

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: P241418

Luminaire Tested: **FVS8M-2-LD4-35-1LO-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241418
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-2-LD4-35-1LO-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (42) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

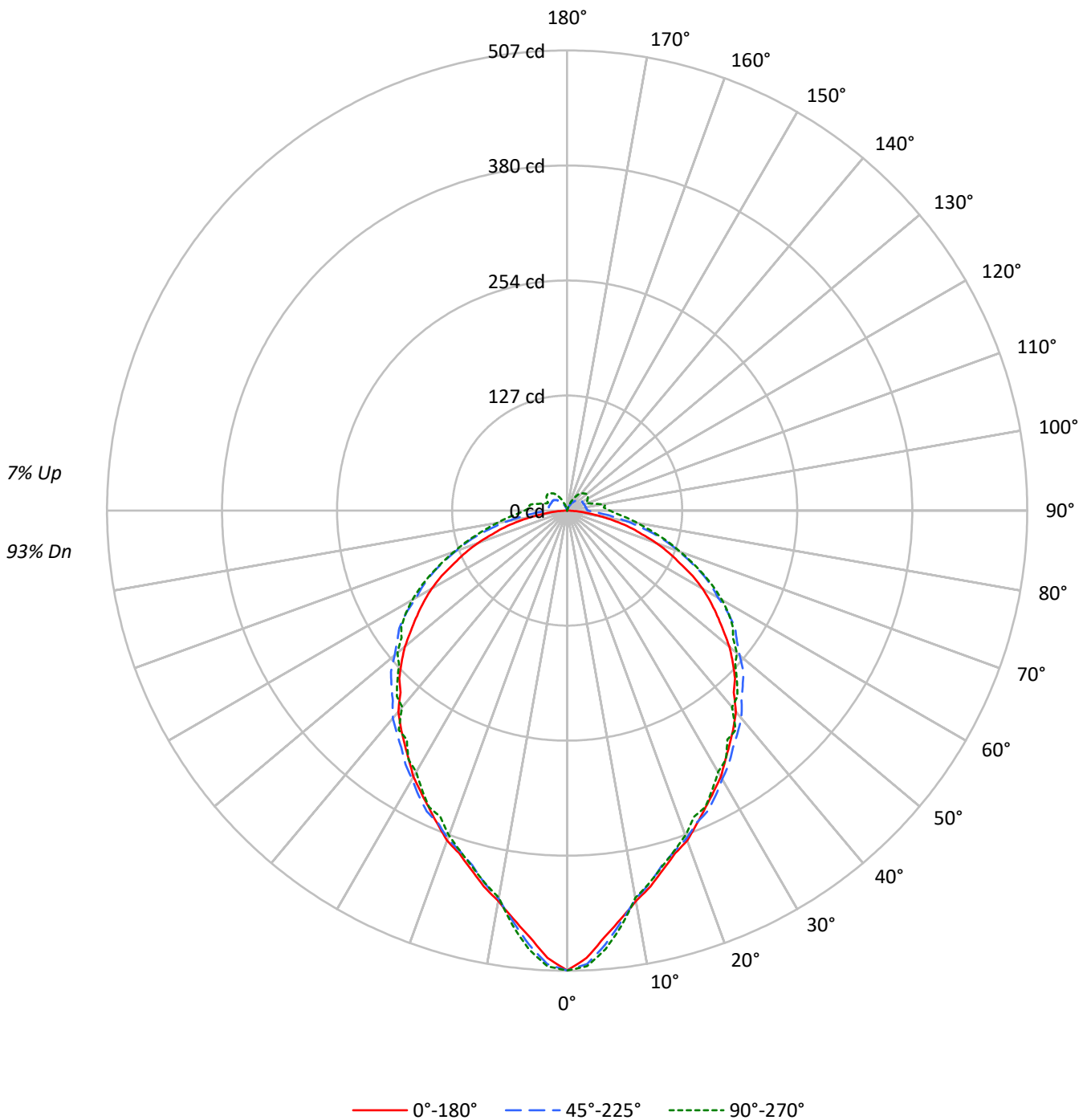
Lumens per Lamp: N/A
Luminaire Lumens: 1319.0 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.99 / 1.23
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 12.4
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	93
1	106	101	97	93	103	98	94	90	93	89	86	88	85	82	83	81	79	76
2	96	88	81	75	93	85	79	73	81	75	71	76	72	68	72	69	65	63
3	88	77	69	62	85	75	67	61	71	64	59	67	62	57	64	59	55	53
4	80	68	59	52	77	66	58	52	63	56	50	60	54	49	57	51	47	45
5	74	61	52	45	71	59	51	44	56	49	43	53	47	42	51	45	41	39
6	68	55	46	39	66	53	45	39	51	43	38	48	42	37	46	40	36	34
7	63	50	41	35	61	48	40	34	46	39	33	44	38	33	42	36	32	30
8	59	45	37	31	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	28	53	41	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4555	4555	4555
5°	4227	4253	4291
10°	3932	3820	3803
15°	3728	3557	3558
20°	3597	3410	3366
25°	3453	3296	3233
30°	3362	3154	3054
35°	3252	3039	2917
40°	3183	2970	2788
45°	3082	2861	2743
50°	2982	2762	2689
55°	2843	2708	2641
60°	2726	2517	2546
65°	2490	2385	2366
70°	2265	2158	2149
75°	1925	1903	1941
80°	1403	1531	1777
85°	722	1132	1699



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.3	3.4
10°-20°	114.8	8.7
20°-30°	167.0	12.7
30°-40°	198.4	15.0
40°-50°	207.3	15.7
50°-60°	195.1	14.8
60°-70°	155.9	11.8
70°-80°	98.5	7.5
80°-90°	42.8	3.2
90°-100°	22.8	1.7
100°-110°	19.4	1.5
110°-120°	16.3	1.2
120°-130°	14.9	1.1
130°-140°	11.4	0.9
140°-150°	7.0	0.5
150°-160°	2.7	0.2
160°-170°	0.5	0.0
170°-180°	0.0	0.0
0°-30°	326.1	24.7
0°-40°	524.5	39.8
0°-60°	926.9	70.3
0°-90°	1224.0	92.8
90°-120°	58.4	4.4
90°-150°	91.7	7.0
90°-180°	95.0	7.2
0°-180°	1319.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	507	507	507	507	507	
5°	472	475	480	485	485	44
15°	409	409	404	402	406	116
25°	361	363	366	358	360	167
35°	313	318	319	319	308	196
45°	262	268	274	265	264	201
55°	202	212	226	230	223	181
65°	137	146	164	166	165	137
75°	72	82	99	104	103	75
85°	13	24	38	51	59	16
90°	0	10	23	36	47	1
95°	0	9	22	31	40	0
105°	0	9	20	29	30	0
115°	0	8	19	25	24	0
125°	0	8	19	26	28	0
135°	0	6	16	24	26	0
145°	0	4	11	19	22	0
155°	0	1	6	10	11	0
165°	0	0	1	3	3	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°	506.7	506.7	506.7	506.7	506.7	506.7	506.7	506.7	506.7	506.7	506.7
2.5°	493.4	493.4	494.6	494.6	495.8	496.4	496.4	497.0	497.6	498.8	500.0
5°	471.7	472.3	472.9	473.5	474.1	474.7	475.9	477.8	478.4	479.0	480.2
7.5°	453.7	453.1	453.7	452.4	451.8	451.8	451.8	452.4	454.3	456.1	456.7
10°	436.8	438.0	438.0	436.8	435.6	436.8	435.6	435.6	435.0	435.0	434.4
12.5°	424.1	421.7	421.1	421.1	422.3	421.7	421.1	422.3	419.9	420.5	420.5
15°	409.1	408.5	406.7	410.9	410.9	409.1	408.5	406.1	406.7	406.7	404.3
17.5°	395.8	397.0	395.2	395.2	395.2	394.6	395.8	395.2	395.8	393.4	393.4
20°	386.8	383.2	381.4	385.6	386.2	386.2	386.8	388.0	385.6	383.2	384.4
22.5°	373.5	370.5	374.1	376.5	374.7	372.9	374.7	374.7	370.5	372.9	372.3
25°	360.9	358.5	362.7	362.7	362.7	362.7	363.3	363.3	363.9	363.9	365.7
27.5°	349.4	349.4	350.0	351.2	352.4	354.2	353.0	353.0	353.0	351.8	354.2
30°	338.6	336.8	338.6	341.0	342.2	343.4	341.6	341.0	342.8	342.2	341.6
32.5°	324.7	324.1	328.9	326.5	327.7	328.3	331.4	332.6	333.8	332.6	331.4
35°	312.7	313.3	314.5	316.3	318.7	318.1	321.1	319.3	319.9	321.1	318.7
37.5°	301.2	300.0	301.2	305.4	306.1	306.1	306.7	307.3	309.7	310.3	308.5
40°	289.2	286.2	291.0	294.0	291.6	293.4	294.6	298.2	297.6	298.2	298.8
42.5°	271.7	275.3	276.5	276.5	282.0	284.4	283.8	285.0	284.4	283.8	284.4
45°	261.5	263.3	262.7	266.3	268.1	267.5	268.1	270.5	271.7	272.9	273.5
47.5°	247.6	247.6	248.2	251.8	253.6	253.6	254.2	260.3	260.9	262.7	263.3
50°	233.2	233.2	236.2	236.2	239.8	242.8	245.2	245.8	245.2	248.2	248.2
52.5°	216.9	217.5	219.9	221.7	227.7	227.1	228.3	230.7	231.3	235.6	235.6
55°	201.8	205.4	202.4	207.8	209.1	211.5	213.9	216.9	222.3	224.7	225.9
57.5°	187.4	188.0	189.2	192.8	191.0	195.2	199.4	204.8	207.8	209.7	210.3
60°	172.3	169.9	174.1	174.7	180.7	181.3	182.5	186.2	188.6	191.6	192.2
62.5°	156.0	157.8	158.4	159.0	163.3	165.1	166.9	168.7	174.1	177.1	178.9
65°	136.8	139.8	139.8	145.8	146.4	146.4	149.4	155.4	158.4	161.5	163.9
67.5°	121.1	124.1	122.9	126.5	130.7	131.9	133.7	138.6	139.8	144.6	147.0
70°	104.8	106.6	108.4	109.6	112.7	116.3	118.1	121.1	124.7	128.3	130.7
72.5°	86.2	87.4	91.0	93.4	97.0	98.8	101.2	104.2	108.4	113.3	115.7
75°	71.7	71.1	73.5	76.5	81.3	81.9	82.5	88.6	92.2	95.8	98.8
77.5°	54.8	56.0	57.8	60.8	63.9	65.7	67.5	72.3	76.5	78.9	81.3
80°	39.2	40.4	42.2	44.6	48.2	50.0	52.4	56.6	59.6	63.3	65.7
82.5°	24.1	25.9	27.7	30.7	33.1	35.5	37.4	41.6	44.6	48.8	51.2
85°	13.3	13.3	15.7	18.7	21.1	23.5	24.7	28.3	31.3	34.9	38.0
87.5°	4.2	4.8	6.6	9.6	12.7	13.9	15.7	18.7	21.7	25.3	28.3
90°	0.0	0.6	3.0	5.4	7.8	9.6	10.8	13.9	16.9	19.9	22.9
92.5°	0.0	0.6	2.4	4.8	7.2	9.0	10.2	13.3	16.3	19.3	21.7
95°	0.0	0.6	2.4	4.8	7.2	9.0	10.2	13.3	16.3	18.7	21.7
97.5°	0.0	0.6	2.4	4.8	7.8	9.0	10.2	13.3	16.3	18.7	21.1
100°	0.0	0.6	2.4	4.8	7.2	9.0	10.2	13.3	16.3	18.7	20.5
102.5°	0.0	0.6	2.4	4.8	7.2	9.0	10.2	13.3	15.7	18.1	20.5
105°	0.0	0.6	2.4	4.8	7.2	9.0	10.2	12.7	15.7	18.1	20.5
107.5°	0.0	0.6	2.4	4.8	7.2	9.0	10.2	12.7	15.7	18.1	19.9
110°	0.0	0.6	2.4	4.8	7.2	9.0	10.2	12.7	15.7	17.5	19.9



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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	2.4	4.8	7.2	9.0	10.2	12.7	15.1	17.5	19.9
115°	0.0	0.6	2.4	4.8	7.2	8.4	10.2	12.7	15.1	17.5	19.3
117.5°	0.0	0.6	2.4	4.2	7.2	8.4	10.2	12.7	15.1	17.5	19.3
120°	0.0	0.6	1.8	4.2	7.2	8.4	9.6	12.7	15.1	17.5	19.3
122.5°	0.0	0.6	1.8	4.2	6.6	8.4	9.6	12.0	14.5	16.9	19.3
125°	0.0	0.6	1.8	4.2	6.6	7.8	9.0	12.0	14.5	16.9	19.3
127.5°	0.0	0.0	1.8	3.6	6.0	7.8	9.0	11.4	13.9	16.3	18.7
130°	0.0	0.0	1.2	3.6	6.0	7.2	8.4	10.8	13.3	15.7	18.1
132.5°	0.0	0.0	1.2	3.0	5.4	6.6	7.8	10.2	12.7	15.1	16.9
135°	0.0	0.0	1.2	3.0	4.8	6.0	7.2	9.6	11.4	13.9	16.3
137.5°	0.0	0.0	1.2	2.4	4.2	5.4	6.6	8.4	10.8	12.7	15.1
140°	0.0	0.0	0.6	2.4	3.6	4.8	6.0	7.8	9.6	12.0	13.9
142.5°	0.0	0.0	0.6	1.8	3.6	4.2	5.4	7.2	9.0	10.8	12.7
145°	0.0	0.0	0.6	1.8	3.0	3.6	4.2	6.0	7.8	9.6	11.4
147.5°	0.0	0.0	0.6	1.2	2.4	3.0	3.6	5.4	7.2	8.4	10.2
150°	0.0	0.0	0.0	1.2	1.8	2.4	3.0	4.2	6.0	7.2	8.4
152.5°	0.0	0.0	0.0	0.6	1.2	1.8	2.4	3.6	4.8	6.0	7.2
155°	0.0	0.0	0.0	0.6	1.2	1.2	1.8	3.0	3.6	4.8	6.0
157.5°	0.0	0.0	0.0	0.6	0.6	1.2	1.2	1.8	3.0	3.6	4.2
160°	0.0	0.0	0.0	0.0	0.6	0.6	1.2	1.2	1.8	2.4	3.0
162.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.2	1.8	2.4
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	1.2	1.2
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6
170°	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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°	506.7	506.7	506.7	506.7	506.7	506.7	506.7	506.7	506.7	506.7
2.5°	500.6	501.2	501.9	502.5	501.9	501.9	503.1	503.1	503.1	502.5
5°	480.8	481.4	482.6	484.4	485.0	485.0	485.6	485.6	485.6	485.0
7.5°	456.1	456.1	456.7	456.1	457.3	457.9	459.7	460.3	460.9	460.9
10°	434.4	435.0	435.0	434.4	431.4	433.2	431.4	430.8	431.4	433.2
12.5°	417.5	415.7	415.1	418.7	419.9	421.7	422.3	419.9	418.1	419.9
15°	403.0	404.9	406.1	403.0	401.8	401.2	401.8	403.6	405.5	405.5
17.5°	394.0	391.0	394.6	400.6	401.8	401.2	399.4	395.2	392.2	392.8
20°	384.4	389.2	389.2	382.0	377.7	377.1	377.1	380.2	380.2	380.8
22.5°	376.5	372.3	370.5	374.1	377.1	378.9	372.9	369.9	366.9	365.1
25°	364.5	360.9	367.5	360.9	357.9	356.1	356.1	359.7	361.5	360.3
27.5°	350.0	355.5	347.0	351.8	355.5	357.3	356.1	351.2	346.4	346.4
30°	344.0	337.4	344.6	345.8	342.2	336.2	330.8	330.8	330.8	332.6
32.5°	329.5	333.8	332.0	322.3	324.1	326.5	328.9	327.7	325.3	325.3
35°	319.3	321.7	313.3	320.5	319.3	316.9	310.9	307.3	307.3	307.9
37.5°	312.1	303.0	310.9	303.6	300.0	300.0	303.0	306.7	305.4	304.8
40°	297.0	297.6	293.4	292.8	297.0	298.8	291.6	287.4	284.4	282.6
42.5°	283.8	285.0	283.2	287.4	282.0	277.1	275.3	277.1	278.3	277.7
45°	272.9	269.9	275.3	265.7	265.1	266.9	269.3	266.9	265.1	264.5
47.5°	262.7	263.9	255.4	257.9	259.1	257.9	251.8	250.0	251.8	251.2
50°	247.6	249.4	249.4	247.0	243.4	242.2	244.6	244.6	242.8	244.0
52.5°	239.2	236.2	239.8	236.8	239.2	238.6	237.4	231.9	229.5	230.1
55°	228.3	229.5	224.7	229.5	229.5	225.9	221.7	224.1	223.5	222.9
57.5°	211.5	215.7	216.3	211.5	209.7	210.9	213.3	212.7	210.9	210.9
60°	195.2	196.4	199.4	197.0	197.6	198.2	197.0	196.4	197.6	197.0
62.5°	181.3	181.3	178.9	183.8	184.4	181.3	181.9	182.5	182.5	181.9
65°	165.7	167.5	166.3	166.3	165.7	166.9	166.9	165.7	164.5	165.1
67.5°	149.4	149.4	153.6	151.2	151.8	151.8	148.8	148.2	148.8	148.8
70°	132.5	133.1	134.3	136.2	135.6	133.7	133.1	133.1	133.1	132.5
72.5°	116.9	118.1	119.3	119.3	118.7	118.1	118.7	117.5	117.5	118.1
75°	101.2	103.6	103.6	103.6	104.2	105.4	104.2	104.2	103.0	103.0
77.5°	84.3	86.8	88.0	88.6	89.2	90.4	89.8	90.4	89.2	89.8
80°	68.7	71.1	72.9	74.7	75.3	76.5	76.5	77.7	77.7	78.3
82.5°	54.2	57.2	59.6	61.5	62.7	63.9	65.7	66.9	68.1	68.7
85°	41.6	44.0	47.0	50.0	51.2	53.0	56.0	57.2	57.8	59.0
87.5°	31.3	34.3	38.0	41.0	42.8	44.6	45.8	47.6	50.0	51.8
90°	25.9	28.9	31.9	34.9	36.1	36.8	38.6	41.0	44.6	47.0
92.5°	24.7	27.7	30.1	31.9	32.5	33.7	35.5	38.0	41.0	43.4
95°	24.1	27.1	28.9	30.7	31.3	32.5	34.3	36.1	38.6	40.4
97.5°	23.5	25.9	28.3	30.1	31.3	31.9	34.3	37.4	40.4	42.2
100°	23.5	25.3	27.7	30.1	30.7	31.9	34.9	38.0	39.8	39.8
102.5°	22.9	25.3	27.1	29.5	30.7	31.9	33.7	34.9	33.7	33.7
105°	22.3	24.7	26.5	28.3	28.9	29.5	30.1	30.1	29.5	29.5
107.5°	22.3	24.1	25.9	26.5	27.1	27.1	27.1	26.5	25.9	25.9
110°	21.7	23.5	24.7	25.3	25.3	25.3	25.3	24.7	24.1	23.5



TEST NUMBER: P241418

CATALOG NUMBER: FVS8M-2-LD4-35-1LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	21.7	22.9	24.1	24.1	24.7	24.7	24.7	24.1	23.5	22.9
115°	21.1	22.9	23.5	24.1	24.7	24.7	24.7	24.7	24.1	24.1
117.5°	21.1	22.9	24.1	24.7	25.3	25.3	25.9	25.9	25.3	25.3
120°	21.1	22.9	24.7	25.3	25.9	25.9	26.5	26.5	26.5	25.9
122.5°	21.1	22.9	24.7	25.9	26.5	26.5	27.1	27.1	27.1	27.1
125°	21.1	22.9	24.7	25.9	26.5	26.5	27.1	27.7	27.7	27.7
127.5°	20.5	22.9	24.1	25.3	25.9	26.5	27.1	27.7	27.7	27.7
130°	19.9	21.7	23.5	24.7	25.3	25.9	26.5	27.1	27.7	28.3
132.5°	19.3	21.1	22.9	24.1	24.7	25.3	26.5	27.1	27.1	27.7
135°	18.1	19.9	21.7	23.5	24.1	24.7	25.3	26.5	26.5	26.5
137.5°	16.9	18.7	20.5	22.3	22.9	23.5	24.7	25.3	25.3	25.9
140°	15.7	17.5	19.3	20.5	21.7	22.3	23.5	24.1	24.7	24.7
142.5°	14.5	16.3	18.1	19.3	19.9	21.1	21.7	22.9	23.5	23.5
145°	13.3	15.1	16.3	18.1	18.7	19.3	19.9	21.1	21.7	21.7
147.5°	11.4	13.3	14.5	15.7	16.3	16.9	18.1	18.7	19.3	19.3
150°	10.2	11.4	12.7	13.9	14.5	15.1	15.7	16.3	16.9	16.9
152.5°	8.4	9.6	10.8	11.4	12.0	12.7	13.3	13.9	13.9	14.5
155°	6.6	7.8	8.4	9.6	9.6	10.2	10.8	11.4	11.4	11.4
157.5°	5.4	6.0	7.2	7.8	7.8	8.4	8.4	9.0	9.0	9.0
160°	3.6	4.8	5.4	5.4	6.0	6.0	6.6	6.6	6.6	7.2
162.5°	2.4	3.0	3.6	4.2	4.2	4.2	4.8	4.8	4.8	4.8
165°	1.8	1.8	2.4	2.4	3.0	3.0	3.0	3.0	3.0	3.0
167.5°	0.6	1.2	1.2	1.2	1.8	1.8	1.8	1.8	1.8	1.8
170°	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
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)