

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: P232007

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232007
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-LD4-50-2LO-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

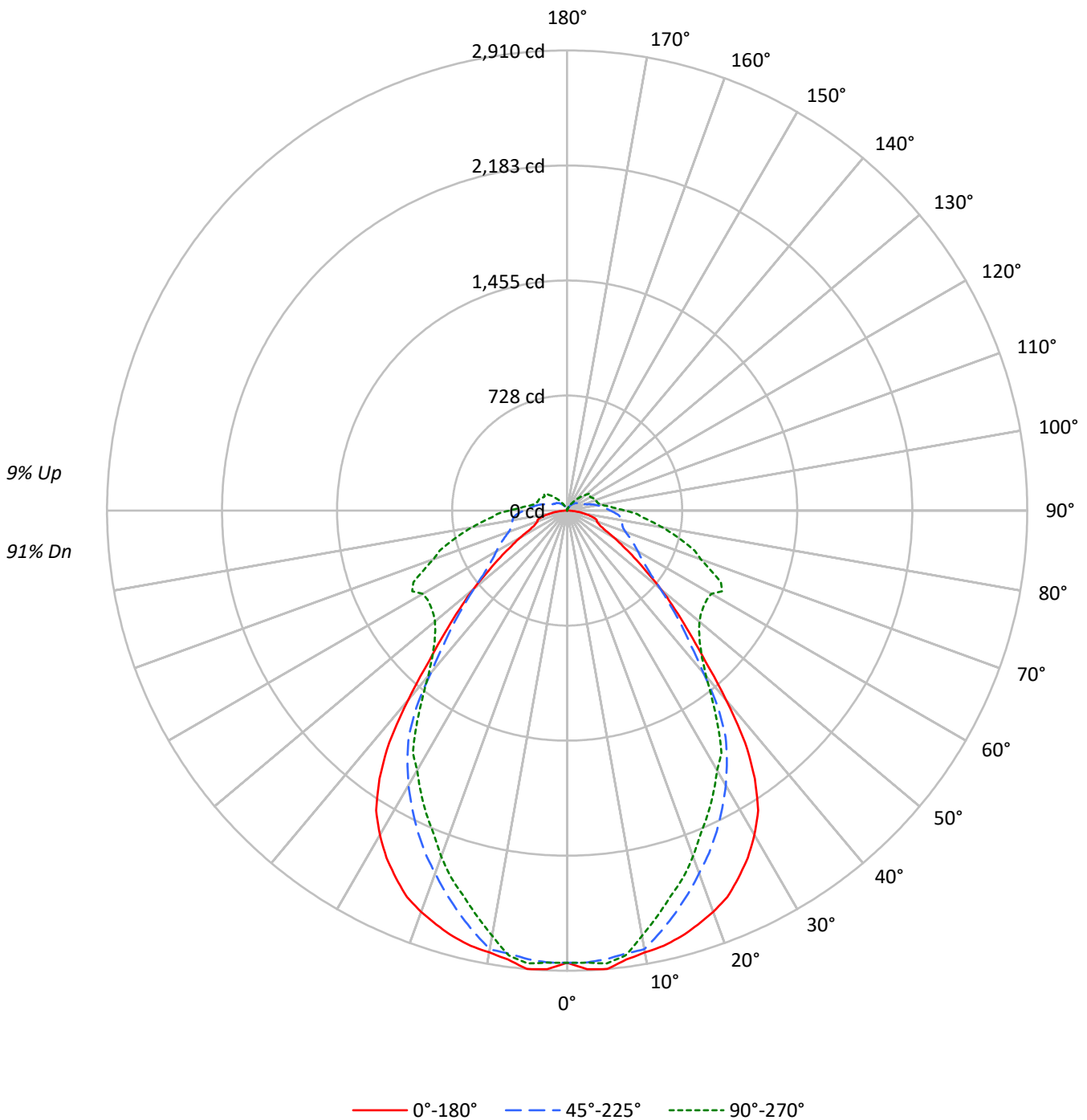
Lumens per Lamp: N/A
Luminaire Lumens: 6627.0 lumens
Efficiency: N/A
Efficacy: 115.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.02 / 1.12
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Direct

Input Watts (W): 57.4
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°	25971	25971	25971
5°	26422	24960	24906
10°	25942	24034	22778
15°	25878	22083	20460
20°	25647	20219	18470
25°	25112	18477	16531
30°	24157	16633	14771
35°	22177	14662	12981
40°	17799	11482	10778
45°	13367	8970	9525
50°	10353	7028	8985
55°	7657	5779	8985
60°	5754	5238	9378
65°	4540	4898	10080
70°	4672	4611	9010
75°	5173	4670	8277
80°	4339	5093	7272
85°	3143	5419	6323



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	272.0	4.1
10°-20°	747.7	11.3
20°-30°	1047.5	15.8
30°-40°	1104.2	16.7
40°-50°	838.7	12.7
50°-60°	633.5	9.6
60°-70°	587.1	8.9
70°-80°	473.6	7.1
80°-90°	317.8	4.8
90°-100°	196.5	3.0
100°-110°	138.1	2.1
110°-120°	104.3	1.6
120°-130°	80.1	1.2
130°-140°	49.2	0.7
140°-150°	25.2	0.4
150°-160°	9.5	0.1
160°-170°	1.9	0.0
170°-180°	0.0	0.0
0°-30°	2067.3	31.2
0°-40°	3171.5	47.9
0°-60°	4643.7	70.1
0°-90°	6022.2	90.9
90°-120°	438.9	6.6
90°-150°	593.3	9.0
90°-180°	605.0	9.1
0°-180°	6627.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2859	2859	2859	2859	2859	
5°	2910	2885	2847	2871	2875	274
15°	2788	2779	2637	2572	2525	786
25°	2563	2395	2238	2149	2111	1178
35°	2069	1886	1747	1664	1662	1267
45°	1092	1055	1019	1073	1186	859
55°	518	536	604	854	1053	472
65°	234	329	452	946	1072	245
75°	175	191	361	758	764	177
85°	47	107	325	469	477	52
90°	2	63	273	374	365	4
95°	2	57	227	284	273	1
105°	2	54	153	212	198	2
115°	2	49	97	176	183	2
125°	2	41	82	147	178	1
135°	2	31	64	94	125	2
145°	2	23	45	57	64	2
155°	3	13	24	26	27	1
165°	3	6	10	6	9	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°	2858.9	2858.9	2858.9	2858.9	2858.9
2.5°	2902.9	2890.3	2860.4	2867.5	2861.2
5°	2910.0	2884.8	2847.1	2871.4	2874.6
7.5°	2863.6	2871.4	2825.8	2843.9	2836.8
10°	2836.8	2853.3	2816.4	2779.4	2730.6
12.5°	2819.5	2817.2	2729.0	2674.8	2628.3
15°	2788.0	2778.6	2637.0	2571.7	2525.3
17.5°	2746.4	2711.7	2541.0	2460.8	2436.4
20°	2700.7	2605.5	2441.1	2357.7	2327.8
22.5°	2645.7	2506.4	2344.4	2257.8	2208.3
25°	2563.1	2394.7	2238.1	2149.3	2110.7
27.5°	2474.2	2278.3	2122.5	2037.5	2005.3
30°	2368.7	2156.3	2006.1	1939.2	1895.9
32.5°	2248.4	2029.7	1879.4	1814.9	1816.5
35°	2069.0	1885.7	1747.3	1663.9	1662.3
37.5°	1848.7	1699.3	1566.3	1510.5	1506.5
40°	1563.2	1499.4	1341.3	1364.9	1366.5
42.5°	1291.8	1254.8	1161.2	1195.0	1262.6
45°	1091.9	1055.0	1018.8	1073.1	1186.3
47.5°	925.2	872.4	881.9	981.0	1131.3
50°	775.7	739.5	769.4	915.7	1090.4
52.5°	627.0	623.8	669.5	874.0	1067.5
55°	517.6	535.7	604.2	853.6	1053.4
57.5°	417.7	461.8	553.0	856.7	1047.9
60°	343.8	406.7	517.6	885.0	1052.6
62.5°	273.8	365.0	482.2	911.8	1104.5
65°	233.6	328.8	452.3	946.4	1072.3
67.5°	213.2	293.4	419.3	1003.0	980.2
70°	199.8	255.7	392.6	957.4	898.4
72.5°	197.5	220.3	372.1	864.6	845.7
75°	174.6	191.2	361.1	757.6	763.9
77.5°	144.0	170.7	355.6	669.5	686.0
80°	106.2	150.3	350.9	594.7	612.0
82.5°	80.2	127.4	342.2	531.0	538.9
85°	47.2	107.0	324.9	468.9	476.7
87.5°	22.8	80.2	300.5	405.9	437.4
90°	2.4	62.9	273.0	373.7	365.0
92.5°	2.4	58.2	250.2	323.3	310.7
95°	1.6	57.4	227.4	284.0	273.0
97.5°	1.6	57.4	210.8	253.3	239.9
100°	1.6	56.6	193.5	232.9	217.9
102.5°	1.6	55.9	174.6	219.5	204.5
105°	1.6	54.3	153.4	212.4	198.2
107.5°	1.6	53.5	131.4	205.3	194.3
110°	1.6	51.9	116.4	193.5	192.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	50.3	103.8	184.1	191.2
115°	1.6	48.8	96.8	176.2	183.3
117.5°	1.6	47.2	92.0	174.6	176.2
120°	1.6	44.8	88.9	177.8	170.7
122.5°	1.6	42.5	85.0	166.0	169.1
125°	1.6	40.9	81.8	147.1	177.8
127.5°	1.6	37.8	77.9	131.4	174.6
130°	1.6	35.4	73.2	118.0	155.8
132.5°	1.6	33.0	69.2	104.6	140.0
135°	2.4	30.7	63.7	93.6	125.1
137.5°	2.4	29.1	59.0	83.4	108.6
140°	2.4	26.7	55.1	73.9	93.6
142.5°	2.4	25.2	50.3	65.3	78.7
145°	2.4	22.8	44.8	56.6	64.5
147.5°	2.4	21.2	40.1	48.0	51.1
150°	2.4	18.1	34.6	40.9	40.1
152.5°	2.4	15.7	29.1	32.3	33.0
155°	3.1	13.4	23.6	26.0	26.7
157.5°	2.4	11.0	19.7	20.5	22.8
160°	3.1	9.4	16.5	14.9	19.7
162.5°	3.1	7.1	14.2	10.2	15.7
165°	3.1	5.5	10.2	5.5	9.4
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)