

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: P241467

Luminaire Tested: **FVS8M-3-LD4-40-2LO-PA187-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241467  
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-LD4-40-2LO-PA187-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
3FT LENGTH, 2-MODULE LED WITH PA187 LENS  
Light Source: (168) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

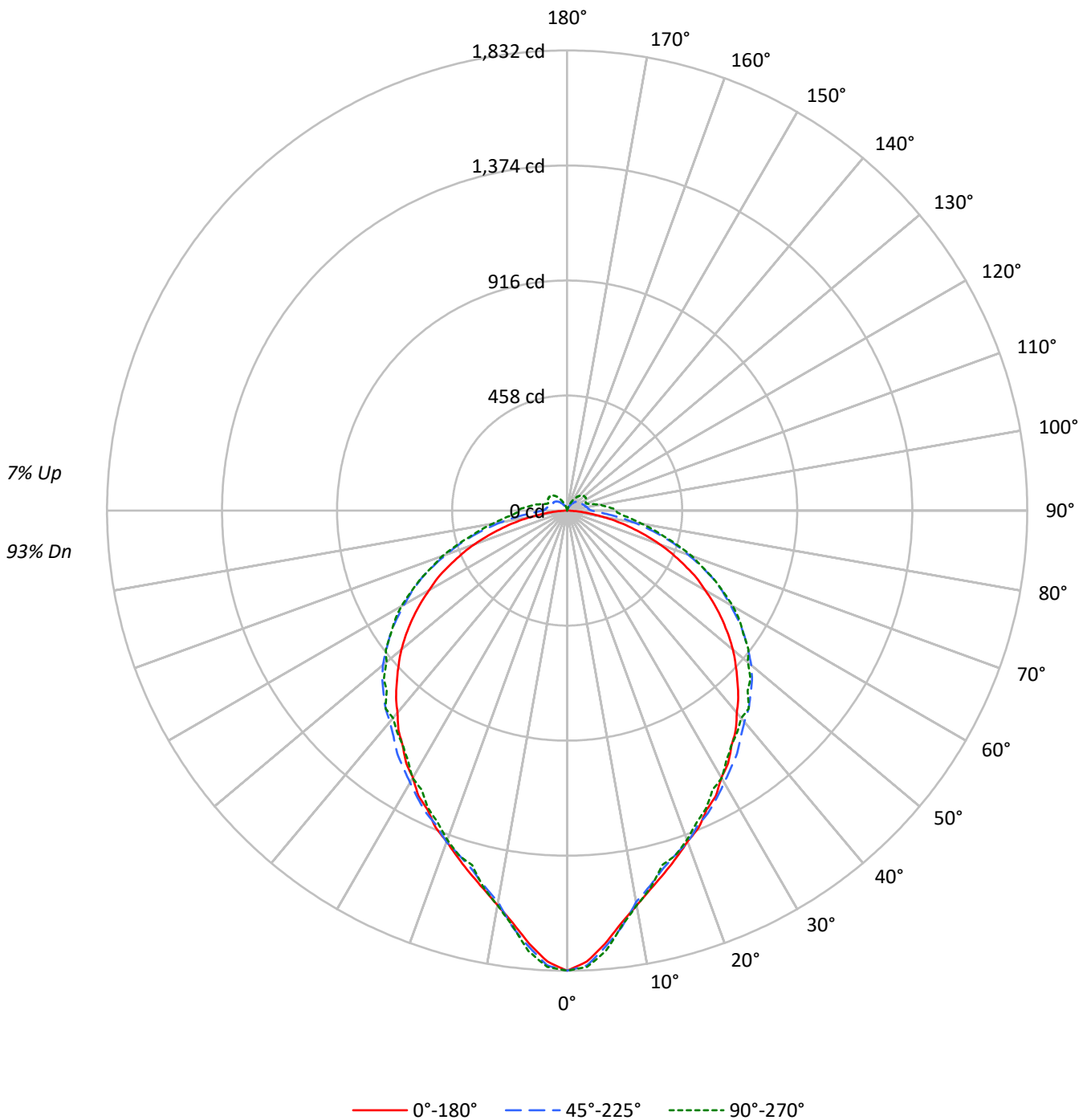
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4923.9 lumens  
Efficiency: N/A  
Efficacy: 121.0 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-LD4-40-2LO-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°	10695	10695	10695
5°	10100	10050	10121
10°	9373	9067	9099
15°	8911	8471	8332
20°	8553	8147	8009
25°	8270	7844	7626
30°	8041	7575	7335
35°	7855	7399	7021
40°	7682	7187	6910
45°	7532	7133	6844
50°	7380	7052	6718
55°	7135	6836	6594
60°	6806	6536	6401
65°	6427	6230	5996
70°	5897	5686	5568
75°	5025	5067	4894
80°	3812	4235	4437
85°	2005	3267	4195



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	161.3	3.3
10°-20°	418.5	8.5
20°-30°	609.5	12.4
30°-40°	728.0	14.8
40°-50°	782.4	15.9
50°-60°	743.0	15.1
60°-70°	600.3	12.2
70°-80°	385.6	7.8
80°-90°	168.8	3.4
90°-100°	89.6	1.8
100°-110°	67.8	1.4
110°-120°	54.1	1.1
120°-130°	48.2	1.0
130°-140°	36.0	0.7
140°-150°	20.8	0.4
150°-160°	8.2	0.2
160°-170°	1.7	0.0
170°-180°	0.0	0.0
0°-30°	1189.3	24.2
0°-40°	1917.3	38.9
0°-60°	3442.7	69.9
0°-90°	4597.4	93.4
90°-120°	211.4	4.3
90°-150°	316.5	6.4
90°-180°	327.0	6.6
0°-180°	4923.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1832	1832	1832	1832	1832	
5°	1731	1732	1744	1757	1761	161
15°	1494	1488	1475	1472	1462	421
25°	1314	1328	1328	1314	1308	608
35°	1141	1169	1180	1168	1141	716
45°	959	996	1033	1047	1016	740
55°	752	799	859	857	857	672
65°	516	565	640	646	644	512
75°	265	318	389	413	400	282
85°	47	92	158	197	224	60
90°	1	42	98	137	194	2
95°	1	37	84	125	161	0
105°	1	32	73	99	98	1
115°	1	30	64	81	82	1
125°	1	25	61	86	90	1
135°	1	19	50	76	84	1
145°	1	10	34	55	65	1
155°	1	4	17	30	34	1
165°	2	1	4	9	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°	1831.5	1831.5	1831.5	1831.5	1831.5	1831.5	1831.5	1831.5	1831.5	1831.5	1831.5
2.5°	1797.1	1799.7	1799.7	1799.0	1800.3	1799.7	1802.9	1807.5	1809.4	1812.0	1812.7
5°	1730.8	1733.4	1729.5	1725.6	1728.2	1732.1	1735.3	1741.8	1741.2	1740.5	1743.8
7.5°	1655.4	1656.1	1652.8	1650.9	1649.6	1652.2	1654.8	1657.4	1662.6	1668.4	1671.0
10°	1595.0	1596.9	1591.1	1586.5	1584.6	1583.9	1587.8	1592.4	1594.3	1589.1	1582.0
12.5°	1541.7	1540.4	1538.4	1530.6	1534.5	1535.8	1537.1	1535.8	1529.3	1526.1	1529.3
15°	1494.2	1493.6	1491.6	1487.1	1488.4	1488.4	1484.5	1481.9	1481.9	1486.4	1474.7
17.5°	1448.1	1447.4	1446.8	1440.3	1442.9	1443.5	1444.2	1443.5	1446.8	1439.0	1435.7
20°	1401.9	1399.3	1400.0	1401.3	1407.8	1405.2	1404.5	1407.1	1401.9	1400.6	1404.5
22.5°	1366.8	1365.5	1362.9	1362.3	1362.9	1361.6	1363.6	1364.9	1363.6	1367.5	1357.1
25°	1314.2	1313.5	1314.8	1317.4	1323.3	1328.5	1332.4	1323.3	1330.4	1327.8	1328.5
27.5°	1281.0	1281.0	1281.7	1279.7	1283.6	1286.9	1286.9	1292.7	1295.3	1290.1	1289.5
30°	1227.7	1227.7	1231.6	1238.8	1245.3	1253.1	1251.8	1252.4	1253.1	1253.7	1250.5
32.5°	1192.6	1193.9	1195.9	1196.5	1206.3	1205.0	1206.3	1217.3	1218.0	1217.3	1214.1
35°	1141.3	1139.3	1147.1	1152.3	1166.6	1169.2	1171.2	1172.5	1179.0	1175.7	1180.3
37.5°	1102.3	1103.0	1106.2	1114.0	1115.3	1125.0	1132.2	1134.1	1133.5	1136.7	1134.8
40°	1051.0	1049.0	1054.2	1067.9	1079.6	1084.1	1088.0	1094.5	1097.1	1100.4	1097.8
42.5°	1008.1	1006.8	1012.0	1023.7	1033.4	1041.9	1045.8	1052.9	1061.4	1065.9	1069.8
45°	958.7	957.4	965.2	976.9	990.5	995.7	1002.9	1013.9	1024.3	1030.2	1032.8
47.5°	909.9	911.2	913.2	926.8	946.3	952.2	960.6	965.2	985.3	991.2	998.3
50°	861.8	862.5	868.3	876.8	893.0	900.2	911.9	924.9	934.0	945.7	957.4
52.5°	807.2	806.6	815.7	828.0	843.6	853.4	860.5	879.4	889.8	898.9	906.7
55°	752.0	755.9	762.4	773.4	789.0	799.4	806.6	822.2	842.3	852.1	859.2
57.5°	696.1	699.3	709.1	719.5	733.8	740.9	752.0	768.9	783.8	794.9	805.9
60°	634.3	638.2	648.0	659.7	680.5	682.4	695.4	711.7	727.3	742.2	749.4
62.5°	581.7	581.7	588.8	603.8	618.7	627.8	640.2	654.5	672.0	684.4	696.7
65°	516.1	520.0	531.0	545.3	555.7	565.4	579.1	595.3	614.8	629.1	640.2
67.5°	455.6	457.6	469.9	481.0	498.5	508.9	515.4	536.9	555.1	567.4	576.5
70°	393.9	397.8	406.9	419.9	435.5	446.5	454.3	475.1	490.1	505.0	512.2
72.5°	327.6	332.8	344.5	357.5	373.1	382.8	390.6	410.8	426.4	439.4	454.3
75°	265.2	268.4	280.8	295.1	312.0	318.5	328.9	344.5	364.0	380.2	388.7
77.5°	206.0	208.6	221.0	232.7	248.9	258.0	267.1	284.7	300.9	315.9	326.9
80°	146.2	149.5	160.5	171.6	189.1	197.6	204.1	224.2	241.1	254.1	265.8
82.5°	93.6	96.8	107.2	120.9	133.9	143.0	150.1	165.7	183.3	195.6	209.3
85°	47.4	50.0	59.1	70.8	87.1	91.6	102.7	116.3	131.9	145.6	157.9
87.5°	14.3	18.2	27.3	38.3	51.3	57.8	66.3	80.6	94.2	107.2	120.9
90°	0.6	3.9	11.7	22.1	35.1	41.6	48.7	61.7	73.4	86.4	97.5
92.5°	0.6	3.2	10.4	20.8	32.5	39.0	44.8	57.2	68.2	78.6	88.4
95°	0.6	2.6	9.7	19.5	31.2	37.0	42.9	54.6	65.0	75.4	84.5
97.5°	0.6	2.6	9.1	18.8	29.9	35.7	41.6	52.0	61.7	72.1	81.9
100°	0.6	2.6	9.1	18.2	29.2	34.4	39.6	50.0	59.8	69.5	78.6
102.5°	0.6	2.6	8.4	18.2	27.9	33.1	38.3	48.1	57.8	67.6	76.0
105°	0.6	1.9	8.4	17.5	27.3	32.5	37.0	46.8	56.5	65.6	73.4
107.5°	0.6	1.9	7.8	16.9	26.6	31.8	36.4	46.1	54.6	63.7	70.8
110°	0.6	1.9	7.8	16.2	26.0	31.2	35.7	45.5	53.9	61.7	68.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.6	1.9	7.1	15.6	25.3	30.5	35.1	44.2	52.6	59.8	66.3
115°	0.6	1.3	7.1	14.9	24.7	29.9	34.4	43.5	51.3	58.5	64.3
117.5°	0.6	1.3	6.5	14.9	24.0	28.6	33.8	42.2	50.0	57.2	63.7
120°	0.6	1.3	6.5	14.3	22.7	27.9	32.5	40.9	49.4	56.5	63.0
122.5°	0.6	1.3	5.8	13.6	22.1	26.6	31.2	39.6	48.1	55.9	62.4
125°	0.6	0.6	5.2	12.3	20.8	25.3	29.9	38.3	46.1	53.9	61.1
127.5°	0.6	0.6	4.5	11.7	20.1	24.0	28.6	37.0	44.8	52.0	59.1
130°	0.6	0.6	3.9	10.4	18.8	22.7	26.6	34.4	42.2	49.4	56.5
132.5°	0.6	0.6	3.9	9.7	16.9	20.8	24.7	32.5	39.6	46.8	53.3
135°	0.6	0.6	3.2	8.4	15.6	18.8	22.7	29.9	37.0	43.5	50.0
137.5°	1.3	0.6	2.6	7.1	13.6	16.9	20.1	27.3	33.8	40.3	46.1
140°	1.3	0.6	1.9	5.8	11.7	14.9	18.2	24.0	30.5	36.4	42.9
142.5°	1.3	1.3	1.3	5.2	9.7	12.3	15.6	21.4	27.3	33.1	38.3
145°	1.3	1.3	1.3	3.9	7.8	10.4	13.0	18.2	23.4	29.2	34.4
147.5°	1.3	1.3	1.3	3.2	6.5	8.4	10.4	15.6	20.1	24.7	29.9
150°	1.3	1.3	1.3	2.6	5.2	7.1	8.4	12.3	16.9	21.4	25.3
152.5°	1.3	1.3	1.3	1.9	3.9	5.2	6.5	10.4	13.6	17.5	21.4
155°	1.3	1.3	1.3	1.3	3.2	3.9	5.2	7.8	11.0	13.6	16.9
157.5°	1.3	1.3	1.3	1.3	1.9	2.6	3.9	5.8	8.4	11.0	13.0
160°	1.3	1.3	1.3	1.3	1.3	1.9	2.6	3.9	5.8	7.8	9.7
162.5°	1.9	1.3	1.3	1.3	1.3	1.3	1.9	2.6	3.9	5.8	7.1
165°	1.9	1.3	1.3	1.3	0.6	1.3	1.3	1.9	2.6	3.2	4.5
167.5°	1.9	1.9	1.3	1.3	1.3	0.6	0.6	0.6	1.3	1.9	2.6
170°	1.9	1.9	1.3	1.3	1.3	0.6	0.6	0.6	0.6	0.6	0.6
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°	1831.5	1831.5	1831.5	1831.5	1831.5	1831.5	1831.5	1831.5	1831.5	1831.5
2.5°	1813.3	1817.2	1818.5	1819.2	1821.8	1820.5	1821.8	1819.2	1819.2	1818.5
5°	1743.1	1745.7	1750.3	1756.8	1757.4	1758.1	1759.4	1762.6	1763.9	1760.7
7.5°	1663.2	1666.5	1661.3	1657.4	1660.6	1660.0	1665.8	1661.9	1666.5	1667.1
10°	1577.4	1578.1	1585.2	1590.4	1589.8	1592.4	1589.8	1586.5	1590.4	1595.6
12.5°	1530.0	1520.2	1508.5	1514.4	1519.6	1521.5	1533.9	1535.8	1541.0	1537.1
15°	1470.2	1476.7	1484.5	1472.8	1472.1	1468.2	1464.3	1461.7	1461.1	1461.7
17.5°	1441.6	1430.5	1424.0	1429.9	1439.6	1445.5	1445.5	1446.8	1435.7	1437.7
20°	1391.5	1394.8	1407.1	1400.0	1396.1	1392.2	1389.6	1394.1	1398.7	1394.8
22.5°	1362.3	1367.5	1355.8	1369.4	1372.0	1376.6	1373.3	1355.1	1348.0	1344.7
25°	1326.5	1321.3	1340.2	1320.7	1314.2	1303.8	1302.5	1305.1	1309.0	1308.3
27.5°	1284.3	1296.0	1271.9	1277.8	1287.5	1288.8	1286.2	1271.9	1264.1	1253.1
30°	1258.3	1236.8	1248.5	1247.2	1233.6	1230.3	1223.2	1227.1	1230.3	1229.7
32.5°	1208.9	1214.1	1201.1	1192.0	1200.4	1206.9	1206.3	1191.3	1182.2	1179.6
35°	1171.8	1167.3	1162.1	1175.1	1167.9	1154.9	1139.3	1140.0	1140.6	1140.6
37.5°	1135.4	1123.7	1138.0	1114.0	1112.1	1117.3	1125.0	1120.5	1113.4	1112.1
40°	1093.2	1106.2	1085.4	1099.7	1101.7	1099.1	1082.8	1077.6	1078.3	1078.3
42.5°	1071.1	1066.6	1077.6	1075.0	1067.9	1067.2	1075.0	1075.0	1071.8	1069.8
45°	1041.2	1038.6	1041.2	1040.6	1047.1	1047.7	1032.8	1021.1	1017.2	1015.9
47.5°	997.7	1012.6	1002.2	1007.4	999.0	989.2	988.6	991.2	990.5	989.2
50°	960.0	959.3	971.7	950.2	952.2	957.4	956.1	946.3	943.1	938.5
52.5°	918.4	922.3	911.9	915.8	915.1	908.0	900.2	903.4	907.3	909.9
55°	864.4	870.3	868.3	865.1	857.3	859.9	869.0	864.4	857.9	856.6
57.5°	818.9	812.4	818.9	815.0	820.2	817.0	805.9	807.2	809.8	813.7
60°	759.8	768.2	756.5	765.6	757.8	750.0	756.5	765.6	763.0	762.4
62.5°	698.7	702.6	706.5	698.7	697.4	702.6	703.2	695.4	698.0	700.6
65°	642.1	638.2	645.4	645.4	646.0	643.4	636.9	640.8	644.1	644.1
67.5°	580.4	586.2	583.0	586.2	581.7	583.0	585.6	580.4	581.7	578.4
70°	519.3	524.5	528.4	526.5	529.1	531.0	526.5	525.8	526.5	528.4
72.5°	459.5	464.1	472.5	474.5	479.0	476.4	469.3	466.0	462.8	462.8
75°	397.1	405.6	410.1	417.3	412.7	409.5	412.7	404.9	401.7	399.7
77.5°	336.7	346.4	354.9	351.0	352.9	356.2	352.9	351.0	349.0	350.3
80°	275.6	287.9	292.5	295.1	298.3	298.3	299.6	300.3	300.9	300.9
82.5°	222.3	230.7	237.9	243.7	245.7	245.7	250.2	254.1	258.0	260.6
85°	173.5	180.7	187.8	193.0	196.9	200.2	207.3	213.2	219.7	224.2
87.5°	132.6	139.7	147.5	155.3	159.2	163.8	171.6	180.0	191.1	200.2
90°	105.9	115.0	124.1	133.2	137.1	141.7	151.4	162.5	180.7	193.7
92.5°	97.5	106.6	115.0	124.1	128.7	133.2	143.6	159.2	176.8	183.9
95°	93.6	102.7	111.1	119.6	124.8	130.0	141.0	151.4	158.6	161.2
97.5°	90.3	98.8	106.6	115.7	120.2	124.8	133.2	138.4	143.0	144.9
100°	87.1	95.5	103.3	111.1	114.4	117.0	122.8	128.7	133.9	135.2
102.5°	84.5	91.6	98.1	104.0	106.6	109.2	114.4	117.0	115.7	115.0
105°	80.6	87.1	92.3	96.8	98.8	100.1	102.0	101.4	99.4	98.1
107.5°	77.3	81.9	86.4	89.0	90.3	90.3	89.7	89.0	87.7	87.7
110°	74.1	78.0	81.2	83.2	83.8	83.8	83.8	82.5	82.5	81.9





TEST NUMBER: P241467

CATALOG NUMBER: FVS8M-3-LD4-40-2LO-PA187-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	71.5	75.4	78.0	79.9	80.6	80.6	81.2	81.2	80.6	80.6
115°	69.5	73.4	76.7	79.3	80.6	81.2	82.5	83.2	82.5	82.5
117.5°	68.9	73.4	77.3	81.2	82.5	83.8	85.8	85.8	85.1	85.1
120°	68.9	74.1	78.6	82.5	84.5	86.4	88.4	88.4	87.7	87.7
122.5°	68.9	74.1	78.6	83.2	85.8	87.1	89.7	89.7	89.0	89.0
125°	67.6	73.4	78.6	83.2	85.8	87.7	89.7	90.3	89.7	89.7
127.5°	65.6	71.5	77.3	81.9	84.5	86.4	89.0	89.7	89.7	89.7
130°	63.0	69.5	74.7	79.9	82.5	84.5	87.1	88.4	89.0	89.0
132.5°	60.4	65.6	71.5	76.7	79.3	81.2	84.5	85.8	87.1	87.1
135°	56.5	62.4	68.2	73.4	76.0	78.0	81.2	83.2	83.8	84.5
137.5°	52.6	58.5	63.7	68.9	71.5	73.4	77.3	79.3	80.6	81.2
140°	48.1	53.9	59.1	64.3	66.9	68.9	72.1	74.7	76.0	76.7
142.5°	43.5	48.7	53.9	59.1	61.1	63.0	66.9	69.5	70.8	71.5
145°	39.0	43.5	48.7	53.3	55.2	56.5	60.4	62.4	64.3	65.0
147.5°	34.4	39.0	42.9	46.8	48.7	50.0	53.3	55.2	56.5	57.2
150°	29.9	33.8	37.7	40.9	42.2	43.5	45.5	47.4	48.7	49.4
152.5°	25.3	28.6	31.8	34.4	35.7	36.4	39.0	40.3	40.9	41.6
155°	20.1	23.4	26.6	28.6	29.9	30.5	32.5	33.1	33.8	34.4
157.5°	15.6	18.2	20.8	23.4	24.0	25.3	26.0	27.3	27.3	27.3
160°	11.7	13.6	16.2	18.2	18.8	20.1	20.8	21.4	22.1	22.1
162.5°	8.4	9.7	11.7	13.0	13.6	14.9	15.6	16.2	16.9	16.9
165°	5.8	6.5	7.8	9.1	9.1	9.7	11.0	11.0	11.7	11.7
167.5°	3.2	3.9	4.5	5.2	5.2	5.8	6.5	7.1	7.1	7.1
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)