

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: P834193

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2LO-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834193
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-27-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

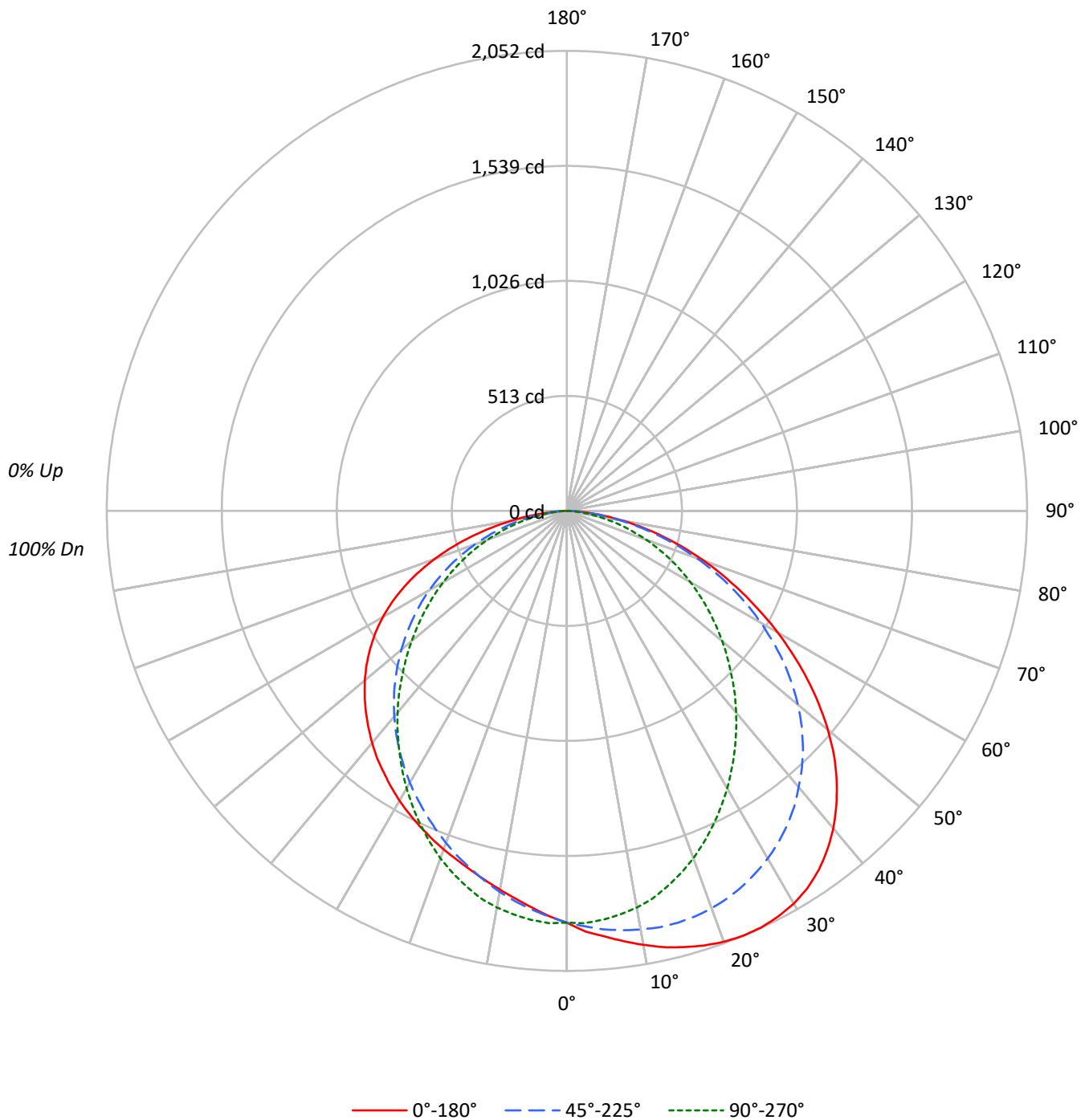
Lumens per Lamp: N/A
Luminaire Lumens: 5402.8 lumens
Efficiency: N/A
Efficacy: 115.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4943	4943	4943
5°	5146	4945	4799
10°	5371	4908	4688
15°	5612	4829	4620
20°	5858	4723	4601
25°	6088	4586	4608
30°	6286	4442	4638
35°	6430	4284	4677
40°	6495	4125	4745
45°	6476	3951	4823
50°	6362	3785	4923
55°	6144	3611	5025
60°	5845	3425	5102
65°	5489	3216	5095
70°	5108	2966	4943
75°	4637	2604	4558
80°	3981	2140	3845
85°	3038	1463	2640

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.2	3.2
10°-20°	503.1	9.3
20°-30°	770.7	14.3
30°-40°	940.5	17.4
40°-50°	983.6	18.2
50°-60°	890.2	16.5
60°-70°	674.2	12.5
70°-80°	375.7	7.0
80°-90°	90.6	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°	1447.9	26.8
0°-40°	2388.5	44.2
0°-60°	4262.2	78.9
0°-90°	5402.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5402.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1837	1837	1837	1837	1837	
5°	1905	1873	1831	1786	1776	184
15°	2015	1903	1734	1653	1658	571
25°	2050	1849	1544	1490	1552	946
35°	1957	1712	1304	1302	1424	1222
45°	1702	1489	1038	1084	1267	1309
55°	1310	1182	770	838	1071	1169
65°	862	811	505	574	800	855
75°	446	421	250	299	438	473
85°	98	87	47	63	86	118
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°	1836.7	1836.7	1836.7	1836.7	1836.7	1836.7	1836.7	1836.7	1836.7	1836.7	1836.7
2.5°	1877.3	1868.4	1861.2	1864.0	1865.6	1860.0	1855.2	1856.0	1851.2	1860.4	1838.7
5°	1905.0	1896.9	1888.5	1891.7	1888.5	1880.1	1873.3	1871.2	1858.4	1863.6	1841.5
7.5°	1935.9	1927.1	1914.6	1918.2	1911.4	1895.7	1886.9	1881.7	1862.0	1862.4	1837.9
10°	1965.6	1958.0	1941.1	1943.5	1931.1	1910.2	1896.1	1888.9	1861.2	1857.2	1831.9
12.5°	1993.3	1982.9	1964.8	1966.0	1947.9	1920.2	1902.2	1891.7	1855.6	1843.5	1818.7
15°	2014.6	2004.5	1982.9	1982.5	1959.2	1923.0	1902.6	1888.1	1842.3	1823.5	1797.4
17.5°	2032.6	2023.4	1996.5	1995.7	1967.6	1921.8	1897.3	1879.3	1823.1	1799.8	1770.9
20°	2045.5	2036.3	2006.1	2003.3	1969.6	1915.8	1886.5	1863.6	1797.8	1770.1	1738.0
22.5°	2051.5	2042.3	2008.1	2004.1	1964.8	1903.8	1870.8	1843.9	1768.9	1732.7	1699.4
25°	2050.3	2041.5	2002.9	1998.9	1955.6	1885.7	1848.8	1817.9	1732.3	1689.8	1656.9
27.5°	2040.3	2033.4	1992.9	1987.7	1938.7	1861.2	1821.9	1787.7	1691.8	1644.4	1608.7
30°	2023.0	2017.8	1974.8	1970.0	1917.8	1834.3	1790.6	1751.2	1648.0	1594.6	1558.5
32.5°	1995.3	1990.5	1947.1	1942.7	1889.7	1799.8	1754.0	1713.5	1600.3	1541.2	1505.1
35°	1957.2	1954.4	1912.2	1907.4	1853.6	1760.4	1711.9	1667.3	1550.5	1483.8	1449.3
37.5°	1907.0	1907.0	1866.4	1861.2	1808.6	1712.3	1664.5	1617.1	1494.3	1423.6	1389.5
40°	1848.8	1854.0	1812.6	1807.4	1756.4	1660.5	1608.3	1558.5	1433.6	1360.2	1326.9
42.5°	1778.9	1783.7	1749.2	1744.4	1696.6	1600.7	1552.1	1497.9	1370.2	1295.5	1261.0
45°	1701.8	1708.3	1677.3	1673.7	1629.2	1535.2	1488.6	1433.6	1304.0	1228.1	1194.4
47.5°	1615.9	1624.3	1597.4	1595.4	1554.1	1468.2	1419.6	1363.8	1234.5	1157.8	1126.1
50°	1519.6	1531.6	1509.5	1509.5	1472.6	1387.1	1344.9	1289.1	1162.3	1085.6	1054.3
52.5°	1416.4	1431.6	1415.2	1415.6	1385.5	1308.8	1265.0	1210.4	1086.8	1011.3	982.4
55°	1309.6	1324.4	1314.0	1315.6	1291.9	1222.1	1182.3	1128.1	1009.7	936.2	908.9
57.5°	1198.0	1214.0	1207.2	1210.4	1194.0	1131.3	1090.0	1042.6	930.2	857.5	834.3
60°	1086.0	1101.2	1097.6	1102.0	1091.6	1037.4	999.7	950.7	850.3	780.5	760.0
62.5°	972.8	986.8	986.0	990.8	985.2	940.2	906.5	864.8	767.6	703.4	684.5
65°	862.0	874.0	873.2	878.4	877.2	841.1	810.6	772.4	684.9	625.9	609.4
67.5°	754.4	764.4	761.6	767.6	769.2	740.3	713.8	679.7	606.2	548.8	534.8
70°	649.2	656.0	652.4	656.4	660.0	638.3	615.9	585.7	522.3	471.7	460.1
72.5°	546.0	550.8	545.2	549.2	552.4	536.8	518.3	492.2	439.6	395.8	386.2
75°	446.0	452.9	441.2	445.2	447.6	432.0	421.1	399.9	354.5	320.8	314.4
77.5°	349.3	353.3	346.9	345.3	346.9	335.6	327.2	310.7	276.6	248.9	244.9
80°	256.9	259.3	252.9	251.3	252.5	244.5	238.1	226.0	201.9	181.1	179.5
82.5°	172.2	173.4	167.8	166.2	167.0	164.6	157.0	148.5	137.3	119.6	119.2
85°	98.4	98.4	94.3	92.7	93.5	89.5	86.7	82.3	77.9	65.8	66.6
87.5°	36.1	36.1	34.1	33.7	37.7	33.3	32.1	30.1	31.3	24.9	26.5
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°	1836.7	1836.7	1836.7	1836.7	1836.7	1836.7	1836.7	1836.7	1836.7	1836.7	1836.7
2.5°	1844.7	1840.7	1837.1	1824.7	1829.9	1817.0	1816.2	1811.4	1807.8	1801.0	1809.8
5°	1838.7	1830.7	1820.3	1805.4	1809.8	1794.6	1791.4	1785.7	1780.9	1772.1	1778.9
7.5°	1829.1	1815.8	1799.4	1780.5	1786.5	1767.7	1762.9	1756.8	1752.8	1742.4	1748.4
10°	1815.0	1796.2	1776.9	1754.0	1758.4	1738.0	1731.9	1725.5	1721.9	1712.7	1718.7
12.5°	1793.4	1770.5	1744.4	1719.5	1724.3	1705.0	1697.0	1690.2	1689.0	1681.4	1688.6
15°	1765.3	1733.5	1706.6	1680.1	1685.8	1663.3	1659.7	1652.8	1654.9	1649.6	1658.5
17.5°	1729.5	1693.0	1663.7	1635.2	1640.8	1621.9	1619.1	1615.9	1617.9	1617.1	1626.8
20°	1689.4	1649.2	1615.5	1587.4	1590.6	1575.8	1577.0	1576.2	1580.2	1584.6	1597.8
22.5°	1644.0	1598.6	1563.3	1534.4	1539.2	1526.4	1532.0	1533.6	1540.4	1550.5	1567.3
25°	1593.0	1544.5	1507.5	1480.2	1484.6	1476.2	1485.8	1489.9	1500.7	1517.6	1534.8
27.5°	1539.6	1488.2	1448.9	1422.8	1431.2	1422.8	1437.3	1445.3	1461.7	1480.2	1501.5
30°	1483.0	1429.6	1389.1	1365.8	1373.8	1366.2	1389.5	1400.3	1416.8	1442.1	1467.4
32.5°	1423.6	1367.4	1327.7	1309.6	1315.2	1314.0	1340.1	1352.1	1374.2	1403.1	1430.0
35°	1362.6	1304.0	1263.8	1248.6	1255.4	1257.0	1288.3	1302.4	1326.5	1361.4	1390.3
37.5°	1299.6	1239.7	1200.4	1187.9	1194.0	1200.0	1236.5	1250.6	1277.9	1316.0	1347.7
40°	1234.1	1174.3	1135.8	1125.7	1131.7	1138.2	1177.9	1197.2	1226.9	1268.2	1302.8
42.5°	1167.9	1108.1	1070.7	1063.5	1069.5	1082.0	1124.1	1142.2	1173.5	1219.3	1257.4
45°	1100.4	1038.2	1005.7	1000.1	1006.5	1020.9	1062.3	1084.0	1117.3	1167.5	1208.4
47.5°	1032.2	971.6	940.6	937.0	943.5	959.5	1005.3	1025.0	1060.3	1113.7	1157.8
50°	963.1	904.1	874.4	873.2	879.2	896.5	940.2	963.5	1000.1	1059.9	1105.2
52.5°	893.3	836.7	809.8	809.8	815.4	833.0	877.2	901.3	939.0	1002.1	1052.3
55°	823.4	769.6	743.9	745.9	754.0	769.2	812.2	837.5	875.6	941.0	994.0
57.5°	753.6	702.6	679.3	682.1	689.7	705.0	747.1	775.6	810.2	878.0	932.2
60°	684.5	636.3	615.9	619.1	625.9	641.1	684.9	709.4	743.9	813.0	867.2
62.5°	614.6	570.9	551.6	555.6	561.7	576.9	618.3	641.9	676.1	743.9	798.5
65°	545.6	505.0	488.6	492.6	498.2	512.3	551.2	574.1	606.6	672.9	725.1
67.5°	477.3	440.4	426.8	430.8	435.2	448.4	480.6	505.4	536.0	599.0	648.4
70°	409.9	377.0	364.9	368.9	373.0	385.0	413.1	436.0	464.1	521.9	567.7
72.5°	343.3	311.1	305.1	308.7	311.9	322.4	349.3	367.3	391.8	443.2	482.6
75°	278.2	250.5	246.5	250.1	252.9	261.0	283.4	299.1	319.6	364.1	396.2
77.5°	215.6	192.3	190.7	193.5	196.3	201.9	219.6	236.1	252.1	285.0	313.5
80°	157.0	138.1	138.1	140.9	140.1	146.9	159.4	172.6	184.3	208.0	228.8
82.5°	103.6	88.7	90.7	92.7	93.9	96.8	104.4	114.4	121.6	136.1	149.7
85°	57.4	47.4	49.4	51.0	50.2	53.4	57.4	63.4	67.0	73.9	81.1
87.5°	21.3	17.7	18.1	19.3	20.1	21.7	21.7	25.3	25.7	26.5	28.1
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°	1836.7	1836.7	1836.7
2.5°	1793.0	1802.6	1809.8
5°	1762.0	1770.1	1776.5
7.5°	1731.9	1739.2	1744.8
10°	1703.4	1711.5	1715.5
12.5°	1674.1	1683.4	1686.6
15°	1645.2	1654.5	1658.5
17.5°	1615.5	1627.6	1632.0
20°	1587.8	1603.1	1606.7
22.5°	1559.7	1575.4	1579.8
25°	1529.2	1547.7	1552.1
27.5°	1496.7	1518.8	1523.2
30°	1464.2	1488.2	1492.7
32.5°	1429.2	1455.3	1459.3
35°	1392.7	1418.8	1423.6
37.5°	1352.1	1380.7	1390.3
40°	1310.0	1340.9	1350.9
42.5°	1265.8	1299.6	1310.0
45°	1218.5	1255.4	1267.4
47.5°	1170.7	1212.4	1222.9
50°	1118.9	1163.5	1175.9
52.5°	1064.7	1113.3	1125.7
55°	1008.5	1057.5	1071.1
57.5°	947.5	998.1	1012.5
60°	883.6	934.2	947.9
62.5°	818.2	864.0	877.2
65°	745.1	788.1	800.1
67.5°	667.6	707.0	717.0
70°	585.3	619.5	628.3
72.5°	499.4	523.1	534.8
75°	410.7	429.6	438.4
77.5°	321.6	334.8	342.1
80°	234.5	242.1	248.1
82.5°	153.4	156.6	161.0
85°	82.7	82.7	85.5
87.5°	28.1	26.9	28.1
90°	0.0	0.0	0.0

(END OF REPORT)