093
55°	3681	3036	2963
60°	3545	2872	2817
65°	3320	2691	2664
70°	2967	2486	2480
75°	2510	2231	2278
80°	1889	1958	2059
85°	890	1721	1907



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.9	2.2
10°-20°	102.2	6.5
20°-30°	159.9	10.2
30°-40°	200.8	12.8
40°-50°	219.6	14.0
50°-60°	214.3	13.6
60°-70°	184.3	11.7
70°-80°	134.1	8.5
80°-90°	82.4	5.2
90°-100°	63.8	4.1
100°-110°	56.3	3.6
110°-120°	46.2	2.9
120°-130°	34.6	2.2
130°-140°	22.9	1.5
140°-150°	12.4	0.8
150°-160°	4.6	0.3
160°-170°	0.6	0.0
170°-180°	0.0	0.0
0°-30°	297.0	18.9
0°-40°	497.8	31.6
0°-60°	931.8	59.2
0°-90°	1332.5	84.7
90°-120°	166.3	10.6
90°-150°	236.2	15.0
90°-180°	241.0	15.3
0°-180°	1574.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	367	367	367	367	367	
5°	368	367	367	366	364	35
15°	354	357	363	366	366	100
25°	330	337	350	357	358	152
35°	293	306	325	336	339	183
45°	250	267	290	304	308	191
55°	195	218	246	263	267	175
65°	135	161	193	213	218	133
75°	68	100	135	155	162	73
85°	11	45	81	104	111	15
90°	0	33	69	92	99	1
95°	0	31	66	88	95	0
105°	0	27	60	82	88	0
115°	0	22	52	72	78	0
125°	0	18	44	61	66	0
135°	0	12	34	47	51	0
145°	0	6	22	33	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°	367.0	367.0	367.0	367.0	367.0	367.0	367.0	367.0	367.0	367.0	367.0
2.5°	368.9	367.7	367.0	367.0	367.7	367.7	368.3	368.9	368.3	367.7	367.0
5°	367.7	366.4	365.8	365.8	366.4	367.0	367.0	367.7	367.7	367.0	367.0
7.5°	365.8	364.5	363.9	363.9	364.5	365.1	366.4	367.0	367.0	366.4	367.0
10°	362.6	361.4	360.7	361.4	362.0	363.3	364.5	365.1	365.8	365.8	365.8
12.5°	359.5	358.2	357.6	358.2	359.5	360.7	362.0	363.3	363.9	364.5	365.1
15°	354.4	353.8	353.1	354.4	355.7	357.6	359.5	360.7	362.0	363.3	363.9
17.5°	349.4	348.7	348.7	349.4	351.2	353.1	355.7	358.2	359.5	360.7	361.4
20°	343.0	342.4	342.4	344.3	346.2	348.7	351.2	354.4	355.7	357.6	358.8
22.5°	336.7	336.1	336.7	338.6	341.1	344.3	347.5	350.0	351.9	353.8	355.7
25°	329.8	329.1	329.8	332.3	334.8	338.6	342.4	344.9	347.5	350.0	351.9
27.5°	320.9	320.9	321.6	324.1	327.9	332.3	335.5	339.2	341.8	344.3	346.8
30°	312.7	312.1	313.3	316.5	320.3	325.3	329.1	332.9	336.1	338.6	341.1
32.5°	302.6	302.6	305.1	308.3	312.7	317.1	321.6	326.0	329.1	332.3	335.5
35°	293.1	293.1	294.4	299.4	303.9	308.9	314.0	317.8	321.6	325.3	327.9
37.5°	283.0	283.0	285.5	289.3	294.4	300.1	304.5	309.6	312.7	316.5	320.3
40°	271.6	272.3	274.8	279.2	284.9	290.0	295.7	300.7	305.1	308.9	312.1
42.5°	259.0	259.6	263.4	268.5	274.2	279.9	284.9	290.6	295.0	299.4	302.6
45°	249.5	248.3	252.7	257.8	263.4	269.8	275.4	281.1	285.5	290.0	293.8
47.5°	235.0	236.3	240.7	245.7	252.1	257.8	264.7	270.4	275.4	279.9	284.3
50°	224.3	224.3	228.1	233.7	240.1	246.4	253.3	259.0	264.1	269.1	273.5
52.5°	209.1	210.4	215.4	221.7	227.4	233.7	240.7	247.6	252.7	257.8	262.2
55°	195.2	196.5	202.2	207.8	214.2	222.4	228.7	234.4	240.7	246.4	250.8
57.5°	181.3	182.6	187.6	194.6	200.9	208.5	216.1	222.4	228.1	233.7	238.8
60°	166.8	168.0	173.1	180.0	187.0	194.6	201.5	208.5	214.8	220.5	226.2
62.5°	149.7	152.9	157.9	164.3	173.1	180.7	188.3	194.6	202.2	207.2	213.5
65°	135.2	137.1	142.8	149.7	157.3	165.5	173.7	180.7	187.0	193.3	199.0
67.5°	117.5	120.7	127.0	134.6	142.8	150.4	159.2	166.8	173.1	179.4	184.5
70°	101.1	104.2	111.2	119.4	126.3	135.2	143.4	151.0	157.9	164.9	169.9
72.5°	86.5	87.8	94.8	103.0	111.2	120.0	127.6	136.5	142.8	150.4	155.4
75°	68.2	72.7	78.3	87.2	95.4	104.9	112.4	120.7	127.6	134.6	139.6
77.5°	52.4	56.2	63.8	71.4	80.9	89.1	98.6	106.1	113.1	120.7	126.3
80°	37.9	41.7	48.0	57.5	65.1	75.2	83.4	91.6	99.2	105.5	111.8
82.5°	23.4	27.2	34.7	43.0	52.4	61.9	69.5	77.7	85.9	92.2	98.6
85°	11.4	15.8	22.7	31.6	39.8	49.9	58.8	66.3	74.5	80.9	87.8
87.5°	3.8	6.9	14.5	22.7	32.2	41.7	50.5	58.1	66.3	73.3	79.6
90°	0.0	3.2	10.7	19.0	28.4	37.3	46.1	54.3	61.9	68.9	75.2
92.5°	0.0	3.2	9.5	18.3	27.2	36.0	44.9	53.1	60.6	67.6	73.9
95°	0.0	2.5	8.8	17.7	26.5	35.4	43.6	51.8	59.4	66.3	72.7
97.5°	0.0	2.5	8.8	17.1	25.3	34.1	43.0	50.5	58.1	65.1	71.4
100°	0.0	2.5	8.2	15.8	24.6	32.9	41.7	49.3	56.9	63.8	70.1
102.5°	0.0	1.9	7.6	15.2	23.4	32.2	40.4	48.0	55.6	61.9	68.2
105°	0.0	1.9	7.6	14.5	22.7	31.0	39.2	46.7	53.7	60.0	66.3
107.5°	0.0	1.3	6.9	13.9	21.5	29.7	37.9	44.9	52.4	58.8	64.4
110°	0.0	1.3	6.3	13.3	20.8	28.4	36.0	43.6	50.5	56.9	62.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	1.3	5.7	12.6	19.6	27.2	34.7	41.7	48.6	55.0	60.0
115°	0.0	1.3	5.7	12.0	19.0	25.9	33.5	40.4	46.7	52.4	58.1
117.5°	0.0	0.6	5.1	10.7	17.7	24.6	31.6	38.5	44.9	50.5	55.6
120°	0.0	0.6	4.4	10.1	16.4	23.4	30.3	36.6	43.0	48.0	53.1
122.5°	0.0	0.6	3.8	9.5	15.8	22.1	28.4	34.7	40.4	46.1	51.2
125°	0.0	0.6	3.8	8.8	14.5	20.8	26.5	32.9	38.5	43.6	48.0
127.5°	0.0	0.6	3.2	7.6	13.3	19.0	25.3	31.0	36.0	41.1	45.5
130°	0.0	0.6	2.5	6.9	12.0	17.7	23.4	28.4	33.5	38.5	43.0
132.5°	0.0	0.0	1.9	5.7	10.7	16.4	21.5	26.5	31.6	36.0	39.8
135°	0.0	0.0	1.9	5.1	9.5	14.5	19.6	24.6	29.1	33.5	37.3
137.5°	0.0	0.0	1.3	4.4	8.2	12.6	17.7	22.1	26.5	31.0	34.1
140°	0.0	0.0	1.3	3.8	6.9	10.7	15.2	19.6	24.0	27.8	31.6
142.5°	0.0	0.0	0.6	2.5	5.7	9.5	13.3	17.1	20.8	24.6	28.4
145°	0.0	0.0	0.6	1.9	4.4	7.6	11.4	14.5	18.3	21.5	25.3
147.5°	0.0	0.0	0.6	1.3	3.8	6.3	9.5	12.0	15.2	18.3	21.5
150°	0.0	0.0	0.0	1.3	2.5	5.1	7.6	10.1	12.6	15.2	17.7
152.5°	0.0	0.0	0.0	0.6	1.9	3.8	5.7	8.2	10.1	12.0	14.5
155°	0.0	0.0	0.0	0.6	1.3	2.5	4.4	6.3	7.6	10.1	11.4
157.5°	0.6	0.0	0.0	0.6	0.6	1.9	3.2	4.4	5.7	6.9	8.2
160°	0.6	0.0	0.0	0.0	0.6	1.3	1.9	2.5	3.8	5.1	6.3
162.5°	0.6	0.6	0.0	0.0	0.0	0.6	1.3	1.9	2.5	3.2	3.8
165°	0.6	0.6	0.0	0.0	0.0	0.0	0.6	0.6	1.3	1.3	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°	367.0	367.0	367.0	367.0	367.0	367.0	367.0	367.0
2.5°	367.0	366.4	366.4	365.8	365.8	365.1	364.5	363.9
5°	367.0	366.4	366.4	366.4	365.8	365.1	364.5	363.9
7.5°	367.0	367.0	367.0	366.4	366.4	365.8	365.1	365.1
10°	366.4	366.4	367.0	367.0	367.0	366.4	365.8	365.8
12.5°	365.8	366.4	367.0	367.0	367.0	367.0	366.4	365.8
15°	364.5	365.8	365.8	366.4	366.4	366.4	365.8	365.8
17.5°	362.6	363.9	364.5	365.1	365.8	365.1	364.5	364.5
20°	360.1	362.0	362.6	363.3	363.9	363.9	363.3	363.3
22.5°	357.6	358.8	360.1	360.7	362.0	362.0	361.4	361.4
25°	353.8	355.0	356.3	357.6	358.2	358.2	358.2	357.6
27.5°	348.7	350.6	352.5	353.8	354.4	354.4	354.4	353.8
30°	343.7	345.6	347.5	348.7	350.0	350.0	350.0	350.0
32.5°	337.3	339.9	341.8	343.0	344.3	344.9	344.3	344.3
35°	331.0	333.6	335.5	336.7	338.0	338.6	338.0	338.6
37.5°	323.5	326.0	327.9	330.4	331.0	331.0	331.0	331.0
40°	315.2	317.8	320.3	322.2	323.5	323.5	324.1	324.1
42.5°	306.4	308.9	312.1	314.6	314.6	315.2	315.9	315.9
45°	297.6	300.1	303.2	305.1	306.4	307.7	307.0	307.7
47.5°	288.1	291.2	293.8	296.3	296.9	298.2	298.2	297.6
50°	278.0	281.1	283.7	286.2	288.1	288.1	288.7	288.7
52.5°	266.6	270.4	273.5	276.7	276.7	278.6	279.2	278.6
55°	255.2	258.4	261.5	264.7	266.0	266.6	267.2	267.2
57.5°	243.2	247.0	249.5	252.7	254.6	254.6	255.9	255.2
60°	230.6	234.4	237.5	240.1	242.6	243.2	244.5	243.2
62.5°	218.0	222.4	224.9	227.4	229.3	230.6	231.8	231.8
65°	204.7	208.5	211.6	214.8	216.1	216.7	218.6	218.0
67.5°	190.2	193.9	197.1	200.9	203.4	204.1	205.3	204.1
70°	175.6	180.0	183.8	186.4	187.6	190.2	189.5	190.2
72.5°	160.5	164.9	168.7	171.8	174.4	176.3	176.9	177.5
75°	145.3	151.0	154.1	156.7	159.8	160.5	162.4	161.7
77.5°	132.0	136.5	140.2	142.8	145.9	147.2	147.8	147.8
80°	116.9	121.9	125.7	129.5	130.8	132.7	134.6	133.3
82.5°	104.2	109.3	113.7	116.9	119.4	120.7	121.3	121.9
85°	92.9	97.9	102.3	105.5	108.0	109.9	111.2	110.6
87.5°	85.3	90.3	94.1	97.9	101.1	101.7	103.0	103.0
90°	80.9	85.9	90.3	93.5	96.0	97.9	98.6	99.2
92.5°	79.0	84.0	88.4	91.6	94.1	95.4	96.7	96.7
95°	77.7	82.8	86.5	90.3	92.9	94.1	95.4	95.4
97.5°	77.1	81.5	85.9	88.4	91.0	92.9	93.5	94.1
100°	75.2	80.2	84.0	87.2	89.7	91.0	92.2	92.2
102.5°	73.3	78.3	82.1	85.3	87.8	89.1	89.7	90.3
105°	71.4	76.4	80.2	83.4	85.3	87.2	87.8	88.4
107.5°	69.5	73.9	77.7	80.9	83.4	84.7	85.3	85.9
110°	67.6	72.0	75.8	79.0	80.9	82.1	83.4	83.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	65.1	69.5	73.3	76.4	78.3	79.6	80.2	80.2
115°	63.2	67.0	70.8	73.3	75.8	77.1	77.7	77.7
117.5°	60.6	64.4	68.2	70.8	72.7	73.9	74.5	75.2
120°	58.1	61.9	65.1	67.6	70.1	71.4	72.0	72.0
122.5°	55.0	58.8	62.5	65.1	67.0	68.2	68.9	68.9
125°	52.4	56.2	59.4	61.9	63.8	64.4	65.1	65.7
127.5°	49.3	53.1	56.2	58.8	60.0	61.3	61.9	61.9
130°	46.7	49.9	53.1	55.0	56.9	58.1	58.8	58.8
132.5°	43.6	46.7	49.9	51.8	53.1	54.3	55.0	55.0
135°	40.4	43.6	46.1	48.0	49.9	50.5	51.2	51.2
137.5°	37.3	40.4	43.0	44.9	46.1	46.7	47.4	47.4
140°	34.1	37.3	39.2	41.1	42.3	43.0	43.6	43.6
142.5°	31.0	33.5	36.0	37.3	38.5	39.2	39.8	39.8
145°	27.8	30.3	31.6	33.5	34.7	35.4	35.4	35.4
147.5°	24.0	27.2	28.4	29.7	31.0	31.0	31.6	31.6
150°	20.2	22.7	24.6	25.9	26.5	27.2	27.8	27.8
152.5°	16.4	19.0	20.8	22.1	22.7	23.4	24.0	23.4
155°	13.3	14.5	16.4	18.3	19.0	19.0	19.6	19.0
157.5°	9.5	10.7	12.6	13.9	15.2	15.2	15.2	15.2
160°	6.9	7.6	8.8	9.5	10.7	11.4	11.4	11.4
162.5°	4.4	5.1	5.7	6.3	6.3	7.6	7.6	6.9
165°	1.9	1.9	2.5	2.5	3.2	3.8	3.8	3.8
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)