

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: P241600

Luminaire Tested: **FVS8M-4-LD4-50-1LO-O-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

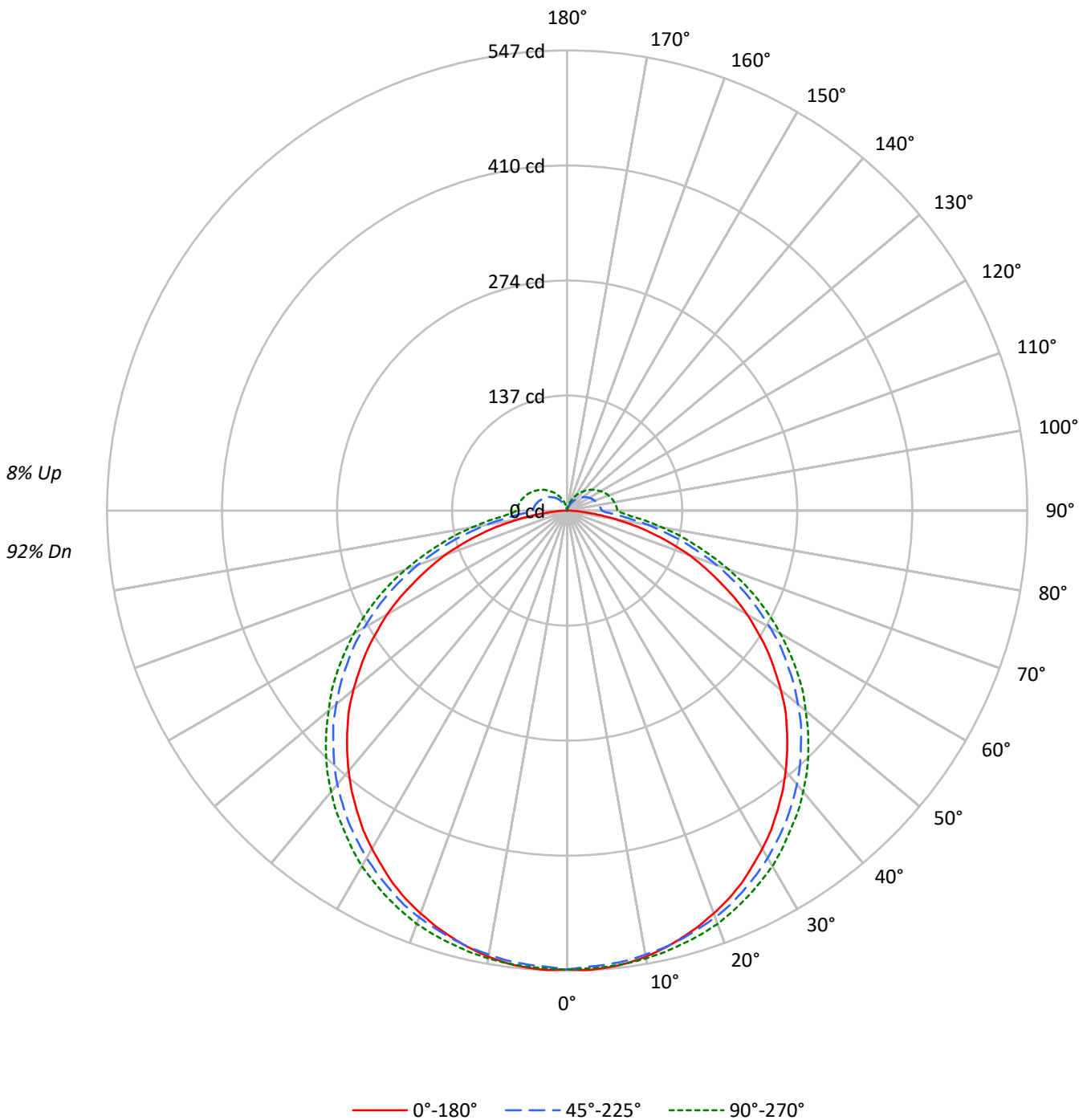
Test Method: LM-79-08  
Report Number: P241600  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-34)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS8M-4-LD4-50-1LO-O-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
4FT 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: 1888.0 lumens  
Efficiency: N/A  
Efficacy: 80.0 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): 23.6  
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

TEST NUMBER: P241600  
CATALOG NUMBER: FVS8M-4-LD4-50-1LO-O-UNV-EDC1

### Luminous Intensity Polar Plot





TEST NUMBER: P241600

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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	36	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°	2438	2438	2438
5°	2439	2391	2394
10°	2427	2355	2359
15°	2408	2323	2325
20°	2389	2291	2298
25°	2370	2256	2262
30°	2342	2220	2228
35°	2314	2184	2181
40°	2283	2143	2140
45°	2248	2092	2091
50°	2204	2036	2028
55°	2145	1965	1966
60°	2069	1881	1880
65°	1950	1774	1783
70°	1823	1632	1648
75°	1578	1442	1471
80°	1197	1212	1281
85°	649	957	1093



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.7	2.7
10°-20°	149.4	7.9
20°-30°	229.7	12.2
30°-40°	282.6	15.0
40°-50°	301.5	16.0
50°-60°	283.1	15.0
60°-70°	228.2	12.1
70°-80°	145.4	7.7
80°-90°	63.0	3.3
90°-100°	38.4	2.0
100°-110°	34.7	1.8
110°-120°	29.0	1.5
120°-130°	22.3	1.2
130°-140°	15.3	0.8
140°-150°	8.9	0.5
150°-160°	3.9	0.2
160°-170°	1.0	0.1
170°-180°	0.0	0.0
0°-30°	430.8	22.8
0°-40°	713.4	37.8
0°-60°	1298.0	68.7
0°-90°	1734.6	91.9
90°-120°	102.1	5.4
90°-150°	148.5	7.9
90°-180°	153.0	8.1
0°-180°	1888.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	546	546	546	546	546	
5°	546	544	542	544	544	52
15°	526	527	527	532	533	148
25°	489	492	498	505	507	225
35°	436	443	453	461	463	273
45°	370	380	393	402	406	285
55°	291	304	320	330	334	259
65°	200	217	235	247	250	198
75°	105	122	142	154	157	111
85°	18	37	59	72	76	23
90°	0	19	41	55	59	1
95°	0	18	40	54	59	0
105°	0	16	37	50	55	0
115°	0	14	33	45	49	0
125°	0	12	28	38	42	0
135°	1	9	22	31	34	0
145°	1	6	15	23	25	0
155°	1	2	8	14	16	0
165°	1	1	3	5	7	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241600

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	545.5	545.5	545.5	545.5	545.5	545.5	545.5	545.5	545.5	545.5	545.5
2.5°	546.7	546.1	546.1	546.1	546.1	546.1	546.1	546.1	544.8	544.2	542.9
5°	545.5	544.8	544.2	544.2	544.2	544.2	544.2	544.2	543.6	542.3	541.7
7.5°	542.9	542.3	541.7	541.7	541.7	541.7	542.3	541.7	541.1	539.8	539.8
10°	538.5	537.9	537.3	537.3	537.9	537.9	537.9	537.9	537.3	536.6	536.0
12.5°	532.9	532.9	532.2	532.2	532.2	532.9	532.9	533.5	532.9	532.2	532.2
15°	525.9	525.9	525.3	525.3	525.9	526.6	526.6	527.8	527.2	527.2	527.2
17.5°	518.4	517.7	517.7	517.7	519.0	519.6	519.6	520.2	520.9	520.9	520.9
20°	509.5	509.5	508.9	510.2	510.8	511.4	512.0	512.7	513.3	513.3	514.6
22.5°	500.1	499.4	499.4	500.1	501.3	502.0	503.2	504.5	504.5	505.1	507.0
25°	489.3	488.7	488.1	489.3	490.6	491.9	493.1	494.4	495.0	496.3	497.5
27.5°	476.7	476.7	477.4	478.0	479.9	481.1	482.4	483.7	484.9	486.2	487.5
30°	464.1	464.1	464.1	465.4	467.9	469.8	470.4	472.3	472.9	474.8	476.7
32.5°	450.9	449.6	450.9	452.8	455.3	456.6	457.8	459.7	461.0	462.9	464.8
35°	435.7	435.7	436.4	438.3	441.4	442.7	443.9	447.1	448.4	450.2	452.8
37.5°	420.6	420.0	421.2	423.8	426.9	428.2	430.1	432.0	433.9	436.4	438.9
40°	404.2	404.2	405.5	408.6	411.2	413.0	414.3	417.5	419.3	421.9	425.0
42.5°	387.2	387.8	389.1	391.6	395.4	397.3	399.2	401.7	404.2	406.7	409.9
45°	369.5	368.9	371.4	374.6	378.4	380.3	382.1	385.3	387.8	391.0	392.9
47.5°	351.9	350.0	353.1	355.7	360.1	363.2	363.9	367.6	370.8	373.9	377.1
50°	331.7	331.7	334.8	337.4	342.4	343.7	345.6	349.4	352.5	356.3	358.2
52.5°	310.9	310.9	314.0	318.5	322.9	324.8	326.7	331.1	334.2	336.7	339.9
55°	290.7	291.3	293.9	297.6	302.7	303.9	307.1	310.3	314.0	317.2	319.7
57.5°	268.6	269.9	272.4	276.2	281.9	283.1	286.3	290.7	293.2	297.0	300.8
60°	247.2	247.8	251.0	256.7	260.4	261.7	264.2	268.6	272.4	274.9	278.7
62.5°	223.9	225.8	228.3	233.3	237.1	240.3	241.5	245.9	250.3	253.5	256.7
65°	199.9	202.4	204.9	209.4	214.4	216.9	219.4	223.2	228.3	231.4	235.2
67.5°	176.6	178.5	181.6	186.7	190.4	193.6	194.9	200.5	203.7	208.1	211.3
70°	154.5	155.8	158.3	162.7	167.1	169.6	172.8	176.6	181.6	186.0	189.2
72.5°	129.3	129.9	133.1	137.5	143.1	145.7	147.6	153.9	157.6	162.1	164.6
75°	104.7	105.9	109.1	113.5	119.2	121.7	124.2	129.9	134.3	138.1	141.9
77.5°	81.3	81.3	85.1	90.8	95.9	98.4	100.3	106.6	110.4	114.8	118.6
80°	56.8	58.6	63.1	67.5	73.1	76.3	78.8	82.6	87.7	92.7	97.1
82.5°	36.6	37.8	41.6	47.3	52.3	54.9	58.0	62.4	67.5	72.5	76.3
85°	18.3	20.8	24.0	29.0	34.7	37.2	39.7	44.8	49.8	54.2	58.6
87.5°	5.7	7.6	11.4	16.4	22.1	24.6	27.1	32.2	37.2	41.6	46.0
90°	0.0	1.9	6.3	10.7	16.4	18.9	21.4	27.1	32.2	36.6	41.0
92.5°	0.0	1.9	5.7	10.7	15.8	18.9	21.4	26.5	31.5	35.9	40.4
95°	0.0	1.9	5.7	10.1	15.8	18.3	20.8	25.9	30.9	35.3	39.7
97.5°	0.0	1.9	5.0	10.1	15.1	17.7	20.2	25.9	30.3	34.7	39.1
100°	0.0	1.3	5.0	10.1	15.1	17.7	20.2	25.2	29.6	34.1	38.5
102.5°	0.0	1.3	5.0	9.5	14.5	17.0	19.5	24.6	29.0	33.4	37.8
105°	0.0	1.3	5.0	9.5	13.9	16.4	18.9	24.0	28.4	32.8	36.6
107.5°	0.0	1.3	4.4	8.8	13.9	15.8	18.3	23.3	27.7	31.5	35.9
110°	0.0	1.3	4.4	8.8	13.2	15.8	17.7	22.1	26.5	30.9	34.7



TEST NUMBER: P241600

CATALOG NUMBER: FVS8M-4-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	1.3	4.4	8.2	12.6	15.1	17.0	21.4	25.9	29.6	33.4
115°	0.0	1.3	3.8	7.6	12.0	14.5	16.4	20.8	25.2	29.0	32.8
117.5°	0.0	0.6	3.8	7.6	11.4	13.9	15.8	20.2	24.0	27.7	31.5
120°	0.0	0.6	3.8	6.9	11.4	13.2	15.1	18.9	23.3	27.1	30.3
122.5°	0.0	0.6	3.2	6.9	10.1	12.6	14.5	18.3	22.1	25.9	29.0
125°	0.0	0.6	3.2	6.3	10.1	12.0	13.9	17.7	20.8	24.6	27.7
127.5°	0.0	0.6	3.2	5.7	9.5	11.4	12.6	16.4	20.2	23.3	26.5
130°	0.0	0.6	2.5	5.7	8.8	10.1	12.0	15.8	18.9	22.1	24.6
132.5°	0.0	0.6	1.9	5.0	8.2	9.5	11.4	14.5	17.7	20.8	23.3
135°	0.6	0.6	1.9	4.4	6.9	8.8	10.1	13.2	16.4	19.5	22.1
137.5°	0.6	0.6	1.9	3.8	6.3	7.6	9.5	12.0	15.1	17.7	20.2
140°	0.6	0.6	1.3	3.2	5.7	6.9	8.2	10.7	13.2	15.8	18.9
142.5°	0.6	0.6	1.3	3.2	5.0	6.3	7.6	9.5	12.0	14.5	17.0
145°	0.6	0.6	1.3	2.5	4.4	5.7	6.3	8.8	10.7	12.6	15.1
147.5°	0.6	0.6	0.6	1.9	3.8	4.4	5.7	7.6	9.5	11.4	13.2
150°	0.6	0.6	0.6	1.9	3.2	3.8	5.0	6.3	8.2	10.1	11.4
152.5°	0.6	0.6	0.6	1.3	2.5	3.2	3.8	5.7	6.9	8.2	10.1
155°	0.6	0.6	0.6	1.3	2.5	2.5	3.2	4.4	5.7	6.9	8.2
157.5°	0.6	0.6	0.6	1.3	1.9	2.5	2.5	3.8	5.0	5.7	6.9
160°	0.6	0.6	0.6	0.6	1.3	1.9	1.9	3.2	3.8	4.4	5.7
162.5°	0.6	0.6	0.6	0.6	1.3	1.3	1.3	2.5	3.2	3.8	4.4
165°	0.6	0.6	0.6	0.6	0.6	0.6	1.3	1.3	1.9	2.5	3.2
167.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.3	1.3	1.9	1.9
170°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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	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°	545.5	545.5	545.5	545.5	545.5	545.5	545.5	545.5	545.5	545.5
2.5°	542.9	544.2	544.8	545.5	545.5	545.5	545.5	545.5	545.5	544.8
5°	541.7	542.9	543.6	544.2	544.2	544.2	544.2	544.2	544.2	544.2
7.5°	539.8	541.1	541.7	542.3	542.3	542.9	542.9	542.9	542.9	542.9
10°	536.6	537.9	539.2	539.8	539.8	540.4	540.4	540.4	540.4	540.4
12.5°	533.5	534.7	535.4	536.6	536.6	536.6	537.3	537.3	537.3	537.3
15°	528.4	530.3	531.0	532.2	532.2	532.2	532.9	532.9	533.5	532.9
17.5°	522.8	524.0	525.9	525.9	527.2	527.2	527.2	527.8	527.8	528.4
20°	515.8	517.7	519.0	520.2	520.2	521.5	521.5	522.1	522.1	522.8
22.5°	508.3	510.2	512.0	513.3	513.3	513.9	514.6	515.2	515.2	515.2
25°	499.4	501.3	503.2	504.5	505.1	505.7	506.4	506.4	507.0	507.0
27.5°	489.3	491.9	493.8	495.0	495.7	495.7	496.9	497.5	497.5	497.5
30°	479.3	481.1	483.0	484.9	484.9	485.6	486.8	487.5	486.8	488.1
32.5°	467.9	469.8	471.7	472.9	473.6	474.2	474.8	476.1	476.1	476.1
35°	454.7	457.2	459.1	461.0	461.0	461.6	462.9	463.5	463.5	462.9
37.5°	441.4	443.9	445.8	447.7	448.4	448.4	449.6	449.6	450.2	450.9
40°	427.5	430.1	432.0	432.6	433.9	434.5	435.7	436.4	435.7	436.4
42.5°	413.0	414.3	416.2	418.7	418.7	420.0	420.6	421.2	421.9	421.9
45°	396.0	397.9	400.4	402.3	402.3	403.6	404.2	404.8	406.1	405.5
47.5°	379.6	381.5	383.4	385.3	385.3	386.6	388.4	388.4	388.4	388.4
50°	361.3	363.9	365.1	367.6	368.3	368.9	369.5	370.8	370.8	370.2
52.5°	342.4	345.6	348.1	349.4	350.0	350.6	351.2	352.5	352.5	353.1
55°	322.9	326.0	327.9	330.4	330.4	331.1	333.0	333.6	333.0	333.6
57.5°	302.7	305.2	307.7	309.6	310.9	310.9	312.1	313.4	313.4	313.4
60°	281.9	283.8	286.9	288.8	290.7	290.1	292.6	292.6	292.6	292.6
62.5°	259.2	263.0	264.9	268.0	268.6	269.3	270.5	271.2	271.2	271.8
65°	237.7	240.9	243.4	245.3	246.6	246.6	248.5	249.1	249.7	250.3
67.5°	215.0	218.2	220.7	223.9	224.5	224.5	225.1	227.6	227.0	227.6
70°	191.7	194.9	197.4	199.9	200.5	201.2	202.4	204.3	204.3	204.3
72.5°	168.4	172.2	174.7	176.6	176.6	177.8	180.4	179.7	181.6	180.4
75°	145.7	148.2	152.0	153.2	154.5	155.8	157.0	157.6	158.3	157.0
77.5°	123.0	126.1	128.6	130.5	131.8	133.1	134.3	135.6	134.9	136.8
80°	100.9	102.8	105.3	108.5	109.7	111.0	112.9	113.5	112.9	113.5
82.5°	80.1	83.2	85.8	88.9	89.5	90.8	92.1	94.0	94.0	94.6
85°	62.4	65.6	69.4	71.3	71.9	73.1	75.0	75.7	76.9	76.3
87.5°	49.8	53.6	56.8	58.6	59.9	61.2	62.4	63.7	64.3	65.0
90°	44.8	47.9	51.1	53.6	54.9	55.5	57.4	58.6	59.3	59.3
92.5°	44.1	47.3	50.4	53.0	54.2	55.5	56.8	58.0	58.6	59.3
95°	43.5	46.7	49.8	52.3	53.6	54.9	56.1	57.4	58.0	58.6
97.5°	42.9	46.7	49.2	51.7	53.0	54.2	55.5	56.8	57.4	58.0
100°	42.3	45.4	48.6	51.1	52.3	53.0	54.9	56.1	56.8	56.8
102.5°	41.6	44.8	47.9	50.4	51.1	52.3	53.6	54.9	55.5	56.1
105°	40.4	43.5	46.7	49.2	50.4	51.1	53.0	54.2	54.9	54.9
107.5°	39.7	42.9	45.4	47.9	49.2	50.4	51.7	53.0	53.6	53.6
110°	38.5	41.6	44.1	46.7	47.9	48.6	50.4	51.7	52.3	52.3





TEST NUMBER: P241600

CATALOG NUMBER: FVS8M-4-LD4-50-1LO-O-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	37.2	40.4	42.9	45.4	46.7	47.3	49.2	49.8	50.4	51.1
115°	35.9	39.1	41.6	44.1	44.8	46.0	47.3	48.6	49.2	49.2
117.5°	34.7	37.8	40.4	42.3	43.5	44.1	46.0	46.7	47.3	47.9
120°	33.4	36.6	39.1	41.0	42.3	42.9	44.1	45.4	46.0	46.0
122.5°	32.2	34.7	37.2	39.1	40.4	41.0	42.3	43.5	44.1	44.1
125°	30.9	33.4	35.3	37.8	38.5	39.1	41.0	41.6	42.3	42.3
127.5°	29.0	31.5	34.1	35.9	36.6	37.8	38.5	39.7	40.4	40.4
130°	27.7	30.3	32.2	34.1	34.7	35.9	36.6	37.8	38.5	38.5
132.5°	25.9	28.4	30.3	32.2	32.8	33.4	34.7	35.9	35.9	36.6
135°	24.6	26.5	28.4	30.3	30.9	31.5	32.8	33.4	34.1	34.1
137.5°	22.7	24.6	26.5	28.4	29.0	29.6	30.9	31.5	32.2	32.2
140°	20.8	23.3	24.6	26.5	27.1	27.7	28.4	29.0	29.6	29.6
142.5°	19.5	21.4	22.7	24.0	24.6	25.2	26.5	27.1	27.1	27.7
145°	17.0	19.5	20.8	22.1	22.7	23.3	24.0	24.6	25.2	25.2
147.5°	15.1	17.0	18.9	20.2	20.8	20.8	22.1	22.1	22.7	22.7
150°	13.2	15.1	17.0	18.3	18.3	18.9	19.5	20.2	20.2	20.2
152.5°	11.4	12.6	14.5	15.8	16.4	16.4	17.0	17.7	18.3	18.3
155°	9.5	10.7	12.0	13.2	13.9	14.5	15.1	15.8	15.8	15.8
157.5°	8.2	8.8	10.1	11.4	12.0	12.6	12.6	13.2	13.2	13.2
160°	6.3	6.9	8.2	8.8	9.5	10.1	10.7	10.7	11.4	11.4
162.5°	5.0	5.7	6.3	6.9	7.6	7.6	8.2	8.8	8.8	8.8
165°	3.8	3.8	4.4	5.0	5.0	5.7	6.3	6.9	6.9	6.9
167.5°	2.5	2.5	3.2	3.2	3.8	3.8	3.8	4.4	4.4	4.4
170°	1.3	1.3	1.9	1.9	1.9	1.9	2.5	2.5	2.5	2.5
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)