

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: P834240

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2HI-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834240
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-LD4-2HI-20-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

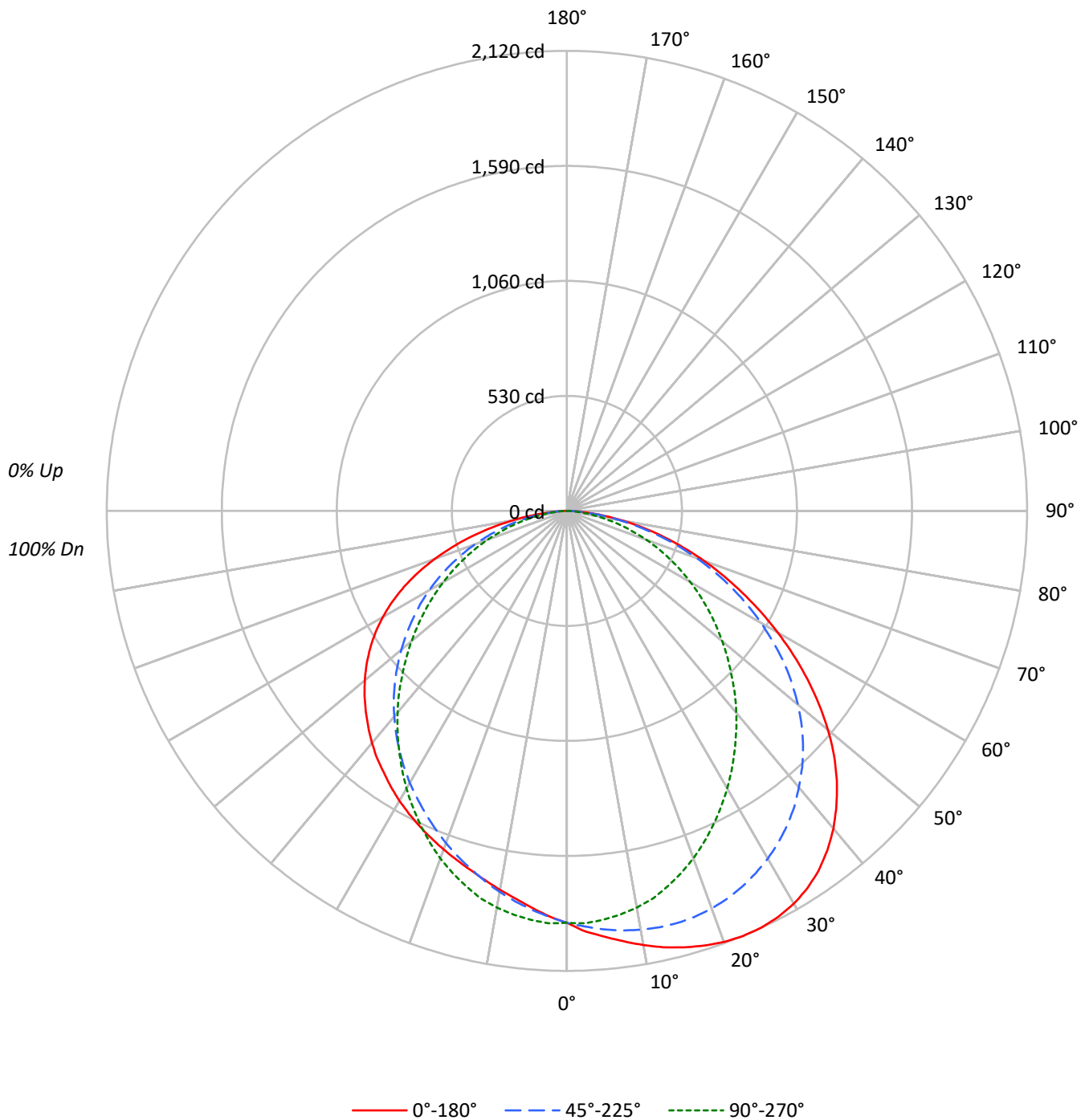
Lumens per Lamp: N/A
Luminaire Lumens: 5583.8 lumens
Efficiency: N/A
Efficacy: 63.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 88
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°	5108	5108	5108
5°	5318	5111	4960
10°	5551	5072	4844
15°	5801	4991	4775
20°	6054	4881	4755
25°	6292	4739	4763
30°	6497	4591	4794
35°	6645	4427	4833
40°	6712	4263	4905
45°	6693	4083	4985
50°	6575	3912	5088
55°	6350	3732	5194
60°	6041	3539	5272
65°	5672	3324	5265
70°	5279	3065	5109
75°	4793	2692	4711
80°	4114	2211	3973
85°	3140	1513	2729

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.0	3.2
10°-20°	519.9	9.3
20°-30°	796.5	14.3
30°-40°	972.0	17.4
40°-50°	1016.5	18.2
50°-60°	920.0	16.5
60°-70°	696.8	12.5
70°-80°	388.3	7.0
80°-90°	93.7	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°	1496.4	26.8
0°-40°	2468.5	44.2
0°-60°	4405.0	78.9
0°-90°	5583.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5583.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1898	1898	1898	1898	1898	
5°	1969	1936	1892	1846	1836	190
15°	2082	1966	1792	1708	1714	590
25°	2119	1911	1596	1540	1604	978
35°	2023	1769	1348	1346	1471	1263
45°	1759	1538	1073	1120	1310	1353
55°	1354	1222	795	866	1107	1208
65°	891	838	522	593	827	884
75°	461	435	259	309	453	489
85°	102	90	49	66	88	122
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°	1898.2	1898.2	1898.2	1898.2	1898.2	1898.2	1898.2	1898.2	1898.2	1898.2	1898.2
2.5°	1940.2	1931.0	1923.6	1926.5	1928.1	1922.3	1917.3	1918.2	1913.2	1922.7	1900.3
5°	1968.8	1960.5	1951.8	1955.1	1951.8	1943.1	1936.0	1933.9	1920.7	1926.0	1903.2
7.5°	2000.7	1991.6	1978.7	1982.5	1975.4	1959.2	1950.1	1944.7	1924.4	1924.8	1899.5
10°	2031.4	2023.6	2006.1	2008.6	1995.8	1974.2	1959.7	1952.2	1923.6	1919.4	1893.3
12.5°	2060.1	2049.3	2030.6	2031.9	2013.2	1984.5	1965.9	1955.1	1917.7	1905.3	1879.6
15°	2082.1	2071.7	2049.3	2048.9	2024.8	1987.5	1966.3	1951.4	1904.1	1884.6	1857.6
17.5°	2100.7	2091.2	2063.4	2062.6	2033.5	1986.2	1960.9	1942.2	1884.1	1860.1	1830.2
20°	2114.0	2104.5	2073.3	2070.4	2035.6	1980.0	1949.7	1926.0	1858.0	1829.4	1796.2
22.5°	2120.2	2110.7	2075.4	2071.3	2030.6	1967.5	1933.5	1905.7	1828.1	1790.8	1756.3
25°	2119.0	2109.9	2070.0	2065.9	2021.1	1948.9	1910.7	1878.7	1790.4	1746.4	1712.4
27.5°	2108.6	2101.6	2059.6	2054.3	2003.6	1923.6	1882.9	1847.6	1748.5	1699.5	1662.6
30°	2090.8	2085.4	2041.0	2036.0	1982.1	1895.8	1850.5	1809.9	1703.2	1648.1	1610.7
32.5°	2062.1	2057.2	2012.3	2007.8	1953.0	1860.1	1812.8	1770.9	1653.9	1592.9	1555.5
35°	2022.7	2019.8	1976.3	1971.3	1915.7	1819.4	1769.2	1723.2	1602.4	1533.5	1497.9
37.5°	1970.9	1970.9	1929.0	1923.6	1869.2	1769.6	1720.2	1671.3	1544.3	1471.3	1436.0
40°	1910.7	1916.1	1873.4	1868.0	1815.3	1716.1	1662.2	1610.7	1481.7	1405.7	1371.3
42.5°	1838.5	1843.5	1807.8	1802.8	1753.4	1654.3	1604.1	1548.1	1416.1	1338.9	1303.3
45°	1758.8	1765.5	1733.5	1729.8	1683.7	1586.6	1538.5	1481.7	1347.7	1269.2	1234.4
47.5°	1670.0	1678.8	1651.0	1648.9	1606.1	1517.4	1467.1	1409.5	1275.9	1196.6	1163.8
50°	1570.5	1582.9	1560.1	1560.1	1521.9	1433.5	1390.0	1332.3	1201.2	1121.9	1089.6
52.5°	1463.8	1479.6	1462.6	1463.0	1431.9	1352.6	1307.4	1251.0	1123.2	1045.2	1015.3
55°	1353.5	1368.8	1358.0	1359.7	1335.2	1263.0	1221.9	1165.9	1043.5	967.6	939.4
57.5°	1238.1	1254.7	1247.7	1251.0	1234.0	1169.2	1126.5	1077.5	961.4	886.3	862.2
60°	1122.4	1138.1	1134.4	1138.9	1128.2	1072.1	1033.1	982.5	878.8	806.6	785.4
62.5°	1005.3	1019.9	1019.0	1024.0	1018.2	971.7	936.9	893.7	793.3	726.9	707.4
65°	890.8	903.3	902.4	907.8	906.6	869.3	837.7	798.3	707.8	646.9	629.8
67.5°	779.6	790.0	787.1	793.3	795.0	765.1	737.7	702.5	626.5	567.2	552.7
70°	670.9	678.0	674.2	678.4	682.1	659.7	636.5	605.4	539.8	487.5	475.5
72.5°	564.3	569.3	563.5	567.6	570.9	554.7	535.7	508.7	454.3	409.1	399.2
75°	461.0	468.0	456.0	460.1	462.6	446.5	435.2	413.3	366.4	331.5	324.9
77.5°	361.0	365.1	358.5	356.8	358.5	346.9	338.2	321.1	285.9	257.2	253.1
80°	265.5	268.0	261.4	259.7	261.0	252.7	246.0	233.6	208.7	187.1	185.5
82.5°	178.0	179.2	173.4	171.8	172.6	170.1	162.2	153.5	141.9	123.6	123.2
85°	101.7	101.7	97.5	95.8	96.7	92.5	89.6	85.1	80.5	68.0	68.9
87.5°	37.3	37.3	35.3	34.9	39.0	34.4	33.2	31.1	32.4	25.7	27.4
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°	1898.2	1898.2	1898.2	1898.2	1898.2	1898.2	1898.2	1898.2	1898.2	1898.2	1898.2
2.5°	1906.5	1902.4	1898.7	1885.8	1891.2	1877.9	1877.1	1872.1	1868.4	1861.3	1870.4
5°	1900.3	1892.0	1881.2	1865.9	1870.4	1854.7	1851.4	1845.6	1840.6	1831.4	1838.5
7.5°	1890.4	1876.7	1859.7	1840.2	1846.4	1826.9	1821.9	1815.7	1811.5	1800.7	1807.0
10°	1875.8	1856.3	1836.4	1812.8	1817.3	1796.2	1790.0	1783.3	1779.6	1770.0	1776.3
12.5°	1853.4	1829.8	1802.8	1777.1	1782.1	1762.2	1753.9	1746.8	1745.6	1737.7	1745.1
15°	1824.4	1791.6	1763.8	1736.4	1742.2	1719.0	1715.3	1708.2	1710.3	1704.9	1714.0
17.5°	1787.5	1749.7	1719.4	1690.0	1695.8	1676.3	1673.4	1670.0	1672.1	1671.3	1681.2
20°	1746.0	1704.5	1669.6	1640.6	1643.9	1628.6	1629.8	1629.0	1633.1	1637.7	1651.4
22.5°	1699.1	1652.2	1615.7	1585.8	1590.8	1577.5	1583.3	1585.0	1592.0	1602.4	1619.8
25°	1646.4	1596.2	1558.0	1529.8	1534.4	1525.7	1535.6	1539.8	1551.0	1568.4	1586.2
27.5°	1591.2	1538.1	1497.4	1470.5	1479.2	1470.5	1485.4	1493.7	1510.7	1529.8	1551.8
30°	1532.7	1477.5	1435.6	1411.5	1419.8	1412.0	1436.0	1447.2	1464.2	1490.4	1516.5
32.5°	1471.3	1413.2	1372.1	1353.5	1359.3	1358.0	1385.0	1397.4	1420.3	1450.1	1477.9
35°	1408.2	1347.7	1306.2	1290.4	1297.4	1299.1	1331.5	1346.0	1370.9	1407.0	1436.9
37.5°	1343.1	1281.3	1240.6	1227.7	1234.0	1240.2	1277.9	1292.5	1320.7	1360.1	1392.9
40°	1275.5	1213.6	1173.8	1163.4	1169.7	1176.3	1217.4	1237.3	1268.0	1310.7	1346.4
42.5°	1207.0	1145.2	1106.6	1099.1	1105.3	1118.2	1161.8	1180.4	1212.8	1260.1	1299.5
45°	1137.3	1073.0	1039.4	1033.6	1040.2	1055.1	1097.9	1120.3	1154.7	1206.6	1248.9
47.5°	1066.8	1004.1	972.2	968.4	975.1	991.7	1039.0	1059.3	1095.8	1151.0	1196.6
50°	995.4	934.4	903.7	902.4	908.7	926.5	971.7	995.8	1033.6	1095.4	1142.3
52.5°	923.2	864.7	836.9	836.9	842.7	861.0	906.6	931.5	970.5	1035.6	1087.5
55°	851.0	795.4	768.8	770.9	779.2	795.0	839.4	865.5	904.9	972.6	1027.3
57.5°	778.8	726.1	702.0	704.9	712.8	728.6	772.2	801.6	837.3	907.4	963.4
60°	707.4	657.6	636.5	639.8	646.9	662.6	707.8	733.2	768.8	840.2	896.2
62.5°	635.2	590.0	570.1	574.2	580.5	596.2	639.0	663.5	698.7	768.8	825.3
65°	563.9	522.0	505.0	509.1	514.9	529.4	569.7	593.3	626.9	695.4	749.3
67.5°	493.3	455.2	441.1	445.2	449.8	463.5	496.7	522.4	553.9	619.1	670.1
70°	423.6	389.6	377.2	381.3	385.5	397.9	426.9	450.6	479.6	539.4	586.7
72.5°	354.8	321.6	315.3	319.1	322.4	333.2	361.0	379.6	405.0	458.1	498.7
75°	287.5	258.9	254.8	258.5	261.4	269.7	292.9	309.1	330.3	376.3	409.5
77.5°	222.8	198.7	197.1	200.0	202.9	208.7	227.0	244.0	260.6	294.6	324.1
80°	162.2	142.7	142.7	145.6	144.8	151.9	164.7	178.4	190.4	214.9	236.5
82.5°	107.0	91.7	93.8	95.8	97.1	100.0	107.9	118.3	125.7	140.7	154.8
85°	59.3	49.0	51.0	52.7	51.9	55.2	59.3	65.6	69.3	76.3	83.8
87.5°	22.0	18.3	18.7	19.9	20.7	22.4	22.4	26.1	26.6	27.4	29.0
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°	1898.2	1898.2	1898.2
2.5°	1853.0	1863.0	1870.4
5°	1821.1	1829.4	1836.0
7.5°	1790.0	1797.4	1803.2
10°	1760.5	1768.8	1772.9
12.5°	1730.2	1739.7	1743.1
15°	1700.3	1709.9	1714.0
17.5°	1669.6	1682.1	1686.6
20°	1641.0	1656.8	1660.5
22.5°	1612.0	1628.1	1632.7
25°	1580.4	1599.5	1604.1
27.5°	1546.8	1569.6	1574.2
30°	1513.2	1538.1	1542.7
32.5°	1477.1	1504.1	1508.2
35°	1439.3	1466.3	1471.3
37.5°	1397.4	1426.9	1436.9
40°	1353.9	1385.8	1396.2
42.5°	1308.2	1343.1	1353.9
45°	1259.3	1297.4	1309.9
47.5°	1209.9	1253.1	1263.8
50°	1156.4	1202.4	1215.3
52.5°	1100.4	1150.6	1163.4
55°	1042.3	1092.9	1107.0
57.5°	979.2	1031.5	1046.4
60°	913.2	965.5	979.6
62.5°	845.6	892.9	906.6
65°	770.1	814.5	826.9
67.5°	690.0	730.7	741.0
70°	604.9	640.2	649.3
72.5°	516.2	540.6	552.7
75°	424.5	444.0	453.1
77.5°	332.3	346.0	353.5
80°	242.3	250.2	256.4
82.5°	158.5	161.8	166.4
85°	85.5	85.5	88.4
87.5°	29.0	27.8	29.0
90°	0.0	0.0	0.0

(END OF REPORT)