

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: P231958

Luminaire Tested: **FVS4M-4-LD4-40-1LO-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P231958  
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-LD4-40-1LO-PFS125-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
4FT LENGTH, 1-MODULE LED WITH PFS125 LENS  
Light Source: (84) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

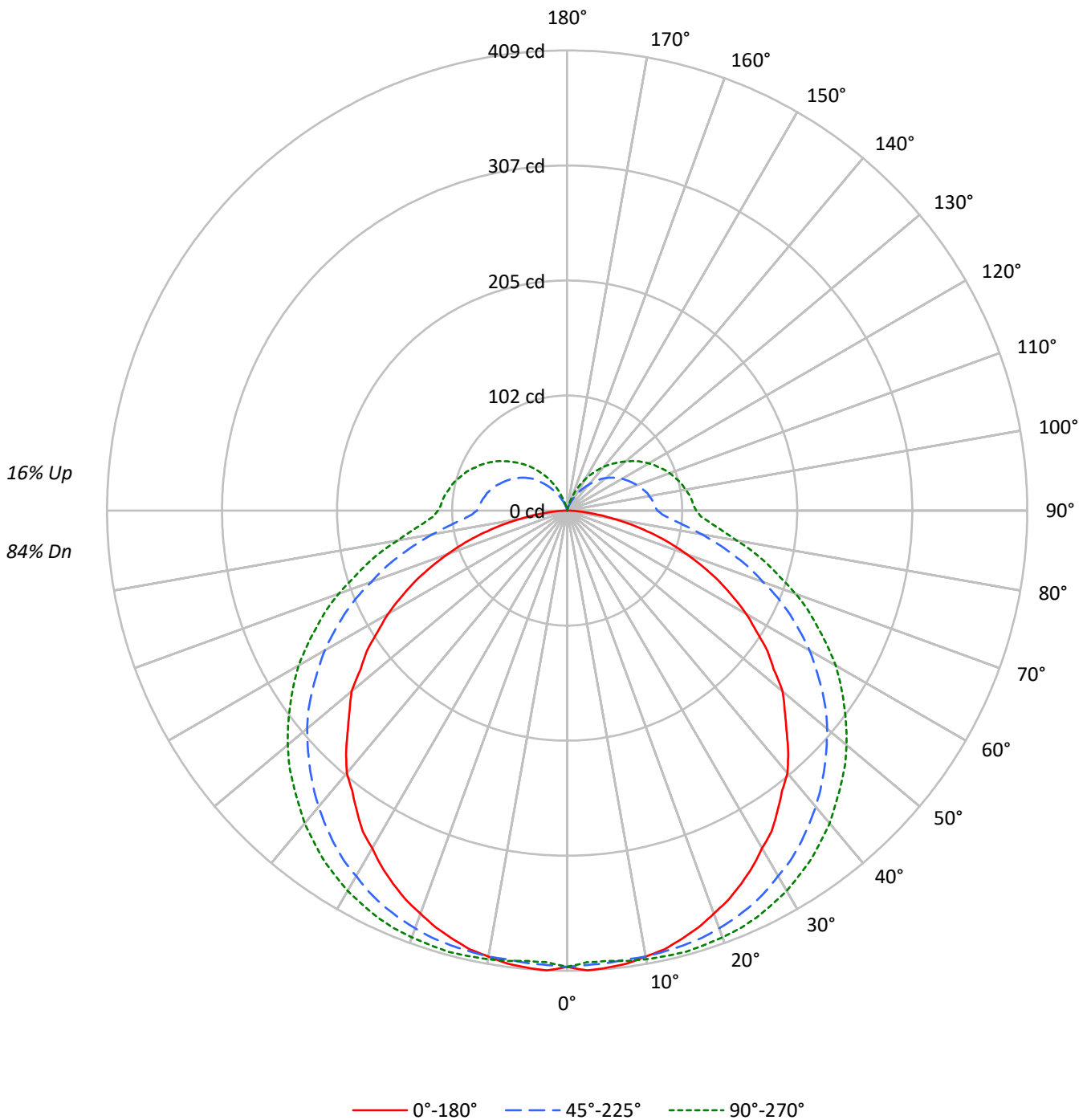
Lumens per Lamp: N/A  
Luminaire Lumens: 1774.0 lumens  
Efficiency: N/A  
Efficacy: 75.2 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.43 / 1.51  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')  
CIE Type: Semi-Direct

Input Watts (W): 23.6  
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	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°	3684	3684	3684
5°	3704	3539	3482
10°	3681	3435	3378
15°	3657	3350	3290
20°	3620	3273	3203
25°	3586	3197	3123
30°	3535	3110	3041
35°	3494	3031	2953
40°	3469	2941	2863
45°	3374	2848	2764
50°	3338	2756	2672
55°	3215	2642	2563
60°	3078	2519	2455
65°	2902	2366	2311
70°	2640	2174	2167
75°	2285	1987	1999
80°	1712	1762	1818
85°	932	1560	1699



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.6	2.2
10°-20°	113.3	6.4
20°-30°	177.8	10.0
30°-40°	223.7	12.6
40°-50°	245.4	13.8
50°-60°	240.3	13.5
60°-70°	207.5	11.7
70°-80°	152.3	8.6
80°-90°	94.9	5.3
90°-100°	74.3	4.2
100°-110°	65.7	3.7
110°-120°	53.8	3.0
120°-130°	40.3	2.3
130°-140°	26.3	1.5
140°-150°	14.0	0.8
150°-160°	5.2	0.3
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	329.7	18.6
0°-40°	553.4	31.2
0°-60°	1039.1	58.6
0°-90°	1493.8	84.2
90°-120°	193.8	10.9
90°-150°	274.4	15.5
90°-180°	280.0	15.8
0°-180°	1774.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	406	406	406	406	406	
5°	408	407	404	404	402	39
15°	394	395	400	406	406	111
25°	366	374	387	398	399	169
35°	326	342	361	375	378	204
45°	276	297	324	341	344	214
55°	217	245	276	296	300	193
65°	149	182	218	240	246	147
75°	77	114	154	178	184	82
85°	14	53	94	120	128	17
90°	1	38	80	106	115	1
95°	0	36	77	103	111	0
105°	0	32	70	95	103	0
115°	0	26	61	84	90	0
125°	0	21	51	70	76	0
135°	0	13	38	55	60	0
145°	0	7	23	38	41	0
155°	1	2	10	18	22	0
165°	1	0	1	3	4	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°	22.5°	25°	30°	35°	40°	45°
0°	405.5	405.5	405.5	405.5	405.5	405.5	405.5	405.5	405.5	405.5	405.5
2.5°	409.1	408.5	407.9	407.3	407.3	407.9	407.9	407.9	407.3	405.5	404.3
5°	407.9	407.3	406.7	406.1	406.7	406.7	406.7	406.7	406.1	404.9	403.7
7.5°	406.1	405.5	404.9	404.3	404.3	404.9	404.9	404.9	404.9	403.7	402.5
10°	402.5	402.5	401.2	401.2	401.9	401.9	402.5	403.1	403.1	403.1	402.5
12.5°	399.4	398.2	397.6	398.2	398.2	398.8	399.4	401.2	401.2	401.9	401.2
15°	394.0	393.4	392.7	392.7	394.6	395.2	396.4	398.2	399.4	399.4	400.0
17.5°	388.5	387.9	387.9	387.9	389.7	390.9	392.7	394.6	395.8	397.0	398.2
20°	381.2	381.2	381.8	382.4	384.9	386.1	387.9	390.9	392.1	394.0	395.2
22.5°	374.5	373.9	373.9	375.7	378.8	380.6	382.4	385.5	387.3	389.7	391.5
25°	366.0	366.0	366.0	369.1	372.7	373.9	377.0	380.0	382.4	384.9	387.3
27.5°	356.9	356.9	356.9	361.2	364.8	367.3	369.7	373.3	376.4	378.8	381.8
30°	346.6	347.2	349.0	352.7	356.9	359.4	361.8	366.0	369.7	372.1	375.1
32.5°	338.1	336.3	338.7	342.4	347.8	350.9	353.3	357.5	361.8	365.4	369.1
35°	326.0	326.0	328.4	333.3	338.7	341.8	344.2	349.0	353.3	356.9	361.2
37.5°	313.8	313.2	316.9	322.3	328.4	331.4	334.5	339.3	343.0	347.2	352.7
40°	304.7	301.7	305.3	311.4	317.5	321.1	324.2	329.0	333.9	338.7	343.6
42.5°	290.8	288.3	292.6	298.7	305.9	309.6	312.6	318.7	323.5	329.0	333.9
45°	275.6	275.6	281.1	287.1	293.2	297.4	300.5	307.2	312.6	318.7	323.5
47.5°	262.2	261.6	266.5	274.4	281.1	285.3	288.9	295.0	301.1	307.8	312.6
50°	250.1	247.7	253.1	260.4	268.9	271.9	276.2	282.3	289.6	295.0	301.7
52.5°	231.3	233.7	238.0	246.5	254.3	258.6	262.8	269.5	276.8	282.9	289.6
55°	217.3	217.9	224.0	232.5	239.8	244.6	249.5	257.4	263.4	270.1	276.2
57.5°	199.1	201.5	208.8	216.7	225.2	230.7	234.3	241.6	248.9	256.2	262.2
60°	183.9	186.4	193.0	200.3	209.4	214.3	218.5	226.4	233.7	241.6	248.9
62.5°	166.3	169.4	176.6	185.1	193.6	197.9	202.1	212.5	219.7	227.0	233.7
65°	149.3	152.4	159.0	166.9	177.3	182.1	186.4	194.9	204.0	211.2	218.5
67.5°	131.1	134.2	142.0	150.5	160.3	165.7	170.0	179.7	186.4	194.9	202.7
70°	112.9	115.9	123.2	132.3	142.7	148.1	153.6	162.1	170.6	178.5	185.1
72.5°	95.3	98.9	106.2	115.3	125.7	130.5	135.4	145.1	153.6	162.7	170.0
75°	77.1	80.7	88.6	98.3	108.7	113.5	118.4	128.7	137.2	145.7	153.6
77.5°	59.5	62.5	71.6	81.9	91.1	95.3	101.4	111.7	120.8	129.3	137.2
80°	41.9	45.5	54.6	64.3	74.7	80.1	85.0	95.9	104.4	113.5	121.4
82.5°	27.3	30.4	39.5	49.2	60.1	65.0	70.4	80.7	89.2	99.6	106.8
85°	14.0	17.6	26.1	36.4	46.7	52.8	57.1	68.0	76.5	86.2	93.5
87.5°	4.2	8.5	16.4	26.7	37.0	43.1	48.6	58.3	68.0	76.5	85.0
90°	0.6	4.2	12.1	22.5	33.4	38.2	43.7	54.0	63.1	72.2	80.1
92.5°	0.0	3.6	11.5	21.2	31.6	37.0	42.5	52.2	61.9	70.4	78.3
95°	0.0	3.0	10.9	20.6	31.0	35.8	41.3	51.0	60.7	69.2	77.1
97.5°	0.0	3.0	10.3	19.4	29.7	35.2	40.1	50.4	59.5	68.0	75.9
100°	0.0	2.4	9.7	18.8	28.5	34.0	38.8	48.6	57.7	66.2	74.1
102.5°	0.0	2.4	9.1	18.2	27.9	32.8	37.6	47.3	56.5	65.0	72.8
105°	0.0	1.8	8.5	17.0	26.7	31.6	36.4	45.5	54.6	63.1	70.4
107.5°	0.0	1.8	7.9	16.4	25.5	30.4	34.6	44.3	52.8	60.7	68.6
110°	0.0	1.8	7.3	15.2	24.3	28.5	33.4	42.5	51.0	58.9	66.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.2	6.7	14.6	23.1	27.3	32.2	40.7	49.2	57.1	63.7
115°	0.0	1.2	6.1	13.4	21.9	26.1	30.4	38.8	46.7	54.6	61.3
117.5°	0.0	0.6	5.5	12.7	20.6	24.9	29.1	37.0	44.9	52.2	58.9
120°	0.0	0.6	4.9	11.5	19.4	23.7	27.3	35.2	42.5	49.8	56.5
122.5°	0.0	0.6	4.2	10.9	18.2	21.9	25.5	33.4	40.7	47.3	53.4
125°	0.0	0.6	3.6	9.7	17.0	20.6	24.3	31.6	38.2	44.9	51.0
127.5°	0.0	0.0	3.0	8.5	15.2	18.2	21.9	29.1	35.8	41.9	48.0
130°	0.0	0.0	2.4	7.9	13.4	16.4	20.0	26.7	32.8	39.5	44.9
132.5°	0.0	0.0	1.8	6.7	12.1	15.2	17.6	23.7	29.7	35.8	41.9
135°	0.0	0.0	1.8	5.5	10.3	13.4	15.8	21.2	26.7	32.8	37.6
137.5°	0.0	0.0	1.2	4.2	9.1	11.5	14.0	18.8	23.7	29.1	34.0
140°	0.0	0.0	0.6	3.6	7.9	9.7	12.1	17.0	21.2	25.5	30.4
142.5°	0.0	0.0	0.6	3.0	6.1	8.5	10.3	14.6	18.8	22.5	26.7
145°	0.0	0.0	0.6	1.8	4.9	6.7	8.5	12.1	15.8	19.4	23.1
147.5°	0.6	0.6	0.6	1.8	4.2	5.5	7.3	10.3	13.4	17.0	20.0
150°	0.6	0.6	0.6	1.2	3.0	4.2	6.1	8.5	10.9	14.0	17.0
152.5°	0.6	0.6	0.0	0.6	2.4	3.0	4.2	6.7	9.1	10.9	13.4
155°	0.6	0.6	0.6	0.6	1.2	2.4	3.0	4.9	7.3	9.1	10.3
157.5°	0.6	0.6	0.0	0.0	0.6	1.2	1.8	3.6	5.5	6.7	7.9
160°	0.6	0.6	0.0	0.0	0.6	0.6	1.2	2.4	3.6	4.2	5.5
162.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.6	1.2	1.8	2.4	3.6
165°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.6	1.2	1.2
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



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	405.5	405.5	405.5	405.5	405.5	405.5	405.5	405.5	405.5	405.5
2.5°	404.3	404.9	404.9	404.3	404.3	404.3	403.7	403.1	402.5	401.9
5°	403.7	404.3	404.3	404.3	404.3	404.3	403.1	403.1	402.5	401.9
7.5°	403.1	404.3	404.9	404.9	404.9	404.9	404.9	404.3	403.7	403.7
10°	403.1	404.9	405.5	406.1	406.1	406.1	406.1	405.5	405.5	404.9
12.5°	403.1	404.9	405.5	406.1	406.1	406.7	406.7	406.1	406.1	405.5
15°	401.9	403.7	404.9	406.1	406.1	406.7	406.7	406.1	406.1	406.1
17.5°	400.0	402.5	403.7	404.9	404.9	405.5	406.1	405.5	405.5	404.9
20°	397.6	400.0	401.9	403.1	403.7	403.7	404.3	404.3	404.3	403.7
22.5°	394.6	397.0	398.8	400.0	400.6	401.2	402.5	402.5	401.9	401.9
25°	389.7	392.7	395.2	397.0	397.6	398.2	398.8	399.4	398.8	398.8
27.5°	385.5	387.9	390.9	392.7	393.4	394.0	394.6	395.8	395.2	394.6
30°	380.0	382.4	385.5	387.3	387.9	389.1	390.3	390.9	390.3	390.3
32.5°	373.3	376.4	378.8	381.2	382.4	383.0	384.2	384.9	384.9	384.2
35°	365.4	369.1	372.1	374.5	375.1	375.7	377.6	378.2	378.2	378.2
37.5°	357.5	360.6	364.2	366.6	367.9	368.5	369.7	370.9	370.3	370.3
40°	347.8	352.1	355.7	358.1	359.4	360.0	361.8	363.0	363.0	363.0
42.5°	338.7	342.4	346.0	349.0	350.3	352.1	353.3	353.3	353.9	353.3
45°	328.4	332.7	336.9	339.9	341.1	342.4	344.2	344.2	344.8	344.2
47.5°	318.1	323.5	326.6	329.6	330.2	332.0	333.9	334.5	334.5	335.1
50°	306.5	312.0	315.0	318.7	319.9	321.1	322.9	323.5	324.2	324.2
52.5°	294.4	298.7	304.1	307.2	308.4	309.6	310.8	312.0	313.2	312.6
55°	282.3	286.5	290.8	294.4	295.6	296.8	299.3	300.5	300.5	300.5
57.5°	268.3	273.2	278.0	281.7	282.9	284.1	286.5	287.1	287.7	288.3
60°	254.3	259.8	263.4	268.3	268.9	270.7	273.2	274.4	275.6	275.6
62.5°	239.8	244.6	250.1	253.7	255.0	256.8	259.2	260.4	261.0	261.0
65°	224.6	230.1	234.9	239.2	239.8	242.2	245.2	245.8	247.1	245.8
67.5°	209.4	214.9	219.7	223.4	225.8	227.6	229.5	230.1	231.9	231.9
70°	193.0	198.5	204.0	208.2	210.0	211.2	213.7	215.5	215.5	216.1
72.5°	176.6	182.1	187.6	191.2	193.0	194.9	197.9	199.1	199.7	199.1
75°	160.3	166.3	171.8	175.4	177.9	179.7	181.5	183.9	184.5	184.5
77.5°	143.9	151.1	155.4	160.3	162.1	163.9	165.7	167.5	168.8	169.4
80°	128.1	134.8	139.6	143.9	146.3	148.7	151.1	152.4	153.0	153.0
82.5°	114.1	120.2	125.7	129.9	132.3	133.5	136.6	137.8	139.6	139.6
85°	101.4	106.8	112.9	118.4	119.6	121.4	124.4	126.9	127.5	128.1
87.5°	92.3	98.9	104.4	109.3	111.1	112.9	115.9	117.8	118.4	119.0
90°	88.0	94.1	99.6	104.4	106.2	108.1	111.1	112.9	114.1	114.7
92.5°	85.6	92.3	97.7	102.6	104.4	106.2	108.7	111.1	111.7	112.3
95°	84.4	91.1	96.5	101.4	103.2	105.0	107.4	109.3	110.5	111.1
97.5°	83.2	89.2	95.3	99.6	101.4	103.2	106.2	108.1	108.7	109.3
100°	81.3	88.0	92.9	97.7	99.6	101.4	103.8	105.6	106.8	106.8
102.5°	79.5	85.6	91.1	95.9	97.7	98.9	102.0	103.8	104.4	105.0
105°	77.7	83.8	89.2	93.5	95.3	97.1	99.6	101.4	102.0	102.6
107.5°	75.3	81.3	86.8	91.1	92.9	94.1	97.1	98.3	99.6	99.6
110°	72.8	78.9	83.8	88.6	89.8	91.7	94.1	95.9	96.5	97.1





TEST NUMBER: P231958

CATALOG NUMBER: FVS4M-4-LD4-40-1LO-PFS125-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	70.4	75.9	81.3	85.0	87.4	88.6	91.1	92.9	93.5	94.1
115°	68.0	73.5	78.3	82.6	84.4	85.6	88.0	89.8	90.4	90.4
117.5°	65.0	70.4	75.3	79.5	80.7	82.6	84.4	86.2	86.8	87.4
120°	61.9	67.4	72.2	75.9	77.7	78.9	81.3	82.6	83.2	83.8
122.5°	59.5	64.3	68.6	72.8	74.1	75.9	77.7	78.9	79.5	80.1
125°	56.5	61.3	65.6	69.2	70.4	72.2	74.1	75.9	75.9	76.5
127.5°	53.4	57.7	61.9	65.6	66.8	68.0	70.4	71.6	72.2	72.2
130°	49.8	54.6	58.3	61.9	63.1	64.3	66.2	67.4	68.0	68.0
132.5°	46.7	51.0	54.6	57.7	58.9	60.1	61.9	63.1	63.7	63.7
135°	43.1	47.3	51.0	54.0	55.2	56.5	57.7	58.9	59.5	59.5
137.5°	38.8	43.7	46.7	49.8	51.0	52.2	53.4	54.6	55.2	55.2
140°	34.6	39.5	43.1	46.1	46.7	48.0	49.2	49.8	50.4	51.0
142.5°	31.0	34.6	38.8	41.3	42.5	43.1	44.9	45.5	45.5	46.1
145°	26.7	29.7	34.0	37.0	38.2	38.8	40.1	41.3	41.3	41.3
147.5°	22.5	26.1	28.5	32.2	33.4	34.6	35.8	36.4	36.4	37.0
150°	19.4	21.9	24.3	27.3	28.5	29.7	31.0	31.6	32.2	32.2
152.5°	15.8	18.2	20.0	22.5	23.1	24.3	26.1	26.7	26.7	27.3
155°	12.7	14.0	15.8	17.6	18.2	19.4	21.2	22.5	22.5	22.5
157.5°	9.1	10.9	12.1	13.4	14.0	14.6	16.4	17.6	17.6	17.6
160°	6.7	7.3	8.5	9.1	9.7	10.3	11.5	12.7	13.4	12.7
162.5°	4.2	4.9	5.5	6.1	6.1	6.7	6.7	7.9	8.5	8.5
165°	1.8	2.4	2.4	2.4	3.0	3.0	3.0	3.0	4.2	4.2
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)