

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: P241582

Luminaire Tested: **FVS8M-3-LD4-35-2HI-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241582
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-35-2HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 2-MODULE LED WITH OPAL LENS
Light Source: (168) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

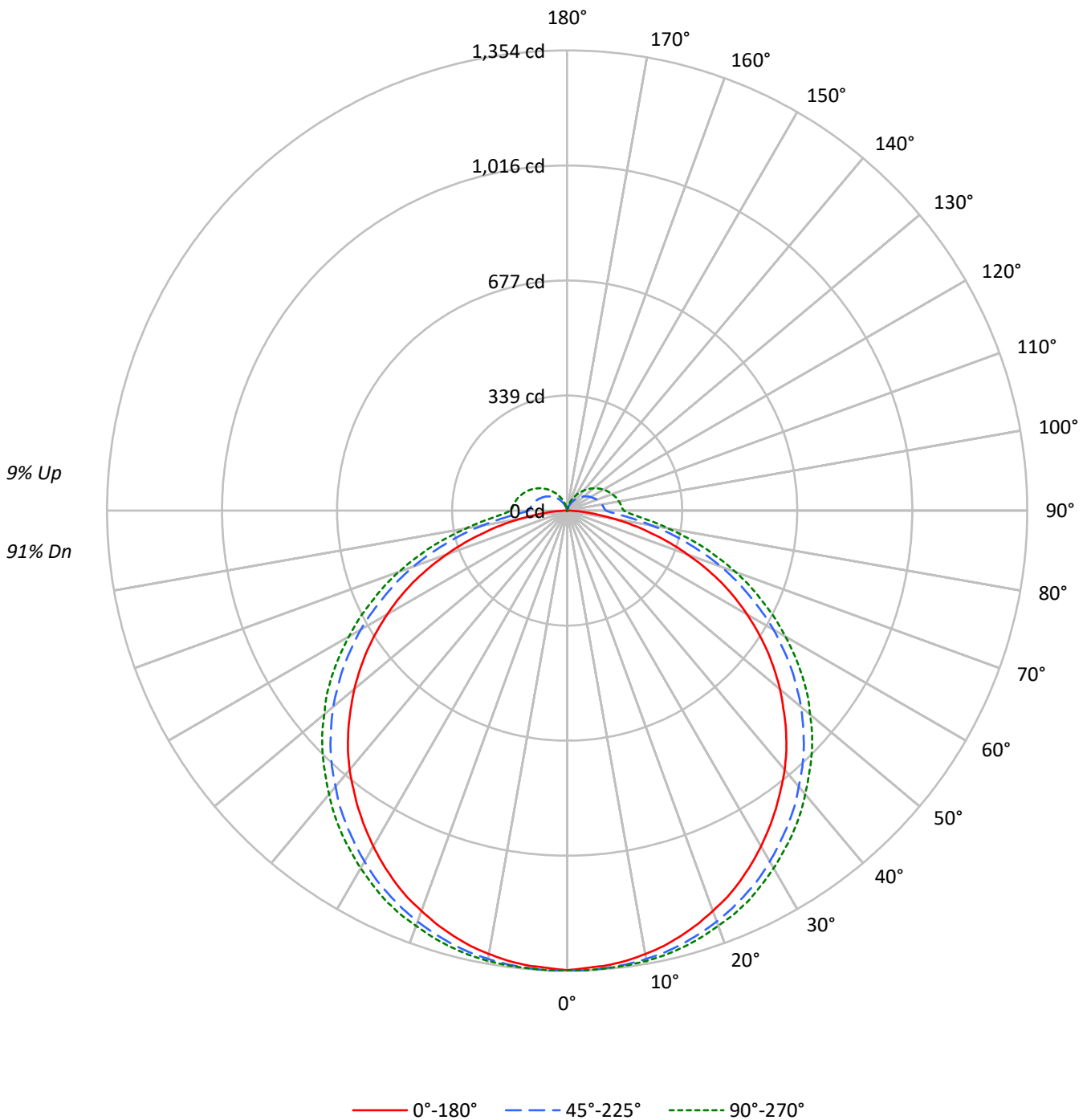
Lumens per Lamp: N/A
Luminaire Lumens: 4761.0 lumens
Efficiency: N/A
Efficacy: 68.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.33 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 69.3
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: P241582

CATALOG NUMBER: FVS8M-3-LD4-35-2HI-O-UNV-EDC1

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	100	100	100	94	94	94	91
1	106	101	96	92	102	97	93	89	92	88	85	86	83	81	81	79	77	74
2	96	87	80	74	92	84	78	72	79	74	69	75	70	66	70	67	64	61
3	87	76	67	61	84	74	66	59	69	63	57	65	60	55	62	57	53	51
4	79	67	58	51	76	65	57	50	61	54	48	58	52	47	55	50	45	43
5	73	60	50	43	70	58	49	43	55	47	42	52	45	40	49	44	39	37
6	67	53	44	38	64	52	43	37	49	42	36	47	40	35	44	39	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	40	35	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	32	28	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	29	23	35	28	23	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7898	7898	7898
5°	7841	7783	7769
10°	7786	7679	7673
15°	7727	7577	7575
20°	7647	7464	7468
25°	7574	7349	7375
30°	7472	7225	7249
35°	7372	7090	7130
40°	7278	6943	6984
45°	7154	6802	6854
50°	6999	6620	6679
55°	6816	6393	6496
60°	6562	6120	6229
65°	6224	5751	5912
70°	5649	5342	5556
75°	4847	4740	5076
80°	3679	4030	4465
85°	2030	3304	3961



TEST NUMBER: P241582

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.4	2.7
10°-20°	371.5	7.8
20°-30°	571.5	12.0
30°-40°	703.6	14.8
40°-50°	752.3	15.8
50°-60°	708.9	14.9
60°-70°	575.2	12.1
70°-80°	372.3	7.8
80°-90°	170.1	3.6
90°-100°	105.1	2.2
100°-110°	93.2	2.0
110°-120°	76.9	1.6
120°-130°	58.3	1.2
130°-140°	39.5	0.8
140°-150°	22.5	0.5
150°-160°	9.6	0.2
160°-170°	2.2	0.0
170°-180°	0.0	0.0
0°-30°	1071.4	22.5
0°-40°	1775.0	37.3
0°-60°	3236.2	68.0
0°-90°	4353.7	91.4
90°-120°	275.2	5.8
90°-150°	395.4	8.3
90°-180°	407.0	8.5
0°-180°	4761.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1352	1352	1352	1352	1352	
5°	1344	1346	1350	1352	1352	128
15°	1296	1304	1319	1327	1329	366
25°	1204	1219	1245	1258	1265	554
35°	1071	1099	1131	1152	1158	670
45°	910	945	985	1008	1017	702
55°	718	757	804	832	844	641
65°	500	541	591	626	635	493
75°	256	306	364	398	415	272
85°	48	100	160	199	212	59
90°	1	53	114	154	167	3
95°	1	49	108	147	160	0
105°	1	43	99	136	149	1
115°	1	36	86	120	132	1
125°	1	29	72	102	113	1
135°	1	22	57	81	90	1
145°	1	12	39	59	65	1
155°	1	5	21	35	39	0
165°	2	1	6	12	15	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241582

CATALOG NUMBER: FVS8M-3-LD4-35-2HI-O-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1352.5	1352.5	1352.5	1352.5	1352.5	1352.5	1352.5	1352.5	1352.5	1352.5	1352.5
2.5°	1346.6	1347.6	1347.6	1347.6	1348.5	1349.5	1350.5	1352.5	1353.4	1354.4	1354.4
5°	1343.6	1343.6	1343.6	1343.6	1344.6	1345.6	1347.6	1348.5	1349.5	1350.5	1350.5
7.5°	1335.8	1336.8	1336.8	1336.8	1337.8	1338.7	1339.7	1342.7	1344.6	1345.6	1346.6
10°	1325.0	1327.0	1327.0	1327.0	1328.0	1329.9	1330.9	1333.8	1336.8	1338.7	1339.7
12.5°	1312.3	1312.3	1313.3	1313.3	1316.2	1317.2	1320.1	1324.0	1326.0	1328.9	1330.9
15°	1295.6	1296.6	1296.6	1297.6	1301.5	1303.5	1305.4	1309.3	1314.2	1316.2	1319.1
17.5°	1276.0	1277.0	1279.0	1279.9	1283.9	1286.8	1288.8	1293.7	1298.6	1301.5	1303.5
20°	1253.5	1255.4	1256.4	1259.4	1264.3	1267.2	1269.2	1275.0	1279.9	1282.9	1286.8
22.5°	1230.9	1230.9	1232.9	1236.8	1241.7	1245.6	1248.6	1253.5	1259.4	1262.3	1267.2
25°	1203.5	1203.5	1206.4	1211.3	1216.2	1219.2	1222.1	1229.0	1235.8	1240.7	1244.7
27.5°	1173.1	1174.1	1178.0	1182.9	1188.8	1193.7	1195.7	1203.5	1209.4	1216.2	1221.1
30°	1140.8	1143.7	1147.6	1152.5	1160.4	1164.3	1168.2	1175.1	1181.9	1188.8	1192.7
32.5°	1106.5	1108.4	1115.3	1120.2	1128.0	1132.9	1136.9	1144.7	1151.6	1157.4	1162.3
35°	1071.2	1073.2	1079.0	1085.9	1094.7	1098.6	1101.6	1111.4	1120.2	1126.1	1131.0
37.5°	1033.0	1036.9	1041.8	1048.7	1059.4	1063.4	1067.3	1076.1	1084.9	1090.8	1098.6
40°	995.7	996.7	1002.6	1012.4	1021.2	1024.2	1030.0	1040.8	1047.7	1055.5	1060.4
42.5°	954.6	955.5	961.4	971.2	980.0	985.9	991.8	1001.6	1009.4	1017.3	1024.2
45°	910.5	913.4	919.3	929.1	937.9	944.8	949.7	960.4	969.3	976.1	984.9
47.5°	863.4	867.3	874.2	884.0	893.8	900.7	905.6	915.4	926.1	934.0	941.8
50°	817.4	822.3	828.1	838.9	848.7	855.6	859.5	870.3	880.1	889.9	898.7
52.5°	768.4	772.3	780.1	790.9	800.7	807.6	811.5	824.2	835.0	842.8	850.7
55°	718.4	722.3	730.1	739.9	751.7	756.6	762.5	775.2	785.0	794.8	803.6
57.5°	665.5	670.4	678.2	689.0	699.8	704.7	710.5	722.3	735.0	743.9	751.7
60°	611.6	614.5	622.3	635.1	644.9	650.8	657.6	668.4	681.1	690.9	701.7
62.5°	556.7	559.6	567.4	580.2	591.9	595.9	603.7	616.5	626.3	639.0	646.8
65°	499.8	503.7	511.6	520.4	535.1	541.0	546.9	559.6	570.4	581.2	591.0
67.5°	440.0	442.0	453.8	464.5	474.3	483.2	490.0	502.8	514.5	526.3	538.0
70°	377.3	382.2	392.0	404.8	416.5	424.4	429.3	444.0	456.7	471.4	481.2
72.5°	317.5	324.4	334.2	345.0	356.7	366.5	372.4	385.2	397.9	410.6	422.4
75°	255.8	263.6	274.4	286.2	298.9	305.8	315.6	328.3	341.1	352.8	363.6
77.5°	198.0	202.9	216.6	228.4	244.0	249.9	255.8	270.5	283.2	296.0	308.7
80°	141.1	147.0	158.8	172.5	187.2	193.1	200.9	214.6	228.4	241.1	252.9
82.5°	91.1	97.0	106.8	120.5	135.2	142.1	149.9	163.7	178.4	191.1	202.9
85°	48.0	52.9	63.7	77.4	92.1	100.0	105.8	121.5	133.3	149.0	159.7
87.5°	17.6	21.6	31.4	47.0	60.8	69.6	75.5	90.2	103.9	116.6	129.4
90°	1.0	6.9	17.6	31.4	46.1	52.9	60.8	75.5	89.2	101.9	113.7
92.5°	0.0	4.9	15.7	28.4	43.1	51.0	57.8	71.5	85.3	98.0	109.8
95°	1.0	4.9	14.7	27.4	42.1	49.0	56.8	70.6	83.3	96.0	107.8
97.5°	0.0	3.9	13.7	26.5	40.2	48.0	54.9	68.6	82.3	94.1	105.8
100°	1.0	3.9	12.7	25.5	39.2	46.1	52.9	66.6	80.4	92.1	103.9
102.5°	0.0	3.9	12.7	24.5	38.2	45.1	51.9	64.7	77.4	90.2	100.9
105°	1.0	2.9	11.8	23.5	36.3	43.1	50.0	62.7	75.5	87.2	99.0
107.5°	0.0	2.9	10.8	22.5	35.3	41.2	48.0	60.8	73.5	85.3	96.0
110°	1.0	2.9	10.8	21.6	33.3	40.2	46.1	58.8	70.6	82.3	93.1



TEST NUMBER: P241582

CATALOG NUMBER: FVS8M-3-LD4-35-2HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.0	2.0	9.8	20.6	32.3	38.2	44.1	56.8	68.6	79.4	90.2
115°	1.0	2.0	8.8	19.6	30.4	36.3	42.1	53.9	65.7	76.4	86.2
117.5°	1.0	2.0	8.8	17.6	29.4	34.3	40.2	51.9	62.7	73.5	83.3
120°	1.0	2.0	7.8	16.7	27.4	32.3	38.2	49.0	59.8	70.6	79.4
122.5°	1.0	1.0	6.9	15.7	25.5	31.4	36.3	47.0	56.8	66.6	76.4
125°	1.0	1.0	5.9	14.7	24.5	29.4	34.3	44.1	53.9	63.7	72.5
127.5°	1.0	1.0	5.9	13.7	22.5	27.4	32.3	41.2	51.0	59.8	68.6
130°	1.0	1.0	4.9	11.8	20.6	25.5	29.4	39.2	48.0	56.8	64.7
132.5°	1.0	1.0	3.9	10.8	18.6	23.5	27.4	36.3	45.1	52.9	60.8
135°	1.0	1.0	3.9	9.8	17.6	21.6	25.5	33.3	41.2	49.0	56.8
137.5°	1.0	1.0	2.9	7.8	14.7	18.6	22.5	30.4	38.2	45.1	51.9
140°	1.0	1.0	2.0	6.9	12.7	16.7	20.6	27.4	35.3	42.1	48.0
142.5°	1.0	1.0	2.0	5.9	11.8	14.7	17.6	24.5	31.4	38.2	44.1
145°	1.0	1.0	2.0	4.9	9.8	11.8	14.7	20.6	27.4	33.3	39.2
147.5°	1.0	1.0	1.0	3.9	7.8	9.8	12.7	17.6	23.5	29.4	34.3
150°	1.0	1.0	1.0	2.9	6.9	8.8	10.8	14.7	19.6	24.5	29.4
152.5°	1.0	1.0	1.0	2.0	4.9	6.9	8.8	12.7	16.7	20.6	24.5
155°	1.0	1.0	1.0	2.0	3.9	4.9	6.9	9.8	13.7	16.7	20.6
157.5°	1.0	1.0	1.0	2.0	2.9	3.9	4.9	7.8	9.8	12.7	16.7
160°	1.0	1.0	1.0	1.0	2.0	2.9	3.9	4.9	7.8	9.8	11.8
162.5°	2.0	2.0	1.0	1.0	2.0	2.0	2.9	3.9	4.9	6.9	8.8
165°	2.0	2.0	2.0	1.0	1.0	1.0	2.0	2.9	3.9	4.9	5.9
167.5°	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	2.0	2.9	2.9
170°	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0
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



TEST NUMBER: P241582

CATALOG NUMBER: FVS8M-3-LD4-35-2HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1352.5	1352.5	1352.5	1352.5	1352.5	1352.5	1352.5	1352.5	1352.5	1352.5
2.5°	1354.4	1354.4	1354.4	1354.4	1354.4	1354.4	1354.4	1354.4	1353.4	1353.4
5°	1350.5	1350.5	1351.5	1352.5	1352.5	1352.5	1352.5	1351.5	1351.5	1351.5
7.5°	1346.6	1348.5	1349.5	1349.5	1349.5	1349.5	1350.5	1350.5	1349.5	1349.5
10°	1340.7	1341.7	1343.6	1344.6	1344.6	1344.6	1344.6	1345.6	1345.6	1345.6
12.5°	1332.9	1333.8	1334.8	1336.8	1336.8	1337.8	1338.7	1337.8	1339.7	1338.7
15°	1320.1	1323.1	1325.0	1326.0	1327.0	1327.0	1328.0	1328.9	1328.9	1328.9
17.5°	1306.4	1308.4	1311.3	1313.3	1313.3	1315.2	1314.2	1316.2	1317.2	1316.2
20°	1288.8	1291.7	1294.6	1296.6	1298.6	1298.6	1299.5	1300.5	1300.5	1300.5
22.5°	1270.1	1273.1	1276.0	1279.0	1279.9	1280.9	1282.9	1283.9	1283.9	1284.8
25°	1247.6	1251.5	1255.4	1257.4	1258.4	1260.3	1261.3	1262.3	1263.3	1265.2
27.5°	1224.1	1228.0	1231.9	1234.9	1234.9	1237.8	1239.8	1240.7	1240.7	1240.7
30°	1197.6	1201.5	1204.5	1209.4	1209.4	1210.4	1212.3	1215.3	1214.3	1215.3
32.5°	1168.2	1173.1	1177.0	1179.0	1181.9	1183.9	1183.9	1186.8	1188.8	1186.8
35°	1136.9	1141.8	1146.7	1149.6	1152.5	1152.5	1156.5	1156.5	1158.4	1158.4
37.5°	1104.5	1108.4	1113.3	1116.3	1119.2	1122.2	1124.1	1124.1	1125.1	1126.1
40°	1067.3	1072.2	1079.0	1083.9	1084.9	1085.9	1088.8	1089.8	1091.8	1089.8
42.5°	1030.0	1035.9	1041.8	1046.7	1046.7	1049.6	1051.6	1053.6	1054.5	1053.6
45°	989.8	997.7	1001.6	1007.5	1007.5	1010.4	1012.4	1016.3	1017.3	1017.3
47.5°	947.7	954.6	961.4	967.3	967.3	970.2	971.2	974.2	975.1	978.1
50°	905.6	912.4	917.3	924.2	925.2	927.1	930.1	932.0	933.0	933.0
52.5°	860.5	866.4	872.2	877.1	881.1	881.1	886.0	886.9	887.9	891.8
55°	812.5	819.3	825.2	832.1	832.1	834.0	837.0	838.9	841.9	843.8
57.5°	761.5	768.4	777.2	780.1	784.0	786.0	789.9	790.9	791.9	793.8
60°	709.6	717.4	723.3	729.2	732.1	734.1	737.0	739.9	741.9	741.9
62.5°	657.6	662.5	671.3	678.2	680.2	684.1	686.0	688.0	690.0	690.9
65°	601.7	609.6	618.4	623.3	626.3	626.3	631.2	635.1	634.1	635.1
67.5°	545.9	554.7	560.6	567.4	570.4	573.3	578.2	579.2	582.1	583.1
70°	488.1	498.8	505.7	510.6	515.5	514.5	521.4	522.4	525.3	527.3
72.5°	432.2	440.0	449.8	454.7	457.7	459.6	463.6	466.5	466.5	468.5
75°	374.4	382.2	390.1	397.9	397.9	403.8	407.7	411.6	411.6	414.6
77.5°	316.6	328.3	336.2	341.1	345.0	347.9	350.9	355.8	354.8	355.8
80°	261.7	271.5	279.3	287.2	290.1	293.0	296.0	299.9	301.9	302.8
82.5°	211.7	221.5	230.3	237.2	240.1	244.0	248.9	251.9	252.9	255.8
85°	169.5	179.3	188.2	196.0	198.9	200.9	205.8	208.8	210.7	211.7
87.5°	140.1	149.9	158.8	165.6	168.6	171.5	176.4	179.3	182.3	182.3
90°	124.5	134.3	143.1	149.9	153.9	156.8	161.7	164.6	166.6	166.6
92.5°	120.5	129.4	138.2	145.0	149.0	151.9	155.8	158.8	161.7	161.7
95°	118.6	128.4	136.2	143.1	147.0	149.9	153.9	157.8	159.7	159.7
97.5°	116.6	126.4	134.3	141.1	145.0	148.0	151.9	154.8	156.8	157.8
100°	113.7	123.5	132.3	139.2	142.1	145.0	149.9	152.9	154.8	154.8
102.5°	111.7	120.5	129.4	136.2	139.2	142.1	146.0	149.9	150.9	151.9
105°	108.8	117.6	126.4	133.3	136.2	139.2	143.1	146.0	148.0	149.0
107.5°	105.8	114.7	122.5	129.4	132.3	135.2	140.1	143.1	145.0	145.0
110°	102.9	111.7	119.6	125.4	129.4	131.3	136.2	139.2	141.1	141.1



TEST NUMBER: P241582

CATALOG NUMBER: FVS8M-3-LD4-35-2HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	99.0	107.8	115.6	121.5	124.5	127.4	131.3	134.3	136.2	137.2
115°	96.0	103.9	111.7	117.6	120.5	123.5	127.4	130.3	132.3	132.3
117.5°	92.1	100.0	106.8	113.7	116.6	118.6	122.5	125.4	127.4	128.4
120°	88.2	96.0	102.9	108.8	111.7	113.7	117.6	120.5	122.5	123.5
122.5°	84.3	92.1	99.0	104.9	106.8	108.8	112.7	115.6	117.6	118.6
125°	80.4	87.2	94.1	100.0	101.9	103.9	107.8	110.7	111.7	112.7
127.5°	76.4	83.3	89.2	95.1	97.0	99.0	102.9	104.9	106.8	107.8
130°	71.5	78.4	84.3	89.2	92.1	94.1	97.0	100.0	100.9	101.9
132.5°	67.6	73.5	79.4	84.3	86.2	88.2	92.1	94.1	96.0	96.0
135°	62.7	68.6	74.5	79.4	81.3	83.3	86.2	88.2	89.2	90.2
137.5°	58.8	64.7	69.6	73.5	75.5	77.4	80.4	82.3	83.3	84.3
140°	53.9	58.8	63.7	67.6	69.6	71.5	74.5	76.4	77.4	77.4
142.5°	49.0	53.9	58.8	62.7	64.7	65.7	68.6	69.6	70.6	71.5
145°	45.1	49.0	52.9	56.8	58.8	59.8	61.7	63.7	64.7	64.7
147.5°	40.2	44.1	48.0	51.0	52.9	53.9	55.9	57.8	58.8	58.8
150°	34.3	39.2	42.1	45.1	47.0	48.0	50.0	51.0	51.9	51.9
152.5°	29.4	33.3	37.2	40.2	41.2	42.1	44.1	45.1	46.1	46.1
155°	24.5	27.4	31.4	34.3	35.3	36.3	37.2	38.2	39.2	39.2
157.5°	19.6	22.5	25.5	28.4	29.4	30.4	31.4	32.3	32.3	33.3
160°	14.7	16.7	19.6	22.5	23.5	24.5	25.5	25.5	26.5	26.5
162.5°	10.8	12.7	14.7	16.7	16.7	18.6	19.6	20.6	20.6	20.6
165°	6.9	8.8	9.8	10.8	11.8	12.7	13.7	13.7	14.7	14.7
167.5°	3.9	4.9	5.9	6.9	6.9	7.8	7.8	8.8	8.8	8.8
170°	2.0	2.0	2.9	2.9	2.9	2.9	3.9	3.9	3.9	4.9
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)