

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: P241475

Luminaire Tested: **FVS8M-3-LD4-40-2HI-PA187-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241475  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-25)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS8M-3-LD4-40-2HI-PA187-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
3FT LENGTH, 2-MODULE LED WITH PA187 LENS  
Light Source: (168) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

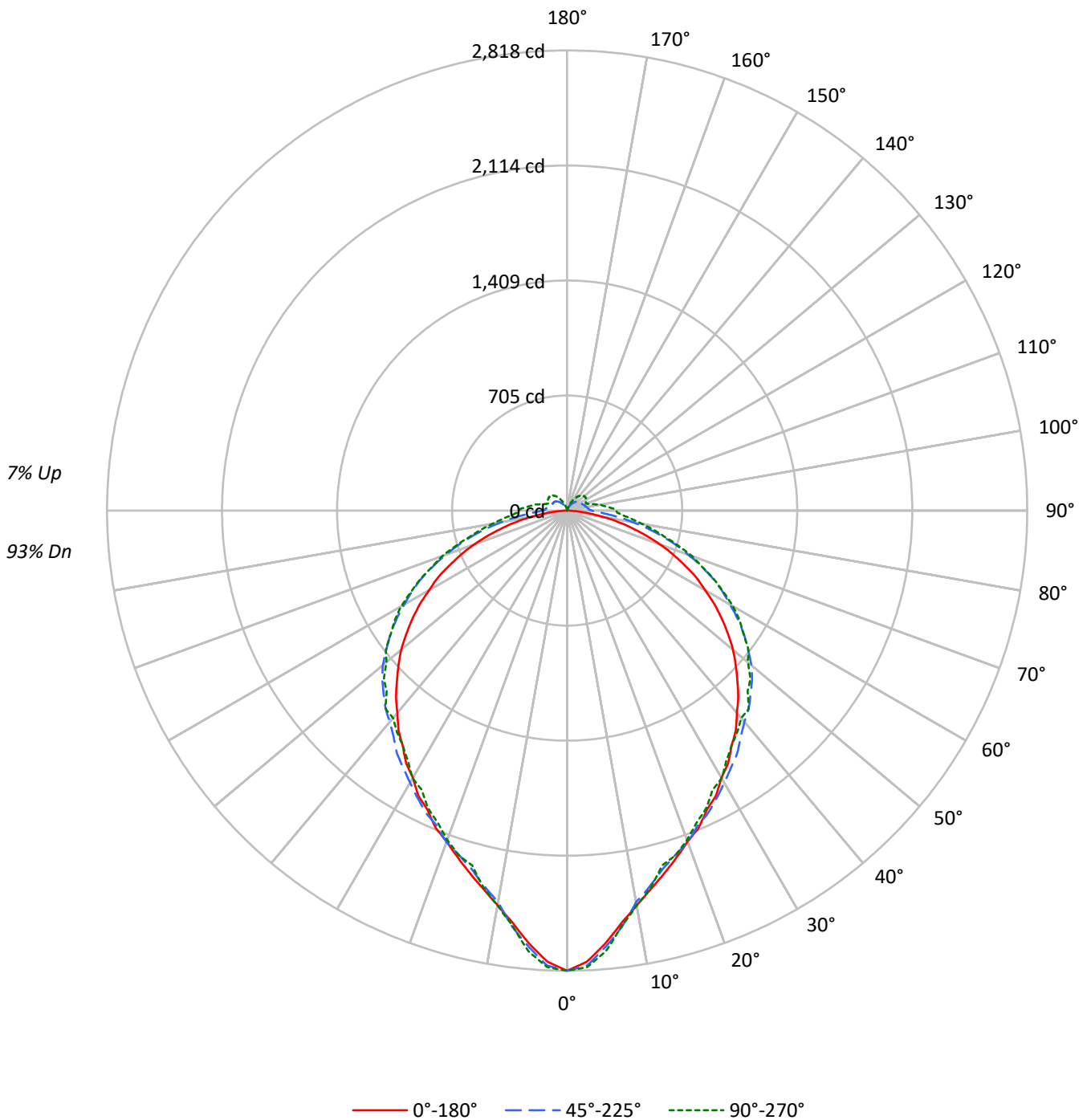
Lumens per Lamp: N/A  
Luminaire Lumens: 7576.1 lumens  
Efficiency: N/A  
Efficacy: 109.3 lumens/watt  
Spacing Criteria (0/90/45): 1.01 / 1 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')  
CIE Type: Direct

Input Watts (W): 69.3  
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	114	114	114	114	107	107	107	101	101	101	96	96	96	93
1	106	101	97	92	103	98	94	90	93	89	86	88	85	82	83	81	79	76
2	96	88	80	74	93	85	79	73	80	75	70	76	72	68	72	68	65	63
3	87	77	68	61	84	74	67	60	71	64	58	67	61	57	63	59	55	52
4	80	68	59	52	77	66	57	51	62	55	50	59	53	48	56	51	47	44
5	73	60	51	44	71	59	50	44	56	48	43	53	47	42	51	45	41	38
6	68	54	45	39	65	53	44	38	50	43	37	48	41	36	46	40	36	33
7	63	49	40	34	61	48	40	34	46	38	33	44	37	32	42	36	32	29
8	58	45	36	30	56	44	36	30	42	35	29	40	34	29	38	33	28	26
9	55	41	33	27	53	40	32	27	39	31	26	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	24	36	29	24	34	28	24	33	27	23	21

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

	0°	45°	90°
0°	16456	16456	16456
5°	15540	15462	15572
10°	14421	13951	14000
15°	13711	13033	12820
20°	13159	12536	12323
25°	12725	12068	11734
30°	12372	11656	11286
35°	12085	11385	10803
40°	11819	11058	10632
45°	11589	10974	10530
50°	11355	10850	10336
55°	10978	10518	10146
60°	10472	10056	9848
65°	9888	9585	9226
70°	9073	8748	8566
75°	7731	7796	7530
80°	5866	6517	6827
85°	3088	5028	6455



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	248.2	3.3
10°-20°	643.9	8.5
20°-30°	937.7	12.4
30°-40°	1120.1	14.8
40°-50°	1203.8	15.9
50°-60°	1143.1	15.1
60°-70°	923.7	12.2
70°-80°	593.3	7.8
80°-90°	259.7	3.4
90°-100°	137.8	1.8
100°-110°	104.3	1.4
110°-120°	83.2	1.1
120°-130°	74.2	1.0
130°-140°	55.5	0.7
140°-150°	32.1	0.4
150°-160°	12.7	0.2
160°-170°	2.7	0.0
170°-180°	0.1	0.0
0°-30°	1829.8	24.2
0°-40°	2950.0	38.9
0°-60°	5296.9	69.9
0°-90°	7073.5	93.4
90°-120°	325.3	4.3
90°-150°	487.1	6.4
90°-180°	503.0	6.6
0°-180°	7576.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2818	2818	2818	2818	2818	
5°	2663	2665	2683	2704	2709	247
15°	2299	2290	2269	2265	2249	648
25°	2022	2044	2044	2022	2013	936
35°	1756	1799	1816	1797	1755	1102
45°	1475	1532	1589	1611	1563	1139
55°	1157	1230	1322	1319	1318	1033
65°	794	870	985	994	991	787
75°	408	490	598	635	615	433
85°	73	141	243	303	345	93
90°	1	64	150	211	298	3
95°	1	57	130	192	248	1
105°	1	50	113	152	151	1
115°	1	46	99	124	127	1
125°	1	39	94	132	138	1
135°	1	29	77	117	130	1
145°	2	16	53	85	100	1
155°	2	6	26	46	53	1
165°	3	2	7	14	18	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2818	2818	2818	2818	2818	2818	2818	2818	2818	2818	2818
2.5°	2765	2769	2769	2768	2770	2769	2774	2781	2784	2788	2789
5°	2663	2667	2661	2655	2659	2665	2670	2680	2679	2678	2683
7.5°	2547	2548	2543	2540	2538	2542	2546	2550	2558	2567	2571
10°	2454	2457	2448	2441	2438	2437	2443	2450	2453	2445	2434
12.5°	2372	2370	2367	2355	2361	2363	2365	2363	2353	2348	2353
15°	2299	2298	2295	2288	2290	2290	2284	2280	2280	2287	2269
17.5°	2228	2227	2226	2216	2220	2221	2222	2221	2226	2214	2209
20°	2157	2153	2154	2156	2166	2162	2161	2165	2157	2155	2161
22.5°	2103	2101	2097	2096	2097	2095	2098	2100	2098	2104	2088
25°	2022	2021	2023	2027	2036	2044	2050	2036	2047	2043	2044
27.5°	1971	1971	1972	1969	1975	1980	1980	1989	1993	1985	1984
30°	1889	1889	1895	1906	1916	1928	1926	1927	1928	1929	1924
32.5°	1835	1837	1840	1841	1856	1854	1856	1873	1874	1873	1868
35°	1756	1753	1765	1773	1795	1799	1802	1804	1814	1809	1816
37.5°	1696	1697	1702	1714	1716	1731	1742	1745	1744	1749	1746
40°	1617	1614	1622	1643	1661	1668	1674	1684	1688	1693	1689
42.5°	1551	1549	1557	1575	1590	1603	1609	1620	1633	1640	1646
45°	1475	1473	1485	1503	1524	1532	1543	1560	1576	1585	1589
47.5°	1400	1402	1405	1426	1456	1465	1478	1485	1516	1525	1536
50°	1326	1327	1336	1349	1374	1385	1403	1423	1437	1455	1473
52.5°	1242	1241	1255	1274	1298	1313	1324	1353	1369	1383	1395
55°	1157	1163	1173	1190	1214	1230	1241	1265	1296	1311	1322
57.5°	1071	1076	1091	1107	1129	1140	1157	1183	1206	1223	1240
60°	976	982	997	1015	1047	1050	1070	1095	1119	1142	1153
62.5°	895	895	906	929	952	966	985	1007	1034	1053	1072
65°	794	800	817	839	855	870	891	916	946	968	985
67.5°	701	704	723	740	767	783	793	826	854	873	887
70°	606	612	626	646	670	687	699	731	754	777	788
72.5°	504	512	530	550	574	589	601	632	656	676	699
75°	408	413	432	454	480	490	506	530	560	585	598
77.5°	317	321	340	358	383	397	411	438	463	486	503
80°	225	230	247	264	291	304	314	345	371	391	409
82.5°	144	149	165	186	206	220	231	255	282	301	322
85°	73	77	91	109	134	141	158	179	203	224	243
87.5°	22	28	42	59	79	89	102	124	145	165	186
90°	1	6	18	34	54	64	75	95	113	133	150
92.5°	1	5	16	32	50	60	69	88	105	121	136
95°	1	4	15	30	48	57	66	84	100	116	130
97.5°	1	4	14	29	46	55	64	80	95	111	126
100°	1	4	14	28	45	53	61	77	92	107	121
102.5°	1	4	13	28	43	51	59	74	89	104	117
105°	1	3	13	27	42	50	57	72	87	101	113
107.5°	1	3	12	26	41	49	56	71	84	98	109
110°	1	3	12	25	40	48	55	70	83	95	105



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1	3	11	24	39	47	54	68	81	92	102
115°	1	2	11	23	38	46	53	67	79	90	99
117.5°	1	2	10	23	37	44	52	65	77	88	98
120°	1	2	10	22	35	43	50	63	76	87	97
122.5°	1	2	9	21	34	41	48	61	74	86	96
125°	1	1	8	19	32	39	46	59	71	83	94
127.5°	1	1	7	18	31	37	44	57	69	80	91
130°	1	1	6	16	29	35	41	53	65	76	87
132.5°	1	1	6	15	26	32	38	50	61	72	82
135°	1	1	5	13	24	29	35	46	57	67	77
137.5°	2	1	4	11	21	26	31	42	52	62	71
140°	2	1	3	9	18	23	28	37	47	56	66
142.5°	2	2	2	8	15	19	24	33	42	51	59
145°	2	2	2	6	12	16	20	28	36	45	53
147.5°	2	2	2	5	10	13	16	24	31	38	46
150°	2	2	2	4	8	11	13	19	26	33	39
152.5°	2	2	2	3	6	8	10	16	21	27	33
155°	2	2	2	2	5	6	8	12	17	21	26
157.5°	2	2	2	2	3	4	6	9	13	17	20
160°	2	2	2	2	2	3	4	6	9	12	15
162.5°	3	2	2	2	2	2	3	4	6	9	11
165°	3	2	2	2	1	2	2	3	4	5	7
167.5°	3	3	2	2	2	1	1	1	2	3	4
170°	3	3	2	2	2	1	1	1	1	1	1
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	2818	2818	2818	2818	2818	2818	2818	2818	2818	2818
2.5°	2790	2796	2798	2799	2803	2801	2803	2799	2799	2798
5°	2682	2686	2693	2703	2704	2705	2707	2712	2714	2709
7.5°	2559	2564	2556	2550	2555	2554	2563	2557	2564	2565
10°	2427	2428	2439	2447	2446	2450	2446	2441	2447	2455
12.5°	2354	2339	2321	2330	2338	2341	2360	2363	2371	2365
15°	2262	2272	2284	2266	2265	2259	2253	2249	2248	2249
17.5°	2218	2201	2191	2200	2215	2224	2224	2226	2209	2212
20°	2141	2146	2165	2154	2148	2142	2138	2145	2152	2146
22.5°	2096	2104	2086	2107	2111	2118	2113	2085	2074	2069
25°	2041	2033	2062	2032	2022	2006	2004	2008	2014	2013
27.5°	1976	1994	1957	1966	1981	1983	1979	1957	1945	1928
30°	1936	1903	1921	1919	1898	1893	1882	1888	1893	1892
32.5°	1860	1868	1848	1834	1847	1857	1856	1833	1819	1815
35°	1803	1796	1788	1808	1797	1777	1753	1754	1755	1755
37.5°	1747	1729	1751	1714	1711	1719	1731	1724	1713	1711
40°	1682	1702	1670	1692	1695	1691	1666	1658	1659	1659
42.5°	1648	1641	1658	1654	1643	1642	1654	1654	1649	1646
45°	1602	1598	1602	1601	1611	1612	1589	1571	1565	1563
47.5°	1535	1558	1542	1550	1537	1522	1521	1525	1524	1522
50°	1477	1476	1495	1462	1465	1473	1471	1456	1451	1444
52.5°	1413	1419	1403	1409	1408	1397	1385	1390	1396	1400
55°	1330	1339	1336	1331	1319	1323	1337	1330	1320	1318
57.5°	1260	1250	1260	1254	1262	1257	1240	1242	1246	1252
60°	1169	1182	1164	1178	1166	1154	1164	1178	1174	1173
62.5°	1075	1081	1087	1075	1073	1081	1082	1070	1074	1078
65°	988	982	993	993	994	990	980	986	991	991
67.5°	893	902	897	902	895	897	901	893	895	890
70°	799	807	813	810	814	817	810	809	810	813
72.5°	707	714	727	730	737	733	722	717	712	712
75°	611	624	631	642	635	630	635	623	618	615
77.5°	518	533	546	540	543	548	543	540	537	539
80°	424	443	450	454	459	459	461	462	463	463
82.5°	342	355	366	375	378	378	385	391	397	401
85°	267	278	289	297	303	308	319	328	338	345
87.5°	204	215	227	239	245	252	264	277	294	308
90°	163	177	191	205	211	218	233	250	278	298
92.5°	150	164	177	191	198	205	221	245	272	283
95°	144	158	171	184	192	200	217	233	244	248
97.5°	139	152	164	178	185	192	205	213	220	223
100°	134	147	159	171	176	180	189	198	206	208
102.5°	130	141	151	160	164	168	176	180	178	177
105°	124	134	142	149	152	154	157	156	153	151
107.5°	119	126	133	137	139	139	138	137	135	135
110°	114	120	125	128	129	129	129	127	127	126





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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	110	116	120	123	124	124	125	125	124	124
115°	107	113	118	122	124	125	127	128	127	127
117.5°	106	113	119	125	127	129	132	132	131	131
120°	106	114	121	127	130	133	136	136	135	135
122.5°	106	114	121	128	132	134	138	138	137	137
125°	104	113	121	128	132	135	138	139	138	138
127.5°	101	110	119	126	130	133	137	138	138	138
130°	97	107	115	123	127	130	134	136	137	137
132.5°	93	101	110	118	122	125	130	132	134	134
135°	87	96	105	113	117	120	125	128	129	130
137.5°	81	90	98	106	110	113	119	122	124	125
140°	74	83	91	99	103	106	111	115	117	118
142.5°	67	75	83	91	94	97	103	107	109	110
145°	60	67	75	82	85	87	93	96	99	100
147.5°	53	60	66	72	75	77	82	85	87	88
150°	46	52	58	63	65	67	70	73	75	76
152.5°	39	44	49	53	55	56	60	62	63	64
155°	31	36	41	44	46	47	50	51	52	53
157.5°	24	28	32	36	37	39	40	42	42	42
160°	18	21	25	28	29	31	32	33	34	34
162.5°	13	15	18	20	21	23	24	25	26	26
165°	9	10	12	14	14	15	17	17	18	18
167.5°	5	6	7	8	8	9	10	11	11	11
170°	2	2	3	3	3	4	4	5	5	5
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)