

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: P231930

Luminaire Tested: **FVS4M-2-LD4-40-2HI-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231930
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-LD4-40-2HI-PFS125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH PFS125 LENS
Light Source: (84) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

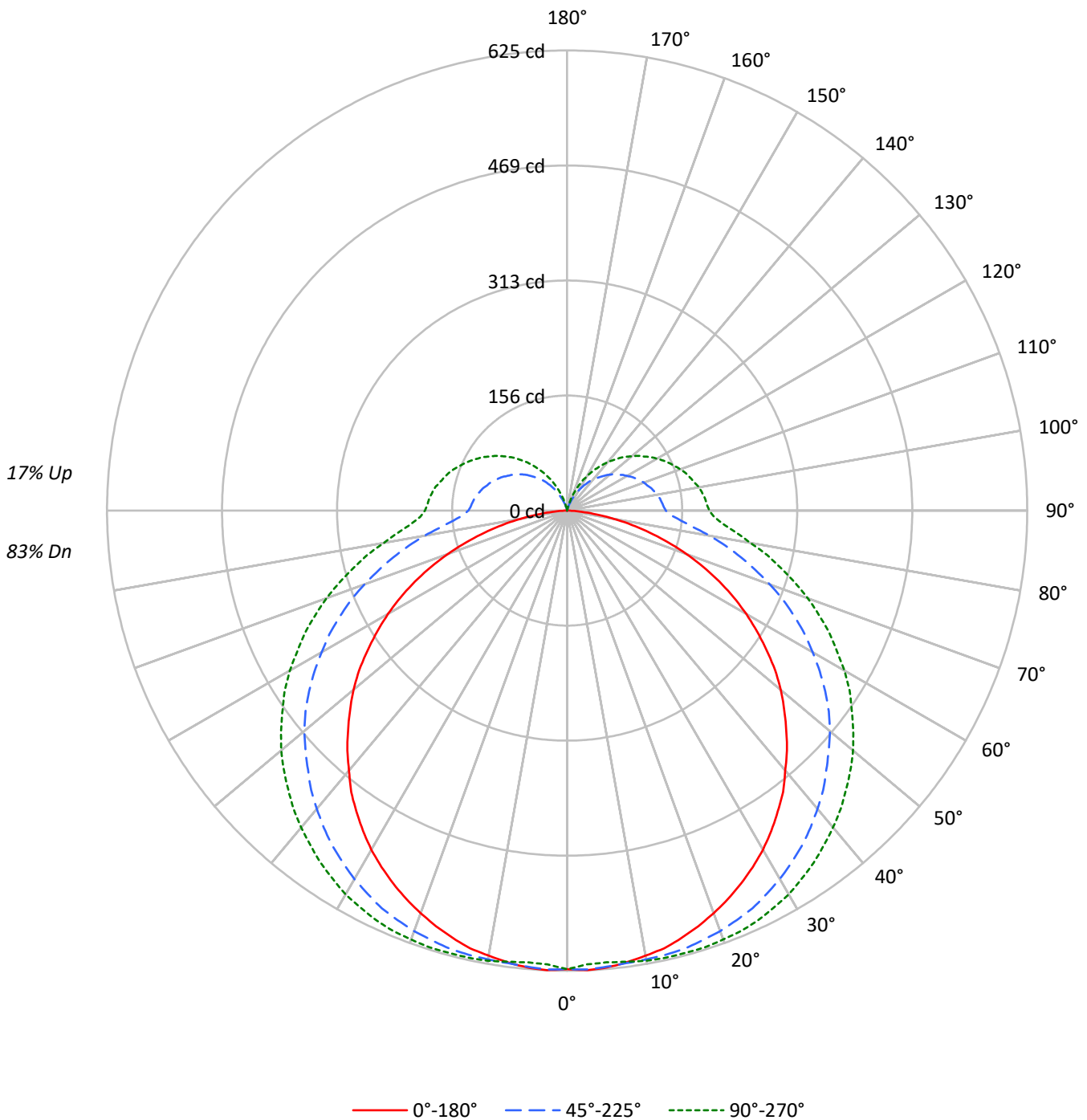
Lumens per Lamp: N/A
Luminaire Lumens: 2795.1 lumens
Efficiency: N/A
Efficacy: 62.4 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.44 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 44.8
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	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°	11194	11194	11194
5°	11142	10755	10557
10°	11013	10390	10246
15°	10894	10121	9968
20°	10746	9856	9730
25°	10599	9606	9512
30°	10447	9333	9277
35°	10244	9064	9020
40°	9992	8775	8768
45°	9744	8473	8512
50°	9487	8202	8263
55°	9097	7865	7962
60°	8633	7459	7665
65°	8014	7043	7306
70°	7164	6533	6902
75°	5900	5960	6429
80°	4260	5340	5945
85°	1947	4813	5589



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.2	2.1
10°-20°	173.3	6.2
20°-30°	272.5	9.7
30°-40°	343.6	12.3
40°-50°	378.3	13.5
50°-60°	372.2	13.3
60°-70°	324.2	11.6
70°-80°	242.2	8.7
80°-90°	156.3	5.6
90°-100°	124.9	4.5
100°-110°	110.2	3.9
110°-120°	90.3	3.2
120°-130°	67.8	2.4
130°-140°	45.0	1.6
140°-150°	24.7	0.9
150°-160°	9.3	0.3
160°-170°	1.2	0.0
170°-180°	0.0	0.0
0°-30°	505.0	18.1
0°-40°	848.6	30.4
0°-60°	1599.0	57.2
0°-90°	2321.7	83.1
90°-120°	325.4	11.6
90°-150°	462.9	16.6
90°-180°	473.0	16.9
0°-180°	2795.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	623	623	623	623	623	
5°	623	622	622	619	616	59
15°	601	602	616	622	622	170
25°	559	571	596	611	614	258
35°	499	521	556	578	584	312
45°	421	453	498	528	536	325
55°	331	374	428	462	472	296
65°	228	278	341	380	393	225
75°	116	176	244	287	300	123
85°	20	84	155	200	213	26
90°	0	64	134	180	193	1
95°	0	60	129	174	188	0
105°	0	52	118	160	173	0
115°	0	44	103	141	153	0
125°	0	34	85	118	128	0
135°	0	24	65	93	101	0
145°	0	12	44	64	70	0
155°	1	4	20	35	38	0
165°	0	0	2	6	7	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231930

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	622.9	622.9	622.9	622.9	622.9	622.9	622.9	622.9	622.9	622.9	622.9
2.5°	624.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9
5°	622.9	621.9	621.9	621.9	621.9	621.9	622.9	621.9	622.9	621.9	621.9
7.5°	618.9	617.9	617.9	617.9	617.9	618.9	618.9	618.9	618.9	619.9	619.9
10°	613.9	612.9	612.9	612.9	613.9	613.9	614.9	615.9	617.9	618.9	619.9
12.5°	608.9	606.9	607.9	606.9	607.9	608.9	610.9	613.9	615.9	617.9	619.9
15°	600.9	598.9	599.9	599.9	600.9	603.9	606.9	609.9	612.9	615.9	617.9
17.5°	591.9	590.9	590.9	590.9	594.9	597.9	601.9	605.9	608.9	611.9	614.9
20°	581.9	580.9	580.9	581.9	585.9	590.9	594.9	599.9	603.9	607.9	611.9
22.5°	570.9	569.9	569.9	572.9	576.9	582.9	587.9	592.9	597.9	601.9	606.9
25°	558.9	558.9	558.9	562.9	567.9	573.9	579.9	584.9	590.9	595.9	600.9
27.5°	545.9	544.9	545.9	550.9	556.9	563.9	569.9	575.9	581.9	586.9	591.9
30°	531.9	529.9	531.9	537.9	544.9	551.9	558.9	565.9	571.9	577.9	583.9
32.5°	515.9	514.9	516.9	523.9	530.9	538.9	546.9	553.9	560.9	566.9	573.9
35°	498.9	496.9	499.9	508.9	516.9	524.9	532.9	540.9	548.9	555.9	562.9
37.5°	481.9	479.9	483.9	492.9	500.9	509.9	518.9	527.9	535.9	542.9	549.9
40°	460.9	460.9	465.9	474.9	483.9	493.9	502.9	512.9	521.9	528.9	536.9
42.5°	441.9	441.9	447.9	456.9	466.9	476.9	491.9	500.9	505.9	514.9	522.9
45°	420.9	420.9	427.9	437.9	447.9	458.9	469.9	479.9	489.9	497.9	507.9
47.5°	399.9	399.9	408.9	418.9	429.9	441.9	451.9	462.9	472.9	481.9	491.9
50°	378.9	377.9	386.9	397.9	409.9	425.9	433.9	444.9	454.9	465.9	474.9
52.5°	355.9	355.9	365.9	376.9	388.9	400.9	413.9	425.9	437.9	447.9	456.9
55°	330.9	331.9	341.9	353.9	367.9	379.9	392.9	404.9	415.9	427.9	437.9
57.5°	305.9	307.9	318.9	331.9	343.9	357.9	370.9	383.9	395.9	406.9	416.9
60°	280.9	282.9	293.9	305.9	319.9	333.9	348.9	361.9	373.9	384.9	395.9
62.5°	254.9	256.9	267.9	281.9	296.9	310.9	324.9	338.9	350.9	363.9	374.9
65°	228.0	231.0	242.9	255.9	270.9	285.9	300.9	314.9	327.9	340.9	350.9
67.5°	200.0	205.0	216.0	231.0	245.9	260.9	275.9	290.9	304.9	317.9	327.9
70°	173.0	177.0	188.0	205.0	220.0	236.0	250.9	266.9	280.9	292.9	303.9
72.5°	144.0	150.0	163.0	177.0	194.0	210.0	226.0	240.9	255.9	267.9	279.9
75°	116.0	122.0	135.0	152.0	167.0	185.0	200.0	216.0	230.0	243.9	256.9
77.5°	90.0	96.0	109.0	125.0	142.0	159.0	175.0	191.0	207.0	220.0	231.0
80°	64.0	70.0	84.0	100.0	117.0	134.0	152.0	167.0	182.0	196.0	207.0
82.5°	40.0	47.0	61.0	78.0	95.0	112.0	129.0	145.0	160.0	173.0	186.0
85°	20.0	27.0	41.0	59.0	76.0	93.0	111.0	126.0	141.0	155.0	167.0
87.5°	7.0	14.0	27.0	45.0	62.0	79.0	96.0	112.0	128.0	141.0	153.0
90°	0.0	7.0	21.0	38.0	55.0	73.0	90.0	106.0	120.0	134.0	147.0
92.5°	0.0	6.0	19.0	35.0	53.0	70.0	87.0	103.0	118.0	131.0	144.0
95°	0.0	6.0	18.0	34.0	51.0	68.0	85.0	101.0	116.0	129.0	141.0
97.5°	0.0	5.0	17.0	33.0	49.0	67.0	83.0	99.0	113.0	127.0	139.0
100°	0.0	5.0	16.0	31.0	48.0	64.0	81.0	96.0	110.0	124.0	136.0
102.5°	0.0	4.0	15.0	30.0	46.0	62.0	78.0	93.0	108.0	121.0	133.0
105°	0.0	4.0	14.0	29.0	44.0	60.0	76.0	91.0	105.0	118.0	129.0
107.5°	0.0	3.0	14.0	27.0	42.0	58.0	73.0	88.0	101.0	114.0	126.0
110°	0.0	3.0	13.0	26.0	41.0	56.0	71.0	85.0	98.0	111.0	122.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	2.0	12.0	24.0	39.0	53.0	68.0	82.0	95.0	107.0	117.0
115°	0.0	2.0	11.0	23.0	37.0	51.0	65.0	78.0	91.0	103.0	113.0
117.5°	0.0	1.0	10.0	21.0	35.0	48.0	62.0	75.0	87.0	99.0	109.0
120°	0.0	1.0	9.0	20.0	33.0	46.0	59.0	71.0	83.0	94.0	104.0
122.5°	0.0	1.0	8.0	18.0	31.0	43.0	56.0	68.0	79.0	90.0	99.0
125°	0.0	1.0	7.0	17.0	28.0	40.0	52.0	64.0	75.0	85.0	95.0
127.5°	0.0	1.0	6.0	15.0	26.0	38.0	49.0	60.0	71.0	81.0	90.0
130°	0.0	1.0	5.0	14.0	24.0	35.0	46.0	56.0	66.0	76.0	84.0
132.5°	0.0	0.0	4.0	12.0	21.0	32.0	42.0	52.0	62.0	71.0	79.0
135°	0.0	0.0	3.0	10.0	19.0	29.0	39.0	48.0	57.0	65.0	73.0
137.5°	0.0	0.0	2.0	9.0	17.0	26.0	35.0	44.0	52.0	60.0	67.0
140°	0.0	0.0	1.0	7.0	15.0	23.0	31.0	40.0	48.0	55.0	62.0
142.5°	0.0	0.0	1.0	5.0	12.0	20.0	27.0	35.0	43.0	50.0	56.0
145°	0.0	0.0	0.0	4.0	9.0	16.0	23.0	30.0	38.0	44.0	50.0
147.5°	0.0	0.0	0.0	3.0	7.0	13.0	19.0	25.0	32.0	38.0	44.0
150°	0.0	0.0	0.0	1.0	5.0	10.0	16.0	21.0	27.0	32.0	37.0
152.5°	0.0	0.0	0.0	1.0	4.0	8.0	12.0	17.0	21.0	26.0	31.0
155°	1.0	0.0	0.0	0.0	2.0	5.0	9.0	12.0	16.0	20.0	24.0
157.5°	0.0	0.0	0.0	0.0	1.0	3.0	6.0	9.0	12.0	15.0	18.0
160°	1.0	0.0	0.0	0.0	0.0	1.0	3.0	5.0	8.0	10.0	12.0
162.5°	1.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	4.0	6.0	7.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	3.0
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°	622.9	622.9	622.9	622.9	622.9	622.9	622.9	622.9
2.5°	622.9	621.9	620.9	619.9	618.9	617.9	616.9	616.9
5°	620.9	620.9	619.9	618.9	617.9	616.9	615.9	615.9
7.5°	620.9	620.9	620.9	619.9	619.9	618.9	617.9	617.9
10°	620.9	621.9	621.9	621.9	621.9	620.9	620.9	620.9
12.5°	620.9	622.9	622.9	622.9	622.9	622.9	622.9	621.9
15°	619.9	620.9	621.9	622.9	622.9	622.9	621.9	621.9
17.5°	617.9	619.9	620.9	621.9	621.9	621.9	621.9	621.9
20°	613.9	616.9	617.9	619.9	619.9	620.9	619.9	619.9
22.5°	609.9	612.9	614.9	615.9	616.9	617.9	617.9	617.9
25°	603.9	607.9	609.9	611.9	612.9	613.9	613.9	613.9
27.5°	596.9	600.9	603.9	605.9	606.9	607.9	607.9	607.9
30°	588.9	591.9	595.9	598.9	599.9	600.9	600.9	601.9
32.5°	578.9	582.9	586.9	589.9	590.9	591.9	592.9	592.9
35°	567.9	572.9	575.9	579.9	581.9	582.9	582.9	583.9
37.5°	556.9	561.9	564.9	568.9	570.9	571.9	572.9	572.9
40°	542.9	548.9	552.9	556.9	558.9	560.9	560.9	561.9
42.5°	529.9	535.9	539.9	543.9	546.9	548.9	549.9	549.9
45°	514.9	520.9	525.9	529.9	532.9	534.9	535.9	535.9
47.5°	498.9	505.9	511.9	515.9	518.9	520.9	521.9	521.9
50°	481.9	489.9	494.9	499.9	502.9	504.9	505.9	506.9
52.5°	464.9	471.9	477.9	482.9	486.9	488.9	489.9	489.9
55°	445.9	453.9	458.9	464.9	468.9	469.9	471.9	471.9
57.5°	426.9	433.9	439.9	445.9	448.9	451.9	453.9	454.9
60°	405.9	412.9	419.9	425.9	429.9	432.9	433.9	434.9
62.5°	384.9	392.9	399.9	404.9	408.9	411.9	413.9	412.9
65°	361.9	369.9	376.9	382.9	387.9	390.9	391.9	392.9
67.5°	338.9	348.9	354.9	360.9	364.9	368.9	369.9	369.9
70°	314.9	324.9	332.9	336.9	341.9	344.9	347.9	347.9
72.5°	290.9	299.9	307.9	313.9	317.9	321.9	323.9	323.9
75°	265.9	274.9	283.9	289.9	294.9	297.9	298.9	299.9
77.5°	241.9	251.9	259.9	265.9	270.9	273.9	275.9	277.9
80°	218.0	228.0	236.0	242.9	246.9	250.9	252.9	252.9
82.5°	197.0	207.0	215.0	222.0	226.0	230.0	231.0	232.0
85°	178.0	189.0	196.0	203.0	208.0	211.0	213.0	213.0
87.5°	165.0	175.0	183.0	190.0	195.0	198.0	200.0	200.0
90°	158.0	168.0	176.0	183.0	188.0	191.0	193.0	193.0
92.5°	155.0	165.0	173.0	180.0	184.0	188.0	190.0	190.0
95°	153.0	162.0	170.0	177.0	182.0	186.0	187.0	188.0
97.5°	150.0	160.0	168.0	175.0	179.0	183.0	185.0	185.0
100°	147.0	156.0	164.0	171.0	176.0	179.0	181.0	182.0
102.5°	143.0	153.0	161.0	167.0	172.0	175.0	177.0	177.0
105°	140.0	149.0	157.0	163.0	168.0	171.0	173.0	173.0
107.5°	136.0	145.0	153.0	159.0	163.0	167.0	168.0	169.0
110°	132.0	141.0	148.0	154.0	159.0	162.0	163.0	164.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	127.0	136.0	143.0	149.0	153.0	156.0	158.0	158.0
115°	123.0	131.0	138.0	144.0	148.0	151.0	153.0	153.0
117.5°	118.0	126.0	133.0	138.0	142.0	145.0	147.0	147.0
120°	113.0	121.0	128.0	133.0	137.0	140.0	141.0	141.0
122.5°	108.0	116.0	122.0	127.0	131.0	133.0	135.0	135.0
125°	103.0	110.0	116.0	121.0	125.0	127.0	128.0	128.0
127.5°	97.0	104.0	110.0	115.0	118.0	121.0	121.0	122.0
130°	92.0	98.0	104.0	108.0	111.0	114.0	115.0	115.0
132.5°	86.0	92.0	97.0	101.0	105.0	107.0	107.0	108.0
135°	80.0	86.0	91.0	95.0	98.0	99.0	101.0	101.0
137.5°	74.0	79.0	84.0	88.0	91.0	92.0	93.0	93.0
140°	68.0	73.0	77.0	81.0	83.0	85.0	86.0	86.0
142.5°	61.0	66.0	70.0	73.0	76.0	77.0	78.0	78.0
145°	55.0	59.0	63.0	66.0	68.0	70.0	70.0	70.0
147.5°	49.0	53.0	56.0	59.0	61.0	62.0	62.0	62.0
150°	42.0	46.0	49.0	51.0	53.0	54.0	54.0	54.0
152.5°	35.0	39.0	41.0	43.0	45.0	46.0	46.0	47.0
155°	28.0	31.0	34.0	36.0	37.0	38.0	38.0	38.0
157.5°	21.0	24.0	26.0	28.0	29.0	30.0	30.0	30.0
160°	14.0	17.0	19.0	21.0	22.0	22.0	22.0	22.0
162.5°	9.0	10.0	11.0	13.0	14.0	14.0	14.0	14.0
165°	4.0	4.0	5.0	6.0	6.0	7.0	7.0	7.0
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)