

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: P241541

Luminaire Tested: **FVS8M-2-LD4-30-2STD-O-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241541  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-9)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS8M-2-LD4-30-2STD-O-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
2FT LENGTH, 2-MODULE LED WITH OPAL LENS  
Light Source: (84) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

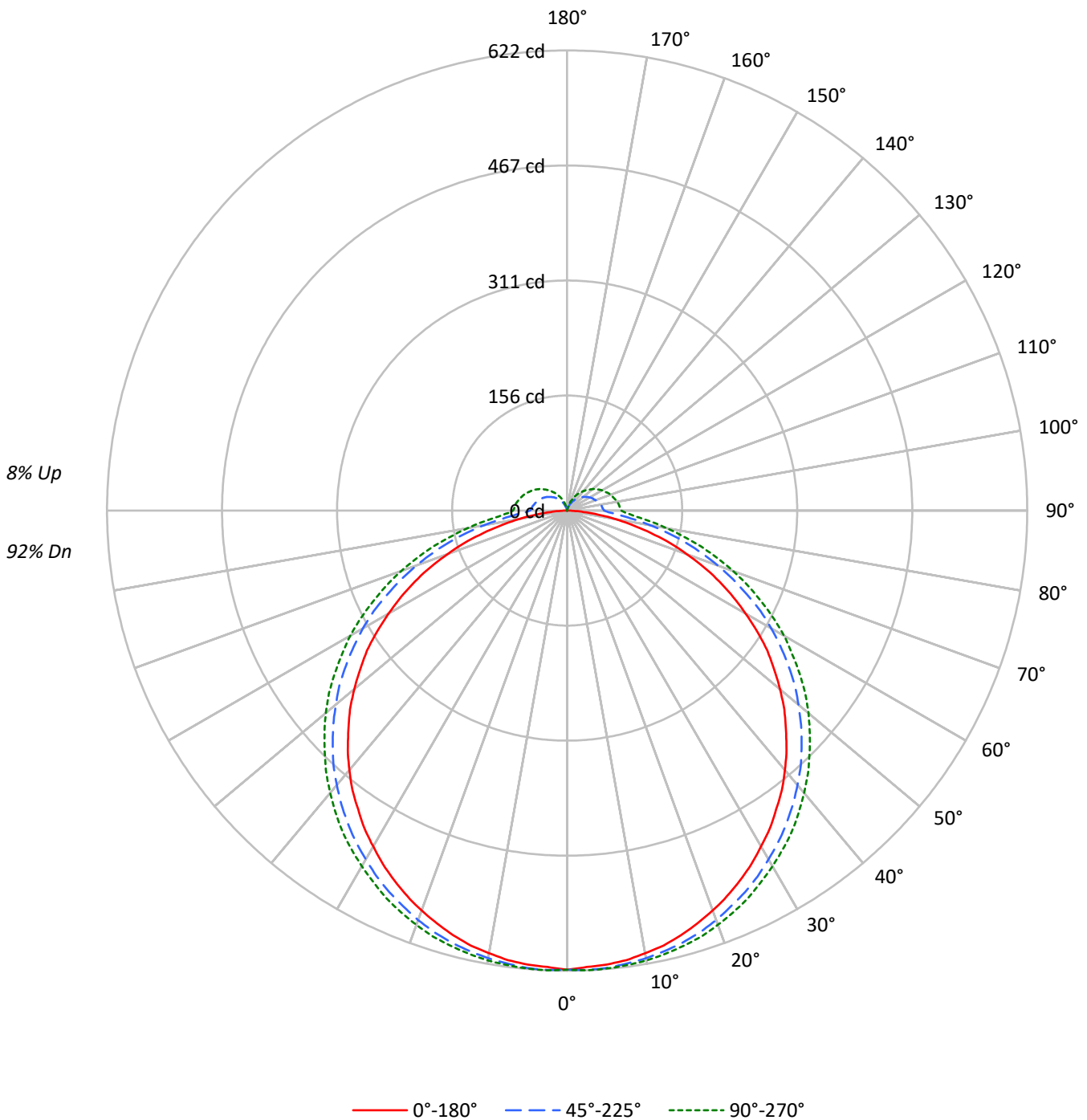
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2165.0 lumens  
Efficiency: N/A  
Efficacy: 64.4 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.33 / 1.43  
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')  
CIE Type: Direct  
  
Input Watts (W): 33.6  
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	113	113	113	113	106	106	106	100	100	100	94	94	94	92
1	106	101	96	92	102	98	93	89	92	88	85	86	84	81	81	79	77	74
2	96	87	80	74	92	84	78	72	79	74	69	75	70	66	71	67	64	61
3	87	76	67	61	84	74	66	60	70	63	57	66	60	55	62	57	53	51
4	79	67	58	51	76	65	57	50	61	54	49	58	52	47	55	50	46	43
5	73	60	50	44	70	58	49	43	55	47	42	52	46	41	49	44	39	37
6	67	54	44	38	65	52	44	37	49	42	36	47	40	35	45	39	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	37	31	27	25
9	54	40	32	26	52	39	31	26	38	31	26	36	30	25	34	29	24	22
10	50	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°	5578	5578	5578
5°	5520	5496	5498
10°	5469	5403	5420
15°	5417	5318	5344
20°	5349	5225	5267
25°	5282	5129	5188
30°	5206	5026	5097
35°	5125	4926	5019
40°	5043	4813	4915
45°	4927	4687	4807
50°	4804	4542	4692
55°	4654	4375	4543
60°	4410	4175	4378
65°	4133	3898	4137
70°	3711	3574	3872
75°	3141	3174	3526
80°	2370	2657	3094
85°	1211	2134	2704



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.9	2.7
10°-20°	170.3	7.9
20°-30°	261.5	12.1
30°-40°	321.7	14.9
40°-50°	343.4	15.9
50°-60°	322.9	14.9
60°-70°	261.1	12.1
70°-80°	168.4	7.8
80°-90°	76.0	3.5
90°-100°	46.3	2.1
100°-110°	41.1	1.9
110°-120°	34.0	1.6
120°-130°	25.9	1.2
130°-140°	17.6	0.8
140°-150°	10.2	0.5
150°-160°	4.4	0.2
160°-170°	1.0	0.0
170°-180°	0.0	0.0
0°-30°	490.7	22.7
0°-40°	812.4	37.5
0°-60°	1478.7	68.3
0°-90°	1984.3	91.7
90°-120°	121.4	5.6
90°-150°	175.2	8.1
90°-180°	181.0	8.4
0°-180°	2165.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	621	621	621	621	621	
5°	616	617	621	621	621	59
15°	594	598	604	608	609	168
25°	552	558	569	575	578	254
35°	493	503	517	526	530	309
45°	418	430	448	460	464	323
55°	330	345	365	379	383	294
65°	227	246	268	285	289	224
75°	117	139	165	181	187	125
85°	22	45	72	88	94	28
90°	0	24	50	67	73	1
95°	0	22	48	65	71	0
105°	0	19	43	60	65	0
115°	0	16	38	53	58	0
125°	0	13	32	45	50	0
135°	0	10	25	36	40	0
145°	0	6	18	26	29	0
155°	1	2	10	16	18	0
165°	1	1	3	6	7	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°	620.6	620.6	620.6	620.6	620.6	620.6	620.6	620.6	620.6	620.6	620.6
2.5°	617.5	617.5	617.5	617.5	618.3	618.3	619.0	619.8	619.8	620.6	621.4
5°	616.0	615.2	616.0	616.0	616.7	616.7	617.5	618.3	619.0	619.8	620.6
7.5°	612.9	612.1	612.9	613.7	613.7	614.4	614.4	615.2	616.0	616.7	617.5
10°	607.5	607.5	608.3	609.0	609.8	609.8	610.6	611.3	612.1	613.7	614.4
12.5°	602.1	601.3	602.1	602.9	603.6	604.4	604.4	606.0	607.5	608.3	609.8
15°	594.4	594.4	595.2	595.9	596.7	597.5	598.3	600.6	601.3	602.9	604.4
17.5°	585.2	585.9	585.9	587.5	589.0	589.8	590.6	592.1	594.4	595.2	597.5
20°	575.2	575.9	575.9	577.5	579.0	580.5	581.3	583.6	585.9	587.5	589.0
22.5°	564.4	564.4	565.1	567.5	569.0	569.8	571.3	573.6	575.2	577.5	579.0
25°	552.1	552.1	553.6	555.1	557.4	558.2	559.8	562.1	564.4	566.7	569.0
27.5°	539.0	539.0	540.5	542.8	545.1	545.9	547.4	550.5	552.8	555.1	557.4
30°	524.3	525.1	526.7	529.0	531.3	532.8	534.3	536.7	539.0	542.0	544.4
32.5°	509.7	509.7	511.3	513.6	516.6	518.2	520.5	522.8	525.9	529.0	531.3
35°	492.8	493.5	495.1	498.9	500.5	502.8	504.3	507.4	511.3	513.6	516.6
37.5°	476.6	477.4	478.1	481.2	484.3	486.6	488.2	491.2	494.3	497.4	501.2
40°	458.1	458.1	460.4	464.3	466.6	468.9	470.4	474.3	477.4	481.2	484.3
42.5°	438.9	438.9	442.0	444.3	448.1	450.4	452.0	455.8	459.7	463.5	467.4
45°	418.1	419.6	421.9	425.0	429.6	430.4	432.7	436.6	441.2	445.0	448.1
47.5°	398.1	398.8	401.1	405.0	408.8	411.9	413.5	416.5	421.2	425.8	428.9
50°	375.7	377.3	379.6	383.4	387.3	390.4	392.7	396.5	401.1	405.0	408.1
52.5°	352.6	354.2	357.3	361.9	366.5	368.0	370.3	375.0	380.4	383.4	388.1
55°	330.3	331.1	334.2	338.0	343.4	344.9	347.3	351.9	356.5	361.1	365.0
57.5°	304.9	305.7	309.5	314.1	318.0	321.1	323.4	328.8	333.4	338.0	341.9
60°	278.7	281.0	284.9	290.3	294.1	297.2	299.5	304.1	308.8	313.4	318.8
62.5°	253.3	254.9	259.5	263.3	268.7	271.0	274.1	279.5	284.1	288.7	294.9
65°	227.1	228.7	231.8	237.1	243.3	245.6	248.7	253.3	258.7	264.1	267.9
67.5°	200.2	202.5	206.3	210.2	215.6	218.7	221.0	227.9	232.5	237.9	242.5
70°	171.7	174.0	178.6	184.0	189.4	193.3	195.6	201.0	207.1	211.7	216.4
72.5°	146.3	146.3	150.9	157.1	163.2	166.3	169.4	175.6	180.2	184.0	190.2
75°	117.0	119.3	124.7	130.1	137.1	139.4	142.4	147.8	154.8	159.4	164.8
77.5°	90.1	94.7	97.8	103.2	110.1	113.2	116.3	121.7	128.6	134.0	138.6
80°	66.2	68.5	72.4	77.8	85.5	87.0	90.9	97.0	102.4	107.8	114.0
82.5°	42.3	44.7	49.3	54.7	61.6	64.7	67.8	73.9	79.3	85.5	90.9
85°	22.3	24.6	29.3	35.4	42.3	45.4	48.5	53.9	60.1	66.2	71.6
87.5°	8.5	10.8	15.4	21.6	27.7	30.8	33.9	40.0	46.2	51.6	57.0
90°	0.0	3.1	8.5	13.9	20.8	23.9	26.9	33.1	39.3	44.7	50.0
92.5°	0.0	2.3	6.9	12.3	19.2	22.3	25.4	31.6	37.7	43.1	48.5
95°	0.0	2.3	6.2	12.3	18.5	21.6	24.6	30.8	37.0	42.3	47.7
97.5°	0.0	2.3	6.2	11.5	17.7	20.8	23.9	30.0	36.2	41.6	47.0
100°	0.0	1.5	6.2	11.5	16.9	20.0	23.1	29.3	35.4	40.8	45.4
102.5°	0.0	1.5	5.4	10.8	16.9	20.0	22.3	28.5	33.9	39.3	44.7
105°	0.0	1.5	5.4	10.8	16.2	19.2	22.3	27.7	33.1	38.5	43.1
107.5°	0.0	1.5	5.4	10.0	15.4	18.5	21.6	26.9	32.3	37.7	42.3
110°	0.0	1.5	4.6	9.2	14.6	17.7	20.8	26.2	31.6	36.2	40.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.5	4.6	9.2	14.6	16.9	20.0	25.4	30.0	35.4	39.3
115°	0.0	0.8	3.8	8.5	13.9	16.2	18.5	23.9	29.3	33.9	38.5
117.5°	0.0	0.8	3.8	8.5	13.1	15.4	17.7	23.1	27.7	32.3	37.0
120°	0.0	0.8	3.8	7.7	12.3	14.6	16.9	22.3	26.9	30.8	35.4
122.5°	0.0	0.8	3.1	6.9	11.5	13.9	16.2	20.8	25.4	30.0	33.9
125°	0.0	0.8	3.1	6.9	10.8	13.1	15.4	20.0	23.9	28.5	32.3
127.5°	0.0	0.8	3.1	6.2	10.0	12.3	14.6	18.5	23.1	26.9	30.0
130°	0.0	0.8	2.3	5.4	9.2	11.5	13.1	17.7	21.6	25.4	28.5
132.5°	0.0	0.8	2.3	5.4	8.5	10.8	12.3	16.2	20.0	23.9	26.9
135°	0.0	0.8	1.5	4.6	7.7	10.0	11.5	15.4	18.5	22.3	25.4
137.5°	0.0	0.0	1.5	3.8	6.9	8.5	10.8	13.9	16.9	20.8	23.1
140°	0.0	0.0	1.5	3.8	6.2	7.7	9.2	12.3	15.4	18.5	21.6
142.5°	0.0	0.0	0.8	3.1	5.4	6.9	8.5	11.5	14.6	16.9	20.0
145°	0.0	0.0	0.8	2.3	4.6	6.2	7.7	10.0	13.1	15.4	17.7
147.5°	0.0	0.0	0.8	2.3	3.8	5.4	6.2	9.2	11.5	13.9	16.2
150°	0.0	0.0	0.8	1.5	3.1	3.8	5.4	7.7	10.0	12.3	13.9
152.5°	0.8	0.0	0.8	0.8	2.3	3.1	3.8	6.2	8.5	10.0	12.3
155°	0.8	0.0	0.8	0.8	1.5	2.3	3.1	4.6	6.2	8.5	10.0
157.5°	0.8	0.8	0.0	0.8	1.5	1.5	2.3	3.8	5.4	6.2	7.7
160°	0.8	0.8	0.8	0.8	0.8	1.5	1.5	2.3	3.8	4.6	6.2
162.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.5	2.3	3.1	4.6
165°	0.8	0.8	0.8	0.0	0.8	0.8	0.8	0.8	1.5	2.3	3.1
167.5°	0.8	0.8	0.8	0.8	0.0	0.8	0.8	0.8	0.8	1.5	1.5
170°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.8	0.8	0.8
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°	620.6	620.6	620.6	620.6	620.6	620.6	620.6	620.6	620.6	620.6
2.5°	621.4	621.4	621.4	622.1	622.1	622.1	622.1	621.4	621.4	622.1
5°	620.6	620.6	621.4	621.4	621.4	621.4	621.4	621.4	621.4	621.4
7.5°	618.3	619.0	619.0	619.8	619.8	619.8	619.8	619.8	619.8	619.8
10°	615.2	616.0	616.7	616.7	616.7	617.5	617.5	617.5	617.5	617.5
12.5°	610.6	612.1	612.9	612.9	613.7	612.9	613.7	613.7	613.7	613.7
15°	605.2	606.7	607.5	607.5	608.3	608.3	608.3	609.0	609.0	609.0
17.5°	598.3	599.8	600.6	601.3	602.1	602.1	602.9	602.9	602.9	603.6
20°	590.6	592.1	592.9	594.4	594.4	594.4	595.2	595.2	595.9	595.9
22.5°	581.3	582.9	584.4	585.9	585.9	585.9	586.7	587.5	587.5	587.5
25°	571.3	572.1	573.6	575.2	575.2	575.9	577.5	577.5	577.5	578.2
27.5°	559.8	561.3	563.6	563.6	565.1	565.1	565.9	566.7	566.7	566.7
30°	547.4	549.0	551.3	552.1	553.6	553.6	554.4	555.1	555.1	555.1
32.5°	533.6	535.9	537.4	539.7	539.7	540.5	542.0	542.0	542.8	542.8
35°	519.7	522.0	523.6	525.1	525.9	526.7	527.4	528.2	529.0	529.7
37.5°	502.8	505.9	508.2	510.5	511.3	511.3	512.8	513.6	514.3	514.3
40°	486.6	489.7	491.2	493.5	495.1	495.1	496.6	497.4	498.2	498.2
42.5°	469.7	472.8	475.8	477.4	478.1	478.1	479.7	481.2	481.2	482.0
45°	451.2	455.0	458.1	459.7	459.7	460.4	462.0	463.5	463.5	463.5
47.5°	432.7	435.0	437.3	440.4	441.2	442.7	443.5	443.5	444.3	445.0
50°	412.7	415.0	418.1	420.4	421.9	422.7	424.2	424.2	425.8	425.8
52.5°	390.4	394.2	397.3	399.6	400.4	401.9	402.7	404.2	405.0	405.8
55°	368.8	371.9	375.0	377.3	378.8	379.6	381.9	382.7	383.4	383.4
57.5°	345.7	349.6	352.6	354.9	355.7	357.3	358.8	360.3	361.1	360.3
60°	322.6	326.5	328.8	331.1	333.4	334.2	334.9	337.2	338.0	338.8
62.5°	298.0	301.1	304.1	307.2	308.0	310.3	311.8	312.6	312.6	314.1
65°	272.6	276.4	280.3	282.6	284.9	285.7	287.2	288.0	289.5	288.7
67.5°	247.2	251.0	254.9	257.2	258.7	260.2	261.8	263.3	264.1	264.1
70°	221.0	225.6	227.9	231.8	233.3	234.1	235.6	237.1	237.1	238.7
72.5°	194.8	198.6	202.5	206.3	206.3	209.4	210.2	212.5	211.7	212.5
75°	169.4	172.5	176.3	178.6	180.9	181.7	184.8	185.6	185.6	187.1
77.5°	142.4	147.8	150.1	154.0	157.1	156.3	158.6	160.2	161.7	160.2
80°	117.0	122.4	126.3	128.6	130.1	131.7	134.0	134.0	136.3	136.3
82.5°	95.5	100.1	103.2	106.3	107.8	109.3	110.9	112.4	113.2	114.0
85°	76.2	79.3	83.2	87.0	87.8	89.3	91.6	92.4	93.9	93.9
87.5°	61.6	65.4	69.3	72.4	74.7	75.5	77.8	78.5	79.3	80.1
90°	54.7	58.5	62.4	66.2	67.0	68.5	70.8	71.6	73.1	73.1
92.5°	53.1	57.0	60.8	63.9	65.4	67.0	68.5	70.1	70.8	71.6
95°	52.4	56.2	60.1	63.1	64.7	66.2	67.8	69.3	70.1	70.8
97.5°	51.6	55.4	59.3	62.4	63.9	65.4	67.0	68.5	69.3	70.1
100°	50.0	54.7	57.7	61.6	62.4	63.9	66.2	67.8	68.5	68.5
102.5°	49.3	53.1	57.0	60.1	61.6	62.4	64.7	66.2	67.0	67.0
105°	47.7	51.6	55.4	58.5	60.1	61.6	63.1	64.7	65.4	65.4
107.5°	47.0	50.8	53.9	57.0	58.5	60.1	61.6	63.1	63.9	63.9
110°	45.4	49.3	52.4	55.4	57.0	57.7	60.1	61.6	62.4	62.4





TEST NUMBER: P241541

CATALOG NUMBER: FVS8M-2-LD4-30-2STD-O-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	43.9	47.7	50.8	53.9	55.4	56.2	58.5	59.3	60.1	60.8
115°	42.3	46.2	49.3	52.4	53.1	54.7	56.2	57.7	58.5	58.5
117.5°	40.8	43.9	47.7	50.0	51.6	52.4	53.9	55.4	56.2	56.2
120°	39.3	42.3	45.4	48.5	49.3	50.8	52.4	53.1	53.9	54.7
122.5°	37.7	40.8	43.9	46.2	47.7	48.5	50.0	51.6	52.4	52.4
125°	35.4	38.5	41.6	43.9	45.4	46.2	47.7	49.3	49.3	50.0
127.5°	33.9	37.0	40.0	42.3	43.1	43.9	45.4	47.0	47.7	47.7
130°	32.3	34.6	37.7	40.0	40.8	41.6	43.1	43.9	44.7	45.4
132.5°	30.0	33.1	35.4	37.7	38.5	39.3	40.8	41.6	42.3	42.3
135°	28.5	30.8	33.1	35.4	36.2	37.0	38.5	39.3	40.0	40.0
137.5°	26.2	28.5	30.8	33.1	33.9	34.6	35.4	37.0	37.0	37.0
140°	23.9	26.2	28.5	30.0	31.6	31.6	33.1	33.9	34.6	34.6
142.5°	22.3	23.9	26.2	27.7	28.5	29.3	30.0	31.6	31.6	31.6
145°	20.0	22.3	23.9	25.4	26.2	26.9	27.7	28.5	29.3	29.3
147.5°	17.7	20.0	21.6	23.1	23.9	23.9	25.4	25.4	26.2	26.2
150°	16.2	17.7	19.2	20.8	20.8	21.6	22.3	23.1	23.1	23.1
152.5°	13.9	15.4	16.9	17.7	18.5	18.5	20.0	20.0	20.8	20.8
155°	11.5	13.1	14.6	15.4	16.2	16.2	16.9	16.9	17.7	17.7
157.5°	9.2	10.8	12.3	13.1	13.1	13.9	13.9	14.6	14.6	14.6
160°	6.9	8.5	9.2	10.0	10.8	10.8	11.5	11.5	12.3	12.3
162.5°	5.4	6.2	6.9	7.7	8.5	8.5	9.2	9.2	9.2	9.2
165°	3.8	3.8	4.6	5.4	6.2	6.2	6.2	6.2	6.9	6.9
167.5°	2.3	2.3	3.1	3.1	3.8	3.8	3.8	3.8	3.8	3.8
170°	0.8	0.8	1.5	1.5	1.5	1.5	2.3	2.3	2.3	2.3
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)