

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: P241596

Luminaire Tested: **FVS8M-3-LD4-50-3HI-O-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241596  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-29)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS8M-3-LD4-50-3HI-O-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
3FT LENGTH, 3-MODULE LED WITH OPAL LENS  
Light Source: (252) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

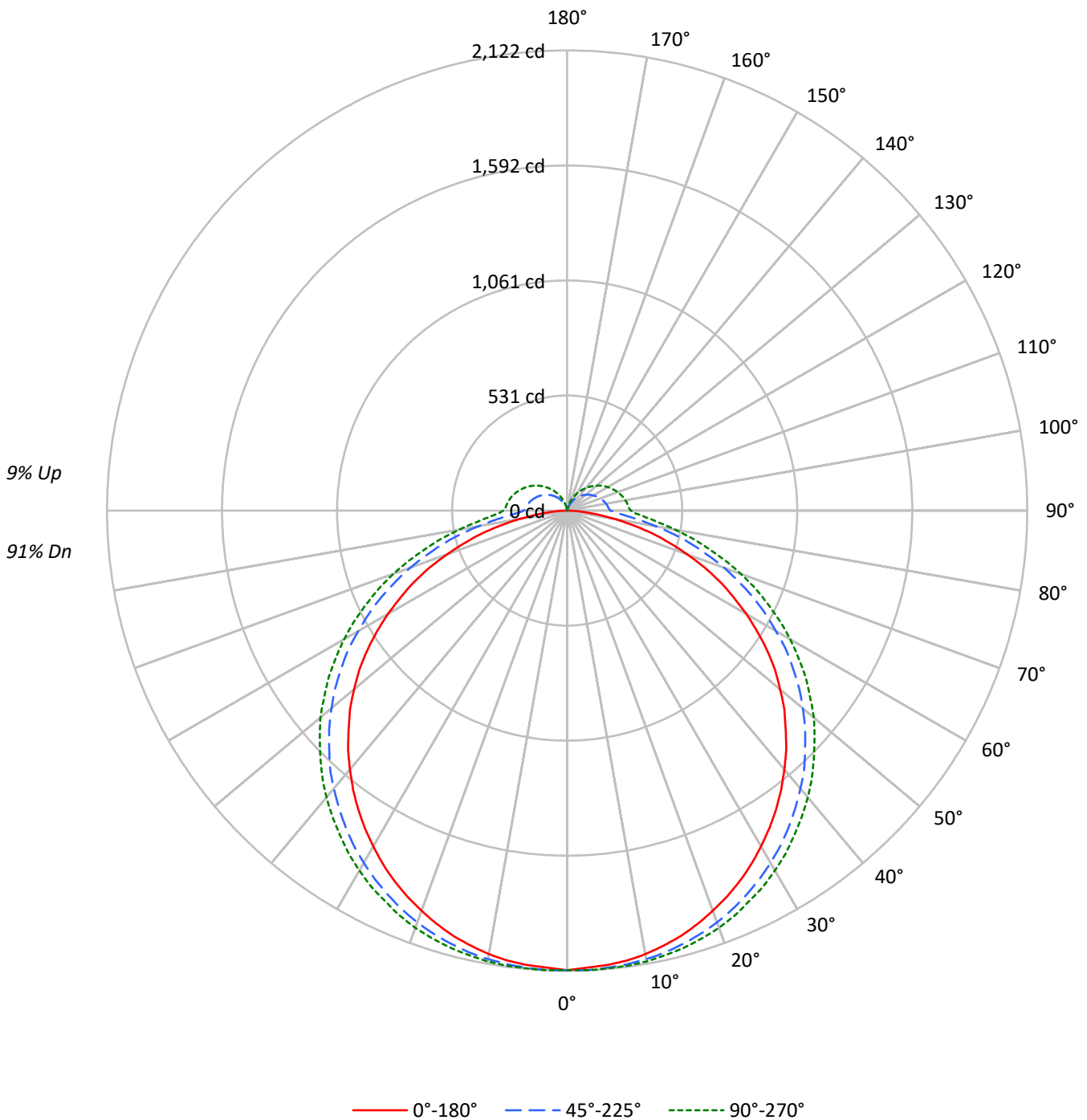
Lumens per Lamp: N/A  
Luminaire Lumens: 7618.0 lumens  
Efficiency: N/A  
Efficacy: 72.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.34 / 1.44  
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')  
CIE Type: Direct

Input Watts (W): 105  
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-LD4-50-3HI-O-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	113	113	113	113	106	106	106	99	99	99	93	93	93	91
1	105	100	95	91	102	97	93	89	91	88	84	85	83	80	80	78	76	73
2	95	87	79	73	92	84	77	72	79	73	68	74	69	66	70	66	63	60
3	87	76	67	60	83	73	65	59	69	62	57	65	59	55	61	56	53	50
4	79	67	57	51	76	65	56	50	61	54	48	57	51	46	54	49	45	42
5	72	59	50	43	70	58	49	42	54	47	41	51	45	40	49	43	39	36
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	31
7	62	48	39	33	59	47	38	32	44	37	31	42	36	31	40	34	30	28
8	57	44	35	29	55	43	34	29	40	33	28	38	32	27	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	35	29	24	34	28	24	22
10	50	37	29	24	48	36	28	23	34	27	23	33	27	22	31	26	22	20

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

	0°	45°	90°
0°	12376	12376	12376
5°	12277	12196	12183
10°	12204	12040	12038
15°	12106	11881	11892
20°	11978	11721	11758
25°	11859	11543	11585
30°	11708	11365	11433
35°	11566	11168	11240
40°	11387	10955	11063
45°	11194	10715	10838
50°	10980	10448	10630
55°	10686	10118	10336
60°	10231	9695	9970
65°	9699	9199	9507
70°	8812	8544	8974
75°	7665	7700	8238
80°	5775	6595	7437
85°	3122	5616	6829



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	201.3	2.6
10°-20°	582.8	7.6
20°-30°	897.7	11.8
30°-40°	1107.6	14.5
40°-50°	1187.2	15.6
50°-60°	1122.6	14.7
60°-70°	916.0	12.0
70°-80°	600.7	7.9
80°-90°	286.7	3.8
90°-100°	184.7	2.4
100°-110°	163.6	2.1
110°-120°	135.0	1.8
120°-130°	102.4	1.3
130°-140°	69.3	0.9
140°-150°	39.7	0.5
150°-160°	16.9	0.2
160°-170°	3.8	0.0
170°-180°	0.1	0.0
0°-30°	1681.8	22.1
0°-40°	2789.4	36.6
0°-60°	5099.2	66.9
0°-90°	6902.6	90.6
90°-120°	483.3	6.3
90°-150°	694.7	9.1
90°-180°	715.0	9.4
0°-180°	7618.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2119	2119	2119	2119	2119	
5°	2104	2109	2116	2119	2119	200
15°	2030	2044	2068	2083	2086	573
25°	1884	1914	1955	1980	1987	868
35°	1680	1724	1781	1817	1826	1051
45°	1425	1485	1552	1597	1609	1100
55°	1126	1192	1272	1326	1343	1005
65°	779	855	945	1006	1021	767
75°	404	490	591	652	673	425
85°	74	167	271	339	365	92
90°	3	94	200	270	293	4
95°	1	86	189	258	281	1
105°	1	76	173	239	262	1
115°	1	64	152	212	233	1
125°	1	51	127	180	199	1
135°	1	37	99	142	158	1
145°	2	22	70	103	114	1
155°	2	9	36	62	69	1
165°	2	2	10	21	26	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241596

CATALOG NUMBER: FVS8M-3-LD4-50-3HI-O-UNV-EDC1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2119.4	2119.4	2119.4	2119.4	2119.4	2119.4	2119.4	2119.4	2119.4	2119.4	2119.4
2.5°	2110.0	2112.1	2113.1	2112.1	2113.1	2115.2	2116.3	2118.3	2119.4	2120.4	2121.5
5°	2103.8	2104.8	2106.9	2106.9	2107.9	2109.0	2111.1	2112.1	2114.2	2115.2	2116.3
7.5°	2093.4	2094.4	2095.5	2096.5	2097.5	2098.6	2099.6	2102.7	2105.9	2107.9	2110.0
10°	2076.7	2077.8	2079.9	2079.9	2081.9	2084.0	2087.1	2091.3	2095.5	2098.6	2100.7
12.5°	2054.9	2057.0	2058.0	2060.1	2063.2	2065.3	2068.4	2073.6	2079.9	2083.0	2087.1
15°	2030.0	2032.0	2032.0	2035.2	2040.4	2044.5	2047.6	2052.8	2060.1	2064.3	2068.4
17.5°	1998.8	2002.9	2002.9	2007.1	2013.3	2017.5	2020.6	2027.9	2036.2	2040.4	2046.6
20°	1963.4	1966.5	1968.6	1973.8	1982.1	1987.3	1990.4	1997.7	2008.1	2014.4	2020.6
22.5°	1926.0	1927.0	1933.2	1938.4	1947.8	1952.0	1958.2	1967.6	1973.8	1983.2	1990.4
25°	1884.4	1885.4	1890.6	1897.9	1907.2	1914.5	1918.7	1929.1	1939.5	1948.8	1955.1
27.5°	1838.6	1838.6	1844.8	1855.2	1865.6	1870.8	1879.2	1890.6	1900.0	1908.3	1917.6
30°	1787.6	1789.7	1796.0	1808.4	1818.8	1825.1	1833.4	1844.8	1857.3	1866.7	1876.0
32.5°	1735.7	1737.7	1747.1	1757.5	1771.0	1776.2	1784.5	1799.1	1810.5	1823.0	1831.3
35°	1680.5	1679.5	1693.0	1703.4	1716.9	1724.2	1733.6	1747.1	1759.6	1773.1	1781.4
37.5°	1621.3	1623.3	1633.7	1646.2	1660.8	1670.1	1679.5	1692.0	1704.5	1720.1	1728.4
40°	1557.8	1559.9	1573.4	1586.9	1603.6	1611.9	1619.2	1633.7	1649.3	1662.9	1673.3
42.5°	1495.4	1497.5	1507.9	1523.5	1540.1	1546.4	1557.8	1573.4	1590.1	1604.6	1618.1
45°	1424.7	1427.8	1441.3	1458.0	1474.6	1485.0	1491.3	1508.9	1524.5	1541.2	1551.6
47.5°	1358.2	1359.2	1373.8	1389.4	1407.0	1419.5	1426.8	1447.6	1460.1	1475.7	1488.1
50°	1282.2	1285.4	1298.9	1315.5	1336.3	1344.6	1353.0	1372.7	1390.4	1403.9	1418.5
52.5°	1208.4	1209.4	1223.0	1242.7	1261.4	1269.8	1278.1	1298.9	1318.6	1335.3	1348.8
55°	1126.2	1133.5	1146.0	1161.6	1182.4	1191.8	1201.1	1223.0	1240.6	1258.3	1271.8
57.5°	1041.0	1048.3	1062.8	1080.5	1101.3	1111.7	1122.1	1141.8	1162.6	1179.3	1198.0
60°	953.6	963.0	978.6	996.3	1019.1	1026.4	1037.9	1056.6	1078.4	1098.2	1111.7
62.5°	865.2	874.6	891.2	907.9	931.8	944.3	953.6	975.5	996.3	1013.9	1030.6
65°	778.9	785.2	798.7	822.6	843.4	854.8	865.2	890.2	905.8	930.7	945.3
67.5°	685.3	690.5	708.2	732.1	754.0	763.3	776.8	800.7	818.4	841.3	855.9
70°	588.6	599.0	614.6	637.5	662.4	671.8	684.3	707.2	732.1	749.8	769.6
72.5°	495.0	504.4	524.1	543.9	567.8	581.3	591.7	616.7	638.5	663.5	677.0
75°	404.5	409.7	429.5	452.4	475.2	489.8	498.1	524.1	546.0	569.9	590.7
77.5°	307.8	319.3	339.0	361.9	390.0	403.5	411.8	438.9	460.7	483.6	503.3
80°	221.5	227.7	248.5	273.5	297.4	312.0	323.4	349.4	370.2	399.3	413.9
82.5°	140.4	152.9	168.5	194.5	221.5	235.0	250.6	272.5	294.3	315.1	336.9
85°	73.8	83.2	100.9	126.9	152.9	167.4	178.9	205.9	228.8	248.5	271.4
87.5°	25.0	33.3	53.0	75.9	104.0	117.5	130.0	155.0	179.9	200.7	222.5
90°	3.1	11.4	30.2	54.1	80.1	93.6	106.1	131.0	156.0	177.8	199.7
92.5°	1.0	8.3	27.0	51.0	75.9	88.4	101.9	126.9	149.8	171.6	192.4
95°	1.0	8.3	25.0	48.9	73.8	86.3	98.8	123.8	146.6	168.5	189.3
97.5°	1.0	7.3	23.9	46.8	70.7	84.2	96.7	120.6	144.6	166.4	186.1
100°	1.0	7.3	22.9	44.7	68.6	81.1	93.6	117.5	140.4	162.2	182.0
102.5°	1.0	6.2	21.8	42.6	66.6	78.0	90.5	113.4	136.2	158.1	177.8
105°	1.0	6.2	20.8	41.6	64.5	75.9	87.4	110.2	132.1	153.9	172.6
107.5°	1.0	5.2	19.8	39.5	61.4	72.8	84.2	107.1	127.9	148.7	168.5
110°	1.0	5.2	18.7	37.4	59.3	69.7	81.1	103.0	123.8	144.6	162.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.0	4.2	17.7	35.4	56.2	67.6	78.0	99.8	119.6	139.4	157.0
115°	1.0	4.2	15.6	33.3	54.1	64.5	74.9	94.6	115.4	134.2	151.8
117.5°	1.0	3.1	14.6	31.2	51.0	61.4	70.7	90.5	110.2	129.0	145.6
120°	1.0	3.1	13.5	30.2	47.8	57.2	67.6	86.3	105.0	122.7	139.4
122.5°	1.0	2.1	12.5	28.1	45.8	54.1	63.4	82.2	99.8	117.5	133.1
125°	1.0	2.1	11.4	26.0	42.6	51.0	60.3	78.0	94.6	111.3	126.9
127.5°	1.0	2.1	10.4	23.9	39.5	47.8	56.2	72.8	89.4	105.0	120.6
130°	1.0	2.1	8.3	21.8	36.4	44.7	52.0	68.6	84.2	98.8	113.4
132.5°	1.0	2.1	7.3	19.8	33.3	40.6	48.9	63.4	79.0	92.6	106.1
135°	1.0	1.0	6.2	16.6	30.2	37.4	44.7	59.3	72.8	86.3	98.8
137.5°	1.0	1.0	5.2	14.6	27.0	33.3	40.6	54.1	67.6	80.1	91.5
140°	1.0	1.0	4.2	12.5	22.9	29.1	35.4	48.9	61.4	72.8	84.2
142.5°	2.1	2.1	3.1	10.4	19.8	25.0	31.2	42.6	55.1	66.6	77.0
145°	2.1	2.1	2.1	8.3	16.6	21.8	27.0	37.4	47.8	59.3	69.7
147.5°	2.1	2.1	2.1	7.3	13.5	17.7	22.9	32.2	41.6	52.0	61.4
150°	2.1	2.1	2.1	5.2	11.4	14.6	18.7	26.0	35.4	43.7	52.0
152.5°	2.1	2.1	2.1	4.2	8.3	11.4	14.6	21.8	29.1	36.4	43.7
155°	2.1	2.1	2.1	3.1	6.2	9.4	11.4	17.7	22.9	30.2	36.4
157.5°	2.1	2.1	2.1	2.1	4.2	6.2	8.3	13.5	17.7	22.9	28.1
160°	2.1	2.1	2.1	2.1	3.1	5.2	6.2	9.4	13.5	17.7	21.8
162.5°	2.1	2.1	2.1	2.1	2.1	3.1	4.2	6.2	9.4	12.5	15.6
165°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	4.2	6.2	7.3	10.4
167.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.1	4.2	5.2
170°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.0	2.1	2.1
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°	2119.4	2119.4	2119.4	2119.4	2119.4	2119.4	2119.4	2119.4	2119.4	2119.4
2.5°	2121.5	2121.5	2122.5	2122.5	2122.5	2121.5	2122.5	2121.5	2121.5	2121.5
5°	2116.3	2117.3	2118.3	2119.4	2119.4	2119.4	2119.4	2118.3	2119.4	2119.4
7.5°	2112.1	2112.1	2114.2	2115.2	2116.3	2116.3	2116.3	2116.3	2117.3	2117.3
10°	2102.7	2104.8	2106.9	2109.0	2109.0	2110.0	2111.1	2110.0	2111.1	2111.1
12.5°	2089.2	2091.3	2094.4	2096.5	2098.6	2097.5	2099.6	2099.6	2099.6	2099.6
15°	2071.5	2075.7	2077.8	2080.9	2083.0	2084.0	2084.0	2086.1	2086.1	2086.1
17.5°	2049.7	2054.9	2058.0	2062.2	2063.2	2065.3	2066.3	2066.3	2068.4	2068.4
20°	2025.8	2030.0	2034.1	2038.3	2040.4	2042.4	2044.5	2044.5	2045.6	2047.6
22.5°	1994.6	2001.9	2006.0	2011.2	2014.4	2014.4	2016.4	2019.6	2019.6	2020.6
25°	1961.3	1967.6	1973.8	1979.0	1980.0	1982.1	1985.2	1987.3	1990.4	1987.3
27.5°	1924.9	1932.2	1939.5	1943.6	1944.7	1946.8	1950.9	1953.0	1954.0	1956.1
30°	1882.3	1891.6	1898.9	1903.1	1905.2	1908.3	1911.4	1913.5	1916.6	1916.6
32.5°	1838.6	1845.9	1856.3	1861.5	1864.6	1867.7	1869.8	1872.9	1875.0	1875.0
35°	1790.8	1801.2	1805.3	1814.7	1816.8	1818.8	1824.0	1827.2	1827.2	1826.1
37.5°	1742.9	1751.2	1756.4	1764.8	1768.9	1770.0	1774.1	1776.2	1779.3	1778.3
40°	1683.7	1697.2	1705.5	1709.7	1713.8	1719.0	1721.1	1724.2	1727.3	1726.3
42.5°	1628.5	1634.8	1647.3	1655.6	1657.7	1660.8	1666.0	1668.1	1672.2	1671.2
45°	1565.1	1577.6	1585.9	1593.2	1597.3	1601.5	1604.6	1607.7	1612.9	1608.8
47.5°	1501.7	1512.1	1523.5	1532.9	1534.9	1539.1	1543.3	1547.4	1549.5	1547.4
50°	1434.1	1444.5	1455.9	1463.2	1467.3	1470.5	1477.7	1481.9	1482.9	1485.0
52.5°	1363.4	1377.9	1386.2	1395.6	1399.8	1406.0	1409.1	1415.4	1413.3	1412.2
55°	1288.5	1297.8	1312.4	1321.8	1325.9	1328.0	1333.2	1338.4	1338.4	1342.6
57.5°	1208.4	1224.0	1235.4	1245.8	1247.9	1254.2	1259.4	1262.5	1264.6	1265.6
60°	1128.3	1143.9	1155.4	1167.8	1171.0	1175.1	1178.2	1183.4	1187.6	1187.6
62.5°	1046.2	1058.7	1073.2	1083.6	1087.8	1091.9	1099.2	1103.4	1105.5	1107.5
65°	963.0	978.6	987.9	1001.5	1005.6	1008.7	1010.8	1022.3	1021.2	1021.2
67.5°	875.6	887.1	901.6	915.1	918.3	922.4	928.7	935.9	934.9	939.1
70°	787.2	799.7	816.3	825.7	833.0	838.2	839.2	845.5	850.7	851.7
72.5°	694.7	712.4	726.9	737.3	741.5	748.8	755.0	761.2	762.3	762.3
75°	606.3	620.8	637.5	646.8	652.0	657.2	663.5	671.8	671.8	672.8
77.5°	520.0	537.6	549.1	559.5	565.7	568.8	579.2	581.3	584.4	590.7
80°	432.6	448.2	463.8	475.2	480.4	485.6	494.0	499.2	502.3	504.4
82.5°	356.7	372.3	387.9	399.3	404.5	410.8	414.9	425.3	427.4	427.4
85°	288.1	305.7	322.4	332.8	339.0	345.3	352.5	359.8	361.9	365.0
87.5°	243.3	261.0	275.6	289.1	294.3	298.5	306.8	314.1	316.1	317.2
90°	218.4	235.0	251.7	264.1	270.4	274.5	283.9	289.1	292.2	293.3
92.5°	211.1	227.7	243.3	255.8	262.1	266.2	274.5	280.8	283.9	284.9
95°	208.0	224.6	239.2	252.7	257.9	263.1	271.4	276.6	279.7	280.8
97.5°	204.9	221.5	236.1	248.5	254.8	260.0	267.3	273.5	276.6	277.7
100°	200.7	217.3	231.9	244.4	249.6	254.8	263.1	268.3	271.4	272.5
102.5°	196.5	212.1	226.7	239.2	244.4	249.6	256.9	263.1	266.2	267.3
105°	191.3	206.9	221.5	232.9	239.2	243.3	251.7	256.9	261.0	262.1
107.5°	186.1	201.7	215.3	227.7	232.9	237.1	245.4	251.7	254.8	254.8
110°	179.9	195.5	209.0	221.5	226.7	230.9	238.1	244.4	247.5	248.5





TEST NUMBER: P241596

CATALOG NUMBER: FVS8M-3-LD4-50-3HI-O-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	174.7	189.3	202.8	214.2	219.4	223.6	230.9	237.1	239.2	240.2
115°	167.4	183.0	195.5	206.9	212.1	216.3	223.6	228.8	231.9	232.9
117.5°	161.2	175.7	188.2	199.7	203.8	208.0	215.3	220.5	223.6	224.6
120°	155.0	168.5	180.9	191.3	196.5	200.7	206.9	212.1	215.3	216.3
122.5°	147.7	161.2	173.7	183.0	188.2	191.3	198.6	203.8	206.9	208.0
125°	141.4	153.9	165.3	174.7	179.9	183.0	189.3	194.5	197.6	198.6
127.5°	134.2	146.6	157.0	166.4	170.5	174.7	179.9	185.1	187.2	188.2
130°	126.9	138.3	148.7	157.0	161.2	164.3	170.5	174.7	177.8	178.9
132.5°	118.6	130.0	139.4	147.7	151.8	155.0	161.2	165.3	167.4	168.5
135°	111.3	121.7	131.0	138.3	142.5	145.6	150.8	155.0	157.0	158.1
137.5°	103.0	113.4	121.7	129.0	133.1	135.2	140.4	144.6	146.6	147.7
140°	94.6	104.0	112.3	119.6	122.7	125.8	130.0	133.1	135.2	136.2
142.5°	87.4	95.7	103.0	109.2	112.3	115.4	119.6	122.7	124.8	125.8
145°	79.0	86.3	93.6	99.8	103.0	105.0	109.2	112.3	113.4	114.4
147.5°	70.7	78.0	84.2	90.5	92.6	94.6	98.8	100.9	103.0	103.0
150°	61.4	68.6	74.9	80.1	82.2	84.2	87.4	89.4	91.5	92.6
152.5°	52.0	59.3	65.5	69.7	71.8	73.8	77.0	79.0	80.1	81.1
155°	42.6	48.9	56.2	60.3	62.4	63.4	65.5	67.6	68.6	68.6
157.5°	33.3	39.5	44.7	49.9	51.0	53.0	55.1	57.2	57.2	58.2
160°	26.0	30.2	34.3	39.5	40.6	42.6	44.7	45.8	46.8	46.8
162.5°	18.7	21.8	25.0	29.1	30.2	32.2	34.3	35.4	35.4	36.4
165°	12.5	14.6	16.6	19.8	20.8	21.8	23.9	25.0	25.0	26.0
167.5°	7.3	8.3	10.4	11.4	12.5	12.5	14.6	15.6	15.6	15.6
170°	3.1	3.1	4.2	5.2	5.2	5.2	6.2	7.3	7.3	7.3
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)