

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: P241611

Luminaire Tested: **FVS8M-4-LD4-40-2LO-O-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241611  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-39)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS8M-4-LD4-40-2LO-O-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
4FT LENGTH, 2-MODULE LED WITH OPAL LENS  
Light Source: (168) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

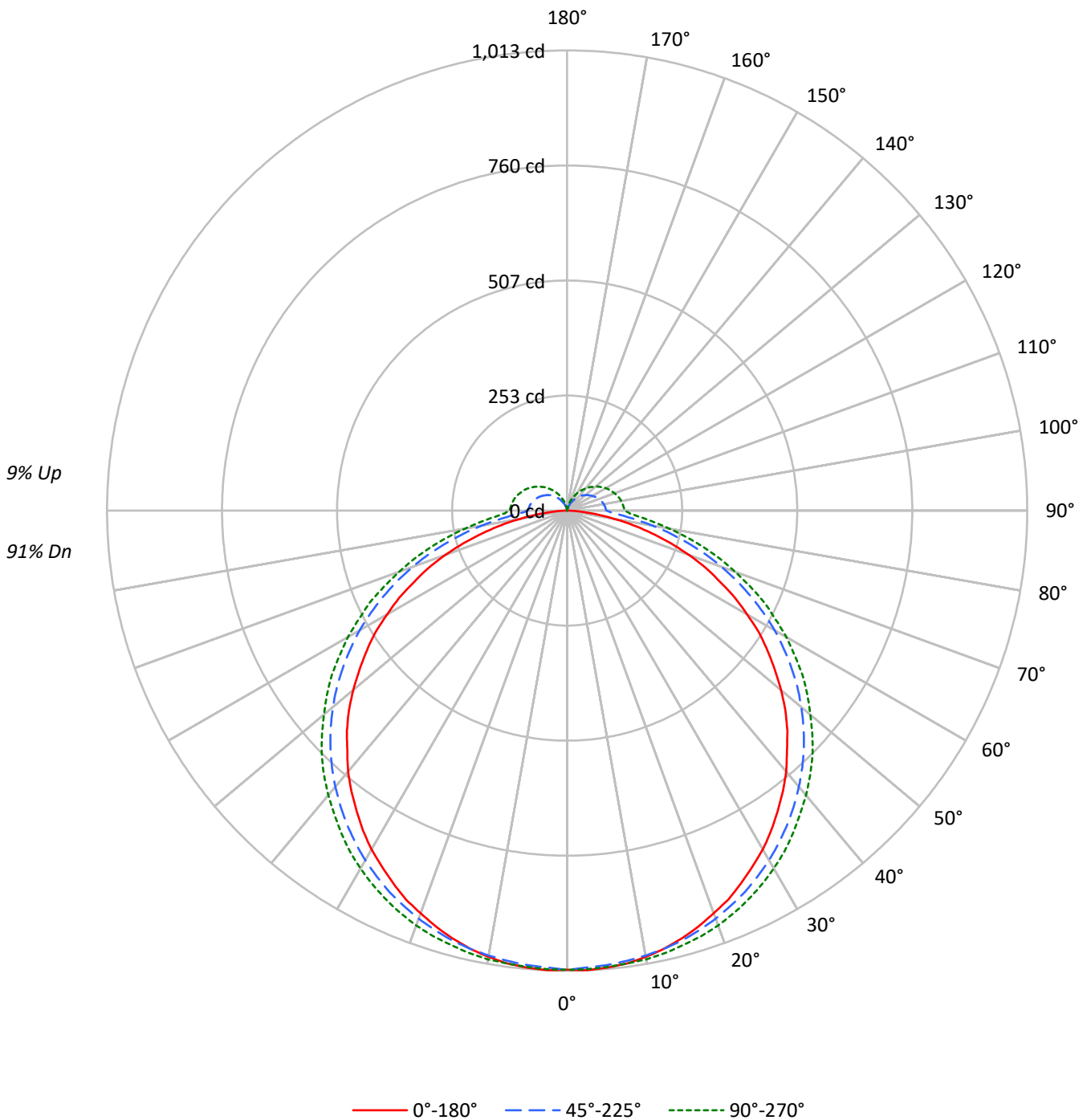
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3590.0 lumens  
Efficiency: N/A  
Efficacy: 78.9 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.34 / 1.44  
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 3.73' x H: 0.15')  
CIE Type: Direct

Input Watts (W): 45.5  
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-4-LD4-40-2LO-O-UNV-EDC1

### Luminous Intensity Polar Plot





TEST NUMBER: P241611

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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	91
1	106	100	96	92	102	97	93	89	91	88	85	86	83	80	81	79	77	74
2	95	87	80	73	92	84	77	72	79	74	69	74	70	66	70	66	63	60
3	87	76	67	60	83	73	66	59	69	63	57	65	60	55	61	57	53	50
4	79	67	58	51	76	65	56	50	61	54	48	58	52	47	54	49	45	42
5	73	59	50	43	70	58	49	43	55	47	41	52	45	40	49	43	39	36
6	67	53	44	38	64	52	43	37	49	42	36	47	40	35	44	38	34	32
7	62	48	39	33	60	47	39	33	45	37	32	42	36	31	40	34	30	28
8	58	44	35	29	55	43	35	29	41	33	28	39	32	27	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22
10	50	37	29	24	49	36	28	23	34	28	23	33	27	22	32	26	22	20

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

	0°	45°	90°
0°	4518	4518	4518
5°	4515	4433	4437
10°	4496	4369	4378
15°	4464	4315	4318
20°	4423	4257	4271
25°	4385	4200	4214
30°	4347	4140	4153
35°	4289	4072	4084
40°	4238	4002	4013
45°	4170	3923	3938
50°	4084	3824	3830
55°	3978	3704	3727
60°	3828	3560	3582
65°	3628	3363	3415
70°	3364	3118	3166
75°	2898	2780	2912
80°	2237	2377	2570
85°	1191	1964	2300



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.9	2.7
10°-20°	277.3	7.7
20°-30°	427.2	11.9
30°-40°	526.8	14.7
40°-50°	564.0	15.7
50°-60°	531.9	14.8
60°-70°	432.2	12.0
70°-80°	280.1	7.8
80°-90°	128.1	3.6
90°-100°	81.7	2.3
100°-110°	73.6	2.1
110°-120°	61.7	1.7
120°-130°	47.4	1.3
130°-140°	32.6	0.9
140°-150°	18.9	0.5
150°-160°	8.4	0.2
160°-170°	2.2	0.1
170°-180°	0.1	0.0
0°-30°	800.4	22.3
0°-40°	1327.1	37.0
0°-60°	2423.0	67.5
0°-90°	3263.5	90.9
90°-120°	217.0	6.0
90°-150°	315.9	8.8
90°-180°	327.0	9.1
0°-180°	3590.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1011	1011	1011	1011	1011	
5°	1010	1009	1004	1009	1009	96
15°	975	976	979	988	990	275
25°	905	912	926	941	944	418
35°	808	823	844	862	867	506
45°	686	708	737	756	764	528
55°	539	568	603	625	632	481
65°	372	407	446	470	479	369
75°	192	231	274	300	311	204
85°	34	75	120	150	161	44
90°	1	41	87	117	127	2
95°	1	38	84	114	124	0
105°	1	35	78	107	117	1
115°	1	30	70	96	106	1
125°	1	25	59	82	90	1
135°	1	18	47	66	73	0
145°	1	12	32	48	54	0
155°	1	6	18	30	34	1
165°	1	2	7	11	15	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241611

CATALOG NUMBER: FVS8M-4-LD4-40-2LO-O-UNV-EDC1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0
2.5°	1012.8	1012.8	1012.2	1011.6	1011.6	1012.2	1012.2	1011.6	1009.8	1007.4	1006.7
5°	1009.8	1009.2	1009.8	1008.6	1009.2	1009.2	1008.6	1008.6	1006.7	1005.5	1004.3
7.5°	1005.5	1004.9	1004.3	1003.7	1003.7	1004.3	1003.7	1003.7	1002.5	1000.6	1000.0
10°	997.6	997.0	997.6	996.4	996.4	997.0	997.6	997.6	996.4	995.8	994.5
12.5°	987.8	987.8	987.2	986.6	987.2	987.8	988.4	988.4	987.8	988.4	987.8
15°	975.0	975.6	974.4	973.8	976.2	976.2	977.4	978.7	978.7	978.0	979.3
17.5°	960.3	960.3	960.3	961.0	961.6	962.8	964.0	965.2	965.8	967.1	968.3
20°	943.2	944.5	944.5	945.1	947.5	949.4	949.4	952.4	953.0	953.6	956.1
22.5°	926.8	926.2	926.2	927.4	930.4	932.3	934.1	935.9	937.1	939.0	941.4
25°	905.4	906.0	906.6	908.4	912.1	912.1	915.2	917.6	920.0	922.5	926.2
27.5°	883.4	884.6	885.2	887.1	891.4	893.8	895.6	898.7	901.1	904.2	907.8
30°	861.4	861.4	862.0	864.5	868.8	871.8	873.6	877.3	881.0	885.2	888.9
32.5°	835.8	835.8	836.4	840.7	845.0	848.0	851.1	854.7	858.4	862.7	867.5
35°	807.7	807.1	808.9	815.0	819.3	823.0	826.6	830.9	835.8	840.1	844.3
37.5°	779.6	780.2	780.9	787.0	793.7	795.5	799.8	804.1	808.9	813.8	819.9
40°	750.3	750.3	752.8	757.0	765.0	768.0	771.7	777.2	781.5	788.2	793.7
42.5°	716.1	719.2	722.2	727.1	735.1	738.7	742.4	749.1	754.6	758.9	766.2
45°	685.6	686.2	689.3	696.6	703.9	707.6	712.5	719.2	725.9	730.8	736.9
47.5°	651.4	651.4	655.7	662.4	671.0	675.2	679.5	686.2	692.3	700.9	705.8
50°	614.8	616.0	620.9	629.4	638.0	640.4	644.7	653.9	659.4	666.1	672.8
52.5°	576.3	578.8	585.5	592.8	600.1	605.6	609.3	619.1	625.8	632.5	639.2
55°	539.1	539.7	545.2	555.0	564.1	567.8	573.9	581.8	589.1	596.5	602.6
57.5°	501.2	500.0	506.7	517.1	526.3	529.3	534.8	544.6	551.9	558.6	565.3
60°	457.3	460.3	466.4	476.2	486.0	489.0	493.9	504.9	511.6	519.5	527.5
62.5°	417.0	417.6	427.4	434.7	445.1	451.2	454.2	463.4	470.7	479.3	486.6
65°	371.8	377.3	382.8	391.3	401.7	406.6	410.3	422.5	430.4	438.4	445.7
67.5°	330.9	332.7	340.1	349.2	359.6	363.9	370.0	378.5	387.7	394.4	404.2
70°	285.1	286.9	293.7	304.6	314.4	320.5	325.4	335.2	343.7	352.3	361.4
72.5°	239.3	241.2	249.7	259.5	271.1	274.7	280.2	290.6	299.8	308.9	318.7
75°	192.3	197.2	206.4	214.9	226.5	230.8	237.5	249.1	258.2	266.2	273.5
77.5°	148.4	155.1	162.4	171.6	181.9	188.0	193.5	204.5	214.3	224.7	232.6
80°	106.2	111.1	119.1	128.2	139.8	147.7	152.0	162.4	171.6	181.3	190.5
82.5°	69.0	71.4	79.4	91.0	102.0	108.1	113.6	124.5	133.7	142.9	152.0
85°	33.6	37.9	45.8	58.0	69.0	75.1	80.6	91.6	101.3	111.7	120.3
87.5°	11.0	15.9	23.8	34.2	45.8	51.3	56.8	67.8	78.1	87.3	97.1
90°	0.6	4.3	12.8	23.8	34.8	40.9	46.4	57.4	67.8	77.5	86.7
92.5°	0.6	3.7	12.2	22.6	33.6	39.7	45.2	56.2	66.5	76.3	84.9
95°	0.6	3.7	11.6	22.0	33.0	38.5	44.6	54.9	65.3	75.1	84.3
97.5°	0.6	3.7	11.0	21.4	32.4	37.9	43.3	54.3	64.7	74.5	83.0
100°	0.6	3.1	11.0	20.8	31.7	37.2	42.7	53.1	63.5	72.7	81.8
102.5°	0.6	3.1	10.4	20.1	30.5	36.0	41.5	51.9	61.7	70.8	80.0
105°	0.6	3.1	10.4	19.5	29.9	35.4	40.3	50.7	60.4	69.6	78.1
107.5°	0.6	3.1	9.8	18.9	28.7	34.2	39.1	48.8	58.6	67.8	76.3
110°	0.6	2.4	9.2	18.3	28.1	33.0	37.9	47.6	56.8	65.9	73.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.6	2.4	9.2	17.7	26.9	31.7	36.6	45.8	54.9	63.5	72.0
115°	0.6	2.4	8.5	16.5	25.6	30.5	35.4	44.6	53.1	61.7	69.6
117.5°	0.6	1.8	7.9	15.9	24.4	29.3	33.6	42.7	51.3	59.2	67.2
120°	0.6	1.8	7.3	15.3	23.2	28.1	32.4	40.9	48.8	57.4	64.1
122.5°	0.6	1.8	6.7	14.0	22.6	26.3	30.5	39.1	47.0	54.9	61.7
125°	0.6	1.2	6.7	13.4	21.4	25.0	29.3	37.2	44.6	51.9	58.6
127.5°	0.6	1.2	6.1	12.8	20.1	23.8	27.5	34.8	42.7	49.5	56.2
130°	0.6	1.2	5.5	11.6	18.3	22.0	25.6	33.0	39.7	47.0	53.1
132.5°	0.6	1.2	4.9	10.4	17.1	20.1	23.8	31.1	37.9	44.0	50.1
135°	0.6	1.2	4.3	9.2	15.3	18.3	22.0	28.1	34.8	40.9	47.0
137.5°	0.6	1.2	3.7	8.5	13.4	16.5	19.5	25.6	31.7	37.9	43.3
140°	0.6	0.6	3.1	7.3	12.2	14.7	17.7	23.2	28.7	34.2	39.7
142.5°	0.6	0.6	2.4	6.1	11.0	12.8	15.9	20.8	25.6	31.1	36.0
145°	0.6	0.6	1.8	5.5	9.2	11.6	14.0	18.3	22.6	27.5	32.4
147.5°	0.6	0.6	1.8	4.3	7.9	9.8	11.6	15.9	20.1	24.4	28.1
150°	1.2	1.2	1.8	3.7	6.7	8.5	10.4	14.0	17.7	21.4	24.4
152.5°	1.2	1.2	1.2	3.1	5.5	7.3	8.5	11.6	14.7	18.3	21.4
155°	1.2	1.2	1.2	2.4	4.9	6.1	7.3	9.8	12.2	15.3	17.7
157.5°	1.2	1.2	1.2	1.8	3.7	4.9	5.5	7.9	10.4	12.2	14.7
160°	1.2	1.2	1.2	1.8	3.1	3.7	4.3	6.1	7.9	9.8	11.6
162.5°	1.2	1.2	1.2	1.2	2.4	3.1	3.7	4.9	6.1	7.9	9.2
165°	1.2	1.2	1.2	1.2	1.8	1.8	2.4	3.7	4.3	5.5	6.7
167.5°	1.2	1.2	1.2	1.2	1.2	1.8	1.8	2.4	3.1	3.7	4.3
170°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.8	1.8	2.4	2.4
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°	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0
2.5°	1008.0	1008.6	1009.8	1011.0	1010.4	1010.4	1011.0	1010.4	1011.0	1010.4
5°	1004.3	1006.1	1007.4	1008.6	1008.6	1008.6	1008.6	1008.6	1008.6	1008.6
7.5°	1000.6	1001.9	1003.7	1005.5	1005.5	1006.1	1006.1	1005.5	1006.1	1005.5
10°	995.8	998.2	1000.0	1001.2	1001.9	1001.9	1002.5	1002.5	1002.5	1003.1
12.5°	989.0	991.5	993.9	995.8	996.4	995.8	997.0	997.6	997.0	997.6
15°	981.1	982.9	986.6	987.8	988.4	989.0	989.6	990.3	990.3	989.6
17.5°	970.7	973.8	975.6	979.3	979.3	979.9	981.1	981.7	981.1	982.3
20°	959.1	962.2	965.2	967.7	967.7	968.9	970.1	970.7	971.9	971.9
22.5°	945.1	948.7	952.4	954.8	956.1	956.1	957.9	958.5	959.7	959.1
25°	929.2	934.1	937.8	939.6	941.4	942.0	943.2	943.9	943.9	944.5
27.5°	912.1	915.8	920.0	923.1	924.9	924.9	926.8	927.4	927.4	928.0
30°	892.6	898.1	901.1	904.2	904.8	906.0	907.8	908.4	910.3	909.7
32.5°	871.8	876.7	880.4	882.8	885.2	885.9	887.1	888.9	888.9	890.1
35°	849.8	853.5	857.2	860.8	862.0	863.9	865.7	866.3	867.5	866.9
37.5°	825.4	830.3	834.0	835.2	838.2	839.5	841.9	842.5	843.1	841.9
40°	799.2	803.4	808.3	810.8	812.6	813.2	816.3	816.9	817.5	818.1
42.5°	771.7	777.2	780.9	783.9	785.7	786.3	789.4	789.4	791.2	791.8
45°	742.4	747.9	752.2	755.8	756.4	758.3	760.7	761.9	761.3	763.8
47.5°	711.9	717.4	721.6	724.7	725.3	726.5	729.6	730.2	731.4	732.0
50°	678.3	683.8	688.7	692.3	693.5	695.4	697.8	699.0	699.7	699.0
52.5°	645.3	650.8	653.9	658.7	660.6	660.0	663.6	666.1	665.5	666.7
55°	609.9	614.8	619.7	623.3	624.6	626.4	628.8	629.4	630.7	632.5
57.5°	570.8	579.4	583.0	584.9	587.3	589.1	590.4	594.6	594.6	594.0
60°	533.0	539.1	544.0	548.2	549.5	551.9	554.3	556.2	556.2	557.4
62.5°	494.5	500.0	504.9	508.6	509.2	512.2	515.3	516.5	517.1	516.5
65°	453.6	457.3	465.2	467.0	469.5	472.5	474.4	476.2	477.4	479.3
67.5°	410.9	416.4	422.5	427.4	429.8	431.0	433.5	435.3	436.5	435.3
70°	368.8	374.2	379.1	384.0	386.5	387.1	389.5	392.0	393.2	392.6
72.5°	325.4	331.5	337.6	341.3	343.7	345.6	349.8	350.4	350.4	352.9
75°	282.1	288.8	294.9	299.8	300.4	302.8	305.3	307.7	311.4	310.8
77.5°	239.3	246.6	251.5	255.8	258.9	261.3	263.7	265.6	266.8	268.6
80°	199.0	207.0	210.6	216.1	218.6	221.0	223.4	226.5	228.9	227.7
82.5°	160.0	168.5	174.6	180.1	181.3	185.6	186.8	189.3	189.9	191.7
85°	128.2	136.1	141.6	148.4	149.6	152.6	155.7	157.5	158.7	160.6
87.5°	105.0	112.3	118.4	124.5	126.4	128.2	131.9	134.9	136.1	137.4
90°	94.6	102.0	108.7	114.2	116.6	118.4	122.1	125.2	126.4	127.0
92.5°	93.4	100.7	106.8	112.3	114.8	117.2	120.9	123.3	124.5	125.2
95°	92.2	99.5	106.2	111.7	114.2	116.0	119.7	122.1	123.3	123.9
97.5°	91.0	98.3	105.0	110.5	112.9	114.8	118.4	120.9	122.1	122.7
100°	89.7	97.1	103.2	108.7	111.1	112.9	116.6	119.1	120.3	120.9
102.5°	87.9	95.2	101.3	106.8	109.3	111.1	114.2	117.2	118.4	119.1
105°	86.1	92.8	98.9	104.4	106.8	108.7	112.3	114.8	116.0	116.6
107.5°	83.6	91.0	96.5	102.0	104.4	106.2	109.9	111.7	113.6	114.2
110°	81.8	88.5	94.0	99.5	102.0	103.8	106.8	109.3	110.5	111.1





TEST NUMBER: P241611

CATALOG NUMBER: FVS8M-4-LD4-40-2LO-O-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	79.4	86.1	91.6	96.5	98.9	100.7	104.4	106.2	108.1	108.1
115°	76.3	83.0	88.5	93.4	95.9	97.7	100.7	103.2	104.4	105.6
117.5°	73.9	80.0	86.1	90.4	92.8	94.6	97.7	100.1	101.3	102.0
120°	71.4	77.5	82.4	87.3	89.1	91.0	94.0	96.5	97.7	98.3
122.5°	68.4	74.5	79.4	83.6	85.5	87.3	90.4	92.8	94.0	94.6
125°	65.3	70.8	75.7	80.0	81.8	83.6	86.7	88.5	89.7	90.4
127.5°	62.3	67.8	72.7	76.3	78.1	80.0	82.4	84.9	86.1	86.7
130°	58.6	64.1	69.0	72.7	74.5	75.7	78.1	80.6	81.8	82.4
132.5°	55.6	60.4	64.7	69.0	70.2	72.0	73.9	76.3	77.5	77.5
135°	51.9	56.8	61.1	64.7	65.9	67.8	70.2	72.0	72.7	73.3
137.5°	48.8	53.1	57.4	60.4	61.7	63.5	65.3	67.2	68.4	68.4
140°	45.2	49.5	53.1	56.2	57.4	58.6	61.1	62.3	63.5	63.5
142.5°	40.9	45.2	48.8	51.9	53.1	54.3	56.2	58.0	58.6	58.6
145°	36.6	41.5	44.6	47.6	48.2	49.5	51.3	52.5	53.7	53.7
147.5°	32.4	36.6	40.3	42.7	44.0	45.2	46.4	47.6	48.8	48.8
150°	28.7	32.4	36.0	38.5	39.7	40.3	42.1	42.7	43.3	44.0
152.5°	24.4	27.5	31.1	34.2	34.8	35.4	37.2	38.5	38.5	39.1
155°	20.1	23.2	25.6	28.7	30.5	31.1	32.4	33.0	33.6	33.6
157.5°	17.1	19.5	21.4	23.8	25.0	26.3	27.5	28.7	28.7	28.7
160°	13.4	15.3	17.1	18.9	20.1	21.4	23.2	23.2	23.8	24.4
162.5°	10.4	11.6	13.4	14.7	15.9	16.5	18.3	18.9	18.9	18.9
165°	7.3	8.5	9.8	11.0	11.0	11.6	13.4	14.0	14.0	14.7
167.5°	4.9	5.5	6.7	7.3	7.3	7.9	8.5	10.4	9.8	9.8
170°	3.1	3.1	3.7	4.3	4.3	4.3	4.9	5.5	6.1	6.1
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)