

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: P241511

Luminaire Tested: **FVS8M-4-LD4-40-2HI-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241511
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-4-LD4-40-2HI-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
4FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (168) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

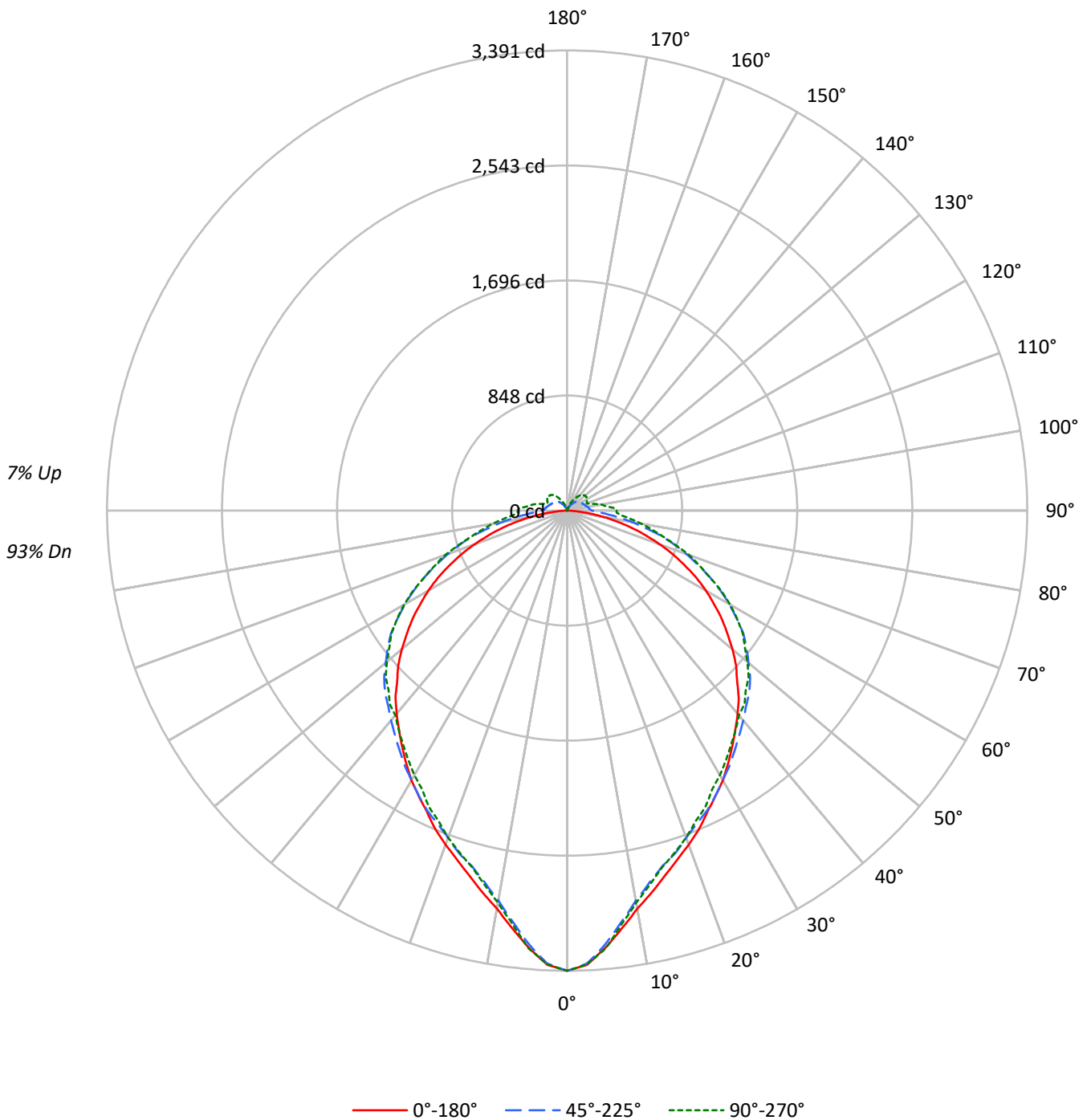
Lumens per Lamp: N/A
Luminaire Lumens: 9076.0 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 0.99 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 3.73' x H: 0.15')
CIE Type: Direct

Input Watts (W): 85.4
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

TEST NUMBER: P241511

CATALOG NUMBER: FVS8M-4-LD4-40-2HI-PA187-UNV-EDC1

Luminous Intensity Polar Plot





TEST NUMBER: P241511

CATALOG NUMBER: FVS8M-4-LD4-40-2HI-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	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	88	77	68	61	84	74	67	60	70	64	58	67	61	57	63	59	55	52
4	80	68	59	52	77	66	58	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	42	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	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	34	28	24	33	27	23	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15155	15155	15155
5°	14459	14169	14254
10°	13422	12824	12801
15°	12752	11949	11850
20°	12281	11421	11269
25°	11851	11066	10752
30°	11582	10679	10277
35°	11264	10389	9922
40°	11044	10179	9658
45°	10766	10104	9606
50°	10563	9919	9494
55°	10265	9750	9303
60°	9887	9300	8912
65°	9328	8737	8244
70°	8543	8041	7709
75°	7414	7256	6785
80°	5751	6015	6263
85°	3012	4734	5728



TEST NUMBER: P241511

CATALOG NUMBER: FVS8M-4-LD4-40-2HI-PA187-UNV-EDC1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.6	3.3
10°-20°	774.2	8.5
20°-30°	1124.2	12.4
30°-40°	1342.2	14.8
40°-50°	1437.4	15.8
50°-60°	1366.0	15.1
60°-70°	1099.1	12.1
70°-80°	703.7	7.8
80°-90°	309.4	3.4
90°-100°	172.8	1.9
100°-110°	130.3	1.4
110°-120°	104.2	1.1
120°-130°	92.2	1.0
130°-140°	67.7	0.7
140°-150°	37.2	0.4
150°-160°	14.1	0.2
160°-170°	2.8	0.0
170°-180°	0.0	0.0
0°-30°	2197.0	24.2
0°-40°	3539.2	39.0
0°-60°	6342.6	69.9
0°-90°	8454.7	93.2
90°-120°	407.3	4.5
90°-150°	604.3	6.7
90°-180°	621.0	6.8
0°-180°	9076.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3391	3391	3391	3391	3391	
5°	3234	3223	3210	3224	3240	301
15°	2785	2765	2712	2720	2716	786
25°	2447	2450	2440	2422	2410	1131
35°	2121	2170	2154	2149	2106	1329
45°	1770	1842	1898	1898	1863	1371
55°	1391	1471	1586	1583	1579	1241
65°	956	1049	1158	1172	1157	947
75°	492	586	714	756	724	522
85°	85	170	290	363	400	112
90°	1	79	183	258	364	4
95°	1	72	164	243	312	1
105°	1	63	141	189	189	1
115°	1	56	124	156	160	1
125°	1	47	115	165	173	1
135°	2	34	92	144	163	1
145°	2	17	59	99	118	1
155°	2	6	28	52	61	1
165°	3	2	7	14	19	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241511

CATALOG NUMBER: FVS8M-4-LD4-40-2HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	3391	3391	3391	3391	3391	3391	3391	3391	3391	3391	3391
2.5°	3350	3359	3352	3350	3349	3355	3354	3356	3355	3345	3342
5°	3234	3239	3233	3234	3225	3223	3227	3234	3227	3228	3210
7.5°	3104	3106	3095	3084	3082	3091	3089	3082	3076	3062	3059
10°	2978	2985	2971	2959	2954	2955	2952	2938	2937	2928	2919
12.5°	2882	2888	2873	2860	2855	2851	2857	2837	2833	2824	2807
15°	2785	2781	2783	2766	2766	2765	2760	2749	2739	2727	2712
17.5°	2697	2702	2692	2679	2678	2680	2679	2677	2669	2654	2649
20°	2619	2615	2604	2608	2606	2605	2607	2596	2584	2579	2565
22.5°	2540	2533	2526	2530	2530	2520	2524	2520	2511	2509	2496
25°	2447	2459	2453	2444	2447	2450	2459	2458	2454	2453	2440
27.5°	2370	2375	2367	2367	2386	2391	2390	2380	2381	2361	2367
30°	2295	2290	2295	2305	2307	2308	2306	2311	2302	2301	2293
32.5°	2208	2209	2216	2212	2229	2234	2237	2251	2249	2238	2228
35°	2121	2133	2128	2129	2171	2170	2172	2173	2159	2144	2154
37.5°	2036	2045	2042	2065	2077	2076	2075	2084	2091	2084	2084
40°	1955	1946	1959	1979	1986	2000	2017	2029	2028	2020	2019
42.5°	1872	1868	1877	1887	1919	1935	1945	1947	1937	1948	1952
45°	1770	1783	1775	1811	1834	1842	1848	1864	1879	1885	1898
47.5°	1688	1691	1693	1724	1739	1754	1765	1792	1814	1824	1829
50°	1590	1584	1603	1622	1656	1674	1689	1702	1722	1739	1745
52.5°	1488	1491	1503	1525	1566	1582	1588	1609	1632	1650	1666
55°	1391	1395	1402	1437	1459	1471	1491	1523	1549	1562	1586
57.5°	1283	1290	1303	1327	1356	1377	1393	1425	1452	1466	1482
60°	1181	1175	1205	1221	1257	1280	1288	1314	1343	1365	1378
62.5°	1074	1072	1088	1117	1148	1161	1172	1211	1232	1257	1274
65°	956	966	976	1008	1034	1049	1067	1100	1128	1150	1158
67.5°	845	851	873	895	922	935	958	988	1016	1035	1043
70°	724	733	757	782	812	823	839	872	898	923	932
72.5°	607	614	639	660	695	713	727	757	780	803	824
75°	492	505	525	545	580	586	601	635	663	689	714
77.5°	384	392	404	438	459	473	487	520	552	571	591
80°	273	284	297	318	349	363	375	406	436	459	482
82.5°	175	179	197	217	250	258	270	301	328	355	378
85°	85	95	110	133	158	170	182	213	241	267	290
87.5°	28	34	50	70	95	109	120	148	174	201	225
90°	1	8	23	43	67	79	92	117	142	165	183
92.5°	1	6	20	40	63	75	87	111	134	152	170
95°	1	5	19	39	60	72	84	106	126	146	164
97.5°	1	5	18	37	58	70	80	101	121	140	159
100°	1	5	17	36	56	67	77	97	117	135	153
102.5°	1	4	17	35	54	64	74	94	113	130	147
105°	1	4	16	33	53	63	72	91	109	126	141
107.5°	1	3	15	32	51	61	71	89	106	122	136
110°	1	3	15	31	50	60	69	87	104	119	131



TEST NUMBER: P241511

CATALOG NUMBER: FVS8M-4-LD4-40-2HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1	3	14	30	48	58	67	85	101	115	127
115°	1	2	13	29	47	56	65	83	99	112	124
117.5°	1	2	12	28	45	54	63	80	96	110	122
120°	1	2	11	26	43	52	61	78	94	107	120
122.5°	1	2	10	24	41	50	59	75	91	105	118
125°	1	1	9	23	39	47	56	72	88	102	115
127.5°	1	1	8	21	36	45	53	69	84	98	111
130°	1	1	7	19	34	42	49	65	80	93	106
132.5°	1	1	6	16	30	37	45	60	75	87	99
135°	2	1	4	14	27	34	40	54	68	80	92
137.5°	2	1	3	12	23	29	35	48	61	73	85
140°	2	2	3	9	19	25	31	42	54	65	76
142.5°	2	2	2	7	16	21	25	36	47	57	67
145°	2	2	2	6	13	17	21	30	40	49	59
147.5°	2	2	2	4	10	14	17	25	33	42	50
150°	2	2	2	3	8	11	14	21	28	35	42
152.5°	2	2	2	2	6	8	11	16	22	29	35
155°	2	2	2	2	4	6	8	13	18	23	28
157.5°	3	2	2	2	3	4	6	9	13	18	22
160°	3	2	2	2	2	3	4	7	10	13	16
162.5°	3	3	2	2	2	2	2	4	6	9	11
165°	3	3	2	2	2	2	2	2	3	5	7
167.5°	3	3	2	2	1	1	1	1	2	2	3
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



TEST NUMBER: P241511

CATALOG NUMBER: FVS8M-4-LD4-40-2HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	3391	3391	3391	3391	3391	3391	3391	3391	3391	3391
2.5°	3339	3344	3348	3346	3347	3355	3342	3347	3349	3346
5°	3212	3215	3225	3228	3224	3227	3228	3233	3241	3240
7.5°	3056	3064	3062	3069	3072	3074	3075	3076	3075	3075
10°	2911	2920	2925	2934	2931	2933	2928	2935	2930	2933
12.5°	2816	2817	2800	2808	2806	2808	2817	2809	2817	2821
15°	2709	2711	2722	2725	2720	2717	2722	2726	2724	2716
17.5°	2647	2644	2647	2651	2651	2654	2650	2655	2643	2641
20°	2575	2578	2586	2583	2570	2563	2563	2559	2557	2564
22.5°	2505	2508	2500	2500	2506	2503	2499	2489	2475	2476
25°	2442	2438	2445	2438	2422	2423	2413	2416	2413	2410
27.5°	2354	2369	2364	2363	2362	2370	2352	2344	2332	2315
30°	2293	2284	2295	2288	2282	2267	2261	2247	2250	2251
32.5°	2232	2231	2224	2200	2201	2200	2200	2191	2179	2179
35°	2145	2152	2135	2151	2149	2131	2118	2112	2112	2106
37.5°	2087	2071	2074	2065	2061	2065	2066	2052	2052	2039
40°	2022	2024	2012	2017	2024	2008	2003	1976	1967	1969
42.5°	1956	1964	1977	1968	1954	1943	1934	1937	1931	1934
45°	1902	1905	1908	1887	1898	1901	1886	1873	1870	1863
47.5°	1841	1853	1829	1835	1826	1812	1811	1810	1818	1813
50°	1758	1764	1763	1747	1744	1747	1759	1746	1736	1733
52.5°	1673	1670	1672	1677	1681	1676	1658	1649	1646	1651
55°	1597	1593	1585	1591	1583	1581	1582	1584	1583	1579
57.5°	1491	1498	1514	1486	1489	1497	1500	1488	1482	1485
60°	1383	1391	1389	1399	1397	1386	1385	1385	1388	1387
62.5°	1277	1284	1277	1283	1277	1277	1275	1281	1276	1279
65°	1170	1171	1182	1175	1172	1178	1161	1152	1153	1157
67.5°	1055	1064	1066	1068	1062	1057	1047	1047	1053	1052
70°	942	955	958	954	948	946	951	962	969	956
72.5°	834	850	852	849	857	862	854	839	829	832
75°	724	736	746	753	756	749	736	727	720	724
77.5°	613	628	638	638	639	642	639	639	636	637
80°	503	523	523	539	544	541	551	552	554	555
82.5°	406	420	429	443	452	453	463	465	469	473
85°	313	328	345	357	363	370	382	385	398	400
87.5°	241	257	274	291	298	302	313	327	350	364
90°	200	219	237	251	258	265	282	304	340	364
92.5°	190	208	222	238	248	257	281	311	343	355
95°	183	200	216	234	243	253	274	293	308	312
97.5°	175	191	207	224	233	240	254	264	273	276
100°	168	183	199	213	219	225	236	248	255	257
102.5°	161	175	188	199	205	210	219	223	223	222
105°	155	167	177	186	189	193	196	193	190	189
107.5°	148	158	166	172	174	175	174	171	169	168
110°	142	151	157	161	162	162	161	159	157	156



TEST NUMBER: P241511

CATALOG NUMBER: FVS8M-4-LD4-40-2HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	137	145	151	154	155	156	158	157	156	156
115°	134	142	149	154	156	158	161	161	161	160
117.5°	132	142	150	156	160	163	167	168	166	165
120°	132	142	151	160	163	167	171	172	170	169
122.5°	130	142	152	161	166	170	174	174	173	172
125°	128	140	150	160	165	169	174	175	174	173
127.5°	124	136	147	157	161	165	171	174	174	173
130°	119	132	142	152	157	161	168	171	171	171
132.5°	112	125	135	146	151	156	163	166	168	168
135°	105	116	128	138	144	149	157	160	162	163
137.5°	97	107	118	129	135	140	149	152	155	156
140°	88	98	109	119	124	129	137	141	145	145
142.5°	78	89	99	108	112	117	124	128	131	132
145°	69	79	87	96	99	103	109	113	117	118
147.5°	60	69	77	84	87	90	94	98	101	102
150°	50	57	65	72	75	77	81	83	86	87
152.5°	41	48	54	61	63	65	68	71	72	73
155°	33	38	44	50	52	54	57	59	60	61
157.5°	26	30	34	39	42	44	46	48	49	50
160°	19	23	26	29	32	33	37	38	38	39
162.5°	14	16	19	21	22	24	27	27	29	28
165°	8	10	12	13	14	15	18	19	19	19
167.5°	4	5	6	7	7	8	9	11	11	11
170°	1	1	2	2	2	2	3	4	4	4
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)