

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: P241425

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241425
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-LD4-30-1HI-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

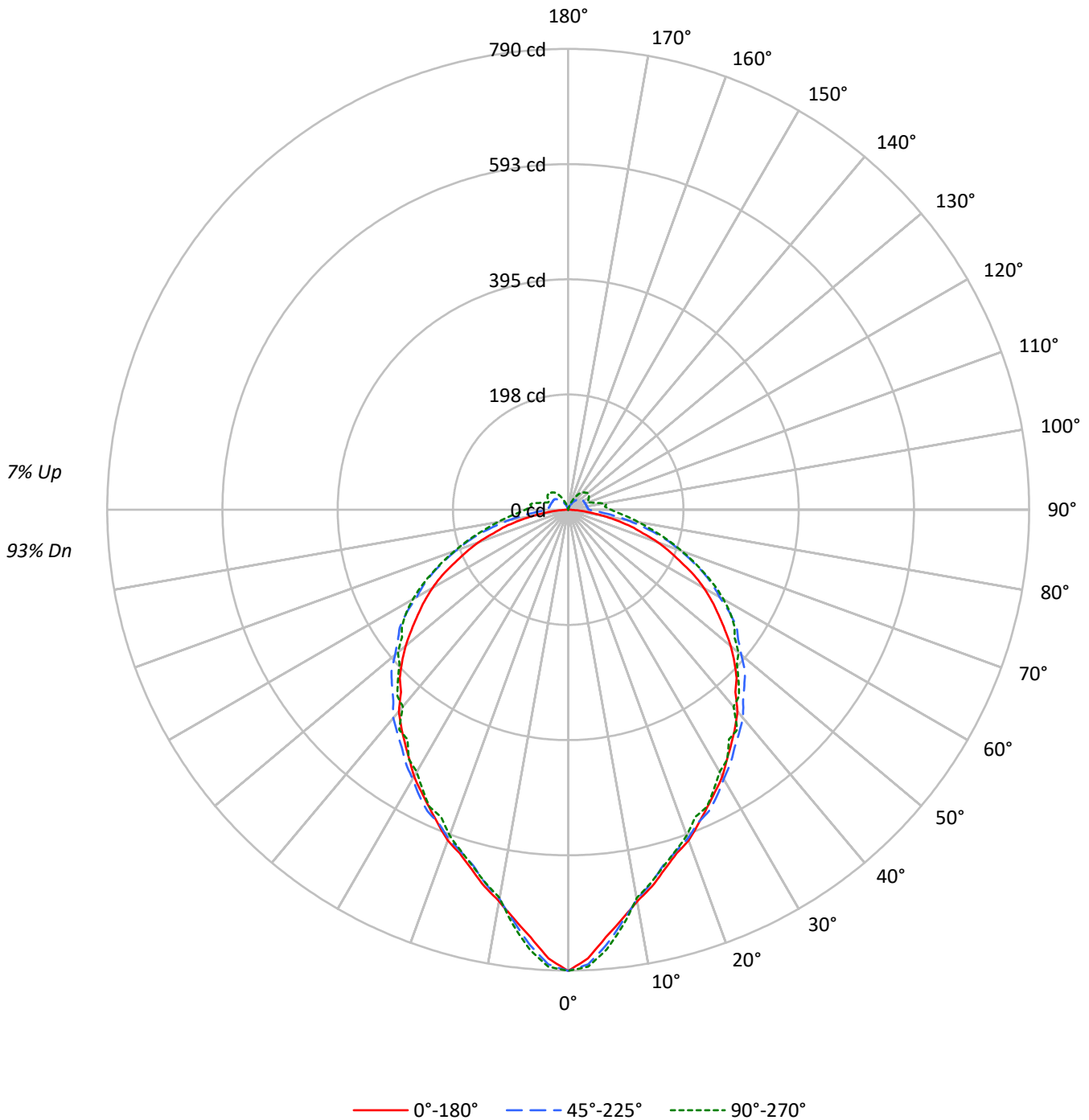
Lumens per Lamp: N/A
Luminaire Lumens: 2058.0 lumens
Efficiency: N/A
Efficacy: 92.3 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.99 / 1.23
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 22.3
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°	7106	7106	7106
5°	6596	6635	6696
10°	6135	5959	5933
15°	5817	5549	5551
20°	5612	5320	5251
25°	5387	5143	5044
30°	5245	4921	4765
35°	5074	4742	4551
40°	4967	4633	4349
45°	4808	4464	4280
50°	4651	4310	4195
55°	4437	4225	4121
60°	4253	3927	3973
65°	3884	3721	3691
70°	3536	3369	3354
75°	3004	2970	3029
80°	2187	2389	2774
85°	1124	1764	2653



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.1	3.4
10°-20°	179.2	8.7
20°-30°	260.5	12.7
30°-40°	309.5	15.0
40°-50°	323.4	15.7
50°-60°	304.5	14.8
60°-70°	243.2	11.8
70°-80°	153.6	7.5
80°-90°	66.7	3.2
90°-100°	35.5	1.7
100°-110°	30.3	1.5
110°-120°	25.4	1.2
120°-130°	23.2	1.1
130°-140°	17.8	0.9
140°-150°	10.9	0.5
150°-160°	4.3	0.2
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	508.8	24.7
0°-40°	818.3	39.8
0°-60°	1446.2	70.3
0°-90°	1909.8	92.8
90°-120°	91.1	4.4
90°-150°	143.1	7.0
90°-180°	148.0	7.2
0°-180°	2058.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	790	790	790	790	790	
5°	736	741	749	757	757	69
15°	638	638	631	627	633	180
25°	563	566	571	558	562	260
35°	488	496	497	498	480	306
45°	408	417	427	414	413	314
55°	315	330	352	358	348	282
65°	213	228	256	258	258	213
75°	112	128	154	163	161	117
85°	21	37	59	80	92	25
90°	0	15	36	56	73	1
95°	0	14	34	49	63	0
105°	0	14	32	45	46	0
115°	0	13	30	38	38	0
125°	0	12	30	41	43	0
135°	0	9	25	38	41	0
145°	0	6	18	29	34	0
155°	0	2	9	15	18	0
165°	0	0	2	5	5	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°	790.5	790.5	790.5	790.5	790.5	790.5	790.5	790.5	790.5	790.5	790.5
2.5°	769.9	769.9	771.7	771.7	773.6	774.6	774.6	775.5	776.4	778.3	780.2
5°	736.0	737.0	737.9	738.8	739.8	740.7	742.6	745.4	746.4	747.3	749.2
7.5°	707.8	706.9	707.8	705.9	705.0	705.0	705.0	705.9	708.8	711.6	712.5
10°	681.5	683.4	683.4	681.5	679.6	681.5	679.6	679.6	678.7	678.7	677.7
12.5°	661.8	658.0	657.1	657.1	658.9	658.0	657.1	658.9	655.2	656.1	656.1
15°	638.3	637.3	634.5	641.1	641.1	638.3	637.3	633.6	634.5	634.5	630.7
17.5°	617.6	619.5	616.6	616.6	616.6	615.7	617.6	616.6	617.6	613.8	613.8
20°	603.5	597.8	595.0	601.6	602.5	602.5	603.5	605.4	601.6	597.8	599.7
22.5°	582.8	578.1	583.7	587.5	584.7	581.9	584.7	584.7	578.1	581.9	580.9
25°	563.1	559.3	565.9	565.9	565.9	565.9	566.8	566.8	567.8	567.8	570.6
27.5°	545.2	545.2	546.1	548.0	549.9	552.7	550.8	550.8	550.8	549.0	552.7
30°	528.3	525.5	528.3	532.0	533.9	535.8	533.0	532.0	534.9	533.9	533.0
32.5°	506.7	505.7	513.2	509.5	511.4	512.3	517.0	518.9	520.8	518.9	517.0
35°	487.9	488.8	490.7	493.5	497.3	496.3	501.0	498.2	499.1	501.0	497.3
37.5°	470.0	468.1	470.0	476.6	477.5	477.5	478.5	479.4	483.2	484.1	481.3
40°	451.2	446.5	454.0	458.7	455.0	457.8	459.7	465.3	464.4	465.3	466.2
42.5°	423.9	429.6	431.5	431.5	439.9	443.7	442.7	444.6	443.7	442.7	443.7
45°	408.0	410.8	409.8	415.5	418.3	417.4	418.3	422.1	423.9	425.8	426.8
47.5°	386.3	386.3	387.3	392.9	395.7	395.7	396.7	406.1	407.0	409.8	410.8
50°	363.8	363.8	368.5	368.5	374.1	378.8	382.6	383.5	382.6	387.3	387.3
52.5°	338.4	339.3	343.1	345.9	355.3	354.4	356.3	360.0	361.0	367.5	367.5
55°	314.9	320.5	315.8	324.3	326.2	329.9	333.7	338.4	346.9	350.6	352.5
57.5°	292.3	293.3	295.2	300.8	298.0	304.6	311.1	319.6	324.3	327.1	328.1
60°	268.8	265.1	271.7	272.6	282.0	282.9	284.8	290.5	294.2	298.9	299.9
62.5°	243.5	246.3	247.2	248.2	254.7	257.6	260.4	263.2	271.7	276.4	279.2
65°	213.4	218.1	218.1	227.5	228.4	228.4	233.1	242.5	247.2	251.9	255.7
67.5°	188.9	193.6	191.8	197.4	204.0	205.9	208.7	216.2	218.1	225.6	229.4
70°	163.6	166.4	169.2	171.1	175.8	181.4	184.2	188.9	194.6	200.2	204.0
72.5°	134.4	136.3	141.9	145.7	151.3	154.2	157.9	162.6	169.2	176.7	180.5
75°	111.9	110.9	114.7	119.4	126.9	127.8	128.8	138.2	143.8	149.5	154.2
77.5°	85.5	87.4	90.2	94.9	99.6	102.5	105.3	112.8	119.4	123.1	126.9
80°	61.1	63.0	65.8	69.6	75.2	78.0	81.8	88.4	93.1	98.7	102.5
82.5°	37.6	40.4	43.2	47.9	51.7	55.5	58.3	64.9	69.6	76.1	79.9
85°	20.7	20.7	24.4	29.1	32.9	36.7	38.5	44.2	48.9	54.5	59.2
87.5°	6.6	7.5	10.3	15.0	19.7	21.6	24.4	29.1	33.8	39.5	44.2
90°	0.0	0.9	4.7	8.5	12.2	15.0	16.9	21.6	26.3	31.0	35.7
92.5°	0.0	0.9	3.8	7.5	11.3	14.1	16.0	20.7	25.4	30.1	33.8
95°	0.0	0.9	3.8	7.5	11.3	14.1	16.0	20.7	25.4	29.1	33.8
97.5°	0.0	0.9	3.8	7.5	12.2	14.1	16.0	20.7	25.4	29.1	32.9
100°	0.0	0.9	3.8	7.5	11.3	14.1	16.0	20.7	25.4	29.1	32.0
102.5°	0.0	0.9	3.8	7.5	11.3	14.1	16.0	20.7	24.4	28.2	32.0
105°	0.0	0.9	3.8	7.5	11.3	14.1	16.0	19.7	24.4	28.2	32.0
107.5°	0.0	0.9	3.8	7.5	11.3	14.1	16.0	19.7	24.4	28.2	31.0
110°	0.0	0.9	3.8	7.5	11.3	14.1	16.0	19.7	24.4	27.3	31.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.9	3.8	7.5	11.3	14.1	16.0	19.7	23.5	27.3	31.0
115°	0.0	0.9	3.8	7.5	11.3	13.2	16.0	19.7	23.5	27.3	30.1
117.5°	0.0	0.9	3.8	6.6	11.3	13.2	16.0	19.7	23.5	27.3	30.1
120°	0.0	0.9	2.8	6.6	11.3	13.2	15.0	19.7	23.5	27.3	30.1
122.5°	0.0	0.9	2.8	6.6	10.3	13.2	15.0	18.8	22.6	26.3	30.1
125°	0.0	0.9	2.8	6.6	10.3	12.2	14.1	18.8	22.6	26.3	30.1
127.5°	0.0	0.0	2.8	5.6	9.4	12.2	14.1	17.9	21.6	25.4	29.1
130°	0.0	0.0	1.9	5.6	9.4	11.3	13.2	16.9	20.7	24.4	28.2
132.5°	0.0	0.0	1.9	4.7	8.5	10.3	12.2	16.0	19.7	23.5	26.3
135°	0.0	0.0	1.9	4.7	7.5	9.4	11.3	15.0	17.9	21.6	25.4
137.5°	0.0	0.0	1.9	3.8	6.6	8.5	10.3	13.2	16.9	19.7	23.5
140°	0.0	0.0	0.9	3.8	5.6	7.5	9.4	12.2	15.0	18.8	21.6
142.5°	0.0	0.0	0.9	2.8	5.6	6.6	8.5	11.3	14.1	16.9	19.7
145°	0.0	0.0	0.9	2.8	4.7	5.6	6.6	9.4	12.2	15.0	17.9
147.5°	0.0	0.0	0.9	1.9	3.8	4.7	5.6	8.5	11.3	13.2	16.0
150°	0.0	0.0	0.0	1.9	2.8	3.8	4.7	6.6	9.4	11.3	13.2
152.5°	0.0	0.0	0.0	0.9	1.9	2.8	3.8	5.6	7.5	9.4	11.3
155°	0.0	0.0	0.0	0.9	1.9	1.9	2.8	4.7	5.6	7.5	9.4
157.5°	0.0	0.0	0.0	0.9	0.9	1.9	1.9	2.8	4.7	5.6	6.6
160°	0.0	0.0	0.0	0.0	0.9	0.9	1.9	1.9	2.8	3.8	4.7
162.5°	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	1.9	2.8	3.8
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	1.9	1.9
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9
170°	0.9	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°	790.5	790.5	790.5	790.5	790.5	790.5	790.5	790.5	790.5	790.5
2.5°	781.1	782.1	783.0	784.0	783.0	783.0	784.9	784.9	784.9	784.0
5°	750.1	751.1	752.9	755.8	756.7	756.7	757.6	757.6	757.6	756.7
7.5°	711.6	711.6	712.5	711.6	713.5	714.4	717.2	718.2	719.1	719.1
10°	677.7	678.7	678.7	677.7	673.0	675.9	673.0	672.1	673.0	675.9
12.5°	651.4	648.6	647.7	653.3	655.2	658.0	658.9	655.2	652.4	655.2
15°	628.9	631.7	633.6	628.9	627.0	626.0	627.0	629.8	632.6	632.6
17.5°	614.8	610.1	615.7	625.1	627.0	626.0	623.2	616.6	611.9	612.9
20°	599.7	607.2	607.2	596.0	589.4	588.4	588.4	593.1	593.1	594.1
22.5°	587.5	580.9	578.1	583.7	588.4	591.3	581.9	577.2	572.5	569.6
25°	568.7	563.1	573.4	563.1	558.4	555.5	555.5	561.2	564.0	562.1
27.5°	546.1	554.6	541.4	549.0	554.6	557.4	555.5	548.0	540.5	540.5
30°	536.7	526.4	537.7	539.6	533.9	524.5	516.1	516.1	516.1	518.9
32.5°	514.2	520.8	517.9	502.9	505.7	509.5	513.2	511.4	507.6	507.6
35°	498.2	502.0	488.8	500.1	498.2	494.4	485.0	479.4	479.4	480.3
37.5°	486.9	472.8	485.0	473.8	468.1	468.1	472.8	478.5	476.6	475.6
40°	463.4	464.4	457.8	456.8	463.4	466.2	455.0	448.4	443.7	440.9
42.5°	442.7	444.6	441.8	448.4	439.9	432.4	429.6	432.4	434.3	433.3
45°	425.8	421.1	429.6	414.5	413.6	416.4	420.2	416.4	413.6	412.7
47.5°	409.8	411.7	398.6	402.3	404.2	402.3	392.9	390.1	392.9	392.0
50°	386.3	389.2	389.2	385.4	379.8	377.9	381.6	381.6	378.8	380.7
52.5°	373.2	368.5	374.1	369.4	373.2	372.2	370.4	361.9	358.1	359.1
55°	356.3	358.1	350.6	358.1	358.1	352.5	345.9	349.7	348.7	347.8
57.5°	329.9	336.5	337.5	329.9	327.1	329.0	332.8	331.8	329.0	329.0
60°	304.6	306.4	311.1	307.4	308.3	309.3	307.4	306.4	308.3	307.4
62.5°	282.9	282.9	279.2	286.7	287.6	282.9	283.9	284.8	284.8	283.9
65°	258.5	261.3	259.4	259.4	258.5	260.4	260.4	258.5	256.6	257.6
67.5°	233.1	233.1	239.7	235.9	236.9	236.9	232.2	231.2	232.2	232.2
70°	206.8	207.7	209.6	212.4	211.5	208.7	207.7	207.7	207.7	206.8
72.5°	182.4	184.2	186.1	186.1	185.2	184.2	185.2	183.3	183.3	184.2
75°	157.9	161.7	161.7	161.7	162.6	164.5	162.6	162.6	160.7	160.7
77.5°	131.6	135.4	137.2	138.2	139.1	141.0	140.1	141.0	139.1	140.1
80°	107.2	110.9	113.7	116.6	117.5	119.4	119.4	121.3	121.3	122.2
82.5°	84.6	89.3	93.1	95.9	97.8	99.6	102.5	104.3	106.2	107.2
85°	64.9	68.6	73.3	78.0	79.9	82.7	87.4	89.3	90.2	92.1
87.5°	48.9	53.6	59.2	63.9	66.7	69.6	71.4	74.3	78.0	80.8
90°	40.4	45.1	49.8	54.5	56.4	57.3	60.2	63.9	69.6	73.3
92.5°	38.5	43.2	47.0	49.8	50.8	52.6	55.5	59.2	63.9	67.7
95°	37.6	42.3	45.1	47.9	48.9	50.8	53.6	56.4	60.2	63.0
97.5°	36.7	40.4	44.2	47.0	48.9	49.8	53.6	58.3	63.0	65.8
100°	36.7	39.5	43.2	47.0	47.9	49.8	54.5	59.2	62.0	62.0
102.5°	35.7	39.5	42.3	46.1	47.9	49.8	52.6	54.5	52.6	52.6
105°	34.8	38.5	41.4	44.2	45.1	46.1	47.0	47.0	46.1	46.1
107.5°	34.8	37.6	40.4	41.4	42.3	42.3	42.3	41.4	40.4	40.4
110°	33.8	36.7	38.5	39.5	39.5	39.5	39.5	38.5	37.6	36.7



TEST NUMBER: P241425

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	33.8	35.7	37.6	37.6	38.5	38.5	38.5	37.6	36.7	35.7
115°	32.9	35.7	36.7	37.6	38.5	38.5	38.5	38.5	37.6	37.6
117.5°	32.9	35.7	37.6	38.5	39.5	39.5	40.4	40.4	39.5	39.5
120°	32.9	35.7	38.5	39.5	40.4	40.4	41.4	41.4	41.4	40.4
122.5°	32.9	35.7	38.5	40.4	41.4	41.4	42.3	42.3	42.3	42.3
125°	32.9	35.7	38.5	40.4	41.4	41.4	42.3	43.2	43.2	43.2
127.5°	32.0	35.7	37.6	39.5	40.4	41.4	42.3	43.2	43.2	43.2
130°	31.0	33.8	36.7	38.5	39.5	40.4	41.4	42.3	43.2	44.2
132.5°	30.1	32.9	35.7	37.6	38.5	39.5	41.4	42.3	42.3	43.2
135°	28.2	31.0	33.8	36.7	37.6	38.5	39.5	41.4	41.4	41.4
137.5°	26.3	29.1	32.0	34.8	35.7	36.7	38.5	39.5	39.5	40.4
140°	24.4	27.3	30.1	32.0	33.8	34.8	36.7	37.6	38.5	38.5
142.5°	22.6	25.4	28.2	30.1	31.0	32.9	33.8	35.7	36.7	36.7
145°	20.7	23.5	25.4	28.2	29.1	30.1	31.0	32.9	33.8	33.8
147.5°	17.9	20.7	22.6	24.4	25.4	26.3	28.2	29.1	30.1	30.1
150°	16.0	17.9	19.7	21.6	22.6	23.5	24.4	25.4	26.3	26.3
152.5°	13.2	15.0	16.9	17.9	18.8	19.7	20.7	21.6	21.6	22.6
155°	10.3	12.2	13.2	15.0	15.0	16.0	16.9	17.9	17.9	17.9
157.5°	8.5	9.4	11.3	12.2	12.2	13.2	13.2	14.1	14.1	14.1
160°	5.6	7.5	8.5	8.5	9.4	9.4	10.3	10.3	10.3	11.3
162.5°	3.8	4.7	5.6	6.6	6.6	6.6	7.5	7.5	7.5	7.5
165°	2.8	2.8	3.8	3.8	4.7	4.7	4.7	4.7	4.7	4.7
167.5°	0.9	1.9	1.9	1.9	2.8	2.8	2.8	2.8	2.8	2.8
170°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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)