

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: P241574

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241574
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-LD4-35-2LO-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

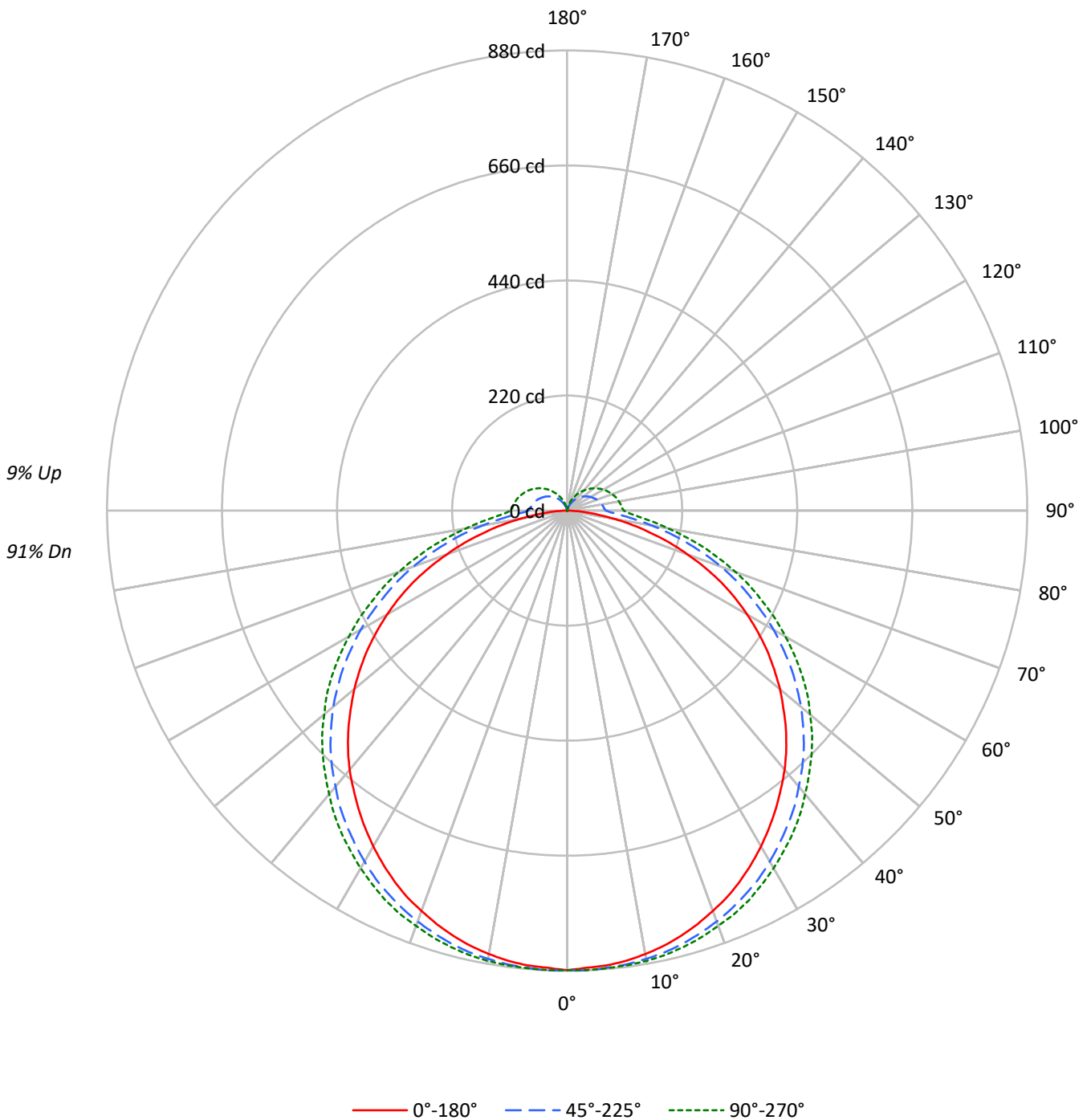
Lumens per Lamp: N/A
Luminaire Lumens: 3094.0 lumens
Efficiency: N/A
Efficacy: 76.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.33 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 40.7
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	50	30	10	0	
RCR																						
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	94	94	94	91	
1	106	101	96	92	102	97	93	89	92	88	85	86	83	81	81	79	77	77	77	77	74	
2	96	87	80	74	92	84	78	72	79	74	69	75	70	66	70	67	64	64	64	64	61	
3	87	76	67	61	84	74	66	59	69	63	57	65	60	55	62	57	53	53	53	53	51	
4	79	67	58	51	76	65	57	50	61	54	48	58	52	47	55	50	45	45	45	45	43	
5	73	60	50	43	70	58	49	43	55	47	42	52	45	40	49	44	39	39	39	39	37	
6	67	53	44	38	64	52	43	37	49	42	36	47	40	35	44	39	34	34	34	34	32	
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	40	35	30	30	30	30	28	
8	58	44	35	29	56	43	35	29	41	34	28	39	32	28	37	31	27	27	27	27	25	
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	24	24	24	22	
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	22	22	22	20	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5132	5132	5132
5°	5096	5058	5049
10°	5060	4990	4987
15°	5021	4924	4923
20°	4970	4851	4853
25°	4922	4776	4793
30°	4855	4696	4711
35°	4791	4608	4634
40°	4730	4512	4539
45°	4649	4421	4454
50°	4549	4302	4340
55°	4429	4155	4222
60°	4264	3977	4047
65°	4045	3737	3842
70°	3671	3471	3611
75°	3149	3080	3298
80°	2391	2618	2902
85°	1320	2148	2574



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.5	2.7
10°-20°	241.4	7.8
20°-30°	371.4	12.0
30°-40°	457.3	14.8
40°-50°	488.9	15.8
50°-60°	460.7	14.9
60°-70°	373.8	12.1
70°-80°	241.9	7.8
80°-90°	110.5	3.6
90°-100°	68.3	2.2
100°-110°	60.6	2.0
110°-120°	50.0	1.6
120°-130°	37.9	1.2
130°-140°	25.6	0.8
140°-150°	14.6	0.5
150°-160°	6.2	0.2
160°-170°	1.4	0.0
170°-180°	0.0	0.0
0°-30°	696.2	22.5
0°-40°	1153.5	37.3
0°-60°	2103.1	68.0
0°-90°	2829.3	91.4
90°-120°	178.8	5.8
90°-150°	257.0	8.3
90°-180°	265.0	8.6
0°-180°	3094.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	879	879	879	879	879	
5°	873	874	878	879	878	83
15°	842	847	857	862	864	238
25°	782	792	809	818	822	360
35°	696	714	735	749	753	436
45°	592	614	640	655	661	456
55°	467	492	522	541	548	417
65°	325	352	384	407	413	320
75°	166	199	236	259	269	177
85°	31	65	104	129	138	39
90°	1	34	74	100	108	2
95°	1	32	70	96	104	0
105°	1	28	64	88	97	0
115°	1	24	56	78	86	1
125°	1	19	47	66	73	1
135°	1	14	37	53	59	0
145°	1	8	26	38	42	0
155°	1	3	13	23	26	0
165°	1	1	4	8	10	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241574

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	878.9	878.9	878.9	878.9	878.9	878.9	878.9	878.9	878.9	878.9	878.9
2.5°	875.1	875.7	875.7	875.7	876.4	877.0	877.6	878.9	879.6	880.2	880.2
5°	873.2	873.2	873.2	873.2	873.8	874.5	875.7	876.4	877.0	877.6	877.6
7.5°	868.1	868.7	868.7	868.7	869.4	870.0	870.6	872.5	873.8	874.5	875.1
10°	861.1	862.4	862.4	862.4	863.0	864.3	864.9	866.8	868.7	870.0	870.6
12.5°	852.8	852.8	853.4	853.4	855.4	856.0	857.9	860.4	861.7	863.6	864.9
15°	842.0	842.6	842.6	843.3	845.8	847.1	848.3	850.9	854.1	855.4	857.3
17.5°	829.2	829.9	831.2	831.8	834.3	836.2	837.5	840.7	843.9	845.8	847.1
20°	814.6	815.9	816.5	818.4	821.6	823.5	824.8	828.6	831.8	833.7	836.2
22.5°	799.9	799.9	801.2	803.8	806.9	809.5	811.4	814.6	818.4	820.3	823.5
25°	782.1	782.1	784.0	787.2	790.4	792.3	794.2	798.7	803.1	806.3	808.9
27.5°	762.4	763.0	765.6	768.7	772.6	775.7	777.0	782.1	785.9	790.4	793.6
30°	741.3	743.3	745.8	749.0	754.1	756.6	759.2	763.6	768.1	772.6	775.1
32.5°	719.1	720.3	724.8	728.0	733.1	736.3	738.8	743.9	748.4	752.2	755.4
35°	696.1	697.4	701.2	705.7	711.4	714.0	715.9	722.2	728.0	731.8	735.0
37.5°	671.3	673.8	677.0	681.5	688.5	691.0	693.6	699.3	705.0	708.9	714.0
40°	647.1	647.7	651.5	657.9	663.6	665.6	669.4	676.4	680.8	685.9	689.1
42.5°	620.3	621.0	624.8	631.2	636.9	640.7	644.5	650.9	656.0	661.1	665.6
45°	591.7	593.6	597.4	603.8	609.5	614.0	617.2	624.2	629.9	634.4	640.1
47.5°	561.1	563.7	568.1	574.5	580.9	585.3	588.5	594.9	601.9	607.0	612.1
50°	531.2	534.4	538.2	545.2	551.6	556.0	558.6	565.6	571.9	578.3	584.0
52.5°	499.3	501.9	507.0	514.0	520.3	524.8	527.4	535.6	542.6	547.7	552.8
55°	466.8	469.4	474.5	480.9	488.5	491.7	495.5	503.8	510.2	516.5	522.3
57.5°	432.5	435.6	440.7	447.7	454.7	457.9	461.8	469.4	477.7	483.4	488.5
60°	397.4	399.3	404.4	412.7	419.1	422.9	427.4	434.4	442.6	449.0	456.0
62.5°	361.8	363.7	368.8	377.0	384.7	387.2	392.3	400.6	407.0	415.3	420.4
65°	324.8	327.4	332.5	338.2	347.7	351.6	355.4	363.7	370.7	377.7	384.0
67.5°	286.0	287.2	294.9	301.9	308.3	314.0	318.4	326.7	334.4	342.0	349.7
70°	245.2	248.4	254.8	263.0	270.7	275.8	279.0	288.5	296.8	306.3	312.7
72.5°	206.4	210.8	217.2	224.2	231.8	238.2	242.0	250.3	258.6	266.9	274.5
75°	166.2	171.3	178.3	186.0	194.3	198.7	205.1	213.4	221.6	229.3	236.3
77.5°	128.7	131.8	140.8	148.4	158.6	162.4	166.2	175.8	184.1	192.3	200.6
80°	91.7	95.5	103.2	112.1	121.6	125.5	130.6	139.5	148.4	156.7	164.3
82.5°	59.2	63.1	69.4	78.3	87.9	92.4	97.4	106.4	115.9	124.2	131.8
85°	31.2	34.4	41.4	50.3	59.9	65.0	68.8	79.0	86.6	96.8	103.8
87.5°	11.5	14.0	20.4	30.6	39.5	45.2	49.0	58.6	67.5	75.8	84.1
90°	0.6	4.5	11.5	20.4	29.9	34.4	39.5	49.0	58.0	66.2	73.9
92.5°	0.0	3.2	10.2	18.5	28.0	33.1	37.6	46.5	55.4	63.7	71.3
95°	0.6	3.2	9.6	17.8	27.4	31.8	36.9	45.9	54.1	62.4	70.1
97.5°	0.0	2.5	8.9	17.2	26.1	31.2	35.7	44.6	53.5	61.1	68.8
100°	0.6	2.5	8.3	16.6	25.5	29.9	34.4	43.3	52.2	59.9	67.5
102.5°	0.0	2.5	8.3	15.9	24.8	29.3	33.8	42.0	50.3	58.6	65.6
105°	0.6	1.9	7.6	15.3	23.6	28.0	32.5	40.8	49.0	56.7	64.3
107.5°	0.0	1.9	7.0	14.6	22.9	26.7	31.2	39.5	47.8	55.4	62.4
110°	0.6	1.9	7.0	14.0	21.7	26.1	29.9	38.2	45.9	53.5	60.5



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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.6	1.3	6.4	13.4	21.0	24.8	28.7	36.9	44.6	51.6	58.6
115°	0.6	1.3	5.7	12.7	19.7	23.6	27.4	35.0	42.7	49.7	56.0
117.5°	0.6	1.3	5.7	11.5	19.1	22.3	26.1	33.8	40.8	47.8	54.1
120°	0.6	1.3	5.1	10.8	17.8	21.0	24.8	31.8	38.9	45.9	51.6
122.5°	0.6	0.6	4.5	10.2	16.6	20.4	23.6	30.6	36.9	43.3	49.7
125°	0.6	0.6	3.8	9.6	15.9	19.1	22.3	28.7	35.0	41.4	47.1
127.5°	0.6	0.6	3.8	8.9	14.6	17.8	21.0	26.7	33.1	38.9	44.6
130°	0.6	0.6	3.2	7.6	13.4	16.6	19.1	25.5	31.2	36.9	42.0
132.5°	0.6	0.6	2.5	7.0	12.1	15.3	17.8	23.6	29.3	34.4	39.5
135°	0.6	0.6	2.5	6.4	11.5	14.0	16.6	21.7	26.7	31.8	36.9
137.5°	0.6	0.6	1.9	5.1	9.6	12.1	14.6	19.7	24.8	29.3	33.8
140°	0.6	0.6	1.3	4.5	8.3	10.8	13.4	17.8	22.9	27.4	31.2
142.5°	0.6	0.6	1.3	3.8	7.6	9.6	11.5	15.9	20.4	24.8	28.7
145°	0.6	0.6	1.3	3.2	6.4	7.6	9.6	13.4	17.8	21.7	25.5
147.5°	0.6	0.6	0.6	2.5	5.1	6.4	8.3	11.5	15.3	19.1	22.3
150°	0.6	0.6	0.6	1.9	4.5	5.7	7.0	9.6	12.7	15.9	19.1
152.5°	0.6	0.6	0.6	1.3	3.2	4.5	5.7	8.3	10.8	13.4	15.9
155°	0.6	0.6	0.6	1.3	2.5	3.2	4.5	6.4	8.9	10.8	13.4
157.5°	0.6	0.6	0.6	1.3	1.9	2.5	3.2	5.1	6.4	8.3	10.8
160°	0.6	0.6	0.6	0.6	1.3	1.9	2.5	3.2	5.1	6.4	7.6
162.5°	1.3	1.3	0.6	0.6	1.3	1.3	1.9	2.5	3.2	4.5	5.7
165°	1.3	1.3	1.3	0.6	0.6	0.6	1.3	1.9	2.5	3.2	3.8
167.5°	1.3	1.3	1.3	1.3	0.6	0.6	0.6	0.6	1.3	1.9	1.9
170°	1.3	1.3	1.3	1.3	0.6	0.6	0.6	0.6	0.6	0.6	1.3
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°	878.9	878.9	878.9	878.9	878.9	878.9	878.9	878.9	878.9	878.9
2.5°	880.2	880.2	880.2	880.2	880.2	880.2	880.2	880.2	879.6	879.6
5°	877.6	877.6	878.3	878.9	878.9	878.9	878.9	878.3	878.3	878.3
7.5°	875.1	876.4	877.0	877.0	877.0	877.0	877.6	877.6	877.0	877.0
10°	871.3	871.9	873.2	873.8	873.8	873.8	873.8	874.5	874.5	874.5
12.5°	866.2	866.8	867.5	868.7	868.7	869.4	870.0	869.4	870.6	870.0
15°	857.9	859.8	861.1	861.7	862.4	862.4	863.0	863.6	863.6	863.6
17.5°	849.0	850.3	852.2	853.4	853.4	854.7	854.1	855.4	856.0	855.4
20°	837.5	839.4	841.3	842.6	843.9	843.9	844.5	845.2	845.2	845.2
22.5°	825.4	827.3	829.2	831.2	831.8	832.4	833.7	834.3	834.3	835.0
25°	810.8	813.3	815.9	817.1	817.8	819.1	819.7	820.3	821.0	822.2
27.5°	795.5	798.0	800.6	802.5	802.5	804.4	805.7	806.3	806.3	806.3
30°	778.3	780.8	782.7	785.9	785.9	786.6	787.8	789.8	789.1	789.8
32.5°	759.2	762.4	764.9	766.2	768.1	769.4	769.4	771.3	772.6	771.3
35°	738.8	742.0	745.2	747.1	749.0	749.0	751.5	751.5	752.8	752.8
37.5°	717.8	720.3	723.5	725.4	727.3	729.2	730.5	730.5	731.2	731.8
40°	693.6	696.8	701.2	704.4	705.0	705.7	707.6	708.2	709.5	708.2
42.5°	669.4	673.2	677.0	680.2	680.2	682.1	683.4	684.7	685.3	684.7
45°	643.3	648.4	650.9	654.7	654.7	656.6	657.9	660.5	661.1	661.1
47.5°	615.9	620.3	624.8	628.6	628.6	630.5	631.2	633.1	633.7	635.6
50°	588.5	593.0	596.1	600.6	601.2	602.5	604.4	605.7	606.3	606.3
52.5°	559.2	563.0	566.8	570.0	572.6	572.6	575.8	576.4	577.0	579.6
55°	528.0	532.4	536.3	540.7	540.7	542.0	543.9	545.2	547.1	548.4
57.5°	494.9	499.3	505.1	507.0	509.5	510.8	513.3	514.0	514.6	515.9
60°	461.1	466.2	470.0	473.9	475.8	477.0	478.9	480.9	482.1	482.1
62.5°	427.4	430.5	436.3	440.7	442.0	444.6	445.8	447.1	448.4	449.0
65°	391.1	396.2	401.9	405.1	407.0	407.0	410.2	412.7	412.1	412.7
67.5°	354.8	360.5	364.3	368.8	370.7	372.6	375.8	376.4	378.3	379.0
70°	317.2	324.2	328.6	331.8	335.0	334.4	338.8	339.5	341.4	342.7
72.5°	280.9	286.0	292.3	295.5	297.4	298.7	301.3	303.2	303.2	304.4
75°	243.3	248.4	253.5	258.6	258.6	262.4	264.9	267.5	267.5	269.4
77.5°	205.7	213.4	218.5	221.6	224.2	226.1	228.0	231.2	230.6	231.2
80°	170.1	176.4	181.5	186.6	188.5	190.4	192.3	194.9	196.2	196.8
82.5°	137.6	143.9	149.7	154.1	156.0	158.6	161.8	163.7	164.3	166.2
85°	110.2	116.6	122.3	127.4	129.3	130.6	133.7	135.7	136.9	137.6
87.5°	91.1	97.4	103.2	107.6	109.5	111.5	114.6	116.6	118.5	118.5
90°	80.9	87.3	93.0	97.4	100.0	101.9	105.1	107.0	108.3	108.3
92.5°	78.3	84.1	89.8	94.3	96.8	98.7	101.3	103.2	105.1	105.1
95°	77.1	83.4	88.5	93.0	95.5	97.4	100.0	102.5	103.8	103.8
97.5°	75.8	82.2	87.3	91.7	94.3	96.2	98.7	100.6	101.9	102.5
100°	73.9	80.2	86.0	90.4	92.4	94.3	97.4	99.4	100.6	100.6
102.5°	72.6	78.3	84.1	88.5	90.4	92.4	94.9	97.4	98.1	98.7
105°	70.7	76.4	82.2	86.6	88.5	90.4	93.0	94.9	96.2	96.8
107.5°	68.8	74.5	79.6	84.1	86.0	87.9	91.1	93.0	94.3	94.3
110°	66.9	72.6	77.7	81.5	84.1	85.3	88.5	90.4	91.7	91.7



TEST NUMBER: P241574

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	64.3	70.1	75.2	79.0	80.9	82.8	85.3	87.3	88.5	89.2
115°	62.4	67.5	72.6	76.4	78.3	80.2	82.8	84.7	86.0	86.0
117.5°	59.9	65.0	69.4	73.9	75.8	77.1	79.6	81.5	82.8	83.4
120°	57.3	62.4	66.9	70.7	72.6	73.9	76.4	78.3	79.6	80.2
122.5°	54.8	59.9	64.3	68.1	69.4	70.7	73.2	75.2	76.4	77.1
125°	52.2	56.7	61.1	65.0	66.2	67.5	70.1	72.0	72.6	73.2
127.5°	49.7	54.1	58.0	61.8	63.1	64.3	66.9	68.1	69.4	70.1
130°	46.5	51.0	54.8	58.0	59.9	61.1	63.1	65.0	65.6	66.2
132.5°	43.9	47.8	51.6	54.8	56.0	57.3	59.9	61.1	62.4	62.4
135°	40.8	44.6	48.4	51.6	52.9	54.1	56.0	57.3	58.0	58.6
137.5°	38.2	42.0	45.2	47.8	49.0	50.3	52.2	53.5	54.1	54.8
140°	35.0	38.2	41.4	43.9	45.2	46.5	48.4	49.7	50.3	50.3
142.5°	31.8	35.0	38.2	40.8	42.0	42.7	44.6	45.2	45.9	46.5
145°	29.3	31.8	34.4	36.9	38.2	38.9	40.1	41.4	42.0	42.0
147.5°	26.1	28.7	31.2	33.1	34.4	35.0	36.3	37.6	38.2	38.2
150°	22.3	25.5	27.4	29.3	30.6	31.2	32.5	33.1	33.8	33.8
152.5°	19.1	21.7	24.2	26.1	26.7	27.4	28.7	29.3	29.9	29.9
155°	15.9	17.8	20.4	22.3	22.9	23.6	24.2	24.8	25.5	25.5
157.5°	12.7	14.6	16.6	18.5	19.1	19.7	20.4	21.0	21.0	21.7
160°	9.6	10.8	12.7	14.6	15.3	15.9	16.6	16.6	17.2	17.2
162.5°	7.0	8.3	9.6	10.8	10.8	12.1	12.7	13.4	13.4	13.4
165°	4.5	5.7	6.4	7.0	7.6	8.3	8.9	8.9	9.6	9.6
167.5°	2.5	3.2	3.8	4.5	4.5	5.1	5.1	5.7	5.7	5.7
170°	1.3	1.3	1.9	1.9	1.9	1.9	2.5	2.5	2.5	3.2
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)