

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: P834283

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2LO-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834283
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-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

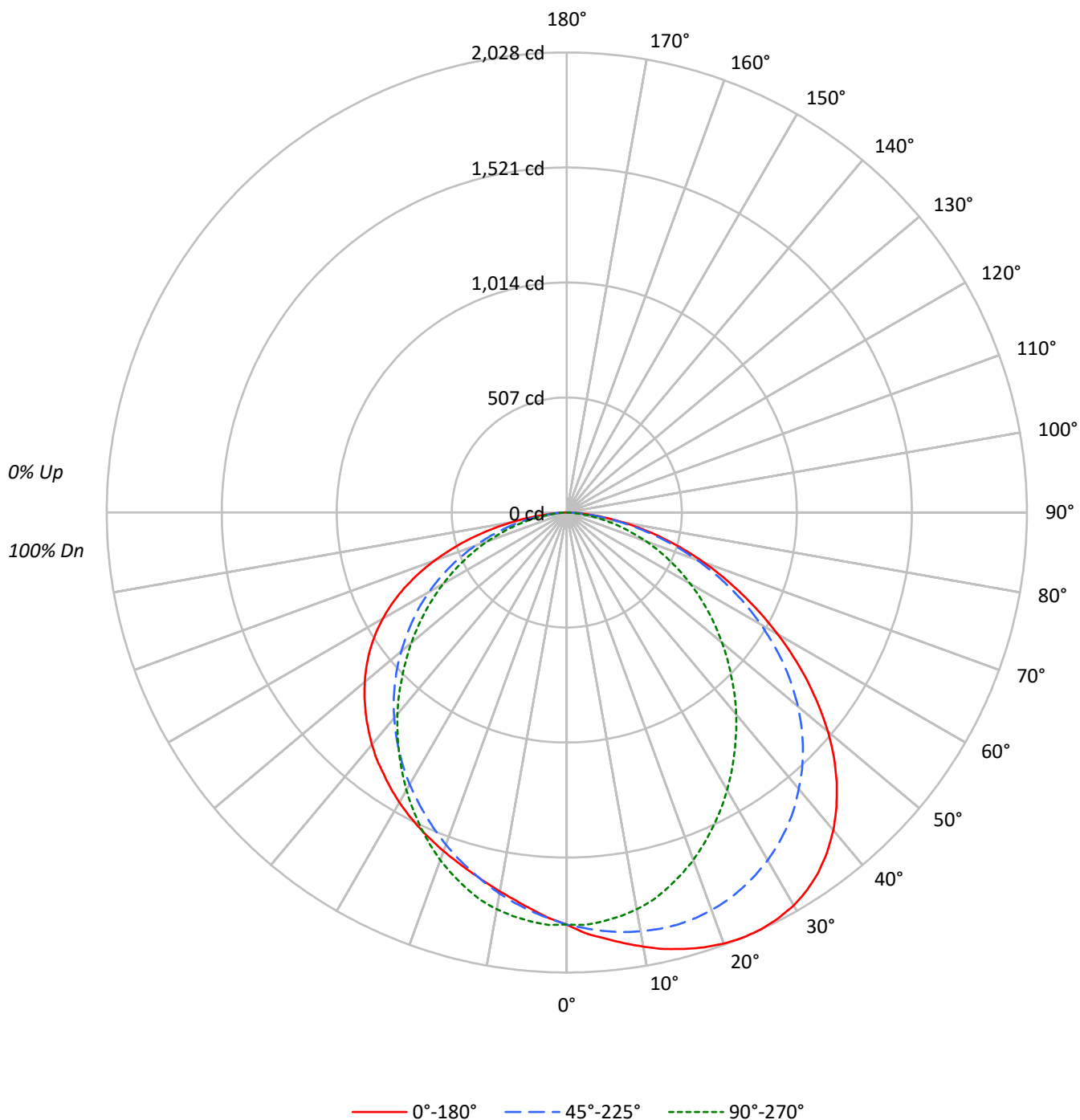
Lumens per Lamp: N/A
Luminaire Lumens: 5342.1 lumens
Efficiency: N/A
Efficacy: 114.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	4887	4887	4887
5°	5088	4890	4745
10°	5311	4853	4635
15°	5549	4775	4568
20°	5792	4670	4549
25°	6019	4534	4556
30°	6215	4392	4586
35°	6357	4235	4624
40°	6421	4079	4692
45°	6404	3906	4769
50°	6290	3742	4868
55°	6075	3570	4969
60°	5779	3386	5044
65°	5427	3180	5037
70°	5050	2932	4888
75°	4585	2575	4507
80°	3938	2117	3801
85°	3004	1445	2612

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.2	3.2
10°-20°	497.4	9.3
20°-30°	762.0	14.3
30°-40°	930.0	17.4
40°-50°	972.5	18.2
50°-60°	880.2	16.5
60°-70°	666.6	12.5
70°-80°	371.5	7.0
80°-90°	89.6	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°	1431.7	26.8
0°-40°	2361.6	44.2
0°-60°	4214.4	78.9
0°-90°	5342.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5342.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1816	1816	1816	1816	1816	
5°	1884	1852	1810	1766	1756	182
15°	1992	1881	1714	1634	1640	565
25°	2027	1828	1527	1473	1535	935
35°	1935	1693	1289	1288	1408	1208
45°	1683	1472	1026	1072	1253	1295
55°	1295	1169	761	828	1059	1155
65°	852	802	499	568	791	845
75°	441	416	248	296	434	468
85°	97	86	47	63	85	117
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°	1816.1	1816.1	1816.1	1816.1	1816.1	1816.1	1816.1	1816.1	1816.1	1816.1	1816.1
2.5°	1856.2	1847.4	1840.3	1843.1	1844.7	1839.1	1834.3	1835.1	1830.4	1839.5	1818.1
5°	1883.6	1875.6	1867.3	1870.5	1867.3	1859.0	1852.2	1850.2	1837.5	1842.7	1820.8
7.5°	1914.1	1905.4	1893.1	1896.7	1889.9	1874.4	1865.7	1860.5	1841.1	1841.5	1817.3
10°	1943.5	1936.0	1919.3	1921.7	1909.4	1888.7	1874.8	1867.7	1840.3	1836.3	1811.3
12.5°	1970.9	1960.6	1942.7	1943.9	1926.0	1898.7	1880.8	1870.5	1834.7	1822.8	1798.2
15°	1991.9	1982.0	1960.6	1960.2	1937.2	1901.4	1881.2	1866.9	1821.6	1803.0	1777.2
17.5°	2009.8	2000.7	1974.1	1973.3	1945.5	1900.2	1876.0	1858.2	1802.6	1779.6	1751.0
20°	2022.5	2013.4	1983.6	1980.8	1947.5	1894.3	1865.3	1842.7	1777.6	1750.2	1718.4
22.5°	2028.5	2019.3	1985.6	1981.6	1942.7	1882.4	1849.8	1823.2	1749.0	1713.3	1680.3
25°	2027.3	2018.5	1980.4	1976.5	1933.6	1864.5	1828.0	1797.4	1712.9	1670.8	1638.2
27.5°	2017.3	2010.6	1970.5	1965.3	1916.9	1840.3	1801.4	1767.7	1672.8	1625.9	1590.6
30°	2000.3	1995.1	1952.6	1947.9	1896.3	1813.7	1770.4	1731.5	1629.5	1576.7	1541.0
32.5°	1972.9	1968.1	1925.2	1920.9	1868.5	1779.6	1734.3	1694.2	1582.3	1523.9	1488.2
35°	1935.2	1932.4	1890.7	1885.9	1832.8	1740.7	1692.6	1648.6	1533.1	1467.2	1433.0
37.5°	1885.6	1885.6	1845.5	1840.3	1788.3	1693.0	1645.8	1598.9	1477.5	1407.6	1373.9
40°	1828.0	1833.2	1792.3	1787.1	1736.7	1641.8	1590.2	1541.0	1417.5	1344.9	1311.9
42.5°	1758.9	1763.7	1729.5	1724.8	1677.5	1582.7	1534.6	1481.1	1354.8	1281.0	1246.8
45°	1682.7	1689.1	1658.5	1654.9	1610.9	1518.0	1471.9	1417.5	1289.3	1214.3	1181.0
47.5°	1597.8	1606.1	1579.5	1577.5	1536.6	1451.7	1403.6	1348.5	1220.6	1144.8	1113.5
50°	1502.5	1514.4	1492.6	1492.6	1456.0	1371.5	1329.8	1274.6	1149.2	1073.4	1042.4
52.5°	1400.5	1415.6	1399.3	1399.7	1369.9	1294.1	1250.8	1196.8	1074.6	999.9	971.4
55°	1294.9	1309.6	1299.2	1300.8	1277.4	1208.3	1169.0	1115.5	998.3	925.7	898.7
57.5°	1184.5	1200.4	1193.7	1196.8	1180.6	1118.6	1077.7	1030.9	919.8	847.9	824.9
60°	1073.8	1088.9	1085.3	1089.6	1079.3	1025.7	988.4	940.0	840.8	771.7	751.4
62.5°	961.8	975.7	974.9	979.7	974.1	929.7	896.3	855.0	759.0	695.5	676.8
65°	852.3	864.2	863.4	868.5	867.4	831.6	801.5	763.7	677.2	618.9	602.6
67.5°	745.9	755.8	753.0	759.0	760.6	732.0	705.8	672.1	599.4	542.6	528.7
70°	641.9	648.6	645.1	649.0	652.6	631.2	608.9	579.2	516.4	466.4	454.9
72.5°	539.9	544.6	539.1	543.0	546.2	530.7	512.5	486.7	434.7	391.4	381.9
75°	441.0	447.8	436.3	440.2	442.6	427.1	416.4	395.4	350.5	317.2	310.8
77.5°	345.4	349.3	343.0	341.4	343.0	331.9	323.5	307.2	273.5	246.1	242.1
80°	254.1	256.4	250.1	248.5	249.7	241.7	235.4	223.5	199.7	179.0	177.4
82.5°	170.3	171.5	165.9	164.3	165.1	162.8	155.2	146.9	135.8	118.3	117.9
85°	97.3	97.3	93.3	91.7	92.5	88.5	85.7	81.4	77.0	65.1	65.9
87.5°	35.7	35.7	33.7	33.3	37.3	32.9	31.8	29.8	31.0	24.6	26.2
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1816.1	1816.1	1816.1	1816.1	1816.1	1816.1	1816.1	1816.1	1816.1	1816.1	1816.1
2.5°	1824.0	1820.1	1816.5	1804.2	1809.3	1796.6	1795.8	1791.1	1787.5	1780.8	1789.5
5°	1818.1	1810.1	1799.8	1785.1	1789.5	1774.4	1771.2	1765.7	1760.9	1752.2	1758.9
7.5°	1808.5	1795.4	1779.2	1760.5	1766.5	1747.8	1743.0	1737.1	1733.1	1722.8	1728.8
10°	1794.6	1776.0	1756.9	1734.3	1738.7	1718.4	1712.5	1706.1	1702.6	1693.4	1699.4
12.5°	1773.2	1750.6	1724.8	1700.2	1704.9	1685.9	1677.9	1671.2	1670.0	1662.5	1669.6
15°	1745.4	1714.1	1687.5	1661.3	1666.8	1644.6	1641.0	1634.3	1636.3	1631.1	1639.8
17.5°	1710.1	1674.0	1645.0	1616.8	1622.4	1603.7	1600.9	1597.8	1599.7	1598.9	1608.5
20°	1670.4	1630.7	1597.4	1569.6	1572.7	1558.1	1559.3	1558.5	1562.4	1566.8	1579.9
22.5°	1625.5	1580.7	1545.8	1517.2	1521.9	1509.2	1514.8	1516.4	1523.1	1533.1	1549.7
25°	1575.1	1527.1	1490.6	1463.6	1468.0	1459.6	1469.1	1473.1	1483.8	1500.5	1517.6
27.5°	1522.3	1471.5	1432.6	1406.8	1415.2	1406.8	1421.1	1429.0	1445.3	1463.6	1484.6
30°	1466.4	1413.6	1373.5	1350.5	1358.4	1350.8	1373.9	1384.6	1400.9	1425.9	1450.9
32.5°	1407.6	1352.0	1312.7	1294.9	1300.4	1299.2	1325.0	1337.0	1358.8	1387.4	1414.0
35°	1347.3	1289.3	1249.6	1234.5	1241.3	1242.9	1273.8	1287.7	1311.5	1346.1	1374.7
37.5°	1285.0	1225.8	1186.9	1174.6	1180.6	1186.5	1222.6	1236.5	1263.5	1301.2	1332.6
40°	1220.2	1161.1	1123.0	1113.1	1119.0	1125.4	1164.7	1183.7	1213.1	1254.0	1288.1
42.5°	1154.8	1095.6	1058.7	1051.5	1057.5	1069.8	1111.5	1129.3	1160.3	1205.6	1243.3
45°	1088.1	1026.5	994.4	988.8	995.2	1009.5	1050.4	1071.8	1104.7	1154.4	1194.8
47.5°	1020.6	960.6	930.1	926.5	932.9	948.7	994.0	1013.4	1048.4	1101.2	1144.8
50°	952.3	893.9	864.6	863.4	869.3	886.4	929.7	952.7	988.8	1048.0	1092.8
52.5°	883.2	827.3	800.7	800.7	806.2	823.7	867.4	891.2	928.5	990.8	1040.4
55°	814.2	761.0	735.6	737.5	745.5	760.6	803.0	828.1	865.8	930.5	982.9
57.5°	745.1	694.7	671.7	674.4	682.0	697.1	738.7	766.9	801.1	868.1	921.7
60°	676.8	629.2	608.9	612.1	618.9	633.9	677.2	701.4	735.6	803.8	857.4
62.5°	607.7	564.5	545.4	549.4	555.3	570.4	611.3	634.7	668.5	735.6	789.5
65°	539.5	499.4	483.1	487.1	492.6	506.5	545.0	567.7	599.8	665.3	716.9
67.5°	472.0	435.5	422.0	425.9	430.3	443.4	475.2	499.8	529.9	592.3	641.1
70°	405.3	372.7	360.8	364.8	368.8	380.7	408.5	431.1	458.9	516.0	561.3
72.5°	339.4	307.6	301.7	305.3	308.4	318.8	345.4	363.2	387.4	438.2	477.1
75°	275.1	247.7	243.7	247.3	250.1	258.0	280.3	295.7	316.0	360.0	391.8
77.5°	213.2	190.1	188.6	191.3	194.1	199.7	217.1	233.4	249.3	281.8	310.0
80°	155.2	136.6	136.6	139.3	138.5	145.3	157.6	170.7	182.2	205.6	226.3
82.5°	102.4	87.7	89.7	91.7	92.9	95.7	103.2	113.1	120.3	134.6	148.1
85°	56.8	46.8	48.8	50.4	49.6	52.8	56.8	62.7	66.3	73.0	80.2
87.5°	21.0	17.5	17.9	19.1	19.8	21.4	21.4	25.0	25.4	26.2	27.8
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°	1816.1	1816.1	1816.1
2.5°	1772.8	1782.3	1789.5
5°	1742.2	1750.2	1756.5
7.5°	1712.5	1719.6	1725.2
10°	1684.3	1692.2	1696.2
12.5°	1655.3	1664.4	1667.6
15°	1626.7	1635.9	1639.8
17.5°	1597.4	1609.3	1613.6
20°	1570.0	1585.1	1588.6
22.5°	1542.2	1557.7	1562.0
25°	1512.0	1530.3	1534.6
27.5°	1479.9	1501.7	1506.1
30°	1447.7	1471.5	1475.9
32.5°	1413.2	1439.0	1442.9
35°	1377.0	1402.8	1407.6
37.5°	1337.0	1365.1	1374.7
40°	1295.3	1325.8	1335.8
42.5°	1251.6	1285.0	1295.3
45°	1204.8	1241.3	1253.2
47.5°	1157.5	1198.8	1209.1
50°	1106.3	1150.4	1162.7
52.5°	1052.7	1100.8	1113.1
55°	997.2	1045.6	1059.1
57.5°	936.8	986.8	1001.1
60°	873.7	923.7	937.2
62.5°	809.0	854.3	867.4
65°	736.8	779.2	791.1
67.5°	660.1	699.0	709.0
70°	578.8	612.5	621.2
72.5°	493.8	517.2	528.7
75°	406.1	424.7	433.5
77.5°	318.0	331.1	338.2
80°	231.8	239.4	245.3
82.5°	151.6	154.8	159.2
85°	81.8	81.8	84.6
87.5°	27.8	26.6	27.8
90°	0.0	0.0	0.0

(END OF REPORT)