

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: P241593

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241593
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-29)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-30-3HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 3-MODULE LED WITH OPAL LENS
Light Source: (252) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

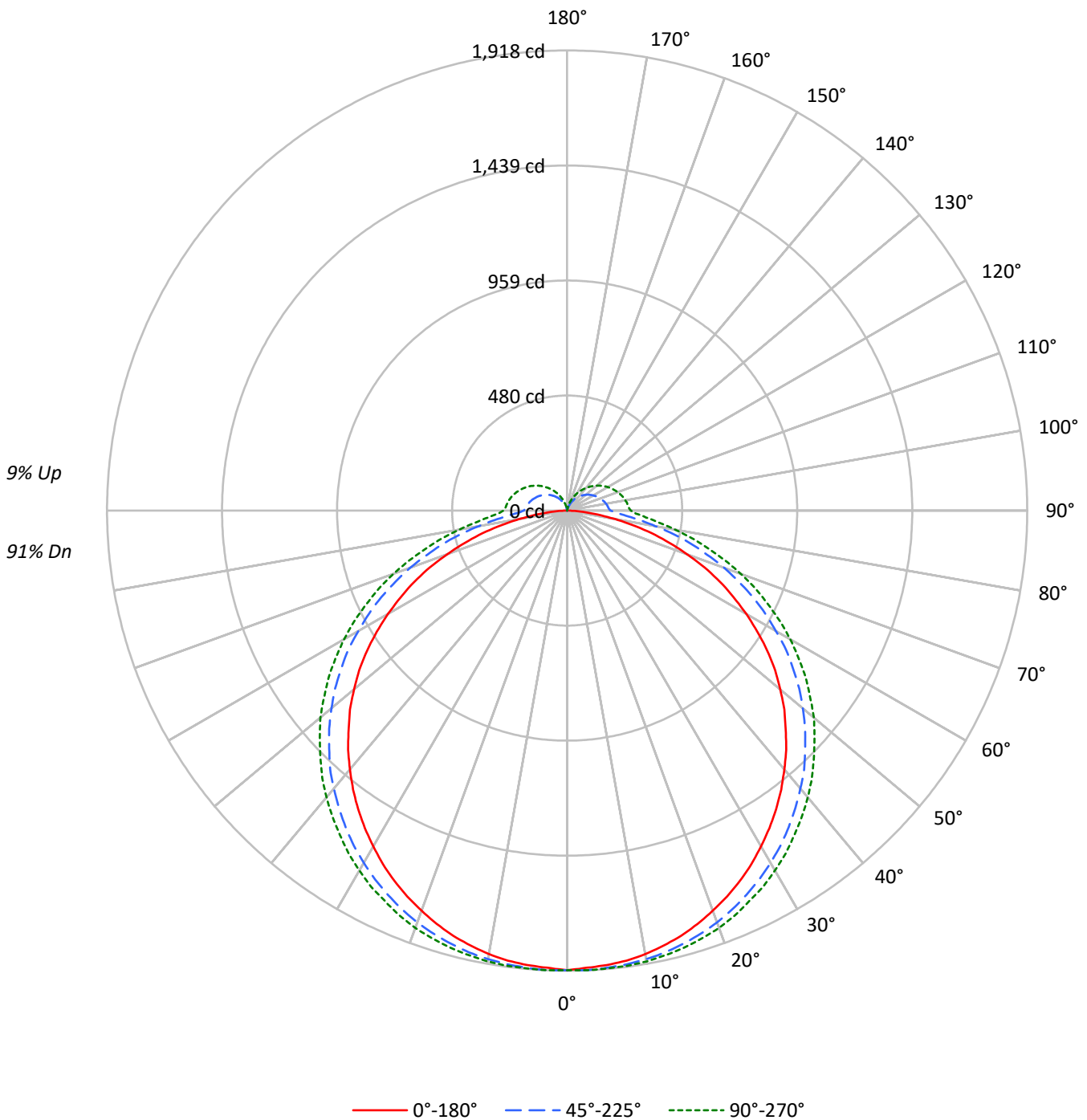
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6886.0 lumens
Efficiency: N/A
Efficacy: 65.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.34 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 105
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





TEST NUMBER: P241593

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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	113	113	113	113	106	106	106	99	99	99	93	93	93	91
1	105	100	95	91	102	97	93	89	91	88	84	85	83	80	80	78	76	73
2	95	87	79	73	92	84	77	72	79	73	68	74	69	66	70	66	63	60
3	87	76	67	60	83	73	65	59	69	62	57	65	59	55	61	56	53	50
4	79	67	57	51	76	65	56	50	61	54	48	57	51	46	54	49	45	42
5	72	59	50	43	70	58	49	42	54	47	41	51	45	40	49	43	39	36
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	31
7	62	48	39	33	59	47	38	32	44	37	31	42	36	31	40	34	30	28
8	57	44	35	29	55	43	34	29	40	33	28	38	32	27	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	35	29	24	34	28	24	22
10	50	37	29	24	48	36	28	23	34	27	23	33	27	22	31	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11187	11187	11187
5°	11097	11024	11012
10°	11031	10883	10881
15°	10943	10740	10749
20°	10827	10595	10628
25°	10719	10434	10472
30°	10583	10273	10334
35°	10455	10095	10161
40°	10292	9903	10000
45°	10118	9686	9797
50°	9925	9444	9608
55°	9659	9146	9343
60°	9249	8764	9012
65°	8768	8315	8593
70°	7965	7722	8112
75°	6929	6960	7447
80°	5220	5961	6722
85°	2821	5076	6172



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.9	2.6
10°-20°	526.8	7.6
20°-30°	811.5	11.8
30°-40°	1001.2	14.5
40°-50°	1073.1	15.6
50°-60°	1014.8	14.7
60°-70°	827.9	12.0
70°-80°	543.0	7.9
80°-90°	259.1	3.8
90°-100°	167.0	2.4
100°-110°	147.9	2.1
110°-120°	122.0	1.8
120°-130°	92.5	1.3
130°-140°	62.7	0.9
140°-150°	35.9	0.5
150°-160°	15.2	0.2
160°-170°	3.4	0.0
170°-180°	0.1	0.0
0°-30°	1520.2	22.1
0°-40°	2521.4	36.6
0°-60°	4609.3	66.9
0°-90°	6239.4	90.6
90°-120°	436.9	6.3
90°-150°	627.9	9.1
90°-180°	647.0	9.4
0°-180°	6886.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1916	1916	1916	1916	1916	
5°	1902	1906	1913	1916	1916	181
15°	1835	1848	1870	1883	1886	518
25°	1703	1731	1767	1790	1796	785
35°	1519	1558	1610	1642	1651	950
45°	1288	1342	1402	1444	1454	995
55°	1018	1077	1150	1198	1214	908
65°	704	773	854	909	923	693
75°	366	443	534	589	608	384
85°	67	151	245	306	330	83
90°	3	85	180	244	265	4
95°	1	78	171	233	254	1
105°	1	69	156	216	237	1
115°	1	58	137	192	211	1
125°	1	46	115	163	180	1
135°	1	34	89	129	143	1
145°	2	20	63	93	103	1
155°	2	8	33	56	62	1
165°	2	2	9	19	24	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°	1915.7	1915.7	1915.7	1915.7	1915.7	1915.7	1915.7	1915.7	1915.7	1915.7	1915.7
2.5°	1907.3	1909.2	1910.1	1909.2	1910.1	1912.0	1912.9	1914.8	1915.7	1916.7	1917.6
5°	1901.6	1902.6	1904.5	1904.5	1905.4	1906.3	1908.2	1909.2	1911.0	1912.0	1912.9
7.5°	1892.2	1893.2	1894.1	1895.1	1896.0	1896.9	1897.9	1900.7	1903.5	1905.4	1907.3
10°	1877.2	1878.1	1880.0	1880.0	1881.9	1883.8	1886.6	1890.4	1894.1	1896.9	1898.8
12.5°	1857.5	1859.3	1860.3	1862.2	1865.0	1866.9	1869.7	1874.4	1880.0	1882.8	1886.6
15°	1834.9	1836.8	1836.8	1839.6	1844.3	1848.1	1850.9	1855.6	1862.2	1865.9	1869.7
17.5°	1806.7	1810.5	1810.5	1814.2	1819.9	1823.6	1826.4	1833.0	1840.5	1844.3	1849.9
20°	1774.7	1777.6	1779.4	1784.1	1791.7	1796.4	1799.2	1805.8	1815.2	1820.8	1826.4
22.5°	1740.9	1741.8	1747.5	1752.2	1760.6	1764.4	1770.0	1778.5	1784.1	1792.6	1799.2
25°	1703.3	1704.2	1708.9	1715.5	1724.0	1730.6	1734.3	1743.7	1753.1	1761.6	1767.2
27.5°	1661.9	1661.9	1667.6	1677.0	1686.4	1691.1	1698.6	1708.9	1717.4	1724.9	1733.4
30°	1615.9	1617.8	1623.4	1634.7	1644.1	1649.7	1657.2	1667.6	1678.9	1687.3	1695.8
32.5°	1568.9	1570.8	1579.2	1588.6	1600.8	1605.5	1613.1	1626.2	1636.6	1647.8	1655.4
35°	1519.1	1518.1	1530.3	1539.7	1552.0	1558.5	1567.0	1579.2	1590.5	1602.7	1610.2
37.5°	1465.5	1467.4	1476.8	1488.0	1501.2	1509.7	1518.1	1529.4	1540.7	1554.8	1562.3
40°	1408.1	1410.0	1422.2	1434.5	1449.5	1457.0	1463.6	1476.8	1490.9	1503.1	1512.5
42.5°	1351.7	1353.6	1363.0	1377.1	1392.2	1397.8	1408.1	1422.2	1437.3	1450.4	1462.7
45°	1287.8	1290.6	1302.9	1317.9	1332.9	1342.3	1348.0	1364.0	1378.1	1393.1	1402.5
47.5°	1227.7	1228.6	1241.8	1255.9	1271.8	1283.1	1289.7	1308.5	1319.8	1333.9	1345.2
50°	1159.0	1161.9	1174.1	1189.1	1207.9	1215.4	1223.0	1240.8	1256.8	1269.0	1282.2
52.5°	1092.3	1093.2	1105.5	1123.3	1140.2	1147.8	1155.3	1174.1	1191.9	1207.0	1219.2
55°	1018.0	1024.6	1035.9	1050.0	1068.8	1077.3	1085.7	1105.5	1121.4	1137.4	1149.6
57.5°	940.9	947.5	960.7	976.7	995.5	1004.9	1014.3	1032.1	1050.9	1066.0	1082.9
60°	862.0	870.4	884.5	900.5	921.2	927.8	938.1	955.0	974.8	992.6	1004.9
62.5°	782.1	790.5	805.6	820.6	842.2	853.5	862.0	881.7	900.5	916.5	931.5
65°	704.1	709.7	721.9	743.5	762.3	772.7	782.1	804.6	818.7	841.3	854.5
67.5°	619.5	624.2	640.1	661.8	681.5	690.0	702.2	723.8	739.8	760.5	773.6
70°	532.0	541.4	555.5	576.2	598.8	607.2	618.5	639.2	661.8	677.7	695.6
72.5°	447.4	455.9	473.8	491.6	513.2	525.5	534.9	557.4	577.2	599.7	611.9
75°	365.7	370.4	388.2	408.9	429.6	442.7	450.3	473.8	493.5	515.1	533.9
77.5°	278.2	288.6	306.4	327.1	352.5	364.7	372.2	396.7	416.4	437.1	455.0
80°	200.2	205.9	224.7	247.2	268.8	282.0	292.3	315.8	334.6	361.0	374.1
82.5°	126.9	138.2	152.3	175.8	200.2	212.4	226.5	246.3	266.0	284.8	304.6
85°	66.7	75.2	91.2	114.7	138.2	151.3	161.7	186.1	206.8	224.7	245.3
87.5°	22.6	30.1	47.9	68.6	94.0	106.2	117.5	140.1	162.6	181.4	201.2
90°	2.8	10.3	27.3	48.9	72.4	84.6	95.9	118.4	141.0	160.7	180.5
92.5°	0.9	7.5	24.4	46.1	68.6	79.9	92.1	114.7	135.4	155.1	173.9
95°	0.9	7.5	22.6	44.2	66.7	78.0	89.3	111.9	132.5	152.3	171.1
97.5°	0.9	6.6	21.6	42.3	63.9	76.1	87.4	109.0	130.7	150.4	168.3
100°	0.9	6.6	20.7	40.4	62.0	73.3	84.6	106.2	126.9	146.6	164.5
102.5°	0.9	5.6	19.7	38.5	60.2	70.5	81.8	102.5	123.1	142.9	160.7
105°	0.9	5.6	18.8	37.6	58.3	68.6	79.0	99.6	119.4	139.1	156.0
107.5°	0.9	4.7	17.9	35.7	55.5	65.8	76.1	96.8	115.6	134.4	152.3
110°	0.9	4.7	16.9	33.8	53.6	63.0	73.3	93.1	111.9	130.7	146.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.9	3.8	16.0	32.0	50.8	61.1	70.5	90.2	108.1	126.0	141.9
115°	0.9	3.8	14.1	30.1	48.9	58.3	67.7	85.5	104.3	121.3	137.2
117.5°	0.9	2.8	13.2	28.2	46.1	55.5	63.9	81.8	99.6	116.6	131.6
120°	0.9	2.8	12.2	27.3	43.2	51.7	61.1	78.0	94.9	110.9	126.0
122.5°	0.9	1.9	11.3	25.4	41.4	48.9	57.3	74.3	90.2	106.2	120.3
125°	0.9	1.9	10.3	23.5	38.5	46.1	54.5	70.5	85.5	100.6	114.7
127.5°	0.9	1.9	9.4	21.6	35.7	43.2	50.8	65.8	80.8	94.9	109.0
130°	0.9	1.9	7.5	19.7	32.9	40.4	47.0	62.0	76.1	89.3	102.5
132.5°	0.9	1.9	6.6	17.9	30.1	36.7	44.2	57.3	71.4	83.7	95.9
135°	0.9	0.9	5.6	15.0	27.3	33.8	40.4	53.6	65.8	78.0	89.3
137.5°	0.9	0.9	4.7	13.2	24.4	30.1	36.7	48.9	61.1	72.4	82.7
140°	0.9	0.9	3.8	11.3	20.7	26.3	32.0	44.2	55.5	65.8	76.1
142.5°	1.9	1.9	2.8	9.4	17.9	22.6	28.2	38.5	49.8	60.2	69.6
145°	1.9	1.9	1.9	7.5	15.0	19.7	24.4	33.8	43.2	53.6	63.0
147.5°	1.9	1.9	1.9	6.6	12.2	16.0	20.7	29.1	37.6	47.0	55.5
150°	1.9	1.9	1.9	4.7	10.3	13.2	16.9	23.5	32.0	39.5	47.0
152.5°	1.9	1.9	1.9	3.8	7.5	10.3	13.2	19.7	26.3	32.9	39.5
155°	1.9	1.9	1.9	2.8	5.6	8.5	10.3	16.0	20.7	27.3	32.9
157.5°	1.9	1.9	1.9	1.9	3.8	5.6	7.5	12.2	16.0	20.7	25.4
160°	1.9	1.9	1.9	1.9	2.8	4.7	5.6	8.5	12.2	16.0	19.7
162.5°	1.9	1.9	1.9	1.9	1.9	2.8	3.8	5.6	8.5	11.3	14.1
165°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	3.8	5.6	6.6	9.4
167.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.8	3.8	4.7
170°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.9	1.9	1.9
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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1915.7	1915.7	1915.7	1915.7	1915.7	1915.7	1915.7	1915.7	1915.7	1915.7
2.5°	1917.6	1917.6	1918.6	1918.6	1918.6	1917.6	1918.6	1917.6	1917.6	1917.6
5°	1912.9	1913.9	1914.8	1915.7	1915.7	1915.7	1915.7	1914.8	1915.7	1915.7
7.5°	1909.2	1909.2	1911.0	1912.0	1912.9	1912.9	1912.9	1912.9	1913.9	1913.9
10°	1900.7	1902.6	1904.5	1906.3	1906.3	1907.3	1908.2	1907.3	1908.2	1908.2
12.5°	1888.5	1890.4	1893.2	1895.1	1896.9	1896.0	1897.9	1897.9	1897.9	1897.9
15°	1872.5	1876.3	1878.1	1881.0	1882.8	1883.8	1883.8	1885.7	1885.7	1885.7
17.5°	1852.8	1857.5	1860.3	1864.0	1865.0	1866.9	1867.8	1867.8	1869.7	1869.7
20°	1831.1	1834.9	1838.7	1842.4	1844.3	1846.2	1848.1	1848.1	1849.0	1850.9
22.5°	1802.9	1809.5	1813.3	1818.0	1820.8	1820.8	1822.7	1825.5	1825.5	1826.4
25°	1772.9	1778.5	1784.1	1788.8	1789.8	1791.7	1794.5	1796.4	1799.2	1796.4
27.5°	1740.0	1746.5	1753.1	1756.9	1757.8	1759.7	1763.5	1765.3	1766.3	1768.2
30°	1701.4	1709.9	1716.5	1720.2	1722.1	1724.9	1727.7	1729.6	1732.4	1732.4
32.5°	1661.9	1668.5	1677.9	1682.6	1685.4	1688.3	1690.1	1693.0	1694.8	1694.8
35°	1618.7	1628.1	1631.9	1640.3	1642.2	1644.1	1648.8	1651.6	1651.6	1650.7
37.5°	1575.5	1583.0	1587.7	1595.2	1599.0	1599.9	1603.7	1605.5	1608.4	1607.4
40°	1521.9	1534.1	1541.6	1545.4	1549.1	1553.8	1555.7	1558.5	1561.4	1560.4
42.5°	1472.1	1477.7	1489.0	1496.5	1498.4	1501.2	1505.9	1507.8	1511.5	1510.6
45°	1414.7	1426.0	1433.5	1440.1	1443.9	1447.6	1450.4	1453.3	1458.0	1454.2
47.5°	1357.4	1366.8	1377.1	1385.6	1387.5	1391.2	1395.0	1398.7	1400.6	1398.7
50°	1296.3	1305.7	1316.0	1322.6	1326.4	1329.2	1335.8	1339.5	1340.5	1342.3
52.5°	1232.4	1245.5	1253.0	1261.5	1265.3	1270.9	1273.7	1279.4	1277.5	1276.5
55°	1164.7	1173.1	1186.3	1194.8	1198.5	1200.4	1205.1	1209.8	1209.8	1213.6
57.5°	1092.3	1106.4	1116.7	1126.1	1128.0	1133.7	1138.4	1141.2	1143.1	1144.0
60°	1019.9	1034.0	1044.3	1055.6	1058.4	1062.2	1065.0	1069.7	1073.5	1073.5
62.5°	945.6	956.9	970.1	979.5	983.2	987.0	993.6	997.3	999.2	1001.1
65°	870.4	884.5	893.0	905.2	909.0	911.8	913.7	924.0	923.1	923.1
67.5°	791.5	801.8	815.0	827.2	830.0	833.8	839.4	846.0	845.1	848.8
70°	711.6	722.9	737.9	746.4	752.9	757.6	758.6	764.2	768.9	769.9
72.5°	627.9	643.9	657.1	666.5	670.2	676.8	682.4	688.1	689.0	689.0
75°	548.0	561.2	576.2	584.7	589.4	594.1	599.7	607.2	607.2	608.2
77.5°	470.0	486.0	496.3	505.7	511.4	514.2	523.6	525.5	528.3	533.9
80°	391.0	405.1	419.2	429.6	434.3	439.0	446.5	451.2	454.0	455.9
82.5°	322.4	336.5	350.6	361.0	365.7	371.3	375.1	384.5	386.3	386.3
85°	260.4	276.4	291.4	300.8	306.4	312.1	318.7	325.2	327.1	329.9
87.5°	220.0	235.9	249.1	261.3	266.0	269.8	277.3	283.9	285.8	286.7
90°	197.4	212.4	227.5	238.8	244.4	248.2	256.6	261.3	264.1	265.1
92.5°	190.8	205.9	220.0	231.2	236.9	240.6	248.2	253.8	256.6	257.6
95°	188.0	203.0	216.2	228.4	233.1	237.8	245.3	250.0	252.9	253.8
97.5°	185.2	200.2	213.4	224.7	230.3	235.0	241.6	247.2	250.0	251.0
100°	181.4	196.5	209.6	220.9	225.6	230.3	237.8	242.5	245.3	246.3
102.5°	177.7	191.8	204.9	216.2	220.9	225.6	232.2	237.8	240.6	241.6
105°	173.0	187.1	200.2	210.6	216.2	220.0	227.5	232.2	235.9	236.9
107.5°	168.3	182.4	194.6	205.9	210.6	214.3	221.8	227.5	230.3	230.3
110°	162.6	176.7	188.9	200.2	204.9	208.7	215.3	220.9	223.7	224.7



TEST NUMBER: P241593

CATALOG NUMBER: FVS8M-3-LD4-30-3HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	157.9	171.1	183.3	193.6	198.3	202.1	208.7	214.3	216.2	217.1
115°	151.3	165.4	176.7	187.1	191.8	195.5	202.1	206.8	209.6	210.6
117.5°	145.7	158.9	170.1	180.5	184.2	188.0	194.6	199.3	202.1	203.0
120°	140.1	152.3	163.6	173.0	177.7	181.4	187.1	191.8	194.6	195.5
122.5°	133.5	145.7	157.0	165.4	170.1	173.0	179.5	184.2	187.1	188.0
125°	127.8	139.1	149.5	157.9	162.6	165.4	171.1	175.8	178.6	179.5
127.5°	121.3	132.5	141.9	150.4	154.2	157.9	162.6	167.3	169.2	170.1
130°	114.7	125.0	134.4	141.9	145.7	148.5	154.2	157.9	160.7	161.7
132.5°	107.2	117.5	126.0	133.5	137.2	140.1	145.7	149.5	151.3	152.3
135°	100.6	110.0	118.4	125.0	128.8	131.6	136.3	140.1	141.9	142.9
137.5°	93.1	102.5	110.0	116.6	120.3	122.2	126.9	130.7	132.5	133.5
140°	85.5	94.0	101.5	108.1	110.9	113.7	117.5	120.3	122.2	123.1
142.5°	79.0	86.5	93.1	98.7	101.5	104.3	108.1	110.9	112.8	113.7
145°	71.4	78.0	84.6	90.2	93.1	94.9	98.7	101.5	102.5	103.4
147.5°	63.9	70.5	76.1	81.8	83.7	85.5	89.3	91.2	93.1	93.1
150°	55.5	62.0	67.7	72.4	74.3	76.1	79.0	80.8	82.7	83.7
152.5°	47.0	53.6	59.2	63.0	64.9	66.7	69.6	71.4	72.4	73.3
155°	38.5	44.2	50.8	54.5	56.4	57.3	59.2	61.1	62.0	62.0
157.5°	30.1	35.7	40.4	45.1	46.1	47.9	49.8	51.7	51.7	52.6
160°	23.5	27.3	31.0	35.7	36.7	38.5	40.4	41.4	42.3	42.3
162.5°	16.9	19.7	22.6	26.3	27.3	29.1	31.0	32.0	32.0	32.9
165°	11.3	13.2	15.0	17.9	18.8	19.7	21.6	22.6	22.6	23.5
167.5°	6.6	7.5	9.4	10.3	11.3	11.3	13.2	14.1	14.1	14.1
170°	2.8	2.8	3.8	4.7	4.7	4.7	5.6	6.6	6.6	6.6
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)