

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: P241606

Luminaire Tested: **FVS8M-4-LD4-35-1HI-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241606
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-LD4-35-1HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
4FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

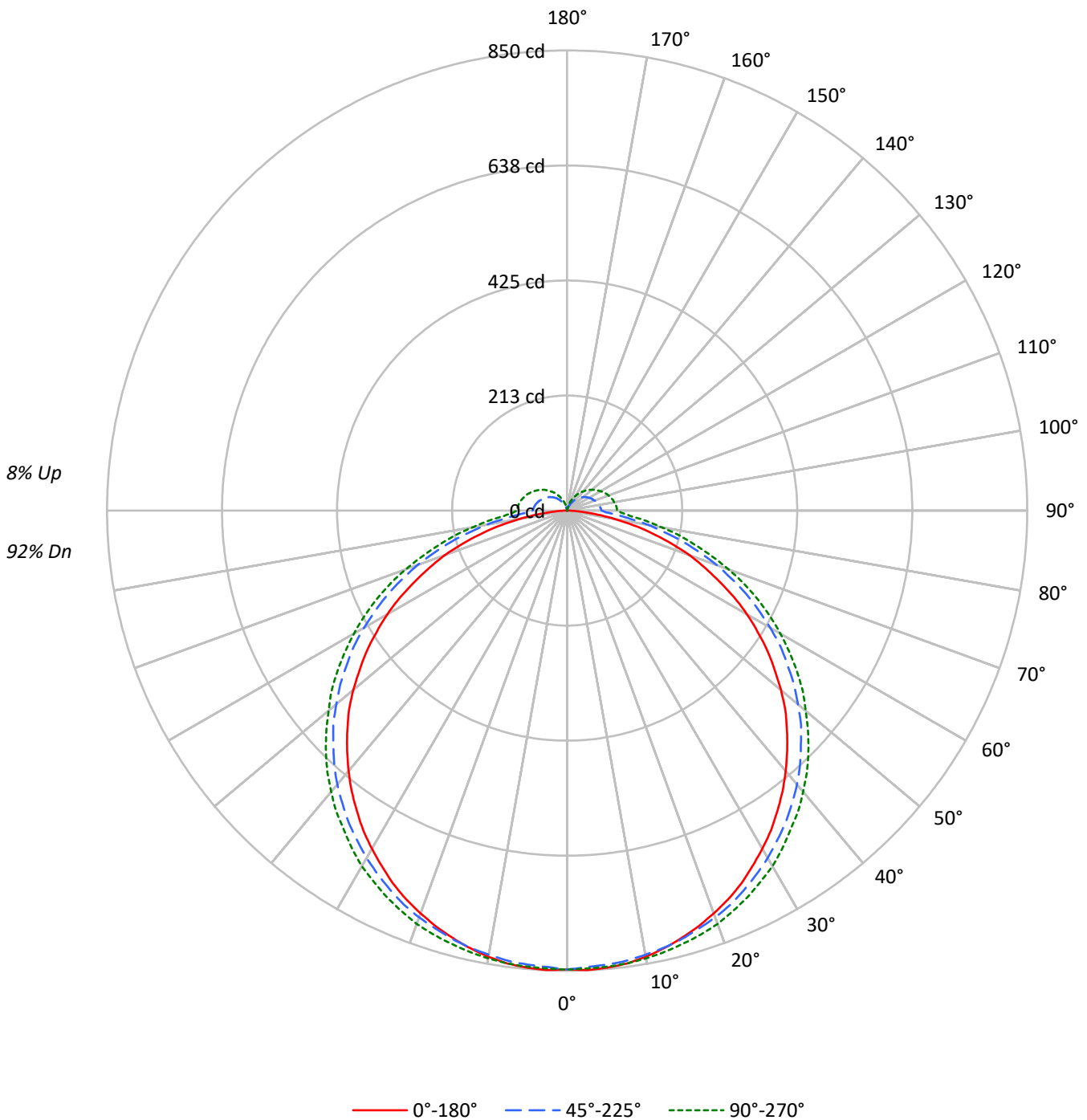
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2934.0 lumens
Efficiency: N/A
Efficacy: 66.4 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): 44.2
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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CATALOG NUMBER: FVS8M-4-LD4-35-1HI-O-UNV-EDC1

Luminous Intensity Polar Plot





TEST NUMBER: P241606

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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	37	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°	3789	3789	3789
5°	3790	3716	3721
10°	3772	3659	3665
15°	3742	3610	3613
20°	3713	3561	3570
25°	3683	3507	3515
30°	3640	3450	3463
35°	3596	3394	3389
40°	3549	3330	3326
45°	3493	3250	3249
50°	3425	3164	3151
55°	3334	3054	3054
60°	3216	2923	2922
65°	3031	2758	2772
70°	2833	2536	2560
75°	2452	2241	2287
80°	1858	1883	1991
85°	1006	1487	1698



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.4	2.7
10°-20°	232.2	7.9
20°-30°	357.0	12.2
30°-40°	439.1	15.0
40°-50°	468.6	16.0
50°-60°	439.9	15.0
60°-70°	354.6	12.1
70°-80°	225.9	7.7
80°-90°	97.9	3.3
90°-100°	59.7	2.0
100°-110°	53.9	1.8
110°-120°	45.0	1.5
120°-130°	34.6	1.2
130°-140°	23.7	0.8
140°-150°	13.8	0.5
150°-160°	6.1	0.2
160°-170°	1.6	0.1
170°-180°	0.0	0.0
0°-30°	669.5	22.8
0°-40°	1108.6	37.8
0°-60°	2017.1	68.7
0°-90°	2695.6	91.9
90°-120°	158.6	5.4
90°-150°	230.8	7.9
90°-180°	238.0	8.1
0°-180°	2934.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	848	848	848	848	848	
5°	848	846	842	846	846	81
15°	817	818	819	827	828	231
25°	760	764	773	785	788	350
35°	677	688	704	716	719	424
45°	574	591	610	625	630	443
55°	452	472	497	514	518	403
65°	311	337	366	383	389	308
75°	163	189	220	240	244	172
85°	28	58	91	112	119	36
90°	0	29	64	85	92	1
95°	0	28	62	83	91	0
105°	0	26	57	78	85	0
115°	0	22	51	70	76	0
125°	0	19	43	60	66	0
135°	1	14	34	48	53	0
145°	1	9	24	35	39	1
155°	1	4	13	22	24	0
165°	1	1	5	8	11	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241606

CATALOG NUMBER: FVS8M-4-LD4-35-1HI-O-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	847.7	847.7	847.7	847.7	847.7	847.7	847.7	847.7	847.7	847.7	847.7
2.5°	849.6	848.7	848.7	848.7	848.7	848.7	848.7	848.7	846.7	845.7	843.8
5°	847.7	846.7	845.7	845.7	845.7	845.7	845.7	845.7	844.7	842.8	841.8
7.5°	843.8	842.8	841.8	841.8	841.8	841.8	842.8	841.8	840.8	838.9	838.9
10°	836.9	835.9	834.9	834.9	835.9	835.9	835.9	835.9	834.9	834.0	833.0
12.5°	828.1	828.1	827.1	827.1	827.1	828.1	828.1	829.1	828.1	827.1	827.1
15°	817.3	817.3	816.3	816.3	817.3	818.3	818.3	820.2	819.3	819.3	819.3
17.5°	805.5	804.6	804.6	804.6	806.5	807.5	807.5	808.5	809.5	809.5	809.5
20°	791.8	791.8	790.8	792.8	793.8	794.8	795.7	796.7	797.7	797.7	799.7
22.5°	777.1	776.1	776.1	777.1	779.1	780.1	782.0	784.0	784.0	785.0	787.9
25°	760.5	759.5	758.5	760.5	762.4	764.4	766.3	768.3	769.3	771.2	773.2
27.5°	740.9	740.9	741.8	742.8	745.8	747.7	749.7	751.6	753.6	755.6	757.5
30°	721.3	721.3	721.3	723.2	727.1	730.1	731.1	734.0	735.0	737.9	740.9
32.5°	700.7	698.7	700.7	703.6	707.5	709.5	711.5	714.4	716.4	719.3	722.2
35°	677.2	677.2	678.1	681.1	686.0	687.9	689.9	694.8	696.8	699.7	703.6
37.5°	653.6	652.7	654.6	658.5	663.4	665.4	668.3	671.3	674.2	678.1	682.1
40°	628.2	628.2	630.1	635.0	638.9	641.9	643.8	648.7	651.7	655.6	660.5
42.5°	601.7	602.7	604.6	608.6	614.4	617.4	620.3	624.2	628.2	632.1	637.0
45°	574.3	573.3	577.2	582.1	588.0	590.9	593.9	598.8	602.7	607.6	610.5
47.5°	546.8	543.9	548.8	552.7	559.6	564.5	565.4	571.3	576.2	581.1	586.0
50°	515.5	515.5	520.4	524.3	532.1	534.1	537.0	542.9	547.8	553.7	556.6
52.5°	483.1	483.1	488.0	494.9	501.7	504.7	507.6	514.5	519.4	523.3	528.2
55°	451.8	452.7	456.7	462.5	470.4	472.3	477.2	482.1	488.0	492.9	496.8
57.5°	417.5	419.4	423.3	429.2	438.0	440.0	444.9	451.8	455.7	461.6	467.4
60°	384.1	385.1	390.0	398.8	404.7	406.7	410.6	417.5	423.3	427.3	433.1
62.5°	347.9	350.8	354.7	362.6	368.5	373.4	375.3	382.2	389.0	393.9	398.8
65°	310.6	314.6	318.5	325.3	333.2	337.1	341.0	346.9	354.7	359.6	365.5
67.5°	274.4	277.3	282.2	290.1	296.0	300.9	302.8	311.6	316.5	323.4	328.3
70°	240.1	242.1	246.0	252.8	259.7	263.6	268.5	274.4	282.2	289.1	294.0
72.5°	200.9	201.9	206.8	213.6	222.5	226.4	229.3	239.1	245.0	251.9	255.8
75°	162.7	164.6	169.5	176.4	185.2	189.1	193.1	201.9	208.7	214.6	220.5
77.5°	126.4	126.4	132.3	141.1	149.0	152.9	155.8	165.6	171.5	178.4	184.2
80°	88.2	91.1	98.0	104.9	113.7	118.6	122.5	128.4	136.2	144.1	150.9
82.5°	56.8	58.8	64.7	73.5	81.3	85.3	90.2	97.0	104.9	112.7	118.6
85°	28.4	32.3	37.2	45.1	53.9	57.8	61.7	69.6	77.4	84.3	91.1
87.5°	8.8	11.8	17.6	25.5	34.3	38.2	42.1	50.0	57.8	64.7	71.5
90°	0.0	2.9	9.8	16.7	25.5	29.4	33.3	42.1	50.0	56.8	63.7
92.5°	0.0	2.9	8.8	16.7	24.5	29.4	33.3	41.2	49.0	55.9	62.7
95°	0.0	2.9	8.8	15.7	24.5	28.4	32.3	40.2	48.0	54.9	61.7
97.5°	0.0	2.9	7.8	15.7	23.5	27.4	31.4	40.2	47.0	53.9	60.8
100°	0.0	2.0	7.8	15.7	23.5	27.4	31.4	39.2	46.1	52.9	59.8
102.5°	0.0	2.0	7.8	14.7	22.5	26.5	30.4	38.2	45.1	51.9	58.8
105°	0.0	2.0	7.8	14.7	21.6	25.5	29.4	37.2	44.1	51.0	56.8
107.5°	0.0	2.0	6.9	13.7	21.6	24.5	28.4	36.3	43.1	49.0	55.9
110°	0.0	2.0	6.9	13.7	20.6	24.5	27.4	34.3	41.2	48.0	53.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	2.0	6.9	12.7	19.6	23.5	26.5	33.3	40.2	46.1	51.9
115°	0.0	2.0	5.9	11.8	18.6	22.5	25.5	32.3	39.2	45.1	51.0
117.5°	0.0	1.0	5.9	11.8	17.6	21.6	24.5	31.4	37.2	43.1	49.0
120°	0.0	1.0	5.9	10.8	17.6	20.6	23.5	29.4	36.3	42.1	47.0
122.5°	0.0	1.0	4.9	10.8	15.7	19.6	22.5	28.4	34.3	40.2	45.1
125°	0.0	1.0	4.9	9.8	15.7	18.6	21.6	27.4	32.3	38.2	43.1
127.5°	0.0	1.0	4.9	8.8	14.7	17.6	19.6	25.5	31.4	36.3	41.2
130°	0.0	1.0	3.9	8.8	13.7	15.7	18.6	24.5	29.4	34.3	38.2
132.5°	0.0	1.0	2.9	7.8	12.7	14.7	17.6	22.5	27.4	32.3	36.3
135°	1.0	1.0	2.9	6.9	10.8	13.7	15.7	20.6	25.5	30.4	34.3
137.5°	1.0	1.0	2.9	5.9	9.8	11.8	14.7	18.6	23.5	27.4	31.4
140°	1.0	1.0	2.0	4.9	8.8	10.8	12.7	16.7	20.6	24.5	29.4
142.5°	1.0	1.0	2.0	4.9	7.8	9.8	11.8	14.7	18.6	22.5	26.5
145°	1.0	1.0	2.0	3.9	6.9	8.8	9.8	13.7	16.7	19.6	23.5
147.5°	1.0	1.0	1.0	2.9	5.9	6.9	8.8	11.8	14.7	17.6	20.6
150°	1.0	1.0	1.0	2.9	4.9	5.9	7.8	9.8	12.7	15.7	17.6
152.5°	1.0	1.0	1.0	2.0	3.9	4.9	5.9	8.8	10.8	12.7	15.7
155°	1.0	1.0	1.0	2.0	3.9	3.9	4.9	6.9	8.8	10.8	12.7
157.5°	1.0	1.0	1.0	2.0	2.9	3.9	3.9	5.9	7.8	8.8	10.8
160°	1.0	1.0	1.0	1.0	2.0	2.9	2.9	4.9	5.9	6.9	8.8
162.5°	1.0	1.0	1.0	1.0	2.0	2.0	2.0	3.9	4.9	5.9	6.9
165°	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.9	3.9	4.9
167.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.9	2.9
170°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0
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



TEST NUMBER: P241606

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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	847.7	847.7	847.7	847.7	847.7	847.7	847.7	847.7	847.7	847.7
2.5°	843.8	845.7	846.7	847.7	847.7	847.7	847.7	847.7	847.7	846.7
5°	841.8	843.8	844.7	845.7	845.7	845.7	845.7	845.7	845.7	845.7
7.5°	838.9	840.8	841.8	842.8	842.8	843.8	843.8	843.8	843.8	843.8
10°	834.0	835.9	837.9	838.9	838.9	839.8	839.8	839.8	839.8	839.8
12.5°	829.1	831.0	832.0	834.0	834.0	834.0	834.9	834.9	834.9	834.9
15°	821.2	824.2	825.1	827.1	827.1	827.1	828.1	828.1	829.1	828.1
17.5°	812.4	814.4	817.3	817.3	819.3	819.3	819.3	820.2	820.2	821.2
20°	801.6	804.6	806.5	808.5	808.5	810.4	810.4	811.4	811.4	812.4
22.5°	789.9	792.8	795.7	797.7	797.7	798.7	799.7	800.6	800.6	800.6
25°	776.1	779.1	782.0	784.0	785.0	785.9	786.9	786.9	787.9	787.9
27.5°	760.5	764.4	767.3	769.3	770.3	770.3	772.2	773.2	773.2	773.2
30°	744.8	747.7	750.7	753.6	753.6	754.6	756.5	757.5	756.5	758.5
32.5°	727.1	730.1	733.0	735.0	736.0	736.9	737.9	739.9	739.9	739.9
35°	706.6	710.5	713.4	716.4	716.4	717.3	719.3	720.3	720.3	719.3
37.5°	686.0	689.9	692.8	695.8	696.8	696.8	698.7	698.7	699.7	700.7
40°	664.4	668.3	671.3	672.3	674.2	675.2	677.2	678.1	677.2	678.1
42.5°	641.9	643.8	646.8	650.7	650.7	652.7	653.6	654.6	655.6	655.6
45°	615.4	618.4	622.3	625.2	625.2	627.2	628.2	629.1	631.1	630.1
47.5°	589.9	592.9	595.8	598.8	598.8	600.7	603.7	603.7	603.7	603.7
50°	561.5	565.4	567.4	571.3	572.3	573.3	574.3	576.2	576.2	575.2
52.5°	532.1	537.0	540.9	542.9	543.9	544.9	545.8	547.8	547.8	548.8
55°	501.7	506.6	509.6	513.5	513.5	514.5	517.4	518.4	517.4	518.4
57.5°	470.4	474.3	478.2	481.2	483.1	483.1	485.1	487.0	487.0	487.0
60°	438.0	441.0	445.9	448.8	451.8	450.8	454.7	454.7	454.7	454.7
62.5°	402.8	408.6	411.6	416.5	417.5	418.4	420.4	421.4	421.4	422.4
65°	369.4	374.3	378.3	381.2	383.2	383.2	386.1	387.1	388.1	389.0
67.5°	334.2	339.1	343.0	347.9	348.9	348.9	349.8	353.8	352.8	353.8
70°	297.9	302.8	306.7	310.6	311.6	312.6	314.6	317.5	317.5	317.5
72.5°	261.7	267.5	271.5	274.4	274.4	276.4	280.3	279.3	282.2	280.3
75°	226.4	230.3	236.2	238.1	240.1	242.1	244.0	245.0	246.0	244.0
77.5°	191.1	196.0	199.9	202.9	204.8	206.8	208.7	210.7	209.7	212.7
80°	156.8	159.7	163.7	168.6	170.5	172.5	175.4	176.4	175.4	176.4
82.5°	124.5	129.4	133.3	138.2	139.2	141.1	143.1	146.0	146.0	147.0
85°	97.0	101.9	107.8	110.7	111.7	113.7	116.6	117.6	119.6	118.6
87.5°	77.4	83.3	88.2	91.1	93.1	95.1	97.0	99.0	100.0	100.9
90°	69.6	74.5	79.4	83.3	85.3	86.2	89.2	91.1	92.1	92.1
92.5°	68.6	73.5	78.4	82.3	84.3	86.2	88.2	90.2	91.1	92.1
95°	67.6	72.5	77.4	81.3	83.3	85.3	87.2	89.2	90.2	91.1
97.5°	66.6	72.5	76.4	80.4	82.3	84.3	86.2	88.2	89.2	90.2
100°	65.7	70.6	75.5	79.4	81.3	82.3	85.3	87.2	88.2	88.2
102.5°	64.7	69.6	74.5	78.4	79.4	81.3	83.3	85.3	86.2	87.2
105°	62.7	67.6	72.5	76.4	78.4	79.4	82.3	84.3	85.3	85.3
107.5°	61.7	66.6	70.6	74.5	76.4	78.4	80.4	82.3	83.3	83.3
110°	59.8	64.7	68.6	72.5	74.5	75.5	78.4	80.4	81.3	81.3



TEST NUMBER: P241606

CATALOG NUMBER: FVS8M-4-LD4-35-1HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	57.8	62.7	66.6	70.6	72.5	73.5	76.4	77.4	78.4	79.4
115°	55.9	60.8	64.7	68.6	69.6	71.5	73.5	75.5	76.4	76.4
117.5°	53.9	58.8	62.7	65.7	67.6	68.6	71.5	72.5	73.5	74.5
120°	51.9	56.8	60.8	63.7	65.7	66.6	68.6	70.6	71.5	71.5
122.5°	50.0	53.9	57.8	60.8	62.7	63.7	65.7	67.6	68.6	68.6
125°	48.0	51.9	54.9	58.8	59.8	60.8	63.7	64.7	65.7	65.7
127.5°	45.1	49.0	52.9	55.9	56.8	58.8	59.8	61.7	62.7	62.7
130°	43.1	47.0	50.0	52.9	53.9	55.9	56.8	58.8	59.8	59.8
132.5°	40.2	44.1	47.0	50.0	51.0	51.9	53.9	55.9	55.9	56.8
135°	38.2	41.2	44.1	47.0	48.0	49.0	51.0	51.9	52.9	52.9
137.5°	35.3	38.2	41.2	44.1	45.1	46.1	48.0	49.0	50.0	50.0
140°	32.3	36.3	38.2	41.2	42.1	43.1	44.1	45.1	46.1	46.1
142.5°	30.4	33.3	35.3	37.2	38.2	39.2	41.2	42.1	42.1	43.1
145°	26.5	30.4	32.3	34.3	35.3	36.3	37.2	38.2	39.2	39.2
147.5°	23.5	26.5	29.4	31.4	32.3	32.3	34.3	34.3	35.3	35.3
150°	20.6	23.5	26.5	28.4	28.4	29.4	30.4	31.4	31.4	31.4
152.5°	17.6	19.6	22.5	24.5	25.5	25.5	26.5	27.4	28.4	28.4
155°	14.7	16.7	18.6	20.6	21.6	22.5	23.5	24.5	24.5	24.5
157.5°	12.7	13.7	15.7	17.6	18.6	19.6	19.6	20.6	20.6	20.6
160°	9.8	10.8	12.7	13.7	14.7	15.7	16.7	16.7	17.6	17.6
162.5°	7.8	8.8	9.8	10.8	11.8	11.8	12.7	13.7	13.7	13.7
165°	5.9	5.9	6.9	7.8	7.8	8.8	9.8	10.8	10.8	10.8
167.5°	3.9	3.9	4.9	4.9	5.9	5.9	5.9	6.9	6.9	6.9
170°	2.0	2.0	2.9	2.9	2.9	2.9	3.9	3.9	3.9	3.9
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)