

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: P834211

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2LO-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834211
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-35-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

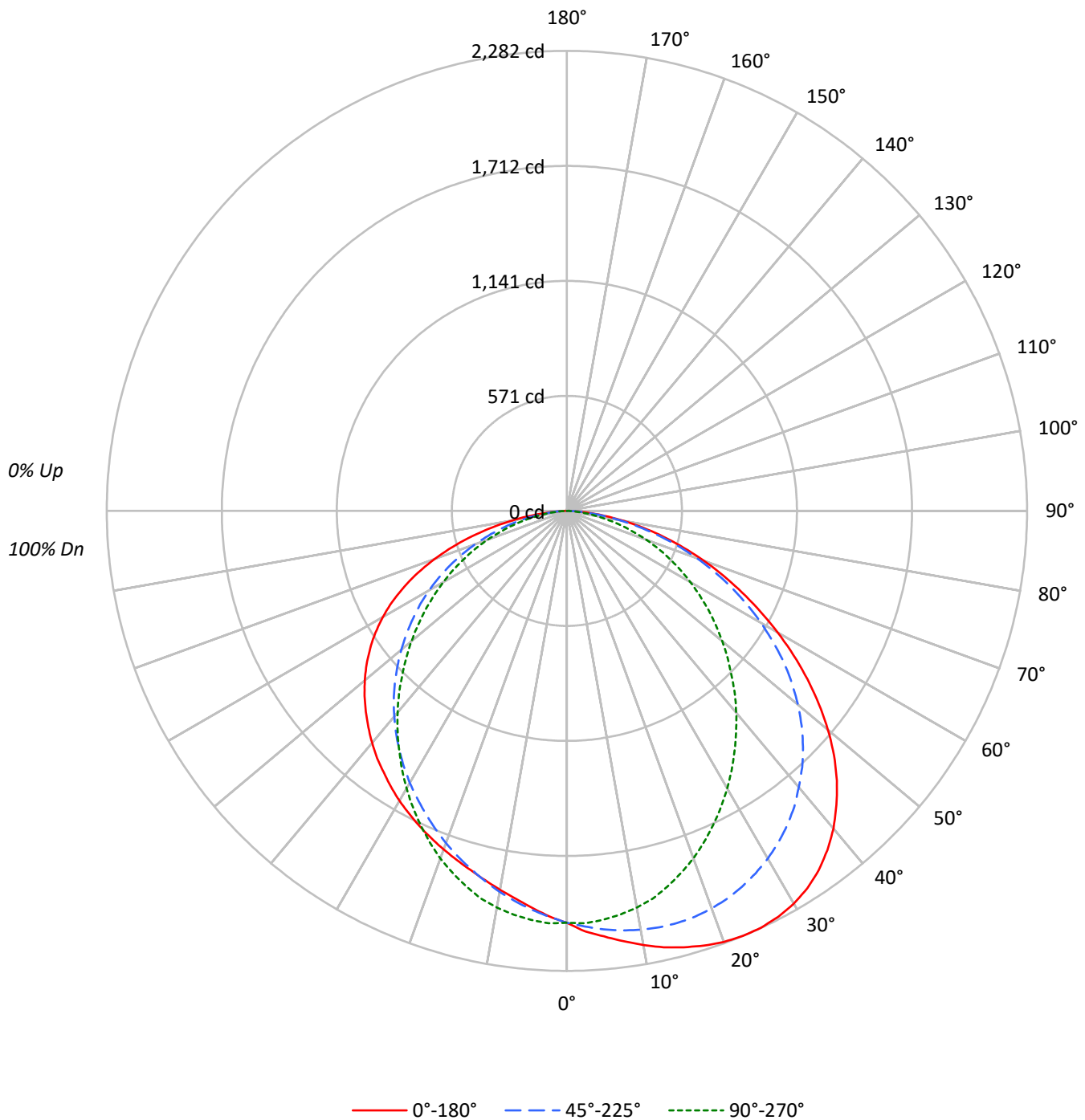
Lumens per Lamp: N/A
Luminaire Lumens: 6009.8 lumens
Efficiency: N/A
Efficacy: 128.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

Peachtree City, GA 30269



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5498	5498	5498
5°	5724	5501	5338
10°	5974	5460	5214
15°	6243	5372	5139
20°	6516	5253	5118
25°	6772	5101	5126
30°	6992	4941	5159
35°	7152	4765	5202
40°	7224	4588	5279
45°	7204	4395	5365
50°	7076	4210	5476
55°	6834	4016	5590
60°	6501	3809	5675
65°	6105	3577	5667
70°	5681	3299	5499
75°	5158	2898	5071
80°	4429	2380	4277
85°	3378	1627	2936



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.8	3.2
10°-20°	559.6	9.3
20°-30°	857.3	14.3
30°-40°	1046.2	17.4
40°-50°	1094.1	18.2
50°-60°	990.2	16.5
60°-70°	749.9	12.5
70°-80°	417.9	7.0
80°-90°	100.8	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°	1610.6	26.8
0°-40°	2656.8	44.2
0°-60°	4741.1	78.9
0°-90°	6009.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6009.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2043	2043	2043	2043	2043	
5°	2119	2084	2036	1986	1976	204
15°	2241	2116	1928	1839	1845	636
25°	2281	2056	1718	1657	1726	1052
35°	2177	1904	1450	1449	1584	1359
45°	1893	1656	1155	1206	1410	1457
55°	1457	1315	856	932	1192	1300
65°	959	902	562	639	890	951
75°	496	468	279	333	488	526
85°	109	96	53	71	95	132
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°	2043.1	2043.1	2043.1	2043.1	2043.1	2043.1	2043.1	2043.1	2043.1	2043.1	2043.1
2.5°	2088.2	2078.4	2070.3	2073.5	2075.2	2069.0	2063.6	2064.5	2059.2	2069.4	2045.3
5°	2119.0	2110.1	2100.7	2104.3	2100.7	2091.3	2083.7	2081.5	2067.2	2073.0	2048.5
7.5°	2153.4	2143.6	2129.7	2133.7	2126.2	2108.7	2098.9	2093.1	2071.2	2071.7	2044.4
10°	2186.4	2178.0	2159.2	2161.9	2148.0	2124.8	2109.2	2101.1	2070.3	2065.9	2037.7
12.5°	2217.3	2205.6	2185.6	2186.9	2166.8	2136.0	2115.9	2104.3	2064.1	2050.7	2023.0
15°	2240.9	2229.8	2205.6	2205.2	2179.3	2139.1	2116.3	2100.3	2049.3	2028.4	1999.3
17.5°	2261.0	2250.8	2220.8	2219.9	2188.7	2137.8	2110.5	2090.4	2027.9	2002.0	1969.9
20°	2275.3	2265.0	2231.5	2228.4	2190.9	2131.1	2098.5	2073.0	1999.8	1969.0	1933.2
22.5°	2282.0	2271.7	2233.8	2229.3	2185.6	2117.7	2081.1	2051.1	1967.6	1927.4	1890.4
25°	2280.7	2270.8	2228.0	2223.5	2175.3	2097.6	2056.5	2022.1	1927.0	1879.6	1843.0
27.5°	2269.5	2261.9	2216.8	2211.0	2156.5	2070.3	2026.6	1988.6	1881.9	1829.2	1789.4
30°	2250.3	2244.5	2196.7	2191.4	2133.3	2040.4	1991.7	1948.0	1833.2	1773.8	1733.6
32.5°	2219.5	2214.1	2165.9	2161.0	2102.0	2002.0	1951.1	1906.0	1780.1	1714.4	1674.2
35°	2177.1	2173.9	2127.1	2121.7	2061.8	1958.2	1904.2	1854.6	1724.7	1650.6	1612.1
37.5°	2121.2	2121.2	2076.1	2070.3	2011.8	1904.7	1851.5	1798.8	1662.2	1583.6	1545.6
40°	2056.5	2062.3	2016.3	2010.5	1953.8	1847.0	1789.0	1733.6	1594.7	1513.0	1475.9
42.5°	1978.8	1984.1	1945.7	1940.4	1887.2	1780.5	1726.5	1666.2	1524.2	1441.1	1402.7
45°	1893.0	1900.2	1865.8	1861.8	1812.2	1707.7	1655.9	1594.7	1450.5	1366.1	1328.6
47.5°	1797.5	1806.9	1776.9	1774.7	1728.7	1633.1	1579.1	1517.0	1373.2	1287.9	1252.7
50°	1690.3	1703.7	1679.1	1679.1	1638.0	1542.9	1496.0	1434.0	1292.8	1207.5	1172.7
52.5°	1575.5	1592.5	1574.2	1574.6	1541.1	1455.8	1407.2	1346.4	1208.9	1124.9	1092.8
55°	1456.7	1473.3	1461.6	1463.4	1437.1	1359.4	1315.2	1254.9	1123.1	1041.4	1011.1
57.5°	1332.6	1350.5	1342.9	1346.4	1328.1	1258.5	1212.5	1159.8	1034.7	953.9	928.0
60°	1208.0	1225.0	1220.9	1225.9	1214.2	1154.0	1112.0	1057.5	945.9	868.1	845.4
62.5°	1082.1	1097.7	1096.8	1102.2	1095.9	1045.9	1008.4	961.9	853.9	782.4	761.4
65°	958.8	972.2	971.3	977.1	975.8	935.6	901.6	859.2	761.9	696.2	677.9
67.5°	839.1	850.3	847.2	853.9	855.6	823.5	794.0	756.1	674.3	610.5	594.8
70°	722.1	729.7	725.7	730.2	734.2	710.1	685.1	651.6	581.0	524.7	511.8
72.5°	607.3	612.7	606.5	610.9	614.5	597.1	576.5	547.5	489.0	440.3	429.6
75°	496.1	503.7	490.8	495.3	497.9	480.5	468.5	444.8	394.3	356.8	349.7
77.5°	388.5	393.0	385.8	384.1	385.8	373.3	364.0	345.7	307.7	276.9	272.4
80°	285.8	288.5	281.3	279.6	280.9	272.0	264.8	251.4	224.6	201.4	199.6
82.5°	191.6	192.9	186.7	184.9	185.8	183.1	174.6	165.2	152.7	133.1	132.6
85°	109.4	109.4	104.9	103.2	104.1	99.6	96.5	91.5	86.6	73.2	74.1
87.5°	40.2	40.2	38.0	37.5	42.0	37.1	35.7	33.5	34.8	27.7	29.5
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°	2043.1	2043.1	2043.1	2043.1	2043.1	2043.1	2043.1	2043.1	2043.1	2043.1	2043.1
2.5°	2052.0	2047.6	2043.5	2029.7	2035.5	2021.2	2020.3	2015.0	2010.9	2003.3	2013.2
5°	2045.3	2036.4	2024.8	2008.3	2013.2	1996.2	1992.6	1986.4	1981.0	1971.2	1978.8
7.5°	2034.6	2019.9	2001.6	1980.6	1987.3	1966.3	1960.9	1954.2	1949.8	1938.1	1944.8
10°	2019.0	1998.0	1976.6	1951.1	1956.0	1933.2	1926.5	1919.4	1915.4	1905.1	1911.8
12.5°	1994.9	1969.4	1940.4	1912.7	1918.1	1896.6	1887.7	1880.1	1878.8	1870.3	1878.3
15°	1963.6	1928.3	1898.4	1868.9	1875.2	1850.2	1846.2	1838.6	1840.8	1835.0	1844.8
17.5°	1923.9	1883.2	1850.6	1818.9	1825.2	1804.2	1801.0	1797.5	1799.7	1798.8	1809.5
20°	1879.2	1834.5	1797.0	1765.8	1769.3	1752.8	1754.2	1753.3	1757.7	1762.6	1777.4
22.5°	1828.7	1778.3	1739.0	1706.8	1712.2	1697.9	1704.1	1705.9	1713.5	1724.7	1743.4
25°	1772.0	1718.0	1676.9	1646.5	1651.4	1642.1	1652.8	1657.3	1669.3	1688.1	1707.3
27.5°	1712.6	1655.5	1611.7	1582.7	1592.0	1582.7	1598.7	1607.7	1626.0	1646.5	1670.2
30°	1649.7	1590.3	1545.2	1519.3	1528.2	1519.7	1545.6	1557.7	1576.0	1604.1	1632.2
32.5°	1583.6	1521.0	1476.8	1456.7	1463.0	1461.6	1490.7	1504.1	1528.6	1560.8	1590.7
35°	1515.7	1450.5	1405.8	1388.9	1396.4	1398.2	1433.1	1448.7	1475.5	1514.3	1546.5
37.5°	1445.6	1379.0	1335.3	1321.4	1328.1	1334.8	1375.5	1391.1	1421.5	1463.9	1499.2
40°	1372.8	1306.2	1263.4	1252.2	1258.9	1266.0	1310.3	1331.7	1364.7	1410.7	1449.1
42.5°	1299.1	1232.6	1191.0	1183.0	1189.7	1203.5	1250.4	1270.5	1305.3	1356.3	1398.7
45°	1224.1	1154.9	1118.7	1112.4	1119.6	1135.6	1181.6	1205.8	1242.8	1298.6	1344.2
47.5°	1148.2	1080.7	1046.3	1042.3	1049.5	1067.3	1118.2	1140.1	1179.4	1238.8	1287.9
50°	1071.3	1005.7	972.6	971.3	978.0	997.2	1045.9	1071.8	1112.4	1179.0	1229.4
52.5°	993.6	930.7	900.7	900.7	907.0	926.6	975.8	1002.6	1044.5	1114.7	1170.5
55°	915.9	856.1	827.5	829.7	838.7	855.6	903.4	931.6	974.0	1046.8	1105.7
57.5°	838.2	781.5	755.6	758.7	767.2	784.2	831.1	862.8	901.2	976.7	1037.0
60°	761.4	707.8	685.1	688.6	696.2	713.2	761.9	789.1	827.5	904.3	964.6
62.5°	683.7	635.0	613.6	618.1	624.8	641.7	687.7	714.1	752.0	827.5	888.2
65°	606.9	561.8	543.5	548.0	554.2	569.8	613.2	638.6	674.8	748.5	806.5
67.5°	531.0	489.9	474.7	479.2	484.1	498.8	534.6	562.2	596.2	666.3	721.2
70°	456.0	419.3	405.9	410.4	414.9	428.3	459.5	485.0	516.2	580.6	631.5
72.5°	381.8	346.1	339.4	343.4	347.0	358.6	388.5	408.6	435.9	493.0	536.8
75°	309.5	278.7	274.2	278.2	281.3	290.3	315.3	332.7	355.5	405.0	440.8
77.5°	239.8	213.9	212.1	215.3	218.4	224.6	244.3	262.6	280.5	317.1	348.8
80°	174.6	153.6	153.6	156.7	155.9	163.4	177.3	192.0	205.0	231.3	254.5
82.5°	115.2	98.7	100.9	103.2	104.5	107.6	116.1	127.3	135.3	151.4	166.6
85°	63.9	52.7	54.9	56.7	55.8	59.4	63.9	70.6	74.6	82.2	90.2
87.5°	23.7	19.6	20.1	21.4	22.3	24.1	24.1	28.1	28.6	29.5	31.3
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°	2043.1	2043.1	2043.1
2.5°	1994.4	2005.1	2013.2
5°	1960.0	1969.0	1976.1
7.5°	1926.5	1934.6	1940.8
10°	1894.8	1903.8	1908.2
12.5°	1862.2	1872.5	1876.1
15°	1830.1	1840.3	1844.8
17.5°	1797.0	1810.4	1815.3
20°	1766.2	1783.2	1787.2
22.5°	1735.0	1752.4	1757.3
25°	1701.0	1721.6	1726.5
27.5°	1664.8	1689.4	1694.3
30°	1628.7	1655.5	1660.4
32.5°	1589.8	1618.8	1623.3
35°	1549.2	1578.2	1583.6
37.5°	1504.1	1535.8	1546.5
40°	1457.2	1491.6	1502.7
42.5°	1408.1	1445.6	1457.2
45°	1355.4	1396.4	1409.8
47.5°	1302.2	1348.7	1360.3
50°	1244.6	1294.2	1308.0
52.5°	1184.3	1238.4	1252.2
55°	1121.8	1176.3	1191.5
57.5°	1053.9	1110.2	1126.3
60°	982.9	1039.2	1054.4
62.5°	910.1	961.0	975.8
65°	828.8	876.6	890.0
67.5°	742.7	786.4	797.6
70°	651.1	689.1	698.9
72.5°	555.5	581.9	594.8
75°	456.8	477.8	487.7
77.5°	357.7	372.4	380.5
80°	260.8	269.3	276.0
82.5°	170.6	174.2	179.1
85°	92.0	92.0	95.1
87.5°	31.3	29.9	31.3
90°	0.0	0.0	0.0

(END OF REPORT)