

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: P231943

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231943
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-10)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-2-LD4-50-2HI-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

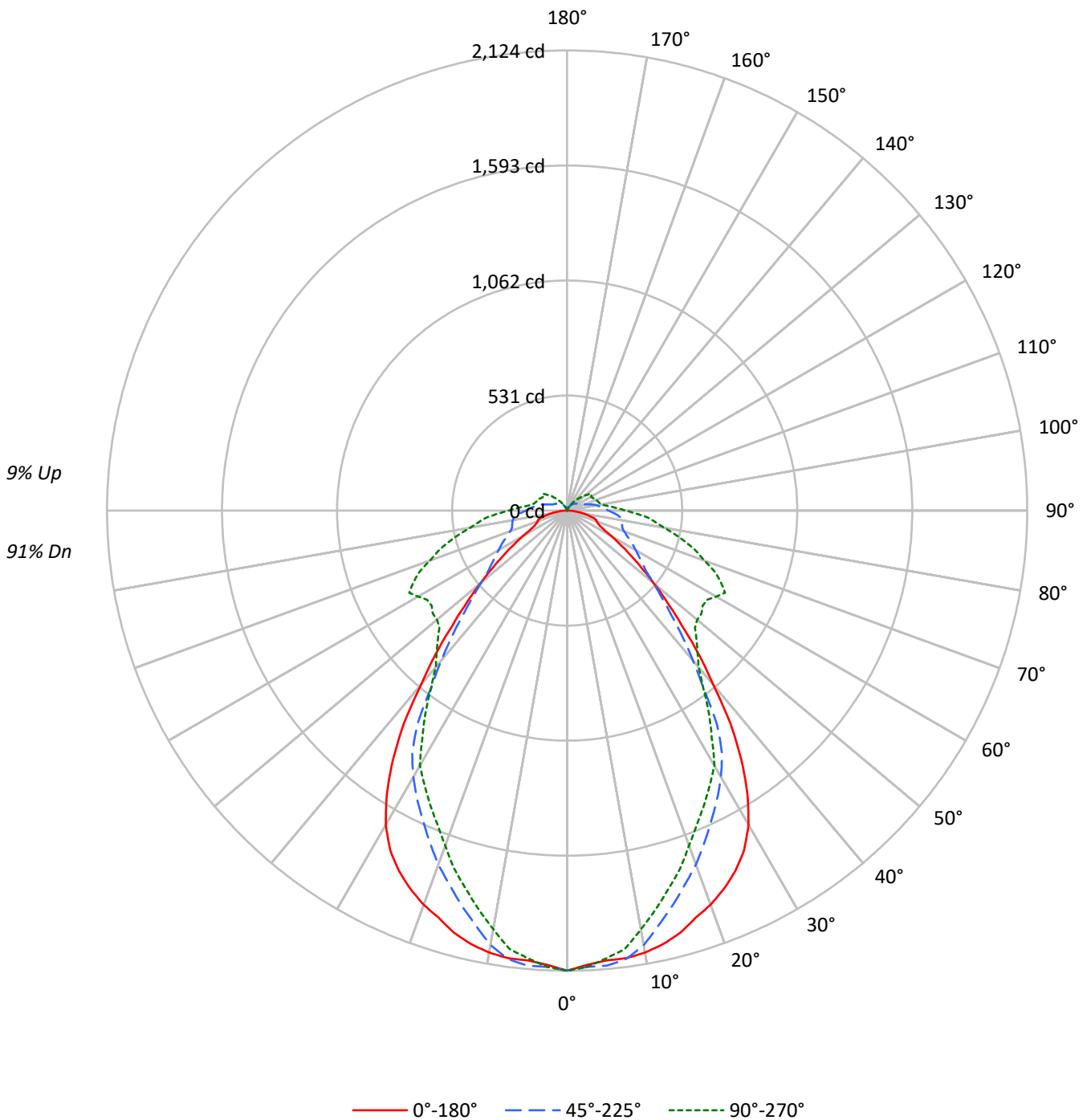
Lumens per Lamp: N/A
Luminaire Lumens: 4696.0 lumens
Efficiency: N/A
Efficacy: 104.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.98 / 1.07
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Direct

Input Watts (W): 44.8
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	93	90	92	88	85	86	83	81	81	79	77	74
2	97	88	81	76	93	86	79	74	81	75	71	76	72	68	72	68	65	62
3	89	78	70	64	85	76	69	63	72	66	61	68	63	58	64	60	56	54
4	82	70	62	55	79	68	60	54	65	58	53	61	56	51	58	53	49	47
5	76	63	55	48	73	62	54	48	59	52	46	56	50	45	53	48	44	41
6	70	58	49	43	68	56	48	42	53	47	41	51	45	40	49	43	39	37
7	66	53	44	39	63	51	44	38	49	42	37	47	41	36	45	40	35	33
8	61	49	40	35	59	47	40	34	45	39	34	43	37	33	42	36	32	30
9	58	45	37	32	56	44	36	31	42	35	31	40	34	30	39	33	30	28
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	36	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	38162	38162	38162
5°	37279	36457	35555
10°	37153	34185	32379
15°	36580	30970	28969
20°	35752	28171	25819
25°	34812	25410	23190
30°	32888	22922	20950
35°	28761	19657	17614
40°	22736	14974	14713
45°	17312	11557	13419
50°	13100	9116	12777
55°	9740	7775	12893
60°	7303	7077	13987
65°	5824	6576	14555
70°	5959	6225	13366
75°	6211	6419	12197
80°	4786	6920	10660
85°	3183	7211	9869



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.9	4.2
10°-20°	533.8	11.4
20°-30°	741.3	15.8
30°-40°	760.0	16.2
40°-50°	571.4	12.2
50°-60°	447.9	9.5
60°-70°	427.9	9.1
70°-80°	344.8	7.3
80°-90°	233.5	5.0
90°-100°	144.1	3.1
100°-110°	101.0	2.2
110°-120°	75.9	1.6
120°-130°	57.2	1.2
130°-140°	34.2	0.7
140°-150°	17.5	0.4
150°-160°	6.5	0.1
160°-170°	1.0	0.0
170°-180°	0.0	0.0
0°-30°	1473.0	31.4
0°-40°	2233.0	47.6
0°-60°	3252.3	69.3
0°-90°	4258.5	90.7
90°-120°	321.1	6.8
90°-150°	429.9	9.2
90°-180°	437.0	9.3
0°-180°	4696.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2124	2124	2124	2124	2124	
5°	2084	2100	2108	2085	2074	199
15°	2018	1980	1885	1820	1807	568
25°	1836	1687	1576	1520	1497	841
35°	1401	1306	1206	1139	1140	864
45°	748	700	679	742	845	586
55°	354	363	423	616	764	324
65°	166	231	318	714	783	174
75°	122	135	263	556	569	123
85°	33	75	232	347	376	35
90°	0	44	190	282	269	2
95°	0	41	164	212	204	0
105°	0	39	109	157	150	0
115°	0	34	69	130	134	0
125°	0	28	57	105	135	0
135°	1	23	45	63	86	1
145°	1	16	34	38	42	1
155°	1	9	16	20	17	1
165°	1	2	4	2	4	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°	2123.5	2123.5	2123.5	2123.5	2123.5
2.5°	2098.4	2102.8	2108.2	2111.5	2108.2
5°	2084.2	2099.5	2108.2	2085.3	2074.4
7.5°	2084.2	2086.4	2087.5	2054.8	2040.6
10°	2071.1	2064.6	2036.3	1974.1	1962.1
12.5°	2049.3	2035.2	1957.8	1897.8	1885.8
15°	2017.7	1979.6	1884.7	1820.4	1807.4
17.5°	1970.9	1913.1	1809.5	1746.3	1733.2
20°	1936.0	1845.5	1737.6	1675.5	1644.9
22.5°	1890.2	1768.1	1656.9	1595.9	1566.4
25°	1835.7	1687.4	1576.3	1519.6	1496.7
27.5°	1768.1	1598.1	1499.9	1440.0	1425.8
30°	1674.4	1517.4	1419.3	1369.1	1359.3
32.5°	1549.0	1418.2	1331.0	1254.7	1242.7
35°	1400.8	1305.9	1205.6	1139.1	1140.2
37.5°	1237.2	1181.6	1032.3	1031.2	1031.2
40°	1048.7	994.2	902.6	914.6	942.9
42.5°	897.1	831.7	784.9	819.7	891.7
45°	747.8	699.8	679.1	742.3	844.8
47.5°	625.7	588.6	589.7	685.7	800.1
50°	523.2	499.3	517.8	645.3	783.8
52.5°	431.7	420.8	460.0	624.6	781.6
55°	354.3	363.0	423.0	615.9	764.1
57.5°	287.8	318.3	391.3	631.2	766.3
60°	237.6	283.4	365.2	650.8	793.6
62.5°	191.9	254.0	343.4	676.9	821.9
65°	165.7	231.1	318.3	714.0	782.7
67.5°	153.7	203.8	296.5	746.7	738.0
70°	143.9	177.7	279.1	702.0	673.7
72.5°	140.6	154.8	267.1	623.5	625.7
75°	122.1	135.2	262.7	555.9	569.0
77.5°	94.8	122.1	259.4	493.8	511.2
80°	71.9	106.8	254.0	440.4	453.5
82.5°	52.3	90.5	248.5	391.3	411.0
85°	32.7	75.2	232.2	346.6	376.1
87.5°	14.2	56.7	210.4	316.1	317.2
90°	0.0	43.6	189.7	282.3	269.2
92.5°	0.0	42.5	177.7	243.1	233.3
95°	0.0	41.4	163.5	211.5	203.8
97.5°	0.0	41.4	150.4	190.8	177.7
100°	0.0	40.3	139.5	174.4	163.5
102.5°	0.0	39.2	126.4	162.4	154.8
105°	0.0	39.2	109.0	157.0	150.4
107.5°	0.0	38.2	94.8	150.4	146.1
110°	0.0	37.1	82.8	140.6	143.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	36.0	75.2	134.1	141.7
115°	0.0	33.8	68.7	129.7	134.1
117.5°	0.0	32.7	65.4	133.0	129.7
120°	0.0	31.6	62.1	131.9	127.5
122.5°	0.0	30.5	60.0	117.7	133.0
125°	0.0	28.3	56.7	104.6	135.2
127.5°	0.0	27.3	53.4	92.7	121.0
130°	0.0	25.1	50.1	81.8	109.0
132.5°	0.0	24.0	46.9	71.9	99.2
135°	1.1	22.9	44.7	63.2	86.1
137.5°	1.1	21.8	42.5	56.7	74.1
140°	1.1	20.7	39.2	50.1	62.1
142.5°	1.1	18.5	37.1	43.6	52.3
145°	1.1	16.4	33.8	38.2	42.5
147.5°	1.1	15.3	29.4	32.7	33.8
150°	1.1	13.1	25.1	28.3	26.2
152.5°	1.1	10.9	20.7	24.0	20.7
155°	1.1	8.7	16.4	19.6	17.4
157.5°	1.1	6.5	13.1	16.4	14.2
160°	1.1	4.4	10.9	10.9	12.0
162.5°	1.1	3.3	7.6	6.5	8.7
165°	1.1	2.2	4.4	2.2	4.4
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)