

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: P231898

Luminaire Tested: **FVS4M-2-LD4-40-1LO-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231898
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-LD4-40-1LO-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (42) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

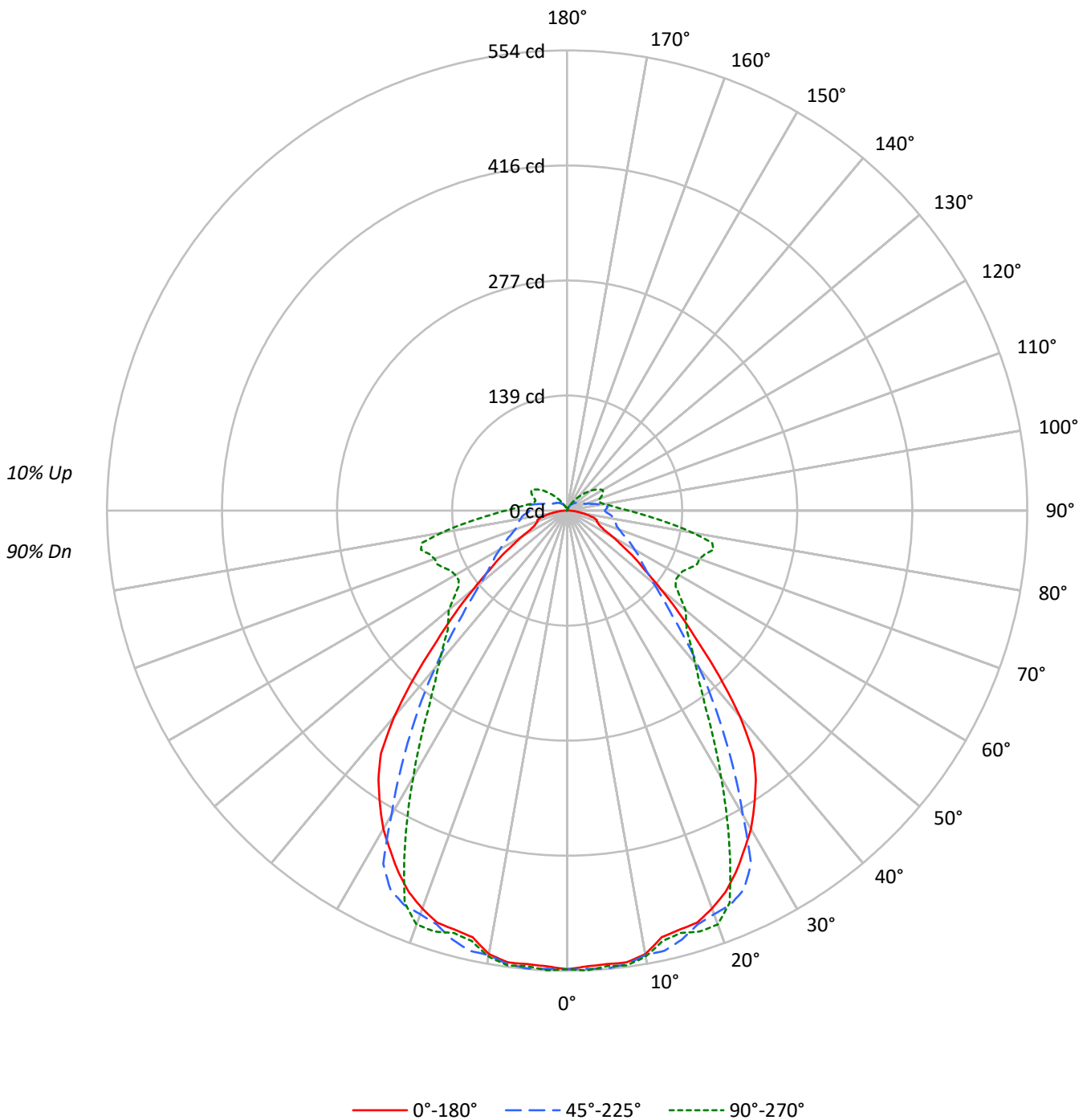
Lumens per Lamp: N/A
Luminaire Lumens: 1279.0 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.07 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

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	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°	9924	9924	9924
5°	9804	9570	9434
10°	9725	9121	8995
15°	9471	8781	8440
20°	9416	8384	8322
25°	9116	8115	7191
30°	8693	6832	5710
35°	8133	5371	4491
40°	7013	4111	3737
45°	5116	3041	3226
50°	3683	2380	3030
55°	2719	2025	2695
60°	1958	1812	2741
65°	1529	1624	3035
70°	1578	1488	3369
75°	1668	1486	3908
80°	1311	1542	3599
85°	866	1590	2766



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.3	4.1
10°-20°	150.4	11.8
20°-30°	220.4	17.2
30°-40°	211.9	16.6
40°-50°	151.9	11.9
50°-60°	110.0	8.6
60°-70°	96.1	7.5
70°-80°	90.3	7.1
80°-90°	66.1	5.2
90°-100°	39.9	3.1
100°-110°	28.5	2.2
110°-120°	24.4	1.9
120°-130°	17.9	1.4
130°-140°	10.7	0.8
140°-150°	5.6	0.4
150°-160°	2.1	0.2
160°-170°	0.4	0.0
170°-180°	0.0	0.0
0°-30°	423.1	33.1
0°-40°	635.0	49.7
0°-60°	897.0	70.1
0°-90°	1149.5	89.9
90°-120°	92.7	7.3
90°-150°	126.9	9.9
90°-180°	129.0	10.1
0°-180°	1279.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	552	552	552	552	552	
5°	548	552	553	549	550	52
15°	522	536	534	539	527	148
25°	481	487	503	479	464	221
35°	396	393	329	301	291	245
45°	221	194	179	186	203	174
55°	99	101	110	140	160	89
65°	44	62	79	142	163	46
75°	33	35	61	140	182	33
85°	9	19	51	115	105	9
90°	0	11	45	77	74	0
95°	0	11	49	60	56	0
105°	0	11	31	43	40	0
115°	0	10	20	47	47	0
125°	0	8	16	33	44	0
135°	0	7	13	21	29	0
145°	0	5	10	12	14	0
155°	0	3	5	7	6	0
165°	0	1	2	2	2	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°	552.2	552.2	552.2	552.2	552.2
2.5°	549.2	551.0	552.2	552.8	554.0
5°	548.1	552.2	553.4	549.2	550.4
7.5°	548.6	548.1	550.4	548.6	552.2
10°	542.1	538.5	543.3	535.5	545.1
12.5°	526.0	539.7	542.7	537.3	530.8
15°	522.4	535.5	534.4	539.1	526.6
17.5°	520.1	522.4	522.4	533.8	531.4
20°	509.9	509.9	517.1	528.4	530.2
22.5°	497.4	496.8	513.5	515.3	511.1
25°	480.7	486.7	503.4	479.0	464.1
27.5°	461.1	471.8	479.5	430.7	416.4
30°	442.6	453.9	423.0	390.2	370.5
32.5°	419.4	433.7	375.3	340.7	328.8
35°	396.1	392.6	329.4	300.8	290.7
37.5°	368.1	331.8	287.1	266.3	261.5
40°	323.5	277.6	247.8	234.7	239.5
42.5°	271.6	229.9	210.9	210.3	220.4
45°	221.0	194.2	178.7	185.9	203.1
47.5°	182.9	163.2	155.5	168.0	194.2
50°	147.1	137.0	135.2	159.1	185.9
52.5°	118.0	116.8	120.9	152.5	171.6
55°	98.9	101.3	110.2	140.0	159.7
57.5°	77.4	88.8	102.5	136.4	154.9
60°	63.7	79.2	93.5	138.2	155.5
62.5°	50.0	70.3	86.4	140.0	157.3
65°	43.5	62.5	78.6	141.8	163.2
67.5°	40.5	54.8	71.5	142.4	169.2
70°	38.1	47.1	66.7	142.4	169.8
72.5°	37.5	40.5	62.5	141.8	173.9
75°	32.8	35.1	60.8	140.0	182.3
77.5°	26.2	31.6	59.6	140.0	178.7
80°	19.7	27.4	56.6	147.7	153.1
82.5°	14.3	23.2	54.8	134.0	128.1
85°	8.9	19.1	51.2	115.0	105.4
87.5°	3.6	14.3	47.1	94.1	87.0
90°	0.0	10.7	45.3	77.4	73.9
92.5°	0.0	10.7	47.1	66.7	63.1
95°	0.0	10.7	48.8	59.6	56.0
97.5°	0.0	10.7	47.1	52.4	50.6
100°	0.0	10.7	42.3	47.1	45.3
102.5°	0.0	10.7	36.3	44.1	41.7
105°	0.0	10.7	31.0	42.9	40.5
107.5°	0.0	10.1	27.4	44.1	39.9
110°	0.0	10.1	23.8	45.9	41.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	9.5	21.4	47.1	44.7
115°	0.0	9.5	19.7	47.1	47.1
117.5°	0.0	8.9	18.5	44.1	48.8
120°	0.0	8.9	17.3	41.1	49.4
122.5°	0.0	8.3	16.7	37.5	47.1
125°	0.0	7.7	16.1	33.4	44.1
127.5°	0.0	7.7	15.5	29.8	41.1
130°	0.0	7.1	14.3	26.2	37.5
132.5°	0.0	7.1	13.7	23.2	32.8
135°	0.0	6.6	13.1	20.8	29.2
137.5°	0.0	6.6	11.9	18.5	25.0
140°	0.0	6.6	11.9	16.1	21.4
142.5°	0.0	6.0	10.7	14.3	17.9
145°	0.0	5.4	10.1	11.9	14.3
147.5°	0.0	4.8	8.9	10.7	11.3
150°	0.0	4.2	7.7	8.9	8.9
152.5°	0.0	3.6	6.6	7.7	7.1
155°	0.0	3.0	5.4	6.6	6.0
157.5°	0.0	2.4	4.2	5.4	4.8
160°	0.0	1.8	3.6	4.2	4.2
162.5°	0.0	1.2	2.4	3.0	3.6
165°	0.0	1.2	1.8	1.8	2.4
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)