

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: P834229

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2LO-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834229
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-2LO-50-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

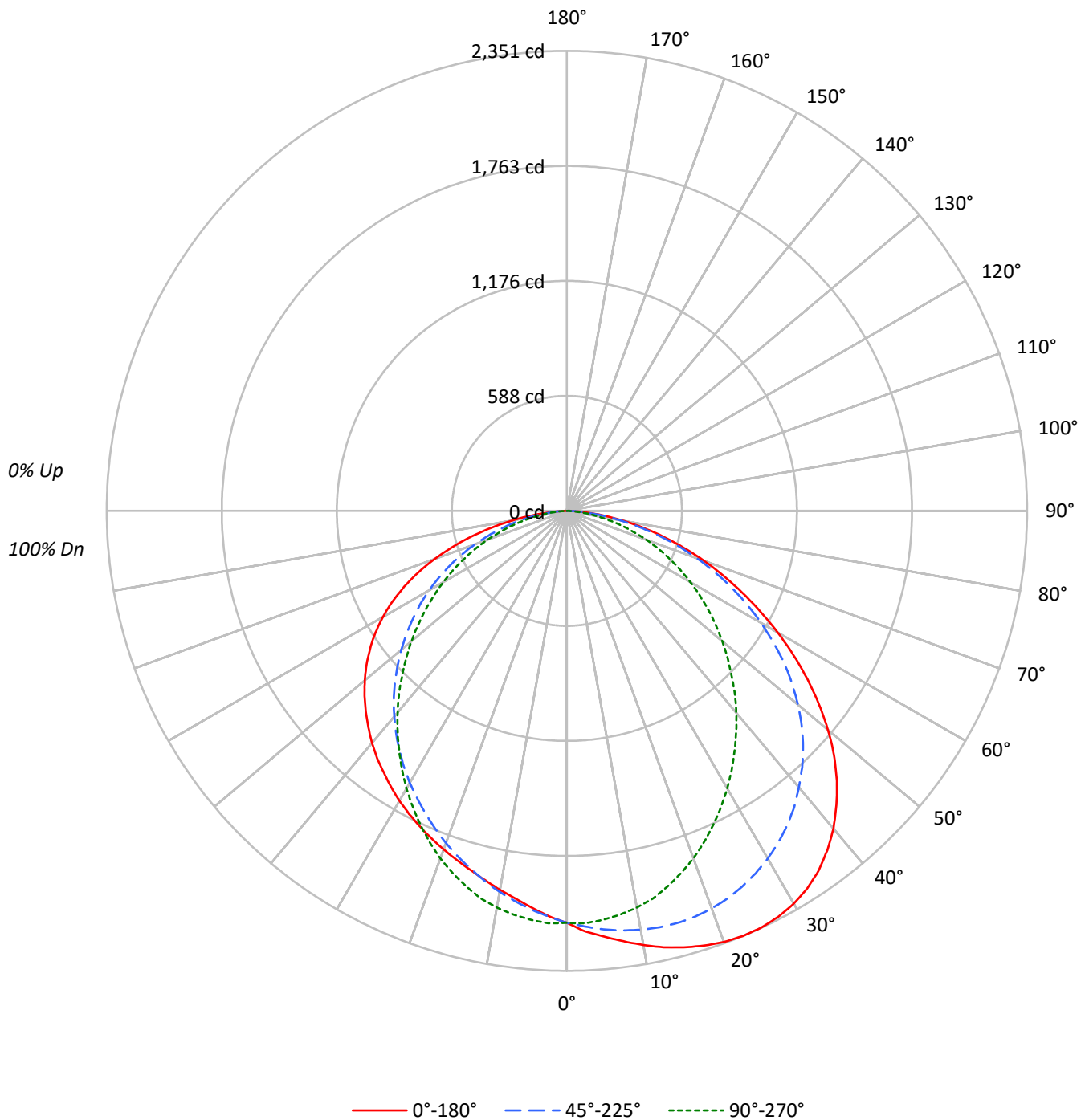
Lumens per Lamp: N/A
Luminaire Lumens: 6191.9 lumens
Efficiency: N/A
Efficacy: 132.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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: 28.75 FT

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Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5665	5665	5665
5°	5897	5668	5500
10°	6155	5625	5372
15°	6432	5535	5295
20°	6713	5413	5273
25°	6977	5255	5282
30°	7204	5091	5316
35°	7368	4909	5360
40°	7443	4728	5439
45°	7422	4528	5528
50°	7291	4338	5642
55°	7042	4138	5759
60°	6698	3925	5846
65°	6290	3685	5839
70°	5854	3399	5666
75°	5315	2985	5224
80°	4564	2453	4406
85°	3480	1677	3026

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.6	3.2
10°-20°	576.5	9.3
20°-30°	883.3	14.3
30°-40°	1077.9	17.4
40°-50°	1127.3	18.2
50°-60°	1020.2	16.5
60°-70°	772.7	12.5
70°-80°	430.6	7.0
80°-90°	103.9	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1659.4	26.8
0°-40°	2737.3	44.2
0°-60°	4884.8	78.9
0°-90°	6191.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6191.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2105	2105	2105	2105	2105	
5°	2183	2147	2098	2047	2036	211
15°	2309	2180	1987	1894	1901	655
25°	2350	2119	1770	1708	1779	1084
35°	2243	1962	1494	1493	1632	1401
45°	1950	1706	1190	1242	1453	1501
55°	1501	1355	882	960	1228	1339
65°	988	929	579	658	917	980
75°	511	483	287	343	502	542
85°	113	99	54	73	98	136
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	2105.0	2105.0	2105.0	2105.0	2105.0	2105.0	2105.0	2105.0	2105.0	2105.0	2105.0
2.5°	2151.5	2141.4	2133.1	2136.3	2138.1	2131.7	2126.2	2127.1	2121.6	2132.2	2107.3
5°	2183.2	2174.0	2164.4	2168.0	2164.4	2154.7	2146.9	2144.6	2129.9	2135.8	2110.5
7.5°	2218.7	2208.5	2194.3	2198.4	2190.6	2172.6	2162.5	2156.5	2134.0	2134.5	2106.4
10°	2252.7	2244.0	2224.6	2227.4	2213.1	2189.2	2173.1	2164.8	2133.1	2128.5	2099.5
12.5°	2284.4	2272.5	2251.8	2253.2	2232.5	2200.7	2180.0	2168.0	2126.6	2112.8	2084.3
15°	2308.8	2297.3	2272.5	2272.0	2245.3	2203.9	2180.5	2163.9	2111.4	2089.8	2059.9
17.5°	2329.5	2319.0	2288.1	2287.2	2255.0	2202.5	2174.5	2153.8	2089.4	2062.7	2029.5
20°	2344.3	2333.7	2299.2	2296.0	2257.3	2195.6	2162.1	2135.8	2060.4	2028.6	1991.8
22.5°	2351.2	2340.6	2301.5	2296.9	2251.8	2181.8	2144.1	2113.3	2027.2	1985.8	1947.6
25°	2349.8	2339.7	2295.5	2290.9	2241.2	2161.1	2118.8	2083.4	1985.4	1936.6	1898.9
27.5°	2338.3	2330.5	2284.0	2278.0	2221.9	2133.1	2088.0	2048.9	1938.9	1884.6	1843.7
30°	2318.5	2312.5	2263.3	2257.8	2197.9	2102.2	2052.1	2007.0	1888.8	1827.6	1786.1
32.5°	2286.7	2281.2	2231.5	2226.5	2165.7	2062.7	2010.2	1963.8	1834.0	1766.4	1725.0
35°	2243.0	2239.8	2191.5	2186.0	2124.3	2017.6	1961.9	1910.8	1776.9	1700.6	1661.0
37.5°	2185.5	2185.5	2139.1	2133.1	2072.8	1962.4	1907.6	1853.3	1712.5	1631.6	1592.4
40°	2118.8	2124.8	2077.4	2071.4	2013.0	1903.0	1843.2	1786.1	1643.1	1558.9	1520.7
42.5°	2038.7	2044.3	2004.7	1999.2	1944.4	1834.5	1778.8	1716.7	1570.4	1484.8	1445.2
45°	1950.4	1957.8	1922.3	1918.2	1867.1	1759.5	1706.1	1643.1	1494.4	1407.5	1368.8
47.5°	1851.9	1861.6	1830.8	1828.5	1781.1	1682.6	1627.0	1563.0	1414.8	1327.0	1290.6
50°	1741.5	1755.3	1730.0	1730.0	1687.7	1589.7	1541.4	1477.4	1332.0	1244.1	1208.3
52.5°	1623.3	1640.8	1621.9	1622.3	1587.8	1500.0	1449.8	1387.2	1245.5	1159.0	1125.9
55°	1500.9	1517.9	1505.9	1507.8	1480.6	1400.6	1355.0	1292.9	1157.2	1073.0	1041.7
57.5°	1373.0	1391.4	1383.6	1387.2	1368.4	1296.6	1249.2	1194.9	1066.1	982.8	956.1
60°	1244.6	1262.1	1257.9	1263.0	1251.0	1188.9	1145.7	1089.5	974.5	894.5	871.0
62.5°	1114.8	1131.0	1130.0	1135.6	1129.1	1077.6	1038.9	991.1	879.7	806.1	784.5
65°	987.9	1001.7	1000.7	1006.7	1005.3	963.9	929.0	885.3	784.9	717.3	698.4
67.5°	864.5	876.1	872.8	879.7	881.6	848.4	818.1	779.0	694.8	629.0	612.9
70°	744.0	751.8	747.7	752.3	756.4	731.6	705.8	671.3	598.6	540.6	527.3
72.5°	625.8	631.3	624.8	629.4	633.1	615.2	594.0	564.1	503.8	453.7	442.6
75°	511.2	519.0	505.7	510.3	513.0	495.1	482.7	458.3	406.3	367.6	360.3
77.5°	400.3	404.9	397.5	395.7	397.5	384.7	375.0	356.1	317.0	285.3	280.7
80°	294.5	297.2	289.9	288.0	289.4	280.2	272.8	259.0	231.4	207.5	205.7
82.5°	197.4	198.8	192.3	190.5	191.4	188.6	179.9	170.2	157.4	137.1	136.7
85°	112.7	112.7	108.1	106.3	107.2	102.6	99.4	94.3	89.3	75.5	76.4
87.5°	41.4	41.4	39.1	38.6	43.3	38.2	36.8	34.5	35.9	28.5	30.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2105.0	2105.0	2105.0	2105.0	2105.0	2105.0	2105.0	2105.0	2105.0	2105.0	2105.0
2.5°	2114.2	2109.6	2105.5	2091.2	2097.2	2082.5	2081.5	2076.0	2071.9	2064.1	2074.2
5°	2107.3	2098.1	2086.1	2069.1	2074.2	2056.7	2053.0	2046.6	2041.1	2030.9	2038.7
7.5°	2096.3	2081.1	2062.2	2040.6	2047.5	2025.9	2020.3	2013.4	2008.8	1996.9	2003.8
10°	2080.2	2058.5	2036.4	2010.2	2015.3	1991.8	1984.9	1977.6	1973.4	1962.8	1969.7
12.5°	2055.3	2029.1	1999.2	1970.7	1976.2	1954.1	1944.9	1937.1	1935.7	1926.9	1935.2
15°	2023.1	1986.8	1955.9	1925.6	1932.0	1906.2	1902.1	1894.3	1896.6	1890.6	1900.7
17.5°	1982.2	1940.3	1906.7	1874.0	1880.5	1858.8	1855.6	1851.9	1854.2	1853.3	1864.4
20°	1936.1	1890.1	1851.5	1819.3	1823.0	1805.9	1807.3	1806.4	1811.0	1816.1	1831.2
22.5°	1884.2	1832.2	1791.7	1758.5	1764.1	1749.3	1755.8	1757.6	1765.4	1776.9	1796.3
25°	1825.7	1770.0	1727.7	1696.4	1701.5	1691.8	1702.9	1707.5	1719.9	1739.2	1759.0
27.5°	1764.5	1705.6	1660.5	1630.6	1640.3	1630.6	1647.2	1656.4	1675.3	1696.4	1720.8
30°	1699.6	1638.5	1592.0	1565.3	1574.5	1565.8	1592.4	1604.9	1623.7	1652.7	1681.7
32.5°	1631.6	1567.1	1521.6	1500.9	1507.3	1505.9	1535.8	1549.7	1575.0	1608.1	1638.9
35°	1561.6	1494.4	1448.4	1430.9	1438.8	1440.6	1476.5	1492.6	1520.2	1560.2	1593.4
37.5°	1489.4	1420.8	1375.7	1361.5	1368.4	1375.3	1417.1	1433.2	1464.5	1508.2	1544.6
40°	1414.4	1345.8	1301.7	1290.1	1297.1	1304.4	1350.0	1372.0	1406.1	1453.5	1493.1
42.5°	1338.5	1269.9	1227.1	1218.8	1225.7	1240.0	1288.3	1309.0	1344.9	1397.4	1441.1
45°	1261.2	1189.8	1152.6	1146.1	1153.5	1170.1	1217.5	1242.3	1280.5	1338.0	1384.9
47.5°	1182.9	1113.5	1078.0	1073.9	1081.3	1099.7	1152.1	1174.7	1215.2	1276.3	1327.0
50°	1103.8	1036.2	1002.1	1000.7	1007.6	1027.4	1077.6	1104.3	1146.1	1214.7	1266.7
52.5°	1023.7	958.9	928.0	928.0	934.5	954.7	1005.3	1032.9	1076.2	1148.4	1205.9
55°	943.7	882.0	852.6	854.9	864.1	881.6	930.8	959.8	1003.5	1078.5	1139.2
57.5°	863.6	805.2	778.5	781.7	790.5	808.0	856.3	888.9	928.5	1006.3	1068.4
60°	784.5	729.3	705.8	709.5	717.3	734.8	784.9	813.0	852.6	931.7	993.8
62.5°	704.4	654.3	632.2	636.8	643.7	661.2	708.6	735.7	774.8	852.6	915.2
65°	625.3	578.8	560.0	564.6	571.0	587.1	631.7	658.0	695.2	771.1	831.0
67.5°	547.1	504.7	489.1	493.7	498.8	513.9	550.8	579.3	614.2	686.5	743.1
70°	469.8	432.0	418.2	422.8	427.4	441.2	473.5	499.7	531.9	598.1	650.6
72.5°	393.4	356.6	349.7	353.8	357.5	369.5	400.3	421.0	449.1	508.0	553.1
75°	318.9	287.1	282.5	286.6	289.9	299.1	324.8	342.8	366.2	417.3	454.1
77.5°	247.1	220.4	218.6	221.8	225.0	231.4	251.7	270.5	288.9	326.7	359.3
80°	179.9	158.3	158.3	161.5	160.6	168.4	182.7	197.8	211.2	238.3	262.3
82.5°	118.7	101.7	104.0	106.3	107.7	110.9	119.6	131.1	139.4	156.0	171.6
85°	65.8	54.3	56.6	58.4	57.5	61.2	65.8	72.7	76.8	84.7	92.9
87.5°	24.4	20.2	20.7	22.1	23.0	24.8	24.8	29.0	29.4	30.4	32.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	2105.0	2105.0	2105.0
2.5°	2054.9	2065.9	2074.2
5°	2019.4	2028.6	2036.0
7.5°	1984.9	1993.2	1999.6
10°	1952.2	1961.5	1966.1
12.5°	1918.7	1929.2	1932.9
15°	1885.5	1896.1	1900.7
17.5°	1851.5	1865.3	1870.3
20°	1819.7	1837.2	1841.4
22.5°	1787.5	1805.5	1810.5
25°	1752.6	1773.7	1778.8
27.5°	1715.3	1740.6	1745.7
30°	1678.0	1705.6	1710.7
32.5°	1638.0	1667.9	1672.5
35°	1596.1	1626.0	1631.6
37.5°	1549.7	1582.3	1593.4
40°	1501.3	1536.8	1548.3
42.5°	1450.7	1489.4	1501.3
45°	1396.4	1438.8	1452.6
47.5°	1341.7	1389.5	1401.5
50°	1282.3	1333.4	1347.7
52.5°	1220.2	1275.9	1290.1
55°	1155.8	1211.9	1227.6
57.5°	1085.9	1143.8	1160.4
60°	1012.7	1070.7	1086.3
62.5°	937.7	990.2	1005.3
65°	854.0	903.2	917.0
67.5°	765.2	810.3	821.8
70°	670.8	710.0	720.1
72.5°	572.4	599.5	612.9
75°	470.7	492.3	502.4
77.5°	368.5	383.7	392.0
80°	268.7	277.4	284.3
82.5°	175.8	179.4	184.5
85°	94.8	94.8	98.0
87.5°	32.2	30.8	32.2
90°	0.0	0.0	0.0

(END OF REPORT)