

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: P241480

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241480
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-30)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-50-3LO-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 3-MODULE LED WITH PA187 LENS
Light Source: (252) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

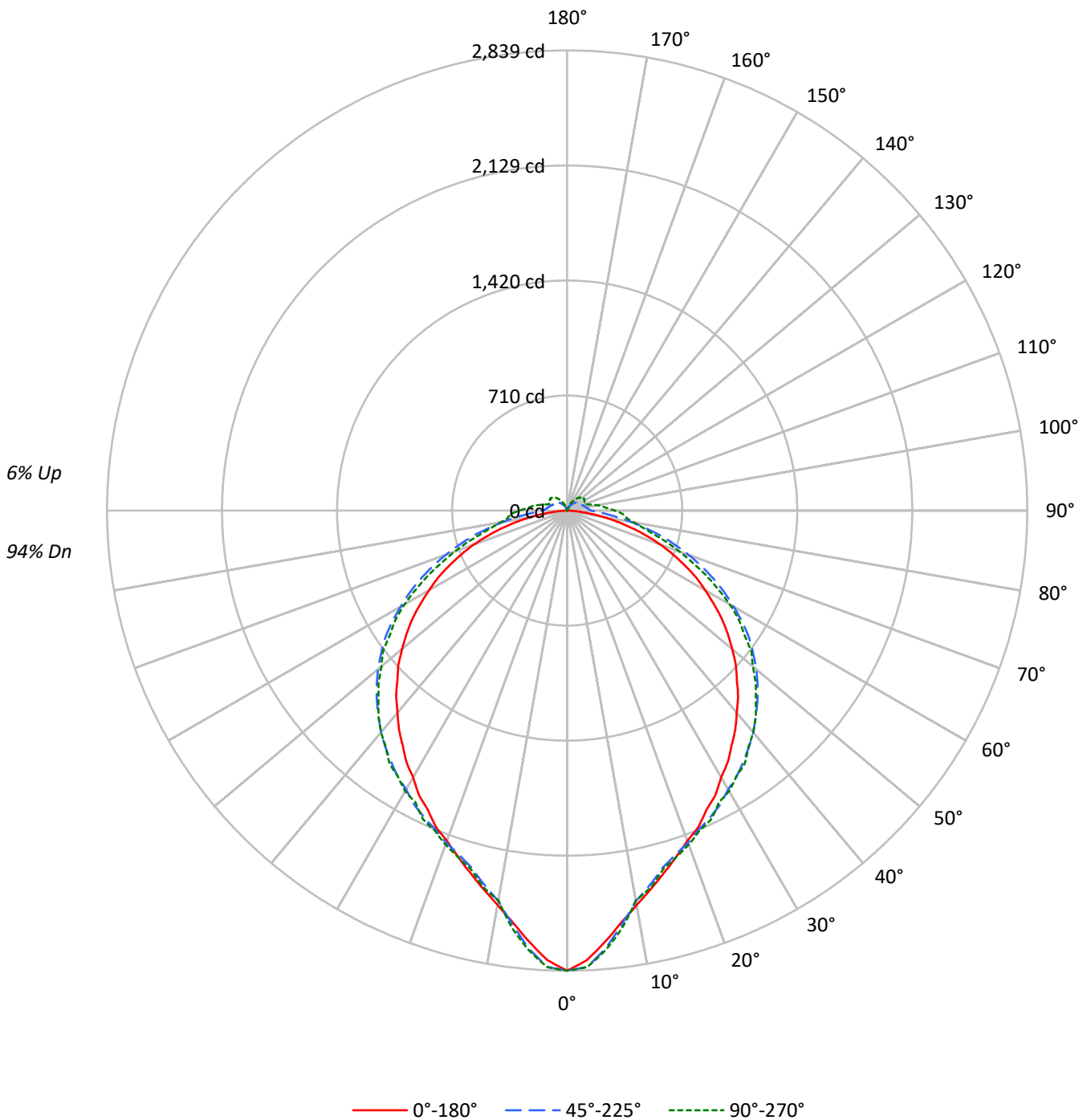
Lumens per Lamp: N/A
Luminaire Lumens: 7673.0 lumens
Efficiency: N/A
Efficacy: 124.6 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1.04 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 61.6
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-LD4-50-3LO-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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	107	101	97	93	103	99	94	91	93	90	87	88	85	83	84	81	79	77
2	97	88	81	75	93	85	79	73	81	75	71	77	72	68	73	69	66	63
3	88	77	68	62	85	75	67	61	71	64	59	67	62	57	64	59	55	53
4	80	68	59	52	77	66	58	51	63	56	50	60	54	49	57	52	47	45
5	74	61	51	45	71	59	51	44	56	49	43	54	47	42	51	46	41	39
6	68	54	45	39	66	53	45	38	51	43	38	48	42	37	46	41	36	34
7	63	49	40	34	61	48	40	34	46	39	33	44	37	33	42	36	32	30
8	59	45	36	30	57	44	36	30	42	35	30	40	34	29	39	33	29	27
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	35	28	24	33	28	23	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16576	16576	16576
5°	15588	15624	15650
10°	14517	14016	13936
15°	13794	13095	13058
20°	13230	12654	12597
25°	12811	12331	12258
30°	12445	12037	11928
35°	12172	11865	11750
40°	11896	11698	11446
45°	11636	11469	11088
50°	11381	11223	10703
55°	11054	10904	10273
60°	10550	10356	9740
65°	9965	9707	8812
70°	9167	8838	7766
75°	7775	7797	6651
80°	5924	6375	6099
85°	2982	4966	6687



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.1	3.3
10°-20°	649.3	8.5
20°-30°	959.4	12.5
30°-40°	1170.2	15.3
40°-50°	1245.7	16.2
50°-60°	1171.0	15.3
60°-70°	927.4	12.1
70°-80°	576.8	7.5
80°-90°	254.3	3.3
90°-100°	135.2	1.8
100°-110°	99.6	1.3
110°-120°	77.7	1.0
120°-130°	67.4	0.9
130°-140°	48.6	0.6
140°-150°	27.3	0.4
150°-160°	10.8	0.1
160°-170°	2.2	0.0
170°-180°	0.0	0.0
0°-30°	1858.8	24.2
0°-40°	3029.0	39.5
0°-60°	5445.7	71.0
0°-90°	7204.3	93.9
90°-120°	312.5	4.1
90°-150°	455.7	5.9
90°-180°	469.0	6.1
0°-180°	7673.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2839	2839	2839	2839	2839	
5°	2671	2690	2711	2726	2723	249
15°	2313	2302	2280	2281	2291	652
25°	2036	2063	2089	2093	2103	941
35°	1768	1840	1893	1910	1909	1108
45°	1481	1570	1661	1659	1646	1146
55°	1165	1261	1370	1360	1334	1039
65°	800	894	998	987	947	793
75°	410	501	598	595	543	436
85°	70	150	240	290	357	92
90°	1	69	148	212	294	4
95°	1	58	130	188	231	1
105°	1	49	108	145	144	1
115°	1	42	93	116	118	1
125°	1	35	85	119	127	1
135°	1	26	68	100	114	1
145°	2	14	46	71	82	1
155°	2	5	22	39	45	1
165°	3	1	5	11	14	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	



TEST NUMBER: P241480

CATALOG NUMBER: FVS8M-3-LD4-50-3LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2838.6	2838.6	2838.6	2838.6	2838.6	2838.6	2838.6	2838.6	2838.6	2838.6	2838.6
2.5°	2776.8	2782.3	2787.0	2789.7	2792.4	2799.9	2805.3	2806.0	2814.1	2820.2	2818.2
5°	2671.1	2675.8	2685.3	2690.1	2686.7	2690.1	2697.5	2700.2	2702.3	2705.0	2711.1
7.5°	2562.6	2559.9	2568.0	2566.0	2569.3	2567.3	2568.7	2568.0	2574.8	2576.1	2576.8
10°	2470.3	2473.1	2474.4	2469.0	2468.3	2470.3	2466.3	2462.2	2460.2	2450.0	2445.3
12.5°	2390.3	2390.3	2391.0	2380.8	2376.1	2372.7	2377.4	2376.1	2367.3	2358.5	2363.9
15°	2313.0	2315.1	2316.4	2309.0	2302.9	2301.5	2303.5	2290.0	2291.3	2296.1	2279.8
17.5°	2239.1	2247.2	2243.9	2235.0	2235.0	2235.0	2233.0	2230.3	2233.0	2228.3	2223.5
20°	2168.6	2170.6	2169.9	2174.0	2174.0	2173.3	2172.7	2174.0	2179.4	2168.6	2181.5
22.5°	2113.7	2115.7	2119.1	2111.6	2109.6	2106.9	2112.3	2127.9	2123.2	2131.3	2127.9
25°	2035.7	2036.4	2035.7	2043.1	2055.3	2062.8	2068.2	2069.6	2073.7	2085.9	2088.6
27.5°	1979.4	1980.1	1988.9	1992.3	1999.1	2007.2	2008.6	2019.4	2030.3	2035.0	2045.2
30°	1900.1	1909.5	1910.9	1928.5	1946.8	1952.9	1957.0	1968.5	1976.7	1989.6	1986.9
32.5°	1843.1	1848.5	1861.4	1872.3	1885.1	1889.9	1900.7	1918.4	1930.6	1943.5	1945.5
35°	1768.5	1771.2	1784.1	1802.4	1830.2	1840.4	1852.6	1856.0	1874.3	1888.5	1892.6
37.5°	1704.1	1708.8	1725.8	1742.1	1757.7	1771.9	1788.2	1805.8	1820.7	1832.2	1841.1
40°	1627.5	1630.8	1650.5	1671.5	1701.4	1715.6	1721.0	1747.5	1763.8	1773.9	1786.8
42.5°	1561.7	1565.1	1582.7	1603.7	1625.4	1645.8	1658.7	1683.7	1700.7	1712.9	1722.4
45°	1481.0	1488.4	1504.7	1533.2	1563.0	1570.5	1584.7	1609.1	1632.2	1653.2	1660.7
47.5°	1412.5	1415.2	1434.9	1454.5	1484.4	1500.7	1517.6	1538.6	1566.4	1580.7	1593.6
50°	1329.1	1337.9	1354.2	1379.9	1407.1	1422.0	1441.7	1468.8	1491.2	1510.8	1523.7
52.5°	1249.1	1253.8	1272.8	1299.9	1330.4	1348.1	1362.3	1390.1	1420.6	1438.3	1446.4
55°	1165.0	1170.4	1191.4	1217.9	1247.0	1261.3	1278.9	1309.4	1339.9	1356.2	1370.5
57.5°	1073.4	1085.0	1104.0	1132.4	1158.2	1172.4	1191.4	1226.0	1252.5	1270.1	1280.9
60°	983.3	991.4	1011.7	1036.8	1073.4	1089.7	1104.6	1135.2	1157.5	1177.2	1187.4
62.5°	900.5	904.6	922.9	946.6	977.2	992.1	1009.0	1042.3	1065.3	1082.3	1094.5
65°	800.2	811.0	828.0	850.3	879.5	893.7	910.7	943.9	969.0	989.4	997.5
67.5°	706.6	709.3	731.0	756.8	785.9	799.5	813.7	845.6	870.0	886.3	896.5
70°	612.3	613.7	636.7	655.7	687.6	702.5	714.7	742.5	771.0	784.6	796.1
72.5°	509.3	515.4	539.1	559.4	585.2	598.8	617.1	644.2	667.3	684.2	693.0
75°	410.3	415.7	432.6	459.8	486.2	501.1	518.8	544.5	563.5	584.5	598.1
77.5°	314.6	329.6	338.4	362.1	391.9	409.6	421.8	445.5	464.5	481.5	492.3
80°	227.2	230.6	248.9	270.6	299.0	310.6	324.1	349.9	368.9	387.9	400.1
82.5°	142.4	149.2	167.5	187.8	212.2	223.8	236.7	261.1	282.1	297.0	313.3
85°	70.5	77.3	94.3	113.2	139.7	150.5	162.7	185.1	204.8	221.1	240.0
87.5°	23.7	29.2	44.1	63.1	85.4	95.6	106.5	126.8	144.4	164.1	179.7
90°	1.4	6.8	20.3	38.7	59.0	69.2	79.3	95.6	113.9	130.9	147.8
92.5°	0.7	5.4	17.6	34.6	53.6	62.4	70.5	87.5	105.1	120.7	136.3
95°	0.7	4.7	16.3	31.9	48.8	57.6	66.5	83.4	100.4	116.0	130.2
97.5°	0.7	4.1	14.9	29.8	46.1	54.9	63.1	80.0	95.6	110.5	124.1
100°	0.7	4.1	14.2	28.5	44.1	52.2	60.4	76.6	91.5	105.1	118.0
102.5°	0.7	4.1	13.6	27.1	42.7	50.2	58.3	73.2	87.5	100.4	113.2
105°	0.7	3.4	12.9	26.4	41.4	48.8	55.6	70.5	83.4	96.3	108.5
107.5°	0.7	3.4	12.2	25.1	39.3	46.8	54.2	67.8	80.7	92.9	103.8
110°	0.7	2.7	11.5	24.4	38.0	45.4	52.2	65.8	78.0	89.5	99.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.7	2.7	10.8	23.1	36.6	44.1	50.9	63.7	75.9	86.1	95.6
115°	0.7	2.0	10.2	21.7	35.3	42.0	48.8	61.7	73.2	83.4	92.9
117.5°	0.7	2.0	9.5	21.0	33.9	40.7	46.8	59.7	71.2	82.1	90.9
120°	0.7	2.0	8.8	19.7	32.5	38.7	45.4	57.6	69.8	80.0	89.5
122.5°	0.7	1.4	8.1	18.3	30.5	36.6	43.4	55.6	67.1	78.0	88.2
125°	0.7	1.4	7.5	17.6	29.2	35.3	41.4	52.9	65.1	75.3	85.4
127.5°	1.4	1.4	6.8	16.3	27.1	33.2	38.7	50.9	61.7	71.9	82.1
130°	1.4	1.4	6.1	14.2	25.1	31.2	36.6	47.5	58.3	67.8	78.0
132.5°	1.4	1.4	5.4	12.9	23.1	28.5	33.9	44.1	54.2	63.7	73.2
135°	1.4	1.4	4.1	11.5	20.3	25.8	30.5	40.7	50.2	59.0	67.8
137.5°	1.4	1.4	3.4	9.5	17.6	22.4	27.1	36.6	46.1	54.2	63.1
140°	1.4	1.4	2.7	8.1	15.6	19.7	23.7	32.5	41.4	49.5	57.6
142.5°	2.0	1.4	2.7	6.8	12.9	17.0	20.3	27.8	35.9	44.1	51.5
145°	2.0	1.4	2.0	5.4	10.8	13.6	17.0	23.7	31.2	38.7	46.1
147.5°	2.0	2.0	2.0	4.1	8.8	11.5	14.2	20.3	26.4	33.2	39.3
150°	2.0	2.0	1.4	3.4	6.8	8.8	11.5	16.3	21.7	27.8	33.2
152.5°	2.0	2.0	1.4	2.7	5.4	6.8	8.8	13.6	17.6	22.4	27.8
155°	2.0	2.0	2.0	2.0	4.1	5.4	6.8	10.2	14.2	17.6	22.4
157.5°	2.0	2.0	2.0	2.0	2.7	4.1	4.7	7.5	10.2	13.6	17.0
160°	2.7	2.0	2.0	1.4	2.0	2.7	3.4	5.4	7.5	10.2	12.2
162.5°	2.7	2.7	2.0	2.0	1.4	2.0	2.7	3.4	4.7	6.8	8.1
165°	2.7	2.7	2.0	2.0	1.4	1.4	2.0	2.0	3.4	4.1	5.4
167.5°	2.7	2.7	2.0	2.0	1.4	1.4	1.4	1.4	2.0	2.0	2.7
170°	2.7	2.7	2.0	2.0	1.4	1.4	1.4	1.4	0.7	0.7	1.4
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°	2838.6	2838.6	2838.6	2838.6	2838.6	2838.6	2838.6	2838.6	2838.6	2838.6
2.5°	2822.3	2817.5	2820.2	2820.9	2823.0	2825.7	2818.9	2818.2	2820.2	2820.2
5°	2711.8	2717.9	2717.2	2722.6	2726.0	2723.3	2724.0	2726.0	2728.7	2722.6
7.5°	2571.4	2575.5	2582.9	2577.5	2584.3	2580.9	2591.0	2584.9	2596.5	2598.5
10°	2445.3	2445.9	2454.7	2458.1	2466.3	2454.1	2450.7	2448.0	2440.5	2443.9
12.5°	2353.0	2340.1	2330.0	2336.1	2346.3	2353.7	2367.3	2376.1	2380.2	2381.5
15°	2273.7	2286.6	2292.7	2292.0	2281.2	2277.8	2275.7	2278.4	2285.9	2290.6
17.5°	2238.4	2228.9	2220.1	2240.5	2252.7	2260.1	2260.8	2256.1	2253.3	2241.1
20°	2169.9	2188.9	2207.2	2191.6	2180.8	2177.4	2174.0	2185.5	2193.0	2193.7
22.5°	2141.5	2154.3	2129.3	2153.0	2165.2	2168.6	2160.4	2150.3	2142.8	2136.7
25°	2094.0	2088.6	2115.0	2100.1	2093.3	2086.5	2096.7	2101.5	2100.1	2102.8
27.5°	2035.7	2056.0	2037.0	2051.3	2065.5	2070.9	2054.7	2041.1	2030.9	2028.2
30°	2002.5	1987.5	2021.4	2012.6	2000.4	1994.3	1992.3	1997.0	1998.4	1999.7
32.5°	1948.9	1964.5	1949.6	1944.8	1958.4	1963.8	1966.5	1954.3	1950.9	1944.1
35°	1898.7	1902.1	1899.4	1919.7	1910.2	1905.5	1902.8	1907.5	1910.2	1908.9
37.5°	1860.0	1842.4	1869.5	1851.2	1858.7	1862.1	1865.5	1852.6	1848.5	1838.3
40°	1788.8	1803.1	1789.5	1804.4	1804.4	1795.6	1781.4	1778.7	1781.4	1786.1
42.5°	1730.5	1731.9	1750.9	1727.8	1722.4	1721.7	1730.5	1728.5	1718.3	1723.1
45°	1670.9	1677.0	1658.0	1653.9	1658.7	1654.6	1641.7	1639.7	1645.1	1645.8
47.5°	1598.3	1606.4	1586.8	1585.4	1579.3	1573.2	1580.7	1585.4	1579.3	1578.0
50°	1530.5	1514.9	1520.3	1510.1	1512.9	1517.6	1502.0	1492.5	1492.5	1495.2
52.5°	1449.8	1454.5	1443.7	1455.9	1445.7	1436.9	1437.6	1434.2	1433.5	1433.5
55°	1369.8	1375.2	1382.7	1361.6	1360.3	1358.9	1354.2	1343.3	1335.9	1334.5
57.5°	1288.4	1289.1	1291.1	1284.3	1287.0	1280.9	1260.6	1263.3	1261.3	1257.2
60°	1194.8	1203.0	1190.8	1186.0	1182.6	1180.6	1178.6	1167.7	1160.2	1160.2
62.5°	1097.9	1091.8	1094.5	1084.3	1088.4	1089.0	1069.4	1061.2	1052.4	1049.7
65°	1000.9	992.7	990.7	992.1	986.6	971.0	964.3	959.5	949.3	946.6
67.5°	898.5	899.8	895.8	885.6	877.5	873.4	860.5	848.3	839.5	836.8
70°	796.1	794.7	796.8	784.6	788.0	779.8	763.5	749.3	745.2	737.1
72.5°	696.4	698.5	697.8	697.1	690.3	680.8	670.0	659.1	653.0	638.8
75°	602.2	610.3	604.2	598.8	594.7	589.3	583.2	562.2	550.6	543.2
77.5°	503.2	512.6	516.0	508.6	506.5	506.5	495.0	480.8	476.0	474.0
80°	406.9	417.7	425.9	426.5	425.9	422.5	419.7	417.7	415.7	413.6
82.5°	325.5	338.4	343.8	346.5	351.3	350.6	357.4	362.8	368.9	372.3
85°	251.6	263.1	274.6	284.1	289.6	296.3	304.5	318.0	339.1	357.4
87.5°	195.3	208.9	224.5	237.3	242.1	248.2	263.1	285.5	313.3	331.6
90°	163.4	178.3	193.3	206.1	211.6	219.7	236.7	257.0	281.4	293.6
92.5°	150.5	164.8	178.3	191.2	198.7	206.1	220.4	234.6	249.5	257.7
95°	143.8	156.6	169.5	181.7	187.8	194.6	204.1	216.3	226.5	231.2
97.5°	137.0	149.2	160.7	172.2	177.7	183.1	193.9	204.8	215.0	214.3
100°	130.9	142.4	152.6	162.7	167.5	172.2	181.1	185.8	188.5	189.2
102.5°	125.4	134.9	144.4	152.6	156.0	160.7	166.8	167.5	167.5	164.1
105°	118.7	128.2	136.3	141.7	145.1	147.1	148.5	147.8	145.1	143.8
107.5°	113.2	120.7	127.5	131.6	132.9	132.9	130.9	129.5	126.8	127.5
110°	107.8	114.6	119.3	121.4	122.1	122.1	120.7	118.7	117.3	117.3



TEST NUMBER: P241480

CATALOG NUMBER: FVS8M-3-LD4-50-3LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	103.8	109.9	113.9	116.0	116.6	116.6	116.6	116.0	115.3	114.6
115°	100.4	107.1	111.2	114.6	116.0	116.6	118.0	118.7	118.0	118.0
117.5°	99.7	105.8	111.9	116.0	118.0	119.3	121.4	122.7	122.1	121.4
120°	98.3	105.8	111.9	117.3	119.3	121.4	124.1	125.4	124.8	124.1
122.5°	97.6	105.1	111.9	118.0	120.0	122.1	125.4	126.8	126.1	126.1
125°	94.9	103.1	110.5	116.6	118.7	120.7	124.8	126.1	126.8	126.8
127.5°	91.5	99.7	107.1	113.2	116.0	118.7	122.1	124.1	125.4	125.4
130°	86.8	95.6	103.1	109.2	111.9	114.6	118.0	121.4	122.7	123.4
132.5°	82.1	90.2	97.6	104.4	107.1	109.9	113.9	116.6	118.7	119.3
135°	76.6	84.1	91.5	97.6	100.4	103.8	107.8	111.2	113.2	113.9
137.5°	70.5	78.0	84.8	90.9	93.6	96.3	101.7	105.1	107.1	107.8
140°	64.4	71.9	78.0	84.1	86.8	89.5	94.3	97.6	99.7	100.4
142.5°	59.0	65.1	71.2	76.6	79.3	82.1	86.1	89.5	90.9	92.2
145°	52.2	58.3	63.7	69.2	71.2	73.2	77.3	80.0	81.4	82.1
147.5°	46.1	51.5	57.0	61.0	63.1	65.1	68.5	70.5	72.6	72.6
150°	39.3	44.8	49.5	53.6	55.6	57.0	59.7	61.7	62.4	63.1
152.5°	32.5	37.3	42.0	45.4	46.8	48.8	50.9	52.9	53.6	54.2
155°	25.8	30.5	34.6	38.0	39.3	40.7	42.0	44.1	44.8	45.4
157.5°	20.3	23.7	27.1	30.5	31.2	32.5	33.9	35.3	35.9	35.9
160°	14.9	17.6	20.3	23.1	24.4	25.1	27.1	27.1	28.5	28.5
162.5°	10.2	12.2	14.2	16.3	17.0	18.3	19.7	20.3	21.0	21.0
165°	6.8	7.5	9.5	10.8	10.8	11.5	13.6	13.6	13.6	14.2
167.5°	3.4	4.1	4.7	6.1	6.1	6.8	7.5	8.1	8.1	8.1
170°	1.4	1.4	2.0	2.0	2.0	2.7	2.7	3.4	3.4	3.4
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)