

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: P231973

Luminaire Tested: **FVS4M-4-LD4-35-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231973
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-LD4-35-1STD-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
4FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

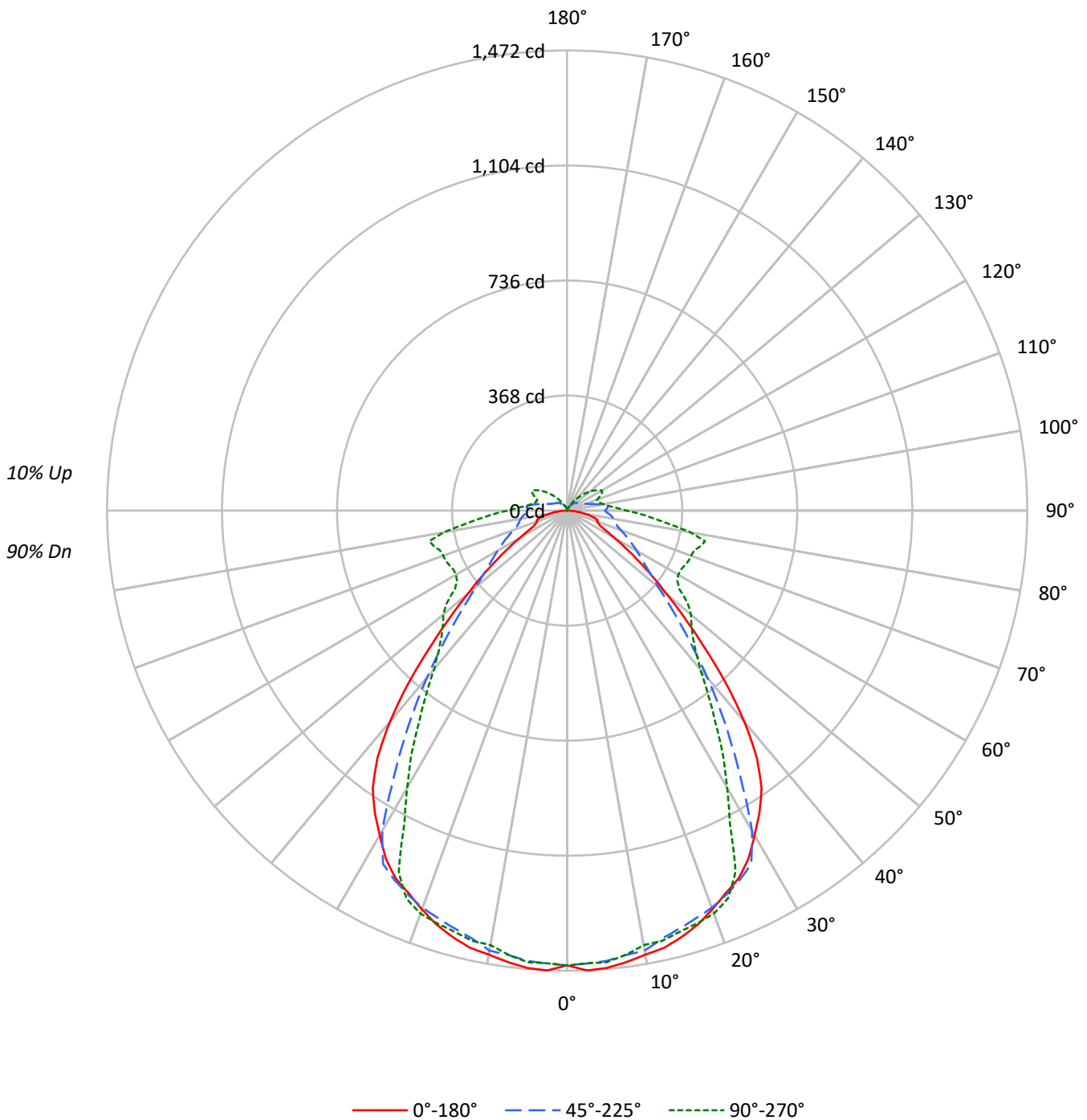
Lumens per Lamp: N/A
Luminaire Lumens: 3434.0 lumens
Efficiency: N/A
Efficacy: 102.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.09 / 1.12
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Direct

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	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°	13216	13216	13216
5°	13333	12677	12563
10°	13188	12197	11770
15°	13111	11596	11296
20°	12892	11198	10885
25°	12715	10773	9983
30°	12227	9809	7968
35°	11620	7719	6455
40°	10039	5971	5218
45°	7631	4506	4558
50°	5543	3473	4257
55°	4044	2920	3739
60°	2909	2598	3657
65°	2293	2348	3896
70°	2385	2143	4229
75°	2717	2082	4776
80°	2182	2187	4746
85°	1538	2260	3637



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.1	4.0
10°-20°	394.9	11.5
20°-30°	588.1	17.1
30°-40°	587.9	17.1
40°-50°	427.9	12.5
50°-60°	304.2	8.9
60°-70°	254.7	7.4
70°-80°	232.8	6.8
80°-90°	171.9	5.0
90°-100°	104.0	3.0
100°-110°	73.5	2.1
110°-120°	63.2	1.8
120°-130°	46.1	1.3
130°-140°	27.3	0.8
140°-150°	13.6	0.4
150°-160°	5.0	0.1
160°-170°	0.9	0.0
170°-180°	0.0	0.0
0°-30°	1121.1	32.6
0°-40°	1709.0	49.8
0°-60°	2441.2	71.1
0°-90°	3100.5	90.3
90°-120°	240.7	7.0
90°-150°	327.7	9.5
90°-180°	334.0	9.7
0°-180°	3434.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1455	1455	1455	1455	1455	
5°	1468	1458	1446	1454	1450	139
15°	1413	1404	1385	1397	1394	398
25°	1298	1283	1305	1313	1275	595
35°	1084	1078	920	848	827	666
45°	623	549	512	529	568	487
55°	273	279	305	393	438	251
65°	118	171	217	369	414	125
75°	92	96	161	357	441	91
85°	23	51	136	295	274	26
90°	1	30	121	202	189	2
95°	0	30	131	150	144	0
105°	0	28	81	108	104	0
115°	0	25	52	123	120	0
125°	1	21	42	84	113	1
135°	1	16	34	53	73	1
145°	1	12	23	32	37	1
155°	1	6	12	14	15	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°	1454.8	1454.8	1454.8	1454.8	1454.8
2.5°	1472.3	1463.6	1450.0	1454.0	1449.2
5°	1468.4	1458.0	1446.0	1454.0	1450.0
7.5°	1456.4	1455.6	1434.1	1442.8	1433.3
10°	1442.1	1446.8	1429.3	1428.5	1411.0
12.5°	1432.5	1425.3	1402.2	1417.3	1409.4
15°	1412.6	1403.8	1384.7	1397.4	1394.2
17.5°	1388.6	1380.7	1367.9	1375.9	1383.9
20°	1357.6	1351.2	1352.0	1372.7	1371.9
22.5°	1324.9	1326.5	1329.7	1352.0	1343.2
25°	1297.8	1283.4	1304.9	1312.9	1274.6
27.5°	1255.5	1250.7	1274.6	1188.6	1127.2
30°	1198.9	1206.1	1183.0	1055.4	1022.7
32.5°	1144.7	1155.1	1044.3	952.6	927.1
35°	1084.1	1078.5	919.9	848.2	826.6
37.5°	997.2	947.0	805.9	753.3	739.8
40°	881.7	785.2	697.5	664.0	661.6
42.5°	754.9	654.5	597.1	592.3	608.2
45°	623.4	549.2	511.8	529.3	567.6
47.5°	512.6	458.4	438.4	479.1	538.9
50°	415.3	383.4	380.2	444.8	516.6
52.5°	340.4	325.2	338.0	424.9	485.5
55°	273.4	279.0	305.3	393.0	438.4
57.5°	220.0	243.1	279.8	370.7	417.7
60°	173.8	213.6	256.7	362.7	410.5
62.5°	141.1	191.3	236.0	365.9	409.7
65°	118.0	171.4	216.8	369.1	414.5
67.5°	109.2	149.9	198.5	369.9	420.1
70°	102.0	129.1	182.5	369.9	421.7
72.5°	102.0	110.8	169.0	366.7	425.7
75°	91.7	95.7	161.0	357.1	440.8
77.5°	73.3	84.5	156.2	350.0	452.0
80°	53.4	74.1	150.7	361.9	399.4
82.5°	40.7	62.2	144.3	342.0	328.4
85°	23.1	51.0	135.5	294.9	274.2
87.5°	10.4	39.1	126.0	243.1	230.4
90°	0.8	30.3	121.2	202.5	188.9
92.5°	0.0	28.7	126.0	169.8	163.4
95°	0.0	29.5	130.7	149.9	143.5
97.5°	0.0	29.5	124.4	133.9	127.5
100°	0.0	29.5	110.8	122.0	117.2
102.5°	0.0	28.7	94.9	112.4	110.0
105°	0.0	27.9	81.3	107.6	104.4
107.5°	0.0	27.9	70.9	110.8	102.0
110°	0.0	27.1	62.2	118.0	102.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	26.3	56.6	122.8	110.8
115°	0.0	24.7	51.8	122.8	119.6
117.5°	0.0	23.9	48.6	114.8	126.0
120°	0.0	23.1	46.2	105.2	128.3
122.5°	0.8	21.5	44.6	94.9	121.2
125°	0.8	20.7	42.2	84.5	113.2
127.5°	0.8	19.1	40.7	75.7	104.4
130°	0.8	18.3	38.3	67.0	94.1
132.5°	0.8	17.5	35.9	59.0	83.7
135°	0.8	15.9	33.5	52.6	73.3
137.5°	0.8	15.1	31.1	47.0	63.8
140°	0.8	14.3	28.7	41.5	53.4
142.5°	0.8	13.6	25.5	36.7	44.6
145°	0.8	12.0	23.1	31.9	36.7
147.5°	0.8	11.2	19.9	26.3	29.5
150°	0.8	9.6	17.5	22.3	23.1
152.5°	0.8	8.0	14.3	18.3	18.3
155°	0.8	6.4	12.0	14.3	15.1
157.5°	0.8	5.6	9.6	11.2	12.8
160°	0.8	4.8	7.2	8.0	10.4
162.5°	0.8	3.2	5.6	4.8	8.0
165°	0.8	2.4	4.0	2.4	4.8
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)