

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: P231994

Luminaire Tested: **FVS4M-4-LD4-40-2LO-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231994
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-4-LD4-40-2LO-PFS125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
4FT LENGTH, 2-MODULE LED WITH PFS125 LENS
Light Source: (168) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

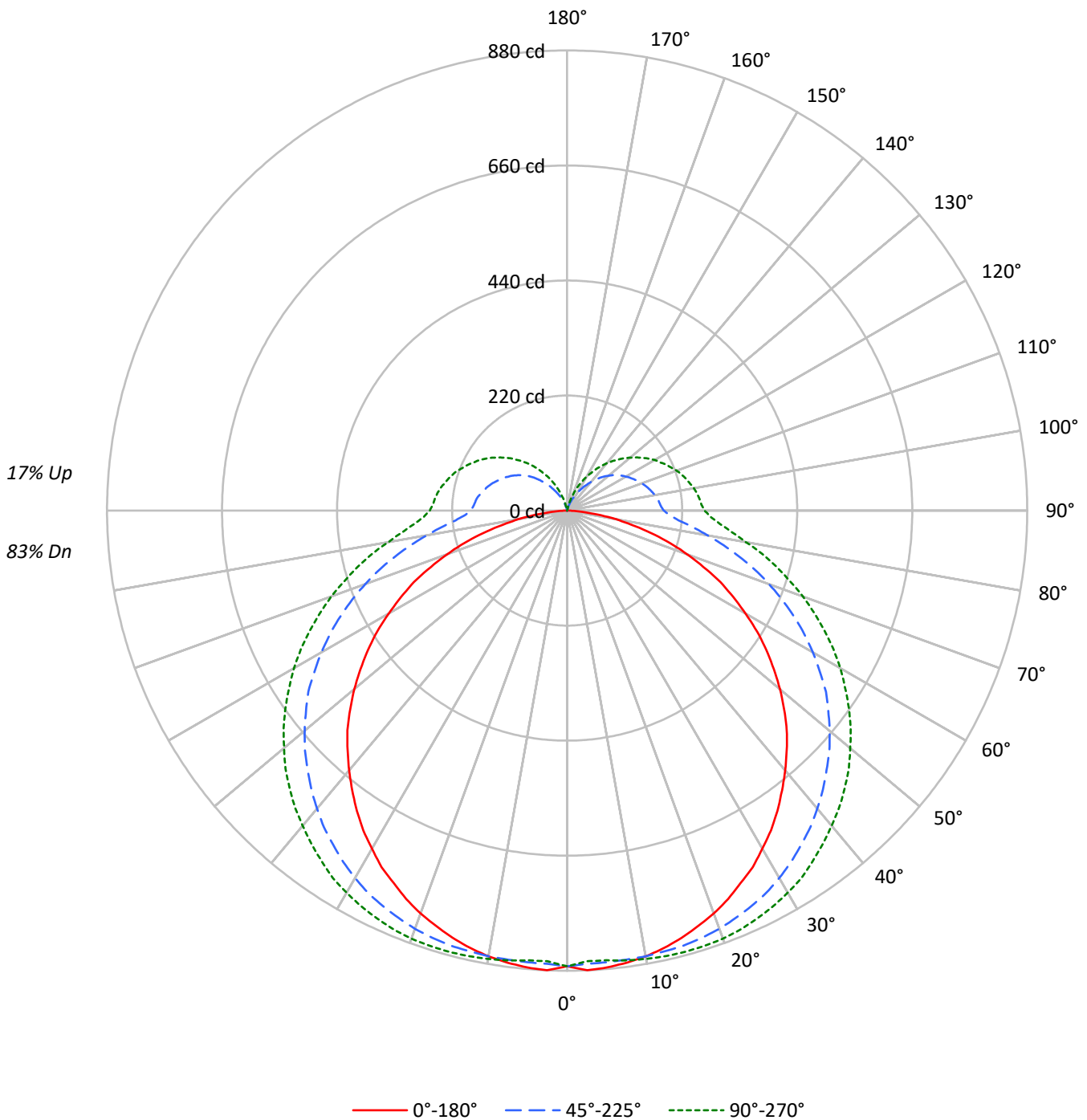
Lumens per Lamp: N/A
Luminaire Lumens: 3905.0 lumens
Efficiency: N/A
Efficacy: 68.0 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.44 / 1.52
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 57.4
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	87	87	87	83
1	103	97	92	88	98	93	89	85	86	82	79	79	76	74	73	71	68	65
2	93	83	76	69	88	80	73	67	74	68	63	68	63	59	63	59	56	52
3	84	72	64	57	80	70	62	55	64	57	52	59	54	49	55	50	46	43
4	76	64	54	47	73	61	53	46	57	49	44	52	46	41	48	43	39	36
5	70	56	47	40	67	54	46	39	50	43	37	47	40	35	43	38	33	31
6	64	51	41	35	61	49	40	34	45	38	32	42	36	31	39	33	29	27
7	59	46	37	30	57	44	36	30	41	34	28	38	32	27	35	30	26	23
8	55	41	33	27	53	40	32	26	37	30	25	35	28	24	32	27	23	21
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	32	25	20	29	24	19	28	22	18	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7915	7915	7915
5°	7963	7600	7480
10°	7915	7386	7262
15°	7852	7212	7076
20°	7787	7050	6913
25°	7695	6889	6739
30°	7612	6728	6574
35°	7513	6548	6393
40°	7389	6370	6206
45°	7273	6177	6028
50°	7091	5986	5823
55°	6877	5779	5609
60°	6595	5493	5377
65°	6285	5183	5102
70°	5706	4823	4814
75°	4939	4406	4489
80°	3865	3949	4125
85°	1971	3564	3888



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.0	2.1
10°-20°	243.7	6.2
20°-30°	383.3	9.8
30°-40°	483.6	12.4
40°-50°	532.2	13.6
50°-60°	523.1	13.4
60°-70°	454.7	11.6
70°-80°	338.1	8.7
80°-90°	215.8	5.5
90°-100°	170.4	4.4
100°-110°	151.0	3.9
110°-120°	124.0	3.2
120°-130°	93.2	2.4
130°-140°	61.4	1.6
140°-150°	33.1	0.8
150°-160°	12.5	0.3
160°-170°	1.7	0.0
170°-180°	0.0	0.0
0°-30°	710.1	18.2
0°-40°	1193.7	30.6
0°-60°	2249.0	57.6
0°-90°	3257.6	83.4
90°-120°	445.4	11.4
90°-150°	633.1	16.2
90°-180°	647.0	16.6
0°-180°	3905.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	871	871	871	871	871	
5°	877	874	867	868	863	83
15°	846	851	861	875	873	239
25°	785	807	834	859	860	363
35°	701	736	780	813	819	438
45°	594	643	702	742	751	457
55°	465	531	604	647	658	415
65°	323	396	479	530	543	317
75°	167	249	341	397	414	176
85°	30	119	214	274	293	38
90°	0	88	185	245	263	1
95°	0	83	177	236	254	0
105°	0	73	162	218	235	0
115°	0	61	142	194	209	0
125°	0	48	118	163	176	0
135°	0	32	89	127	138	0
145°	1	17	56	90	97	0
155°	1	6	26	45	53	0
165°	1	0	4	8	12	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231994

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	871.3	871.3	871.3	871.3	871.3	871.3	871.3	871.3	871.3	871.3	871.3
2.5°	879.9	878.5	876.3	875.6	876.3	876.3	876.3	874.9	871.3	867.7	867.7
5°	877.0	876.3	873.4	872.7	873.4	874.2	874.2	872.7	869.8	866.9	866.9
7.5°	872.0	871.3	869.1	868.4	869.8	870.5	871.3	869.8	868.4	866.2	866.9
10°	865.5	864.1	862.6	861.9	863.3	865.5	866.9	866.9	866.2	865.5	867.7
12.5°	856.8	856.1	853.9	854.7	856.8	860.4	862.6	864.1	864.1	863.3	866.9
15°	846.0	846.0	844.6	845.3	848.2	853.2	856.8	859.0	859.7	861.2	864.8
17.5°	833.0	833.7	832.3	833.7	839.5	845.3	850.3	852.5	854.7	856.8	861.9
20°	820.0	820.0	818.6	822.2	828.0	835.2	840.2	844.6	847.5	851.1	856.1
22.5°	804.1	804.1	804.1	808.5	815.7	822.9	830.8	835.9	839.5	843.1	849.6
25°	785.4	787.5	786.8	793.3	802.0	811.4	818.6	823.6	829.4	834.5	841.7
27.5°	768.8	767.3	768.8	776.0	786.1	794.8	804.9	810.6	817.1	824.4	831.6
30°	746.4	745.7	749.3	757.9	768.0	779.6	789.0	796.2	804.1	811.4	820.0
32.5°	725.5	723.3	728.3	739.2	749.3	763.0	771.7	779.6	787.5	796.9	805.6
35°	700.9	700.2	706.0	716.8	729.8	742.8	754.3	763.7	771.7	780.3	791.1
37.5°	674.9	677.8	682.9	693.7	708.1	721.8	733.4	742.8	752.2	763.7	774.5
40°	648.9	650.4	656.2	669.9	685.0	699.5	711.7	720.4	733.4	744.2	755.1
42.5°	621.5	620.8	632.3	646.1	660.5	676.4	688.6	700.2	712.5	724.0	735.6
45°	594.1	591.9	603.5	618.6	634.5	651.1	665.5	678.5	690.1	701.6	713.2
47.5°	563.0	563.8	576.0	591.2	608.5	625.1	645.3	653.3	665.5	680.0	691.5
50°	531.3	531.3	545.7	562.3	578.9	598.4	612.8	627.3	642.4	655.4	667.7
52.5°	498.1	501.0	514.0	532.7	552.2	568.8	584.0	601.3	615.7	629.5	641.7
55°	464.9	467.8	484.4	501.0	521.9	539.2	555.8	571.7	586.9	604.2	615.0
57.5°	430.9	435.3	450.4	468.5	488.0	508.2	526.9	542.1	558.7	573.1	586.9
60°	394.1	400.6	415.1	433.1	455.5	475.7	493.7	510.3	526.9	542.8	555.8
62.5°	358.0	363.8	379.7	398.5	420.8	443.2	459.1	479.3	495.9	511.1	525.5
65°	323.4	327.7	345.0	363.8	386.2	406.4	426.6	445.4	462.0	478.6	493.7
67.5°	282.2	290.2	306.8	327.7	350.1	371.0	390.5	410.7	428.8	444.7	459.8
70°	244.0	251.2	267.8	290.2	314.0	337.1	357.3	376.1	394.9	410.7	425.9
72.5°	205.7	213.7	230.3	250.5	275.0	296.7	319.1	340.0	360.2	376.8	392.0
75°	166.7	174.0	192.7	215.1	239.7	259.1	284.4	303.9	323.4	340.7	358.0
77.5°	125.6	136.4	153.8	177.6	200.7	225.2	248.3	269.2	288.0	306.8	324.8
80°	94.6	100.3	116.9	142.9	165.3	190.6	212.2	234.6	255.5	272.1	288.7
82.5°	57.7	66.4	87.3	107.6	135.0	156.6	181.2	202.8	223.1	241.8	257.7
85°	29.6	39.0	57.0	81.6	106.8	132.1	153.0	175.4	195.6	213.7	230.3
87.5°	8.7	17.3	37.5	60.6	85.9	111.2	134.3	155.9	176.1	194.9	211.5
90°	0.0	8.7	28.2	51.3	75.8	100.3	123.4	145.8	166.0	184.8	201.4
92.5°	0.0	7.9	26.0	48.4	72.9	96.7	119.8	141.5	161.0	179.7	196.3
95°	0.0	7.2	24.5	46.9	70.7	94.6	117.7	139.3	158.8	176.9	193.5
97.5°	0.0	6.5	23.1	44.8	68.6	91.7	114.8	136.4	155.9	174.7	191.3
100°	0.0	5.8	22.4	43.3	66.4	88.8	111.9	132.8	152.3	170.4	187.0
102.5°	0.0	5.1	20.9	41.1	63.5	86.6	108.3	129.2	148.7	166.0	182.6
105°	0.0	5.1	19.5	39.7	61.4	83.7	104.7	125.6	144.4	161.7	178.3
107.5°	0.0	4.3	18.8	37.5	59.2	80.1	101.1	121.3	140.0	157.4	173.2
110°	0.0	3.6	17.3	36.1	56.3	77.2	98.2	117.7	135.7	152.3	168.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	2.9	15.9	33.9	53.4	73.6	93.8	112.6	130.7	146.5	161.7
115°	0.0	2.2	15.2	31.8	51.3	70.7	89.5	108.3	125.6	141.5	155.9
117.5°	0.0	1.4	13.7	29.6	48.4	67.1	85.9	103.9	120.5	135.7	150.1
120°	0.0	1.4	12.3	28.2	45.5	63.5	81.6	98.9	115.5	129.9	143.6
122.5°	0.0	0.7	10.8	26.0	42.6	59.9	77.2	93.8	109.0	124.2	137.2
125°	0.0	0.7	9.4	23.8	39.7	56.3	72.9	88.8	103.9	117.7	130.7
127.5°	0.0	0.7	7.9	20.9	36.1	52.0	67.9	83.0	98.2	111.2	123.4
130°	0.0	0.7	6.5	18.8	32.5	47.6	62.8	77.2	91.7	103.9	116.2
132.5°	0.0	0.7	5.1	15.9	28.9	42.6	56.3	70.7	83.7	96.7	108.3
135°	0.0	0.0	3.6	13.7	25.3	38.3	50.5	63.5	76.5	88.8	100.3
137.5°	0.7	0.7	2.9	11.5	22.4	33.2	45.5	57.0	68.6	80.1	91.7
140°	0.7	0.7	2.2	9.4	18.8	29.6	39.7	50.5	61.4	71.5	81.6
142.5°	0.7	0.7	1.4	7.2	15.9	25.3	34.6	44.8	54.1	62.8	72.2
145°	0.7	0.7	1.4	5.1	13.0	20.9	30.3	38.3	46.9	55.6	62.8
147.5°	0.7	0.7	0.7	3.6	10.1	17.3	25.3	32.5	40.4	47.6	54.1
150°	0.7	0.7	0.7	2.9	7.9	14.4	20.9	26.7	33.9	39.7	46.2
152.5°	0.7	0.7	0.7	2.2	5.8	11.5	16.6	22.4	27.4	33.2	37.5
155°	0.7	0.7	0.7	1.4	3.6	7.9	13.0	17.3	21.7	26.0	30.3
157.5°	0.7	0.7	0.7	0.7	2.2	5.1	9.4	13.0	16.6	19.5	23.8
160°	0.7	0.7	0.7	0.7	1.4	2.9	5.8	8.7	11.5	14.4	16.6
162.5°	0.7	0.7	0.7	0.0	0.7	1.4	2.9	5.1	7.2	9.4	10.8
165°	0.7	0.7	0.7	0.0	0.0	0.0	0.7	1.4	2.9	4.3	5.1
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°	871.3	871.3	871.3	871.3	871.3	871.3	871.3	871.3
2.5°	868.4	869.1	868.4	867.7	866.2	864.8	863.3	862.6
5°	868.4	869.1	868.4	868.4	866.9	865.5	864.1	863.3
7.5°	869.8	870.5	870.5	870.5	870.5	869.8	868.4	867.7
10°	870.5	872.7	873.4	873.4	873.4	872.7	872.0	870.5
12.5°	870.5	873.4	874.2	874.9	875.6	874.9	873.4	872.7
15°	869.1	872.7	874.2	874.9	875.6	875.6	874.2	873.4
17.5°	866.9	870.5	872.7	873.4	874.9	874.2	873.4	872.7
20°	861.9	866.2	869.1	871.3	872.0	872.7	872.0	871.3
22.5°	856.1	860.4	864.1	866.2	867.7	868.4	867.7	866.9
25°	848.2	853.2	857.6	859.7	861.2	862.6	861.9	860.4
27.5°	838.8	843.8	848.2	851.1	853.9	853.9	853.9	853.2
30°	826.5	833.0	837.3	841.0	843.1	844.6	844.6	843.8
32.5°	814.2	820.7	825.1	829.4	831.6	832.3	833.0	833.7
35°	799.1	805.6	811.4	815.0	817.9	819.3	819.3	818.6
37.5°	782.5	790.4	796.2	799.8	804.1	804.1	804.1	803.4
40°	763.7	770.9	778.2	782.5	786.8	787.5	786.8	786.8
42.5°	745.7	752.9	759.4	764.4	767.3	768.8	769.5	770.2
45°	724.0	732.7	739.2	744.9	747.8	750.0	750.7	750.7
47.5°	700.9	710.3	717.5	722.6	726.9	729.8	728.3	730.5
50°	678.5	686.5	695.1	699.5	703.8	707.4	706.7	706.7
52.5°	653.3	661.2	669.9	676.4	680.0	682.9	683.6	683.6
55°	625.8	635.2	643.9	649.7	654.0	656.2	657.6	657.6
57.5°	598.4	607.8	615.7	623.7	628.0	631.6	631.6	630.2
60°	568.8	578.9	587.6	594.1	601.3	602.0	602.7	603.5
62.5°	538.5	548.6	558.0	565.9	569.5	573.1	575.3	573.9
65°	506.7	515.4	527.7	532.7	537.8	539.9	543.6	542.8
67.5°	475.0	485.8	493.7	502.4	508.2	508.9	513.2	511.1
70°	438.9	449.7	461.3	467.0	473.5	475.7	477.9	480.0
72.5°	405.7	417.2	426.6	435.3	438.9	442.5	445.4	446.1
75°	371.0	384.7	392.0	401.3	406.4	409.3	413.6	414.3
77.5°	336.4	348.7	359.5	366.0	372.5	376.1	379.0	381.9
80°	302.5	313.3	325.6	334.9	341.4	344.3	347.9	347.2
82.5°	272.1	284.4	295.2	303.2	310.4	314.7	318.3	318.3
85°	246.9	260.6	269.2	277.9	284.4	288.7	292.3	293.1
87.5°	228.1	240.4	251.9	259.1	266.4	270.7	273.6	274.3
90°	216.6	229.5	240.4	249.0	255.5	259.9	262.8	262.8
92.5°	211.5	223.8	235.3	243.3	249.8	254.1	256.3	257.0
95°	208.6	220.9	231.7	240.4	246.9	251.2	253.4	254.1
97.5°	205.7	218.0	228.1	237.5	243.3	247.6	249.8	250.5
100°	201.4	213.7	224.5	232.4	239.7	243.3	245.4	246.2
102.5°	197.1	208.6	219.4	227.4	233.9	237.5	240.4	240.4
105°	192.0	205.0	214.4	222.3	228.8	233.2	234.6	235.3
107.5°	187.0	199.2	209.3	217.3	223.1	226.7	229.5	229.5
110°	181.9	193.5	202.8	210.8	216.6	220.2	222.3	223.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	175.4	187.0	196.3	204.3	209.3	212.9	215.1	215.1
115°	168.9	180.5	189.8	197.8	202.8	206.4	207.9	208.6
117.5°	162.4	173.2	182.6	189.8	194.9	198.5	200.0	200.0
120°	155.9	166.7	175.4	182.6	187.7	190.6	192.7	193.5
122.5°	148.7	158.8	167.5	174.7	179.7	182.6	184.1	184.8
125°	141.5	151.6	159.5	166.0	171.1	174.0	176.1	176.1
127.5°	134.3	143.6	151.6	157.4	161.7	164.6	166.0	166.7
130°	126.3	134.3	142.2	148.0	153.0	155.2	157.4	157.4
132.5°	118.4	126.3	133.5	140.0	142.9	145.8	148.0	148.0
135°	110.4	117.7	124.9	129.9	133.5	136.4	137.9	137.9
137.5°	101.8	109.7	116.2	120.5	124.2	126.3	127.8	128.5
140°	92.4	101.1	106.1	110.4	114.1	116.2	117.7	117.7
142.5°	81.6	90.2	96.7	101.8	103.9	105.4	107.6	107.6
145°	71.5	79.4	87.3	91.7	94.6	96.0	96.7	97.4
147.5°	61.4	68.6	75.8	80.8	83.7	84.5	85.2	85.2
150°	52.0	57.7	64.2	70.7	72.9	74.4	75.1	75.8
152.5°	43.3	47.6	53.4	58.5	62.8	63.5	64.2	64.2
155°	34.6	39.0	42.6	46.9	52.0	52.7	53.4	53.4
157.5°	26.7	29.6	32.5	35.4	39.7	42.6	42.6	43.3
160°	18.8	21.7	23.1	25.3	28.2	31.8	31.8	31.8
162.5°	12.3	13.7	15.2	15.9	17.3	20.2	21.7	21.7
165°	6.5	6.5	7.2	7.9	8.7	9.4	11.5	12.3
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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