

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: P834598

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-2LO-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834598
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-2LO-50-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

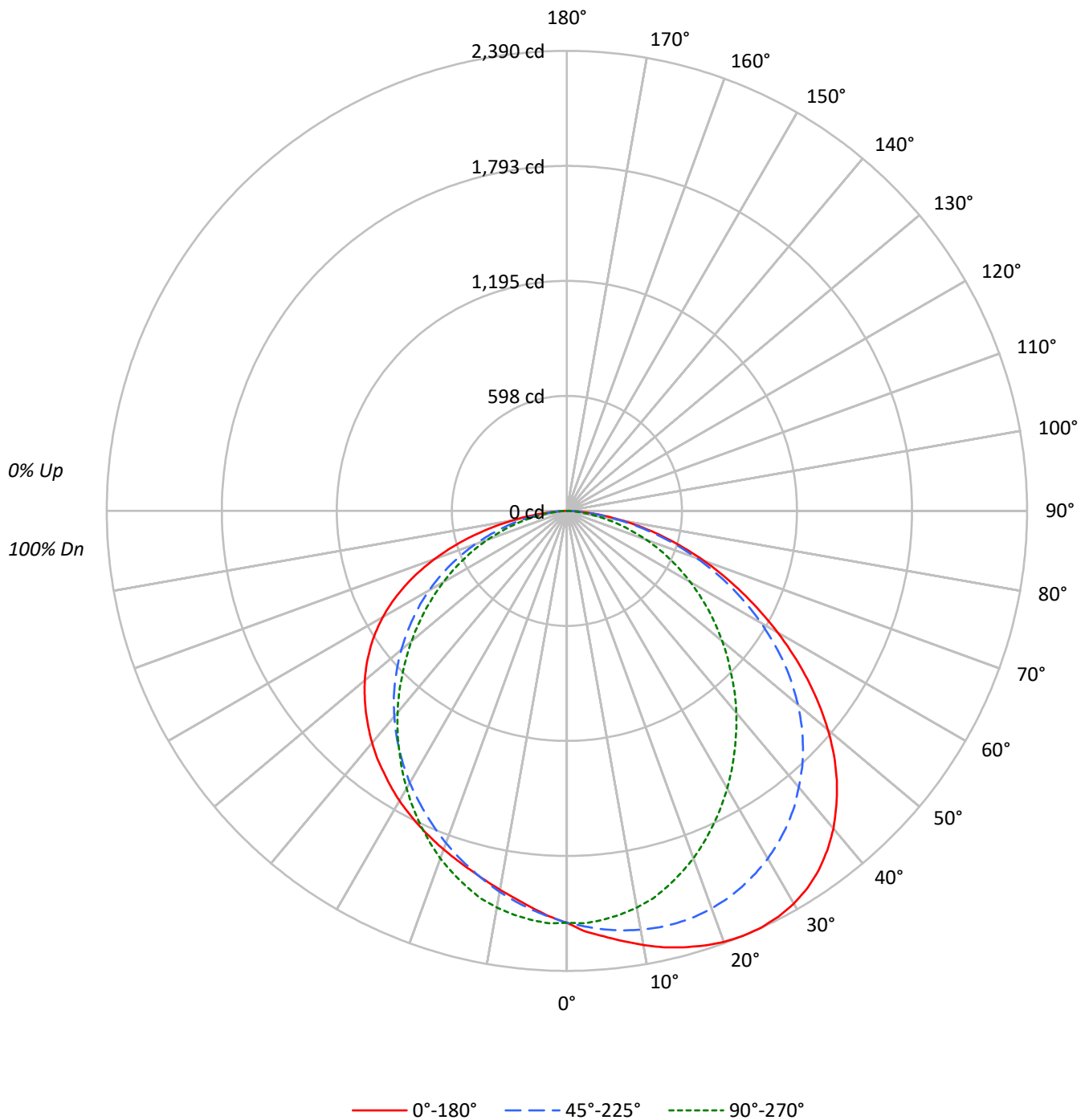
Lumens per Lamp: N/A
Luminaire Lumens: 6294.2 lumens
Efficiency: N/A
Efficacy: 134.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2879	2879	2879
5°	2997	2881	2795
10°	3129	2859	2730
15°	3269	2813	2691
20°	3412	2751	2680
25°	3546	2671	2684
30°	3662	2588	2702
35°	3745	2495	2724
40°	3783	2403	2764
45°	3773	2301	2810
50°	3706	2205	2867
55°	3579	2103	2927
60°	3405	1995	2972
65°	3197	1873	2968
70°	2975	1728	2880
75°	2701	1517	2655
80°	2319	1247	2239
85°	1769	852	1538

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.9	3.2
10°-20°	586.1	9.3
20°-30°	897.8	14.3
30°-40°	1095.7	17.4
40°-50°	1145.9	18.2
50°-60°	1037.1	16.5
60°-70°	785.4	12.5
70°-80°	437.7	7.0
80°-90°	105.6	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°	1686.8	26.8
0°-40°	2782.5	44.2
0°-60°	4965.5	78.9
0°-90°	6294.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6294.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2140	2140	2140	2140	2140	
5°	2219	2182	2133	2080	2070	214
15°	2347	2216	2020	1926	1932	666
25°	2389	2154	1799	1736	1808	1102
35°	2280	1994	1519	1517	1658	1424
45°	1983	1734	1210	1263	1477	1525
55°	1526	1377	897	976	1248	1361
65°	1004	944	588	669	932	996
75°	520	491	292	348	511	551
85°	115	101	55	74	100	138
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°	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8
2.5°	2187.0	2176.7	2168.3	2171.6	2173.4	2166.9	2161.3	2162.2	2156.6	2167.4	2142.1
5°	2219.3	2209.9	2200.1	2203.9	2200.1	2190.3	2182.3	2180.0	2165.0	2171.1	2145.4
7.5°	2255.3	2245.0	2230.5	2234.7	2226.8	2208.5	2198.2	2192.2	2169.2	2169.7	2141.2
10°	2289.9	2281.0	2261.4	2264.2	2249.7	2225.4	2209.0	2200.6	2168.3	2163.6	2134.2
12.5°	2322.2	2310.0	2289.0	2290.4	2269.3	2237.1	2216.0	2203.9	2161.8	2147.7	2118.7
15°	2347.0	2335.3	2310.0	2309.6	2282.4	2240.3	2216.5	2199.6	2146.3	2124.3	2093.9
17.5°	2368.0	2357.3	2325.9	2325.0	2292.2	2238.9	2210.4	2189.4	2123.9	2096.7	2063.1
20°	2383.0	2372.2	2337.1	2333.9	2294.6	2231.9	2197.8	2171.1	2094.4	2062.1	2024.7
22.5°	2390.0	2379.2	2339.5	2334.8	2289.0	2217.9	2179.5	2148.2	2060.7	2018.6	1979.8
25°	2388.6	2378.3	2333.4	2328.7	2278.2	2196.8	2153.8	2117.8	2018.2	1968.6	1930.2
27.5°	2376.9	2369.0	2321.7	2315.6	2258.6	2168.3	2122.5	2082.7	1970.9	1915.7	1874.1
30°	2356.8	2350.7	2300.7	2295.1	2234.3	2137.0	2086.0	2040.2	1920.0	1857.7	1815.7
32.5°	2324.5	2318.9	2268.4	2263.3	2201.5	2096.7	2043.4	1996.2	1864.3	1795.5	1753.4
35°	2280.1	2276.8	2227.7	2222.1	2159.4	2050.9	1994.3	1942.4	1806.3	1728.7	1688.4
37.5°	2221.6	2221.6	2174.4	2168.3	2107.0	1994.8	1939.1	1883.9	1740.8	1658.5	1618.7
40°	2153.8	2159.9	2111.7	2105.6	2046.2	1934.4	1873.6	1815.7	1670.2	1584.6	1545.8
42.5°	2072.4	2078.0	2037.8	2032.2	1976.5	1864.8	1808.2	1745.0	1596.3	1509.3	1469.1
45°	1982.6	1990.1	1954.1	1949.9	1898.0	1788.5	1734.3	1670.2	1519.1	1430.7	1391.4
47.5°	1882.5	1892.4	1861.0	1858.7	1810.5	1710.4	1653.8	1588.8	1438.2	1348.9	1311.9
50°	1770.3	1784.3	1758.6	1758.6	1715.6	1615.9	1566.8	1501.8	1354.0	1264.7	1228.2
52.5°	1650.1	1667.9	1648.7	1649.1	1614.1	1524.7	1473.8	1410.1	1266.1	1178.2	1144.5
55°	1525.7	1543.0	1530.8	1532.7	1505.1	1423.7	1377.4	1314.3	1176.3	1090.7	1058.9
57.5°	1395.6	1414.4	1406.4	1410.1	1391.0	1318.0	1269.8	1214.6	1083.7	999.0	971.9
60°	1265.2	1282.9	1278.7	1283.9	1271.7	1208.6	1164.6	1107.5	990.6	909.2	885.4
62.5°	1133.3	1149.6	1148.7	1154.3	1147.8	1095.4	1056.1	1007.4	894.3	819.4	797.4
65°	1004.2	1018.2	1017.3	1023.4	1021.9	979.9	944.3	899.9	797.9	729.2	710.0
67.5°	878.8	890.5	887.2	894.3	896.1	862.5	831.6	791.8	706.2	639.4	623.0
70°	756.3	764.2	760.0	764.7	768.9	743.7	717.5	682.4	608.5	549.6	536.0
72.5°	636.1	641.7	635.2	639.8	643.6	625.3	603.8	573.4	512.1	461.2	449.9
75°	519.6	527.6	514.0	518.7	521.5	503.3	490.6	465.8	413.0	373.7	366.2
77.5°	406.9	411.6	404.1	402.2	404.1	391.0	381.2	362.0	322.3	290.0	285.3
80°	299.3	302.1	294.7	292.8	294.2	284.8	277.4	263.3	235.3	210.9	209.1
82.5°	200.6	202.1	195.5	193.6	194.6	191.8	182.9	173.1	160.0	139.4	138.9
85°	114.6	114.6	109.9	108.0	109.0	104.3	101.0	95.9	90.7	76.7	77.6
87.5°	42.1	42.1	39.8	39.3	44.0	38.8	37.4	35.1	36.5	29.0	30.9
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°	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8	2139.8
2.5°	2149.1	2144.5	2140.2	2125.7	2131.8	2116.9	2115.9	2110.3	2106.1	2098.1	2108.4
5°	2142.1	2132.8	2120.6	2103.3	2108.4	2090.7	2086.9	2080.4	2074.8	2064.5	2072.4
7.5°	2130.9	2115.5	2096.3	2074.3	2081.3	2059.3	2053.7	2046.7	2042.0	2029.9	2036.9
10°	2114.5	2092.5	2070.1	2043.4	2048.6	2024.7	2017.7	2010.2	2006.0	1995.3	2002.3
12.5°	2089.3	2062.6	2032.2	2003.2	2008.8	1986.4	1977.0	1969.1	1967.7	1958.8	1967.2
15°	2056.5	2019.6	1988.2	1957.4	1963.9	1937.7	1933.5	1925.6	1927.9	1921.8	1932.1
17.5°	2014.9	1972.3	1938.2	1905.0	1911.5	1889.5	1886.3	1882.5	1884.9	1883.9	1895.2
20°	1968.1	1921.4	1882.1	1849.3	1853.1	1835.8	1837.2	1836.2	1840.9	1846.1	1861.5
22.5°	1915.3	1862.4	1821.3	1787.6	1793.2	1778.2	1784.8	1786.7	1794.6	1806.3	1825.9
25°	1855.9	1799.3	1756.3	1724.4	1729.6	1719.8	1731.0	1735.7	1748.3	1767.9	1788.1
27.5°	1793.7	1733.8	1688.0	1657.6	1667.4	1657.6	1674.4	1683.8	1702.9	1724.4	1749.2
30°	1727.7	1665.5	1618.3	1591.2	1600.5	1591.6	1618.7	1631.4	1650.5	1680.0	1709.5
32.5°	1658.5	1593.0	1546.7	1525.7	1532.2	1530.8	1561.2	1575.2	1601.0	1634.6	1666.0
35°	1587.4	1519.1	1472.4	1454.6	1462.5	1464.4	1500.9	1517.3	1545.3	1586.0	1619.7
37.5°	1514.0	1444.3	1398.5	1384.0	1391.0	1398.0	1440.5	1456.9	1488.7	1533.2	1570.1
40°	1437.7	1368.1	1323.2	1311.5	1318.5	1326.0	1372.3	1394.7	1429.3	1477.5	1517.7
42.5°	1360.6	1290.9	1247.4	1239.0	1246.0	1260.5	1309.6	1330.6	1367.1	1420.4	1464.9
45°	1282.0	1209.5	1171.6	1165.1	1172.5	1189.4	1237.6	1262.8	1301.6	1360.1	1407.8
47.5°	1202.5	1131.9	1095.8	1091.6	1099.1	1117.8	1171.1	1194.1	1235.2	1297.4	1348.9
50°	1122.0	1053.3	1018.7	1017.3	1024.3	1044.4	1095.4	1122.5	1165.1	1234.8	1287.6
52.5°	1040.7	974.7	943.4	943.4	949.9	970.5	1021.9	1050.0	1094.0	1167.4	1225.9
55°	959.3	896.6	866.7	869.0	878.4	896.1	946.2	975.6	1020.1	1096.3	1158.1
57.5°	877.9	818.5	791.4	794.6	803.5	821.3	870.4	903.6	943.8	1022.9	1086.0
60°	797.4	741.3	717.5	721.2	729.2	746.9	797.9	826.4	866.7	947.1	1010.3
62.5°	716.1	665.1	642.6	647.3	654.3	672.1	720.3	747.9	787.6	866.7	930.3
65°	635.6	588.4	569.2	573.9	580.4	596.8	642.2	668.8	706.7	783.9	844.7
67.5°	556.1	513.1	497.2	501.9	507.0	522.4	559.8	588.8	624.4	697.8	755.4
70°	477.5	439.2	425.1	429.8	434.5	448.5	481.3	507.9	540.7	608.0	661.3
72.5°	399.9	362.5	355.5	359.7	363.4	375.6	406.9	428.0	456.5	516.4	562.2
75°	324.1	291.9	287.2	291.4	294.7	304.0	330.2	348.4	372.3	424.2	461.6
77.5°	251.2	224.0	222.2	225.4	228.7	235.3	255.8	275.0	293.7	332.1	365.3
80°	182.9	160.9	160.9	164.2	163.2	171.2	185.7	201.1	214.7	242.3	266.6
82.5°	120.7	103.4	105.7	108.0	109.4	112.7	121.6	133.3	141.7	158.6	174.5
85°	66.9	55.2	57.5	59.4	58.5	62.2	66.9	73.9	78.1	86.1	94.5
87.5°	24.8	20.6	21.0	22.5	23.4	25.3	25.3	29.5	29.9	30.9	32.7
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°	2139.8	2139.8	2139.8
2.5°	2088.8	2100.0	2108.4
5°	2052.8	2062.1	2069.6
7.5°	2017.7	2026.1	2032.7
10°	1984.5	1993.8	1998.5
12.5°	1950.4	1961.1	1964.9
15°	1916.7	1927.4	1932.1
17.5°	1882.1	1896.1	1901.2
20°	1849.8	1867.6	1871.8
22.5°	1817.1	1835.3	1840.4
25°	1781.5	1803.0	1808.2
27.5°	1743.6	1769.3	1774.5
30°	1705.7	1733.8	1738.9
32.5°	1665.0	1695.4	1700.1
35°	1622.5	1652.9	1658.5
37.5°	1575.2	1608.5	1619.7
40°	1526.1	1562.2	1573.8
42.5°	1474.7	1514.0	1526.1
45°	1419.5	1462.5	1476.6
47.5°	1363.8	1412.5	1424.6
50°	1303.5	1355.4	1369.9
52.5°	1240.4	1297.0	1311.5
55°	1174.9	1231.9	1247.9
57.5°	1103.8	1162.7	1179.6
60°	1029.4	1088.4	1104.3
62.5°	953.2	1006.5	1021.9
65°	868.1	918.1	932.1
67.5°	777.8	823.6	835.3
70°	681.9	721.7	732.0
72.5°	581.8	609.4	623.0
75°	478.5	500.5	510.7
77.5°	374.6	390.1	398.5
80°	273.1	282.0	289.0
82.5°	178.7	182.4	187.6
85°	96.3	96.3	99.6
87.5°	32.7	31.3	32.7
90°	0.0	0.0	0.0

(END OF REPORT)