

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: P241468

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241468  
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-LD4-50-2LO-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

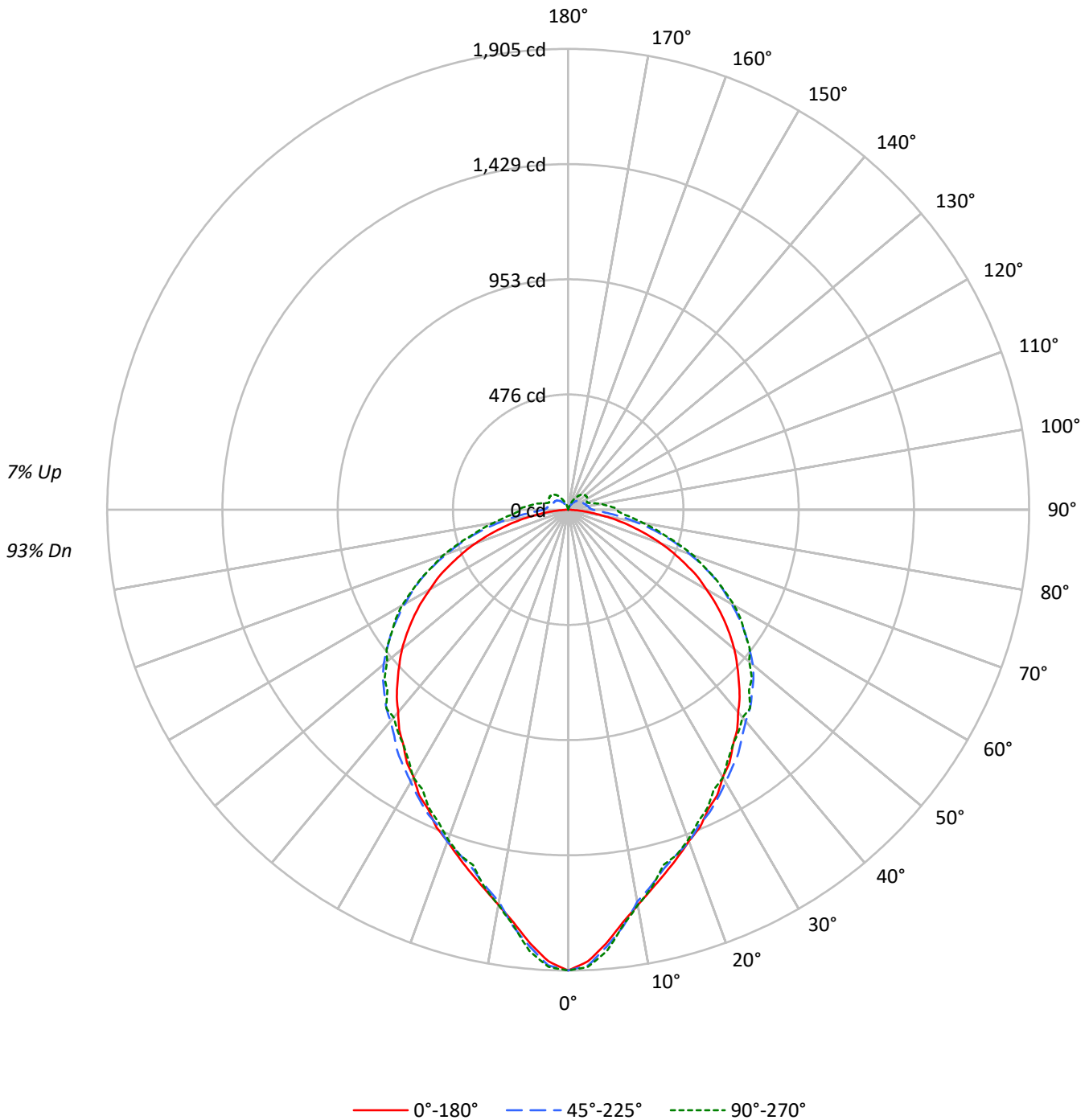
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5121.0 lumens  
Efficiency: N/A  
Efficacy: 125.8 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): 40.7  
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-LD4-50-2LO-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°	11123	11123	11123
5°	10504	10452	10525
10°	9748	9430	9463
15°	9268	8810	8666
20°	8895	8473	8330
25°	8601	8157	7932
30°	8363	7878	7629
35°	8169	7695	7302
40°	7989	7475	7187
45°	7833	7418	7118
50°	7675	7334	6987
55°	7421	7109	6858
60°	7078	6797	6657
65°	6683	6479	6236
70°	6132	5913	5790
75°	5226	5269	5090
80°	3966	4406	4615
85°	2085	3400	4363



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.8	3.3
10°-20°	435.2	8.5
20°-30°	633.9	12.4
30°-40°	757.1	14.8
40°-50°	813.7	15.9
50°-60°	772.7	15.1
60°-70°	624.3	12.2
70°-80°	401.0	7.8
80°-90°	175.5	3.4
90°-100°	93.2	1.8
100°-110°	70.5	1.4
110°-120°	56.3	1.1
120°-130°	50.2	1.0
130°-140°	37.5	0.7
140°-150°	21.7	0.4
150°-160°	8.6	0.2
160°-170°	1.8	0.0
170°-180°	0.0	0.0
0°-30°	1236.9	24.2
0°-40°	1994.0	38.9
0°-60°	3580.4	69.9
0°-90°	4781.3	93.4
90°-120°	219.9	4.3
90°-150°	329.3	6.4
90°-180°	340.0	6.6
0°-180°	5121.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1905	1905	1905	1905	1905	
5°	1800	1801	1814	1828	1831	167
15°	1554	1548	1534	1531	1520	438
25°	1367	1382	1382	1367	1361	633
35°	1187	1216	1228	1215	1186	745
45°	997	1036	1074	1089	1056	770
55°	782	831	894	892	891	699
65°	537	588	666	672	670	532
75°	276	331	404	429	416	293
85°	49	95	164	205	233	63
90°	1	43	101	143	201	2
95°	1	38	88	130	168	1
105°	1	34	76	103	102	1
115°	1	31	67	84	86	1
125°	1	26	64	89	93	1
135°	1	20	52	79	88	1
145°	1	11	36	58	68	1
155°	1	4	18	31	36	1
165°	2	1	5	10	12	1
175°	0	0	0	0	0	0
180°	0	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°	1904.8	1904.8	1904.8	1904.8	1904.8	1904.8	1904.8	1904.8	1904.8	1904.8	1904.8
2.5°	1869.0	1871.7	1871.7	1871.0	1872.4	1871.7	1875.1	1879.8	1881.8	1884.5	1885.2
5°	1800.0	1802.7	1798.7	1794.6	1797.3	1801.4	1804.8	1811.5	1810.9	1810.2	1813.6
7.5°	1721.6	1722.3	1718.9	1716.9	1715.5	1718.3	1721.0	1723.7	1729.1	1735.2	1737.9
10°	1658.8	1660.8	1654.7	1650.0	1648.0	1647.3	1651.3	1656.1	1658.1	1652.7	1645.3
12.5°	1603.3	1602.0	1600.0	1591.9	1595.9	1597.3	1598.6	1597.3	1590.5	1587.1	1590.5
15°	1554.0	1553.3	1551.3	1546.6	1547.9	1547.9	1543.9	1541.2	1541.2	1545.9	1533.7
17.5°	1506.0	1505.3	1504.7	1497.9	1500.6	1501.3	1501.9	1501.3	1504.7	1496.5	1493.2
20°	1458.0	1455.3	1456.0	1457.3	1464.1	1461.4	1460.7	1463.4	1458.0	1456.7	1460.7
22.5°	1421.5	1420.2	1417.5	1416.8	1417.5	1416.1	1418.1	1419.5	1418.1	1422.2	1411.4
25°	1366.8	1366.1	1367.4	1370.1	1376.2	1381.6	1385.7	1376.2	1383.7	1381.0	1381.6
27.5°	1332.3	1332.3	1333.0	1330.9	1335.0	1338.4	1338.4	1344.5	1347.2	1341.8	1341.1
30°	1276.9	1276.9	1280.9	1288.4	1295.1	1303.2	1301.9	1302.5	1303.2	1303.9	1300.5
32.5°	1240.4	1241.7	1243.7	1244.4	1254.6	1253.2	1254.6	1266.0	1266.7	1266.0	1262.7
35°	1187.0	1184.9	1193.0	1198.5	1213.3	1216.0	1218.1	1219.4	1226.2	1222.8	1227.5
37.5°	1146.4	1147.1	1150.5	1158.6	1159.9	1170.1	1177.5	1179.5	1178.8	1182.2	1180.2
40°	1093.0	1091.0	1096.4	1110.6	1122.7	1127.5	1131.5	1138.3	1141.0	1144.4	1141.7
42.5°	1048.4	1047.0	1052.4	1064.6	1074.8	1083.5	1087.6	1095.0	1103.8	1108.5	1112.6
45°	997.0	995.7	1003.8	1015.9	1030.1	1035.5	1043.0	1054.5	1065.3	1071.4	1074.1
47.5°	946.3	947.7	949.7	963.9	984.2	990.3	999.0	1003.8	1024.7	1030.8	1038.3
50°	896.3	897.0	903.1	911.8	928.7	936.2	948.4	961.9	971.3	983.5	995.7
52.5°	839.5	838.8	848.3	861.2	877.4	887.5	895.0	914.6	925.4	934.8	942.9
55°	782.1	786.1	792.9	804.4	820.6	831.4	838.8	855.1	876.0	886.2	893.6
57.5°	723.9	727.3	737.5	748.3	763.1	770.6	782.1	799.6	815.2	826.7	838.2
60°	659.7	663.8	673.9	686.1	707.7	709.7	723.3	740.2	756.4	771.9	779.4
62.5°	605.0	605.0	612.4	628.0	643.5	653.0	665.8	680.7	698.9	711.8	724.6
65°	536.7	540.8	552.2	567.1	577.9	588.1	602.3	619.2	639.4	654.3	665.8
67.5°	473.8	475.9	488.7	500.2	518.4	529.3	536.0	558.3	577.3	590.1	599.6
70°	409.6	413.7	423.1	436.7	452.9	464.4	472.5	494.1	509.7	525.2	532.6
72.5°	340.7	346.1	358.3	371.8	388.0	398.1	406.2	427.2	443.4	456.9	472.5
75°	275.8	279.2	292.0	306.9	324.5	331.2	342.0	358.3	378.5	395.4	404.2
77.5°	214.3	217.0	229.8	242.0	258.9	268.4	277.8	296.1	313.0	328.5	340.0
80°	152.1	155.5	167.0	178.4	196.7	205.5	212.2	233.2	250.8	264.3	276.5
82.5°	97.3	100.7	111.5	125.7	139.2	148.7	156.1	172.4	190.6	203.5	217.7
85°	49.3	52.0	61.5	73.7	90.6	95.3	106.8	121.0	137.2	151.4	164.3
87.5°	14.9	18.9	28.4	39.9	53.4	60.2	68.9	83.8	98.0	111.5	125.7
90°	0.7	4.1	12.2	23.0	36.5	43.3	50.7	64.2	76.4	89.9	101.4
92.5°	0.7	3.4	10.8	21.6	33.8	40.6	46.6	59.5	71.0	81.8	91.9
95°	0.7	2.7	10.1	20.3	32.4	38.5	44.6	56.8	67.6	78.4	87.9
97.5°	0.7	2.7	9.5	19.6	31.1	37.2	43.3	54.1	64.2	75.0	85.2
100°	0.7	2.7	9.5	18.9	30.4	35.8	41.2	52.0	62.2	72.3	81.8
102.5°	0.7	2.7	8.8	18.9	29.1	34.5	39.9	50.0	60.2	70.3	79.1
105°	0.7	2.0	8.8	18.3	28.4	33.8	38.5	48.7	58.8	68.3	76.4
107.5°	0.7	2.0	8.1	17.6	27.7	33.1	37.9	48.0	56.8	66.2	73.7
110°	0.7	2.0	8.1	16.9	27.0	32.4	37.2	47.3	56.1	64.2	71.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.7	2.0	7.4	16.2	26.4	31.8	36.5	46.0	54.8	62.2	68.9
115°	0.7	1.4	7.4	15.5	25.7	31.1	35.8	45.3	53.4	60.8	66.9
117.5°	0.7	1.4	6.8	15.5	25.0	29.7	35.1	43.9	52.0	59.5	66.2
120°	0.7	1.4	6.8	14.9	23.7	29.1	33.8	42.6	51.4	58.8	65.6
122.5°	0.7	1.4	6.1	14.2	23.0	27.7	32.4	41.2	50.0	58.1	64.9
125°	0.7	0.7	5.4	12.8	21.6	26.4	31.1	39.9	48.0	56.1	63.5
127.5°	0.7	0.7	4.7	12.2	21.0	25.0	29.7	38.5	46.6	54.1	61.5
130°	0.7	0.7	4.1	10.8	19.6	23.7	27.7	35.8	43.9	51.4	58.8
132.5°	0.7	0.7	4.1	10.1	17.6	21.6	25.7	33.8	41.2	48.7	55.4
135°	0.7	0.7	3.4	8.8	16.2	19.6	23.7	31.1	38.5	45.3	52.0
137.5°	1.4	0.7	2.7	7.4	14.2	17.6	21.0	28.4	35.1	41.9	48.0
140°	1.4	0.7	2.0	6.1	12.2	15.5	18.9	25.0	31.8	37.9	44.6
142.5°	1.4	1.4	1.4	5.4	10.1	12.8	16.2	22.3	28.4	34.5	39.9
145°	1.4	1.4	1.4	4.1	8.1	10.8	13.5	18.9	24.3	30.4	35.8
147.5°	1.4	1.4	1.4	3.4	6.8	8.8	10.8	16.2	21.0	25.7	31.1
150°	1.4	1.4	1.4	2.7	5.4	7.4	8.8	12.8	17.6	22.3	26.4
152.5°	1.4	1.4	1.4	2.0	4.1	5.4	6.8	10.8	14.2	18.3	22.3
155°	1.4	1.4	1.4	1.4	3.4	4.1	5.4	8.1	11.5	14.2	17.6
157.5°	1.4	1.4	1.4	1.4	2.0	2.7	4.1	6.1	8.8	11.5	13.5
160°	1.4	1.4	1.4	1.4	1.4	2.0	2.7	4.1	6.1	8.1	10.1
162.5°	2.0	1.4	1.4	1.4	1.4	1.4	2.0	2.7	4.1	6.1	7.4
165°	2.0	1.4	1.4	1.4	0.7	1.4	1.4	2.0	2.7	3.4	4.7
167.5°	2.0	2.0	1.4	1.4	1.4	0.7	0.7	0.7	1.4	2.0	2.7
170°	2.0	2.0	1.4	1.4	1.4	0.7	0.7	0.7	0.7	0.7	0.7
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°	1904.8	1904.8	1904.8	1904.8	1904.8	1904.8	1904.8	1904.8	1904.8	1904.8
2.5°	1885.9	1889.9	1891.3	1892.0	1894.7	1893.3	1894.7	1892.0	1892.0	1891.3
5°	1812.9	1815.6	1820.3	1827.1	1827.8	1828.4	1829.8	1833.2	1834.5	1831.1
7.5°	1729.7	1733.1	1727.7	1723.7	1727.0	1726.4	1732.4	1728.4	1733.1	1733.8
10°	1640.5	1641.2	1648.6	1654.0	1653.4	1656.1	1653.4	1650.0	1654.0	1659.4
12.5°	1591.2	1581.0	1568.9	1575.0	1580.4	1582.4	1595.2	1597.3	1602.7	1598.6
15°	1529.0	1535.7	1543.9	1531.7	1531.0	1527.0	1522.9	1520.2	1519.5	1520.2
17.5°	1499.2	1487.8	1481.0	1487.1	1497.2	1503.3	1503.3	1504.7	1493.2	1495.2
20°	1447.2	1450.6	1463.4	1456.0	1451.9	1447.9	1445.2	1449.9	1454.6	1450.6
22.5°	1416.8	1422.2	1410.0	1424.2	1426.9	1431.7	1428.3	1409.3	1401.9	1398.5
25°	1379.6	1374.2	1393.8	1373.5	1366.8	1355.9	1354.6	1357.3	1361.4	1360.7
27.5°	1335.7	1347.8	1322.8	1328.9	1339.0	1340.4	1337.7	1322.8	1314.7	1303.2
30°	1308.6	1286.3	1298.5	1297.1	1282.9	1279.6	1272.1	1276.2	1279.6	1278.9
32.5°	1257.3	1262.7	1249.1	1239.7	1248.5	1255.2	1254.6	1239.0	1229.5	1226.8
35°	1218.7	1214.0	1208.6	1222.1	1214.7	1201.2	1184.9	1185.6	1186.3	1186.3
37.5°	1180.9	1168.7	1183.6	1158.6	1156.5	1161.9	1170.1	1165.3	1157.9	1156.5
40°	1136.9	1150.5	1128.8	1143.7	1145.7	1143.0	1126.1	1120.7	1121.4	1121.4
42.5°	1114.0	1109.2	1120.7	1118.0	1110.6	1109.9	1118.0	1118.0	1114.6	1112.6
45°	1082.9	1080.2	1082.9	1082.2	1088.9	1089.6	1074.1	1061.9	1057.9	1056.5
47.5°	1037.6	1053.1	1042.3	1047.7	1038.9	1028.8	1028.1	1030.8	1030.1	1028.8
50°	998.4	997.7	1010.5	988.2	990.3	995.7	994.3	984.2	980.8	976.1
52.5°	955.1	959.2	948.4	952.4	951.7	944.3	936.2	939.6	943.6	946.3
55°	899.0	905.1	903.1	899.7	891.6	894.3	903.7	899.0	892.2	890.9
57.5°	851.7	844.9	851.7	847.6	853.0	849.7	838.2	839.5	842.2	846.3
60°	790.2	799.0	786.8	796.3	788.2	780.0	786.8	796.3	793.6	792.9
62.5°	726.6	730.7	734.8	726.6	725.3	730.7	731.4	723.3	726.0	728.7
65°	667.8	663.8	671.2	671.2	671.9	669.2	662.4	666.5	669.9	669.9
67.5°	603.6	609.7	606.3	609.7	605.0	606.3	609.0	603.6	605.0	601.6
70°	540.1	545.5	549.5	547.5	550.2	552.2	547.5	546.8	547.5	549.5
72.5°	477.9	482.6	491.4	493.4	498.2	495.5	488.0	484.7	481.3	481.3
75°	413.0	421.8	426.5	434.0	429.2	425.8	429.2	421.1	417.7	415.7
77.5°	350.1	360.3	369.1	365.0	367.0	370.4	367.0	365.0	363.0	364.3
80°	286.6	299.4	304.2	306.9	310.3	310.3	311.6	312.3	313.0	313.0
82.5°	231.2	240.0	247.4	253.5	255.5	255.5	260.2	264.3	268.4	271.1
85°	180.5	187.9	195.3	200.8	204.8	208.2	215.6	221.7	228.5	233.2
87.5°	137.9	145.3	153.4	161.6	165.6	170.3	178.4	187.2	198.7	208.2
90°	110.2	119.6	129.1	138.6	142.6	147.4	157.5	169.0	187.9	201.4
92.5°	101.4	110.9	119.6	129.1	133.8	138.6	149.4	165.6	183.9	191.3
95°	97.3	106.8	115.6	124.4	129.8	135.2	146.7	157.5	164.9	167.6
97.5°	94.0	102.7	110.9	120.3	125.0	129.8	138.6	144.0	148.7	150.7
100°	90.6	99.4	107.5	115.6	119.0	121.7	127.8	133.8	139.2	140.6
102.5°	87.9	95.3	102.1	108.2	110.9	113.6	119.0	121.7	120.3	119.6
105°	83.8	90.6	96.0	100.7	102.7	104.1	106.1	105.4	103.4	102.1
107.5°	80.4	85.2	89.9	92.6	94.0	94.0	93.3	92.6	91.3	91.3
110°	77.1	81.1	84.5	86.5	87.2	87.2	87.2	85.8	85.8	85.2





TEST NUMBER: P241468

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

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	74.4	78.4	81.1	83.1	83.8	83.8	84.5	84.5	83.8	83.8
115°	72.3	76.4	79.8	82.5	83.8	84.5	85.8	86.5	85.8	85.8
117.5°	71.7	76.4	80.4	84.5	85.8	87.2	89.2	89.2	88.5	88.5
120°	71.7	77.1	81.8	85.8	87.9	89.9	91.9	91.9	91.3	91.3
122.5°	71.7	77.1	81.8	86.5	89.2	90.6	93.3	93.3	92.6	92.6
125°	70.3	76.4	81.8	86.5	89.2	91.3	93.3	94.0	93.3	93.3
127.5°	68.3	74.4	80.4	85.2	87.9	89.9	92.6	93.3	93.3	93.3
130°	65.6	72.3	77.7	83.1	85.8	87.9	90.6	91.9	92.6	92.6
132.5°	62.9	68.3	74.4	79.8	82.5	84.5	87.9	89.2	90.6	90.6
135°	58.8	64.9	71.0	76.4	79.1	81.1	84.5	86.5	87.2	87.9
137.5°	54.8	60.8	66.2	71.7	74.4	76.4	80.4	82.5	83.8	84.5
140°	50.0	56.1	61.5	66.9	69.6	71.7	75.0	77.7	79.1	79.8
142.5°	45.3	50.7	56.1	61.5	63.5	65.6	69.6	72.3	73.7	74.4
145°	40.6	45.3	50.7	55.4	57.5	58.8	62.9	64.9	66.9	67.6
147.5°	35.8	40.6	44.6	48.7	50.7	52.0	55.4	57.5	58.8	59.5
150°	31.1	35.1	39.2	42.6	43.9	45.3	47.3	49.3	50.7	51.4
152.5°	26.4	29.7	33.1	35.8	37.2	37.9	40.6	41.9	42.6	43.3
155°	21.0	24.3	27.7	29.7	31.1	31.8	33.8	34.5	35.1	35.8
157.5°	16.2	18.9	21.6	24.3	25.0	26.4	27.0	28.4	28.4	28.4
160°	12.2	14.2	16.9	18.9	19.6	21.0	21.6	22.3	23.0	23.0
162.5°	8.8	10.1	12.2	13.5	14.2	15.5	16.2	16.9	17.6	17.6
165°	6.1	6.8	8.1	9.5	9.5	10.1	11.5	11.5	12.2	12.2
167.5°	3.4	4.1	4.7	5.4	5.4	6.1	6.8	7.4	7.4	7.4
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)