

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: P241469

Luminaire Tested: **FVS8M-3-LD4-30-2STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241469  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-25)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS8M-3-LD4-30-2STD-PA187-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
3FT LENGTH, 2-MODULE LED WITH PA187 LENS  
Light Source: (168) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

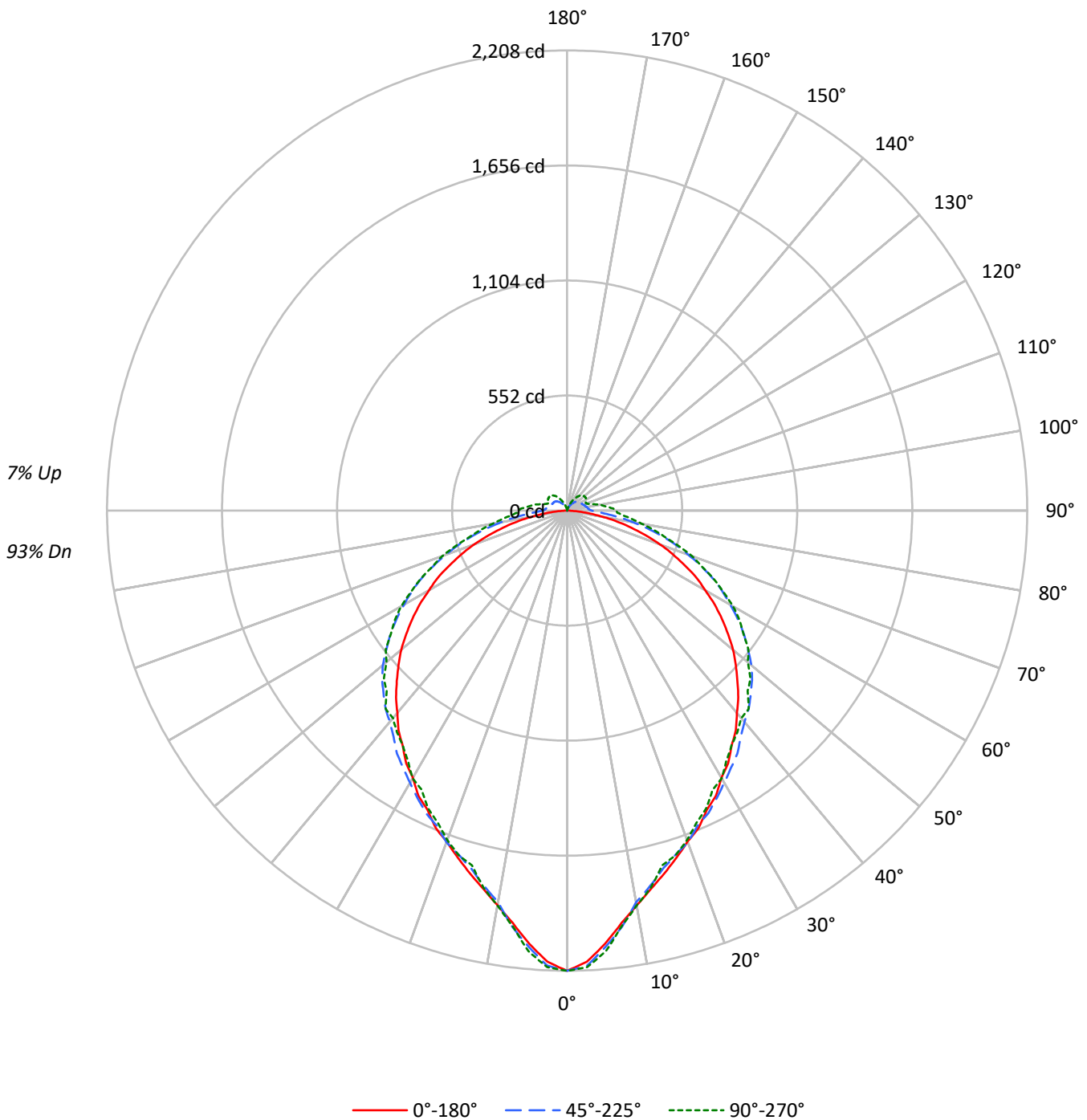
Lumens per Lamp: N/A  
Luminaire Lumens: 5937.0 lumens  
Efficiency: N/A  
Efficacy: 108.5 lumens/watt  
Spacing Criteria (0/90/45): 1.01 / 1 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')  
CIE Type: Direct

Input Watts (W): 54.7  
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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CATALOG NUMBER: FVS8M-3-LD4-30-2STD-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	96	96	96	93
1	106	101	97	92	103	98	94	90	93	89	86	88	85	82	83	81	79	76
2	96	88	80	74	93	85	79	73	80	75	70	76	72	68	72	68	65	63
3	87	77	68	61	84	74	67	60	71	64	58	67	61	57	63	59	55	52
4	80	68	59	52	77	66	57	51	62	55	50	59	53	48	56	51	47	44
5	73	60	51	44	71	59	50	44	56	48	43	53	47	42	51	45	41	38
6	68	54	45	39	65	53	44	38	50	43	37	48	41	36	46	40	36	33
7	63	49	40	34	61	48	40	34	46	38	33	44	37	32	42	36	32	29
8	58	45	36	30	56	44	36	30	42	35	29	40	34	29	38	33	28	26
9	55	41	33	27	53	40	32	27	39	31	26	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	24	36	29	24	34	28	24	33	27	23	21

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	12895	12895	12895
5°	12178	12117	12203
10°	11301	10933	10971
15°	10744	10214	10047
20°	10312	9824	9657
25°	9972	9457	9196
30°	9695	9134	8844
35°	9471	8922	8466
40°	9263	8666	8332
45°	9082	8599	8251
50°	8898	8502	8100
55°	8603	8242	7951
60°	8206	7880	7717
65°	7748	7512	7230
70°	7110	6855	6713
75°	6058	6109	5900
80°	4597	5107	5350
85°	2419	3940	5059



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	194.5	3.3
10°-20°	504.6	8.5
20°-30°	734.9	12.4
30°-40°	877.8	14.8
40°-50°	943.4	15.9
50°-60°	895.8	15.1
60°-70°	723.8	12.2
70°-80°	464.9	7.8
80°-90°	203.5	3.4
90°-100°	108.0	1.8
100°-110°	81.7	1.4
110°-120°	65.2	1.1
120°-130°	58.2	1.0
130°-140°	43.5	0.7
140°-150°	25.2	0.4
150°-160°	9.9	0.2
160°-170°	2.1	0.0
170°-180°	0.0	0.0
0°-30°	1434.0	24.2
0°-40°	2311.7	38.9
0°-60°	4150.9	69.9
0°-90°	5543.2	93.4
90°-120°	255.0	4.3
90°-150°	381.8	6.4
90°-180°	394.0	6.6
0°-180°	5937.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2208	2208	2208	2208	2208	
5°	2087	2088	2102	2119	2123	194
15°	1802	1795	1778	1775	1762	508
25°	1584	1602	1602	1584	1578	733
35°	1376	1410	1423	1408	1375	864
45°	1156	1201	1245	1262	1225	892
55°	907	964	1036	1034	1033	810
65°	622	682	772	779	777	617
75°	320	384	469	498	482	340
85°	57	110	190	237	270	73
90°	1	50	118	165	234	3
95°	1	45	102	150	194	1
105°	1	39	89	119	118	1
115°	1	36	78	97	100	1
125°	1	31	74	103	108	1
135°	1	23	60	92	102	1
145°	2	12	42	67	78	1
155°	2	5	20	36	42	1
165°	2	2	6	11	14	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CATALOG NUMBER: FVS8M-3-LD4-30-2STD-PA187-UNV-EDC1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2208.3	2208.3	2208.3	2208.3	2208.3	2208.3	2208.3	2208.3	2208.3	2208.3	2208.3
2.5°	2166.8	2169.9	2169.9	2169.2	2170.7	2169.9	2173.9	2179.3	2181.7	2184.8	2185.6
5°	2086.9	2090.0	2085.3	2080.6	2083.7	2088.4	2092.4	2100.2	2099.4	2098.6	2102.5
7.5°	1996.0	1996.7	1992.8	1990.5	1988.9	1992.0	1995.2	1998.3	2004.6	2011.6	2014.8
10°	1923.1	1925.4	1918.4	1912.9	1910.5	1909.8	1914.5	1919.9	1922.3	1916.0	1907.4
12.5°	1858.8	1857.3	1854.9	1845.5	1850.2	1851.8	1853.3	1851.8	1843.9	1840.0	1843.9
15°	1801.6	1800.8	1798.5	1793.0	1794.6	1794.6	1789.9	1786.7	1786.7	1792.2	1778.1
17.5°	1746.0	1745.2	1744.4	1736.6	1739.7	1740.5	1741.3	1740.5	1744.4	1735.0	1731.1
20°	1690.3	1687.2	1688.0	1689.6	1697.4	1694.3	1693.5	1696.6	1690.3	1688.8	1693.5
22.5°	1648.0	1646.5	1643.3	1642.5	1643.3	1641.8	1644.1	1645.7	1644.1	1648.8	1636.3
25°	1584.5	1583.8	1585.3	1588.5	1595.5	1601.8	1606.5	1595.5	1604.1	1601.0	1601.8
27.5°	1544.6	1544.6	1545.4	1543.0	1547.7	1551.6	1551.6	1558.7	1561.8	1555.6	1554.8
30°	1480.3	1480.3	1485.0	1493.6	1501.5	1510.9	1509.3	1510.1	1510.9	1511.7	1507.7
32.5°	1438.0	1439.6	1441.9	1442.7	1454.5	1452.9	1454.5	1467.8	1468.6	1467.8	1463.9
35°	1376.1	1373.7	1383.1	1389.4	1406.7	1409.8	1412.1	1413.7	1421.5	1417.6	1423.1
37.5°	1329.1	1329.9	1333.8	1343.2	1344.7	1356.5	1365.1	1367.5	1366.7	1370.6	1368.3
40°	1267.2	1264.8	1271.1	1287.5	1301.6	1307.1	1311.8	1319.7	1322.8	1326.7	1323.6
42.5°	1215.4	1213.9	1220.1	1234.3	1246.0	1256.2	1260.9	1269.5	1279.7	1285.2	1289.9
45°	1155.9	1154.3	1163.7	1177.8	1194.3	1200.6	1209.2	1222.5	1235.0	1242.1	1245.2
47.5°	1097.1	1098.7	1101.0	1117.5	1141.0	1148.1	1158.2	1163.7	1188.0	1195.1	1203.7
50°	1039.1	1039.9	1047.0	1057.1	1076.7	1085.4	1099.5	1115.1	1126.1	1140.2	1154.3
52.5°	973.3	972.5	983.5	998.4	1017.2	1028.9	1037.6	1060.3	1072.8	1083.8	1093.2
55°	906.7	911.4	919.2	932.5	951.4	963.9	972.5	991.3	1015.6	1027.4	1036.0
57.5°	839.3	843.2	855.0	867.5	884.7	893.4	906.7	927.1	945.1	958.4	971.7
60°	764.8	769.5	781.3	795.4	820.5	822.8	838.5	858.1	876.9	894.9	903.6
62.5°	701.4	701.4	710.0	728.0	746.0	757.0	771.9	789.1	810.3	825.2	840.1
65°	622.2	626.9	640.2	657.5	670.0	681.8	698.2	717.8	741.3	758.6	771.9
67.5°	549.3	551.7	566.6	579.9	601.1	613.6	621.4	647.3	669.2	684.1	695.1
70°	474.9	479.6	490.6	506.2	525.0	538.4	547.8	572.9	590.9	608.9	617.5
72.5°	395.0	401.2	415.3	431.0	449.8	461.6	471.0	495.3	514.1	529.7	547.8
75°	319.7	323.6	338.5	355.8	376.2	384.0	396.5	415.3	438.8	458.4	468.6
77.5°	248.4	251.6	266.4	280.5	300.1	311.1	322.1	343.2	362.8	380.9	394.2
80°	176.3	180.2	193.6	206.9	228.0	238.2	246.1	270.4	290.7	306.4	320.5
82.5°	112.8	116.8	129.3	145.8	161.4	172.4	181.0	199.8	221.0	235.9	252.3
85°	57.2	60.3	71.3	85.4	105.0	110.5	123.8	140.3	159.1	175.5	190.4
87.5°	17.2	21.9	32.9	46.2	61.9	69.7	79.9	97.2	113.6	129.3	145.8
90°	0.8	4.7	14.1	26.6	42.3	50.2	58.8	74.4	88.6	104.2	117.5
92.5°	0.8	3.9	12.5	25.1	39.2	47.0	54.1	69.0	82.3	94.8	106.6
95°	0.8	3.1	11.8	23.5	37.6	44.7	51.7	65.8	78.4	90.9	101.9
97.5°	0.8	3.1	11.0	22.7	36.0	43.1	50.2	62.7	74.4	87.0	98.7
100°	0.8	3.1	11.0	21.9	35.3	41.5	47.8	60.3	72.1	83.9	94.8
102.5°	0.8	3.1	10.2	21.9	33.7	40.0	46.2	58.0	69.7	81.5	91.7
105°	0.8	2.4	10.2	21.2	32.9	39.2	44.7	56.4	68.2	79.1	88.6
107.5°	0.8	2.4	9.4	20.4	32.1	38.4	43.9	55.6	65.8	76.8	85.4
110°	0.8	2.4	9.4	19.6	31.3	37.6	43.1	54.9	65.0	74.4	82.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.8	2.4	8.6	18.8	30.6	36.8	42.3	53.3	63.5	72.1	79.9
115°	0.8	1.6	8.6	18.0	29.8	36.0	41.5	52.5	61.9	70.5	77.6
117.5°	0.8	1.6	7.8	18.0	29.0	34.5	40.7	50.9	60.3	69.0	76.8
120°	0.8	1.6	7.8	17.2	27.4	33.7	39.2	49.4	59.6	68.2	76.0
122.5°	0.8	1.6	7.1	16.5	26.6	32.1	37.6	47.8	58.0	67.4	75.2
125°	0.8	0.8	6.3	14.9	25.1	30.6	36.0	46.2	55.6	65.0	73.7
127.5°	0.8	0.8	5.5	14.1	24.3	29.0	34.5	44.7	54.1	62.7	71.3
130°	0.8	0.8	4.7	12.5	22.7	27.4	32.1	41.5	50.9	59.6	68.2
132.5°	0.8	0.8	4.7	11.8	20.4	25.1	29.8	39.2	47.8	56.4	64.3
135°	0.8	0.8	3.9	10.2	18.8	22.7	27.4	36.0	44.7	52.5	60.3
137.5°	1.6	0.8	3.1	8.6	16.5	20.4	24.3	32.9	40.7	48.6	55.6
140°	1.6	0.8	2.4	7.1	14.1	18.0	21.9	29.0	36.8	43.9	51.7
142.5°	1.6	1.6	1.6	6.3	11.8	14.9	18.8	25.9	32.9	40.0	46.2
145°	1.6	1.6	1.6	4.7	9.4	12.5	15.7	21.9	28.2	35.3	41.5
147.5°	1.6	1.6	1.6	3.9	7.8	10.2	12.5	18.8	24.3	29.8	36.0
150°	1.6	1.6	1.6	3.1	6.3	8.6	10.2	14.9	20.4	25.9	30.6
152.5°	1.6	1.6	1.6	2.4	4.7	6.3	7.8	12.5	16.5	21.2	25.9
155°	1.6	1.6	1.6	1.6	3.9	4.7	6.3	9.4	13.3	16.5	20.4
157.5°	1.6	1.6	1.6	1.6	2.4	3.1	4.7	7.1	10.2	13.3	15.7
160°	1.6	1.6	1.6	1.6	1.6	2.4	3.1	4.7	7.1	9.4	11.8
162.5°	2.4	1.6	1.6	1.6	1.6	1.6	2.4	3.1	4.7	7.1	8.6
165°	2.4	1.6	1.6	1.6	0.8	1.6	1.6	2.4	3.1	3.9	5.5
167.5°	2.4	2.4	1.6	1.6	1.6	0.8	0.8	0.8	1.6	2.4	3.1
170°	2.4	2.4	1.6	1.6	1.6	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°	2208.3	2208.3	2208.3	2208.3	2208.3	2208.3	2208.3	2208.3	2208.3	2208.3
2.5°	2186.4	2191.1	2192.7	2193.4	2196.6	2195.0	2196.6	2193.4	2193.4	2192.7
5°	2101.8	2104.9	2110.4	2118.2	2119.0	2119.8	2121.3	2125.3	2126.8	2122.9
7.5°	2005.4	2009.3	2003.0	1998.3	2002.2	2001.4	2008.5	2003.8	2009.3	2010.1
10°	1901.9	1902.7	1911.3	1917.6	1916.8	1919.9	1916.8	1912.9	1917.6	1923.9
12.5°	1844.7	1833.0	1818.9	1825.9	1832.2	1834.5	1849.4	1851.8	1858.0	1853.3
15°	1772.6	1780.5	1789.9	1775.8	1775.0	1770.3	1765.6	1762.4	1761.7	1762.4
17.5°	1738.1	1724.8	1717.0	1724.0	1735.8	1742.8	1742.8	1744.4	1731.1	1733.4
20°	1677.8	1681.7	1696.6	1688.0	1683.3	1678.6	1675.4	1680.9	1686.4	1681.7
22.5°	1642.5	1648.8	1634.7	1651.2	1654.3	1659.8	1655.9	1633.9	1625.3	1621.4
25°	1599.4	1593.2	1615.9	1592.4	1584.5	1572.0	1570.4	1573.6	1578.3	1577.5
27.5°	1548.5	1562.6	1533.6	1540.7	1552.4	1554.0	1550.8	1533.6	1524.2	1510.9
30°	1517.2	1491.3	1505.4	1503.8	1487.4	1483.5	1474.8	1479.5	1483.5	1482.7
32.5°	1457.6	1463.9	1448.2	1437.2	1447.4	1455.2	1454.5	1436.4	1425.5	1422.3
35°	1412.9	1407.4	1401.2	1416.8	1408.2	1392.6	1373.7	1374.5	1375.3	1375.3
37.5°	1369.0	1354.9	1372.2	1343.2	1340.8	1347.1	1356.5	1351.0	1342.4	1340.8
40°	1318.1	1333.8	1308.7	1325.9	1328.3	1325.2	1305.6	1299.3	1300.1	1300.1
42.5°	1291.5	1286.0	1299.3	1296.2	1287.5	1286.8	1296.2	1296.2	1292.2	1289.9
45°	1255.4	1252.3	1255.4	1254.6	1262.5	1263.2	1245.2	1231.1	1226.4	1224.8
47.5°	1202.9	1220.9	1208.4	1214.7	1204.5	1192.7	1191.9	1195.1	1194.3	1192.7
50°	1157.5	1156.7	1171.6	1145.7	1148.1	1154.3	1152.8	1141.0	1137.1	1131.6
52.5°	1107.3	1112.0	1099.5	1104.2	1103.4	1094.8	1085.4	1089.3	1094.0	1097.1
55°	1042.3	1049.3	1047.0	1043.0	1033.6	1036.8	1047.7	1042.3	1034.4	1032.9
57.5°	987.4	979.6	987.4	982.7	989.0	985.1	971.7	973.3	976.4	981.1
60°	916.1	926.3	912.2	923.1	913.7	904.3	912.2	923.1	920.0	919.2
62.5°	842.4	847.1	851.8	842.4	840.9	847.1	847.9	838.5	841.6	844.8
65°	774.2	769.5	778.2	778.2	779.0	775.8	768.0	772.7	776.6	776.6
67.5°	699.8	706.9	702.9	706.9	701.4	702.9	706.1	699.8	701.4	697.5
70°	626.1	632.4	637.1	634.8	637.9	640.2	634.8	634.0	634.8	637.1
72.5°	554.0	559.5	569.7	572.1	577.6	574.4	565.8	561.9	558.0	558.0
75°	478.8	489.0	494.5	503.1	497.6	493.7	497.6	488.2	484.3	481.9
77.5°	405.9	417.7	427.9	423.2	425.5	429.4	425.5	423.2	420.8	422.4
80°	332.3	347.2	352.6	355.8	359.7	359.7	361.3	362.0	362.8	362.8
82.5°	268.0	278.2	286.8	293.9	296.2	296.2	301.7	306.4	311.1	314.2
85°	209.2	217.9	226.5	232.7	237.4	241.4	250.0	257.0	264.9	270.4
87.5°	159.9	168.5	177.9	187.3	192.0	197.5	206.9	217.1	230.4	241.4
90°	127.7	138.7	149.7	160.6	165.4	170.8	182.6	195.9	217.9	233.5
92.5°	117.5	128.5	138.7	149.7	155.2	160.6	173.2	192.0	213.2	221.8
95°	112.8	123.8	134.0	144.2	150.5	156.7	170.1	182.6	191.2	194.3
97.5°	108.9	119.1	128.5	139.5	145.0	150.5	160.6	166.9	172.4	174.8
100°	105.0	115.2	124.6	134.0	137.9	141.1	148.1	155.2	161.4	163.0
102.5°	101.9	110.5	118.3	125.4	128.5	131.7	137.9	141.1	139.5	138.7
105°	97.2	105.0	111.3	116.8	119.1	120.7	123.0	122.2	119.9	118.3
107.5°	93.3	98.7	104.2	107.4	108.9	108.9	108.1	107.4	105.8	105.8
110°	89.3	94.0	98.0	100.3	101.1	101.1	101.1	99.5	99.5	98.7





TEST NUMBER: P241469

CATALOG NUMBER: FVS8M-3-LD4-30-2STD-PA187-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	86.2	90.9	94.0	96.4	97.2	97.2	98.0	98.0	97.2	97.2
115°	83.9	88.6	92.5	95.6	97.2	98.0	99.5	100.3	99.5	99.5
117.5°	83.1	88.6	93.3	98.0	99.5	101.1	103.4	103.4	102.7	102.7
120°	83.1	89.3	94.8	99.5	101.9	104.2	106.6	106.6	105.8	105.8
122.5°	83.1	89.3	94.8	100.3	103.4	105.0	108.1	108.1	107.4	107.4
125°	81.5	88.6	94.8	100.3	103.4	105.8	108.1	108.9	108.1	108.1
127.5°	79.1	86.2	93.3	98.7	101.9	104.2	107.4	108.1	108.1	108.1
130°	76.0	83.9	90.1	96.4	99.5	101.9	105.0	106.6	107.4	107.4
132.5°	72.9	79.1	86.2	92.5	95.6	98.0	101.9	103.4	105.0	105.0
135°	68.2	75.2	82.3	88.6	91.7	94.0	98.0	100.3	101.1	101.9
137.5°	63.5	70.5	76.8	83.1	86.2	88.6	93.3	95.6	97.2	98.0
140°	58.0	65.0	71.3	77.6	80.7	83.1	87.0	90.1	91.7	92.5
142.5°	52.5	58.8	65.0	71.3	73.7	76.0	80.7	83.9	85.4	86.2
145°	47.0	52.5	58.8	64.3	66.6	68.2	72.9	75.2	77.6	78.4
147.5°	41.5	47.0	51.7	56.4	58.8	60.3	64.3	66.6	68.2	69.0
150°	36.0	40.7	45.5	49.4	50.9	52.5	54.9	57.2	58.8	59.6
152.5°	30.6	34.5	38.4	41.5	43.1	43.9	47.0	48.6	49.4	50.2
155°	24.3	28.2	32.1	34.5	36.0	36.8	39.2	40.0	40.7	41.5
157.5°	18.8	21.9	25.1	28.2	29.0	30.6	31.3	32.9	32.9	32.9
160°	14.1	16.5	19.6	21.9	22.7	24.3	25.1	25.9	26.6	26.6
162.5°	10.2	11.8	14.1	15.7	16.5	18.0	18.8	19.6	20.4	20.4
165°	7.1	7.8	9.4	11.0	11.0	11.8	13.3	13.3	14.1	14.1
167.5°	3.9	4.7	5.5	6.3	6.3	7.1	7.8	8.6	8.6	8.6
170°	1.6	1.6	2.4	2.4	2.4	3.1	3.1	3.9	3.9	3.9
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)