

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: P232000

Luminaire Tested: **FVS4M-4-LD4-30-2HI-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232000
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-4-LD4-30-2HI-PFS125-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
4FT LENGTH, 2-MODULE LED WITH PFS125 LENS
Light Source: (168) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

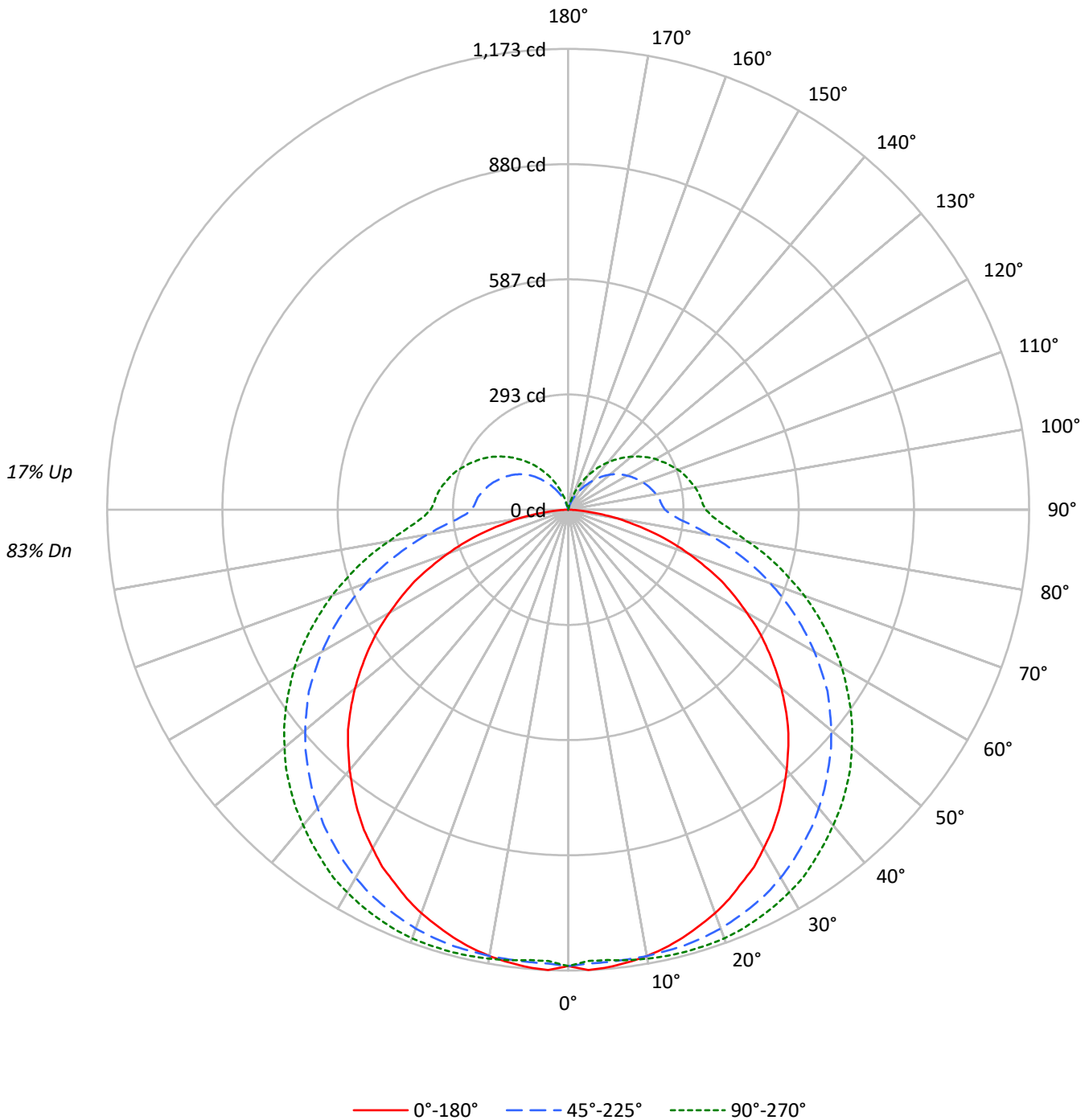
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5205.0 lumens
Efficiency: N/A
Efficacy: 58.3 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.44 / 1.52
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 89.3
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

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Luminous Intensity Polar Plot





TEST NUMBER: P232000

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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	115	115	115	115	110	110	110	110	102	102	102	94	94	94	87	87	87	83
1	103	97	92	88	98	93	89	85	86	82	79	79	76	74	73	71	68	65
2	93	83	76	69	88	80	73	67	74	68	63	68	63	59	63	59	56	52
3	84	72	64	57	80	70	62	55	64	57	52	59	54	49	55	50	46	43
4	76	64	54	47	73	61	53	46	57	49	44	52	46	41	48	43	39	36
5	70	56	47	40	67	54	46	39	50	43	37	47	40	35	43	38	33	31
6	64	51	41	35	61	49	40	34	45	38	32	42	36	31	39	33	29	27
7	59	46	37	30	57	44	36	30	41	34	28	38	32	27	35	30	26	23
8	55	41	33	27	53	40	32	26	37	30	25	35	28	24	32	27	23	21
9	51	38	29	24	49	37	29	23	34	27	22	32	26	21	30	24	20	18
10	48	35	27	21	46	34	26	21	32	25	20	29	24	19	28	22	18	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10550	10550	10550
5°	10614	10131	9970
10°	10549	9844	9680
15°	10466	9613	9433
20°	10380	9396	9214
25°	10256	9183	8983
30°	10146	8967	8763
35°	10014	8728	8520
40°	9849	8492	8273
45°	9694	8234	8034
50°	9450	7979	7762
55°	9166	7703	7476
60°	8791	7321	7167
65°	8376	6908	6801
70°	7604	6430	6416
75°	6587	5873	5984
80°	5148	5264	5499
85°	2624	4750	5181



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.6	2.1
10°-20°	324.9	6.2
20°-30°	510.9	9.8
30°-40°	644.6	12.4
40°-50°	709.4	13.6
50°-60°	697.2	13.4
60°-70°	606.1	11.6
70°-80°	450.6	8.7
80°-90°	287.6	5.5
90°-100°	227.1	4.4
100°-110°	201.2	3.9
110°-120°	165.3	3.2
120°-130°	124.3	2.4
130°-140°	81.8	1.6
140°-150°	44.1	0.8
150°-160°	16.7	0.3
160°-170°	2.3	0.0
170°-180°	0.0	0.0
0°-30°	946.5	18.2
0°-40°	1591.1	30.6
0°-60°	2997.7	57.6
0°-90°	4342.1	83.4
90°-120°	593.7	11.4
90°-150°	843.9	16.2
90°-180°	863.0	16.6
0°-180°	5205.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1161	1161	1161	1161	1161	
5°	1169	1165	1156	1158	1151	111
15°	1128	1134	1148	1166	1164	318
25°	1047	1075	1112	1144	1147	483
35°	934	981	1040	1084	1091	584
45°	792	857	935	989	1001	610
55°	620	707	805	862	876	553
65°	431	528	638	707	724	423
75°	222	332	454	529	552	234
85°	39	159	285	365	391	50
90°	0	117	246	326	350	2
95°	0	110	236	315	339	0
105°	0	97	216	291	314	0
115°	0	81	189	258	278	0
125°	0	64	157	217	235	0
135°	0	42	118	170	184	0
145°	1	23	74	119	130	1
155°	1	8	35	60	71	0
165°	1	0	6	10	16	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P232000

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1161.3	1161.3	1161.3	1161.3	1161.3	1161.3	1161.3	1161.3	1161.3	1161.3	1161.3
2.5°	1172.9	1170.9	1168.1	1167.1	1168.1	1168.1	1168.1	1166.1	1161.3	1156.5	1156.5
5°	1169.0	1168.1	1164.2	1163.2	1164.2	1165.2	1165.2	1163.2	1159.4	1155.6	1155.6
7.5°	1162.3	1161.3	1158.4	1157.5	1159.4	1160.4	1161.3	1159.4	1157.5	1154.6	1155.6
10°	1153.6	1151.7	1149.8	1148.8	1150.7	1153.6	1155.6	1155.6	1154.6	1153.6	1156.5
12.5°	1142.1	1141.1	1138.2	1139.2	1142.1	1146.9	1149.8	1151.7	1151.7	1150.7	1155.6
15°	1127.6	1127.6	1125.7	1126.7	1130.5	1137.3	1142.1	1145.0	1145.9	1147.9	1152.7
17.5°	1110.3	1111.3	1109.4	1111.3	1119.0	1126.7	1133.4	1136.3	1139.2	1142.1	1148.8
20°	1093.0	1093.0	1091.1	1095.9	1103.6	1113.2	1120.0	1125.7	1129.6	1134.4	1141.1
22.5°	1071.8	1071.8	1071.8	1077.6	1087.2	1096.9	1107.4	1114.2	1119.0	1123.8	1132.5
25°	1046.8	1049.7	1048.8	1057.4	1069.0	1081.5	1091.1	1097.8	1105.5	1112.3	1121.9
27.5°	1024.7	1022.8	1024.7	1034.3	1047.8	1059.3	1072.8	1080.5	1089.2	1098.8	1108.4
30°	994.9	993.9	998.7	1010.3	1023.7	1039.1	1051.6	1061.3	1071.8	1081.5	1093.0
32.5°	967.0	964.1	970.8	985.2	998.7	1017.0	1028.5	1039.1	1049.7	1062.2	1073.8
35°	934.3	933.3	941.0	955.4	972.7	990.1	1005.5	1018.0	1028.5	1040.1	1054.5
37.5°	899.6	903.5	910.2	924.6	943.9	962.2	977.6	990.1	1002.6	1018.0	1032.4
40°	865.0	866.9	874.6	892.9	913.1	932.3	948.7	960.2	977.6	992.0	1006.4
42.5°	828.4	827.5	842.8	861.1	880.4	901.5	917.9	933.3	949.6	965.0	980.4
45°	791.9	789.0	804.4	824.6	845.7	867.9	887.1	904.4	919.8	935.2	950.6
47.5°	750.5	751.4	767.8	788.0	811.1	833.2	860.2	870.8	887.1	906.4	921.7
50°	708.1	708.1	727.4	749.5	771.6	797.6	816.9	836.1	856.3	873.6	890.0
52.5°	663.9	667.7	685.1	710.1	736.1	758.2	778.4	801.5	820.7	839.0	855.4
55°	619.6	623.5	645.6	667.7	695.6	718.7	740.9	762.0	782.2	805.3	819.8
57.5°	574.4	580.2	600.4	624.4	650.4	677.4	702.4	722.6	744.7	764.0	782.2
60°	525.3	534.0	553.2	577.3	607.1	634.1	658.1	680.2	702.4	723.5	740.9
62.5°	477.2	484.9	506.1	531.1	560.9	590.8	611.9	638.9	661.0	681.2	700.5
65°	431.0	436.8	459.9	484.9	514.8	541.7	568.6	593.7	615.8	637.9	658.1
67.5°	376.2	386.8	408.9	436.8	466.6	494.5	520.5	547.5	571.5	592.7	612.9
70°	325.2	334.8	357.0	386.8	418.5	449.3	476.3	501.3	526.3	547.5	567.7
72.5°	274.2	284.8	306.9	333.9	366.6	395.4	425.3	453.2	480.1	502.2	522.5
75°	222.3	231.9	256.9	286.7	319.4	345.4	379.1	405.1	431.0	454.1	477.2
77.5°	167.4	181.8	204.9	236.7	267.5	300.2	331.0	358.9	383.9	408.9	433.0
80°	126.0	133.7	155.9	190.5	220.3	254.0	282.9	312.7	340.6	362.7	384.9
82.5°	77.0	88.5	116.4	143.4	179.9	208.8	241.5	270.4	297.3	322.3	343.5
85°	39.4	52.0	76.0	108.7	142.4	176.1	204.0	233.8	260.7	284.8	306.9
87.5°	11.5	23.1	50.0	80.8	114.5	148.2	179.0	207.8	234.8	259.8	281.9
90°	0.0	11.5	37.5	68.3	101.0	133.7	164.5	194.4	221.3	246.3	268.4
92.5°	0.0	10.6	34.6	64.5	97.2	128.9	159.7	188.6	214.6	239.6	261.7
95°	0.0	9.6	32.7	62.5	94.3	126.0	156.8	185.7	211.7	235.7	257.9
97.5°	0.0	8.7	30.8	59.7	91.4	122.2	153.0	181.8	207.8	232.8	255.0
100°	0.0	7.7	29.8	57.7	88.5	118.3	149.1	177.0	203.0	227.1	249.2
102.5°	0.0	6.7	27.9	54.8	84.7	115.5	144.3	172.2	198.2	221.3	243.4
105°	0.0	6.7	26.0	52.9	81.8	111.6	139.5	167.4	192.4	215.5	237.7
107.5°	0.0	5.8	25.0	50.0	78.9	106.8	134.7	161.6	186.7	209.8	230.9
110°	0.0	4.8	23.1	48.1	75.0	103.0	130.9	156.8	180.9	203.0	224.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	3.8	21.2	45.2	71.2	98.1	125.1	150.1	174.2	195.3	215.5
115°	0.0	2.9	20.2	42.3	68.3	94.3	119.3	144.3	167.4	188.6	207.8
117.5°	0.0	1.9	18.3	39.4	64.5	89.5	114.5	138.6	160.7	180.9	200.1
120°	0.0	1.9	16.4	37.5	60.6	84.7	108.7	131.8	153.9	173.2	191.5
122.5°	0.0	1.0	14.4	34.6	56.8	79.9	103.0	125.1	145.3	165.5	182.8
125°	0.0	1.0	12.5	31.8	52.9	75.0	97.2	118.3	138.6	156.8	174.2
127.5°	0.0	1.0	10.6	27.9	48.1	69.3	90.4	110.6	130.9	148.2	164.5
130°	0.0	1.0	8.7	25.0	43.3	63.5	83.7	103.0	122.2	138.6	154.9
132.5°	0.0	1.0	6.7	21.2	38.5	56.8	75.0	94.3	111.6	128.9	144.3
135°	0.0	0.0	4.8	18.3	33.7	51.0	67.4	84.7	102.0	118.3	133.7
137.5°	1.0	1.0	3.8	15.4	29.8	44.3	60.6	76.0	91.4	106.8	122.2
140°	1.0	1.0	2.9	12.5	25.0	39.4	52.9	67.4	81.8	95.3	108.7
142.5°	1.0	1.0	1.9	9.6	21.2	33.7	46.2	59.7	72.2	83.7	96.2
145°	1.0	1.0	1.9	6.7	17.3	27.9	40.4	51.0	62.5	74.1	83.7
147.5°	1.0	1.0	1.0	4.8	13.5	23.1	33.7	43.3	53.9	63.5	72.2
150°	1.0	1.0	1.0	3.8	10.6	19.2	27.9	35.6	45.2	52.9	61.6
152.5°	1.0	1.0	1.0	2.9	7.7	15.4	22.1	29.8	36.6	44.3	50.0
155°	1.0	1.0	1.0	1.9	4.8	10.6	17.3	23.1	28.9	34.6	40.4
157.5°	1.0	1.0	1.0	1.0	2.9	6.7	12.5	17.3	22.1	26.0	31.8
160°	1.0	1.0	1.0	1.0	1.9	3.8	7.7	11.5	15.4	19.2	22.1
162.5°	1.0	1.0	1.0	0.0	1.0	1.9	3.8	6.7	9.6	12.5	14.4
165°	1.0	1.0	1.0	0.0	0.0	0.0	1.0	1.9	3.8	5.8	6.7
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1161.3	1161.3	1161.3	1161.3	1161.3	1161.3	1161.3	1161.3
2.5°	1157.5	1158.4	1157.5	1156.5	1154.6	1152.7	1150.7	1149.8
5°	1157.5	1158.4	1157.5	1157.5	1155.6	1153.6	1151.7	1150.7
7.5°	1159.4	1160.4	1160.4	1160.4	1160.4	1159.4	1157.5	1156.5
10°	1160.4	1163.2	1164.2	1164.2	1164.2	1163.2	1162.3	1160.4
12.5°	1160.4	1164.2	1165.2	1166.1	1167.1	1166.1	1164.2	1163.2
15°	1158.4	1163.2	1165.2	1166.1	1167.1	1167.1	1165.2	1164.2
17.5°	1155.6	1160.4	1163.2	1164.2	1166.1	1165.2	1164.2	1163.2
20°	1148.8	1154.6	1158.4	1161.3	1162.3	1163.2	1162.3	1161.3
22.5°	1141.1	1146.9	1151.7	1154.6	1156.5	1157.5	1156.5	1155.6
25°	1130.5	1137.3	1143.0	1145.9	1147.9	1149.8	1148.8	1146.9
27.5°	1118.0	1124.8	1130.5	1134.4	1138.2	1138.2	1138.2	1137.3
30°	1101.7	1110.3	1116.1	1120.9	1123.8	1125.7	1125.7	1124.8
32.5°	1085.3	1094.0	1099.7	1105.5	1108.4	1109.4	1110.3	1111.3
35°	1065.1	1073.8	1081.5	1086.3	1090.1	1092.0	1092.0	1091.1
37.5°	1043.0	1053.6	1061.3	1066.1	1071.8	1071.8	1071.8	1070.9
40°	1018.0	1027.6	1037.2	1043.0	1048.8	1049.7	1048.8	1048.8
42.5°	993.9	1003.5	1012.2	1018.9	1022.8	1024.7	1025.7	1026.6
45°	965.0	976.6	985.2	992.9	996.8	999.7	1000.6	1000.6
47.5°	934.3	946.8	956.4	963.1	968.9	972.7	970.8	973.7
50°	904.4	915.0	926.6	932.3	938.1	942.9	942.0	942.0
52.5°	870.8	881.3	892.9	901.5	906.4	910.2	911.2	911.2
55°	834.2	846.7	858.2	865.9	871.7	874.6	876.5	876.5
57.5°	797.6	810.1	820.7	831.3	837.1	841.9	841.9	840.0
60°	758.2	771.6	783.2	791.9	801.5	802.4	803.4	804.4
62.5°	717.8	731.2	743.7	754.3	759.1	764.0	766.8	764.9
65°	675.4	687.0	703.3	710.1	716.8	719.7	724.5	723.5
67.5°	633.1	647.5	658.1	669.7	677.4	678.3	684.1	681.2
70°	585.0	599.4	614.8	622.5	631.2	634.1	636.9	639.8
72.5°	540.7	556.1	568.6	580.2	585.0	589.8	593.7	594.6
75°	494.5	512.8	522.5	535.0	541.7	545.5	551.3	552.3
77.5°	448.4	464.7	479.2	487.8	496.5	501.3	505.1	509.0
80°	403.1	417.6	433.9	446.4	455.1	458.9	463.8	462.8
82.5°	362.7	379.1	393.5	404.1	413.7	419.5	424.3	424.3
85°	329.1	347.3	358.9	370.4	379.1	384.9	389.7	390.6
87.5°	304.0	320.4	335.8	345.4	355.0	360.8	364.7	365.6
90°	288.6	306.0	320.4	331.9	340.6	346.4	350.2	350.2
92.5°	281.9	298.3	313.7	324.2	332.9	338.7	341.6	342.5
95°	278.1	294.4	308.9	320.4	329.1	334.8	337.7	338.7
97.5°	274.2	290.6	304.0	316.5	324.2	330.0	332.9	333.9
100°	268.4	284.8	299.2	309.8	319.4	324.2	327.1	328.1
102.5°	262.7	278.1	292.5	303.1	311.7	316.5	320.4	320.4
105°	255.9	273.3	285.8	296.3	305.0	310.8	312.7	313.7
107.5°	249.2	265.6	279.0	289.6	297.3	302.1	306.0	306.0
110°	242.5	257.9	270.4	280.9	288.6	293.5	296.3	297.3



TEST NUMBER: P232000

CATALOG NUMBER: FVS4M-4-LD4-30-2HI-PFS125-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	233.8	249.2	261.7	272.3	279.0	283.8	286.7	286.7
115°	225.1	240.5	253.0	263.6	270.4	275.2	277.1	278.1
117.5°	216.5	230.9	243.4	253.0	259.8	264.6	266.5	266.5
120°	207.8	222.3	233.8	243.4	250.2	254.0	256.9	257.9
122.5°	198.2	211.7	223.2	232.8	239.6	243.4	245.4	246.3
125°	188.6	202.1	212.6	221.3	228.0	231.9	234.8	234.8
127.5°	179.0	191.5	202.1	209.8	215.5	219.4	221.3	222.3
130°	168.4	179.0	189.5	197.2	204.0	206.9	209.8	209.8
132.5°	157.8	168.4	178.0	186.7	190.5	194.4	197.2	197.2
135°	147.2	156.8	166.5	173.2	178.0	181.8	183.8	183.8
137.5°	135.7	146.2	154.9	160.7	165.5	168.4	170.3	171.3
140°	123.2	134.7	141.4	147.2	152.0	154.9	156.8	156.8
142.5°	108.7	120.3	128.9	135.7	138.6	140.5	143.4	143.4
145°	95.3	105.8	116.4	122.2	126.0	128.0	128.9	129.9
147.5°	81.8	91.4	101.0	107.8	111.6	112.6	113.5	113.5
150°	69.3	77.0	85.6	94.3	97.2	99.1	100.1	101.0
152.5°	57.7	63.5	71.2	77.9	83.7	84.7	85.6	85.6
155°	46.2	52.0	56.8	62.5	69.3	70.2	71.2	71.2
157.5°	35.6	39.4	43.3	47.1	52.9	56.8	56.8	57.7
160°	25.0	28.9	30.8	33.7	37.5	42.3	42.3	42.3
162.5°	16.4	18.3	20.2	21.2	23.1	26.9	28.9	28.9
165°	8.7	8.7	9.6	10.6	11.5	12.5	15.4	16.4
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	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
177.5°	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

(END OF REPORT)