

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: P232075

Luminaire Tested: **FVS4M-3-LD4-50-2HI-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P232075  
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-LD4-50-2HI-PFS125-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
3FT LENGTH, 2-MODULE LED WITH PFS125 LENS  
Light Source: (168) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

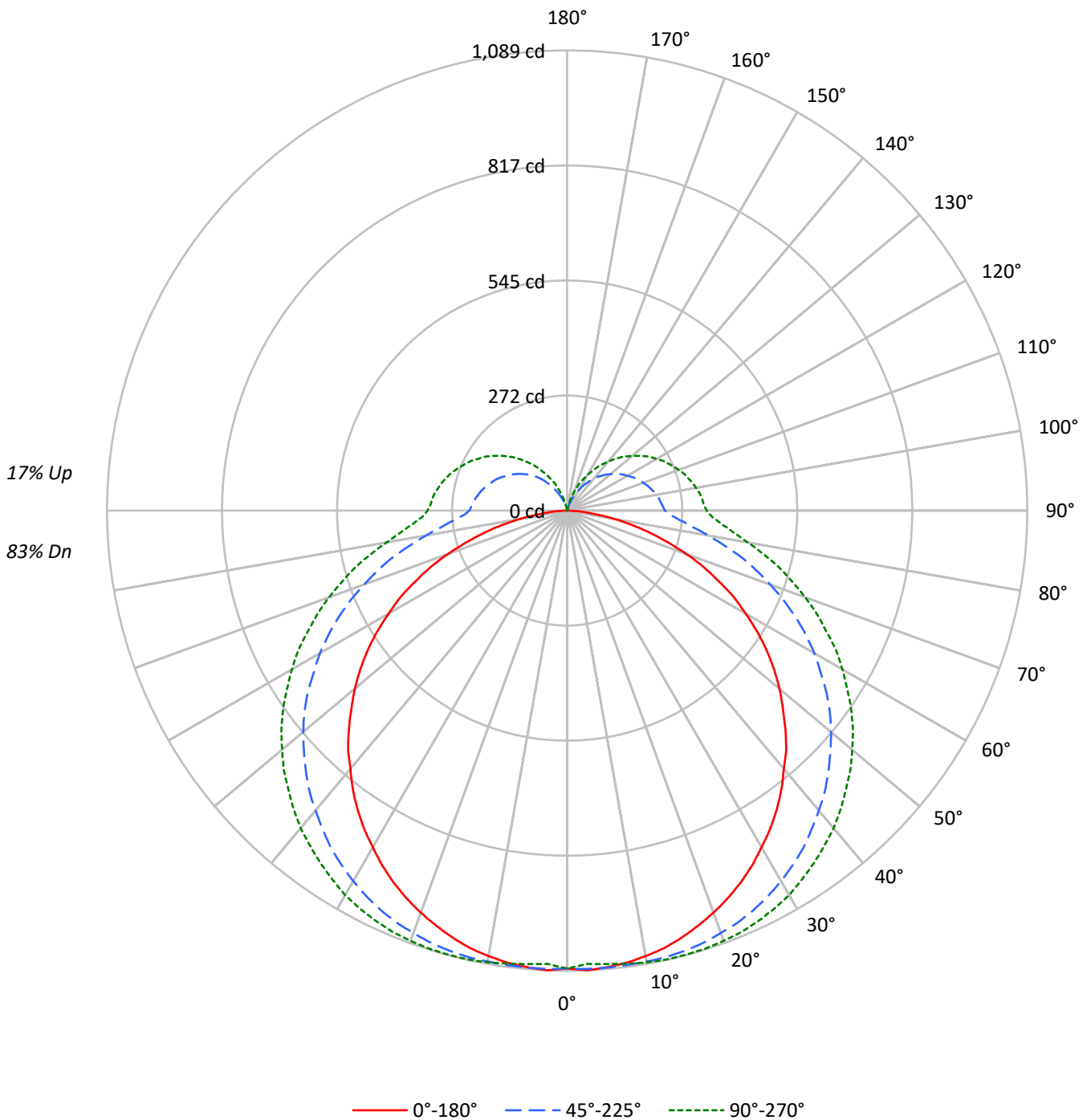
Lumens per Lamp: N/A  
Luminaire Lumens: 4881.0 lumens  
Efficiency: N/A  
Efficacy: 68.1 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.44 / 1.52  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 2.92' x H: 0.19')  
CIE Type: Semi-Direct

Input Watts (W): 71.7  
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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CATALOG NUMBER: FVS4M-3-LD4-50-2HI-PFS125-UNV-EDC1

### 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°	12796	12796	12796
5°	12786	12363	12131
10°	12692	11999	11774
15°	12577	11707	11459
20°	12436	11418	11176
25°	12287	11151	10910
30°	12097	10864	10643
35°	11925	10572	10336
40°	11671	10245	10059
45°	11460	9934	9740
50°	11198	9604	9436
55°	10874	9229	9101
60°	10378	8801	8711
65°	9718	8301	8272
70°	8798	7706	7816
75°	7500	7082	7309
80°	5597	6292	6701
85°	2984	5727	6334



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.3	2.1
10°-20°	303.3	6.2
20°-30°	476.7	9.8
30°-40°	600.9	12.3
40°-50°	661.3	13.5
50°-60°	650.3	13.3
60°-70°	565.8	11.6
70°-80°	421.2	8.6
80°-90°	270.0	5.5
90°-100°	214.5	4.4
100°-110°	190.6	3.9
110°-120°	157.5	3.2
120°-130°	119.4	2.4
130°-140°	80.5	1.6
140°-150°	44.9	0.9
150°-160°	17.9	0.4
160°-170°	2.8	0.1
170°-180°	0.0	0.0
0°-30°	883.4	18.1
0°-40°	1484.3	30.4
0°-60°	2795.9	57.3
0°-90°	4053.0	83.0
90°-120°	562.6	11.5
90°-150°	807.4	16.5
90°-180°	828.0	17.0
0°-180°	4881.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1084	1084	1084	1084	1084	
5°	1085	1084	1086	1083	1077	103
15°	1046	1056	1078	1090	1088	295
25°	971	1001	1043	1069	1072	447
35°	864	913	974	1012	1018	540
45°	730	797	874	923	933	563
55°	577	657	749	806	821	514
65°	396	489	596	661	677	392
75°	204	310	427	495	519	215
85°	38	147	269	343	367	46
90°	1	110	231	307	330	2
95°	1	104	222	298	320	1
105°	1	92	204	275	296	1
115°	1	78	180	244	264	1
125°	1	63	150	207	225	1
135°	1	46	117	163	178	1
145°	1	26	78	116	126	1
155°	1	10	38	65	73	1
165°	1	2	9	15	18	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°	1083.5	1083.5	1083.5	1083.5	1083.5	1083.5	1083.5	1083.5	1083.5	1083.5	1083.5
2.5°	1089.0	1086.8	1083.5	1083.5	1085.7	1086.8	1089.0	1089.0	1087.9	1085.7	1084.6
5°	1084.6	1083.5	1080.2	1080.2	1082.4	1084.6	1086.8	1086.8	1086.8	1085.7	1084.6
7.5°	1079.2	1077.0	1074.8	1074.8	1078.1	1080.2	1083.5	1084.6	1085.7	1084.6	1085.7
10°	1070.4	1069.3	1067.2	1068.3	1071.5	1074.8	1078.1	1081.3	1083.5	1083.5	1085.7
12.5°	1060.6	1058.4	1056.3	1058.4	1062.8	1067.2	1073.7	1077.0	1080.2	1082.4	1083.5
15°	1046.4	1045.4	1044.3	1047.5	1053.0	1059.5	1066.1	1071.5	1074.8	1078.1	1081.3
17.5°	1030.1	1030.1	1030.1	1034.5	1041.0	1049.7	1056.3	1062.8	1068.3	1072.6	1077.0
20°	1012.7	1011.6	1012.7	1019.2	1029.0	1036.6	1045.4	1053.0	1059.5	1063.9	1069.3
22.5°	993.0	993.0	995.2	1001.8	1012.7	1023.6	1032.3	1041.0	1048.6	1055.2	1060.6
25°	971.2	972.3	975.6	983.2	995.2	1006.1	1017.0	1026.8	1036.6	1043.2	1050.8
27.5°	947.3	947.3	952.7	962.5	975.6	987.6	999.6	1010.5	1021.4	1029.0	1036.6
30°	920.0	922.2	927.6	940.7	953.8	968.0	980.0	993.0	1002.8	1012.7	1021.4
32.5°	893.8	894.9	901.5	914.6	930.9	945.1	958.2	973.4	983.2	994.1	1003.9
35°	864.4	866.6	874.2	888.4	904.7	921.1	936.4	950.5	962.5	974.5	984.3
37.5°	832.8	836.1	845.9	860.1	877.5	893.8	910.2	925.5	939.6	950.5	963.6
40°	797.9	803.4	813.2	831.7	849.2	865.5	882.9	898.2	913.5	926.5	939.6
42.5°	767.4	769.6	781.6	800.1	819.7	839.3	856.8	873.1	888.4	902.6	913.5
45°	730.3	735.8	747.8	765.2	785.9	807.7	829.5	841.5	859.0	874.2	887.3
47.5°	692.2	698.7	714.0	733.6	754.3	773.9	792.5	813.2	829.5	844.8	860.1
50°	656.2	662.8	676.9	698.7	718.3	740.1	761.9	780.5	797.9	815.4	829.5
52.5°	617.0	622.4	639.9	660.6	683.5	705.3	726.0	747.8	765.2	783.7	797.9
55°	576.6	582.1	599.5	621.3	645.3	669.3	690.0	712.9	729.2	748.9	765.2
57.5°	533.0	542.8	557.0	579.9	603.9	627.9	651.9	673.7	693.3	710.7	729.2
60°	488.3	498.2	516.7	539.6	562.5	588.6	612.6	634.4	655.1	675.8	691.1
62.5°	445.8	453.5	472.0	496.0	521.0	546.1	573.4	594.1	618.1	636.6	655.1
65°	395.7	406.6	427.3	451.3	476.4	502.5	527.6	552.7	575.5	596.3	614.8
67.5°	349.9	358.6	382.6	404.4	431.7	457.8	488.3	511.2	534.1	554.8	572.3
70°	299.8	313.9	330.3	360.8	387.0	416.4	441.5	467.6	490.5	511.2	530.9
72.5°	249.6	263.8	286.7	311.8	340.1	370.6	396.8	421.9	445.8	468.7	487.3
75°	203.8	214.7	238.7	266.0	296.5	322.7	349.9	378.2	403.3	427.3	444.7
77.5°	157.0	170.0	190.8	218.0	248.5	281.2	308.5	333.6	359.7	380.4	403.3
80°	112.3	123.2	147.2	173.3	204.9	235.5	264.9	292.1	316.1	339.0	359.7
82.5°	69.8	82.8	105.7	137.3	166.8	198.4	225.6	252.9	279.1	300.9	321.6
85°	38.2	48.0	73.0	100.3	131.9	161.3	192.9	219.1	246.4	269.2	292.1
87.5°	13.1	24.0	46.9	76.3	107.9	136.3	167.9	195.1	220.2	244.2	266.0
90°	1.1	12.0	36.0	64.3	94.8	125.4	154.8	182.0	208.2	231.1	252.9
92.5°	1.1	10.9	32.7	61.0	91.6	121.0	150.4	177.7	202.7	226.7	247.4
95°	1.1	9.8	31.6	58.9	89.4	118.8	147.2	174.4	199.5	222.4	243.1
97.5°	1.1	9.8	30.5	57.8	86.1	115.5	143.9	171.1	196.2	219.1	239.8
100°	1.1	8.7	28.3	54.5	83.9	112.3	140.6	166.8	191.8	213.7	235.5
102.5°	1.1	7.6	27.3	53.4	80.7	109.0	136.3	162.4	186.4	209.3	230.0
105°	1.1	7.6	26.2	51.2	78.5	105.7	131.9	158.1	182.0	203.8	223.5
107.5°	1.1	6.5	25.1	49.1	75.2	102.5	128.6	153.7	176.6	198.4	218.0
110°	1.1	6.5	24.0	46.9	71.9	98.1	124.3	148.2	171.1	191.8	211.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.1	5.5	21.8	44.7	68.7	94.8	118.8	143.9	165.7	186.4	204.9
115°	1.1	5.5	20.7	42.5	66.5	90.5	114.5	137.3	159.1	179.9	197.3
117.5°	1.1	4.4	19.6	40.3	63.2	86.1	110.1	131.9	153.7	172.2	189.7
120°	1.1	4.4	17.4	37.1	58.9	81.8	104.6	126.4	146.1	164.6	182.0
122.5°	1.1	3.3	16.4	34.9	56.7	77.4	99.2	119.9	140.6	158.1	174.4
125°	1.1	3.3	15.3	32.7	52.3	73.0	93.7	114.5	133.0	150.4	165.7
127.5°	1.1	2.2	13.1	29.4	49.1	68.7	88.3	107.9	125.4	142.8	158.1
130°	1.1	2.2	12.0	27.3	45.8	64.3	82.8	101.4	118.8	134.1	148.2
132.5°	1.1	2.2	9.8	24.0	41.4	60.0	77.4	94.8	111.2	126.4	139.5
135°	1.1	2.2	8.7	21.8	37.1	54.5	70.9	87.2	103.6	116.6	129.7
137.5°	1.1	1.1	7.6	18.5	32.7	49.1	64.3	80.7	94.8	109.0	121.0
140°	1.1	1.1	5.5	15.3	28.3	42.5	56.7	71.9	86.1	99.2	111.2
142.5°	1.1	1.1	4.4	13.1	24.0	37.1	50.1	64.3	76.3	89.4	101.4
145°	1.1	1.1	3.3	10.9	20.7	31.6	42.5	55.6	66.5	78.5	89.4
147.5°	1.1	1.1	3.3	8.7	17.4	26.2	37.1	46.9	57.8	68.7	77.4
150°	1.1	1.1	2.2	6.5	13.1	21.8	30.5	39.2	49.1	56.7	67.6
152.5°	1.1	1.1	2.2	4.4	9.8	17.4	25.1	32.7	40.3	48.0	55.6
155°	1.1	1.1	1.1	3.3	7.6	13.1	19.6	26.2	31.6	38.2	44.7
157.5°	1.1	1.1	1.1	2.2	5.5	8.7	14.2	19.6	25.1	29.4	34.9
160°	1.1	1.1	1.1	2.2	3.3	6.5	9.8	14.2	18.5	21.8	25.1
162.5°	1.1	1.1	1.1	1.1	2.2	3.3	6.5	9.8	12.0	14.2	17.4
165°	1.1	1.1	1.1	1.1	1.1	2.2	3.3	4.4	6.5	8.7	9.8
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°	1083.5	1083.5	1083.5	1083.5	1083.5	1083.5	1083.5	1083.5
2.5°	1083.5	1082.4	1081.3	1080.2	1079.2	1077.0	1074.8	1073.7
5°	1084.6	1084.6	1083.5	1082.4	1081.3	1079.2	1077.0	1077.0
7.5°	1085.7	1086.8	1086.8	1086.8	1085.7	1084.6	1082.4	1081.3
10°	1087.9	1087.9	1089.0	1089.0	1089.0	1087.9	1086.8	1085.7
12.5°	1086.8	1087.9	1090.1	1091.1	1091.1	1090.1	1087.9	1087.9
15°	1084.6	1086.8	1089.0	1090.1	1091.1	1090.1	1087.9	1087.9
17.5°	1080.2	1083.5	1086.8	1089.0	1089.0	1089.0	1087.9	1086.8
20°	1074.8	1078.1	1081.3	1084.6	1085.7	1085.7	1084.6	1083.5
22.5°	1066.1	1071.5	1075.9	1079.2	1080.2	1080.2	1079.2	1079.2
25°	1056.3	1061.7	1067.2	1070.4	1072.6	1073.7	1072.6	1071.5
27.5°	1044.3	1049.7	1055.2	1059.5	1061.7	1062.8	1062.8	1061.7
30°	1031.2	1036.6	1042.1	1047.5	1049.7	1050.8	1050.8	1050.8
32.5°	1012.7	1020.3	1026.8	1031.2	1035.5	1035.5	1035.5	1034.5
35°	993.0	1001.8	1008.3	1014.8	1017.0	1019.2	1019.2	1018.1
37.5°	971.2	982.1	988.7	994.1	998.5	999.6	998.5	999.6
40°	949.4	958.2	969.1	972.3	976.7	980.0	978.9	981.0
42.5°	925.5	935.3	944.0	951.6	954.9	956.0	957.1	958.2
45°	900.4	909.1	920.0	925.5	929.8	933.1	933.1	933.1
47.5°	872.0	884.0	893.8	900.4	904.7	908.0	906.9	909.1
50°	842.6	854.6	865.5	871.0	877.5	878.6	879.7	880.8
52.5°	812.1	824.1	835.0	842.6	845.9	849.2	851.3	852.4
55°	779.4	791.4	801.2	809.9	815.4	818.6	818.6	820.8
57.5°	744.5	757.6	769.6	775.0	780.5	784.8	787.0	785.9
60°	709.6	721.6	730.3	741.2	747.8	751.0	752.1	752.1
62.5°	667.1	683.5	693.3	706.4	709.6	714.0	715.1	718.3
65°	632.2	644.2	657.3	663.8	672.6	674.7	678.0	676.9
67.5°	589.7	606.1	615.9	625.7	634.4	637.7	637.7	639.9
70°	546.1	563.6	573.4	585.4	590.8	597.3	600.6	599.5
72.5°	505.8	520.0	533.0	542.8	550.5	554.8	555.9	558.1
75°	464.4	478.5	490.5	500.3	510.1	513.4	516.7	518.9
77.5°	419.7	432.8	449.1	460.0	466.5	473.1	475.3	475.3
80°	378.2	393.5	406.6	418.6	425.1	431.7	436.0	433.8
82.5°	339.0	355.4	371.7	381.5	389.1	395.7	397.9	396.8
85°	308.5	324.8	337.9	348.8	357.5	364.1	366.3	367.3
87.5°	284.5	300.9	315.0	325.9	333.6	339.0	341.2	343.4
90°	271.4	287.8	301.9	312.8	320.5	325.9	329.2	330.3
92.5°	266.0	282.3	295.4	306.3	315.0	320.5	322.7	323.7
95°	262.7	278.0	292.1	303.0	310.7	316.1	319.4	320.5
97.5°	258.3	274.7	287.8	298.7	306.3	312.8	315.0	316.1
100°	252.9	269.2	282.3	293.2	300.9	306.3	309.6	309.6
102.5°	247.4	263.8	276.9	287.8	295.4	300.9	303.0	304.1
105°	242.0	257.3	270.3	280.1	287.8	293.2	296.5	296.5
107.5°	235.5	250.7	262.7	273.6	281.2	285.6	288.9	290.0
110°	228.9	243.1	256.2	266.0	273.6	278.0	281.2	281.2





TEST NUMBER: P232075

CATALOG NUMBER: FVS4M-3-LD4-50-2HI-PFS125-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	221.3	235.5	248.5	257.3	264.9	270.3	272.5	272.5
115°	213.7	227.8	239.8	248.5	256.2	260.5	263.8	263.8
117.5°	206.0	220.2	231.1	239.8	246.4	251.8	254.0	255.1
120°	197.3	210.4	222.4	231.1	237.6	242.0	244.2	244.2
122.5°	188.6	201.7	213.7	221.3	227.8	231.1	234.4	235.5
125°	179.9	192.9	203.8	210.4	216.9	221.3	223.5	224.6
127.5°	171.1	182.0	192.9	200.6	206.0	210.4	212.6	212.6
130°	161.3	172.2	182.0	189.7	195.1	198.4	200.6	201.7
132.5°	151.5	162.4	171.1	178.8	184.2	187.5	188.6	189.7
135°	141.7	151.5	159.1	166.8	172.2	174.4	176.6	177.7
137.5°	130.8	140.6	149.3	155.9	159.1	162.4	163.5	164.6
140°	121.0	129.7	137.3	142.8	147.2	149.3	151.5	151.5
142.5°	110.1	118.8	125.4	130.8	134.1	137.3	139.5	138.4
145°	99.2	107.9	113.4	118.8	122.1	124.3	125.4	126.4
147.5°	88.3	95.9	101.4	106.8	109.0	111.2	112.3	111.2
150°	74.1	82.8	89.4	93.7	95.9	98.1	99.2	98.1
152.5°	62.1	70.9	77.4	80.7	82.8	83.9	85.0	85.0
155°	50.1	56.7	63.2	67.6	69.8	70.9	71.9	73.0
157.5°	39.2	44.7	48.0	54.5	57.8	57.8	57.8	57.8
160°	29.4	32.7	36.0	40.3	43.6	44.7	44.7	44.7
162.5°	19.6	21.8	24.0	27.3	29.4	31.6	31.6	31.6
165°	10.9	12.0	14.2	15.3	15.3	18.5	19.6	18.5
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)