

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: P835168

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6LO-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835168
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-LD4-6LO-20-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

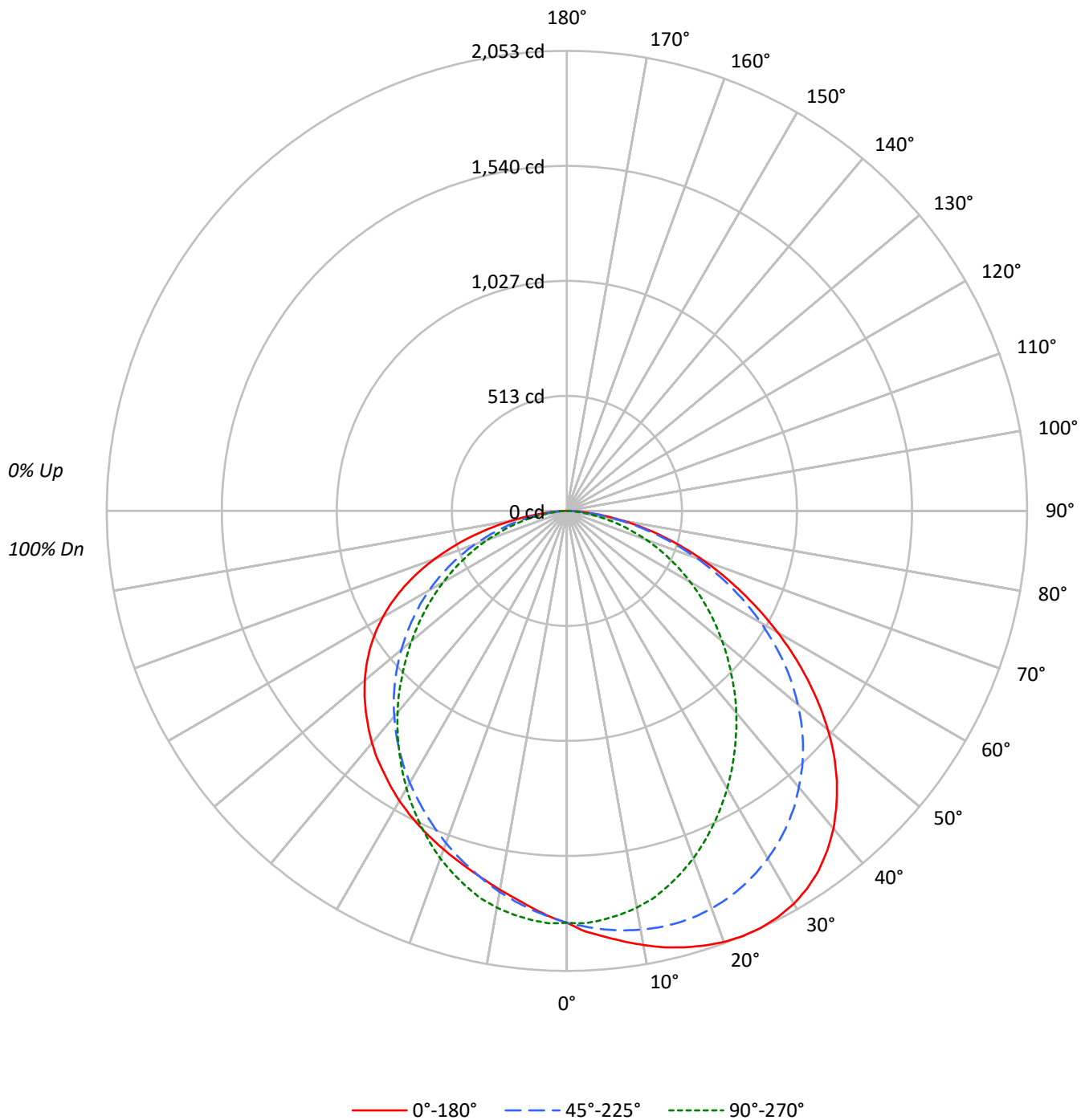
Lumens per Lamp: N/A
Luminaire Lumens: 5407.5 lumens
Efficiency: N/A
Efficacy: 77.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	4947	4947	4947
5°	5150	4950	4803
10°	5376	4912	4692
15°	5617	4834	4624
20°	5863	4727	4605
25°	6093	4590	4612
30°	6292	4446	4642
35°	6435	4287	4681
40°	6500	4129	4750
45°	6482	3954	4827
50°	6367	3788	4927
55°	6149	3614	5030
60°	5850	3428	5106
65°	5493	3219	5099
70°	5112	2969	4947
75°	4641	2607	4562
80°	3986	2142	3848
85°	3038	1463	2643

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.4	3.2
10°-20°	503.5	9.3
20°-30°	771.4	14.3
30°-40°	941.3	17.4
40°-50°	984.4	18.2
50°-60°	891.0	16.5
60°-70°	674.8	12.5
70°-80°	376.0	7.0
80°-90°	90.7	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°	1449.2	26.8
0°-40°	2390.5	44.2
0°-60°	4266.0	78.9
0°-90°	5407.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5407.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1838	1838	1838	1838	1838	
5°	1907	1875	1832	1787	1778	184
15°	2016	1904	1735	1654	1660	572
25°	2052	1850	1546	1491	1553	947
35°	1959	1713	1305	1304	1425	1223
45°	1703	1490	1039	1085	1268	1311
55°	1311	1183	770	838	1072	1170
65°	863	811	506	575	801	856
75°	446	422	251	299	439	473
85°	98	87	47	64	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°	1838.3	1838.3	1838.3	1838.3	1838.3	1838.3	1838.3	1838.3	1838.3	1838.3	1838.3
2.5°	1878.9	1870.1	1862.8	1865.7	1867.3	1861.6	1856.8	1857.6	1852.8	1862.0	1840.3
5°	1906.6	1898.6	1890.2	1893.4	1890.2	1881.7	1874.9	1872.9	1860.0	1865.2	1843.1
7.5°	1937.6	1928.7	1916.3	1919.9	1913.1	1897.4	1888.6	1883.3	1863.6	1864.0	1839.5
10°	1967.3	1959.7	1942.8	1945.2	1932.8	1911.9	1897.8	1890.6	1862.8	1858.8	1833.5
12.5°	1995.0	1984.6	1966.5	1967.7	1949.6	1921.9	1903.8	1893.4	1857.2	1845.2	1820.2
15°	2016.3	2006.3	1984.6	1984.2	1960.9	1924.7	1904.2	1889.8	1844.0	1825.1	1798.9
17.5°	2034.4	2025.2	1998.3	1997.4	1969.3	1923.5	1899.0	1880.9	1824.7	1801.4	1772.4
20°	2047.3	2038.0	2007.9	2005.1	1971.3	1917.5	1888.2	1865.2	1799.4	1771.6	1739.5
22.5°	2053.3	2044.1	2009.9	2005.9	1966.5	1905.4	1872.5	1845.6	1770.4	1734.3	1700.9
25°	2052.1	2043.3	2004.7	2000.7	1957.3	1887.3	1850.4	1819.4	1733.9	1691.3	1658.3
27.5°	2042.1	2035.2	1994.6	1989.4	1940.4	1862.8	1823.5	1789.3	1693.3	1645.9	1610.1
30°	2024.8	2019.5	1976.6	1971.7	1919.5	1835.9	1792.1	1752.7	1649.5	1596.0	1559.9
32.5°	1997.0	1992.2	1948.8	1944.4	1891.4	1801.4	1755.6	1715.0	1601.7	1542.6	1506.4
35°	1958.9	1956.1	1913.9	1909.0	1855.2	1762.0	1713.4	1668.8	1551.8	1485.1	1450.6
37.5°	1908.6	1908.6	1868.1	1862.8	1810.2	1713.8	1665.9	1618.5	1495.6	1424.9	1390.7
40°	1850.4	1855.6	1814.2	1809.0	1758.0	1661.9	1609.7	1559.9	1434.9	1361.4	1328.0
42.5°	1780.5	1785.3	1750.7	1745.9	1698.1	1602.1	1553.4	1499.2	1371.4	1296.7	1262.1
45°	1703.3	1709.7	1678.8	1675.2	1630.6	1536.6	1489.9	1434.9	1305.1	1229.2	1195.4
47.5°	1617.3	1625.8	1598.8	1596.8	1555.4	1469.5	1420.8	1365.0	1235.6	1158.8	1127.1
50°	1520.9	1532.9	1510.8	1510.8	1473.9	1388.3	1346.1	1290.2	1163.3	1086.5	1055.2
52.5°	1417.6	1432.9	1416.4	1416.8	1386.7	1309.9	1266.1	1211.5	1087.7	1012.2	983.3
55°	1310.7	1325.6	1315.2	1316.8	1293.1	1223.1	1183.4	1129.1	1010.6	937.0	909.7
57.5°	1199.0	1215.1	1208.3	1211.5	1195.0	1132.3	1090.9	1043.5	931.0	858.3	835.0
60°	1086.9	1102.2	1098.6	1103.0	1092.5	1038.3	1000.5	951.5	851.1	781.1	760.6
62.5°	973.6	987.7	986.9	991.7	986.1	941.1	907.3	865.5	768.3	704.0	685.1
65°	862.7	874.8	874.0	879.2	878.0	841.8	811.3	773.1	685.5	626.4	610.0
67.5°	755.0	765.1	762.3	768.3	769.9	741.0	714.4	680.3	606.7	549.3	535.2
70°	649.7	656.6	653.0	657.0	660.6	638.9	616.4	586.3	522.8	472.1	460.5
72.5°	546.5	551.3	545.7	549.7	552.9	537.2	518.7	492.6	440.0	396.2	386.6
75°	446.4	453.3	441.6	445.6	448.0	432.4	421.5	400.2	354.8	321.1	314.6
77.5°	349.6	353.6	347.2	345.6	347.2	335.9	327.5	311.0	276.9	249.1	245.1
80°	257.2	259.6	253.1	251.5	252.7	244.7	238.3	226.2	202.1	181.2	179.6
82.5°	172.4	173.6	168.0	166.4	167.2	164.7	157.1	148.7	137.4	119.7	119.3
85°	98.4	98.4	94.4	92.8	93.6	89.6	86.8	82.4	78.0	65.9	66.7
87.5°	36.2	36.2	34.2	33.8	37.8	33.4	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°	1838.3	1838.3	1838.3	1838.3	1838.3	1838.3	1838.3	1838.3	1838.3	1838.3	1838.3
2.5°	1846.4	1842.3	1838.7	1826.3	1831.5	1818.6	1817.8	1813.0	1809.4	1802.6	1811.4
5°	1840.3	1832.3	1821.9	1807.0	1811.4	1796.1	1792.9	1787.3	1782.5	1773.6	1780.5
7.5°	1830.7	1817.4	1801.0	1782.1	1788.1	1769.2	1764.4	1758.4	1754.3	1743.9	1749.9
10°	1816.6	1797.7	1778.5	1755.6	1760.0	1739.5	1733.5	1727.0	1723.4	1714.2	1720.2
12.5°	1794.9	1772.0	1745.9	1721.0	1725.8	1706.5	1698.5	1691.7	1690.5	1682.8	1690.1
15°	1766.8	1735.1	1708.1	1681.6	1687.2	1664.7	1661.1	1654.3	1656.3	1651.1	1659.9
17.5°	1731.0	1694.5	1665.1	1636.6	1642.2	1623.4	1620.5	1617.3	1619.3	1618.5	1628.2
20°	1690.9	1650.7	1616.9	1588.8	1592.0	1577.1	1578.3	1577.5	1581.6	1586.0	1599.2
22.5°	1645.5	1600.0	1564.7	1535.8	1540.6	1527.7	1533.3	1535.0	1541.8	1551.8	1568.7
25°	1594.4	1545.8	1508.8	1481.5	1485.9	1477.5	1487.1	1491.2	1502.0	1518.9	1536.2
27.5°	1541.0	1489.5	1450.2	1424.1	1432.5	1424.1	1438.5	1446.6	1463.0	1481.5	1502.8
30°	1484.3	1430.9	1390.3	1367.0	1375.0	1367.4	1390.7	1401.5	1418.0	1443.3	1468.7
32.5°	1424.9	1368.6	1328.8	1310.7	1316.4	1315.2	1341.3	1353.3	1375.4	1404.4	1431.3
35°	1363.8	1305.1	1264.9	1249.7	1256.5	1258.1	1289.4	1303.5	1327.6	1362.6	1391.5
37.5°	1300.7	1240.8	1201.4	1189.0	1195.0	1201.0	1237.6	1251.7	1279.0	1317.2	1348.9
40°	1235.2	1175.3	1136.7	1126.7	1132.7	1139.2	1178.9	1198.2	1228.0	1269.4	1303.9
42.5°	1168.9	1109.0	1071.7	1064.4	1070.4	1082.9	1125.1	1143.2	1174.5	1220.3	1258.5
45°	1101.4	1039.1	1006.6	1000.9	1007.4	1021.8	1063.2	1084.9	1118.3	1168.5	1209.5
47.5°	1033.1	972.4	941.5	937.8	944.3	960.4	1006.2	1025.8	1061.2	1114.6	1158.8
50°	964.0	904.9	875.2	874.0	880.0	897.3	941.1	964.4	1000.9	1060.8	1106.2
52.5°	894.0	837.4	810.5	810.5	816.1	833.8	878.0	902.1	939.9	1002.9	1053.2
55°	824.1	770.3	744.6	746.6	754.6	769.9	812.9	838.2	876.4	941.9	994.9
57.5°	754.2	703.2	679.9	682.7	690.3	705.6	747.8	776.3	810.9	878.8	933.0
60°	685.1	636.9	616.4	619.6	626.4	641.7	685.5	710.0	744.6	813.7	867.9
62.5°	615.2	571.4	552.1	556.1	562.1	577.4	618.8	642.5	676.7	744.6	799.2
65°	546.1	505.5	489.0	493.0	498.7	512.7	551.7	574.6	607.2	673.5	725.7
67.5°	477.8	440.8	427.1	431.2	435.6	448.8	481.0	505.9	536.4	599.5	648.9
70°	410.3	377.3	365.3	369.3	373.3	385.3	413.5	436.4	464.5	522.4	568.2
72.5°	343.6	311.4	305.4	309.0	312.2	322.7	349.6	367.7	392.2	443.6	483.0
75°	278.5	250.7	246.7	250.3	253.1	261.2	283.7	299.4	319.8	364.5	396.6
77.5°	215.8	192.5	190.9	193.7	196.5	202.1	219.8	236.3	252.3	285.3	313.8
80°	157.1	138.2	138.2	141.0	140.2	147.1	159.5	172.8	184.4	208.1	229.0
82.5°	103.7	88.8	90.8	92.8	94.0	96.8	104.5	114.5	121.8	136.2	149.9
85°	57.5	47.4	49.4	51.0	50.2	53.4	57.5	63.5	67.1	73.9	81.2
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°	1838.3	1838.3	1838.3
2.5°	1794.5	1804.2	1811.4
5°	1763.6	1771.6	1778.1
7.5°	1733.5	1740.7	1746.3
10°	1704.9	1713.0	1717.0
12.5°	1675.6	1684.8	1688.0
15°	1646.7	1655.9	1659.9
17.5°	1616.9	1629.0	1633.4
20°	1589.2	1604.5	1608.1
22.5°	1561.1	1576.7	1581.2
25°	1530.5	1549.0	1553.4
27.5°	1498.0	1520.1	1524.5
30°	1465.4	1489.5	1494.0
32.5°	1430.5	1456.6	1460.6
35°	1393.9	1420.0	1424.9
37.5°	1353.3	1381.9	1391.5
40°	1311.1	1342.1	1352.1
42.5°	1266.9	1300.7	1311.1
45°	1219.5	1256.5	1268.5
47.5°	1171.7	1213.5	1223.9
50°	1119.9	1164.5	1176.9
52.5°	1065.6	1114.2	1126.7
55°	1009.4	1058.4	1072.1
57.5°	948.3	998.9	1013.4
60°	884.4	935.0	948.7
62.5°	818.9	864.7	878.0
65°	745.8	788.8	800.8
67.5°	668.2	707.6	717.7
70°	585.9	620.0	628.8
72.5°	499.9	523.6	535.2
75°	411.1	429.9	438.8
77.5°	321.9	335.1	342.4
80°	234.7	242.3	248.3
82.5°	153.5	156.7	161.1
85°	82.8	82.8	85.6
87.5°	28.1	26.9	28.1
90°	0.0	0.0	0.0

(END OF REPORT)