

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: P241458

Luminaire Tested: **FVS8M-3-LD4-35-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241458
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-35-1STD-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

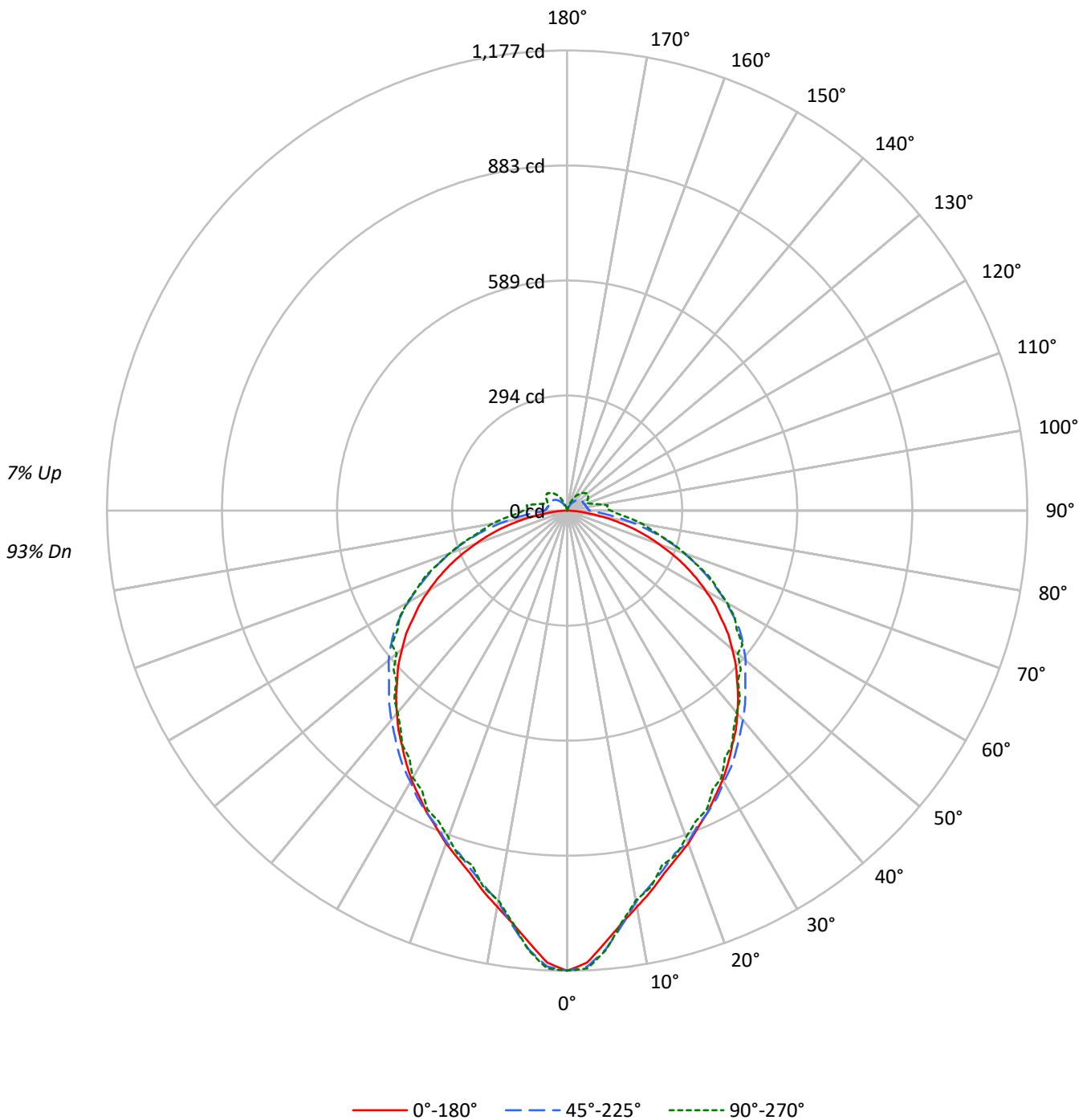
Lumens per Lamp: N/A
Luminaire Lumens: 3130.0 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.23
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 28.5
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	114	114	114	114	107	107	107	101	101	101	95	95	95	93
1	106	101	97	92	103	98	94	90	93	89	86	87	85	82	83	80	78	76
2	96	88	81	75	93	85	79	73	80	75	70	76	72	68	72	68	65	62
3	88	77	68	62	84	75	67	61	71	64	59	67	61	57	63	59	55	52
4	80	68	59	52	77	66	58	51	63	55	50	59	53	48	56	51	47	44
5	74	60	51	45	71	59	50	44	56	49	43	53	47	42	51	45	41	38
6	68	54	45	39	65	53	45	38	51	43	37	48	42	37	46	40	36	33
7	63	49	40	34	61	48	40	34	46	39	33	44	37	32	42	36	32	30
8	59	45	36	31	57	44	36	30	42	35	30	40	34	29	39	33	28	26
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	34	28	24	33	27	23	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6871	6871	6871
5°	6476	6494	6491
10°	6048	5820	5771
15°	5725	5458	5352
20°	5528	5238	5105
25°	5355	5028	4922
30°	5210	4854	4706
35°	5061	4717	4516
40°	4951	4579	4321
45°	4830	4448	4158
50°	4720	4390	4074
55°	4566	4302	4075
60°	4385	4090	3965
65°	4127	3835	3744
70°	3717	3526	3372
75°	3225	3131	3001
80°	2420	2569	2869
85°	1307	1955	2619



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.7	3.3
10°-20°	268.8	8.6
20°-30°	391.3	12.5
30°-40°	466.1	14.9
40°-50°	489.9	15.7
50°-60°	466.9	14.9
60°-70°	374.5	12.0
70°-80°	238.6	7.6
80°-90°	104.5	3.3
90°-100°	55.7	1.8
100°-110°	45.7	1.5
110°-120°	38.0	1.2
120°-130°	35.2	1.1
130°-140°	27.0	0.9
140°-150°	16.3	0.5
150°-160°	6.6	0.2
160°-170°	1.2	0.0
170°-180°	0.0	0.0
0°-30°	763.8	24.4
0°-40°	1229.9	39.3
0°-60°	2186.7	69.9
0°-90°	2904.4	92.8
90°-120°	139.4	4.5
90°-150°	217.8	7.0
90°-180°	226.0	7.2
0°-180°	3130.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1177	1177	1177	1177	1177	
5°	1110	1117	1127	1124	1129	103
15°	960	957	950	945	939	271
25°	851	852	852	840	844	392
35°	735	748	752	743	734	461
45°	615	634	644	640	617	475
55°	481	508	541	537	529	431
65°	331	358	394	401	402	327
75°	170	200	240	252	245	180
85°	31	56	94	128	140	38
90°	1	24	57	85	112	1
95°	0	22	54	76	103	0
105°	0	21	49	67	67	0
115°	0	20	46	57	56	0
125°	0	19	46	62	65	0
135°	1	14	38	56	64	1
145°	1	7	27	44	50	1
155°	1	2	13	24	28	0
165°	1	1	2	6	8	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°	1176.6	1176.6	1176.6	1176.6	1176.6	1176.6	1176.6	1176.6	1176.6	1176.6	1176.6
2.5°	1157.8	1154.6	1154.6	1157.8	1160.3	1160.3	1162.7	1166.0	1168.4	1167.6	1167.6
5°	1109.8	1109.0	1108.2	1113.9	1115.5	1117.1	1118.8	1126.1	1126.9	1129.3	1126.9
7.5°	1065.0	1061.8	1061.8	1065.8	1067.5	1069.1	1070.7	1074.0	1069.9	1067.5	1070.7
10°	1029.2	1024.3	1023.5	1025.9	1025.1	1024.3	1025.1	1021.9	1023.5	1020.2	1015.4
12.5°	995.8	992.6	988.5	988.5	987.7	987.7	986.0	986.0	981.2	976.3	982.0
15°	960.0	959.2	954.3	956.7	956.7	956.7	957.5	956.7	953.5	955.9	950.2
17.5°	931.5	929.0	928.2	933.1	931.5	929.9	930.7	927.4	929.9	924.2	918.5
20°	906.2	903.0	903.0	903.8	902.2	900.5	901.4	903.8	900.5	896.5	903.0
22.5°	876.1	872.0	872.9	876.9	876.9	879.4	881.0	876.9	874.5	876.9	872.0
25°	850.9	848.4	850.9	850.9	849.2	851.7	854.1	855.8	853.3	852.5	851.7
27.5°	821.6	818.3	820.7	823.2	828.9	829.7	828.9	828.9	828.1	831.3	828.9
30°	795.5	793.1	796.3	800.4	800.4	801.2	802.0	805.3	802.8	807.7	801.2
32.5°	766.2	763.8	767.0	768.6	776.0	776.0	778.4	781.7	780.9	782.5	779.2
35°	735.3	733.6	737.7	745.0	747.5	747.5	752.4	752.4	755.6	755.6	752.4
37.5°	708.4	707.6	710.0	718.2	721.4	723.9	727.1	727.9	732.0	728.7	724.7
40°	677.4	675.8	679.9	687.2	691.3	693.7	696.2	701.9	701.9	701.1	699.4
42.5°	647.3	647.3	650.6	656.3	663.6	666.9	667.7	674.2	676.6	672.6	673.4
45°	614.7	614.7	618.0	626.1	631.8	634.3	637.5	641.6	644.9	648.9	644.1
47.5°	585.4	585.4	587.9	593.6	603.3	603.3	607.4	613.1	616.4	619.6	618.0
50°	551.2	553.7	556.9	561.8	566.7	572.4	578.1	584.6	587.9	591.1	596.0
52.5°	519.5	517.9	521.9	527.6	535.0	541.5	544.7	554.5	561.0	566.7	568.3
55°	481.2	486.1	487.7	495.1	499.1	508.1	512.2	519.5	529.3	535.8	540.7
57.5°	447.0	447.8	451.1	458.4	467.4	470.6	475.5	484.5	492.6	500.8	505.6
60°	408.7	411.2	416.1	421.0	429.9	434.0	438.1	450.3	456.0	463.3	469.0
62.5°	370.5	372.9	378.6	385.1	390.0	394.9	399.0	411.2	421.8	425.8	431.5
65°	331.4	334.7	337.9	342.8	350.9	358.3	360.7	372.9	381.9	389.2	394.1
67.5°	290.7	293.1	299.6	305.3	312.7	318.4	322.4	333.8	343.6	353.4	355.8
70°	248.3	253.2	257.3	266.3	273.6	278.5	283.4	294.8	303.7	310.2	317.6
72.5°	210.1	212.5	218.2	226.4	234.5	239.4	242.6	255.7	263.8	274.4	280.1
75°	170.2	173.4	178.3	184.8	194.6	199.5	206.0	215.8	225.5	234.5	240.2
77.5°	131.1	134.3	138.4	146.6	154.7	159.6	166.9	176.7	187.3	193.8	200.3
80°	92.8	96.1	100.2	109.1	118.1	121.3	127.8	136.0	147.4	154.7	161.2
82.5°	58.6	61.1	66.0	74.1	83.1	86.3	92.0	101.0	110.7	118.9	126.2
85°	30.9	31.8	38.3	44.0	52.1	56.2	60.3	69.2	79.0	86.3	94.5
87.5°	9.0	11.4	16.3	23.6	30.1	34.2	38.3	46.4	55.4	61.9	70.0
90°	0.8	2.4	6.5	13.0	19.5	23.6	26.9	35.0	42.3	49.7	57.0
92.5°	0.0	1.6	6.5	12.2	18.7	22.8	26.1	33.4	40.7	47.2	54.6
95°	0.0	1.6	5.7	11.4	18.7	22.0	26.1	33.4	39.9	47.2	53.7
97.5°	0.0	1.6	5.7	11.4	18.7	22.0	25.2	32.6	39.9	45.6	52.1
100°	0.0	1.6	5.7	11.4	17.9	22.0	25.2	31.8	39.1	44.8	50.5
102.5°	0.0	1.6	5.7	11.4	17.9	21.2	25.2	31.8	37.5	44.0	49.7
105°	0.0	1.6	5.7	11.4	17.9	21.2	24.4	30.9	36.6	43.2	48.9
107.5°	0.0	1.6	5.7	11.4	17.9	21.2	24.4	30.9	36.6	42.3	48.0
110°	0.0	0.8	4.9	11.4	17.9	21.2	24.4	30.1	36.6	42.3	47.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.8	4.9	10.6	17.1	21.2	24.4	30.1	36.6	41.5	46.4
115°	0.0	0.8	4.9	10.6	17.1	20.4	23.6	30.1	35.8	40.7	45.6
117.5°	0.0	0.8	4.9	10.6	17.1	20.4	23.6	30.1	35.8	40.7	45.6
120°	0.0	0.8	4.1	9.8	16.3	19.5	22.8	29.3	35.8	40.7	45.6
122.5°	0.0	0.8	4.1	9.8	15.5	18.7	22.0	28.5	35.0	40.7	45.6
125°	0.0	0.8	3.3	9.0	15.5	18.7	22.0	27.7	34.2	39.9	45.6
127.5°	0.8	0.8	3.3	8.1	14.7	17.9	21.2	26.9	32.6	38.3	44.0
130°	0.8	0.8	3.3	7.3	13.0	16.3	19.5	26.1	31.8	37.5	42.3
132.5°	0.8	0.8	2.4	6.5	12.2	15.5	17.9	24.4	29.3	35.0	40.7
135°	0.8	0.8	1.6	5.7	11.4	13.8	16.3	22.8	27.7	32.6	38.3
137.5°	0.8	0.8	1.6	4.9	9.8	12.2	14.7	20.4	26.1	30.1	35.8
140°	0.8	0.8	1.6	4.1	8.1	10.6	13.0	17.9	23.6	28.5	32.6
142.5°	0.8	0.8	0.8	3.3	7.3	9.0	11.4	15.5	20.4	25.2	30.1
145°	0.8	0.8	0.8	2.4	5.7	7.3	9.8	13.8	17.9	22.8	26.9
147.5°	0.8	0.8	0.8	2.4	4.9	6.5	8.1	11.4	15.5	19.5	23.6
150°	0.8	0.8	0.8	1.6	3.3	4.9	6.5	9.8	13.0	16.3	20.4
152.5°	0.8	0.8	0.8	0.8	2.4	4.1	4.9	7.3	10.6	13.8	16.3
155°	0.8	0.8	0.8	0.8	1.6	2.4	4.1	5.7	8.1	10.6	13.0
157.5°	0.8	0.8	0.8	0.8	1.6	1.6	2.4	4.1	5.7	8.1	9.8
160°	0.8	0.8	0.8	0.8	0.8	1.6	1.6	3.3	4.1	5.7	7.3
162.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	4.1	4.9
165°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	2.4
167.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6
170°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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°	1176.6	1176.6	1176.6	1176.6	1176.6	1176.6	1176.6	1176.6	1176.6	1176.6
2.5°	1169.2	1168.4	1169.2	1171.7	1171.7	1172.5	1173.3	1174.1	1173.3	1172.5
5°	1127.7	1123.6	1122.8	1126.1	1124.5	1125.3	1127.7	1130.2	1129.3	1129.3
7.5°	1071.5	1069.1	1069.9	1062.6	1061.8	1058.5	1059.3	1059.3	1060.9	1063.4
10°	1008.8	1011.3	1017.8	1023.5	1025.1	1022.7	1018.6	1013.7	1011.3	1012.1
12.5°	982.8	975.5	965.7	961.6	965.7	971.4	979.5	985.2	986.9	986.9
15°	939.6	942.9	949.4	953.5	945.3	942.1	940.4	938.0	938.8	938.8
17.5°	926.6	921.7	913.6	922.5	928.2	934.7	934.7	928.2	922.5	925.0
20°	894.0	898.9	911.1	899.7	890.0	885.1	885.1	885.9	891.6	889.1
22.5°	877.7	878.6	863.9	870.4	881.0	884.3	878.6	868.8	858.2	859.8
25°	848.4	843.5	856.6	846.8	840.3	836.2	838.7	842.7	846.0	844.4
27.5°	823.2	831.3	814.2	824.0	829.7	833.0	828.1	812.6	810.2	805.3
30°	803.7	791.4	806.1	802.8	791.4	786.6	780.0	785.7	785.7	789.0
32.5°	773.5	777.6	770.3	762.1	767.8	772.7	768.6	762.1	753.2	750.7
35°	753.2	747.5	741.8	750.7	743.4	735.3	728.7	731.2	734.4	733.6
37.5°	728.7	719.0	723.0	709.2	712.5	717.3	721.4	710.0	705.1	700.2
40°	693.7	701.9	687.2	699.4	695.4	686.4	673.4	670.9	675.0	674.2
42.5°	671.7	666.0	674.2	657.1	653.0	654.6	662.0	664.4	657.9	654.6
45°	646.5	647.3	635.9	635.9	640.0	639.2	626.1	617.2	618.0	617.2
47.5°	615.6	618.8	612.3	614.7	602.5	600.9	601.7	605.0	603.3	601.7
50°	598.5	590.3	599.3	586.2	591.1	594.4	587.1	574.0	570.8	569.2
52.5°	574.0	578.9	568.3	579.7	575.7	565.1	558.6	563.5	564.3	565.1
55°	538.2	547.2	550.4	539.8	536.6	539.8	542.3	534.1	530.9	529.3
57.5°	511.3	508.9	508.1	508.9	511.3	509.7	502.4	502.4	507.3	508.1
60°	472.3	478.8	469.8	473.9	468.2	468.2	476.3	475.5	473.9	472.3
62.5°	433.2	434.8	440.5	431.5	434.8	439.7	434.8	430.7	433.2	433.2
65°	397.3	397.3	395.7	401.4	401.4	394.9	392.5	398.2	401.4	402.2
67.5°	361.5	364.0	362.3	363.1	357.4	357.4	361.5	356.6	355.0	356.6
70°	320.0	323.3	329.8	321.6	325.7	326.5	318.4	315.9	318.4	320.0
72.5°	282.5	284.2	287.4	289.9	289.9	287.4	285.0	285.0	284.2	284.2
75°	243.5	249.2	249.2	253.2	251.6	250.0	252.4	249.2	245.1	245.1
77.5°	206.0	214.1	215.0	215.8	216.6	219.8	219.0	216.6	216.6	217.4
80°	168.5	175.1	179.9	181.6	183.2	186.5	187.3	192.2	193.8	194.6
82.5°	132.7	140.9	145.7	152.3	154.7	158.0	162.8	166.9	170.2	167.7
85°	102.6	109.1	116.4	125.4	127.8	131.9	135.2	136.0	137.6	140.0
87.5°	77.4	86.3	95.3	102.6	104.2	105.0	107.5	112.4	118.1	122.1
90°	65.1	73.3	80.6	83.9	84.7	86.3	91.2	97.7	105.0	111.6
92.5°	61.9	68.4	72.5	75.7	78.2	80.6	84.7	89.6	96.9	101.8
95°	59.4	65.1	69.2	73.3	76.5	79.0	83.1	89.6	97.7	102.6
97.5°	57.8	63.5	68.4	73.3	76.5	79.0	86.3	95.3	103.4	104.2
100°	57.0	61.9	66.8	72.5	75.7	79.0	86.3	90.4	89.6	89.6
102.5°	55.4	60.3	66.0	70.8	73.3	74.9	78.2	78.2	76.5	75.7
105°	54.6	58.6	63.5	66.8	66.8	68.4	69.2	68.4	67.6	66.8
107.5°	52.9	57.0	60.3	61.1	61.9	62.7	62.7	61.9	60.3	59.4
110°	51.3	54.6	57.0	57.8	57.8	58.6	57.8	57.0	55.4	54.6



TEST NUMBER: P241458

CATALOG NUMBER: FVS8M-3-LD4-35-1STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	50.5	52.9	55.4	56.2	56.2	57.0	57.0	56.2	55.4	54.6
115°	49.7	52.9	55.4	56.2	57.0	57.8	58.6	57.8	57.0	56.2
117.5°	49.7	52.9	56.2	57.8	58.6	59.4	60.3	61.1	59.4	58.6
120°	50.5	53.7	57.0	59.4	60.3	61.1	62.7	62.7	61.9	61.9
122.5°	50.5	54.6	57.8	60.3	61.9	62.7	63.5	64.3	63.5	63.5
125°	50.5	54.6	57.8	60.3	61.9	62.7	64.3	66.0	65.1	65.1
127.5°	49.7	53.7	57.0	60.3	61.1	61.9	64.3	66.0	66.0	66.8
130°	48.0	52.1	56.2	58.6	60.3	61.1	63.5	65.1	66.0	66.8
132.5°	45.6	50.5	53.7	57.0	57.8	59.4	61.9	63.5	65.1	66.0
135°	43.2	47.2	51.3	54.6	56.2	57.8	59.4	61.9	63.5	63.5
137.5°	39.9	44.8	48.9	52.1	52.9	54.6	57.0	59.4	60.3	61.1
140°	37.5	41.5	45.6	48.9	50.5	52.1	54.6	56.2	57.8	57.8
142.5°	34.2	39.1	42.3	45.6	47.2	48.9	51.3	52.9	54.6	54.6
145°	31.8	35.8	39.1	42.3	44.0	44.8	47.2	48.9	50.5	50.5
147.5°	28.5	31.8	35.8	38.3	39.9	40.7	43.2	44.8	45.6	46.4
150°	24.4	27.7	30.9	33.4	35.0	35.8	38.3	39.9	40.7	41.5
152.5°	19.5	22.8	26.1	28.5	29.3	30.9	32.6	33.4	35.0	35.0
155°	16.3	18.7	21.2	23.6	24.4	25.2	26.9	27.7	28.5	28.5
157.5°	12.2	13.8	16.3	18.7	19.5	19.5	21.2	22.0	22.8	22.8
160°	9.0	10.6	12.2	13.8	14.7	15.5	16.3	17.1	17.1	17.1
162.5°	5.7	7.3	8.1	9.8	9.8	10.6	11.4	12.2	12.2	12.2
165°	3.3	4.1	4.9	5.7	6.5	6.5	7.3	7.3	8.1	8.1
167.5°	1.6	2.4	2.4	3.3	3.3	3.3	4.1	4.1	4.9	4.1
170°	0.8	0.8	0.8	0.8	0.8	1.6	1.6	1.6	1.6	1.6
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)