

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: P241538

Luminaire Tested: **FVS8M-2-LD4-35-2LO-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241538
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-LD4-35-2LO-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH OPAL LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

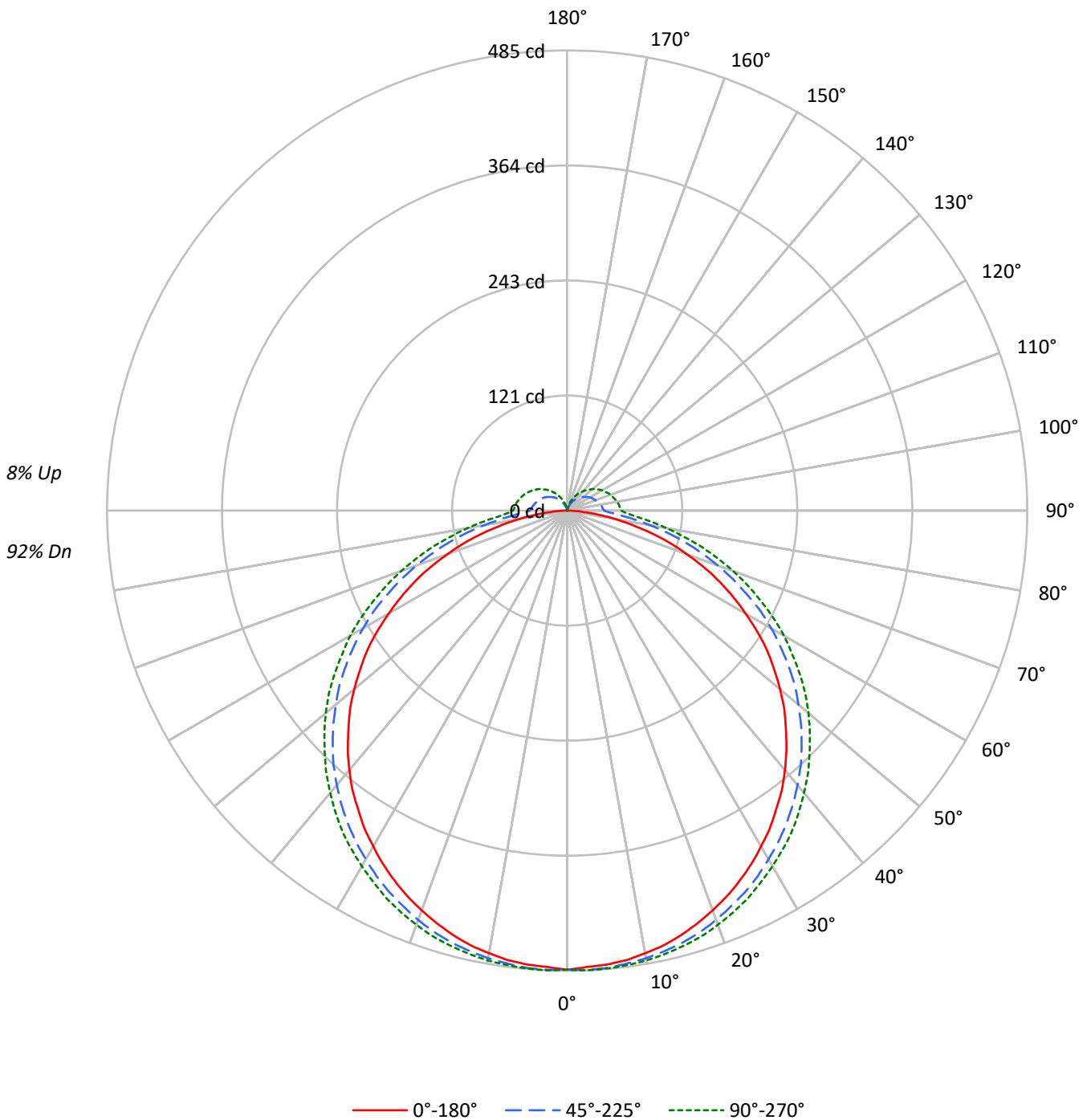
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1687.9 lumens
Efficiency: N/A
Efficacy: 71.2 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

TEST NUMBER: P241538
CATALOG NUMBER: FVS8M-2-LD4-35-2LO-O-UNV-EDC1

Luminous Intensity Polar Plot





TEST NUMBER: P241538

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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°	4350	4350	4350
5°	4304	4286	4287
10°	4265	4213	4227
15°	4223	4146	4167
20°	4170	4073	4107
25°	4118	3998	4045
30°	4059	3918	3974
35°	3996	3841	3913
40°	3932	3753	3832
45°	3842	3655	3748
50°	3746	3541	3658
55°	3628	3411	3543
60°	3438	3254	3413
65°	3223	3040	3226
70°	2894	2786	3018
75°	2449	2475	2750
80°	1847	2070	2413
85°	945	1663	2108



TEST NUMBER: P241538

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.9	2.7
10°-20°	132.7	7.9
20°-30°	203.9	12.1
30°-40°	250.8	14.9
40°-50°	267.8	15.9
50°-60°	251.8	14.9
60°-70°	203.6	12.1
70°-80°	131.3	7.8
80°-90°	59.2	3.5
90°-100°	36.1	2.1
100°-110°	32.0	1.9
110°-120°	26.5	1.6
120°-130°	20.2	1.2
130°-140°	13.7	0.8
140°-150°	7.9	0.5
150°-160°	3.4	0.2
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	382.6	22.7
0°-40°	633.4	37.5
0°-60°	1152.9	68.3
0°-90°	1547.1	91.7
90°-120°	94.6	5.6
90°-150°	136.5	8.1
90°-180°	141.0	8.4
0°-180°	1687.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	484	484	484	484	484	
5°	480	481	484	484	484	46
15°	463	466	471	474	475	131
25°	430	435	444	448	451	198
35°	384	392	403	410	413	241
45°	326	336	349	358	361	252
55°	258	269	285	295	299	229
65°	177	192	209	222	225	175
75°	91	109	128	141	146	97
85°	17	35	56	68	73	22
90°	0	19	39	52	57	1
95°	0	17	37	50	55	0
105°	0	15	34	47	51	0
115°	0	13	30	41	46	0
125°	0	10	25	35	39	0
135°	0	8	20	28	31	0
145°	0	5	14	20	23	0
155°	1	2	8	13	14	0
165°	1	1	2	5	5	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241538

CATALOG NUMBER: FVS8M-2-LD4-35-2LO-O-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	483.9	483.9	483.9	483.9	483.9	483.9	483.9	483.9	483.9	483.9	483.9
2.5°	481.5	481.5	481.5	481.5	482.1	482.1	482.7	483.3	483.3	483.9	484.5
5°	480.3	479.7	480.3	480.3	480.9	480.9	481.5	482.1	482.7	483.3	483.9
7.5°	477.9	477.3	477.9	478.5	478.5	479.1	479.1	479.7	480.3	480.9	481.5
10°	473.7	473.7	474.3	474.9	475.5	475.5	476.1	476.7	477.3	478.5	479.1
12.5°	469.4	468.8	469.4	470.0	470.6	471.2	471.2	472.4	473.7	474.3	475.5
15°	463.4	463.4	464.0	464.6	465.2	465.8	466.4	468.2	468.8	470.0	471.2
17.5°	456.2	456.8	456.8	458.0	459.2	459.8	460.4	461.6	463.4	464.0	465.8
20°	448.4	449.0	449.0	450.2	451.4	452.6	453.2	455.0	456.8	458.0	459.2
22.5°	440.0	440.0	440.6	442.4	443.6	444.2	445.4	447.2	448.4	450.2	451.4
25°	430.4	430.4	431.6	432.8	434.6	435.2	436.4	438.2	440.0	441.8	443.6
27.5°	420.2	420.2	421.4	423.2	425.0	425.6	426.8	429.2	431.0	432.8	434.6
30°	408.8	409.4	410.6	412.4	414.2	415.4	416.6	418.4	420.2	422.6	424.4
32.5°	397.4	397.4	398.6	400.4	402.8	404.0	405.8	407.6	410.0	412.4	414.2
35°	384.2	384.8	386.0	389.0	390.2	392.0	393.2	395.6	398.6	400.4	402.8
37.5°	371.6	372.2	372.8	375.2	377.6	379.4	380.6	383.0	385.4	387.8	390.8
40°	357.2	357.2	359.0	362.0	363.8	365.6	366.8	369.8	372.2	375.2	377.6
42.5°	342.2	342.2	344.6	346.4	349.4	351.2	352.4	355.4	358.4	361.4	364.4
45°	326.0	327.2	329.0	331.4	335.0	335.6	337.4	340.4	344.0	347.0	349.4
47.5°	310.4	311.0	312.8	315.8	318.8	321.2	322.4	324.8	328.4	332.0	334.4
50°	293.0	294.2	296.0	299.0	302.0	304.4	306.2	309.2	312.8	315.8	318.2
52.5°	274.9	276.1	278.5	282.1	285.8	287.0	288.8	292.4	296.6	299.0	302.6
55°	257.5	258.1	260.5	263.5	267.7	268.9	270.7	274.3	277.9	281.5	284.6
57.5°	237.7	238.3	241.3	244.9	247.9	250.3	252.1	256.3	259.9	263.5	266.5
60°	217.3	219.1	222.1	226.3	229.3	231.7	233.5	237.1	240.7	244.3	248.5
62.5°	197.5	198.7	202.3	205.3	209.5	211.3	213.7	217.9	221.5	225.1	229.9
65°	177.1	178.3	180.7	184.9	189.7	191.5	193.9	197.5	201.7	205.9	208.9
67.5°	156.1	157.9	160.9	163.9	168.1	170.5	172.3	177.7	181.3	185.5	189.1
70°	133.9	135.7	139.3	143.5	147.7	150.7	152.5	156.7	161.5	165.1	168.7
72.5°	114.1	114.1	117.7	122.5	127.3	129.7	132.1	136.9	140.5	143.5	148.3
75°	91.2	93.0	97.3	101.5	106.9	108.7	111.1	115.3	120.7	124.3	128.5
77.5°	70.2	73.8	76.2	80.4	85.8	88.2	90.6	94.9	100.3	104.5	108.1
80°	51.6	53.4	56.4	60.6	66.6	67.8	70.8	75.6	79.8	84.0	88.8
82.5°	33.0	34.8	38.4	42.6	48.0	50.4	52.8	57.6	61.8	66.6	70.8
85°	17.4	19.2	22.8	27.6	33.0	35.4	37.8	42.0	46.8	51.6	55.8
87.5°	6.6	8.4	12.0	16.8	21.6	24.0	26.4	31.2	36.0	40.2	44.4
90°	0.0	2.4	6.6	10.8	16.2	18.6	21.0	25.8	30.6	34.8	39.0
92.5°	0.0	1.8	5.4	9.6	15.0	17.4	19.8	24.6	29.4	33.6	37.8
95°	0.0	1.8	4.8	9.6	14.4	16.8	19.2	24.0	28.8	33.0	37.2
97.5°	0.0	1.8	4.8	9.0	13.8	16.2	18.6	23.4	28.2	32.4	36.6
100°	0.0	1.2	4.8	9.0	13.2	15.6	18.0	22.8	27.6	31.8	35.4
102.5°	0.0	1.2	4.2	8.4	13.2	15.6	17.4	22.2	26.4	30.6	34.8
105°	0.0	1.2	4.2	8.4	12.6	15.0	17.4	21.6	25.8	30.0	33.6
107.5°	0.0	1.2	4.2	7.8	12.0	14.4	16.8	21.0	25.2	29.4	33.0
110°	0.0	1.2	3.6	7.2	11.4	13.8	16.2	20.4	24.6	28.2	31.8



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CATALOG NUMBER: FVS8M-2-LD4-35-2LO-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.2	3.6	7.2	11.4	13.2	15.6	19.8	23.4	27.6	30.6
115°	0.0	0.6	3.0	6.6	10.8	12.6	14.4	18.6	22.8	26.4	30.0
117.5°	0.0	0.6	3.0	6.6	10.2	12.0	13.8	18.0	21.6	25.2	28.8
120°	0.0	0.6	3.0	6.0	9.6	11.4	13.2	17.4	21.0	24.0	27.6
122.5°	0.0	0.6	2.4	5.4	9.0	10.8	12.6	16.2	19.8	23.4	26.4
125°	0.0	0.6	2.4	5.4	8.4	10.2	12.0	15.6	18.6	22.2	25.2
127.5°	0.0	0.6	2.4	4.8	7.8	9.6	11.4	14.4	18.0	21.0	23.4
130°	0.0	0.6	1.8	4.2	7.2	9.0	10.2	13.8	16.8	19.8	22.2
132.5°	0.0	0.6	1.8	4.2	6.6	8.4	9.6	12.6	15.6	18.6	21.0
135°	0.0	0.6	1.2	3.6	6.0	7.8	9.0	12.0	14.4	17.4	19.8
137.5°	0.0	0.0	1.2	3.0	5.4	6.6	8.4	10.8	13.2	16.2	18.0
140°	0.0	0.0	1.2	3.0	4.8	6.0	7.2	9.6	12.0	14.4	16.8
142.5°	0.0	0.0	0.6	2.4	4.2	5.4	6.6	9.0	11.4	13.2	15.6
145°	0.0	0.0	0.6	1.8	3.6	4.8	6.0	7.8	10.2	12.0	13.8
147.5°	0.0	0.0	0.6	1.8	3.0	4.2	4.8	7.2	9.0	10.8	12.6
150°	0.0	0.0	0.6	1.2	2.4	3.0	4.2	6.0	7.8	9.6	10.8
152.5°	0.6	0.0	0.6	0.6	1.8	2.4	3.0	4.8	6.6	7.8	9.6
155°	0.6	0.0	0.6	0.6	1.2	1.8	2.4	3.6	4.8	6.6	7.8
157.5°	0.6	0.6	0.0	0.6	1.2	1.2	1.8	3.0	4.2	4.8	6.0
160°	0.6	0.6	0.6	0.6	0.6	1.2	1.2	1.8	3.0	3.6	4.8
162.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.2	1.8	2.4	3.6
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



TEST NUMBER: P241538

CATALOG NUMBER: FVS8M-2-LD4-35-2LO-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	483.9	483.9	483.9	483.9	483.9	483.9	483.9	483.9	483.9	483.9
2.5°	484.5	484.5	484.5	485.1	485.1	485.1	485.1	484.5	484.5	485.1
5°	483.9	483.9	484.5	484.5	484.5	484.5	484.5	484.5	484.5	484.5
7.5°	482.1	482.7	482.7	483.3	483.3	483.3	483.3	483.3	483.3	483.3
10°	479.7	480.3	480.9	480.9	480.9	481.5	481.5	481.5	481.5	481.5
12.5°	476.1	477.3	477.9	477.9	478.5	477.9	478.5	478.5	478.5	478.5
15°	471.8	473.0	473.7	473.7	474.3	474.3	474.3	474.9	474.9	474.9
17.5°	466.4	467.6	468.2	468.8	469.4	469.4	470.0	470.0	470.0	470.6
20°	460.4	461.6	462.2	463.4	463.4	463.4	464.0	464.0	464.6	464.6
22.5°	453.2	454.4	455.6	456.8	456.8	456.8	457.4	458.0	458.0	458.0
25°	445.4	446.0	447.2	448.4	448.4	449.0	450.2	450.2	450.2	450.8
27.5°	436.4	437.6	439.4	439.4	440.6	440.6	441.2	441.8	441.8	441.8
30°	426.8	428.0	429.8	430.4	431.6	431.6	432.2	432.8	432.8	432.8
32.5°	416.0	417.8	419.0	420.8	420.8	421.4	422.6	422.6	423.2	423.2
35°	405.2	407.0	408.2	409.4	410.0	410.6	411.2	411.8	412.4	413.0
37.5°	392.0	394.4	396.2	398.0	398.6	398.6	399.8	400.4	401.0	401.0
40°	379.4	381.8	383.0	384.8	386.0	386.0	387.2	387.8	388.4	388.4
42.5°	366.2	368.6	371.0	372.2	372.8	372.8	374.0	375.2	375.2	375.8
45°	351.8	354.8	357.2	358.4	358.4	359.0	360.2	361.4	361.4	361.4
47.5°	337.4	339.2	341.0	343.4	344.0	345.2	345.8	345.8	346.4	347.0
50°	321.8	323.6	326.0	327.8	329.0	329.6	330.8	330.8	332.0	332.0
52.5°	304.4	307.4	309.8	311.6	312.2	313.4	314.0	315.2	315.8	316.4
55°	287.6	290.0	292.4	294.2	295.4	296.0	297.8	298.4	299.0	299.0
57.5°	269.5	272.5	274.9	276.7	277.3	278.5	279.7	280.9	281.5	280.9
60°	251.5	254.5	256.3	258.1	259.9	260.5	261.1	262.9	263.5	264.1
62.5°	232.3	234.7	237.1	239.5	240.1	241.9	243.1	243.7	243.7	244.9
65°	212.5	215.5	218.5	220.3	222.1	222.7	223.9	224.5	225.7	225.1
67.5°	192.7	195.7	198.7	200.5	201.7	202.9	204.1	205.3	205.9	205.9
70°	172.3	175.9	177.7	180.7	181.9	182.5	183.7	184.9	184.9	186.1
72.5°	151.9	154.9	157.9	160.9	160.9	163.3	163.9	165.7	165.1	165.7
75°	132.1	134.5	137.5	139.3	141.1	141.7	144.1	144.7	144.7	145.9
77.5°	111.1	115.3	117.1	120.1	122.5	121.9	123.7	124.9	126.1	124.9
80°	91.2	95.5	98.5	100.3	101.5	102.7	104.5	104.5	106.3	106.3
82.5°	74.4	78.0	80.4	82.8	84.0	85.2	86.4	87.6	88.2	88.8
85°	59.4	61.8	64.8	67.8	68.4	69.6	71.4	72.0	73.2	73.2
87.5°	48.0	51.0	54.0	56.4	58.2	58.8	60.6	61.2	61.8	62.4
90°	42.6	45.6	48.6	51.6	52.2	53.4	55.2	55.8	57.0	57.0
92.5°	41.4	44.4	47.4	49.8	51.0	52.2	53.4	54.6	55.2	55.8
95°	40.8	43.8	46.8	49.2	50.4	51.6	52.8	54.0	54.6	55.2
97.5°	40.2	43.2	46.2	48.6	49.8	51.0	52.2	53.4	54.0	54.6
100°	39.0	42.6	45.0	48.0	48.6	49.8	51.6	52.8	53.4	53.4
102.5°	38.4	41.4	44.4	46.8	48.0	48.6	50.4	51.6	52.2	52.2
105°	37.2	40.2	43.2	45.6	46.8	48.0	49.2	50.4	51.0	51.0
107.5°	36.6	39.6	42.0	44.4	45.6	46.8	48.0	49.2	49.8	49.8
110°	35.4	38.4	40.8	43.2	44.4	45.0	46.8	48.0	48.6	48.6



TEST NUMBER: P241538

CATALOG NUMBER: FVS8M-2-LD4-35-2LO-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	34.2	37.2	39.6	42.0	43.2	43.8	45.6	46.2	46.8	47.4
115°	33.0	36.0	38.4	40.8	41.4	42.6	43.8	45.0	45.6	45.6
117.5°	31.8	34.2	37.2	39.0	40.2	40.8	42.0	43.2	43.8	43.8
120°	30.6	33.0	35.4	37.8	38.4	39.6	40.8	41.4	42.0	42.6
122.5°	29.4	31.8	34.2	36.0	37.2	37.8	39.0	40.2	40.8	40.8
125°	27.6	30.0	32.4	34.2	35.4	36.0	37.2	38.4	38.4	39.0
127.5°	26.4	28.8	31.2	33.0	33.6	34.2	35.4	36.6	37.2	37.2
130°	25.2	27.0	29.4	31.2	31.8	32.4	33.6	34.2	34.8	35.4
132.5°	23.4	25.8	27.6	29.4	30.0	30.6	31.8	32.4	33.0	33.0
135°	22.2	24.0	25.8	27.6	28.2	28.8	30.0	30.6	31.2	31.2
137.5°	20.4	22.2	24.0	25.8	26.4	27.0	27.6	28.8	28.8	28.8
140°	18.6	20.4	22.2	23.4	24.6	24.6	25.8	26.4	27.0	27.0
142.5°	17.4	18.6	20.4	21.6	22.2	22.8	23.4	24.6	24.6	24.6
145°	15.6	17.4	18.6	19.8	20.4	21.0	21.6	22.2	22.8	22.8
147.5°	13.8	15.6	16.8	18.0	18.6	18.6	19.8	19.8	20.4	20.4
150°	12.6	13.8	15.0	16.2	16.2	16.8	17.4	18.0	18.0	18.0
152.5°	10.8	12.0	13.2	13.8	14.4	14.4	15.6	15.6	16.2	16.2
155°	9.0	10.2	11.4	12.0	12.6	12.6	13.2	13.2	13.8	13.8
157.5°	7.2	8.4	9.6	10.2	10.2	10.8	10.8	11.4	11.4	11.4
160°	5.4	6.6	7.2	7.8	8.4	8.4	9.0	9.0	9.6	9.6
162.5°	4.2	4.8	5.4	6.0	6.6	6.6	7.2	7.2	7.2	7.2
165°	3.0	3.0	3.6	4.2	4.8	4.8	4.8	4.8	5.4	5.4
167.5°	1.8	1.8	2.4	2.4	3.0	3.0	3.0	3.0	3.0	3.0
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)