

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: P241602

Luminaire Tested: **FVS8M-4-LD4-35-1STD-O-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241602  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-34)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS8M-4-LD4-35-1STD-O-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
4FT LENGTH, 1-MODULE LED WITH OPAL LENS  
Light Source: (84) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

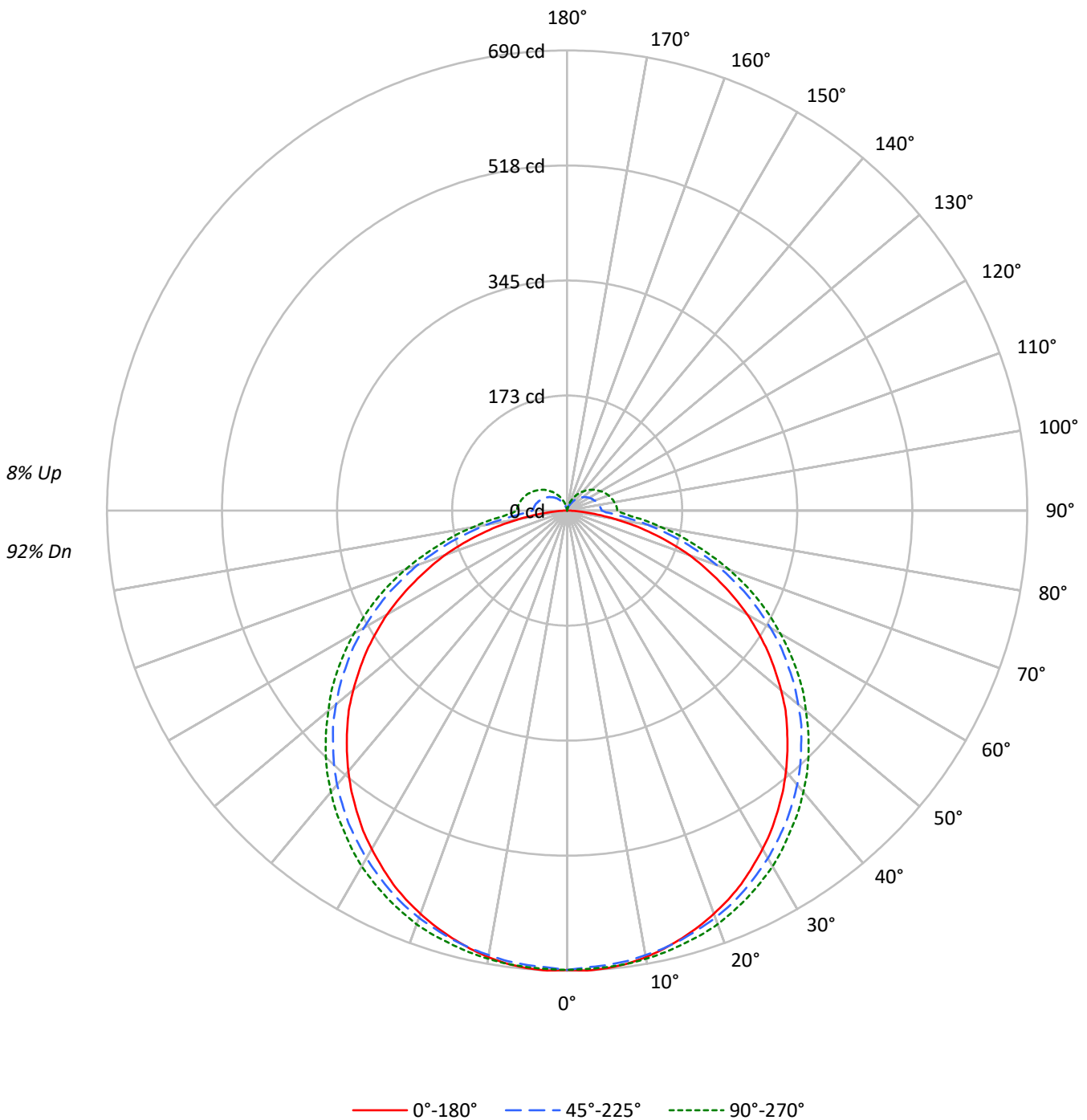
Lumens per Lamp: N/A  
Luminaire Lumens: 2384.0 lumens  
Efficiency: N/A  
Efficacy: 71.2 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.32 / 1.43  
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 3.73' x H: 0.15')  
CIE Type: Direct

Input Watts (W): 33.5  
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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CATALOG NUMBER: FVS8M-4-LD4-35-1STD-O-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	113	113	113	113	107	107	107	100	100	100	95	95	95	92
1	106	101	96	92	102	98	94	90	92	89	85	87	84	81	82	80	78	75
2	96	87	80	74	92	85	78	72	80	74	70	75	71	67	71	67	64	61
3	87	76	68	61	84	74	66	60	70	63	58	66	60	56	62	58	54	51
4	79	67	58	51	77	65	57	50	62	55	49	58	52	47	55	50	46	43
5	73	60	51	44	70	58	50	43	55	48	42	52	46	41	50	44	40	37
6	67	54	45	38	65	52	44	37	50	42	37	47	41	36	45	39	35	32
7	62	48	40	33	60	47	39	33	45	38	32	43	36	31	41	35	31	28
8	58	44	36	30	56	43	35	29	41	34	29	39	33	28	37	32	27	25
9	54	40	32	27	52	39	32	26	38	31	26	36	30	25	35	29	25	23
10	51	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	20

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

	0°	45°	90°
0°	3078	3078	3078
5°	3080	3019	3023
10°	3065	2973	2978
15°	3041	2933	2935
20°	3017	2893	2901
25°	2992	2849	2856
30°	2958	2804	2814
35°	2922	2758	2754
40°	2883	2706	2703
45°	2838	2641	2640
50°	2782	2571	2561
55°	2709	2482	2482
60°	2613	2375	2374
65°	2463	2241	2252
70°	2302	2061	2081
75°	1992	1821	1858
80°	1510	1530	1617
85°	819	1210	1379



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.3	2.7
10°-20°	188.6	7.9
20°-30°	290.0	12.2
30°-40°	356.8	15.0
40°-50°	380.7	16.0
50°-60°	357.4	15.0
60°-70°	288.1	12.1
70°-80°	183.6	7.7
80°-90°	79.5	3.3
90°-100°	48.5	2.0
100°-110°	43.8	1.8
110°-120°	36.6	1.5
120°-130°	28.1	1.2
130°-140°	19.3	0.8
140°-150°	11.2	0.5
150°-160°	4.9	0.2
160°-170°	1.3	0.1
170°-180°	0.0	0.0
0°-30°	544.0	22.8
0°-40°	900.8	37.8
0°-60°	1639.0	68.7
0°-90°	2190.2	91.9
90°-120°	128.9	5.4
90°-150°	187.5	7.9
90°-180°	194.0	8.1
0°-180°	2384.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	689	689	689	689	689	
5°	689	687	684	687	687	65
15°	664	665	666	672	673	187
25°	618	621	628	638	640	285
35°	550	559	572	582	584	344
45°	467	480	496	508	512	360
55°	367	384	404	417	421	328
65°	252	274	297	311	316	250
75°	132	154	179	195	198	140
85°	23	47	74	91	96	30
90°	0	24	52	69	75	1
95°	0	23	50	68	74	0
105°	0	21	46	64	69	0
115°	0	18	41	56	62	0
125°	0	15	35	49	53	0
135°	1	11	28	39	43	0
145°	1	7	19	29	32	1
155°	1	3	10	18	20	0
165°	1	1	4	6	9	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241602

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	688.8	688.8	688.8	688.8	688.8	688.8	688.8	688.8	688.8	688.8	688.8
2.5°	690.4	689.6	689.6	689.6	689.6	689.6	689.6	689.6	688.0	687.2	685.6
5°	688.8	688.0	687.2	687.2	687.2	687.2	687.2	687.2	686.4	684.8	684.0
7.5°	685.6	684.8	684.0	684.0	684.0	684.0	684.8	684.0	683.2	681.6	681.6
10°	680.0	679.2	678.4	678.4	679.2	679.2	679.2	679.2	678.4	677.6	676.8
12.5°	672.8	672.8	672.0	672.0	672.0	672.8	672.8	673.6	672.8	672.0	672.0
15°	664.1	664.1	663.3	663.3	664.1	664.9	664.9	666.5	665.7	665.7	665.7
17.5°	654.5	653.7	653.7	653.7	655.3	656.1	656.1	656.9	657.7	657.7	657.7
20°	643.4	643.4	642.6	644.2	645.0	645.8	646.6	647.4	648.2	648.2	649.8
22.5°	631.4	630.6	630.6	631.4	633.0	633.8	635.4	637.0	637.0	637.8	640.2
25°	617.9	617.1	616.3	617.9	619.5	621.1	622.7	624.3	625.1	626.7	628.3
27.5°	602.0	602.0	602.8	603.6	606.0	607.6	609.1	610.7	612.3	613.9	615.5
30°	586.1	586.1	586.1	587.6	590.8	593.2	594.0	596.4	597.2	599.6	602.0
32.5°	569.3	567.7	569.3	571.7	574.9	576.5	578.1	580.5	582.1	584.5	586.8
35°	550.2	550.2	551.0	553.4	557.4	559.0	560.6	564.6	566.1	568.5	571.7
37.5°	531.1	530.3	531.9	535.1	539.1	540.7	543.1	545.4	547.8	551.0	554.2
40°	510.4	510.4	512.0	516.0	519.2	521.6	523.1	527.1	529.5	532.7	536.7
42.5°	488.9	489.7	491.3	494.5	499.3	501.6	504.0	507.2	510.4	513.6	517.6
45°	466.6	465.8	469.0	473.0	477.8	480.1	482.5	486.5	489.7	493.7	496.1
47.5°	444.3	441.9	445.9	449.1	454.7	458.6	459.4	464.2	468.2	472.2	476.2
50°	418.8	418.8	422.8	426.0	432.4	434.0	436.4	441.1	445.1	449.9	452.3
52.5°	392.6	392.6	396.5	402.1	407.7	410.1	412.5	418.0	422.0	425.2	429.2
55°	367.1	367.9	371.1	375.8	382.2	383.8	387.8	391.8	396.5	400.5	403.7
57.5°	339.2	340.8	344.0	348.8	355.9	357.5	361.5	367.1	370.3	375.0	379.8
60°	312.1	312.9	316.9	324.1	328.9	330.5	333.6	339.2	344.0	347.2	351.9
62.5°	282.7	285.1	288.2	294.6	299.4	303.4	305.0	310.5	316.1	320.1	324.1
65°	252.4	255.6	258.8	264.4	270.7	273.9	277.1	281.9	288.2	292.2	297.0
67.5°	223.0	225.3	229.3	235.7	240.5	244.5	246.0	253.2	257.2	262.8	266.7
70°	195.1	196.7	199.9	205.4	211.0	214.2	218.2	223.0	229.3	234.9	238.9
72.5°	163.2	164.0	168.0	173.6	180.8	183.9	186.3	194.3	199.1	204.6	207.8
75°	132.2	133.8	137.8	143.3	150.5	153.7	156.9	164.0	169.6	174.4	179.2
77.5°	102.7	102.7	107.5	114.7	121.0	124.2	126.6	134.6	139.3	144.9	149.7
80°	71.7	74.1	79.6	85.2	92.4	96.3	99.5	104.3	110.7	117.1	122.6
82.5°	46.2	47.8	52.6	59.7	66.1	69.3	73.3	78.8	85.2	91.6	96.3
85°	23.1	26.3	30.3	36.6	43.8	47.0	50.2	56.5	62.9	68.5	74.1
87.5°	7.2	9.6	14.3	20.7	27.9	31.1	34.2	40.6	47.0	52.6	58.1
90°	0.0	2.4	8.0	13.5	20.7	23.9	27.1	34.2	40.6	46.2	51.8
92.5°	0.0	2.4	7.2	13.5	19.9	23.9	27.1	33.4	39.8	45.4	51.0
95°	0.0	2.4	7.2	12.7	19.9	23.1	26.3	32.6	39.0	44.6	50.2
97.5°	0.0	2.4	6.4	12.7	19.1	22.3	25.5	32.6	38.2	43.8	49.4
100°	0.0	1.6	6.4	12.7	19.1	22.3	25.5	31.9	37.4	43.0	48.6
102.5°	0.0	1.6	6.4	11.9	18.3	21.5	24.7	31.1	36.6	42.2	47.8
105°	0.0	1.6	6.4	11.9	17.5	20.7	23.9	30.3	35.8	41.4	46.2
107.5°	0.0	1.6	5.6	11.1	17.5	19.9	23.1	29.5	35.0	39.8	45.4
110°	0.0	1.6	5.6	11.1	16.7	19.9	22.3	27.9	33.4	39.0	43.8



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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	5.6	10.4	15.9	19.1	21.5	27.1	32.6	37.4	42.2
115°	0.0	1.6	4.8	9.6	15.1	18.3	20.7	26.3	31.9	36.6	41.4
117.5°	0.0	0.8	4.8	9.6	14.3	17.5	19.9	25.5	30.3	35.0	39.8
120°	0.0	0.8	4.8	8.8	14.3	16.7	19.1	23.9	29.5	34.2	38.2
122.5°	0.0	0.8	4.0	8.8	12.7	15.9	18.3	23.1	27.9	32.6	36.6
125°	0.0	0.8	4.0	8.0	12.7	15.1	17.5	22.3	26.3	31.1	35.0
127.5°	0.0	0.8	4.0	7.2	11.9	14.3	15.9	20.7	25.5	29.5	33.4
130°	0.0	0.8	3.2	7.2	11.1	12.7	15.1	19.9	23.9	27.9	31.1
132.5°	0.0	0.8	2.4	6.4	10.4	11.9	14.3	18.3	22.3	26.3	29.5
135°	0.8	0.8	2.4	5.6	8.8	11.1	12.7	16.7	20.7	24.7	27.9
137.5°	0.8	0.8	2.4	4.8	8.0	9.6	11.9	15.1	19.1	22.3	25.5
140°	0.8	0.8	1.6	4.0	7.2	8.8	10.4	13.5	16.7	19.9	23.9
142.5°	0.8	0.8	1.6	4.0	6.4	8.0	9.6	11.9	15.1	18.3	21.5
145°	0.8	0.8	1.6	3.2	5.6	7.2	8.0	11.1	13.5	15.9	19.1
147.5°	0.8	0.8	0.8	2.4	4.8	5.6	7.2	9.6	11.9	14.3	16.7
150°	0.8	0.8	0.8	2.4	4.0	4.8	6.4	8.0	10.4	12.7	14.3
152.5°	0.8	0.8	0.8	1.6	3.2	4.0	4.8	7.2	8.8	10.4	12.7
155°	0.8	0.8	0.8	1.6	3.2	3.2	4.0	5.6	7.2	8.8	10.4
157.5°	0.8	0.8	0.8	1.6	2.4	3.2	3.2	4.8	6.4	7.2	8.8
160°	0.8	0.8	0.8	0.8	1.6	2.4	2.4	4.0	4.8	5.6	7.2
162.5°	0.8	0.8	0.8	0.8	1.6	1.6	1.6	3.2	4.0	4.8	5.6
165°	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6	2.4	3.2	4.0
167.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6	2.4	2.4
170°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6
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°	688.8	688.8	688.8	688.8	688.8	688.8	688.8	688.8	688.8	688.8
2.5°	685.6	687.2	688.0	688.8	688.8	688.8	688.8	688.8	688.8	688.0
5°	684.0	685.6	686.4	687.2	687.2	687.2	687.2	687.2	687.2	687.2
7.5°	681.6	683.2	684.0	684.8	684.8	685.6	685.6	685.6	685.6	685.6
10°	677.6	679.2	680.8	681.6	681.6	682.4	682.4	682.4	682.4	682.4
12.5°	673.6	675.2	676.0	677.6	677.6	677.6	678.4	678.4	678.4	678.4
15°	667.3	669.7	670.5	672.0	672.0	672.0	672.8	672.8	673.6	672.8
17.5°	660.1	661.7	664.1	664.1	665.7	665.7	665.7	666.5	666.5	667.3
20°	651.3	653.7	655.3	656.9	656.9	658.5	658.5	659.3	659.3	660.1
22.5°	641.8	644.2	646.6	648.2	648.2	649.0	649.8	650.5	650.5	650.5
25°	630.6	633.0	635.4	637.0	637.8	638.6	639.4	639.4	640.2	640.2
27.5°	617.9	621.1	623.5	625.1	625.9	625.9	627.5	628.3	628.3	628.3
30°	605.2	607.6	609.9	612.3	612.3	613.1	614.7	615.5	614.7	616.3
32.5°	590.8	593.2	595.6	597.2	598.0	598.8	599.6	601.2	601.2	601.2
35°	574.1	577.3	579.7	582.1	582.1	582.9	584.5	585.3	585.3	584.5
37.5°	557.4	560.6	563.0	565.3	566.1	566.1	567.7	567.7	568.5	569.3
40°	539.9	543.1	545.4	546.2	547.8	548.6	550.2	551.0	550.2	551.0
42.5°	521.6	523.1	525.5	528.7	528.7	530.3	531.1	531.9	532.7	532.7
45°	500.1	502.4	505.6	508.0	508.0	509.6	510.4	511.2	512.8	512.0
47.5°	479.4	481.7	484.1	486.5	486.5	488.1	490.5	490.5	490.5	490.5
50°	456.3	459.4	461.0	464.2	465.0	465.8	466.6	468.2	468.2	467.4
52.5°	432.4	436.4	439.5	441.1	441.9	442.7	443.5	445.1	445.1	445.9
55°	407.7	411.7	414.1	417.2	417.2	418.0	420.4	421.2	420.4	421.2
57.5°	382.2	385.4	388.6	391.0	392.6	392.6	394.2	395.7	395.7	395.7
60°	355.9	358.3	362.3	364.7	367.1	366.3	369.5	369.5	369.5	369.5
62.5°	327.3	332.0	334.4	338.4	339.2	340.0	341.6	342.4	342.4	343.2
65°	300.2	304.2	307.4	309.7	311.3	311.3	313.7	314.5	315.3	316.1
67.5°	271.5	275.5	278.7	282.7	283.5	283.5	284.3	287.5	286.7	287.5
70°	242.1	246.0	249.2	252.4	253.2	254.0	255.6	258.0	258.0	258.0
72.5°	212.6	217.4	220.6	223.0	223.0	224.5	227.7	226.9	229.3	227.7
75°	183.9	187.1	191.9	193.5	195.1	196.7	198.3	199.1	199.9	198.3
77.5°	155.3	159.3	162.4	164.8	166.4	168.0	169.6	171.2	170.4	172.8
80°	127.4	129.8	133.0	137.0	138.6	140.1	142.5	143.3	142.5	143.3
82.5°	101.1	105.1	108.3	112.3	113.1	114.7	116.3	118.6	118.6	119.4
85°	78.8	82.8	87.6	90.0	90.8	92.4	94.8	95.6	97.1	96.3
87.5°	62.9	67.7	71.7	74.1	75.6	77.2	78.8	80.4	81.2	82.0
90°	56.5	60.5	64.5	67.7	69.3	70.1	72.5	74.1	74.8	74.8
92.5°	55.7	59.7	63.7	66.9	68.5	70.1	71.7	73.3	74.1	74.8
95°	54.9	58.9	62.9	66.1	67.7	69.3	70.9	72.5	73.3	74.1
97.5°	54.1	58.9	62.1	65.3	66.9	68.5	70.1	71.7	72.5	73.3
100°	53.3	57.3	61.3	64.5	66.1	66.9	69.3	70.9	71.7	71.7
102.5°	52.6	56.5	60.5	63.7	64.5	66.1	67.7	69.3	70.1	70.9
105°	51.0	54.9	58.9	62.1	63.7	64.5	66.9	68.5	69.3	69.3
107.5°	50.2	54.1	57.3	60.5	62.1	63.7	65.3	66.9	67.7	67.7
110°	48.6	52.6	55.7	58.9	60.5	61.3	63.7	65.3	66.1	66.1





TEST NUMBER: P241602

CATALOG NUMBER: FVS8M-4-LD4-35-1STD-O-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	47.0	51.0	54.1	57.3	58.9	59.7	62.1	62.9	63.7	64.5
115°	45.4	49.4	52.6	55.7	56.5	58.1	59.7	61.3	62.1	62.1
117.5°	43.8	47.8	51.0	53.3	54.9	55.7	58.1	58.9	59.7	60.5
120°	42.2	46.2	49.4	51.8	53.3	54.1	55.7	57.3	58.1	58.1
122.5°	40.6	43.8	47.0	49.4	51.0	51.8	53.3	54.9	55.7	55.7
125°	39.0	42.2	44.6	47.8	48.6	49.4	51.8	52.6	53.3	53.3
127.5°	36.6	39.8	43.0	45.4	46.2	47.8	48.6	50.2	51.0	51.0
130°	35.0	38.2	40.6	43.0	43.8	45.4	46.2	47.8	48.6	48.6
132.5°	32.6	35.8	38.2	40.6	41.4	42.2	43.8	45.4	45.4	46.2
135°	31.1	33.4	35.8	38.2	39.0	39.8	41.4	42.2	43.0	43.0
137.5°	28.7	31.1	33.4	35.8	36.6	37.4	39.0	39.8	40.6	40.6
140°	26.3	29.5	31.1	33.4	34.2	35.0	35.8	36.6	37.4	37.4
142.5°	24.7	27.1	28.7	30.3	31.1	31.9	33.4	34.2	34.2	35.0
145°	21.5	24.7	26.3	27.9	28.7	29.5	30.3	31.1	31.9	31.9
147.5°	19.1	21.5	23.9	25.5	26.3	26.3	27.9	27.9	28.7	28.7
150°	16.7	19.1	21.5	23.1	23.1	23.9	24.7	25.5	25.5	25.5
152.5°	14.3	15.9	18.3	19.9	20.7	20.7	21.5	22.3	23.1	23.1
155°	11.9	13.5	15.1	16.7	17.5	18.3	19.1	19.9	19.9	19.9
157.5°	10.4	11.1	12.7	14.3	15.1	15.9	15.9	16.7	16.7	16.7
160°	8.0	8.8	10.4	11.1	11.9	12.7	13.5	13.5	14.3	14.3
162.5°	6.4	7.2	8.0	8.8	9.6	9.6	10.4	11.1	11.1	11.1
165°	4.8	4.8	5.6	6.4	6.4	7.2	8.0	8.8	8.8	8.8
167.5°	3.2	3.2	4.0	4.0	4.8	4.8	4.8	5.6	5.6	5.6
170°	1.6	1.6	2.4	2.4	2.4	2.4	3.2	3.2	3.2	3.2
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)