

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: P231887

Luminaire Tested: **FVS4M-2-LD4-50-1LO-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P231887  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-4)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS4M-2-LD4-50-1LO-PFS125-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
2FT LENGTH, 1-MODULE LED WITH PFS125 LENS  
Light Source: (42) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

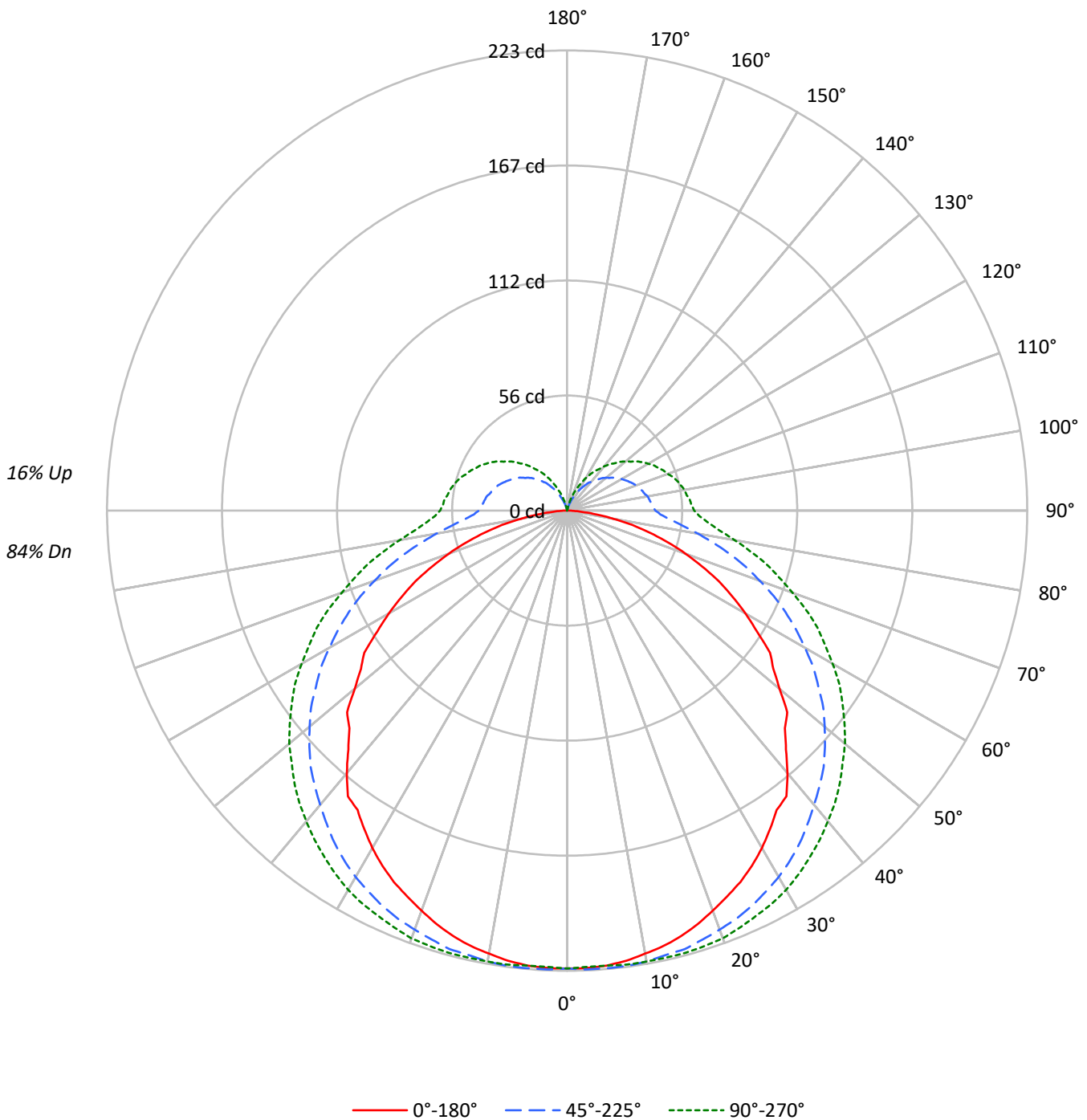
Lumens per Lamp: N/A  
Luminaire Lumens: 961.0 lumens  
Efficiency: N/A  
Efficacy: 78.1 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.42 / 1.5  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')  
CIE Type: Semi-Direct

Input Watts (W): 12.3  
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-2-LD4-50-1LO-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	111	111	111	111	102	102	102	95	95	95	87	87	87	84
1	103	98	93	88	99	94	89	85	86	83	80	80	77	74	74	71	69	66
2	93	84	76	70	89	81	74	68	74	69	64	69	64	60	63	60	56	53
3	84	73	64	57	80	70	62	56	65	58	53	60	54	50	55	51	47	44
4	77	64	55	48	73	62	53	47	57	50	44	53	47	42	49	44	40	37
5	70	57	47	41	67	55	46	40	51	43	38	47	41	36	44	38	34	31
6	65	51	42	35	62	49	40	34	46	38	33	42	36	31	39	34	30	27
7	60	46	37	31	57	44	36	30	41	34	29	39	32	27	36	30	26	24
8	55	42	33	27	53	40	32	27	38	31	25	35	29	24	33	27	23	21
9	52	38	30	24	49	37	29	24	35	28	23	32	26	22	30	25	21	19
10	48	35	27	22	46	34	26	21	32	25	20	30	24	20	28	23	19	17

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3988	3988	3988
5°	3958	3849	3793
10°	3911	3725	3662
15°	3871	3615	3557
20°	3810	3504	3463
25°	3766	3409	3358
30°	3708	3311	3270
35°	3636	3206	3167
40°	3601	3089	3068
45°	3454	2992	2969
50°	3363	2868	2866
55°	3299	2731	2749
60°	3070	2577	2619
65°	2851	2413	2486
70°	2526	2215	2303
75°	2111	1999	2141
80°	1511	1749	1937
85°	691	1553	1805



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.2	2.2
10°-20°	61.8	6.4
20°-30°	96.8	10.1
30°-40°	121.5	12.6
40°-50°	133.0	13.8
50°-60°	129.8	13.5
60°-70°	111.5	11.6
70°-80°	81.5	8.5
80°-90°	50.8	5.3
90°-100°	39.7	4.1
100°-110°	35.2	3.7
110°-120°	29.0	3.0
120°-130°	22.0	2.3
130°-140°	14.9	1.5
140°-150°	8.4	0.9
150°-160°	3.4	0.3
160°-170°	0.5	0.1
170°-180°	0.0	0.0
0°-30°	179.8	18.7
0°-40°	301.3	31.4
0°-60°	564.1	58.7
0°-90°	807.9	84.1
90°-120°	103.9	10.8
90°-150°	149.2	15.5
90°-180°	153.0	15.9
0°-180°	961.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	222	222	222	222	222	
5°	221	222	223	223	221	21
15°	214	215	220	222	222	60
25°	199	204	212	216	217	91
35°	177	186	197	203	205	112
45°	149	161	176	184	187	116
55°	120	132	149	160	163	106
65°	81	97	117	130	134	80
75°	42	60	82	95	100	44
85°	7	28	50	64	69	9
90°	0	21	43	57	62	0
95°	0	19	41	55	60	0
105°	0	17	38	51	55	0
115°	0	14	33	45	49	0
125°	0	12	28	38	42	0
135°	0	8	21	30	32	0
145°	0	5	15	21	23	0
155°	0	2	7	12	13	0
165°	0	1	1	3	3	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231887

CATALOG NUMBER: FVS4M-2-LD4-50-1LO-PFS125-UNV-EDC1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	221.9	221.9	221.9	221.9	221.9	221.9	221.9	221.9	221.9	221.9	221.9
2.5°	221.9	222.6	221.9	222.6	222.6	222.6	222.6	222.6	222.6	222.6	222.6
5°	221.3	221.3	221.3	221.9	221.9	221.9	221.9	222.6	222.6	222.6	222.6
7.5°	220.0	220.6	220.6	220.6	221.3	221.3	221.3	221.9	221.9	221.9	222.6
10°	218.0	218.7	218.7	219.3	220.0	220.0	220.0	220.0	220.6	221.3	221.9
12.5°	216.1	216.1	216.7	216.7	217.4	217.4	218.0	218.7	219.3	220.0	220.6
15°	213.5	213.5	214.1	214.8	215.4	215.4	216.1	217.4	218.0	219.3	220.0
17.5°	210.2	210.2	210.9	211.5	212.2	212.8	213.5	214.8	216.1	217.4	218.0
20°	206.3	207.0	207.6	208.3	209.6	210.2	210.9	212.2	213.5	215.4	216.1
22.5°	202.4	203.1	204.4	205.0	206.3	207.0	207.6	209.6	210.9	212.2	214.1
25°	198.6	199.2	199.9	201.1	203.1	203.7	204.4	206.3	208.3	209.6	211.5
27.5°	194.0	194.7	195.3	196.6	198.6	199.9	200.5	202.4	204.4	206.3	208.3
30°	188.8	189.5	190.1	192.1	194.0	195.3	196.6	198.6	200.5	203.1	205.0
32.5°	183.0	184.3	184.9	187.5	189.5	190.8	192.1	194.0	196.6	199.2	201.1
35°	177.1	178.4	179.1	181.7	183.6	185.6	186.2	188.8	191.4	194.0	196.6
37.5°	174.5	171.3	173.2	175.8	177.8	179.7	181.0	183.6	186.2	189.5	191.4
40°	166.1	164.8	166.1	169.4	172.0	173.2	175.2	178.4	181.0	184.3	186.2
42.5°	157.0	157.7	159.6	162.9	165.5	167.4	169.4	172.0	175.2	178.4	181.0
45°	149.2	150.5	152.5	155.7	159.0	160.9	162.9	166.1	169.4	172.6	175.8
47.5°	144.7	142.8	145.3	148.6	151.8	153.8	155.7	159.0	162.9	166.1	169.4
50°	134.3	135.6	138.2	141.5	144.7	147.3	148.6	152.5	156.4	159.6	162.9
52.5°	125.9	127.2	129.8	133.7	136.9	139.5	141.5	145.3	149.2	152.5	156.4
55°	120.0	119.4	122.0	125.2	129.8	131.7	133.7	137.6	141.5	145.3	148.6
57.5°	109.0	110.3	113.6	117.4	121.3	123.3	125.9	129.8	133.7	137.6	141.5
60°	99.9	101.2	104.5	108.4	112.9	114.8	117.4	121.3	125.9	129.1	133.0
62.5°	90.2	91.5	95.4	99.3	103.8	106.4	109.0	112.9	117.4	121.3	125.2
65°	81.1	82.4	86.3	90.2	94.7	97.3	99.9	104.5	108.4	112.9	116.8
67.5°	70.7	72.7	75.9	81.1	85.7	88.2	90.2	95.4	100.6	103.8	108.4
70°	61.0	62.3	66.8	71.4	76.6	78.5	81.1	86.3	90.8	95.4	99.3
72.5°	51.3	53.2	56.5	61.6	66.8	69.4	72.0	77.2	81.8	86.3	90.8
75°	41.5	43.5	47.4	52.6	57.7	60.3	62.9	68.1	73.3	77.9	81.8
77.5°	32.4	34.4	38.3	43.5	48.7	51.3	53.9	59.0	64.2	68.8	72.7
80°	22.7	24.7	29.2	34.4	39.6	42.2	45.4	50.6	55.2	60.3	64.2
82.5°	14.3	16.9	20.8	26.0	31.8	34.4	37.6	42.2	47.4	52.6	56.5
85°	7.1	9.7	13.6	19.5	25.3	27.9	30.5	35.7	40.9	46.1	50.0
87.5°	3.2	5.2	9.1	14.3	20.1	22.7	26.0	31.1	36.3	40.9	45.4
90°	0.0	2.6	7.1	12.3	17.5	20.8	23.4	28.6	33.7	38.3	42.8
92.5°	0.0	1.9	6.5	11.7	16.9	19.5	22.7	27.9	33.1	37.6	41.5
95°	0.0	1.9	5.8	11.0	16.2	18.8	22.1	27.3	31.8	37.0	40.9
97.5°	0.0	1.9	5.8	10.4	16.2	18.8	21.4	26.6	31.1	36.3	40.2
100°	0.0	1.9	5.2	10.4	15.6	18.2	20.8	26.0	30.5	35.0	39.6
102.5°	0.0	1.3	5.2	9.7	14.9	17.5	20.1	25.3	29.8	34.4	38.3
105°	0.0	1.3	5.2	9.1	14.3	16.9	19.5	24.0	29.2	33.7	37.6
107.5°	0.0	1.3	4.5	9.1	13.6	16.2	18.8	23.4	27.9	32.4	36.3
110°	0.0	1.3	4.5	8.4	13.0	15.6	18.2	22.7	27.3	31.8	35.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.3	3.9	8.4	13.0	14.9	17.5	22.1	26.6	30.5	34.4
115°	0.0	0.6	3.9	7.8	12.3	14.3	16.9	20.8	25.3	29.2	33.1
117.5°	0.0	0.6	3.9	7.1	11.7	13.6	15.6	20.1	24.0	27.9	31.8
120°	0.0	0.6	3.2	7.1	11.0	13.0	14.9	19.5	23.4	26.6	30.5
122.5°	0.0	0.6	3.2	6.5	10.4	12.3	14.3	18.2	22.1	26.0	29.2
125°	0.0	0.6	2.6	5.8	9.7	11.7	13.6	17.5	20.8	24.7	27.9
127.5°	0.0	0.6	2.6	5.2	9.1	11.0	13.0	16.2	19.5	23.4	26.0
130°	0.0	0.6	1.9	5.2	8.4	9.7	11.7	14.9	18.8	22.1	24.7
132.5°	0.0	0.6	1.9	4.5	7.8	9.1	11.0	14.3	17.5	20.1	23.4
135°	0.0	0.6	1.9	3.9	7.1	8.4	9.7	13.0	16.2	18.8	21.4
137.5°	0.0	0.6	1.3	3.9	6.5	7.8	9.1	12.3	14.9	17.5	20.1
140°	0.0	0.0	1.3	3.2	5.8	7.1	8.4	11.0	13.6	16.2	18.2
142.5°	0.0	0.0	0.6	2.6	4.5	5.8	7.1	9.7	12.3	14.3	16.9
145°	0.0	0.0	0.6	1.9	3.9	5.2	6.5	8.4	11.0	13.0	14.9
147.5°	0.0	0.0	0.6	1.9	3.2	4.5	5.2	7.1	9.1	11.0	13.0
150°	0.0	0.0	0.6	1.3	2.6	3.2	4.5	5.8	7.8	9.7	11.0
152.5°	0.0	0.0	0.6	0.6	1.9	2.6	3.2	4.5	6.5	7.8	9.1
155°	0.0	0.0	0.6	0.6	1.3	1.9	2.6	3.9	5.2	6.5	7.1
157.5°	0.0	0.0	0.0	0.6	1.3	1.3	1.9	2.6	3.9	4.5	5.8
160°	0.0	0.0	0.0	0.6	0.6	0.6	1.3	1.9	2.6	3.2	3.9
162.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	1.3	1.3	1.9	2.6
165°	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.3	1.3
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):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	221.9	221.9	221.9	221.9	221.9	221.9	221.9	221.9	221.9	221.9
2.5°	222.6	222.6	222.6	221.9	221.9	221.9	221.9	221.3	221.3	221.3
5°	222.6	222.6	222.6	222.6	222.6	221.9	221.9	221.3	221.3	221.3
7.5°	222.6	222.6	222.6	222.6	222.6	222.6	221.9	221.9	221.9	221.9
10°	221.9	222.6	222.6	222.6	222.6	222.6	222.6	222.6	222.6	221.9
12.5°	221.3	221.9	221.9	222.6	222.6	222.6	222.6	221.9	221.9	221.9
15°	220.6	221.3	221.9	221.9	221.9	222.6	222.6	221.9	221.9	221.9
17.5°	219.3	220.0	220.6	220.6	221.3	221.3	221.3	221.3	221.3	221.3
20°	217.4	218.0	219.3	220.0	220.0	220.0	220.0	220.6	220.6	220.6
22.5°	215.4	216.1	217.4	218.0	218.0	218.7	218.7	218.7	218.7	218.7
25°	212.8	214.1	214.8	215.4	216.1	216.7	216.7	216.7	217.4	216.7
27.5°	210.2	211.5	212.8	213.5	213.5	214.1	214.8	214.8	214.8	214.8
30°	206.3	208.3	208.9	210.2	210.9	210.9	211.5	212.2	212.2	212.2
32.5°	203.1	204.4	206.3	207.0	207.6	208.3	208.3	208.9	208.9	208.9
35°	198.6	199.9	201.8	203.1	203.1	203.7	204.4	205.0	205.0	205.0
37.5°	193.4	196.0	197.3	198.6	199.2	199.2	200.5	201.1	201.1	201.1
40°	188.8	190.8	192.7	194.0	194.7	194.7	196.0	196.0	196.6	196.6
42.5°	183.0	185.6	187.5	188.8	189.5	190.1	190.8	191.4	192.1	192.1
45°	178.4	180.4	182.3	183.6	184.3	184.9	186.2	186.9	186.9	186.9
47.5°	172.0	174.5	176.5	177.8	178.4	179.7	180.4	181.0	181.0	181.0
50°	165.5	168.1	170.7	172.6	172.6	173.9	174.5	175.8	175.8	175.8
52.5°	159.0	161.6	164.2	166.1	166.8	167.4	168.7	169.4	170.0	169.4
55°	151.8	154.4	157.0	159.0	159.6	160.3	161.6	162.2	162.9	162.9
57.5°	144.0	147.3	149.9	151.8	152.5	153.1	154.4	155.7	155.7	156.4
60°	136.9	139.5	142.1	144.0	145.3	146.0	147.3	147.9	148.6	148.6
62.5°	128.5	131.7	135.0	136.9	137.6	138.9	139.5	140.2	140.8	140.8
65°	120.0	123.3	126.5	128.5	129.8	130.4	131.7	132.4	133.0	133.7
67.5°	112.3	114.8	118.1	120.0	120.7	122.0	123.3	124.6	125.2	125.2
70°	103.2	106.4	109.0	111.6	112.9	113.6	114.8	115.5	116.8	116.1
72.5°	94.1	97.3	101.2	103.2	103.8	105.1	106.4	107.7	108.4	107.7
75°	85.7	88.9	92.1	94.1	95.4	96.0	98.0	99.3	99.3	99.9
77.5°	76.6	80.5	83.7	85.7	86.9	87.6	89.5	90.2	90.8	90.8
80°	68.1	72.0	74.6	77.2	79.2	79.2	81.1	81.8	82.4	82.4
82.5°	60.3	64.2	67.5	69.4	70.7	72.0	73.3	74.0	74.6	74.6
85°	53.9	57.7	60.3	63.6	64.2	65.5	66.8	68.1	68.8	68.8
87.5°	49.3	53.2	55.8	58.4	59.7	61.0	62.3	63.6	64.2	64.2
90°	46.7	50.6	53.2	55.8	57.1	58.4	59.7	61.0	61.6	61.6
92.5°	45.4	49.3	52.6	54.5	55.8	57.1	58.4	59.7	60.3	60.3
95°	44.8	48.7	51.3	53.9	55.2	55.8	57.7	58.4	59.0	59.7
97.5°	44.1	47.4	50.6	53.2	54.5	55.2	57.1	57.7	58.4	58.4
100°	43.5	46.7	50.0	51.9	53.2	54.5	55.8	57.1	57.1	57.7
102.5°	42.2	45.4	48.7	51.3	51.9	53.2	54.5	55.8	56.5	56.5
105°	40.9	44.8	47.4	50.0	50.6	51.9	53.2	54.5	55.2	55.2
107.5°	40.2	43.5	46.1	48.7	49.3	50.6	51.9	53.2	53.9	53.9
110°	38.9	42.2	44.8	47.4	48.0	49.3	50.6	51.3	51.9	51.9





TEST NUMBER: P231887

CATALOG NUMBER: FVS4M-2-LD4-50-1LO-PFS125-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	37.6	40.9	43.5	45.4	46.7	47.4	48.7	50.0	50.6	50.6
115°	36.3	39.6	42.2	44.1	45.4	46.1	47.4	48.0	48.7	48.7
117.5°	35.0	37.6	40.2	42.8	43.5	44.1	45.4	46.7	46.7	47.4
120°	33.7	36.3	38.9	40.9	41.5	42.8	43.5	44.8	44.8	45.4
122.5°	31.8	35.0	37.0	38.9	40.2	40.9	42.2	42.8	42.8	43.5
125°	30.5	33.1	35.7	37.6	38.3	38.9	40.2	40.9	40.9	41.5
127.5°	29.2	31.1	33.7	35.7	36.3	37.0	38.3	38.9	38.9	38.9
130°	27.3	29.8	31.8	33.7	34.4	35.0	35.7	36.3	37.0	37.0
132.5°	26.0	27.9	29.8	31.8	32.4	33.1	33.7	34.4	35.0	35.0
135°	24.0	26.0	27.9	29.2	29.8	30.5	31.8	32.4	32.4	32.4
137.5°	22.1	24.0	26.0	27.3	27.9	28.6	29.2	29.8	30.5	30.5
140°	20.1	22.1	24.0	25.3	26.0	26.6	27.3	27.9	27.9	27.9
142.5°	18.8	20.1	22.1	23.4	24.0	24.0	24.7	25.3	25.3	25.3
145°	16.9	18.2	19.5	20.8	21.4	22.1	22.7	22.7	23.4	23.4
147.5°	14.9	16.2	17.5	18.8	19.5	19.5	20.1	20.8	20.8	20.8
150°	13.0	14.3	15.6	16.2	16.9	16.9	17.5	18.2	18.2	18.2
152.5°	11.0	12.3	13.6	14.3	14.3	14.9	15.6	15.6	15.6	15.6
155°	9.1	9.7	11.0	11.7	12.3	12.3	13.0	13.0	13.0	13.0
157.5°	6.5	7.8	8.4	9.7	9.7	10.4	10.4	10.4	10.4	10.4
160°	5.2	5.8	6.5	7.1	7.8	7.8	7.8	8.4	8.4	8.4
162.5°	3.2	3.9	3.9	4.5	5.2	5.2	5.8	5.8	5.8	5.8
165°	1.9	1.9	2.6	2.6	2.6	3.2	3.2	3.2	3.2	3.2
167.5°	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
172.5°	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
177.5°	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

(END OF REPORT)