

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: P231956

Luminaire Tested: **FVS4M-4-LD4-30-1LO-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P231956  
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-LD4-30-1LO-PFS125-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
4FT LENGTH, 1-MODULE LED WITH PFS125 LENS  
Light Source: (84) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

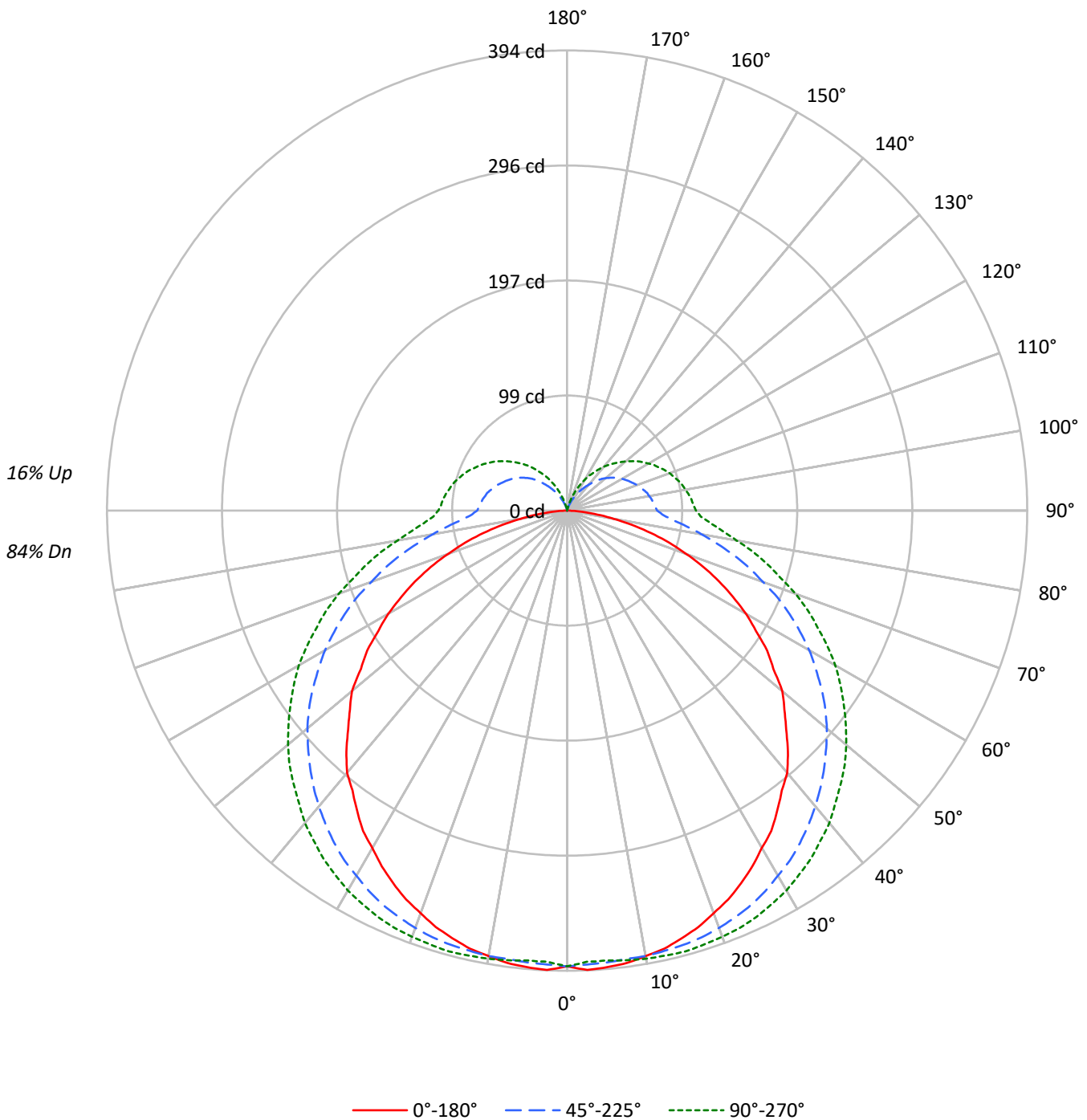
Lumens per Lamp: N/A  
Luminaire Lumens: 1707.0 lumens  
Efficiency: N/A  
Efficacy: 72.3 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.43 / 1.51  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')  
CIE Type: Semi-Direct

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	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°	3545	3545	3545
5°	3564	3405	3350
10°	3542	3305	3250
15°	3519	3223	3166
20°	3483	3149	3082
25°	3451	3077	3006
30°	3401	2993	2926
35°	3362	2916	2842
40°	3338	2830	2755
45°	3247	2741	2659
50°	3211	2652	2570
55°	3093	2542	2466
60°	2962	2424	2363
65°	2793	2278	2224
70°	2539	2093	2085
75°	2199	1912	1924
80°	1647	1695	1749
85°	892	1501	1634



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.2	2.2
10°-20°	109.0	6.4
20°-30°	171.1	10.0
30°-40°	215.3	12.6
40°-50°	236.2	13.8
50°-60°	231.2	13.5
60°-70°	199.7	11.7
70°-80°	146.5	8.6
80°-90°	91.3	5.3
90°-100°	71.5	4.2
100°-110°	63.2	3.7
110°-120°	51.8	3.0
120°-130°	38.7	2.3
130°-140°	25.3	1.5
140°-150°	13.5	0.8
150°-160°	5.0	0.3
160°-170°	0.6	0.0
170°-180°	0.0	0.0
0°-30°	317.2	18.6
0°-40°	532.5	31.2
0°-60°	999.9	58.6
0°-90°	1437.3	84.2
90°-120°	186.5	10.9
90°-150°	264.0	15.5
90°-180°	270.0	15.8
0°-180°	1707.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	390	390	390	390	390	
5°	392	391	388	389	387	37
15°	379	380	385	391	391	107
25°	352	360	373	383	384	162
35°	314	329	348	361	364	196
45°	265	286	311	328	331	205
55°	209	235	266	284	289	186
65°	144	175	210	231	237	142
75°	74	109	148	171	178	78
85°	13	51	90	115	123	17
90°	1	37	77	102	110	1
95°	0	34	74	99	107	0
105°	0	30	68	92	99	0
115°	0	25	59	81	87	0
125°	0	20	49	68	74	0
135°	0	13	36	53	57	0
145°	0	6	22	37	40	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°	390.2	390.2	390.2	390.2	390.2	390.2	390.2	390.2	390.2	390.2	390.2
2.5°	393.7	393.1	392.5	391.9	391.9	392.5	392.5	392.5	391.9	390.2	389.0
5°	392.5	391.9	391.3	390.8	391.3	391.3	391.3	391.3	390.8	389.6	388.4
7.5°	390.8	390.2	389.6	389.0	389.0	389.6	389.6	389.6	389.6	388.4	387.3
10°	387.3	387.3	386.1	386.1	386.7	386.7	387.3	387.8	387.8	387.8	387.3
12.5°	384.3	383.2	382.6	383.2	383.2	383.8	384.3	386.1	386.1	386.7	386.1
15°	379.1	378.5	377.9	377.9	379.7	380.2	381.4	383.2	384.3	384.3	384.9
17.5°	373.8	373.2	373.2	373.2	375.0	376.2	377.9	379.7	380.8	382.0	383.2
20°	366.8	366.8	367.4	368.0	370.3	371.5	373.2	376.2	377.3	379.1	380.2
22.5°	360.4	359.8	359.8	361.6	364.5	366.2	368.0	370.9	372.7	375.0	376.7
25°	352.2	352.2	352.2	355.1	358.6	359.8	362.7	365.6	368.0	370.3	372.7
27.5°	343.5	343.5	343.5	347.5	351.0	353.4	355.7	359.2	362.1	364.5	367.4
30°	333.5	334.1	335.9	339.4	343.5	345.8	348.1	352.2	355.7	358.1	361.0
32.5°	325.3	323.6	325.9	329.4	334.7	337.6	339.9	344.0	348.1	351.6	355.1
35°	313.7	313.7	316.0	320.7	325.9	328.8	331.2	335.9	339.9	343.5	347.5
37.5°	302.0	301.4	304.9	310.2	316.0	318.9	321.8	326.5	330.0	334.1	339.4
40°	293.2	290.3	293.8	299.6	305.5	309.0	311.9	316.6	321.3	325.9	330.6
42.5°	279.8	277.4	281.5	287.4	294.4	297.9	300.8	306.7	311.3	316.6	321.3
45°	265.2	265.2	270.4	276.3	282.1	286.2	289.1	295.6	300.8	306.7	311.3
47.5°	252.3	251.7	256.4	264.0	270.4	274.5	278.0	283.9	289.7	296.1	300.8
50°	240.6	238.3	243.6	250.6	258.8	261.7	265.8	271.6	278.6	283.9	290.3
52.5°	222.5	224.9	229.0	237.1	244.7	248.8	252.9	259.3	266.3	272.2	278.6
55°	209.1	209.7	215.5	223.7	230.7	235.4	240.1	247.7	253.5	259.9	265.8
57.5°	191.6	193.9	200.9	208.5	216.7	222.0	225.5	232.5	239.5	246.5	252.3
60°	177.0	179.3	185.7	192.8	201.5	206.2	210.3	217.9	224.9	232.5	239.5
62.5°	160.0	163.0	170.0	178.2	186.3	190.4	194.5	204.4	211.4	218.5	224.9
65°	143.7	146.6	153.0	160.6	170.6	175.2	179.3	187.5	196.3	203.3	210.3
67.5°	126.2	129.1	136.7	144.9	154.2	159.5	163.5	172.9	179.3	187.5	195.1
70°	108.6	111.6	118.6	127.3	137.3	142.5	147.8	156.0	164.1	171.7	178.2
72.5°	91.7	95.2	102.2	111.0	120.9	125.6	130.3	139.6	147.8	156.5	163.5
75°	74.2	77.7	85.3	94.6	104.6	109.2	113.9	123.8	132.0	140.2	147.8
77.5°	57.2	60.2	68.9	78.9	87.6	91.7	97.5	107.5	116.2	124.4	132.0
80°	40.3	43.8	52.6	61.9	71.8	77.1	81.8	92.3	100.5	109.2	116.8
82.5°	26.3	29.2	38.0	47.3	57.8	62.5	67.8	77.7	85.9	95.8	102.8
85°	13.4	16.9	25.1	35.0	45.0	50.8	54.9	65.4	73.6	82.9	90.0
87.5°	4.1	8.2	15.8	25.7	35.6	41.5	46.7	56.1	65.4	73.6	81.8
90°	0.6	4.1	11.7	21.6	32.1	36.8	42.1	52.0	60.7	69.5	77.1
92.5°	0.0	3.5	11.1	20.4	30.4	35.6	40.9	50.2	59.6	67.8	75.3
95°	0.0	2.9	10.5	19.9	29.8	34.5	39.7	49.1	58.4	66.6	74.2
97.5°	0.0	2.9	9.9	18.7	28.6	33.9	38.6	48.5	57.2	65.4	73.0
100°	0.0	2.3	9.3	18.1	27.5	32.7	37.4	46.7	55.5	63.7	71.3
102.5°	0.0	2.3	8.8	17.5	26.9	31.5	36.2	45.6	54.3	62.5	70.1
105°	0.0	1.8	8.2	16.4	25.7	30.4	35.0	43.8	52.6	60.7	67.8
107.5°	0.0	1.8	7.6	15.8	24.5	29.2	33.3	42.6	50.8	58.4	66.0
110°	0.0	1.8	7.0	14.6	23.4	27.5	32.1	40.9	49.1	56.7	63.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.2	6.4	14.0	22.2	26.3	31.0	39.1	47.3	54.9	61.3
115°	0.0	1.2	5.8	12.9	21.0	25.1	29.2	37.4	45.0	52.6	59.0
117.5°	0.0	0.6	5.3	12.3	19.9	23.9	28.0	35.6	43.2	50.2	56.7
120°	0.0	0.6	4.7	11.1	18.7	22.8	26.3	33.9	40.9	47.9	54.3
122.5°	0.0	0.6	4.1	10.5	17.5	21.0	24.5	32.1	39.1	45.6	51.4
125°	0.0	0.6	3.5	9.3	16.4	19.9	23.4	30.4	36.8	43.2	49.1
127.5°	0.0	0.0	2.9	8.2	14.6	17.5	21.0	28.0	34.5	40.3	46.1
130°	0.0	0.0	2.3	7.6	12.9	15.8	19.3	25.7	31.5	38.0	43.2
132.5°	0.0	0.0	1.8	6.4	11.7	14.6	16.9	22.8	28.6	34.5	40.3
135°	0.0	0.0	1.8	5.3	9.9	12.9	15.2	20.4	25.7	31.5	36.2
137.5°	0.0	0.0	1.2	4.1	8.8	11.1	13.4	18.1	22.8	28.0	32.7
140°	0.0	0.0	0.6	3.5	7.6	9.3	11.7	16.4	20.4	24.5	29.2
142.5°	0.0	0.0	0.6	2.9	5.8	8.2	9.9	14.0	18.1	21.6	25.7
145°	0.0	0.0	0.6	1.8	4.7	6.4	8.2	11.7	15.2	18.7	22.2
147.5°	0.6	0.6	0.6	1.8	4.1	5.3	7.0	9.9	12.9	16.4	19.3
150°	0.6	0.6	0.6	1.2	2.9	4.1	5.8	8.2	10.5	13.4	16.4
152.5°	0.6	0.6	0.0	0.6	2.3	2.9	4.1	6.4	8.8	10.5	12.9
155°	0.6	0.6	0.6	0.6	1.2	2.3	2.9	4.7	7.0	8.8	9.9
157.5°	0.6	0.6	0.0	0.0	0.6	1.2	1.8	3.5	5.3	6.4	7.6
160°	0.6	0.6	0.0	0.0	0.6	0.6	1.2	2.3	3.5	4.1	5.3
162.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.6	1.2	1.8	2.3	3.5
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°	390.2	390.2	390.2	390.2	390.2	390.2	390.2	390.2	390.2	390.2
2.5°	389.0	389.6	389.6	389.0	389.0	389.0	388.4	387.8	387.3	386.7
5°	388.4	389.0	389.0	389.0	389.0	389.0	387.8	387.8	387.3	386.7
7.5°	387.8	389.0	389.6	389.6	389.6	389.6	389.6	389.0	388.4	388.4
10°	387.8	389.6	390.2	390.8	390.8	390.8	390.8	390.2	390.2	389.6
12.5°	387.8	389.6	390.2	390.8	390.8	391.3	391.3	390.8	390.8	390.2
15°	386.7	388.4	389.6	390.8	390.8	391.3	391.3	390.8	390.8	390.8
17.5°	384.9	387.3	388.4	389.6	389.6	390.2	390.8	390.2	390.2	389.6
20°	382.6	384.9	386.7	387.8	388.4	388.4	389.0	389.0	389.0	388.4
22.5°	379.7	382.0	383.8	384.9	385.5	386.1	387.3	387.3	386.7	386.7
25°	375.0	377.9	380.2	382.0	382.6	383.2	383.8	384.3	383.8	383.8
27.5°	370.9	373.2	376.2	377.9	378.5	379.1	379.7	380.8	380.2	379.7
30°	365.6	368.0	370.9	372.7	373.2	374.4	375.6	376.2	375.6	375.6
32.5°	359.2	362.1	364.5	366.8	368.0	368.6	369.7	370.3	370.3	369.7
35°	351.6	355.1	358.1	360.4	361.0	361.6	363.3	363.9	363.9	363.9
37.5°	344.0	347.0	350.5	352.8	354.0	354.5	355.7	356.9	356.3	356.3
40°	334.7	338.8	342.3	344.6	345.8	346.4	348.1	349.3	349.3	349.3
42.5°	325.9	329.4	332.9	335.9	337.0	338.8	339.9	339.9	340.5	339.9
45°	316.0	320.1	324.2	327.1	328.3	329.4	331.2	331.2	331.8	331.2
47.5°	306.1	311.3	314.2	317.2	317.8	319.5	321.3	321.8	321.8	322.4
50°	295.0	300.2	303.1	306.7	307.8	309.0	310.7	311.3	311.9	311.9
52.5°	283.3	287.4	292.6	295.6	296.7	297.9	299.1	300.2	301.4	300.8
55°	271.6	275.7	279.8	283.3	284.5	285.6	288.0	289.1	289.1	289.1
57.5°	258.2	262.8	267.5	271.0	272.2	273.4	275.7	276.3	276.9	277.4
60°	244.7	250.0	253.5	258.2	258.8	260.5	262.8	264.0	265.2	265.2
62.5°	230.7	235.4	240.6	244.2	245.3	247.1	249.4	250.6	251.2	251.2
65°	216.1	221.4	226.0	230.1	230.7	233.1	236.0	236.6	237.7	236.6
67.5°	201.5	206.8	211.4	214.9	217.3	219.0	220.8	221.4	223.1	223.1
70°	185.7	191.0	196.3	200.3	202.1	203.3	205.6	207.4	207.4	207.9
72.5°	170.0	175.2	180.5	184.0	185.7	187.5	190.4	191.6	192.2	191.6
75°	154.2	160.0	165.3	168.8	171.1	172.9	174.6	177.0	177.6	177.6
77.5°	138.4	145.4	149.5	154.2	156.0	157.7	159.5	161.2	162.4	163.0
80°	123.2	129.7	134.3	138.4	140.8	143.1	145.4	146.6	147.2	147.2
82.5°	109.8	115.7	120.9	125.0	127.3	128.5	131.4	132.6	134.3	134.3
85°	97.5	102.8	108.6	113.9	115.1	116.8	119.7	122.1	122.7	123.2
87.5°	88.8	95.2	100.5	105.1	106.9	108.6	111.6	113.3	113.9	114.5
90°	84.7	90.5	95.8	100.5	102.2	104.0	106.9	108.6	109.8	110.4
92.5°	82.4	88.8	94.0	98.7	100.5	102.2	104.6	106.9	107.5	108.1
95°	81.2	87.6	92.9	97.5	99.3	101.0	103.4	105.1	106.3	106.9
97.5°	80.0	85.9	91.7	95.8	97.5	99.3	102.2	104.0	104.6	105.1
100°	78.3	84.7	89.4	94.0	95.8	97.5	99.9	101.6	102.8	102.8
102.5°	76.5	82.4	87.6	92.3	94.0	95.2	98.1	99.9	100.5	101.0
105°	74.8	80.6	85.9	90.0	91.7	93.5	95.8	97.5	98.1	98.7
107.5°	72.4	78.3	83.5	87.6	89.4	90.5	93.5	94.6	95.8	95.8
110°	70.1	75.9	80.6	85.3	86.4	88.2	90.5	92.3	92.9	93.5





TEST NUMBER: P231956

CATALOG NUMBER: FVS4M-4-LD4-30-1LO-PFS125-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	67.8	73.0	78.3	81.8	84.1	85.3	87.6	89.4	90.0	90.5
115°	65.4	70.7	75.3	79.4	81.2	82.4	84.7	86.4	87.0	87.0
117.5°	62.5	67.8	72.4	76.5	77.7	79.4	81.2	82.9	83.5	84.1
120°	59.6	64.8	69.5	73.0	74.8	75.9	78.3	79.4	80.0	80.6
122.5°	57.2	61.9	66.0	70.1	71.3	73.0	74.8	75.9	76.5	77.1
125°	54.3	59.0	63.1	66.6	67.8	69.5	71.3	73.0	73.0	73.6
127.5°	51.4	55.5	59.6	63.1	64.3	65.4	67.8	68.9	69.5	69.5
130°	47.9	52.6	56.1	59.6	60.7	61.9	63.7	64.8	65.4	65.4
132.5°	45.0	49.1	52.6	55.5	56.7	57.8	59.6	60.7	61.3	61.3
135°	41.5	45.6	49.1	52.0	53.2	54.3	55.5	56.7	57.2	57.2
137.5°	37.4	42.1	45.0	47.9	49.1	50.2	51.4	52.6	53.2	53.2
140°	33.3	38.0	41.5	44.4	45.0	46.1	47.3	47.9	48.5	49.1
142.5°	29.8	33.3	37.4	39.7	40.9	41.5	43.2	43.8	43.8	44.4
145°	25.7	28.6	32.7	35.6	36.8	37.4	38.6	39.7	39.7	39.7
147.5°	21.6	25.1	27.5	31.0	32.1	33.3	34.5	35.0	35.0	35.6
150°	18.7	21.0	23.4	26.3	27.5	28.6	29.8	30.4	31.0	31.0
152.5°	15.2	17.5	19.3	21.6	22.2	23.4	25.1	25.7	25.7	26.3
155°	12.3	13.4	15.2	16.9	17.5	18.7	20.4	21.6	21.6	21.6
157.5°	8.8	10.5	11.7	12.9	13.4	14.0	15.8	16.9	16.9	16.9
160°	6.4	7.0	8.2	8.8	9.3	9.9	11.1	12.3	12.9	12.3
162.5°	4.1	4.7	5.3	5.8	5.8	6.4	6.4	7.6	8.2	8.2
165°	1.8	2.3	2.3	2.3	2.9	2.9	2.9	2.9	4.1	4.1
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)