

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: P241422

Luminaire Tested: **FVS8M-2-LD4-35-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241422
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-2-LD4-35-1STD-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (42) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

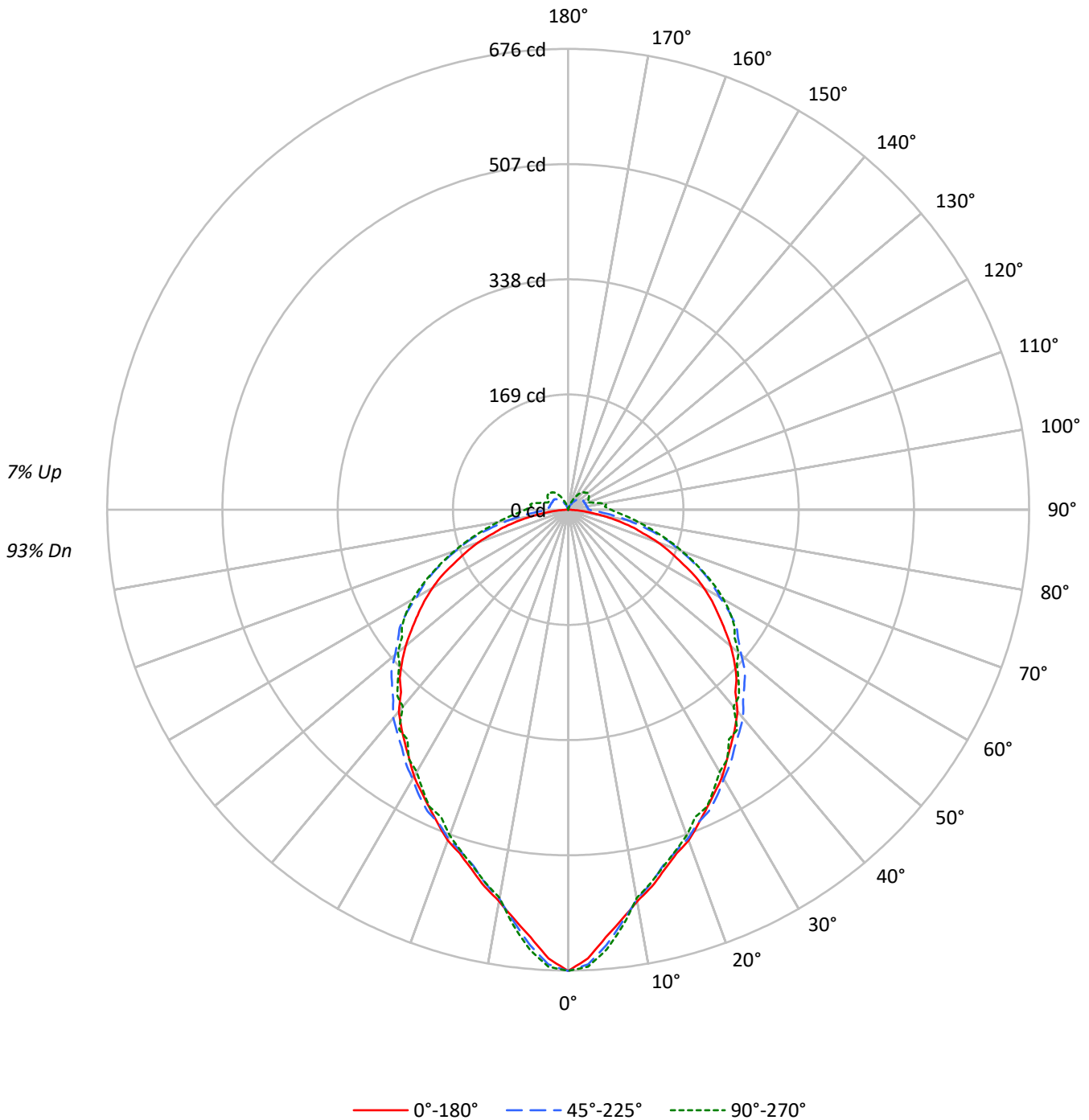
Lumens per Lamp: N/A
Luminaire Lumens: 1761.0 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.99 / 1.23
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 17.2
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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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	97	93	103	98	94	90	93	89	86	88	85	82	83	81	79	76
2	96	88	81	75	93	85	79	73	81	75	71	76	72	68	72	69	65	63
3	88	77	69	62	85	75	67	61	71	64	59	67	62	57	64	59	55	53
4	80	68	59	52	77	66	58	52	63	56	50	60	54	49	57	51	47	45
5	74	61	52	45	71	59	51	44	56	49	43	53	47	42	51	45	41	39
6	68	55	46	39	66	53	45	39	51	43	38	48	42	37	46	40	36	34
7	63	50	41	35	61	48	40	34	46	39	33	44	38	33	42	36	32	30
8	59	45	37	31	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	28	53	41	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6081	6081	6081
5°	5644	5678	5729
10°	5250	5099	5076
15°	4978	4748	4750
20°	4802	4552	4493
25°	4609	4400	4316
30°	4488	4211	4077
35°	4342	4057	3894
40°	4250	3966	3721
45°	4114	3820	3662
50°	3980	3688	3590
55°	3797	3615	3527
60°	3639	3360	3399
65°	3323	3184	3158
70°	3026	2882	2871
75°	2569	2540	2591
80°	1872	2044	2374
85°	961	1511	2269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.2	3.4
10°-20°	153.3	8.7
20°-30°	222.9	12.7
30°-40°	264.9	15.0
40°-50°	276.8	15.7
50°-60°	260.5	14.8
60°-70°	208.1	11.8
70°-80°	131.5	7.5
80°-90°	57.1	3.2
90°-100°	30.4	1.7
100°-110°	25.9	1.5
110°-120°	21.7	1.2
120°-130°	19.9	1.1
130°-140°	15.3	0.9
140°-150°	9.3	0.5
150°-160°	3.7	0.2
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	435.4	24.7
0°-40°	700.2	39.8
0°-60°	1237.5	70.3
0°-90°	1634.2	92.8
90°-120°	78.0	4.4
90°-150°	122.5	7.0
90°-180°	127.0	7.2
0°-180°	1761.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	676	676	676	676	676	
5°	630	634	641	648	648	59
15°	546	546	540	536	541	154
25°	482	484	488	478	481	223
35°	418	425	426	426	411	262
45°	349	357	365	354	353	269
55°	270	282	302	306	298	242
65°	183	196	219	221	220	182
75°	96	109	132	139	138	100
85°	18	31	51	68	79	21
90°	0	13	31	48	63	1
95°	0	12	29	42	54	0
105°	0	12	27	39	39	0
115°	0	11	26	33	32	0
125°	0	10	26	35	37	0
135°	0	8	22	32	35	0
145°	0	5	15	25	29	0
155°	0	2	8	13	15	0
165°	0	0	2	4	4	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°	676.5	676.5	676.5	676.5	676.5	676.5	676.5	676.5	676.5	676.5	676.5
2.5°	658.8	658.8	660.4	660.4	662.0	662.8	662.8	663.6	664.4	666.0	667.6
5°	629.8	630.6	631.4	632.2	633.0	633.8	635.4	637.8	638.7	639.5	641.1
7.5°	605.7	604.9	605.7	604.1	603.3	603.3	603.3	604.1	606.5	608.9	609.7
10°	583.2	584.8	584.8	583.2	581.5	583.2	581.5	581.5	580.7	580.7	579.9
12.5°	566.3	563.0	562.2	562.2	563.8	563.0	562.2	563.8	560.6	561.4	561.4
15°	546.2	545.3	542.9	548.6	548.6	546.2	545.3	542.1	542.9	542.9	539.7
17.5°	528.5	530.1	527.7	527.7	527.7	526.8	528.5	527.7	528.5	525.2	525.2
20°	516.4	511.6	509.2	514.8	515.6	515.6	516.4	518.0	514.8	511.6	513.2
22.5°	498.7	494.7	499.5	502.7	500.3	497.9	500.3	500.3	494.7	497.9	497.1
25°	481.8	478.6	484.2	484.2	484.2	484.2	485.0	485.0	485.8	485.8	488.2
27.5°	466.5	466.5	467.3	468.9	470.5	473.0	471.3	471.3	471.3	469.7	473.0
30°	452.0	449.6	452.0	455.3	456.9	458.5	456.1	455.3	457.7	456.9	456.1
32.5°	433.5	432.7	439.2	436.0	437.6	438.4	442.4	444.0	445.6	444.0	442.4
35°	417.5	418.3	419.9	422.3	425.5	424.7	428.7	426.3	427.1	428.7	425.5
37.5°	402.2	400.6	402.2	407.8	408.6	408.6	409.4	410.2	413.4	414.2	411.8
40°	386.1	382.1	388.5	392.5	389.3	391.7	393.3	398.2	397.3	398.2	399.0
42.5°	362.8	367.6	369.2	369.2	376.4	379.7	378.8	380.5	379.7	378.8	379.7
45°	349.1	351.5	350.7	355.5	357.9	357.1	357.9	361.2	362.8	364.4	365.2
47.5°	330.6	330.6	331.4	336.2	338.6	338.6	339.4	347.5	348.3	350.7	351.5
50°	311.3	311.3	315.3	315.3	320.1	324.2	327.4	328.2	327.4	331.4	331.4
52.5°	289.6	290.4	293.6	296.0	304.0	303.2	304.8	308.1	308.9	314.5	314.5
55°	269.5	274.3	270.3	277.5	279.1	282.3	285.5	289.6	296.8	300.0	301.6
57.5°	250.2	251.0	252.6	257.4	255.0	260.6	266.2	273.5	277.5	279.9	280.7
60°	230.0	226.8	232.5	233.3	241.3	242.1	243.7	248.5	251.8	255.8	256.6
62.5°	208.3	210.7	211.5	212.3	218.0	220.4	222.8	225.2	232.5	236.5	238.9
65°	182.6	186.6	186.6	194.7	195.5	195.5	199.5	207.5	211.5	215.6	218.8
67.5°	161.7	165.7	164.1	168.9	174.5	176.2	178.6	185.0	186.6	193.0	196.3
70°	140.0	142.4	144.8	146.4	150.4	155.2	157.7	161.7	166.5	171.3	174.5
72.5°	115.0	116.6	121.5	124.7	129.5	131.9	135.1	139.2	144.8	151.2	154.4
75°	95.7	94.9	98.1	102.2	108.6	109.4	110.2	118.2	123.1	127.9	131.9
77.5°	73.2	74.8	77.2	81.2	85.3	87.7	90.1	96.5	102.2	105.4	108.6
80°	52.3	53.9	56.3	59.5	64.3	66.8	70.0	75.6	79.6	84.5	87.7
82.5°	32.2	34.6	37.0	41.0	44.2	47.5	49.9	55.5	59.5	65.2	68.4
85°	17.7	17.7	20.9	24.9	28.2	31.4	33.0	37.8	41.8	46.7	50.7
87.5°	5.6	6.4	8.8	12.9	16.9	18.5	20.9	24.9	29.0	33.8	37.8
90°	0.0	0.8	4.0	7.2	10.5	12.9	14.5	18.5	22.5	26.5	30.6
92.5°	0.0	0.8	3.2	6.4	9.7	12.1	13.7	17.7	21.7	25.7	29.0
95°	0.0	0.8	3.2	6.4	9.7	12.1	13.7	17.7	21.7	24.9	29.0
97.5°	0.0	0.8	3.2	6.4	10.5	12.1	13.7	17.7	21.7	24.9	28.2
100°	0.0	0.8	3.2	6.4	9.7	12.1	13.7	17.7	21.7	24.9	27.3
102.5°	0.0	0.8	3.2	6.4	9.7	12.1	13.7	17.7	20.9	24.1	27.3
105°	0.0	0.8	3.2	6.4	9.7	12.1	13.7	16.9	20.9	24.1	27.3
107.5°	0.0	0.8	3.2	6.4	9.7	12.1	13.7	16.9	20.9	24.1	26.5
110°	0.0	0.8	3.2	6.4	9.7	12.1	13.7	16.9	20.9	23.3	26.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.8	3.2	6.4	9.7	12.1	13.7	16.9	20.1	23.3	26.5
115°	0.0	0.8	3.2	6.4	9.7	11.3	13.7	16.9	20.1	23.3	25.7
117.5°	0.0	0.8	3.2	5.6	9.7	11.3	13.7	16.9	20.1	23.3	25.7
120°	0.0	0.8	2.4	5.6	9.7	11.3	12.9	16.9	20.1	23.3	25.7
122.5°	0.0	0.8	2.4	5.6	8.8	11.3	12.9	16.1	19.3	22.5	25.7
125°	0.0	0.8	2.4	5.6	8.8	10.5	12.1	16.1	19.3	22.5	25.7
127.5°	0.0	0.0	2.4	4.8	8.0	10.5	12.1	15.3	18.5	21.7	24.9
130°	0.0	0.0	1.6	4.8	8.0	9.7	11.3	14.5	17.7	20.9	24.1
132.5°	0.0	0.0	1.6	4.0	7.2	8.8	10.5	13.7	16.9	20.1	22.5
135°	0.0	0.0	1.6	4.0	6.4	8.0	9.7	12.9	15.3	18.5	21.7
137.5°	0.0	0.0	1.6	3.2	5.6	7.2	8.8	11.3	14.5	16.9	20.1
140°	0.0	0.0	0.8	3.2	4.8	6.4	8.0	10.5	12.9	16.1	18.5
142.5°	0.0	0.0	0.8	2.4	4.8	5.6	7.2	9.7	12.1	14.5	16.9
145°	0.0	0.0	0.8	2.4	4.0	4.8	5.6	8.0	10.5	12.9	15.3
147.5°	0.0	0.0	0.8	1.6	3.2	4.0	4.8	7.2	9.7	11.3	13.7
150°	0.0	0.0	0.0	1.6	2.4	3.2	4.0	5.6	8.0	9.7	11.3
152.5°	0.0	0.0	0.0	0.8	1.6	2.4	3.2	4.8	6.4	8.0	9.7
155°	0.0	0.0	0.0	0.8	1.6	1.6	2.4	4.0	4.8	6.4	8.0
157.5°	0.0	0.0	0.0	0.8	0.8	1.6	1.6	2.4	4.0	4.8	5.6
160°	0.0	0.0	0.0	0.0	0.8	0.8	1.6	1.6	2.4	3.2	4.0
162.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.6	2.4	3.2
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.6	1.6
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8
170°	0.8	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°	676.5	676.5	676.5	676.5	676.5	676.5	676.5	676.5	676.5	676.5
2.5°	668.4	669.2	670.0	670.8	670.0	670.0	671.6	671.6	671.6	670.8
5°	641.9	642.7	644.3	646.7	647.5	647.5	648.3	648.3	648.3	647.5
7.5°	608.9	608.9	609.7	608.9	610.5	611.3	613.7	614.5	615.3	615.3
10°	579.9	580.7	580.7	579.9	575.9	578.3	575.9	575.1	575.9	578.3
12.5°	557.4	555.0	554.2	559.0	560.6	563.0	563.8	560.6	558.2	560.6
15°	538.1	540.5	542.1	538.1	536.5	535.7	536.5	538.9	541.3	541.3
17.5°	526.0	522.0	526.8	534.9	536.5	535.7	533.3	527.7	523.6	524.4
20°	513.2	519.6	519.6	510.0	504.3	503.5	503.5	507.5	507.5	508.3
22.5°	502.7	497.1	494.7	499.5	503.5	505.9	497.9	493.9	489.8	487.4
25°	486.6	481.8	490.7	481.8	477.8	475.4	475.4	480.2	482.6	481.0
27.5°	467.3	474.6	463.3	469.7	474.6	477.0	475.4	468.9	462.5	462.5
30°	459.3	450.4	460.1	461.7	456.9	448.8	441.6	441.6	441.6	444.0
32.5°	440.0	445.6	443.2	430.3	432.7	436.0	439.2	437.6	434.3	434.3
35°	426.3	429.5	418.3	427.9	426.3	423.1	415.0	410.2	410.2	411.0
37.5°	416.7	404.6	415.0	405.4	400.6	400.6	404.6	409.4	407.8	407.0
40°	396.5	397.3	391.7	390.9	396.5	399.0	389.3	383.7	379.7	377.2
42.5°	378.8	380.5	378.0	383.7	376.4	370.0	367.6	370.0	371.6	370.8
45°	364.4	360.3	367.6	354.7	353.9	356.3	359.5	356.3	353.9	353.1
47.5°	350.7	352.3	341.0	344.3	345.9	344.3	336.2	333.8	336.2	335.4
50°	330.6	333.0	333.0	329.8	325.0	323.3	326.6	326.6	324.2	325.8
52.5°	319.3	315.3	320.1	316.1	319.3	318.5	316.9	309.7	306.5	307.3
55°	304.8	306.5	300.0	306.5	306.5	301.6	296.0	299.2	298.4	297.6
57.5°	282.3	288.0	288.8	282.3	279.9	281.5	284.7	283.9	281.5	281.5
60°	260.6	262.2	266.2	263.0	263.8	264.6	263.0	262.2	263.8	263.0
62.5°	242.1	242.1	238.9	245.3	246.1	242.1	242.9	243.7	243.7	242.9
65°	221.2	223.6	222.0	222.0	221.2	222.8	222.8	221.2	219.6	220.4
67.5°	199.5	199.5	205.1	201.9	202.7	202.7	198.7	197.9	198.7	198.7
70°	177.0	177.8	179.4	181.8	181.0	178.6	177.8	177.8	177.8	177.0
72.5°	156.0	157.7	159.3	159.3	158.5	157.7	158.5	156.8	156.8	157.7
75°	135.1	138.3	138.3	138.3	139.2	140.8	139.2	139.2	137.5	137.5
77.5°	112.6	115.8	117.4	118.2	119.0	120.7	119.8	120.7	119.0	119.8
80°	91.7	94.9	97.3	99.7	100.5	102.2	102.2	103.8	103.8	104.6
82.5°	72.4	76.4	79.6	82.0	83.7	85.3	87.7	89.3	90.9	91.7
85°	55.5	58.7	62.7	66.8	68.4	70.8	74.8	76.4	77.2	78.8
87.5°	41.8	45.8	50.7	54.7	57.1	59.5	61.1	63.5	66.8	69.2
90°	34.6	38.6	42.6	46.7	48.3	49.1	51.5	54.7	59.5	62.7
92.5°	33.0	37.0	40.2	42.6	43.4	45.0	47.5	50.7	54.7	57.9
95°	32.2	36.2	38.6	41.0	41.8	43.4	45.8	48.3	51.5	53.9
97.5°	31.4	34.6	37.8	40.2	41.8	42.6	45.8	49.9	53.9	56.3
100°	31.4	33.8	37.0	40.2	41.0	42.6	46.7	50.7	53.1	53.1
102.5°	30.6	33.8	36.2	39.4	41.0	42.6	45.0	46.7	45.0	45.0
105°	29.8	33.0	35.4	37.8	38.6	39.4	40.2	40.2	39.4	39.4
107.5°	29.8	32.2	34.6	35.4	36.2	36.2	36.2	35.4	34.6	34.6
110°	29.0	31.4	33.0	33.8	33.8	33.8	33.8	33.0	32.2	31.4



TEST NUMBER: P241422

CATALOG NUMBER: FVS8M-2-LD4-35-1STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	29.0	30.6	32.2	32.2	33.0	33.0	33.0	32.2	31.4	30.6
115°	28.2	30.6	31.4	32.2	33.0	33.0	33.0	33.0	32.2	32.2
117.5°	28.2	30.6	32.2	33.0	33.8	33.8	34.6	34.6	33.8	33.8
120°	28.2	30.6	33.0	33.8	34.6	34.6	35.4	35.4	35.4	34.6
122.5°	28.2	30.6	33.0	34.6	35.4	35.4	36.2	36.2	36.2	36.2
125°	28.2	30.6	33.0	34.6	35.4	35.4	36.2	37.0	37.0	37.0
127.5°	27.3	30.6	32.2	33.8	34.6	35.4	36.2	37.0	37.0	37.0
130°	26.5	29.0	31.4	33.0	33.8	34.6	35.4	36.2	37.0	37.8
132.5°	25.7	28.2	30.6	32.2	33.0	33.8	35.4	36.2	36.2	37.0
135°	24.1	26.5	29.0	31.4	32.2	33.0	33.8	35.4	35.4	35.4
137.5°	22.5	24.9	27.3	29.8	30.6	31.4	33.0	33.8	33.8	34.6
140°	20.9	23.3	25.7	27.3	29.0	29.8	31.4	32.2	33.0	33.0
142.5°	19.3	21.7	24.1	25.7	26.5	28.2	29.0	30.6	31.4	31.4
145°	17.7	20.1	21.7	24.1	24.9	25.7	26.5	28.2	29.0	29.0
147.5°	15.3	17.7	19.3	20.9	21.7	22.5	24.1	24.9	25.7	25.7
150°	13.7	15.3	16.9	18.5	19.3	20.1	20.9	21.7	22.5	22.5
152.5°	11.3	12.9	14.5	15.3	16.1	16.9	17.7	18.5	18.5	19.3
155°	8.8	10.5	11.3	12.9	12.9	13.7	14.5	15.3	15.3	15.3
157.5°	7.2	8.0	9.7	10.5	10.5	11.3	11.3	12.1	12.1	12.1
160°	4.8	6.4	7.2	7.2	8.0	8.0	8.8	8.8	8.8	9.7
162.5°	3.2	4.0	4.8	5.6	5.6	5.6	6.4	6.4	6.4	6.4
165°	2.4	2.4	3.2	3.2	4.0	4.0	4.0	4.0	4.0	4.0
167.5°	0.8	1.6	1.6	1.6	2.4	2.4	2.4	2.4	2.4	2.4
170°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	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
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)