

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: P231967

Luminaire Tested: **FVS4M-4-LD4-50-1HI-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P231967  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-14)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS4M-4-LD4-50-1HI-PFS125-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
4FT LENGTH, 1-MODULE LED WITH PFS125 LENS  
Light Source: (84) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

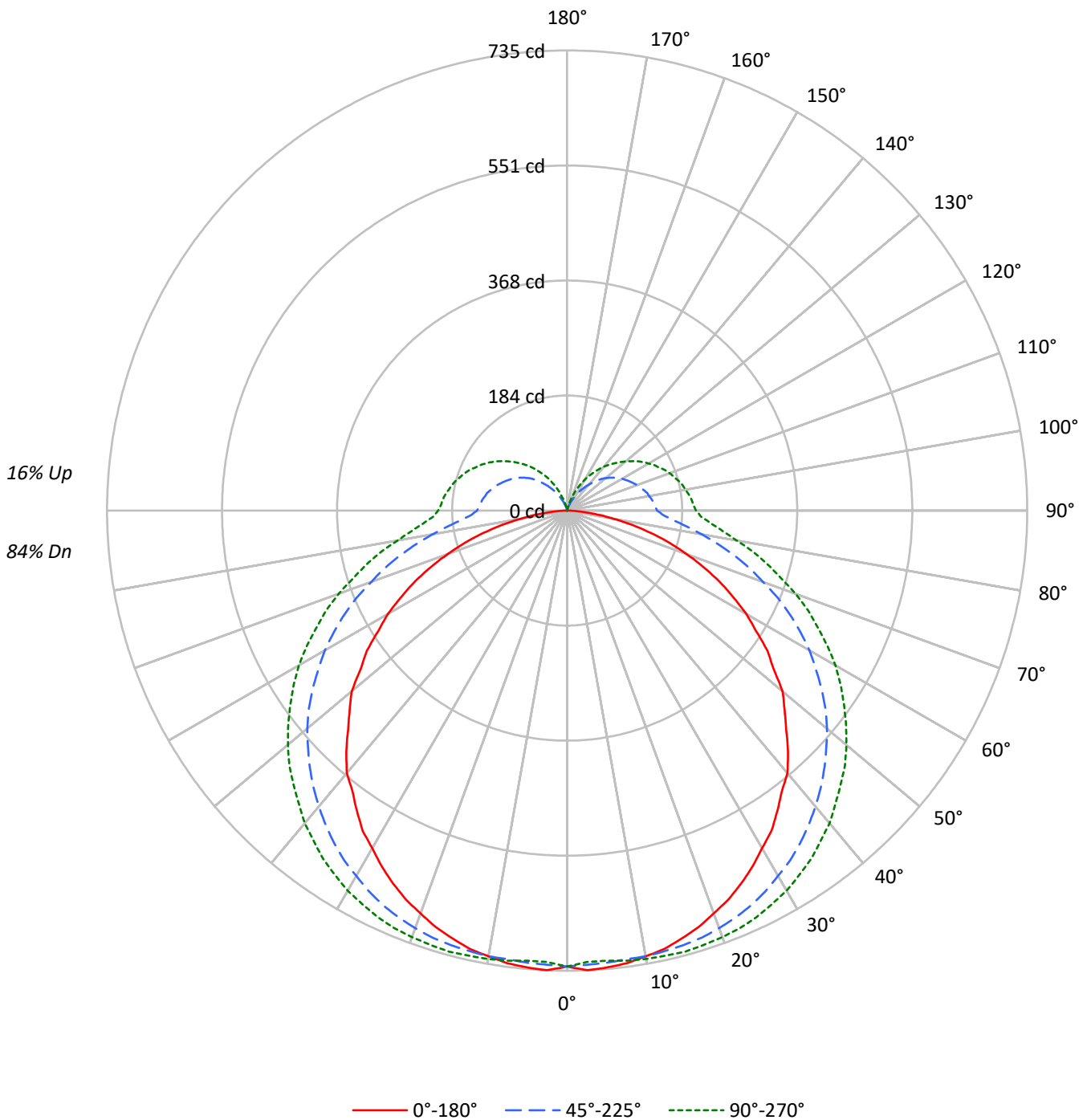
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3186.0 lumens  
Efficiency: N/A  
Efficacy: 71.6 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.43 / 1.51  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')  
CIE Type: Semi-Direct

Input Watts (W): 44.5  
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

TEST NUMBER: P231967  
CATALOG NUMBER: FVS4M-4-LD4-50-1HI-PFS125-UNV-EDC1

### Luminous Intensity Polar Plot





TEST NUMBER: P231967

CATALOG NUMBER: FVS4M-4-LD4-50-1HI-PFS125-UNV-EDC1

**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	88	88	88	84
1	103	98	93	88	99	94	89	85	86	83	79	80	77	74	74	71	69	66
2	93	84	76	70	89	80	74	68	74	69	64	69	64	60	63	60	56	53
3	84	73	64	57	80	70	62	55	65	58	52	60	54	50	55	51	47	44
4	77	64	55	48	73	62	53	46	57	50	44	53	47	42	49	44	40	37
5	70	57	47	40	67	55	46	39	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	38	32	27	36	30	26	24
8	55	42	33	27	53	40	32	26	38	30	25	35	29	24	33	27	23	21
9	52	38	30	24	49	37	29	24	34	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°	6615	6615	6615
5°	6652	6356	6253
10°	6610	6168	6066
15°	6567	6016	5909
20°	6501	5878	5753
25°	6441	5742	5610
30°	6349	5586	5461
35°	6275	5444	5304
40°	6232	5282	5142
45°	6058	5116	4963
50°	5995	4949	4798
55°	5774	4744	4602
60°	5528	4523	4409
65°	5212	4251	4150
70°	4742	3905	3892
75°	4104	3567	3591
80°	3072	3164	3264
85°	1671	2800	3051



TEST NUMBER: P231967

CATALOG NUMBER: FVS4M-4-LD4-50-1HI-PFS125-UNV-EDC1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.4	2.2
10°-20°	203.4	6.4
20°-30°	319.3	10.0
30°-40°	401.8	12.6
40°-50°	440.8	13.8
50°-60°	431.5	13.5
60°-70°	372.7	11.7
70°-80°	273.5	8.6
80°-90°	170.4	5.3
90°-100°	133.4	4.2
100°-110°	118.0	3.7
110°-120°	96.6	3.0
120°-130°	72.3	2.3
130°-140°	47.2	1.5
140°-150°	25.2	0.8
150°-160°	9.3	0.3
160°-170°	1.2	0.0
170°-180°	0.0	0.0
0°-30°	592.1	18.6
0°-40°	993.9	31.2
0°-60°	1866.2	58.6
0°-90°	2682.7	84.2
90°-120°	348.0	10.9
90°-150°	492.8	15.5
90°-180°	503.0	15.8
0°-180°	3186.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	728	728	728	728	728	
5°	733	730	725	726	722	70
15°	708	710	718	729	729	200
25°	657	672	696	714	716	303
35°	585	614	649	674	679	367
45°	495	534	581	613	618	384
55°	390	439	496	531	540	347
65°	268	327	392	431	442	264
75°	138	204	276	319	331	146
85°	25	95	168	215	230	31
90°	1	69	144	191	206	1
95°	0	64	138	185	200	0
105°	0	57	126	171	184	0
115°	0	47	110	152	162	0
125°	0	37	92	126	137	0
135°	0	24	68	99	107	0
145°	0	12	41	69	74	0
155°	1	4	18	33	40	1
165°	1	0	2	6	8	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231967

CATALOG NUMBER: FVS4M-4-LD4-50-1HI-PFS125-UNV-EDC1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	728.2	728.2	728.2	728.2	728.2	728.2	728.2	728.2	728.2	728.2	728.2
2.5°	734.8	733.7	732.6	731.5	731.5	732.6	732.6	732.6	731.5	728.2	726.1
5°	732.6	731.5	730.4	729.3	730.4	730.4	730.4	730.4	729.3	727.2	725.0
7.5°	729.3	728.2	727.2	726.1	726.1	727.2	727.2	727.2	727.2	725.0	722.8
10°	722.8	722.8	720.6	720.6	721.7	721.7	722.8	723.9	723.9	723.9	722.8
12.5°	717.3	715.2	714.1	715.2	715.2	716.3	717.3	720.6	720.6	721.7	720.6
15°	707.5	706.4	705.3	705.3	708.6	709.7	711.9	715.2	717.3	717.3	718.4
17.5°	697.7	696.6	696.6	696.6	699.9	702.1	705.3	708.6	710.8	713.0	715.2
20°	684.6	684.6	685.7	686.8	691.2	693.4	696.6	702.1	704.3	707.5	709.7
22.5°	672.6	671.6	671.6	674.8	680.3	683.5	686.8	692.3	695.5	699.9	703.2
25°	657.4	657.4	657.4	662.8	669.4	671.6	677.0	682.5	686.8	691.2	695.5
27.5°	641.0	641.0	641.0	648.7	655.2	659.6	663.9	670.5	675.9	680.3	685.7
30°	622.5	623.6	626.9	633.4	641.0	645.4	649.7	657.4	663.9	668.3	673.7
32.5°	607.2	604.0	608.3	614.9	624.7	630.1	634.5	642.1	649.7	656.3	662.8
35°	585.4	585.4	589.8	598.5	608.3	613.8	618.1	626.9	634.5	641.0	648.7
37.5°	563.6	562.5	569.1	578.9	589.8	595.2	600.7	609.4	616.0	623.6	633.4
40°	547.3	541.8	548.4	559.3	570.2	576.7	582.2	590.9	599.6	608.3	617.0
42.5°	522.2	517.8	525.5	536.4	549.5	556.0	561.4	572.3	581.1	590.9	599.6
45°	494.9	494.9	504.8	515.7	526.6	534.2	539.6	551.6	561.4	572.3	581.1
47.5°	471.0	469.9	478.6	492.8	504.8	512.4	518.9	529.8	540.7	552.7	561.4
50°	449.2	444.8	454.6	467.7	483.0	488.4	496.0	506.9	520.0	529.8	541.8
52.5°	415.4	419.7	427.4	442.6	456.8	464.4	472.0	484.0	497.1	508.0	520.0
55°	390.3	391.4	402.3	417.5	430.6	439.3	448.1	462.2	473.1	485.1	496.0
57.5°	357.6	361.9	375.0	389.2	404.5	414.3	420.8	433.9	447.0	460.1	471.0
60°	330.3	334.7	346.7	359.8	376.1	384.8	392.5	406.6	419.7	433.9	447.0
62.5°	298.7	304.2	317.2	332.5	347.8	355.4	363.0	381.6	394.6	407.7	419.7
65°	268.2	273.6	285.6	299.8	318.3	327.1	334.7	349.9	366.3	379.4	392.5
67.5°	235.5	240.9	255.1	270.4	287.8	297.6	305.3	322.7	334.7	349.9	364.1
70°	202.8	208.2	221.3	237.7	256.2	266.0	275.8	291.1	306.3	320.5	332.5
72.5°	171.2	177.7	190.8	207.1	225.7	234.4	243.1	260.6	275.8	292.2	305.3
75°	138.5	145.0	159.2	176.6	195.1	203.9	212.6	231.1	246.4	261.6	275.8
77.5°	106.8	112.3	128.6	147.2	163.5	171.2	182.1	200.6	216.9	232.2	246.4
80°	75.2	81.8	98.1	115.6	134.1	143.9	152.6	172.2	187.5	203.9	218.0
82.5°	49.1	54.5	70.9	88.3	107.9	116.6	126.5	145.0	160.3	178.8	191.9
85°	25.1	31.6	46.9	65.4	83.9	94.8	102.5	122.1	137.4	154.8	167.9
87.5°	7.6	15.3	29.4	48.0	66.5	77.4	87.2	104.7	122.1	137.4	152.6
90°	1.1	7.6	21.8	40.3	60.0	68.7	78.5	97.0	113.4	129.7	143.9
92.5°	0.0	6.5	20.7	38.2	56.7	66.5	76.3	93.8	111.2	126.5	140.6
95°	0.0	5.5	19.6	37.1	55.6	64.3	74.1	91.6	109.0	124.3	138.5
97.5°	0.0	5.5	18.5	34.9	53.4	63.2	72.0	90.5	106.8	122.1	136.3
100°	0.0	4.4	17.4	33.8	51.2	61.1	69.8	87.2	103.6	118.8	133.0
102.5°	0.0	4.4	16.4	32.7	50.1	58.9	67.6	85.0	101.4	116.6	130.8
105°	0.0	3.3	15.3	30.5	48.0	56.7	65.4	81.8	98.1	113.4	126.5
107.5°	0.0	3.3	14.2	29.4	45.8	54.5	62.1	79.6	94.8	109.0	123.2
110°	0.0	3.3	13.1	27.3	43.6	51.2	60.0	76.3	91.6	105.7	118.8



TEST NUMBER: P231967

CATALOG NUMBER: FVS4M-4-LD4-50-1HI-PFS125-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	2.2	12.0	26.2	41.4	49.1	57.8	73.0	88.3	102.5	114.5
115°	0.0	2.2	10.9	24.0	39.2	46.9	54.5	69.8	83.9	98.1	110.1
117.5°	0.0	1.1	9.8	22.9	37.1	44.7	52.3	66.5	80.7	93.8	105.7
120°	0.0	1.1	8.7	20.7	34.9	42.5	49.1	63.2	76.3	89.4	101.4
122.5°	0.0	1.1	7.6	19.6	32.7	39.2	45.8	60.0	73.0	85.0	95.9
125°	0.0	1.1	6.5	17.4	30.5	37.1	43.6	56.7	68.7	80.7	91.6
127.5°	0.0	0.0	5.5	15.3	27.3	32.7	39.2	52.3	64.3	75.2	86.1
130°	0.0	0.0	4.4	14.2	24.0	29.4	36.0	48.0	58.9	70.9	80.7
132.5°	0.0	0.0	3.3	12.0	21.8	27.3	31.6	42.5	53.4	64.3	75.2
135°	0.0	0.0	3.3	9.8	18.5	24.0	28.3	38.2	48.0	58.9	67.6
137.5°	0.0	0.0	2.2	7.6	16.4	20.7	25.1	33.8	42.5	52.3	61.1
140°	0.0	0.0	1.1	6.5	14.2	17.4	21.8	30.5	38.2	45.8	54.5
142.5°	0.0	0.0	1.1	5.5	10.9	15.3	18.5	26.2	33.8	40.3	48.0
145°	0.0	0.0	1.1	3.3	8.7	12.0	15.3	21.8	28.3	34.9	41.4
147.5°	1.1	1.1	1.1	3.3	7.6	9.8	13.1	18.5	24.0	30.5	36.0
150°	1.1	1.1	1.1	2.2	5.5	7.6	10.9	15.3	19.6	25.1	30.5
152.5°	1.1	1.1	0.0	1.1	4.4	5.5	7.6	12.0	16.4	19.6	24.0
155°	1.1	1.1	1.1	1.1	2.2	4.4	5.5	8.7	13.1	16.4	18.5
157.5°	1.1	1.1	0.0	0.0	1.1	2.2	3.3	6.5	9.8	12.0	14.2
160°	1.1	1.1	0.0	0.0	1.1	1.1	2.2	4.4	6.5	7.6	9.8
162.5°	1.1	1.1	1.1	0.0	0.0	0.0	1.1	2.2	3.3	4.4	6.5
165°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	1.1	2.2	2.2
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



TEST NUMBER: P231967

CATALOG NUMBER: FVS4M-4-LD4-50-1HI-PFS125-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	728.2	728.2	728.2	728.2	728.2	728.2	728.2	728.2	728.2	728.2
2.5°	726.1	727.2	727.2	726.1	726.1	726.1	725.0	723.9	722.8	721.7
5°	725.0	726.1	726.1	726.1	726.1	726.1	723.9	723.9	722.8	721.7
7.5°	723.9	726.1	727.2	727.2	727.2	727.2	727.2	726.1	725.0	725.0
10°	723.9	727.2	728.2	729.3	729.3	729.3	729.3	728.2	728.2	727.2
12.5°	723.9	727.2	728.2	729.3	729.3	730.4	730.4	729.3	729.3	728.2
15°	721.7	725.0	727.2	729.3	729.3	730.4	730.4	729.3	729.3	729.3
17.5°	718.4	722.8	725.0	727.2	727.2	728.2	729.3	728.2	728.2	727.2
20°	714.1	718.4	721.7	723.9	725.0	725.0	726.1	726.1	726.1	725.0
22.5°	708.6	713.0	716.3	718.4	719.5	720.6	722.8	722.8	721.7	721.7
25°	699.9	705.3	709.7	713.0	714.1	715.2	716.3	717.3	716.3	716.3
27.5°	692.3	696.6	702.1	705.3	706.4	707.5	708.6	710.8	709.7	708.6
30°	682.5	686.8	692.3	695.5	696.6	698.8	701.0	702.1	701.0	701.0
32.5°	670.5	675.9	680.3	684.6	686.8	687.9	690.1	691.2	691.2	690.1
35°	656.3	662.8	668.3	672.6	673.7	674.8	678.1	679.2	679.2	679.2
37.5°	642.1	647.6	654.1	658.5	660.7	661.7	663.9	666.1	665.0	665.0
40°	624.7	632.3	638.8	643.2	645.4	646.5	649.7	651.9	651.9	651.9
42.5°	608.3	614.9	621.4	626.9	629.0	632.3	634.5	634.5	635.6	634.5
45°	589.8	597.4	605.1	610.5	612.7	614.9	618.1	618.1	619.2	618.1
47.5°	571.3	581.1	586.5	592.0	593.1	596.3	599.6	600.7	600.7	601.8
50°	550.5	560.4	565.8	572.3	574.5	576.7	580.0	581.1	582.2	582.2
52.5°	528.7	536.4	546.2	551.6	553.8	556.0	558.2	560.4	562.5	561.4
55°	506.9	514.6	522.2	528.7	530.9	533.1	537.5	539.6	539.6	539.6
57.5°	481.9	490.6	499.3	505.8	508.0	510.2	514.6	515.7	516.7	517.8
60°	456.8	466.6	473.1	481.9	483.0	486.2	490.6	492.8	494.9	494.9
62.5°	430.6	439.3	449.2	455.7	457.9	461.1	465.5	467.7	468.8	468.8
65°	403.4	413.2	421.9	429.5	430.6	435.0	440.4	441.5	443.7	441.5
67.5°	376.1	385.9	394.6	401.2	405.5	408.8	412.1	413.2	416.4	416.4
70°	346.7	356.5	366.3	373.9	377.2	379.4	383.7	387.0	387.0	388.1
72.5°	317.2	327.1	336.9	343.4	346.7	349.9	355.4	357.6	358.7	357.6
75°	287.8	298.7	308.5	315.1	319.4	322.7	326.0	330.3	331.4	331.4
77.5°	258.4	271.5	279.1	287.8	291.1	294.3	297.6	300.9	303.1	304.2
80°	230.0	242.0	250.7	258.4	262.7	267.1	271.5	273.6	274.7	274.7
82.5°	205.0	215.9	225.7	233.3	237.7	239.8	245.3	247.5	250.7	250.7
85°	182.1	191.9	202.8	212.6	214.8	218.0	223.5	227.8	228.9	230.0
87.5°	165.7	177.7	187.5	196.2	199.5	202.8	208.2	211.5	212.6	213.7
90°	158.1	169.0	178.8	187.5	190.8	194.1	199.5	202.8	205.0	206.0
92.5°	153.7	165.7	175.5	184.2	187.5	190.8	195.1	199.5	200.6	201.7
95°	151.5	163.5	173.3	182.1	185.3	188.6	193.0	196.2	198.4	199.5
97.5°	149.4	160.3	171.2	178.8	182.1	185.3	190.8	194.1	195.1	196.2
100°	146.1	158.1	166.8	175.5	178.8	182.1	186.4	189.7	191.9	191.9
102.5°	142.8	153.7	163.5	172.2	175.5	177.7	183.2	186.4	187.5	188.6
105°	139.5	150.4	160.3	167.9	171.2	174.4	178.8	182.1	183.2	184.2
107.5°	135.2	146.1	155.9	163.5	166.8	169.0	174.4	176.6	178.8	178.8
110°	130.8	141.7	150.4	159.2	161.3	164.6	169.0	172.2	173.3	174.4





TEST NUMBER: P231967

CATALOG NUMBER: FVS4M-4-LD4-50-1HI-PFS125-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	126.5	136.3	146.1	152.6	157.0	159.2	163.5	166.8	167.9	169.0
115°	122.1	131.9	140.6	148.3	151.5	153.7	158.1	161.3	162.4	162.4
117.5°	116.6	126.5	135.2	142.8	145.0	148.3	151.5	154.8	155.9	157.0
120°	111.2	121.0	129.7	136.3	139.5	141.7	146.1	148.3	149.4	150.4
122.5°	106.8	115.6	123.2	130.8	133.0	136.3	139.5	141.7	142.8	143.9
125°	101.4	110.1	117.7	124.3	126.5	129.7	133.0	136.3	136.3	137.4
127.5°	95.9	103.6	111.2	117.7	119.9	122.1	126.5	128.6	129.7	129.7
130°	89.4	98.1	104.7	111.2	113.4	115.6	118.8	121.0	122.1	122.1
132.5°	83.9	91.6	98.1	103.6	105.7	107.9	111.2	113.4	114.5	114.5
135°	77.4	85.0	91.6	97.0	99.2	101.4	103.6	105.7	106.8	106.8
137.5°	69.8	78.5	83.9	89.4	91.6	93.8	95.9	98.1	99.2	99.2
140°	62.1	70.9	77.4	82.9	83.9	86.1	88.3	89.4	90.5	91.6
142.5°	55.6	62.1	69.8	74.1	76.3	77.4	80.7	81.8	81.8	82.9
145°	48.0	53.4	61.1	66.5	68.7	69.8	72.0	74.1	74.1	74.1
147.5°	40.3	46.9	51.2	57.8	60.0	62.1	64.3	65.4	65.4	66.5
150°	34.9	39.2	43.6	49.1	51.2	53.4	55.6	56.7	57.8	57.8
152.5°	28.3	32.7	36.0	40.3	41.4	43.6	46.9	48.0	48.0	49.1
155°	22.9	25.1	28.3	31.6	32.7	34.9	38.2	40.3	40.3	40.3
157.5°	16.4	19.6	21.8	24.0	25.1	26.2	29.4	31.6	31.6	31.6
160°	12.0	13.1	15.3	16.4	17.4	18.5	20.7	22.9	24.0	22.9
162.5°	7.6	8.7	9.8	10.9	10.9	12.0	12.0	14.2	15.3	15.3
165°	3.3	4.4	4.4	4.4	5.5	5.5	5.5	5.5	7.6	7.6
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)