

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: P241419

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241419  
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-LD4-40-1LO-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

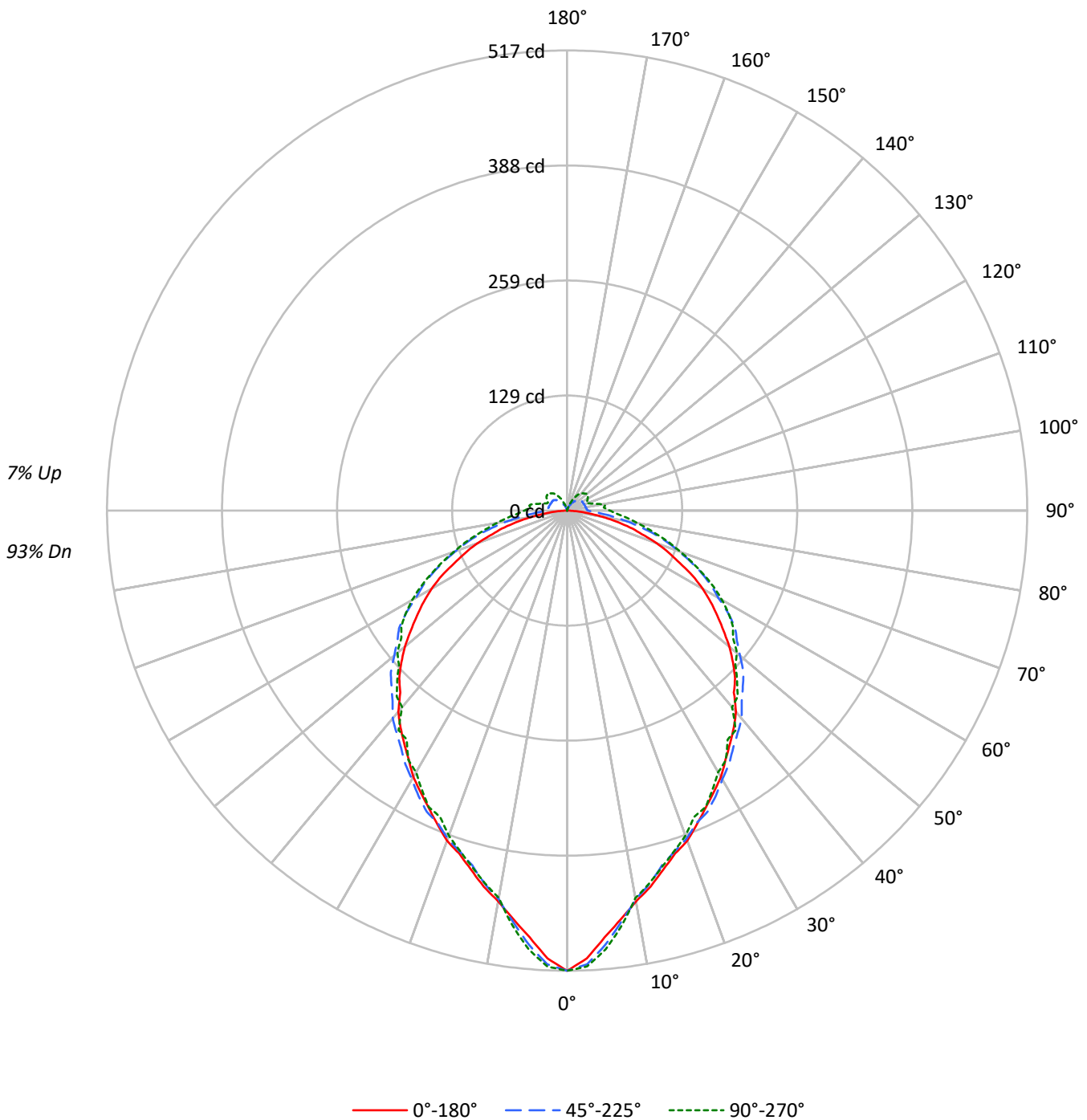
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1346.0 lumens  
Efficiency: N/A  
Efficacy: 108.5 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): 12.4  
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: P241419

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

### Luminous Intensity Polar Plot





TEST NUMBER: P241419

CATALOG NUMBER: FVS8M-2-LD4-40-1LO-PA187-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	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°	4647	4647	4647
5°	4314	4340	4379
10°	4012	3898	3880
15°	3804	3629	3631
20°	3670	3479	3434
25°	3524	3364	3299
30°	3430	3218	3116
35°	3319	3101	2977
40°	3248	3030	2844
45°	3144	2919	2799
50°	3042	2819	2744
55°	2902	2763	2696
60°	2782	2568	2598
65°	2541	2433	2415
70°	2312	2203	2194
75°	1965	1941	1981
80°	1432	1562	1814
85°	733	1153	1734



TEST NUMBER: P241419

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

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.2	3.4
10°-20°	117.2	8.7
20°-30°	170.4	12.7
30°-40°	202.5	15.0
40°-50°	211.5	15.7
50°-60°	199.1	14.8
60°-70°	159.1	11.8
70°-80°	100.5	7.5
80°-90°	43.6	3.2
90°-100°	23.2	1.7
100°-110°	19.8	1.5
110°-120°	16.6	1.2
120°-130°	15.2	1.1
130°-140°	11.7	0.9
140°-150°	7.1	0.5
150°-160°	2.8	0.2
160°-170°	0.5	0.0
170°-180°	0.0	0.0
0°-30°	332.8	24.7
0°-40°	535.2	39.8
0°-60°	945.9	70.3
0°-90°	1249.1	92.8
90°-120°	59.6	4.4
90°-150°	93.6	7.0
90°-180°	97.0	7.2
0°-180°	1346.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	517	517	517	517	517	
5°	481	484	490	495	495	45
15°	417	417	412	410	414	118
25°	368	370	373	365	368	170
35°	319	325	325	326	314	200
45°	267	273	279	270	270	205
55°	206	216	230	234	228	185
65°	140	149	167	169	168	139
75°	73	84	101	106	105	77
85°	14	24	39	52	60	16
90°	0	10	23	37	48	1
95°	0	9	22	32	41	0
105°	0	9	21	30	30	0
115°	0	9	20	25	25	0
125°	0	8	20	27	28	0
135°	0	6	17	25	27	0
145°	0	4	12	19	22	0
155°	0	1	6	10	12	0
165°	0	0	1	3	3	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241419

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

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	517.0	517.0	517.0	517.0	517.0	517.0	517.0	517.0	517.0	517.0	517.0
2.5°	503.5	503.5	504.7	504.7	506.0	506.6	506.6	507.2	507.8	509.0	510.3
5°	481.4	482.0	482.6	483.2	483.8	484.5	485.7	487.5	488.1	488.8	490.0
7.5°	462.9	462.3	462.9	461.7	461.1	461.1	461.1	461.7	463.6	465.4	466.0
10°	445.7	447.0	447.0	445.7	444.5	445.7	444.5	444.5	443.9	443.9	443.3
12.5°	432.8	430.4	429.7	429.7	431.0	430.4	429.7	431.0	428.5	429.1	429.1
15°	417.4	416.8	415.0	419.3	419.3	417.4	416.8	414.4	415.0	415.0	412.5
17.5°	403.9	405.1	403.3	403.3	403.3	402.7	403.9	403.3	403.9	401.5	401.5
20°	394.7	391.0	389.2	393.5	394.1	394.1	394.7	395.9	393.5	391.0	392.2
22.5°	381.2	378.1	381.8	384.2	382.4	380.6	382.4	382.4	378.1	380.6	379.9
25°	368.3	365.8	370.1	370.1	370.1	370.1	370.7	370.7	371.3	371.3	373.2
27.5°	356.6	356.6	357.2	358.4	359.7	361.5	360.3	360.3	360.3	359.0	361.5
30°	345.5	343.7	345.5	348.0	349.2	350.4	348.6	348.0	349.8	349.2	348.6
32.5°	331.4	330.8	335.7	333.2	334.4	335.1	338.1	339.4	340.6	339.4	338.1
35°	319.1	319.7	320.9	322.8	325.2	324.6	327.7	325.8	326.5	327.7	325.2
37.5°	307.4	306.2	307.4	311.7	312.3	312.3	312.9	313.5	316.0	316.6	314.8
40°	295.1	292.0	296.9	300.0	297.6	299.4	300.6	304.3	303.7	304.3	304.9
42.5°	277.3	281.0	282.2	282.2	287.7	290.2	289.6	290.8	290.2	289.6	290.2
45°	266.8	268.7	268.1	271.7	273.6	273.0	273.6	276.0	277.3	278.5	279.1
47.5°	252.7	252.7	253.3	257.0	258.8	258.8	259.4	265.6	266.2	268.1	268.7
50°	237.9	237.9	241.0	241.0	244.7	247.8	250.2	250.8	250.2	253.3	253.3
52.5°	221.3	221.9	224.4	226.2	232.4	231.8	233.0	235.5	236.1	240.4	240.4
55°	206.0	209.6	206.6	212.1	213.3	215.8	218.3	221.3	226.9	229.3	230.5
57.5°	191.2	191.8	193.0	196.7	194.9	199.2	203.5	209.0	212.1	213.9	214.6
60°	175.8	173.4	177.7	178.3	184.4	185.1	186.3	190.0	192.4	195.5	196.1
62.5°	159.2	161.1	161.7	162.3	166.6	168.5	170.3	172.1	177.7	180.7	182.6
65°	139.6	142.6	142.6	148.8	149.4	149.4	152.5	158.6	161.7	164.8	167.2
67.5°	123.6	126.6	125.4	129.1	133.4	134.6	136.5	141.4	142.6	147.6	150.0
70°	107.0	108.8	110.7	111.9	115.0	118.7	120.5	123.6	127.3	131.0	133.4
72.5°	87.9	89.1	92.8	95.3	99.0	100.8	103.3	106.4	110.7	115.6	118.0
75°	73.2	72.5	75.0	78.1	83.0	83.6	84.2	90.4	94.1	97.8	100.8
77.5°	55.9	57.2	59.0	62.1	65.2	67.0	68.9	73.8	78.1	80.5	83.0
80°	40.0	41.2	43.0	45.5	49.2	51.0	53.5	57.8	60.9	64.6	67.0
82.5°	24.6	26.4	28.3	31.4	33.8	36.3	38.1	42.4	45.5	49.8	52.3
85°	13.5	13.5	16.0	19.1	21.5	24.0	25.2	28.9	32.0	35.7	38.7
87.5°	4.3	4.9	6.8	9.8	12.9	14.1	16.0	19.1	22.1	25.8	28.9
90°	0.0	0.6	3.1	5.5	8.0	9.8	11.1	14.1	17.2	20.3	23.4
92.5°	0.0	0.6	2.5	4.9	7.4	9.2	10.5	13.5	16.6	19.7	22.1
95°	0.0	0.6	2.5	4.9	7.4	9.2	10.5	13.5	16.6	19.1	22.1
97.5°	0.0	0.6	2.5	4.9	8.0	9.2	10.5	13.5	16.6	19.1	21.5
100°	0.0	0.6	2.5	4.9	7.4	9.2	10.5	13.5	16.6	19.1	20.9
102.5°	0.0	0.6	2.5	4.9	7.4	9.2	10.5	13.5	16.0	18.4	20.9
105°	0.0	0.6	2.5	4.9	7.4	9.2	10.5	12.9	16.0	18.4	20.9
107.5°	0.0	0.6	2.5	4.9	7.4	9.2	10.5	12.9	16.0	18.4	20.3
110°	0.0	0.6	2.5	4.9	7.4	9.2	10.5	12.9	16.0	17.8	20.3



TEST NUMBER: P241419

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

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.6	2.5	4.9	7.4	9.2	10.5	12.9	15.4	17.8	20.3
115°	0.0	0.6	2.5	4.9	7.4	8.6	10.5	12.9	15.4	17.8	19.7
117.5°	0.0	0.6	2.5	4.3	7.4	8.6	10.5	12.9	15.4	17.8	19.7
120°	0.0	0.6	1.8	4.3	7.4	8.6	9.8	12.9	15.4	17.8	19.7
122.5°	0.0	0.6	1.8	4.3	6.8	8.6	9.8	12.3	14.8	17.2	19.7
125°	0.0	0.6	1.8	4.3	6.8	8.0	9.2	12.3	14.8	17.2	19.7
127.5°	0.0	0.0	1.8	3.7	6.1	8.0	9.2	11.7	14.1	16.6	19.1
130°	0.0	0.0	1.2	3.7	6.1	7.4	8.6	11.1	13.5	16.0	18.4
132.5°	0.0	0.0	1.2	3.1	5.5	6.8	8.0	10.5	12.9	15.4	17.2
135°	0.0	0.0	1.2	3.1	4.9	6.1	7.4	9.8	11.7	14.1	16.6
137.5°	0.0	0.0	1.2	2.5	4.3	5.5	6.8	8.6	11.1	12.9	15.4
140°	0.0	0.0	0.6	2.5	3.7	4.9	6.1	8.0	9.8	12.3	14.1
142.5°	0.0	0.0	0.6	1.8	3.7	4.3	5.5	7.4	9.2	11.1	12.9
145°	0.0	0.0	0.6	1.8	3.1	3.7	4.3	6.1	8.0	9.8	11.7
147.5°	0.0	0.0	0.6	1.2	2.5	3.1	3.7	5.5	7.4	8.6	10.5
150°	0.0	0.0	0.0	1.2	1.8	2.5	3.1	4.3	6.1	7.4	8.6
152.5°	0.0	0.0	0.0	0.6	1.2	1.8	2.5	3.7	4.9	6.1	7.4
155°	0.0	0.0	0.0	0.6	1.2	1.2	1.8	3.1	3.7	4.9	6.1
157.5°	0.0	0.0	0.0	0.6	0.6	1.2	1.2	1.8	3.1	3.7	4.3
160°	0.0	0.0	0.0	0.0	0.6	0.6	1.2	1.2	1.8	2.5	3.1
162.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.2	1.8	2.5
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	1.2	1.2
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6
170°	0.6	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: P241419

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

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	517.0	517.0	517.0	517.0	517.0	517.0	517.0	517.0	517.0	517.0
2.5°	510.9	511.5	512.1	512.7	512.1	512.1	513.4	513.4	513.4	512.7
5°	490.6	491.2	492.4	494.3	494.9	494.9	495.5	495.5	495.5	494.9
7.5°	465.4	465.4	466.0	465.4	466.6	467.2	469.1	469.7	470.3	470.3
10°	443.3	443.9	443.9	443.3	440.2	442.0	440.2	439.6	440.2	442.0
12.5°	426.1	424.2	423.6	427.3	428.5	430.4	431.0	428.5	426.7	428.5
15°	411.3	413.1	414.4	411.3	410.1	409.5	410.1	411.9	413.8	413.8
17.5°	402.1	399.0	402.7	408.8	410.1	409.5	407.6	403.3	400.2	400.8
20°	392.2	397.2	397.2	389.8	385.5	384.9	384.9	387.9	387.9	388.5
22.5°	384.2	379.9	378.1	381.8	384.9	386.7	380.6	377.5	374.4	372.6
25°	372.0	368.3	375.0	368.3	365.2	363.3	363.3	367.0	368.9	367.6
27.5°	357.2	362.7	354.1	359.0	362.7	364.6	363.3	358.4	353.5	353.5
30°	351.0	344.3	351.7	352.9	349.2	343.1	337.5	337.5	337.5	339.4
32.5°	336.3	340.6	338.8	328.9	330.8	333.2	335.7	334.4	332.0	332.0
35°	325.8	328.3	319.7	327.1	325.8	323.4	317.2	313.5	313.5	314.2
37.5°	318.5	309.2	317.2	309.9	306.2	306.2	309.2	312.9	311.7	311.1
40°	303.1	303.7	299.4	298.8	303.1	304.9	297.6	293.3	290.2	288.3
42.5°	289.6	290.8	289.0	293.3	287.7	282.8	281.0	282.8	284.0	283.4
45°	278.5	275.4	281.0	271.1	270.5	272.4	274.8	272.4	270.5	269.9
47.5°	268.1	269.3	260.7	263.1	264.4	263.1	257.0	255.1	257.0	256.4
50°	252.7	254.5	254.5	252.1	248.4	247.1	249.6	249.6	247.8	249.0
52.5°	244.1	241.0	244.7	241.6	244.1	243.5	242.2	236.7	234.2	234.9
55°	233.0	234.2	229.3	234.2	234.2	230.5	226.2	228.7	228.1	227.5
57.5°	215.8	220.1	220.7	215.8	213.9	215.2	217.6	217.0	215.2	215.2
60°	199.2	200.4	203.5	201.0	201.7	202.3	201.0	200.4	201.7	201.0
62.5°	185.1	185.1	182.6	187.5	188.1	185.1	185.7	186.3	186.3	185.7
65°	169.1	170.9	169.7	169.7	169.1	170.3	170.3	169.1	167.8	168.5
67.5°	152.5	152.5	156.8	154.3	154.9	154.9	151.9	151.2	151.9	151.9
70°	135.3	135.9	137.1	138.9	138.3	136.5	135.9	135.9	135.9	135.3
72.5°	119.3	120.5	121.7	121.7	121.1	120.5	121.1	119.9	119.9	120.5
75°	103.3	105.7	105.7	105.7	106.4	107.6	106.4	106.4	105.1	105.1
77.5°	86.1	88.5	89.8	90.4	91.0	92.2	91.6	92.2	91.0	91.6
80°	70.1	72.5	74.4	76.2	76.8	78.1	78.1	79.3	79.3	79.9
82.5°	55.3	58.4	60.9	62.7	63.9	65.2	67.0	68.2	69.5	70.1
85°	42.4	44.9	48.0	51.0	52.3	54.1	57.2	58.4	59.0	60.2
87.5°	32.0	35.0	38.7	41.8	43.7	45.5	46.7	48.6	51.0	52.9
90°	26.4	29.5	32.6	35.7	36.9	37.5	39.3	41.8	45.5	48.0
92.5°	25.2	28.3	30.7	32.6	33.2	34.4	36.3	38.7	41.8	44.3
95°	24.6	27.7	29.5	31.4	32.0	33.2	35.0	36.9	39.3	41.2
97.5°	24.0	26.4	28.9	30.7	32.0	32.6	35.0	38.1	41.2	43.0
100°	24.0	25.8	28.3	30.7	31.4	32.6	35.7	38.7	40.6	40.6
102.5°	23.4	25.8	27.7	30.1	31.4	32.6	34.4	35.7	34.4	34.4
105°	22.7	25.2	27.1	28.9	29.5	30.1	30.7	30.7	30.1	30.1
107.5°	22.7	24.6	26.4	27.1	27.7	27.7	27.7	27.1	26.4	26.4
110°	22.1	24.0	25.2	25.8	25.8	25.8	25.8	25.2	24.6	24.0





TEST NUMBER: P241419

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

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	22.1	23.4	24.6	24.6	25.2	25.2	25.2	24.6	24.0	23.4
115°	21.5	23.4	24.0	24.6	25.2	25.2	25.2	25.2	24.6	24.6
117.5°	21.5	23.4	24.6	25.2	25.8	25.8	26.4	26.4	25.8	25.8
120°	21.5	23.4	25.2	25.8	26.4	26.4	27.1	27.1	27.1	26.4
122.5°	21.5	23.4	25.2	26.4	27.1	27.1	27.7	27.7	27.7	27.7
125°	21.5	23.4	25.2	26.4	27.1	27.1	27.7	28.3	28.3	28.3
127.5°	20.9	23.4	24.6	25.8	26.4	27.1	27.7	28.3	28.3	28.3
130°	20.3	22.1	24.0	25.2	25.8	26.4	27.1	27.7	28.3	28.9
132.5°	19.7	21.5	23.4	24.6	25.2	25.8	27.1	27.7	27.7	28.3
135°	18.4	20.3	22.1	24.0	24.6	25.2	25.8	27.1	27.1	27.1
137.5°	17.2	19.1	20.9	22.7	23.4	24.0	25.2	25.8	25.8	26.4
140°	16.0	17.8	19.7	20.9	22.1	22.7	24.0	24.6	25.2	25.2
142.5°	14.8	16.6	18.4	19.7	20.3	21.5	22.1	23.4	24.0	24.0
145°	13.5	15.4	16.6	18.4	19.1	19.7	20.3	21.5	22.1	22.1
147.5°	11.7	13.5	14.8	16.0	16.6	17.2	18.4	19.1	19.7	19.7
150°	10.5	11.7	12.9	14.1	14.8	15.4	16.0	16.6	17.2	17.2
152.5°	8.6	9.8	11.1	11.7	12.3	12.9	13.5	14.1	14.1	14.8
155°	6.8	8.0	8.6	9.8	9.8	10.5	11.1	11.7	11.7	11.7
157.5°	5.5	6.1	7.4	8.0	8.0	8.6	8.6	9.2	9.2	9.2
160°	3.7	4.9	5.5	5.5	6.1	6.1	6.8	6.8	6.8	7.4
162.5°	2.5	3.1	3.7	4.3	4.3	4.3	4.9	4.9	4.9	4.9
165°	1.8	1.8	2.5	2.5	3.1	3.1	3.1	3.1	3.1	3.1
167.5°	0.6	1.2	1.2	1.2	1.8	1.8	1.8	1.8	1.8	1.8
170°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)