

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: P241457

Luminaire Tested: **FVS8M-3-LD4-30-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241457
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-30-1STD-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

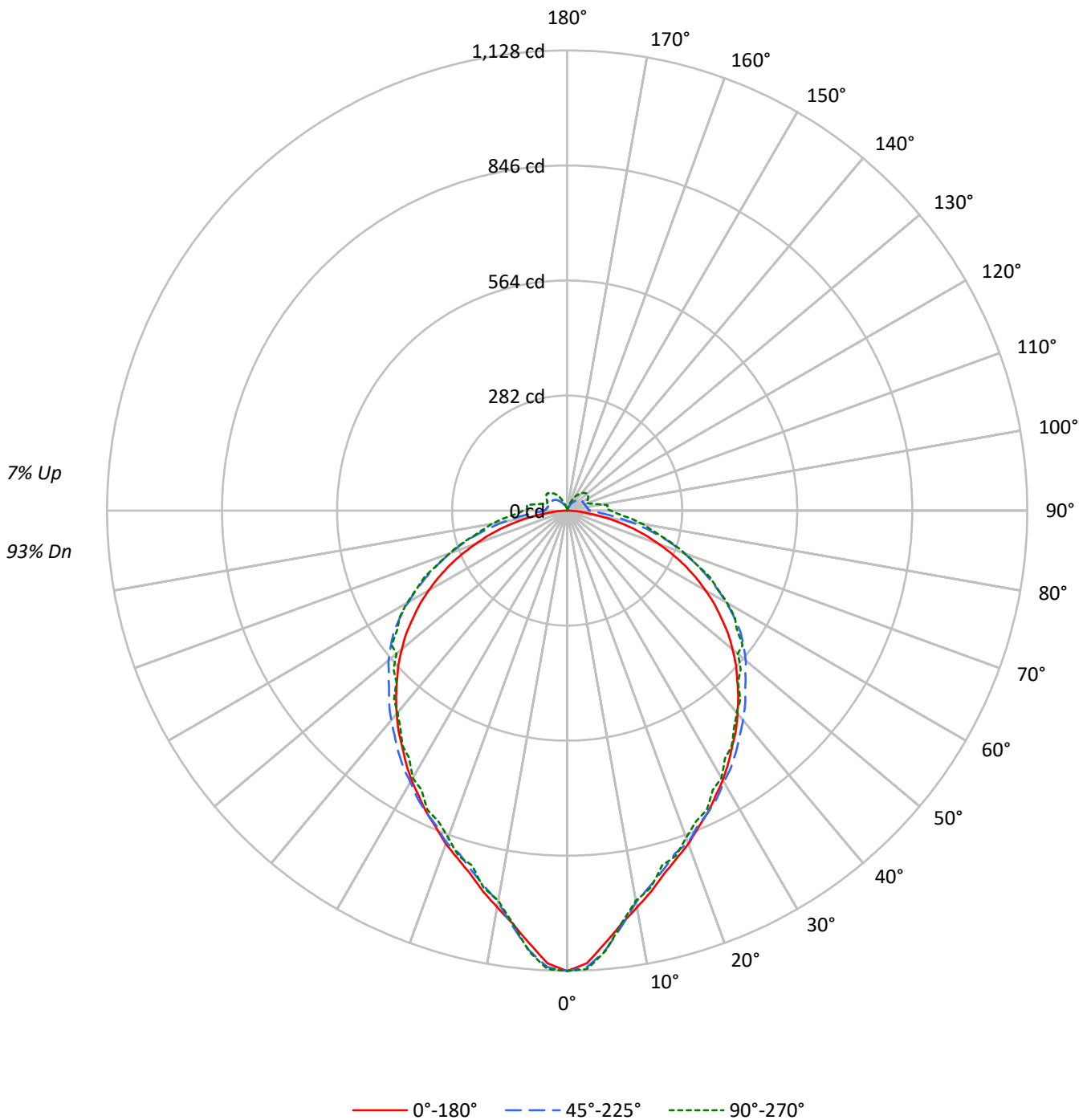
Lumens per Lamp: N/A
Luminaire Lumens: 3002.0 lumens
Efficiency: N/A
Efficacy: 105.3 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.23
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 28.5
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	92	103	98	94	90	93	89	86	87	85	82	83	80	78	76
2	96	88	81	75	93	85	79	73	80	75	70	76	72	68	72	68	65	62
3	88	77	68	62	84	75	67	61	71	64	59	67	61	57	63	59	55	52
4	80	68	59	52	77	66	58	51	63	55	50	59	53	48	56	51	47	44
5	74	60	51	45	71	59	50	44	56	49	43	53	47	42	51	45	41	38
6	68	54	45	39	65	53	45	38	51	43	37	48	42	37	46	40	36	33
7	63	49	40	34	61	48	40	34	46	39	33	44	37	32	42	36	32	30
8	59	45	36	31	57	44	36	30	42	35	30	40	34	29	39	33	28	26
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	34	28	24	33	27	23	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6590	6590	6590
5°	6211	6229	6226
10°	5801	5581	5535
15°	5491	5235	5133
20°	5303	5024	4897
25°	5136	4823	4721
30°	4997	4655	4514
35°	4853	4524	4331
40°	4749	4392	4144
45°	4632	4266	3988
50°	4527	4210	3908
55°	4379	4125	3908
60°	4206	3923	3802
65°	3957	3678	3592
70°	3566	3381	3234
75°	3092	3003	2879
80°	2320	2463	2751
85°	1256	1875	2513



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.4	3.3
10°-20°	257.8	8.6
20°-30°	375.3	12.5
30°-40°	447.0	14.9
40°-50°	469.9	15.7
50°-60°	447.8	14.9
60°-70°	359.2	12.0
70°-80°	228.8	7.6
80°-90°	100.3	3.3
90°-100°	53.4	1.8
100°-110°	43.8	1.5
110°-120°	36.4	1.2
120°-130°	33.7	1.1
130°-140°	25.9	0.9
140°-150°	15.7	0.5
150°-160°	6.3	0.2
160°-170°	1.2	0.0
170°-180°	0.0	0.0
0°-30°	732.6	24.4
0°-40°	1179.6	39.3
0°-60°	2097.3	69.9
0°-90°	2785.6	92.8
90°-120°	133.7	4.5
90°-150°	208.9	7.0
90°-180°	216.0	7.2
0°-180°	3002.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1128	1128	1128	1128	1128	
5°	1064	1071	1081	1078	1083	99
15°	921	918	911	907	900	260
25°	816	817	817	806	810	376
35°	705	717	722	713	704	442
45°	590	608	618	614	592	456
55°	462	487	518	515	508	413
65°	318	344	378	385	386	313
75°	163	191	230	241	235	172
85°	30	54	91	123	134	37
90°	1	23	55	81	107	1
95°	0	21	52	73	98	0
105°	0	20	47	64	64	0
115°	0	20	44	55	54	0
125°	0	18	44	59	62	0
135°	1	13	37	54	61	1
145°	1	7	26	42	48	1
155°	1	2	12	23	27	0
165°	1	1	2	6	8	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°	1128.5	1128.5	1128.5	1128.5	1128.5	1128.5	1128.5	1128.5	1128.5	1128.5	1128.5
2.5°	1110.5	1107.4	1107.4	1110.5	1112.8	1112.8	1115.2	1118.3	1120.6	1119.9	1119.9
5°	1064.4	1063.6	1062.9	1068.3	1069.9	1071.4	1073.0	1080.0	1080.8	1083.2	1080.8
7.5°	1021.5	1018.3	1018.3	1022.2	1023.8	1025.4	1026.9	1030.1	1026.2	1023.8	1026.9
10°	987.1	982.4	981.6	984.0	983.2	982.4	983.2	980.1	981.6	978.5	973.8
12.5°	955.1	952.0	948.1	948.1	947.3	947.3	945.7	945.7	941.0	936.3	941.8
15°	920.7	919.9	915.3	917.6	917.6	917.6	918.4	917.6	914.5	916.8	911.4
17.5°	893.4	891.1	890.3	895.0	893.4	891.8	892.6	889.5	891.8	886.4	880.9
20°	869.2	866.1	866.1	866.8	865.3	863.7	864.5	866.8	863.7	859.8	866.1
22.5°	840.3	836.4	837.2	841.1	841.1	843.4	845.0	841.1	838.7	841.1	836.4
25°	816.1	813.7	816.1	816.1	814.5	816.9	819.2	820.8	818.4	817.6	816.9
27.5°	788.0	784.8	787.2	789.5	795.0	795.8	795.0	795.0	794.2	797.3	795.0
30°	763.0	760.6	763.8	767.7	767.7	768.4	769.2	772.3	770.0	774.7	768.4
32.5°	734.9	732.5	735.6	737.2	744.2	744.2	746.6	749.7	748.9	750.5	747.4
35°	705.2	703.6	707.5	714.6	716.9	716.9	721.6	721.6	724.7	724.7	721.6
37.5°	679.4	678.6	681.0	688.8	691.9	694.3	697.4	698.2	702.1	698.9	695.0
40°	649.7	648.2	652.1	659.1	663.0	665.4	667.7	673.2	673.2	672.4	670.8
42.5°	620.8	620.8	624.0	629.4	636.5	639.6	640.4	646.6	649.0	645.1	645.8
45°	589.6	589.6	592.7	600.5	606.0	608.4	611.5	615.4	618.5	622.4	617.7
47.5°	561.5	561.5	563.8	569.3	578.7	578.7	582.6	588.0	591.2	594.3	592.7
50°	528.7	531.0	534.2	538.8	543.5	549.0	554.5	560.7	563.8	567.0	571.6
52.5°	498.2	496.7	500.6	506.0	513.1	519.3	522.4	531.8	538.1	543.5	545.1
55°	461.5	466.2	467.8	474.8	478.7	487.3	491.2	498.2	507.6	513.9	518.5
57.5°	428.7	429.5	432.6	439.7	448.3	451.4	456.1	464.7	472.5	480.3	485.0
60°	392.0	394.4	399.1	403.7	412.3	416.2	420.1	431.9	437.3	444.4	449.8
62.5°	355.3	357.7	363.1	369.4	374.1	378.8	382.7	394.4	404.5	408.4	413.9
65°	317.8	321.0	324.1	328.8	336.6	343.6	346.0	357.7	366.3	373.3	378.0
67.5°	278.8	281.1	287.4	292.9	299.9	305.3	309.3	320.2	329.6	338.9	341.3
70°	238.2	242.9	246.8	255.4	262.4	267.1	271.8	282.7	291.3	297.5	304.6
72.5°	201.5	203.8	209.3	217.1	224.9	229.6	232.7	245.2	253.0	263.2	268.6
75°	163.2	166.3	171.0	177.3	186.6	191.3	197.6	206.9	216.3	224.9	230.4
77.5°	125.7	128.9	132.8	140.6	148.4	153.1	160.1	169.5	179.6	185.9	192.1
80°	89.0	92.2	96.1	104.6	113.2	116.4	122.6	130.4	141.3	148.4	154.6
82.5°	56.2	58.6	63.3	71.1	79.7	82.8	88.2	96.8	106.2	114.0	121.0
85°	29.7	30.5	36.7	42.2	50.0	53.9	57.8	66.4	75.8	82.8	90.6
87.5°	8.6	10.9	15.6	22.6	28.9	32.8	36.7	44.5	53.1	59.4	67.2
90°	0.8	2.3	6.2	12.5	18.7	22.6	25.8	33.6	40.6	47.6	54.7
92.5°	0.0	1.6	6.2	11.7	18.0	21.9	25.0	32.0	39.0	45.3	52.3
95°	0.0	1.6	5.5	10.9	18.0	21.1	25.0	32.0	38.3	45.3	51.5
97.5°	0.0	1.6	5.5	10.9	18.0	21.1	24.2	31.2	38.3	43.7	50.0
100°	0.0	1.6	5.5	10.9	17.2	21.1	24.2	30.5	37.5	43.0	48.4
102.5°	0.0	1.6	5.5	10.9	17.2	20.3	24.2	30.5	35.9	42.2	47.6
105°	0.0	1.6	5.5	10.9	17.2	20.3	23.4	29.7	35.1	41.4	46.9
107.5°	0.0	1.6	5.5	10.9	17.2	20.3	23.4	29.7	35.1	40.6	46.1
110°	0.0	0.8	4.7	10.9	17.2	20.3	23.4	28.9	35.1	40.6	45.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.8	4.7	10.2	16.4	20.3	23.4	28.9	35.1	39.8	44.5
115°	0.0	0.8	4.7	10.2	16.4	19.5	22.6	28.9	34.4	39.0	43.7
117.5°	0.0	0.8	4.7	10.2	16.4	19.5	22.6	28.9	34.4	39.0	43.7
120°	0.0	0.8	3.9	9.4	15.6	18.7	21.9	28.1	34.4	39.0	43.7
122.5°	0.0	0.8	3.9	9.4	14.8	18.0	21.1	27.3	33.6	39.0	43.7
125°	0.0	0.8	3.1	8.6	14.8	18.0	21.1	26.6	32.8	38.3	43.7
127.5°	0.8	0.8	3.1	7.8	14.1	17.2	20.3	25.8	31.2	36.7	42.2
130°	0.8	0.8	3.1	7.0	12.5	15.6	18.7	25.0	30.5	35.9	40.6
132.5°	0.8	0.8	2.3	6.2	11.7	14.8	17.2	23.4	28.1	33.6	39.0
135°	0.8	0.8	1.6	5.5	10.9	13.3	15.6	21.9	26.6	31.2	36.7
137.5°	0.8	0.8	1.6	4.7	9.4	11.7	14.1	19.5	25.0	28.9	34.4
140°	0.8	0.8	1.6	3.9	7.8	10.2	12.5	17.2	22.6	27.3	31.2
142.5°	0.8	0.8	0.8	3.1	7.0	8.6	10.9	14.8	19.5	24.2	28.9
145°	0.8	0.8	0.8	2.3	5.5	7.0	9.4	13.3	17.2	21.9	25.8
147.5°	0.8	0.8	0.8	2.3	4.7	6.2	7.8	10.9	14.8	18.7	22.6
150°	0.8	0.8	0.8	1.6	3.1	4.7	6.2	9.4	12.5	15.6	19.5
152.5°	0.8	0.8	0.8	0.8	2.3	3.9	4.7	7.0	10.2	13.3	15.6
155°	0.8	0.8	0.8	0.8	1.6	2.3	3.9	5.5	7.8	10.2	12.5
157.5°	0.8	0.8	0.8	0.8	1.6	1.6	2.3	3.9	5.5	7.8	9.4
160°	0.8	0.8	0.8	0.8	0.8	1.6	1.6	3.1	3.9	5.5	7.0
162.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.3	3.9	4.7
165°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.3	2.3
167.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6
170°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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°	1128.5	1128.5	1128.5	1128.5	1128.5	1128.5	1128.5	1128.5	1128.5	1128.5
2.5°	1121.4	1120.6	1121.4	1123.8	1123.8	1124.6	1125.3	1126.1	1125.3	1124.6
5°	1081.6	1077.7	1076.9	1080.0	1078.5	1079.3	1081.6	1083.9	1083.2	1083.2
7.5°	1027.7	1025.4	1026.2	1019.1	1018.3	1015.2	1016.0	1016.0	1017.6	1019.9
10°	967.6	969.9	976.2	981.6	983.2	980.9	977.0	972.3	969.9	970.7
12.5°	942.6	935.6	926.2	922.3	926.2	931.7	939.5	944.9	946.5	946.5
15°	901.2	904.3	910.6	914.5	906.7	903.5	902.0	899.6	900.4	900.4
17.5°	888.7	884.0	876.2	884.8	890.3	896.5	896.5	890.3	884.8	887.1
20°	857.5	862.2	873.9	862.9	853.6	848.9	848.9	849.7	855.1	852.8
22.5°	841.9	842.6	828.6	834.8	845.0	848.1	842.6	833.3	823.1	824.7
25°	813.7	809.1	821.5	812.2	805.9	802.0	804.4	808.3	811.4	809.8
27.5°	789.5	797.3	780.9	790.3	795.8	798.9	794.2	779.4	777.0	772.3
30°	770.8	759.1	773.1	770.0	759.1	754.4	748.1	753.6	753.6	756.7
32.5°	741.9	745.8	738.8	731.0	736.4	741.1	737.2	731.0	722.4	720.0
35°	722.4	716.9	711.4	720.0	713.0	705.2	698.9	701.3	704.4	703.6
37.5°	698.9	689.6	693.5	680.2	683.3	688.0	691.9	681.0	676.3	671.6
40°	665.4	673.2	659.1	670.8	666.9	658.3	645.8	643.5	647.4	646.6
42.5°	644.3	638.8	646.6	630.2	626.3	627.9	634.9	637.2	631.0	627.9
45°	620.1	620.8	609.9	609.9	613.8	613.0	600.5	592.0	592.7	592.0
47.5°	590.4	593.5	587.3	589.6	577.9	576.3	577.1	580.2	578.7	577.1
50°	574.0	566.2	574.8	562.3	567.0	570.1	563.1	550.6	547.4	545.9
52.5°	550.6	555.2	545.1	556.0	552.1	542.0	535.7	540.4	541.2	542.0
55°	516.2	524.8	527.9	517.8	514.6	517.8	520.1	512.3	509.2	507.6
57.5°	490.4	488.1	487.3	488.1	490.4	488.9	481.8	481.8	486.5	487.3
60°	452.9	459.2	450.6	454.5	449.0	449.0	456.8	456.1	454.5	452.9
62.5°	415.5	417.0	422.5	413.9	417.0	421.7	417.0	413.1	415.5	415.5
65°	381.1	381.1	379.5	385.0	385.0	378.8	376.4	381.9	385.0	385.8
67.5°	346.7	349.1	347.5	348.3	342.8	342.8	346.7	342.1	340.5	342.1
70°	306.9	310.0	316.3	308.5	312.4	313.2	305.3	303.0	305.3	306.9
72.5°	271.0	272.5	275.7	278.0	278.0	275.7	273.3	273.3	272.5	272.5
75°	233.5	239.0	239.0	242.9	241.3	239.7	242.1	239.0	235.1	235.1
77.5°	197.6	205.4	206.2	206.9	207.7	210.9	210.1	207.7	207.7	208.5
80°	161.7	167.9	172.6	174.1	175.7	178.8	179.6	184.3	185.9	186.6
82.5°	127.3	135.1	139.8	146.0	148.4	151.5	156.2	160.1	163.2	160.9
85°	98.4	104.6	111.7	120.3	122.6	126.5	129.6	130.4	132.0	134.3
87.5°	74.2	82.8	91.4	98.4	100.0	100.7	103.1	107.8	113.2	117.1
90°	62.5	70.3	77.3	80.4	81.2	82.8	87.5	93.7	100.7	107.0
92.5°	59.4	65.6	69.5	72.6	75.0	77.3	81.2	85.9	92.9	97.6
95°	57.0	62.5	66.4	70.3	73.4	75.8	79.7	85.9	93.7	98.4
97.5°	55.4	60.9	65.6	70.3	73.4	75.8	82.8	91.4	99.2	100.0
100°	54.7	59.4	64.0	69.5	72.6	75.8	82.8	86.7	85.9	85.9
102.5°	53.1	57.8	63.3	67.9	70.3	71.8	75.0	75.0	73.4	72.6
105°	52.3	56.2	60.9	64.0	64.0	65.6	66.4	65.6	64.8	64.0
107.5°	50.8	54.7	57.8	58.6	59.4	60.1	60.1	59.4	57.8	57.0
110°	49.2	52.3	54.7	55.4	55.4	56.2	55.4	54.7	53.1	52.3



TEST NUMBER: P241457

CATALOG NUMBER: FVS8M-3-LD4-30-1STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	48.4	50.8	53.1	53.9	53.9	54.7	54.7	53.9	53.1	52.3
115°	47.6	50.8	53.1	53.9	54.7	55.4	56.2	55.4	54.7	53.9
117.5°	47.6	50.8	53.9	55.4	56.2	57.0	57.8	58.6	57.0	56.2
120°	48.4	51.5	54.7	57.0	57.8	58.6	60.1	60.1	59.4	59.4
122.5°	48.4	52.3	55.4	57.8	59.4	60.1	60.9	61.7	60.9	60.9
125°	48.4	52.3	55.4	57.8	59.4	60.1	61.7	63.3	62.5	62.5
127.5°	47.6	51.5	54.7	57.8	58.6	59.4	61.7	63.3	63.3	64.0
130°	46.1	50.0	53.9	56.2	57.8	58.6	60.9	62.5	63.3	64.0
132.5°	43.7	48.4	51.5	54.7	55.4	57.0	59.4	60.9	62.5	63.3
135°	41.4	45.3	49.2	52.3	53.9	55.4	57.0	59.4	60.9	60.9
137.5°	38.3	43.0	46.9	50.0	50.8	52.3	54.7	57.0	57.8	58.6
140°	35.9	39.8	43.7	46.9	48.4	50.0	52.3	53.9	55.4	55.4
142.5°	32.8	37.5	40.6	43.7	45.3	46.9	49.2	50.8	52.3	52.3
145°	30.5	34.4	37.5	40.6	42.2	43.0	45.3	46.9	48.4	48.4
147.5°	27.3	30.5	34.4	36.7	38.3	39.0	41.4	43.0	43.7	44.5
150°	23.4	26.6	29.7	32.0	33.6	34.4	36.7	38.3	39.0	39.8
152.5°	18.7	21.9	25.0	27.3	28.1	29.7	31.2	32.0	33.6	33.6
155°	15.6	18.0	20.3	22.6	23.4	24.2	25.8	26.6	27.3	27.3
157.5°	11.7	13.3	15.6	18.0	18.7	18.7	20.3	21.1	21.9	21.9
160°	8.6	10.2	11.7	13.3	14.1	14.8	15.6	16.4	16.4	16.4
162.5°	5.5	7.0	7.8	9.4	9.4	10.2	10.9	11.7	11.7	11.7
165°	3.1	3.9	4.7	5.5	6.2	6.2	7.0	7.0	7.8	7.8
167.5°	1.6	2.3	2.3	3.1	3.1	3.1	3.9	3.9	4.7	3.9
170°	0.8	0.8	0.8	0.8	0.8	1.6	1.6	1.6	1.6	1.6
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)