

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: P835289

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4STD-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835289
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2-LD4-4STD-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

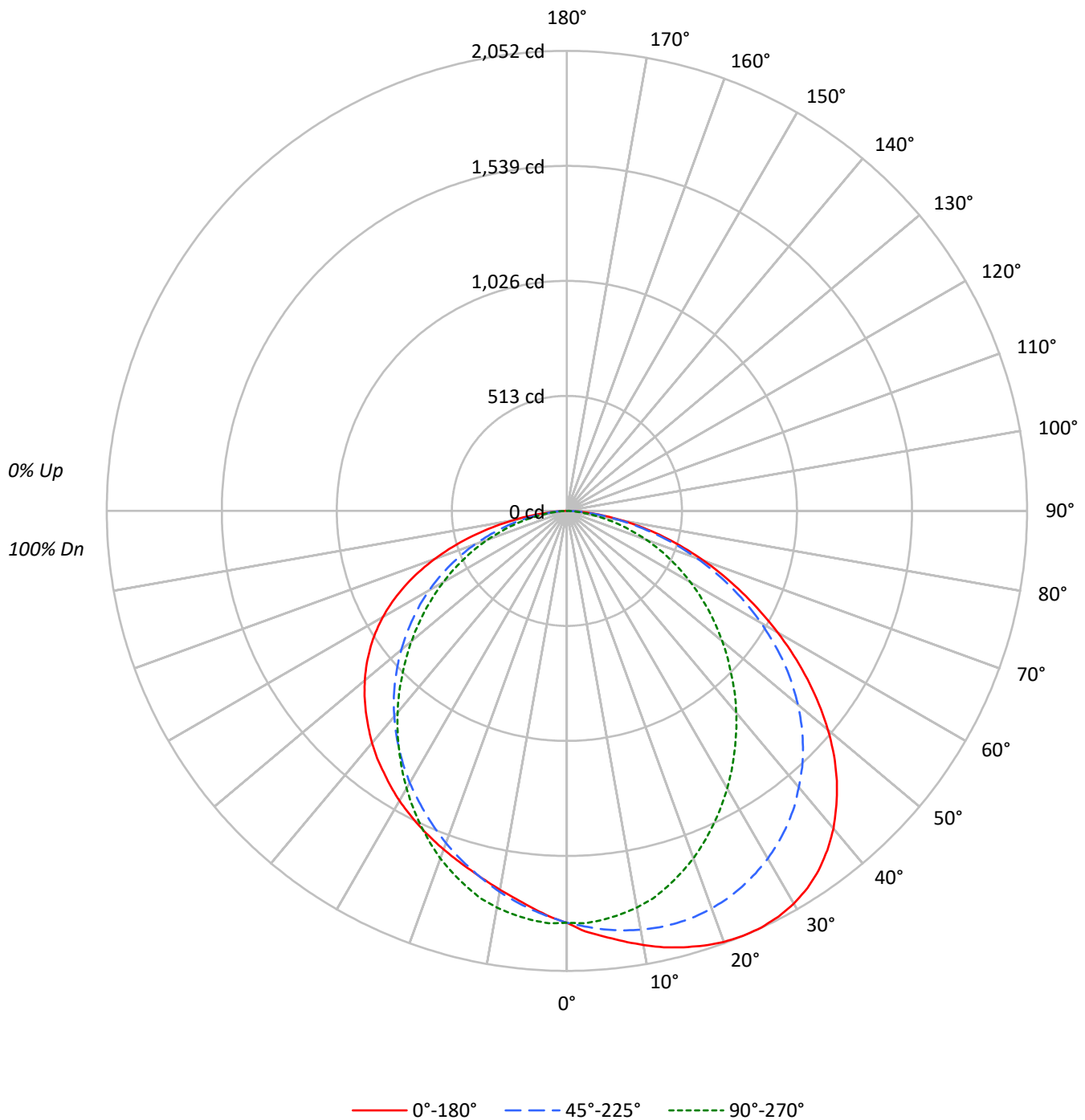
Lumens per Lamp: N/A
Luminaire Lumens: 5404.2 lumens
Efficiency: N/A
Efficacy: 81.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	4944	4944	4944
5°	5147	4947	4800
10°	5372	4909	4689
15°	5614	4831	4622
20°	5859	4724	4602
25°	6089	4587	4610
30°	6288	4443	4639
35°	6431	4285	4678
40°	6496	4126	4747
45°	6478	3952	4825
50°	6363	3786	4924
55°	6145	3612	5027
60°	5846	3426	5103
65°	5490	3217	5096
70°	5109	2967	4945
75°	4639	2606	4559
80°	3983	2140	3846
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°	503.2	9.3
20°-30°	770.9	14.3
30°-40°	940.8	17.4
40°-50°	983.8	18.2
50°-60°	890.4	16.5
60°-70°	674.4	12.5
70°-80°	375.8	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°	1448.3	26.8
0°-40°	2389.1	44.2
0°-60°	4263.4	78.9
0°-90°	5404.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5404.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1837	1837	1837	1837	1837	
5°	1906	1874	1831	1786	1777	184
15°	2015	1903	1734	1653	1659	571
25°	2051	1849	1545	1490	1552	946
35°	1958	1712	1304	1303	1424	1222
45°	1702	1489	1038	1084	1268	1310
55°	1310	1183	770	838	1071	1169
65°	862	811	505	574	800	855
75°	446	421	251	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°	1837.2	1837.2	1837.2	1837.2	1837.2	1837.2	1837.2	1837.2	1837.2	1837.2	1837.2
2.5°	1877.8	1868.9	1861.7	1864.5	1866.1	1860.5	1855.7	1856.5	1851.7	1860.9	1839.2
5°	1905.5	1897.4	1889.0	1892.2	1889.0	1880.6	1873.8	1871.7	1858.9	1864.1	1842.0
7.5°	1936.4	1927.6	1915.1	1918.7	1911.9	1896.2	1887.4	1882.2	1862.5	1862.9	1838.4
10°	1966.1	1958.5	1941.6	1944.0	1931.6	1910.7	1896.6	1889.4	1861.7	1857.7	1832.4
12.5°	1993.8	1983.4	1965.3	1966.5	1948.4	1920.7	1902.7	1892.2	1856.1	1844.0	1819.1
15°	2015.1	2005.1	1983.4	1983.0	1959.7	1923.5	1903.1	1888.6	1842.8	1824.0	1797.9
17.5°	2033.2	2023.9	1997.0	1996.2	1968.1	1922.3	1897.8	1879.8	1823.6	1800.3	1771.3
20°	2046.0	2036.8	2006.7	2003.9	1970.1	1916.3	1887.0	1864.1	1798.3	1770.5	1738.4
22.5°	2052.0	2042.8	2008.7	2004.7	1965.3	1904.3	1871.3	1844.4	1769.3	1733.2	1699.9
25°	2050.8	2042.0	2003.5	1999.4	1956.1	1886.2	1849.3	1818.3	1732.8	1690.2	1657.3
27.5°	2040.8	2034.0	1993.4	1988.2	1939.2	1861.7	1822.3	1788.2	1692.2	1644.9	1609.1
30°	2023.5	2018.3	1975.3	1970.5	1918.3	1834.8	1791.0	1751.7	1648.5	1595.1	1558.9
32.5°	1995.8	1991.0	1947.6	1943.2	1890.2	1800.3	1754.5	1713.9	1600.7	1541.6	1505.5
35°	1957.7	1954.9	1912.7	1907.9	1854.1	1760.9	1712.3	1667.7	1550.9	1484.2	1449.7
37.5°	1907.5	1907.5	1866.9	1861.7	1809.1	1712.7	1664.9	1617.5	1494.7	1424.0	1389.9
40°	1849.3	1854.5	1813.1	1807.9	1756.9	1660.9	1608.7	1558.9	1434.0	1360.5	1327.2
42.5°	1779.4	1784.2	1749.7	1744.8	1697.1	1601.1	1552.5	1498.3	1370.6	1295.9	1261.3
45°	1702.3	1708.7	1677.8	1674.2	1629.6	1535.6	1489.0	1434.0	1304.3	1228.4	1194.7
47.5°	1616.3	1624.8	1597.9	1595.9	1554.5	1468.6	1420.0	1364.2	1234.8	1158.1	1126.4
50°	1520.0	1532.0	1509.9	1509.9	1473.0	1387.4	1345.3	1289.5	1162.6	1085.9	1054.5
52.5°	1416.8	1432.0	1415.6	1416.0	1385.8	1309.1	1265.4	1210.7	1087.1	1011.6	982.7
55°	1309.9	1324.8	1314.4	1316.0	1292.3	1222.4	1182.6	1128.4	1010.0	936.5	909.2
57.5°	1198.3	1214.4	1207.5	1210.7	1194.3	1131.6	1090.3	1042.9	930.4	857.8	834.5
60°	1086.3	1101.5	1097.9	1102.3	1091.9	1037.7	999.9	950.9	850.5	780.7	760.2
62.5°	973.0	987.1	986.3	991.1	985.5	940.5	906.8	865.0	767.8	703.6	684.7
65°	862.2	874.2	873.4	878.6	877.4	841.3	810.8	772.6	685.1	626.1	609.6
67.5°	754.6	764.6	761.8	767.8	769.4	740.5	714.0	679.9	606.4	549.0	534.9
70°	649.3	656.2	652.6	656.6	660.2	638.5	616.0	585.9	522.4	471.9	460.2
72.5°	546.1	551.0	545.3	549.4	552.6	536.9	518.4	492.3	439.7	396.0	386.3
75°	446.2	453.0	441.3	445.3	447.8	432.1	421.3	400.0	354.6	320.9	314.4
77.5°	349.4	353.4	347.0	345.4	347.0	335.7	327.3	310.8	276.7	249.0	245.0
80°	257.0	259.4	253.0	251.4	252.6	244.6	238.1	226.1	202.0	181.1	179.5
82.5°	172.3	173.5	167.9	166.3	167.1	164.6	157.0	148.6	137.3	119.7	119.3
85°	98.4	98.4	94.4	92.8	93.6	89.6	86.7	82.3	77.9	65.9	66.7
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°	1837.2	1837.2	1837.2	1837.2	1837.2	1837.2	1837.2	1837.2	1837.2	1837.2	1837.2
2.5°	1845.2	1841.2	1837.6	1825.2	1830.4	1817.5	1816.7	1811.9	1808.3	1801.5	1810.3
5°	1839.2	1831.2	1820.7	1805.9	1810.3	1795.0	1791.8	1786.2	1781.4	1772.6	1779.4
7.5°	1829.6	1816.3	1799.9	1781.0	1787.0	1768.1	1763.3	1757.3	1753.3	1742.8	1748.9
10°	1815.5	1796.6	1777.4	1754.5	1758.9	1738.4	1732.4	1726.0	1722.4	1713.1	1719.1
12.5°	1793.8	1770.9	1744.8	1719.9	1724.8	1705.5	1697.5	1690.6	1689.4	1681.8	1689.0
15°	1765.7	1734.0	1707.1	1680.6	1686.2	1663.7	1660.1	1653.3	1655.3	1650.1	1658.9
17.5°	1730.0	1693.4	1664.1	1635.6	1641.2	1622.4	1619.6	1616.3	1618.3	1617.5	1627.2
20°	1689.8	1649.7	1615.9	1587.8	1591.0	1576.2	1577.4	1576.6	1580.6	1585.0	1598.3
22.5°	1644.5	1599.1	1563.7	1534.8	1539.6	1526.8	1532.4	1534.0	1540.8	1550.9	1567.7
25°	1593.5	1544.9	1507.9	1480.6	1485.0	1476.6	1486.2	1490.2	1501.1	1518.0	1535.2
27.5°	1540.0	1488.6	1449.3	1423.2	1431.6	1423.2	1437.6	1445.7	1462.1	1480.6	1501.9
30°	1483.4	1430.0	1389.5	1366.2	1374.2	1366.6	1389.9	1400.7	1417.2	1442.5	1467.8
32.5°	1424.0	1367.8	1328.0	1309.9	1315.6	1314.4	1340.5	1352.5	1374.6	1403.5	1430.4
35°	1362.9	1304.3	1264.2	1248.9	1255.7	1257.3	1288.7	1302.7	1326.8	1361.7	1390.7
37.5°	1299.9	1240.1	1200.7	1188.3	1194.3	1200.3	1236.9	1250.9	1278.2	1316.4	1348.1
40°	1234.4	1174.6	1136.1	1126.0	1132.0	1138.5	1178.2	1197.5	1227.2	1268.6	1303.1
42.5°	1168.2	1108.3	1071.0	1063.8	1069.8	1082.2	1124.4	1142.5	1173.8	1219.6	1257.7
45°	1100.7	1038.5	1005.9	1000.3	1006.7	1021.2	1062.6	1084.3	1117.6	1167.8	1208.7
47.5°	1032.4	971.8	940.9	937.3	943.7	959.8	1005.5	1025.2	1060.6	1114.0	1158.1
50°	963.4	904.3	874.6	873.4	879.4	896.7	940.5	963.8	1000.3	1060.2	1105.5
52.5°	893.5	836.9	810.0	810.0	815.6	833.3	877.4	901.5	939.3	1002.3	1052.5
55°	823.6	769.8	744.1	746.1	754.2	769.4	812.4	837.7	875.8	941.3	994.3
57.5°	753.8	702.8	679.5	682.3	689.9	705.2	747.3	775.8	810.4	878.2	932.5
60°	684.7	636.5	616.0	619.2	626.1	641.3	685.1	709.6	744.1	813.2	867.4
62.5°	614.8	571.0	551.8	555.8	561.8	577.1	618.4	642.1	676.3	744.1	798.7
65°	545.7	505.2	488.7	492.7	498.4	512.4	551.4	574.3	606.8	673.0	725.2
67.5°	477.5	440.5	426.9	430.9	435.3	448.6	480.7	505.6	536.1	599.2	648.5
70°	410.0	377.1	365.0	369.0	373.1	385.1	413.2	436.1	464.2	522.0	567.8
72.5°	343.3	311.2	305.2	308.8	312.0	322.5	349.4	367.4	391.9	443.3	482.7
75°	278.3	250.6	246.6	250.2	253.0	261.0	283.5	299.2	319.7	364.2	396.4
77.5°	215.6	192.4	190.7	193.6	196.4	202.0	219.7	236.1	252.2	285.1	313.6
80°	157.0	138.1	138.1	141.0	140.1	147.0	159.4	172.7	184.3	208.0	228.9
82.5°	103.6	88.7	90.8	92.8	94.0	96.8	104.4	114.4	121.7	136.1	149.8
85°	57.4	47.4	49.4	51.0	50.2	53.4	57.4	63.4	67.1	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°	1837.2	1837.2	1837.2
2.5°	1793.4	1803.1	1810.3
5°	1762.5	1770.5	1777.0
7.5°	1732.4	1739.6	1745.2
10°	1703.9	1711.9	1715.9
12.5°	1674.6	1683.8	1687.0
15°	1645.7	1654.9	1658.9
17.5°	1615.9	1628.0	1632.4
20°	1588.2	1603.5	1607.1
22.5°	1560.1	1575.8	1580.2
25°	1529.6	1548.1	1552.5
27.5°	1497.1	1519.2	1523.6
30°	1464.5	1488.6	1493.1
32.5°	1429.6	1455.7	1459.7
35°	1393.1	1419.2	1424.0
37.5°	1352.5	1381.0	1390.7
40°	1310.3	1341.3	1351.3
42.5°	1266.2	1299.9	1310.3
45°	1218.8	1255.7	1267.8
47.5°	1171.0	1212.8	1223.2
50°	1119.2	1163.8	1176.2
52.5°	1065.0	1113.6	1126.0
55°	1008.8	1057.7	1071.4
57.5°	947.7	998.3	1012.8
60°	883.9	934.5	948.1
62.5°	818.4	864.2	877.4
65°	745.3	788.3	800.3
67.5°	667.8	707.2	717.2
70°	585.5	619.6	628.5
72.5°	499.6	523.3	534.9
75°	410.8	429.7	438.5
77.5°	321.7	334.9	342.1
80°	234.5	242.1	248.2
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)