

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: P241568

Luminaire Tested: **FVS8M-3-LD4-50-1STD-O-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241568  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS8M-3-LD4-50-1STD-O-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
3FT LENGTH, 1-MODULE LED WITH OPAL LENS  
Light Source: (84) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

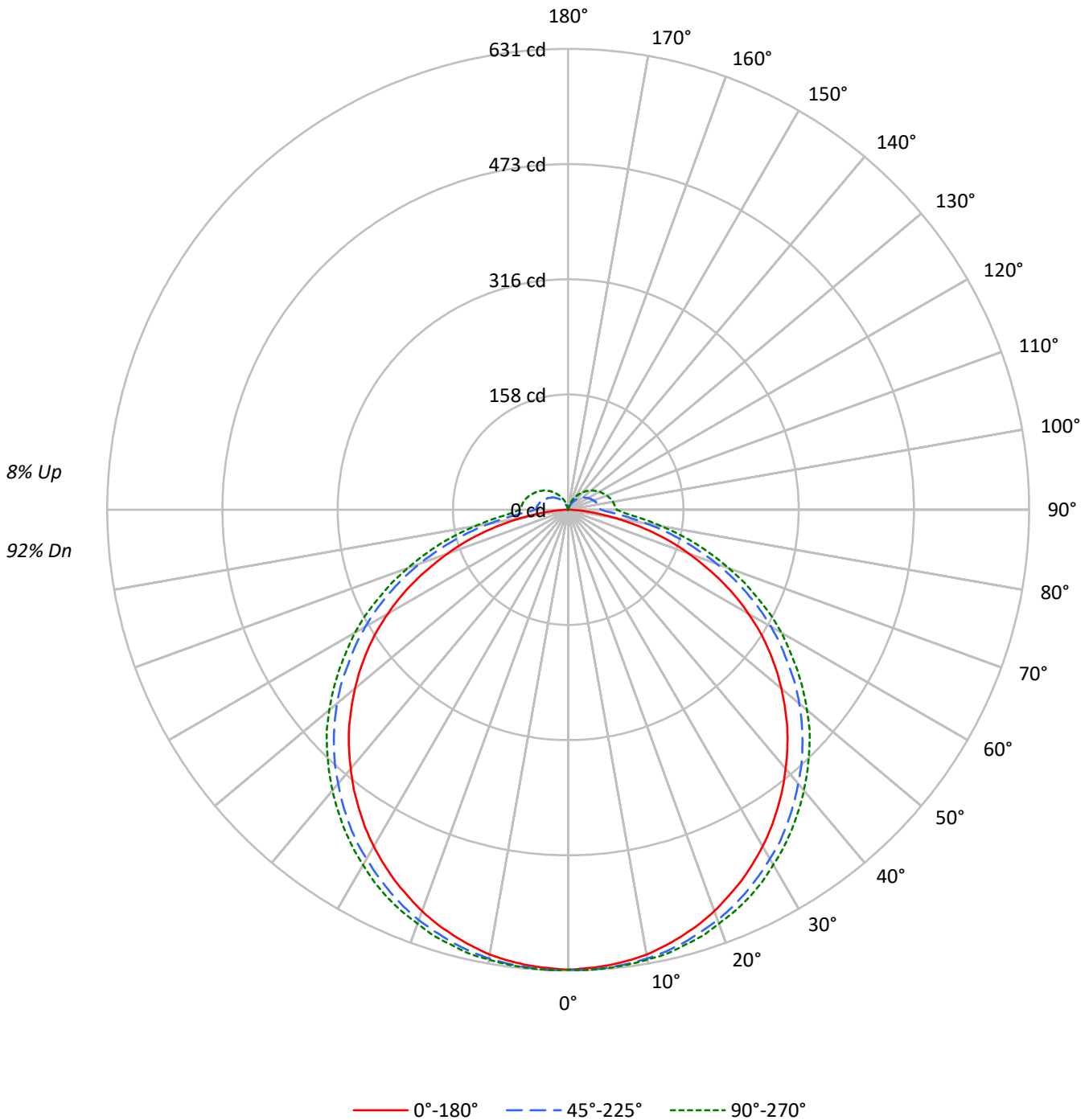
Lumens per Lamp: N/A  
Luminaire Lumens: 2158.0 lumens  
Efficiency: N/A  
Efficacy: 75.7 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.32 / 1.43  
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')  
CIE Type: Direct

Input Watts (W): 28.5  
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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	92
1	106	101	96	92	103	98	94	90	92	89	86	87	84	82	82	80	78	75
2	96	87	80	74	93	85	78	73	80	75	70	76	71	67	71	68	65	62
3	87	76	68	61	84	74	66	60	70	63	58	66	61	56	63	58	54	52
4	80	67	58	51	77	65	57	51	62	55	49	59	53	48	56	50	46	44
5	73	60	51	44	70	58	50	43	55	48	42	53	46	41	50	44	40	38
6	67	54	45	38	65	52	44	38	50	42	37	47	41	36	45	39	35	33
7	62	49	40	33	60	47	39	33	45	38	32	43	37	32	41	35	31	29
8	58	44	36	30	56	43	35	29	41	34	29	39	33	28	38	32	28	25
9	54	41	32	27	52	40	32	26	38	31	26	36	30	25	35	29	25	23
10	51	37	29	24	49	37	29	24	35	28	23	34	27	23	32	27	22	21

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

	0°	45°	90°
0°	3678	3678	3678
5°	3655	3625	3621
10°	3636	3576	3567
15°	3602	3524	3517
20°	3569	3468	3463
25°	3529	3408	3415
30°	3486	3345	3350
35°	3437	3283	3287
40°	3385	3207	3217
45°	3334	3133	3143
50°	3263	3042	3055
55°	3181	2921	2947
60°	3059	2796	2829
65°	2884	2624	2662
70°	2626	2398	2458
75°	2276	2107	2222
80°	1713	1735	1911
85°	914	1376	1617



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.8	2.8
10°-20°	172.8	8.0
20°-30°	265.2	12.3
30°-40°	325.8	15.1
40°-50°	347.1	16.1
50°-60°	325.4	15.1
60°-70°	261.7	12.1
70°-80°	166.1	7.7
80°-90°	71.5	3.3
90°-100°	41.9	1.9
100°-110°	37.2	1.7
110°-120°	30.7	1.4
120°-130°	23.3	1.1
130°-140°	15.8	0.7
140°-150°	9.0	0.4
150°-160°	3.9	0.2
160°-170°	0.9	0.0
170°-180°	0.0	0.0
0°-30°	497.8	23.1
0°-40°	823.6	38.2
0°-60°	1496.1	69.3
0°-90°	1995.4	92.5
90°-120°	109.8	5.1
90°-150°	157.8	7.3
90°-180°	163.0	7.6
0°-180°	2158.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	630	630	630	630	630	
5°	626	626	629	630	630	60
15°	604	607	614	616	617	171
25°	561	567	577	584	586	258
35°	499	511	524	532	534	313
45°	424	438	454	463	467	327
55°	335	350	367	380	383	299
65°	232	248	270	282	286	229
75°	120	140	162	175	182	127
85°	22	42	66	82	86	27
90°	1	22	45	61	66	1
95°	0	20	43	59	64	0
105°	0	17	40	54	60	0
115°	0	15	35	48	53	0
125°	0	11	28	41	45	0
135°	0	9	22	32	36	0
145°	1	5	16	23	26	1
155°	1	2	8	14	16	0
165°	1	1	3	4	6	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°	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9
2.5°	628.2	628.2	627.3	628.2	628.2	629.0	629.0	629.9	630.8	631.6	630.8
5°	626.4	625.6	625.6	626.4	626.4	626.4	627.3	628.2	629.0	629.0	629.0
7.5°	623.0	622.1	622.1	623.0	623.0	623.9	623.9	625.6	626.4	626.4	627.3
10°	618.7	617.8	617.8	617.8	618.7	619.5	619.5	621.3	623.0	623.9	623.9
12.5°	611.8	611.8	610.9	612.6	612.6	613.5	615.2	616.9	617.8	618.7	619.5
15°	604.0	604.0	604.0	604.8	605.7	606.6	608.3	610.0	611.8	612.6	613.5
17.5°	595.3	595.3	595.3	596.2	597.9	598.8	600.5	602.3	604.0	604.8	605.7
20°	585.0	584.1	585.0	586.7	588.4	589.3	590.2	593.6	595.3	597.1	597.9
22.5°	572.9	572.9	573.7	575.5	578.1	578.9	579.8	582.4	585.0	586.7	588.4
25°	560.8	560.8	561.6	563.4	566.0	566.8	568.6	572.0	573.7	575.5	577.2
27.5°	547.0	547.0	547.8	550.4	553.9	554.7	555.6	559.0	561.6	563.4	565.1
30°	532.3	532.3	534.0	536.6	539.2	540.9	542.6	546.1	548.7	550.4	552.1
32.5°	516.7	516.7	518.4	521.0	524.5	526.2	527.9	531.4	534.0	536.6	539.2
35°	499.4	500.3	502.9	504.6	508.1	510.7	512.4	515.8	518.4	521.0	523.6
37.5°	482.1	482.1	483.9	487.3	491.7	492.5	496.0	499.4	502.0	505.5	507.2
40°	463.1	464.0	465.7	470.1	474.4	475.2	477.8	482.1	484.7	488.2	489.9
42.5°	444.1	445.0	447.6	451.9	454.5	457.1	459.7	463.1	465.7	470.1	472.6
45°	424.3	423.4	427.7	432.0	434.6	438.1	439.8	444.1	448.4	451.0	453.6
47.5°	402.7	404.4	407.8	410.4	414.8	417.3	419.1	423.4	426.8	430.3	433.8
50°	381.1	381.9	386.2	389.7	393.1	394.9	398.3	402.7	406.1	408.7	413.0
52.5°	358.6	360.3	362.9	365.5	370.7	373.3	375.9	379.3	384.5	388.0	391.4
55°	335.3	336.1	338.7	343.0	348.2	349.9	351.7	356.9	361.2	363.8	367.2
57.5°	311.1	311.9	315.4	318.8	322.3	326.6	328.3	331.8	337.0	341.3	344.8
60°	285.1	286.0	289.5	292.9	297.2	300.7	303.3	308.5	311.9	316.2	320.6
62.5°	259.2	259.2	263.5	266.1	272.2	275.6	276.5	281.7	286.9	290.3	295.5
65°	231.6	233.3	235.9	241.1	246.3	248.0	250.6	255.8	260.1	265.3	269.6
67.5°	203.1	204.8	209.1	212.6	218.6	222.1	223.8	228.1	235.0	239.3	243.7
70°	175.4	179.7	181.5	185.8	191.0	194.4	197.0	202.2	206.5	211.7	216.0
72.5°	149.5	150.3	152.9	159.0	164.2	166.8	170.2	173.7	179.7	184.9	188.4
75°	120.1	121.8	125.3	131.3	136.5	140.0	141.7	147.8	152.1	156.4	161.6
77.5°	91.6	94.2	99.4	103.7	109.7	112.3	115.8	121.0	126.2	130.5	134.8
80°	65.7	68.3	72.6	77.8	83.8	86.4	89.9	95.9	100.2	105.4	108.9
82.5°	42.3	44.1	49.3	54.4	59.6	63.1	65.7	71.7	76.9	81.2	85.5
85°	21.6	24.2	28.5	33.7	38.9	42.3	44.9	51.0	57.0	62.2	66.5
87.5°	7.8	9.5	13.8	19.9	25.1	27.7	31.1	36.3	42.3	47.5	51.8
90°	0.9	2.6	6.9	12.1	18.1	21.6	24.2	30.2	35.4	40.6	44.9
92.5°	0.0	1.7	6.0	11.2	17.3	19.9	23.3	28.5	33.7	38.9	43.2
95°	0.0	1.7	6.0	11.2	16.4	19.9	22.5	27.7	33.7	38.0	43.2
97.5°	0.0	1.7	5.2	10.4	16.4	19.0	21.6	27.7	32.8	38.0	42.3
100°	0.0	1.7	5.2	10.4	15.6	18.1	21.6	26.8	32.0	37.2	41.5
102.5°	0.0	1.7	5.2	9.5	15.6	18.1	20.7	25.9	31.1	36.3	40.6
105°	0.0	1.7	5.2	9.5	14.7	17.3	19.9	25.1	30.2	34.6	39.7
107.5°	0.0	0.9	4.3	8.6	13.8	16.4	19.0	24.2	29.4	33.7	38.0
110°	0.0	0.9	4.3	8.6	13.8	16.4	18.1	23.3	28.5	32.8	37.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.9	4.3	7.8	13.0	15.6	18.1	22.5	27.7	32.0	35.4
115°	0.0	0.9	3.5	7.8	12.1	14.7	17.3	21.6	25.9	30.2	34.6
117.5°	0.0	0.9	3.5	6.9	11.2	13.8	16.4	20.7	25.1	29.4	32.8
120°	0.0	0.9	3.5	6.9	11.2	13.0	15.6	19.9	24.2	27.7	32.0
122.5°	0.0	0.9	2.6	6.0	10.4	12.1	14.7	19.0	22.5	26.8	30.2
125°	0.0	0.9	2.6	6.0	9.5	11.2	13.8	17.3	21.6	25.1	28.5
127.5°	0.0	0.9	2.6	5.2	8.6	11.2	13.0	16.4	20.7	24.2	27.7
130°	0.0	0.0	1.7	5.2	8.6	10.4	12.1	15.6	19.0	22.5	25.9
132.5°	0.0	0.0	1.7	4.3	7.8	9.5	11.2	14.7	18.1	20.7	24.2
135°	0.0	0.9	1.7	3.5	6.9	8.6	10.4	13.0	16.4	19.9	22.5
137.5°	0.0	0.9	0.9	3.5	6.0	7.8	9.5	12.1	15.6	18.1	20.7
140°	0.9	0.9	0.9	2.6	5.2	6.9	7.8	11.2	13.8	16.4	19.0
142.5°	0.9	0.9	0.9	2.6	4.3	6.0	6.9	9.5	12.1	14.7	17.3
145°	0.9	0.9	0.9	1.7	3.5	5.2	6.0	8.6	11.2	13.0	15.6
147.5°	0.9	0.9	0.9	1.7	3.5	4.3	5.2	6.9	9.5	11.2	13.8
150°	0.9	0.9	0.9	0.9	2.6	3.5	4.3	6.0	7.8	9.5	12.1
152.5°	0.9	0.9	0.9	0.9	1.7	2.6	3.5	5.2	6.9	8.6	9.5
155°	0.9	0.9	0.9	0.9	1.7	1.7	2.6	4.3	5.2	6.9	7.8
157.5°	0.9	0.9	0.9	0.9	0.9	1.7	1.7	3.5	4.3	5.2	6.0
160°	0.9	0.9	0.9	0.9	0.9	0.9	1.7	1.7	3.5	4.3	5.2
162.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7	1.7	2.6	3.5
165°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7	1.7	2.6
167.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7
170°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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°	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9
2.5°	630.8	630.8	631.6	631.6	630.8	631.6	631.6	630.8	630.8	630.8
5°	629.0	629.0	629.9	629.9	629.9	629.9	629.9	629.9	629.0	629.9
7.5°	627.3	627.3	627.3	628.2	628.2	628.2	628.2	628.2	628.2	628.2
10°	623.9	624.7	624.7	625.6	625.6	625.6	626.4	625.6	625.6	625.6
12.5°	619.5	620.4	621.3	622.1	621.3	622.1	622.1	622.1	622.1	623.0
15°	614.3	615.2	615.2	616.1	616.1	616.9	616.9	616.9	616.9	616.9
17.5°	607.4	608.3	609.2	610.0	610.9	610.0	610.9	610.9	611.8	611.8
20°	598.8	600.5	601.4	602.3	603.1	602.3	603.1	603.1	604.0	603.1
22.5°	589.3	591.0	591.9	593.6	593.6	594.5	594.5	595.3	594.5	595.3
25°	578.9	580.7	581.5	583.2	584.1	584.1	585.0	585.0	585.0	585.8
27.5°	566.8	568.6	569.4	571.1	571.1	572.0	572.9	572.9	573.7	574.6
30°	554.7	555.6	558.2	559.0	559.9	559.9	560.8	561.6	561.6	561.6
32.5°	540.9	541.8	544.4	545.2	546.1	547.0	547.8	547.8	547.8	548.7
35°	525.4	527.9	528.8	531.4	532.3	533.1	533.1	534.0	533.1	534.0
37.5°	509.8	512.4	513.3	515.0	515.8	516.7	517.6	517.6	518.4	518.4
40°	492.5	495.1	496.8	498.6	499.4	500.3	500.3	501.2	502.9	502.0
42.5°	475.2	476.1	479.6	481.3	481.3	483.0	483.9	483.9	484.7	484.7
45°	456.2	458.8	460.5	462.3	463.1	464.0	464.9	465.7	465.7	466.6
47.5°	436.4	439.8	441.5	444.1	444.1	445.0	446.7	446.7	446.7	448.4
50°	415.6	418.2	421.7	422.5	423.4	424.3	425.1	426.0	426.8	426.8
52.5°	394.0	397.5	399.2	401.8	402.7	402.7	404.4	405.2	405.2	405.2
55°	371.5	375.0	376.7	378.5	380.2	381.1	381.1	382.8	383.6	382.8
57.5°	347.4	349.9	352.5	356.0	356.9	357.7	357.7	358.6	361.2	359.5
60°	322.3	325.8	328.3	331.8	332.7	332.7	333.5	335.3	336.1	337.0
62.5°	298.1	302.4	304.2	306.7	306.7	309.3	310.2	311.1	311.9	312.8
65°	272.2	275.6	278.2	280.8	282.5	282.5	285.1	286.9	286.9	286.0
67.5°	246.3	249.7	253.2	254.9	256.6	256.6	258.4	260.1	260.1	260.9
70°	220.3	222.9	226.4	229.0	230.7	230.7	232.4	234.2	234.2	233.3
72.5°	192.7	195.3	199.6	201.3	203.1	203.9	205.6	206.5	207.4	207.4
75°	165.9	169.4	171.9	174.5	175.4	177.1	178.9	179.7	180.6	181.5
77.5°	138.3	143.4	146.0	149.5	149.5	151.2	154.7	153.8	154.7	154.7
80°	113.2	117.5	120.1	123.6	124.4	125.3	127.0	128.7	129.6	129.6
82.5°	90.7	94.2	97.6	99.4	102.0	102.0	103.7	105.4	106.3	107.1
85°	70.9	74.3	77.8	81.2	82.1	83.0	85.5	86.4	86.4	86.4
87.5°	57.0	60.5	63.9	66.5	68.3	69.1	70.9	71.7	73.4	73.4
90°	49.3	53.6	57.0	59.6	61.3	62.2	63.9	65.7	65.7	66.5
92.5°	48.4	51.8	55.3	57.9	58.8	60.5	62.2	63.1	63.9	64.8
95°	47.5	51.0	54.4	57.0	58.8	59.6	61.3	63.1	63.1	63.9
97.5°	46.7	50.1	53.6	56.2	57.9	58.8	60.5	62.2	63.1	63.1
100°	45.8	49.3	52.7	55.3	57.0	57.9	59.6	60.5	61.3	62.2
102.5°	44.9	48.4	51.8	54.4	55.3	56.2	58.8	59.6	60.5	60.5
105°	43.2	46.7	50.1	52.7	54.4	55.3	57.0	58.8	58.8	59.6
107.5°	42.3	45.8	49.3	51.8	52.7	53.6	55.3	57.0	57.9	57.9
110°	40.6	44.1	47.5	50.1	51.8	52.7	54.4	55.3	56.2	56.2





TEST NUMBER: P241568

CATALOG NUMBER: FVS8M-3-LD4-50-1STD-O-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	39.7	43.2	45.8	48.4	50.1	51.0	52.7	53.6	54.4	54.4
115°	38.0	41.5	44.1	46.7	48.4	49.3	51.0	51.8	52.7	52.7
117.5°	36.3	39.7	43.2	44.9	46.7	47.5	49.3	50.1	51.0	51.0
120°	35.4	38.0	41.5	43.2	44.9	45.8	46.7	48.4	49.3	49.3
122.5°	33.7	37.2	39.7	41.5	42.3	43.2	44.9	45.8	46.7	47.5
125°	32.0	35.4	37.2	39.7	40.6	41.5	43.2	44.1	44.9	44.9
127.5°	30.2	32.8	35.4	38.0	38.9	39.7	41.5	42.3	42.3	43.2
130°	28.5	31.1	33.7	35.4	36.3	37.2	38.9	39.7	40.6	40.6
132.5°	26.8	29.4	32.0	33.7	34.6	35.4	36.3	37.2	38.0	38.0
135°	25.1	27.7	29.4	31.1	32.0	32.8	34.6	35.4	35.4	36.3
137.5°	23.3	25.9	27.7	29.4	30.2	31.1	32.0	32.8	33.7	33.7
140°	21.6	23.3	25.9	26.8	27.7	28.5	29.4	30.2	31.1	31.1
142.5°	19.9	21.6	23.3	25.1	25.9	25.9	26.8	27.7	28.5	28.5
145°	18.1	19.9	21.6	22.5	23.3	24.2	25.1	25.9	25.9	25.9
147.5°	15.6	17.3	19.0	20.7	20.7	21.6	22.5	23.3	23.3	23.3
150°	13.8	15.6	17.3	18.1	19.0	19.0	19.9	20.7	20.7	20.7
152.5°	11.2	13.0	14.7	15.6	16.4	16.4	17.3	18.1	18.1	18.1
155°	9.5	11.2	12.1	13.8	13.8	14.7	14.7	15.6	15.6	15.6
157.5°	7.8	8.6	10.4	11.2	12.1	12.1	12.1	13.0	13.0	13.0
160°	6.0	6.9	7.8	8.6	9.5	9.5	10.4	10.4	10.4	10.4
162.5°	4.3	5.2	6.0	6.0	6.9	6.9	7.8	7.8	7.8	7.8
165°	2.6	3.5	3.5	4.3	4.3	5.2	5.2	5.2	6.0	6.0
167.5°	1.7	1.7	2.6	2.6	2.6	2.6	3.5	3.5	3.5	3.5
170°	0.9	0.9	0.9	0.9	0.9	1.7	1.7	1.7	1.7	1.7
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)