

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: P241605

Luminaire Tested: **FVS8M-4-LD4-30-1HI-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241605
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-34)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-4-LD4-30-1HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
4FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

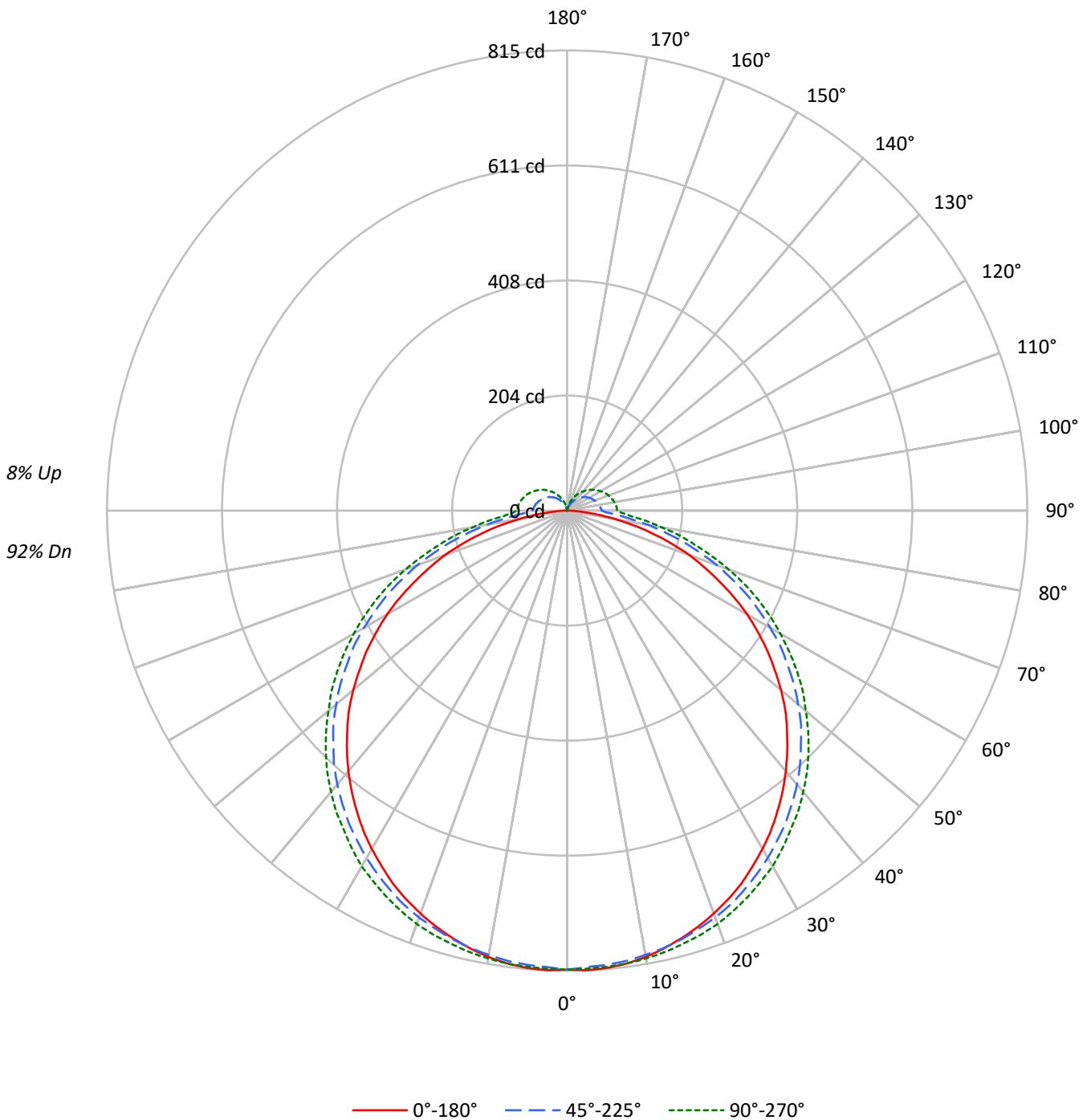
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2814.0 lumens
Efficiency: N/A
Efficacy: 63.7 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.32 / 1.43
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 3.73' x H: 0.15')
CIE Type: Direct

Input Watts (W): 44.2
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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CATALOG NUMBER: FVS8M-4-LD4-30-1HI-O-UNV-EDC1

Luminous Intensity Polar Plot





TEST NUMBER: P241605

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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	107	107	107	100	100	100	95	95	95	92
1	106	101	96	92	102	98	94	90	92	89	85	87	84	81	82	80	78	75
2	96	87	80	74	92	85	78	72	80	74	70	75	71	67	71	67	64	61
3	87	76	68	61	84	74	66	60	70	63	58	66	60	56	62	58	54	51
4	79	67	58	51	77	65	57	50	62	55	49	58	52	47	55	50	46	43
5	73	60	51	44	70	58	50	43	55	48	42	52	46	41	50	44	40	37
6	67	54	45	38	65	52	44	37	50	42	37	47	41	36	45	39	35	32
7	62	48	40	33	60	47	39	33	45	38	32	43	36	31	41	35	31	28
8	58	44	36	30	56	43	35	29	41	34	29	39	33	28	37	32	27	25
9	54	40	32	27	52	39	32	26	38	31	26	36	30	25	35	29	25	23
10	51	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3634	3634	3634
5°	3635	3564	3568
10°	3618	3510	3516
15°	3589	3462	3465
20°	3561	3415	3425
25°	3532	3363	3372
30°	3491	3309	3321
35°	3449	3255	3250
40°	3403	3194	3190
45°	3350	3117	3116
50°	3284	3035	3023
55°	3198	2929	2929
60°	3084	2803	2802
65°	2907	2645	2658
70°	2717	2433	2456
75°	2351	2149	2193
80°	1782	1806	1909
85°	967	1427	1628



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.1	2.7
10°-20°	222.7	7.9
20°-30°	342.4	12.2
30°-40°	421.1	15.0
40°-50°	449.4	16.0
50°-60°	421.9	15.0
60°-70°	340.1	12.1
70°-80°	216.7	7.7
80°-90°	93.9	3.3
90°-100°	57.3	2.0
100°-110°	51.7	1.8
110°-120°	43.2	1.5
120°-130°	33.2	1.2
130°-140°	22.8	0.8
140°-150°	13.2	0.5
150°-160°	5.8	0.2
160°-170°	1.5	0.1
170°-180°	0.0	0.0
0°-30°	642.1	22.8
0°-40°	1063.3	37.8
0°-60°	1934.6	68.7
0°-90°	2585.3	91.9
90°-120°	152.1	5.4
90°-150°	221.3	7.9
90°-180°	229.0	8.1
0°-180°	2814.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	813	813	813	813	813	
5°	813	811	807	811	811	77
15°	784	785	786	793	794	221
25°	729	733	742	753	756	336
35°	650	660	675	687	690	407
45°	551	567	586	600	604	425
55°	433	453	476	492	497	387
65°	298	323	351	368	373	295
75°	156	181	212	230	234	165
85°	27	56	87	107	114	35
90°	0	28	61	82	88	1
95°	0	27	59	80	87	0
105°	0	24	54	75	82	0
115°	0	22	49	67	73	0
125°	0	18	41	57	63	0
135°	1	13	33	46	51	0
145°	1	8	23	34	38	1
155°	1	4	12	21	24	0
165°	1	1	5	8	10	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241605

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	813.0	813.0	813.0	813.0	813.0	813.0	813.0	813.0	813.0	813.0	813.0
2.5°	814.9	813.9	813.9	813.9	813.9	813.9	813.9	813.9	812.1	811.1	809.2
5°	813.0	812.1	811.1	811.1	811.1	811.1	811.1	811.1	810.2	808.3	807.4
7.5°	809.2	808.3	807.4	807.4	807.4	807.4	808.3	807.4	806.4	804.5	804.5
10°	802.7	801.7	800.8	800.8	801.7	801.7	801.7	801.7	800.8	799.8	798.9
12.5°	794.2	794.2	793.3	793.3	793.3	794.2	794.2	795.1	794.2	793.3	793.3
15°	783.9	783.9	782.9	782.9	783.9	784.8	784.8	786.7	785.7	785.7	785.7
17.5°	772.6	771.6	771.6	771.6	773.5	774.5	774.5	775.4	776.3	776.3	776.3
20°	759.4	759.4	758.5	760.4	761.3	762.2	763.2	764.1	765.1	765.1	766.9
22.5°	745.3	744.4	744.4	745.3	747.2	748.2	750.0	751.9	751.9	752.8	755.7
25°	729.4	728.4	727.5	729.4	731.2	733.1	735.0	736.9	737.8	739.7	741.6
27.5°	710.6	710.6	711.5	712.4	715.3	717.1	719.0	720.9	722.8	724.7	726.5
30°	691.8	691.8	691.8	693.6	697.4	700.2	701.2	704.0	704.9	707.7	710.6
32.5°	672.0	670.1	672.0	674.8	678.6	680.5	682.4	685.2	687.1	689.9	692.7
35°	649.5	649.5	650.4	653.2	657.9	659.8	661.7	666.4	668.3	671.1	674.8
37.5°	626.9	626.0	627.8	631.6	636.3	638.2	641.0	643.8	646.6	650.4	654.2
40°	602.5	602.5	604.3	609.0	612.8	615.6	617.5	622.2	625.0	628.8	633.5
42.5°	577.1	578.0	579.9	583.7	589.3	592.1	594.9	598.7	602.5	606.2	610.9
45°	550.8	549.8	553.6	558.3	563.9	566.8	569.6	574.3	578.0	582.7	585.5
47.5°	524.5	521.6	526.3	530.1	536.7	541.4	542.3	548.0	552.7	557.4	562.1
50°	494.4	494.4	499.1	502.8	510.4	512.2	515.1	520.7	525.4	531.0	533.9
52.5°	463.4	463.4	468.1	474.6	481.2	484.0	486.9	493.4	498.1	501.9	506.6
55°	433.3	434.2	438.0	443.6	451.1	453.0	457.7	462.4	468.1	472.8	476.5
57.5°	400.4	402.3	406.0	411.7	420.1	422.0	426.7	433.3	437.0	442.7	448.3
60°	368.4	369.4	374.1	382.5	388.2	390.1	393.8	400.4	406.0	409.8	415.4
62.5°	333.7	336.5	340.2	347.8	353.4	358.1	360.0	366.6	373.1	377.8	382.5
65°	297.9	301.7	305.5	312.0	319.6	323.3	327.1	332.7	340.2	344.9	350.6
67.5°	263.2	266.0	270.7	278.2	283.8	288.5	290.4	298.9	303.6	310.2	314.9
70°	230.3	232.2	235.9	242.5	249.1	252.8	257.5	263.2	270.7	277.3	282.0
72.5°	192.7	193.6	198.3	204.9	213.4	217.1	219.9	229.3	235.0	241.6	245.3
75°	156.0	157.9	162.6	169.2	177.6	181.4	185.2	193.6	200.2	205.8	211.5
77.5°	121.2	121.2	126.9	135.3	142.9	146.6	149.4	158.8	164.5	171.1	176.7
80°	84.6	87.4	94.0	100.6	109.0	113.7	117.5	123.1	130.6	138.2	144.7
82.5°	54.5	56.4	62.0	70.5	78.0	81.8	86.5	93.0	100.6	108.1	113.7
85°	27.3	31.0	35.7	43.2	51.7	55.5	59.2	66.7	74.3	80.8	87.4
87.5°	8.5	11.3	16.9	24.4	32.9	36.7	40.4	47.9	55.5	62.0	68.6
90°	0.0	2.8	9.4	16.0	24.4	28.2	32.0	40.4	47.9	54.5	61.1
92.5°	0.0	2.8	8.5	16.0	23.5	28.2	32.0	39.5	47.0	53.6	60.2
95°	0.0	2.8	8.5	15.0	23.5	27.3	31.0	38.5	46.1	52.6	59.2
97.5°	0.0	2.8	7.5	15.0	22.6	26.3	30.1	38.5	45.1	51.7	58.3
100°	0.0	1.9	7.5	15.0	22.6	26.3	30.1	37.6	44.2	50.8	57.3
102.5°	0.0	1.9	7.5	14.1	21.6	25.4	29.1	36.7	43.2	49.8	56.4
105°	0.0	1.9	7.5	14.1	20.7	24.4	28.2	35.7	42.3	48.9	54.5
107.5°	0.0	1.9	6.6	13.2	20.7	23.5	27.3	34.8	41.4	47.0	53.6
110°	0.0	1.9	6.6	13.2	19.7	23.5	26.3	32.9	39.5	46.1	51.7



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CATALOG NUMBER: FVS8M-4-LD4-30-1HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.9	6.6	12.2	18.8	22.6	25.4	32.0	38.5	44.2	49.8
115°	0.0	1.9	5.6	11.3	17.9	21.6	24.4	31.0	37.6	43.2	48.9
117.5°	0.0	0.9	5.6	11.3	16.9	20.7	23.5	30.1	35.7	41.4	47.0
120°	0.0	0.9	5.6	10.3	16.9	19.7	22.6	28.2	34.8	40.4	45.1
122.5°	0.0	0.9	4.7	10.3	15.0	18.8	21.6	27.3	32.9	38.5	43.2
125°	0.0	0.9	4.7	9.4	15.0	17.9	20.7	26.3	31.0	36.7	41.4
127.5°	0.0	0.9	4.7	8.5	14.1	16.9	18.8	24.4	30.1	34.8	39.5
130°	0.0	0.9	3.8	8.5	13.2	15.0	17.9	23.5	28.2	32.9	36.7
132.5°	0.0	0.9	2.8	7.5	12.2	14.1	16.9	21.6	26.3	31.0	34.8
135°	0.9	0.9	2.8	6.6	10.3	13.2	15.0	19.7	24.4	29.1	32.9
137.5°	0.9	0.9	2.8	5.6	9.4	11.3	14.1	17.9	22.6	26.3	30.1
140°	0.9	0.9	1.9	4.7	8.5	10.3	12.2	16.0	19.7	23.5	28.2
142.5°	0.9	0.9	1.9	4.7	7.5	9.4	11.3	14.1	17.9	21.6	25.4
145°	0.9	0.9	1.9	3.8	6.6	8.5	9.4	13.2	16.0	18.8	22.6
147.5°	0.9	0.9	0.9	2.8	5.6	6.6	8.5	11.3	14.1	16.9	19.7
150°	0.9	0.9	0.9	2.8	4.7	5.6	7.5	9.4	12.2	15.0	16.9
152.5°	0.9	0.9	0.9	1.9	3.8	4.7	5.6	8.5	10.3	12.2	15.0
155°	0.9	0.9	0.9	1.9	3.8	3.8	4.7	6.6	8.5	10.3	12.2
157.5°	0.9	0.9	0.9	1.9	2.8	3.8	3.8	5.6	7.5	8.5	10.3
160°	0.9	0.9	0.9	0.9	1.9	2.8	2.8	4.7	5.6	6.6	8.5
162.5°	0.9	0.9	0.9	0.9	1.9	1.9	1.9	3.8	4.7	5.6	6.6
165°	0.9	0.9	0.9	0.9	0.9	0.9	1.9	1.9	2.8	3.8	4.7
167.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.9	1.9	2.8	2.8
170°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.9	1.9
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°	813.0	813.0	813.0	813.0	813.0	813.0	813.0	813.0	813.0	813.0
2.5°	809.2	811.1	812.1	813.0	813.0	813.0	813.0	813.0	813.0	812.1
5°	807.4	809.2	810.2	811.1	811.1	811.1	811.1	811.1	811.1	811.1
7.5°	804.5	806.4	807.4	808.3	808.3	809.2	809.2	809.2	809.2	809.2
10°	799.8	801.7	803.6	804.5	804.5	805.5	805.5	805.5	805.5	805.5
12.5°	795.1	797.0	798.0	799.8	799.8	799.8	800.8	800.8	800.8	800.8
15°	787.6	790.4	791.4	793.3	793.3	793.3	794.2	794.2	795.1	794.2
17.5°	779.2	781.0	783.9	783.9	785.7	785.7	785.7	786.7	786.7	787.6
20°	768.8	771.6	773.5	775.4	775.4	777.3	777.3	778.2	778.2	779.2
22.5°	757.5	760.4	763.2	765.1	765.1	766.0	766.9	767.9	767.9	767.9
25°	744.4	747.2	750.0	751.9	752.8	753.8	754.7	754.7	755.7	755.7
27.5°	729.4	733.1	735.9	737.8	738.8	738.8	740.6	741.6	741.6	741.6
30°	714.3	717.1	720.0	722.8	722.8	723.7	725.6	726.5	725.6	727.5
32.5°	697.4	700.2	703.0	704.9	705.9	706.8	707.7	709.6	709.6	709.6
35°	677.7	681.4	684.2	687.1	687.1	688.0	689.9	690.8	690.8	689.9
37.5°	657.9	661.7	664.5	667.3	668.3	668.3	670.1	670.1	671.1	672.0
40°	637.2	641.0	643.8	644.8	646.6	647.6	649.5	650.4	649.5	650.4
42.5°	615.6	617.5	620.3	624.1	624.1	626.0	626.9	627.8	628.8	628.8
45°	590.2	593.1	596.8	599.6	599.6	601.5	602.5	603.4	605.3	604.3
47.5°	565.8	568.6	571.5	574.3	574.3	576.2	579.0	579.0	579.0	579.0
50°	538.6	542.3	544.2	548.0	548.9	549.8	550.8	552.7	552.7	551.7
52.5°	510.4	515.1	518.8	520.7	521.6	522.6	523.5	525.4	525.4	526.3
55°	481.2	485.9	488.7	492.5	492.5	493.4	496.3	497.2	496.3	497.2
57.5°	451.1	454.9	458.7	461.5	463.4	463.4	465.2	467.1	467.1	467.1
60°	420.1	422.9	427.6	430.5	433.3	432.3	436.1	436.1	436.1	436.1
62.5°	386.3	391.9	394.8	399.5	400.4	401.3	403.2	404.2	404.2	405.1
65°	354.3	359.0	362.8	365.6	367.5	367.5	370.3	371.3	372.2	373.1
67.5°	320.5	325.2	329.0	333.7	334.6	334.6	335.5	339.3	338.4	339.3
70°	285.7	290.4	294.2	297.9	298.9	299.8	301.7	304.5	304.5	304.5
72.5°	250.9	256.6	260.3	263.2	263.2	265.0	268.8	267.9	270.7	268.8
75°	217.1	220.9	226.5	228.4	230.3	232.2	234.0	235.0	235.9	234.0
77.5°	183.3	188.0	191.7	194.6	196.4	198.3	200.2	202.1	201.1	204.0
80°	150.4	153.2	157.0	161.7	163.5	165.4	168.2	169.2	168.2	169.2
82.5°	119.4	124.1	127.8	132.5	133.5	135.3	137.2	140.0	140.0	141.0
85°	93.0	97.7	103.4	106.2	107.1	109.0	111.8	112.8	114.7	113.7
87.5°	74.3	79.9	84.6	87.4	89.3	91.2	93.0	94.9	95.9	96.8
90°	66.7	71.4	76.1	79.9	81.8	82.7	85.5	87.4	88.3	88.3
92.5°	65.8	70.5	75.2	79.0	80.8	82.7	84.6	86.5	87.4	88.3
95°	64.9	69.6	74.3	78.0	79.9	81.8	83.6	85.5	86.5	87.4
97.5°	63.9	69.6	73.3	77.1	79.0	80.8	82.7	84.6	85.5	86.5
100°	63.0	67.7	72.4	76.1	78.0	79.0	81.8	83.6	84.6	84.6
102.5°	62.0	66.7	71.4	75.2	76.1	78.0	79.9	81.8	82.7	83.6
105°	60.2	64.9	69.6	73.3	75.2	76.1	79.0	80.8	81.8	81.8
107.5°	59.2	63.9	67.7	71.4	73.3	75.2	77.1	79.0	79.9	79.9
110°	57.3	62.0	65.8	69.6	71.4	72.4	75.2	77.1	78.0	78.0



TEST NUMBER: P241605

CATALOG NUMBER: FVS8M-4-LD4-30-1HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	55.5	60.2	63.9	67.7	69.6	70.5	73.3	74.3	75.2	76.1
115°	53.6	58.3	62.0	65.8	66.7	68.6	70.5	72.4	73.3	73.3
117.5°	51.7	56.4	60.2	63.0	64.9	65.8	68.6	69.6	70.5	71.4
120°	49.8	54.5	58.3	61.1	63.0	63.9	65.8	67.7	68.6	68.6
122.5°	47.9	51.7	55.5	58.3	60.2	61.1	63.0	64.9	65.8	65.8
125°	46.1	49.8	52.6	56.4	57.3	58.3	61.1	62.0	63.0	63.0
127.5°	43.2	47.0	50.8	53.6	54.5	56.4	57.3	59.2	60.2	60.2
130°	41.4	45.1	47.9	50.8	51.7	53.6	54.5	56.4	57.3	57.3
132.5°	38.5	42.3	45.1	47.9	48.9	49.8	51.7	53.6	53.6	54.5
135°	36.7	39.5	42.3	45.1	46.1	47.0	48.9	49.8	50.8	50.8
137.5°	33.8	36.7	39.5	42.3	43.2	44.2	46.1	47.0	47.9	47.9
140°	31.0	34.8	36.7	39.5	40.4	41.4	42.3	43.2	44.2	44.2
142.5°	29.1	32.0	33.8	35.7	36.7	37.6	39.5	40.4	40.4	41.4
145°	25.4	29.1	31.0	32.9	33.8	34.8	35.7	36.7	37.6	37.6
147.5°	22.6	25.4	28.2	30.1	31.0	31.0	32.9	32.9	33.8	33.8
150°	19.7	22.6	25.4	27.3	27.3	28.2	29.1	30.1	30.1	30.1
152.5°	16.9	18.8	21.6	23.5	24.4	24.4	25.4	26.3	27.3	27.3
155°	14.1	16.0	17.9	19.7	20.7	21.6	22.6	23.5	23.5	23.5
157.5°	12.2	13.2	15.0	16.9	17.9	18.8	18.8	19.7	19.7	19.7
160°	9.4	10.3	12.2	13.2	14.1	15.0	16.0	16.0	16.9	16.9
162.5°	7.5	8.5	9.4	10.3	11.3	11.3	12.2	13.2	13.2	13.2
165°	5.6	5.6	6.6	7.5	7.5	8.5	9.4	10.3	10.3	10.3
167.5°	3.8	3.8	4.7	4.7	5.6	5.6	5.6	6.6	6.6	6.6
170°	1.9	1.9	2.8	2.8	2.8	2.8	3.8	3.8	3.8	3.8
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)