

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: P241423

Luminaire Tested: **FVS8M-2-LD4-40-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241423  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-5)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS8M-2-LD4-40-1STD-PA187-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
2FT LENGTH, 1-MODULE LED WITH PA187 LENS  
Light Source: (42) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

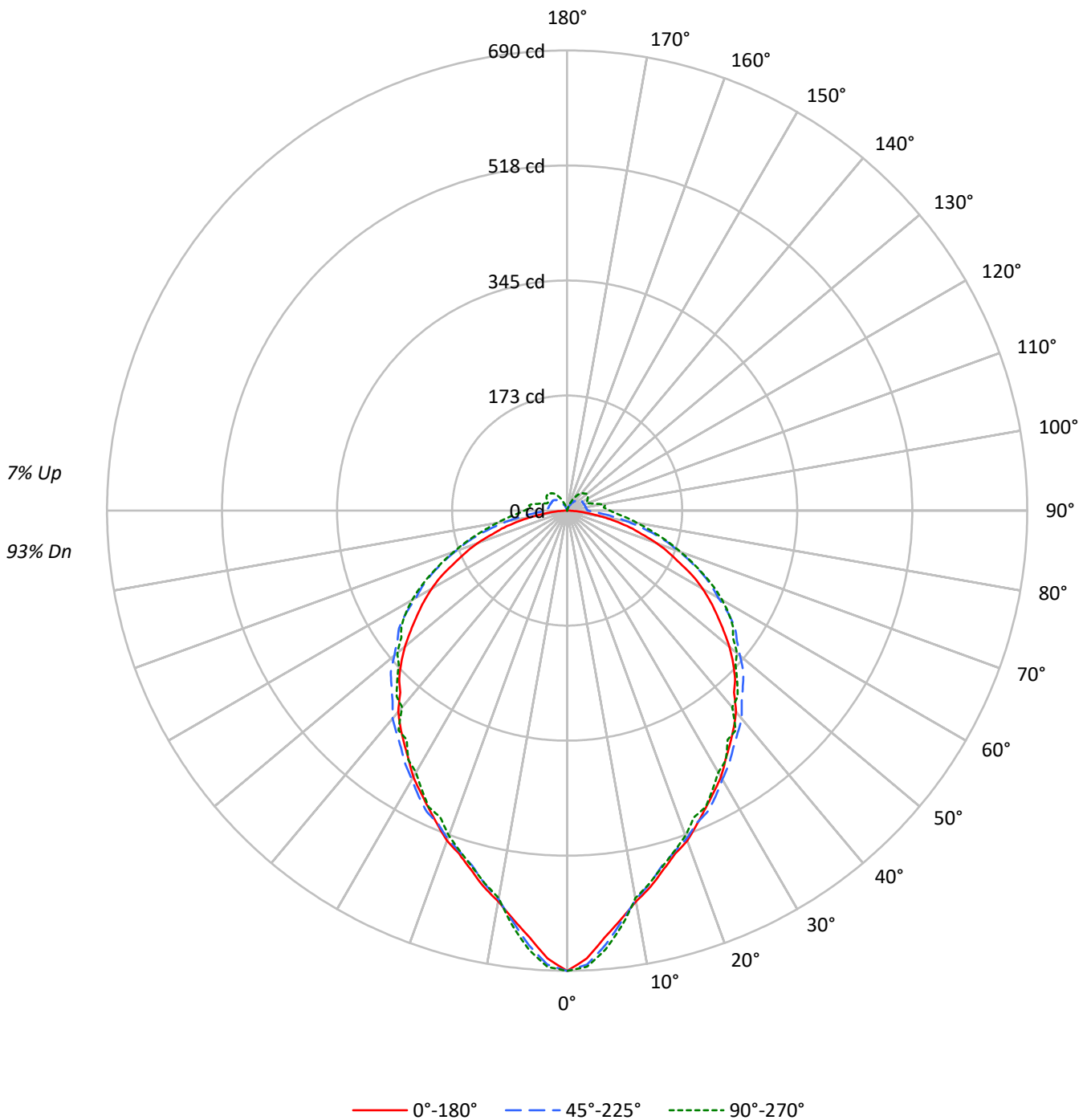
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1797.0 lumens  
Efficiency: N/A  
Efficacy: 104.5 lumens/watt  
Spacing Criteria (0/90/45): 1 / 0.99 / 1.23  
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')  
CIE Type: Direct  
  
Input Watts (W): 17.2  
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: FVS8M-2-LD4-40-1STD-PA187-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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	93
1	106	101	97	93	103	98	94	90	93	89	86	88	85	82	83	81	79	76
2	96	88	81	75	93	85	79	73	81	75	71	76	72	68	72	69	65	63
3	88	77	69	62	85	75	67	61	71	64	59	67	62	57	64	59	55	53
4	80	68	59	52	77	66	58	52	63	56	50	60	54	49	57	51	47	45
5	74	61	52	45	71	59	51	44	56	49	43	53	47	42	51	45	41	39
6	68	55	46	39	66	53	45	39	51	43	38	48	42	37	46	40	36	34
7	63	50	41	35	61	48	40	34	46	39	33	44	38	33	42	36	32	30
8	59	45	37	31	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	28	53	41	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	24	22

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

	0°	45°	90°
0°	6205	6205	6205
5°	5760	5794	5846
10°	5357	5204	5180
15°	5079	4846	4847
20°	4900	4646	4585
25°	4704	4490	4404
30°	4580	4297	4160
35°	4431	4140	3974
40°	4337	4046	3798
45°	4198	3897	3736
50°	4061	3764	3663
55°	3874	3689	3599
60°	3713	3428	3469
65°	3391	3249	3223
70°	3086	2941	2929
75°	2623	2592	2646
80°	1912	2086	2422
85°	983	1541	2316



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.4	3.4
10°-20°	156.4	8.7
20°-30°	227.5	12.7
30°-40°	270.3	15.0
40°-50°	282.4	15.7
50°-60°	265.9	14.8
60°-70°	212.4	11.8
70°-80°	134.2	7.5
80°-90°	58.2	3.2
90°-100°	31.0	1.7
100°-110°	26.4	1.5
110°-120°	22.2	1.2
120°-130°	20.3	1.1
130°-140°	15.6	0.9
140°-150°	9.5	0.5
150°-160°	3.7	0.2
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	444.3	24.7
0°-40°	714.6	39.8
0°-60°	1262.8	70.3
0°-90°	1667.6	92.8
90°-120°	79.6	4.4
90°-150°	124.9	7.0
90°-180°	129.0	7.2
0°-180°	1797.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	690	690	690	690	690	
5°	643	647	654	661	661	60
15°	557	557	551	548	552	157
25°	492	494	498	488	491	227
35°	426	433	434	435	419	267
45°	356	364	373	361	360	274
55°	275	288	308	313	304	246
65°	186	200	223	226	225	186
75°	98	112	135	142	140	102
85°	18	32	52	70	80	22
90°	0	13	31	49	64	1
95°	0	12	30	43	55	0
105°	0	12	28	39	40	0
115°	0	12	26	34	33	0
125°	0	11	26	36	38	0
135°	0	8	22	33	36	0
145°	0	5	16	25	30	0
155°	0	2	8	13	16	0
165°	0	0	2	4	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°	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3
2.5°	672.2	672.2	673.9	673.9	675.5	676.3	676.3	677.2	678.0	679.6	681.3
5°	642.7	643.5	644.3	645.1	646.0	646.8	648.4	650.9	651.7	652.5	654.2
7.5°	618.1	617.2	618.1	616.4	615.6	615.6	615.6	616.4	618.9	621.3	622.2
10°	595.1	596.7	596.7	595.1	593.4	595.1	593.4	593.4	592.6	592.6	591.8
12.5°	577.8	574.6	573.7	573.7	575.4	574.6	573.7	575.4	572.1	572.9	572.9
15°	557.3	556.5	554.0	559.8	559.8	557.3	556.5	553.2	554.0	554.0	550.8
17.5°	539.3	540.9	538.4	538.4	538.4	537.6	539.3	538.4	539.3	536.0	536.0
20°	526.9	522.0	519.6	525.3	526.1	526.1	526.9	528.6	525.3	522.0	523.7
22.5°	508.9	504.8	509.7	513.0	510.5	508.1	510.5	510.5	504.8	508.1	507.2
25°	491.7	488.4	494.1	494.1	494.1	494.1	494.9	494.9	495.8	495.8	498.2
27.5°	476.1	476.1	476.9	478.5	480.2	482.6	481.0	481.0	481.0	479.3	482.6
30°	461.3	458.8	461.3	464.6	466.2	467.9	465.4	464.6	467.0	466.2	465.4
32.5°	442.4	441.6	448.2	444.9	446.5	447.3	451.4	453.1	454.7	453.1	451.4
35°	426.0	426.8	428.5	430.9	434.2	433.4	437.5	435.0	435.8	437.5	434.2
37.5°	410.4	408.8	410.4	416.1	417.0	417.0	417.8	418.6	421.9	422.7	420.2
40°	394.0	389.9	396.4	400.5	397.3	399.7	401.4	406.3	405.5	406.3	407.1
42.5°	370.2	375.1	376.7	376.7	384.1	387.4	386.6	388.2	387.4	386.6	387.4
45°	356.2	358.7	357.9	362.8	365.3	364.4	365.3	368.5	370.2	371.8	372.6
47.5°	337.3	337.3	338.2	343.1	345.6	345.6	346.4	354.6	355.4	357.9	358.7
50°	317.6	317.6	321.8	321.8	326.7	330.8	334.1	334.9	334.1	338.2	338.2
52.5°	295.5	296.3	299.6	302.1	310.3	309.4	311.1	314.4	315.2	320.9	320.9
55°	275.0	279.9	275.8	283.2	284.8	288.1	291.4	295.5	302.9	306.2	307.8
57.5°	255.3	256.1	257.7	262.7	260.2	265.9	271.7	279.1	283.2	285.6	286.5
60°	234.7	231.5	237.2	238.0	246.2	247.1	248.7	253.6	256.9	261.0	261.8
62.5°	212.6	215.0	215.9	216.7	222.4	224.9	227.4	229.8	237.2	241.3	243.8
65°	186.3	190.4	190.4	198.6	199.5	199.5	203.6	211.8	215.9	220.0	223.3
67.5°	165.0	169.1	167.4	172.4	178.1	179.8	182.2	188.8	190.4	197.0	200.3
70°	142.8	145.3	147.7	149.4	153.5	158.4	160.9	165.0	169.9	174.8	178.1
72.5°	117.4	119.0	123.9	127.2	132.1	134.6	137.9	142.0	147.7	154.3	157.6
75°	97.7	96.9	100.1	104.2	110.8	111.6	112.4	120.7	125.6	130.5	134.6
77.5°	74.7	76.3	78.8	82.9	87.0	89.5	91.9	98.5	104.2	107.5	110.8
80°	53.4	55.0	57.5	60.7	65.7	68.1	71.4	77.2	81.3	86.2	89.5
82.5°	32.8	35.3	37.8	41.9	45.1	48.4	50.9	56.6	60.7	66.5	69.8
85°	18.1	18.1	21.3	25.4	28.7	32.0	33.7	38.6	42.7	47.6	51.7
87.5°	5.7	6.6	9.0	13.1	17.2	18.9	21.3	25.4	29.5	34.5	38.6
90°	0.0	0.8	4.1	7.4	10.7	13.1	14.8	18.9	23.0	27.1	31.2
92.5°	0.0	0.8	3.3	6.6	9.8	12.3	14.0	18.1	22.2	26.3	29.5
95°	0.0	0.8	3.3	6.6	9.8	12.3	14.0	18.1	22.2	25.4	29.5
97.5°	0.0	0.8	3.3	6.6	10.7	12.3	14.0	18.1	22.2	25.4	28.7
100°	0.0	0.8	3.3	6.6	9.8	12.3	14.0	18.1	22.2	25.4	27.9
102.5°	0.0	0.8	3.3	6.6	9.8	12.3	14.0	18.1	21.3	24.6	27.9
105°	0.0	0.8	3.3	6.6	9.8	12.3	14.0	17.2	21.3	24.6	27.9
107.5°	0.0	0.8	3.3	6.6	9.8	12.3	14.0	17.2	21.3	24.6	27.1
110°	0.0	0.8	3.3	6.6	9.8	12.3	14.0	17.2	21.3	23.8	27.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.8	3.3	6.6	9.8	12.3	14.0	17.2	20.5	23.8	27.1
115°	0.0	0.8	3.3	6.6	9.8	11.5	14.0	17.2	20.5	23.8	26.3
117.5°	0.0	0.8	3.3	5.7	9.8	11.5	14.0	17.2	20.5	23.8	26.3
120°	0.0	0.8	2.5	5.7	9.8	11.5	13.1	17.2	20.5	23.8	26.3
122.5°	0.0	0.8	2.5	5.7	9.0	11.5	13.1	16.4	19.7	23.0	26.3
125°	0.0	0.8	2.5	5.7	9.0	10.7	12.3	16.4	19.7	23.0	26.3
127.5°	0.0	0.0	2.5	4.9	8.2	10.7	12.3	15.6	18.9	22.2	25.4
130°	0.0	0.0	1.6	4.9	8.2	9.8	11.5	14.8	18.1	21.3	24.6
132.5°	0.0	0.0	1.6	4.1	7.4	9.0	10.7	14.0	17.2	20.5	23.0
135°	0.0	0.0	1.6	4.1	6.6	8.2	9.8	13.1	15.6	18.9	22.2
137.5°	0.0	0.0	1.6	3.3	5.7	7.4	9.0	11.5	14.8	17.2	20.5
140°	0.0	0.0	0.8	3.3	4.9	6.6	8.2	10.7	13.1	16.4	18.9
142.5°	0.0	0.0	0.8	2.5	4.9	5.7	7.4	9.8	12.3	14.8	17.2
145°	0.0	0.0	0.8	2.5	4.1	4.9	5.7	8.2	10.7	13.1	15.6
147.5°	0.0	0.0	0.8	1.6	3.3	4.1	4.9	7.4	9.8	11.5	14.0
150°	0.0	0.0	0.0	1.6	2.5	3.3	4.1	5.7	8.2	9.8	11.5
152.5°	0.0	0.0	0.0	0.8	1.6	2.5	3.3	4.9	6.6	8.2	9.8
155°	0.0	0.0	0.0	0.8	1.6	1.6	2.5	4.1	4.9	6.6	8.2
157.5°	0.0	0.0	0.0	0.8	0.8	1.6	1.6	2.5	4.1	4.9	5.7
160°	0.0	0.0	0.0	0.0	0.8	0.8	1.6	1.6	2.5	3.3	4.1
162.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.6	2.5	3.3
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.6	1.6
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8
170°	0.8	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°	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3
2.5°	682.1	682.9	683.7	684.5	683.7	683.7	685.4	685.4	685.4	684.5
5°	655.0	655.8	657.5	659.9	660.7	660.7	661.6	661.6	661.6	660.7
7.5°	621.3	621.3	622.2	621.3	623.0	623.8	626.3	627.1	627.9	627.9
10°	591.8	592.6	592.6	591.8	587.7	590.1	587.7	586.9	587.7	590.1
12.5°	568.8	566.3	565.5	570.4	572.1	574.6	575.4	572.1	569.6	572.1
15°	549.1	551.6	553.2	549.1	547.5	546.6	547.5	549.9	552.4	552.4
17.5°	536.8	532.7	537.6	545.8	547.5	546.6	544.2	538.4	534.3	535.2
20°	523.7	530.2	530.2	520.4	514.6	513.8	513.8	517.9	517.9	518.7
22.5°	513.0	507.2	504.8	509.7	513.8	516.3	508.1	504.0	499.9	497.4
25°	496.6	491.7	500.7	491.7	487.5	485.1	485.1	490.0	492.5	490.8
27.5°	476.9	484.3	472.8	479.3	484.3	486.7	485.1	478.5	472.0	472.0
30°	468.7	459.6	469.5	471.1	466.2	458.0	450.6	450.6	450.6	453.1
32.5°	449.0	454.7	452.3	439.1	441.6	444.9	448.2	446.5	443.2	443.2
35°	435.0	438.3	426.8	436.7	435.0	431.7	423.5	418.6	418.6	419.4
37.5°	425.2	412.9	423.5	413.7	408.8	408.8	412.9	417.8	416.1	415.3
40°	404.6	405.5	399.7	398.9	404.6	407.1	397.3	391.5	387.4	385.0
42.5°	386.6	388.2	385.8	391.5	384.1	377.6	375.1	377.6	379.2	378.4
45°	371.8	367.7	375.1	362.0	361.1	363.6	366.9	363.6	361.1	360.3
47.5°	357.9	359.5	348.0	351.3	352.9	351.3	343.1	340.6	343.1	342.3
50°	337.3	339.8	339.8	336.5	331.6	330.0	333.2	333.2	330.8	332.4
52.5°	325.9	321.8	326.7	322.6	325.9	325.0	323.4	316.0	312.7	313.5
55°	311.1	312.7	306.2	312.7	312.7	307.8	302.1	305.3	304.5	303.7
57.5°	288.1	293.8	294.7	288.1	285.6	287.3	290.6	289.7	287.3	287.3
60°	265.9	267.6	271.7	268.4	269.2	270.0	268.4	267.6	269.2	268.4
62.5°	247.1	247.1	243.8	250.3	251.2	247.1	247.9	248.7	248.7	247.9
65°	225.7	228.2	226.5	226.5	225.7	227.4	227.4	225.7	224.1	224.9
67.5°	203.6	203.6	209.3	206.0	206.8	206.8	202.7	201.9	202.7	202.7
70°	180.6	181.4	183.0	185.5	184.7	182.2	181.4	181.4	181.4	180.6
72.5°	159.2	160.9	162.5	162.5	161.7	160.9	161.7	160.1	160.1	160.9
75°	137.9	141.2	141.2	141.2	142.0	143.6	142.0	142.0	140.4	140.4
77.5°	114.9	118.2	119.8	120.7	121.5	123.1	122.3	123.1	121.5	122.3
80°	93.6	96.9	99.3	101.8	102.6	104.2	104.2	105.9	105.9	106.7
82.5°	73.9	78.0	81.3	83.7	85.4	87.0	89.5	91.1	92.7	93.6
85°	56.6	59.9	64.0	68.1	69.8	72.2	76.3	78.0	78.8	80.4
87.5°	42.7	46.8	51.7	55.8	58.3	60.7	62.4	64.8	68.1	70.6
90°	35.3	39.4	43.5	47.6	49.2	50.1	52.5	55.8	60.7	64.0
92.5°	33.7	37.8	41.0	43.5	44.3	46.0	48.4	51.7	55.8	59.1
95°	32.8	36.9	39.4	41.9	42.7	44.3	46.8	49.2	52.5	55.0
97.5°	32.0	35.3	38.6	41.0	42.7	43.5	46.8	50.9	55.0	57.5
100°	32.0	34.5	37.8	41.0	41.9	43.5	47.6	51.7	54.2	54.2
102.5°	31.2	34.5	36.9	40.2	41.9	43.5	46.0	47.6	46.0	46.0
105°	30.4	33.7	36.1	38.6	39.4	40.2	41.0	41.0	40.2	40.2
107.5°	30.4	32.8	35.3	36.1	36.9	36.9	36.9	36.1	35.3	35.3
110°	29.5	32.0	33.7	34.5	34.5	34.5	34.5	33.7	32.8	32.0





TEST NUMBER: P241423

CATALOG NUMBER: FVS8M-2-LD4-40-1STD-PA187-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	29.5	31.2	32.8	32.8	33.7	33.7	33.7	32.8	32.0	31.2
115°	28.7	31.2	32.0	32.8	33.7	33.7	33.7	33.7	32.8	32.8
117.5°	28.7	31.2	32.8	33.7	34.5	34.5	35.3	35.3	34.5	34.5
120°	28.7	31.2	33.7	34.5	35.3	35.3	36.1	36.1	36.1	35.3
122.5°	28.7	31.2	33.7	35.3	36.1	36.1	36.9	36.9	36.9	36.9
125°	28.7	31.2	33.7	35.3	36.1	36.1	36.9	37.8	37.8	37.8
127.5°	27.9	31.2	32.8	34.5	35.3	36.1	36.9	37.8	37.8	37.8
130°	27.1	29.5	32.0	33.7	34.5	35.3	36.1	36.9	37.8	38.6
132.5°	26.3	28.7	31.2	32.8	33.7	34.5	36.1	36.9	36.9	37.8
135°	24.6	27.1	29.5	32.0	32.8	33.7	34.5	36.1	36.1	36.1
137.5°	23.0	25.4	27.9	30.4	31.2	32.0	33.7	34.5	34.5	35.3
140°	21.3	23.8	26.3	27.9	29.5	30.4	32.0	32.8	33.7	33.7
142.5°	19.7	22.2	24.6	26.3	27.1	28.7	29.5	31.2	32.0	32.0
145°	18.1	20.5	22.2	24.6	25.4	26.3	27.1	28.7	29.5	29.5
147.5°	15.6	18.1	19.7	21.3	22.2	23.0	24.6	25.4	26.3	26.3
150°	14.0	15.6	17.2	18.9	19.7	20.5	21.3	22.2	23.0	23.0
152.5°	11.5	13.1	14.8	15.6	16.4	17.2	18.1	18.9	18.9	19.7
155°	9.0	10.7	11.5	13.1	13.1	14.0	14.8	15.6	15.6	15.6
157.5°	7.4	8.2	9.8	10.7	10.7	11.5	11.5	12.3	12.3	12.3
160°	4.9	6.6	7.4	7.4	8.2	8.2	9.0	9.0	9.0	9.8
162.5°	3.3	4.1	4.9	5.7	5.7	5.7	6.6	6.6	6.6	6.6
165°	2.5	2.5	3.3	3.3	4.1	4.1	4.1	4.1	4.1	4.1
167.5°	0.8	1.6	1.6	1.6	2.5	2.5	2.5	2.5	2.5	2.5
170°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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)