

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: P231974

Luminaire Tested: **FVS4M-4-LD4-40-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231974
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-LD4-40-1STD-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
4FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (84) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

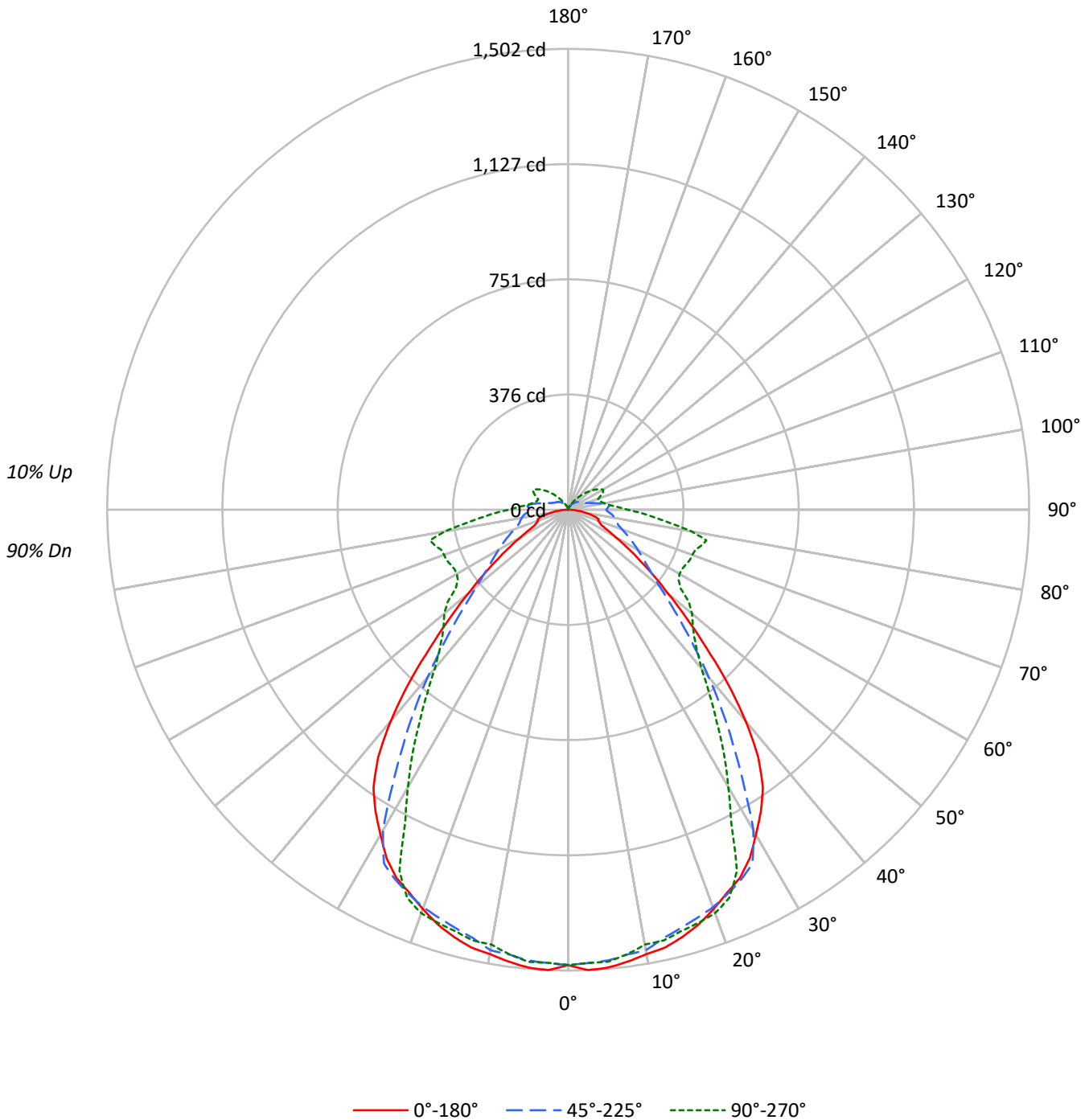
Lumens per Lamp: N/A
Luminaire Lumens: 3503.0 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.09 / 1.12
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Direct

Input Watts (W): 33.6
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	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°	13481	13481	13481
5°	13600	12932	12816
10°	13452	12442	12006
15°	13374	11829	11523
20°	13151	11423	11104
25°	12970	10990	10184
30°	12473	10005	8128
35°	11854	7875	6585
40°	10241	6091	5323
45°	7785	4597	4649
50°	5655	3543	4342
55°	4126	2978	3814
60°	2967	2649	3731
65°	2338	2396	3974
70°	2434	2187	4314
75°	2770	2125	4873
80°	2227	2231	4841
85°	1572	2305	3710



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.8	4.0
10°-20°	402.9	11.5
20°-30°	599.9	17.1
30°-40°	599.7	17.1
40°-50°	436.5	12.5
50°-60°	310.3	8.9
60°-70°	259.8	7.4
70°-80°	237.4	6.8
80°-90°	175.3	5.0
90°-100°	106.1	3.0
100°-110°	74.9	2.1
110°-120°	64.5	1.8
120°-130°	47.0	1.3
130°-140°	27.8	0.8
140°-150°	13.9	0.4
150°-160°	5.1	0.1
160°-170°	0.9	0.0
170°-180°	0.0	0.0
0°-30°	1143.6	32.6
0°-40°	1743.4	49.8
0°-60°	2490.2	71.1
0°-90°	3162.7	90.3
90°-120°	245.5	7.0
90°-150°	334.3	9.5
90°-180°	340.0	9.7
0°-180°	3503.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1484	1484	1484	1484	1484	
5°	1498	1487	1475	1483	1479	142
15°	1441	1432	1412	1426	1422	406
25°	1324	1309	1331	1339	1300	607
35°	1106	1100	938	865	843	680
45°	636	560	522	540	579	496
55°	279	285	311	401	447	256
65°	120	175	221	376	423	128
75°	94	98	164	364	450	93
85°	24	52	138	301	280	27
90°	1	31	124	206	193	2
95°	0	30	133	153	146	0
105°	0	28	83	110	106	0
115°	0	25	53	125	122	0
125°	1	21	43	86	116	1
135°	1	16	34	54	75	1
145°	1	12	24	32	37	1
155°	1	6	12	15	16	0
165°	1	2	4	2	5	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°	1484.0	1484.0	1484.0	1484.0	1484.0
2.5°	1501.9	1493.0	1479.2	1483.2	1478.3
5°	1497.9	1487.3	1475.1	1483.2	1479.2
7.5°	1485.7	1484.9	1462.9	1471.8	1462.1
10°	1471.0	1475.9	1458.0	1457.2	1439.3
12.5°	1461.3	1454.0	1430.4	1445.8	1437.7
15°	1440.9	1432.0	1412.5	1425.5	1422.2
17.5°	1416.5	1408.4	1395.4	1403.5	1411.7
20°	1384.8	1378.3	1379.1	1400.3	1399.5
22.5°	1351.5	1353.1	1356.4	1379.1	1370.2
25°	1323.8	1309.2	1331.2	1339.3	1300.3
27.5°	1280.7	1275.9	1300.3	1212.4	1149.8
30°	1223.0	1230.3	1206.7	1076.6	1043.3
32.5°	1167.7	1178.3	1065.3	971.7	945.7
35°	1105.9	1100.2	938.4	865.2	843.3
37.5°	1017.3	966.0	822.1	768.4	754.6
40°	899.4	801.0	711.5	677.4	674.9
42.5°	770.1	667.6	609.1	604.2	620.5
45°	635.9	560.3	522.1	539.9	579.0
47.5°	522.9	467.6	447.2	488.7	549.7
50°	423.7	391.1	387.9	453.7	526.9
52.5°	347.2	331.8	344.8	433.4	495.2
55°	278.9	284.6	311.4	400.9	447.2
57.5°	224.4	248.0	285.4	378.1	426.1
60°	177.3	217.9	261.8	370.0	418.8
62.5°	143.9	195.2	240.7	373.2	418.0
65°	120.3	174.8	221.2	376.5	422.8
67.5°	111.4	152.9	202.5	377.3	428.5
70°	104.1	131.7	186.2	377.3	430.2
72.5°	104.1	113.0	172.4	374.1	434.2
75°	93.5	97.6	164.3	364.3	449.7
77.5°	74.8	86.2	159.4	357.0	461.1
80°	54.5	75.6	153.7	369.2	407.4
82.5°	41.5	63.4	147.2	348.9	335.0
85°	23.6	52.0	138.2	300.9	279.7
87.5°	10.6	39.8	128.5	248.0	235.0
90°	0.8	30.9	123.6	206.5	192.7
92.5°	0.0	29.3	128.5	173.2	166.7
95°	0.0	30.1	133.4	152.9	146.4
97.5°	0.0	30.1	126.9	136.6	130.1
100°	0.0	30.1	113.0	124.4	119.5
102.5°	0.0	29.3	96.8	114.7	112.2
105°	0.0	28.5	82.9	109.8	106.5
107.5°	0.0	28.5	72.4	113.0	104.1
110°	0.0	27.6	63.4	120.3	104.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	26.8	57.7	125.2	113.0
115°	0.0	25.2	52.9	125.2	122.0
117.5°	0.0	24.4	49.6	117.1	128.5
120°	0.0	23.6	47.2	107.3	130.9
122.5°	0.8	22.0	45.5	96.8	123.6
125°	0.8	21.1	43.1	86.2	115.5
127.5°	0.8	19.5	41.5	77.3	106.5
130°	0.8	18.7	39.0	68.3	96.0
132.5°	0.8	17.9	36.6	60.2	85.4
135°	0.8	16.3	34.2	53.7	74.8
137.5°	0.8	15.5	31.7	48.0	65.1
140°	0.8	14.6	29.3	42.3	54.5
142.5°	0.8	13.8	26.0	37.4	45.5
145°	0.8	12.2	23.6	32.5	37.4
147.5°	0.8	11.4	20.3	26.8	30.1
150°	0.8	9.8	17.9	22.8	23.6
152.5°	0.8	8.1	14.6	18.7	18.7
155°	0.8	6.5	12.2	14.6	15.5
157.5°	0.8	5.7	9.8	11.4	13.0
160°	0.8	4.9	7.3	8.1	10.6
162.5°	0.8	3.3	5.7	4.9	8.1
165°	0.8	2.4	4.1	2.4	4.9
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)