

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: P231938

Luminaire Tested: **FVS4M-2-LD4-40-2STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231938
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-LD4-40-2STD-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (84) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

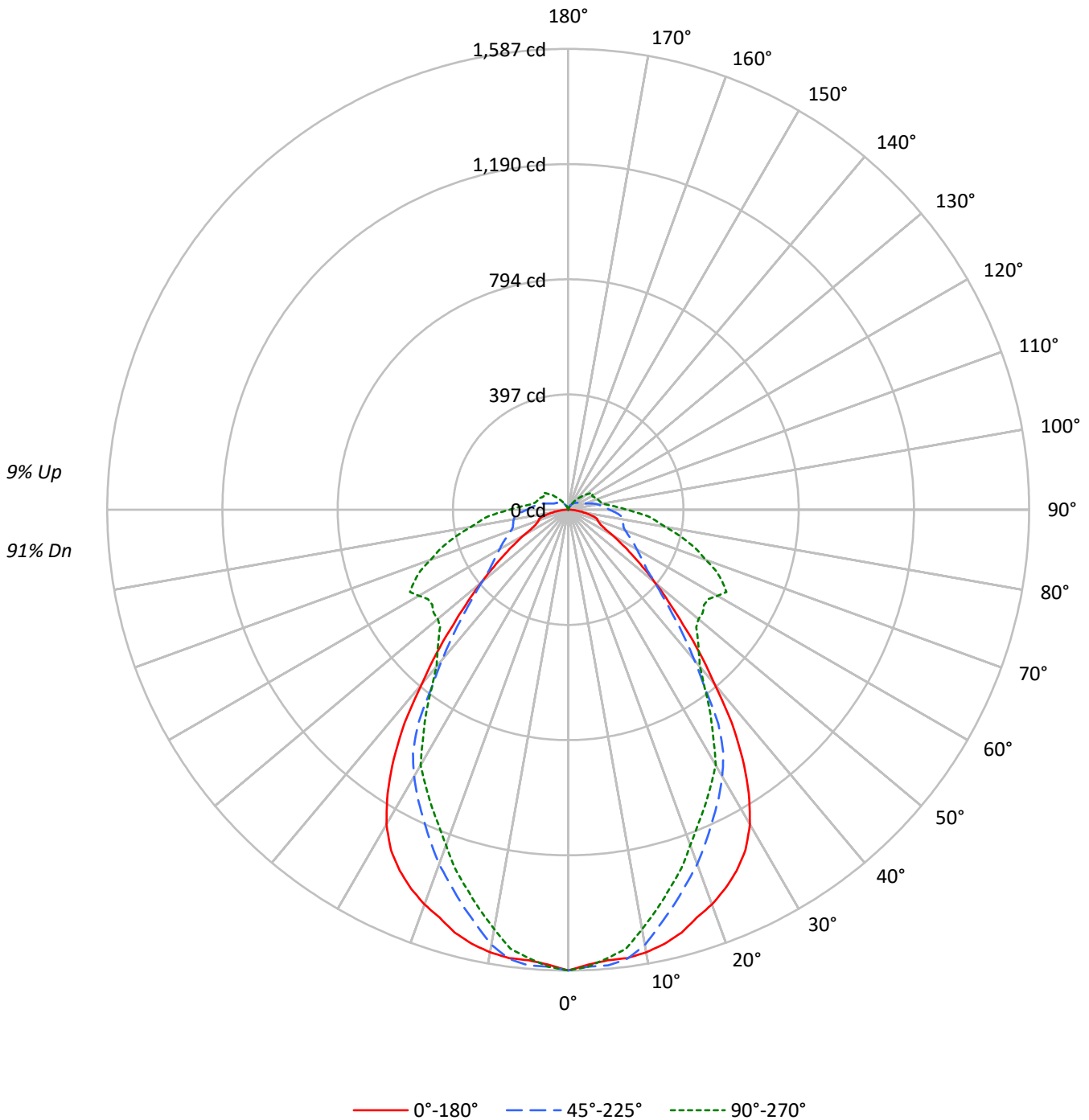
Lumens per Lamp: N/A
Luminaire Lumens: 3509.0 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.98 / 1.07
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Direct

Input Watts (W): 33.9
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°	28515	28515	28515
5°	27857	27242	26569
10°	27762	25544	24196
15°	27334	23142	21646
20°	26714	21051	19293
25°	26013	18986	17328
30°	24574	17127	15654
35°	21491	14689	13162
40°	16988	11189	10994
45°	12936	8636	10028
50°	9790	6811	9548
55°	7277	5808	9635
60°	5458	5289	10452
65°	4351	4913	10875
70°	4452	4651	9987
75°	4639	4797	9114
80°	3581	5171	7964
85°	2375	5388	7373



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.8	4.2
10°-20°	398.9	11.4
20°-30°	553.9	15.8
30°-40°	567.9	16.2
40°-50°	427.0	12.2
50°-60°	334.6	9.5
60°-70°	319.7	9.1
70°-80°	257.6	7.3
80°-90°	174.5	5.0
90°-100°	107.7	3.1
100°-110°	75.5	2.2
110°-120°	56.7	1.6
120°-130°	42.7	1.2
130°-140°	25.5	0.7
140°-150°	13.1	0.4
150°-160°	4.9	0.1
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	1100.7	31.4
0°-40°	1668.6	47.6
0°-60°	2430.2	69.3
0°-90°	3182.1	90.7
90°-120°	239.9	6.8
90°-150°	321.3	9.2
90°-180°	327.0	9.3
0°-180°	3509.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1587	1587	1587	1587	1587	
5°	1557	1569	1575	1558	1550	149
15°	1508	1479	1408	1360	1350	424
25°	1372	1261	1178	1136	1118	629
35°	1047	976	901	851	852	645
45°	559	523	508	555	631	438
55°	265	271	316	460	571	242
65°	124	173	238	534	585	130
75°	91	101	196	415	425	92
85°	24	56	174	259	281	26
90°	0	33	142	211	201	1
95°	0	31	122	158	152	0
105°	0	29	82	117	112	0
115°	0	25	51	97	100	0
125°	0	21	42	78	101	0
135°	1	17	33	47	64	0
145°	1	12	25	28	32	1
155°	1	6	12	15	13	0
165°	1	2	3	2	3	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°	1586.7	1586.7	1586.7	1586.7	1586.7
2.5°	1568.0	1571.3	1575.3	1577.8	1575.3
5°	1557.4	1568.8	1575.3	1558.2	1550.1
7.5°	1557.4	1559.0	1559.8	1535.4	1524.8
10°	1547.6	1542.7	1521.6	1475.1	1466.2
12.5°	1531.3	1520.7	1462.9	1418.1	1409.2
15°	1507.7	1479.2	1408.3	1360.3	1350.5
17.5°	1472.7	1429.5	1352.1	1304.9	1295.1
20°	1446.6	1379.0	1298.4	1251.9	1229.1
22.5°	1412.4	1321.2	1238.1	1192.5	1170.5
25°	1371.7	1260.9	1177.8	1135.5	1118.4
27.5°	1321.2	1194.1	1120.8	1076.0	1065.4
30°	1251.1	1133.8	1060.5	1023.1	1015.7
32.5°	1157.5	1059.7	994.6	937.5	928.6
35°	1046.7	975.8	900.9	851.2	852.0
37.5°	924.5	883.0	771.4	770.6	770.6
40°	783.6	742.9	674.4	683.4	704.6
42.5°	670.4	621.5	586.5	612.5	666.3
45°	558.8	522.9	507.5	554.7	631.3
47.5°	467.5	439.9	440.7	512.3	597.9
50°	391.0	373.1	386.9	482.2	585.7
52.5°	322.6	314.4	343.7	466.7	584.0
55°	264.7	271.2	316.0	460.2	571.0
57.5°	215.0	237.8	292.4	471.6	572.6
60°	177.6	211.8	272.9	486.3	593.0
62.5°	143.4	189.8	256.6	505.8	614.2
65°	123.8	172.7	237.8	533.5	584.8
67.5°	114.9	152.3	221.6	558.0	551.4
70°	107.5	132.8	208.5	524.6	503.4
72.5°	105.1	115.7	199.6	465.9	467.5
75°	91.2	101.0	196.3	415.4	425.2
77.5°	70.9	91.2	193.9	369.0	382.0
80°	53.8	79.8	189.8	329.1	338.8
82.5°	39.1	67.6	185.7	292.4	307.1
85°	24.4	56.2	173.5	259.0	281.0
87.5°	10.6	42.4	157.2	236.2	237.0
90°	0.0	32.6	141.7	211.0	201.2
92.5°	0.0	31.8	132.8	181.6	174.3
95°	0.0	31.0	122.2	158.0	152.3
97.5°	0.0	31.0	112.4	142.5	132.8
100°	0.0	30.1	104.3	130.3	122.2
102.5°	0.0	29.3	94.5	121.4	115.7
105°	0.0	29.3	81.5	117.3	112.4
107.5°	0.0	28.5	70.9	112.4	109.1
110°	0.0	27.7	61.9	105.1	107.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	26.9	56.2	100.2	105.9
115°	0.0	25.3	51.3	96.9	100.2
117.5°	0.0	24.4	48.9	99.4	96.9
120°	0.0	23.6	46.4	98.6	95.3
122.5°	0.0	22.8	44.8	88.0	99.4
125°	0.0	21.2	42.4	78.2	101.0
127.5°	0.0	20.4	39.9	69.2	90.4
130°	0.0	18.7	37.5	61.1	81.5
132.5°	0.0	17.9	35.0	53.8	74.1
135°	0.8	17.1	33.4	47.2	64.3
137.5°	0.8	16.3	31.8	42.4	55.4
140°	0.8	15.5	29.3	37.5	46.4
142.5°	0.8	13.8	27.7	32.6	39.1
145°	0.8	12.2	25.3	28.5	31.8
147.5°	0.8	11.4	22.0	24.4	25.3
150°	0.8	9.8	18.7	21.2	19.5
152.5°	0.8	8.1	15.5	17.9	15.5
155°	0.8	6.5	12.2	14.7	13.0
157.5°	0.8	4.9	9.8	12.2	10.6
160°	0.8	3.3	8.1	8.1	9.0
162.5°	0.8	2.4	5.7	4.9	6.5
165°	0.8	1.6	3.3	1.6	3.3
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)