

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: P835363

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5LO-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835363
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-LD4-5LO-50-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

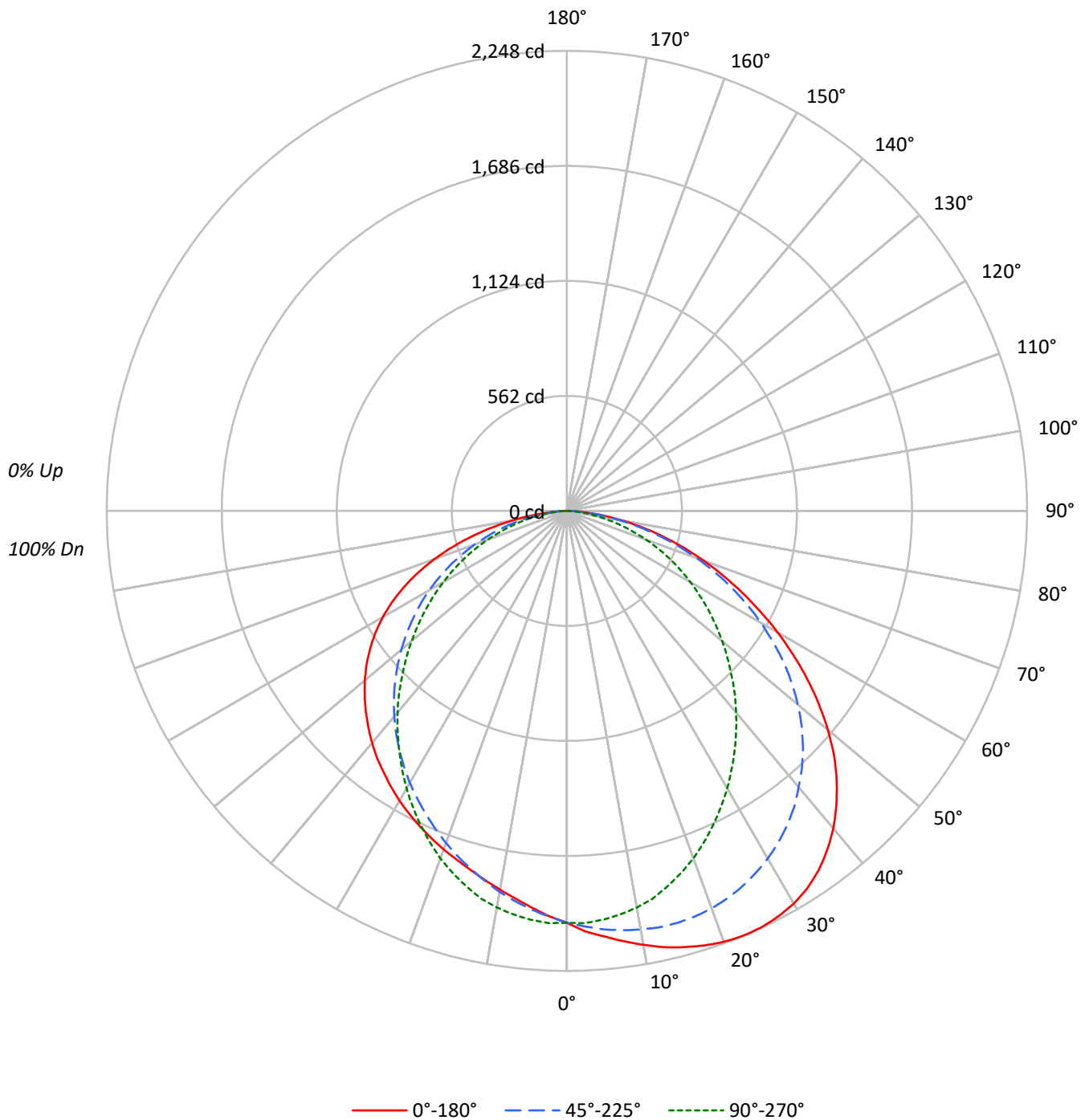
Lumens per Lamp: N/A
Luminaire Lumens: 5919.1 lumens
Efficiency: N/A
Efficacy: 101.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 58.5
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
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°	5415	5415	5415
5°	5638	5418	5257
10°	5884	5377	5135
15°	6149	5291	5062
20°	6418	5174	5041
25°	6669	5024	5049
30°	6887	4867	5081
35°	7044	4693	5124
40°	7115	4519	5199
45°	7096	4329	5284
50°	6970	4147	5393
55°	6731	3956	5506
60°	6403	3752	5589
65°	6013	3523	5582
70°	5596	3249	5415
75°	5081	2854	4994
80°	4362	2345	4212
85°	3328	1602	2893



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.8	3.2
10°-20°	551.1	9.3
20°-30°	844.3	14.3
30°-40°	1030.4	17.4
40°-50°	1077.6	18.2
50°-60°	975.3	16.5
60°-70°	738.6	12.5
70°-80°	411.6	7.0
80°-90°	99.3	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°	1586.3	26.8
0°-40°	2616.7	44.2
0°-60°	4669.6	78.9
0°-90°	5919.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5919.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2012	2012	2012	2012	2012	
5°	2087	2052	2006	1956	1946	201
15°	2207	2084	1899	1811	1817	626
25°	2246	2025	1692	1632	1700	1036
35°	2144	1876	1429	1427	1560	1339
45°	1864	1631	1137	1188	1389	1435
55°	1435	1295	843	918	1174	1280
65°	944	888	553	629	877	937
75°	489	461	274	328	480	518
85°	108	95	52	70	94	130
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°	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2
2.5°	2056.7	2047.0	2039.1	2042.2	2043.9	2037.8	2032.5	2033.4	2028.1	2038.2	2014.4
5°	2087.0	2078.2	2069.0	2072.5	2069.0	2059.7	2052.3	2050.1	2036.0	2041.7	2017.5
7.5°	2120.9	2111.2	2097.6	2101.5	2094.1	2076.9	2067.2	2061.5	2040.0	2040.4	2013.6
10°	2153.4	2145.1	2126.6	2129.2	2115.6	2092.7	2077.3	2069.4	2039.1	2034.7	2007.0
12.5°	2183.8	2172.3	2152.5	2153.9	2134.1	2103.7	2083.9	2072.5	2032.9	2019.7	1992.4
15°	2207.1	2196.1	2172.3	2171.9	2146.4	2106.8	2084.4	2068.5	2018.4	1997.7	1969.1
17.5°	2226.9	2216.8	2187.3	2186.4	2155.6	2105.5	2078.7	2058.9	1997.3	1971.8	1940.1
20°	2241.0	2230.8	2197.9	2194.8	2157.8	2098.9	2066.8	2041.7	1969.6	1939.2	1904.0
22.5°	2247.6	2237.4	2200.1	2195.7	2152.5	2085.7	2049.6	2020.2	1937.9	1898.3	1861.8
25°	2246.2	2236.6	2194.3	2189.9	2142.4	2065.9	2025.4	1991.6	1897.9	1851.3	1815.2
27.5°	2235.2	2227.8	2183.3	2177.6	2124.0	2039.1	1996.0	1958.6	1853.5	1801.6	1762.4
30°	2216.3	2210.6	2163.5	2158.3	2101.1	2009.6	1961.7	1918.6	1805.5	1747.0	1707.4
32.5°	2186.0	2180.7	2133.2	2128.4	2070.3	1971.8	1921.6	1877.2	1753.2	1688.5	1648.9
35°	2144.2	2141.1	2094.9	2089.7	2030.7	1928.7	1875.5	1826.6	1698.6	1625.6	1587.8
37.5°	2089.2	2089.2	2044.8	2039.1	1981.5	1875.9	1823.6	1771.7	1637.1	1559.7	1522.3
40°	2025.4	2031.2	1985.9	1980.1	1924.3	1819.2	1762.0	1707.4	1570.6	1490.2	1453.7
42.5°	1948.9	1954.2	1916.4	1911.1	1858.7	1753.6	1700.4	1641.0	1501.2	1419.3	1381.5
45°	1864.5	1871.5	1837.6	1833.7	1784.8	1681.9	1630.9	1570.6	1428.6	1345.5	1308.5
47.5°	1770.3	1779.6	1750.1	1747.9	1702.6	1608.5	1555.3	1494.1	1352.5	1268.5	1233.7
50°	1664.8	1678.0	1653.8	1653.8	1613.3	1519.6	1473.4	1412.3	1273.3	1189.3	1155.0
52.5°	1551.7	1568.4	1550.4	1550.9	1517.9	1433.9	1385.9	1326.1	1190.6	1107.9	1076.3
55°	1434.7	1451.0	1439.6	1441.3	1415.4	1338.9	1295.3	1235.9	1106.2	1025.7	995.8
57.5°	1312.5	1330.1	1322.6	1326.1	1308.1	1239.5	1194.2	1142.2	1019.1	939.5	914.0
60°	1189.8	1206.5	1202.5	1207.3	1195.9	1136.5	1095.2	1041.5	931.6	855.0	832.6
62.5°	1065.7	1081.1	1080.2	1085.5	1079.4	1030.1	993.1	947.4	841.0	770.6	749.9
65°	944.3	957.5	956.6	962.4	961.0	921.5	888.0	846.2	750.4	685.7	667.7
67.5°	826.4	837.4	834.4	841.0	842.7	811.1	782.0	744.6	664.1	601.3	585.9
70°	711.2	718.7	714.7	719.1	723.1	699.3	674.7	641.7	572.2	516.8	504.1
72.5°	598.2	603.5	597.3	601.7	605.2	588.1	567.8	539.2	481.6	433.7	423.1
75°	488.7	496.1	483.4	487.8	490.4	473.3	461.4	438.1	388.4	351.4	344.4
77.5°	382.7	387.1	380.0	378.3	380.0	367.7	358.5	340.4	303.0	272.7	268.3
80°	281.5	284.1	277.1	275.3	276.7	267.9	260.8	247.6	221.2	198.4	196.6
82.5°	188.7	190.0	183.9	182.1	183.0	180.3	172.0	162.7	150.4	131.1	130.6
85°	107.8	107.8	103.4	101.6	102.5	98.1	95.0	90.2	85.3	72.1	73.0
87.5°	39.6	39.6	37.4	36.9	41.3	36.5	35.2	33.0	34.3	27.3	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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2
2.5°	2021.0	2016.6	2012.7	1999.0	2004.8	1990.7	1989.8	1984.5	1980.6	1973.1	1982.8
5°	2014.4	2005.6	1994.2	1977.9	1982.8	1966.1	1962.5	1956.4	1951.1	1941.4	1948.9
7.5°	2003.9	1989.4	1971.3	1950.7	1957.3	1936.6	1931.3	1924.7	1920.3	1908.9	1915.5
10°	1988.5	1967.8	1946.7	1921.6	1926.5	1904.0	1897.4	1890.4	1886.4	1876.3	1882.9
12.5°	1964.7	1939.7	1911.1	1883.8	1889.1	1868.0	1859.2	1851.7	1850.4	1842.0	1849.9
15°	1934.0	1899.2	1869.7	1840.7	1846.9	1822.2	1818.3	1810.8	1813.0	1807.3	1817.0
17.5°	1894.8	1854.8	1822.7	1791.4	1797.6	1776.9	1773.9	1770.3	1772.5	1771.7	1782.2
20°	1850.8	1806.8	1769.9	1739.1	1742.6	1726.3	1727.7	1726.8	1731.2	1736.0	1750.5
22.5°	1801.1	1751.4	1712.7	1681.0	1686.3	1672.3	1678.4	1680.2	1687.6	1698.6	1717.1
25°	1745.3	1692.0	1651.6	1621.7	1626.5	1617.3	1627.8	1632.2	1644.1	1662.6	1681.5
27.5°	1686.8	1630.5	1587.4	1558.8	1568.0	1558.8	1574.6	1583.4	1601.4	1621.7	1645.0
30°	1624.7	1566.3	1521.8	1496.3	1505.1	1496.8	1522.3	1534.1	1552.2	1579.9	1607.6
32.5°	1559.7	1498.1	1454.5	1434.7	1440.9	1439.6	1468.2	1481.4	1505.6	1537.2	1566.7
35°	1492.8	1428.6	1384.6	1367.9	1375.4	1377.1	1411.4	1426.8	1453.2	1491.5	1523.1
37.5°	1423.7	1358.2	1315.1	1301.5	1308.1	1314.7	1354.7	1370.1	1400.0	1441.8	1476.5
40°	1352.1	1286.5	1244.3	1233.3	1239.9	1246.9	1290.5	1311.6	1344.1	1389.4	1427.3
42.5°	1279.5	1213.9	1173.0	1165.1	1171.7	1185.4	1231.5	1251.3	1285.6	1335.8	1377.6
45°	1205.6	1137.4	1101.8	1095.6	1102.7	1118.5	1163.8	1187.6	1224.1	1279.0	1323.9
47.5°	1130.8	1064.4	1030.5	1026.6	1033.6	1051.2	1101.3	1122.9	1161.6	1220.1	1268.5
50°	1055.2	990.5	958.0	956.6	963.2	982.2	1030.1	1055.6	1095.6	1161.2	1210.9
52.5°	978.6	916.6	887.1	887.1	893.3	912.7	961.0	987.4	1028.8	1097.8	1152.8
55°	902.1	843.2	815.0	817.2	826.0	842.7	889.8	917.5	959.3	1031.0	1089.0
57.5°	825.6	769.7	744.2	747.3	755.6	772.3	818.5	849.8	887.6	961.9	1021.3
60°	749.9	697.1	674.7	678.2	685.7	702.4	750.4	777.2	815.0	890.7	950.0
62.5°	673.4	625.4	604.3	608.7	615.3	632.0	677.3	703.3	740.7	815.0	874.8
65°	597.7	553.3	535.3	539.7	545.8	561.2	603.9	629.0	664.6	737.2	794.3
67.5°	523.0	482.5	467.5	471.9	476.8	491.3	526.5	553.8	587.2	656.2	710.3
70°	449.1	413.0	399.8	404.2	408.6	421.8	452.6	477.7	508.4	571.8	621.9
72.5°	376.1	340.9	334.3	338.2	341.8	353.2	382.7	402.4	429.3	485.6	528.7
75°	304.8	274.5	270.1	274.0	277.1	285.9	310.5	327.7	350.1	398.9	434.1
77.5°	236.2	210.7	208.9	212.0	215.1	221.2	240.6	258.6	276.2	312.3	343.5
80°	172.0	151.3	151.3	154.4	153.5	161.0	174.6	189.1	201.9	227.8	250.7
82.5°	113.5	97.2	99.4	101.6	102.9	106.0	114.4	125.4	133.3	149.1	164.1
85°	62.9	51.9	54.1	55.9	55.0	58.5	62.9	69.5	73.5	80.9	88.8
87.5°	23.3	19.4	19.8	21.1	22.0	23.8	23.8	27.7	28.1	29.0	30.8
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°	2012.2	2012.2	2012.2
2.5°	1964.3	1974.9	1982.8
5°	1930.4	1939.2	1946.3
7.5°	1897.4	1905.4	1911.5
10°	1866.2	1875.0	1879.4
12.5°	1834.1	1844.2	1847.7
15°	1802.4	1812.6	1817.0
17.5°	1769.9	1783.1	1787.9
20°	1739.5	1756.3	1760.2
22.5°	1708.8	1725.9	1730.7
25°	1675.3	1695.6	1700.4
27.5°	1639.7	1663.9	1668.7
30°	1604.1	1630.5	1635.3
32.5°	1565.8	1594.4	1598.8
35°	1525.8	1554.4	1559.7
37.5°	1481.4	1512.6	1523.1
40°	1435.2	1469.0	1480.0
42.5°	1386.8	1423.7	1435.2
45°	1334.9	1375.4	1388.6
47.5°	1282.6	1328.3	1339.7
50°	1225.8	1274.6	1288.3
52.5°	1166.4	1219.7	1233.3
55°	1104.9	1158.5	1173.5
57.5°	1038.0	1093.4	1109.3
60°	968.1	1023.5	1038.4
62.5°	896.4	946.5	961.0
65°	816.3	863.4	876.6
67.5°	731.4	774.5	785.5
70°	641.3	678.7	688.3
72.5°	547.2	573.1	585.9
75°	450.0	470.6	480.3
77.5°	352.3	366.8	374.7
80°	256.9	265.2	271.8
82.5°	168.0	171.5	176.4
85°	90.6	90.6	93.7
87.5°	30.8	29.5	30.8
90°	0.0	0.0	0.0

(END OF REPORT)