

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: P835164

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4HI-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835164
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-LD4-4HI-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

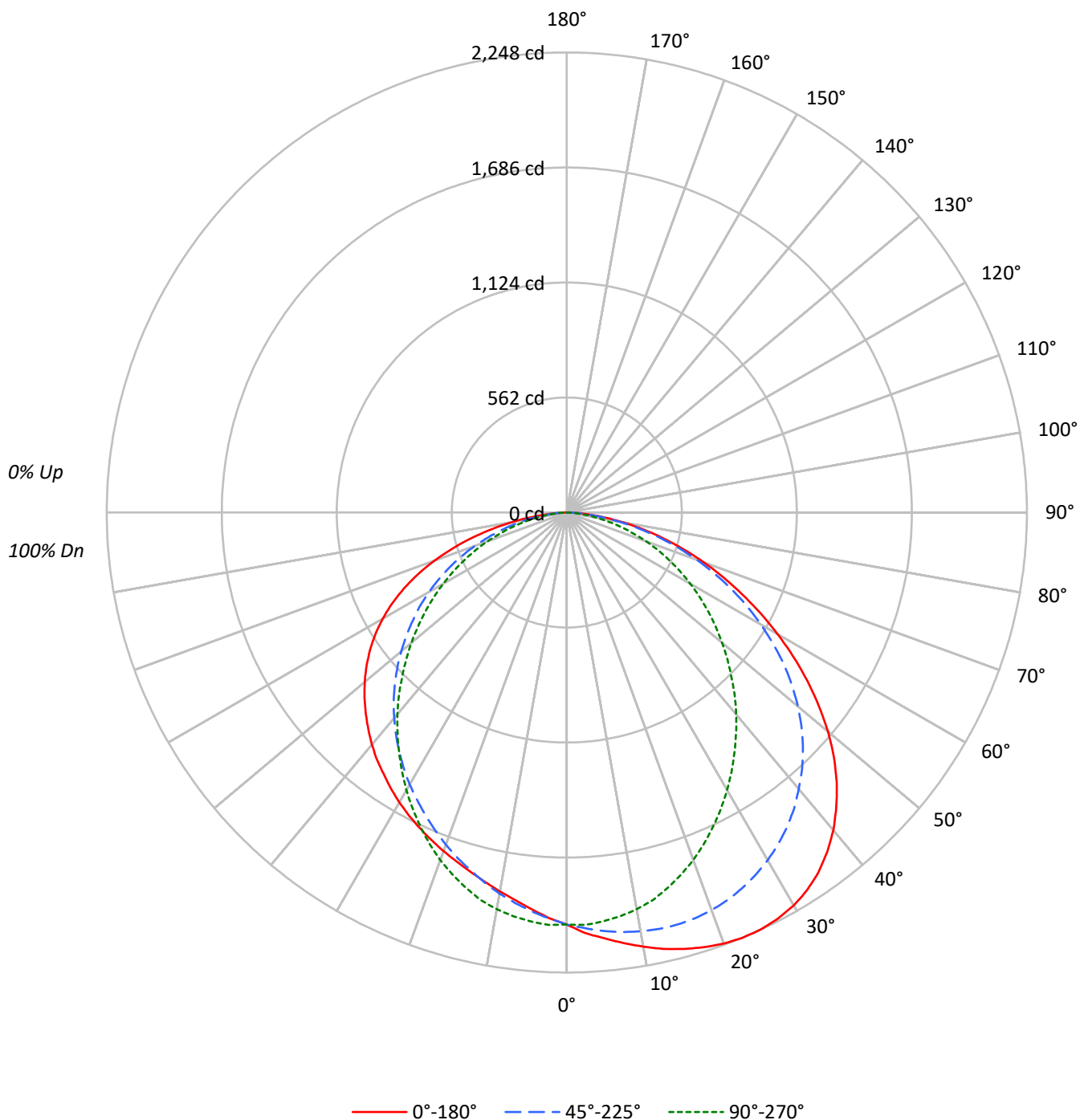
Lumens per Lamp: N/A
Luminaire Lumens: 5921.3 lumens
Efficiency: N/A
Efficacy: 67.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	5417	5417	5417
5°	5640	5420	5259
10°	5886	5379	5137
15°	6151	5293	5064
20°	6420	5176	5043
25°	6672	5026	5051
30°	6889	4868	5083
35°	7046	4695	5125
40°	7118	4521	5201
45°	7098	4330	5286
50°	6972	4148	5395
55°	6734	3957	5507
60°	6406	3753	5591
65°	6015	3524	5584
70°	5598	3251	5418
75°	5082	2855	4996
80°	4364	2346	4214
85°	3328	1602	2893

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.9	3.2
10°-20°	551.3	9.3
20°-30°	844.7	14.3
30°-40°	1030.8	17.4
40°-50°	1078.0	18.2
50°-60°	975.6	16.5
60°-70°	738.9	12.5
70°-80°	411.8	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°	1586.9	26.8
0°-40°	2617.7	44.2
0°-60°	4671.3	78.9
0°-90°	5921.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5921.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2013	2013	2013	2013	2013	
5°	2088	2053	2006	1957	1947	201
15°	2208	2085	1900	1812	1818	626
25°	2247	2026	1693	1633	1701	1037
35°	2145	1876	1429	1427	1560	1339
45°	1865	1632	1138	1188	1389	1435
55°	1435	1296	844	918	1174	1281
65°	945	888	554	629	877	937
75°	489	462	275	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°	2013.0	2013.0	2013.0	2013.0	2013.0	2013.0	2013.0	2013.0	2013.0	2013.0	2013.0
2.5°	2057.4	2047.8	2039.8	2042.9	2044.7	2038.5	2033.2	2034.1	2028.8	2039.0	2015.2
5°	2087.8	2079.0	2069.8	2073.3	2069.8	2060.5	2053.0	2050.8	2036.8	2042.5	2018.3
7.5°	2121.7	2112.0	2098.4	2102.3	2094.8	2077.7	2068.0	2062.3	2040.7	2041.2	2014.3
10°	2154.2	2145.9	2127.4	2130.0	2116.4	2093.5	2078.1	2070.2	2039.8	2035.4	2007.7
12.5°	2184.6	2173.2	2153.4	2154.7	2134.9	2104.5	2084.7	2073.3	2033.7	2020.5	1993.2
15°	2207.9	2196.9	2173.2	2172.7	2147.2	2107.6	2085.2	2069.3	2019.2	1998.5	1969.9
17.5°	2227.7	2217.6	2188.1	2187.2	2156.4	2106.3	2079.4	2059.6	1998.0	1972.5	1940.8
20°	2241.8	2231.7	2198.7	2195.6	2158.6	2099.7	2067.6	2042.5	1970.3	1940.0	1904.8
22.5°	2248.4	2238.3	2200.9	2196.5	2153.4	2086.5	2050.4	2020.9	1938.6	1899.0	1862.5
25°	2247.1	2237.4	2195.2	2190.8	2143.2	2066.7	2026.2	1992.3	1898.6	1852.0	1815.9
27.5°	2236.1	2228.6	2184.2	2178.4	2124.8	2039.8	1996.7	1959.3	1854.2	1802.2	1763.1
30°	2217.2	2211.4	2164.4	2159.1	2101.9	2010.4	1962.4	1919.3	1806.2	1747.7	1708.1
32.5°	2186.8	2181.5	2134.0	2129.2	2071.1	1972.5	1922.4	1877.9	1753.8	1689.2	1649.6
35°	2145.0	2141.9	2095.7	2090.4	2031.5	1929.4	1876.2	1827.3	1699.3	1626.2	1588.4
37.5°	2090.0	2090.0	2045.6	2039.8	1982.2	1876.6	1824.2	1772.3	1637.7	1560.2	1522.8
40°	2026.2	2031.9	1986.6	1980.9	1925.0	1819.8	1762.6	1708.1	1571.2	1490.7	1454.2
42.5°	1949.6	1954.9	1917.1	1911.8	1859.4	1754.3	1701.0	1641.6	1501.7	1419.9	1382.0
45°	1865.2	1872.2	1838.3	1834.4	1785.5	1682.6	1631.5	1571.2	1429.1	1346.0	1309.0
47.5°	1771.0	1780.2	1750.8	1748.6	1703.2	1609.1	1555.8	1494.7	1353.0	1269.0	1234.2
50°	1665.4	1678.6	1654.4	1654.4	1613.9	1520.2	1474.0	1412.8	1273.8	1189.8	1155.4
52.5°	1552.3	1569.0	1551.0	1551.4	1518.4	1434.4	1386.4	1326.6	1191.1	1108.4	1076.7
55°	1435.3	1451.6	1440.1	1441.9	1415.9	1339.4	1295.8	1236.4	1106.6	1026.1	996.2
57.5°	1313.0	1330.6	1323.1	1326.6	1308.6	1239.9	1194.6	1142.7	1019.5	939.8	914.3
60°	1190.2	1206.9	1203.0	1207.8	1196.4	1137.0	1095.6	1041.9	931.9	855.4	832.9
62.5°	1066.1	1081.5	1080.6	1085.9	1079.8	1030.5	993.5	947.8	841.3	770.9	750.2
65°	944.7	957.9	957.0	962.7	961.4	921.8	888.4	846.6	750.6	686.0	667.9
67.5°	826.8	837.8	834.7	841.3	843.0	811.4	782.3	744.9	664.4	601.5	586.1
70°	711.5	719.0	715.0	719.4	723.4	699.6	675.0	642.0	572.4	517.0	504.2
72.5°	598.4	603.7	597.5	601.9	605.4	588.3	568.0	539.4	481.8	433.8	423.3
75°	488.8	496.3	483.6	488.0	490.6	473.4	461.6	438.2	388.5	351.6	344.5
77.5°	382.8	387.2	380.2	378.4	380.2	367.8	358.6	340.6	303.2	272.8	268.4
80°	281.6	284.2	277.2	275.4	276.8	268.0	260.9	247.7	221.3	198.4	196.7
82.5°	188.8	190.1	183.9	182.2	183.0	180.4	172.0	162.8	150.5	131.1	130.7
85°	107.8	107.8	103.4	101.6	102.5	98.1	95.0	90.2	85.4	72.2	73.0
87.5°	39.6	39.6	37.4	37.0	41.4	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°	2013.0	2013.0	2013.0	2013.0	2013.0	2013.0	2013.0	2013.0	2013.0	2013.0	2013.0
2.5°	2021.8	2017.4	2013.4	1999.8	2005.5	1991.4	1990.6	1985.3	1981.3	1973.8	1983.5
5°	2015.2	2006.4	1995.0	1978.7	1983.5	1966.8	1963.3	1957.1	1951.8	1942.2	1949.6
7.5°	2004.6	1990.1	1972.1	1951.4	1958.0	1937.3	1932.0	1925.4	1921.0	1909.6	1916.2
10°	1989.2	1968.6	1947.4	1922.4	1927.2	1904.8	1898.2	1891.1	1887.2	1877.0	1883.6
12.5°	1965.5	1940.4	1911.8	1884.5	1889.8	1868.7	1859.9	1852.4	1851.1	1842.7	1850.6
15°	1934.7	1899.9	1870.4	1841.4	1847.6	1822.9	1819.0	1811.5	1813.7	1808.0	1817.6
17.5°	1895.5	1855.5	1823.4	1792.1	1798.3	1777.6	1774.5	1771.0	1773.2	1772.3	1782.9
20°	1851.5	1807.5	1770.6	1739.8	1743.3	1727.0	1728.3	1727.4	1731.8	1736.7	1751.2
22.5°	1801.8	1752.1	1713.4	1681.7	1687.0	1672.9	1679.0	1680.8	1688.3	1699.3	1717.8
25°	1745.9	1692.7	1652.2	1622.3	1627.1	1617.9	1628.4	1632.8	1644.7	1663.2	1682.1
27.5°	1687.4	1631.1	1588.0	1559.4	1568.6	1559.4	1575.2	1584.0	1602.0	1622.3	1645.6
30°	1625.4	1566.8	1522.4	1496.9	1505.7	1497.3	1522.8	1534.7	1552.8	1580.5	1608.2
32.5°	1560.2	1498.6	1455.1	1435.3	1441.4	1440.1	1468.7	1481.9	1506.1	1537.8	1567.3
35°	1493.4	1429.1	1385.1	1368.4	1375.9	1377.6	1412.0	1427.4	1453.8	1492.0	1523.7
37.5°	1424.3	1358.7	1315.6	1302.0	1308.6	1315.2	1355.2	1370.6	1400.5	1442.3	1477.1
40°	1352.6	1287.0	1244.8	1233.8	1240.4	1247.4	1291.0	1312.1	1344.6	1390.0	1427.8
42.5°	1280.0	1214.4	1173.5	1165.6	1172.2	1185.8	1232.0	1251.8	1286.1	1336.3	1378.1
45°	1206.0	1137.8	1102.2	1096.0	1103.1	1118.9	1164.2	1188.0	1224.5	1279.5	1324.4
47.5°	1131.2	1064.8	1030.9	1027.0	1034.0	1051.6	1101.8	1123.3	1162.0	1220.6	1269.0
50°	1055.6	990.9	958.3	957.0	963.6	982.5	1030.5	1056.0	1096.0	1161.6	1211.3
52.5°	979.0	917.0	887.5	887.5	893.6	913.0	961.4	987.8	1029.2	1098.2	1153.2
55°	902.4	843.5	815.3	817.5	826.3	843.0	890.1	917.8	959.6	1031.4	1089.4
57.5°	825.9	770.0	744.5	747.6	755.9	772.6	818.8	850.1	887.9	962.3	1021.7
60°	750.2	697.4	675.0	678.5	686.0	702.7	750.6	777.5	815.3	891.0	950.4
62.5°	673.6	625.7	604.6	609.0	615.6	632.3	677.6	703.6	741.0	815.3	875.2
65°	598.0	553.5	535.5	539.9	546.0	561.4	604.1	629.2	664.8	737.4	794.6
67.5°	523.2	482.7	467.7	472.1	477.0	491.5	526.7	554.0	587.4	656.5	710.6
70°	449.2	413.2	400.0	404.4	408.8	422.0	452.8	477.8	508.6	572.0	622.2
72.5°	376.2	341.0	334.4	338.4	341.9	353.3	382.8	402.6	429.4	485.8	528.9
75°	304.9	274.6	270.2	274.1	277.2	286.0	310.6	327.8	350.2	399.1	434.3
77.5°	236.3	210.8	209.0	212.1	215.2	221.3	240.7	258.7	276.3	312.4	343.6
80°	172.0	151.4	151.4	154.4	153.6	161.0	174.7	189.2	202.0	227.9	250.8
82.5°	113.5	97.2	99.4	101.6	103.0	106.0	114.4	125.4	133.3	149.2	164.1
85°	62.9	51.9	54.1	55.9	55.0	58.5	62.9	69.5	73.5	81.0	88.9
87.5°	23.3	19.4	19.8	21.1	22.0	23.8	23.8	27.7	28.2	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°	2013.0	2013.0	2013.0
2.5°	1965.0	1975.6	1983.5
5°	1931.2	1940.0	1947.0
7.5°	1898.2	1906.1	1912.2
10°	1866.9	1875.7	1880.1
12.5°	1834.8	1844.9	1848.4
15°	1803.1	1813.2	1817.6
17.5°	1770.6	1783.8	1788.6
20°	1740.2	1756.9	1760.9
22.5°	1709.4	1726.6	1731.4
25°	1676.0	1696.2	1701.0
27.5°	1640.3	1664.5	1669.4
30°	1604.7	1631.1	1635.9
32.5°	1566.4	1595.0	1599.4
35°	1526.4	1555.0	1560.2
37.5°	1481.9	1513.2	1523.7
40°	1435.7	1469.6	1480.6
42.5°	1387.3	1424.3	1435.7
45°	1335.4	1375.9	1389.1
47.5°	1283.0	1328.8	1340.2
50°	1226.3	1275.1	1288.8
52.5°	1166.9	1220.1	1233.8
55°	1105.3	1159.0	1173.9
57.5°	1038.4	1093.8	1109.7
60°	968.4	1023.9	1038.8
62.5°	896.7	946.9	961.4
65°	816.6	863.7	876.9
67.5°	731.7	774.8	785.8
70°	641.5	678.9	688.6
72.5°	547.4	573.3	586.1
75°	450.1	470.8	480.5
77.5°	352.4	367.0	374.9
80°	257.0	265.3	271.9
82.5°	168.1	171.6	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)