

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: P232033

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232033
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-LD4-35-1STD-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

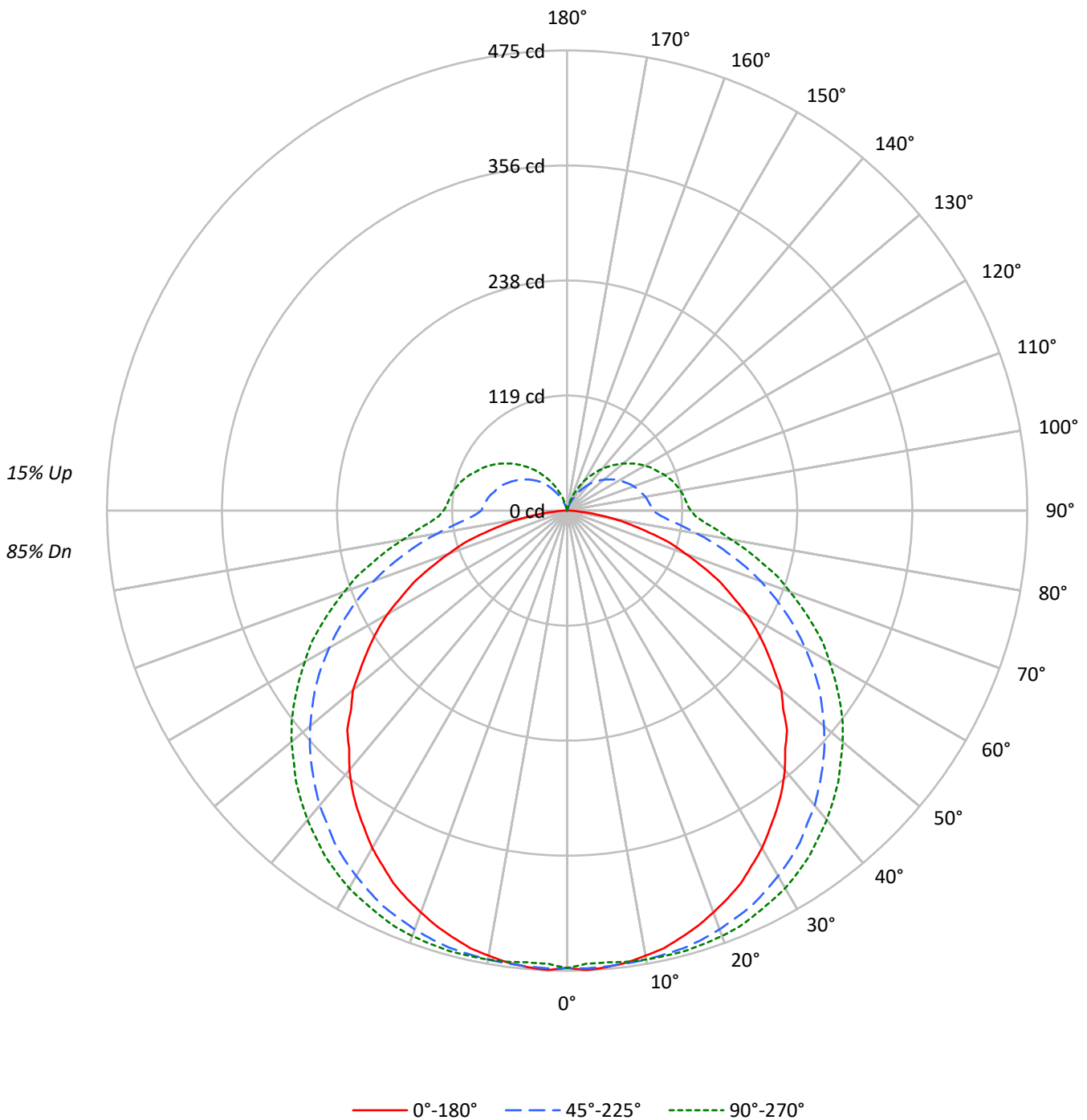
Lumens per Lamp: N/A
Luminaire Lumens: 2025.0 lumens
Efficiency: N/A
Efficacy: 71.1 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.42 / 1.5
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 2.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 28.5
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			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°	5576	5576	5576
5°	5576	5377	5272
10°	5531	5212	5103
15°	5481	5075	4957
20°	5419	4937	4820
25°	5368	4813	4684
30°	5290	4673	4561
35°	5202	4541	4422
40°	5112	4394	4275
45°	5037	4240	4131
50°	4923	4078	3979
55°	4735	3906	3812
60°	4561	3695	3624
65°	4271	3462	3427
70°	3815	3197	3189
75°	3231	2869	2931
80°	2432	2519	2649
85°	1140	2213	2452



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.9	2.2
10°-20°	131.4	6.5
20°-30°	205.8	10.2
30°-40°	258.3	12.8
40°-50°	282.6	14.0
50°-60°	275.8	13.6
60°-70°	237.1	11.7
70°-80°	172.5	8.5
80°-90°	106.0	5.2
90°-100°	82.1	4.1
100°-110°	72.5	3.6
110°-120°	59.4	2.9
120°-130°	44.5	2.2
130°-140°	29.4	1.5
140°-150°	16.0	0.8
150°-160°	6.0	0.3
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	382.1	18.9
0°-40°	640.5	31.6
0°-60°	1198.8	59.2
0°-90°	1714.3	84.7
90°-120°	214.0	10.6
90°-150°	303.9	15.0
90°-180°	311.0	15.4
0°-180°	2025.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	472	472	472	472	472	
5°	473	472	472	471	468	45
15°	456	459	467	471	471	129
25°	424	433	450	459	460	195
35°	377	394	419	432	436	236
45°	321	343	373	391	396	246
55°	251	281	317	338	344	225
65°	174	208	249	274	280	171
75°	88	129	173	200	208	94
85°	15	58	104	134	142	19
90°	0	42	89	118	128	1
95°	0	40	85	114	123	0
105°	0	35	77	105	114	0
115°	0	29	68	93	100	0
125°	0	23	56	78	84	0
135°	0	15	43	61	66	0
145°	0	8	28	42	46	0
155°	0	2	13	22	24	0
165°	1	0	2	3	5	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°	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2
2.5°	474.6	473.0	472.2	472.2	473.0	473.0	473.8	474.6	473.8	473.0	472.2
5°	473.0	471.4	470.6	470.6	471.4	472.2	472.2	473.0	473.0	472.2	472.2
7.5°	470.6	469.0	468.1	468.1	469.0	469.8	471.4	472.2	472.2	471.4	472.2
10°	466.5	464.9	464.1	464.9	465.7	467.3	469.0	469.8	470.6	470.6	470.6
12.5°	462.5	460.8	460.0	460.8	462.5	464.1	465.7	467.3	468.1	469.0	469.8
15°	456.0	455.1	454.3	456.0	457.6	460.0	462.5	464.1	465.7	467.3	468.1
17.5°	449.5	448.6	448.6	449.5	451.9	454.3	457.6	460.8	462.5	464.1	464.9
20°	441.3	440.5	440.5	443.0	445.4	448.6	451.9	456.0	457.6	460.0	461.6
22.5°	433.2	432.4	433.2	435.6	438.9	443.0	447.0	450.3	452.7	455.1	457.6
25°	424.3	423.4	424.3	427.5	430.8	435.6	440.5	443.8	447.0	450.3	452.7
27.5°	412.9	412.9	413.7	416.9	421.8	427.5	431.6	436.4	439.7	443.0	446.2
30°	402.3	401.5	403.1	407.2	412.1	418.6	423.4	428.3	432.4	435.6	438.9
32.5°	389.3	389.3	392.6	396.6	402.3	408.0	413.7	419.4	423.4	427.5	431.6
35°	377.1	377.1	378.7	385.2	390.9	397.4	403.9	408.8	413.7	418.6	421.8
37.5°	364.1	364.1	367.4	372.2	378.7	386.1	391.7	398.3	402.3	407.2	412.1
40°	349.5	350.3	353.5	359.2	366.6	373.1	380.4	386.9	392.6	397.4	401.5
42.5°	333.2	334.0	338.9	345.4	352.7	360.1	366.6	373.9	379.6	385.2	389.3
45°	321.0	319.4	325.1	331.6	338.9	347.0	354.4	361.7	367.4	373.1	377.9
47.5°	302.3	304.0	309.7	316.2	324.3	331.6	340.5	347.9	354.4	360.1	365.7
50°	288.5	288.5	293.4	300.7	308.8	317.0	325.9	333.2	339.7	346.2	351.9
52.5°	269.0	270.6	277.1	285.3	292.6	300.7	309.7	318.6	325.1	331.6	337.3
55°	251.1	252.8	260.1	267.4	275.5	286.1	294.2	301.5	309.7	317.0	322.7
57.5°	233.3	234.9	241.4	250.3	258.5	268.2	278.0	286.1	293.4	300.7	307.2
60°	214.6	216.2	222.7	231.6	240.6	250.3	259.3	268.2	276.3	283.7	291.0
62.5°	192.6	196.7	203.2	211.3	222.7	232.4	242.2	250.3	260.1	266.6	274.7
65°	173.9	176.4	183.7	192.6	202.4	212.9	223.5	232.4	240.6	248.7	256.0
67.5°	151.2	155.2	163.4	173.1	183.7	193.4	204.8	214.6	222.7	230.8	237.3
70°	130.0	134.1	143.0	153.6	162.6	173.9	184.5	194.2	203.2	212.1	218.6
72.5°	111.3	113.0	121.9	132.5	143.0	154.4	164.2	175.6	183.7	193.4	199.9
75°	87.8	93.5	100.8	112.2	122.7	134.9	144.7	155.2	164.2	173.1	179.6
77.5°	67.5	72.3	82.1	91.8	104.0	114.6	126.8	136.5	145.5	155.2	162.6
80°	48.8	53.6	61.8	74.0	83.7	96.7	107.3	117.8	127.6	135.7	143.9
82.5°	30.1	34.9	44.7	55.3	67.5	79.7	89.4	100.0	110.5	118.7	126.8
85°	14.6	20.3	29.3	40.6	51.2	64.2	75.6	85.3	95.9	104.0	113.0
87.5°	4.9	8.9	18.7	29.3	41.5	53.6	65.0	74.8	85.3	94.3	102.4
90°	0.0	4.1	13.8	24.4	36.6	48.0	59.3	69.9	79.7	88.6	96.7
92.5°	0.0	4.1	12.2	23.6	34.9	46.3	57.7	68.3	78.0	87.0	95.1
95°	0.0	3.3	11.4	22.8	34.1	45.5	56.1	66.6	76.4	85.3	93.5
97.5°	0.0	3.3	11.4	21.9	32.5	43.9	55.3	65.0	74.8	83.7	91.8
100°	0.0	3.3	10.6	20.3	31.7	42.3	53.6	63.4	73.1	82.1	90.2
102.5°	0.0	2.4	9.8	19.5	30.1	41.5	52.0	61.8	71.5	79.7	87.8
105°	0.0	2.4	9.8	18.7	29.3	39.8	50.4	60.1	69.1	77.2	85.3
107.5°	0.0	1.6	8.9	17.9	27.6	38.2	48.8	57.7	67.5	75.6	82.9
110°	0.0	1.6	8.1	17.1	26.8	36.6	46.3	56.1	65.0	73.1	80.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	1.6	7.3	16.3	25.2	34.9	44.7	53.6	62.6	70.7	77.2
115°	0.0	1.6	7.3	15.4	24.4	33.3	43.1	52.0	60.1	67.5	74.8
117.5°	0.0	0.8	6.5	13.8	22.8	31.7	40.6	49.6	57.7	65.0	71.5
120°	0.0	0.8	5.7	13.0	21.1	30.1	39.0	47.1	55.3	61.8	68.3
122.5°	0.0	0.8	4.9	12.2	20.3	28.4	36.6	44.7	52.0	59.3	65.8
125°	0.0	0.8	4.9	11.4	18.7	26.8	34.1	42.3	49.6	56.1	61.8
127.5°	0.0	0.8	4.1	9.8	17.1	24.4	32.5	39.8	46.3	52.8	58.5
130°	0.0	0.8	3.3	8.9	15.4	22.8	30.1	36.6	43.1	49.6	55.3
132.5°	0.0	0.0	2.4	7.3	13.8	21.1	27.6	34.1	40.6	46.3	51.2
135°	0.0	0.0	2.4	6.5	12.2	18.7	25.2	31.7	37.4	43.1	48.0
137.5°	0.0	0.0	1.6	5.7	10.6	16.3	22.8	28.4	34.1	39.8	43.9
140°	0.0	0.0	1.6	4.9	8.9	13.8	19.5	25.2	30.9	35.8	40.6
142.5°	0.0	0.0	0.8	3.3	7.3	12.2	17.1	21.9	26.8	31.7	36.6
145°	0.0	0.0	0.8	2.4	5.7	9.8	14.6	18.7	23.6	27.6	32.5
147.5°	0.0	0.0	0.8	1.6	4.9	8.1	12.2	15.4	19.5	23.6	27.6
150°	0.0	0.0	0.0	1.6	3.3	6.5	9.8	13.0	16.3	19.5	22.8
152.5°	0.0	0.0	0.0	0.8	2.4	4.9	7.3	10.6	13.0	15.4	18.7
155°	0.0	0.0	0.0	0.8	1.6	3.3	5.7	8.1	9.8	13.0	14.6
157.5°	0.8	0.0	0.0	0.8	0.8	2.4	4.1	5.7	7.3	8.9	10.6
160°	0.8	0.0	0.0	0.0	0.8	1.6	2.4	3.3	4.9	6.5	8.1
162.5°	0.8	0.8	0.0	0.0	0.0	0.8	1.6	2.4	3.3	4.1	4.9
165°	0.8	0.8	0.0	0.0	0.0	0.0	0.8	0.8	1.6	1.6	2.4
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°	472.2	472.2	472.2	472.2	472.2	472.2	472.2	472.2
2.5°	472.2	471.4	471.4	470.6	470.6	469.8	469.0	468.1
5°	472.2	471.4	471.4	471.4	470.6	469.8	469.0	468.1
7.5°	472.2	472.2	472.2	471.4	471.4	470.6	469.8	469.8
10°	471.4	471.4	472.2	472.2	472.2	471.4	470.6	470.6
12.5°	470.6	471.4	472.2	472.2	472.2	472.2	471.4	470.6
15°	469.0	470.6	470.6	471.4	471.4	471.4	470.6	470.6
17.5°	466.5	468.1	469.0	469.8	470.6	469.8	469.0	469.0
20°	463.3	465.7	466.5	467.3	468.1	468.1	467.3	467.3
22.5°	460.0	461.6	463.3	464.1	465.7	465.7	464.9	464.9
25°	455.1	456.8	458.4	460.0	460.8	460.8	460.8	460.0
27.5°	448.6	451.1	453.5	455.1	456.0	456.0	456.0	455.1
30°	442.1	444.6	447.0	448.6	450.3	450.3	450.3	450.3
32.5°	434.0	437.3	439.7	441.3	443.0	443.8	443.0	443.0
35°	425.9	429.1	431.6	433.2	434.8	435.6	434.8	435.6
37.5°	416.1	419.4	421.8	425.1	425.9	425.9	425.9	425.9
40°	405.6	408.8	412.1	414.5	416.1	416.1	416.9	416.9
42.5°	394.2	397.4	401.5	404.8	404.8	405.6	406.4	406.4
45°	382.8	386.1	390.1	392.6	394.2	395.8	395.0	395.8
47.5°	370.6	374.7	377.9	381.2	382.0	383.6	383.6	382.8
50°	357.6	361.7	364.9	368.2	370.6	370.6	371.4	371.4
52.5°	343.0	347.9	351.9	356.0	356.0	358.4	359.2	358.4
55°	328.4	332.4	336.5	340.5	342.2	343.0	343.8	343.8
57.5°	312.9	317.8	321.0	325.1	327.5	327.5	329.2	328.4
60°	296.7	301.5	305.6	308.8	312.1	312.9	314.5	312.9
62.5°	280.4	286.1	289.3	292.6	295.0	296.7	298.3	298.3
65°	263.3	268.2	272.3	276.3	278.0	278.8	281.2	280.4
67.5°	244.6	249.5	253.6	258.5	261.7	262.5	264.1	262.5
70°	225.9	231.6	236.5	239.8	241.4	244.6	243.8	244.6
72.5°	206.4	212.1	217.0	221.1	224.3	226.8	227.6	228.4
75°	186.9	194.2	198.3	201.6	205.6	206.4	208.9	208.1
77.5°	169.9	175.6	180.4	183.7	187.7	189.4	190.2	190.2
80°	150.4	156.9	161.7	166.6	168.2	170.7	173.1	171.5
82.5°	134.1	140.6	146.3	150.4	153.6	155.2	156.0	156.9
85°	119.5	126.0	131.7	135.7	139.0	141.4	143.0	142.2
87.5°	109.7	116.2	121.1	126.0	130.0	130.9	132.5	132.5
90°	104.0	110.5	116.2	120.3	123.5	126.0	126.8	127.6
92.5°	101.6	108.1	113.8	117.8	121.1	122.7	124.4	124.4
95°	100.0	106.5	111.3	116.2	119.5	121.1	122.7	122.7
97.5°	99.2	104.8	110.5	113.8	117.0	119.5	120.3	121.1
100°	96.7	103.2	108.1	112.2	115.4	117.0	118.7	118.7
102.5°	94.3	100.8	105.7	109.7	113.0	114.6	115.4	116.2
105°	91.8	98.3	103.2	107.3	109.7	112.2	113.0	113.8
107.5°	89.4	95.1	100.0	104.0	107.3	108.9	109.7	110.5
110°	87.0	92.7	97.5	101.6	104.0	105.7	107.3	107.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	83.7	89.4	94.3	98.3	100.8	102.4	103.2	103.2
115°	81.3	86.2	91.0	94.3	97.5	99.2	100.0	100.0
117.5°	78.0	82.9	87.8	91.0	93.5	95.1	95.9	96.7
120°	74.8	79.7	83.7	87.0	90.2	91.8	92.7	92.7
122.5°	70.7	75.6	80.5	83.7	86.2	87.8	88.6	88.6
125°	67.5	72.3	76.4	79.7	82.1	82.9	83.7	84.5
127.5°	63.4	68.3	72.3	75.6	77.2	78.8	79.7	79.7
130°	60.1	64.2	68.3	70.7	73.1	74.8	75.6	75.6
132.5°	56.1	60.1	64.2	66.6	68.3	69.9	70.7	70.7
135°	52.0	56.1	59.3	61.8	64.2	65.0	65.8	65.8
137.5°	48.0	52.0	55.3	57.7	59.3	60.1	61.0	61.0
140°	43.9	48.0	50.4	52.8	54.5	55.3	56.1	56.1
142.5°	39.8	43.1	46.3	48.0	49.6	50.4	51.2	51.2
145°	35.8	39.0	40.6	43.1	44.7	45.5	45.5	45.5
147.5°	30.9	34.9	36.6	38.2	39.8	39.8	40.6	40.6
150°	26.0	29.3	31.7	33.3	34.1	34.9	35.8	35.8
152.5°	21.1	24.4	26.8	28.4	29.3	30.1	30.9	30.1
155°	17.1	18.7	21.1	23.6	24.4	24.4	25.2	24.4
157.5°	12.2	13.8	16.3	17.9	19.5	19.5	19.5	19.5
160°	8.9	9.8	11.4	12.2	13.8	14.6	14.6	14.6
162.5°	5.7	6.5	7.3	8.1	8.1	9.8	9.8	8.9
165°	2.4	2.4	3.3	3.3	4.1	4.9	4.9	4.9
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)