

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: P241597

Luminaire Tested: **FVS8M-4-LD4-30-1LO-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241597
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-LD4-30-1LO-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
4FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

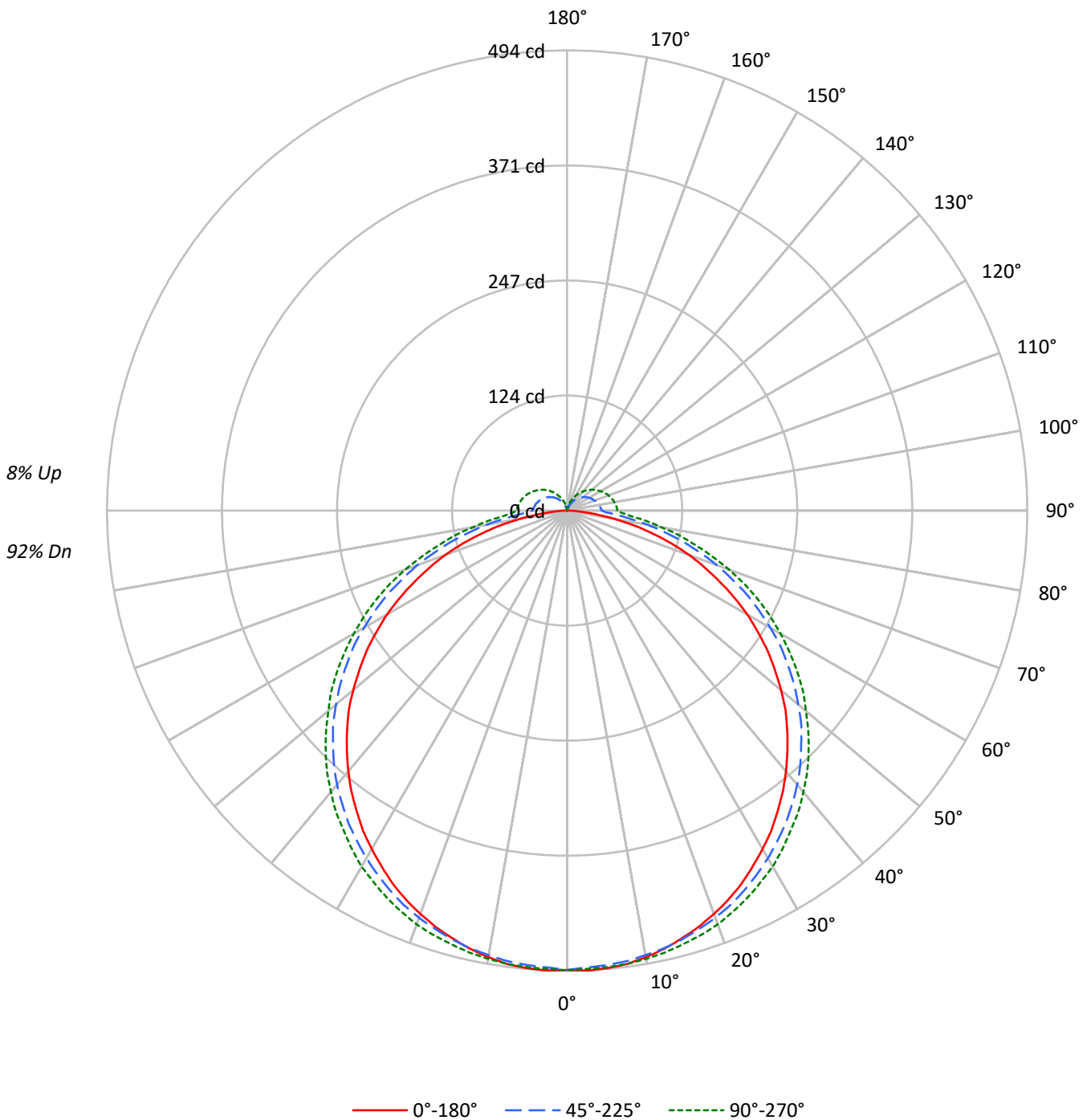
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1707.0 lumens
Efficiency: N/A
Efficacy: 72.3 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): 23.6
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: P241597

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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°	2204	2204	2204
5°	2205	2162	2165
10°	2195	2129	2132
15°	2177	2100	2102
20°	2160	2071	2077
25°	2143	2040	2045
30°	2118	2007	2015
35°	2092	1975	1972
40°	2065	1938	1935
45°	2032	1891	1890
50°	1992	1840	1834
55°	1939	1777	1777
60°	1871	1701	1700
65°	1763	1605	1612
70°	1648	1475	1489
75°	1426	1304	1331
80°	1081	1096	1158
85°	585	865	988



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.8	2.7
10°-20°	135.1	7.9
20°-30°	207.7	12.2
30°-40°	255.5	15.0
40°-50°	272.6	16.0
50°-60°	255.9	15.0
60°-70°	206.3	12.1
70°-80°	131.4	7.7
80°-90°	57.0	3.3
90°-100°	34.8	2.0
100°-110°	31.3	1.8
110°-120°	26.2	1.5
120°-130°	20.2	1.2
130°-140°	13.8	0.8
140°-150°	8.0	0.5
150°-160°	3.5	0.2
160°-170°	0.9	0.1
170°-180°	0.0	0.0
0°-30°	389.5	22.8
0°-40°	645.0	37.8
0°-60°	1173.6	68.7
0°-90°	1568.3	91.9
90°-120°	92.3	5.4
90°-150°	134.3	7.9
90°-180°	139.0	8.1
0°-180°	1707.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	493	493	493	493	493	
5°	493	492	490	492	492	47
15°	476	476	477	481	482	134
25°	442	445	450	457	458	204
35°	394	400	409	417	418	247
45°	334	344	355	364	367	258
55°	263	275	289	299	302	235
65°	181	196	213	223	226	179
75°	95	110	128	140	142	100
85°	16	34	53	65	69	21
90°	0	17	37	50	54	1
95°	0	16	36	48	53	0
105°	0	15	33	46	50	0
115°	0	13	30	40	44	0
125°	0	11	25	35	38	0
135°	1	8	20	28	31	0
145°	1	5	14	20	23	0
155°	1	2	7	12	14	0
165°	1	1	3	5	6	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°	493.2	493.2	493.2	493.2	493.2	493.2	493.2	493.2	493.2	493.2	493.2
2.5°	494.3	493.7	493.7	493.7	493.7	493.7	493.7	493.7	492.6	492.0	490.9
5°	493.2	492.6	492.0	492.0	492.0	492.0	492.0	492.0	491.5	490.3	489.8
7.5°	490.9	490.3	489.8	489.8	489.8	489.8	490.3	489.8	489.2	488.0	488.0
10°	486.9	486.3	485.8	485.8	486.3	486.3	486.3	486.3	485.8	485.2	484.6
12.5°	481.8	481.8	481.2	481.2	481.2	481.8	481.8	482.3	481.8	481.2	481.2
15°	475.5	475.5	474.9	474.9	475.5	476.1	476.1	477.2	476.6	476.6	476.6
17.5°	468.7	468.1	468.1	468.1	469.2	469.8	469.8	470.4	470.9	470.9	470.9
20°	460.7	460.7	460.1	461.2	461.8	462.4	463.0	463.5	464.1	464.1	465.2
22.5°	452.1	451.6	451.6	452.1	453.3	453.8	455.0	456.1	456.1	456.7	458.4
25°	442.4	441.9	441.3	442.4	443.6	444.7	445.9	447.0	447.6	448.7	449.8
27.5°	431.0	431.0	431.6	432.2	433.9	435.0	436.2	437.3	438.4	439.6	440.7
30°	419.6	419.6	419.6	420.8	423.0	424.8	425.3	427.0	427.6	429.3	431.0
32.5°	407.7	406.5	407.7	409.4	411.6	412.8	413.9	415.6	416.8	418.5	420.2
35°	394.0	394.0	394.5	396.3	399.1	400.2	401.4	404.2	405.4	407.1	409.4
37.5°	380.3	379.7	380.9	383.1	386.0	387.1	388.8	390.5	392.3	394.5	396.8
40°	365.5	365.5	366.6	369.5	371.7	373.4	374.6	377.4	379.1	381.4	384.3
42.5°	350.1	350.6	351.8	354.1	357.5	359.2	360.9	363.2	365.5	367.7	370.6
45°	334.1	333.5	335.8	338.7	342.1	343.8	345.5	348.4	350.6	353.5	355.2
47.5°	318.1	316.4	319.3	321.6	325.6	328.4	329.0	332.4	335.2	338.1	340.9
50°	299.9	299.9	302.7	305.0	309.6	310.7	312.4	315.9	318.7	322.1	323.8
52.5°	281.1	281.1	283.9	287.9	291.9	293.6	295.3	299.3	302.2	304.5	307.3
55°	262.8	263.4	265.7	269.1	273.7	274.8	277.7	280.5	283.9	286.8	289.1
57.5°	242.9	244.0	246.3	249.7	254.9	256.0	258.8	262.8	265.1	268.5	272.0
60°	223.5	224.1	226.9	232.0	235.5	236.6	238.9	242.9	246.3	248.6	252.0
62.5°	202.4	204.1	206.4	211.0	214.4	217.2	218.4	222.4	226.3	229.2	232.0
65°	180.7	183.0	185.3	189.3	193.8	196.1	198.4	201.8	206.4	209.2	212.7
67.5°	159.6	161.4	164.2	168.8	172.2	175.0	176.2	181.3	184.2	188.1	191.0
70°	139.7	140.8	143.1	147.1	151.1	153.4	156.2	159.6	164.2	168.2	171.0
72.5°	116.9	117.4	120.3	124.3	129.4	131.7	133.4	139.1	142.5	146.5	148.8
75°	94.6	95.8	98.6	102.6	107.8	110.0	112.3	117.4	121.4	124.9	128.3
77.5°	73.5	73.5	77.0	82.1	86.7	88.9	90.7	96.4	99.8	103.8	107.2
80°	51.3	53.0	57.0	61.0	66.1	69.0	71.3	74.7	79.3	83.8	87.8
82.5°	33.1	34.2	37.6	42.8	47.3	49.6	52.5	56.4	61.0	65.6	69.0
85°	16.5	18.8	21.7	26.2	31.4	33.6	35.9	40.5	45.0	49.0	53.0
87.5°	5.1	6.8	10.3	14.8	20.0	22.2	24.5	29.1	33.6	37.6	41.6
90°	0.0	1.7	5.7	9.7	14.8	17.1	19.4	24.5	29.1	33.1	37.1
92.5°	0.0	1.7	5.1	9.7	14.3	17.1	19.4	23.9	28.5	32.5	36.5
95°	0.0	1.7	5.1	9.1	14.3	16.5	18.8	23.4	27.9	31.9	35.9
97.5°	0.0	1.7	4.6	9.1	13.7	16.0	18.2	23.4	27.4	31.4	35.3
100°	0.0	1.1	4.6	9.1	13.7	16.0	18.2	22.8	26.8	30.8	34.8
102.5°	0.0	1.1	4.6	8.6	13.1	15.4	17.7	22.2	26.2	30.2	34.2
105°	0.0	1.1	4.6	8.6	12.5	14.8	17.1	21.7	25.7	29.6	33.1
107.5°	0.0	1.1	4.0	8.0	12.5	14.3	16.5	21.1	25.1	28.5	32.5
110°	0.0	1.1	4.0	8.0	12.0	14.3	16.0	20.0	23.9	27.9	31.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.1	4.0	7.4	11.4	13.7	15.4	19.4	23.4	26.8	30.2
115°	0.0	1.1	3.4	6.8	10.8	13.1	14.8	18.8	22.8	26.2	29.6
117.5°	0.0	0.6	3.4	6.8	10.3	12.5	14.3	18.2	21.7	25.1	28.5
120°	0.0	0.6	3.4	6.3	10.3	12.0	13.7	17.1	21.1	24.5	27.4
122.5°	0.0	0.6	2.9	6.3	9.1	11.4	13.1	16.5	20.0	23.4	26.2
125°	0.0	0.6	2.9	5.7	9.1	10.8	12.5	16.0	18.8	22.2	25.1
127.5°	0.0	0.6	2.9	5.1	8.6	10.3	11.4	14.8	18.2	21.1	23.9
130°	0.0	0.6	2.3	5.1	8.0	9.1	10.8	14.3	17.1	20.0	22.2
132.5°	0.0	0.6	1.7	4.6	7.4	8.6	10.3	13.1	16.0	18.8	21.1
135°	0.6	0.6	1.7	4.0	6.3	8.0	9.1	12.0	14.8	17.7	20.0
137.5°	0.6	0.6	1.7	3.4	5.7	6.8	8.6	10.8	13.7	16.0	18.2
140°	0.6	0.6	1.1	2.9	5.1	6.3	7.4	9.7	12.0	14.3	17.1
142.5°	0.6	0.6	1.1	2.9	4.6	5.7	6.8	8.6	10.8	13.1	15.4
145°	0.6	0.6	1.1	2.3	4.0	5.1	5.7	8.0	9.7	11.4	13.7
147.5°	0.6	0.6	0.6	1.7	3.4	4.0	5.1	6.8	8.6	10.3	12.0
150°	0.6	0.6	0.6	1.7	2.9	3.4	4.6	5.7	7.4	9.1	10.3
152.5°	0.6	0.6	0.6	1.1	2.3	2.9	3.4	5.1	6.3	7.4	9.1
155°	0.6	0.6	0.6	1.1	2.3	2.3	2.9	4.0	5.1	6.3	7.4
157.5°	0.6	0.6	0.6	1.1	1.7	2.3	2.3	3.4	4.6	5.1	6.3
160°	0.6	0.6	0.6	0.6	1.1	1.7	1.7	2.9	3.4	4.0	5.1
162.5°	0.6	0.6	0.6	0.6	1.1	1.1	1.1	2.3	2.9	3.4	4.0
165°	0.6	0.6	0.6	0.6	0.6	0.6	1.1	1.1	1.7	2.3	2.9
167.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.1	1.1	1.7	1.7
170°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.1	1.1
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°	493.2	493.2	493.2	493.2	493.2	493.2	493.2	493.2	493.2	493.2
2.5°	490.9	492.0	492.6	493.2	493.2	493.2	493.2	493.2	493.2	492.6
5°	489.8	490.9	491.5	492.0	492.0	492.0	492.0	492.0	492.0	492.0
7.5°	488.0	489.2	489.8	490.3	490.3	490.9	490.9	490.9	490.9	490.9
10°	485.2	486.3	487.5	488.0	488.0	488.6	488.6	488.6	488.6	488.6
12.5°	482.3	483.5	484.1	485.2	485.2	485.2	485.8	485.8	485.8	485.8
15°	477.8	479.5	480.1	481.2	481.2	481.2	481.8	481.8	482.3	481.8
17.5°	472.7	473.8	475.5	475.5	476.6	476.6	476.6	477.2	477.2	477.8
20°	466.4	468.1	469.2	470.4	470.4	471.5	471.5	472.1	472.1	472.7
22.5°	459.5	461.2	463.0	464.1	464.1	464.7	465.2	465.8	465.8	465.8
25°	451.6	453.3	455.0	456.1	456.7	457.3	457.8	457.8	458.4	458.4
27.5°	442.4	444.7	446.4	447.6	448.1	448.1	449.3	449.8	449.8	449.8
30°	433.3	435.0	436.7	438.4	438.4	439.0	440.2	440.7	440.2	441.3
32.5°	423.0	424.8	426.5	427.6	428.2	428.7	429.3	430.5	430.5	430.5
35°	411.1	413.4	415.1	416.8	416.8	417.3	418.5	419.1	419.1	418.5
37.5°	399.1	401.4	403.1	404.8	405.4	405.4	406.5	406.5	407.1	407.7
40°	386.6	388.8	390.5	391.1	392.3	392.8	394.0	394.5	394.0	394.5
42.5°	373.4	374.6	376.3	378.6	378.6	379.7	380.3	380.9	381.4	381.4
45°	358.1	359.8	362.0	363.8	363.8	364.9	365.5	366.0	367.2	366.6
47.5°	343.2	344.9	346.6	348.4	348.4	349.5	351.2	351.2	351.2	351.2
50°	326.7	329.0	330.1	332.4	333.0	333.5	334.1	335.2	335.2	334.7
52.5°	309.6	312.4	314.7	315.9	316.4	317.0	317.6	318.7	318.7	319.3
55°	291.9	294.8	296.5	298.8	298.8	299.3	301.0	301.6	301.0	301.6
57.5°	273.7	276.0	278.2	279.9	281.1	281.1	282.2	283.4	283.4	283.4
60°	254.9	256.6	259.4	261.1	262.8	262.3	264.5	264.5	264.5	264.5
62.5°	234.3	237.8	239.5	242.3	242.9	243.5	244.6	245.2	245.2	245.7
65°	214.9	217.8	220.1	221.8	222.9	222.9	224.6	225.2	225.8	226.3
67.5°	194.4	197.3	199.6	202.4	203.0	203.0	203.5	205.8	205.3	205.8
70°	173.3	176.2	178.5	180.7	181.3	181.9	183.0	184.7	184.7	184.7
72.5°	152.2	155.6	157.9	159.6	159.6	160.8	163.1	162.5	164.2	163.1
75°	131.7	134.0	137.4	138.5	139.7	140.8	142.0	142.5	143.1	142.0
77.5°	111.2	114.0	116.3	118.0	119.2	120.3	121.4	122.6	122.0	123.7
80°	91.2	92.9	95.2	98.1	99.2	100.3	102.1	102.6	102.1	102.6
82.5°	72.4	75.3	77.5	80.4	81.0	82.1	83.2	85.0	85.0	85.5
85°	56.4	59.3	62.7	64.4	65.0	66.1	67.8	68.4	69.6	69.0
87.5°	45.0	48.5	51.3	53.0	54.2	55.3	56.4	57.6	58.2	58.7
90°	40.5	43.3	46.2	48.5	49.6	50.2	51.9	53.0	53.6	53.6
92.5°	39.9	42.8	45.6	47.9	49.0	50.2	51.3	52.5	53.0	53.6
95°	39.3	42.2	45.0	47.3	48.5	49.6	50.7	51.9	52.5	53.0
97.5°	38.8	42.2	44.5	46.8	47.9	49.0	50.2	51.3	51.9	52.5
100°	38.2	41.1	43.9	46.2	47.3	47.9	49.6	50.7	51.3	51.3
102.5°	37.6	40.5	43.3	45.6	46.2	47.3	48.5	49.6	50.2	50.7
105°	36.5	39.3	42.2	44.5	45.6	46.2	47.9	49.0	49.6	49.6
107.5°	35.9	38.8	41.1	43.3	44.5	45.6	46.8	47.9	48.5	48.5
110°	34.8	37.6	39.9	42.2	43.3	43.9	45.6	46.8	47.3	47.3



TEST NUMBER: P241597

CATALOG NUMBER: FVS8M-4-LD4-30-1LO-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	33.6	36.5	38.8	41.1	42.2	42.8	44.5	45.0	45.6	46.2
115°	32.5	35.3	37.6	39.9	40.5	41.6	42.8	43.9	44.5	44.5
117.5°	31.4	34.2	36.5	38.2	39.3	39.9	41.6	42.2	42.8	43.3
120°	30.2	33.1	35.3	37.1	38.2	38.8	39.9	41.1	41.6	41.6
122.5°	29.1	31.4	33.6	35.3	36.5	37.1	38.2	39.3	39.9	39.9
125°	27.9	30.2	31.9	34.2	34.8	35.3	37.1	37.6	38.2	38.2
127.5°	26.2	28.5	30.8	32.5	33.1	34.2	34.8	35.9	36.5	36.5
130°	25.1	27.4	29.1	30.8	31.4	32.5	33.1	34.2	34.8	34.8
132.5°	23.4	25.7	27.4	29.1	29.6	30.2	31.4	32.5	32.5	33.1
135°	22.2	23.9	25.7	27.4	27.9	28.5	29.6	30.2	30.8	30.8
137.5°	20.5	22.2	23.9	25.7	26.2	26.8	27.9	28.5	29.1	29.1
140°	18.8	21.1	22.2	23.9	24.5	25.1	25.7	26.2	26.8	26.8
142.5°	17.7	19.4	20.5	21.7	22.2	22.8	23.9	24.5	24.5	25.1
145°	15.4	17.7	18.8	20.0	20.5	21.1	21.7	22.2	22.8	22.8
147.5°	13.7	15.4	17.1	18.2	18.8	18.8	20.0	20.0	20.5	20.5
150°	12.0	13.7	15.4	16.5	16.5	17.1	17.7	18.2	18.2	18.2
152.5°	10.3	11.4	13.1	14.3	14.8	14.8	15.4	16.0	16.5	16.5
155°	8.6	9.7	10.8	12.0	12.5	13.1	13.7	14.3	14.3	14.3
157.5°	7.4	8.0	9.1	10.3	10.8	11.4	11.4	12.0	12.0	12.0
160°	5.7	6.3	7.4	8.0	8.6	9.1	9.7	9.7	10.3	10.3
162.5°	4.6	5.1	5.7	6.3	6.8	6.8	7.4	8.0	8.0	8.0
165°	3.4	3.4	4.0	4.6	4.6	5.1	5.7	6.3	6.3	6.3
167.5°	2.3	2.3	2.9	2.9	3.4	3.4	3.4	4.0	4.0	4.0
170°	1.1	1.1	1.7	1.7	1.7	1.7	2.3	2.3	2.3	2.3
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)