

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: P241532

Luminaire Tested: **FVS8M-2-LD4-50-1STD-O-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241532  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-4)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS8M-2-LD4-50-1STD-O-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
2FT LENGTH, 1-MODULE LED WITH OPAL LENS  
Light Source: (42) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

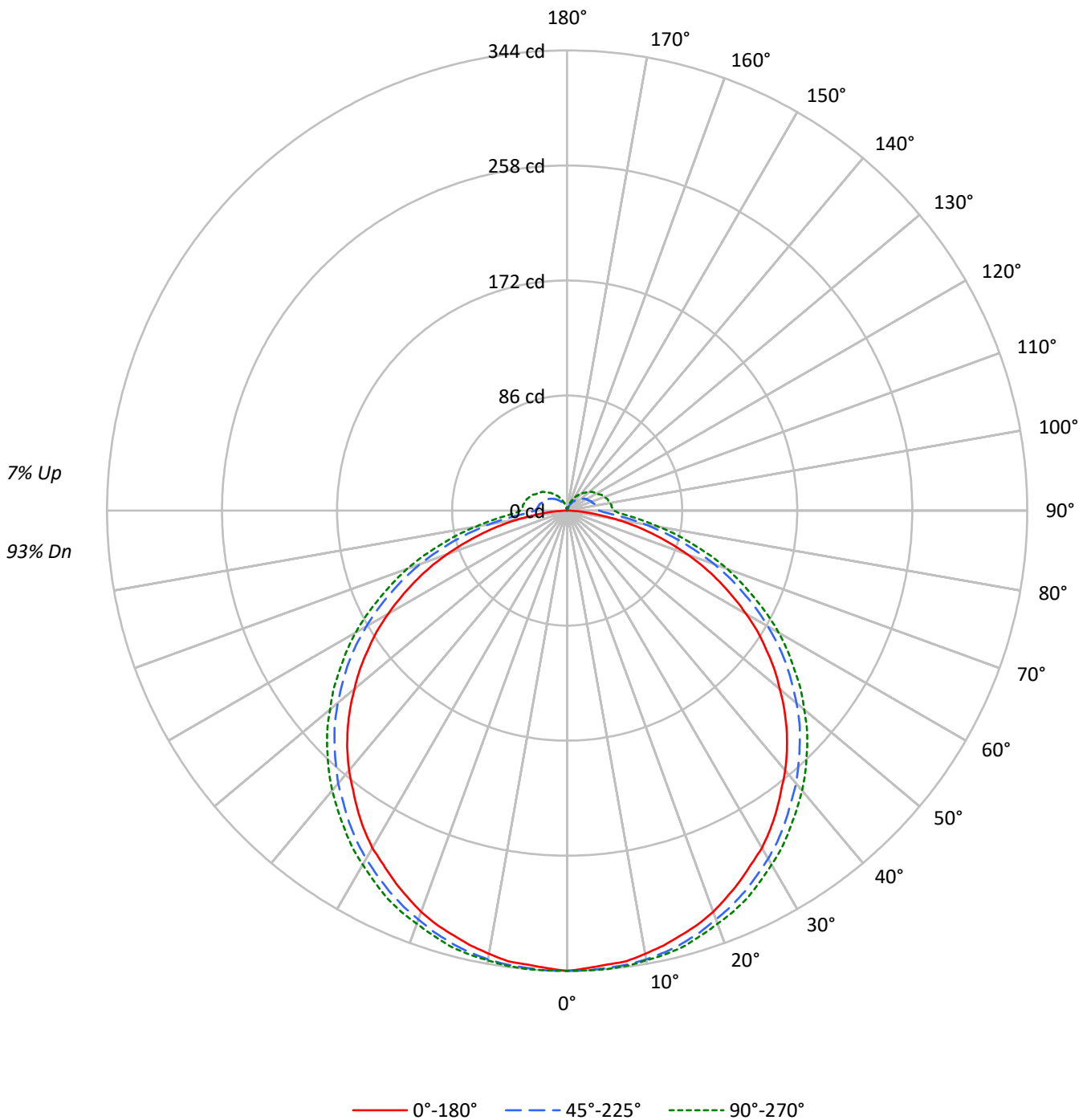
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1169.0 lumens  
Efficiency: N/A  
Efficacy: 68.0 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')  
CIE Type: Direct  
  
Input Watts (W): 17.2  
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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### 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	96	92	103	98	94	90	92	89	86		87	85	82		82	80	78	76
2	96	87	80	74	93	85	78	73	80	75	70		76	71	67		72	68	65	62
3	87	76	68	61	84	74	66	60	70	64	58		66	61	56		63	58	54	52
4	80	67	58	51	77	66	57	51	62	55	49		59	53	48		56	51	46	44
5	73	60	51	44	70	58	50	43	55	48	42		53	46	41		50	45	40	38
6	67	54	45	38	65	53	44	38	50	42	37		48	41	36		45	40	35	33
7	62	49	40	34	60	48	39	33	45	38	32		43	37	32		41	35	31	29
8	58	44	36	30	56	43	35	29	41	34	29		40	33	28		38	32	28	26
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	23	21

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

	0°	45°	90°
0°	3093	3093	3093
5°	3053	3039	3045
10°	3028	2996	2998
15°	2996	2945	2960
20°	2969	2886	2905
25°	2925	2832	2865
30°	2891	2774	2807
35°	2841	2711	2751
40°	2792	2648	2695
45°	2737	2572	2630
50°	2653	2490	2550
55°	2563	2395	2459
60°	2445	2269	2361
65°	2284	2111	2214
70°	2066	1932	2063
75°	1742	1677	1834
80°	1285	1373	1571
85°	652	1043	1328



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.6	2.8
10°-20°	94.2	8.1
20°-30°	144.5	12.4
30°-40°	177.2	15.2
40°-50°	188.7	16.1
50°-60°	176.6	15.1
60°-70°	141.7	12.1
70°-80°	89.7	7.7
80°-90°	38.1	3.3
90°-100°	22.0	1.9
100°-110°	19.5	1.7
110°-120°	16.1	1.4
120°-130°	12.3	1.1
130°-140°	8.4	0.7
140°-150°	4.8	0.4
150°-160°	2.1	0.2
160°-170°	0.5	0.0
170°-180°	0.0	0.0
0°-30°	271.3	23.2
0°-40°	448.5	38.4
0°-60°	813.8	69.6
0°-90°	1083.3	92.7
90°-120°	57.7	4.9
90°-150°	83.2	7.1
90°-180°	86.0	7.4
0°-180°	1169.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	344	344	344	344	344	
5°	341	342	343	344	344	32
15°	329	331	335	336	337	93
25°	306	309	314	318	319	141
35°	273	278	284	289	290	171
45°	232	237	246	252	254	179
55°	182	190	200	206	208	163
65°	126	134	145	153	154	124
75°	65	75	87	95	97	69
85°	12	23	35	44	46	15
90°	0	11	24	32	35	1
95°	0	10	22	31	33	0
105°	0	9	20	28	32	0
115°	0	8	18	26	28	0
125°	0	6	15	21	24	0
135°	0	4	12	17	19	0
145°	0	3	8	13	14	0
155°	0	1	5	8	8	0
165°	0	0	2	3	3	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241532

CATALOG NUMBER: FVS8M-2-LD4-50-1STD-O-UNV-EDC1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	344.1	344.1	344.1	344.1	344.1	344.1	344.1	344.1	344.1	344.1	344.1
2.5°	342.4	342.4	342.4	342.4	342.4	343.2	343.2	343.2	343.2	344.1	344.1
5°	340.7	340.7	340.7	341.5	341.5	341.5	342.4	342.4	342.4	343.2	343.2
7.5°	339.8	339.0	339.8	339.8	339.8	340.7	340.7	340.7	341.5	341.5	342.4
10°	336.4	336.4	337.3	337.3	337.3	338.1	338.1	339.0	339.0	339.8	340.7
12.5°	333.0	333.0	333.8	333.8	334.7	334.7	335.6	335.6	336.4	337.3	338.1
15°	328.7	328.7	329.6	330.4	330.4	331.3	331.3	332.1	333.0	333.8	334.7
17.5°	324.5	324.5	324.5	325.3	326.2	326.2	327.0	327.9	328.7	329.6	330.4
20°	319.3	319.3	319.3	320.2	321.0	321.0	321.9	322.7	323.6	324.5	325.3
22.5°	312.5	313.4	313.4	314.2	315.1	315.1	315.9	317.6	318.5	319.3	320.2
25°	305.7	306.5	306.5	307.4	309.1	309.1	309.9	310.8	312.5	313.4	314.2
27.5°	298.0	298.8	299.7	300.5	301.4	302.3	303.1	304.0	304.8	306.5	307.4
30°	291.2	291.2	292.0	292.9	293.7	295.4	295.4	297.1	298.0	299.7	300.5
32.5°	282.6	282.6	283.5	284.3	285.2	286.9	286.9	288.6	290.3	291.2	292.9
35°	273.2	273.2	274.1	275.8	276.6	277.5	278.3	280.1	281.8	283.5	284.3
37.5°	263.0	263.8	264.7	265.5	268.1	268.1	269.0	270.7	272.4	273.2	274.9
40°	253.6	253.6	255.3	256.1	257.9	258.7	259.6	261.3	263.0	263.8	266.4
42.5°	243.3	243.3	245.0	245.9	247.6	248.5	249.3	251.0	252.7	255.3	256.1
45°	232.2	232.2	233.9	235.7	237.4	237.4	239.1	240.8	243.3	244.2	245.9
47.5°	220.3	220.3	222.8	223.7	225.4	227.1	228.0	229.7	231.4	233.1	235.7
50°	207.5	208.3	210.0	211.7	214.3	215.2	216.0	217.7	220.3	222.0	223.7
52.5°	195.5	196.4	197.2	199.8	201.5	203.2	203.2	205.8	207.5	210.0	211.7
55°	181.9	183.6	185.3	187.0	188.7	190.4	191.3	193.0	195.5	197.2	199.8
57.5°	169.1	169.9	171.6	173.3	175.0	176.7	177.6	180.2	181.9	183.6	187.0
60°	154.5	155.4	157.1	159.7	161.4	163.1	164.8	166.5	169.1	170.8	173.3
62.5°	140.0	140.9	142.6	145.1	147.7	148.6	149.4	152.0	154.5	158.0	159.7
65°	125.5	126.4	128.1	130.6	133.2	134.0	135.8	138.3	140.9	142.6	145.1
67.5°	111.0	111.9	113.6	116.1	118.7	120.4	121.2	123.8	126.4	128.9	131.5
70°	95.6	97.3	99.0	100.8	103.3	105.0	106.7	109.3	111.9	113.6	117.0
72.5°	80.3	81.1	82.8	86.2	88.8	89.7	91.4	93.9	97.3	99.0	101.6
75°	64.9	65.7	68.3	70.9	74.3	75.1	76.8	79.4	82.0	84.5	87.1
77.5°	50.4	51.2	54.6	56.4	58.9	60.6	61.5	64.9	68.3	70.9	72.6
80°	35.9	36.7	39.3	41.8	45.3	46.1	47.8	51.2	53.8	56.4	58.9
82.5°	23.1	24.8	26.5	29.0	32.4	34.2	35.9	38.4	41.0	43.5	46.1
85°	12.0	12.8	16.2	17.9	21.3	23.1	24.8	27.3	29.9	33.3	35.0
87.5°	4.3	5.1	7.7	10.2	13.7	15.4	16.2	19.6	22.2	24.8	27.3
90°	0.0	1.7	3.4	6.8	9.4	11.1	12.8	16.2	18.8	21.3	23.9
92.5°	0.0	0.9	3.4	6.0	9.4	10.2	12.0	15.4	17.9	20.5	23.1
95°	0.0	0.9	3.4	6.0	8.5	10.2	12.0	14.5	17.1	20.5	22.2
97.5°	0.0	0.9	2.6	5.1	8.5	10.2	11.1	14.5	17.1	19.6	22.2
100°	0.0	0.9	2.6	5.1	8.5	9.4	11.1	13.7	17.1	19.6	21.3
102.5°	0.0	0.9	2.6	5.1	7.7	9.4	11.1	13.7	16.2	18.8	21.3
105°	0.0	0.9	2.6	5.1	7.7	9.4	10.2	12.8	16.2	17.9	20.5
107.5°	0.0	0.9	2.6	5.1	7.7	8.5	10.2	12.8	15.4	17.9	19.6
110°	0.0	0.9	2.6	4.3	6.8	8.5	9.4	12.8	14.5	17.1	19.6



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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	1.7	4.3	6.8	7.7	9.4	12.0	14.5	17.1	18.8
115°	0.0	0.9	1.7	4.3	6.8	7.7	8.5	11.1	13.7	16.2	17.9
117.5°	0.0	0.0	1.7	3.4	6.0	7.7	8.5	11.1	13.7	15.4	17.1
120°	0.0	0.0	1.7	3.4	6.0	6.8	7.7	10.2	12.8	14.5	17.1
122.5°	0.0	0.0	1.7	3.4	5.1	6.8	7.7	10.2	12.0	14.5	16.2
125°	0.0	0.0	1.7	3.4	5.1	6.0	7.7	9.4	11.1	13.7	15.4
127.5°	0.0	0.0	1.7	2.6	5.1	6.0	6.8	8.5	11.1	12.8	14.5
130°	0.0	0.0	0.9	2.6	4.3	5.1	6.0	8.5	10.2	12.0	13.7
132.5°	0.0	0.0	0.9	2.6	4.3	5.1	6.0	7.7	9.4	11.1	12.8
135°	0.0	0.0	0.9	2.6	3.4	4.3	5.1	6.8	8.5	10.2	12.0
137.5°	0.0	0.0	0.9	1.7	3.4	4.3	5.1	6.8	8.5	9.4	11.1
140°	0.0	0.0	0.9	1.7	3.4	3.4	4.3	6.0	7.7	8.5	10.2
142.5°	0.0	0.0	0.9	1.7	2.6	3.4	4.3	5.1	6.8	8.5	9.4
145°	0.0	0.0	0.0	0.9	2.6	2.6	3.4	5.1	6.0	7.7	8.5
147.5°	0.0	0.0	0.0	0.9	1.7	2.6	2.6	4.3	5.1	6.8	7.7
150°	0.0	0.0	0.0	0.9	1.7	1.7	2.6	3.4	4.3	6.0	6.8
152.5°	0.0	0.0	0.0	0.9	0.9	1.7	1.7	2.6	3.4	5.1	6.0
155°	0.0	0.0	0.0	0.0	0.9	0.9	1.7	2.6	3.4	4.3	5.1
157.5°	0.0	0.0	0.0	0.0	0.9	0.9	0.9	1.7	2.6	3.4	3.4
160°	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	1.7	2.6	2.6
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	1.7	1.7
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	1.7
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
170°	0.0	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°	344.1	344.1	344.1	344.1	344.1	344.1	344.1	344.1	344.1	344.1
2.5°	344.1	344.9	344.9	344.9	344.9	344.9	344.9	344.9	344.9	344.1
5°	344.1	344.1	344.1	344.1	344.1	344.1	344.1	344.1	344.1	344.1
7.5°	342.4	342.4	343.2	343.2	343.2	343.2	343.2	343.2	343.2	343.2
10°	340.7	340.7	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5
12.5°	338.1	339.0	339.0	339.0	339.0	339.0	339.8	339.8	339.8	339.8
15°	334.7	335.6	335.6	336.4	336.4	336.4	336.4	336.4	336.4	337.3
17.5°	331.3	332.1	332.1	332.1	333.0	333.0	333.0	333.0	333.0	333.0
20°	326.2	327.0	327.9	327.9	328.7	328.7	328.7	328.7	328.7	328.7
22.5°	321.0	321.9	322.7	322.7	323.6	323.6	323.6	324.5	324.5	324.5
25°	315.1	315.9	316.8	317.6	317.6	318.5	318.5	318.5	318.5	319.3
27.5°	309.1	309.1	309.9	310.8	311.6	311.6	311.6	311.6	312.5	312.5
30°	301.4	303.1	304.0	304.0	304.8	304.8	304.8	305.7	305.7	305.7
32.5°	293.7	295.4	296.3	296.3	297.1	298.0	298.0	298.0	298.0	298.8
35°	285.2	286.9	287.7	288.6	289.4	289.4	289.4	290.3	290.3	290.3
37.5°	276.6	277.5	279.2	279.2	280.1	280.1	280.9	281.8	281.8	281.8
40°	267.2	269.0	269.8	270.7	271.5	271.5	272.4	272.4	272.4	273.2
42.5°	257.9	258.7	260.4	261.3	262.1	262.1	263.0	263.8	263.8	263.8
45°	247.6	248.5	250.2	251.9	251.9	251.9	253.6	253.6	253.6	253.6
47.5°	236.5	238.2	239.9	240.8	240.8	241.6	241.6	242.5	243.3	243.3
50°	225.4	227.1	228.0	229.7	229.7	230.5	231.4	232.2	232.2	231.4
52.5°	213.5	215.2	216.9	217.7	218.6	218.6	219.4	219.4	220.3	220.3
55°	200.6	202.4	204.1	205.8	205.8	205.8	207.5	208.3	207.5	207.5
57.5°	187.8	189.5	191.3	192.1	193.0	193.8	193.8	195.5	195.5	195.5
60°	175.0	176.7	178.4	180.2	180.2	181.0	181.0	181.9	182.7	182.7
62.5°	162.2	163.1	164.8	166.5	166.5	166.5	168.2	168.2	169.1	169.1
65°	146.9	149.4	151.1	152.0	152.8	153.7	153.7	154.5	155.4	154.5
67.5°	132.3	134.9	135.8	137.5	138.3	139.2	140.0	140.9	140.9	140.9
70°	118.7	120.4	122.1	123.8	123.8	124.7	125.5	126.4	126.4	127.2
72.5°	104.2	105.9	107.6	108.4	109.3	110.1	111.0	111.9	112.7	112.7
75°	89.7	91.4	93.1	94.8	94.8	94.8	96.5	97.3	97.3	97.3
77.5°	75.1	76.8	78.6	80.3	80.3	81.1	82.0	82.8	83.7	83.7
80°	61.5	63.2	64.9	66.6	66.6	67.5	68.3	69.2	70.0	69.2
82.5°	48.7	50.4	52.1	52.9	53.8	55.5	56.4	56.4	57.2	57.2
85°	37.6	39.3	41.0	42.7	43.5	44.4	44.4	45.3	46.1	46.1
87.5°	29.9	31.6	33.3	35.0	35.0	35.9	36.7	37.6	38.4	38.4
90°	25.6	28.2	29.9	31.6	31.6	32.4	33.3	34.2	35.0	35.0
92.5°	25.6	27.3	29.0	30.7	30.7	31.6	32.4	33.3	34.2	34.2
95°	24.8	26.5	28.2	29.9	30.7	31.6	32.4	33.3	33.3	33.3
97.5°	24.8	26.5	28.2	29.9	29.9	30.7	31.6	32.4	33.3	33.3
100°	23.9	25.6	27.3	29.0	29.9	30.7	31.6	32.4	32.4	32.4
102.5°	23.1	25.6	27.3	28.2	29.0	29.9	30.7	31.6	31.6	31.6
105°	23.1	24.8	26.5	28.2	28.2	29.0	29.9	30.7	30.7	31.6
107.5°	22.2	23.9	25.6	27.3	28.2	28.2	29.0	29.9	30.7	30.7
110°	21.3	23.1	24.8	26.5	27.3	27.3	28.2	29.0	29.9	29.9





TEST NUMBER: P241532

CATALOG NUMBER: FVS8M-2-LD4-50-1STD-O-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	20.5	22.2	23.9	25.6	26.5	26.5	27.3	28.2	29.0	29.0
115°	20.5	22.2	23.1	24.8	25.6	25.6	26.5	27.3	27.3	28.2
117.5°	19.6	21.3	22.2	23.9	24.8	24.8	25.6	26.5	26.5	26.5
120°	18.8	20.5	21.3	23.1	23.1	23.9	24.8	25.6	25.6	25.6
122.5°	17.9	19.6	20.5	22.2	22.2	23.1	23.9	24.8	24.8	24.8
125°	17.1	18.8	19.6	21.3	21.3	22.2	23.1	23.1	23.9	23.9
127.5°	16.2	17.9	18.8	19.6	20.5	21.3	21.3	22.2	22.2	23.1
130°	15.4	17.1	17.9	18.8	19.6	19.6	20.5	21.3	21.3	21.3
132.5°	14.5	15.4	17.1	17.9	17.9	18.8	19.6	19.6	20.5	20.5
135°	13.7	14.5	16.2	17.1	17.1	17.9	17.9	18.8	18.8	18.8
137.5°	12.8	13.7	14.5	15.4	16.2	16.2	17.1	17.1	17.9	17.9
140°	11.1	12.8	13.7	14.5	14.5	15.4	15.4	16.2	16.2	16.2
142.5°	10.2	12.0	12.8	13.7	13.7	13.7	14.5	14.5	15.4	15.4
145°	9.4	10.2	11.1	12.0	12.8	12.8	12.8	13.7	13.7	13.7
147.5°	8.5	9.4	10.2	11.1	11.1	11.1	12.0	12.0	12.0	12.8
150°	7.7	8.5	9.4	9.4	10.2	10.2	10.2	11.1	11.1	11.1
152.5°	6.8	6.8	7.7	8.5	8.5	8.5	9.4	9.4	9.4	9.4
155°	5.1	6.0	6.8	6.8	7.7	7.7	7.7	8.5	8.5	8.5
157.5°	4.3	5.1	6.0	6.0	6.0	6.8	6.8	6.8	6.8	6.8
160°	3.4	4.3	4.3	5.1	5.1	5.1	5.1	5.1	6.0	6.0
162.5°	2.6	2.6	3.4	3.4	4.3	4.3	4.3	4.3	4.3	4.3
165°	1.7	1.7	2.6	2.6	2.6	2.6	2.6	3.4	3.4	3.4
167.5°	0.9	0.9	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
170°	0.0	0.0	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
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)