

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: P231998

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P231998  
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-LD4-40-2STD-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**

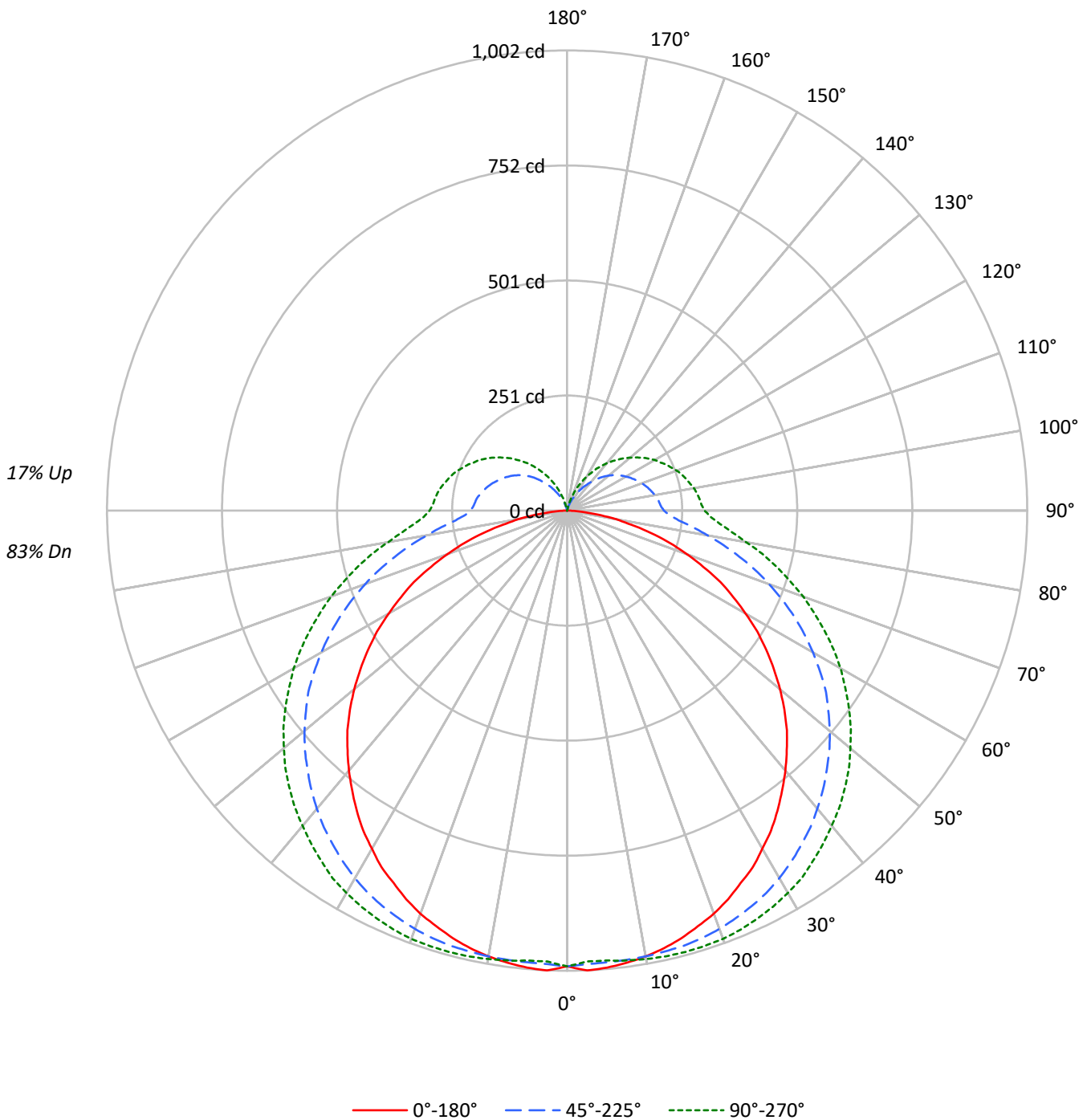
Lumens per Lamp: N/A  
Luminaire Lumens: 4448.0 lumens  
Efficiency: N/A  
Efficacy: 65.9 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.44 / 1.52  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')  
CIE Type: Semi-Direct

Input Watts (W): 67.5  
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	
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°	9015	9015	9015
5°	9071	8657	8520
10°	9015	8412	8272
15°	8944	8214	8061
20°	8870	8029	7874
25°	8765	7847	7676
30°	8671	7663	7489
35°	8558	7458	7281
40°	8417	7256	7069
45°	8284	7036	6866
50°	8077	6819	6633
55°	7833	6583	6388
60°	7512	6257	6124
65°	7160	5903	5812
70°	6498	5494	5484
75°	5627	5019	5114
80°	4400	4499	4699
85°	2244	4060	4428



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.6	2.1
10°-20°	277.6	6.2
20°-30°	436.6	9.8
30°-40°	550.9	12.4
40°-50°	606.3	13.6
50°-60°	595.8	13.4
60°-70°	518.0	11.6
70°-80°	385.1	8.7
80°-90°	245.8	5.5
90°-100°	194.1	4.4
100°-110°	172.0	3.9
110°-120°	141.3	3.2
120°-130°	106.2	2.4
130°-140°	69.9	1.6
140°-150°	37.7	0.8
150°-160°	14.3	0.3
160°-170°	2.0	0.0
170°-180°	0.0	0.0
0°-30°	808.8	18.2
0°-40°	1359.7	30.6
0°-60°	2561.8	57.6
0°-90°	3710.6	83.4
90°-120°	507.3	11.4
90°-150°	721.2	16.2
90°-180°	737.0	16.6
0°-180°	4448.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	992	992	992	992	992	
5°	999	995	988	989	983	95
15°	964	969	981	996	995	272
25°	895	919	950	978	980	413
35°	798	839	889	926	932	499
45°	677	732	799	845	855	521
55°	530	604	688	737	749	473
65°	368	451	545	604	618	361
75°	190	284	388	452	472	200
85°	34	136	243	312	334	43
90°	0	100	210	279	299	1
95°	0	94	201	269	289	0
105°	0	83	184	249	268	0
115°	0	70	161	221	238	0
125°	0	55	134	185	201	0
135°	0	36	101	145	157	0
145°	1	19	63	102	111	1
155°	1	7	30	51	61	0
165°	1	0	5	9	14	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231998

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4
2.5°	1002.3	1000.6	998.2	997.4	998.2	998.2	998.2	996.5	992.4	988.3	988.3
5°	999.0	998.2	994.9	994.1	994.9	995.7	995.7	994.1	990.8	987.5	987.5
7.5°	993.2	992.4	990.0	989.1	990.8	991.6	992.4	990.8	989.1	986.7	987.5
10°	985.8	984.2	982.6	981.7	983.4	985.8	987.5	987.5	986.7	985.8	988.3
12.5°	976.0	975.2	972.7	973.5	976.0	980.1	982.6	984.2	984.2	983.4	987.5
15°	963.6	963.6	962.0	962.8	966.1	971.9	976.0	978.4	979.3	980.9	985.0
17.5°	948.8	949.7	948.0	949.7	956.2	962.8	968.6	971.0	973.5	976.0	981.7
20°	934.0	934.0	932.4	936.5	943.1	951.3	957.1	962.0	965.3	969.4	975.2
22.5°	916.0	916.0	916.0	920.9	929.1	937.3	946.4	952.1	956.2	960.4	967.8
25°	894.6	897.0	896.2	903.6	913.5	924.2	932.4	938.2	944.7	950.5	958.7
27.5°	875.7	874.0	875.7	883.9	895.4	905.3	916.8	923.4	930.8	939.0	947.2
30°	850.2	849.4	853.5	863.3	874.8	888.0	898.7	906.9	916.0	924.2	934.0
32.5°	826.3	823.9	829.6	842.0	853.5	869.1	879.0	888.0	897.0	907.7	917.6
35°	798.4	797.6	804.1	816.5	831.3	846.1	859.2	869.9	879.0	888.8	901.2
37.5°	768.8	772.1	777.8	790.2	806.6	822.2	835.4	846.1	856.8	869.9	882.2
40°	739.2	740.8	747.4	763.0	780.3	796.7	810.7	820.6	835.4	847.7	860.0
42.5°	707.9	707.1	720.3	735.9	752.3	770.4	784.4	797.6	811.5	824.7	837.8
45°	676.7	674.2	687.4	704.6	722.7	741.6	758.1	772.9	786.0	799.2	812.4
47.5°	641.3	642.2	656.1	673.4	693.1	712.0	735.1	744.1	758.1	774.5	787.7
50°	605.2	605.2	621.6	640.5	659.4	681.6	698.1	714.5	731.8	746.6	760.6
52.5°	567.3	570.6	585.4	606.8	629.0	647.9	665.2	684.9	701.4	717.0	731.0
55°	529.5	532.8	551.7	570.6	594.5	614.2	633.1	651.2	668.5	688.2	700.5
57.5°	490.9	495.8	513.1	533.6	555.8	578.8	600.2	617.5	636.4	652.8	668.5
60°	448.9	456.3	472.8	493.3	518.8	541.8	562.4	581.3	600.2	618.3	633.1
62.5°	407.8	414.4	432.5	453.9	479.4	504.8	522.9	546.0	564.9	582.1	598.6
65°	368.4	373.3	393.0	414.4	439.9	462.9	485.9	507.3	526.2	545.1	562.4
67.5°	321.5	330.5	349.4	373.3	398.8	422.6	444.8	467.8	488.4	506.5	523.8
70°	277.9	286.1	305.0	330.5	357.7	384.0	407.0	428.4	449.8	467.8	485.1
72.5°	234.3	243.4	262.3	285.3	313.3	337.9	363.4	387.3	410.3	429.2	446.5
75°	189.9	198.2	219.5	245.0	273.0	295.2	324.0	346.2	368.4	388.1	407.8
77.5°	143.1	155.4	175.1	202.3	228.6	256.5	282.8	306.7	328.1	349.4	370.0
80°	107.7	114.3	133.2	162.8	188.3	217.1	241.7	267.2	291.1	310.0	328.9
82.5°	65.8	75.6	99.5	122.5	153.8	178.4	206.4	231.0	254.1	275.4	293.5
85°	33.7	44.4	65.0	92.9	121.7	150.5	174.3	199.8	222.8	243.4	262.3
87.5°	9.9	19.7	42.8	69.1	97.8	126.6	152.9	177.6	200.6	222.0	240.9
90°	0.0	9.9	32.1	58.4	86.3	114.3	140.6	166.1	189.1	210.5	229.4
92.5°	0.0	9.0	29.6	55.1	83.0	110.2	136.5	161.2	183.4	204.7	223.6
95°	0.0	8.2	28.0	53.4	80.6	107.7	134.0	158.7	180.9	201.4	220.4
97.5°	0.0	7.4	26.3	51.0	78.1	104.4	130.7	155.4	177.6	199.0	217.9
100°	0.0	6.6	25.5	49.3	75.6	101.1	127.4	151.3	173.5	194.0	213.0
102.5°	0.0	5.8	23.8	46.9	72.4	98.7	123.3	147.2	169.4	189.1	208.0
105°	0.0	5.8	22.2	45.2	69.9	95.4	119.2	143.1	164.4	184.2	203.1
107.5°	0.0	4.9	21.4	42.8	67.4	91.3	115.1	138.1	159.5	179.2	197.3
110°	0.0	4.1	19.7	41.1	64.1	88.0	111.8	134.0	154.6	173.5	191.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	3.3	18.1	38.6	60.8	83.9	106.9	128.3	148.8	166.9	184.2
115°	0.0	2.5	17.3	36.2	58.4	80.6	102.0	123.3	143.1	161.2	177.6
117.5°	0.0	1.6	15.6	33.7	55.1	76.5	97.8	118.4	137.3	154.6	171.0
120°	0.0	1.6	14.0	32.1	51.8	72.4	92.9	112.6	131.6	148.0	163.6
122.5°	0.0	0.8	12.3	29.6	48.5	68.2	88.0	106.9	124.2	141.4	156.2
125°	0.0	0.8	10.7	27.1	45.2	64.1	83.0	101.1	118.4	134.0	148.8
127.5°	0.0	0.8	9.0	23.8	41.1	59.2	77.3	94.6	111.8	126.6	140.6
130°	0.0	0.8	7.4	21.4	37.0	54.3	71.5	88.0	104.4	118.4	132.4
132.5°	0.0	0.8	5.8	18.1	32.9	48.5	64.1	80.6	95.4	110.2	123.3
135°	0.0	0.0	4.1	15.6	28.8	43.6	57.6	72.4	87.2	101.1	114.3
137.5°	0.8	0.8	3.3	13.2	25.5	37.8	51.8	65.0	78.1	91.3	104.4
140°	0.8	0.8	2.5	10.7	21.4	33.7	45.2	57.6	69.9	81.4	92.9
142.5°	0.8	0.8	1.6	8.2	18.1	28.8	39.5	51.0	61.7	71.5	82.2
145°	0.8	0.8	1.6	5.8	14.8	23.8	34.5	43.6	53.4	63.3	71.5
147.5°	0.8	0.8	0.8	4.1	11.5	19.7	28.8	37.0	46.0	54.3	61.7
150°	0.8	0.8	0.8	3.3	9.0	16.4	23.8	30.4	38.6	45.2	52.6
152.5°	0.8	0.8	0.8	2.5	6.6	13.2	18.9	25.5	31.2	37.8	42.8
155°	0.8	0.8	0.8	1.6	4.1	9.0	14.8	19.7	24.7	29.6	34.5
157.5°	0.8	0.8	0.8	0.8	2.5	5.8	10.7	14.8	18.9	22.2	27.1
160°	0.8	0.8	0.8	0.8	1.6	3.3	6.6	9.9	13.2	16.4	18.9
162.5°	0.8	0.8	0.8	0.0	0.8	1.6	3.3	5.8	8.2	10.7	12.3
165°	0.8	0.8	0.8	0.0	0.0	0.0	0.8	1.6	3.3	4.9	5.8
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°	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4
2.5°	989.1	990.0	989.1	988.3	986.7	985.0	983.4	982.6
5°	989.1	990.0	989.1	989.1	987.5	985.8	984.2	983.4
7.5°	990.8	991.6	991.6	991.6	991.6	990.8	989.1	988.3
10°	991.6	994.1	994.9	994.9	994.9	994.1	993.2	991.6
12.5°	991.6	994.9	995.7	996.5	997.4	996.5	994.9	994.1
15°	990.0	994.1	995.7	996.5	997.4	997.4	995.7	994.9
17.5°	987.5	991.6	994.1	994.9	996.5	995.7	994.9	994.1
20°	981.7	986.7	990.0	992.4	993.2	994.1	993.2	992.4
22.5°	975.2	980.1	984.2	986.7	988.3	989.1	988.3	987.5
25°	966.1	971.9	976.8	979.3	980.9	982.6	981.7	980.1
27.5°	955.4	961.2	966.1	969.4	972.7	972.7	972.7	971.9
30°	941.4	948.8	953.8	957.9	960.4	962.0	962.0	961.2
32.5°	927.5	934.9	939.8	944.7	947.2	948.0	948.8	949.7
35°	910.2	917.6	924.2	928.3	931.6	933.2	933.2	932.4
37.5°	891.3	900.3	906.9	911.0	916.0	916.0	916.0	915.1
40°	869.9	878.1	886.4	891.3	896.2	897.0	896.2	896.2
42.5°	849.4	857.6	865.0	870.7	874.0	875.7	876.5	877.3
45°	824.7	834.6	842.0	848.5	851.8	854.3	855.1	855.1
47.5°	798.4	809.1	817.3	823.0	828.0	831.3	829.6	832.1
50°	772.9	781.9	791.8	796.7	801.7	805.8	805.0	805.0
52.5°	744.1	753.2	763.0	770.4	774.5	777.8	778.6	778.6
55°	712.9	723.6	733.4	740.0	744.9	747.4	749.0	749.0
57.5°	681.6	692.3	701.4	710.4	715.3	719.4	719.4	717.8
60°	647.9	659.4	669.3	676.7	684.9	685.7	686.6	687.4
62.5°	613.4	624.9	635.6	644.6	648.7	652.8	655.3	653.7
65°	577.2	587.1	601.0	606.8	612.6	615.0	619.1	618.3
67.5°	541.0	553.4	562.4	572.3	578.8	579.7	584.6	582.1
70°	499.9	512.2	525.4	532.0	539.4	541.8	544.3	546.8
72.5°	462.1	475.2	485.9	495.8	499.9	504.0	507.3	508.1
75°	422.6	438.2	446.5	457.2	462.9	466.2	471.1	472.0
77.5°	383.2	397.1	409.5	416.9	424.3	428.4	431.7	435.0
80°	344.5	356.8	370.8	381.5	388.9	392.2	396.3	395.5
82.5°	310.0	324.0	336.3	345.3	353.6	358.5	362.6	362.6
85°	281.2	296.8	306.7	316.6	324.0	328.9	333.0	333.8
87.5°	259.8	273.8	287.0	295.2	303.4	308.3	311.6	312.4
90°	246.7	261.5	273.8	283.7	291.1	296.0	299.3	299.3
92.5°	240.9	254.9	268.0	277.1	284.5	289.4	291.9	292.7
95°	237.6	251.6	263.9	273.8	281.2	286.1	288.6	289.4
97.5°	234.3	248.3	259.8	270.5	277.1	282.0	284.5	285.3
100°	229.4	243.4	255.7	264.8	273.0	277.1	279.6	280.4
102.5°	224.5	237.6	250.0	259.0	266.4	270.5	273.8	273.8
105°	218.7	233.5	244.2	253.2	260.6	265.6	267.2	268.0
107.5°	213.0	226.9	238.4	247.5	254.1	258.2	261.5	261.5
110°	207.2	220.4	231.0	240.1	246.7	250.8	253.2	254.1





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	199.8	213.0	223.6	232.7	238.4	242.6	245.0	245.0
115°	192.4	205.6	216.2	225.3	231.0	235.2	236.8	237.6
117.5°	185.0	197.3	208.0	216.2	222.0	226.1	227.8	227.8
120°	177.6	189.9	199.8	208.0	213.8	217.1	219.5	220.4
122.5°	169.4	180.9	190.8	199.0	204.7	208.0	209.7	210.5
125°	161.2	172.7	181.7	189.1	194.9	198.2	200.6	200.6
127.5°	152.9	163.6	172.7	179.2	184.2	187.5	189.1	189.9
130°	143.9	152.9	162.0	168.6	174.3	176.8	179.2	179.2
132.5°	134.8	143.9	152.1	159.5	162.8	166.1	168.6	168.6
135°	125.8	134.0	142.2	148.0	152.1	155.4	157.0	157.0
137.5°	115.9	125.0	132.4	137.3	141.4	143.9	145.5	146.4
140°	105.2	115.1	120.9	125.8	129.9	132.4	134.0	134.0
142.5°	92.9	102.8	110.2	115.9	118.4	120.0	122.5	122.5
145°	81.4	90.4	99.5	104.4	107.7	109.4	110.2	111.0
147.5°	69.9	78.1	86.3	92.1	95.4	96.2	97.0	97.0
150°	59.2	65.8	73.2	80.6	83.0	84.7	85.5	86.3
152.5°	49.3	54.3	60.8	66.6	71.5	72.4	73.2	73.2
155°	39.5	44.4	48.5	53.4	59.2	60.0	60.8	60.8
157.5°	30.4	33.7	37.0	40.3	45.2	48.5	48.5	49.3
160°	21.4	24.7	26.3	28.8	32.1	36.2	36.2	36.2
162.5°	14.0	15.6	17.3	18.1	19.7	23.0	24.7	24.7
165°	7.4	7.4	8.2	9.0	9.9	10.7	13.2	14.0
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)