

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: P241563

Luminaire Tested: **FVS8M-3-LD4-40-1LO-O-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241563  
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-LD4-40-1LO-O-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
3FT LENGTH, 1-MODULE LED WITH OPAL LENS  
Light Source: (84) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

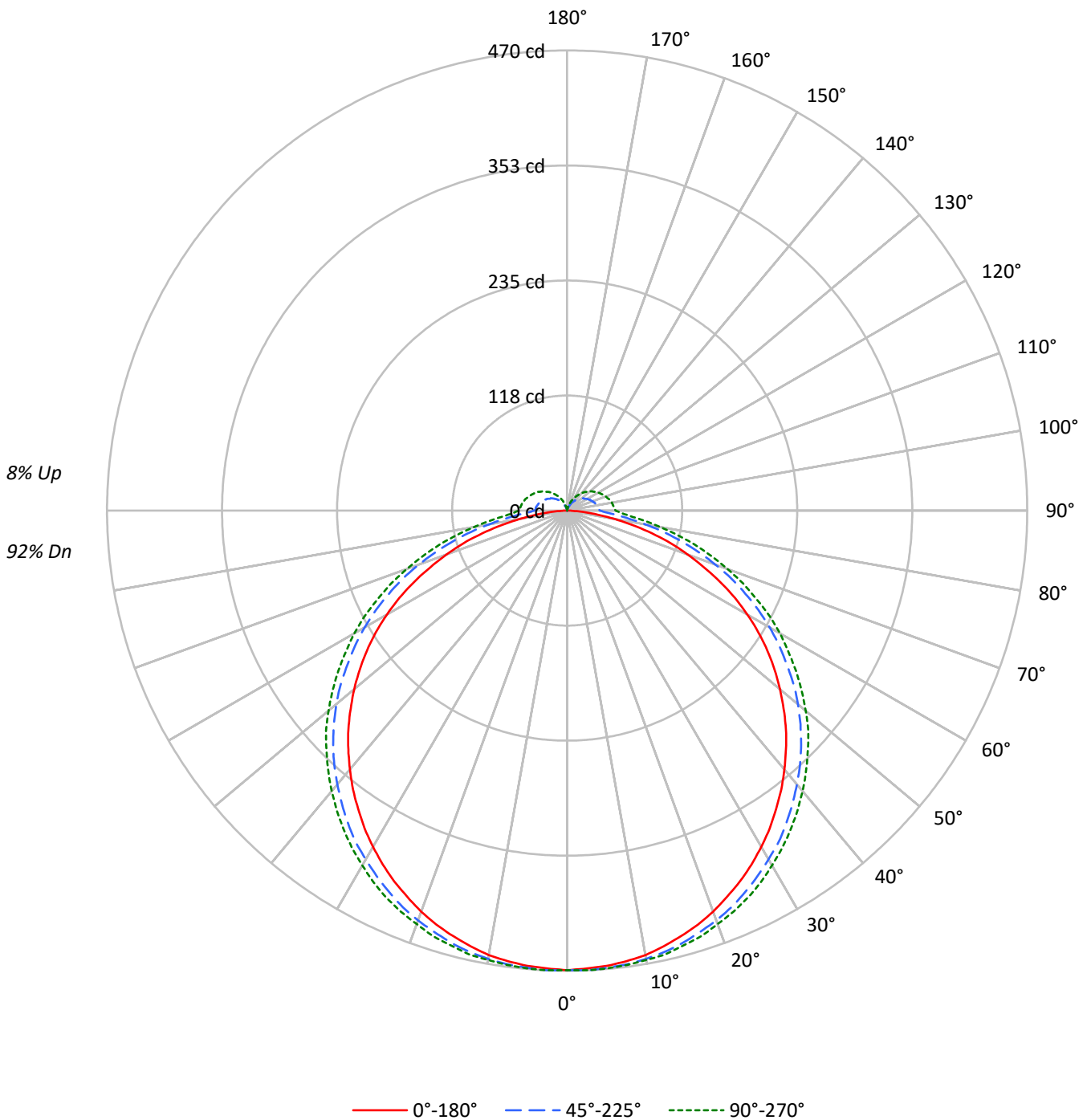
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1608.0 lumens  
Efficiency: N/A  
Efficacy: 75.8 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 (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

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CATALOG NUMBER: FVS8M-3-LD4-40-1LO-O-UNV-EDC1

### Luminous Intensity Polar Plot





TEST NUMBER: P241563

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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°	2741	2741	2741
5°	2724	2701	2698
10°	2709	2665	2658
15°	2684	2626	2621
20°	2659	2584	2581
25°	2630	2539	2544
30°	2598	2492	2496
35°	2561	2446	2449
40°	2522	2390	2397
45°	2484	2334	2342
50°	2431	2267	2277
55°	2370	2177	2196
60°	2280	2083	2108
65°	2148	1955	1984
70°	1957	1787	1831
75°	1696	1570	1655
80°	1275	1292	1424
85°	681	1026	1205



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.6	2.8
10°-20°	128.8	8.0
20°-30°	197.6	12.3
30°-40°	242.7	15.1
40°-50°	258.7	16.1
50°-60°	242.5	15.1
60°-70°	195.0	12.1
70°-80°	123.8	7.7
80°-90°	53.3	3.3
90°-100°	31.2	1.9
100°-110°	27.7	1.7
110°-120°	22.9	1.4
120°-130°	17.3	1.1
130°-140°	11.7	0.7
140°-150°	6.7	0.4
150°-160°	2.9	0.2
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	371.0	23.1
0°-40°	613.7	38.2
0°-60°	1114.8	69.3
0°-90°	1486.9	92.5
90°-120°	81.8	5.1
90°-150°	117.6	7.3
90°-180°	121.0	7.5
0°-180°	1608.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	469	469	469	469	469	
5°	467	467	469	469	469	44
15°	450	452	457	459	460	127
25°	418	422	430	435	436	193
35°	372	380	390	397	398	233
45°	316	326	338	345	348	244
55°	250	261	274	283	285	223
65°	172	185	201	210	213	170
75°	90	104	120	131	135	95
85°	16	32	50	61	64	20
90°	1	16	34	46	50	1
95°	0	15	32	44	48	0
105°	0	13	30	41	44	0
115°	0	11	26	36	39	0
125°	0	8	21	30	34	0
135°	0	6	17	24	27	0
145°	1	4	12	17	19	0
155°	1	1	6	10	12	0
165°	1	1	2	3	4	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241563

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	469.4	469.4	469.4	469.4	469.4	469.4	469.4	469.4	469.4	469.4	469.4
2.5°	468.1	468.1	467.4	468.1	468.1	468.7	468.7	469.4	470.0	470.6	470.0
5°	466.8	466.1	466.1	466.8	466.8	466.8	467.4	468.1	468.7	468.7	468.7
7.5°	464.2	463.6	463.6	464.2	464.2	464.9	464.9	466.1	466.8	466.8	467.4
10°	461.0	460.3	460.3	460.3	461.0	461.6	461.6	462.9	464.2	464.9	464.9
12.5°	455.8	455.8	455.2	456.5	456.5	457.1	458.4	459.7	460.3	461.0	461.6
15°	450.0	450.0	450.0	450.7	451.3	452.0	453.3	454.6	455.8	456.5	457.1
17.5°	443.6	443.6	443.6	444.3	445.5	446.2	447.5	448.8	450.0	450.7	451.3
20°	435.9	435.2	435.9	437.2	438.5	439.1	439.7	442.3	443.6	444.9	445.5
22.5°	426.9	426.9	427.5	428.8	430.7	431.4	432.0	434.0	435.9	437.2	438.5
25°	417.9	417.9	418.5	419.8	421.7	422.4	423.6	426.2	427.5	428.8	430.1
27.5°	407.6	407.6	408.2	410.1	412.7	413.3	414.0	416.6	418.5	419.8	421.1
30°	396.6	396.6	397.9	399.8	401.8	403.0	404.3	406.9	408.8	410.1	411.4
32.5°	385.0	385.0	386.3	388.2	390.8	392.1	393.4	396.0	397.9	399.8	401.8
35°	372.1	372.8	374.7	376.0	378.6	380.5	381.8	384.4	386.3	388.2	390.2
37.5°	359.3	359.3	360.6	363.1	366.3	367.0	369.6	372.1	374.1	376.6	377.9
40°	345.1	345.7	347.0	350.3	353.5	354.1	356.0	359.3	361.2	363.8	365.1
42.5°	330.9	331.6	333.5	336.7	338.7	340.6	342.5	345.1	347.0	350.3	352.2
45°	316.1	315.5	318.7	321.9	323.9	326.4	327.7	330.9	334.2	336.1	338.0
47.5°	300.0	301.3	303.9	305.8	309.0	311.0	312.3	315.5	318.1	320.6	323.2
50°	283.9	284.6	287.8	290.4	292.9	294.2	296.8	300.0	302.6	304.5	307.8
52.5°	267.2	268.5	270.4	272.3	276.2	278.1	280.1	282.6	286.5	289.1	291.7
55°	249.8	250.5	252.4	255.6	259.5	260.8	262.0	265.9	269.1	271.1	273.6
57.5°	231.8	232.4	235.0	237.6	240.2	243.4	244.7	247.2	251.1	254.3	256.9
60°	212.5	213.1	215.7	218.3	221.5	224.1	226.0	229.9	232.4	235.6	238.9
62.5°	193.2	193.2	196.4	198.3	202.8	205.4	206.0	209.9	213.8	216.3	220.2
65°	172.5	173.8	175.8	179.6	183.5	184.8	186.7	190.6	193.8	197.7	200.9
67.5°	151.3	152.6	155.8	158.4	162.9	165.5	166.8	170.0	175.1	178.3	181.6
70°	130.7	133.9	135.2	138.4	142.3	144.9	146.8	150.7	153.9	157.7	161.0
72.5°	111.4	112.0	114.0	118.5	122.3	124.3	126.8	129.4	133.9	137.8	140.4
75°	89.5	90.8	93.4	97.9	101.7	104.3	105.6	110.1	113.3	116.5	120.4
77.5°	68.2	70.2	74.0	77.3	81.8	83.7	86.3	90.1	94.0	97.2	100.4
80°	48.9	50.9	54.1	57.9	62.5	64.4	67.0	71.5	74.7	78.5	81.1
82.5°	31.5	32.8	36.7	40.6	44.4	47.0	48.9	53.4	57.3	60.5	63.7
85°	16.1	18.0	21.2	25.1	29.0	31.5	33.5	38.0	42.5	46.4	49.6
87.5°	5.8	7.1	10.3	14.8	18.7	20.6	23.2	27.0	31.5	35.4	38.6
90°	0.6	1.9	5.2	9.0	13.5	16.1	18.0	22.5	26.4	30.3	33.5
92.5°	0.0	1.3	4.5	8.4	12.9	14.8	17.4	21.2	25.1	29.0	32.2
95°	0.0	1.3	4.5	8.4	12.2	14.8	16.7	20.6	25.1	28.3	32.2
97.5°	0.0	1.3	3.9	7.7	12.2	14.2	16.1	20.6	24.5	28.3	31.5
100°	0.0	1.3	3.9	7.7	11.6	13.5	16.1	20.0	23.8	27.7	30.9
102.5°	0.0	1.3	3.9	7.1	11.6	13.5	15.5	19.3	23.2	27.0	30.3
105°	0.0	1.3	3.9	7.1	10.9	12.9	14.8	18.7	22.5	25.8	29.6
107.5°	0.0	0.6	3.2	6.4	10.3	12.2	14.2	18.0	21.9	25.1	28.3
110°	0.0	0.6	3.2	6.4	10.3	12.2	13.5	17.4	21.2	24.5	27.7



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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	5.8	9.7	11.6	13.5	16.7	20.6	23.8	26.4
115°	0.0	0.6	2.6	5.8	9.0	10.9	12.9	16.1	19.3	22.5	25.8
117.5°	0.0	0.6	2.6	5.2	8.4	10.3	12.2	15.5	18.7	21.9	24.5
120°	0.0	0.6	2.6	5.2	8.4	9.7	11.6	14.8	18.0	20.6	23.8
122.5°	0.0	0.6	1.9	4.5	7.7	9.0	10.9	14.2	16.7	20.0	22.5
125°	0.0	0.6	1.9	4.5	7.1	8.4	10.3	12.9	16.1	18.7	21.2
127.5°	0.0	0.6	1.9	3.9	6.4	8.4	9.7	12.2	15.5	18.0	20.6
130°	0.0	0.0	1.3	3.9	6.4	7.7	9.0	11.6	14.2	16.7	19.3
132.5°	0.0	0.0	1.3	3.2	5.8	7.1	8.4	10.9	13.5	15.5	18.0
135°	0.0	0.6	1.3	2.6	5.2	6.4	7.7	9.7	12.2	14.8	16.7
137.5°	0.0	0.6	0.6	2.6	4.5	5.8	7.1	9.0	11.6	13.5	15.5
140°	0.6	0.6	0.6	1.9	3.9	5.2	5.8	8.4	10.3	12.2	14.2
142.5°	0.6	0.6	0.6	1.9	3.2	4.5	5.2	7.1	9.0	10.9	12.9
145°	0.6	0.6	0.6	1.3	2.6	3.9	4.5	6.4	8.4	9.7	11.6
147.5°	0.6	0.6	0.6	1.3	2.6	3.2	3.9	5.2	7.1	8.4	10.3
150°	0.6	0.6	0.6	0.6	1.9	2.6	3.2	4.5	5.8	7.1	9.0
152.5°	0.6	0.6	0.6	0.6	1.3	1.9	2.6	3.9	5.2	6.4	7.1
155°	0.6	0.6	0.6	0.6	1.3	1.3	1.9	3.2	3.9	5.2	5.8
157.5°	0.6	0.6	0.6	0.6	0.6	1.3	1.3	2.6	3.2	3.9	4.5
160°	0.6	0.6	0.6	0.6	0.6	0.6	1.3	1.3	2.6	3.2	3.9
162.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.3	1.3	1.9	2.6
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°	469.4	469.4	469.4	469.4	469.4	469.4	469.4	469.4	469.4	469.4
2.5°	470.0	470.0	470.6	470.6	470.0	470.6	470.6	470.0	470.0	470.0
5°	468.7	468.7	469.4	469.4	469.4	469.4	469.4	469.4	468.7	469.4
7.5°	467.4	467.4	467.4	468.1	468.1	468.1	468.1	468.1	468.1	468.1
10°	464.9	465.5	465.5	466.1	466.1	466.1	466.8	466.1	466.1	466.1
12.5°	461.6	462.3	462.9	463.6	462.9	463.6	463.6	463.6	463.6	464.2
15°	457.8	458.4	458.4	459.1	459.1	459.7	459.7	459.7	459.7	459.7
17.5°	452.6	453.3	453.9	454.6	455.2	454.6	455.2	455.2	455.8	455.8
20°	446.2	447.5	448.1	448.8	449.4	448.8	449.4	449.4	450.0	449.4
22.5°	439.1	440.4	441.0	442.3	442.3	443.0	443.0	443.6	443.0	443.6
25°	431.4	432.7	433.3	434.6	435.2	435.2	435.9	435.9	435.9	436.5
27.5°	422.4	423.6	424.3	425.6	425.6	426.2	426.9	426.9	427.5	428.2
30°	413.3	414.0	415.9	416.6	417.2	417.2	417.9	418.5	418.5	418.5
32.5°	403.0	403.7	405.6	406.3	406.9	407.6	408.2	408.2	408.2	408.8
35°	391.5	393.4	394.0	396.0	396.6	397.3	397.3	397.9	397.3	397.9
37.5°	379.9	381.8	382.4	383.7	384.4	385.0	385.7	385.7	386.3	386.3
40°	367.0	368.9	370.2	371.5	372.1	372.8	372.8	373.4	374.7	374.1
42.5°	354.1	354.8	357.3	358.6	358.6	359.9	360.6	360.6	361.2	361.2
45°	339.9	341.9	343.2	344.5	345.1	345.7	346.4	347.0	347.0	347.7
47.5°	325.1	327.7	329.0	330.9	330.9	331.6	332.9	332.9	332.9	334.2
50°	309.7	311.6	314.2	314.8	315.5	316.1	316.8	317.4	318.1	318.1
52.5°	293.6	296.2	297.5	299.4	300.0	300.0	301.3	302.0	302.0	302.0
55°	276.9	279.4	280.7	282.0	283.3	283.9	283.9	285.2	285.9	285.2
57.5°	258.8	260.8	262.7	265.3	265.9	266.6	266.6	267.2	269.1	267.8
60°	240.2	242.7	244.7	247.2	247.9	247.9	248.5	249.8	250.5	251.1
62.5°	222.1	225.3	226.6	228.6	228.6	230.5	231.1	231.8	232.4	233.1
65°	202.8	205.4	207.3	209.2	210.5	210.5	212.5	213.8	213.8	213.1
67.5°	183.5	186.1	188.6	189.9	191.2	191.2	192.5	193.8	193.8	194.4
70°	164.2	166.1	168.7	170.6	171.9	171.9	173.2	174.5	174.5	173.8
72.5°	143.6	145.5	148.7	150.0	151.3	151.9	153.2	153.9	154.5	154.5
75°	123.6	126.2	128.1	130.1	130.7	132.0	133.3	133.9	134.6	135.2
77.5°	103.0	106.9	108.8	111.4	111.4	112.7	115.2	114.6	115.2	115.2
80°	84.3	87.6	89.5	92.1	92.7	93.4	94.6	95.9	96.6	96.6
82.5°	67.6	70.2	72.8	74.0	76.0	76.0	77.3	78.5	79.2	79.8
85°	52.8	55.4	57.9	60.5	61.2	61.8	63.7	64.4	64.4	64.4
87.5°	42.5	45.1	47.6	49.6	50.9	51.5	52.8	53.4	54.7	54.7
90°	36.7	39.9	42.5	44.4	45.7	46.4	47.6	48.9	48.9	49.6
92.5°	36.1	38.6	41.2	43.1	43.8	45.1	46.4	47.0	47.6	48.3
95°	35.4	38.0	40.6	42.5	43.8	44.4	45.7	47.0	47.0	47.6
97.5°	34.8	37.3	39.9	41.8	43.1	43.8	45.1	46.4	47.0	47.0
100°	34.1	36.7	39.3	41.2	42.5	43.1	44.4	45.1	45.7	46.4
102.5°	33.5	36.1	38.6	40.6	41.2	41.8	43.8	44.4	45.1	45.1
105°	32.2	34.8	37.3	39.3	40.6	41.2	42.5	43.8	43.8	44.4
107.5°	31.5	34.1	36.7	38.6	39.3	39.9	41.2	42.5	43.1	43.1
110°	30.3	32.8	35.4	37.3	38.6	39.3	40.6	41.2	41.8	41.8





TEST NUMBER: P241563

CATALOG NUMBER: FVS8M-3-LD4-40-1LO-O-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	29.6	32.2	34.1	36.1	37.3	38.0	39.3	39.9	40.6	40.6
115°	28.3	30.9	32.8	34.8	36.1	36.7	38.0	38.6	39.3	39.3
117.5°	27.0	29.6	32.2	33.5	34.8	35.4	36.7	37.3	38.0	38.0
120°	26.4	28.3	30.9	32.2	33.5	34.1	34.8	36.1	36.7	36.7
122.5°	25.1	27.7	29.6	30.9	31.5	32.2	33.5	34.1	34.8	35.4
125°	23.8	26.4	27.7	29.6	30.3	30.9	32.2	32.8	33.5	33.5
127.5°	22.5	24.5	26.4	28.3	29.0	29.6	30.9	31.5	31.5	32.2
130°	21.2	23.2	25.1	26.4	27.0	27.7	29.0	29.6	30.3	30.3
132.5°	20.0	21.9	23.8	25.1	25.8	26.4	27.0	27.7	28.3	28.3
135°	18.7	20.6	21.9	23.2	23.8	24.5	25.8	26.4	26.4	27.0
137.5°	17.4	19.3	20.6	21.9	22.5	23.2	23.8	24.5	25.1	25.1
140°	16.1	17.4	19.3	20.0	20.6	21.2	21.9	22.5	23.2	23.2
142.5°	14.8	16.1	17.4	18.7	19.3	19.3	20.0	20.6	21.2	21.2
145°	13.5	14.8	16.1	16.7	17.4	18.0	18.7	19.3	19.3	19.3
147.5°	11.6	12.9	14.2	15.5	15.5	16.1	16.7	17.4	17.4	17.4
150°	10.3	11.6	12.9	13.5	14.2	14.2	14.8	15.5	15.5	15.5
152.5°	8.4	9.7	10.9	11.6	12.2	12.2	12.9	13.5	13.5	13.5
155°	7.1	8.4	9.0	10.3	10.3	10.9	10.9	11.6	11.6	11.6
157.5°	5.8	6.4	7.7	8.4	9.0	9.0	9.0	9.7	9.7	9.7
160°	4.5	5.2	5.8	6.4	7.1	7.1	7.7	7.7	7.7	7.7
162.5°	3.2	3.9	4.5	4.5	5.2	5.2	5.8	5.8	5.8	5.8
165°	1.9	2.6	2.6	3.2	3.2	3.9	3.9	3.9	4.5	4.5
167.5°	1.3	1.3	1.9	1.9	1.9	1.9	2.6	2.6	2.6	2.6
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)