

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: P241562

Luminaire Tested: **FVS8M-3-LD4-35-1LO-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241562
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-LD4-35-1LO-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

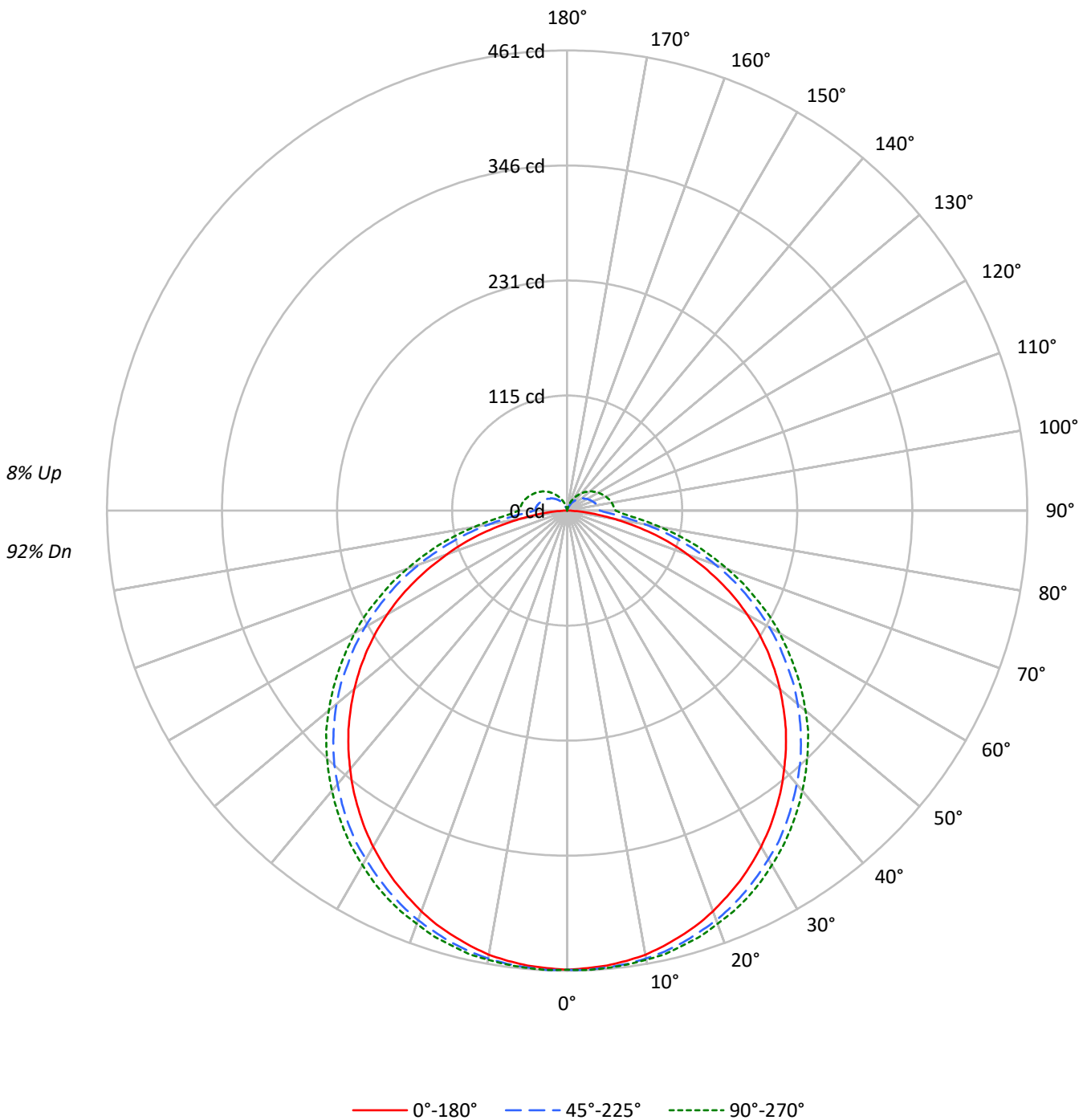
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1576.0 lumens
Efficiency: N/A
Efficacy: 74.3 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): 21.2
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





TEST NUMBER: P241562

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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°	2686	2686	2686
5°	2670	2648	2644
10°	2655	2611	2605
15°	2631	2573	2569
20°	2606	2533	2529
25°	2577	2489	2494
30°	2546	2443	2447
35°	2510	2397	2401
40°	2472	2343	2349
45°	2434	2288	2296
50°	2383	2222	2231
55°	2323	2134	2152
60°	2234	2042	2066
65°	2106	1916	1945
70°	1918	1752	1795
75°	1662	1538	1622
80°	1251	1267	1396
85°	668	1006	1181



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.7	2.8
10°-20°	126.2	8.0
20°-30°	193.7	12.3
30°-40°	237.9	15.1
40°-50°	253.5	16.1
50°-60°	237.6	15.1
60°-70°	191.1	12.1
70°-80°	121.3	7.7
80°-90°	52.2	3.3
90°-100°	30.6	1.9
100°-110°	27.2	1.7
110°-120°	22.4	1.4
120°-130°	17.0	1.1
130°-140°	11.5	0.7
140°-150°	6.6	0.4
150°-160°	2.8	0.2
160°-170°	0.6	0.0
170°-180°	0.0	0.0
0°-30°	363.6	23.1
0°-40°	601.5	38.2
0°-60°	1092.6	69.3
0°-90°	1457.3	92.5
90°-120°	80.2	5.1
90°-150°	115.2	7.3
90°-180°	119.0	7.6
0°-180°	1576.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	458	458	459	460	460	43
15°	441	443	448	450	451	125
25°	410	414	422	427	428	189
35°	365	373	382	389	390	228
45°	310	320	331	338	341	239
55°	245	256	268	278	280	219
65°	169	181	197	206	209	167
75°	88	102	118	128	132	93
85°	16	31	49	60	63	20
90°	1	16	33	45	49	1
95°	0	14	32	43	47	0
105°	0	13	29	40	44	0
115°	0	11	25	35	38	0
125°	0	8	21	30	33	0
135°	0	6	16	23	26	0
145°	1	4	11	17	19	0
155°	1	1	6	10	11	0
165°	1	1	2	3	4	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241562

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	460.0	460.0	460.0	460.0	460.0	460.0	460.0	460.0	460.0	460.0	460.0
2.5°	458.8	458.8	458.1	458.8	458.8	459.4	459.4	460.0	460.7	461.3	460.7
5°	457.5	456.9	456.9	457.5	457.5	457.5	458.1	458.8	459.4	459.4	459.4
7.5°	455.0	454.3	454.3	455.0	455.0	455.6	455.6	456.9	457.5	457.5	458.1
10°	451.8	451.2	451.2	451.2	451.8	452.4	452.4	453.7	455.0	455.6	455.6
12.5°	446.8	446.8	446.1	447.4	447.4	448.0	449.3	450.6	451.2	451.8	452.4
15°	441.1	441.1	441.1	441.7	442.4	443.0	444.2	445.5	446.8	447.4	448.0
17.5°	434.8	434.8	434.8	435.4	436.7	437.3	438.6	439.8	441.1	441.7	442.4
20°	427.2	426.6	427.2	428.5	429.7	430.4	431.0	433.5	434.8	436.0	436.7
22.5°	418.4	418.4	419.0	420.3	422.2	422.8	423.4	425.3	427.2	428.5	429.7
25°	409.5	409.5	410.2	411.4	413.3	414.0	415.2	417.7	419.0	420.3	421.5
27.5°	399.4	399.4	400.1	402.0	404.5	405.1	405.8	408.3	410.2	411.4	412.7
30°	388.7	388.7	390.0	391.9	393.8	395.0	396.3	398.8	400.7	402.0	403.2
32.5°	377.4	377.4	378.6	380.5	383.0	384.3	385.6	388.1	390.0	391.9	393.8
35°	364.7	365.4	367.3	368.5	371.0	372.9	374.2	376.7	378.6	380.5	382.4
37.5°	352.1	352.1	353.4	355.9	359.1	359.7	362.2	364.7	366.6	369.2	370.4
40°	338.2	338.9	340.1	343.3	346.4	347.1	349.0	352.1	354.0	356.5	357.8
42.5°	324.3	325.0	326.9	330.0	331.9	333.8	335.7	338.2	340.1	343.3	345.2
45°	309.8	309.2	312.4	315.5	317.4	319.9	321.2	324.3	327.5	329.4	331.3
47.5°	294.1	295.3	297.8	299.7	302.9	304.8	306.0	309.2	311.7	314.3	316.8
50°	278.3	278.9	282.1	284.6	287.1	288.4	290.9	294.1	296.6	298.5	301.6
52.5°	261.9	263.1	265.0	266.9	270.7	272.6	274.5	277.0	280.8	283.3	285.9
55°	244.8	245.5	247.4	250.5	254.3	255.6	256.8	260.6	263.8	265.7	268.2
57.5°	227.2	227.8	230.3	232.9	235.4	238.5	239.8	242.3	246.1	249.3	251.8
60°	208.2	208.9	211.4	213.9	217.1	219.6	221.5	225.3	227.8	231.0	234.1
62.5°	189.3	189.3	192.5	194.4	198.8	201.3	201.9	205.7	209.5	212.0	215.8
65°	169.1	170.4	172.3	176.1	179.8	181.1	183.0	186.8	189.9	193.7	196.9
67.5°	148.3	149.6	152.7	155.2	159.7	162.2	163.4	166.6	171.6	174.8	178.0
70°	128.1	131.3	132.5	135.7	139.5	142.0	143.9	147.7	150.8	154.6	157.8
72.5°	109.2	109.8	111.7	116.1	119.9	121.8	124.3	126.8	131.3	135.0	137.6
75°	87.7	89.0	91.5	95.9	99.7	102.2	103.5	107.9	111.1	114.2	118.0
77.5°	66.9	68.8	72.6	75.7	80.1	82.0	84.6	88.3	92.1	95.3	98.4
80°	48.0	49.9	53.0	56.8	61.2	63.1	65.6	70.0	73.2	77.0	79.5
82.5°	30.9	32.2	36.0	39.8	43.5	46.1	48.0	52.4	56.2	59.3	62.5
85°	15.8	17.7	20.8	24.6	28.4	30.9	32.8	37.2	41.6	45.4	48.6
87.5°	5.7	6.9	10.1	14.5	18.3	20.2	22.7	26.5	30.9	34.7	37.9
90°	0.6	1.9	5.0	8.8	13.3	15.8	17.7	22.1	25.9	29.7	32.8
92.5°	0.0	1.3	4.4	8.2	12.6	14.5	17.0	20.8	24.6	28.4	31.6
95°	0.0	1.3	4.4	8.2	12.0	14.5	16.4	20.2	24.6	27.8	31.6
97.5°	0.0	1.3	3.8	7.6	12.0	13.9	15.8	20.2	24.0	27.8	30.9
100°	0.0	1.3	3.8	7.6	11.4	13.3	15.8	19.6	23.3	27.1	30.3
102.5°	0.0	1.3	3.8	6.9	11.4	13.3	15.1	18.9	22.7	26.5	29.7
105°	0.0	1.3	3.8	6.9	10.7	12.6	14.5	18.3	22.1	25.2	29.0
107.5°	0.0	0.6	3.2	6.3	10.1	12.0	13.9	17.7	21.5	24.6	27.8
110°	0.0	0.6	3.2	6.3	10.1	12.0	13.3	17.0	20.8	24.0	27.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.6	3.2	5.7	9.5	11.4	13.3	16.4	20.2	23.3	25.9
115°	0.0	0.6	2.5	5.7	8.8	10.7	12.6	15.8	18.9	22.1	25.2
117.5°	0.0	0.6	2.5	5.0	8.2	10.1	12.0	15.1	18.3	21.5	24.0
120°	0.0	0.6	2.5	5.0	8.2	9.5	11.4	14.5	17.7	20.2	23.3
122.5°	0.0	0.6	1.9	4.4	7.6	8.8	10.7	13.9	16.4	19.6	22.1
125°	0.0	0.6	1.9	4.4	6.9	8.2	10.1	12.6	15.8	18.3	20.8
127.5°	0.0	0.6	1.9	3.8	6.3	8.2	9.5	12.0	15.1	17.7	20.2
130°	0.0	0.0	1.3	3.8	6.3	7.6	8.8	11.4	13.9	16.4	18.9
132.5°	0.0	0.0	1.3	3.2	5.7	6.9	8.2	10.7	13.3	15.1	17.7
135°	0.0	0.6	1.3	2.5	5.0	6.3	7.6	9.5	12.0	14.5	16.4
137.5°	0.0	0.6	0.6	2.5	4.4	5.7	6.9	8.8	11.4	13.3	15.1
140°	0.6	0.6	0.6	1.9	3.8	5.0	5.7	8.2	10.1	12.0	13.9
142.5°	0.6	0.6	0.6	1.9	3.2	4.4	5.0	6.9	8.8	10.7	12.6
145°	0.6	0.6	0.6	1.3	2.5	3.8	4.4	6.3	8.2	9.5	11.4
147.5°	0.6	0.6	0.6	1.3	2.5	3.2	3.8	5.0	6.9	8.2	10.1
150°	0.6	0.6	0.6	0.6	1.9	2.5	3.2	4.4	5.7	6.9	8.8
152.5°	0.6	0.6	0.6	0.6	1.3	1.9	2.5	3.8	5.0	6.3	6.9
155°	0.6	0.6	0.6	0.6	1.3	1.3	1.9	3.2	3.8	5.0	5.7
157.5°	0.6	0.6	0.6	0.6	0.6	1.3	1.3	2.5	3.2	3.8	4.4
160°	0.6	0.6	0.6	0.6	0.6	0.6	1.3	1.3	2.5	3.2	3.8
162.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.3	1.3	1.9	2.5
165°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.3	1.3	1.9
167.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.3
170°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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°	460.0	460.0	460.0	460.0	460.0	460.0	460.0	460.0	460.0	460.0
2.5°	460.7	460.7	461.3	461.3	460.7	461.3	461.3	460.7	460.7	460.7
5°	459.4	459.4	460.0	460.0	460.0	460.0	460.0	460.0	459.4	460.0
7.5°	458.1	458.1	458.1	458.8	458.8	458.8	458.8	458.8	458.8	458.8
10°	455.6	456.2	456.2	456.9	456.9	456.9	457.5	456.9	456.9	456.9
12.5°	452.4	453.1	453.7	454.3	453.7	454.3	454.3	454.3	454.3	455.0
15°	448.7	449.3	449.3	449.9	449.9	450.6	450.6	450.6	450.6	450.6
17.5°	443.6	444.2	444.9	445.5	446.1	445.5	446.1	446.1	446.8	446.8
20°	437.3	438.6	439.2	439.8	440.5	439.8	440.5	440.5	441.1	440.5
22.5°	430.4	431.6	432.3	433.5	433.5	434.1	434.1	434.8	434.1	434.8
25°	422.8	424.1	424.7	425.9	426.6	426.6	427.2	427.2	427.2	427.8
27.5°	414.0	415.2	415.8	417.1	417.1	417.7	418.4	418.4	419.0	419.6
30°	405.1	405.8	407.6	408.3	408.9	408.9	409.5	410.2	410.2	410.2
32.5°	395.0	395.7	397.5	398.2	398.8	399.4	400.1	400.1	400.1	400.7
35°	383.7	385.6	386.2	388.1	388.7	389.3	389.3	390.0	389.3	390.0
37.5°	372.3	374.2	374.8	376.1	376.7	377.4	378.0	378.0	378.6	378.6
40°	359.7	361.6	362.8	364.1	364.7	365.4	365.4	366.0	367.3	366.6
42.5°	347.1	347.7	350.2	351.5	351.5	352.7	353.4	353.4	354.0	354.0
45°	333.2	335.1	336.3	337.6	338.2	338.9	339.5	340.1	340.1	340.8
47.5°	318.7	321.2	322.5	324.3	324.3	325.0	326.2	326.2	326.2	327.5
50°	303.5	305.4	307.9	308.6	309.2	309.8	310.5	311.1	311.7	311.7
52.5°	287.7	290.3	291.5	293.4	294.1	294.1	295.3	296.0	296.0	296.0
55°	271.3	273.9	275.1	276.4	277.7	278.3	278.3	279.5	280.2	279.5
57.5°	253.7	255.6	257.5	260.0	260.6	261.2	261.2	261.9	263.8	262.5
60°	235.4	237.9	239.8	242.3	242.9	242.9	243.6	244.8	245.5	246.1
62.5°	217.7	220.9	222.1	224.0	224.0	225.9	226.5	227.2	227.8	228.4
65°	198.8	201.3	203.2	205.1	206.3	206.3	208.2	209.5	209.5	208.9
67.5°	179.8	182.4	184.9	186.2	187.4	187.4	188.7	189.9	189.9	190.6
70°	160.9	162.8	165.3	167.2	168.5	168.5	169.7	171.0	171.0	170.4
72.5°	140.7	142.6	145.8	147.0	148.3	148.9	150.2	150.8	151.4	151.4
75°	121.2	123.7	125.6	127.5	128.1	129.4	130.6	131.3	131.9	132.5
77.5°	101.0	104.8	106.6	109.2	109.2	110.4	113.0	112.3	113.0	113.0
80°	82.7	85.8	87.7	90.2	90.9	91.5	92.8	94.0	94.7	94.7
82.5°	66.3	68.8	71.3	72.6	74.5	74.5	75.7	77.0	77.6	78.2
85°	51.7	54.3	56.8	59.3	59.9	60.6	62.5	63.1	63.1	63.1
87.5°	41.6	44.2	46.7	48.6	49.9	50.5	51.7	52.4	53.6	53.6
90°	36.0	39.1	41.6	43.5	44.8	45.4	46.7	48.0	48.0	48.6
92.5°	35.3	37.9	40.4	42.3	42.9	44.2	45.4	46.1	46.7	47.3
95°	34.7	37.2	39.8	41.6	42.9	43.5	44.8	46.1	46.1	46.7
97.5°	34.1	36.6	39.1	41.0	42.3	42.9	44.2	45.4	46.1	46.1
100°	33.4	36.0	38.5	40.4	41.6	42.3	43.5	44.2	44.8	45.4
102.5°	32.8	35.3	37.9	39.8	40.4	41.0	42.9	43.5	44.2	44.2
105°	31.6	34.1	36.6	38.5	39.8	40.4	41.6	42.9	42.9	43.5
107.5°	30.9	33.4	36.0	37.9	38.5	39.1	40.4	41.6	42.3	42.3
110°	29.7	32.2	34.7	36.6	37.9	38.5	39.8	40.4	41.0	41.0



TEST NUMBER: P241562

CATALOG NUMBER: FVS8M-3-LD4-35-1LO-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	29.0	31.6	33.4	35.3	36.6	37.2	38.5	39.1	39.8	39.8
115°	27.8	30.3	32.2	34.1	35.3	36.0	37.2	37.9	38.5	38.5
117.5°	26.5	29.0	31.6	32.8	34.1	34.7	36.0	36.6	37.2	37.2
120°	25.9	27.8	30.3	31.6	32.8	33.4	34.1	35.3	36.0	36.0
122.5°	24.6	27.1	29.0	30.3	30.9	31.6	32.8	33.4	34.1	34.7
125°	23.3	25.9	27.1	29.0	29.7	30.3	31.6	32.2	32.8	32.8
127.5°	22.1	24.0	25.9	27.8	28.4	29.0	30.3	30.9	30.9	31.6
130°	20.8	22.7	24.6	25.9	26.5	27.1	28.4	29.0	29.7	29.7
132.5°	19.6	21.5	23.3	24.6	25.2	25.9	26.5	27.1	27.8	27.8
135°	18.3	20.2	21.5	22.7	23.3	24.0	25.2	25.9	25.9	26.5
137.5°	17.0	18.9	20.2	21.5	22.1	22.7	23.3	24.0	24.6	24.6
140°	15.8	17.0	18.9	19.6	20.2	20.8	21.5	22.1	22.7	22.7
142.5°	14.5	15.8	17.0	18.3	18.9	18.9	19.6	20.2	20.8	20.8
145°	13.3	14.5	15.8	16.4	17.0	17.7	18.3	18.9	18.9	18.9
147.5°	11.4	12.6	13.9	15.1	15.1	15.8	16.4	17.0	17.0	17.0
150°	10.1	11.4	12.6	13.3	13.9	13.9	14.5	15.1	15.1	15.1
152.5°	8.2	9.5	10.7	11.4	12.0	12.0	12.6	13.3	13.3	13.3
155°	6.9	8.2	8.8	10.1	10.1	10.7	10.7	11.4	11.4	11.4
157.5°	5.7	6.3	7.6	8.2	8.8	8.8	8.8	9.5	9.5	9.5
160°	4.4	5.0	5.7	6.3	6.9	6.9	7.6	7.6	7.6	7.6
162.5°	3.2	3.8	4.4	4.4	5.0	5.0	5.7	5.7	5.7	5.7
165°	1.9	2.5	2.5	3.2	3.2	3.8	3.8	3.8	4.4	4.4
167.5°	1.3	1.3	1.9	1.9	1.9	1.9	2.5	2.5	2.5	2.5
170°	0.6	0.6	0.6	0.6	0.6	1.3	1.3	1.3	1.3	1.3
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)