

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: P231962

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P231962  
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-LD4-40-1STD-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**

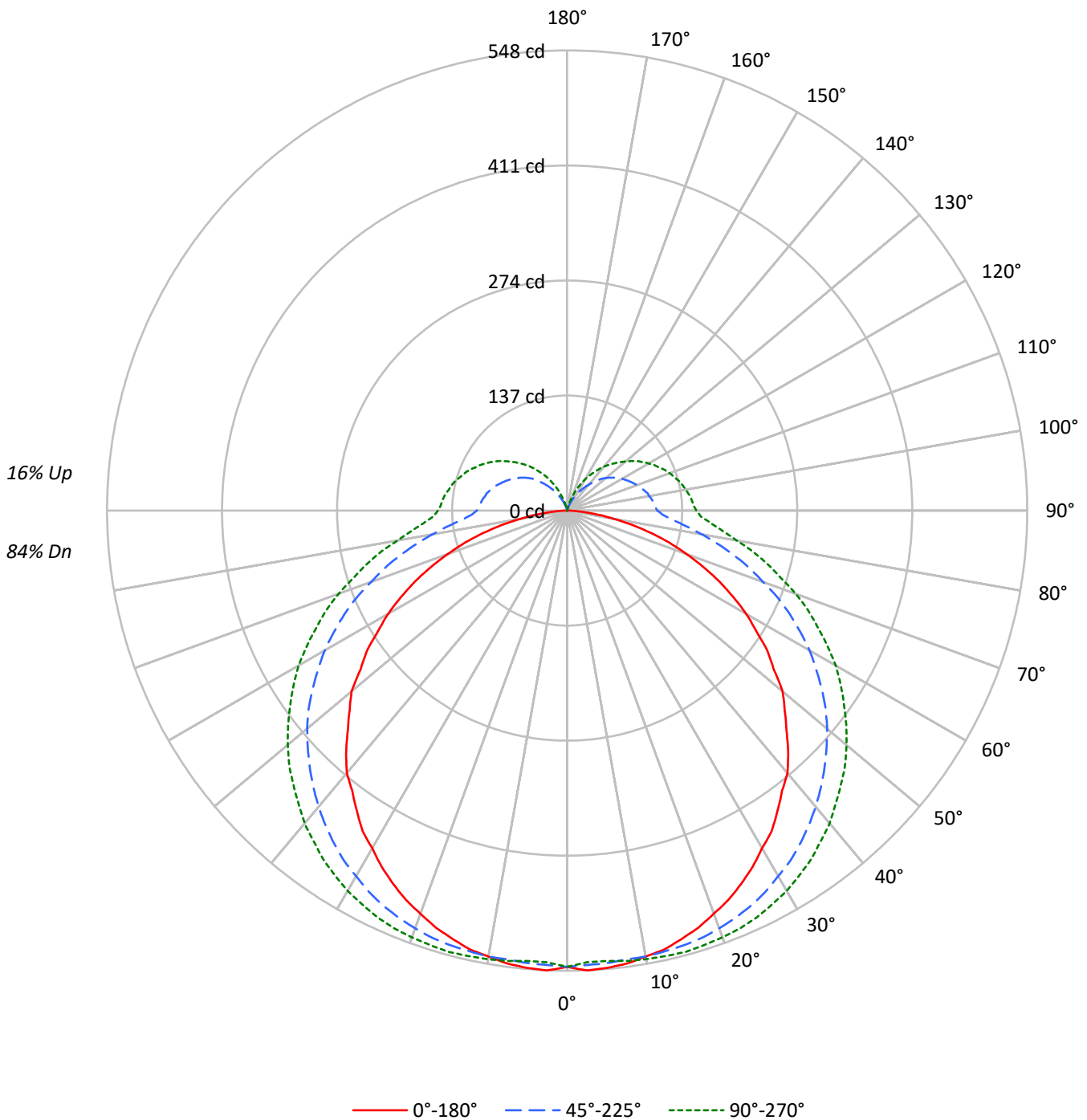
Lumens per Lamp: N/A  
Luminaire Lumens: 2377.0 lumens  
Efficiency: N/A  
Efficacy: 70.7 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.43 / 1.51  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')  
CIE Type: Semi-Direct

Input Watts (W): 33.6  
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°	4935	4935	4935
5°	4963	4742	4665
10°	4932	4602	4525
15°	4900	4489	4408
20°	4851	4386	4292
25°	4806	4284	4185
30°	4736	4168	4075
35°	4682	4061	3957
40°	4649	3941	3837
45°	4521	3817	3703
50°	4472	3692	3579
55°	4308	3540	3434
60°	4124	3375	3290
65°	3889	3171	3096
70°	3538	2914	2904
75°	3061	2662	2680
80°	2292	2361	2436
85°	1245	2090	2276



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.7	2.2
10°-20°	151.7	6.4
20°-30°	238.2	10.0
30°-40°	299.8	12.6
40°-50°	328.9	13.8
50°-60°	321.9	13.5
60°-70°	278.1	11.7
70°-80°	204.0	8.6
80°-90°	127.1	5.3
90°-100°	99.5	4.2
100°-110°	88.0	3.7
110°-120°	72.1	3.0
120°-130°	53.9	2.3
130°-140°	35.2	1.5
140°-150°	18.8	0.8
150°-160°	6.9	0.3
160°-170°	0.9	0.0
170°-180°	0.0	0.0
0°-30°	441.7	18.6
0°-40°	741.5	31.2
0°-60°	1392.3	58.6
0°-90°	2001.5	84.2
90°-120°	259.6	10.9
90°-150°	367.6	15.5
90°-180°	375.0	15.8
0°-180°	2377.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	543	543	543	543	543	
5°	547	545	541	542	538	52
15°	528	530	536	544	544	149
25°	490	501	519	533	534	226
35°	437	458	484	503	507	274
45°	369	398	434	457	461	286
55°	291	328	370	396	403	259
65°	200	244	293	321	329	197
75°	103	152	206	238	247	109
85°	19	71	125	160	172	23
90°	1	51	107	142	154	1
95°	0	48	103	138	149	0
105°	0	42	94	128	138	0
115°	0	35	82	113	121	0
125°	0	28	68	94	102	0
135°	0	18	50	74	80	0
145°	0	9	31	51	55	0
155°	1	3	14	24	30	0
165°	1	0	2	4	6	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231962

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	543.3	543.3	543.3	543.3	543.3	543.3	543.3	543.3	543.3	543.3	543.3
2.5°	548.2	547.4	546.6	545.8	545.8	546.6	546.6	546.6	545.8	543.3	541.7
5°	546.6	545.8	545.0	544.1	545.0	545.0	545.0	545.0	544.1	542.5	540.9
7.5°	544.1	543.3	542.5	541.7	541.7	542.5	542.5	542.5	542.5	540.9	539.3
10°	539.3	539.3	537.6	537.6	538.4	538.4	539.3	540.1	540.1	540.1	539.3
12.5°	535.2	533.6	532.8	533.6	533.6	534.4	535.2	537.6	537.6	538.4	537.6
15°	527.9	527.1	526.2	526.2	528.7	529.5	531.1	533.6	535.2	535.2	536.0
17.5°	520.6	519.7	519.7	519.7	522.2	523.8	526.2	528.7	530.3	531.9	533.6
20°	510.8	510.8	511.6	512.4	515.7	517.3	519.7	523.8	525.4	527.9	529.5
22.5°	501.8	501.0	501.0	503.5	507.5	510.0	512.4	516.5	518.9	522.2	524.6
25°	490.5	490.5	490.5	494.5	499.4	501.0	505.1	509.2	512.4	515.7	518.9
27.5°	478.3	478.3	478.3	483.9	488.8	492.1	495.3	500.2	504.3	507.5	511.6
30°	464.4	465.2	467.7	472.6	478.3	481.5	484.8	490.5	495.3	498.6	502.7
32.5°	453.0	450.6	453.9	458.7	466.1	470.1	473.4	479.1	484.8	489.6	494.5
35°	436.8	436.8	440.0	446.5	453.9	457.9	461.2	467.7	473.4	478.3	483.9
37.5°	420.5	419.7	424.6	431.9	440.0	444.1	448.2	454.7	459.5	465.2	472.6
40°	408.3	404.2	409.1	417.3	425.4	430.3	434.3	440.8	447.3	453.9	460.4
42.5°	389.6	386.3	392.0	400.2	409.9	414.8	418.9	427.0	433.5	440.8	447.3
45°	369.3	369.3	376.6	384.7	392.9	398.5	402.6	411.6	418.9	427.0	433.5
47.5°	351.4	350.6	357.1	367.6	376.6	382.3	387.2	395.3	403.4	412.4	418.9
50°	335.1	331.9	339.2	348.9	360.3	364.4	370.1	378.2	388.0	395.3	404.2
52.5°	309.9	313.1	318.8	330.2	340.8	346.5	352.2	361.1	370.9	379.0	388.0
55°	291.2	292.0	300.1	311.5	321.3	327.8	334.3	344.9	353.0	361.9	370.1
57.5°	266.8	270.0	279.8	290.4	301.8	309.1	314.0	323.7	333.5	343.2	351.4
60°	246.4	249.7	258.6	268.4	280.6	287.1	292.8	303.4	313.1	323.7	333.5
62.5°	222.9	226.9	236.7	248.1	259.5	265.2	270.8	284.7	294.4	304.2	313.1
65°	200.1	204.2	213.1	223.7	237.5	244.0	249.7	261.1	273.3	283.0	292.8
67.5°	175.7	179.8	190.3	201.7	214.7	222.0	227.7	240.8	249.7	261.1	271.7
70°	151.3	155.4	165.1	177.3	191.1	198.5	205.8	217.2	228.6	239.1	248.1
72.5°	127.7	132.6	142.3	154.5	168.4	174.9	181.4	194.4	205.8	218.0	227.7
75°	103.3	108.2	118.8	131.8	145.6	152.1	158.6	172.4	183.8	195.2	205.8
77.5°	79.7	83.8	96.0	109.8	122.0	127.7	135.8	149.7	161.9	173.2	183.8
80°	56.1	61.0	73.2	86.2	100.0	107.4	113.9	128.5	139.9	152.1	162.7
82.5°	36.6	40.7	52.9	65.9	80.5	87.0	94.3	108.2	119.6	133.4	143.2
85°	18.7	23.6	35.0	48.8	62.6	70.8	76.5	91.1	102.5	115.5	125.3
87.5°	5.7	11.4	22.0	35.8	49.6	57.7	65.1	78.1	91.1	102.5	113.9
90°	0.8	5.7	16.3	30.1	44.7	51.2	58.6	72.4	84.6	96.8	107.4
92.5°	0.0	4.9	15.5	28.5	42.3	49.6	56.9	69.9	83.0	94.3	104.9
95°	0.0	4.1	14.6	27.7	41.5	48.0	55.3	68.3	81.3	92.7	103.3
97.5°	0.0	4.1	13.8	26.0	39.9	47.2	53.7	67.5	79.7	91.1	101.7
100°	0.0	3.3	13.0	25.2	38.2	45.5	52.1	65.1	77.3	88.7	99.2
102.5°	0.0	3.3	12.2	24.4	37.4	43.9	50.4	63.4	75.6	87.0	97.6
105°	0.0	2.4	11.4	22.8	35.8	42.3	48.8	61.0	73.2	84.6	94.3
107.5°	0.0	2.4	10.6	22.0	34.2	40.7	46.4	59.4	70.8	81.3	91.9
110°	0.0	2.4	9.8	20.3	32.5	38.2	44.7	56.9	68.3	78.9	88.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.6	8.9	19.5	30.9	36.6	43.1	54.5	65.9	76.5	85.4
115°	0.0	1.6	8.1	17.9	29.3	35.0	40.7	52.1	62.6	73.2	82.1
117.5°	0.0	0.8	7.3	17.1	27.7	33.3	39.0	49.6	60.2	69.9	78.9
120°	0.0	0.8	6.5	15.5	26.0	31.7	36.6	47.2	56.9	66.7	75.6
122.5°	0.0	0.8	5.7	14.6	24.4	29.3	34.2	44.7	54.5	63.4	71.6
125°	0.0	0.8	4.9	13.0	22.8	27.7	32.5	42.3	51.2	60.2	68.3
127.5°	0.0	0.0	4.1	11.4	20.3	24.4	29.3	39.0	48.0	56.1	64.3
130°	0.0	0.0	3.3	10.6	17.9	22.0	26.8	35.8	43.9	52.9	60.2
132.5°	0.0	0.0	2.4	8.9	16.3	20.3	23.6	31.7	39.9	48.0	56.1
135°	0.0	0.0	2.4	7.3	13.8	17.9	21.1	28.5	35.8	43.9	50.4
137.5°	0.0	0.0	1.6	5.7	12.2	15.5	18.7	25.2	31.7	39.0	45.5
140°	0.0	0.0	0.8	4.9	10.6	13.0	16.3	22.8	28.5	34.2	40.7
142.5°	0.0	0.0	0.8	4.1	8.1	11.4	13.8	19.5	25.2	30.1	35.8
145°	0.0	0.0	0.8	2.4	6.5	8.9	11.4	16.3	21.1	26.0	30.9
147.5°	0.8	0.8	0.8	2.4	5.7	7.3	9.8	13.8	17.9	22.8	26.8
150°	0.8	0.8	0.8	1.6	4.1	5.7	8.1	11.4	14.6	18.7	22.8
152.5°	0.8	0.8	0.0	0.8	3.3	4.1	5.7	8.9	12.2	14.6	17.9
155°	0.8	0.8	0.8	0.8	1.6	3.3	4.1	6.5	9.8	12.2	13.8
157.5°	0.8	0.8	0.0	0.0	0.8	1.6	2.4	4.9	7.3	8.9	10.6
160°	0.8	0.8	0.0	0.0	0.8	0.8	1.6	3.3	4.9	5.7	7.3
162.5°	0.8	0.8	0.8	0.0	0.0	0.0	0.8	1.6	2.4	3.3	4.9
165°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.8	1.6	1.6
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: P231962

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

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	543.3	543.3	543.3	543.3	543.3	543.3	543.3	543.3	543.3	543.3
2.5°	541.7	542.5	542.5	541.7	541.7	541.7	540.9	540.1	539.3	538.4
5°	540.9	541.7	541.7	541.7	541.7	541.7	540.1	540.1	539.3	538.4
7.5°	540.1	541.7	542.5	542.5	542.5	542.5	542.5	541.7	540.9	540.9
10°	540.1	542.5	543.3	544.1	544.1	544.1	544.1	543.3	543.3	542.5
12.5°	540.1	542.5	543.3	544.1	544.1	545.0	545.0	544.1	544.1	543.3
15°	538.4	540.9	542.5	544.1	544.1	545.0	545.0	544.1	544.1	544.1
17.5°	536.0	539.3	540.9	542.5	542.5	543.3	544.1	543.3	543.3	542.5
20°	532.8	536.0	538.4	540.1	540.9	540.9	541.7	541.7	541.7	540.9
22.5°	528.7	531.9	534.4	536.0	536.8	537.6	539.3	539.3	538.4	538.4
25°	522.2	526.2	529.5	531.9	532.8	533.6	534.4	535.2	534.4	534.4
27.5°	516.5	519.7	523.8	526.2	527.1	527.9	528.7	530.3	529.5	528.7
30°	509.2	512.4	516.5	518.9	519.7	521.4	523.0	523.8	523.0	523.0
32.5°	500.2	504.3	507.5	510.8	512.4	513.2	514.9	515.7	515.7	514.9
35°	489.6	494.5	498.6	501.8	502.7	503.5	505.9	506.7	506.7	506.7
37.5°	479.1	483.1	488.0	491.3	492.9	493.7	495.3	497.0	496.1	496.1
40°	466.1	471.7	476.6	479.9	481.5	482.3	484.8	486.4	486.4	486.4
42.5°	453.9	458.7	463.6	467.7	469.3	471.7	473.4	473.4	474.2	473.4
45°	440.0	445.7	451.4	455.5	457.1	458.7	461.2	461.2	462.0	461.2
47.5°	426.2	433.5	437.6	441.7	442.5	444.9	447.3	448.2	448.2	449.0
50°	410.7	418.1	422.1	427.0	428.6	430.3	432.7	433.5	434.3	434.3
52.5°	394.5	400.2	407.5	411.6	413.2	414.8	416.4	418.1	419.7	418.9
55°	378.2	383.9	389.6	394.5	396.1	397.7	401.0	402.6	402.6	402.6
57.5°	359.5	366.0	372.5	377.4	379.0	380.7	383.9	384.7	385.5	386.3
60°	340.8	348.1	353.0	359.5	360.3	362.8	366.0	367.6	369.3	369.3
62.5°	321.3	327.8	335.1	340.0	341.6	344.1	347.3	348.9	349.7	349.7
65°	300.9	308.3	314.8	320.5	321.3	324.5	328.6	329.4	331.0	329.4
67.5°	280.6	287.9	294.4	299.3	302.6	305.0	307.5	308.3	310.7	310.7
70°	258.6	266.0	273.3	279.0	281.4	283.0	286.3	288.7	288.7	289.6
72.5°	236.7	244.0	251.3	256.2	258.6	261.1	265.2	266.8	267.6	266.8
75°	214.7	222.9	230.2	235.1	238.3	240.8	243.2	246.4	247.3	247.3
77.5°	192.8	202.5	208.2	214.7	217.2	219.6	222.0	224.5	226.1	226.9
80°	171.6	180.6	187.1	192.8	196.0	199.3	202.5	204.2	205.0	205.0
82.5°	152.9	161.0	168.4	174.1	177.3	178.9	183.0	184.6	187.1	187.1
85°	135.8	143.2	151.3	158.6	160.2	162.7	166.7	170.0	170.8	171.6
87.5°	123.6	132.6	139.9	146.4	148.8	151.3	155.4	157.8	158.6	159.4
90°	117.9	126.1	133.4	139.9	142.3	144.8	148.8	151.3	152.9	153.7
92.5°	114.7	123.6	131.0	137.5	139.9	142.3	145.6	148.8	149.7	150.5
95°	113.1	122.0	129.3	135.8	138.3	140.7	144.0	146.4	148.0	148.8
97.5°	111.4	119.6	127.7	133.4	135.8	138.3	142.3	144.8	145.6	146.4
100°	109.0	117.9	124.4	131.0	133.4	135.8	139.1	141.5	143.2	143.2
102.5°	106.6	114.7	122.0	128.5	131.0	132.6	136.6	139.1	139.9	140.7
105°	104.1	112.2	119.6	125.3	127.7	130.1	133.4	135.8	136.6	137.5
107.5°	100.9	109.0	116.3	122.0	124.4	126.1	130.1	131.8	133.4	133.4
110°	97.6	105.7	112.2	118.8	120.4	122.8	126.1	128.5	129.3	130.1





TEST NUMBER: P231962

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

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	94.3	101.7	109.0	113.9	117.1	118.8	122.0	124.4	125.3	126.1
115°	91.1	98.4	104.9	110.6	113.1	114.7	117.9	120.4	121.2	121.2
117.5°	87.0	94.3	100.9	106.6	108.2	110.6	113.1	115.5	116.3	117.1
120°	83.0	90.3	96.8	101.7	104.1	105.7	109.0	110.6	111.4	112.2
122.5°	79.7	86.2	91.9	97.6	99.2	101.7	104.1	105.7	106.6	107.4
125°	75.6	82.1	87.8	92.7	94.3	96.8	99.2	101.7	101.7	102.5
127.5°	71.6	77.3	83.0	87.8	89.5	91.1	94.3	96.0	96.8	96.8
130°	66.7	73.2	78.1	83.0	84.6	86.2	88.7	90.3	91.1	91.1
132.5°	62.6	68.3	73.2	77.3	78.9	80.5	83.0	84.6	85.4	85.4
135°	57.7	63.4	68.3	72.4	74.0	75.6	77.3	78.9	79.7	79.7
137.5°	52.1	58.6	62.6	66.7	68.3	69.9	71.6	73.2	74.0	74.0
140°	46.4	52.9	57.7	61.8	62.6	64.3	65.9	66.7	67.5	68.3
142.5°	41.5	46.4	52.1	55.3	56.9	57.7	60.2	61.0	61.0	61.8
145°	35.8	39.9	45.5	49.6	51.2	52.1	53.7	55.3	55.3	55.3
147.5°	30.1	35.0	38.2	43.1	44.7	46.4	48.0	48.8	48.8	49.6
150°	26.0	29.3	32.5	36.6	38.2	39.9	41.5	42.3	43.1	43.1
152.5°	21.1	24.4	26.8	30.1	30.9	32.5	35.0	35.8	35.8	36.6
155°	17.1	18.7	21.1	23.6	24.4	26.0	28.5	30.1	30.1	30.1
157.5°	12.2	14.6	16.3	17.9	18.7	19.5	22.0	23.6	23.6	23.6
160°	8.9	9.8	11.4	12.2	13.0	13.8	15.5	17.1	17.9	17.1
162.5°	5.7	6.5	7.3	8.1	8.1	8.9	8.9	10.6	11.4	11.4
165°	2.4	3.3	3.3	3.3	4.1	4.1	4.1	4.1	5.7	5.7
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)