

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: P241449

Luminaire Tested: **FVS8M-2-LD4-30-3HI-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241449
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-2-LD4-30-3HI-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 3-MODULE LED WITH PA187 LENS
Light Source: (126) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

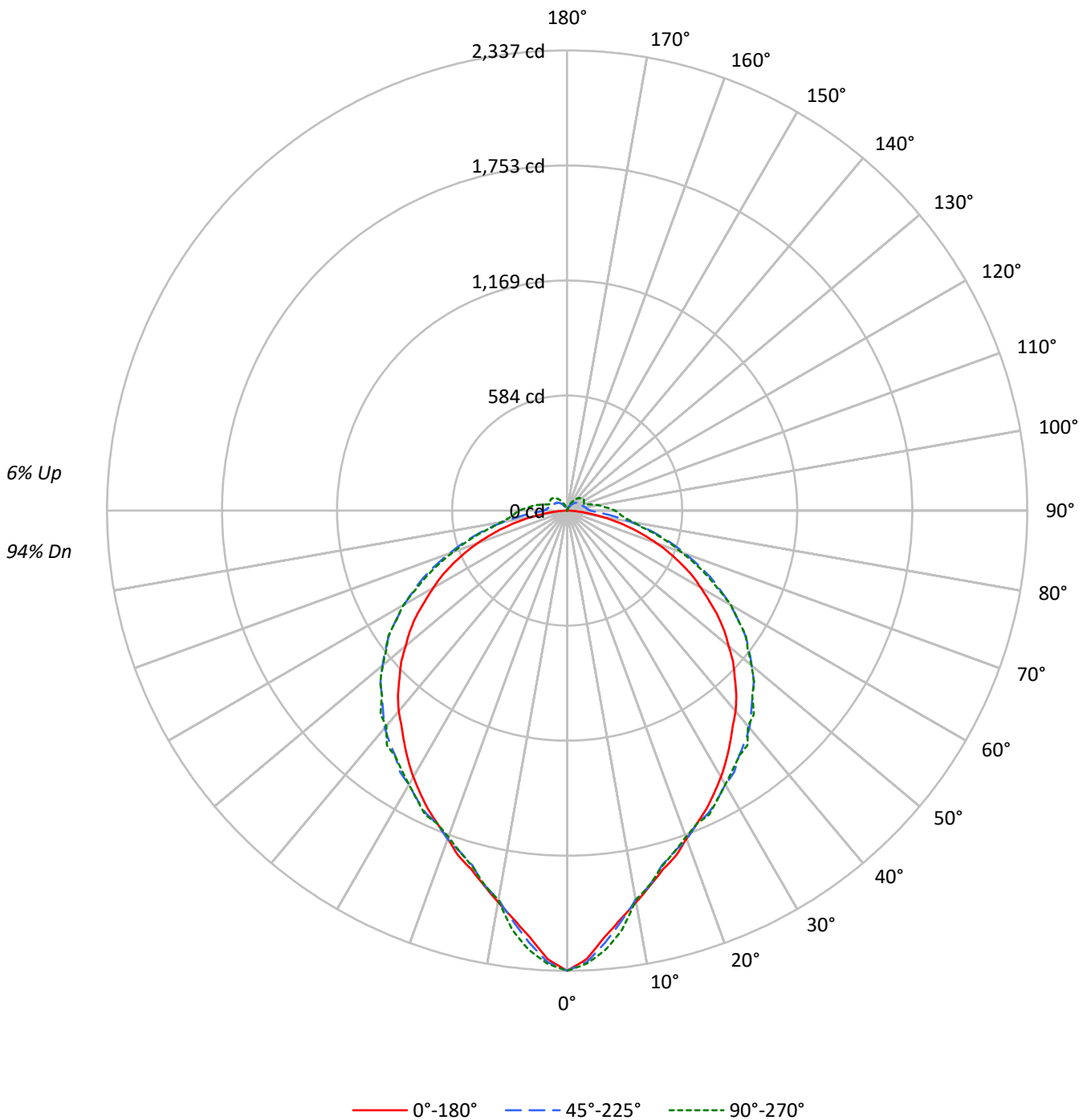
Lumens per Lamp: N/A
Luminaire Lumens: 6211.0 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.03 / 1.26
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 66.5
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

TEST NUMBER: P241449

CATALOG NUMBER: FVS8M-2-LD4-30-3HI-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	69	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	38	33	42	36	32	30
8	59	45	36	31	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°	21006	21006	21006
5°	19484	19514	19812
10°	18177	17640	17633
15°	17177	16400	16390
20°	16487	15752	15588
25°	15999	15293	15301
30°	15511	14831	14751
35°	14998	14513	14420
40°	14641	14322	14095
45°	14192	13924	13784
50°	13690	13611	13465
55°	13191	13228	13122
60°	12405	12494	12415
65°	11633	11695	11248
70°	10443	10509	9986
75°	8758	9232	8787
80°	6361	7580	7701
85°	3112	5716	7906



TEST NUMBER: P241449

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.6	3.3
10°-20°	530.1	8.5
20°-30°	777.6	12.5
30°-40°	945.4	15.2
40°-50°	1006.4	16.2
50°-60°	945.1	15.2
60°-70°	750.9	12.1
70°-80°	468.7	7.5
80°-90°	205.0	3.3
90°-100°	108.5	1.7
100°-110°	80.3	1.3
110°-120°	62.3	1.0
120°-130°	53.9	0.9
130°-140°	39.0	0.6
140°-150°	22.3	0.4
150°-160°	9.1	0.1
160°-170°	1.8	0.0
170°-180°	0.0	0.0
0°-30°	1512.2	24.3
0°-40°	2457.7	39.6
0°-60°	4409.2	71.0
0°-90°	5833.8	93.9
90°-120°	251.1	4.0
90°-150°	366.3	5.9
90°-180°	377.0	6.1
0°-180°	6211.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2337	2337	2337	2337	2337	
5°	2174	2177	2203	2232	2239	203
15°	1885	1880	1864	1856	1868	533
25°	1672	1668	1697	1687	1705	770
35°	1442	1487	1522	1553	1522	904
45°	1204	1268	1331	1337	1329	931
55°	936	1007	1104	1110	1107	833
65°	639	712	804	811	785	631
75°	326	395	479	495	466	346
85°	57	119	192	237	274	73
90°	0	56	118	173	242	3
95°	0	45	102	150	195	0
105°	0	38	86	117	119	0
115°	0	34	74	93	94	0
125°	0	29	68	95	101	0
135°	1	22	54	81	90	1
145°	1	13	38	57	66	1
155°	1	6	20	32	37	0
165°	1	1	5	10	12	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241449

CATALOG NUMBER: FVS8M-2-LD4-30-3HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2336.9	2336.9	2336.9	2336.9	2336.9	2336.9	2336.9	2336.9	2336.9	2336.9	2336.9
2.5°	2279.5	2285.2	2285.2	2286.1	2285.2	2285.2	2288.9	2287.0	2292.7	2292.7	2294.6
5°	2174.2	2181.8	2181.8	2179.9	2180.8	2177.1	2174.2	2185.5	2192.1	2200.6	2203.4
7.5°	2091.5	2098.1	2094.3	2090.6	2085.9	2086.8	2091.5	2097.2	2102.8	2105.6	2102.8
10°	2019.1	2018.2	2016.3	2006.9	2007.9	2007.9	2012.6	2015.4	2010.7	2005.0	2006.0
12.5°	1949.6	1948.6	1945.8	1946.8	1947.7	1948.6	1949.6	1937.4	1933.6	1944.9	1946.8
15°	1884.7	1888.5	1885.7	1885.7	1885.7	1880.0	1881.9	1876.3	1875.3	1880.0	1864.0
17.5°	1837.7	1826.4	1826.4	1828.3	1823.6	1818.9	1818.0	1823.6	1826.4	1814.2	1815.2
20°	1772.9	1771.0	1768.2	1776.6	1771.9	1771.0	1775.7	1780.4	1772.9	1761.6	1775.7
22.5°	1721.2	1715.5	1718.3	1728.7	1723.0	1717.4	1716.5	1721.2	1710.8	1721.2	1721.2
25°	1672.3	1662.9	1669.5	1667.6	1665.7	1668.5	1673.2	1678.9	1684.5	1687.3	1696.7
27.5°	1616.8	1611.2	1614.0	1616.8	1629.0	1634.7	1633.7	1632.8	1644.1	1641.3	1652.5
30°	1562.3	1550.1	1565.1	1569.8	1575.5	1575.5	1578.3	1591.4	1595.2	1604.6	1606.5
32.5°	1503.1	1499.3	1511.5	1515.3	1526.6	1530.3	1533.2	1553.8	1565.1	1569.8	1577.3
35°	1442.0	1447.6	1452.3	1458.9	1483.3	1487.1	1494.6	1505.0	1513.4	1517.2	1521.9
37.5°	1380.9	1389.3	1393.1	1418.5	1421.3	1428.8	1435.4	1447.6	1463.6	1473.9	1481.5
40°	1330.1	1326.4	1341.4	1354.6	1361.1	1375.2	1390.3	1410.0	1426.0	1430.7	1441.0
42.5°	1271.8	1268.1	1285.9	1289.7	1313.2	1331.1	1343.3	1352.7	1361.1	1373.4	1383.7
45°	1204.2	1211.7	1214.5	1234.2	1259.6	1268.1	1270.0	1290.6	1307.6	1323.5	1331.1
47.5°	1144.0	1147.8	1152.5	1175.0	1193.8	1202.3	1213.6	1239.9	1260.6	1278.4	1285.9
50°	1070.7	1074.4	1092.3	1106.4	1130.8	1143.1	1159.0	1177.8	1193.8	1207.9	1223.0
52.5°	1006.8	1004.9	1019.9	1036.8	1072.6	1082.0	1087.6	1109.2	1135.5	1150.6	1163.7
55°	936.3	939.1	949.4	975.7	988.9	1006.8	1019.0	1050.0	1076.3	1092.3	1103.6
57.5°	856.3	869.5	883.6	904.3	917.5	935.3	950.4	986.1	1008.6	1019.0	1028.4
60°	784.0	793.4	812.2	827.2	851.6	867.6	876.1	904.3	928.7	940.0	954.1
62.5°	717.2	719.1	740.7	754.8	780.2	788.7	802.8	827.2	850.7	863.9	878.9
65°	639.2	644.8	654.2	678.7	700.3	712.5	725.7	756.7	771.7	794.3	803.7
67.5°	562.1	571.5	580.9	602.5	622.3	635.4	648.6	675.9	690.9	710.6	719.1
70°	483.2	488.8	502.0	521.7	543.3	555.5	568.7	588.4	608.2	625.1	636.4
72.5°	403.3	408.9	423.9	442.7	468.1	474.7	487.9	509.5	531.1	546.1	559.3
75°	326.2	329.9	346.9	362.8	388.2	394.8	407.0	429.6	452.1	470.9	479.4
77.5°	251.0	254.7	270.7	288.6	310.2	322.4	332.8	352.5	375.1	388.2	401.4
80°	177.7	185.2	195.5	214.3	235.9	246.3	259.4	281.1	299.9	313.0	325.2
82.5°	111.9	118.4	129.7	150.4	169.2	177.7	188.9	208.7	229.4	239.7	251.0
85°	57.3	62.0	75.2	91.2	110.0	119.4	129.7	149.5	163.6	178.6	191.8
87.5°	18.8	23.5	34.8	50.8	68.6	77.1	85.5	103.4	116.6	130.7	143.8
90°	0.0	5.6	16.9	31.0	47.0	55.5	63.9	77.1	90.2	105.3	117.5
92.5°	0.0	3.8	13.2	27.3	42.3	48.9	55.5	68.6	82.7	94.9	108.1
95°	0.0	3.8	12.2	25.4	38.5	45.1	52.6	64.9	78.0	91.2	102.5
97.5°	0.0	2.8	11.3	23.5	36.7	43.2	48.9	63.0	75.2	87.4	97.8
100°	0.0	2.8	11.3	22.6	34.8	41.4	47.9	60.2	72.4	82.7	94.0
102.5°	0.0	2.8	10.3	21.6	33.8	39.5	46.1	58.3	68.6	79.9	89.3
105°	0.0	2.8	10.3	20.7	32.9	38.5	44.2	56.4	66.7	76.1	86.5
107.5°	0.0	2.8	9.4	19.7	31.0	37.6	43.2	54.5	64.9	74.3	82.7
110°	0.0	1.9	9.4	19.7	30.1	35.7	41.4	52.6	62.0	71.4	79.0



TEST NUMBER: P241449

CATALOG NUMBER: FVS8M-2-LD4-30-3HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.9	9.4	18.8	29.1	34.8	40.4	50.8	61.1	68.6	76.1
115°	0.0	1.9	8.5	17.9	28.2	33.8	39.5	49.8	58.3	66.7	74.3
117.5°	0.0	1.9	8.5	16.9	27.3	32.9	37.6	47.9	57.3	64.9	72.4
120°	0.0	1.9	7.5	16.0	26.3	32.0	36.7	46.1	55.5	63.9	71.4
122.5°	0.0	0.9	7.5	16.0	25.4	30.1	34.8	45.1	53.6	62.0	70.5
125°	0.0	0.9	6.6	15.0	23.5	29.1	33.8	43.2	51.7	60.2	67.7
127.5°	0.0	0.9	5.6	14.1	22.6	27.3	32.0	41.4	49.8	57.3	65.8
130°	0.9	0.9	5.6	13.2	20.7	25.4	30.1	38.5	47.0	54.5	62.0
132.5°	0.9	0.9	4.7	11.3	19.7	23.5	27.3	35.7	44.2	51.7	58.3
135°	0.9	0.9	4.7	10.3	17.9	21.6	25.4	32.9	40.4	47.9	54.5
137.5°	0.9	0.9	3.8	9.4	16.0	19.7	22.6	30.1	37.6	44.2	50.8
140°	0.9	0.9	2.8	7.5	14.1	16.9	20.7	27.3	33.8	40.4	46.1
142.5°	0.9	0.9	2.8	6.6	12.2	15.0	17.9	24.4	30.1	35.7	42.3
145°	0.9	0.9	1.9	5.6	10.3	13.2	16.0	21.6	27.3	32.0	37.6
147.5°	0.9	0.9	1.9	4.7	8.5	11.3	13.2	18.8	23.5	28.2	32.9
150°	0.9	0.9	0.9	3.8	6.6	8.5	11.3	15.0	19.7	24.4	29.1
152.5°	0.9	0.9	0.9	2.8	5.6	6.6	8.5	12.2	16.0	20.7	24.4
155°	0.9	0.9	0.9	1.9	3.8	5.6	6.6	9.4	13.2	16.9	19.7
157.5°	0.9	0.9	0.9	0.9	2.8	3.8	4.7	7.5	10.3	13.2	16.0
160°	0.9	0.9	0.9	0.9	1.9	2.8	3.8	5.6	7.5	9.4	11.3
162.5°	0.9	0.9	0.9	0.9	0.9	1.9	1.9	3.8	4.7	6.6	8.5
165°	0.9	0.9	0.9	0.0	0.9	0.9	0.9	1.9	2.8	3.8	4.7
167.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.9	0.9	1.9	2.8
170°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
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



TEST NUMBER: P241449

CATALOG NUMBER: FVS8M-2-LD4-30-3HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	2336.9	2336.9	2336.9	2336.9	2336.9	2336.9	2336.9	2336.9	2336.9	2336.9
2.5°	2295.5	2298.3	2298.3	2299.3	2299.3	2302.1	2302.1	2302.1	2304.0	2303.0
5°	2210.9	2217.5	2222.2	2227.8	2231.6	2235.3	2235.3	2236.3	2241.9	2239.1
7.5°	2100.9	2108.4	2114.1	2125.4	2129.1	2131.9	2139.5	2144.2	2147.0	2145.1
10°	2013.5	2012.6	2018.2	2014.4	2009.7	2012.6	2011.6	2015.4	2010.7	2008.8
12.5°	1935.5	1915.7	1921.4	1934.5	1937.4	1939.2	1945.8	1946.8	1950.5	1944.9
15°	1859.3	1870.6	1869.7	1860.3	1855.6	1852.8	1854.6	1862.2	1868.7	1867.8
17.5°	1819.9	1810.5	1814.2	1838.7	1847.1	1849.9	1841.5	1830.2	1818.0	1815.2
20°	1767.2	1787.9	1798.2	1769.1	1749.4	1746.5	1746.5	1754.1	1763.5	1763.5
22.5°	1735.3	1734.3	1706.1	1730.6	1743.7	1751.2	1747.5	1731.5	1716.5	1721.2
25°	1701.4	1684.5	1714.6	1698.6	1687.3	1681.7	1688.3	1697.7	1701.4	1705.2
27.5°	1642.2	1668.5	1648.8	1661.0	1676.0	1688.3	1683.6	1659.1	1651.6	1653.5
30°	1613.1	1605.5	1628.1	1646.9	1635.6	1618.7	1602.7	1599.0	1606.5	1606.5
32.5°	1580.2	1591.4	1597.1	1568.9	1570.8	1577.3	1584.9	1583.9	1572.6	1563.2
35°	1524.7	1549.1	1525.6	1547.3	1552.9	1543.5	1520.0	1523.8	1526.6	1521.9
37.5°	1497.4	1483.3	1503.1	1495.6	1489.0	1492.7	1508.7	1503.1	1505.0	1503.1
40°	1450.4	1458.9	1442.0	1449.5	1457.0	1459.8	1453.3	1429.8	1426.9	1428.8
42.5°	1388.4	1397.8	1409.1	1416.6	1398.7	1383.7	1387.5	1397.8	1400.6	1403.4
45°	1340.5	1340.5	1352.7	1331.1	1336.7	1346.1	1347.0	1343.3	1334.8	1329.2
47.5°	1292.5	1301.0	1278.4	1290.6	1287.8	1288.8	1278.4	1285.9	1288.8	1287.8
50°	1233.3	1229.5	1235.2	1223.0	1219.2	1220.1	1234.2	1228.6	1223.9	1222.0
52.5°	1173.1	1160.9	1172.2	1171.3	1180.7	1181.6	1162.8	1155.3	1159.0	1156.2
55°	1110.2	1112.0	1108.3	1115.8	1110.2	1103.6	1101.7	1103.6	1103.6	1107.3
57.5°	1033.1	1048.1	1059.4	1042.5	1039.7	1044.4	1044.4	1034.0	1026.5	1025.6
60°	959.8	966.3	973.9	975.7	970.1	964.5	962.6	959.8	961.6	960.7
62.5°	889.2	893.9	886.4	888.3	882.7	886.4	885.5	881.7	874.2	866.7
65°	810.3	814.0	811.2	807.5	811.2	815.0	797.1	790.5	784.0	784.9
67.5°	726.6	729.4	730.4	734.1	726.6	721.0	713.5	712.5	705.9	701.2
70°	649.5	647.7	655.2	652.4	645.8	644.8	635.4	624.2	617.6	615.7
72.5°	568.7	572.5	578.1	567.8	574.3	566.8	555.5	549.0	547.1	545.2
75°	488.8	497.3	499.1	495.4	495.4	488.8	486.9	481.3	474.7	466.2
77.5°	411.7	418.3	422.1	423.0	419.2	418.3	414.5	407.0	395.7	389.2
80°	335.6	342.2	347.8	350.6	348.7	354.4	345.9	341.2	337.5	339.3
82.5°	266.0	272.6	281.1	284.8	288.6	289.5	291.4	294.2	297.0	300.8
85°	202.1	212.4	221.8	230.3	236.9	239.7	246.3	254.7	266.0	274.5
87.5°	157.9	167.3	180.5	192.7	197.4	202.1	212.4	227.5	247.2	262.3
90°	130.7	141.9	154.2	166.4	173.0	177.7	192.7	208.7	229.4	242.5
92.5°	118.4	130.7	141.9	153.2	158.9	164.5	177.7	193.6	207.7	219.0
95°	113.7	124.1	135.4	145.7	150.4	156.0	167.3	176.7	188.0	194.6
97.5°	108.1	118.4	128.8	138.2	141.9	146.6	157.0	163.6	172.0	177.7
100°	103.4	113.7	122.2	130.7	134.4	138.2	146.6	153.2	154.2	157.9
102.5°	99.6	108.1	115.6	123.1	125.0	128.8	135.4	139.1	139.1	138.2
105°	94.9	102.5	109.0	114.7	116.6	119.4	121.3	121.3	120.3	119.4
107.5°	90.2	96.8	102.5	106.2	108.1	108.1	108.1	106.2	104.3	103.4
110°	86.5	92.1	96.8	98.7	98.7	98.7	97.8	96.8	95.9	94.9



TEST NUMBER: P241449

CATALOG NUMBER: FVS8M-2-LD4-30-3HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	82.7	88.4	92.1	94.0	94.0	94.0	94.0	94.0	93.1	92.1
115°	80.8	85.5	89.3	92.1	93.1	94.0	94.9	94.9	94.9	94.0
117.5°	79.0	84.6	89.3	93.1	94.0	95.9	96.8	97.8	96.8	96.8
120°	79.0	84.6	89.3	94.0	95.9	96.8	98.7	99.6	99.6	98.7
122.5°	77.1	83.7	89.3	94.0	95.9	97.8	99.6	100.6	100.6	100.6
125°	75.2	81.8	88.4	93.1	94.9	95.9	98.7	100.6	100.6	100.6
127.5°	72.4	79.9	85.5	90.2	92.1	94.0	96.8	98.7	99.6	99.6
130°	69.6	76.1	82.7	87.4	89.3	91.2	94.0	95.9	96.8	97.8
132.5°	65.8	72.4	78.0	83.7	85.5	87.4	90.2	93.1	93.1	94.0
135°	61.1	67.7	73.3	78.0	80.8	82.7	86.5	88.4	89.3	90.2
137.5°	56.4	62.0	67.7	73.3	75.2	77.1	80.8	83.7	85.5	85.5
140°	51.7	57.3	62.0	66.7	69.6	71.4	75.2	78.0	79.0	79.9
142.5°	47.0	52.6	57.3	61.1	63.9	65.8	68.6	71.4	72.4	73.3
145°	42.3	47.0	51.7	55.5	57.3	59.2	62.0	63.9	64.9	65.8
147.5°	37.6	42.3	46.1	49.8	50.8	52.6	55.5	57.3	58.3	58.3
150°	32.9	36.7	40.4	43.2	44.2	46.1	48.9	49.8	50.8	50.8
152.5°	28.2	31.0	33.8	36.7	38.5	39.5	41.4	43.2	43.2	44.2
155°	23.5	26.3	29.1	31.0	32.0	32.9	34.8	35.7	36.7	36.7
157.5°	18.8	21.6	23.5	25.4	26.3	27.3	28.2	29.1	30.1	30.1
160°	14.1	16.0	17.9	19.7	20.7	20.7	22.6	22.6	23.5	23.5
162.5°	9.4	11.3	13.2	15.0	15.0	16.0	16.0	16.9	16.9	16.9
165°	5.6	7.5	8.5	10.3	10.3	11.3	11.3	12.2	12.2	12.2
167.5°	3.8	3.8	4.7	5.6	6.6	6.6	6.6	7.5	7.5	7.5
170°	0.9	1.9	1.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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)