

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: P241565

Luminaire Tested: **FVS8M-3-LD4-30-1STD-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241565
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-30-1STD-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

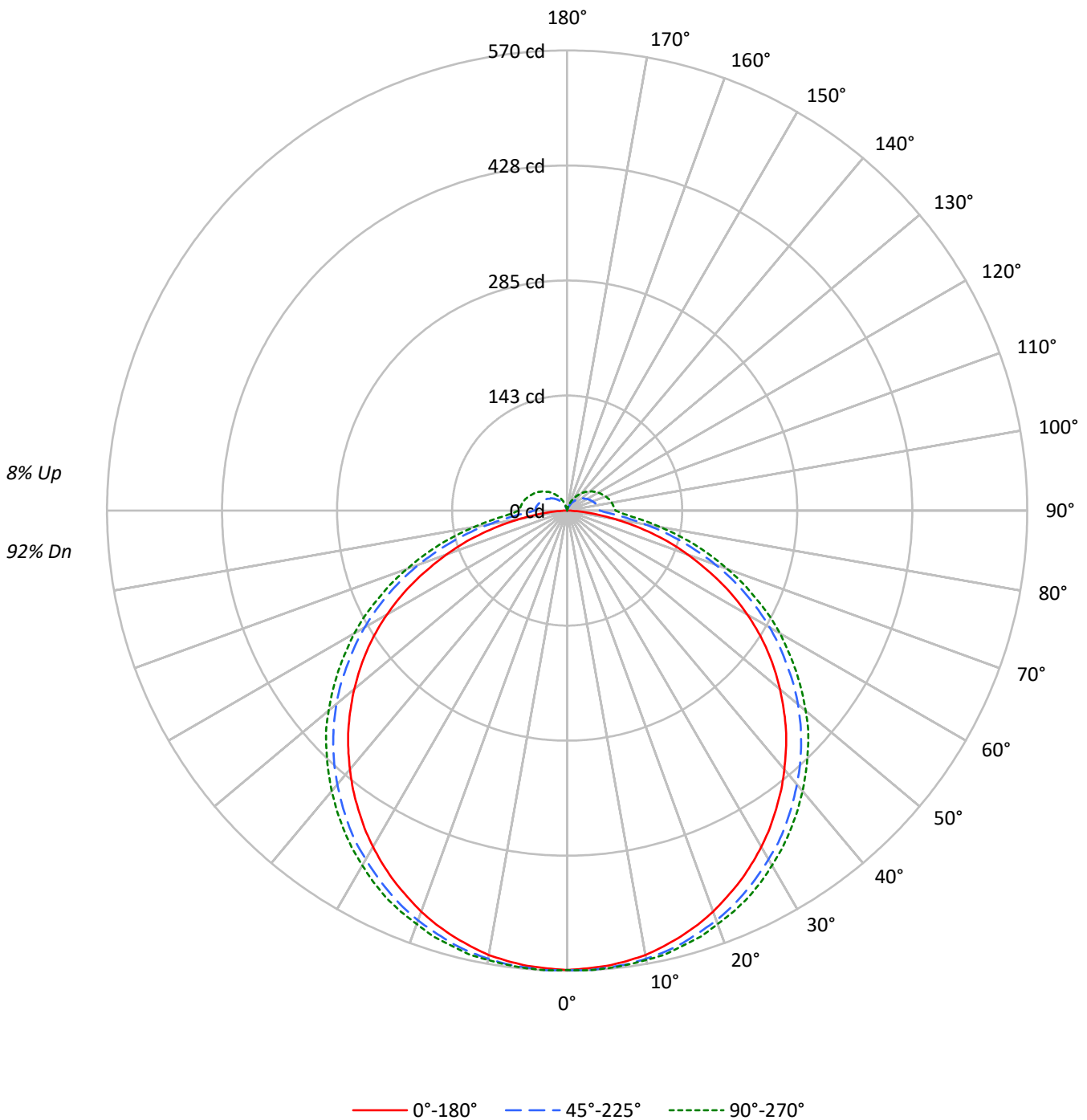
Lumens per Lamp: N/A
Luminaire Lumens: 1950.0 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.32 / 1.43
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

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	92
1	106	101	96	92	103	98	94	90	92	89	86	87	84	82	82	80	78	75
2	96	87	80	74	93	85	78	73	80	75	70	76	71	67	71	68	65	62
3	87	76	68	61	84	74	66	60	70	63	58	66	61	56	63	58	54	52
4	80	67	58	51	77	65	57	51	62	55	49	59	53	48	56	50	46	44
5	73	60	51	44	70	58	50	43	55	48	42	53	46	41	50	44	40	38
6	67	54	45	38	65	52	44	38	50	42	37	47	41	36	45	39	35	33
7	62	49	40	33	60	47	39	33	45	38	32	43	37	32	41	35	31	29
8	58	44	36	30	56	43	35	29	41	34	29	39	33	28	38	32	28	25
9	54	41	32	27	52	40	32	26	38	31	26	36	30	25	35	29	25	23
10	51	37	29	24	49	37	29	24	35	28	23	34	27	23	32	27	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3324	3324	3324
5°	3304	3276	3272
10°	3285	3231	3224
15°	3255	3185	3178
20°	3225	3134	3130
25°	3189	3080	3086
30°	3150	3022	3027
35°	3106	2967	2970
40°	3059	2898	2907
45°	3012	2831	2840
50°	2948	2749	2761
55°	2874	2640	2663
60°	2765	2527	2556
65°	2605	2371	2406
70°	2373	2167	2221
75°	2056	1903	2008
80°	1546	1568	1727
85°	825	1244	1461



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.0	2.8
10°-20°	156.2	8.0
20°-30°	239.7	12.3
30°-40°	294.4	15.1
40°-50°	313.7	16.1
50°-60°	294.0	15.1
60°-70°	236.5	12.1
70°-80°	150.1	7.7
80°-90°	64.6	3.3
90°-100°	37.9	1.9
100°-110°	33.6	1.7
110°-120°	27.7	1.4
120°-130°	21.0	1.1
130°-140°	14.2	0.7
140°-150°	8.2	0.4
150°-160°	3.5	0.2
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	449.8	23.1
0°-40°	744.2	38.2
0°-60°	1351.9	69.3
0°-90°	1803.1	92.5
90°-120°	99.2	5.1
90°-150°	142.6	7.3
90°-180°	147.0	7.5
0°-180°	1950.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	569	569	569	569	569	
5°	566	566	568	569	569	54
15°	546	548	554	557	558	154
25°	507	512	522	528	529	233
35°	451	461	473	481	482	282
45°	383	396	410	418	422	295
55°	303	316	332	344	346	270
65°	209	224	244	255	258	207
75°	108	126	146	158	164	115
85°	20	38	60	74	78	25
90°	1	20	41	55	60	1
95°	0	18	39	53	58	0
105°	0	16	36	49	54	0
115°	0	13	31	44	48	0
125°	0	10	26	37	41	0
135°	0	8	20	29	33	0
145°	1	5	14	21	23	1
155°	1	2	7	12	14	0
165°	1	1	2	4	6	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°	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2
2.5°	567.6	567.6	566.8	567.6	567.6	568.4	568.4	569.2	570.0	570.8	570.0
5°	566.1	565.3	565.3	566.1	566.1	566.1	566.8	567.6	568.4	568.4	568.4
7.5°	562.9	562.2	562.2	562.9	562.9	563.7	563.7	565.3	566.1	566.1	566.8
10°	559.0	558.3	558.3	558.3	559.0	559.8	559.8	561.4	562.9	563.7	563.7
12.5°	552.8	552.8	552.0	553.6	553.6	554.4	555.9	557.5	558.3	559.0	559.8
15°	545.8	545.8	545.8	546.5	547.3	548.1	549.7	551.2	552.8	553.6	554.4
17.5°	538.0	538.0	538.0	538.7	540.3	541.1	542.6	544.2	545.8	546.5	547.3
20°	528.6	527.8	528.6	530.1	531.7	532.5	533.3	536.4	538.0	539.5	540.3
22.5°	517.7	517.7	518.4	520.0	522.3	523.1	523.9	526.2	528.6	530.1	531.7
25°	506.7	506.7	507.5	509.1	511.4	512.2	513.8	516.9	518.4	520.0	521.6
27.5°	494.2	494.2	495.0	497.4	500.5	501.3	502.0	505.2	507.5	509.1	510.6
30°	481.0	481.0	482.5	484.9	487.2	488.8	490.3	493.5	495.8	497.4	498.9
32.5°	466.9	466.9	468.5	470.8	473.9	475.5	477.1	480.2	482.5	484.9	487.2
35°	451.3	452.1	454.4	456.0	459.1	461.4	463.0	466.1	468.5	470.8	473.2
37.5°	435.7	435.7	437.2	440.4	444.3	445.0	448.2	451.3	453.6	456.8	458.3
40°	418.5	419.3	420.8	424.7	428.6	429.4	431.8	435.7	438.0	441.1	442.7
42.5°	401.3	402.1	404.4	408.3	410.7	413.0	415.4	418.5	420.8	424.7	427.1
45°	383.4	382.6	386.5	390.4	392.7	395.9	397.4	401.3	405.2	407.6	409.9
47.5°	363.8	365.4	368.5	370.9	374.8	377.1	378.7	382.6	385.7	388.8	392.0
50°	344.3	345.1	349.0	352.1	355.3	356.8	359.9	363.8	367.0	369.3	373.2
52.5°	324.0	325.6	327.9	330.3	335.0	337.3	339.6	342.8	347.4	350.6	353.7
55°	302.9	303.7	306.1	310.0	314.7	316.2	317.8	322.5	326.4	328.7	331.8
57.5°	281.1	281.9	285.0	288.1	291.2	295.1	296.7	299.8	304.5	308.4	311.5
60°	257.7	258.4	261.6	264.7	268.6	271.7	274.1	278.7	281.9	285.8	289.7
62.5°	234.2	234.2	238.1	240.5	245.9	249.1	249.8	254.5	259.2	262.3	267.0
65°	209.2	210.8	213.2	217.8	222.5	224.1	226.4	231.1	235.0	239.7	243.6
67.5°	183.5	185.0	188.9	192.1	197.5	200.7	202.2	206.1	212.4	216.3	220.2
70°	158.5	162.4	164.0	167.9	172.6	175.7	178.0	182.7	186.6	191.3	195.2
72.5°	135.1	135.9	138.2	143.7	148.3	150.7	153.8	156.9	162.4	167.1	170.2
75°	108.5	110.1	113.2	118.7	123.4	126.5	128.0	133.5	137.4	141.3	146.0
77.5°	82.8	85.1	89.8	93.7	99.2	101.5	104.6	109.3	114.0	117.9	121.8
80°	59.3	61.7	65.6	70.3	75.7	78.1	81.2	86.7	90.6	95.3	98.4
82.5°	38.3	39.8	44.5	49.2	53.9	57.0	59.3	64.8	69.5	73.4	77.3
85°	19.5	21.9	25.8	30.5	35.1	38.3	40.6	46.1	51.5	56.2	60.1
87.5°	7.0	8.6	12.5	18.0	22.6	25.0	28.1	32.8	38.3	42.9	46.8
90°	0.8	2.3	6.2	10.9	16.4	19.5	21.9	27.3	32.0	36.7	40.6
92.5°	0.0	1.6	5.5	10.2	15.6	18.0	21.1	25.8	30.5	35.1	39.0
95°	0.0	1.6	5.5	10.2	14.8	18.0	20.3	25.0	30.5	34.4	39.0
97.5°	0.0	1.6	4.7	9.4	14.8	17.2	19.5	25.0	29.7	34.4	38.3
100°	0.0	1.6	4.7	9.4	14.1	16.4	19.5	24.2	28.9	33.6	37.5
102.5°	0.0	1.6	4.7	8.6	14.1	16.4	18.7	23.4	28.1	32.8	36.7
105°	0.0	1.6	4.7	8.6	13.3	15.6	18.0	22.6	27.3	31.2	35.9
107.5°	0.0	0.8	3.9	7.8	12.5	14.8	17.2	21.9	26.5	30.5	34.4
110°	0.0	0.8	3.9	7.8	12.5	14.8	16.4	21.1	25.8	29.7	33.6



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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	3.9	7.0	11.7	14.1	16.4	20.3	25.0	28.9	32.0
115°	0.0	0.8	3.1	7.0	10.9	13.3	15.6	19.5	23.4	27.3	31.2
117.5°	0.0	0.8	3.1	6.2	10.2	12.5	14.8	18.7	22.6	26.5	29.7
120°	0.0	0.8	3.1	6.2	10.2	11.7	14.1	18.0	21.9	25.0	28.9
122.5°	0.0	0.8	2.3	5.5	9.4	10.9	13.3	17.2	20.3	24.2	27.3
125°	0.0	0.8	2.3	5.5	8.6	10.2	12.5	15.6	19.5	22.6	25.8
127.5°	0.0	0.8	2.3	4.7	7.8	10.2	11.7	14.8	18.7	21.9	25.0
130°	0.0	0.0	1.6	4.7	7.8	9.4	10.9	14.1	17.2	20.3	23.4
132.5°	0.0	0.0	1.6	3.9	7.0	8.6	10.2	13.3	16.4	18.7	21.9
135°	0.0	0.8	1.6	3.1	6.2	7.8	9.4	11.7	14.8	18.0	20.3
137.5°	0.0	0.8	0.8	3.1	5.5	7.0	8.6	10.9	14.1	16.4	18.7
140°	0.8	0.8	0.8	2.3	4.7	6.2	7.0	10.2	12.5	14.8	17.2
142.5°	0.8	0.8	0.8	2.3	3.9	5.5	6.2	8.6	10.9	13.3	15.6
145°	0.8	0.8	0.8	1.6	3.1	4.7	5.5	7.8	10.2	11.7	14.1
147.5°	0.8	0.8	0.8	1.6	3.1	3.9	4.7	6.2	8.6	10.2	12.5
150°	0.8	0.8	0.8	0.8	2.3	3.1	3.9	5.5	7.0	8.6	10.9
152.5°	0.8	0.8	0.8	0.8	1.6	2.3	3.1	4.7	6.2	7.8	8.6
155°	0.8	0.8	0.8	0.8	1.6	1.6	2.3	3.9	4.7	6.2	7.0
157.5°	0.8	0.8	0.8	0.8	0.8	1.6	1.6	3.1	3.9	4.7	5.5
160°	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6	3.1	3.9	4.7
162.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6	2.3	3.1
165°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6	2.3
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°	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2	569.2
2.5°	570.0	570.0	570.8	570.8	570.0	570.8	570.8	570.0	570.0	570.0
5°	568.4	568.4	569.2	569.2	569.2	569.2	569.2	569.2	568.4	569.2
7.5°	566.8	566.8	566.8	567.6	567.6	567.6	567.6	567.6	567.6	567.6
10°	563.7	564.5	564.5	565.3	565.3	565.3	566.1	565.3	565.3	565.3
12.5°	559.8	560.6	561.4	562.2	561.4	562.2	562.2	562.2	562.2	562.9
15°	555.1	555.9	555.9	556.7	556.7	557.5	557.5	557.5	557.5	557.5
17.5°	548.9	549.7	550.4	551.2	552.0	551.2	552.0	552.0	552.8	552.8
20°	541.1	542.6	543.4	544.2	545.0	544.2	545.0	545.0	545.8	545.0
22.5°	532.5	534.1	534.8	536.4	536.4	537.2	537.2	538.0	537.2	538.0
25°	523.1	524.7	525.5	527.0	527.8	527.8	528.6	528.6	528.6	529.4
27.5°	512.2	513.8	514.5	516.1	516.1	516.9	517.7	517.7	518.4	519.2
30°	501.3	502.0	504.4	505.2	505.9	505.9	506.7	507.5	507.5	507.5
32.5°	488.8	489.5	491.9	492.7	493.5	494.2	495.0	495.0	495.0	495.8
35°	474.7	477.1	477.8	480.2	481.0	481.7	481.7	482.5	481.7	482.5
37.5°	460.7	463.0	463.8	465.3	466.1	466.9	467.7	467.7	468.5	468.5
40°	445.0	447.4	448.9	450.5	451.3	452.1	452.1	452.9	454.4	453.6
42.5°	429.4	430.2	433.3	434.9	434.9	436.5	437.2	437.2	438.0	438.0
45°	412.3	414.6	416.2	417.7	418.5	419.3	420.1	420.8	420.8	421.6
47.5°	394.3	397.4	399.0	401.3	401.3	402.1	403.7	403.7	403.7	405.2
50°	375.6	377.9	381.0	381.8	382.6	383.4	384.1	384.9	385.7	385.7
52.5°	356.0	359.2	360.7	363.1	363.8	363.8	365.4	366.2	366.2	366.2
55°	335.7	338.9	340.4	342.0	343.5	344.3	344.3	345.9	346.7	345.9
57.5°	313.9	316.2	318.6	321.7	322.5	323.2	323.2	324.0	326.4	324.8
60°	291.2	294.4	296.7	299.8	300.6	300.6	301.4	302.9	303.7	304.5
62.5°	269.4	273.3	274.8	277.2	277.2	279.5	280.3	281.1	281.9	282.6
65°	245.9	249.1	251.4	253.8	255.3	255.3	257.7	259.2	259.2	258.4
67.5°	222.5	225.6	228.8	230.3	231.9	231.9	233.5	235.0	235.0	235.8
70°	199.1	201.4	204.6	206.9	208.5	208.5	210.0	211.6	211.6	210.8
72.5°	174.1	176.5	180.4	181.9	183.5	184.3	185.8	186.6	187.4	187.4
75°	149.9	153.0	155.4	157.7	158.5	160.1	161.6	162.4	163.2	164.0
77.5°	124.9	129.6	132.0	135.1	135.1	136.6	139.8	139.0	139.8	139.8
80°	102.3	106.2	108.5	111.7	112.4	113.2	114.8	116.3	117.1	117.1
82.5°	82.0	85.1	88.2	89.8	92.1	92.1	93.7	95.3	96.0	96.8
85°	64.0	67.1	70.3	73.4	74.2	75.0	77.3	78.1	78.1	78.1
87.5°	51.5	54.7	57.8	60.1	61.7	62.5	64.0	64.8	66.4	66.4
90°	44.5	48.4	51.5	53.9	55.4	56.2	57.8	59.3	59.3	60.1
92.5°	43.7	46.8	50.0	52.3	53.1	54.7	56.2	57.0	57.8	58.6
95°	42.9	46.1	49.2	51.5	53.1	53.9	55.4	57.0	57.0	57.8
97.5°	42.2	45.3	48.4	50.8	52.3	53.1	54.7	56.2	57.0	57.0
100°	41.4	44.5	47.6	50.0	51.5	52.3	53.9	54.7	55.4	56.2
102.5°	40.6	43.7	46.8	49.2	50.0	50.8	53.1	53.9	54.7	54.7
105°	39.0	42.2	45.3	47.6	49.2	50.0	51.5	53.1	53.1	53.9
107.5°	38.3	41.4	44.5	46.8	47.6	48.4	50.0	51.5	52.3	52.3
110°	36.7	39.8	42.9	45.3	46.8	47.6	49.2	50.0	50.8	50.8



TEST NUMBER: P241565

CATALOG NUMBER: FVS8M-3-LD4-30-1STD-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	35.9	39.0	41.4	43.7	45.3	46.1	47.6	48.4	49.2	49.2
115°	34.4	37.5	39.8	42.2	43.7	44.5	46.1	46.8	47.6	47.6
117.5°	32.8	35.9	39.0	40.6	42.2	42.9	44.5	45.3	46.1	46.1
120°	32.0	34.4	37.5	39.0	40.6	41.4	42.2	43.7	44.5	44.5
122.5°	30.5	33.6	35.9	37.5	38.3	39.0	40.6	41.4	42.2	42.9
125°	28.9	32.0	33.6	35.9	36.7	37.5	39.0	39.8	40.6	40.6
127.5°	27.3	29.7	32.0	34.4	35.1	35.9	37.5	38.3	38.3	39.0
130°	25.8	28.1	30.5	32.0	32.8	33.6	35.1	35.9	36.7	36.7
132.5°	24.2	26.5	28.9	30.5	31.2	32.0	32.8	33.6	34.4	34.4
135°	22.6	25.0	26.5	28.1	28.9	29.7	31.2	32.0	32.0	32.8
137.5°	21.1	23.4	25.0	26.5	27.3	28.1	28.9	29.7	30.5	30.5
140°	19.5	21.1	23.4	24.2	25.0	25.8	26.5	27.3	28.1	28.1
142.5°	18.0	19.5	21.1	22.6	23.4	23.4	24.2	25.0	25.8	25.8
145°	16.4	18.0	19.5	20.3	21.1	21.9	22.6	23.4	23.4	23.4
147.5°	14.1	15.6	17.2	18.7	18.7	19.5	20.3	21.1	21.1	21.1
150°	12.5	14.1	15.6	16.4	17.2	17.2	18.0	18.7	18.7	18.7
152.5°	10.2	11.7	13.3	14.1	14.8	14.8	15.6	16.4	16.4	16.4
155°	8.6	10.2	10.9	12.5	12.5	13.3	13.3	14.1	14.1	14.1
157.5°	7.0	7.8	9.4	10.2	10.9	10.9	10.9	11.7	11.7	11.7
160°	5.5	6.2	7.0	7.8	8.6	8.6	9.4	9.4	9.4	9.4
162.5°	3.9	4.7	5.5	5.5	6.2	6.2	7.0	7.0	7.0	7.0
165°	2.3	3.1	3.1	3.9	3.9	4.7	4.7	4.7	5.5	5.5
167.5°	1.6	1.6	2.3	2.3	2.3	2.3	3.1	3.1	3.1	3.1
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)