

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: P241572

Luminaire Tested: **FVS8M-3-LD4-50-1HI-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241572
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-50-1HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

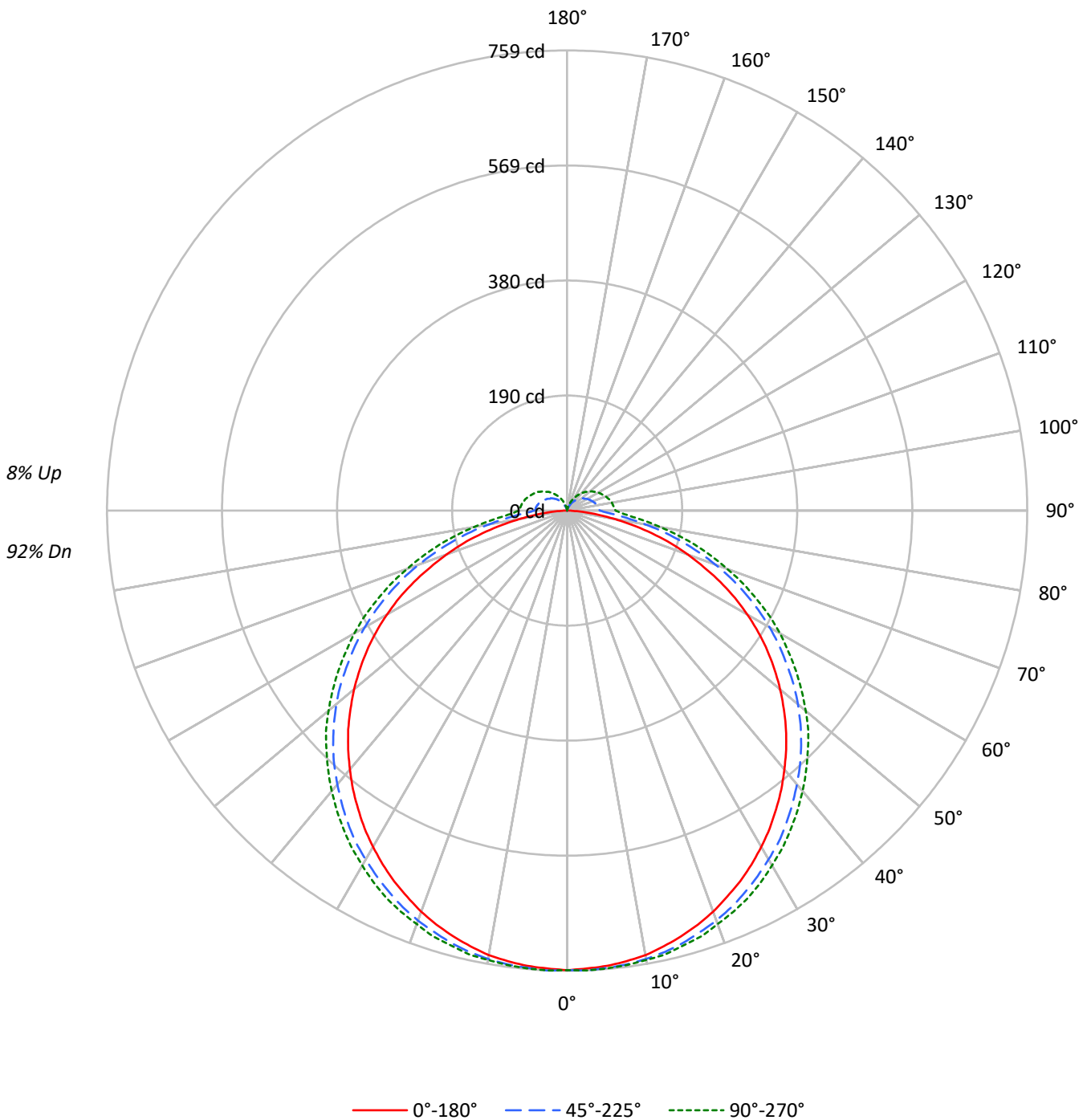
Lumens per Lamp: N/A
Luminaire Lumens: 2597.0 lumens
Efficiency: N/A
Efficacy: 72.1 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.32 / 1.43
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 36
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	114	114	114	114	107	107	107	101	101	101	95	95	95	92
1	106	101	96	92	103	98	94	90	92	89	86	87	84	82	82	80	78	75
2	96	87	80	74	93	85	78	73	80	75	70	76	71	67	71	68	65	62
3	87	76	68	61	84	74	66	60	70	63	58	66	61	56	63	58	54	52
4	80	67	58	51	77	65	57	51	62	55	49	59	53	48	56	50	46	44
5	73	60	51	44	70	58	50	43	55	48	42	53	46	41	50	44	40	38
6	67	54	45	38	65	52	44	38	50	42	37	47	41	36	45	39	35	33
7	62	49	40	33	60	47	39	33	45	38	32	43	37	32	41	35	31	29
8	58	44	36	30	56	43	35	29	41	34	29	39	33	28	38	32	28	26
9	54	41	32	27	52	40	32	26	38	31	26	36	30	25	35	29	25	23
10	51	37	29	24	49	37	29	24	35	28	23	34	27	23	32	27	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4426	4426	4426
5°	4399	4363	4357
10°	4375	4303	4293
15°	4334	4241	4232
20°	4295	4174	4168
25°	4247	4101	4110
30°	4195	4026	4032
35°	4136	3950	3955
40°	4074	3860	3871
45°	4012	3770	3783
50°	3927	3661	3677
55°	3829	3516	3546
60°	3681	3365	3404
65°	3471	3157	3204
70°	3161	2886	2959
75°	2738	2534	2674
80°	2060	2087	2300
85°	1100	1657	1946



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.0	2.8
10°-20°	208.0	8.0
20°-30°	319.2	12.3
30°-40°	392.0	15.1
40°-50°	417.7	16.1
50°-60°	391.6	15.1
60°-70°	314.9	12.1
70°-80°	199.9	7.7
80°-90°	86.1	3.3
90°-100°	50.4	1.9
100°-110°	44.7	1.7
110°-120°	36.9	1.4
120°-130°	28.0	1.1
130°-140°	19.0	0.7
140°-150°	10.9	0.4
150°-160°	4.6	0.2
160°-170°	1.1	0.0
170°-180°	0.0	0.0
0°-30°	599.1	23.1
0°-40°	991.1	38.2
0°-60°	1800.5	69.3
0°-90°	2401.4	92.5
90°-120°	132.1	5.1
90°-150°	189.9	7.3
90°-180°	196.0	7.5
0°-180°	2597.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	758	758	758	758	758	
5°	754	754	757	758	758	72
15°	727	730	738	741	742	205
25°	675	682	695	703	705	311
35°	601	614	630	640	643	376
45°	511	527	546	557	562	393
55°	404	421	442	458	461	360
65°	279	298	324	340	344	275
75°	144	168	194	211	218	153
85°	26	51	80	99	104	33
90°	1	26	54	74	80	2
95°	0	24	52	71	77	0
105°	0	21	48	66	72	0
115°	0	18	42	58	63	0
125°	0	14	34	49	54	0
135°	0	10	27	38	44	0
145°	1	6	19	28	31	1
155°	1	2	9	17	19	0
165°	1	1	3	5	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°	758.0	758.0	758.0	758.0	758.0	758.0	758.0	758.0	758.0	758.0	758.0
2.5°	756.0	756.0	754.9	756.0	756.0	757.0	757.0	758.0	759.1	760.1	759.1
5°	753.9	752.8	752.8	753.9	753.9	753.9	754.9	756.0	757.0	757.0	757.0
7.5°	749.7	748.7	748.7	749.7	749.7	750.8	750.8	752.8	753.9	753.9	754.9
10°	744.5	743.5	743.5	743.5	744.5	745.6	745.6	747.6	749.7	750.8	750.8
12.5°	736.2	736.2	735.2	737.2	737.2	738.3	740.4	742.4	743.5	744.5	745.6
15°	726.8	726.8	726.8	727.9	728.9	730.0	732.0	734.1	736.2	737.2	738.3
17.5°	716.4	716.4	716.4	717.5	719.6	720.6	722.7	724.8	726.8	727.9	728.9
20°	704.0	702.9	704.0	706.1	708.1	709.2	710.2	714.4	716.4	718.5	719.6
22.5°	689.4	689.4	690.5	692.5	695.7	696.7	697.7	700.9	704.0	706.1	708.1
25°	674.9	674.9	675.9	678.0	681.1	682.1	684.2	688.4	690.5	692.5	694.6
27.5°	658.2	658.2	659.3	662.4	666.5	667.6	668.6	672.8	675.9	678.0	680.1
30°	640.5	640.5	642.6	645.7	648.9	650.9	653.0	657.2	660.3	662.4	664.5
32.5°	621.8	621.8	623.9	627.0	631.2	633.3	635.3	639.5	642.6	645.7	648.9
35°	601.0	602.1	605.2	607.3	611.4	614.5	616.6	620.8	623.9	627.0	630.1
37.5°	580.2	580.2	582.3	586.5	591.7	592.7	596.9	601.0	604.1	608.3	610.4
40°	557.4	558.4	560.5	565.7	570.9	571.9	575.0	580.2	583.3	587.5	589.6
42.5°	534.5	535.5	538.6	543.8	547.0	550.1	553.2	557.4	560.5	565.7	568.8
45°	510.6	509.5	514.7	519.9	523.0	527.2	529.3	534.5	539.7	542.8	545.9
47.5°	484.6	486.6	490.8	493.9	499.1	502.2	504.3	509.5	513.7	517.8	522.0
50°	458.6	459.6	464.8	469.0	473.1	475.2	479.4	484.6	488.7	491.8	497.0
52.5°	431.5	433.6	436.7	439.9	446.1	449.2	452.3	456.5	462.7	466.9	471.0
55°	403.5	404.5	407.6	412.8	419.1	421.1	423.2	429.5	434.7	437.8	441.9
57.5°	374.3	375.4	379.5	383.7	387.9	393.1	395.1	399.3	405.5	410.7	414.9
60°	343.1	344.2	348.3	352.5	357.7	361.9	365.0	371.2	375.4	380.6	385.8
62.5°	312.0	312.0	317.2	320.3	327.5	331.7	332.7	339.0	345.2	349.4	355.6
65°	278.7	280.8	283.9	290.1	296.4	298.4	301.6	307.8	313.0	319.2	324.4
67.5°	244.4	246.4	251.6	255.8	263.1	267.2	269.3	274.5	282.8	288.0	293.2
70°	211.1	216.3	218.4	223.6	229.8	234.0	237.1	243.3	248.5	254.8	260.0
72.5°	179.9	180.9	184.1	191.3	197.6	200.7	204.8	209.0	216.3	222.5	226.7
75°	144.5	146.6	150.8	158.1	164.3	168.5	170.5	177.8	183.0	188.2	194.4
77.5°	110.2	113.3	119.6	124.8	132.1	135.2	139.3	145.6	151.8	157.0	162.2
80°	79.0	82.1	87.3	93.6	100.9	104.0	108.1	115.4	120.6	126.9	131.0
82.5°	51.0	53.0	59.3	65.5	71.7	75.9	79.0	86.3	92.5	97.7	102.9
85°	26.0	29.1	34.3	40.6	46.8	51.0	54.1	61.4	68.6	74.9	80.1
87.5°	9.4	11.4	16.6	23.9	30.2	33.3	37.4	43.7	51.0	57.2	62.4
90°	1.0	3.1	8.3	14.6	21.8	26.0	29.1	36.4	42.6	48.9	54.1
92.5°	0.0	2.1	7.3	13.5	20.8	23.9	28.1	34.3	40.6	46.8	52.0
95°	0.0	2.1	7.3	13.5	19.8	23.9	27.0	33.3	40.6	45.8	52.0
97.5°	0.0	2.1	6.2	12.5	19.8	22.9	26.0	33.3	39.5	45.8	51.0
100°	0.0	2.1	6.2	12.5	18.7	21.8	26.0	32.2	38.5	44.7	49.9
102.5°	0.0	2.1	6.2	11.4	18.7	21.8	25.0	31.2	37.4	43.7	48.9
105°	0.0	2.1	6.2	11.4	17.7	20.8	23.9	30.2	36.4	41.6	47.8
107.5°	0.0	1.0	5.2	10.4	16.6	19.8	22.9	29.1	35.4	40.6	45.8
110°	0.0	1.0	5.2	10.4	16.6	19.8	21.8	28.1	34.3	39.5	44.7



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CATALOG NUMBER: FVS8M-3-LD4-50-1HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.0	5.2	9.4	15.6	18.7	21.8	27.0	33.3	38.5	42.6
115°	0.0	1.0	4.2	9.4	14.6	17.7	20.8	26.0	31.2	36.4	41.6
117.5°	0.0	1.0	4.2	8.3	13.5	16.6	19.8	25.0	30.2	35.4	39.5
120°	0.0	1.0	4.2	8.3	13.5	15.6	18.7	23.9	29.1	33.3	38.5
122.5°	0.0	1.0	3.1	7.3	12.5	14.6	17.7	22.9	27.0	32.2	36.4
125°	0.0	1.0	3.1	7.3	11.4	13.5	16.6	20.8	26.0	30.2	34.3
127.5°	0.0	1.0	3.1	6.2	10.4	13.5	15.6	19.8	25.0	29.1	33.3
130°	0.0	0.0	2.1	6.2	10.4	12.5	14.6	18.7	22.9	27.0	31.2
132.5°	0.0	0.0	2.1	5.2	9.4	11.4	13.5	17.7	21.8	25.0	29.1
135°	0.0	1.0	2.1	4.2	8.3	10.4	12.5	15.6	19.8	23.9	27.0
137.5°	0.0	1.0	1.0	4.2	7.3	9.4	11.4	14.6	18.7	21.8	25.0
140°	1.0	1.0	1.0	3.1	6.2	8.3	9.4	13.5	16.6	19.8	22.9
142.5°	1.0	1.0	1.0	3.1	5.2	7.3	8.3	11.4	14.6	17.7	20.8
145°	1.0	1.0	1.0	2.1	4.2	6.2	7.3	10.4	13.5	15.6	18.7
147.5°	1.0	1.0	1.0	2.1	4.2	5.2	6.2	8.3	11.4	13.5	16.6
150°	1.0	1.0	1.0	1.0	3.1	4.2	5.2	7.3	9.4	11.4	14.6
152.5°	1.0	1.0	1.0	1.0	2.1	3.1	4.2	6.2	8.3	10.4	11.4
155°	1.0	1.0	1.0	1.0	2.1	2.1	3.1	5.2	6.2	8.3	9.4
157.5°	1.0	1.0	1.0	1.0	1.0	2.1	2.1	4.2	5.2	6.2	7.3
160°	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	4.2	5.2	6.2
162.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	3.1	4.2
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	3.1
167.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1
170°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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°	758.0	758.0	758.0	758.0	758.0	758.0	758.0	758.0	758.0	758.0
2.5°	759.1	759.1	760.1	760.1	759.1	760.1	760.1	759.1	759.1	759.1
5°	757.0	757.0	758.0	758.0	758.0	758.0	758.0	758.0	757.0	758.0
7.5°	754.9	754.9	754.9	756.0	756.0	756.0	756.0	756.0	756.0	756.0
10°	750.8	751.8	751.8	752.8	752.8	752.8	753.9	752.8	752.8	752.8
12.5°	745.6	746.6	747.6	748.7	747.6	748.7	748.7	748.7	748.7	749.7
15°	739.3	740.4	740.4	741.4	741.4	742.4	742.4	742.4	742.4	742.4
17.5°	731.0	732.0	733.1	734.1	735.2	734.1	735.2	735.2	736.2	736.2
20°	720.6	722.7	723.7	724.8	725.8	724.8	725.8	725.8	726.8	725.8
22.5°	709.2	711.2	712.3	714.4	714.4	715.4	715.4	716.4	715.4	716.4
25°	696.7	698.8	699.8	701.9	702.9	702.9	704.0	704.0	704.0	705.0
27.5°	682.1	684.2	685.3	687.3	687.3	688.4	689.4	689.4	690.5	691.5
30°	667.6	668.6	671.7	672.8	673.8	673.8	674.9	675.9	675.9	675.9
32.5°	650.9	652.0	655.1	656.1	657.2	658.2	659.3	659.3	659.3	660.3
35°	632.2	635.3	636.4	639.5	640.5	641.6	641.6	642.6	641.6	642.6
37.5°	613.5	616.6	617.7	619.7	620.8	621.8	622.9	622.9	623.9	623.9
40°	592.7	595.8	597.9	600.0	601.0	602.1	602.1	603.1	605.2	604.1
42.5°	571.9	573.0	577.1	579.2	579.2	581.3	582.3	582.3	583.3	583.3
45°	549.0	552.2	554.2	556.3	557.4	558.4	559.4	560.5	560.5	561.5
47.5°	525.1	529.3	531.4	534.5	534.5	535.5	537.6	537.6	537.6	539.7
50°	500.2	503.3	507.4	508.5	509.5	510.6	511.6	512.6	513.7	513.7
52.5°	474.2	478.3	480.4	483.5	484.6	484.6	486.6	487.7	487.7	487.7
55°	447.1	451.3	453.4	455.4	457.5	458.6	458.6	460.6	461.7	460.6
57.5°	418.0	421.1	424.3	428.4	429.5	430.5	430.5	431.5	434.7	432.6
60°	387.9	392.0	395.1	399.3	400.3	400.3	401.4	403.5	404.5	405.5
62.5°	358.7	363.9	366.0	369.1	369.1	372.3	373.3	374.3	375.4	376.4
65°	327.5	331.7	334.8	337.9	340.0	340.0	343.1	345.2	345.2	344.2
67.5°	296.4	300.5	304.7	306.8	308.8	308.8	310.9	313.0	313.0	314.0
70°	265.2	268.3	272.4	275.6	277.6	277.6	279.7	281.8	281.8	280.8
72.5°	231.9	235.0	240.2	242.3	244.4	245.4	247.5	248.5	249.6	249.6
75°	199.6	203.8	206.9	210.0	211.1	213.2	215.2	216.3	217.3	218.4
77.5°	166.4	172.6	175.7	179.9	179.9	182.0	186.1	185.1	186.1	186.1
80°	136.2	141.4	144.5	148.7	149.7	150.8	152.9	154.9	156.0	156.0
82.5°	109.2	113.3	117.5	119.6	122.7	122.7	124.8	126.9	127.9	128.9
85°	85.3	89.4	93.6	97.7	98.8	99.8	102.9	104.0	104.0	104.0
87.5°	68.6	72.8	76.9	80.1	82.1	83.2	85.3	86.3	88.4	88.4
90°	59.3	64.5	68.6	71.7	73.8	74.9	76.9	79.0	79.0	80.1
92.5°	58.2	62.4	66.5	69.7	70.7	72.8	74.9	75.9	76.9	78.0
95°	57.2	61.4	65.5	68.6	70.7	71.7	73.8	75.9	75.9	76.9
97.5°	56.2	60.3	64.5	67.6	69.7	70.7	72.8	74.9	75.9	75.9
100°	55.1	59.3	63.4	66.5	68.6	69.7	71.7	72.8	73.8	74.9
102.5°	54.1	58.2	62.4	65.5	66.5	67.6	70.7	71.7	72.8	72.8
105°	52.0	56.2	60.3	63.4	65.5	66.5	68.6	70.7	70.7	71.7
107.5°	51.0	55.1	59.3	62.4	63.4	64.5	66.5	68.6	69.7	69.7
110°	48.9	53.0	57.2	60.3	62.4	63.4	65.5	66.5	67.6	67.6



TEST NUMBER: P241572

CATALOG NUMBER: FVS8M-3-LD4-50-1HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	47.8	52.0	55.1	58.2	60.3	61.4	63.4	64.5	65.5	65.5
115°	45.8	49.9	53.0	56.2	58.2	59.3	61.4	62.4	63.4	63.4
117.5°	43.7	47.8	52.0	54.1	56.2	57.2	59.3	60.3	61.4	61.4
120°	42.6	45.8	49.9	52.0	54.1	55.1	56.2	58.2	59.3	59.3
122.5°	40.6	44.7	47.8	49.9	51.0	52.0	54.1	55.1	56.2	57.2
125°	38.5	42.6	44.7	47.8	48.9	49.9	52.0	53.0	54.1	54.1
127.5°	36.4	39.5	42.6	45.8	46.8	47.8	49.9	51.0	51.0	52.0
130°	34.3	37.4	40.6	42.6	43.7	44.7	46.8	47.8	48.9	48.9
132.5°	32.2	35.4	38.5	40.6	41.6	42.6	43.7	44.7	45.8	45.8
135°	30.2	33.3	35.4	37.4	38.5	39.5	41.6	42.6	42.6	43.7
137.5°	28.1	31.2	33.3	35.4	36.4	37.4	38.5	39.5	40.6	40.6
140°	26.0	28.1	31.2	32.2	33.3	34.3	35.4	36.4	37.4	37.4
142.5°	23.9	26.0	28.1	30.2	31.2	31.2	32.2	33.3	34.3	34.3
145°	21.8	23.9	26.0	27.0	28.1	29.1	30.2	31.2	31.2	31.2
147.5°	18.7	20.8	22.9	25.0	25.0	26.0	27.0	28.1	28.1	28.1
150°	16.6	18.7	20.8	21.8	22.9	22.9	23.9	25.0	25.0	25.0
152.5°	13.5	15.6	17.7	18.7	19.8	19.8	20.8	21.8	21.8	21.8
155°	11.4	13.5	14.6	16.6	16.6	17.7	17.7	18.7	18.7	18.7
157.5°	9.4	10.4	12.5	13.5	14.6	14.6	14.6	15.6	15.6	15.6
160°	7.3	8.3	9.4	10.4	11.4	11.4	12.5	12.5	12.5	12.5
162.5°	5.2	6.2	7.3	7.3	8.3	8.3	9.4	9.4	9.4	9.4
165°	3.1	4.2	4.2	5.2	5.2	6.2	6.2	6.2	7.3	7.3
167.5°	2.1	2.1	3.1	3.1	3.1	3.1	4.2	4.2	4.2	4.2
170°	1.0	1.0	1.0	1.0	1.0	2.1	2.1	2.1	2.1	2.1
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)