

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: P241399

Luminaire Tested: **FVS8M-4-LD4-40-2STD-P125-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241399
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-38)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-4-LD4-40-2STD-P125-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
4FT LENGTH, 2-MODULE LED WITH P125 LENS
Light Source: (168) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

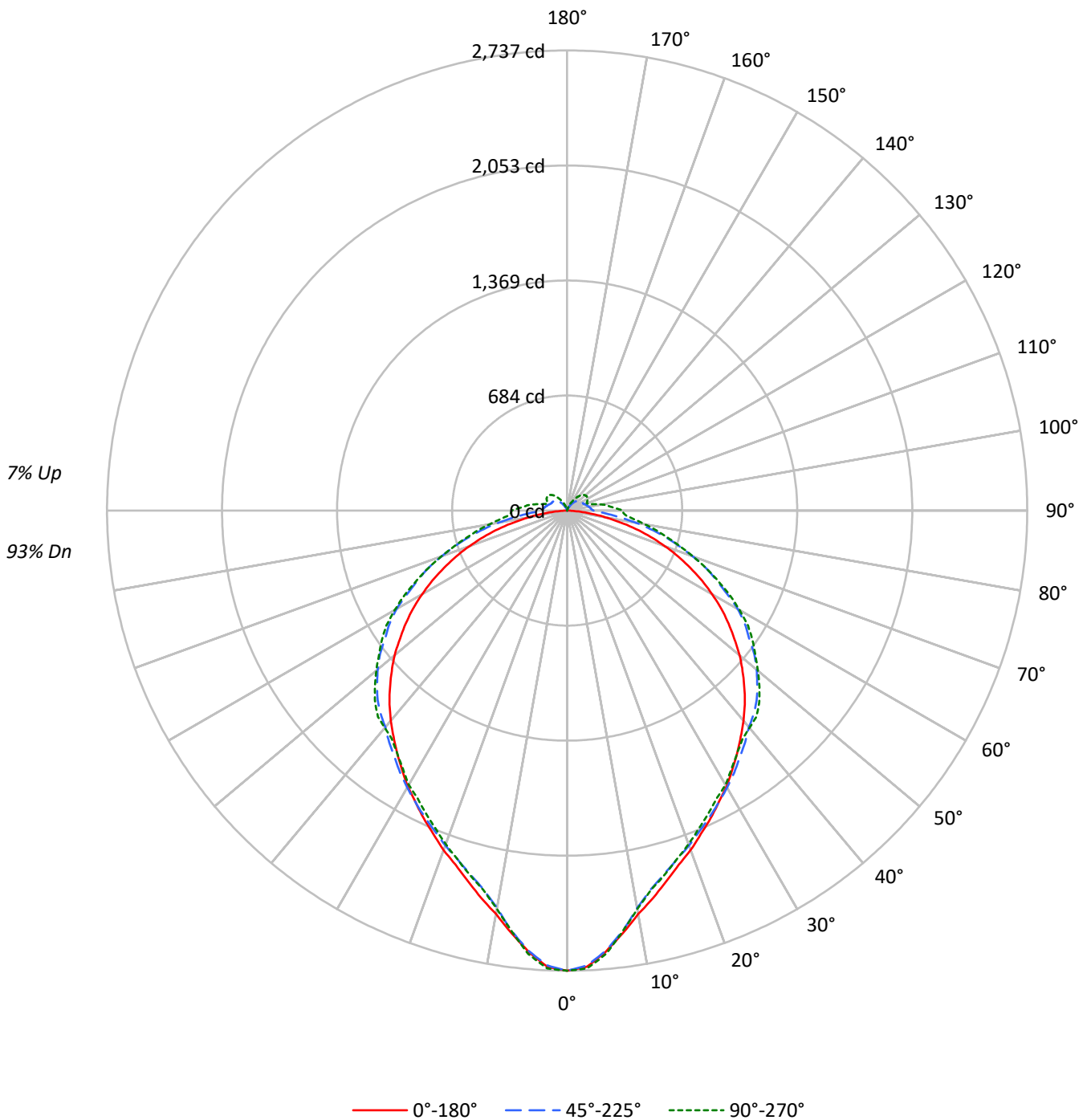
Lumens per Lamp: N/A
Luminaire Lumens: 7601.0 lumens
Efficiency: N/A
Efficacy: 117.1 lumens/watt
Spacing Criteria (0/90/45): 1.04 / 1.02 / 1.27
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 3.73' x H: 0.15')
CIE Type: Direct

Input Watts (W): 64.9
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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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	96	92	103	98	94	90	93	89	86	87	85	82	83	81	79	76
2	96	87	80	74	93	85	78	73	80	75	70	76	71	67	72	68	65	62
3	87	76	68	61	84	74	66	60	70	64	58	67	61	56	63	59	55	52
4	80	67	58	51	77	66	57	51	62	55	49	59	53	48	56	51	47	44
5	73	60	51	44	71	59	50	44	56	48	42	53	46	41	50	45	40	38
6	68	54	45	38	65	53	44	38	50	43	37	48	41	36	46	40	35	33
7	63	49	40	34	60	48	39	33	46	38	33	44	37	32	42	36	31	29
8	58	45	36	30	56	44	35	30	42	34	29	40	33	29	38	32	28	26
9	54	41	33	27	53	40	32	27	38	31	26	37	30	26	35	30	25	23
10	51	38	30	24	49	37	29	24	35	29	24	34	28	23	33	27	23	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12232	12232	12232
5°	11773	11605	11649
10°	10983	10540	10497
15°	10443	9854	9783
20°	10077	9438	9279
25°	9778	9108	8870
30°	9566	8858	8598
35°	9359	8634	8302
40°	9216	8481	8275
45°	9068	8489	8332
50°	8904	8362	8118
55°	8648	8113	7935
60°	8338	7914	7608
65°	7883	7397	7056
70°	7304	6843	6417
75°	6371	6108	5771
80°	4927	5154	5269
85°	2754	4018	5059



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	244.3	3.2
10°-20°	636.2	8.4
20°-30°	927.8	12.2
30°-40°	1117.9	14.7
40°-50°	1212.5	16.0
50°-60°	1155.5	15.2
60°-70°	931.7	12.3
70°-80°	595.9	7.8
80°-90°	266.4	3.5
90°-100°	147.8	1.9
100°-110°	107.8	1.4
110°-120°	84.9	1.1
120°-130°	75.2	1.0
130°-140°	55.0	0.7
140°-150°	29.8	0.4
150°-160°	10.6	0.1
160°-170°	1.7	0.0
170°-180°	0.0	0.0
0°-30°	1808.3	23.8
0°-40°	2926.2	38.5
0°-60°	5294.2	69.7
0°-90°	7088.2	93.3
90°-120°	340.5	4.5
90°-150°	500.5	6.6
90°-180°	513.0	6.7
0°-180°	7601.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2737	2737	2737	2737	2737	
5°	2633	2633	2629	2648	2648	245
15°	2281	2272	2236	2245	2242	644
25°	2019	2022	2008	2004	1988	931
35°	1762	1788	1790	1783	1762	1104
45°	1491	1537	1595	1621	1616	1150
55°	1172	1250	1320	1349	1347	1047
65°	808	899	980	991	990	801
75°	423	503	601	630	616	447
85°	78	148	246	311	353	97
90°	1	72	157	222	330	4
95°	1	64	142	204	259	1
105°	1	54	121	151	150	1
115°	1	47	103	123	132	1
125°	1	39	97	130	144	1
135°	2	26	79	114	132	1
145°	2	11	50	80	92	1
155°	2	2	20	41	47	1
165°	2	1	2	8	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°	2737.0	2737.0	2737.0	2737.0	2737.0	2737.0	2737.0	2737.0	2737.0	2737.0	2737.0
2.5°	2715.7	2715.7	2715.7	2711.7	2711.7	2716.6	2716.6	2719.0	2714.9	2710.8	2707.6
5°	2633.2	2630.7	2625.0	2625.8	2629.1	2633.2	2632.3	2639.7	2637.2	2632.3	2629.1
7.5°	2535.0	2530.1	2527.7	2527.7	2525.2	2529.3	2526.8	2532.6	2527.7	2523.6	2522.8
10°	2436.9	2436.9	2436.9	2430.4	2431.2	2430.4	2425.4	2422.2	2418.1	2405.0	2399.3
12.5°	2360.0	2358.4	2351.8	2346.9	2346.9	2343.7	2344.5	2337.9	2327.3	2311.8	2305.2
15°	2280.7	2283.2	2280.7	2273.3	2275.0	2272.5	2270.1	2261.9	2257.0	2241.5	2236.5
17.5°	2207.9	2214.5	2209.6	2201.4	2198.9	2197.3	2198.1	2194.8	2185.0	2178.5	2173.6
20°	2149.0	2147.4	2143.3	2136.8	2143.3	2140.9	2140.9	2137.6	2131.9	2124.5	2119.6
22.5°	2080.4	2082.0	2077.1	2077.1	2081.2	2083.6	2078.7	2077.1	2073.0	2064.0	2060.7
25°	2019.0	2020.7	2017.4	2015.8	2019.0	2021.5	2021.5	2021.5	2018.2	2012.5	2008.4
27.5°	1954.4	1960.1	1956.1	1956.1	1962.6	1967.5	1970.0	1965.9	1964.2	1957.7	1955.2
30°	1895.5	1889.8	1892.3	1901.3	1904.5	1910.3	1914.4	1915.2	1907.0	1904.5	1902.1
32.5°	1828.5	1830.9	1826.0	1835.8	1848.9	1855.5	1855.5	1853.8	1851.4	1850.6	1848.9
35°	1762.3	1763.9	1765.5	1777.8	1784.3	1788.4	1795.0	1800.7	1796.6	1792.5	1790.1
37.5°	1696.0	1699.3	1702.6	1711.6	1719.7	1727.9	1735.3	1743.4	1741.8	1736.1	1738.5
40°	1631.4	1635.5	1633.9	1639.6	1662.5	1670.7	1673.9	1681.3	1682.1	1674.8	1682.1
42.5°	1564.4	1564.4	1563.5	1581.5	1595.4	1603.6	1604.4	1620.8	1627.3	1633.9	1642.0
45°	1490.8	1492.4	1499.8	1512.0	1524.3	1536.6	1548.8	1567.6	1575.0	1584.8	1594.6
47.5°	1415.5	1416.3	1428.6	1436.8	1462.1	1476.0	1485.9	1495.7	1507.9	1518.6	1533.3
50°	1340.3	1343.6	1343.6	1369.7	1390.2	1395.9	1404.9	1420.4	1444.1	1458.9	1471.1
52.5°	1253.6	1261.8	1267.5	1288.8	1305.1	1318.2	1333.8	1360.7	1377.9	1391.0	1402.4
55°	1171.8	1167.7	1190.6	1197.2	1231.5	1249.5	1261.0	1279.8	1290.4	1305.1	1319.8
57.5°	1088.4	1087.6	1100.7	1118.7	1155.5	1163.7	1166.9	1189.8	1218.4	1239.7	1253.6
60°	996.0	1000.1	1008.3	1041.8	1057.4	1065.5	1082.7	1118.7	1139.1	1161.2	1172.7
62.5°	905.2	906.1	929.0	947.0	967.4	987.8	1005.8	1026.3	1037.7	1057.4	1070.4
65°	807.9	812.8	837.4	849.6	888.1	898.7	905.2	925.7	944.5	968.2	980.5
67.5°	715.5	720.4	740.1	755.6	789.1	792.4	803.8	834.9	864.4	882.4	894.6
70°	619.0	628.0	637.0	665.6	683.6	695.9	712.3	746.6	757.2	778.5	793.2
72.5°	521.7	529.9	539.7	562.6	585.5	599.4	618.2	637.8	650.1	669.7	695.1
75°	422.8	431.0	444.9	463.7	489.0	502.9	512.7	530.7	560.2	583.1	601.0
77.5°	323.8	328.7	348.4	364.7	395.0	404.0	417.9	439.9	467.8	490.6	507.0
80°	233.9	240.4	253.5	273.1	296.0	309.9	320.6	347.5	375.3	391.7	413.0
82.5°	148.8	155.4	170.9	190.5	211.0	223.2	237.1	262.5	286.2	303.4	323.8
85°	77.7	83.4	98.1	118.6	136.6	148.0	161.9	187.3	205.3	226.5	246.1
87.5°	24.5	31.1	45.8	65.4	85.9	96.5	107.9	131.7	149.6	170.9	188.9
90°	0.8	6.5	21.3	40.1	61.3	72.0	82.6	103.0	121.8	139.8	157.0
92.5°	0.8	5.7	19.6	37.6	57.2	67.1	76.9	95.7	114.5	131.7	146.4
95°	0.8	4.9	18.0	36.0	54.8	63.8	73.6	91.6	109.6	125.9	141.5
97.5°	0.8	4.9	17.2	33.5	51.5	60.5	70.3	88.3	105.5	121.0	136.6
100°	0.8	4.1	15.5	31.9	49.1	58.1	67.1	85.0	101.4	116.9	130.8
102.5°	0.8	3.3	14.7	30.3	47.4	55.6	64.6	81.8	97.3	112.8	125.9
105°	0.8	3.3	13.1	28.6	45.8	54.0	63.0	79.3	94.9	108.8	121.0
107.5°	0.8	2.5	12.3	27.0	44.2	52.3	61.3	76.9	91.6	104.7	116.1
110°	0.8	2.5	11.4	26.2	42.5	50.7	58.9	75.2	89.1	101.4	110.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.8	1.6	10.6	24.5	40.9	49.1	57.2	72.8	86.7	97.3	106.3
115°	0.8	1.6	9.8	23.7	39.3	47.4	55.6	70.3	83.4	94.9	103.0
117.5°	0.8	0.8	9.0	22.1	37.6	45.0	53.2	68.7	81.8	92.4	101.4
120°	0.8	0.8	7.4	20.4	35.2	43.3	51.5	66.2	80.1	91.6	101.4
122.5°	0.8	0.8	6.5	18.8	33.5	41.7	49.1	63.8	77.7	90.0	99.8
125°	0.8	0.8	5.7	17.2	31.1	39.3	46.6	61.3	75.2	87.5	97.3
127.5°	0.8	0.8	4.9	15.5	28.6	36.0	44.2	58.1	72.0	83.4	94.0
130°	0.8	0.8	3.3	13.1	26.2	33.5	40.9	54.8	67.9	79.3	90.0
132.5°	1.6	0.8	2.5	11.4	23.7	30.3	36.8	50.7	63.8	74.4	85.0
135°	1.6	0.8	1.6	9.0	20.4	26.2	32.7	45.0	58.1	69.5	79.3
137.5°	1.6	1.6	1.6	7.4	17.2	22.1	27.8	40.1	51.5	63.0	73.6
140°	1.6	1.6	0.8	5.7	13.9	18.8	23.7	34.3	45.0	55.6	66.2
142.5°	1.6	1.6	0.8	4.1	10.6	14.7	19.6	28.6	39.3	49.1	58.1
145°	1.6	1.6	0.8	2.5	8.2	11.4	15.5	23.7	32.7	40.9	49.9
147.5°	1.6	1.6	0.8	1.6	5.7	9.0	11.4	18.8	26.2	33.5	40.9
150°	1.6	1.6	0.8	1.6	4.1	5.7	9.0	14.7	20.4	27.0	33.5
152.5°	1.6	1.6	1.6	0.8	2.5	4.1	6.5	10.6	16.4	21.3	27.0
155°	1.6	1.6	1.6	0.8	1.6	2.5	4.1	7.4	11.4	16.4	20.4
157.5°	2.5	1.6	1.6	0.8	0.8	1.6	2.5	4.9	8.2	11.4	14.7
160°	2.5	1.6	1.6	0.8	0.8	0.8	1.6	2.5	4.9	7.4	9.8
162.5°	2.5	2.5	1.6	0.8	0.8	0.8	0.8	1.6	2.5	4.1	5.7
165°	2.5	2.5	1.6	1.6	0.8	0.8	0.8	0.8	0.8	1.6	2.5
167.5°	2.5	2.5	1.6	1.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8
170°	2.5	2.5	1.6	1.6	0.8	0.8	0.8	0.8	0.0	0.0	0.0
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°	2737.0	2737.0	2737.0	2737.0	2737.0	2737.0	2737.0	2737.0	2737.0	2737.0
2.5°	2707.6	2716.6	2723.1	2725.6	2726.4	2724.7	2728.0	2728.8	2728.0	2725.6
5°	2629.9	2638.9	2646.2	2648.7	2647.9	2651.1	2649.5	2650.3	2649.5	2647.9
7.5°	2513.8	2516.2	2519.5	2515.4	2520.3	2521.1	2514.6	2518.7	2520.3	2524.4
10°	2399.3	2400.9	2403.4	2401.7	2403.4	2403.4	2403.4	2404.2	2407.5	2405.0
12.5°	2304.4	2307.7	2316.7	2314.2	2318.3	2323.2	2317.5	2313.4	2319.1	2309.3
15°	2238.2	2240.6	2242.3	2239.8	2244.7	2242.3	2240.6	2236.5	2241.5	2242.3
17.5°	2176.0	2174.4	2180.1	2175.2	2176.0	2174.4	2173.6	2167.9	2166.2	2172.8
20°	2120.4	2116.3	2112.2	2115.5	2119.6	2116.3	2115.5	2111.4	2112.2	2111.4
22.5°	2059.1	2064.0	2067.3	2066.5	2062.4	2064.0	2058.3	2051.7	2050.9	2046.8
25°	2010.0	2011.7	2010.0	2010.0	2004.3	2001.9	2004.3	1997.8	1991.2	1988.0
27.5°	1956.9	1957.7	1957.7	1951.2	1949.5	1947.9	1942.2	1937.2	1932.3	1928.3
30°	1898.8	1903.7	1898.0	1901.3	1899.6	1893.9	1889.8	1883.3	1878.4	1883.3
32.5°	1848.1	1844.8	1844.8	1842.4	1840.8	1842.4	1834.2	1823.6	1818.7	1819.5
35°	1790.9	1790.9	1794.1	1788.4	1782.7	1781.1	1773.7	1771.2	1761.4	1762.3
37.5°	1738.5	1736.9	1738.5	1736.9	1733.6	1732.8	1718.9	1721.4	1718.9	1712.4
40°	1691.9	1697.6	1699.3	1688.7	1692.7	1696.0	1686.2	1687.8	1683.7	1687.0
42.5°	1652.7	1656.8	1663.3	1661.7	1658.4	1654.3	1661.7	1664.1	1660.0	1664.9
45°	1606.1	1613.4	1614.2	1621.6	1620.8	1617.5	1618.3	1615.9	1611.8	1615.9
47.5°	1543.1	1548.8	1553.7	1554.5	1560.3	1560.3	1554.5	1557.0	1561.9	1550.5
50°	1480.9	1483.4	1489.1	1485.9	1488.3	1491.6	1489.9	1483.4	1483.4	1481.8
52.5°	1412.3	1418.0	1418.8	1420.4	1419.6	1412.3	1413.9	1413.9	1408.2	1410.6
55°	1335.4	1348.5	1353.4	1350.1	1349.3	1351.7	1346.0	1355.8	1346.0	1346.8
57.5°	1263.4	1265.9	1272.4	1273.2	1270.8	1276.5	1274.1	1273.2	1270.8	1275.7
60°	1180.8	1183.3	1183.3	1178.4	1184.9	1178.4	1180.8	1179.2	1186.6	1184.1
62.5°	1081.9	1088.4	1094.1	1085.2	1086.0	1083.5	1082.7	1082.7	1089.2	1091.7
65°	988.7	987.8	996.0	990.3	991.1	992.7	982.9	988.7	988.7	990.3
67.5°	904.4	902.8	899.5	897.1	896.3	895.4	893.0	888.1	891.3	893.8
70°	803.0	812.8	807.9	807.9	806.3	804.7	807.9	792.4	794.9	795.7
72.5°	707.4	712.3	719.6	722.9	720.4	716.3	713.1	707.4	700.8	702.4
75°	612.5	617.4	627.2	629.7	630.5	628.0	629.7	624.8	621.5	615.8
77.5°	520.9	529.1	534.8	544.6	544.6	545.4	549.5	547.9	543.0	544.6
80°	426.0	435.0	447.3	457.9	462.0	463.7	465.3	464.5	466.1	466.9
82.5°	336.9	359.0	365.5	377.0	381.9	383.5	391.7	395.0	397.4	402.3
85°	264.1	279.7	295.2	305.8	310.7	314.8	323.0	333.6	346.7	353.3
87.5°	206.1	220.0	234.7	247.8	256.0	262.5	275.6	296.8	320.6	335.3
90°	171.7	186.4	202.0	215.1	222.4	229.8	249.4	276.4	311.6	330.4
92.5°	161.1	176.6	189.7	203.6	211.0	219.2	239.6	264.1	286.2	293.6
95°	156.2	170.9	182.4	195.4	203.6	211.8	228.2	243.7	255.1	259.2
97.5°	150.5	163.5	175.0	188.1	193.8	200.3	214.3	226.5	235.5	239.6
100°	143.9	156.2	166.0	176.6	180.7	186.4	198.7	207.7	211.8	209.3
102.5°	138.2	147.2	156.2	163.5	166.8	170.9	177.5	179.1	178.3	175.8
105°	130.8	139.0	144.7	148.8	151.3	152.9	154.6	153.7	152.1	149.6
107.5°	124.3	130.0	134.1	134.9	136.6	137.4	138.2	136.6	134.1	133.3
110°	117.8	122.7	125.1	125.9	125.9	126.8	127.6	127.6	125.9	125.1



TEST NUMBER: P241399

CATALOG NUMBER: FVS8M-4-LD4-40-2STD-P125-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	112.8	116.9	119.4	121.0	121.8	122.7	125.1	126.8	125.9	125.9
115°	109.6	114.5	118.6	121.0	122.7	124.3	128.4	130.8	131.7	131.7
117.5°	108.8	115.3	120.2	124.3	125.9	128.4	132.5	135.7	136.6	136.6
120°	109.6	116.1	121.8	126.8	129.2	131.7	135.7	139.0	140.7	141.5
122.5°	108.8	116.1	122.7	128.4	130.8	133.3	137.4	141.5	143.1	143.1
125°	106.3	114.5	121.0	127.6	130.0	132.5	137.4	141.5	143.9	143.9
127.5°	103.0	111.2	118.6	125.1	127.6	130.8	135.7	139.8	143.1	143.1
130°	98.9	107.9	115.3	121.8	124.3	127.6	132.5	137.4	139.8	140.7
132.5°	94.0	103.0	110.4	116.9	120.2	122.7	128.4	133.3	135.7	137.4
135°	89.1	97.3	104.7	112.0	114.5	117.8	122.7	126.8	130.0	131.7
137.5°	82.6	90.8	98.1	104.7	107.1	110.4	115.3	119.4	122.7	123.5
140°	75.2	83.4	90.8	96.5	99.8	102.2	107.1	110.4	112.8	113.7
142.5°	67.1	75.2	81.8	87.5	90.0	92.4	96.5	99.8	102.2	103.0
145°	58.1	66.2	72.0	77.7	80.1	81.8	85.9	88.3	91.6	91.6
147.5°	49.1	56.4	63.0	67.9	69.5	72.0	75.2	77.7	78.5	79.3
150°	40.1	46.6	53.2	58.1	59.7	61.3	63.8	66.2	67.9	67.9
152.5°	31.9	37.6	43.3	49.1	49.9	51.5	54.0	55.6	57.2	57.2
155°	25.4	29.4	33.5	38.4	40.9	42.5	44.2	45.8	46.6	46.6
157.5°	18.8	22.1	25.4	29.4	31.1	33.5	35.2	36.0	36.8	37.6
160°	12.3	15.5	18.0	21.3	22.9	24.5	26.2	27.8	28.6	28.6
162.5°	7.4	9.8	11.4	13.9	14.7	15.5	18.8	19.6	19.6	19.6
165°	4.1	4.9	6.5	7.4	8.2	9.0	10.6	12.3	12.3	12.3
167.5°	0.8	1.6	2.5	2.5	3.3	3.3	4.1	5.7	5.7	5.7
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
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)