

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: P241545

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

Issue Date: 3/3/2020



**Test Information**

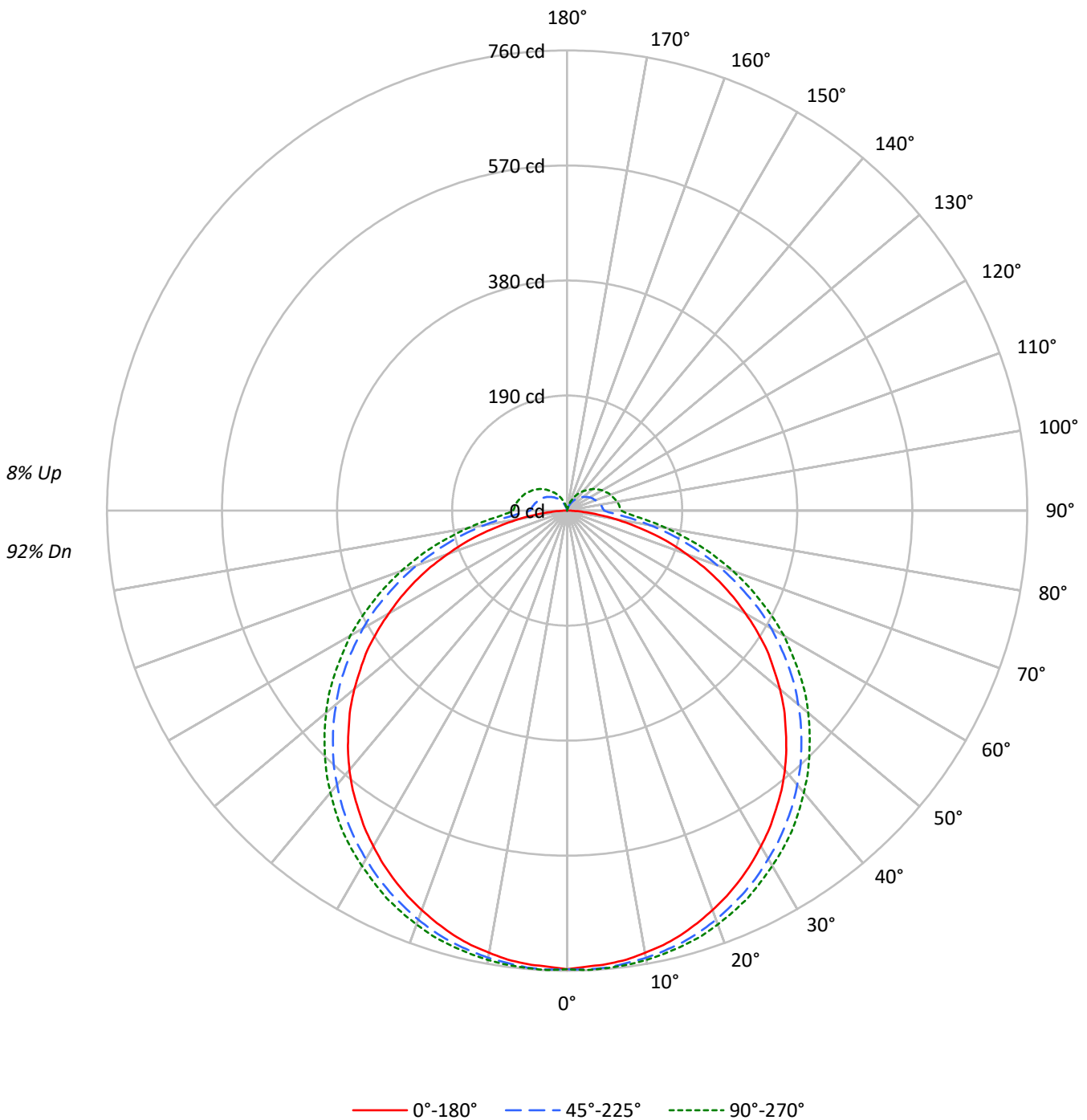
Test Method: LM-79-08  
Report Number: P241545  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-9)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS8M-2-LD4-30-2HI-O-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
2FT LENGTH, 2-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: 2643.0 lumens  
Efficiency: N/A  
Efficacy: 59.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.33 / 1.43  
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')  
CIE Type: Direct  
  
Input Watts (W): 44.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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: P241545  
CATALOG NUMBER: FVS8M-2-LD4-30-2HI-O-UNV-EDC1

### Luminous Intensity Polar Plot





TEST NUMBER: P241545

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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	106	106	106	100	100	100	94	94	94	92
1	106	101	96	92	102	98	93	89	92	88	85	86	84	81	81	79	77	74
2	96	87	80	74	92	84	78	72	79	74	69	75	70	66	71	67	64	61
3	87	76	67	61	84	74	66	60	70	63	57	66	60	55	62	57	53	51
4	79	67	58	51	76	65	57	50	61	54	49	58	52	47	55	50	46	43
5	73	60	50	44	70	58	49	43	55	47	42	52	46	41	49	44	39	37
6	67	54	44	38	65	52	44	37	49	42	36	47	40	35	45	39	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	37	31	27	25
9	54	40	32	26	52	39	31	26	38	31	26	36	30	25	34	29	24	22
10	50	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°	6810	6810	6810
5°	6739	6710	6711
10°	6676	6596	6617
15°	6613	6492	6524
20°	6529	6379	6431
25°	6447	6261	6334
30°	6355	6135	6223
35°	6257	6014	6128
40°	6157	5876	5999
45°	6015	5723	5869
50°	5865	5544	5728
55°	5681	5340	5547
60°	5384	5095	5345
65°	5047	4760	5051
70°	4530	4361	4726
75°	3837	3873	4305
80°	2892	3242	3777
85°	1483	2605	3303



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.9	2.7
10°-20°	207.8	7.9
20°-30°	319.2	12.1
30°-40°	392.7	14.9
40°-50°	419.3	15.9
50°-60°	394.2	14.9
60°-70°	318.8	12.1
70°-80°	205.6	7.8
80°-90°	92.8	3.5
90°-100°	56.5	2.1
100°-110°	50.2	1.9
110°-120°	41.5	1.6
120°-130°	31.7	1.2
130°-140°	21.5	0.8
140°-150°	12.4	0.5
150°-160°	5.4	0.2
160°-170°	1.2	0.0
170°-180°	0.0	0.0
0°-30°	599.0	22.7
0°-40°	991.8	37.5
0°-60°	1805.2	68.3
0°-90°	2422.4	91.7
90°-120°	148.3	5.6
90°-150°	213.9	8.1
90°-180°	221.0	8.4
0°-180°	2643.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	758	758	758	758	758	
5°	752	753	758	758	758	71
15°	726	729	738	743	744	205
25°	674	682	695	702	706	311
35°	602	614	631	642	647	377
45°	510	525	547	561	566	394
55°	403	421	446	462	468	359
65°	277	300	327	348	352	274
75°	143	170	201	221	228	152
85°	27	56	87	107	115	34
90°	0	29	61	82	89	1
95°	0	26	58	79	86	0
105°	0	24	53	73	80	0
115°	0	20	47	65	71	0
125°	0	16	40	56	61	0
135°	0	12	31	44	49	0
145°	0	8	22	32	36	0
155°	1	3	12	20	22	0
165°	1	1	4	8	8	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241545

CATALOG NUMBER: FVS8M-2-LD4-30-2HI-O-UNV-EDC1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6
2.5°	753.8	753.8	753.8	753.8	754.8	754.8	755.7	756.7	756.7	757.6	758.5
5°	752.0	751.0	752.0	752.0	752.9	752.9	753.8	754.8	755.7	756.7	757.6
7.5°	748.2	747.3	748.2	749.1	749.1	750.1	750.1	751.0	752.0	752.9	753.8
10°	741.6	741.6	742.6	743.5	744.4	744.4	745.4	746.3	747.3	749.1	750.1
12.5°	735.0	734.1	735.0	736.0	736.9	737.9	737.9	739.7	741.6	742.6	744.4
15°	725.6	725.6	726.6	727.5	728.5	729.4	730.3	733.2	734.1	736.0	737.9
17.5°	714.4	715.3	715.3	717.2	719.1	720.0	720.9	722.8	725.6	726.6	729.4
20°	702.1	703.1	703.1	705.0	706.8	708.7	709.7	712.5	715.3	717.2	719.1
22.5°	689.0	689.0	689.9	692.7	694.6	695.6	697.4	700.3	702.1	705.0	706.8
25°	673.9	673.9	675.8	677.7	680.5	681.5	683.3	686.2	689.0	691.8	694.6
27.5°	658.0	658.0	659.8	662.7	665.5	666.4	668.3	672.1	674.9	677.7	680.5
30°	640.1	641.0	642.9	645.7	648.6	650.4	652.3	655.1	658.0	661.7	664.5
32.5°	622.2	622.2	624.1	626.9	630.7	632.6	635.4	638.2	642.0	645.7	648.6
35°	601.6	602.5	604.4	609.1	611.0	613.8	615.7	619.4	624.1	626.9	630.7
37.5°	581.8	582.8	583.7	587.5	591.2	594.0	595.9	599.7	603.4	607.2	611.9
40°	559.3	559.3	562.1	566.8	569.6	572.4	574.3	579.0	582.8	587.5	591.2
42.5°	535.8	535.8	539.5	542.4	547.1	549.9	551.8	556.5	561.2	565.9	570.6
45°	510.4	512.3	515.1	518.9	524.5	525.4	528.3	533.0	538.6	543.3	547.1
47.5°	486.0	486.9	489.7	494.4	499.1	502.9	504.8	508.5	514.2	519.8	523.6
50°	458.7	460.6	463.4	468.1	472.8	476.6	479.4	484.1	489.7	494.4	498.2
52.5°	430.5	432.4	436.1	441.8	447.4	449.3	452.1	457.8	464.3	468.1	473.7
55°	403.2	404.2	407.9	412.6	419.2	421.1	423.9	429.6	435.2	440.8	445.5
57.5°	372.2	373.2	377.9	383.5	388.2	392.0	394.8	401.4	407.0	412.6	417.3
60°	340.3	343.1	347.8	354.4	359.1	362.8	365.6	371.3	376.9	382.6	389.1
62.5°	309.2	311.1	316.8	321.5	328.0	330.9	334.6	341.2	346.8	352.5	360.0
65°	277.3	279.2	282.9	289.5	297.0	299.8	303.6	309.2	315.8	322.4	327.1
67.5°	244.4	247.2	251.9	256.6	263.2	266.9	269.8	278.2	283.9	290.4	296.1
70°	209.6	212.4	218.1	224.6	231.2	235.9	238.7	245.3	252.8	258.5	264.1
72.5°	178.6	178.6	184.2	191.8	199.3	203.0	206.8	214.3	219.9	224.6	232.2
75°	142.9	145.7	152.3	158.9	167.3	170.1	173.9	180.5	188.9	194.6	201.1
77.5°	110.0	115.6	119.4	126.0	134.4	138.2	141.9	148.5	157.0	163.6	169.2
80°	80.8	83.7	88.4	94.9	104.3	106.2	110.9	118.4	125.0	131.6	139.1
82.5°	51.7	54.5	60.2	66.7	75.2	79.0	82.7	90.2	96.8	104.3	110.9
85°	27.3	30.1	35.7	43.2	51.7	55.5	59.2	65.8	73.3	80.8	87.4
87.5°	10.3	13.2	18.8	26.3	33.8	37.6	41.4	48.9	56.4	63.0	69.6
90°	0.0	3.8	10.3	16.9	25.4	29.1	32.9	40.4	47.9	54.5	61.1
92.5°	0.0	2.8	8.5	15.0	23.5	27.3	31.0	38.5	46.1	52.6	59.2
95°	0.0	2.8	7.5	15.0	22.6	26.3	30.1	37.6	45.1	51.7	58.3
97.5°	0.0	2.8	7.5	14.1	21.6	25.4	29.1	36.7	44.2	50.8	57.3
100°	0.0	1.9	7.5	14.1	20.7	24.4	28.2	35.7	43.2	49.8	55.5
102.5°	0.0	1.9	6.6	13.2	20.7	24.4	27.3	34.8	41.4	47.9	54.5
105°	0.0	1.9	6.6	13.2	19.7	23.5	27.3	33.8	40.4	47.0	52.6
107.5°	0.0	1.9	6.6	12.2	18.8	22.6	26.3	32.9	39.5	46.1	51.7
110°	0.0	1.9	5.6	11.3	17.9	21.6	25.4	32.0	38.5	44.2	49.8



TEST NUMBER: P241545

CATALOG NUMBER: FVS8M-2-LD4-30-2HI-O-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.9	5.6	11.3	17.9	20.7	24.4	31.0	36.7	43.2	47.9
115°	0.0	0.9	4.7	10.3	16.9	19.7	22.6	29.1	35.7	41.4	47.0
117.5°	0.0	0.9	4.7	10.3	16.0	18.8	21.6	28.2	33.8	39.5	45.1
120°	0.0	0.9	4.7	9.4	15.0	17.9	20.7	27.3	32.9	37.6	43.2
122.5°	0.0	0.9	3.8	8.5	14.1	16.9	19.7	25.4	31.0	36.7	41.4
125°	0.0	0.9	3.8	8.5	13.2	16.0	18.8	24.4	29.1	34.8	39.5
127.5°	0.0	0.9	3.8	7.5	12.2	15.0	17.9	22.6	28.2	32.9	36.7
130°	0.0	0.9	2.8	6.6	11.3	14.1	16.0	21.6	26.3	31.0	34.8
132.5°	0.0	0.9	2.8	6.6	10.3	13.2	15.0	19.7	24.4	29.1	32.9
135°	0.0	0.9	1.9	5.6	9.4	12.2	14.1	18.8	22.6	27.3	31.0
137.5°	0.0	0.0	1.9	4.7	8.5	10.3	13.2	16.9	20.7	25.4	28.2
140°	0.0	0.0	1.9	4.7	7.5	9.4	11.3	15.0	18.8	22.6	26.3
142.5°	0.0	0.0	0.9	3.8	6.6	8.5	10.3	14.1	17.9	20.7	24.4
145°	0.0	0.0	0.9	2.8	5.6	7.5	9.4	12.2	16.0	18.8	21.6
147.5°	0.0	0.0	0.9	2.8	4.7	6.6	7.5	11.3	14.1	16.9	19.7
150°	0.0	0.0	0.9	1.9	3.8	4.7	6.6	9.4	12.2	15.0	16.9
152.5°	0.9	0.0	0.9	0.9	2.8	3.8	4.7	7.5	10.3	12.2	15.0
155°	0.9	0.0	0.9	0.9	1.9	2.8	3.8	5.6	7.5	10.3	12.2
157.5°	0.9	0.9	0.0	0.9	1.9	1.9	2.8	4.7	6.6	7.5	9.4
160°	0.9	0.9	0.9	0.9	0.9	1.9	1.9	2.8	4.7	5.6	7.5
162.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.9	2.8	3.8	5.6
165°	0.9	0.9	0.9	0.0	0.9	0.9	0.9	0.9	1.9	2.8	3.8
167.5°	0.9	0.9	0.9	0.9	0.0	0.9	0.9	0.9	0.9	1.9	1.9
170°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	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	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: P241545

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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6
2.5°	758.5	758.5	758.5	759.5	759.5	759.5	759.5	758.5	758.5	759.5
5°	757.6	757.6	758.5	758.5	758.5	758.5	758.5	758.5	758.5	758.5
7.5°	754.8	755.7	755.7	756.7	756.7	756.7	756.7	756.7	756.7	756.7
10°	751.0	752.0	752.9	752.9	752.9	753.8	753.8	753.8	753.8	753.8
12.5°	745.4	747.3	748.2	748.2	749.1	748.2	749.1	749.1	749.1	749.1
15°	738.8	740.7	741.6	741.6	742.6	742.6	742.6	743.5	743.5	743.5
17.5°	730.3	732.2	733.2	734.1	735.0	735.0	736.0	736.0	736.0	736.9
20°	720.9	722.8	723.8	725.6	725.6	725.6	726.6	726.6	727.5	727.5
22.5°	709.7	711.5	713.4	715.3	715.3	715.3	716.2	717.2	717.2	717.2
25°	697.4	698.4	700.3	702.1	702.1	703.1	705.0	705.0	705.0	705.9
27.5°	683.3	685.2	688.0	688.0	689.9	689.9	690.9	691.8	691.8	691.8
30°	668.3	670.2	673.0	673.9	675.8	675.8	676.8	677.7	677.7	677.7
32.5°	651.4	654.2	656.1	658.9	658.9	659.8	661.7	661.7	662.7	662.7
35°	634.5	637.3	639.2	641.0	642.0	642.9	643.9	644.8	645.7	646.7
37.5°	613.8	617.5	620.4	623.2	624.1	624.1	626.0	626.9	627.9	627.9
40°	594.0	597.8	599.7	602.5	604.4	604.4	606.3	607.2	608.1	608.1
42.5°	573.4	577.1	580.9	582.8	583.7	583.7	585.6	587.5	587.5	588.4
45°	550.8	555.5	559.3	561.2	561.2	562.1	564.0	565.9	565.9	565.9
47.5°	528.3	531.1	533.9	537.7	538.6	540.5	541.4	541.4	542.4	543.3
50°	503.8	506.6	510.4	513.2	515.1	516.0	517.9	517.9	519.8	519.8
52.5°	476.6	481.3	485.0	487.8	488.8	490.7	491.6	493.5	494.4	495.4
55°	450.2	454.0	457.8	460.6	462.5	463.4	466.2	467.2	468.1	468.1
57.5°	422.0	426.7	430.5	433.3	434.3	436.1	438.0	439.9	440.8	439.9
60°	393.8	398.5	401.4	404.2	407.0	407.9	408.9	411.7	412.6	413.6
62.5°	363.8	367.5	371.3	375.0	376.0	378.8	380.7	381.6	381.6	383.5
65°	332.7	337.4	342.1	345.0	347.8	348.7	350.6	351.5	353.4	352.5
67.5°	301.7	306.4	311.1	313.9	315.8	317.7	319.6	321.5	322.4	322.4
70°	269.8	275.4	278.2	282.9	284.8	285.7	287.6	289.5	289.5	291.4
72.5°	237.8	242.5	247.2	251.9	251.9	255.7	256.6	259.4	258.5	259.4
75°	206.8	210.5	215.2	218.1	220.9	221.8	225.6	226.5	226.5	228.4
77.5°	173.9	180.5	183.3	188.0	191.8	190.8	193.6	195.5	197.4	195.5
80°	142.9	149.5	154.2	157.0	158.9	160.7	163.6	163.6	166.4	166.4
82.5°	116.6	122.2	126.0	129.7	131.6	133.5	135.4	137.2	138.2	139.1
85°	93.1	96.8	101.5	106.2	107.2	109.0	111.9	112.8	114.7	114.7
87.5°	75.2	79.9	84.6	88.4	91.2	92.1	94.9	95.9	96.8	97.8
90°	66.7	71.4	76.1	80.8	81.8	83.7	86.5	87.4	89.3	89.3
92.5°	64.9	69.6	74.3	78.0	79.9	81.8	83.7	85.5	86.5	87.4
95°	63.9	68.6	73.3	77.1	79.0	80.8	82.7	84.6	85.5	86.5
97.5°	63.0	67.7	72.4	76.1	78.0	79.9	81.8	83.7	84.6	85.5
100°	61.1	66.7	70.5	75.2	76.1	78.0	80.8	82.7	83.7	83.7
102.5°	60.2	64.9	69.6	73.3	75.2	76.1	79.0	80.8	81.8	81.8
105°	58.3	63.0	67.7	71.4	73.3	75.2	77.1	79.0	79.9	79.9
107.5°	57.3	62.0	65.8	69.6	71.4	73.3	75.2	77.1	78.0	78.0
110°	55.5	60.2	63.9	67.7	69.6	70.5	73.3	75.2	76.1	76.1





TEST NUMBER: P241545

CATALOG NUMBER: FVS8M-2-LD4-30-2HI-O-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	53.6	58.3	62.0	65.8	67.7	68.6	71.4	72.4	73.3	74.3
115°	51.7	56.4	60.2	63.9	64.9	66.7	68.6	70.5	71.4	71.4
117.5°	49.8	53.6	58.3	61.1	63.0	63.9	65.8	67.7	68.6	68.6
120°	47.9	51.7	55.5	59.2	60.2	62.0	63.9	64.9	65.8	66.7
122.5°	46.1	49.8	53.6	56.4	58.3	59.2	61.1	63.0	63.9	63.9
125°	43.2	47.0	50.8	53.6	55.5	56.4	58.3	60.2	60.2	61.1
127.5°	41.4	45.1	48.9	51.7	52.6	53.6	55.5	57.3	58.3	58.3
130°	39.5	42.3	46.1	48.9	49.8	50.8	52.6	53.6	54.5	55.5
132.5°	36.7	40.4	43.2	46.1	47.0	47.9	49.8	50.8	51.7	51.7
135°	34.8	37.6	40.4	43.2	44.2	45.1	47.0	47.9	48.9	48.9
137.5°	32.0	34.8	37.6	40.4	41.4	42.3	43.2	45.1	45.1	45.1
140°	29.1	32.0	34.8	36.7	38.5	38.5	40.4	41.4	42.3	42.3
142.5°	27.3	29.1	32.0	33.8	34.8	35.7	36.7	38.5	38.5	38.5
145°	24.4	27.3	29.1	31.0	32.0	32.9	33.8	34.8	35.7	35.7
147.5°	21.6	24.4	26.3	28.2	29.1	29.1	31.0	31.0	32.0	32.0
150°	19.7	21.6	23.5	25.4	25.4	26.3	27.3	28.2	28.2	28.2
152.5°	16.9	18.8	20.7	21.6	22.6	22.6	24.4	24.4	25.4	25.4
155°	14.1	16.0	17.9	18.8	19.7	19.7	20.7	20.7	21.6	21.6
157.5°	11.3	13.2	15.0	16.0	16.0	16.9	16.9	17.9	17.9	17.9
160°	8.5	10.3	11.3	12.2	13.2	13.2	14.1	14.1	15.0	15.0
162.5°	6.6	7.5	8.5	9.4	10.3	10.3	11.3	11.3	11.3	11.3
165°	4.7	4.7	5.6	6.6	7.5	7.5	7.5	7.5	8.5	8.5
167.5°	2.8	2.8	3.8	3.8	4.7	4.7	4.7	4.7	4.7	4.7
170°	0.9	0.9	1.9	1.9	1.9	1.9	2.8	2.8	2.8	2.8
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)