

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: P241539

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241539
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-9)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-2-LD4-40-2LO-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH OPAL LENS
Light Source: (84) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

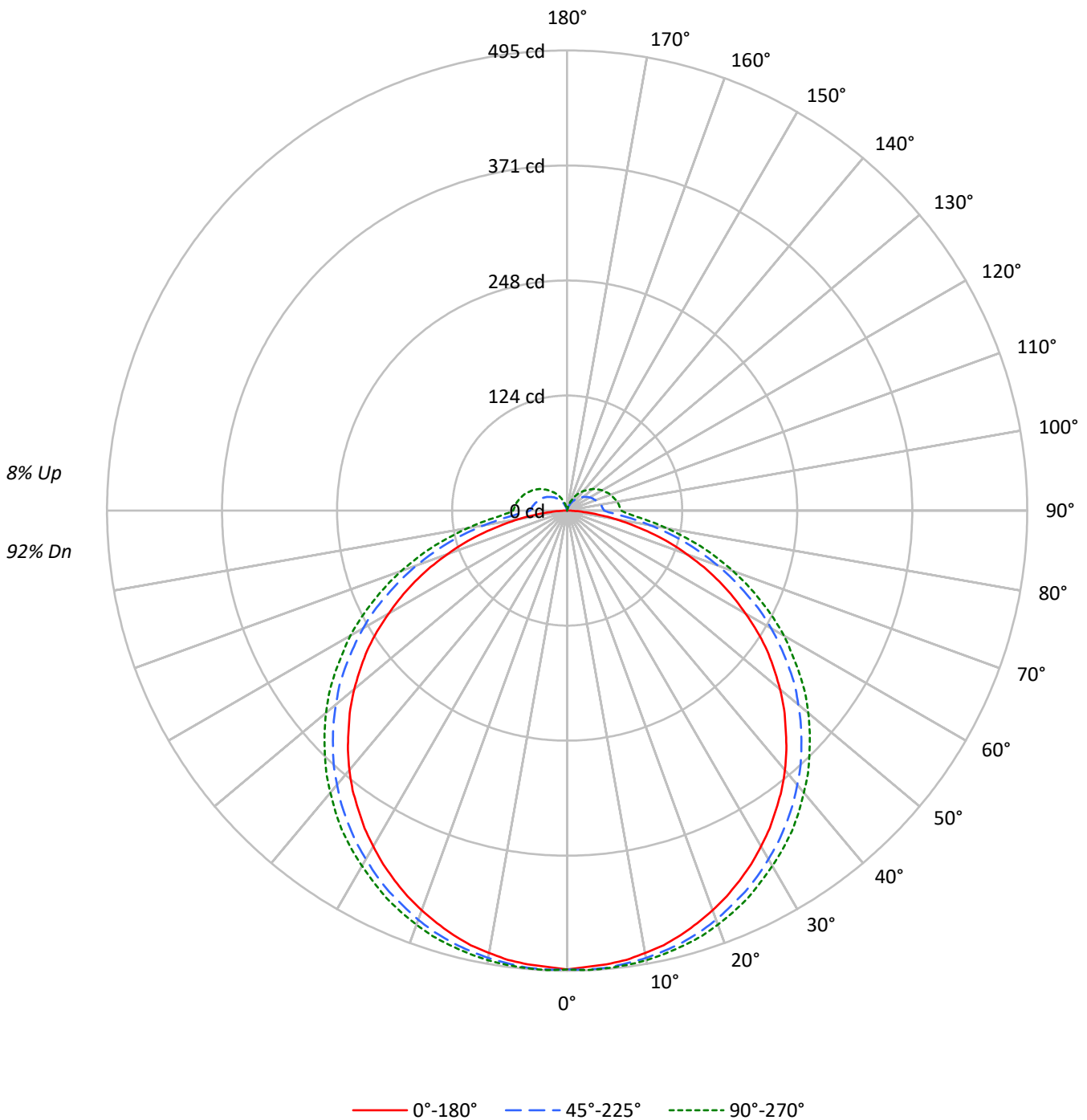
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1722.0 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.33 / 1.43
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 23.7
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





TEST NUMBER: P241539

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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	92
1	106	101	96	92	102	98	93	89	92	88	85	86	84	81	81	79	77	74
2	96	87	80	74	92	84	78	72	79	74	69	75	70	66	71	67	64	61
3	87	76	67	61	84	74	66	60	70	63	57	66	60	55	62	57	53	51
4	79	67	58	51	76	65	57	50	61	54	49	58	52	47	55	50	46	43
5	73	60	50	44	70	58	49	43	55	47	42	52	46	41	49	44	39	37
6	67	54	44	38	65	52	44	37	49	42	36	47	40	35	45	39	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	37	31	27	25
9	54	40	32	26	52	39	31	26	38	31	26	36	30	25	34	29	24	22
10	50	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°	4437	4437	4437
5°	4390	4371	4373
10°	4350	4297	4312
15°	4309	4229	4251
20°	4255	4156	4190
25°	4201	4079	4127
30°	4141	3997	4054
35°	4076	3918	3992
40°	4011	3828	3908
45°	3919	3728	3824
50°	3822	3612	3732
55°	3701	3480	3614
60°	3508	3320	3483
65°	3289	3101	3292
70°	2952	2842	3078
75°	2500	2525	2804
80°	1887	2112	2460
85°	967	1699	2151



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.9	2.7
10°-20°	135.4	7.9
20°-30°	208.0	12.1
30°-40°	255.9	14.9
40°-50°	273.1	15.9
50°-60°	256.9	14.9
60°-70°	207.7	12.1
70°-80°	134.0	7.8
80°-90°	60.5	3.5
90°-100°	36.8	2.1
100°-110°	32.7	1.9
110°-120°	27.1	1.6
120°-130°	20.6	1.2
130°-140°	14.0	0.8
140°-150°	8.1	0.5
150°-160°	3.5	0.2
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	390.3	22.7
0°-40°	646.2	37.5
0°-60°	1176.2	68.3
0°-90°	1578.3	91.7
90°-120°	96.6	5.6
90°-150°	139.3	8.1
90°-180°	144.0	8.4
0°-180°	1722.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	494	494	494	494	494	
5°	490	490	494	494	494	47
15°	473	475	481	484	484	133
25°	439	444	453	458	460	202
35°	392	400	411	418	421	245
45°	332	342	356	366	369	257
55°	263	274	290	301	305	234
65°	181	195	213	227	230	178
75°	93	111	131	144	149	99
85°	18	36	57	70	75	22
90°	0	19	40	53	58	1
95°	0	17	38	51	56	0
105°	0	15	34	48	52	0
115°	0	13	31	42	46	0
125°	0	10	26	36	40	0
135°	0	8	20	29	32	0
145°	0	5	14	21	23	0
155°	1	2	8	13	14	0
165°	1	1	2	5	6	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241539

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	493.6	493.6	493.6	493.6	493.6	493.6	493.6	493.6	493.6	493.6	493.6
2.5°	491.2	491.2	491.2	491.2	491.8	491.8	492.4	493.0	493.0	493.6	494.2
5°	489.9	489.3	489.9	489.9	490.5	490.5	491.2	491.8	492.4	493.0	493.6
7.5°	487.5	486.9	487.5	488.1	488.1	488.7	488.7	489.3	489.9	490.5	491.2
10°	483.2	483.2	483.8	484.4	485.0	485.0	485.6	486.3	486.9	488.1	488.7
12.5°	478.9	478.3	478.9	479.5	480.1	480.7	480.7	482.0	483.2	483.8	485.0
15°	472.8	472.8	473.4	474.0	474.6	475.2	475.8	477.7	478.3	479.5	480.7
17.5°	465.4	466.0	466.0	467.3	468.5	469.1	469.7	470.9	472.8	473.4	475.2
20°	457.5	458.1	458.1	459.3	460.5	461.8	462.4	464.2	466.0	467.3	468.5
22.5°	448.9	448.9	449.5	451.3	452.6	453.2	454.4	456.2	457.5	459.3	460.5
25°	439.1	439.1	440.3	441.5	443.4	444.0	445.2	447.1	448.9	450.7	452.6
27.5°	428.7	428.7	429.9	431.7	433.6	434.2	435.4	437.9	439.7	441.5	443.4
30°	417.1	417.7	418.9	420.7	422.6	423.8	425.0	426.8	428.7	431.1	433.0
32.5°	405.4	405.4	406.6	408.5	410.9	412.2	414.0	415.8	418.3	420.7	422.6
35°	391.9	392.6	393.8	396.8	398.1	399.9	401.1	403.6	406.6	408.5	410.9
37.5°	379.1	379.7	380.3	382.8	385.2	387.0	388.3	390.7	393.2	395.6	398.7
40°	364.4	364.4	366.2	369.3	371.1	373.0	374.2	377.2	379.7	382.8	385.2
42.5°	349.1	349.1	351.5	353.4	356.4	358.3	359.5	362.5	365.6	368.7	371.7
45°	332.5	333.8	335.6	338.0	341.7	342.3	344.2	347.2	350.9	354.0	356.4
47.5°	316.6	317.2	319.1	322.1	325.2	327.6	328.9	331.3	335.0	338.7	341.1
50°	298.9	300.1	301.9	305.0	308.0	310.5	312.3	315.4	319.1	322.1	324.6
52.5°	280.5	281.7	284.2	287.8	291.5	292.7	294.6	298.2	302.5	305.0	308.7
55°	262.7	263.3	265.8	268.8	273.1	274.4	276.2	279.9	283.5	287.2	290.3
57.5°	242.5	243.1	246.2	249.9	252.9	255.4	257.2	261.5	265.2	268.8	271.9
60°	221.7	223.5	226.6	230.9	233.9	236.4	238.2	241.9	245.6	249.3	253.5
62.5°	201.5	202.7	206.4	209.4	213.7	215.6	218.0	222.3	226.0	229.7	234.6
65°	180.7	181.9	184.3	188.6	193.5	195.4	197.8	201.5	205.8	210.1	213.1
67.5°	159.2	161.1	164.1	167.2	171.5	173.9	175.8	181.3	184.9	189.2	192.9
70°	136.6	138.4	142.1	146.4	150.7	153.7	155.6	159.8	164.7	168.4	172.1
72.5°	116.4	116.4	120.0	124.9	129.8	132.3	134.7	139.6	143.3	146.4	151.3
75°	93.1	94.9	99.2	103.5	109.0	110.8	113.3	117.6	123.1	126.8	131.1
77.5°	71.7	75.3	77.8	82.1	87.6	90.0	92.5	96.8	102.3	106.6	110.2
80°	52.7	54.5	57.6	61.9	68.0	69.2	72.3	77.2	81.5	85.7	90.6
82.5°	33.7	35.5	39.2	43.5	49.0	51.4	53.9	58.8	63.1	68.0	72.3
85°	17.8	19.6	23.3	28.2	33.7	36.1	38.6	42.9	47.8	52.7	57.0
87.5°	6.7	8.6	12.2	17.1	22.0	24.5	26.9	31.8	36.7	41.0	45.3
90°	0.0	2.4	6.7	11.0	16.5	19.0	21.4	26.3	31.2	35.5	39.8
92.5°	0.0	1.8	5.5	9.8	15.3	17.8	20.2	25.1	30.0	34.3	38.6
95°	0.0	1.8	4.9	9.8	14.7	17.1	19.6	24.5	29.4	33.7	38.0
97.5°	0.0	1.8	4.9	9.2	14.1	16.5	19.0	23.9	28.8	33.1	37.4
100°	0.0	1.2	4.9	9.2	13.5	15.9	18.4	23.3	28.2	32.5	36.1
102.5°	0.0	1.2	4.3	8.6	13.5	15.9	17.8	22.7	26.9	31.2	35.5
105°	0.0	1.2	4.3	8.6	12.9	15.3	17.8	22.0	26.3	30.6	34.3
107.5°	0.0	1.2	4.3	8.0	12.2	14.7	17.1	21.4	25.7	30.0	33.7
110°	0.0	1.2	3.7	7.3	11.6	14.1	16.5	20.8	25.1	28.8	32.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.2	3.7	7.3	11.6	13.5	15.9	20.2	23.9	28.2	31.2
115°	0.0	0.6	3.1	6.7	11.0	12.9	14.7	19.0	23.3	26.9	30.6
117.5°	0.0	0.6	3.1	6.7	10.4	12.2	14.1	18.4	22.0	25.7	29.4
120°	0.0	0.6	3.1	6.1	9.8	11.6	13.5	17.8	21.4	24.5	28.2
122.5°	0.0	0.6	2.4	5.5	9.2	11.0	12.9	16.5	20.2	23.9	26.9
125°	0.0	0.6	2.4	5.5	8.6	10.4	12.2	15.9	19.0	22.7	25.7
127.5°	0.0	0.6	2.4	4.9	8.0	9.8	11.6	14.7	18.4	21.4	23.9
130°	0.0	0.6	1.8	4.3	7.3	9.2	10.4	14.1	17.1	20.2	22.7
132.5°	0.0	0.6	1.8	4.3	6.7	8.6	9.8	12.9	15.9	19.0	21.4
135°	0.0	0.6	1.2	3.7	6.1	8.0	9.2	12.2	14.7	17.8	20.2
137.5°	0.0	0.0	1.2	3.1	5.5	6.7	8.6	11.0	13.5	16.5	18.4
140°	0.0	0.0	1.2	3.1	4.9	6.1	7.3	9.8	12.2	14.7	17.1
142.5°	0.0	0.0	0.6	2.4	4.3	5.5	6.7	9.2	11.6	13.5	15.9
145°	0.0	0.0	0.6	1.8	3.7	4.9	6.1	8.0	10.4	12.2	14.1
147.5°	0.0	0.0	0.6	1.8	3.1	4.3	4.9	7.3	9.2	11.0	12.9
150°	0.0	0.0	0.6	1.2	2.4	3.1	4.3	6.1	8.0	9.8	11.0
152.5°	0.6	0.0	0.6	0.6	1.8	2.4	3.1	4.9	6.7	8.0	9.8
155°	0.6	0.0	0.6	0.6	1.2	1.8	2.4	3.7	4.9	6.7	8.0
157.5°	0.6	0.6	0.0	0.6	1.2	1.2	1.8	3.1	4.3	4.9	6.1
160°	0.6	0.6	0.6	0.6	0.6	1.2	1.2	1.8	3.1	3.7	4.9
162.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.2	1.8	2.4	3.7
165°	0.6	0.6	0.6	0.0	0.6	0.6	0.6	0.6	1.2	1.8	2.4
167.5°	0.6	0.6	0.6	0.6	0.0	0.6	0.6	0.6	0.6	1.2	1.2
170°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.6	0.6	0.6
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°	493.6	493.6	493.6	493.6	493.6	493.6	493.6	493.6	493.6	493.6
2.5°	494.2	494.2	494.2	494.8	494.8	494.8	494.8	494.2	494.2	494.8
5°	493.6	493.6	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2
7.5°	491.8	492.4	492.4	493.0	493.0	493.0	493.0	493.0	493.0	493.0
10°	489.3	489.9	490.5	490.5	491.2	491.2	491.2	491.2	491.2	491.2
12.5°	485.6	486.9	487.5	487.5	488.1	487.5	488.1	488.1	488.1	488.1
15°	481.4	482.6	483.2	483.2	483.8	483.8	483.8	484.4	484.4	484.4
17.5°	475.8	477.1	477.7	478.3	478.9	478.9	479.5	479.5	479.5	480.1
20°	469.7	470.9	471.6	472.8	472.8	472.8	473.4	473.4	474.0	474.0
22.5°	462.4	463.6	464.8	466.0	466.0	466.0	466.7	467.3	467.3	467.3
25°	454.4	455.0	456.2	457.5	457.5	458.1	459.3	459.3	459.3	459.9
27.5°	445.2	446.4	448.3	448.3	449.5	449.5	450.1	450.7	450.7	450.7
30°	435.4	436.6	438.5	439.1	440.3	440.3	440.9	441.5	441.5	441.5
32.5°	424.4	426.2	427.5	429.3	429.3	429.9	431.1	431.1	431.7	431.7
35°	413.4	415.2	416.4	417.7	418.3	418.9	419.5	420.1	420.7	421.3
37.5°	399.9	402.4	404.2	406.0	406.6	406.6	407.9	408.5	409.1	409.1
40°	387.0	389.5	390.7	392.6	393.8	393.8	395.0	395.6	396.2	396.2
42.5°	373.6	376.0	378.5	379.7	380.3	380.3	381.5	382.8	382.8	383.4
45°	358.9	361.9	364.4	365.6	365.6	366.2	367.4	368.7	368.7	368.7
47.5°	344.2	346.0	347.8	350.3	350.9	352.1	352.7	352.7	353.4	354.0
50°	328.3	330.1	332.5	334.4	335.6	336.2	337.4	337.4	338.7	338.7
52.5°	310.5	313.6	316.0	317.8	318.5	319.7	320.3	321.5	322.1	322.7
55°	293.3	295.8	298.2	300.1	301.3	301.9	303.8	304.4	305.0	305.0
57.5°	275.0	278.0	280.5	282.3	282.9	284.2	285.4	286.6	287.2	286.6
60°	256.6	259.7	261.5	263.3	265.2	265.8	266.4	268.2	268.8	269.5
62.5°	237.0	239.5	241.9	244.4	245.0	246.8	248.0	248.6	248.6	249.9
65°	216.8	219.9	222.9	224.8	226.6	227.2	228.4	229.0	230.3	229.7
67.5°	196.6	199.6	202.7	204.5	205.8	207.0	208.2	209.4	210.1	210.1
70°	175.8	179.4	181.3	184.3	185.6	186.2	187.4	188.6	188.6	189.8
72.5°	154.9	158.0	161.1	164.1	164.1	166.6	167.2	169.0	168.4	169.0
75°	134.7	137.2	140.2	142.1	143.9	144.5	147.0	147.6	147.6	148.8
77.5°	113.3	117.6	119.4	122.5	124.9	124.3	126.2	127.4	128.6	127.4
80°	93.1	97.4	100.4	102.3	103.5	104.7	106.6	106.6	108.4	108.4
82.5°	75.9	79.6	82.1	84.5	85.7	87.0	88.2	89.4	90.0	90.6
85°	60.6	63.1	66.1	69.2	69.8	71.0	72.9	73.5	74.7	74.7
87.5°	49.0	52.1	55.1	57.6	59.4	60.0	61.9	62.5	63.1	63.7
90°	43.5	46.5	49.6	52.7	53.3	54.5	56.3	57.0	58.2	58.2
92.5°	42.3	45.3	48.4	50.8	52.1	53.3	54.5	55.7	56.3	57.0
95°	41.6	44.7	47.8	50.2	51.4	52.7	53.9	55.1	55.7	56.3
97.5°	41.0	44.1	47.2	49.6	50.8	52.1	53.3	54.5	55.1	55.7
100°	39.8	43.5	45.9	49.0	49.6	50.8	52.7	53.9	54.5	54.5
102.5°	39.2	42.3	45.3	47.8	49.0	49.6	51.4	52.7	53.3	53.3
105°	38.0	41.0	44.1	46.5	47.8	49.0	50.2	51.4	52.1	52.1
107.5°	37.4	40.4	42.9	45.3	46.5	47.8	49.0	50.2	50.8	50.8
110°	36.1	39.2	41.6	44.1	45.3	45.9	47.8	49.0	49.6	49.6



TEST NUMBER: P241539

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	34.9	38.0	40.4	42.9	44.1	44.7	46.5	47.2	47.8	48.4
115°	33.7	36.7	39.2	41.6	42.3	43.5	44.7	45.9	46.5	46.5
117.5°	32.5	34.9	38.0	39.8	41.0	41.6	42.9	44.1	44.7	44.7
120°	31.2	33.7	36.1	38.6	39.2	40.4	41.6	42.3	42.9	43.5
122.5°	30.0	32.5	34.9	36.7	38.0	38.6	39.8	41.0	41.6	41.6
125°	28.2	30.6	33.1	34.9	36.1	36.7	38.0	39.2	39.2	39.8
127.5°	26.9	29.4	31.8	33.7	34.3	34.9	36.1	37.4	38.0	38.0
130°	25.7	27.6	30.0	31.8	32.5	33.1	34.3	34.9	35.5	36.1
132.5°	23.9	26.3	28.2	30.0	30.6	31.2	32.5	33.1	33.7	33.7
135°	22.7	24.5	26.3	28.2	28.8	29.4	30.6	31.2	31.8	31.8
137.5°	20.8	22.7	24.5	26.3	26.9	27.6	28.2	29.4	29.4	29.4
140°	19.0	20.8	22.7	23.9	25.1	25.1	26.3	26.9	27.6	27.6
142.5°	17.8	19.0	20.8	22.0	22.7	23.3	23.9	25.1	25.1	25.1
145°	15.9	17.8	19.0	20.2	20.8	21.4	22.0	22.7	23.3	23.3
147.5°	14.1	15.9	17.1	18.4	19.0	19.0	20.2	20.2	20.8	20.8
150°	12.9	14.1	15.3	16.5	16.5	17.1	17.8	18.4	18.4	18.4
152.5°	11.0	12.2	13.5	14.1	14.7	14.7	15.9	15.9	16.5	16.5
155°	9.2	10.4	11.6	12.2	12.9	12.9	13.5	13.5	14.1	14.1
157.5°	7.3	8.6	9.8	10.4	10.4	11.0	11.0	11.6	11.6	11.6
160°	5.5	6.7	7.3	8.0	8.6	8.6	9.2	9.2	9.8	9.8
162.5°	4.3	4.9	5.5	6.1	6.7	6.7	7.3	7.3	7.3	7.3
165°	3.1	3.1	3.7	4.3	4.9	4.9	4.9	4.9	5.5	5.5
167.5°	1.8	1.8	2.4	2.4	3.1	3.1	3.1	3.1	3.1	3.1
170°	0.6	0.6	1.2	1.2	1.2	1.2	1.8	1.8	1.8	1.8
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)