

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: P241618

Luminaire Tested: **FVS8M-4-LD4-35-2HI-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241618
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-39)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-4-LD4-35-2HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
4FT LENGTH, 2-MODULE LED WITH OPAL LENS
Light Source: (168) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

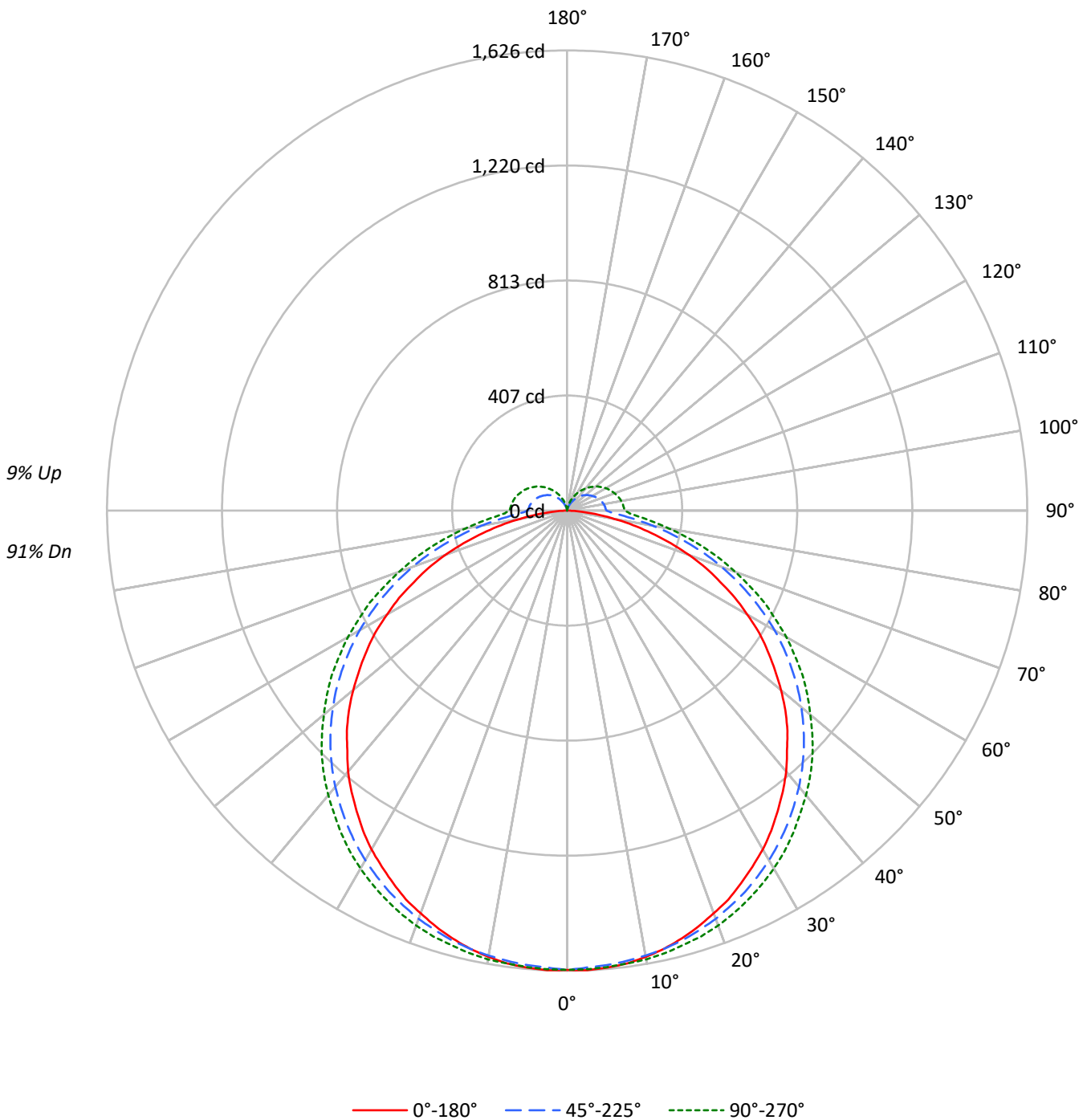
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5763.0 lumens
Efficiency: N/A
Efficacy: 67.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.34 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 3.73' x H: 0.15')
CIE Type: Direct

Input Watts (W): 85.4
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: P241618

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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	100	100	100	94	94	94	91
1	106	100	96	92	102	97	93	89	91	88	85	86	83	80	81	79	77	74
2	95	87	80	73	92	84	77	72	79	74	69	74	70	66	70	66	63	60
3	87	76	67	60	83	73	66	59	69	63	57	65	60	55	61	57	53	50
4	79	67	58	51	76	65	56	50	61	54	48	58	52	47	54	49	45	42
5	73	59	50	43	70	58	49	43	55	47	41	52	45	40	49	43	39	36
6	67	53	44	38	64	52	43	37	49	42	36	47	40	35	44	38	34	32
7	62	48	39	33	60	47	39	33	45	37	32	42	36	31	40	34	30	28
8	58	44	35	29	55	43	35	29	41	33	28	39	32	27	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22
10	50	37	29	24	49	36	28	23	34	28	23	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7254	7254	7254
5°	7248	7116	7123
10°	7218	7014	7028
15°	7167	6926	6931
20°	7101	6834	6857
25°	7039	6742	6764
30°	6979	6646	6667
35°	6886	6538	6556
40°	6804	6424	6442
45°	6695	6297	6322
50°	6556	6139	6148
55°	6386	5946	5982
60°	6146	5715	5750
65°	5824	5397	5481
70°	5401	5006	5082
75°	4652	4463	4674
80°	3592	3816	4126
85°	1910	3152	3692



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.0	2.7
10°-20°	445.2	7.7
20°-30°	685.7	11.9
30°-40°	845.6	14.7
40°-50°	905.4	15.7
50°-60°	853.9	14.8
60°-70°	693.8	12.0
70°-80°	449.7	7.8
80°-90°	205.6	3.6
90°-100°	131.1	2.3
100°-110°	118.2	2.1
110°-120°	99.0	1.7
120°-130°	76.2	1.3
130°-140°	52.4	0.9
140°-150°	30.3	0.5
150°-160°	13.5	0.2
160°-170°	3.5	0.1
170°-180°	0.1	0.0
0°-30°	1284.8	22.3
0°-40°	2130.4	37.0
0°-60°	3889.7	67.5
0°-90°	5238.8	90.9
90°-120°	348.3	6.0
90°-150°	507.2	8.8
90°-180°	524.0	9.1
0°-180°	5763.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1623	1623	1623	1623	1623	
5°	1621	1620	1612	1619	1619	154
15°	1565	1567	1572	1587	1589	442
25°	1453	1464	1487	1511	1516	670
35°	1297	1321	1355	1384	1392	812
45°	1101	1136	1183	1214	1226	848
55°	865	912	967	1003	1015	773
65°	597	653	715	754	769	592
75°	309	370	439	482	499	328
85°	54	120	193	240	258	70
90°	1	66	139	187	204	3
95°	1	62	135	183	199	1
105°	1	57	125	172	187	1
115°	1	49	112	154	170	1
125°	1	40	94	131	145	1
135°	1	29	76	106	118	1
145°	1	19	52	77	86	1
155°	2	10	28	49	54	1
165°	2	3	11	18	24	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	



TEST NUMBER: P241618

CATALOG NUMBER: FVS8M-4-LD4-35-2HI-O-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1623.0	1623.0	1623.0	1623.0	1623.0	1623.0	1623.0	1623.0	1623.0	1623.0	1623.0
2.5°	1625.9	1625.9	1624.9	1624.0	1624.0	1624.9	1624.9	1624.0	1621.0	1617.1	1616.1
5°	1621.0	1620.0	1621.0	1619.1	1620.0	1620.0	1619.1	1619.1	1616.1	1614.2	1612.2
7.5°	1614.2	1613.2	1612.2	1611.2	1611.2	1612.2	1611.2	1611.2	1609.3	1606.3	1605.3
10°	1601.4	1600.4	1601.4	1599.5	1599.5	1600.4	1601.4	1601.4	1599.5	1598.5	1596.5
12.5°	1585.7	1585.7	1584.8	1583.8	1584.8	1585.7	1586.7	1586.7	1585.7	1586.7	1585.7
15°	1565.2	1566.1	1564.2	1563.2	1567.1	1567.1	1569.1	1571.0	1571.0	1570.1	1572.0
17.5°	1541.6	1541.6	1541.6	1542.6	1543.6	1545.6	1547.5	1549.5	1550.5	1552.4	1554.4
20°	1514.2	1516.1	1516.1	1517.1	1521.0	1524.0	1524.0	1528.9	1529.9	1530.8	1534.8
22.5°	1487.7	1486.7	1486.7	1488.7	1493.6	1496.5	1499.5	1502.4	1504.4	1507.3	1511.2
25°	1453.4	1454.4	1455.4	1458.3	1464.2	1464.2	1469.1	1473.0	1476.9	1480.9	1486.7
27.5°	1418.1	1420.1	1421.1	1424.0	1430.9	1434.8	1437.7	1442.6	1446.6	1451.5	1457.3
30°	1382.9	1382.9	1383.8	1387.8	1394.6	1399.5	1402.5	1408.3	1414.2	1421.1	1427.0
32.5°	1341.7	1341.7	1342.7	1349.5	1356.4	1361.3	1366.2	1372.1	1378.0	1384.8	1392.7
35°	1296.6	1295.6	1298.6	1308.4	1315.2	1321.1	1327.0	1333.9	1341.7	1348.6	1355.4
37.5°	1251.5	1252.5	1253.5	1263.3	1274.1	1277.0	1283.9	1290.7	1298.6	1306.4	1316.2
40°	1204.5	1204.5	1208.4	1215.3	1228.0	1232.9	1238.8	1247.6	1254.5	1265.3	1274.1
42.5°	1149.6	1154.5	1159.4	1167.2	1180.0	1185.9	1191.7	1202.5	1211.4	1218.2	1230.0
45°	1100.6	1101.6	1106.5	1118.2	1130.0	1135.9	1143.7	1154.5	1165.3	1173.1	1182.9
47.5°	1045.7	1045.7	1052.6	1063.4	1077.1	1083.9	1090.8	1101.6	1111.4	1125.1	1132.9
50°	986.9	988.9	996.7	1010.4	1024.2	1028.1	1034.9	1049.6	1058.5	1069.2	1080.0
52.5°	925.2	929.1	939.9	951.6	963.4	972.2	978.1	993.8	1004.6	1015.3	1026.1
55°	865.4	866.4	875.2	890.9	905.6	911.5	921.3	934.0	945.8	957.5	967.3
57.5°	804.6	802.7	813.4	830.1	844.8	849.7	858.5	874.2	886.0	896.8	907.5
60°	734.1	739.0	748.8	764.4	780.1	785.0	792.9	810.5	821.3	834.0	846.8
62.5°	669.4	670.4	686.0	697.8	714.5	724.3	729.2	743.9	755.6	769.3	781.1
65°	596.9	605.7	614.5	628.2	644.9	652.7	658.6	678.2	690.9	703.7	715.4
67.5°	531.2	534.1	545.9	560.6	577.3	584.1	593.9	607.6	622.3	633.1	648.8
70°	457.7	460.6	471.4	489.0	504.7	514.5	522.4	538.1	551.8	565.5	580.2
72.5°	384.2	387.1	400.8	416.5	435.1	441.0	449.8	466.5	481.2	495.9	511.6
75°	308.7	316.6	331.3	345.0	363.6	370.5	381.2	399.9	414.6	427.3	439.1
77.5°	238.2	248.9	260.7	275.4	292.1	301.9	310.7	328.3	344.0	360.7	373.4
80°	170.5	178.4	191.1	205.8	224.4	237.2	244.0	260.7	275.4	291.1	305.8
82.5°	110.7	114.7	127.4	146.0	163.7	173.5	182.3	199.9	214.6	229.3	244.0
85°	53.9	60.8	73.5	93.1	110.7	120.5	129.4	147.0	162.7	179.4	193.1
87.5°	17.6	25.5	38.2	54.9	73.5	82.3	91.1	108.8	125.4	140.1	155.8
90°	1.0	6.9	20.6	38.2	55.9	65.7	74.5	92.1	108.8	124.5	139.2
92.5°	1.0	5.9	19.6	36.3	53.9	63.7	72.5	90.2	106.8	122.5	136.2
95°	1.0	5.9	18.6	35.3	52.9	61.7	71.5	88.2	104.9	120.5	135.2
97.5°	1.0	5.9	17.6	34.3	51.9	60.8	69.6	87.2	103.9	119.6	133.3
100°	1.0	4.9	17.6	33.3	51.0	59.8	68.6	85.3	101.9	116.6	131.3
102.5°	1.0	4.9	16.7	32.3	49.0	57.8	66.6	83.3	99.0	113.7	128.4
105°	1.0	4.9	16.7	31.4	48.0	56.8	64.7	81.3	97.0	111.7	125.4
107.5°	1.0	4.9	15.7	30.4	46.1	54.9	62.7	78.4	94.1	108.8	122.5
110°	1.0	3.9	14.7	29.4	45.1	52.9	60.8	76.4	91.1	105.8	118.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.0	3.9	14.7	28.4	43.1	51.0	58.8	73.5	88.2	101.9	115.6
115°	1.0	3.9	13.7	26.5	41.2	49.0	56.8	71.5	85.3	99.0	111.7
117.5°	1.0	2.9	12.7	25.5	39.2	47.0	53.9	68.6	82.3	95.1	107.8
120°	1.0	2.9	11.8	24.5	37.2	45.1	51.9	65.7	78.4	92.1	102.9
122.5°	1.0	2.9	10.8	22.5	36.3	42.1	49.0	62.7	75.5	88.2	99.0
125°	1.0	2.0	10.8	21.6	34.3	40.2	47.0	59.8	71.5	83.3	94.1
127.5°	1.0	2.0	9.8	20.6	32.3	38.2	44.1	55.9	68.6	79.4	90.2
130°	1.0	2.0	8.8	18.6	29.4	35.3	41.2	52.9	63.7	75.5	85.3
132.5°	1.0	2.0	7.8	16.7	27.4	32.3	38.2	50.0	60.8	70.6	80.4
135°	1.0	2.0	6.9	14.7	24.5	29.4	35.3	45.1	55.9	65.7	75.5
137.5°	1.0	2.0	5.9	13.7	21.6	26.5	31.4	41.2	51.0	60.8	69.6
140°	1.0	1.0	4.9	11.8	19.6	23.5	28.4	37.2	46.1	54.9	63.7
142.5°	1.0	1.0	3.9	9.8	17.6	20.6	25.5	33.3	41.2	50.0	57.8
145°	1.0	1.0	2.9	8.8	14.7	18.6	22.5	29.4	36.3	44.1	51.9
147.5°	1.0	1.0	2.9	6.9	12.7	15.7	18.6	25.5	32.3	39.2	45.1
150°	2.0	2.0	2.9	5.9	10.8	13.7	16.7	22.5	28.4	34.3	39.2
152.5°	2.0	2.0	2.0	4.9	8.8	11.8	13.7	18.6	23.5	29.4	34.3
155°	2.0	2.0	2.0	3.9	7.8	9.8	11.8	15.7	19.6	24.5	28.4
157.5°	2.0	2.0	2.0	2.9	5.9	7.8	8.8	12.7	16.7	19.6	23.5
160°	2.0	2.0	2.0	2.9	4.9	5.9	6.9	9.8	12.7	15.7	18.6
162.5°	2.0	2.0	2.0	2.0	3.9	4.9	5.9	7.8	9.8	12.7	14.7
165°	2.0	2.0	2.0	2.0	2.9	2.9	3.9	5.9	6.9	8.8	10.8
167.5°	2.0	2.0	2.0	2.0	2.0	2.9	2.9	3.9	4.9	5.9	6.9
170°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.9	2.9	3.9	3.9
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°	1623.0	1623.0	1623.0	1623.0	1623.0	1623.0	1623.0	1623.0	1623.0	1623.0
2.5°	1618.1	1619.1	1621.0	1623.0	1622.0	1622.0	1623.0	1622.0	1623.0	1622.0
5°	1612.2	1615.1	1617.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1
7.5°	1606.3	1608.3	1611.2	1614.2	1614.2	1615.1	1615.1	1614.2	1615.1	1614.2
10°	1598.5	1602.4	1605.3	1607.3	1608.3	1608.3	1609.3	1609.3	1609.3	1610.2
12.5°	1587.7	1591.6	1595.5	1598.5	1599.5	1598.5	1600.4	1601.4	1600.4	1601.4
15°	1575.0	1577.9	1583.8	1585.7	1586.7	1587.7	1588.7	1589.7	1589.7	1588.7
17.5°	1558.3	1563.2	1566.1	1572.0	1572.0	1573.0	1575.0	1575.9	1575.0	1576.9
20°	1539.7	1544.6	1549.5	1553.4	1553.4	1555.4	1557.3	1558.3	1560.3	1560.3
22.5°	1517.1	1523.0	1528.9	1532.8	1534.8	1534.8	1537.7	1538.7	1540.7	1539.7
25°	1491.6	1499.5	1505.4	1508.3	1511.2	1512.2	1514.2	1515.2	1515.2	1516.1
27.5°	1464.2	1470.1	1476.9	1481.8	1484.8	1484.8	1487.7	1488.7	1488.7	1489.7
30°	1432.8	1441.7	1446.6	1451.5	1452.4	1454.4	1457.3	1458.3	1461.3	1460.3
32.5°	1399.5	1407.4	1413.2	1417.2	1421.1	1422.1	1424.0	1427.0	1427.0	1428.9
35°	1364.2	1370.1	1376.0	1381.9	1383.8	1386.8	1389.7	1390.7	1392.7	1391.7
37.5°	1325.0	1332.9	1338.8	1340.7	1345.6	1347.6	1351.5	1352.5	1353.5	1351.5
40°	1282.9	1289.8	1297.6	1301.5	1304.5	1305.4	1310.3	1311.3	1312.3	1313.3
42.5°	1238.8	1247.6	1253.5	1258.4	1261.3	1262.3	1267.2	1267.2	1270.2	1271.1
45°	1191.7	1200.6	1207.4	1213.3	1214.3	1217.2	1221.2	1223.1	1222.1	1226.1
47.5°	1142.7	1151.6	1158.4	1163.3	1164.3	1166.3	1171.2	1172.1	1174.1	1175.1
50°	1088.8	1097.7	1105.5	1111.4	1113.3	1116.3	1120.2	1122.2	1123.1	1122.2
52.5°	1035.9	1044.7	1049.6	1057.5	1060.4	1059.4	1065.3	1069.2	1068.3	1070.2
55°	979.1	986.9	994.8	1000.6	1002.6	1005.5	1009.5	1010.4	1012.4	1015.3
57.5°	916.4	930.1	936.0	938.9	942.8	945.8	947.7	954.6	954.6	953.6
60°	855.6	865.4	873.2	880.1	882.1	886.0	889.9	892.8	892.8	894.8
62.5°	793.8	802.7	810.5	816.4	817.4	822.3	827.2	829.1	830.1	829.1
65°	728.2	734.1	746.8	749.7	753.7	758.6	761.5	764.4	766.4	769.3
67.5°	659.6	668.4	678.2	686.0	690.0	691.9	695.8	698.8	700.7	698.8
70°	592.0	600.8	608.6	616.5	620.4	621.4	625.3	629.2	631.2	630.2
72.5°	522.4	532.2	542.0	547.9	551.8	554.7	561.6	562.6	562.6	566.5
75°	452.8	463.6	473.4	481.2	482.2	486.1	490.0	493.9	499.8	498.8
77.5°	384.2	395.9	403.8	410.6	415.5	419.5	423.4	426.3	428.3	431.2
80°	319.5	332.2	338.1	346.9	350.9	354.8	358.7	363.6	367.5	365.6
82.5°	256.8	270.5	280.3	289.1	291.1	297.9	299.9	303.8	304.8	307.7
85°	205.8	218.6	227.4	238.2	240.1	245.0	249.9	252.9	254.8	257.8
87.5°	168.6	180.3	190.1	199.9	202.9	205.8	211.7	216.6	218.6	220.5
90°	151.9	163.7	174.5	183.3	187.2	190.1	196.0	200.9	202.9	203.9
92.5°	149.9	161.7	171.5	180.3	184.3	188.2	194.1	198.0	199.9	200.9
95°	148.0	159.7	170.5	179.4	183.3	186.2	192.1	196.0	198.0	199.0
97.5°	146.0	157.8	168.6	177.4	181.3	184.3	190.1	194.1	196.0	197.0
100°	144.1	155.8	165.6	174.5	178.4	181.3	187.2	191.1	193.1	194.1
102.5°	141.1	152.9	162.7	171.5	175.4	178.4	183.3	188.2	190.1	191.1
105°	138.2	149.0	158.8	167.6	171.5	174.5	180.3	184.3	186.2	187.2
107.5°	134.3	146.0	154.8	163.7	167.6	170.5	176.4	179.4	182.3	183.3
110°	131.3	142.1	150.9	159.7	163.7	166.6	171.5	175.4	177.4	178.4



TEST NUMBER: P241618

CATALOG NUMBER: FVS8M-4-LD4-35-2HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	127.4	138.2	147.0	154.8	158.8	161.7	167.6	170.5	173.5	173.5
115°	122.5	133.3	142.1	149.9	153.9	156.8	161.7	165.6	167.6	169.5
117.5°	118.6	128.4	138.2	145.0	149.0	151.9	156.8	160.7	162.7	163.7
120°	114.7	124.5	132.3	140.1	143.1	146.0	150.9	154.8	156.8	157.8
122.5°	109.8	119.6	127.4	134.3	137.2	140.1	145.0	149.0	150.9	151.9
125°	104.9	113.7	121.5	128.4	131.3	134.3	139.2	142.1	144.1	145.0
127.5°	100.0	108.8	116.6	122.5	125.4	128.4	132.3	136.2	138.2	139.2
130°	94.1	102.9	110.7	116.6	119.6	121.5	125.4	129.4	131.3	132.3
132.5°	89.2	97.0	103.9	110.7	112.7	115.6	118.6	122.5	124.5	124.5
135°	83.3	91.1	98.0	103.9	105.8	108.8	112.7	115.6	116.6	117.6
137.5°	78.4	85.3	92.1	97.0	99.0	101.9	104.9	107.8	109.8	109.8
140°	72.5	79.4	85.3	90.2	92.1	94.1	98.0	100.0	101.9	101.9
142.5°	65.7	72.5	78.4	83.3	85.3	87.2	90.2	93.1	94.1	94.1
145°	58.8	66.6	71.5	76.4	77.4	79.4	82.3	84.3	86.2	86.2
147.5°	51.9	58.8	64.7	68.6	70.6	72.5	74.5	76.4	78.4	78.4
150°	46.1	51.9	57.8	61.7	63.7	64.7	67.6	68.6	69.6	70.6
152.5°	39.2	44.1	50.0	54.9	55.9	56.8	59.8	61.7	61.7	62.7
155°	32.3	37.2	41.2	46.1	49.0	50.0	51.9	52.9	53.9	53.9
157.5°	27.4	31.4	34.3	38.2	40.2	42.1	44.1	46.1	46.1	46.1
160°	21.6	24.5	27.4	30.4	32.3	34.3	37.2	37.2	38.2	39.2
162.5°	16.7	18.6	21.6	23.5	25.5	26.5	29.4	30.4	30.4	30.4
165°	11.8	13.7	15.7	17.6	17.6	18.6	21.6	22.5	22.5	23.5
167.5°	7.8	8.8	10.8	11.8	11.8	12.7	13.7	16.7	15.7	15.7
170°	4.9	4.9	5.9	6.9	6.9	6.9	7.8	8.8	9.8	9.8
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)