

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: P241591

Luminaire Tested: **FVS8M-3-LD4-40-3STD-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241591
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-LD4-40-3STD-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 3-MODULE LED WITH OPAL LENS
Light Source: (252) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

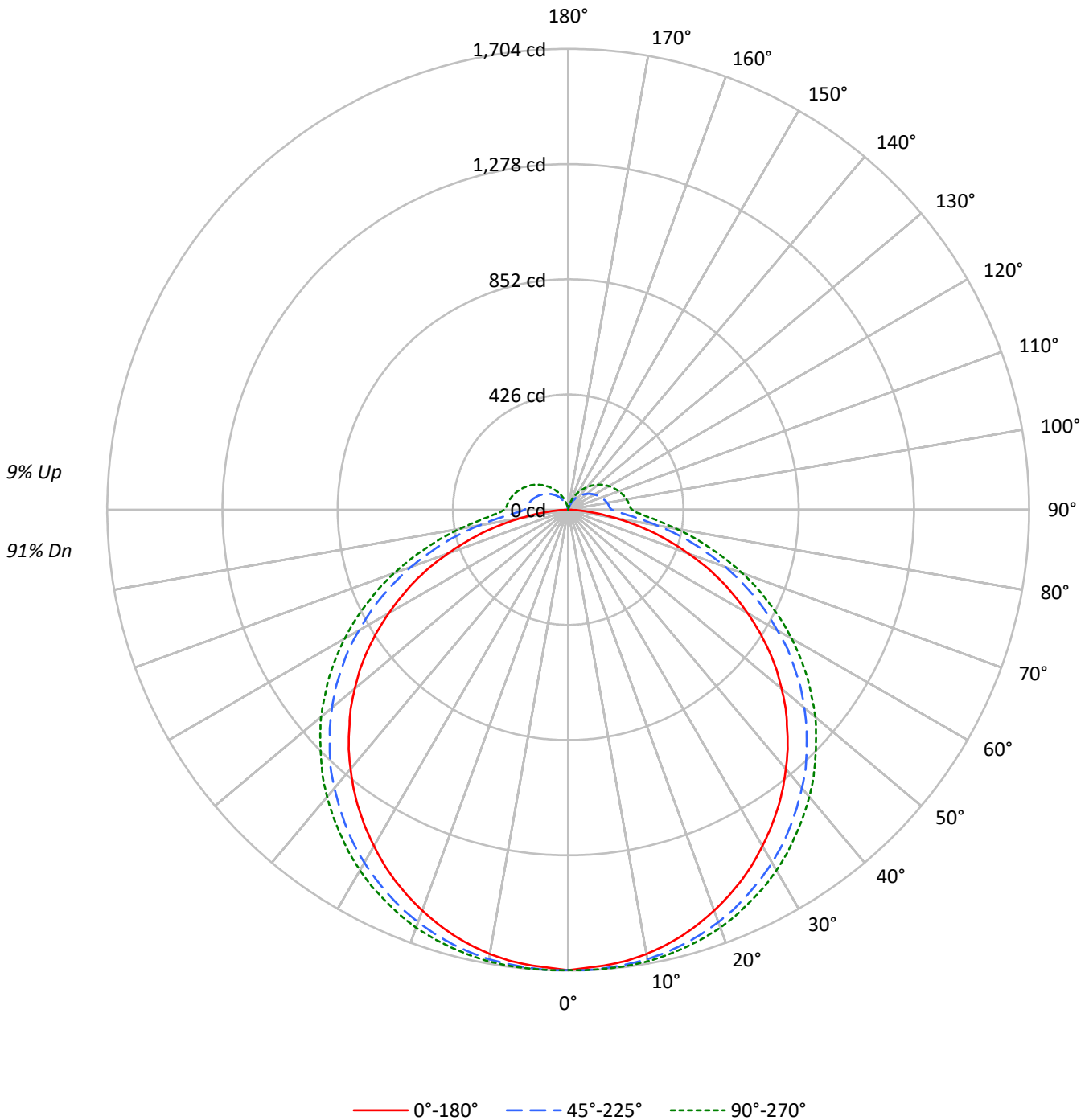
Lumens per Lamp: N/A
Luminaire Lumens: 6119.0 lumens
Efficiency: N/A
Efficacy: 73.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.34 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 82.9
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	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°	9941	9941	9941
5°	9861	9796	9786
10°	9803	9671	9670
15°	9724	9543	9552
20°	9621	9415	9444
25°	9525	9272	9305
30°	9405	9129	9183
35°	9291	8971	9029
40°	9146	8799	8886
45°	8991	8607	8705
50°	8819	8393	8538
55°	8583	8128	8302
60°	8219	7787	8008
65°	7790	7389	7636
70°	7079	6862	7208
75°	6156	6186	6617
80°	4638	5298	5973
85°	2508	4511	5486



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.7	2.6
10°-20°	468.1	7.6
20°-30°	721.1	11.8
30°-40°	889.7	14.5
40°-50°	953.6	15.6
50°-60°	901.7	14.7
60°-70°	735.7	12.0
70°-80°	482.5	7.9
80°-90°	230.3	3.8
90°-100°	148.4	2.4
100°-110°	131.4	2.1
110°-120°	108.4	1.8
120°-130°	82.2	1.3
130°-140°	55.7	0.9
140°-150°	31.9	0.5
150°-160°	13.6	0.2
160°-170°	3.0	0.0
170°-180°	0.1	0.0
0°-30°	1350.8	22.1
0°-40°	2240.5	36.6
0°-60°	4095.9	66.9
0°-90°	5544.4	90.6
90°-120°	388.2	6.3
90°-150°	558.0	9.1
90°-180°	575.0	9.4
0°-180°	6119.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1702	1702	1702	1702	1702	
5°	1690	1694	1700	1702	1702	161
15°	1630	1642	1661	1673	1676	460
25°	1514	1538	1570	1590	1596	697
35°	1350	1385	1431	1459	1467	844
45°	1144	1193	1246	1283	1292	884
55°	905	957	1022	1065	1078	807
65°	626	687	759	808	820	616
75°	325	393	474	524	540	341
85°	59	134	218	272	293	74
90°	2	75	160	217	236	4
95°	1	69	152	207	226	1
105°	1	61	139	192	210	1
115°	1	52	122	170	187	1
125°	1	41	102	144	160	1
135°	1	30	79	114	127	1
145°	2	18	56	83	92	1
155°	2	8	29	50	55	1
165°	2	2	8	17	21	0
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°	1702.4	1702.4	1702.4	1702.4	1702.4	1702.4	1702.4	1702.4	1702.4	1702.4	1702.4
2.5°	1694.8	1696.5	1697.3	1696.5	1697.3	1699.0	1699.8	1701.5	1702.4	1703.2	1704.0
5°	1689.8	1690.7	1692.3	1692.3	1693.2	1694.0	1695.7	1696.5	1698.2	1699.0	1699.8
7.5°	1681.5	1682.3	1683.1	1684.0	1684.8	1685.6	1686.5	1689.0	1691.5	1693.2	1694.8
10°	1668.1	1668.9	1670.6	1670.6	1672.3	1674.0	1676.5	1679.8	1683.1	1685.6	1687.3
12.5°	1650.6	1652.2	1653.1	1654.7	1657.2	1658.9	1661.4	1665.6	1670.6	1673.1	1676.5
15°	1630.5	1632.2	1632.2	1634.7	1638.9	1642.2	1644.7	1648.9	1654.7	1658.1	1661.4
17.5°	1605.5	1608.8	1608.8	1612.1	1617.2	1620.5	1623.0	1628.8	1635.5	1638.9	1643.9
20°	1577.1	1579.6	1581.2	1585.4	1592.1	1596.3	1598.8	1604.6	1613.0	1618.0	1623.0
22.5°	1547.0	1547.8	1552.8	1557.0	1564.5	1567.9	1572.9	1580.4	1585.4	1592.9	1598.8
25°	1513.6	1514.4	1518.6	1524.4	1532.0	1537.8	1541.1	1549.5	1557.8	1565.4	1570.4
27.5°	1476.8	1476.8	1481.8	1490.2	1498.5	1502.7	1509.4	1518.6	1526.1	1532.8	1540.3
30°	1435.9	1437.6	1442.6	1452.6	1460.9	1466.0	1472.6	1481.8	1491.9	1499.4	1506.9
32.5°	1394.1	1395.8	1403.3	1411.7	1422.5	1426.7	1433.4	1445.1	1454.3	1464.3	1471.0
35°	1349.9	1349.0	1359.9	1368.2	1379.1	1384.9	1392.5	1403.3	1413.3	1424.2	1430.9
37.5°	1302.2	1303.9	1312.3	1322.3	1334.0	1341.5	1349.0	1359.0	1369.1	1381.6	1388.3
40°	1251.3	1253.0	1263.8	1274.7	1288.0	1294.7	1300.6	1312.3	1324.8	1335.7	1344.0
42.5°	1201.2	1202.8	1211.2	1223.7	1237.1	1242.1	1251.3	1263.8	1277.2	1288.9	1299.7
45°	1144.4	1146.9	1157.7	1171.1	1184.5	1192.8	1197.8	1212.0	1224.6	1237.9	1246.3
47.5°	1090.9	1091.7	1103.4	1116.0	1130.2	1140.2	1146.0	1162.7	1172.8	1185.3	1195.3
50°	1029.9	1032.4	1043.3	1056.7	1073.4	1080.1	1086.7	1102.6	1116.8	1127.7	1139.4
52.5°	970.6	971.5	982.3	998.2	1013.2	1019.9	1026.6	1043.3	1059.2	1072.5	1083.4
55°	904.6	910.5	920.5	933.0	949.7	957.3	964.8	982.3	996.5	1010.7	1021.6
57.5°	836.1	842.0	853.7	867.9	884.6	892.9	901.3	917.2	933.9	947.2	962.3
60°	766.0	773.5	786.0	800.2	818.6	824.4	833.6	848.7	866.2	882.1	892.9
62.5°	695.0	702.5	715.9	729.2	748.4	758.5	766.0	783.5	800.2	814.4	827.8
65°	625.6	630.7	641.5	660.7	677.4	686.6	695.0	715.0	727.6	747.6	759.3
67.5°	550.5	554.6	568.8	588.1	605.6	613.1	624.0	643.2	657.4	675.8	687.5
70°	472.8	481.1	493.7	512.0	532.1	539.6	549.6	568.0	588.1	602.3	618.1
72.5°	397.6	405.1	421.0	436.9	456.1	466.9	475.3	495.3	512.9	532.9	543.8
75°	324.9	329.1	345.0	363.4	381.7	393.4	400.1	421.0	438.5	457.7	474.5
77.5°	247.3	256.4	272.3	290.7	313.2	324.1	330.8	352.5	370.0	388.4	404.3
80°	177.9	182.9	199.6	219.7	238.9	250.6	259.8	280.7	297.4	320.8	332.5
82.5°	112.8	122.8	135.3	156.2	177.9	188.8	201.3	218.9	236.4	253.1	270.6
85°	59.3	66.8	81.0	101.9	122.8	134.5	143.7	165.4	183.8	199.6	218.0
87.5°	20.0	26.7	42.6	61.0	83.5	94.4	104.4	124.5	144.5	161.2	178.8
90°	2.5	9.2	24.2	43.4	64.3	75.2	85.2	105.2	125.3	142.8	160.4
92.5°	0.8	6.7	21.7	40.9	61.0	71.0	81.9	101.9	120.3	137.8	154.5
95°	0.8	6.7	20.0	39.3	59.3	69.3	79.4	99.4	117.8	135.3	152.0
97.5°	0.8	5.8	19.2	37.6	56.8	67.7	77.7	96.9	116.1	133.6	149.5
100°	0.8	5.8	18.4	35.9	55.1	65.2	75.2	94.4	112.8	130.3	146.2
102.5°	0.8	5.0	17.5	34.2	53.5	62.6	72.7	91.0	109.4	127.0	142.8
105°	0.8	5.0	16.7	33.4	51.8	61.0	70.2	88.5	106.1	123.6	138.7
107.5°	0.8	4.2	15.9	31.7	49.3	58.5	67.7	86.0	102.7	119.4	135.3
110°	0.8	4.2	15.0	30.1	47.6	56.0	65.2	82.7	99.4	116.1	130.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.8	3.3	14.2	28.4	45.1	54.3	62.6	80.2	96.1	111.9	126.1
115°	0.8	3.3	12.5	26.7	43.4	51.8	60.1	76.0	92.7	107.8	122.0
117.5°	0.8	2.5	11.7	25.1	40.9	49.3	56.8	72.7	88.5	103.6	116.9
120°	0.8	2.5	10.9	24.2	38.4	45.9	54.3	69.3	84.4	98.6	111.9
122.5°	0.8	1.7	10.0	22.6	36.8	43.4	51.0	66.0	80.2	94.4	106.9
125°	0.8	1.7	9.2	20.9	34.2	40.9	48.4	62.6	76.0	89.4	101.9
127.5°	0.8	1.7	8.4	19.2	31.7	38.4	45.1	58.5	71.8	84.4	96.9
130°	0.8	1.7	6.7	17.5	29.2	35.9	41.8	55.1	67.7	79.4	91.0
132.5°	0.8	1.7	5.8	15.9	26.7	32.6	39.3	51.0	63.5	74.3	85.2
135°	0.8	0.8	5.0	13.4	24.2	30.1	35.9	47.6	58.5	69.3	79.4
137.5°	0.8	0.8	4.2	11.7	21.7	26.7	32.6	43.4	54.3	64.3	73.5
140°	0.8	0.8	3.3	10.0	18.4	23.4	28.4	39.3	49.3	58.5	67.7
142.5°	1.7	1.7	2.5	8.4	15.9	20.0	25.1	34.2	44.3	53.5	61.8
145°	1.7	1.7	1.7	6.7	13.4	17.5	21.7	30.1	38.4	47.6	56.0
147.5°	1.7	1.7	1.7	5.8	10.9	14.2	18.4	25.9	33.4	41.8	49.3
150°	1.7	1.7	1.7	4.2	9.2	11.7	15.0	20.9	28.4	35.1	41.8
152.5°	1.7	1.7	1.7	3.3	6.7	9.2	11.7	17.5	23.4	29.2	35.1
155°	1.7	1.7	1.7	2.5	5.0	7.5	9.2	14.2	18.4	24.2	29.2
157.5°	1.7	1.7	1.7	1.7	3.3	5.0	6.7	10.9	14.2	18.4	22.6
160°	1.7	1.7	1.7	1.7	2.5	4.2	5.0	7.5	10.9	14.2	17.5
162.5°	1.7	1.7	1.7	1.7	1.7	2.5	3.3	5.0	7.5	10.0	12.5
165°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.3	5.0	5.8	8.4
167.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.5	3.3	4.2
170°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0.8	1.7	1.7
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°	1702.4	1702.4	1702.4	1702.4	1702.4	1702.4	1702.4	1702.4	1702.4	1702.4
2.5°	1704.0	1704.0	1704.9	1704.9	1704.9	1704.0	1704.9	1704.0	1704.0	1704.0
5°	1699.8	1700.7	1701.5	1702.4	1702.4	1702.4	1702.4	1701.5	1702.4	1702.4
7.5°	1696.5	1696.5	1698.2	1699.0	1699.8	1699.8	1699.8	1699.8	1700.7	1700.7
10°	1689.0	1690.7	1692.3	1694.0	1694.0	1694.8	1695.7	1694.8	1695.7	1695.7
12.5°	1678.1	1679.8	1682.3	1684.0	1685.6	1684.8	1686.5	1686.5	1686.5	1686.5
15°	1663.9	1667.3	1668.9	1671.4	1673.1	1674.0	1674.0	1675.6	1675.6	1675.6
17.5°	1646.4	1650.6	1653.1	1656.4	1657.2	1658.9	1659.8	1659.8	1661.4	1661.4
20°	1627.2	1630.5	1633.9	1637.2	1638.9	1640.5	1642.2	1642.2	1643.0	1644.7
22.5°	1602.1	1608.0	1611.3	1615.5	1618.0	1618.0	1619.7	1622.2	1622.2	1623.0
25°	1575.4	1580.4	1585.4	1589.6	1590.4	1592.1	1594.6	1596.3	1598.8	1596.3
27.5°	1546.2	1552.0	1557.8	1561.2	1562.0	1563.7	1567.0	1568.7	1569.5	1571.2
30°	1511.9	1519.4	1525.3	1528.6	1530.3	1532.8	1535.3	1537.0	1539.5	1539.5
32.5°	1476.8	1482.7	1491.0	1495.2	1497.7	1500.2	1501.9	1504.4	1506.1	1506.1
35°	1438.4	1446.7	1450.1	1457.6	1459.3	1460.9	1465.1	1467.6	1467.6	1466.8
37.5°	1400.0	1406.7	1410.8	1417.5	1420.9	1421.7	1425.0	1426.7	1429.2	1428.4
40°	1352.4	1363.2	1369.9	1373.2	1376.6	1380.8	1382.4	1384.9	1387.4	1386.6
42.5°	1308.1	1313.1	1323.1	1329.8	1331.5	1334.0	1338.2	1339.8	1343.2	1342.3
45°	1257.1	1267.2	1273.8	1279.7	1283.0	1286.4	1288.9	1291.4	1295.6	1292.2
47.5°	1206.2	1214.5	1223.7	1231.2	1232.9	1236.3	1239.6	1242.9	1244.6	1242.9
50°	1151.9	1160.2	1169.4	1175.3	1178.6	1181.1	1187.0	1190.3	1191.1	1192.8
52.5°	1095.1	1106.8	1113.5	1121.0	1124.3	1129.3	1131.8	1136.9	1135.2	1134.3
55°	1034.9	1042.5	1054.2	1061.7	1065.0	1066.7	1070.9	1075.0	1075.0	1078.4
57.5°	970.6	983.2	992.3	1000.7	1002.4	1007.4	1011.6	1014.1	1015.7	1016.6
60°	906.3	918.8	928.0	938.0	940.6	943.9	946.4	950.6	953.9	953.9
62.5°	840.3	850.3	862.0	870.4	873.7	877.1	882.9	886.3	887.9	889.6
65°	773.5	786.0	793.5	804.4	807.7	810.2	811.9	821.1	820.3	820.3
67.5°	703.3	712.5	724.2	735.1	737.6	740.9	745.9	751.8	750.9	754.3
70°	632.3	642.3	655.7	663.2	669.1	673.3	674.1	679.1	683.3	684.1
72.5°	558.0	572.2	583.9	592.2	595.6	601.4	606.4	611.4	612.3	612.3
75°	487.0	498.7	512.0	519.6	523.7	527.9	532.9	539.6	539.6	540.4
77.5°	417.7	431.9	441.0	449.4	454.4	456.9	465.3	466.9	469.4	474.5
80°	347.5	360.0	372.5	381.7	385.9	390.1	396.8	400.9	403.5	405.1
82.5°	286.5	299.0	311.6	320.8	324.9	329.9	333.3	341.6	343.3	343.3
85°	231.4	245.6	258.9	267.3	272.3	277.3	283.2	289.0	290.7	293.2
87.5°	195.5	209.7	221.4	232.2	236.4	239.7	246.4	252.3	253.9	254.8
90°	175.4	188.8	202.1	212.2	217.2	220.5	228.0	232.2	234.7	235.6
92.5°	169.6	182.9	195.5	205.5	210.5	213.8	220.5	225.5	228.0	228.9
95°	167.1	180.4	192.1	203.0	207.2	211.3	218.0	222.2	224.7	225.5
97.5°	164.6	177.9	189.6	199.6	204.6	208.8	214.7	219.7	222.2	223.0
100°	161.2	174.6	186.3	196.3	200.5	204.6	211.3	215.5	218.0	218.9
102.5°	157.9	170.4	182.1	192.1	196.3	200.5	206.3	211.3	213.8	214.7
105°	153.7	166.2	177.9	187.1	192.1	195.5	202.1	206.3	209.7	210.5
107.5°	149.5	162.0	172.9	182.9	187.1	190.4	197.1	202.1	204.6	204.6
110°	144.5	157.0	167.9	177.9	182.1	185.4	191.3	196.3	198.8	199.6



TEST NUMBER: P241591

CATALOG NUMBER: FVS8M-3-LD4-40-3STD-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	140.3	152.0	162.9	172.1	176.2	179.6	185.4	190.4	192.1	193.0
115°	134.5	147.0	157.0	166.2	170.4	173.7	179.6	183.8	186.3	187.1
117.5°	129.5	141.2	151.2	160.4	163.7	167.1	172.9	177.1	179.6	180.4
120°	124.5	135.3	145.3	153.7	157.9	161.2	166.2	170.4	172.9	173.7
122.5°	118.6	129.5	139.5	147.0	151.2	153.7	159.5	163.7	166.2	167.1
125°	113.6	123.6	132.8	140.3	144.5	147.0	152.0	156.2	158.7	159.5
127.5°	107.8	117.8	126.1	133.6	137.0	140.3	144.5	148.7	150.4	151.2
130°	101.9	111.1	119.4	126.1	129.5	132.0	137.0	140.3	142.8	143.7
132.5°	95.2	104.4	111.9	118.6	122.0	124.5	129.5	132.8	134.5	135.3
135°	89.4	97.7	105.2	111.1	114.4	116.9	121.1	124.5	126.1	127.0
137.5°	82.7	91.0	97.7	103.6	106.9	108.6	112.8	116.1	117.8	118.6
140°	76.0	83.5	90.2	96.1	98.6	101.1	104.4	106.9	108.6	109.4
142.5°	70.2	76.8	82.7	87.7	90.2	92.7	96.1	98.6	100.2	101.1
145°	63.5	69.3	75.2	80.2	82.7	84.4	87.7	90.2	91.0	91.9
147.5°	56.8	62.6	67.7	72.7	74.3	76.0	79.4	81.0	82.7	82.7
150°	49.3	55.1	60.1	64.3	66.0	67.7	70.2	71.8	73.5	74.3
152.5°	41.8	47.6	52.6	56.0	57.6	59.3	61.8	63.5	64.3	65.2
155°	34.2	39.3	45.1	48.4	50.1	51.0	52.6	54.3	55.1	55.1
157.5°	26.7	31.7	35.9	40.1	40.9	42.6	44.3	45.9	45.9	46.8
160°	20.9	24.2	27.6	31.7	32.6	34.2	35.9	36.8	37.6	37.6
162.5°	15.0	17.5	20.0	23.4	24.2	25.9	27.6	28.4	28.4	29.2
165°	10.0	11.7	13.4	15.9	16.7	17.5	19.2	20.0	20.0	20.9
167.5°	5.8	6.7	8.4	9.2	10.0	10.0	11.7	12.5	12.5	12.5
170°	2.5	2.5	3.3	4.2	4.2	4.2	5.0	5.8	5.8	5.8
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)