

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: P231899

Luminaire Tested: **FVS4M-2-LD4-50-1LO-PA187-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P231899  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-5)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS4M-2-LD4-50-1LO-PA187-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
2FT LENGTH, 1-MODULE LED WITH PA187 LENS  
Light Source: (42) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

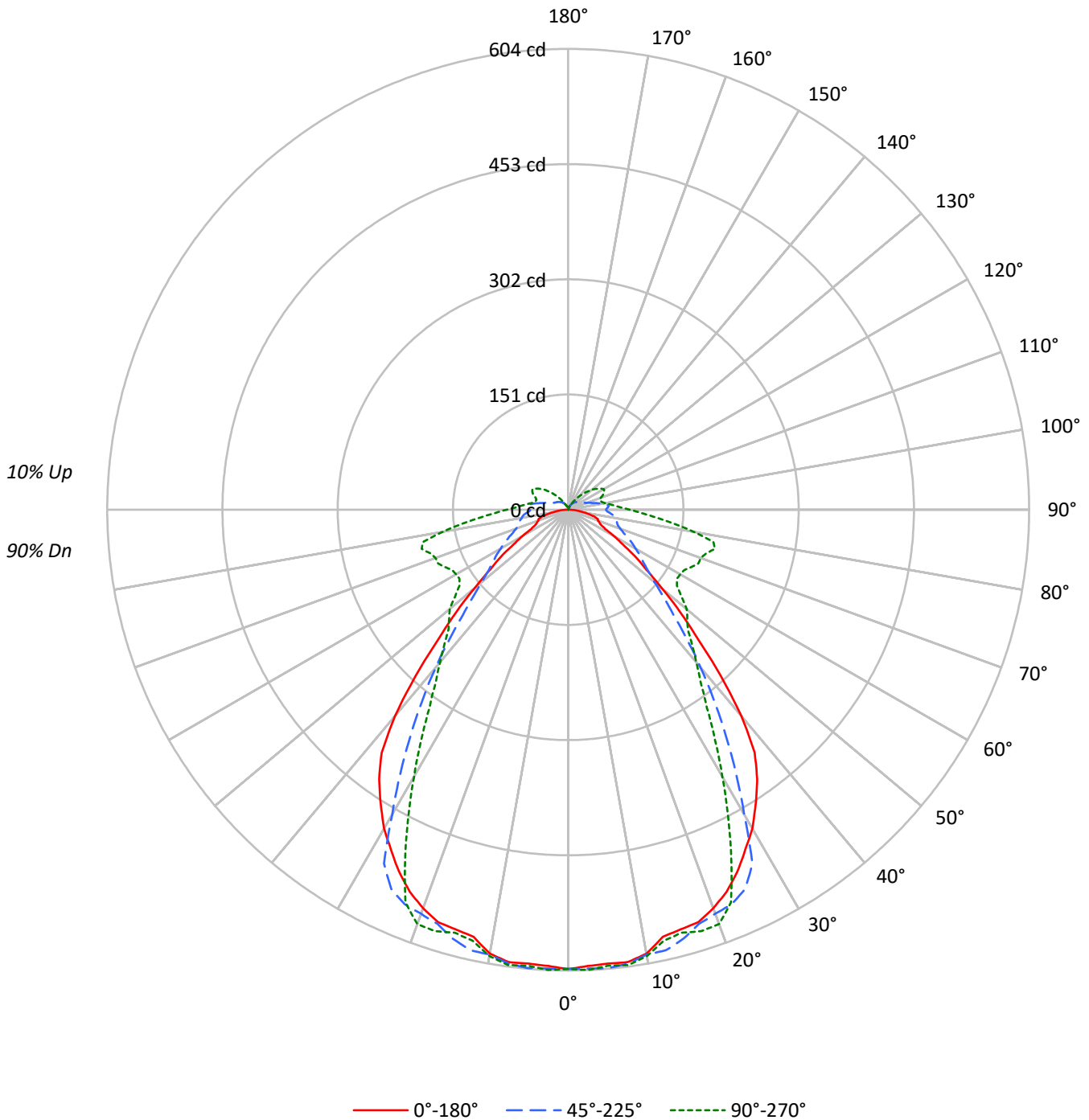
Lumens per Lamp: N/A  
Luminaire Lumens: 1394.0 lumens  
Efficiency: N/A  
Efficacy: 113.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.07 / 1.1  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')  
CIE Type: Semi-Direct

Input Watts (W): 12.3  
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	105	105	105	99	99	99	93	93	93	90
1	106	101	96	92	102	97	93	90	91	88	85	86	83	81	81	78	77	74
2	97	89	82	76	93	86	80	75	81	76	71	76	72	68	72	68	65	63
3	89	79	71	65	86	77	69	64	72	66	61	68	63	59	64	60	57	54
4	82	71	63	56	79	69	61	55	65	59	54	62	56	52	59	54	50	48
5	76	64	56	50	74	63	55	49	59	53	47	56	51	46	54	49	45	42
6	71	59	50	44	69	57	49	44	54	47	42	52	46	41	49	44	40	38
7	66	54	45	40	64	52	45	39	50	43	38	48	42	37	46	40	36	34
8	62	49	41	36	60	48	41	36	46	39	35	44	38	34	42	37	33	31
9	58	46	38	33	56	45	37	32	43	36	32	41	35	31	39	34	30	29
10	55	42	35	30	53	42	35	30	40	34	29	38	33	29	37	32	28	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10817	10817	10817
5°	10684	10431	10282
10°	10598	9940	9804
15°	10323	9570	9200
20°	10264	9137	9071
25°	9937	8843	7837
30°	9475	7445	6223
35°	8866	5854	4894
40°	7644	4481	4073
45°	5577	3315	3517
50°	4016	2595	3303
55°	2964	2207	2936
60°	2136	1975	2987
65°	1666	1771	3308
70°	1723	1622	3670
75°	1816	1618	4259
80°	1424	1681	3923
85°	944	1733	3015



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.0	4.1
10°-20°	163.9	11.8
20°-30°	240.2	17.2
30°-40°	231.0	16.6
40°-50°	165.6	11.9
50°-60°	119.9	8.6
60°-70°	104.7	7.5
70°-80°	98.5	7.1
80°-90°	72.1	5.2
90°-100°	43.5	3.1
100°-110°	31.0	2.2
110°-120°	26.5	1.9
120°-130°	19.5	1.4
130°-140°	11.7	0.8
140°-150°	6.0	0.4
150°-160°	2.3	0.2
160°-170°	0.4	0.0
170°-180°	0.0	0.0
0°-30°	461.1	33.1
0°-40°	692.1	49.7
0°-60°	977.6	70.1
0°-90°	1252.9	89.9
90°-120°	101.1	7.2
90°-150°	138.3	9.9
90°-180°	141.0	10.1
0°-180°	1394.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	602	602	602	602	602	
5°	597	602	603	599	600	57
15°	569	584	582	588	574	161
25°	524	530	549	522	506	241
35°	432	428	359	328	317	267
45°	241	212	195	203	221	190
55°	108	110	120	153	174	97
65°	47	68	86	154	178	50
75°	36	38	66	153	199	36
85°	10	21	56	125	115	10
90°	0	12	49	84	80	1
95°	0	12	53	65	61	0
105°	0	12	34	47	44	0
115°	0	10	21	51	51	0
125°	0	8	18	36	48	0
135°	0	7	14	23	32	0
145°	0	6	11	13	16	0
155°	0	3	6	7	6	0
165°	0	1	2	2	3	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°	601.9	601.9	601.9	601.9	601.9
2.5°	598.6	600.6	601.9	602.5	603.8
5°	597.3	601.9	603.2	598.6	599.9
7.5°	598.0	597.3	599.9	598.0	601.9
10°	590.8	586.9	592.1	583.7	594.1
12.5°	573.3	588.2	591.5	585.6	578.5
15°	569.4	583.7	582.4	587.6	574.0
17.5°	566.8	569.4	569.4	581.7	579.2
20°	555.8	555.8	563.6	575.9	577.9
22.5°	542.1	541.5	559.7	561.6	557.1
25°	524.0	530.5	548.6	522.0	505.8
27.5°	502.5	514.2	522.7	469.4	453.8
30°	482.4	494.7	461.0	425.3	403.8
32.5°	457.1	472.7	409.0	371.4	358.4
35°	431.8	427.9	359.0	327.9	316.8
37.5°	401.3	361.6	312.9	290.2	285.0
40°	352.6	302.6	270.1	255.8	261.0
42.5°	296.1	250.6	229.8	229.2	240.2
45°	240.9	211.7	194.8	202.6	221.4
47.5°	199.3	177.9	169.5	183.1	211.7
50°	160.4	149.3	147.4	173.4	202.6
52.5°	128.6	127.3	131.8	166.2	187.0
55°	107.8	110.4	120.1	152.6	174.0
57.5°	84.4	96.7	111.7	148.7	168.8
60°	69.5	86.4	101.9	150.6	169.5
62.5°	54.5	76.6	94.1	152.6	171.4
65°	47.4	68.2	85.7	154.5	177.9
67.5°	44.2	59.7	77.9	155.2	184.4
70°	41.6	51.3	72.7	155.2	185.0
72.5°	40.9	44.2	68.2	154.5	189.6
75°	35.7	38.3	66.2	152.6	198.7
77.5°	28.6	34.4	64.9	152.6	194.8
80°	21.4	29.9	61.7	161.0	166.9
82.5°	15.6	25.3	59.7	146.1	139.6
85°	9.7	20.8	55.8	125.3	114.9
87.5°	3.9	15.6	51.3	102.6	94.8
90°	0.0	11.7	49.3	84.4	80.5
92.5°	0.0	11.7	51.3	72.7	68.8
95°	0.0	11.7	53.2	64.9	61.0
97.5°	0.0	11.7	51.3	57.1	55.2
100°	0.0	11.7	46.1	51.3	49.3
102.5°	0.0	11.7	39.6	48.0	45.4
105°	0.0	11.7	33.8	46.7	44.2
107.5°	0.0	11.0	29.9	48.0	43.5
110°	0.0	11.0	26.0	50.0	45.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	10.4	23.4	51.3	48.7
115°	0.0	10.4	21.4	51.3	51.3
117.5°	0.0	9.7	20.1	48.0	53.2
120°	0.0	9.7	18.8	44.8	53.9
122.5°	0.0	9.1	18.2	40.9	51.3
125°	0.0	8.4	17.5	36.4	48.0
127.5°	0.0	8.4	16.9	32.5	44.8
130°	0.0	7.8	15.6	28.6	40.9
132.5°	0.0	7.8	14.9	25.3	35.7
135°	0.0	7.1	14.3	22.7	31.8
137.5°	0.0	7.1	13.0	20.1	27.3
140°	0.0	7.1	13.0	17.5	23.4
142.5°	0.0	6.5	11.7	15.6	19.5
145°	0.0	5.8	11.0	13.0	15.6
147.5°	0.0	5.2	9.7	11.7	12.3
150°	0.0	4.5	8.4	9.7	9.7
152.5°	0.0	3.9	7.1	8.4	7.8
155°	0.0	3.2	5.8	7.1	6.5
157.5°	0.0	2.6	4.5	5.8	5.2
160°	0.0	1.9	3.9	4.5	4.5
162.5°	0.0	1.3	2.6	3.2	3.9
165°	0.0	1.3	1.9	1.9	2.6
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)