

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: P231904

Luminaire Tested: **FVS4M-2-LD4-30-1HI-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231904
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-LD4-30-1HI-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (42) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

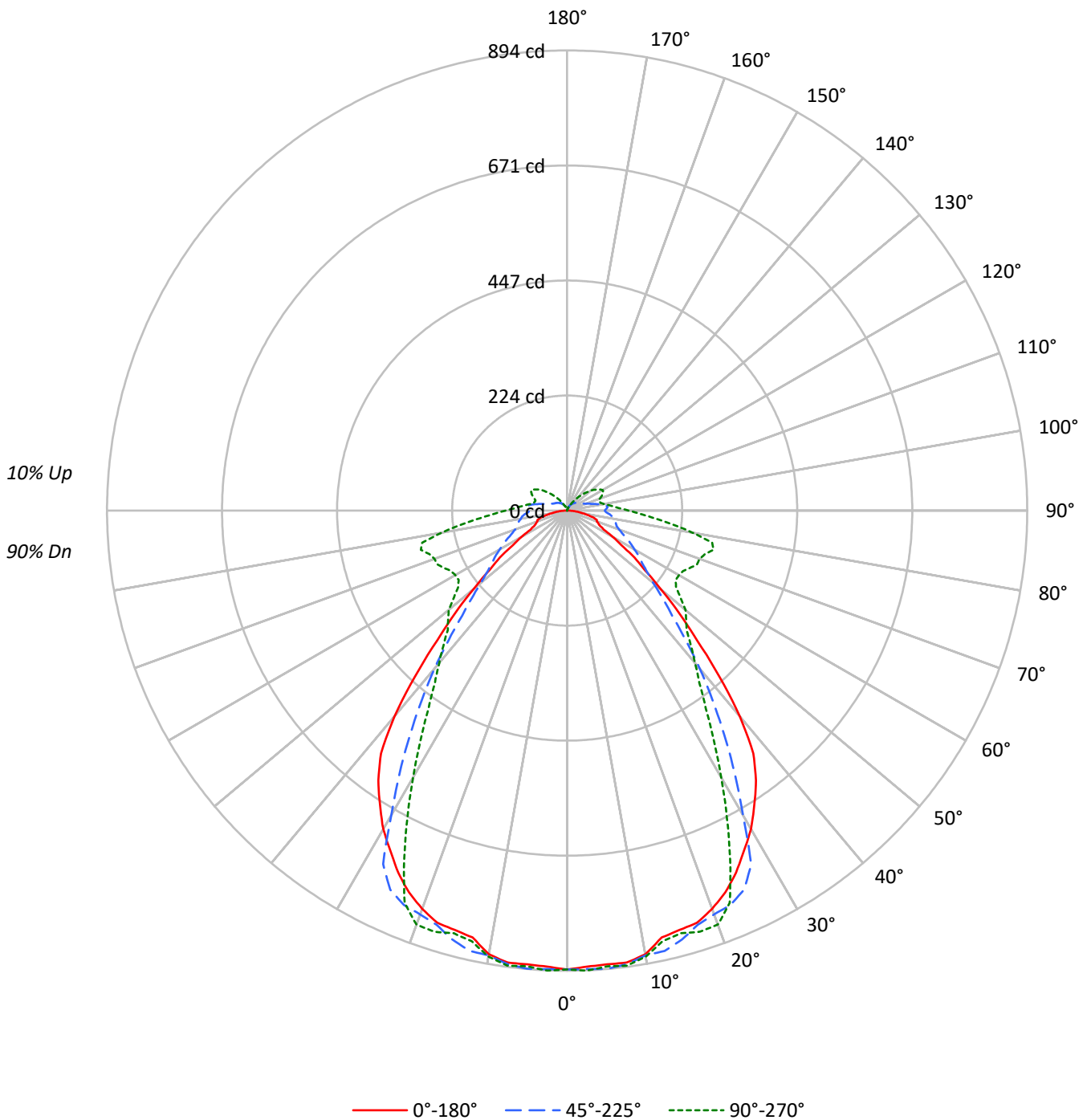
Lumens per Lamp: N/A
Luminaire Lumens: 2065.0 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.07 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 22.2
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

TEST NUMBER: P231904

CATALOG NUMBER: FVS4M-2-LD4-30-1HI-PA187-UNV-EDC1

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°	16023	16023	16023
5°	15828	15451	15232
10°	15700	14726	14522
15°	15292	14176	13627
20°	15204	13534	13436
25°	14720	13101	11608
30°	14036	11029	9220
35°	13132	8673	7251
40°	11323	6638	6032
45°	8260	4910	5210
50°	5949	3843	4892
55°	4390	3270	4350
60°	3163	2926	4424
65°	2467	2624	4900
70°	2551	2402	5438
75°	2691	2397	6308
80°	2110	2490	5811
85°	1402	2568	4466



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.5	4.1
10°-20°	242.8	11.8
20°-30°	355.9	17.2
30°-40°	342.2	16.6
40°-50°	245.3	11.9
50°-60°	177.6	8.6
60°-70°	155.2	7.5
70°-80°	145.8	7.1
80°-90°	106.8	5.2
90°-100°	64.5	3.1
100°-110°	45.9	2.2
110°-120°	39.3	1.9
120°-130°	28.9	1.4
130°-140°	17.3	0.8
140°-150°	9.0	0.4
150°-160°	3.4	0.2
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	683.1	33.1
0°-40°	1025.3	49.7
0°-60°	1448.2	70.1
0°-90°	1855.9	89.9
90°-120°	149.7	7.3
90°-150°	205.0	9.9
90°-180°	209.0	10.1
0°-180°	2065.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	892	892	892	892	892	
5°	885	892	894	887	889	84
15°	844	865	863	870	850	239
25°	776	786	813	773	749	356
35°	640	634	532	486	469	395
45°	357	314	288	300	328	282
55°	160	164	178	226	258	144
65°	70	101	127	229	264	74
75°	53	57	98	226	294	53
85°	14	31	83	186	170	15
90°	0	17	73	125	119	1
95°	0	17	79	96	90	0
105°	0	17	50	69	65	0
115°	0	15	32	76	76	0
125°	0	12	26	54	71	0
135°	0	11	21	34	47	0
145°	0	9	16	19	23	0
155°	0	5	9	11	10	0
165°	0	2	3	3	4	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CATALOG NUMBER: FVS4M-2-LD4-30-1HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	891.6	891.6	891.6	891.6	891.6
2.5°	886.8	889.7	891.6	892.6	894.5
5°	884.9	891.6	893.5	886.8	888.7
7.5°	885.8	884.9	888.7	885.8	891.6
10°	875.2	869.5	877.2	864.7	880.0
12.5°	849.3	871.4	876.2	867.5	857.0
15°	843.5	864.7	862.7	870.4	850.2
17.5°	839.7	843.5	843.5	861.8	857.9
20°	823.3	823.3	834.8	853.1	856.0
22.5°	803.1	802.1	829.1	832.0	825.2
25°	776.2	785.8	812.7	773.3	749.2
27.5°	744.4	761.7	774.2	695.4	672.3
30°	714.6	732.9	682.9	630.0	598.2
32.5°	677.1	700.2	605.9	550.1	530.9
35°	639.6	633.8	531.9	485.7	469.4
37.5°	594.4	535.7	463.6	429.9	422.2
40°	522.3	448.2	400.1	378.9	386.6
42.5°	438.6	371.3	340.5	339.5	355.9
45°	356.8	313.5	288.5	300.1	328.0
47.5°	295.3	263.5	251.0	271.2	313.5
50°	237.6	221.2	218.3	256.8	300.1
52.5°	190.4	188.5	195.2	246.2	277.0
55°	159.7	163.5	177.9	226.0	257.8
57.5°	125.0	143.3	165.4	220.3	250.1
60°	102.9	127.9	151.0	223.1	251.0
62.5°	80.8	113.5	139.5	226.0	253.9
65°	70.2	101.0	127.0	228.9	263.5
67.5°	65.4	88.5	115.4	229.9	273.2
70°	61.6	76.0	107.7	229.9	274.1
72.5°	60.6	65.4	101.0	228.9	280.8
75°	52.9	56.7	98.1	226.0	294.3
77.5°	42.3	51.0	96.2	226.0	288.5
80°	31.7	44.2	91.4	238.5	247.2
82.5°	23.1	37.5	88.5	216.4	206.8
85°	14.4	30.8	82.7	185.6	170.2
87.5°	5.8	23.1	76.0	152.0	140.4
90°	0.0	17.3	73.1	125.0	119.3
92.5°	0.0	17.3	76.0	107.7	102.0
95°	0.0	17.3	78.9	96.2	90.4
97.5°	0.0	17.3	76.0	84.6	81.8
100°	0.0	17.3	68.3	76.0	73.1
102.5°	0.0	17.3	58.7	71.2	67.3
105°	0.0	17.3	50.0	69.2	65.4
107.5°	0.0	16.4	44.2	71.2	64.4
110°	0.0	16.4	38.5	74.1	67.3



TEST NUMBER: P231904

CATALOG NUMBER: FVS4M-2-LD4-30-1HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	15.4	34.6	76.0	72.1
115°	0.0	15.4	31.7	76.0	76.0
117.5°	0.0	14.4	29.8	71.2	78.9
120°	0.0	14.4	27.9	66.4	79.8
122.5°	0.0	13.5	26.9	60.6	76.0
125°	0.0	12.5	26.0	53.9	71.2
127.5°	0.0	12.5	25.0	48.1	66.4
130°	0.0	11.5	23.1	42.3	60.6
132.5°	0.0	11.5	22.1	37.5	52.9
135°	0.0	10.6	21.2	33.7	47.1
137.5°	0.0	10.6	19.2	29.8	40.4
140°	0.0	10.6	19.2	26.0	34.6
142.5°	0.0	9.6	17.3	23.1	28.9
145°	0.0	8.7	16.4	19.2	23.1
147.5°	0.0	7.7	14.4	17.3	18.3
150°	0.0	6.7	12.5	14.4	14.4
152.5°	0.0	5.8	10.6	12.5	11.5
155°	0.0	4.8	8.7	10.6	9.6
157.5°	0.0	3.8	6.7	8.7	7.7
160°	0.0	2.9	5.8	6.7	6.7
162.5°	0.0	1.9	3.8	4.8	5.8
165°	0.0	1.9	2.9	2.9	3.8
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)