

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: P835307

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4STD-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835307
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-LD4-4STD-30-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

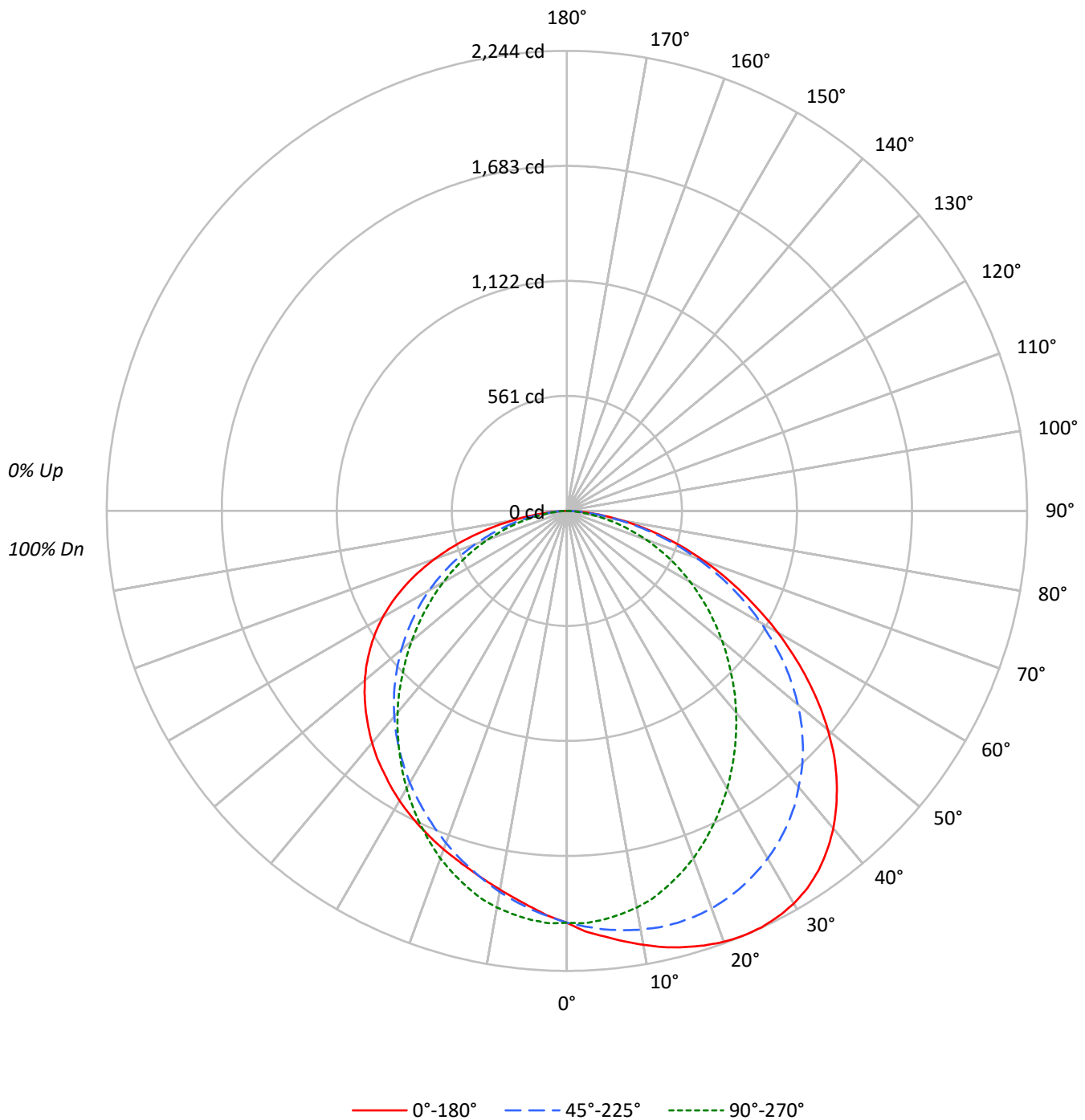
Lumens per Lamp: N/A
Luminaire Lumens: 5908.6 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	5405	5405	5405
5°	5628	5408	5248
10°	5874	5367	5126
15°	6138	5282	5053
20°	6406	5165	5032
25°	6658	5015	5040
30°	6875	4858	5072
35°	7031	4685	5115
40°	7103	4511	5190
45°	7083	4321	5275
50°	6957	4140	5384
55°	6719	3949	5496
60°	6392	3745	5579
65°	6003	3517	5571
70°	5586	3244	5406
75°	5072	2849	4984
80°	4355	2340	4204
85°	3322	1599	2887



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.5	3.2
10°-20°	550.2	9.3
20°-30°	842.8	14.3
30°-40°	1028.6	17.4
40°-50°	1075.7	18.2
50°-60°	973.6	16.5
60°-70°	737.3	12.5
70°-80°	410.9	7.0
80°-90°	99.1	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°	1583.5	26.8
0°-40°	2612.1	44.2
0°-60°	4661.3	78.9
0°-90°	5908.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5908.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2009	2009	2009	2009	2009	
5°	2083	2049	2002	1953	1943	201
15°	2203	2081	1896	1808	1814	625
25°	2242	2022	1689	1629	1697	1034
35°	2140	1872	1426	1424	1557	1337
45°	1861	1628	1135	1186	1386	1432
55°	1432	1293	842	916	1171	1278
65°	943	886	552	628	875	935
75°	488	461	274	327	479	517
85°	108	95	52	69	94	129
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°	2008.7	2008.7	2008.7	2008.7	2008.7	2008.7	2008.7	2008.7	2008.7	2008.7	2008.7
2.5°	2053.0	2043.4	2035.5	2038.5	2040.3	2034.1	2028.9	2029.8	2024.5	2034.6	2010.9
5°	2083.3	2074.5	2065.3	2068.8	2065.3	2056.1	2048.6	2046.4	2032.4	2038.1	2013.9
7.5°	2117.1	2107.5	2093.9	2097.8	2090.3	2073.2	2063.6	2057.9	2036.3	2036.8	2010.0
10°	2149.6	2141.3	2122.8	2125.5	2111.9	2089.0	2073.7	2065.8	2035.5	2031.1	2003.4
12.5°	2179.9	2168.5	2148.7	2150.1	2130.3	2100.0	2080.2	2068.8	2029.3	2016.1	1988.9
15°	2203.2	2192.2	2168.5	2168.1	2142.6	2103.1	2080.7	2064.9	2014.8	1994.2	1965.7
17.5°	2222.9	2212.8	2183.4	2182.5	2151.8	2101.8	2075.0	2055.2	1993.8	1968.3	1936.7
20°	2237.0	2226.9	2194.0	2190.9	2154.0	2095.2	2063.1	2038.1	1966.1	1935.8	1900.7
22.5°	2243.6	2233.5	2196.2	2191.8	2148.7	2082.0	2046.0	2016.6	1934.5	1895.0	1858.5
25°	2242.3	2232.6	2190.4	2186.1	2138.6	2062.2	2021.9	1988.0	1894.5	1848.0	1812.0
27.5°	2231.3	2223.8	2179.5	2173.8	2120.2	2035.5	1992.4	1955.1	1850.2	1798.4	1759.3
30°	2212.4	2206.7	2159.7	2154.4	2097.4	2006.0	1958.2	1915.2	1802.3	1743.9	1704.4
32.5°	2182.1	2176.8	2129.4	2124.6	2066.6	1968.3	1918.2	1873.9	1750.1	1685.5	1646.0
35°	2140.4	2137.3	2091.2	2086.0	2027.1	1925.3	1872.1	1823.4	1695.6	1622.7	1585.0
37.5°	2085.5	2085.5	2041.2	2035.5	1977.9	1872.6	1820.3	1768.5	1634.2	1556.9	1519.6
40°	2021.9	2027.6	1982.3	1976.6	1920.9	1815.9	1758.9	1704.4	1567.9	1487.5	1451.1
42.5°	1945.5	1950.7	1913.0	1907.7	1855.4	1750.5	1697.4	1638.1	1498.5	1416.8	1379.1
45°	1861.2	1868.2	1834.4	1830.4	1781.7	1678.9	1628.0	1567.9	1426.1	1343.1	1306.2
47.5°	1767.2	1776.4	1747.0	1744.8	1699.6	1605.6	1552.5	1491.5	1350.1	1266.2	1231.6
50°	1661.8	1675.0	1650.8	1650.8	1610.5	1516.9	1470.8	1409.8	1271.1	1187.2	1153.0
52.5°	1549.0	1565.7	1547.7	1548.1	1515.2	1431.3	1383.5	1323.8	1188.5	1106.0	1074.4
55°	1432.2	1448.4	1437.0	1438.8	1412.9	1336.5	1293.0	1233.7	1104.2	1023.9	994.0
57.5°	1310.1	1327.7	1320.2	1323.8	1305.8	1237.3	1192.0	1140.2	1017.3	937.8	912.4
60°	1187.6	1204.3	1200.4	1205.2	1193.8	1134.5	1093.2	1039.7	929.9	853.5	831.1
62.5°	1063.8	1079.2	1078.3	1083.6	1077.4	1028.3	991.4	945.7	839.5	769.2	748.6
65°	942.7	955.8	954.9	960.7	959.3	919.8	886.5	844.7	749.0	684.5	666.5
67.5°	825.0	836.0	832.9	839.5	841.2	809.6	780.6	743.3	663.0	600.2	584.8
70°	710.0	717.4	713.5	717.9	721.8	698.1	673.5	640.6	571.2	515.9	503.2
72.5°	597.1	602.4	596.2	600.6	604.1	587.0	566.8	538.3	480.8	432.9	422.4
75°	487.8	495.3	482.5	486.9	489.5	472.4	460.6	437.3	387.7	350.8	343.8
77.5°	382.0	386.4	379.3	377.6	379.3	367.1	357.8	339.8	302.5	272.2	267.8
80°	281.0	283.6	276.6	274.8	276.2	267.4	260.4	247.2	220.8	198.0	196.3
82.5°	188.4	189.7	183.5	181.8	182.6	180.0	171.7	162.5	150.2	130.8	130.4
85°	107.6	107.6	103.2	101.4	102.3	97.9	94.8	90.0	85.2	72.0	72.9
87.5°	39.5	39.5	37.3	36.9	41.3	36.4	35.1	32.9	34.2	27.2	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°	2008.7	2008.7	2008.7	2008.7	2008.7	2008.7	2008.7	2008.7	2008.7	2008.7	2008.7
2.5°	2017.5	2013.1	2009.1	1995.5	2001.2	1987.2	1986.3	1981.0	1977.1	1969.6	1979.3
5°	2010.9	2002.1	1990.7	1974.4	1979.3	1962.6	1959.1	1952.9	1947.7	1938.0	1945.5
7.5°	2000.3	1985.8	1967.8	1947.2	1953.8	1933.2	1927.9	1921.3	1916.9	1905.5	1912.1
10°	1985.0	1964.3	1943.3	1918.2	1923.1	1900.7	1894.1	1887.1	1883.1	1873.0	1879.6
12.5°	1961.3	1936.2	1907.7	1880.5	1885.7	1864.7	1855.9	1848.4	1847.1	1838.8	1846.7
15°	1930.5	1895.8	1866.4	1837.4	1843.6	1819.0	1815.1	1807.6	1809.8	1804.1	1813.7
17.5°	1891.5	1851.5	1819.4	1788.3	1794.4	1773.8	1770.7	1767.2	1769.4	1768.5	1779.1
20°	1847.5	1803.6	1766.8	1736.0	1739.5	1723.3	1724.6	1723.7	1728.1	1733.0	1747.4
22.5°	1797.9	1748.3	1709.7	1678.1	1683.3	1669.3	1675.4	1677.2	1684.7	1695.6	1714.1
25°	1742.2	1689.0	1648.7	1618.8	1623.6	1614.4	1624.9	1629.3	1641.2	1659.6	1678.5
27.5°	1683.8	1627.6	1584.6	1556.0	1565.2	1556.0	1571.8	1580.6	1598.6	1618.8	1642.1
30°	1621.9	1563.5	1519.1	1493.7	1502.4	1494.1	1519.6	1531.4	1549.4	1577.1	1604.7
32.5°	1556.9	1495.4	1452.0	1432.2	1438.3	1437.0	1465.6	1478.7	1502.9	1534.5	1563.9
35°	1490.2	1426.1	1382.1	1365.5	1372.9	1374.7	1408.9	1424.3	1450.6	1488.8	1520.4
37.5°	1421.2	1355.8	1312.8	1299.2	1305.8	1312.3	1352.3	1367.7	1397.5	1439.2	1473.9
40°	1349.7	1284.2	1242.1	1231.1	1237.7	1244.7	1288.2	1309.3	1341.8	1387.0	1424.7
42.5°	1277.2	1211.8	1171.0	1163.1	1169.6	1183.3	1229.4	1249.1	1283.4	1333.4	1375.1
45°	1203.5	1135.4	1099.8	1093.7	1100.7	1116.5	1161.7	1185.5	1221.9	1276.8	1321.6
47.5°	1128.8	1062.5	1028.7	1024.8	1031.8	1049.3	1099.4	1120.9	1159.5	1217.9	1266.2
50°	1053.3	988.8	956.3	954.9	961.5	980.4	1028.3	1053.7	1093.7	1159.1	1208.7
52.5°	976.9	915.0	885.6	885.6	891.7	911.0	959.3	985.7	1027.0	1095.9	1150.8
55°	900.5	841.7	813.6	815.8	824.5	841.2	888.2	915.9	957.6	1029.1	1087.1
57.5°	824.1	768.3	742.9	746.0	754.3	771.0	817.1	848.3	886.0	960.2	1019.5
60°	748.6	695.9	673.5	677.0	684.5	701.2	749.0	775.8	813.6	889.1	948.4
62.5°	672.2	624.3	603.3	607.7	614.2	630.9	676.1	702.0	739.4	813.6	873.3
65°	596.7	552.3	534.3	538.7	544.9	560.2	602.8	627.8	663.4	735.9	792.9
67.5°	522.0	481.6	466.7	471.1	475.9	490.4	525.5	552.8	586.1	655.1	709.1
70°	448.3	412.3	399.1	403.5	407.9	421.1	451.8	476.8	507.5	570.8	620.8
72.5°	375.4	340.3	333.7	337.6	341.1	352.6	382.0	401.7	428.5	484.7	527.7
75°	304.3	274.0	269.6	273.5	276.6	285.4	310.0	327.1	349.5	398.2	433.3
77.5°	235.8	210.3	208.6	211.6	214.7	220.8	240.2	258.2	275.7	311.7	342.9
80°	171.7	151.0	151.0	154.1	153.2	160.7	174.3	188.8	201.5	227.4	250.3
82.5°	113.3	97.0	99.2	101.4	102.7	105.8	114.2	125.1	133.0	148.8	163.8
85°	62.8	51.8	54.0	55.8	54.9	58.4	62.8	69.4	73.3	80.8	88.7
87.5°	23.3	19.3	19.8	21.1	22.0	23.7	23.7	27.7	28.1	29.0	30.7
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°	2008.7	2008.7	2008.7
2.5°	1960.8	1971.4	1979.3
5°	1927.0	1935.8	1942.8
7.5°	1894.1	1902.0	1908.1
10°	1862.9	1871.7	1876.1
12.5°	1830.9	1841.0	1844.5
15°	1799.2	1809.3	1813.7
17.5°	1766.8	1779.9	1784.8
20°	1736.5	1753.1	1757.1
22.5°	1705.7	1722.9	1727.7
25°	1672.4	1692.6	1697.4
27.5°	1636.8	1660.9	1665.8
30°	1601.2	1627.6	1632.4
32.5°	1563.0	1591.6	1596.0
35°	1523.1	1551.6	1556.9
37.5°	1478.7	1509.9	1520.4
40°	1432.6	1466.4	1477.4
42.5°	1384.3	1421.2	1432.6
45°	1332.5	1372.9	1386.1
47.5°	1280.3	1325.9	1337.4
50°	1223.6	1272.4	1286.0
52.5°	1164.4	1217.5	1231.1
55°	1102.9	1156.5	1171.4
57.5°	1036.2	1091.5	1107.3
60°	966.4	1021.7	1036.6
62.5°	894.8	944.8	959.3
65°	814.9	861.9	875.0
67.5°	730.1	773.2	784.2
70°	640.1	677.5	687.1
72.5°	546.2	572.1	584.8
75°	449.2	469.8	479.4
77.5°	351.7	366.2	374.1
80°	256.4	264.8	271.3
82.5°	167.7	171.2	176.1
85°	90.4	90.4	93.5
87.5°	30.7	29.4	30.7
90°	0.0	0.0	0.0

(END OF REPORT)