

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: P231920

Luminaire Tested: **FVS4M-2-LD4-30-2LO-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231920
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-9)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-2-LD4-30-2LO-PFS125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH PFS125 LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

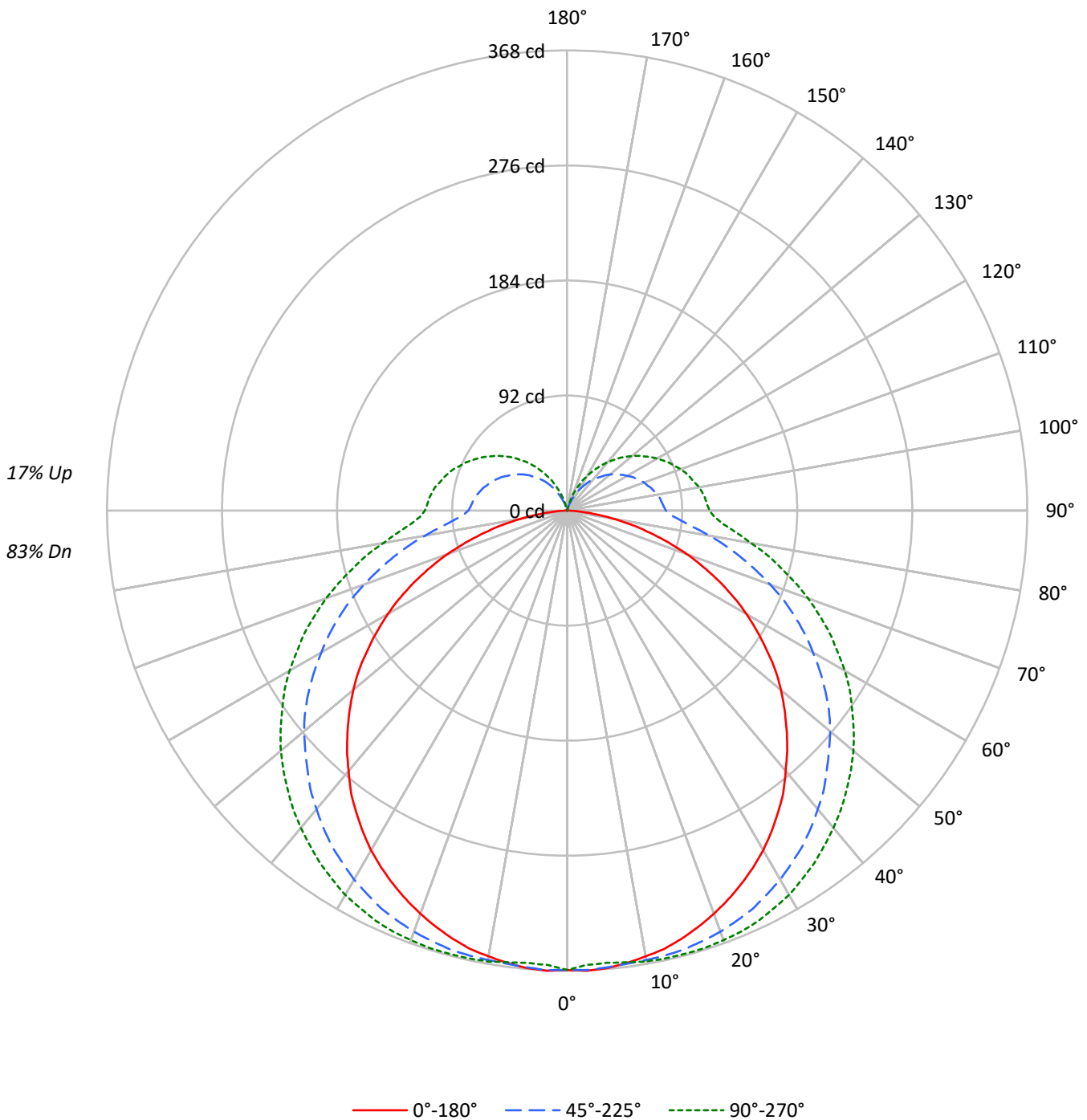
Lumens per Lamp: N/A
Luminaire Lumens: 1648.0 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.44 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 24.1
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	50	30	10	0	
RCR																						
0	115	115	115	115	110	110	110	110	102	102	102	94	94	94	86	86	86	83				
1	103	97	92	87	98	93	89	84	86	82	79	79	76	73	73	70	68	65				
2	92	83	76	69	88	80	73	67	74	68	63	68	63	59	62	59	55	52				
3	84	72	64	57	80	69	61	55	64	57	52	59	53	49	54	50	46	43				
4	76	64	54	47	73	61	53	46	56	49	43	52	46	41	48	43	39	36				
5	70	56	47	40	66	54	46	39	50	43	37	46	40	35	43	38	33	31				
6	64	50	41	35	61	49	40	34	45	38	32	42	35	30	39	33	29	26				
7	59	45	36	30	57	44	35	29	41	33	28	38	32	27	35	30	25	23				
8	55	41	33	27	53	40	32	26	37	30	25	35	28	24	32	27	23	20				
9	51	38	29	24	49	36	29	23	34	27	22	32	26	21	30	24	20	18				
10	48	35	27	21	46	34	26	21	31	25	20	29	23	19	27	22	18	16				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6601	6601	6601
5°	6570	6341	6224
10°	6494	6126	6042
15°	6423	5967	5878
20°	6336	5811	5737
25°	6249	5663	5609
30°	6160	5502	5470
35°	6041	5345	5319
40°	5893	5173	5170
45°	5746	4996	5019
50°	5594	4836	4873
55°	5363	4637	4694
60°	5093	4399	4519
65°	4724	4153	4309
70°	4224	3852	4069
75°	3479	3514	3792
80°	2509	3147	3505
85°	1149	2838	3296



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.9	2.1
10°-20°	102.2	6.2
20°-30°	160.7	9.7
30°-40°	202.6	12.3
40°-50°	223.0	13.5
50°-60°	219.4	13.3
60°-70°	191.1	11.6
70°-80°	142.8	8.7
80°-90°	92.1	5.6
90°-100°	73.6	4.5
100°-110°	65.0	3.9
110°-120°	53.2	3.2
120°-130°	40.0	2.4
130°-140°	26.6	1.6
140°-150°	14.6	0.9
150°-160°	5.5	0.3
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	297.8	18.1
0°-40°	500.3	30.4
0°-60°	942.8	57.2
0°-90°	1368.9	83.1
90°-120°	191.8	11.6
90°-150°	272.9	16.6
90°-180°	279.0	16.9
0°-180°	1648.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	367	367	367	367	367	
5°	367	367	367	365	363	35
15°	354	355	363	367	367	100
25°	330	337	351	360	362	152
35°	294	307	328	341	344	184
45°	248	267	294	311	316	192
55°	195	220	252	272	278	174
65°	134	164	201	224	232	133
75°	68	104	144	169	177	73
85°	12	50	91	118	126	15
90°	0	38	79	106	114	1
95°	0	35	76	102	111	0
105°	0	31	70	94	102	0
115°	0	26	61	83	90	0
125°	0	20	50	70	76	0
135°	0	14	38	55	60	0
145°	0	7	26	38	41	0
155°	1	2	12	21	22	0
165°	0	0	1	3	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°	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3
2.5°	368.4	367.8	367.8	367.8	367.8	367.8	367.8	367.8	367.8	367.8	367.8
5°	367.3	366.7	366.7	366.7	366.7	366.7	367.3	366.7	367.3	366.7	366.7
7.5°	364.9	364.3	364.3	364.3	364.3	364.9	364.9	364.9	364.9	365.5	365.5
10°	362.0	361.4	361.4	361.4	362.0	362.0	362.5	363.1	364.3	364.9	365.5
12.5°	359.0	357.8	358.4	357.8	358.4	359.0	360.2	362.0	363.1	364.3	365.5
15°	354.3	353.1	353.7	353.7	354.3	356.1	357.8	359.6	361.4	363.1	364.3
17.5°	349.0	348.4	348.4	348.4	350.8	352.5	354.9	357.2	359.0	360.8	362.5
20°	343.1	342.5	342.5	343.1	345.4	348.4	350.8	353.7	356.1	358.4	360.8
22.5°	336.6	336.0	336.0	337.8	340.1	343.7	346.6	349.6	352.5	354.9	357.8
25°	329.5	329.5	329.5	331.9	334.8	338.4	341.9	344.9	348.4	351.3	354.3
27.5°	321.9	321.3	321.9	324.8	328.4	332.5	336.0	339.6	343.1	346.0	349.0
30°	313.6	312.4	313.6	317.2	321.3	325.4	329.5	333.7	337.2	340.7	344.3
32.5°	304.2	303.6	304.8	308.9	313.0	317.7	322.5	326.6	330.7	334.2	338.4
35°	294.2	293.0	294.8	300.1	304.8	309.5	314.2	318.9	323.6	327.8	331.9
37.5°	284.1	283.0	285.3	290.6	295.3	300.6	306.0	311.3	316.0	320.1	324.2
40°	271.8	271.8	274.7	280.0	285.3	291.2	296.5	302.4	307.7	311.8	316.6
42.5°	260.6	260.6	264.1	269.4	275.3	281.2	290.0	295.3	298.3	303.6	308.3
45°	248.2	248.2	252.3	258.2	264.1	270.6	277.1	283.0	288.9	293.6	299.5
47.5°	235.8	235.8	241.1	247.0	253.5	260.6	266.5	272.9	278.8	284.1	290.0
50°	223.4	222.8	228.1	234.6	241.7	251.1	255.8	262.3	268.2	274.7	280.0
52.5°	209.9	209.9	215.8	222.2	229.3	236.4	244.1	251.1	258.2	264.1	269.4
55°	195.1	195.7	201.6	208.7	216.9	224.0	231.7	238.7	245.2	252.3	258.2
57.5°	180.4	181.6	188.1	195.7	202.8	211.0	218.7	226.4	233.4	239.9	245.8
60°	165.7	166.8	173.3	180.4	188.6	196.9	205.7	213.4	220.5	227.0	233.4
62.5°	150.3	151.5	158.0	166.2	175.1	183.3	191.6	199.8	206.9	214.6	221.1
65°	134.4	136.2	143.2	150.9	159.8	168.6	177.4	185.7	193.4	201.0	206.9
67.5°	117.9	120.8	127.3	136.2	145.0	153.9	162.7	171.5	179.8	187.5	193.4
70°	102.0	104.3	110.8	120.8	129.7	139.1	148.0	157.4	165.7	172.7	179.2
72.5°	84.9	88.4	96.1	104.3	114.4	123.8	133.2	142.1	150.9	158.0	165.1
75°	68.4	71.9	79.6	89.6	98.4	109.1	117.9	127.3	135.6	143.8	151.5
77.5°	53.1	56.6	64.3	73.7	83.7	93.7	103.2	112.6	122.0	129.7	136.2
80°	37.7	41.3	49.5	59.0	69.0	79.0	89.6	98.4	107.3	115.5	122.0
82.5°	23.6	27.7	36.0	46.0	56.0	66.0	76.0	85.5	94.3	102.0	109.6
85°	11.8	15.9	24.2	34.8	44.8	54.8	65.4	74.3	83.1	91.4	98.4
87.5°	4.1	8.3	15.9	26.5	36.5	46.6	56.6	66.0	75.5	83.1	90.2
90°	0.0	4.1	12.4	22.4	32.4	43.0	53.1	62.5	70.7	79.0	86.7
92.5°	0.0	3.5	11.2	20.6	31.2	41.3	51.3	60.7	69.6	77.2	84.9
95°	0.0	3.5	10.6	20.0	30.1	40.1	50.1	59.5	68.4	76.0	83.1
97.5°	0.0	2.9	10.0	19.5	28.9	39.5	48.9	58.4	66.6	74.9	81.9
100°	0.0	2.9	9.4	18.3	28.3	37.7	47.7	56.6	64.8	73.1	80.2
102.5°	0.0	2.4	8.8	17.7	27.1	36.5	46.0	54.8	63.7	71.3	78.4
105°	0.0	2.4	8.3	17.1	25.9	35.4	44.8	53.6	61.9	69.6	76.0
107.5°	0.0	1.8	8.3	15.9	24.8	34.2	43.0	51.9	59.5	67.2	74.3
110°	0.0	1.8	7.7	15.3	24.2	33.0	41.9	50.1	57.8	65.4	71.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	1.2	7.1	14.1	23.0	31.2	40.1	48.3	56.0	63.1	69.0
115°	0.0	1.2	6.5	13.6	21.8	30.1	38.3	46.0	53.6	60.7	66.6
117.5°	0.0	0.6	5.9	12.4	20.6	28.3	36.5	44.2	51.3	58.4	64.3
120°	0.0	0.6	5.3	11.8	19.5	27.1	34.8	41.9	48.9	55.4	61.3
122.5°	0.0	0.6	4.7	10.6	18.3	25.3	33.0	40.1	46.6	53.1	58.4
125°	0.0	0.6	4.1	10.0	16.5	23.6	30.7	37.7	44.2	50.1	56.0
127.5°	0.0	0.6	3.5	8.8	15.3	22.4	28.9	35.4	41.9	47.7	53.1
130°	0.0	0.6	2.9	8.3	14.1	20.6	27.1	33.0	38.9	44.8	49.5
132.5°	0.0	0.0	2.4	7.1	12.4	18.9	24.8	30.7	36.5	41.9	46.6
135°	0.0	0.0	1.8	5.9	11.2	17.1	23.0	28.3	33.6	38.3	43.0
137.5°	0.0	0.0	1.2	5.3	10.0	15.3	20.6	25.9	30.7	35.4	39.5
140°	0.0	0.0	0.6	4.1	8.8	13.6	18.3	23.6	28.3	32.4	36.5
142.5°	0.0	0.0	0.6	2.9	7.1	11.8	15.9	20.6	25.3	29.5	33.0
145°	0.0	0.0	0.0	2.4	5.3	9.4	13.6	17.7	22.4	25.9	29.5
147.5°	0.0	0.0	0.0	1.8	4.1	7.7	11.2	14.7	18.9	22.4	25.9
150°	0.0	0.0	0.0	0.6	2.9	5.9	9.4	12.4	15.9	18.9	21.8
152.5°	0.0	0.0	0.0	0.6	2.4	4.7	7.1	10.0	12.4	15.3	18.3
155°	0.6	0.0	0.0	0.0	1.2	2.9	5.3	7.1	9.4	11.8	14.1
157.5°	0.0	0.0	0.0	0.0	0.6	1.8	3.5	5.3	7.1	8.8	10.6
160°	0.6	0.0	0.0	0.0	0.0	0.6	1.8	2.9	4.7	5.9	7.1
162.5°	0.6	0.0	0.0	0.0	0.0	0.0	0.6	1.2	2.4	3.5	4.1
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	1.8
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°	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3
2.5°	367.3	366.7	366.1	365.5	364.9	364.3	363.7	363.7
5°	366.1	366.1	365.5	364.9	364.3	363.7	363.1	363.1
7.5°	366.1	366.1	366.1	365.5	365.5	364.9	364.3	364.3
10°	366.1	366.7	366.7	366.7	366.7	366.1	366.1	366.1
12.5°	366.1	367.3	367.3	367.3	367.3	367.3	367.3	366.7
15°	365.5	366.1	366.7	367.3	367.3	367.3	366.7	366.7
17.5°	364.3	365.5	366.1	366.7	366.7	366.7	366.7	366.7
20°	362.0	363.7	364.3	365.5	365.5	366.1	365.5	365.5
22.5°	359.6	361.4	362.5	363.1	363.7	364.3	364.3	364.3
25°	356.1	358.4	359.6	360.8	361.4	362.0	362.0	362.0
27.5°	351.9	354.3	356.1	357.2	357.8	358.4	358.4	358.4
30°	347.2	349.0	351.3	353.1	353.7	354.3	354.3	354.9
32.5°	341.3	343.7	346.0	347.8	348.4	349.0	349.6	349.6
35°	334.8	337.8	339.6	341.9	343.1	343.7	343.7	344.3
37.5°	328.4	331.3	333.1	335.4	336.6	337.2	337.8	337.8
40°	320.1	323.6	326.0	328.4	329.5	330.7	330.7	331.3
42.5°	312.4	316.0	318.3	320.7	322.5	323.6	324.2	324.2
45°	303.6	307.1	310.1	312.4	314.2	315.4	316.0	316.0
47.5°	294.2	298.3	301.8	304.2	306.0	307.1	307.7	307.7
50°	284.1	288.9	291.8	294.8	296.5	297.7	298.3	298.9
52.5°	274.1	278.2	281.8	284.7	287.1	288.3	288.9	288.9
55°	262.9	267.6	270.6	274.1	276.5	277.1	278.2	278.2
57.5°	251.7	255.8	259.4	262.9	264.7	266.5	267.6	268.2
60°	239.3	243.5	247.6	251.1	253.5	255.3	255.8	256.4
62.5°	227.0	231.7	235.8	238.7	241.1	242.9	244.1	243.5
65°	213.4	218.1	222.2	225.8	228.7	230.5	231.1	231.7
67.5°	199.8	205.7	209.3	212.8	215.2	217.5	218.1	218.1
70°	185.7	191.6	196.3	198.7	201.6	203.4	205.1	205.1
72.5°	171.5	176.9	181.6	185.1	187.5	189.8	191.0	191.0
75°	156.8	162.1	167.4	171.0	173.9	175.7	176.3	176.9
77.5°	142.7	148.6	153.3	156.8	159.8	161.5	162.7	163.9
80°	128.5	134.4	139.1	143.2	145.6	148.0	149.1	149.1
82.5°	116.1	122.0	126.7	130.9	133.2	135.6	136.2	136.8
85°	104.9	111.4	115.5	119.7	122.6	124.4	125.6	125.6
87.5°	97.3	103.2	107.9	112.0	115.0	116.7	117.9	117.9
90°	93.1	99.0	103.8	107.9	110.8	112.6	113.8	113.8
92.5°	91.4	97.3	102.0	106.1	108.5	110.8	112.0	112.0
95°	90.2	95.5	100.2	104.3	107.3	109.6	110.2	110.8
97.5°	88.4	94.3	99.0	103.2	105.5	107.9	109.1	109.1
100°	86.7	92.0	96.7	100.8	103.8	105.5	106.7	107.3
102.5°	84.3	90.2	94.9	98.4	101.4	103.2	104.3	104.3
105°	82.5	87.8	92.6	96.1	99.0	100.8	102.0	102.0
107.5°	80.2	85.5	90.2	93.7	96.1	98.4	99.0	99.6
110°	77.8	83.1	87.2	90.8	93.7	95.5	96.1	96.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	74.9	80.2	84.3	87.8	90.2	92.0	93.1	93.1
115°	72.5	77.2	81.4	84.9	87.2	89.0	90.2	90.2
117.5°	69.6	74.3	78.4	81.4	83.7	85.5	86.7	86.7
120°	66.6	71.3	75.5	78.4	80.8	82.5	83.1	83.1
122.5°	63.7	68.4	71.9	74.9	77.2	78.4	79.6	79.6
125°	60.7	64.8	68.4	71.3	73.7	74.9	75.5	75.5
127.5°	57.2	61.3	64.8	67.8	69.6	71.3	71.3	71.9
130°	54.2	57.8	61.3	63.7	65.4	67.2	67.8	67.8
132.5°	50.7	54.2	57.2	59.5	61.9	63.1	63.1	63.7
135°	47.2	50.7	53.6	56.0	57.8	58.4	59.5	59.5
137.5°	43.6	46.6	49.5	51.9	53.6	54.2	54.8	54.8
140°	40.1	43.0	45.4	47.7	48.9	50.1	50.7	50.7
142.5°	36.0	38.9	41.3	43.0	44.8	45.4	46.0	46.0
145°	32.4	34.8	37.1	38.9	40.1	41.3	41.3	41.3
147.5°	28.9	31.2	33.0	34.8	36.0	36.5	36.5	36.5
150°	24.8	27.1	28.9	30.1	31.2	31.8	31.8	31.8
152.5°	20.6	23.0	24.2	25.3	26.5	27.1	27.1	27.7
155°	16.5	18.3	20.0	21.2	21.8	22.4	22.4	22.4
157.5°	12.4	14.1	15.3	16.5	17.1	17.7	17.7	17.7
160°	8.3	10.0	11.2	12.4	13.0	13.0	13.0	13.0
162.5°	5.3	5.9	6.5	7.7	8.3	8.3	8.3	8.3
165°	2.4	2.4	2.9	3.5	3.5	4.1	4.1	4.1
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)