

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: P232069

Luminaire Tested: **FVS4M-3-LD4-35-2STD-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232069
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-29)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-3-LD4-35-2STD-PFS125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
3FT LENGTH, 2-MODULE LED WITH PFS125 LENS
Light Source: (168) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

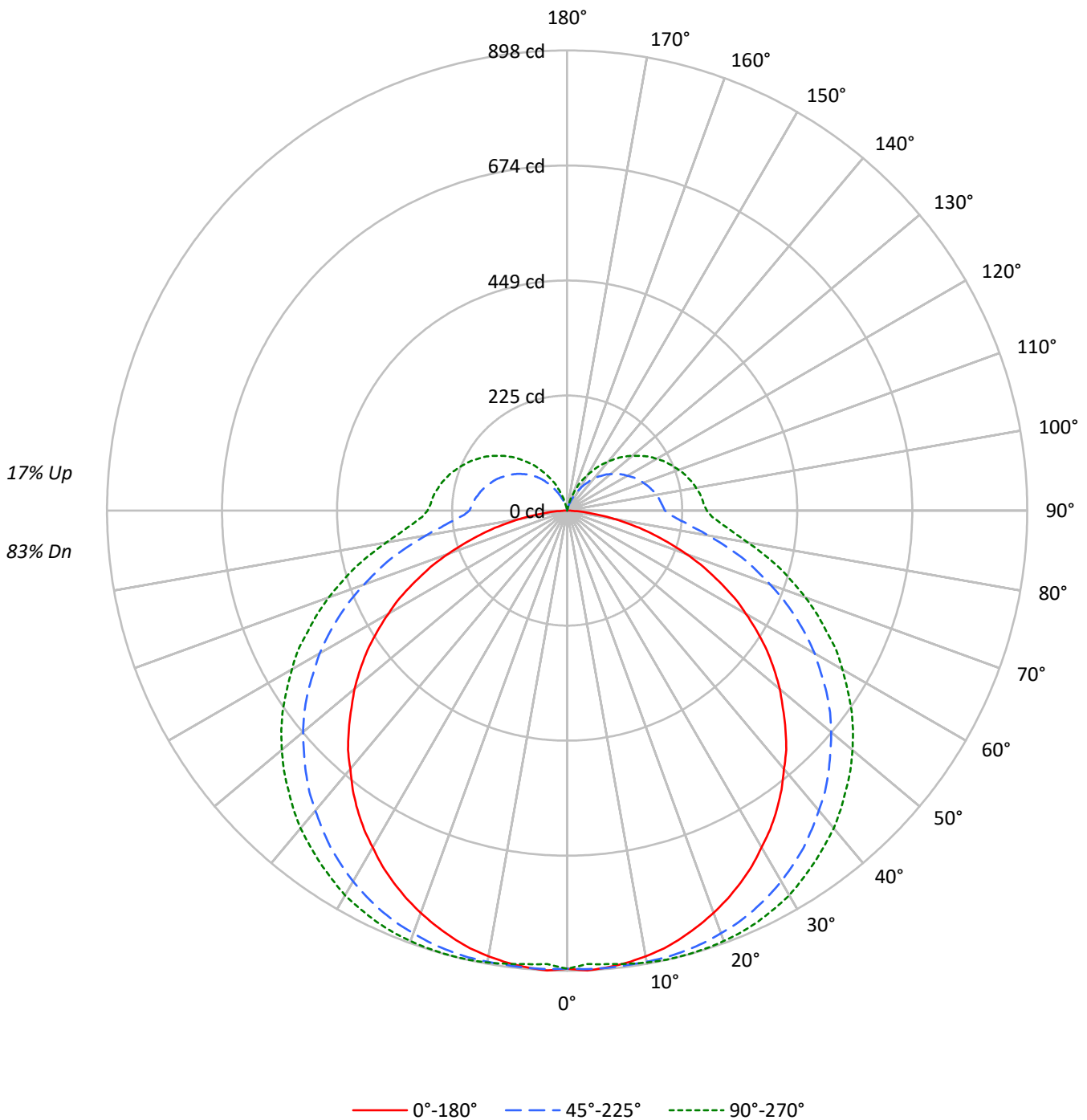
Lumens per Lamp: N/A
Luminaire Lumens: 4027.0 lumens
Efficiency: N/A
Efficacy: 62.9 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.44 / 1.52
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 2.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 64
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	88	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	31	39	33	29	26
7	59	46	37	30	57	44	35	30	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	37	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°	10557	10557	10557
5°	10548	10199	10008
10°	10471	9899	9713
15°	10377	9658	9453
20°	10260	9420	9220
25°	10137	9200	9001
30°	9980	8963	8781
35°	9839	8722	8528
40°	9629	8453	8299
45°	9456	8197	8035
50°	9239	7924	7785
55°	8971	7613	7509
60°	8563	7262	7187
65°	8018	6848	6825
70°	7257	6358	6448
75°	6190	5842	6030
80°	4615	5192	5528
85°	2460	4725	5226



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.3	2.1
10°-20°	250.3	6.2
20°-30°	393.3	9.8
30°-40°	495.8	12.3
40°-50°	545.6	13.5
50°-60°	536.5	13.3
60°-70°	466.8	11.6
70°-80°	347.5	8.6
80°-90°	222.8	5.5
90°-100°	177.0	4.4
100°-110°	157.2	3.9
110°-120°	129.9	3.2
120°-130°	98.5	2.4
130°-140°	66.4	1.6
140°-150°	37.0	0.9
150°-160°	14.7	0.4
160°-170°	2.3	0.1
170°-180°	0.0	0.0
0°-30°	728.8	18.1
0°-40°	1224.6	30.4
0°-60°	2306.7	57.3
0°-90°	3343.8	83.0
90°-120°	464.2	11.5
90°-150°	666.1	16.5
90°-180°	683.0	17.0
0°-180°	4027.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	895	894	896	893	888	85
15°	863	872	889	899	898	244
25°	801	826	861	882	884	369
35°	713	753	804	835	840	446
45°	603	657	721	761	770	465
55°	476	542	618	665	677	424
65°	326	404	492	545	558	324
75°	168	255	352	409	428	178
85°	32	121	222	283	303	38
90°	1	91	191	254	272	2
95°	1	86	184	246	264	1
105°	1	76	168	227	245	1
115°	1	65	148	201	218	1
125°	1	52	124	171	185	1
135°	1	38	96	134	147	1
145°	1	22	65	96	104	1
155°	1	9	32	54	60	0
165°	1	1	7	12	15	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°	893.9	893.9	893.9	893.9	893.9	893.9	893.9	893.9	893.9	893.9	893.9
2.5°	898.4	896.6	893.9	893.9	895.7	896.6	898.4	898.4	897.5	895.7	894.8
5°	894.8	893.9	891.2	891.2	893.0	894.8	896.6	896.6	896.6	895.7	894.8
7.5°	890.3	888.5	886.7	886.7	889.4	891.2	893.9	894.8	895.7	894.8	895.7
10°	883.1	882.2	880.4	881.3	884.0	886.7	889.4	892.1	893.9	893.9	895.7
12.5°	875.0	873.3	871.5	873.3	876.8	880.4	885.8	888.5	891.2	893.0	893.9
15°	863.4	862.5	861.6	864.3	868.8	874.2	879.5	884.0	886.7	889.4	892.1
17.5°	849.9	849.9	849.9	853.5	858.9	866.1	871.5	876.8	881.3	884.9	888.5
20°	835.5	834.6	835.5	840.9	849.0	855.3	862.5	868.8	874.2	877.7	882.2
22.5°	819.3	819.3	821.1	826.5	835.5	844.5	851.7	858.9	865.2	870.6	875.0
25°	801.3	802.2	804.9	811.2	821.1	830.1	839.1	847.2	855.3	860.7	867.0
27.5°	781.5	781.5	786.0	794.1	804.9	814.8	824.7	833.7	842.7	849.0	855.3
30°	759.0	760.8	765.3	776.1	786.9	798.6	808.5	819.3	827.4	835.5	842.7
32.5°	737.5	738.4	743.7	754.5	768.0	779.7	790.5	803.1	811.2	820.2	828.3
35°	713.2	715.0	721.3	733.0	746.4	759.9	772.5	784.2	794.1	804.0	812.1
37.5°	687.1	689.8	697.9	709.6	724.0	737.5	750.9	763.5	775.2	784.2	795.0
40°	658.3	662.8	670.9	686.2	700.6	714.1	728.5	741.0	753.6	764.4	775.2
42.5°	633.1	634.9	644.8	660.1	676.3	692.5	706.9	720.4	733.0	744.6	753.6
45°	602.6	607.0	616.9	631.3	648.4	666.4	684.4	694.3	708.7	721.3	732.1
47.5°	571.1	576.5	589.1	605.3	622.3	638.5	653.8	670.9	684.4	697.0	709.6
50°	541.4	546.8	558.5	576.5	592.7	610.6	628.6	643.9	658.3	672.7	684.4
52.5°	509.0	513.5	527.9	545.0	563.9	581.9	599.0	616.9	631.3	646.6	658.3
55°	475.7	480.2	494.6	512.6	532.4	552.2	569.3	588.2	601.7	617.8	631.3
57.5°	439.8	447.9	459.6	478.4	498.2	518.0	537.8	555.8	572.0	586.4	601.7
60°	402.9	411.0	426.3	445.2	464.1	485.6	505.4	523.4	540.5	557.6	570.2
62.5°	367.8	374.1	389.4	409.2	429.9	450.6	473.0	490.1	509.9	525.2	540.5
65°	326.5	335.5	352.5	372.3	393.0	414.6	435.3	456.0	474.8	491.9	507.2
67.5°	288.7	295.9	315.7	333.7	356.1	377.7	402.9	421.8	440.7	457.8	472.1
70°	247.3	259.0	272.5	297.7	319.3	343.5	364.2	385.8	404.7	421.8	438.0
72.5°	205.9	217.6	236.5	257.2	280.6	305.8	327.4	348.0	367.8	386.7	402.0
75°	168.2	177.2	197.0	219.4	244.6	266.2	288.7	312.1	332.8	352.5	366.9
77.5°	129.5	140.3	157.4	179.9	205.0	232.0	254.5	275.2	296.8	313.9	332.8
80°	92.6	101.6	121.4	143.0	169.1	194.3	218.5	241.0	260.8	279.7	296.8
82.5°	57.6	68.3	87.2	113.3	137.6	163.7	186.2	208.6	230.2	248.2	265.3
85°	31.5	39.6	60.3	82.7	108.8	133.1	159.2	180.8	203.2	222.1	241.0
87.5°	10.8	19.8	38.7	63.0	89.0	112.4	138.5	161.0	181.7	201.5	219.4
90°	0.9	9.9	29.7	53.1	78.2	103.4	127.7	150.2	171.8	190.7	208.6
92.5°	0.9	9.0	27.0	50.4	75.5	99.8	124.1	146.6	167.3	187.1	204.1
95°	0.9	8.1	26.1	48.6	73.7	98.0	121.4	143.9	164.6	183.5	200.6
97.5°	0.9	8.1	25.2	47.7	71.0	95.3	118.7	141.2	161.9	180.8	197.9
100°	0.9	7.2	23.4	45.0	69.2	92.6	116.0	137.6	158.3	176.3	194.3
102.5°	0.9	6.3	22.5	44.1	66.6	89.9	112.4	134.0	153.8	172.7	189.8
105°	0.9	6.3	21.6	42.3	64.8	87.2	108.8	130.4	150.2	168.2	184.4
107.5°	0.9	5.4	20.7	40.5	62.1	84.5	106.1	126.8	145.7	163.7	179.9
110°	0.9	5.4	19.8	38.7	59.4	80.9	102.5	122.3	141.2	158.3	174.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.9	4.5	18.0	36.9	56.7	78.2	98.0	118.7	136.7	153.8	169.1
115°	0.9	4.5	17.1	35.1	54.9	74.6	94.4	113.3	131.3	148.4	162.8
117.5°	0.9	3.6	16.2	33.3	52.2	71.0	90.8	108.8	126.8	142.1	156.5
120°	0.9	3.6	14.4	30.6	48.6	67.4	86.3	104.3	120.5	135.8	150.2
122.5°	0.9	2.7	13.5	28.8	46.8	63.9	81.8	98.9	116.0	130.4	143.9
125°	0.9	2.7	12.6	27.0	43.2	60.3	77.3	94.4	109.7	124.1	136.7
127.5°	0.9	1.8	10.8	24.3	40.5	56.7	72.8	89.0	103.4	117.8	130.4
130°	0.9	1.8	9.9	22.5	37.8	53.1	68.3	83.6	98.0	110.6	122.3
132.5°	0.9	1.8	8.1	19.8	34.2	49.5	63.9	78.2	91.7	104.3	115.1
135°	0.9	1.8	7.2	18.0	30.6	45.0	58.5	71.9	85.4	96.2	107.0
137.5°	0.9	0.9	6.3	15.3	27.0	40.5	53.1	66.6	78.2	89.9	99.8
140°	0.9	0.9	4.5	12.6	23.4	35.1	46.8	59.4	71.0	81.8	91.7
142.5°	0.9	0.9	3.6	10.8	19.8	30.6	41.4	53.1	63.0	73.7	83.6
145°	0.9	0.9	2.7	9.0	17.1	26.1	35.1	45.9	54.9	64.8	73.7
147.5°	0.9	0.9	2.7	7.2	14.4	21.6	30.6	38.7	47.7	56.7	63.9
150°	0.9	0.9	1.8	5.4	10.8	18.0	25.2	32.4	40.5	46.8	55.8
152.5°	0.9	0.9	1.8	3.6	8.1	14.4	20.7	27.0	33.3	39.6	45.9
155°	0.9	0.9	0.9	2.7	6.3	10.8	16.2	21.6	26.1	31.5	36.9
157.5°	0.9	0.9	0.9	1.8	4.5	7.2	11.7	16.2	20.7	24.3	28.8
160°	0.9	0.9	0.9	1.8	2.7	5.4	8.1	11.7	15.3	18.0	20.7
162.5°	0.9	0.9	0.9	0.9	1.8	2.7	5.4	8.1	9.9	11.7	14.4
165°	0.9	0.9	0.9	0.9	0.9	1.8	2.7	3.6	5.4	7.2	8.1
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°	893.9	893.9	893.9	893.9	893.9	893.9	893.9	893.9
2.5°	893.9	893.0	892.1	891.2	890.3	888.5	886.7	885.8
5°	894.8	894.8	893.9	893.0	892.1	890.3	888.5	888.5
7.5°	895.7	896.6	896.6	896.6	895.7	894.8	893.0	892.1
10°	897.5	897.5	898.4	898.4	898.4	897.5	896.6	895.7
12.5°	896.6	897.5	899.3	900.2	900.2	899.3	897.5	897.5
15°	894.8	896.6	898.4	899.3	900.2	899.3	897.5	897.5
17.5°	891.2	893.9	896.6	898.4	898.4	898.4	897.5	896.6
20°	886.7	889.4	892.1	894.8	895.7	895.7	894.8	893.9
22.5°	879.5	884.0	887.6	890.3	891.2	891.2	890.3	890.3
25°	871.5	875.9	880.4	883.1	884.9	885.8	884.9	884.0
27.5°	861.6	866.1	870.6	874.2	875.9	876.8	876.8	875.9
30°	850.8	855.3	859.8	864.3	866.1	867.0	867.0	867.0
32.5°	835.5	841.8	847.2	850.8	854.4	854.4	854.4	853.5
35°	819.3	826.5	831.9	837.3	839.1	840.9	840.9	840.0
37.5°	801.3	810.3	815.7	820.2	823.8	824.7	823.8	824.7
40°	783.3	790.5	799.5	802.2	805.8	808.5	807.6	809.4
42.5°	763.5	771.6	778.8	785.1	787.8	788.7	789.6	790.5
45°	742.8	750.0	759.0	763.5	767.1	769.8	769.8	769.8
47.5°	719.5	729.4	737.5	742.8	746.4	749.1	748.2	750.0
50°	695.2	705.1	714.1	718.6	724.0	724.9	725.8	726.7
52.5°	670.0	679.9	688.9	695.2	697.9	700.6	702.4	703.3
55°	643.0	652.9	661.0	668.2	672.7	675.4	675.4	677.2
57.5°	614.2	625.0	634.9	639.4	643.9	647.5	649.3	648.4
60°	585.5	595.4	602.6	611.5	616.9	619.6	620.5	620.5
62.5°	550.4	563.9	572.0	582.8	585.5	589.1	590.0	592.7
65°	521.6	531.5	542.3	547.7	554.9	556.7	559.4	558.5
67.5°	486.5	500.0	508.1	516.2	523.4	526.1	526.1	527.9
70°	450.6	465.0	473.0	482.9	487.4	492.8	495.5	494.6
72.5°	417.3	429.0	439.8	447.9	454.2	457.8	458.7	460.5
75°	383.1	394.8	404.7	412.8	420.9	423.6	426.3	428.1
77.5°	346.2	357.0	370.5	379.5	384.9	390.3	392.1	392.1
80°	312.1	324.7	335.5	345.3	350.7	356.1	359.7	357.9
82.5°	279.7	293.2	306.7	314.8	321.1	326.5	328.3	327.4
85°	254.5	268.0	278.8	287.8	295.0	300.4	302.2	303.1
87.5°	234.7	248.2	259.9	268.9	275.2	279.7	281.5	283.3
90°	223.9	237.4	249.1	258.1	264.4	268.9	271.6	272.5
92.5°	219.4	232.9	243.7	252.7	259.9	264.4	266.2	267.1
95°	216.7	229.3	241.0	250.0	256.3	260.8	263.5	264.4
97.5°	213.1	226.6	237.4	246.4	252.7	258.1	259.9	260.8
100°	208.6	222.1	232.9	241.9	248.2	252.7	255.4	255.4
102.5°	204.1	217.6	228.4	237.4	243.7	248.2	250.0	250.9
105°	199.7	212.2	223.0	231.1	237.4	241.9	244.6	244.6
107.5°	194.3	206.8	216.7	225.7	232.0	235.6	238.3	239.2
110°	188.9	200.6	211.3	219.4	225.7	229.3	232.0	232.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	182.6	194.3	205.0	212.2	218.5	223.0	224.8	224.8
115°	176.3	188.0	197.9	205.0	211.3	214.9	217.6	217.6
117.5°	170.0	181.7	190.7	197.9	203.2	207.7	209.5	210.4
120°	162.8	173.6	183.5	190.7	196.1	199.7	201.5	201.5
122.5°	155.6	166.4	176.3	182.6	188.0	190.7	193.4	194.3
125°	148.4	159.2	168.2	173.6	179.0	182.6	184.4	185.3
127.5°	141.2	150.2	159.2	165.5	170.0	173.6	175.4	175.4
130°	133.1	142.1	150.2	156.5	161.0	163.7	165.5	166.4
132.5°	125.0	134.0	141.2	147.5	152.0	154.7	155.6	156.5
135°	116.9	125.0	131.3	137.6	142.1	143.9	145.7	146.6
137.5°	107.9	116.0	123.2	128.6	131.3	134.0	134.9	135.8
140°	99.8	107.0	113.3	117.8	121.4	123.2	125.0	125.0
142.5°	90.8	98.0	103.4	107.9	110.6	113.3	115.1	114.2
145°	81.8	89.0	93.5	98.0	100.7	102.5	103.4	104.3
147.5°	72.8	79.1	83.6	88.1	89.9	91.7	92.6	91.7
150°	61.2	68.3	73.7	77.3	79.1	80.9	81.8	80.9
152.5°	51.3	58.5	63.9	66.6	68.3	69.2	70.1	70.1
155°	41.4	46.8	52.2	55.8	57.6	58.5	59.4	60.3
157.5°	32.4	36.9	39.6	45.0	47.7	47.7	47.7	47.7
160°	24.3	27.0	29.7	33.3	36.0	36.9	36.9	36.9
162.5°	16.2	18.0	19.8	22.5	24.3	26.1	26.1	26.1
165°	9.0	9.9	11.7	12.6	12.6	15.3	16.2	15.3
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

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