

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: P241564

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

Issue Date: 3/3/2020



**Test Information**

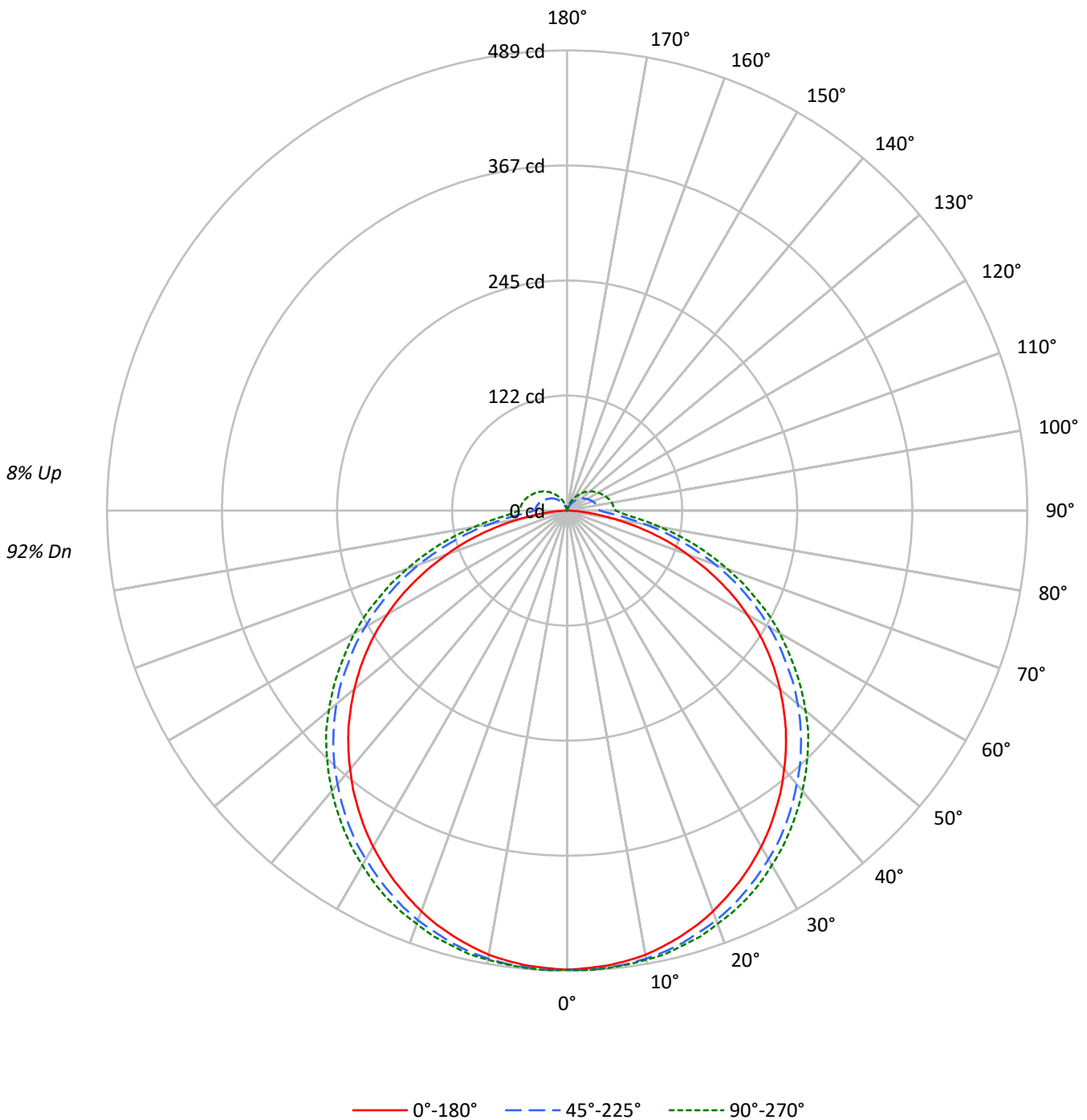
Test Method: LM-79-08  
Report Number: P241564  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS8M-3-LD4-50-1LO-O-UNV-EDC1  
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: 1672.0 lumens  
Efficiency: N/A  
Efficacy: 78.9 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): 21.2  
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-3-LD4-50-1LO-O-UNV-EDC1

### Luminous Intensity Polar Plot





TEST NUMBER: P241564

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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°	2850	2850	2850
5°	2833	2809	2805
10°	2817	2771	2764
15°	2791	2730	2725
20°	2765	2688	2683
25°	2734	2640	2646
30°	2701	2592	2596
35°	2663	2543	2546
40°	2623	2485	2493
45°	2583	2427	2435
50°	2528	2357	2367
55°	2465	2263	2283
60°	2370	2166	2192
65°	2234	2033	2063
70°	2035	1858	1905
75°	1764	1632	1721
80°	1327	1345	1480
85°	706	1066	1252



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.3	2.8
10°-20°	133.9	8.0
20°-30°	205.5	12.3
30°-40°	252.4	15.1
40°-50°	269.0	16.1
50°-60°	252.1	15.1
60°-70°	202.7	12.1
70°-80°	128.7	7.7
80°-90°	55.4	3.3
90°-100°	32.5	1.9
100°-110°	28.8	1.7
110°-120°	23.8	1.4
120°-130°	18.0	1.1
130°-140°	12.2	0.7
140°-150°	7.0	0.4
150°-160°	3.0	0.2
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	385.7	23.1
0°-40°	638.1	38.2
0°-60°	1159.2	69.3
0°-90°	1546.1	92.5
90°-120°	85.0	5.1
90°-150°	122.3	7.3
90°-180°	126.0	7.5
0°-180°	1672.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	488	488	488	488	488	
5°	485	485	487	488	488	46
15°	468	470	475	477	478	132
25°	434	439	447	453	454	200
35°	387	396	406	412	414	242
45°	329	339	352	359	362	253
55°	260	271	284	295	297	232
65°	179	192	209	219	222	177
75°	93	108	125	136	141	98
85°	17	33	52	64	67	21
90°	1	17	35	48	52	1
95°	0	15	34	46	50	0
105°	0	13	31	42	46	0
115°	0	11	27	38	41	0
125°	0	9	22	32	35	0
135°	0	7	17	25	28	0
145°	1	4	12	18	20	0
155°	1	1	6	11	12	0
165°	1	1	2	3	5	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241564

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

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	488.0	488.0	488.0	488.0	488.0	488.0	488.0	488.0	488.0	488.0	488.0
2.5°	486.7	486.7	486.0	486.7	486.7	487.4	487.4	488.0	488.7	489.4	488.7
5°	485.4	484.7	484.7	485.4	485.4	485.4	486.0	486.7	487.4	487.4	487.4
7.5°	482.7	482.0	482.0	482.7	482.7	483.4	483.4	484.7	485.4	485.4	486.0
10°	479.3	478.7	478.7	478.7	479.3	480.0	480.0	481.3	482.7	483.4	483.4
12.5°	474.0	474.0	473.3	474.7	474.7	475.3	476.7	478.0	478.7	479.3	480.0
15°	468.0	468.0	468.0	468.6	469.3	470.0	471.3	472.6	474.0	474.7	475.3
17.5°	461.3	461.3	461.3	461.9	463.3	463.9	465.3	466.6	468.0	468.6	469.3
20°	453.2	452.6	453.2	454.6	455.9	456.6	457.2	459.9	461.3	462.6	463.3
22.5°	443.9	443.9	444.5	445.9	447.9	448.5	449.2	451.2	453.2	454.6	455.9
25°	434.5	434.5	435.2	436.5	438.5	439.2	440.5	443.2	444.5	445.9	447.2
27.5°	423.8	423.8	424.4	426.5	429.1	429.8	430.5	433.1	435.2	436.5	437.8
30°	412.4	412.4	413.7	415.7	417.7	419.1	420.4	423.1	425.1	426.5	427.8
32.5°	400.3	400.3	401.7	403.7	406.4	407.7	409.0	411.7	413.7	415.7	417.7
35°	387.0	387.6	389.6	391.0	393.6	395.7	397.0	399.7	401.7	403.7	405.7
37.5°	373.6	373.6	374.9	377.6	380.9	381.6	384.3	387.0	389.0	391.6	393.0
40°	358.8	359.5	360.8	364.2	367.5	368.2	370.2	373.6	375.6	378.2	379.6
42.5°	344.1	344.8	346.8	350.1	352.1	354.1	356.2	358.8	360.8	364.2	366.2
45°	328.7	328.0	331.4	334.7	336.7	339.4	340.8	344.1	347.5	349.5	351.5
47.5°	312.0	313.3	316.0	318.0	321.3	323.4	324.7	328.0	330.7	333.4	336.1
50°	295.2	295.9	299.3	301.9	304.6	305.9	308.6	312.0	314.7	316.7	320.0
52.5°	277.8	279.2	281.2	283.2	287.2	289.2	291.2	293.9	297.9	300.6	303.3
55°	259.8	260.4	262.4	265.8	269.8	271.1	272.5	276.5	279.8	281.8	284.5
57.5°	241.0	241.7	244.4	247.0	249.7	253.1	254.4	257.1	261.1	264.4	267.1
60°	220.9	221.6	224.3	226.9	230.3	233.0	235.0	239.0	241.7	245.0	248.4
62.5°	200.8	200.8	204.2	206.2	210.9	213.6	214.2	218.2	222.3	224.9	229.0
65°	179.4	180.8	182.8	186.8	190.8	192.1	194.1	198.2	201.5	205.5	208.9
67.5°	157.3	158.7	162.0	164.7	169.4	172.1	173.4	176.7	182.1	185.4	188.8
70°	135.9	139.2	140.6	143.9	148.0	150.6	152.6	156.7	160.0	164.0	167.4
72.5°	115.8	116.5	118.5	123.2	127.2	129.2	131.9	134.6	139.2	143.3	145.9
75°	93.1	94.4	97.1	101.8	105.8	108.5	109.8	114.5	117.8	121.2	125.2
77.5°	71.0	73.0	77.0	80.3	85.0	87.0	89.7	93.7	97.7	101.1	104.4
80°	50.9	52.9	56.2	60.3	64.9	66.9	69.6	74.3	77.7	81.7	84.4
82.5°	32.8	34.1	38.2	42.2	46.2	48.9	50.9	55.6	59.6	62.9	66.3
85°	16.7	18.7	22.1	26.1	30.1	32.8	34.8	39.5	44.2	48.2	51.5
87.5°	6.0	7.4	10.7	15.4	19.4	21.4	24.1	28.1	32.8	36.8	40.2
90°	0.7	2.0	5.4	9.4	14.1	16.7	18.7	23.4	27.4	31.5	34.8
92.5°	0.0	1.3	4.7	8.7	13.4	15.4	18.1	22.1	26.1	30.1	33.5
95°	0.0	1.3	4.7	8.7	12.7	15.4	17.4	21.4	26.1	29.5	33.5
97.5°	0.0	1.3	4.0	8.0	12.7	14.7	16.7	21.4	25.4	29.5	32.8
100°	0.0	1.3	4.0	8.0	12.1	14.1	16.7	20.8	24.8	28.8	32.1
102.5°	0.0	1.3	4.0	7.4	12.1	14.1	16.1	20.1	24.1	28.1	31.5
105°	0.0	1.3	4.0	7.4	11.4	13.4	15.4	19.4	23.4	26.8	30.8
107.5°	0.0	0.7	3.3	6.7	10.7	12.7	14.7	18.7	22.8	26.1	29.5
110°	0.0	0.7	3.3	6.7	10.7	12.7	14.1	18.1	22.1	25.4	28.8



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

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.7	3.3	6.0	10.0	12.1	14.1	17.4	21.4	24.8	27.4
115°	0.0	0.7	2.7	6.0	9.4	11.4	13.4	16.7	20.1	23.4	26.8
117.5°	0.0	0.7	2.7	5.4	8.7	10.7	12.7	16.1	19.4	22.8	25.4
120°	0.0	0.7	2.7	5.4	8.7	10.0	12.1	15.4	18.7	21.4	24.8
122.5°	0.0	0.7	2.0	4.7	8.0	9.4	11.4	14.7	17.4	20.8	23.4
125°	0.0	0.7	2.0	4.7	7.4	8.7	10.7	13.4	16.7	19.4	22.1
127.5°	0.0	0.7	2.0	4.0	6.7	8.7	10.0	12.7	16.1	18.7	21.4
130°	0.0	0.0	1.3	4.0	6.7	8.0	9.4	12.1	14.7	17.4	20.1
132.5°	0.0	0.0	1.3	3.3	6.0	7.4	8.7	11.4	14.1	16.1	18.7
135°	0.0	0.7	1.3	2.7	5.4	6.7	8.0	10.0	12.7	15.4	17.4
137.5°	0.0	0.7	0.7	2.7	4.7	6.0	7.4	9.4	12.1	14.1	16.1
140°	0.7	0.7	0.7	2.0	4.0	5.4	6.0	8.7	10.7	12.7	14.7
142.5°	0.7	0.7	0.7	2.0	3.3	4.7	5.4	7.4	9.4	11.4	13.4
145°	0.7	0.7	0.7	1.3	2.7	4.0	4.7	6.7	8.7	10.0	12.1
147.5°	0.7	0.7	0.7	1.3	2.7	3.3	4.0	5.4	7.4	8.7	10.7
150°	0.7	0.7	0.7	0.7	2.0	2.7	3.3	4.7	6.0	7.4	9.4
152.5°	0.7	0.7	0.7	0.7	1.3	2.0	2.7	4.0	5.4	6.7	7.4
155°	0.7	0.7	0.7	0.7	1.3	1.3	2.0	3.3	4.0	5.4	6.0
157.5°	0.7	0.7	0.7	0.7	0.7	1.3	1.3	2.7	3.3	4.0	4.7
160°	0.7	0.7	0.7	0.7	0.7	0.7	1.3	1.3	2.7	3.3	4.0
162.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.3	1.3	2.0	2.7
165°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.3	1.3	2.0
167.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.3
170°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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°	488.0	488.0	488.0	488.0	488.0	488.0	488.0	488.0	488.0	488.0
2.5°	488.7	488.7	489.4	489.4	488.7	489.4	489.4	488.7	488.7	488.7
5°	487.4	487.4	488.0	488.0	488.0	488.0	488.0	488.0	487.4	488.0
7.5°	486.0	486.0	486.0	486.7	486.7	486.7	486.7	486.7	486.7	486.7
10°	483.4	484.0	484.0	484.7	484.7	484.7	485.4	484.7	484.7	484.7
12.5°	480.0	480.7	481.3	482.0	481.3	482.0	482.0	482.0	482.0	482.7
15°	476.0	476.7	476.7	477.3	477.3	478.0	478.0	478.0	478.0	478.0
17.5°	470.6	471.3	472.0	472.6	473.3	472.6	473.3	473.3	474.0	474.0
20°	463.9	465.3	466.0	466.6	467.3	466.6	467.3	467.3	468.0	467.3
22.5°	456.6	457.9	458.6	459.9	459.9	460.6	460.6	461.3	460.6	461.3
25°	448.5	449.9	450.6	451.9	452.6	452.6	453.2	453.2	453.2	453.9
27.5°	439.2	440.5	441.2	442.5	442.5	443.2	443.9	443.9	444.5	445.2
30°	429.8	430.5	432.5	433.1	433.8	433.8	434.5	435.2	435.2	435.2
32.5°	419.1	419.8	421.8	422.4	423.1	423.8	424.4	424.4	424.4	425.1
35°	407.0	409.0	409.7	411.7	412.4	413.1	413.1	413.7	413.1	413.7
37.5°	395.0	397.0	397.7	399.0	399.7	400.3	401.0	401.0	401.7	401.7
40°	381.6	383.6	384.9	386.3	387.0	387.6	387.6	388.3	389.6	389.0
42.5°	368.2	368.9	371.6	372.9	372.9	374.2	374.9	374.9	375.6	375.6
45°	353.5	355.5	356.8	358.2	358.8	359.5	360.2	360.8	360.8	361.5
47.5°	338.1	340.8	342.1	344.1	344.1	344.8	346.1	346.1	346.1	347.5
50°	322.0	324.0	326.7	327.4	328.0	328.7	329.4	330.0	330.7	330.7
52.5°	305.3	308.0	309.3	311.3	312.0	312.0	313.3	314.0	314.0	314.0
55°	287.9	290.5	291.9	293.2	294.6	295.2	295.2	296.6	297.2	296.6
57.5°	269.1	271.1	273.1	275.8	276.5	277.2	277.2	277.8	279.8	278.5
60°	249.7	252.4	254.4	257.1	257.7	257.7	258.4	259.8	260.4	261.1
62.5°	231.0	234.3	235.7	237.7	237.7	239.7	240.3	241.0	241.7	242.3
65°	210.9	213.6	215.6	217.6	218.9	218.9	220.9	222.3	222.3	221.6
67.5°	190.8	193.5	196.2	197.5	198.8	198.8	200.2	201.5	201.5	202.2
70°	170.7	172.7	175.4	177.4	178.7	178.7	180.1	181.4	181.4	180.8
72.5°	149.3	151.3	154.6	156.0	157.3	158.0	159.3	160.0	160.7	160.7
75°	128.5	131.2	133.2	135.2	135.9	137.2	138.6	139.2	139.9	140.6
77.5°	107.1	111.1	113.1	115.8	115.8	117.2	119.8	119.2	119.8	119.8
80°	87.7	91.0	93.1	95.7	96.4	97.1	98.4	99.8	100.4	100.4
82.5°	70.3	73.0	75.6	77.0	79.0	79.0	80.3	81.7	82.3	83.0
85°	54.9	57.6	60.3	62.9	63.6	64.3	66.3	66.9	66.9	66.9
87.5°	44.2	46.9	49.5	51.5	52.9	53.6	54.9	55.6	56.9	56.9
90°	38.2	41.5	44.2	46.2	47.5	48.2	49.5	50.9	50.9	51.5
92.5°	37.5	40.2	42.8	44.9	45.5	46.9	48.2	48.9	49.5	50.2
95°	36.8	39.5	42.2	44.2	45.5	46.2	47.5	48.9	48.9	49.5
97.5°	36.2	38.8	41.5	43.5	44.9	45.5	46.9	48.2	48.9	48.9
100°	35.5	38.2	40.8	42.8	44.2	44.9	46.2	46.9	47.5	48.2
102.5°	34.8	37.5	40.2	42.2	42.8	43.5	45.5	46.2	46.9	46.9
105°	33.5	36.2	38.8	40.8	42.2	42.8	44.2	45.5	45.5	46.2
107.5°	32.8	35.5	38.2	40.2	40.8	41.5	42.8	44.2	44.9	44.9
110°	31.5	34.1	36.8	38.8	40.2	40.8	42.2	42.8	43.5	43.5





TEST NUMBER: P241564

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

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	30.8	33.5	35.5	37.5	38.8	39.5	40.8	41.5	42.2	42.2
115°	29.5	32.1	34.1	36.2	37.5	38.2	39.5	40.2	40.8	40.8
117.5°	28.1	30.8	33.5	34.8	36.2	36.8	38.2	38.8	39.5	39.5
120°	27.4	29.5	32.1	33.5	34.8	35.5	36.2	37.5	38.2	38.2
122.5°	26.1	28.8	30.8	32.1	32.8	33.5	34.8	35.5	36.2	36.8
125°	24.8	27.4	28.8	30.8	31.5	32.1	33.5	34.1	34.8	34.8
127.5°	23.4	25.4	27.4	29.5	30.1	30.8	32.1	32.8	32.8	33.5
130°	22.1	24.1	26.1	27.4	28.1	28.8	30.1	30.8	31.5	31.5
132.5°	20.8	22.8	24.8	26.1	26.8	27.4	28.1	28.8	29.5	29.5
135°	19.4	21.4	22.8	24.1	24.8	25.4	26.8	27.4	27.4	28.1
137.5°	18.1	20.1	21.4	22.8	23.4	24.1	24.8	25.4	26.1	26.1
140°	16.7	18.1	20.1	20.8	21.4	22.1	22.8	23.4	24.1	24.1
142.5°	15.4	16.7	18.1	19.4	20.1	20.1	20.8	21.4	22.1	22.1
145°	14.1	15.4	16.7	17.4	18.1	18.7	19.4	20.1	20.1	20.1
147.5°	12.1	13.4	14.7	16.1	16.1	16.7	17.4	18.1	18.1	18.1
150°	10.7	12.1	13.4	14.1	14.7	14.7	15.4	16.1	16.1	16.1
152.5°	8.7	10.0	11.4	12.1	12.7	12.7	13.4	14.1	14.1	14.1
155°	7.4	8.7	9.4	10.7	10.7	11.4	11.4	12.1	12.1	12.1
157.5°	6.0	6.7	8.0	8.7	9.4	9.4	9.4	10.0	10.0	10.0
160°	4.7	5.4	6.0	6.7	7.4	7.4	8.0	8.0	8.0	8.0
162.5°	3.3	4.0	4.7	4.7	5.4	5.4	6.0	6.0	6.0	6.0
165°	2.0	2.7	2.7	3.3	3.3	4.0	4.0	4.0	4.7	4.7
167.5°	1.3	1.3	2.0	2.0	2.0	2.0	2.7	2.7	2.7	2.7
170°	0.7	0.7	0.7	0.7	0.7	1.3	1.3	1.3	1.3	1.3
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)