

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: P241534

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241534  
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-LD4-35-1HI-O-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
2FT LENGTH, 1-MODULE LED WITH OPAL LENS  
Light Source: (42) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

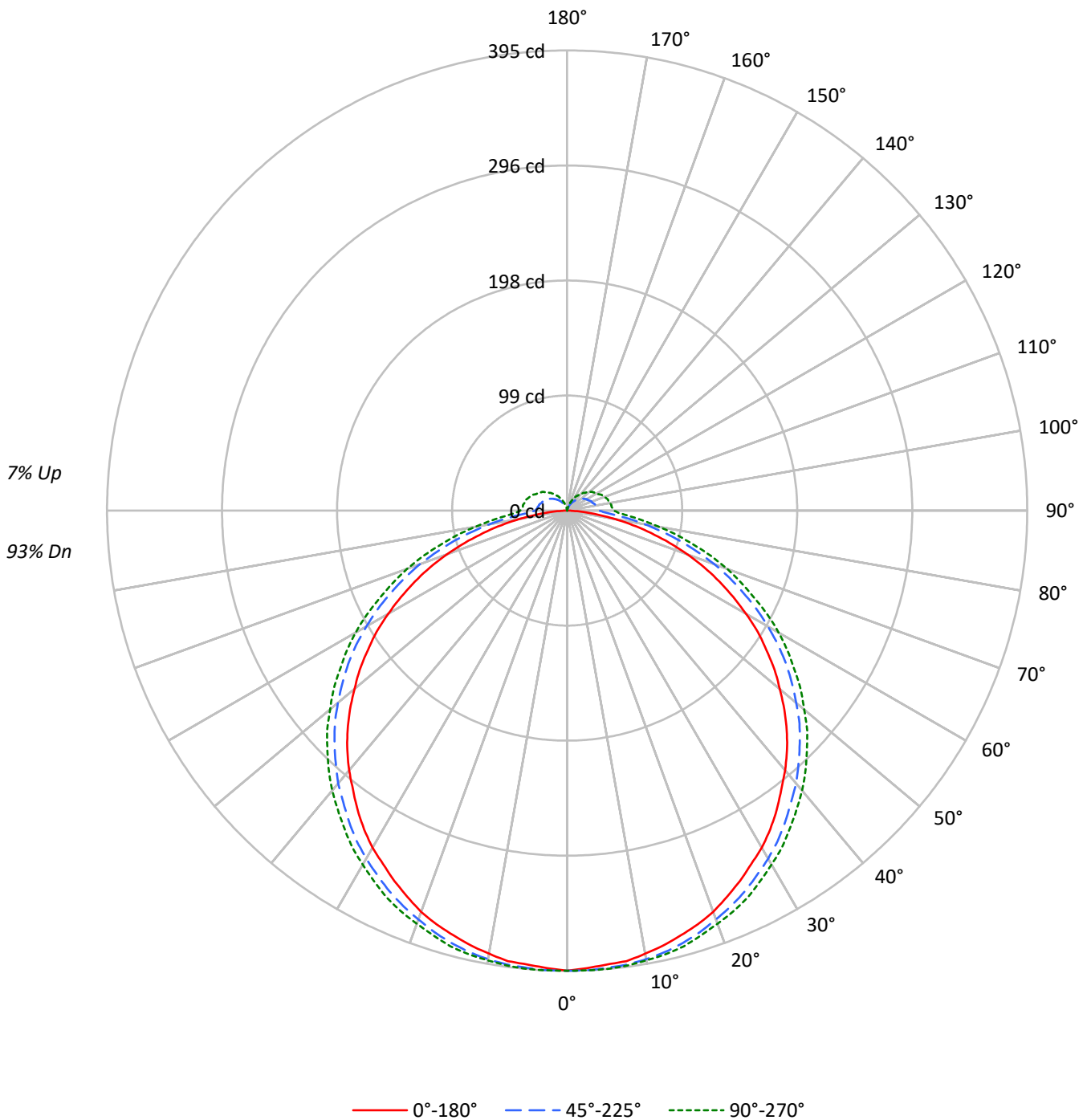
Lumens per Lamp: N/A  
Luminaire Lumens: 1342.0 lumens  
Efficiency: N/A  
Efficacy: 60.2 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')  
CIE Type: Direct

Input Watts (W): 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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### 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°	3551	3551	3551
5°	3505	3489	3495
10°	3477	3439	3442
15°	3440	3380	3398
20°	3409	3312	3336
25°	3357	3251	3290
30°	3318	3185	3222
35°	3263	3112	3158
40°	3204	3039	3095
45°	3142	2953	3019
50°	3046	2858	2927
55°	2942	2750	2823
60°	2807	2606	2711
65°	2623	2424	2542
70°	2373	2218	2368
75°	2000	1926	2105
80°	1475	1576	1802
85°	744	1198	1524



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.5	2.8
10°-20°	108.2	8.1
20°-30°	165.9	12.4
30°-40°	203.4	15.2
40°-50°	216.6	16.1
50°-60°	202.7	15.1
60°-70°	162.6	12.1
70°-80°	102.9	7.7
80°-90°	43.8	3.3
90°-100°	25.3	1.9
100°-110°	22.4	1.7
110°-120°	18.5	1.4
120°-130°	14.2	1.1
130°-140°	9.6	0.7
140°-150°	5.5	0.4
150°-160°	2.4	0.2
160°-170°	0.5	0.0
170°-180°	0.0	0.0
0°-30°	311.5	23.2
0°-40°	514.9	38.4
0°-60°	934.3	69.6
0°-90°	1243.6	92.7
90°-120°	66.2	4.9
90°-150°	95.5	7.1
90°-180°	98.0	7.3
0°-180°	1342.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	395	395	395	395	395	
5°	391	392	394	395	395	37
15°	377	380	384	386	387	107
25°	351	355	361	365	367	162
35°	314	319	326	332	333	196
45°	267	272	282	289	291	205
55°	209	219	229	236	238	187
65°	144	154	167	176	177	142
75°	74	86	100	109	112	79
85°	14	26	40	50	53	17
90°	0	13	27	36	40	1
95°	0	12	26	35	38	0
105°	0	11	24	32	36	0
115°	0	9	21	29	32	0
125°	0	7	18	24	27	0
135°	0	5	14	20	22	0
145°	0	3	10	15	16	0
155°	0	1	6	9	10	0
165°	0	0	2	3	4	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241534

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0
2.5°	393.1	393.1	393.1	393.1	393.1	394.0	394.0	394.0	394.0	395.0	395.0
5°	391.1	391.1	391.1	392.1	392.1	392.1	393.1	393.1	393.1	394.0	394.0
7.5°	390.1	389.1	390.1	390.1	390.1	391.1	391.1	391.1	392.1	392.1	393.1
10°	386.2	386.2	387.2	387.2	387.2	388.2	388.2	389.1	389.1	390.1	391.1
12.5°	382.3	382.3	383.2	383.2	384.2	384.2	385.2	385.2	386.2	387.2	388.2
15°	377.4	377.4	378.3	379.3	379.3	380.3	380.3	381.3	382.3	383.2	384.2
17.5°	372.5	372.5	372.5	373.4	374.4	374.4	375.4	376.4	377.4	378.3	379.3
20°	366.6	366.6	366.6	367.6	368.5	368.5	369.5	370.5	371.5	372.5	373.4
22.5°	358.7	359.7	359.7	360.7	361.7	361.7	362.7	364.6	365.6	366.6	367.6
25°	350.9	351.9	351.9	352.9	354.8	354.8	355.8	356.8	358.7	359.7	360.7
27.5°	342.1	343.1	344.0	345.0	346.0	347.0	348.0	348.9	349.9	351.9	352.9
30°	334.2	334.2	335.2	336.2	337.2	339.1	339.1	341.1	342.1	344.0	345.0
32.5°	324.4	324.4	325.4	326.4	327.4	329.3	329.3	331.3	333.3	334.2	336.2
35°	313.7	313.7	314.6	316.6	317.6	318.6	319.5	321.5	323.5	325.4	326.4
37.5°	301.9	302.9	303.9	304.8	307.8	307.8	308.8	310.7	312.7	313.7	315.6
40°	291.1	291.1	293.1	294.1	296.0	297.0	298.0	299.9	301.9	302.9	305.8
42.5°	279.4	279.4	281.3	282.3	284.3	285.2	286.2	288.2	290.1	293.1	294.1
45°	266.6	266.6	268.6	270.5	272.5	272.5	274.4	276.4	279.4	280.3	282.3
47.5°	252.9	252.9	255.8	256.8	258.8	260.7	261.7	263.7	265.6	267.6	270.5
50°	238.2	239.2	241.1	243.1	246.0	247.0	248.0	249.9	252.9	254.8	256.8
52.5°	224.5	225.4	226.4	229.4	231.3	233.3	233.3	236.2	238.2	241.1	243.1
55°	208.8	210.7	212.7	214.7	216.6	218.6	219.6	221.5	224.5	226.4	229.4
57.5°	194.1	195.1	197.0	199.0	200.9	202.9	203.9	206.8	208.8	210.7	214.7
60°	177.4	178.4	180.4	183.3	185.3	187.2	189.2	191.1	194.1	196.0	199.0
62.5°	160.7	161.7	163.7	166.6	169.6	170.6	171.5	174.5	177.4	181.3	183.3
65°	144.1	145.1	147.0	150.0	152.9	153.9	155.8	158.8	161.7	163.7	166.6
67.5°	127.4	128.4	130.4	133.3	136.2	138.2	139.2	142.1	145.1	148.0	150.9
70°	109.8	111.7	113.7	115.7	118.6	120.6	122.5	125.5	128.4	130.4	134.3
72.5°	92.1	93.1	95.1	99.0	101.9	102.9	104.9	107.8	111.7	113.7	116.6
75°	74.5	75.5	78.4	81.4	85.3	86.3	88.2	91.2	94.1	97.0	100.0
77.5°	57.8	58.8	62.7	64.7	67.6	69.6	70.6	74.5	78.4	81.4	83.3
80°	41.2	42.1	45.1	48.0	51.9	52.9	54.9	58.8	61.8	64.7	67.6
82.5°	26.5	28.4	30.4	33.3	37.2	39.2	41.2	44.1	47.0	50.0	52.9
85°	13.7	14.7	18.6	20.6	24.5	26.5	28.4	31.4	34.3	38.2	40.2
87.5°	4.9	5.9	8.8	11.8	15.7	17.6	18.6	22.5	25.5	28.4	31.4
90°	0.0	2.0	3.9	7.8	10.8	12.7	14.7	18.6	21.6	24.5	27.4
92.5°	0.0	1.0	3.9	6.9	10.8	11.8	13.7	17.6	20.6	23.5	26.5
95°	0.0	1.0	3.9	6.9	9.8	11.8	13.7	16.7	19.6	23.5	25.5
97.5°	0.0	1.0	2.9	5.9	9.8	11.8	12.7	16.7	19.6	22.5	25.5
100°	0.0	1.0	2.9	5.9	9.8	10.8	12.7	15.7	19.6	22.5	24.5
102.5°	0.0	1.0	2.9	5.9	8.8	10.8	12.7	15.7	18.6	21.6	24.5
105°	0.0	1.0	2.9	5.9	8.8	10.8	11.8	14.7	18.6	20.6	23.5
107.5°	0.0	1.0	2.9	5.9	8.8	9.8	11.8	14.7	17.6	20.6	22.5
110°	0.0	1.0	2.9	4.9	7.8	9.8	10.8	14.7	16.7	19.6	22.5



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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	2.0	4.9	7.8	8.8	10.8	13.7	16.7	19.6	21.6
115°	0.0	1.0	2.0	4.9	7.8	8.8	9.8	12.7	15.7	18.6	20.6
117.5°	0.0	0.0	2.0	3.9	6.9	8.8	9.8	12.7	15.7	17.6	19.6
120°	0.0	0.0	2.0	3.9	6.9	7.8	8.8	11.8	14.7	16.7	19.6
122.5°	0.0	0.0	2.0	3.9	5.9	7.8	8.8	11.8	13.7	16.7	18.6
125°	0.0	0.0	2.0	3.9	5.9	6.9	8.8	10.8	12.7	15.7	17.6
127.5°	0.0	0.0	2.0	2.9	5.9	6.9	7.8	9.8	12.7	14.7	16.7
130°	0.0	0.0	1.0	2.9	4.9	5.9	6.9	9.8	11.8	13.7	15.7
132.5°	0.0	0.0	1.0	2.9	4.9	5.9	6.9	8.8	10.8	12.7	14.7
135°	0.0	0.0	1.0	2.9	3.9	4.9	5.9	7.8	9.8	11.8	13.7
137.5°	0.0	0.0	1.0	2.0	3.9	4.9	5.9	7.8	9.8	10.8	12.7
140°	0.0	0.0	1.0	2.0	3.9	3.9	4.9	6.9	8.8	9.8	11.8
142.5°	0.0	0.0	1.0	2.0	2.9	3.9	4.9	5.9	7.8	9.8	10.8
145°	0.0	0.0	0.0	1.0	2.9	2.9	3.9	5.9	6.9	8.8	9.8
147.5°	0.0	0.0	0.0	1.0	2.0	2.9	2.9	4.9	5.9	7.8	8.8
150°	0.0	0.0	0.0	1.0	2.0	2.0	2.9	3.9	4.9	6.9	7.8
152.5°	0.0	0.0	0.0	1.0	1.0	2.0	2.0	2.9	3.9	5.9	6.9
155°	0.0	0.0	0.0	0.0	1.0	1.0	2.0	2.9	3.9	4.9	5.9
157.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0	2.9	3.9	3.9
160°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0	2.9	2.9
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0	2.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
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°	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0
2.5°	395.0	396.0	396.0	396.0	396.0	396.0	396.0	396.0	396.0	395.0
5°	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0
7.5°	393.1	393.1	394.0	394.0	394.0	394.0	394.0	394.0	394.0	394.0
10°	391.1	391.1	392.1	392.1	392.1	392.1	392.1	392.1	392.1	392.1
12.5°	388.2	389.1	389.1	389.1	389.1	389.1	390.1	390.1	390.1	390.1
15°	384.2	385.2	385.2	386.2	386.2	386.2	386.2	386.2	386.2	387.2
17.5°	380.3	381.3	381.3	381.3	382.3	382.3	382.3	382.3	382.3	382.3
20°	374.4	375.4	376.4	376.4	377.4	377.4	377.4	377.4	377.4	377.4
22.5°	368.5	369.5	370.5	370.5	371.5	371.5	371.5	372.5	372.5	372.5
25°	361.7	362.7	363.6	364.6	364.6	365.6	365.6	365.6	365.6	366.6
27.5°	354.8	354.8	355.8	356.8	357.8	357.8	357.8	357.8	358.7	358.7
30°	346.0	348.0	348.9	348.9	349.9	349.9	349.9	350.9	350.9	350.9
32.5°	337.2	339.1	340.1	340.1	341.1	342.1	342.1	342.1	342.1	343.1
35°	327.4	329.3	330.3	331.3	332.3	332.3	332.3	333.3	333.3	333.3
37.5°	317.6	318.6	320.5	320.5	321.5	321.5	322.5	323.5	323.5	323.5
40°	306.8	308.8	309.7	310.7	311.7	311.7	312.7	312.7	312.7	313.7
42.5°	296.0	297.0	299.0	299.9	300.9	300.9	301.9	302.9	302.9	302.9
45°	284.3	285.2	287.2	289.2	289.2	289.2	291.1	291.1	291.1	291.1
47.5°	271.5	273.5	275.4	276.4	276.4	277.4	277.4	278.4	279.4	279.4
50°	258.8	260.7	261.7	263.7	263.7	264.6	265.6	266.6	266.6	265.6
52.5°	245.0	247.0	249.0	249.9	250.9	250.9	251.9	251.9	252.9	252.9
55°	230.3	232.3	234.3	236.2	236.2	236.2	238.2	239.2	238.2	238.2
57.5°	215.6	217.6	219.6	220.5	221.5	222.5	222.5	224.5	224.5	224.5
60°	200.9	202.9	204.9	206.8	206.8	207.8	207.8	208.8	209.8	209.8
62.5°	186.2	187.2	189.2	191.1	191.1	191.1	193.1	193.1	194.1	194.1
65°	168.6	171.5	173.5	174.5	175.5	176.4	176.4	177.4	178.4	177.4
67.5°	151.9	154.9	155.8	157.8	158.8	159.8	160.7	161.7	161.7	161.7
70°	136.2	138.2	140.2	142.1	142.1	143.1	144.1	145.1	145.1	146.0
72.5°	119.6	121.5	123.5	124.5	125.5	126.4	127.4	128.4	129.4	129.4
75°	102.9	104.9	106.8	108.8	108.8	108.8	110.8	111.7	111.7	111.7
77.5°	86.3	88.2	90.2	92.1	92.1	93.1	94.1	95.1	96.1	96.1
80°	70.6	72.5	74.5	76.5	76.5	77.4	78.4	79.4	80.4	79.4
82.5°	55.9	57.8	59.8	60.8	61.8	63.7	64.7	64.7	65.7	65.7
85°	43.1	45.1	47.0	49.0	50.0	51.0	51.0	51.9	52.9	52.9
87.5°	34.3	36.3	38.2	40.2	40.2	41.2	42.1	43.1	44.1	44.1
90°	29.4	32.3	34.3	36.3	36.3	37.2	38.2	39.2	40.2	40.2
92.5°	29.4	31.4	33.3	35.3	35.3	36.3	37.2	38.2	39.2	39.2
95°	28.4	30.4	32.3	34.3	35.3	36.3	37.2	38.2	38.2	38.2
97.5°	28.4	30.4	32.3	34.3	34.3	35.3	36.3	37.2	38.2	38.2
100°	27.4	29.4	31.4	33.3	34.3	35.3	36.3	37.2	37.2	37.2
102.5°	26.5	29.4	31.4	32.3	33.3	34.3	35.3	36.3	36.3	36.3
105°	26.5	28.4	30.4	32.3	32.3	33.3	34.3	35.3	35.3	36.3
107.5°	25.5	27.4	29.4	31.4	32.3	32.3	33.3	34.3	35.3	35.3
110°	24.5	26.5	28.4	30.4	31.4	31.4	32.3	33.3	34.3	34.3





TEST NUMBER: P241534

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

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	23.5	25.5	27.4	29.4	30.4	30.4	31.4	32.3	33.3	33.3
115°	23.5	25.5	26.5	28.4	29.4	29.4	30.4	31.4	31.4	32.3
117.5°	22.5	24.5	25.5	27.4	28.4	28.4	29.4	30.4	30.4	30.4
120°	21.6	23.5	24.5	26.5	26.5	27.4	28.4	29.4	29.4	29.4
122.5°	20.6	22.5	23.5	25.5	25.5	26.5	27.4	28.4	28.4	28.4
125°	19.6	21.6	22.5	24.5	24.5	25.5	26.5	26.5	27.4	27.4
127.5°	18.6	20.6	21.6	22.5	23.5	24.5	24.5	25.5	25.5	26.5
130°	17.6	19.6	20.6	21.6	22.5	22.5	23.5	24.5	24.5	24.5
132.5°	16.7	17.6	19.6	20.6	20.6	21.6	22.5	22.5	23.5	23.5
135°	15.7	16.7	18.6	19.6	19.6	20.6	20.6	21.6	21.6	21.6
137.5°	14.7	15.7	16.7	17.6	18.6	18.6	19.6	19.6	20.6	20.6
140°	12.7	14.7	15.7	16.7	16.7	17.6	17.6	18.6	18.6	18.6
142.5°	11.8	13.7	14.7	15.7	15.7	15.7	16.7	16.7	17.6	17.6
145°	10.8	11.8	12.7	13.7	14.7	14.7	14.7	15.7	15.7	15.7
147.5°	9.8	10.8	11.8	12.7	12.7	12.7	13.7	13.7	13.7	14.7
150°	8.8	9.8	10.8	10.8	11.8	11.8	11.8	12.7	12.7	12.7
152.5°	7.8	7.8	8.8	9.8	9.8	9.8	10.8	10.8	10.8	10.8
155°	5.9	6.9	7.8	7.8	8.8	8.8	8.8	9.8	9.8	9.8
157.5°	4.9	5.9	6.9	6.9	6.9	7.8	7.8	7.8	7.8	7.8
160°	3.9	4.9	4.9	5.9	5.9	5.9	5.9	5.9	6.9	6.9
162.5°	2.9	2.9	3.9	3.9	4.9	4.9	4.9	4.9	4.9	4.9
165°	2.0	2.0	2.9	2.9	2.9	2.9	2.9	3.9	3.9	3.9
167.5°	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
170°	0.0	0.0	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)