

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: P232015

Luminaire Tested: **FVS4M-4-LD4-50-2HI-PA187-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P232015  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-20)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS4M-4-LD4-50-2HI-PA187-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
4FT LENGTH, 2-MODULE LED WITH PA187 LENS  
Light Source: (168) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

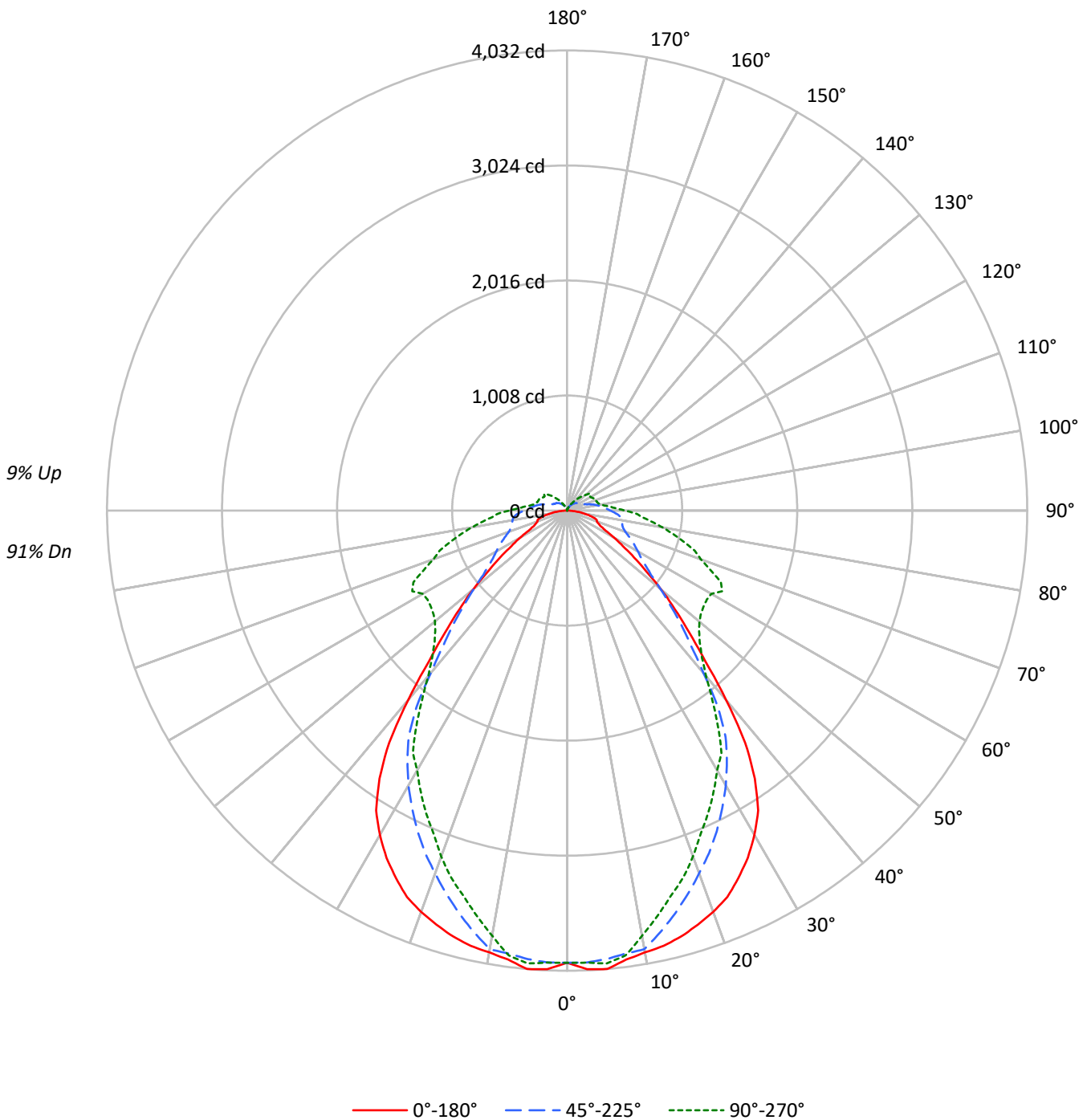
Lumens per Lamp: N/A  
Luminaire Lumens: 9182.1 lumens  
Efficiency: N/A  
Efficacy: 102.8 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.02 / 1.12  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')  
CIE Type: Direct

Input Watts (W): 89.3  
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	100	100	100	94	94	94	91
1	106	101	96	92	102	98	94	90	92	89	85	86	84	81	81	79	77	75
2	97	89	82	76	93	86	80	74	81	76	71	76	72	68	72	69	66	63
3	89	79	71	64	86	76	69	63	72	66	61	68	63	59	64	60	57	54
4	82	70	62	55	79	68	61	55	65	58	53	61	56	51	58	54	50	47
5	76	64	55	49	73	62	54	48	59	52	47	56	50	45	53	48	44	42
6	70	58	49	43	68	56	48	43	54	47	42	51	45	40	49	44	39	37
7	66	53	44	39	63	52	44	38	49	42	37	47	41	36	45	40	36	34
8	61	49	40	35	59	48	40	35	45	39	34	44	38	33	42	36	32	30
9	58	45	37	32	56	44	37	31	42	36	31	40	35	30	39	34	30	28
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	36	31	27	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	35984	35984	35984
5°	36608	34582	34508
10°	35943	33299	31561
15°	35855	30597	28349
20°	35535	28015	25591
25°	34793	25601	22905
30°	33471	23046	20466
35°	30727	20315	17986
40°	24660	15909	14934
45°	18521	12428	13198
50°	14343	9737	12449
55°	10610	8007	12448
60°	7971	7258	12994
65°	6291	6788	13966
70°	6475	6387	12484
75°	7171	6470	11468
80°	6014	7055	10076
85°	4355	7509	8761



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	376.9	4.1
10°-20°	1036.0	11.3
20°-30°	1451.4	15.8
30°-40°	1529.9	16.7
40°-50°	1162.0	12.7
50°-60°	877.8	9.6
60°-70°	813.5	8.9
70°-80°	656.2	7.1
80°-90°	440.4	4.8
90°-100°	272.2	3.0
100°-110°	191.4	2.1
110°-120°	144.5	1.6
120°-130°	111.0	1.2
130°-140°	68.2	0.7
140°-150°	34.9	0.4
150°-160°	13.1	0.1
160°-170°	2.6	0.0
170°-180°	0.0	0.0
0°-30°	2864.3	31.2
0°-40°	4394.2	47.9
0°-60°	6434.0	70.1
0°-90°	8344.1	90.9
90°-120°	608.1	6.6
90°-150°	822.2	9.0
90°-180°	838.0	9.1
0°-180°	9182.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3961	3961	3961	3961	3961	
5°	4032	3997	3945	3978	3983	380
15°	3863	3850	3654	3563	3499	1089
25°	3551	3318	3101	2978	2924	1632
35°	2867	2613	2421	2305	2303	1756
45°	1513	1462	1412	1487	1644	1190
55°	717	742	837	1183	1460	654
65°	324	456	627	1311	1486	340
75°	242	265	500	1050	1058	245
85°	65	148	450	650	660	72
90°	3	87	378	518	506	6
95°	2	80	315	394	378	2
105°	2	75	213	294	275	2
115°	2	68	134	244	254	2
125°	2	57	113	204	246	2
135°	3	42	88	130	173	2
145°	3	32	62	78	89	2
155°	4	18	33	36	37	2
165°	4	8	14	8	13	1
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°	3961.1	3961.1	3961.1	3961.1	3961.1
2.5°	4022.1	4004.7	3963.2	3973.1	3964.3
5°	4031.9	3997.0	3944.7	3978.5	3982.9
7.5°	3967.6	3978.5	3915.3	3940.4	3930.5
10°	3930.5	3953.4	3902.2	3851.0	3783.4
12.5°	3906.6	3903.3	3781.2	3706.0	3641.7
15°	3863.0	3849.9	3653.7	3563.2	3498.9
17.5°	3805.2	3757.2	3520.7	3409.5	3375.7
20°	3742.0	3610.1	3382.3	3266.7	3225.3
22.5°	3665.7	3472.7	3248.2	3128.3	3059.6
25°	3551.2	3318.0	3101.1	2977.9	2924.5
27.5°	3428.1	3156.6	2940.8	2823.1	2778.4
30°	3282.0	2987.7	2779.5	2686.9	2626.9
32.5°	3115.2	2812.2	2604.0	2514.6	2516.8
35°	2866.7	2612.7	2420.9	2305.4	2303.2
37.5°	2561.5	2354.4	2170.2	2092.8	2087.4
40°	2165.8	2077.5	1858.5	1891.2	1893.3
42.5°	1789.8	1738.6	1608.8	1655.7	1749.5
45°	1512.9	1461.7	1411.6	1486.8	1643.7
47.5°	1281.8	1208.8	1221.9	1359.2	1567.4
50°	1074.7	1024.6	1066.0	1268.8	1510.7
52.5°	868.7	864.4	927.6	1211.0	1479.1
55°	717.2	742.3	837.1	1182.7	1459.5
57.5°	578.8	639.8	766.3	1187.0	1451.9
60°	476.3	563.5	717.2	1226.3	1458.4
62.5°	379.3	505.8	668.2	1263.3	1530.4
65°	323.7	455.6	626.8	1311.3	1485.7
67.5°	295.4	406.6	581.0	1389.8	1358.1
70°	276.9	354.3	543.9	1326.5	1244.8
72.5°	273.6	305.2	515.6	1197.9	1171.8
75°	242.0	264.9	500.3	1049.7	1058.4
77.5°	199.5	236.5	492.7	927.6	950.5
80°	147.2	208.2	486.1	824.0	848.0
82.5°	111.2	176.6	474.2	735.8	746.7
85°	65.4	148.2	450.2	649.6	660.5
87.5°	31.6	111.2	416.4	562.4	606.0
90°	3.3	87.2	378.2	517.8	505.8
92.5°	3.3	80.7	346.6	448.0	430.6
95°	2.2	79.6	315.0	393.5	378.2
97.5°	2.2	79.6	292.1	351.0	332.5
100°	2.2	78.5	268.1	322.6	301.9
102.5°	2.2	77.4	242.0	304.1	283.4
105°	2.2	75.2	212.6	294.3	274.7
107.5°	2.2	74.1	182.0	284.5	269.2
110°	2.2	71.9	161.3	268.1	266.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.2	69.8	143.9	255.1	264.9
115°	2.2	67.6	134.1	244.2	254.0
117.5°	2.2	65.4	127.5	242.0	244.2
120°	2.2	62.1	123.2	246.3	236.5
122.5°	2.2	58.9	117.7	230.0	234.4
125°	2.2	56.7	113.4	203.8	246.3
127.5°	2.2	52.3	107.9	182.0	242.0
130°	2.2	49.1	101.4	163.5	215.8
132.5°	2.2	45.8	95.9	145.0	194.0
135°	3.3	42.5	88.3	129.7	173.3
137.5°	3.3	40.3	81.8	115.5	150.4
140°	3.3	37.1	76.3	102.5	129.7
142.5°	3.3	34.9	69.8	90.5	109.0
145°	3.3	31.6	62.1	78.5	89.4
147.5°	3.3	29.4	55.6	66.5	70.9
150°	3.3	25.1	48.0	56.7	55.6
152.5°	3.3	21.8	40.3	44.7	45.8
155°	4.4	18.5	32.7	36.0	37.1
157.5°	3.3	15.3	27.3	28.3	31.6
160°	4.4	13.1	22.9	20.7	27.3
162.5°	4.4	9.8	19.6	14.2	21.8
165°	4.4	7.6	14.2	7.6	13.1
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)