

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: P835294

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6LO-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835294
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-LD4-6LO-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

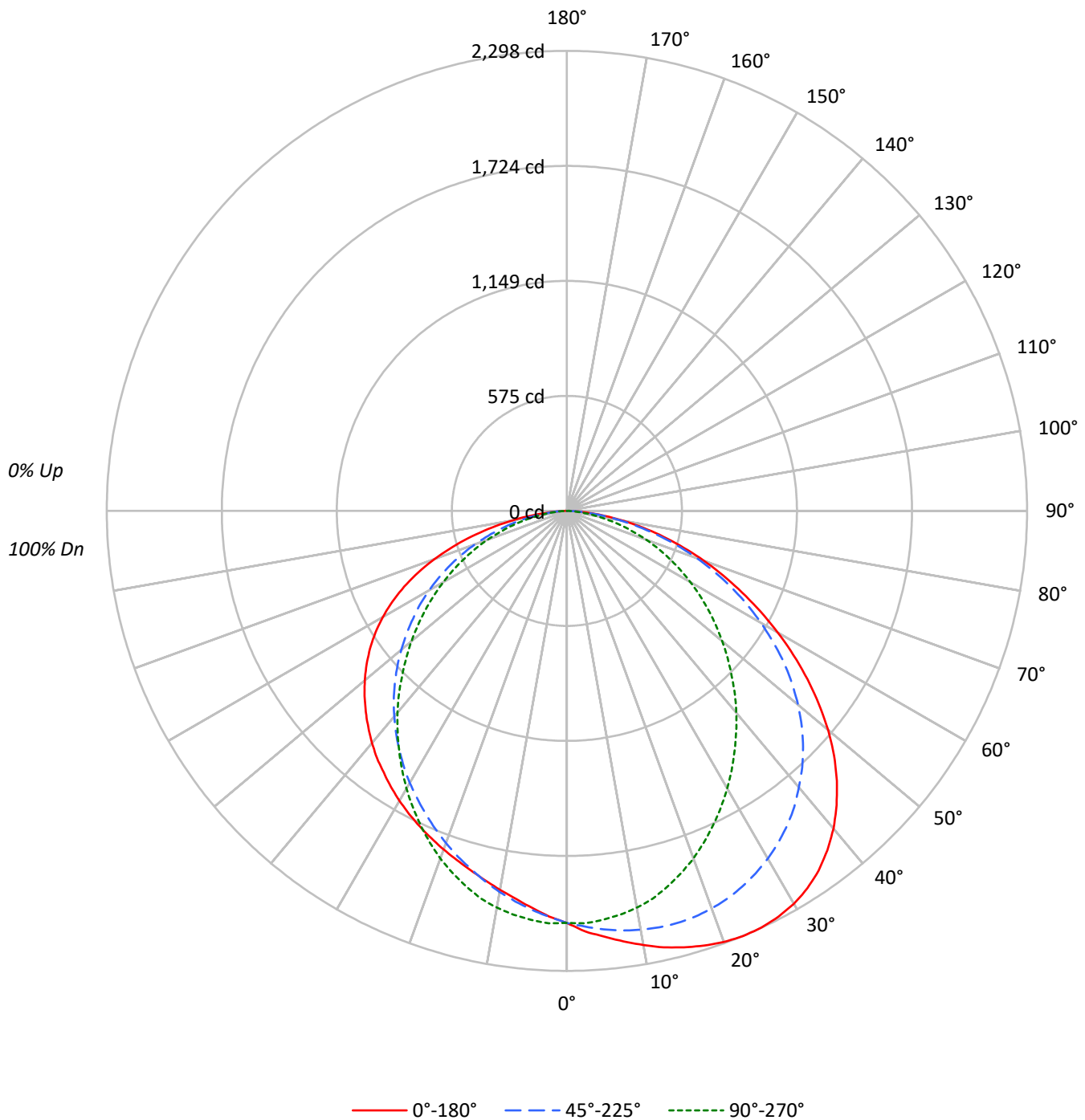
Lumens per Lamp: N/A
Luminaire Lumens: 6053.2 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5537	5537	5537
5°	5765	5541	5377
10°	6017	5499	5252
15°	6288	5411	5176
20°	6563	5292	5155
25°	6820	5138	5163
30°	7043	4977	5197
35°	7204	4799	5240
40°	7276	4622	5317
45°	7256	4427	5404
50°	7127	4240	5516
55°	6883	4046	5630
60°	6548	3837	5716
65°	6149	3603	5708
70°	5722	3323	5538
75°	5195	2918	5107
80°	4462	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°	863.5	14.3
30°-40°	1053.7	17.4
40°-50°	1102.0	18.2
50°-60°	997.4	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°	1622.2	26.8
0°-40°	2676.0	44.2
0°-60°	4775.3	78.9
0°-90°	6053.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6053.2	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	2132	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°	2057.8	2057.8	2057.8	2057.8	2057.8	2057.8	2057.8	2057.8	2057.8	2057.8	2057.8
2.5°	2103.3	2093.4	2085.3	2088.4	2090.2	2083.9	2078.5	2079.4	2074.0	2084.4	2060.1
5°	2134.3	2125.3	2115.9	2119.5	2115.9	2106.4	2098.8	2096.5	2082.1	2088.0	2063.2
7.5°	2168.9	2159.0	2145.1	2149.1	2141.5	2123.9	2114.1	2108.2	2086.2	2086.6	2059.2
10°	2202.2	2193.7	2174.8	2177.5	2163.5	2140.1	2124.4	2116.3	2085.3	2080.8	2052.4
12.5°	2233.3	2221.6	2201.3	2202.7	2182.4	2151.4	2131.1	2119.5	2079.0	2065.5	2037.6
15°	2257.1	2245.8	2221.6	2221.1	2195.0	2154.5	2131.6	2115.4	2064.1	2043.0	2013.7
17.5°	2277.3	2267.0	2236.8	2235.9	2204.5	2153.2	2125.7	2105.5	2042.5	2016.4	1984.1
20°	2291.7	2281.4	2247.6	2244.5	2206.7	2146.4	2113.6	2088.0	2014.2	1983.2	1947.2
22.5°	2298.5	2288.1	2249.9	2245.4	2201.3	2132.9	2096.1	2065.9	1981.8	1941.3	1904.0
25°	2297.1	2287.2	2244.0	2239.5	2191.0	2112.7	2071.3	2036.7	1940.9	1893.2	1856.3
27.5°	2285.9	2278.2	2232.8	2227.0	2172.1	2085.3	2041.2	2003.0	1895.5	1842.4	1802.3
30°	2266.5	2260.7	2212.6	2207.2	2148.7	2055.1	2006.1	1962.0	1846.4	1786.6	1746.1
32.5°	2235.5	2230.1	2181.5	2176.6	2117.2	2016.4	1965.2	1919.7	1792.9	1726.8	1686.3
35°	2192.8	2189.6	2142.4	2137.0	2076.7	1972.4	1917.9	1868.0	1737.1	1662.5	1623.8
37.5°	2136.5	2136.5	2091.1	2085.3	2026.3	1918.4	1864.9	1811.8	1674.2	1595.0	1556.8
40°	2071.3	2077.2	2030.8	2025.0	1967.9	1860.4	1801.9	1746.1	1606.2	1523.9	1486.6
42.5°	1993.1	1998.5	1959.8	1954.4	1900.8	1793.3	1738.9	1678.2	1535.2	1451.5	1412.8
45°	1906.7	1913.9	1879.3	1875.2	1825.3	1720.0	1667.9	1606.2	1460.9	1375.9	1338.2
47.5°	1810.4	1819.9	1789.7	1787.5	1741.2	1644.9	1590.5	1528.0	1383.1	1297.2	1261.7
50°	1702.5	1716.0	1691.2	1691.2	1649.9	1554.1	1506.8	1444.3	1302.2	1216.3	1181.2
52.5°	1586.9	1604.0	1585.5	1586.0	1552.3	1466.3	1417.3	1356.1	1217.6	1133.0	1100.7
55°	1467.2	1483.9	1472.2	1474.0	1447.5	1369.2	1324.7	1263.9	1131.2	1048.9	1018.3
57.5°	1342.2	1360.2	1352.5	1356.1	1337.7	1267.5	1221.2	1168.1	1042.2	960.8	934.7
60°	1216.7	1233.8	1229.7	1234.7	1223.0	1162.3	1120.0	1065.1	952.7	874.4	851.5
62.5°	1089.9	1105.6	1104.7	1110.1	1103.8	1053.4	1015.6	968.9	860.0	788.0	766.9
65°	965.7	979.2	978.3	984.2	982.8	942.3	908.1	865.4	767.4	701.2	682.8
67.5°	845.2	856.4	853.3	860.0	861.8	829.4	799.7	761.5	679.2	614.9	599.1
70°	727.3	735.0	730.9	735.4	739.5	715.2	690.0	656.3	585.2	528.5	515.5
72.5°	611.7	617.1	610.8	615.3	618.9	601.4	580.7	551.5	492.5	443.5	432.7
75°	499.7	507.4	494.3	498.8	501.5	484.0	471.8	448.0	397.2	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°	287.9	290.6	283.4	281.6	282.9	273.9	266.7	253.2	226.2	202.9	201.1
82.5°	193.0	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	97.2	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°	2057.8	2057.8	2057.8	2057.8	2057.8	2057.8	2057.8	2057.8	2057.8	2057.8	2057.8
2.5°	2066.8	2062.3	2058.3	2044.3	2050.2	2035.8	2034.9	2029.5	2025.4	2017.8	2027.7
5°	2060.1	2051.1	2039.4	2022.7	2027.7	2010.6	2007.0	2000.7	1995.3	1985.4	1993.1
7.5°	2049.3	2034.4	2016.0	1994.9	2001.6	1980.5	1975.1	1968.3	1963.8	1952.1	1958.9
10°	2033.5	2012.4	1990.8	1965.2	1970.1	1947.2	1940.4	1933.2	1929.2	1918.8	1925.6
12.5°	2009.3	1983.6	1954.4	1926.5	1931.9	1910.3	1901.3	1893.7	1892.3	1883.8	1891.9
15°	1977.8	1942.2	1912.1	1882.4	1888.7	1863.5	1859.5	1851.8	1854.1	1848.2	1858.1
17.5°	1937.7	1896.8	1864.0	1832.0	1838.3	1817.2	1814.0	1810.4	1812.7	1811.8	1822.6
20°	1892.8	1847.8	1810.0	1778.5	1782.1	1765.5	1766.8	1765.9	1770.4	1775.4	1790.2
22.5°	1841.9	1791.1	1751.5	1719.1	1724.5	1710.1	1716.4	1718.2	1725.9	1737.1	1756.0
25°	1784.8	1730.4	1689.0	1658.4	1663.4	1653.9	1664.7	1669.2	1681.3	1700.2	1719.6
27.5°	1725.0	1667.4	1623.3	1594.1	1603.5	1594.1	1610.3	1619.3	1637.7	1658.4	1682.2
30°	1661.6	1601.7	1556.3	1530.2	1539.2	1530.7	1556.8	1568.9	1587.3	1615.7	1644.0
32.5°	1595.0	1532.0	1487.5	1467.2	1473.5	1472.2	1501.4	1514.9	1539.7	1572.0	1602.2
35°	1526.6	1460.9	1416.0	1398.9	1406.5	1408.3	1443.4	1459.1	1486.1	1525.3	1557.7
37.5°	1456.0	1389.0	1344.9	1331.0	1337.7	1344.4	1385.4	1401.1	1431.7	1474.4	1510.0
40°	1382.7	1315.7	1272.5	1261.2	1268.0	1275.2	1319.7	1341.3	1374.6	1420.9	1459.6
42.5°	1308.5	1241.4	1199.6	1191.5	1198.3	1212.2	1259.4	1279.7	1314.8	1366.0	1408.8
45°	1232.9	1163.2	1126.7	1120.4	1127.6	1143.8	1190.2	1214.5	1251.8	1308.0	1353.9
47.5°	1156.4	1088.5	1053.9	1049.8	1057.0	1075.0	1126.3	1148.3	1187.9	1247.7	1297.2
50°	1079.1	1012.9	979.7	978.3	985.1	1004.4	1053.4	1079.5	1120.4	1187.5	1238.3
52.5°	1000.8	937.4	907.2	907.2	913.5	933.3	982.8	1009.8	1052.1	1122.7	1178.9
55°	922.5	862.3	833.5	835.7	844.7	861.8	909.9	938.3	981.0	1054.3	1113.7
57.5°	844.3	787.1	761.1	764.2	772.8	789.8	837.1	869.0	907.7	983.7	1044.4
60°	766.9	712.9	690.0	693.6	701.2	718.3	767.4	794.8	833.5	910.8	971.6
62.5°	688.6	639.6	618.0	622.5	629.3	646.4	692.7	719.2	757.5	833.5	894.6
65°	611.3	565.8	547.4	551.9	558.2	573.9	617.6	643.2	679.6	753.9	812.3
67.5°	534.8	493.4	478.1	482.6	487.6	502.4	538.4	566.3	600.5	671.1	726.4
70°	459.2	422.4	408.9	413.4	417.9	431.4	462.8	488.5	520.0	584.7	636.0
72.5°	384.6	348.6	341.8	345.9	349.5	361.2	391.3	411.6	439.0	496.6	540.7
75°	311.7	280.7	276.2	280.2	283.4	292.4	317.6	335.1	358.0	408.0	444.0
77.5°	241.5	215.5	213.7	216.8	220.0	226.2	246.0	264.5	282.5	319.4	351.3
80°	175.9	154.7	154.7	157.9	157.0	164.6	178.6	193.4	206.5	233.0	256.4
82.5°	116.0	99.4	101.7	103.9	105.3	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°	2057.8	2057.8	2057.8
2.5°	2008.8	2019.6	2027.7
5°	1974.2	1983.2	1990.4
7.5°	1940.4	1948.5	1954.8
10°	1908.5	1917.5	1922.0
12.5°	1875.7	1886.0	1889.6
15°	1843.3	1853.6	1858.1
17.5°	1810.0	1823.5	1828.4
20°	1779.0	1796.0	1800.1
22.5°	1747.5	1765.0	1770.0
25°	1713.3	1734.0	1738.9
27.5°	1676.8	1701.6	1706.5
30°	1640.4	1667.4	1672.4
32.5°	1601.3	1630.5	1635.0
35°	1560.4	1589.6	1595.0
37.5°	1514.9	1546.9	1557.7
40°	1467.7	1502.3	1513.6
42.5°	1418.2	1456.0	1467.7
45°	1365.1	1406.5	1420.0
47.5°	1311.6	1358.4	1370.1
50°	1253.6	1303.5	1317.5
52.5°	1192.9	1247.3	1261.2
55°	1129.9	1184.8	1200.1
57.5°	1061.5	1118.2	1134.4
60°	990.0	1046.7	1062.0
62.5°	916.7	968.0	982.8
65°	834.8	883.0	896.4
67.5°	748.0	792.1	803.3
70°	655.8	694.0	703.9
72.5°	559.5	586.1	599.1
75°	460.1	481.3	491.2
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)