

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: P232087

Luminaire Tested: **FVS4M-3-LD4-50-2HI-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232087
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-30)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-3-LD4-50-2HI-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
3FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (168) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

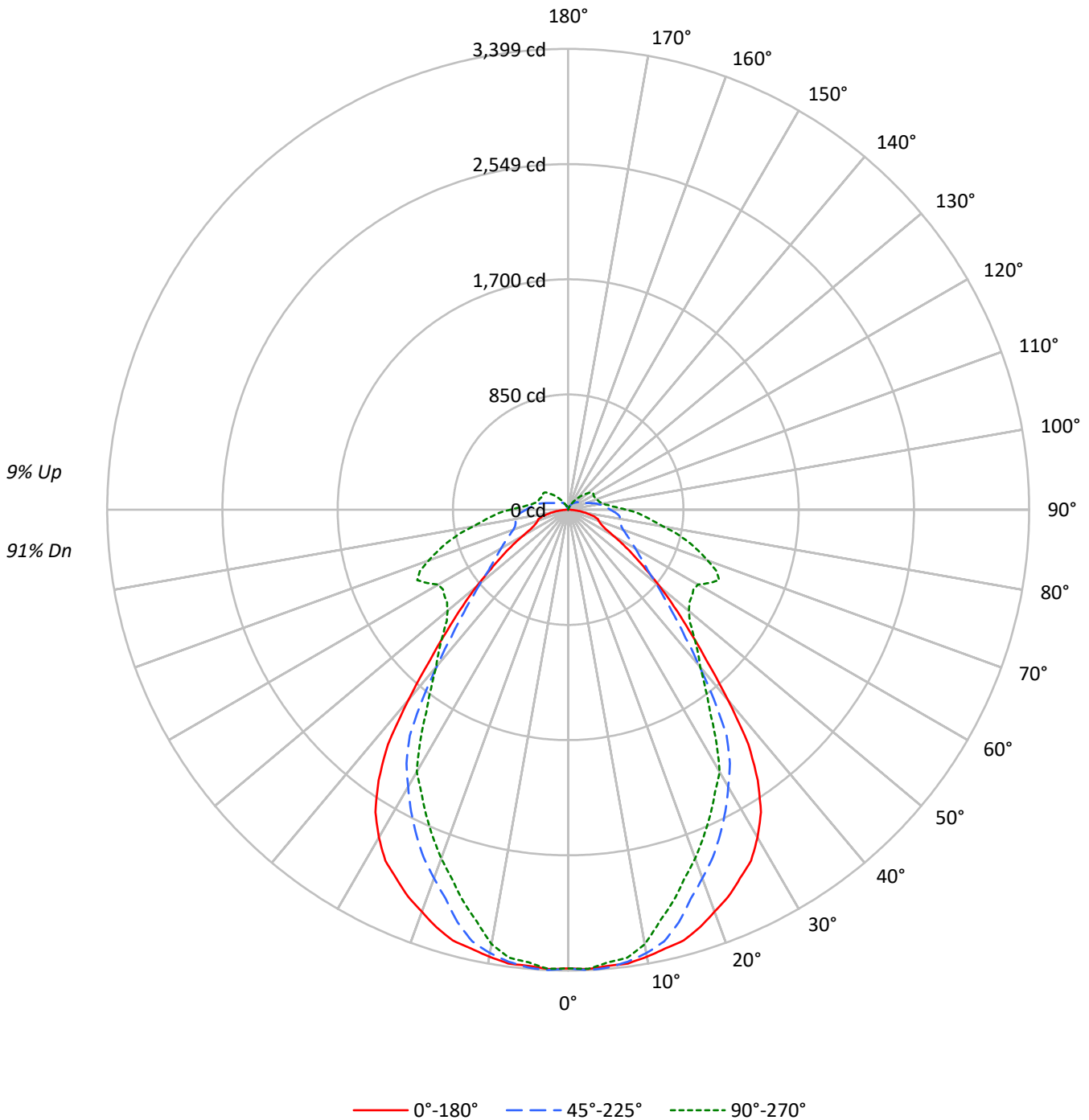
Lumens per Lamp: N/A
Luminaire Lumens: 7629.0 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.01 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 2.92' x H: 0.19')
CIE Type: Direct

Input Watts (W): 71.7
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	0
RCR																		
0	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	91
1	106	101	96	92	102	98	94	90	92	88	85	86	84	81	81	79	77	74
2	97	89	82	76	93	86	80	75	81	76	71	76	72	68	72	69	65	63
3	89	79	71	65	86	76	69	63	72	66	61	68	63	59	64	60	57	54
4	82	71	62	56	79	69	61	55	65	58	53	62	56	51	58	54	50	47
5	76	64	55	49	73	62	54	48	59	52	47	56	50	46	53	48	44	42
6	71	58	50	44	68	57	49	43	54	47	42	51	45	41	49	44	40	38
7	66	53	45	39	64	52	44	39	50	43	38	47	41	37	45	40	36	34
8	62	49	41	35	60	48	40	35	46	39	34	44	38	33	42	37	33	31
9	58	45	37	32	56	44	37	32	42	36	31	41	35	31	39	34	30	28
10	55	42	35	30	53	41	34	29	40	33	29	38	32	28	37	31	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	39955	39955	39955
5°	39807	38600	37752
10°	39691	36781	35295
15°	39538	34231	31503
20°	38750	31047	28220
25°	37948	28312	25270
30°	36704	25314	22609
35°	33608	22077	18523
40°	26785	16609	15524
45°	19772	12571	13630
50°	15029	9950	12435
55°	11162	8328	12340
60°	8223	7439	12789
65°	6773	6859	15011
70°	7005	6474	14254
75°	7382	6666	12897
80°	6085	7222	10961
85°	4343	7768	9736



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	320.7	4.2
10°-20°	882.9	11.6
20°-30°	1234.5	16.2
30°-40°	1271.8	16.7
40°-50°	931.9	12.2
50°-60°	694.4	9.1
60°-70°	652.0	8.5
70°-80°	551.9	7.2
80°-90°	368.1	4.8
90°-100°	230.6	3.0
100°-110°	162.5	2.1
110°-120°	124.9	1.6
120°-130°	97.4	1.3
130°-140°	59.3	0.8
140°-150°	31.2	0.4
150°-160°	12.4	0.2
160°-170°	2.6	0.0
170°-180°	0.0	0.0
0°-30°	2438.0	32.0
0°-40°	3709.8	48.6
0°-60°	5336.2	69.9
0°-90°	6908.1	90.6
90°-120°	518.0	6.8
90°-150°	705.9	9.3
90°-180°	721.0	9.5
0°-180°	7629.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3383	3383	3383	3383	3383	
5°	3377	3395	3390	3372	3352	322
15°	3290	3261	3152	3021	2991	925
25°	3000	2827	2649	2528	2482	1381
35°	2436	2197	2035	1868	1825	1492
45°	1260	1179	1106	1180	1306	994
55°	592	610	676	907	1113	540
65°	276	380	493	1024	1228	286
75°	201	215	402	906	916	204
85°	56	120	365	553	565	60
90°	1	68	310	434	426	4
95°	0	64	270	340	315	0
105°	0	62	185	245	234	0
115°	0	58	117	216	216	0
125°	0	48	94	185	219	0
135°	1	38	75	112	153	1
145°	1	29	57	68	81	1
155°	1	17	32	36	34	1
165°	2	8	14	10	14	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3383.3	3383.3	3383.3	3383.3	3383.3
2.5°	3391.0	3392.0	3398.6	3397.5	3389.9
5°	3376.8	3395.3	3389.9	3372.4	3351.7
7.5°	3375.7	3365.9	3362.6	3347.4	3332.1
10°	3347.4	3346.3	3321.2	3288.5	3254.7
12.5°	3314.7	3320.1	3262.3	3156.6	3111.9
15°	3289.6	3261.2	3152.2	3021.4	2990.9
17.5°	3229.6	3183.9	3007.3	2910.3	2852.5
20°	3155.5	3081.4	2892.8	2791.5	2735.9
22.5°	3087.9	2952.8	2780.6	2670.5	2609.4
25°	2999.6	2827.4	2648.7	2527.7	2481.9
27.5°	2919.0	2681.4	2509.2	2395.8	2346.7
30°	2791.5	2532.0	2359.8	2275.9	2232.3
32.5°	2645.4	2375.1	2219.2	2121.1	2032.8
35°	2436.1	2197.4	2035.0	1868.2	1824.6
37.5°	2183.2	1987.0	1764.7	1678.6	1661.1
40°	1831.2	1696.0	1502.0	1482.4	1514.0
42.5°	1512.9	1403.9	1280.7	1321.1	1411.5
45°	1260.0	1179.4	1106.3	1180.5	1305.8
47.5°	1057.3	1002.8	959.2	1062.7	1214.2
50°	880.7	834.9	844.7	986.4	1160.8
52.5°	717.2	709.6	742.3	931.9	1126.0
55°	591.9	610.4	675.8	906.9	1112.9
57.5°	481.8	536.3	620.2	913.4	1095.4
60°	386.9	476.3	571.2	941.8	1104.2
62.5°	313.9	422.9	529.7	982.1	1171.7
65°	275.8	380.4	492.7	1023.5	1228.4
67.5°	254.0	333.5	458.9	1063.8	1184.8
70°	238.7	289.9	429.5	1106.3	1093.3
72.5°	231.1	248.5	410.9	1025.7	1006.1
75°	200.6	214.7	402.2	905.8	915.6
77.5°	160.2	195.1	396.8	803.3	819.7
80°	122.1	172.2	389.1	709.6	709.6
82.5°	90.5	148.2	382.6	631.1	633.3
85°	55.6	119.9	365.1	552.6	564.6
87.5°	24.0	90.5	336.8	481.8	505.8
90°	1.1	67.6	309.6	433.8	426.2
92.5°	0.0	65.4	291.0	388.0	364.1
95°	0.0	64.3	270.3	340.1	315.0
97.5°	0.0	64.3	249.6	304.1	282.3
100°	0.0	63.2	231.1	274.7	260.5
102.5°	0.0	62.1	210.4	257.2	245.2
105°	0.0	62.1	185.3	245.2	234.3
107.5°	0.0	61.0	162.4	234.3	230.0
110°	0.0	61.0	142.8	223.4	226.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	58.9	126.4	216.9	223.4
115°	0.0	57.8	116.6	215.8	215.8
117.5°	0.0	55.6	109.0	218.0	213.6
120°	0.0	53.4	102.5	218.0	215.8
122.5°	0.0	51.2	98.1	207.1	220.2
125°	0.0	48.0	93.7	185.3	219.1
127.5°	0.0	45.8	89.4	164.6	209.3
130°	0.0	42.5	85.0	146.1	188.6
132.5°	1.1	40.3	79.6	128.6	170.0
135°	1.1	38.1	75.2	112.3	152.6
137.5°	1.1	36.0	70.8	100.3	133.0
140°	1.1	34.9	67.6	89.4	114.4
142.5°	1.1	32.7	63.2	78.5	95.9
145°	1.1	29.4	56.7	67.6	80.7
147.5°	1.1	27.2	51.2	58.9	65.4
150°	1.1	24.0	44.7	51.2	52.3
152.5°	1.1	20.7	38.1	43.6	41.4
155°	1.1	17.4	31.6	36.0	33.8
157.5°	2.2	15.3	26.2	28.3	27.2
160°	2.2	13.1	21.8	21.8	22.9
162.5°	2.2	10.9	17.4	15.3	19.6
165°	2.2	7.6	14.2	9.8	14.2
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)