

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: P835277

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6STD-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835277
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-LD4-6STD-20-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

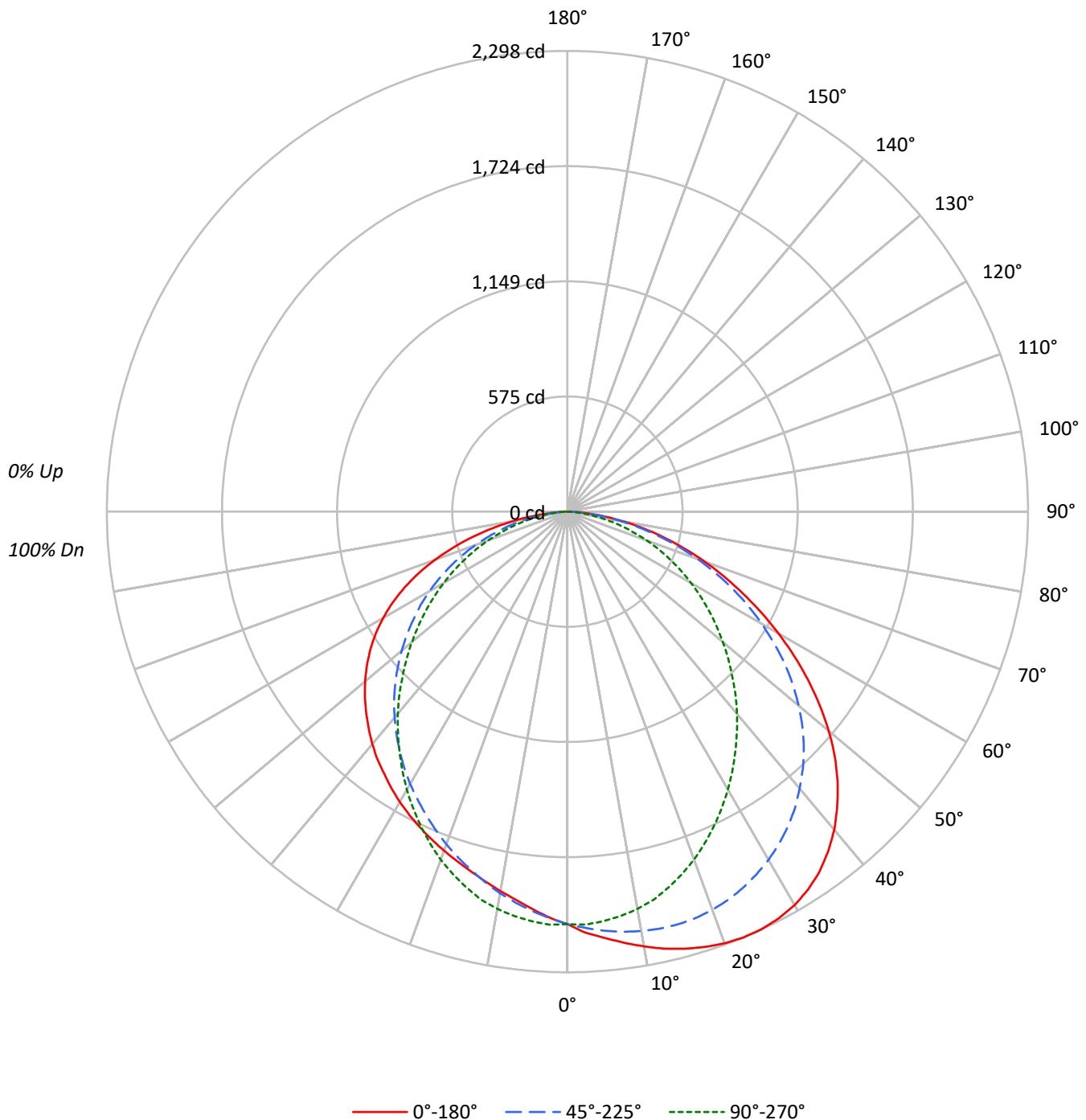
Lumens per Lamp: N/A
Luminaire Lumens: 6052.7 lumens
Efficiency: N/A
Efficacy: 60.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	5537	5537	5537
5°	5765	5540	5376
10°	6017	5498	5251
15°	6288	5411	5176
20°	6562	5291	5155
25°	6820	5137	5163
30°	7042	4977	5196
35°	7203	4799	5239
40°	7276	4621	5317
45°	7256	4426	5404
50°	7127	4240	5515
55°	6883	4045	5630
60°	6548	3837	5715
65°	6148	3603	5708
70°	5722	3323	5538
75°	5195	2918	5106
80°	4460	2397	4308
85°	3402	1639	2958

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.2	3.2
10°-20°	563.6	9.3
20°-30°	863.4	14.3
30°-40°	1053.7	17.4
40°-50°	1101.9	18.2
50°-60°	997.3	16.5
60°-70°	755.3	12.5
70°-80°	420.9	7.0
80°-90°	101.5	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°	1622.1	26.8
0°-40°	2675.8	44.2
0°-60°	4775.0	78.9
0°-90°	6052.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6052.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2058	2058	2058	2058	2058	
5°	2134	2099	2051	2001	1990	206
15°	2257	2131	1942	1852	1858	640
25°	2297	2071	1730	1669	1739	1060
35°	2193	1918	1461	1459	1595	1369
45°	1907	1668	1163	1214	1420	1467
55°	1467	1325	862	938	1200	1309
65°	966	908	566	643	896	958
75°	500	472	281	335	491	530
85°	110	97	53	71	96	133
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°	2057.7	2057.7	2057.7	2057.7	2057.7	2057.7	2057.7	2057.7	2057.7	2057.7	2057.7
2.5°	2103.1	2093.2	2085.1	2088.3	2090.1	2083.8	2078.4	2079.3	2073.9	2084.2	2059.9
5°	2134.1	2125.1	2115.7	2119.3	2115.7	2106.2	2098.6	2096.4	2082.0	2087.8	2063.1
7.5°	2168.8	2158.9	2144.9	2149.0	2141.3	2123.8	2113.9	2108.0	2086.0	2086.5	2059.0
10°	2202.0	2193.5	2174.6	2177.3	2163.4	2140.0	2124.2	2116.1	2085.1	2080.6	2052.3
12.5°	2233.1	2221.4	2201.1	2202.5	2182.3	2151.2	2131.0	2119.3	2078.8	2065.3	2037.4
15°	2256.9	2245.7	2221.4	2220.9	2194.8	2154.4	2131.4	2115.2	2064.0	2042.8	2013.6
17.5°	2277.2	2266.8	2236.7	2235.8	2204.3	2153.0	2125.6	2105.3	2042.4	2016.3	1983.9
20°	2291.5	2281.2	2247.5	2244.3	2206.5	2146.3	2113.4	2087.8	2014.0	1983.0	1947.0
22.5°	2298.3	2288.0	2249.7	2245.2	2201.1	2132.8	2095.9	2065.8	1981.7	1941.2	1903.9
25°	2296.9	2287.1	2243.9	2239.4	2190.8	2112.5	2071.2	2036.5	1940.7	1893.1	1856.2
27.5°	2285.7	2278.1	2232.6	2226.8	2171.9	2085.1	2041.0	2002.8	1895.3	1842.2	1802.2
30°	2266.4	2260.5	2212.4	2207.0	2148.5	2055.0	2005.9	1961.9	1846.3	1786.5	1746.0
32.5°	2235.3	2229.9	2181.4	2176.4	2117.0	2016.3	1965.0	1919.6	1792.8	1726.6	1686.2
35°	2192.6	2189.5	2142.2	2136.8	2076.6	1972.2	1917.8	1867.9	1737.0	1662.3	1623.6
37.5°	2136.4	2136.4	2091.0	2085.1	2026.2	1918.2	1864.7	1811.7	1674.0	1594.9	1556.6
40°	2071.2	2077.0	2030.7	2024.8	1967.7	1860.2	1801.8	1746.0	1606.1	1523.8	1486.5
42.5°	1992.9	1998.3	1959.6	1954.2	1900.7	1793.2	1738.8	1678.1	1535.0	1451.4	1412.7
45°	1906.6	1913.7	1879.1	1875.1	1825.1	1719.9	1667.7	1606.1	1460.8	1375.8	1338.0
47.5°	1810.3	1819.7	1789.6	1787.4	1741.0	1644.8	1590.4	1527.8	1383.0	1297.1	1261.6
50°	1702.4	1715.9	1691.1	1691.1	1649.7	1553.9	1506.7	1444.2	1302.1	1216.2	1181.1
52.5°	1586.8	1603.9	1585.4	1585.9	1552.1	1466.2	1417.2	1356.0	1217.5	1133.0	1100.6
55°	1467.1	1483.8	1472.1	1473.9	1447.3	1369.1	1324.6	1263.8	1131.2	1048.9	1018.3
57.5°	1342.1	1360.1	1352.4	1356.0	1337.6	1267.4	1221.1	1168.0	1042.1	960.7	934.6
60°	1216.6	1233.7	1229.7	1234.6	1222.9	1162.2	1119.9	1065.0	952.6	874.3	851.4
62.5°	1089.8	1105.5	1104.6	1110.0	1103.7	1053.3	1015.6	968.8	859.9	788.0	766.8
65°	965.6	979.1	978.2	984.1	982.7	942.3	908.1	865.3	767.3	701.2	682.7
67.5°	845.1	856.4	853.2	859.9	861.7	829.4	799.7	761.5	679.1	614.8	599.1
70°	727.3	734.9	730.9	735.4	739.4	715.1	689.9	656.2	585.1	528.5	515.4
72.5°	611.7	617.1	610.8	615.3	618.9	601.3	580.6	551.4	492.5	443.5	432.7
75°	499.7	507.3	494.3	498.8	501.5	483.9	471.8	448.0	397.1	359.4	352.2
77.5°	391.3	395.8	388.6	386.8	388.6	376.0	366.6	348.1	309.9	278.9	274.4
80°	287.8	290.5	283.4	281.6	282.9	273.9	266.7	253.2	226.2	202.8	201.0
82.5°	192.9	194.3	188.0	186.2	187.1	184.4	175.9	166.4	153.8	134.0	133.6
85°	110.2	110.2	105.7	103.9	104.8	100.3	97.1	92.2	87.3	73.8	74.7
87.5°	40.5	40.5	38.2	37.8	42.3	37.3	36.0	33.7	35.1	27.9	29.7
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2057.7	2057.7	2057.7	2057.7	2057.7	2057.7	2057.7	2057.7	2057.7	2057.7	2057.7
2.5°	2066.7	2062.2	2058.1	2044.2	2050.0	2035.6	2034.7	2029.3	2025.3	2017.6	2027.5
5°	2059.9	2050.9	2039.2	2022.6	2027.5	2010.4	2006.8	2000.6	1995.2	1985.3	1992.9
7.5°	2049.1	2034.3	2015.8	1994.7	2001.5	1980.3	1974.9	1968.2	1963.7	1952.0	1958.7
10°	2033.4	2012.2	1990.7	1965.0	1970.0	1947.0	1940.3	1933.1	1929.0	1918.7	1925.4
12.5°	2009.1	1983.5	1954.2	1926.3	1931.7	1910.1	1901.2	1893.5	1892.2	1883.6	1891.7
15°	1977.6	1942.1	1911.9	1882.3	1888.6	1863.4	1859.3	1851.7	1853.9	1848.1	1858.0
17.5°	1937.6	1896.7	1863.8	1831.9	1838.2	1817.0	1813.9	1810.3	1812.5	1811.7	1822.4
20°	1892.6	1847.6	1809.9	1778.4	1782.0	1765.3	1766.7	1765.8	1770.3	1775.2	1790.1
22.5°	1841.8	1791.0	1751.4	1719.0	1724.4	1710.0	1716.3	1718.1	1725.7	1737.0	1755.9
25°	1784.7	1730.2	1688.9	1658.3	1663.2	1653.8	1664.6	1669.1	1681.2	1700.1	1719.4
27.5°	1724.8	1667.3	1623.2	1594.0	1603.4	1594.0	1610.2	1619.2	1637.6	1658.3	1682.1
30°	1661.4	1601.6	1556.2	1530.1	1539.1	1530.5	1556.6	1568.8	1587.2	1615.6	1643.9
32.5°	1594.9	1531.9	1487.4	1467.1	1473.4	1472.1	1501.3	1514.8	1539.5	1571.9	1602.1
35°	1526.5	1460.8	1415.9	1398.8	1406.4	1408.2	1443.3	1459.0	1486.0	1525.2	1557.5
37.5°	1455.9	1388.9	1344.8	1330.9	1337.6	1344.3	1385.3	1401.0	1431.6	1474.3	1509.9
40°	1382.6	1315.6	1272.4	1261.1	1267.9	1275.1	1319.6	1341.2	1374.5	1420.8	1459.5
42.5°	1308.4	1241.3	1199.5	1191.4	1198.2	1212.1	1259.3	1279.6	1314.7	1365.9	1408.7
45°	1232.8	1163.1	1126.7	1120.4	1127.6	1143.8	1190.1	1214.4	1251.7	1307.9	1353.8
47.5°	1156.3	1088.4	1053.8	1049.7	1056.9	1074.9	1126.2	1148.2	1187.8	1247.6	1297.1
50°	1079.0	1012.9	979.6	978.2	985.0	1004.3	1053.3	1079.4	1120.4	1187.4	1238.2
52.5°	1000.7	937.3	907.2	907.2	913.5	933.3	982.7	1009.7	1052.0	1122.6	1178.8
55°	922.5	862.2	833.4	835.7	844.7	861.7	909.9	938.2	980.9	1054.2	1113.6
57.5°	844.2	787.1	761.0	764.1	772.7	789.8	837.0	868.9	907.6	983.6	1044.4
60°	766.8	712.9	689.9	693.5	701.2	718.3	767.3	794.7	833.4	910.8	971.5
62.5°	688.6	639.6	618.0	622.5	629.2	646.3	692.6	719.2	757.4	833.4	894.6
65°	611.2	565.8	547.4	551.9	558.2	573.9	617.5	643.2	679.6	753.8	812.3
67.5°	534.8	493.4	478.1	482.6	487.5	502.4	538.4	566.3	600.4	671.0	726.4
70°	459.2	422.3	408.8	413.3	417.8	431.3	462.8	488.4	519.9	584.7	636.0
72.5°	384.5	348.6	341.8	345.9	349.5	361.2	391.3	411.5	439.0	496.5	540.6
75°	311.7	280.7	276.2	280.2	283.4	292.3	317.5	335.1	358.0	407.9	443.9
77.5°	241.5	215.4	213.6	216.8	219.9	226.2	246.0	264.5	282.5	319.3	351.3
80°	175.9	154.7	154.7	157.9	157.0	164.6	178.6	193.4	206.4	233.0	256.4
82.5°	116.0	99.4	101.6	103.9	105.2	108.4	116.9	128.2	136.3	152.5	167.8
85°	64.3	53.1	55.3	57.1	56.2	59.8	64.3	71.1	75.1	82.8	90.9
87.5°	23.8	19.8	20.2	21.6	22.5	24.3	24.3	28.3	28.8	29.7	31.5
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°	2057.7	2057.7	2057.7
2.5°	2008.6	2019.4	2027.5
5°	1974.0	1983.0	1990.2
7.5°	1940.3	1948.4	1954.7
10°	1908.3	1917.3	1921.8
12.5°	1875.5	1885.9	1889.5
15°	1843.1	1853.5	1858.0
17.5°	1809.9	1823.3	1828.3
20°	1778.8	1795.9	1800.0
22.5°	1747.3	1764.9	1769.8
25°	1713.2	1733.8	1738.8
27.5°	1676.7	1701.5	1706.4
30°	1640.3	1667.3	1672.2
32.5°	1601.2	1630.4	1634.9
35°	1560.2	1589.5	1594.9
37.5°	1514.8	1546.7	1557.5
40°	1467.6	1502.2	1513.5
42.5°	1418.1	1455.9	1467.6
45°	1365.0	1406.4	1419.9
47.5°	1311.5	1358.3	1370.0
50°	1253.5	1303.4	1317.4
52.5°	1192.8	1247.2	1261.1
55°	1129.8	1184.7	1200.0
57.5°	1061.4	1118.1	1134.3
60°	989.9	1046.6	1061.9
62.5°	916.6	967.9	982.7
65°	834.8	882.9	896.4
67.5°	748.0	792.0	803.3
70°	655.8	694.0	703.9
72.5°	559.5	586.0	599.1
75°	460.1	481.2	491.1
77.5°	360.3	375.1	383.2
80°	262.7	271.2	278.0
82.5°	171.8	175.4	180.4
85°	92.7	92.7	95.8
87.5°	31.5	30.1	31.5
90°	0.0	0.0	0.0

(END OF REPORT)