

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: P231976

Luminaire Tested: **FVS4M-4-LD4-30-1HI-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231976
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-4-LD4-30-1HI-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
4FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

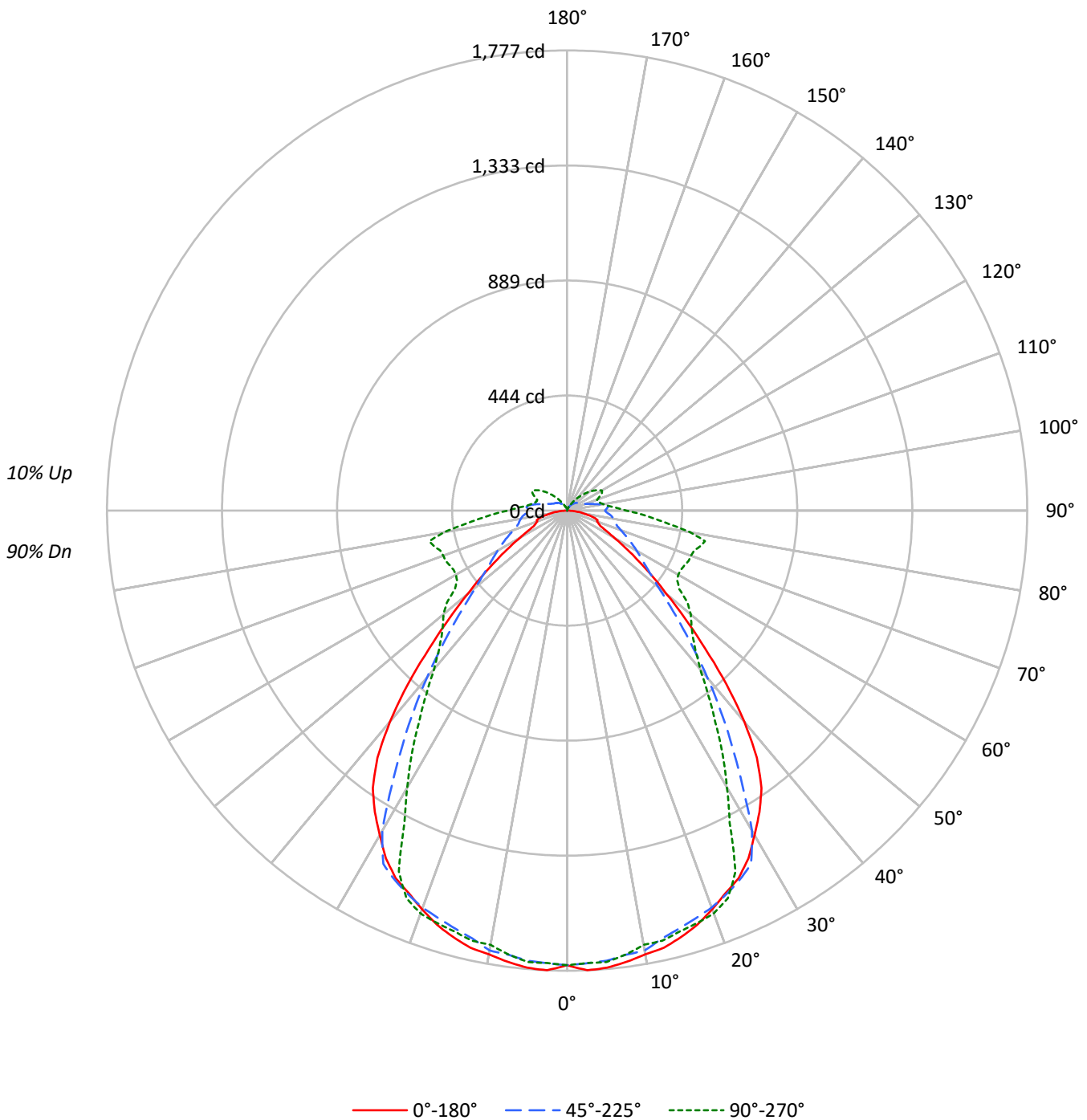
Lumens per Lamp: N/A
Luminaire Lumens: 4144.0 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.09 / 1.12
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Direct

Input Watts (W): 44.5
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: P231976

CATALOG NUMBER: FVS4M-4-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	106	106	106	99	99	99	93	93	93	90
1	106	101	97	93	102	98	94	90	92	88	85	86	84	81	81	79	77	74
2	97	89	82	77	94	86	80	75	81	76	72	76	72	69	72	69	66	63
3	89	79	71	65	86	77	70	64	73	67	62	69	64	59	65	61	57	55
4	82	71	63	56	79	69	61	56	65	59	54	62	57	52	59	54	50	48
5	76	64	56	50	74	63	55	49	60	53	48	57	51	46	54	49	45	43
6	71	59	50	44	69	57	49	44	54	48	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	35	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	41	34	30	40	33	29	38	33	29	37	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15948	15948	15948
5°	16089	15298	15161
10°	15914	14718	14204
15°	15822	13993	13632
20°	15557	13513	13136
25°	15344	13000	12047
30°	14755	11837	9615
35°	14023	9315	7790
40°	12114	7205	6297
45°	9209	5437	5499
50°	6689	4191	5137
55°	4882	3524	4513
60°	3509	3135	4414
65°	2767	2834	4702
70°	2879	2587	5104
75°	3277	2513	5765
80°	2635	2639	5726
85°	1858	2727	4389



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.6	4.0
10°-20°	476.6	11.5
20°-30°	709.7	17.1
30°-40°	709.5	17.1
40°-50°	516.4	12.5
50°-60°	367.1	8.9
60°-70°	307.3	7.4
70°-80°	280.9	6.8
80°-90°	207.4	5.0
90°-100°	125.5	3.0
100°-110°	88.7	2.1
110°-120°	76.3	1.8
120°-130°	55.6	1.3
130°-140°	32.9	0.8
140°-150°	16.5	0.4
150°-160°	6.0	0.1
160°-170°	1.0	0.0
170°-180°	0.0	0.0
0°-30°	1352.9	32.6
0°-40°	2062.4	49.8
0°-60°	2945.9	71.1
0°-90°	3741.5	90.3
90°-120°	290.5	7.0
90°-150°	395.5	9.5
90°-180°	403.0	9.7
0°-180°	4144.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1756	1756	1756	1756	1756	
5°	1772	1759	1745	1755	1750	168
15°	1705	1694	1671	1686	1682	480
25°	1566	1549	1575	1584	1538	718
35°	1308	1302	1110	1024	998	804
45°	752	663	618	639	685	587
55°	330	337	368	474	529	303
65°	142	207	262	445	500	151
75°	111	115	194	431	532	110
85°	28	62	164	356	331	31
90°	1	37	146	244	228	2
95°	0	36	158	181	173	0
105°	0	34	98	130	126	0
115°	0	30	62	148	144	0
125°	1	25	51	102	137	1
135°	1	19	40	64	88	1
145°	1	14	28	38	44	1
155°	1	8	14	17	18	0
165°	1	3	5	3	6	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231976

CATALOG NUMBER: FVS4M-4-LD4-30-1HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1755.6	1755.6	1755.6	1755.6	1755.6
2.5°	1776.8	1766.2	1749.8	1754.6	1748.9
5°	1772.0	1759.4	1745.0	1754.6	1749.8
7.5°	1757.5	1756.6	1730.6	1741.2	1729.6
10°	1740.2	1746.0	1724.8	1723.9	1702.7
12.5°	1728.7	1720.0	1692.1	1710.4	1700.8
15°	1704.6	1694.0	1670.9	1686.3	1682.5
17.5°	1675.8	1666.1	1650.7	1660.4	1670.0
20°	1638.2	1630.5	1631.5	1656.5	1655.6
22.5°	1598.8	1600.7	1604.6	1631.5	1620.9
25°	1566.1	1548.8	1574.7	1584.4	1538.2
27.5°	1515.1	1509.3	1538.2	1434.3	1360.2
30°	1446.8	1455.5	1427.6	1273.6	1234.2
32.5°	1381.4	1393.9	1260.2	1149.6	1118.8
35°	1308.3	1301.5	1110.1	1023.5	997.6
37.5°	1203.4	1142.8	972.6	909.1	892.7
40°	1063.9	947.5	841.7	801.3	798.4
42.5°	911.0	789.8	720.5	714.7	734.0
45°	752.3	662.8	617.6	638.7	684.9
47.5°	618.5	553.1	529.1	578.1	650.3
50°	501.2	462.7	458.9	536.8	623.4
52.5°	410.8	392.5	407.9	512.7	585.8
55°	330.0	336.7	368.4	474.3	529.1
57.5°	265.5	293.4	337.7	447.3	504.1
60°	209.7	257.8	309.8	437.7	495.4
62.5°	170.3	230.9	284.7	441.5	494.5
65°	142.4	206.8	261.7	445.4	500.2
67.5°	131.8	180.9	239.5	446.4	507.0
70°	123.1	155.8	220.3	446.4	508.9
72.5°	123.1	133.7	203.9	442.5	513.7
75°	110.6	115.4	194.3	431.0	532.0
77.5°	88.5	102.0	188.5	422.3	545.4
80°	64.5	89.5	181.8	436.7	481.9
82.5°	49.1	75.0	174.1	412.7	396.3
85°	27.9	61.6	163.5	355.9	330.9
87.5°	12.5	47.1	152.0	293.4	278.0
90°	1.0	36.6	146.2	244.3	228.0
92.5°	0.0	34.6	152.0	204.9	197.2
95°	0.0	35.6	157.8	180.9	173.2
97.5°	0.0	35.6	150.1	161.6	153.9
100°	0.0	35.6	133.7	147.2	141.4
102.5°	0.0	34.6	114.5	135.6	132.8
105°	0.0	33.7	98.1	129.9	126.0
107.5°	0.0	33.7	85.6	133.7	123.1
110°	0.0	32.7	75.0	142.4	123.1



TEST NUMBER: P231976

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	31.7	68.3	148.1	133.7
115°	0.0	29.8	62.5	148.1	144.3
117.5°	0.0	28.9	58.7	138.5	152.0
120°	0.0	27.9	55.8	127.0	154.9
122.5°	1.0	26.0	53.9	114.5	146.2
125°	1.0	25.0	51.0	102.0	136.6
127.5°	1.0	23.1	49.1	91.4	126.0
130°	1.0	22.1	46.2	80.8	113.5
132.5°	1.0	21.2	43.3	71.2	101.0
135°	1.0	19.2	40.4	63.5	88.5
137.5°	1.0	18.3	37.5	56.8	77.0
140°	1.0	17.3	34.6	50.0	64.5
142.5°	1.0	16.4	30.8	44.3	53.9
145°	1.0	14.4	27.9	38.5	44.3
147.5°	1.0	13.5	24.0	31.7	35.6
150°	1.0	11.5	21.2	26.9	27.9
152.5°	1.0	9.6	17.3	22.1	22.1
155°	1.0	7.7	14.4	17.3	18.3
157.5°	1.0	6.7	11.5	13.5	15.4
160°	1.0	5.8	8.7	9.6	12.5
162.5°	1.0	3.8	6.7	5.8	9.6
165°	1.0	2.9	4.8	2.9	5.8
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)