

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: P241426

Luminaire Tested: **FVS8M-2-LD4-35-1HI-PA187-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241426  
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-LD4-35-1HI-PA187-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
2FT LENGTH, 1-MODULE LED WITH PA187 LENS  
Light Source: (42) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

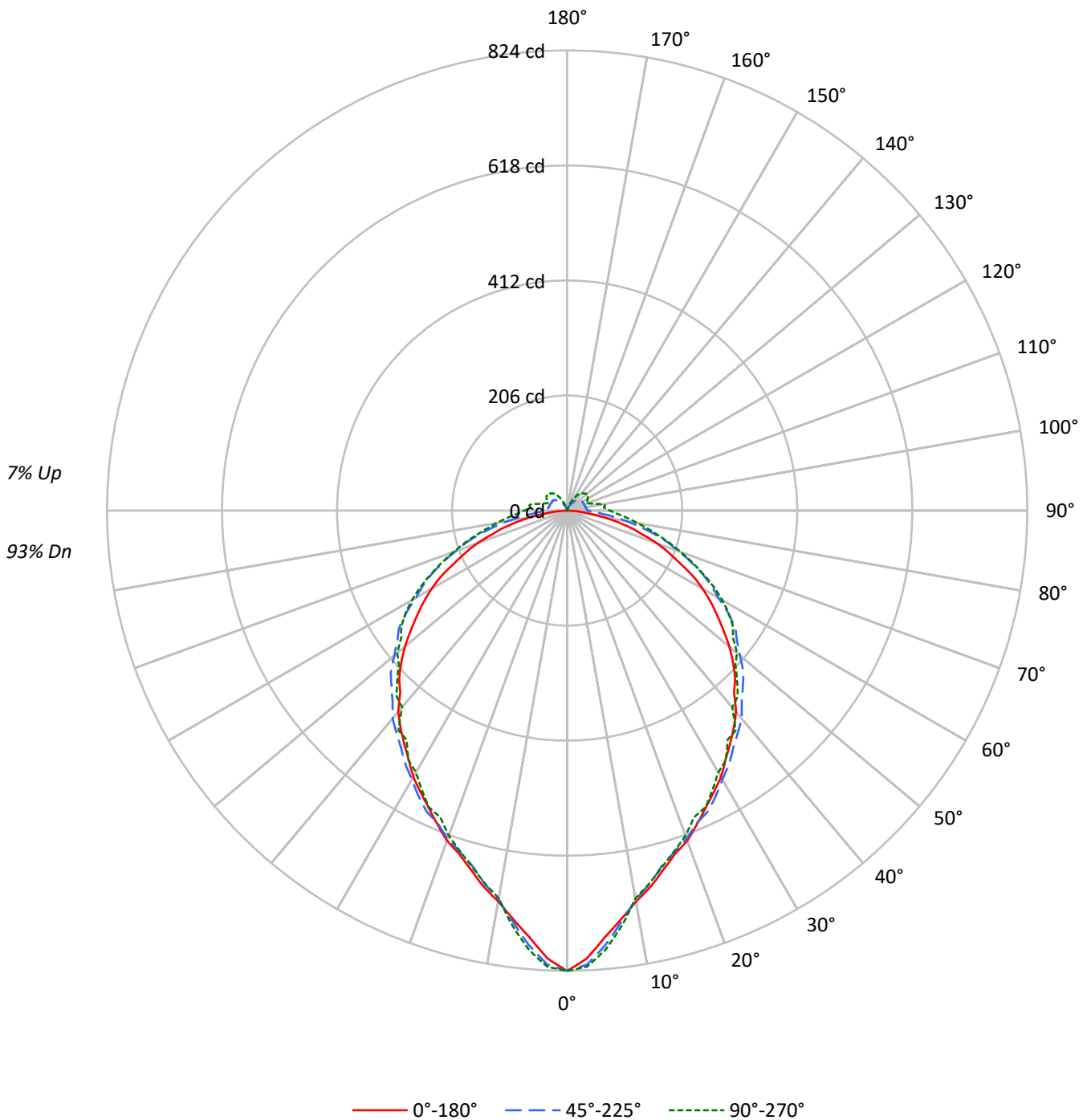
Lumens per Lamp: N/A  
Luminaire Lumens: 2146.0 lumens  
Efficiency: N/A  
Efficacy: 96.2 lumens/watt  
Spacing Criteria (0/90/45): 1 / 0.99 / 1.23  
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')  
CIE Type: Direct

Input Watts (W): 22.3  
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-LD4-35-1HI-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°	7409	7409	7409
5°	6878	6919	6982
10°	6397	6214	6187
15°	6066	5787	5789
20°	5852	5548	5476
25°	5617	5363	5260
30°	5470	5131	4969
35°	5291	4944	4746
40°	5179	4832	4535
45°	5013	4655	4462
50°	4850	4494	4374
55°	4627	4406	4298
60°	4435	4095	4142
65°	4049	3879	3849
70°	3687	3512	3497
75°	3131	3097	3159
80°	2280	2489	2892
85°	1173	1842	2768



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.1	3.4
10°-20°	186.8	8.7
20°-30°	271.7	12.7
30°-40°	322.8	15.0
40°-50°	337.3	15.7
50°-60°	317.5	14.8
60°-70°	253.6	11.8
70°-80°	160.2	7.5
80°-90°	69.6	3.2
90°-100°	37.1	1.7
100°-110°	31.5	1.5
110°-120°	26.4	1.2
120°-130°	24.2	1.1
130°-140°	18.6	0.9
140°-150°	11.3	0.5
150°-160°	4.5	0.2
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	530.6	24.7
0°-40°	853.3	39.8
0°-60°	1508.1	70.3
0°-90°	1991.5	92.8
90°-120°	95.1	4.4
90°-150°	149.2	7.0
90°-180°	154.0	7.2
0°-180°	2146.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	824	824	824	824	824	
5°	768	772	781	789	789	72
15°	666	666	658	654	660	188
25°	587	590	595	582	586	271
35°	509	518	518	520	501	319
45°	425	435	445	431	430	327
55°	328	344	368	374	363	294
65°	222	238	267	270	269	222
75°	117	133	161	170	168	122
85°	22	38	62	83	96	26
90°	0	16	37	59	76	1
95°	0	15	35	51	66	0
105°	0	15	33	47	48	0
115°	0	14	31	40	39	0
125°	0	13	31	43	45	0
135°	0	10	26	39	43	0
145°	0	6	19	30	35	0
155°	0	2	10	16	19	0
165°	0	0	2	5	5	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°	824.3	824.3	824.3	824.3	824.3	824.3	824.3	824.3	824.3	824.3	824.3
2.5°	802.8	802.8	804.7	804.7	806.7	807.7	807.7	808.7	809.6	811.6	813.6
5°	767.5	768.5	769.5	770.4	771.4	772.4	774.4	777.3	778.3	779.3	781.2
7.5°	738.1	737.1	738.1	736.1	735.1	735.1	735.1	736.1	739.1	742.0	743.0
10°	710.6	712.6	712.6	710.6	708.7	710.6	708.7	708.7	707.7	707.7	706.7
12.5°	690.1	686.1	685.2	685.2	687.1	686.1	685.2	687.1	683.2	684.2	684.2
15°	665.6	664.6	661.6	668.5	668.5	665.6	664.6	660.7	661.6	661.6	657.7
17.5°	644.0	646.0	643.0	643.0	643.0	642.0	644.0	643.0	644.0	640.1	640.1
20°	629.3	623.4	620.5	627.3	628.3	628.3	629.3	631.2	627.3	623.4	625.4
22.5°	607.7	602.8	608.7	612.6	609.7	606.7	609.7	609.7	602.8	606.7	605.8
25°	587.1	583.2	590.1	590.1	590.1	590.1	591.1	591.1	592.0	592.0	595.0
27.5°	568.5	568.5	569.5	571.5	573.4	576.4	574.4	574.4	574.4	572.4	576.4
30°	550.9	547.9	550.9	554.8	556.8	558.7	555.8	554.8	557.7	556.8	555.8
32.5°	528.3	527.3	535.2	531.3	533.2	534.2	539.1	541.1	543.0	541.1	539.1
35°	508.7	509.7	511.7	514.6	518.5	517.5	522.4	519.5	520.5	522.4	518.5
37.5°	490.1	488.1	490.1	497.0	497.9	497.9	498.9	499.9	503.8	504.8	501.9
40°	470.5	465.6	473.4	478.3	474.4	477.4	479.3	485.2	484.2	485.2	486.2
42.5°	442.1	448.0	449.9	449.9	458.7	462.7	461.7	463.6	462.7	461.7	462.7
45°	425.4	428.3	427.4	433.2	436.2	435.2	436.2	440.1	442.1	444.0	445.0
47.5°	402.9	402.9	403.8	409.7	412.7	412.7	413.6	423.4	424.4	427.4	428.3
50°	379.3	379.3	384.2	384.2	390.1	395.0	398.9	399.9	398.9	403.8	403.8
52.5°	352.9	353.9	357.8	360.7	370.5	369.5	371.5	375.4	376.4	383.3	383.3
55°	328.4	334.2	329.3	338.2	340.1	344.0	348.0	352.9	361.7	365.6	367.6
57.5°	304.8	305.8	307.8	313.7	310.7	317.6	324.4	333.3	338.2	341.1	342.1
60°	280.3	276.4	283.3	284.3	294.1	295.0	297.0	302.9	306.8	311.7	312.7
62.5°	253.9	256.8	257.8	258.8	265.6	268.6	271.5	274.5	283.3	288.2	291.1
65°	222.5	227.4	227.4	237.2	238.2	238.2	243.1	252.9	257.8	262.7	266.6
67.5°	197.0	201.9	200.0	205.8	212.7	214.7	217.6	225.4	227.4	235.2	239.2
70°	170.6	173.5	176.4	178.4	183.3	189.2	192.1	197.0	202.9	208.8	212.7
72.5°	140.2	142.1	148.0	151.9	157.8	160.8	164.7	169.6	176.4	184.3	188.2
75°	116.6	115.7	119.6	124.5	132.3	133.3	134.3	144.1	150.0	155.9	160.8
77.5°	89.2	91.2	94.1	99.0	103.9	106.8	109.8	117.6	124.5	128.4	132.3
80°	63.7	65.7	68.6	72.5	78.4	81.4	85.3	92.1	97.0	102.9	106.8
82.5°	39.2	42.1	45.1	50.0	53.9	57.8	60.8	67.6	72.5	79.4	83.3
85°	21.6	21.6	25.5	30.4	34.3	38.2	40.2	46.1	51.0	56.9	61.8
87.5°	6.9	7.8	10.8	15.7	20.6	22.5	25.5	30.4	35.3	41.2	46.1
90°	0.0	1.0	4.9	8.8	12.7	15.7	17.6	22.5	27.4	32.3	37.2
92.5°	0.0	1.0	3.9	7.8	11.8	14.7	16.7	21.6	26.5	31.4	35.3
95°	0.0	1.0	3.9	7.8	11.8	14.7	16.7	21.6	26.5	30.4	35.3
97.5°	0.0	1.0	3.9	7.8	12.7	14.7	16.7	21.6	26.5	30.4	34.3
100°	0.0	1.0	3.9	7.8	11.8	14.7	16.7	21.6	26.5	30.4	33.3
102.5°	0.0	1.0	3.9	7.8	11.8	14.7	16.7	21.6	25.5	29.4	33.3
105°	0.0	1.0	3.9	7.8	11.8	14.7	16.7	20.6	25.5	29.4	33.3
107.5°	0.0	1.0	3.9	7.8	11.8	14.7	16.7	20.6	25.5	29.4	32.3
110°	0.0	1.0	3.9	7.8	11.8	14.7	16.7	20.6	25.5	28.4	32.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.0	3.9	7.8	11.8	14.7	16.7	20.6	24.5	28.4	32.3
115°	0.0	1.0	3.9	7.8	11.8	13.7	16.7	20.6	24.5	28.4	31.4
117.5°	0.0	1.0	3.9	6.9	11.8	13.7	16.7	20.6	24.5	28.4	31.4
120°	0.0	1.0	2.9	6.9	11.8	13.7	15.7	20.6	24.5	28.4	31.4
122.5°	0.0	1.0	2.9	6.9	10.8	13.7	15.7	19.6	23.5	27.4	31.4
125°	0.0	1.0	2.9	6.9	10.8	12.7	14.7	19.6	23.5	27.4	31.4
127.5°	0.0	0.0	2.9	5.9	9.8	12.7	14.7	18.6	22.5	26.5	30.4
130°	0.0	0.0	2.0	5.9	9.8	11.8	13.7	17.6	21.6	25.5	29.4
132.5°	0.0	0.0	2.0	4.9	8.8	10.8	12.7	16.7	20.6	24.5	27.4
135°	0.0	0.0	2.0	4.9	7.8	9.8	11.8	15.7	18.6	22.5	26.5
137.5°	0.0	0.0	2.0	3.9	6.9	8.8	10.8	13.7	17.6	20.6	24.5
140°	0.0	0.0	1.0	3.9	5.9	7.8	9.8	12.7	15.7	19.6	22.5
142.5°	0.0	0.0	1.0	2.9	5.9	6.9	8.8	11.8	14.7	17.6	20.6
145°	0.0	0.0	1.0	2.9	4.9	5.9	6.9	9.8	12.7	15.7	18.6
147.5°	0.0	0.0	1.0	2.0	3.9	4.9	5.9	8.8	11.8	13.7	16.7
150°	0.0	0.0	0.0	2.0	2.9	3.9	4.9	6.9	9.8	11.8	13.7
152.5°	0.0	0.0	0.0	1.0	2.0	2.9	3.9	5.9	7.8	9.8	11.8
155°	0.0	0.0	0.0	1.0	2.0	2.0	2.9	4.9	5.9	7.8	9.8
157.5°	0.0	0.0	0.0	1.0	1.0	2.0	2.0	2.9	4.9	5.9	6.9
160°	0.0	0.0	0.0	0.0	1.0	1.0	2.0	2.0	2.9	3.9	4.9
162.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0	2.9	3.9
165°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0	2.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
170°	1.0	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°	824.3	824.3	824.3	824.3	824.3	824.3	824.3	824.3	824.3	824.3
2.5°	814.5	815.5	816.5	817.5	816.5	816.5	818.5	818.5	818.5	817.5
5°	782.2	783.2	785.1	788.1	789.1	789.1	790.0	790.0	790.0	789.1
7.5°	742.0	742.0	743.0	742.0	744.0	745.0	747.9	748.9	749.9	749.9
10°	706.7	707.7	707.7	706.7	701.8	704.8	701.8	700.8	701.8	704.8
12.5°	679.3	676.3	675.4	681.2	683.2	686.1	687.1	683.2	680.3	683.2
15°	655.8	658.7	660.7	655.8	653.8	652.8	653.8	656.7	659.7	659.7
17.5°	641.1	636.1	642.0	651.8	653.8	652.8	649.9	643.0	638.1	639.1
20°	625.4	633.2	633.2	621.4	614.6	613.6	613.6	618.5	618.5	619.5
22.5°	612.6	605.8	602.8	608.7	613.6	616.5	606.7	601.8	596.9	594.0
25°	593.0	587.1	597.9	587.1	582.2	579.3	579.3	585.2	588.1	586.2
27.5°	569.5	578.3	564.6	572.4	578.3	581.3	579.3	571.5	563.6	563.6
30°	559.7	548.9	560.7	562.6	556.8	547.0	538.1	538.1	538.1	541.1
32.5°	536.2	543.0	540.1	524.4	527.3	531.3	535.2	533.2	529.3	529.3
35°	519.5	523.4	509.7	521.5	519.5	515.6	505.8	499.9	499.9	500.9
37.5°	507.7	493.0	505.8	494.0	488.1	488.1	493.0	498.9	497.0	496.0
40°	483.2	484.2	477.4	476.4	483.2	486.2	474.4	467.6	462.7	459.7
42.5°	461.7	463.6	460.7	467.6	458.7	450.9	448.0	450.9	452.9	451.9
45°	444.0	439.1	448.0	432.3	431.3	434.2	438.1	434.2	431.3	430.3
47.5°	427.4	429.3	415.6	419.5	421.5	419.5	409.7	406.8	409.7	408.7
50°	402.9	405.8	405.8	401.9	396.0	394.0	398.0	398.0	395.0	397.0
52.5°	389.1	384.2	390.1	385.2	389.1	388.2	386.2	377.4	373.5	374.4
55°	371.5	373.5	365.6	373.5	373.5	367.6	360.7	364.6	363.7	362.7
57.5°	344.0	350.9	351.9	344.0	341.1	343.1	347.0	346.0	343.1	343.1
60°	317.6	319.5	324.4	320.5	321.5	322.5	320.5	319.5	321.5	320.5
62.5°	295.0	295.0	291.1	299.0	299.9	295.0	296.0	297.0	297.0	296.0
65°	269.6	272.5	270.5	270.5	269.6	271.5	271.5	269.6	267.6	268.6
67.5°	243.1	243.1	250.0	246.0	247.0	247.0	242.1	241.1	242.1	242.1
70°	215.6	216.6	218.6	221.5	220.5	217.6	216.6	216.6	216.6	215.6
72.5°	190.2	192.1	194.1	194.1	193.1	192.1	193.1	191.1	191.1	192.1
75°	164.7	168.6	168.6	168.6	169.6	171.5	169.6	169.6	167.6	167.6
77.5°	137.2	141.1	143.1	144.1	145.1	147.0	146.0	147.0	145.1	146.0
80°	111.7	115.7	118.6	121.5	122.5	124.5	124.5	126.4	126.4	127.4
82.5°	88.2	93.1	97.0	100.0	101.9	103.9	106.8	108.8	110.8	111.7
85°	67.6	71.6	76.5	81.4	83.3	86.3	91.2	93.1	94.1	96.1
87.5°	51.0	55.9	61.8	66.7	69.6	72.5	74.5	77.4	81.4	84.3
90°	42.1	47.0	52.0	56.9	58.8	59.8	62.7	66.7	72.5	76.5
92.5°	40.2	45.1	49.0	52.0	52.9	54.9	57.8	61.8	66.7	70.6
95°	39.2	44.1	47.0	50.0	51.0	52.9	55.9	58.8	62.7	65.7
97.5°	38.2	42.1	46.1	49.0	51.0	52.0	55.9	60.8	65.7	68.6
100°	38.2	41.2	45.1	49.0	50.0	52.0	56.9	61.8	64.7	64.7
102.5°	37.2	41.2	44.1	48.0	50.0	52.0	54.9	56.9	54.9	54.9
105°	36.3	40.2	43.1	46.1	47.0	48.0	49.0	49.0	48.0	48.0
107.5°	36.3	39.2	42.1	43.1	44.1	44.1	44.1	43.1	42.1	42.1
110°	35.3	38.2	40.2	41.2	41.2	41.2	41.2	40.2	39.2	38.2





TEST NUMBER: P241426

CATALOG NUMBER: FVS8M-2-LD4-35-1HI-PA187-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	35.3	37.2	39.2	39.2	40.2	40.2	40.2	39.2	38.2	37.2
115°	34.3	37.2	38.2	39.2	40.2	40.2	40.2	40.2	39.2	39.2
117.5°	34.3	37.2	39.2	40.2	41.2	41.2	42.1	42.1	41.2	41.2
120°	34.3	37.2	40.2	41.2	42.1	42.1	43.1	43.1	43.1	42.1
122.5°	34.3	37.2	40.2	42.1	43.1	43.1	44.1	44.1	44.1	44.1
125°	34.3	37.2	40.2	42.1	43.1	43.1	44.1	45.1	45.1	45.1
127.5°	33.3	37.2	39.2	41.2	42.1	43.1	44.1	45.1	45.1	45.1
130°	32.3	35.3	38.2	40.2	41.2	42.1	43.1	44.1	45.1	46.1
132.5°	31.4	34.3	37.2	39.2	40.2	41.2	43.1	44.1	44.1	45.1
135°	29.4	32.3	35.3	38.2	39.2	40.2	41.2	43.1	43.1	43.1
137.5°	27.4	30.4	33.3	36.3	37.2	38.2	40.2	41.2	41.2	42.1
140°	25.5	28.4	31.4	33.3	35.3	36.3	38.2	39.2	40.2	40.2
142.5°	23.5	26.5	29.4	31.4	32.3	34.3	35.3	37.2	38.2	38.2
145°	21.6	24.5	26.5	29.4	30.4	31.4	32.3	34.3	35.3	35.3
147.5°	18.6	21.6	23.5	25.5	26.5	27.4	29.4	30.4	31.4	31.4
150°	16.7	18.6	20.6	22.5	23.5	24.5	25.5	26.5	27.4	27.4
152.5°	13.7	15.7	17.6	18.6	19.6	20.6	21.6	22.5	22.5	23.5
155°	10.8	12.7	13.7	15.7	15.7	16.7	17.6	18.6	18.6	18.6
157.5°	8.8	9.8	11.8	12.7	12.7	13.7	13.7	14.7	14.7	14.7
160°	5.9	7.8	8.8	8.8	9.8	9.8	10.8	10.8	10.8	11.8
162.5°	3.9	4.9	5.9	6.9	6.9	6.9	7.8	7.8	7.8	7.8
165°	2.9	2.9	3.9	3.9	4.9	4.9	4.9	4.9	4.9	4.9
167.5°	1.0	2.0	2.0	2.0	2.9	2.9	2.9	2.9	2.9	2.9
170°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)