

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: P241470

Luminaire Tested: **FVS8M-3-LD4-35-2STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241470
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-LD4-35-2STD-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (168) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

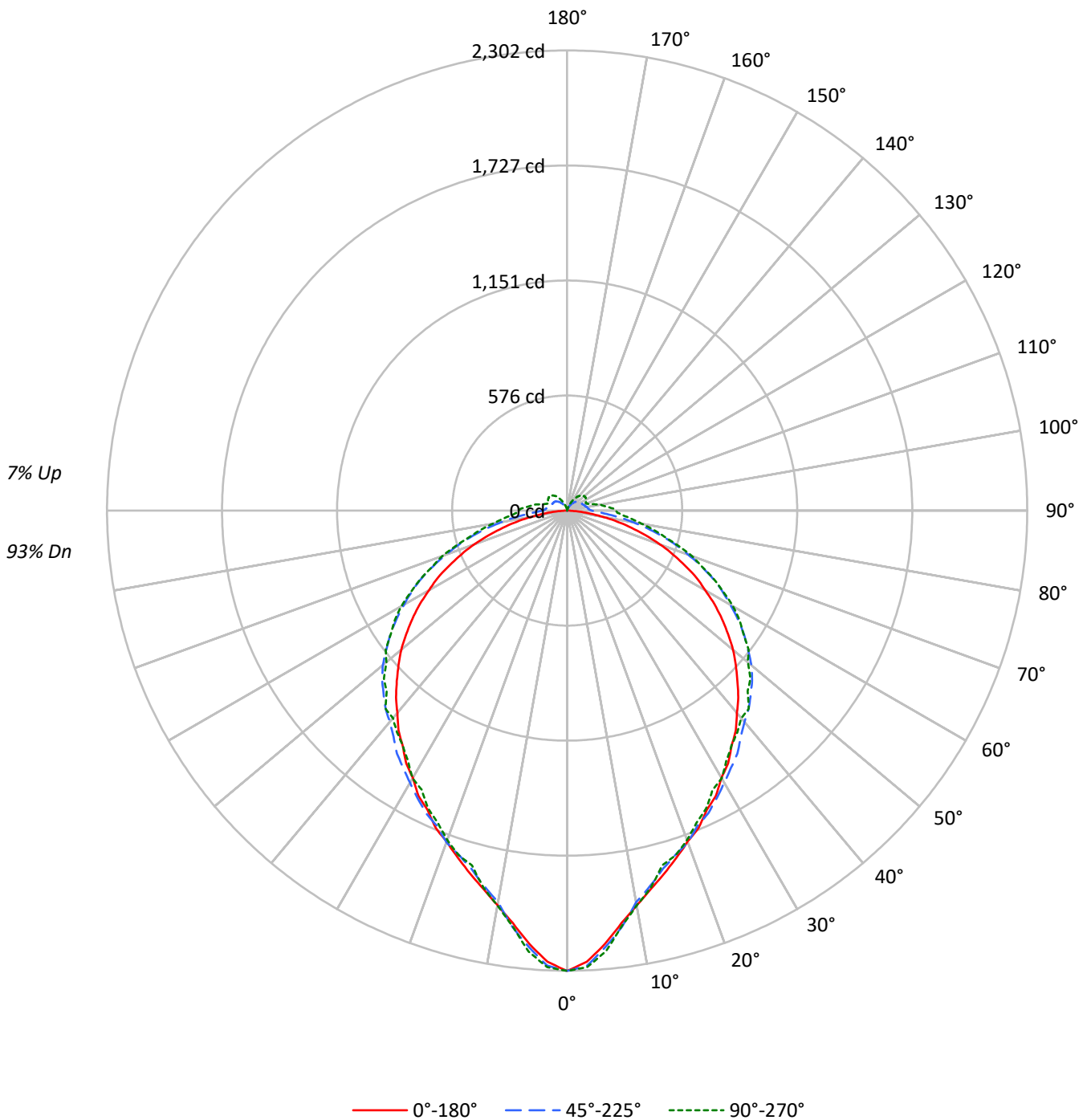
Lumens per Lamp: N/A
Luminaire Lumens: 6190.0 lumens
Efficiency: N/A
Efficacy: 113.2 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 54.7
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

TEST NUMBER: P241470

CATALOG NUMBER: FVS8M-3-LD4-35-2STD-PA187-UNV-EDC1

Luminous Intensity Polar Plot





TEST NUMBER: P241470

CATALOG NUMBER: FVS8M-3-LD4-35-2STD-PA187-UNV-EDC1

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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°	13445	13445	13445
5°	12697	12633	12723
10°	11783	11398	11439
15°	11202	10649	10475
20°	10752	10242	10068
25°	10397	9860	9587
30°	10109	9523	9221
35°	9874	9302	8826
40°	9657	9035	8687
45°	9468	8966	8603
50°	9277	8865	8445
55°	8969	8593	8290
60°	8556	8216	8046
65°	8078	7832	7538
70°	7412	7147	6999
75°	6317	6369	6152
80°	4792	5325	5578
85°	2521	4107	5274



TEST NUMBER: P241470

CATALOG NUMBER: FVS8M-3-LD4-35-2STD-PA187-UNV-EDC1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.8	3.3
10°-20°	526.1	8.5
20°-30°	766.2	12.4
30°-40°	915.2	14.8
40°-50°	983.6	15.9
50°-60°	934.0	15.1
60°-70°	754.7	12.2
70°-80°	484.8	7.8
80°-90°	212.2	3.4
90°-100°	112.6	1.8
100°-110°	85.2	1.4
110°-120°	68.0	1.1
120°-130°	60.7	1.0
130°-140°	45.3	0.7
140°-150°	26.2	0.4
150°-160°	10.3	0.2
160°-170°	2.2	0.0
170°-180°	0.0	0.0
0°-30°	1495.1	24.2
0°-40°	2410.3	38.9
0°-60°	4327.8	69.9
0°-90°	5779.4	93.4
90°-120°	265.8	4.3
90°-150°	398.0	6.4
90°-180°	411.0	6.6
0°-180°	6190.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2302	2302	2302	2302	2302	
5°	2176	2177	2192	2209	2213	202
15°	1878	1871	1854	1851	1838	529
25°	1652	1670	1670	1652	1645	765
35°	1435	1470	1484	1468	1434	901
45°	1205	1252	1298	1316	1277	930
55°	945	1005	1080	1078	1077	844
65°	649	711	805	812	810	643
75°	333	400	489	519	502	354
85°	60	115	198	248	282	76
90°	1	52	123	172	244	3
95°	1	47	106	157	203	1
105°	1	41	92	124	123	1
115°	1	38	81	101	104	1
125°	1	32	77	108	113	1
135°	1	24	63	96	106	1
145°	2	13	43	69	82	1
155°	2	5	21	38	43	1
165°	2	2	6	11	15	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241470

CATALOG NUMBER: FVS8M-3-LD4-35-2STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2302.4	2302.4	2302.4	2302.4	2302.4	2302.4	2302.4	2302.4	2302.4	2302.4	2302.4
2.5°	2259.1	2262.4	2262.4	2261.6	2263.2	2262.4	2266.5	2272.2	2274.7	2277.9	2278.7
5°	2175.8	2179.1	2174.2	2169.3	2172.5	2177.4	2181.5	2189.7	2188.9	2188.1	2192.1
7.5°	2081.0	2081.8	2077.8	2075.3	2073.7	2076.9	2080.2	2083.5	2090.0	2097.4	2100.6
10°	2005.0	2007.5	2000.1	1994.4	1992.0	1991.1	1996.0	2001.8	2004.2	1997.7	1988.7
12.5°	1938.0	1936.4	1934.0	1924.1	1929.0	1930.7	1932.3	1930.7	1922.5	1918.4	1922.5
15°	1878.4	1877.6	1875.1	1869.4	1871.0	1871.0	1866.1	1862.9	1862.9	1868.6	1853.9
17.5°	1820.4	1819.6	1818.7	1810.6	1813.8	1814.7	1815.5	1814.7	1818.7	1808.9	1804.9
20°	1762.4	1759.1	1759.9	1761.6	1769.7	1766.5	1765.6	1768.9	1762.4	1760.7	1765.6
22.5°	1718.3	1716.6	1713.3	1712.5	1713.3	1711.7	1714.2	1715.8	1714.2	1719.1	1706.0
25°	1652.1	1651.3	1652.9	1656.2	1663.5	1670.0	1674.9	1663.5	1672.5	1669.2	1670.0
27.5°	1610.4	1610.4	1611.2	1608.8	1613.7	1617.8	1617.8	1625.1	1628.4	1621.8	1621.0
30°	1543.4	1543.4	1548.3	1557.3	1565.5	1575.3	1573.6	1574.5	1575.3	1576.1	1572.0
32.5°	1499.3	1500.9	1503.4	1504.2	1516.4	1514.8	1516.4	1530.3	1531.1	1530.3	1526.2
35°	1434.7	1432.3	1442.1	1448.6	1466.6	1469.9	1472.3	1474.0	1482.1	1478.0	1483.8
37.5°	1385.7	1386.5	1390.6	1400.4	1402.1	1414.3	1423.3	1425.7	1424.9	1429.0	1426.6
40°	1321.2	1318.7	1325.3	1342.4	1357.1	1362.8	1367.7	1375.9	1379.2	1383.3	1380.0
42.5°	1267.2	1265.6	1272.1	1286.8	1299.1	1309.7	1314.6	1323.6	1334.2	1340.0	1344.9
45°	1205.1	1203.5	1213.3	1228.0	1245.2	1251.7	1260.7	1274.6	1287.7	1295.0	1298.3
47.5°	1143.9	1145.5	1148.0	1165.1	1189.6	1197.0	1207.6	1213.3	1238.6	1246.0	1255.0
50°	1083.4	1084.2	1091.6	1102.2	1122.6	1131.6	1146.3	1162.7	1174.1	1188.8	1203.5
52.5°	1014.8	1014.0	1025.4	1040.9	1060.5	1072.8	1081.8	1105.5	1118.5	1130.0	1139.8
55°	945.3	950.2	958.4	972.3	991.9	1005.0	1014.0	1033.6	1058.9	1071.1	1080.1
57.5°	875.1	879.1	891.4	904.5	922.4	931.4	945.3	966.6	985.4	999.2	1013.1
60°	797.4	802.3	814.6	829.3	855.4	857.9	874.2	894.7	914.3	933.1	942.1
62.5°	731.3	731.3	740.2	759.0	777.8	789.3	804.8	822.8	844.8	860.4	875.9
65°	648.7	653.6	667.5	685.5	698.6	710.8	728.0	748.4	772.9	790.9	804.8
67.5°	572.8	575.2	590.7	604.6	626.7	639.7	647.9	674.9	697.8	713.3	724.7
70°	495.1	500.0	511.5	527.8	547.4	561.3	571.1	597.3	616.1	634.8	643.8
72.5°	411.8	418.3	433.0	449.4	469.0	481.2	491.0	516.4	536.0	552.3	571.1
75°	333.4	337.4	353.0	370.9	392.2	400.4	413.4	433.0	457.5	478.0	488.6
77.5°	259.0	262.3	277.8	292.5	312.9	324.4	335.8	357.9	378.3	397.1	411.0
80°	183.8	187.9	201.8	215.7	237.8	248.4	256.6	281.9	303.1	319.5	334.2
82.5°	117.7	121.7	134.8	152.0	168.3	179.8	188.7	208.3	230.4	245.9	263.1
85°	59.6	62.9	74.4	89.1	109.5	115.2	129.1	146.3	165.9	183.0	198.5
87.5°	18.0	22.9	34.3	48.2	64.5	72.7	83.3	101.3	118.5	134.8	152.0
90°	0.8	4.9	14.7	27.8	44.1	52.3	61.3	77.6	92.3	108.7	122.6
92.5°	0.8	4.1	13.1	26.1	40.9	49.0	56.4	71.9	85.8	98.9	111.1
95°	0.8	3.3	12.3	24.5	39.2	46.6	53.9	68.6	81.7	94.8	106.2
97.5°	0.8	3.3	11.4	23.7	37.6	44.9	52.3	65.4	77.6	90.7	102.9
100°	0.8	3.3	11.4	22.9	36.8	43.3	49.8	62.9	75.2	87.4	98.9
102.5°	0.8	3.3	10.6	22.9	35.1	41.7	48.2	60.5	72.7	85.0	95.6
105°	0.8	2.5	10.6	22.1	34.3	40.9	46.6	58.8	71.1	82.5	92.3
107.5°	0.8	2.5	9.8	21.2	33.5	40.0	45.8	58.0	68.6	80.1	89.1
110°	0.8	2.5	9.8	20.4	32.7	39.2	44.9	57.2	67.8	77.6	85.8



TEST NUMBER: P241470

CATALOG NUMBER: FVS8M-3-LD4-35-2STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.8	2.5	9.0	19.6	31.9	38.4	44.1	55.6	66.2	75.2	83.3
115°	0.8	1.6	9.0	18.8	31.0	37.6	43.3	54.7	64.5	73.5	80.9
117.5°	0.8	1.6	8.2	18.8	30.2	36.0	42.5	53.1	62.9	71.9	80.1
120°	0.8	1.6	8.2	18.0	28.6	35.1	40.9	51.5	62.1	71.1	79.3
122.5°	0.8	1.6	7.4	17.2	27.8	33.5	39.2	49.8	60.5	70.3	78.4
125°	0.8	0.8	6.5	15.5	26.1	31.9	37.6	48.2	58.0	67.8	76.8
127.5°	0.8	0.8	5.7	14.7	25.3	30.2	36.0	46.6	56.4	65.4	74.4
130°	0.8	0.8	4.9	13.1	23.7	28.6	33.5	43.3	53.1	62.1	71.1
132.5°	0.8	0.8	4.9	12.3	21.2	26.1	31.0	40.9	49.8	58.8	67.0
135°	0.8	0.8	4.1	10.6	19.6	23.7	28.6	37.6	46.6	54.7	62.9
137.5°	1.6	0.8	3.3	9.0	17.2	21.2	25.3	34.3	42.5	50.7	58.0
140°	1.6	0.8	2.5	7.4	14.7	18.8	22.9	30.2	38.4	45.8	53.9
142.5°	1.6	1.6	1.6	6.5	12.3	15.5	19.6	27.0	34.3	41.7	48.2
145°	1.6	1.6	1.6	4.9	9.8	13.1	16.3	22.9	29.4	36.8	43.3
147.5°	1.6	1.6	1.6	4.1	8.2	10.6	13.1	19.6	25.3	31.0	37.6
150°	1.6	1.6	1.6	3.3	6.5	9.0	10.6	15.5	21.2	27.0	31.9
152.5°	1.6	1.6	1.6	2.5	4.9	6.5	8.2	13.1	17.2	22.1	27.0
155°	1.6	1.6	1.6	1.6	4.1	4.9	6.5	9.8	13.9	17.2	21.2
157.5°	1.6	1.6	1.6	1.6	2.5	3.3	4.9	7.4	10.6	13.9	16.3
160°	1.6	1.6	1.6	1.6	1.6	2.5	3.3	4.9	7.4	9.8	12.3
162.5°	2.5	1.6	1.6	1.6	1.6	1.6	2.5	3.3	4.9	7.4	9.0
165°	2.5	1.6	1.6	1.6	0.8	1.6	1.6	2.5	3.3	4.1	5.7
167.5°	2.5	2.5	1.6	1.6	1.6	0.8	0.8	0.8	1.6	2.5	3.3
170°	2.5	2.5	1.6	1.6	1.6	0.8	0.8	0.8	0.8	0.8	0.8
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: P241470

CATALOG NUMBER: FVS8M-3-LD4-35-2STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	2302.4	2302.4	2302.4	2302.4	2302.4	2302.4	2302.4	2302.4	2302.4	2302.4
2.5°	2279.6	2284.5	2286.1	2286.9	2290.2	2288.5	2290.2	2286.9	2286.9	2286.1
5°	2191.3	2194.6	2200.3	2208.5	2209.3	2210.1	2211.7	2215.8	2217.5	2213.4
7.5°	2090.8	2094.9	2088.4	2083.5	2087.6	2086.7	2094.1	2089.2	2094.9	2095.7
10°	1983.0	1983.8	1992.8	1999.3	1998.5	2001.8	1998.5	1994.4	1999.3	2005.9
12.5°	1923.3	1911.1	1896.4	1903.7	1910.3	1912.7	1928.2	1930.7	1937.2	1932.3
15°	1848.2	1856.3	1866.1	1851.4	1850.6	1845.7	1840.8	1837.5	1836.7	1837.5
17.5°	1812.2	1798.3	1790.2	1797.5	1809.8	1817.1	1817.1	1818.7	1804.9	1807.3
20°	1749.3	1753.4	1768.9	1759.9	1755.0	1750.1	1746.8	1752.6	1758.3	1753.4
22.5°	1712.5	1719.1	1704.4	1721.5	1724.8	1730.5	1726.4	1703.5	1694.6	1690.5
25°	1667.6	1661.1	1684.8	1660.2	1652.1	1639.0	1637.4	1640.6	1645.5	1644.7
27.5°	1614.5	1629.2	1599.0	1606.3	1618.6	1620.2	1616.9	1599.0	1589.2	1575.3
30°	1581.8	1554.8	1569.5	1567.9	1550.8	1546.7	1537.7	1542.6	1546.7	1545.9
32.5°	1519.7	1526.2	1509.9	1498.5	1509.1	1517.3	1516.4	1497.6	1486.2	1482.9
35°	1473.1	1467.4	1460.9	1477.2	1468.2	1451.9	1432.3	1433.1	1433.9	1433.9
37.5°	1427.4	1412.7	1430.6	1400.4	1398.0	1404.5	1414.3	1408.6	1399.6	1398.0
40°	1374.3	1390.6	1364.5	1382.4	1384.9	1381.6	1361.2	1354.7	1355.5	1355.5
42.5°	1346.5	1340.8	1354.7	1351.4	1342.4	1341.6	1351.4	1351.4	1347.3	1344.9
45°	1308.9	1305.6	1308.9	1308.1	1316.3	1317.1	1298.3	1283.6	1278.7	1277.0
47.5°	1254.2	1273.0	1259.9	1266.4	1255.8	1243.5	1242.7	1246.0	1245.2	1243.5
50°	1206.8	1206.0	1221.5	1194.5	1197.0	1203.5	1201.9	1189.6	1185.5	1179.8
52.5°	1154.5	1159.4	1146.3	1151.2	1150.4	1141.4	1131.6	1135.7	1140.6	1143.9
55°	1086.7	1094.0	1091.6	1087.5	1077.7	1081.0	1092.4	1086.7	1078.5	1076.9
57.5°	1029.5	1021.3	1029.5	1024.6	1031.1	1027.0	1013.1	1014.8	1018.0	1022.9
60°	955.1	965.8	951.0	962.5	952.7	942.9	951.0	962.5	959.2	958.4
62.5°	878.3	883.2	888.1	878.3	876.7	883.2	884.0	874.2	877.5	880.8
65°	807.2	802.3	811.3	811.3	812.1	808.9	800.7	805.6	809.7	809.7
67.5°	729.6	737.0	732.9	737.0	731.3	732.9	736.2	729.6	731.3	727.2
70°	652.8	659.4	664.3	661.8	665.1	667.5	661.8	661.0	661.8	664.3
72.5°	577.7	583.4	594.0	596.4	602.2	598.9	589.9	585.8	581.7	581.7
75°	499.2	509.8	515.6	524.5	518.8	514.7	518.8	509.0	504.9	502.5
77.5°	423.2	435.5	446.1	441.2	443.7	447.7	443.7	441.2	438.8	440.4
80°	346.4	362.0	367.7	370.9	375.0	375.0	376.7	377.5	378.3	378.3
82.5°	279.4	290.1	299.0	306.4	308.8	308.8	314.6	319.5	324.4	327.6
85°	218.2	227.1	236.1	242.7	247.6	251.7	260.6	268.0	276.2	281.9
87.5°	166.7	175.7	185.5	195.3	200.2	205.9	215.7	226.3	240.2	251.7
90°	133.2	144.6	156.1	167.5	172.4	178.1	190.4	204.3	227.1	243.5
92.5°	122.6	134.0	144.6	156.1	161.8	167.5	180.6	200.2	222.2	231.2
95°	117.7	129.1	139.7	150.3	156.9	163.4	177.3	190.4	199.4	202.6
97.5°	113.6	124.2	134.0	145.4	151.2	156.9	167.5	174.0	179.8	182.2
100°	109.5	120.1	129.9	139.7	143.8	147.1	154.4	161.8	168.3	169.9
102.5°	106.2	115.2	123.4	130.7	134.0	137.3	143.8	147.1	145.4	144.6
105°	101.3	109.5	116.0	121.7	124.2	125.8	128.3	127.5	125.0	123.4
107.5°	97.2	102.9	108.7	111.9	113.6	113.6	112.8	111.9	110.3	110.3
110°	93.1	98.0	102.1	104.6	105.4	105.4	105.4	103.8	103.8	102.9



TEST NUMBER: P241470

CATALOG NUMBER: FVS8M-3-LD4-35-2STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	89.9	94.8	98.0	100.5	101.3	101.3	102.1	102.1	101.3	101.3
115°	87.4	92.3	96.4	99.7	101.3	102.1	103.8	104.6	103.8	103.8
117.5°	86.6	92.3	97.2	102.1	103.8	105.4	107.9	107.9	107.0	107.0
120°	86.6	93.1	98.9	103.8	106.2	108.7	111.1	111.1	110.3	110.3
122.5°	86.6	93.1	98.9	104.6	107.9	109.5	112.8	112.8	111.9	111.9
125°	85.0	92.3	98.9	104.6	107.9	110.3	112.8	113.6	112.8	112.8
127.5°	82.5	89.9	97.2	102.9	106.2	108.7	111.9	112.8	112.8	112.8
130°	79.3	87.4	94.0	100.5	103.8	106.2	109.5	111.1	111.9	111.9
132.5°	76.0	82.5	89.9	96.4	99.7	102.1	106.2	107.9	109.5	109.5
135°	71.1	78.4	85.8	92.3	95.6	98.0	102.1	104.6	105.4	106.2
137.5°	66.2	73.5	80.1	86.6	89.9	92.3	97.2	99.7	101.3	102.1
140°	60.5	67.8	74.4	80.9	84.2	86.6	90.7	94.0	95.6	96.4
142.5°	54.7	61.3	67.8	74.4	76.8	79.3	84.2	87.4	89.1	89.9
145°	49.0	54.7	61.3	67.0	69.4	71.1	76.0	78.4	80.9	81.7
147.5°	43.3	49.0	53.9	58.8	61.3	62.9	67.0	69.4	71.1	71.9
150°	37.6	42.5	47.4	51.5	53.1	54.7	57.2	59.6	61.3	62.1
152.5°	31.9	36.0	40.0	43.3	44.9	45.8	49.0	50.7	51.5	52.3
155°	25.3	29.4	33.5	36.0	37.6	38.4	40.9	41.7	42.5	43.3
157.5°	19.6	22.9	26.1	29.4	30.2	31.9	32.7	34.3	34.3	34.3
160°	14.7	17.2	20.4	22.9	23.7	25.3	26.1	27.0	27.8	27.8
162.5°	10.6	12.3	14.7	16.3	17.2	18.8	19.6	20.4	21.2	21.2
165°	7.4	8.2	9.8	11.4	11.4	12.3	13.9	13.9	14.7	14.7
167.5°	4.1	4.9	5.7	6.5	6.5	7.4	8.2	9.0	9.0	9.0
170°	1.6	1.6	2.5	2.5	2.5	3.3	3.3	4.1	4.1	4.1
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)