

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: P241472

Luminaire Tested: **FVS8M-3-LD4-50-2STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241472  
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-LD4-50-2STD-PA187-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
3FT LENGTH, 2-MODULE LED WITH PA187 LENS  
Light Source: (168) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

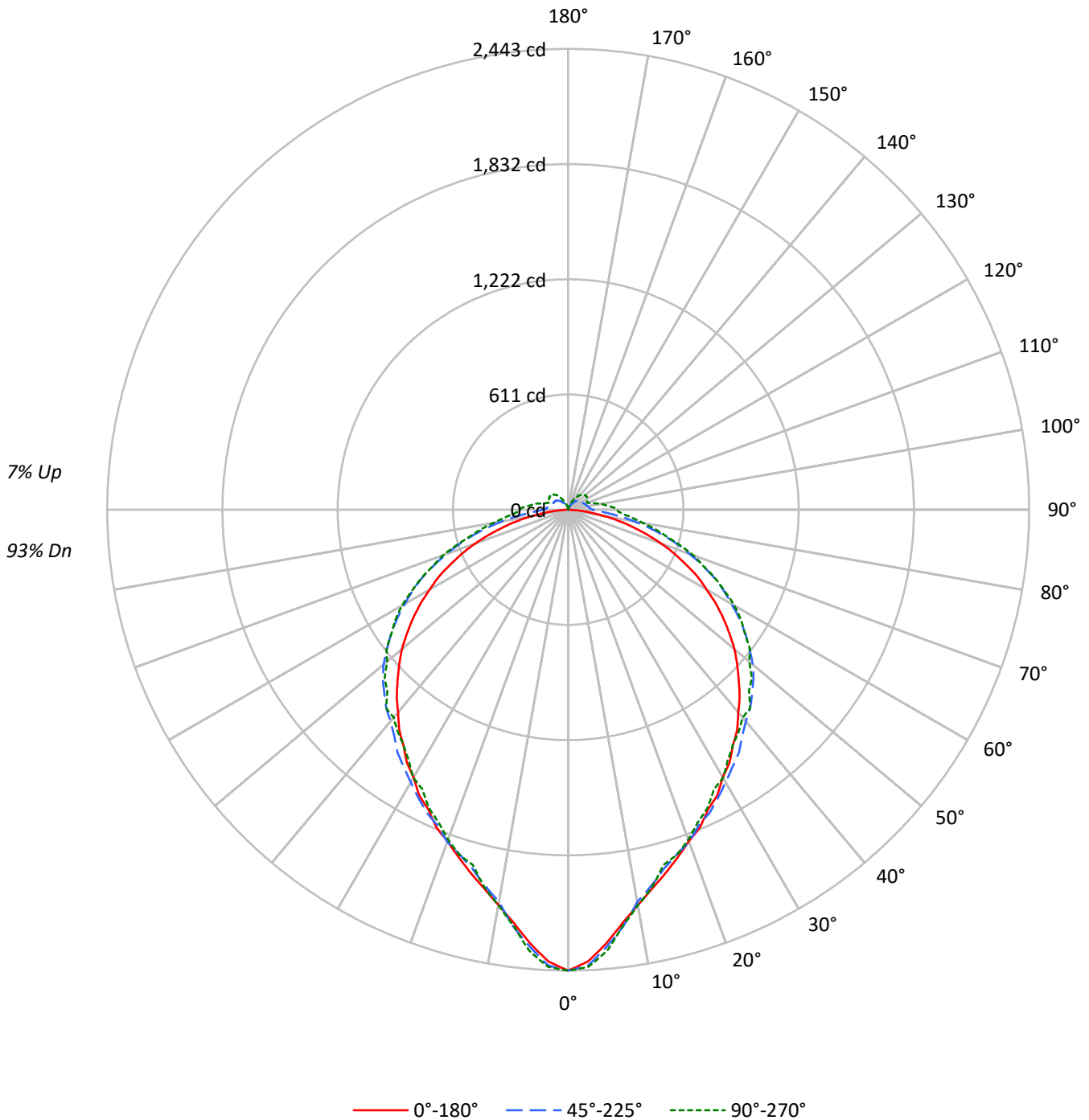
Lumens per Lamp: N/A  
Luminaire Lumens: 6569.0 lumens  
Efficiency: N/A  
Efficacy: 120.1 lumens/watt  
Spacing Criteria (0/90/45): 1.01 / 1 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')  
CIE Type: Direct

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

TEST NUMBER: P241472

CATALOG NUMBER: FVS8M-3-LD4-50-2STD-PA187-UNV-EDC1

### Luminous Intensity Polar Plot





TEST NUMBER: P241472

CATALOG NUMBER: FVS8M-3-LD4-50-2STD-PA187-UNV-EDC1

**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°	14268	14268	14268
5°	13475	13407	13502
10°	12504	12097	12139
15°	11888	11301	11116
20°	11410	10869	10685
25°	11033	10464	10174
30°	10728	10106	9786
35°	10479	9871	9367
40°	10249	9588	9219
45°	10048	9515	9130
50°	9845	9408	8963
55°	9519	9120	8797
60°	9080	8719	8539
65°	8574	8311	7999
70°	7866	7586	7427
75°	6704	6759	6530
80°	5087	5650	5920
85°	2677	4360	5596



TEST NUMBER: P241472

CATALOG NUMBER: FVS8M-3-LD4-50-2STD-PA187-UNV-EDC1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	215.2	3.3
10°-20°	558.3	8.5
20°-30°	813.1	12.4
30°-40°	971.2	14.8
40°-50°	1043.8	15.9
50°-60°	991.2	15.1
60°-70°	800.9	12.2
70°-80°	514.4	7.8
80°-90°	225.2	3.4
90°-100°	119.5	1.8
100°-110°	90.5	1.4
110°-120°	72.2	1.1
120°-130°	64.4	1.0
130°-140°	48.1	0.7
140°-150°	27.8	0.4
150°-160°	11.0	0.2
160°-170°	2.3	0.0
170°-180°	0.0	0.0
0°-30°	1586.6	24.2
0°-40°	2557.8	38.9
0°-60°	4592.8	69.9
0°-90°	6133.3	93.4
90°-120°	282.1	4.3
90°-150°	422.4	6.4
90°-180°	436.0	6.6
0°-180°	6569.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2443	2443	2443	2443	2443	
5°	2309	2311	2326	2345	2349	214
15°	1993	1986	1967	1964	1950	562
25°	1753	1772	1772	1753	1745	811
35°	1523	1560	1575	1558	1522	956
45°	1279	1328	1378	1397	1355	987
55°	1003	1066	1146	1144	1143	896
65°	688	754	854	862	859	682
75°	354	425	518	551	533	376
85°	63	122	211	263	299	80
90°	1	56	130	183	258	3
95°	1	49	113	166	215	1
105°	1	43	98	132	131	1
115°	1	40	86	108	110	1
125°	1	34	82	114	120	1
135°	1	25	67	101	113	1
145°	2	14	46	74	87	1
155°	2	5	22	40	46	1
165°	3	2	6	12	16	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241472

CATALOG NUMBER: FVS8M-3-LD4-50-2STD-PA187-UNV-EDC1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2443.4	2443.4	2443.4	2443.4	2443.4	2443.4	2443.4	2443.4	2443.4	2443.4	2443.4
2.5°	2397.5	2400.9	2400.9	2400.1	2401.8	2400.9	2405.3	2411.3	2413.9	2417.4	2418.3
5°	2309.0	2312.5	2307.3	2302.1	2305.5	2310.8	2315.1	2323.8	2322.9	2322.0	2326.4
7.5°	2208.4	2209.3	2205.0	2202.4	2200.6	2204.1	2207.6	2211.0	2218.0	2225.8	2229.2
10°	2127.8	2130.4	2122.6	2116.5	2113.9	2113.1	2118.3	2124.3	2126.9	2120.0	2110.5
12.5°	2056.7	2055.0	2052.4	2042.0	2047.2	2048.9	2050.6	2048.9	2040.2	2035.9	2040.2
15°	1993.4	1992.5	1989.9	1983.9	1985.6	1985.6	1980.4	1976.9	1976.9	1983.0	1967.4
17.5°	1931.8	1931.0	1930.1	1921.4	1924.9	1925.8	1926.6	1925.8	1930.1	1919.7	1915.4
20°	1870.3	1866.8	1867.7	1869.4	1878.1	1874.6	1873.7	1877.2	1870.3	1868.5	1873.7
22.5°	1823.5	1821.7	1818.3	1817.4	1818.3	1816.5	1819.1	1820.9	1819.1	1824.3	1810.4
25°	1753.2	1752.4	1754.1	1757.6	1765.4	1772.3	1777.5	1765.4	1774.9	1771.4	1772.3
27.5°	1709.0	1709.0	1709.9	1707.3	1712.5	1716.8	1716.8	1724.6	1728.1	1721.1	1720.3
30°	1637.9	1637.9	1643.1	1652.6	1661.3	1671.7	1670.0	1670.9	1671.7	1672.6	1668.2
32.5°	1591.1	1592.8	1595.4	1596.3	1609.3	1607.6	1609.3	1624.0	1624.9	1624.0	1619.7
35°	1522.6	1520.0	1530.4	1537.3	1556.4	1559.9	1562.5	1564.2	1572.9	1568.5	1574.6
37.5°	1470.6	1471.4	1475.8	1486.2	1487.9	1500.9	1510.4	1513.0	1512.2	1516.5	1513.9
40°	1402.1	1399.5	1406.4	1424.6	1440.2	1446.3	1451.5	1460.2	1463.6	1468.0	1464.5
42.5°	1344.8	1343.1	1350.0	1365.6	1378.6	1389.9	1395.1	1404.7	1415.9	1422.0	1427.2
45°	1278.9	1277.2	1287.6	1303.2	1321.4	1328.4	1337.9	1352.6	1366.5	1374.3	1377.8
47.5°	1213.9	1215.6	1218.2	1236.4	1262.5	1270.3	1281.5	1287.6	1314.5	1322.3	1331.8
50°	1149.7	1150.6	1158.4	1169.7	1191.4	1200.9	1216.5	1233.8	1246.0	1261.6	1277.2
52.5°	1076.9	1076.0	1088.2	1104.7	1125.5	1138.5	1148.0	1173.2	1187.0	1199.2	1209.6
55°	1003.2	1008.4	1017.1	1031.8	1052.6	1066.5	1076.0	1096.8	1123.7	1136.7	1146.3
57.5°	928.6	933.0	946.0	959.9	978.9	988.5	1003.2	1025.7	1045.7	1060.4	1075.2
60°	846.3	851.5	864.5	880.1	907.8	910.4	927.8	949.4	970.3	990.2	999.7
62.5°	776.0	776.0	785.6	805.5	825.5	837.6	854.1	873.1	896.6	913.0	929.5
65°	688.5	693.7	708.4	727.5	741.3	754.4	772.6	794.2	820.3	839.3	854.1
67.5°	607.8	610.4	626.9	641.6	665.0	678.9	687.6	716.2	740.5	757.0	769.1
70°	525.4	530.6	542.8	560.1	580.9	595.7	606.1	633.8	653.8	673.7	683.3
72.5°	437.0	443.9	459.5	476.9	497.7	510.7	521.1	548.0	568.8	586.1	606.1
75°	353.8	358.1	374.6	393.7	416.2	424.9	438.7	459.5	485.6	507.2	518.5
77.5°	274.9	278.3	294.8	310.4	332.1	344.2	356.4	379.8	401.5	421.4	436.1
80°	195.1	199.4	214.2	228.9	252.3	263.6	272.3	299.1	321.7	339.0	354.6
82.5°	124.9	129.2	143.1	161.3	178.6	190.8	200.3	221.1	244.5	261.0	279.2
85°	63.3	66.8	78.9	94.5	116.2	122.3	137.0	155.2	176.0	194.2	210.7
87.5°	19.1	24.3	36.4	51.2	68.5	77.2	88.4	107.5	125.7	143.1	161.3
90°	0.9	5.2	15.6	29.5	46.8	55.5	65.0	82.4	98.0	115.3	130.1
92.5°	0.9	4.3	13.9	27.7	43.4	52.0	59.8	76.3	91.0	104.9	117.9
95°	0.9	3.5	13.0	26.0	41.6	49.4	57.2	72.8	86.7	100.6	112.7
97.5°	0.9	3.5	12.1	25.1	39.9	47.7	55.5	69.4	82.4	96.2	109.3
100°	0.9	3.5	12.1	24.3	39.0	46.0	52.9	66.8	79.8	92.8	104.9
102.5°	0.9	3.5	11.3	24.3	37.3	44.2	51.2	64.2	77.2	90.2	101.4
105°	0.9	2.6	11.3	23.4	36.4	43.4	49.4	62.4	75.4	87.6	98.0
107.5°	0.9	2.6	10.4	22.5	35.6	42.5	48.6	61.6	72.8	85.0	94.5
110°	0.9	2.6	10.4	21.7	34.7	41.6	47.7	60.7	72.0	82.4	91.0



TEST NUMBER: P241472

CATALOG NUMBER: FVS8M-3-LD4-50-2STD-PA187-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.9	2.6	9.5	20.8	33.8	40.8	46.8	59.0	70.2	79.8	88.4
115°	0.9	1.7	9.5	19.9	32.9	39.9	46.0	58.1	68.5	78.0	85.8
117.5°	0.9	1.7	8.7	19.9	32.1	38.2	45.1	56.4	66.8	76.3	85.0
120°	0.9	1.7	8.7	19.1	30.3	37.3	43.4	54.6	65.9	75.4	84.1
122.5°	0.9	1.7	7.8	18.2	29.5	35.6	41.6	52.9	64.2	74.6	83.2
125°	0.9	0.9	6.9	16.5	27.7	33.8	39.9	51.2	61.6	72.0	81.5
127.5°	0.9	0.9	6.1	15.6	26.9	32.1	38.2	49.4	59.8	69.4	78.9
130°	0.9	0.9	5.2	13.9	25.1	30.3	35.6	46.0	56.4	65.9	75.4
132.5°	0.9	0.9	5.2	13.0	22.5	27.7	32.9	43.4	52.9	62.4	71.1
135°	0.9	0.9	4.3	11.3	20.8	25.1	30.3	39.9	49.4	58.1	66.8
137.5°	1.7	0.9	3.5	9.5	18.2	22.5	26.9	36.4	45.1	53.8	61.6
140°	1.7	0.9	2.6	7.8	15.6	19.9	24.3	32.1	40.8	48.6	57.2
142.5°	1.7	1.7	1.7	6.9	13.0	16.5	20.8	28.6	36.4	44.2	51.2
145°	1.7	1.7	1.7	5.2	10.4	13.9	17.3	24.3	31.2	39.0	46.0
147.5°	1.7	1.7	1.7	4.3	8.7	11.3	13.9	20.8	26.9	32.9	39.9
150°	1.7	1.7	1.7	3.5	6.9	9.5	11.3	16.5	22.5	28.6	33.8
152.5°	1.7	1.7	1.7	2.6	5.2	6.9	8.7	13.9	18.2	23.4	28.6
155°	1.7	1.7	1.7	1.7	4.3	5.2	6.9	10.4	14.7	18.2	22.5
157.5°	1.7	1.7	1.7	1.7	2.6	3.5	5.2	7.8	11.3	14.7	17.3
160°	1.7	1.7	1.7	1.7	1.7	2.6	3.5	5.2	7.8	10.4	13.0
162.5°	2.6	1.7	1.7	1.7	1.7	1.7	2.6	3.5	5.2	7.8	9.5
165°	2.6	1.7	1.7	1.7	0.9	1.7	1.7	2.6	3.5	4.3	6.1
167.5°	2.6	2.6	1.7	1.7	1.7	0.9	0.9	0.9	1.7	2.6	3.5
170°	2.6	2.6	1.7	1.7	1.7	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	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: P241472

CATALOG NUMBER: FVS8M-3-LD4-50-2STD-PA187-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	2443.4	2443.4	2443.4	2443.4	2443.4	2443.4	2443.4	2443.4	2443.4	2443.4
2.5°	2419.1	2424.3	2426.1	2426.9	2430.4	2428.7	2430.4	2426.9	2426.9	2426.1
5°	2325.5	2329.0	2335.0	2343.7	2344.6	2345.4	2347.2	2351.5	2353.2	2348.9
7.5°	2218.8	2223.2	2216.2	2211.0	2215.4	2214.5	2222.3	2217.1	2223.2	2224.0
10°	2104.4	2105.3	2114.8	2121.7	2120.9	2124.3	2120.9	2116.5	2121.7	2128.7
12.5°	2041.1	2028.1	2012.5	2020.3	2027.2	2029.8	2046.3	2048.9	2055.8	2050.6
15°	1961.3	1970.0	1980.4	1964.8	1963.9	1958.7	1953.5	1950.0	1949.2	1950.0
17.5°	1923.2	1908.4	1899.8	1907.6	1920.6	1928.4	1928.4	1930.1	1915.4	1918.0
20°	1856.4	1860.7	1877.2	1867.7	1862.5	1857.3	1853.8	1859.9	1865.9	1860.7
22.5°	1817.4	1824.3	1808.7	1826.9	1830.4	1836.5	1832.1	1807.8	1798.3	1794.0
25°	1769.7	1762.8	1787.9	1761.9	1753.2	1739.3	1737.6	1741.1	1746.3	1745.4
27.5°	1713.3	1728.9	1696.9	1704.7	1717.7	1719.4	1715.9	1696.9	1686.5	1671.7
30°	1678.7	1650.0	1665.6	1663.9	1645.7	1641.4	1631.8	1637.0	1641.4	1640.5
32.5°	1612.8	1619.7	1602.4	1590.2	1601.5	1610.2	1609.3	1589.3	1577.2	1573.7
35°	1563.3	1557.3	1550.3	1567.7	1558.1	1540.8	1520.0	1520.8	1521.7	1521.7
37.5°	1514.8	1499.2	1518.2	1486.2	1483.6	1490.5	1500.9	1494.8	1485.3	1483.6
40°	1458.4	1475.8	1448.0	1467.1	1469.7	1466.2	1444.5	1437.6	1438.5	1438.5
42.5°	1428.9	1422.9	1437.6	1434.1	1424.6	1423.7	1434.1	1434.1	1429.8	1427.2
45°	1389.1	1385.6	1389.1	1388.2	1396.9	1397.7	1377.8	1362.2	1357.0	1355.2
47.5°	1331.0	1350.9	1337.0	1344.0	1332.7	1319.7	1318.8	1322.3	1321.4	1319.7
50°	1280.7	1279.8	1296.3	1267.7	1270.3	1277.2	1275.5	1262.5	1258.1	1252.1
52.5°	1225.2	1230.4	1216.5	1221.7	1220.8	1211.3	1200.9	1205.2	1210.4	1213.9
55°	1153.2	1161.0	1158.4	1154.1	1143.7	1147.1	1159.3	1153.2	1144.5	1142.8
57.5°	1092.5	1083.8	1092.5	1087.3	1094.2	1089.9	1075.2	1076.9	1080.4	1085.6
60°	1013.6	1024.9	1009.3	1021.4	1011.0	1000.6	1009.3	1021.4	1017.9	1017.1
62.5°	932.1	937.3	942.5	932.1	930.4	937.3	938.2	927.8	931.2	934.7
65°	856.7	851.5	861.0	861.0	861.9	858.4	849.7	854.9	859.3	859.3
67.5°	774.3	782.1	777.8	782.1	776.0	777.8	781.2	774.3	776.0	771.7
70°	692.8	699.7	704.9	702.3	705.8	708.4	702.3	701.5	702.3	704.9
72.5°	613.0	619.1	630.4	633.0	639.0	635.6	626.0	621.7	617.4	617.4
75°	529.8	541.1	547.1	556.7	550.6	546.3	550.6	540.2	535.9	533.3
77.5°	449.1	462.2	473.4	468.2	470.8	475.2	470.8	468.2	465.6	467.4
80°	367.6	384.1	390.2	393.7	398.0	398.0	399.7	400.6	401.5	401.5
82.5°	296.5	307.8	317.3	325.2	327.8	327.8	333.8	339.0	344.2	347.7
85°	231.5	241.0	250.6	257.5	262.7	267.1	276.6	284.4	293.1	299.1
87.5°	176.9	186.4	196.8	207.2	212.4	218.5	228.9	240.2	254.9	267.1
90°	141.3	153.5	165.6	177.8	183.0	189.0	202.0	216.8	241.0	258.4
92.5°	130.1	142.2	153.5	165.6	171.7	177.8	191.6	212.4	235.8	245.4
95°	124.9	137.0	148.3	159.5	166.5	173.4	188.2	202.0	211.6	215.0
97.5°	120.5	131.8	142.2	154.3	160.4	166.5	177.8	184.7	190.8	193.4
100°	116.2	127.5	137.9	148.3	152.6	156.1	163.9	171.7	178.6	180.4
102.5°	112.7	122.3	130.9	138.7	142.2	145.7	152.6	156.1	154.3	153.5
105°	107.5	116.2	123.1	129.2	131.8	133.5	136.1	135.3	132.7	130.9
107.5°	103.2	109.3	115.3	118.8	120.5	120.5	119.7	118.8	117.1	117.1
110°	98.8	104.0	108.4	111.0	111.9	111.9	111.9	110.1	110.1	109.3





TEST NUMBER: P241472

CATALOG NUMBER: FVS8M-3-LD4-50-2STD-PA187-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	95.4	100.6	104.0	106.7	107.5	107.5	108.4	108.4	107.5	107.5
115°	92.8	98.0	102.3	105.8	107.5	108.4	110.1	111.0	110.1	110.1
117.5°	91.9	98.0	103.2	108.4	110.1	111.9	114.5	114.5	113.6	113.6
120°	91.9	98.8	104.9	110.1	112.7	115.3	117.9	117.9	117.1	117.1
122.5°	91.9	98.8	104.9	111.0	114.5	116.2	119.7	119.7	118.8	118.8
125°	90.2	98.0	104.9	111.0	114.5	117.1	119.7	120.5	119.7	119.7
127.5°	87.6	95.4	103.2	109.3	112.7	115.3	118.8	119.7	119.7	119.7
130°	84.1	92.8	99.7	106.7	110.1	112.7	116.2	117.9	118.8	118.8
132.5°	80.6	87.6	95.4	102.3	105.8	108.4	112.7	114.5	116.2	116.2
135°	75.4	83.2	91.0	98.0	101.4	104.0	108.4	111.0	111.9	112.7
137.5°	70.2	78.0	85.0	91.9	95.4	98.0	103.2	105.8	107.5	108.4
140°	64.2	72.0	78.9	85.8	89.3	91.9	96.2	99.7	101.4	102.3
142.5°	58.1	65.0	72.0	78.9	81.5	84.1	89.3	92.8	94.5	95.4
145°	52.0	58.1	65.0	71.1	73.7	75.4	80.6	83.2	85.8	86.7
147.5°	46.0	52.0	57.2	62.4	65.0	66.8	71.1	73.7	75.4	76.3
150°	39.9	45.1	50.3	54.6	56.4	58.1	60.7	63.3	65.0	65.9
152.5°	33.8	38.2	42.5	46.0	47.7	48.6	52.0	53.8	54.6	55.5
155°	26.9	31.2	35.6	38.2	39.9	40.8	43.4	44.2	45.1	46.0
157.5°	20.8	24.3	27.7	31.2	32.1	33.8	34.7	36.4	36.4	36.4
160°	15.6	18.2	21.7	24.3	25.1	26.9	27.7	28.6	29.5	29.5
162.5°	11.3	13.0	15.6	17.3	18.2	19.9	20.8	21.7	22.5	22.5
165°	7.8	8.7	10.4	12.1	12.1	13.0	14.7	14.7	15.6	15.6
167.5°	4.3	5.2	6.1	6.9	6.9	7.8	8.7	9.5	9.5	9.5
170°	1.7	1.7	2.6	2.6	2.6	3.5	3.5	4.3	4.3	4.3
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)