

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: P834597

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1HI-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834597
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-LD4-1HI-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

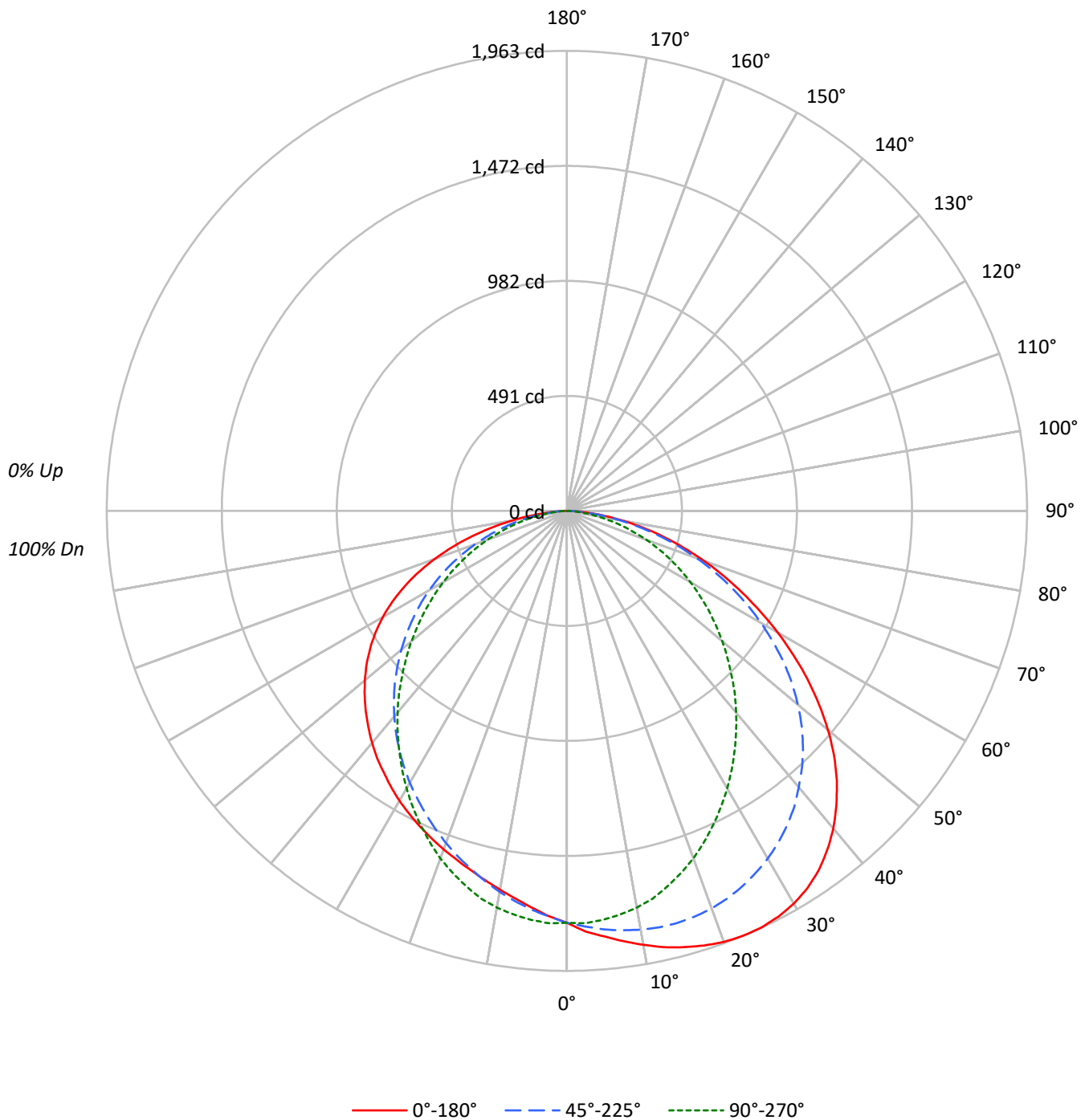
Lumens per Lamp: N/A
Luminaire Lumens: 5169.0 lumens
Efficiency: N/A
Efficacy: 117.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44
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°	2364	2364	2364
5°	2462	2366	2296
10°	2569	2348	2242
15°	2685	2310	2210
20°	2802	2259	2201
25°	2912	2194	2204
30°	3007	2125	2219
35°	3076	2049	2237
40°	3107	1973	2270
45°	3098	1890	2307
50°	3043	1811	2355
55°	2939	1727	2404
60°	2796	1638	2440
65°	2626	1538	2437
70°	2443	1419	2365
75°	2218	1246	2180
80°	1905	1024	1839
85°	1453	699	1263

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.7	3.2
10°-20°	481.3	9.3
20°-30°	737.3	14.3
30°-40°	899.8	17.4
40°-50°	941.0	18.2
50°-60°	851.7	16.5
60°-70°	645.0	12.5
70°-80°	359.5	7.0
80°-90°	86.7	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°	1385.3	26.8
0°-40°	2285.1	44.2
0°-60°	4077.8	78.9
0°-90°	5169.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5169.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1757	1757	1757	1757	1757	
5°	1822	1792	1752	1708	1700	176
15°	1927	1820	1658	1581	1587	547
25°	1962	1769	1478	1425	1485	905
35°	1872	1638	1248	1246	1362	1169
45°	1628	1424	993	1037	1213	1253
55°	1253	1131	736	801	1025	1118
65°	825	776	483	549	766	818
75°	427	403	240	286	419	453
85°	94	83	45	61	82	113
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°	1757.2	1757.2	1757.2	1757.2	1757.2	1757.2	1757.2	1757.2	1757.2	1757.2	1757.2
2.5°	1796.0	1787.6	1780.7	1783.4	1784.9	1779.5	1774.9	1775.7	1771.1	1779.9	1759.2
5°	1822.5	1814.9	1806.8	1809.9	1806.8	1798.7	1792.2	1790.3	1778.0	1783.0	1761.9
7.5°	1852.1	1843.7	1831.8	1835.2	1828.7	1813.7	1805.3	1800.3	1781.4	1781.8	1758.4
10°	1880.5	1873.2	1857.1	1859.4	1847.5	1827.5	1814.1	1807.2	1780.7	1776.8	1752.6
12.5°	1907.0	1897.1	1879.8	1880.9	1863.6	1837.1	1819.9	1809.9	1775.3	1763.8	1740.0
15°	1927.4	1917.8	1897.1	1896.7	1874.4	1839.8	1820.2	1806.4	1762.6	1744.6	1719.6
17.5°	1944.7	1935.9	1910.1	1909.3	1882.5	1838.7	1815.2	1798.0	1744.2	1721.9	1694.3
20°	1957.0	1948.1	1919.3	1916.6	1884.4	1832.9	1804.9	1783.0	1720.0	1693.5	1662.8
22.5°	1962.7	1953.9	1921.3	1917.4	1879.8	1821.4	1789.9	1764.2	1692.3	1657.8	1625.9
25°	1961.6	1953.1	1916.3	1912.4	1870.9	1804.1	1768.8	1739.2	1657.4	1616.7	1585.2
27.5°	1952.0	1945.5	1906.7	1901.7	1854.8	1780.7	1743.0	1710.4	1618.6	1573.3	1539.1
30°	1935.5	1930.5	1889.4	1884.8	1834.8	1754.9	1713.1	1675.4	1576.7	1525.6	1491.1
32.5°	1909.0	1904.4	1862.9	1858.6	1807.9	1721.9	1678.1	1639.3	1531.0	1474.5	1440.0
35°	1872.5	1869.8	1829.5	1824.8	1773.4	1684.3	1637.8	1595.2	1483.4	1419.6	1386.6
37.5°	1824.5	1824.5	1785.7	1780.7	1730.4	1638.2	1592.5	1547.1	1429.6	1362.0	1329.4
40°	1768.8	1773.8	1734.2	1729.2	1680.4	1588.6	1538.7	1491.1	1371.6	1301.3	1269.4
42.5°	1701.9	1706.5	1673.5	1668.9	1623.2	1531.4	1484.9	1433.1	1310.9	1239.5	1206.4
45°	1628.2	1634.3	1604.8	1601.3	1558.7	1468.8	1424.2	1371.6	1247.5	1175.0	1142.7
47.5°	1546.0	1554.1	1528.3	1526.4	1486.8	1404.6	1358.2	1304.8	1181.1	1107.7	1077.4
50°	1453.8	1465.3	1444.2	1444.2	1408.9	1327.1	1286.7	1233.3	1112.0	1038.6	1008.6
52.5°	1355.1	1369.7	1353.9	1354.3	1325.5	1252.2	1210.3	1158.1	1039.8	967.5	939.9
55°	1252.9	1267.1	1257.2	1258.7	1236.0	1169.2	1131.2	1079.3	966.0	895.7	869.6
57.5°	1146.1	1161.5	1155.0	1158.1	1142.3	1082.4	1042.8	997.5	890.0	820.4	798.2
60°	1039.0	1053.6	1050.1	1054.3	1044.4	992.5	956.4	909.5	813.5	746.7	727.1
62.5°	930.7	944.1	943.3	948.0	942.6	899.6	867.3	827.3	734.4	672.9	654.9
65°	824.7	836.2	835.4	840.4	839.3	804.7	775.5	739.0	655.3	598.8	583.1
67.5°	721.7	731.3	728.6	734.4	735.9	708.3	682.9	650.3	580.0	525.1	511.6
70°	621.1	627.6	624.2	628.0	631.5	610.7	589.2	560.4	499.7	451.3	440.2
72.5°	522.4	527.0	521.6	525.4	528.5	513.5	495.9	470.9	420.6	378.7	369.5
75°	426.7	433.3	422.1	426.0	428.3	413.3	402.9	382.6	339.2	306.9	300.7
77.5°	334.2	338.0	331.9	330.3	331.9	321.1	313.0	297.3	264.6	238.1	234.3
80°	245.8	248.1	242.0	240.4	241.6	233.9	227.8	216.2	193.2	173.2	171.7
82.5°	164.8	165.9	160.6	159.0	159.8	157.5	150.2	142.1	131.4	114.5	114.1
85°	94.1	94.1	90.3	88.7	89.5	85.7	83.0	78.7	74.5	63.0	63.8
87.5°	34.6	34.6	32.6	32.3	36.1	31.9	30.7	28.8	30.0	23.8	25.4
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°	1757.2	1757.2	1757.2	1757.2	1757.2	1757.2	1757.2	1757.2	1757.2	1757.2	1757.2
2.5°	1764.9	1761.1	1757.6	1745.7	1750.7	1738.4	1737.7	1733.0	1729.6	1723.1	1731.5
5°	1759.2	1751.5	1741.5	1727.3	1731.5	1716.9	1713.8	1708.5	1703.9	1695.4	1701.9
7.5°	1749.9	1737.3	1721.5	1703.5	1709.2	1691.2	1686.6	1680.8	1677.0	1667.0	1672.7
10°	1736.5	1718.5	1700.0	1678.1	1682.3	1662.8	1657.0	1650.9	1647.4	1638.6	1644.3
12.5°	1715.8	1693.9	1668.9	1645.1	1649.7	1631.3	1623.6	1617.0	1615.9	1608.6	1615.5
15°	1688.9	1658.5	1632.8	1607.4	1612.8	1591.3	1587.9	1581.3	1583.2	1578.3	1586.7
17.5°	1654.7	1619.7	1591.7	1564.4	1569.8	1551.8	1549.1	1546.0	1547.9	1547.1	1556.4
20°	1616.3	1577.9	1545.6	1518.7	1521.8	1507.6	1508.7	1508.0	1511.8	1516.0	1528.7
22.5°	1572.9	1529.5	1495.7	1468.0	1472.6	1460.3	1465.7	1467.3	1473.8	1483.4	1499.5
25°	1524.1	1477.6	1442.3	1416.2	1420.4	1412.3	1421.5	1425.4	1435.8	1451.9	1468.4
27.5°	1473.0	1423.8	1386.2	1361.2	1369.3	1361.2	1375.1	1382.8	1398.5	1416.2	1436.5
30°	1418.9	1367.8	1329.0	1306.7	1314.4	1307.1	1329.4	1339.7	1355.5	1379.7	1403.9
32.5°	1362.0	1308.2	1270.2	1252.9	1258.3	1257.2	1282.1	1293.6	1314.8	1342.4	1368.2
35°	1303.6	1247.5	1209.1	1194.5	1201.1	1202.6	1232.6	1246.0	1269.1	1302.5	1330.1
37.5°	1243.3	1186.1	1148.5	1136.5	1142.3	1148.1	1183.0	1196.5	1222.6	1259.1	1289.4
40°	1180.7	1123.5	1086.6	1077.0	1082.8	1088.9	1126.9	1145.4	1173.8	1213.4	1246.4
42.5°	1117.3	1060.1	1024.4	1017.5	1023.2	1035.1	1075.5	1092.8	1122.7	1166.5	1203.0
45°	1052.8	993.3	962.2	956.8	962.9	976.8	1016.3	1037.1	1068.9	1117.0	1156.1
47.5°	987.5	929.5	899.9	896.5	902.6	918.0	961.8	980.6	1014.4	1065.5	1107.7
50°	921.4	865.0	836.6	835.4	841.2	857.7	899.6	921.8	956.8	1014.0	1057.4
52.5°	854.6	800.5	774.7	774.7	780.1	797.0	839.3	862.3	898.4	958.7	1006.7
55°	787.8	736.3	711.7	713.7	721.3	735.9	777.0	801.2	837.7	900.3	951.0
57.5°	721.0	672.2	649.9	652.6	659.9	674.5	714.8	742.1	775.1	840.0	891.9
60°	654.9	608.8	589.2	592.3	598.8	613.4	655.3	678.7	711.7	777.8	829.7
62.5°	588.1	546.2	527.7	531.6	537.4	551.9	591.5	614.2	646.8	711.7	764.0
65°	522.0	483.2	467.4	471.3	476.7	490.1	527.4	549.3	580.4	643.7	693.7
67.5°	456.7	421.4	408.3	412.1	416.4	429.0	459.8	483.6	512.8	573.1	620.3
70°	392.2	360.7	349.1	353.0	356.8	368.3	395.2	417.1	444.0	499.3	543.1
72.5°	328.4	297.7	291.9	295.4	298.4	308.4	334.2	351.4	374.9	424.0	461.7
75°	266.2	239.7	235.8	239.3	242.0	249.7	271.2	286.2	305.7	348.4	379.1
77.5°	206.3	184.0	182.4	185.1	187.8	193.2	210.1	225.8	241.2	272.7	300.0
80°	150.2	132.1	132.1	134.8	134.0	140.6	152.5	165.2	176.3	199.0	218.9
82.5°	99.1	84.9	86.8	88.7	89.9	92.6	99.9	109.5	116.4	130.2	143.3
85°	54.9	45.3	47.2	48.8	48.0	51.1	54.9	60.7	64.1	70.7	77.6
87.5°	20.4	16.9	17.3	18.4	19.2	20.7	20.7	24.2	24.6	25.4	26.9
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):

	160°	170°	180°
0°	1757.2	1757.2	1757.2
2.5°	1715.4	1724.6	1731.5
5°	1685.8	1693.5	1699.6
7.5°	1657.0	1663.9	1669.3
10°	1629.7	1637.4	1641.2
12.5°	1601.7	1610.5	1613.6
15°	1574.0	1582.9	1586.7
17.5°	1545.6	1557.1	1561.4
20°	1519.1	1533.7	1537.2
22.5°	1492.2	1507.2	1511.4
25°	1463.0	1480.7	1484.9
27.5°	1431.9	1453.0	1457.3
30°	1400.8	1423.8	1428.1
32.5°	1367.4	1392.4	1396.2
35°	1332.4	1357.4	1362.0
37.5°	1293.6	1320.9	1330.1
40°	1253.3	1282.9	1292.5
42.5°	1211.1	1243.3	1253.3
45°	1165.7	1201.1	1212.6
47.5°	1120.0	1160.0	1170.0
50°	1070.5	1113.1	1125.0
52.5°	1018.6	1065.1	1077.0
55°	964.9	1011.7	1024.8
57.5°	906.5	954.9	968.7
60°	845.4	893.8	906.9
62.5°	782.8	826.6	839.3
65°	712.9	754.0	765.5
67.5°	638.8	676.4	686.0
70°	560.0	592.7	601.1
72.5°	477.8	500.5	511.6
75°	392.9	411.0	419.4
77.5°	307.7	320.3	327.3
80°	224.3	231.6	237.4
82.5°	146.7	149.8	154.0
85°	79.1	79.1	81.8
87.5°	26.9	25.7	26.9
90°	0.0	0.0	0.0

(END OF REPORT)