

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: P231972

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231972
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-LD4-30-1STD-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

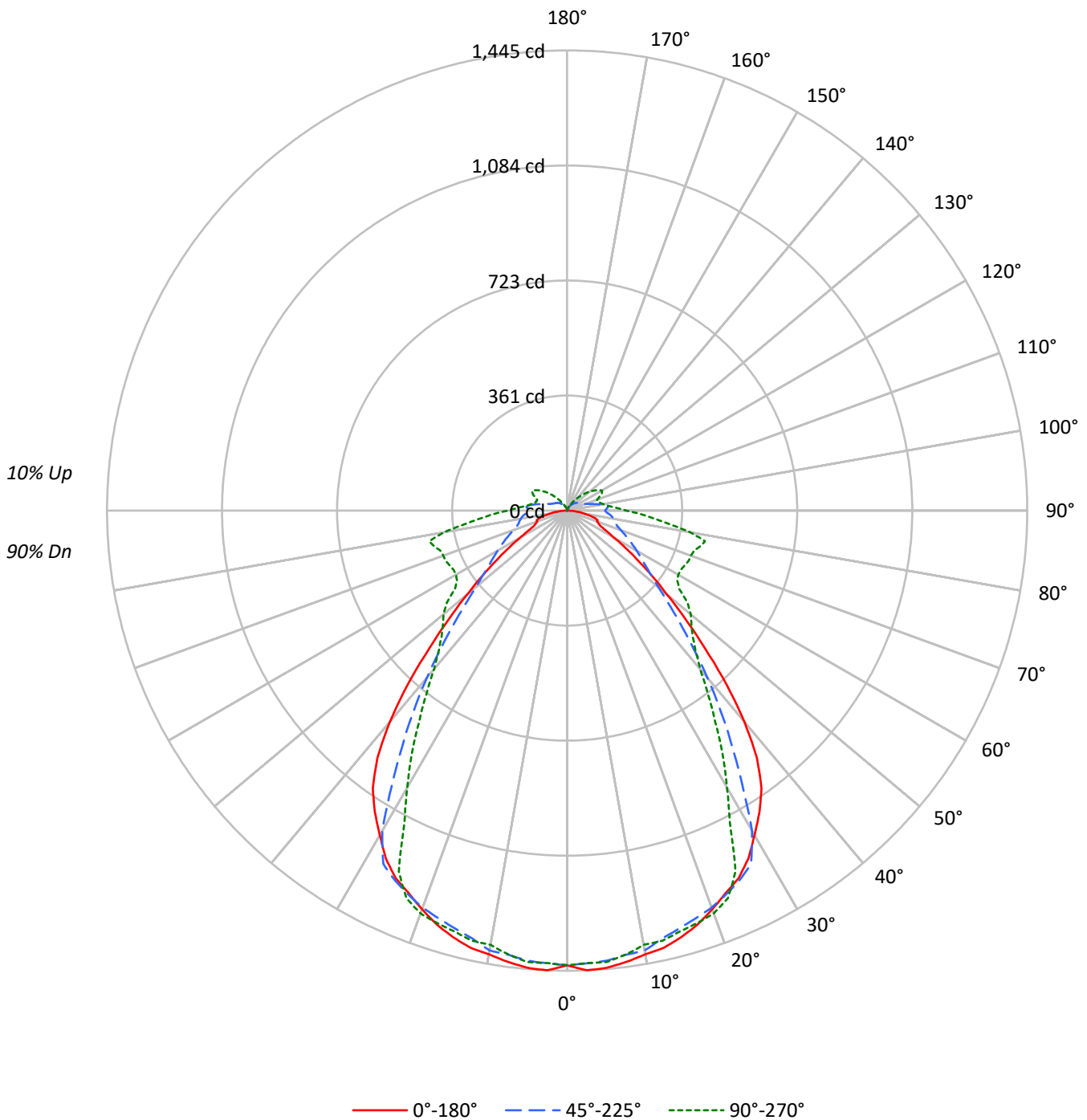
Lumens per Lamp: N/A
Luminaire Lumens: 3370.0 lumens
Efficiency: N/A
Efficacy: 100.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.09 / 1.12
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Direct

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

TEST NUMBER: P231972

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

Luminous Intensity Polar Plot





TEST NUMBER: P231972

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

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°	12970	12970	12970
5°	13084	12441	12329
10°	12942	11970	11551
15°	12866	11380	11085
20°	12652	10990	10682
25°	12478	10572	9797
30°	11999	9625	7820
35°	11404	7576	6335
40°	9851	5859	5121
45°	7489	4421	4472
50°	5440	3409	4177
55°	3969	2866	3670
60°	2853	2549	3590
65°	2250	2305	3824
70°	2341	2103	4150
75°	2667	2043	4687
80°	2141	2147	4657
85°	1512	2218	3569



TEST NUMBER: P231972

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.5	4.0
10°-20°	387.6	11.5
20°-30°	577.2	17.1
30°-40°	577.0	17.1
40°-50°	420.0	12.5
50°-60°	298.5	8.9
60°-70°	249.9	7.4
70°-80°	228.4	6.8
80°-90°	168.7	5.0
90°-100°	102.0	3.0
100°-110°	72.1	2.1
110°-120°	62.1	1.8
120°-130°	45.2	1.3
130°-140°	26.8	0.8
140°-150°	13.4	0.4
150°-160°	4.9	0.1
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	1100.2	32.6
0°-40°	1677.2	49.8
0°-60°	2395.7	71.1
0°-90°	3042.7	90.3
90°-120°	236.2	7.0
90°-150°	321.6	9.5
90°-180°	327.0	9.7
0°-180°	3370.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1428	1428	1428	1428	1428	
5°	1441	1431	1419	1427	1423	137
15°	1386	1378	1359	1371	1368	391
25°	1274	1260	1281	1288	1251	584
35°	1064	1058	903	832	811	654
45°	612	539	502	519	557	478
55°	268	274	300	386	430	246
65°	116	168	213	362	407	123
75°	90	94	158	350	433	89
85°	23	50	133	290	269	26
90°	1	30	119	199	185	2
95°	0	29	128	147	141	0
105°	0	27	80	106	102	0
115°	0	24	51	120	117	0
125°	1	20	42	83	111	1
135°	1	16	33	52	72	1
145°	1	12	23	31	36	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



TEST NUMBER: P231972

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1427.7	1427.7	1427.7	1427.7	1427.7
2.5°	1444.9	1436.3	1423.0	1426.9	1422.2
5°	1441.0	1430.8	1419.1	1426.9	1423.0
7.5°	1429.3	1428.5	1407.4	1416.0	1406.6
10°	1415.2	1419.9	1402.7	1401.9	1384.7
12.5°	1405.8	1398.7	1376.1	1390.9	1383.1
15°	1386.2	1377.6	1358.9	1371.4	1368.2
17.5°	1362.8	1354.9	1342.4	1350.2	1358.1
20°	1332.3	1326.0	1326.8	1347.1	1346.3
22.5°	1300.2	1301.7	1304.9	1326.8	1318.2
25°	1273.6	1259.5	1280.6	1288.4	1250.9
27.5°	1232.1	1227.4	1250.9	1166.4	1106.2
30°	1176.6	1183.6	1160.9	1035.8	1003.7
32.5°	1123.4	1133.5	1024.8	934.8	909.8
35°	1063.9	1058.4	902.8	832.4	811.2
37.5°	978.7	929.4	790.9	739.3	726.0
40°	865.2	770.6	684.5	651.7	649.3
42.5°	740.8	642.3	585.9	581.2	596.9
45°	611.8	539.0	502.2	519.4	557.0
47.5°	503.0	449.8	430.3	470.2	528.8
50°	407.6	376.3	373.2	436.5	506.9
52.5°	334.0	319.2	331.7	417.0	476.4
55°	268.3	273.8	299.6	385.7	430.3
57.5°	215.9	238.6	274.6	363.8	409.9
60°	170.5	209.7	251.9	355.9	402.9
62.5°	138.5	187.8	231.6	359.1	402.1
65°	115.8	168.2	212.8	362.2	406.8
67.5°	107.2	147.1	194.8	363.0	412.3
70°	100.1	126.7	179.1	363.0	413.8
72.5°	100.1	108.7	165.8	359.9	417.7
75°	90.0	93.9	158.0	350.5	432.6
77.5°	72.0	82.9	153.3	343.4	443.6
80°	52.4	72.8	147.9	355.2	391.9
82.5°	39.9	61.0	141.6	335.6	322.3
85°	22.7	50.1	133.0	289.5	269.1
87.5°	10.2	38.3	123.6	238.6	226.1
90°	0.8	29.7	118.9	198.7	185.4
92.5°	0.0	28.2	123.6	166.6	160.4
95°	0.0	28.9	128.3	147.1	140.8
97.5°	0.0	28.9	122.0	131.4	125.2
100°	0.0	28.9	108.7	119.7	115.0
102.5°	0.0	28.2	93.1	110.3	108.0
105°	0.0	27.4	79.8	105.6	102.5
107.5°	0.0	27.4	69.6	108.7	100.1
110°	0.0	26.6	61.0	115.8	100.1



TEST NUMBER: P231972

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

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	25.8	55.5	120.5	108.7
115°	0.0	24.3	50.8	120.5	117.3
117.5°	0.0	23.5	47.7	112.7	123.6
120°	0.0	22.7	45.4	103.3	125.9
122.5°	0.8	21.1	43.8	93.1	118.9
125°	0.8	20.3	41.5	82.9	111.1
127.5°	0.8	18.8	39.9	74.3	102.5
130°	0.8	18.0	37.6	65.7	92.3
132.5°	0.8	17.2	35.2	57.9	82.1
135°	0.8	15.6	32.9	51.6	72.0
137.5°	0.8	14.9	30.5	46.2	62.6
140°	0.8	14.1	28.2	40.7	52.4
142.5°	0.8	13.3	25.0	36.0	43.8
145°	0.8	11.7	22.7	31.3	36.0
147.5°	0.8	11.0	19.6	25.8	28.9
150°	0.8	9.4	17.2	21.9	22.7
152.5°	0.8	7.8	14.1	18.0	18.0
155°	0.8	6.3	11.7	14.1	14.9
157.5°	0.8	5.5	9.4	11.0	12.5
160°	0.8	4.7	7.0	7.8	10.2
162.5°	0.8	3.1	5.5	4.7	7.8
165°	0.8	2.3	3.9	2.3	4.7
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)