

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: P241478

Luminaire Tested: **FVS8M-3-LD4-35-3LO-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241478
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-LD4-35-3LO-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 3-MODULE LED WITH PA187 LENS
Light Source: (252) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

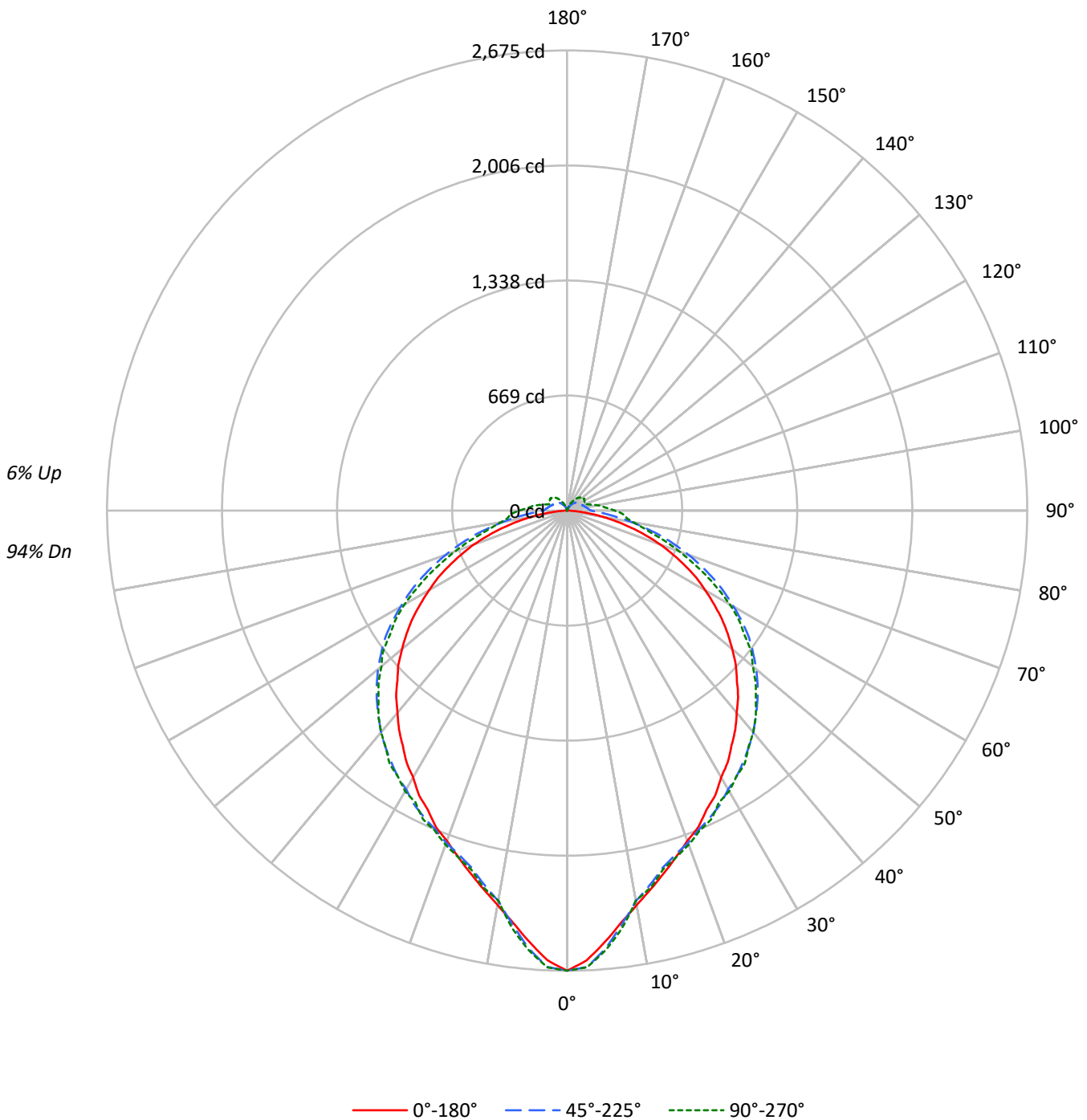
Lumens per Lamp: N/A
Luminaire Lumens: 7230.0 lumens
Efficiency: N/A
Efficacy: 117.4 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1.04 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

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-LD4-35-3LO-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°	15619	15619	15619
5°	14688	14722	14746
10°	13679	13206	13132
15°	12998	12339	12304
20°	12466	11924	11869
25°	12071	11619	11550
30°	11726	11341	11240
35°	11469	11180	11072
40°	11209	11023	10786
45°	10964	10807	10447
50°	10724	10575	10085
55°	10415	10274	9680
60°	9941	9757	9179
65°	9389	9146	8304
70°	8639	8327	7318
75°	7326	7347	6266
80°	5582	6007	5748
85°	2813	4680	6300



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.7	3.3
10°-20°	611.8	8.5
20°-30°	904.0	12.5
30°-40°	1102.6	15.3
40°-50°	1173.8	16.2
50°-60°	1103.4	15.3
60°-70°	873.9	12.1
70°-80°	543.5	7.5
80°-90°	239.6	3.3
90°-100°	127.4	1.8
100°-110°	93.8	1.3
110°-120°	73.2	1.0
120°-130°	63.5	0.9
130°-140°	45.8	0.6
140°-150°	25.7	0.4
150°-160°	10.1	0.1
160°-170°	2.1	0.0
170°-180°	0.0	0.0
0°-30°	1751.5	24.2
0°-40°	2854.1	39.5
0°-60°	5131.3	71.0
0°-90°	6788.3	93.9
90°-120°	294.4	4.1
90°-150°	429.4	5.9
90°-180°	442.0	6.1
0°-180°	7230.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2675	2675	2675	2675	2675	
5°	2517	2535	2554	2569	2565	234
15°	2180	2169	2148	2150	2158	614
25°	1918	1944	1968	1972	1981	887
35°	1666	1734	1783	1800	1799	1044
45°	1396	1480	1565	1563	1551	1079
55°	1098	1188	1291	1282	1258	979
65°	754	842	940	930	892	747
75°	387	472	564	560	512	411
85°	66	142	226	273	337	87
90°	1	65	139	199	277	4
95°	1	54	123	177	218	0
105°	1	46	102	137	136	1
115°	1	40	88	109	111	1
125°	1	33	80	112	120	1
135°	1	24	64	95	107	1
145°	2	13	43	67	77	1
155°	2	5	21	37	43	1
165°	3	1	5	10	13	1
175°	0	0	0	0	0	0
180°	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°	2674.7	2674.7	2674.7	2674.7	2674.7	2674.7	2674.7	2674.7	2674.7	2674.7	2674.7
2.5°	2616.5	2621.6	2626.1	2628.7	2631.2	2638.3	2643.4	2644.0	2651.7	2657.4	2655.5
5°	2516.9	2521.3	2530.3	2534.7	2531.5	2534.7	2541.8	2544.3	2546.2	2548.8	2554.5
7.5°	2414.6	2412.1	2419.7	2417.8	2421.0	2419.1	2420.4	2419.7	2426.1	2427.4	2428.0
10°	2327.7	2330.3	2331.6	2326.4	2325.8	2327.7	2323.9	2320.1	2318.1	2308.6	2304.1
12.5°	2252.3	2252.3	2253.0	2243.4	2238.9	2235.7	2240.2	2238.9	2230.6	2222.3	2227.4
15°	2179.5	2181.4	2182.7	2175.6	2169.9	2168.6	2170.5	2157.8	2159.0	2163.5	2148.2
17.5°	2109.8	2117.5	2114.3	2106.0	2106.0	2106.0	2104.1	2101.5	2104.1	2099.6	2095.1
20°	2043.4	2045.3	2044.7	2048.5	2048.5	2047.9	2047.2	2048.5	2053.6	2043.4	2055.5
22.5°	1991.6	1993.5	1996.7	1989.7	1987.8	1985.2	1990.4	2005.0	2000.6	2008.2	2005.0
25°	1918.1	1918.8	1918.1	1925.2	1936.7	1943.7	1948.8	1950.1	1953.9	1965.4	1968.0
27.5°	1865.1	1865.8	1874.1	1877.3	1883.6	1891.3	1892.6	1902.8	1913.0	1917.5	1927.1
30°	1790.4	1799.3	1800.6	1817.2	1834.4	1840.2	1844.0	1854.9	1862.6	1874.7	1872.1
32.5°	1736.7	1741.8	1753.9	1764.2	1776.3	1780.8	1791.0	1807.6	1819.1	1831.2	1833.2
35°	1666.4	1669.0	1681.1	1698.3	1724.5	1734.1	1745.6	1748.8	1766.1	1779.5	1783.3
37.5°	1605.7	1610.2	1626.1	1641.5	1656.2	1669.6	1684.9	1701.5	1715.6	1726.5	1734.8
40°	1533.5	1536.7	1555.2	1575.0	1603.1	1616.6	1621.7	1646.6	1661.9	1671.5	1683.7
42.5°	1471.5	1474.7	1491.3	1511.1	1531.6	1550.7	1562.9	1586.5	1602.5	1614.0	1622.9
45°	1395.5	1402.5	1417.8	1444.7	1472.8	1479.8	1493.2	1516.2	1538.0	1557.8	1564.8
47.5°	1330.9	1333.5	1352.0	1370.6	1398.7	1414.0	1430.0	1449.8	1476.0	1489.4	1501.5
50°	1252.4	1260.7	1276.0	1300.3	1325.8	1339.9	1358.4	1384.0	1405.1	1423.6	1435.7
52.5°	1177.0	1181.4	1199.3	1224.9	1253.6	1270.2	1283.7	1309.9	1338.6	1355.2	1362.9
55°	1097.7	1102.8	1122.6	1147.6	1175.0	1188.5	1205.1	1233.8	1262.6	1277.9	1291.3
57.5°	1011.5	1022.3	1040.2	1067.1	1091.3	1104.8	1122.6	1155.2	1180.2	1196.8	1207.0
60°	926.5	934.2	953.3	977.0	1011.5	1026.8	1040.9	1069.6	1090.7	1109.2	1118.8
62.5°	848.5	852.4	869.6	892.0	920.7	934.8	950.8	982.1	1003.8	1019.8	1031.3
65°	754.0	764.2	780.2	801.3	828.7	842.1	858.1	889.4	913.1	932.2	939.9
67.5°	665.8	668.3	688.8	713.1	740.6	753.3	766.7	796.8	819.8	835.1	844.7
70°	577.0	578.3	600.0	617.9	647.9	662.0	673.5	699.7	726.5	739.3	750.1
72.5°	479.9	485.6	508.0	527.1	551.4	564.2	581.5	607.0	628.7	644.7	653.0
75°	386.6	391.7	407.7	433.2	458.1	472.2	488.8	513.1	531.0	550.8	563.6
77.5°	296.5	310.5	318.8	341.2	369.3	385.9	397.4	419.8	437.7	453.7	463.9
80°	214.1	217.2	234.5	254.9	281.8	292.6	305.4	329.7	347.6	365.5	377.0
82.5°	134.2	140.6	157.8	177.0	200.0	210.9	223.0	246.0	265.8	279.9	295.2
85°	66.5	72.8	88.8	106.7	131.6	141.8	153.3	174.4	193.0	208.3	226.2
87.5°	22.4	27.5	41.5	59.4	80.5	90.1	100.3	119.5	136.1	154.6	169.3
90°	1.3	6.4	19.2	36.4	55.6	65.2	74.8	90.1	107.3	123.3	139.3
92.5°	0.6	5.1	16.6	32.6	50.5	58.8	66.5	82.4	99.0	113.7	128.4
95°	0.6	4.5	15.3	30.0	46.0	54.3	62.6	78.6	94.6	109.3	122.7
97.5°	0.6	3.8	14.1	28.1	43.4	51.8	59.4	75.4	90.1	104.1	116.9
100°	0.6	3.8	13.4	26.8	41.5	49.2	56.9	72.2	86.3	99.0	111.2
102.5°	0.6	3.8	12.8	25.6	40.3	47.3	55.0	69.0	82.4	94.6	106.7
105°	0.6	3.2	12.1	24.9	39.0	46.0	52.4	66.5	78.6	90.7	102.2
107.5°	0.6	3.2	11.5	23.6	37.1	44.1	51.1	63.9	76.0	87.5	97.8
110°	0.6	2.6	10.9	23.0	35.8	42.8	49.2	62.0	73.5	84.3	93.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.6	2.6	10.2	21.7	34.5	41.5	47.9	60.1	71.6	81.1	90.1
115°	0.6	1.9	9.6	20.4	33.2	39.6	46.0	58.1	69.0	78.6	87.5
117.5°	0.6	1.9	8.9	19.8	31.9	38.3	44.1	56.2	67.1	77.3	85.6
120°	0.6	1.9	8.3	18.5	30.7	36.4	42.8	54.3	65.8	75.4	84.3
122.5°	0.6	1.3	7.7	17.3	28.8	34.5	40.9	52.4	63.3	73.5	83.1
125°	0.6	1.3	7.0	16.6	27.5	33.2	39.0	49.8	61.3	70.9	80.5
127.5°	1.3	1.3	6.4	15.3	25.6	31.3	36.4	47.9	58.1	67.7	77.3
130°	1.3	1.3	5.8	13.4	23.6	29.4	34.5	44.7	55.0	63.9	73.5
132.5°	1.3	1.3	5.1	12.1	21.7	26.8	31.9	41.5	51.1	60.1	69.0
135°	1.3	1.3	3.8	10.9	19.2	24.3	28.8	38.3	47.3	55.6	63.9
137.5°	1.3	1.3	3.2	8.9	16.6	21.1	25.6	34.5	43.4	51.1	59.4
140°	1.3	1.3	2.6	7.7	14.7	18.5	22.4	30.7	39.0	46.6	54.3
142.5°	1.9	1.3	2.6	6.4	12.1	16.0	19.2	26.2	33.9	41.5	48.6
145°	1.9	1.3	1.9	5.1	10.2	12.8	16.0	22.4	29.4	36.4	43.4
147.5°	1.9	1.9	1.9	3.8	8.3	10.9	13.4	19.2	24.9	31.3	37.1
150°	1.9	1.9	1.3	3.2	6.4	8.3	10.9	15.3	20.4	26.2	31.3
152.5°	1.9	1.9	1.3	2.6	5.1	6.4	8.3	12.8	16.6	21.1	26.2
155°	1.9	1.9	1.9	1.9	3.8	5.1	6.4	9.6	13.4	16.6	21.1
157.5°	1.9	1.9	1.9	1.9	2.6	3.8	4.5	7.0	9.6	12.8	16.0
160°	2.6	1.9	1.9	1.3	1.9	2.6	3.2	5.1	7.0	9.6	11.5
162.5°	2.6	2.6	1.9	1.9	1.3	1.9	2.6	3.2	4.5	6.4	7.7
165°	2.6	2.6	1.9	1.9	1.3	1.3	1.9	1.9	3.2	3.8	5.1
167.5°	2.6	2.6	1.9	1.9	1.3	1.3	1.3	1.3	1.9	1.9	2.6
170°	2.6	2.6	1.9	1.9	1.3	1.3	1.3	1.3	0.6	0.6	1.3
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°	2674.7	2674.7	2674.7	2674.7	2674.7	2674.7	2674.7	2674.7	2674.7	2674.7
2.5°	2659.3	2654.9	2657.4	2658.1	2660.0	2662.5	2656.1	2655.5	2657.4	2657.4
5°	2555.2	2560.9	2560.3	2565.4	2568.6	2566.0	2566.7	2568.6	2571.2	2565.4
7.5°	2422.9	2426.8	2433.8	2428.7	2435.1	2431.9	2441.5	2435.7	2446.6	2448.5
10°	2304.1	2304.7	2313.0	2316.2	2323.9	2312.4	2309.2	2306.6	2299.6	2302.8
12.5°	2217.2	2205.0	2195.5	2201.2	2210.8	2217.8	2230.6	2238.9	2242.7	2244.0
15°	2142.4	2154.6	2160.3	2159.7	2149.5	2146.3	2144.3	2146.9	2153.9	2158.4
17.5°	2109.2	2100.3	2091.9	2111.1	2122.6	2129.6	2130.3	2125.8	2123.3	2111.8
20°	2044.7	2062.6	2079.8	2065.1	2054.9	2051.7	2048.5	2059.4	2066.4	2067.0
22.5°	2017.8	2030.0	2006.3	2028.7	2040.2	2043.4	2035.7	2026.1	2019.1	2013.4
25°	1973.1	1968.0	1992.9	1978.8	1972.5	1966.1	1975.7	1980.1	1978.8	1981.4
27.5°	1918.1	1937.3	1919.4	1932.8	1946.3	1951.4	1936.0	1923.3	1913.7	1911.1
30°	1886.8	1872.8	1904.7	1896.4	1884.9	1879.2	1877.3	1881.7	1883.0	1884.3
32.5°	1836.4	1851.1	1837.0	1832.5	1845.3	1850.4	1853.0	1841.5	1838.3	1831.9
35°	1789.1	1792.3	1789.7	1808.9	1799.9	1795.5	1792.9	1797.4	1799.9	1798.7
37.5°	1752.7	1736.0	1761.6	1744.4	1751.4	1754.6	1757.8	1745.6	1741.8	1732.2
40°	1685.6	1699.0	1686.2	1700.3	1700.3	1692.0	1678.5	1676.0	1678.5	1683.0
42.5°	1630.6	1631.9	1649.8	1628.1	1622.9	1622.3	1630.6	1628.7	1619.1	1623.6
45°	1574.4	1580.1	1562.2	1558.4	1562.9	1559.1	1546.9	1545.0	1550.1	1550.7
47.5°	1506.0	1513.7	1495.2	1493.9	1488.1	1482.4	1489.4	1493.9	1488.1	1486.9
50°	1442.1	1427.4	1432.5	1423.0	1425.5	1430.0	1415.3	1406.3	1406.3	1408.9
52.5°	1366.1	1370.6	1360.3	1371.8	1362.3	1353.9	1354.6	1351.4	1350.8	1350.8
55°	1290.7	1295.8	1302.8	1283.0	1281.7	1280.5	1276.0	1265.8	1258.7	1257.5
57.5°	1214.0	1214.7	1216.6	1210.2	1212.7	1207.0	1187.8	1190.4	1188.5	1184.6
60°	1125.8	1133.5	1122.0	1117.5	1114.3	1112.4	1110.5	1100.3	1093.3	1093.3
62.5°	1034.5	1028.7	1031.3	1021.7	1025.5	1026.2	1007.6	1000.0	991.7	989.1
65°	943.1	935.4	933.5	934.8	929.7	915.0	908.6	904.1	894.5	892.0
67.5°	846.6	847.9	844.1	834.5	826.8	823.0	810.8	799.3	791.0	788.5
70°	750.1	748.9	750.8	739.3	742.5	734.8	719.5	706.0	702.2	694.5
72.5°	656.2	658.1	657.5	656.8	650.5	641.5	631.3	621.1	615.3	601.9
75°	567.4	575.1	569.3	564.2	560.4	555.3	549.5	529.7	518.8	511.8
77.5°	474.1	483.1	486.2	479.2	477.3	477.3	466.4	453.0	448.5	446.6
80°	383.4	393.6	401.3	401.9	401.3	398.1	395.5	393.6	391.7	389.8
82.5°	306.7	318.8	324.0	326.5	331.0	330.3	336.7	341.8	347.6	350.8
85°	237.1	247.9	258.8	267.7	272.8	279.2	286.9	299.7	319.5	336.7
87.5°	184.0	196.8	211.5	223.6	228.1	233.9	247.9	269.0	295.2	312.4
90°	154.0	168.0	182.1	194.2	199.4	207.0	223.0	242.2	265.2	276.7
92.5°	141.8	155.3	168.0	180.2	187.2	194.2	207.7	221.1	235.1	242.8
95°	135.5	147.6	159.7	171.2	177.0	183.4	192.3	203.8	213.4	217.9
97.5°	129.1	140.6	151.4	162.3	167.4	172.5	182.7	193.0	202.5	201.9
100°	123.3	134.2	143.8	153.3	157.8	162.3	170.6	175.1	177.6	178.3
102.5°	118.2	127.2	136.1	143.8	147.0	151.4	157.2	157.8	157.8	154.6
105°	111.8	120.8	128.4	133.5	136.7	138.7	139.9	139.3	136.7	135.5
107.5°	106.7	113.7	120.1	124.0	125.2	125.2	123.3	122.0	119.5	120.1
110°	101.6	108.0	112.5	114.4	115.0	115.0	113.7	111.8	110.5	110.5



TEST NUMBER: P241478

CATALOG NUMBER: FVS8M-3-LD4-35-3LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	97.8	103.5	107.3	109.3	109.9	109.9	109.9	109.3	108.6	108.0
115°	94.6	101.0	104.8	108.0	109.3	109.9	111.2	111.8	111.2	111.2
117.5°	93.9	99.7	105.4	109.3	111.2	112.5	114.4	115.7	115.0	114.4
120°	92.6	99.7	105.4	110.5	112.5	114.4	116.9	118.2	117.6	116.9
122.5°	92.0	99.0	105.4	111.2	113.1	115.0	118.2	119.5	118.8	118.8
125°	89.5	97.1	104.1	109.9	111.8	113.7	117.6	118.8	119.5	119.5
127.5°	86.3	93.9	101.0	106.7	109.3	111.8	115.0	116.9	118.2	118.2
130°	81.8	90.1	97.1	102.9	105.4	108.0	111.2	114.4	115.7	116.3
132.5°	77.3	85.0	92.0	98.4	101.0	103.5	107.3	109.9	111.8	112.5
135°	72.2	79.2	86.3	92.0	94.6	97.8	101.6	104.8	106.7	107.3
137.5°	66.5	73.5	79.9	85.6	88.2	90.7	95.8	99.0	101.0	101.6
140°	60.7	67.7	73.5	79.2	81.8	84.3	88.8	92.0	93.9	94.6
142.5°	55.6	61.3	67.1	72.2	74.8	77.3	81.1	84.3	85.6	86.9
145°	49.2	55.0	60.1	65.2	67.1	69.0	72.8	75.4	76.7	77.3
147.5°	43.4	48.6	53.7	57.5	59.4	61.3	64.5	66.5	68.4	68.4
150°	37.1	42.2	46.6	50.5	52.4	53.7	56.2	58.1	58.8	59.4
152.5°	30.7	35.1	39.6	42.8	44.1	46.0	47.9	49.8	50.5	51.1
155°	24.3	28.8	32.6	35.8	37.1	38.3	39.6	41.5	42.2	42.8
157.5°	19.2	22.4	25.6	28.8	29.4	30.7	31.9	33.2	33.9	33.9
160°	14.1	16.6	19.2	21.7	23.0	23.6	25.6	25.6	26.8	26.8
162.5°	9.6	11.5	13.4	15.3	16.0	17.3	18.5	19.2	19.8	19.8
165°	6.4	7.0	8.9	10.2	10.2	10.9	12.8	12.8	12.8	13.4
167.5°	3.2	3.8	4.5	5.8	5.8	6.4	7.0	7.7	7.7	7.7
170°	1.3	1.3	1.9	1.9	1.9	2.6	2.6	3.2	3.2	3.2
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)