

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: P241417

Luminaire Tested: **FVS8M-2-LD4-30-1LO-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241417
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-LD4-30-1LO-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (42) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

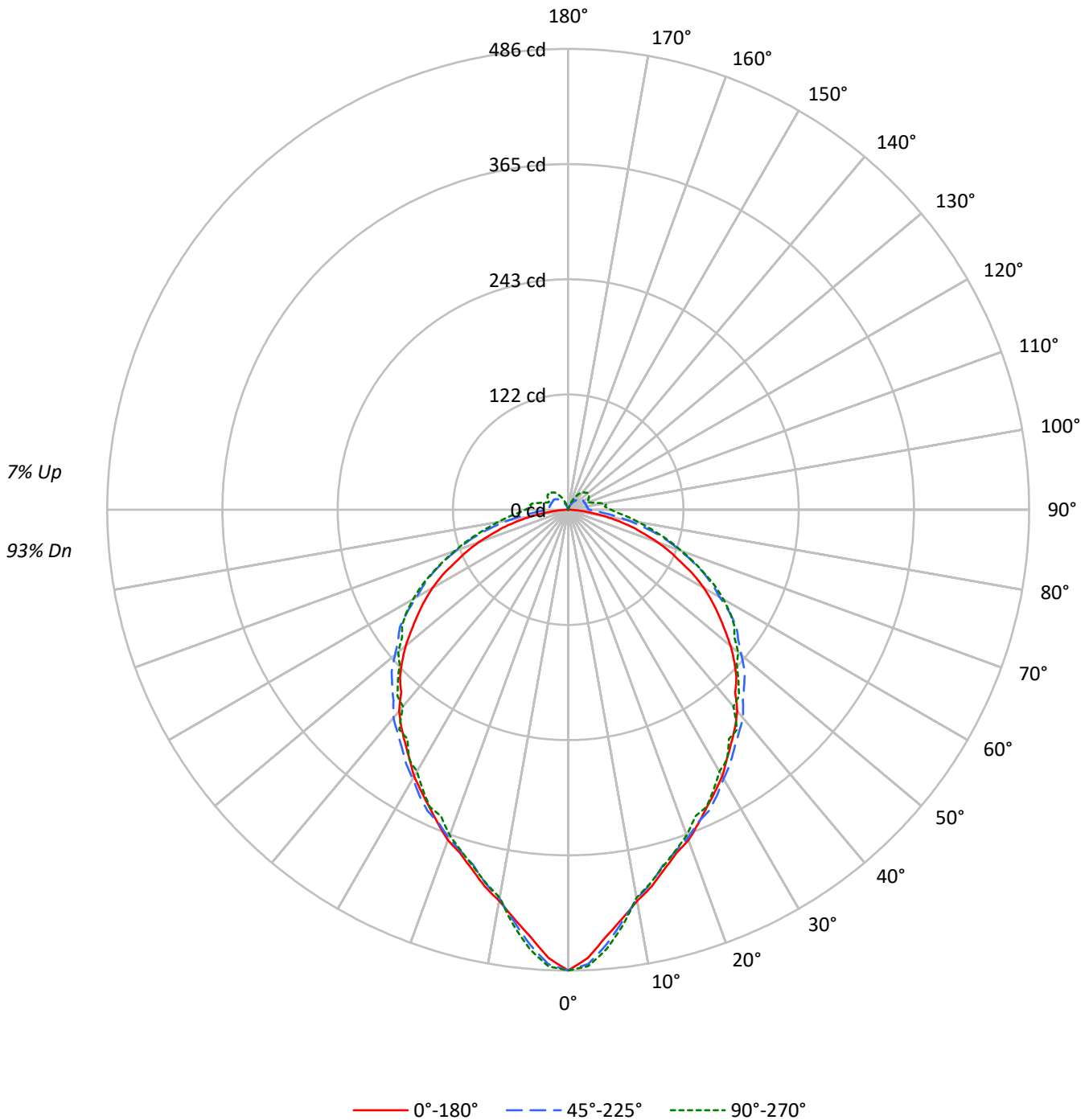
Lumens per Lamp: N/A
Luminaire Lumens: 1265.0 lumens
Efficiency: N/A
Efficacy: 102.0 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.99 / 1.23
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

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

TEST NUMBER: P241417

CATALOG NUMBER: FVS8M-2-LD4-30-1LO-PA187-UNV-EDC1

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°	4368	4368	4368
5°	4054	4078	4115
10°	3771	3663	3646
15°	3575	3411	3413
20°	3449	3270	3228
25°	3311	3161	3100
30°	3224	3024	2928
35°	3119	2915	2798
40°	3052	2848	2673
45°	2956	2744	2631
50°	2859	2650	2578
55°	2728	2597	2534
60°	2614	2413	2441
65°	2388	2287	2268
70°	2172	2071	2061
75°	1847	1826	1862
80°	1346	1468	1705
85°	690	1085	1630



TEST NUMBER: P241417

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.5	3.4
10°-20°	110.1	8.7
20°-30°	160.1	12.7
30°-40°	190.3	15.0
40°-50°	198.8	15.7
50°-60°	187.2	14.8
60°-70°	149.5	11.8
70°-80°	94.4	7.5
80°-90°	41.0	3.2
90°-100°	21.8	1.7
100°-110°	18.6	1.5
110°-120°	15.6	1.2
120°-130°	14.3	1.1
130°-140°	11.0	0.9
140°-150°	6.7	0.5
150°-160°	2.6	0.2
160°-170°	0.5	0.0
170°-180°	0.0	0.0
0°-30°	312.7	24.7
0°-40°	503.0	39.8
0°-60°	889.0	70.3
0°-90°	1173.9	92.8
90°-120°	56.0	4.4
90°-150°	87.9	7.0
90°-180°	91.0	7.2
0°-180°	1265.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	452	455	460	465	465	42
15°	392	392	388	385	389	111
25°	346	348	351	343	346	160
35°	300	305	306	306	295	188
45°	251	256	262	254	254	193
55°	194	203	217	220	214	173
65°	131	140	157	159	158	131
75°	69	79	95	100	99	72
85°	13	22	36	49	57	15
90°	0	9	22	35	45	1
95°	0	9	21	30	39	0
105°	0	9	20	28	28	0
115°	0	8	18	24	23	0
125°	0	8	18	25	27	0
135°	0	6	16	23	25	0
145°	0	4	11	18	21	0
155°	0	1	6	9	11	0
165°	0	0	1	3	3	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241417

CATALOG NUMBER: FVS8M-2-LD4-30-1LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	485.9	485.9	485.9	485.9	485.9	485.9	485.9	485.9	485.9	485.9	485.9
2.5°	473.2	473.2	474.4	474.4	475.5	476.1	476.1	476.7	477.3	478.4	479.6
5°	452.4	453.0	453.6	454.1	454.7	455.3	456.5	458.2	458.8	459.3	460.5
7.5°	435.1	434.5	435.1	433.9	433.3	433.3	433.3	433.9	435.7	437.4	438.0
10°	418.9	420.1	420.1	418.9	417.7	418.9	417.7	417.7	417.2	417.2	416.6
12.5°	406.8	404.5	403.9	403.9	405.0	404.5	403.9	405.0	402.7	403.3	403.3
15°	392.3	391.7	390.0	394.1	394.1	392.3	391.7	389.4	390.0	390.0	387.7
17.5°	379.6	380.8	379.0	379.0	379.0	378.5	379.6	379.0	379.6	377.3	377.3
20°	370.9	367.5	365.7	369.8	370.4	370.4	370.9	372.1	369.8	367.5	368.6
22.5°	358.2	355.3	358.8	361.1	359.4	357.7	359.4	359.4	355.3	357.7	357.1
25°	346.1	343.8	347.8	347.8	347.8	347.8	348.4	348.4	349.0	349.0	350.7
27.5°	335.1	335.1	335.7	336.9	338.0	339.7	338.6	338.6	338.6	337.4	339.7
30°	324.7	323.0	324.7	327.0	328.2	329.3	327.6	327.0	328.8	328.2	327.6
32.5°	311.4	310.9	315.5	313.2	314.3	314.9	317.8	318.9	320.1	318.9	317.8
35°	299.9	300.5	301.6	303.3	305.7	305.1	308.0	306.2	306.8	308.0	305.7
37.5°	288.9	287.7	288.9	292.9	293.5	293.5	294.1	294.7	297.0	297.6	295.8
40°	277.3	274.5	279.1	282.0	279.7	281.4	282.5	286.0	285.4	286.0	286.6
42.5°	260.6	264.1	265.2	265.2	270.4	272.7	272.1	273.3	272.7	272.1	272.7
45°	250.8	252.5	251.9	255.4	257.1	256.5	257.1	259.4	260.6	261.7	262.3
47.5°	237.5	237.5	238.1	241.5	243.3	243.3	243.8	249.6	250.2	251.9	252.5
50°	223.6	223.6	226.5	226.5	230.0	232.9	235.2	235.7	235.2	238.1	238.1
52.5°	208.0	208.6	210.9	212.6	218.4	217.8	219.0	221.3	221.9	225.9	225.9
55°	193.6	197.0	194.1	199.3	200.5	202.8	205.1	208.0	213.2	215.5	216.7
57.5°	179.7	180.3	181.4	184.9	183.2	187.2	191.3	196.5	199.3	201.1	201.7
60°	165.2	162.9	167.0	167.6	173.3	173.9	175.1	178.5	180.9	183.7	184.3
62.5°	149.6	151.4	152.0	152.5	156.6	158.3	160.0	161.8	167.0	169.9	171.6
65°	131.2	134.0	134.0	139.8	140.4	140.4	143.3	149.1	152.0	154.8	157.2
67.5°	116.1	119.0	117.9	121.3	125.4	126.5	128.3	132.9	134.0	138.7	141.0
70°	100.5	102.3	104.0	105.2	108.0	111.5	113.2	116.1	119.6	123.1	125.4
72.5°	82.6	83.8	87.2	89.6	93.0	94.8	97.1	100.0	104.0	108.6	110.9
75°	68.8	68.2	70.5	73.4	78.0	78.6	79.2	84.9	88.4	91.9	94.8
77.5°	52.6	53.7	55.5	58.4	61.2	63.0	64.7	69.3	73.4	75.7	78.0
80°	37.6	38.7	40.4	42.8	46.2	48.0	50.3	54.3	57.2	60.7	63.0
82.5°	23.1	24.8	26.6	29.5	31.8	34.1	35.8	39.9	42.8	46.8	49.1
85°	12.7	12.7	15.0	17.9	20.2	22.5	23.7	27.2	30.0	33.5	36.4
87.5°	4.0	4.6	6.4	9.2	12.1	13.3	15.0	17.9	20.8	24.3	27.2
90°	0.0	0.6	2.9	5.2	7.5	9.2	10.4	13.3	16.2	19.1	22.0
92.5°	0.0	0.6	2.3	4.6	6.9	8.7	9.8	12.7	15.6	18.5	20.8
95°	0.0	0.6	2.3	4.6	6.9	8.7	9.8	12.7	15.6	17.9	20.8
97.5°	0.0	0.6	2.3	4.6	7.5	8.7	9.8	12.7	15.6	17.9	20.2
100°	0.0	0.6	2.3	4.6	6.9	8.7	9.8	12.7	15.6	17.9	19.6
102.5°	0.0	0.6	2.3	4.6	6.9	8.7	9.8	12.7	15.0	17.3	19.6
105°	0.0	0.6	2.3	4.6	6.9	8.7	9.8	12.1	15.0	17.3	19.6
107.5°	0.0	0.6	2.3	4.6	6.9	8.7	9.8	12.1	15.0	17.3	19.1
110°	0.0	0.6	2.3	4.6	6.9	8.7	9.8	12.1	15.0	16.8	19.1



TEST NUMBER: P241417

CATALOG NUMBER: FVS8M-2-LD4-30-1LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.6	2.3	4.6	6.9	8.7	9.8	12.1	14.4	16.8	19.1
115°	0.0	0.6	2.3	4.6	6.9	8.1	9.8	12.1	14.4	16.8	18.5
117.5°	0.0	0.6	2.3	4.0	6.9	8.1	9.8	12.1	14.4	16.8	18.5
120°	0.0	0.6	1.7	4.0	6.9	8.1	9.2	12.1	14.4	16.8	18.5
122.5°	0.0	0.6	1.7	4.0	6.4	8.1	9.2	11.6	13.9	16.2	18.5
125°	0.0	0.6	1.7	4.0	6.4	7.5	8.7	11.6	13.9	16.2	18.5
127.5°	0.0	0.0	1.7	3.5	5.8	7.5	8.7	11.0	13.3	15.6	17.9
130°	0.0	0.0	1.2	3.5	5.8	6.9	8.1	10.4	12.7	15.0	17.3
132.5°	0.0	0.0	1.2	2.9	5.2	6.4	7.5	9.8	12.1	14.4	16.2
135°	0.0	0.0	1.2	2.9	4.6	5.8	6.9	9.2	11.0	13.3	15.6
137.5°	0.0	0.0	1.2	2.3	4.0	5.2	6.4	8.1	10.4	12.1	14.4
140°	0.0	0.0	0.6	2.3	3.5	4.6	5.8	7.5	9.2	11.6	13.3
142.5°	0.0	0.0	0.6	1.7	3.5	4.0	5.2	6.9	8.7	10.4	12.1
145°	0.0	0.0	0.6	1.7	2.9	3.5	4.0	5.8	7.5	9.2	11.0
147.5°	0.0	0.0	0.6	1.2	2.3	2.9	3.5	5.2	6.9	8.1	9.8
150°	0.0	0.0	0.0	1.2	1.7	2.3	2.9	4.0	5.8	6.9	8.1
152.5°	0.0	0.0	0.0	0.6	1.2	1.7	2.3	3.5	4.6	5.8	6.9
155°	0.0	0.0	0.0	0.6	1.2	1.2	1.7	2.9	3.5	4.6	5.8
157.5°	0.0	0.0	0.0	0.6	0.6	1.2	1.2	1.7	2.9	3.5	4.0
160°	0.0	0.0	0.0	0.0	0.6	0.6	1.2	1.2	1.7	2.3	2.9
162.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.2	1.7	2.3
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



TEST NUMBER: P241417

CATALOG NUMBER: FVS8M-2-LD4-30-1LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	485.9	485.9	485.9	485.9	485.9	485.9	485.9	485.9	485.9	485.9
2.5°	480.1	480.7	481.3	481.9	481.3	481.3	482.5	482.5	482.5	481.9
5°	461.1	461.7	462.8	464.5	465.1	465.1	465.7	465.7	465.7	465.1
7.5°	437.4	437.4	438.0	437.4	438.5	439.1	440.9	441.4	442.0	442.0
10°	416.6	417.2	417.2	416.6	413.7	415.4	413.7	413.1	413.7	415.4
12.5°	400.4	398.7	398.1	401.6	402.7	404.5	405.0	402.7	401.0	402.7
15°	386.5	388.3	389.4	386.5	385.4	384.8	385.4	387.1	388.9	388.9
17.5°	377.9	375.0	378.5	384.2	385.4	384.8	383.1	379.0	376.1	376.7
20°	368.6	373.3	373.3	366.3	362.3	361.7	361.7	364.6	364.6	365.2
22.5°	361.1	357.1	355.3	358.8	361.7	363.4	357.7	354.8	351.9	350.1
25°	349.6	346.1	352.5	346.1	343.2	341.5	341.5	344.9	346.7	345.5
27.5°	335.7	340.9	332.8	337.4	340.9	342.6	341.5	336.9	332.2	332.2
30°	329.9	323.6	330.5	331.7	328.2	322.4	317.2	317.2	317.2	318.9
32.5°	316.1	320.1	318.4	309.1	310.9	313.2	315.5	314.3	312.0	312.0
35°	306.2	308.5	300.5	307.4	306.2	303.9	298.1	294.7	294.7	295.3
37.5°	299.3	290.6	298.1	291.2	287.7	287.7	290.6	294.1	292.9	292.4
40°	284.9	285.4	281.4	280.8	284.9	286.6	279.7	275.6	272.7	271.0
42.5°	272.1	273.3	271.6	275.6	270.4	265.8	264.1	265.8	266.9	266.4
45°	261.7	258.9	264.1	254.8	254.2	256.0	258.3	256.0	254.2	253.7
47.5°	251.9	253.1	245.0	247.3	248.5	247.3	241.5	239.8	241.5	240.9
50°	237.5	239.2	239.2	236.9	233.4	232.3	234.6	234.6	232.9	234.0
52.5°	229.4	226.5	230.0	227.1	229.4	228.8	227.7	222.5	220.1	220.7
55°	219.0	220.1	215.5	220.1	220.1	216.7	212.6	214.9	214.4	213.8
57.5°	202.8	206.9	207.4	202.8	201.1	202.2	204.5	204.0	202.2	202.2
60°	187.2	188.4	191.3	188.9	189.5	190.1	188.9	188.4	189.5	188.9
62.5°	173.9	173.9	171.6	176.2	176.8	173.9	174.5	175.1	175.1	174.5
65°	158.9	160.6	159.5	159.5	158.9	160.0	160.0	158.9	157.7	158.3
67.5°	143.3	143.3	147.3	145.0	145.6	145.6	142.7	142.1	142.7	142.7
70°	127.1	127.7	128.8	130.6	130.0	128.3	127.7	127.7	127.7	127.1
72.5°	112.1	113.2	114.4	114.4	113.8	113.2	113.8	112.7	112.7	113.2
75°	97.1	99.4	99.4	99.4	100.0	101.1	100.0	100.0	98.8	98.8
77.5°	80.9	83.2	84.4	84.9	85.5	86.7	86.1	86.7	85.5	86.1
80°	65.9	68.2	69.9	71.6	72.2	73.4	73.4	74.5	74.5	75.1
82.5°	52.0	54.9	57.2	58.9	60.1	61.2	63.0	64.1	65.3	65.9
85°	39.9	42.2	45.1	48.0	49.1	50.8	53.7	54.9	55.5	56.6
87.5°	30.0	32.9	36.4	39.3	41.0	42.8	43.9	45.6	48.0	49.7
90°	24.8	27.7	30.6	33.5	34.7	35.2	37.0	39.3	42.8	45.1
92.5°	23.7	26.6	28.9	30.6	31.2	32.4	34.1	36.4	39.3	41.6
95°	23.1	26.0	27.7	29.5	30.0	31.2	32.9	34.7	37.0	38.7
97.5°	22.5	24.8	27.2	28.9	30.0	30.6	32.9	35.8	38.7	40.4
100°	22.5	24.3	26.6	28.9	29.5	30.6	33.5	36.4	38.1	38.1
102.5°	22.0	24.3	26.0	28.3	29.5	30.6	32.4	33.5	32.4	32.4
105°	21.4	23.7	25.4	27.2	27.7	28.3	28.9	28.9	28.3	28.3
107.5°	21.4	23.1	24.8	25.4	26.0	26.0	26.0	25.4	24.8	24.8
110°	20.8	22.5	23.7	24.3	24.3	24.3	24.3	23.7	23.1	22.5



TEST NUMBER: P241417

CATALOG NUMBER: FVS8M-2-LD4-30-1LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	20.8	22.0	23.1	23.1	23.7	23.7	23.7	23.1	22.5	22.0
115°	20.2	22.0	22.5	23.1	23.7	23.7	23.7	23.7	23.1	23.1
117.5°	20.2	22.0	23.1	23.7	24.3	24.3	24.8	24.8	24.3	24.3
120°	20.2	22.0	23.7	24.3	24.8	24.8	25.4	25.4	25.4	24.8
122.5°	20.2	22.0	23.7	24.8	25.4	25.4	26.0	26.0	26.0	26.0
125°	20.2	22.0	23.7	24.8	25.4	25.4	26.0	26.6	26.6	26.6
127.5°	19.6	22.0	23.1	24.3	24.8	25.4	26.0	26.6	26.6	26.6
130°	19.1	20.8	22.5	23.7	24.3	24.8	25.4	26.0	26.6	27.2
132.5°	18.5	20.2	22.0	23.1	23.7	24.3	25.4	26.0	26.0	26.6
135°	17.3	19.1	20.8	22.5	23.1	23.7	24.3	25.4	25.4	25.4
137.5°	16.2	17.9	19.6	21.4	22.0	22.5	23.7	24.3	24.3	24.8
140°	15.0	16.8	18.5	19.6	20.8	21.4	22.5	23.1	23.7	23.7
142.5°	13.9	15.6	17.3	18.5	19.1	20.2	20.8	22.0	22.5	22.5
145°	12.7	14.4	15.6	17.3	17.9	18.5	19.1	20.2	20.8	20.8
147.5°	11.0	12.7	13.9	15.0	15.6	16.2	17.3	17.9	18.5	18.5
150°	9.8	11.0	12.1	13.3	13.9	14.4	15.0	15.6	16.2	16.2
152.5°	8.1	9.2	10.4	11.0	11.6	12.1	12.7	13.3	13.3	13.9
155°	6.4	7.5	8.1	9.2	9.2	9.8	10.4	11.0	11.0	11.0
157.5°	5.2	5.8	6.9	7.5	7.5	8.1	8.1	8.7	8.7	8.7
160°	3.5	4.6	5.2	5.2	5.8	5.8	6.4	6.4	6.4	6.9
162.5°	2.3	2.9	3.5	4.0	4.0	4.0	4.6	4.6	4.6	4.6
165°	1.7	1.7	2.3	2.3	2.9	2.9	2.9	2.9	2.9	2.9
167.5°	0.6	1.2	1.2	1.2	1.7	1.7	1.7	1.7	1.7	1.7
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)