

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: P835179

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3HI-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835179
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-LD4-3HI-27-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

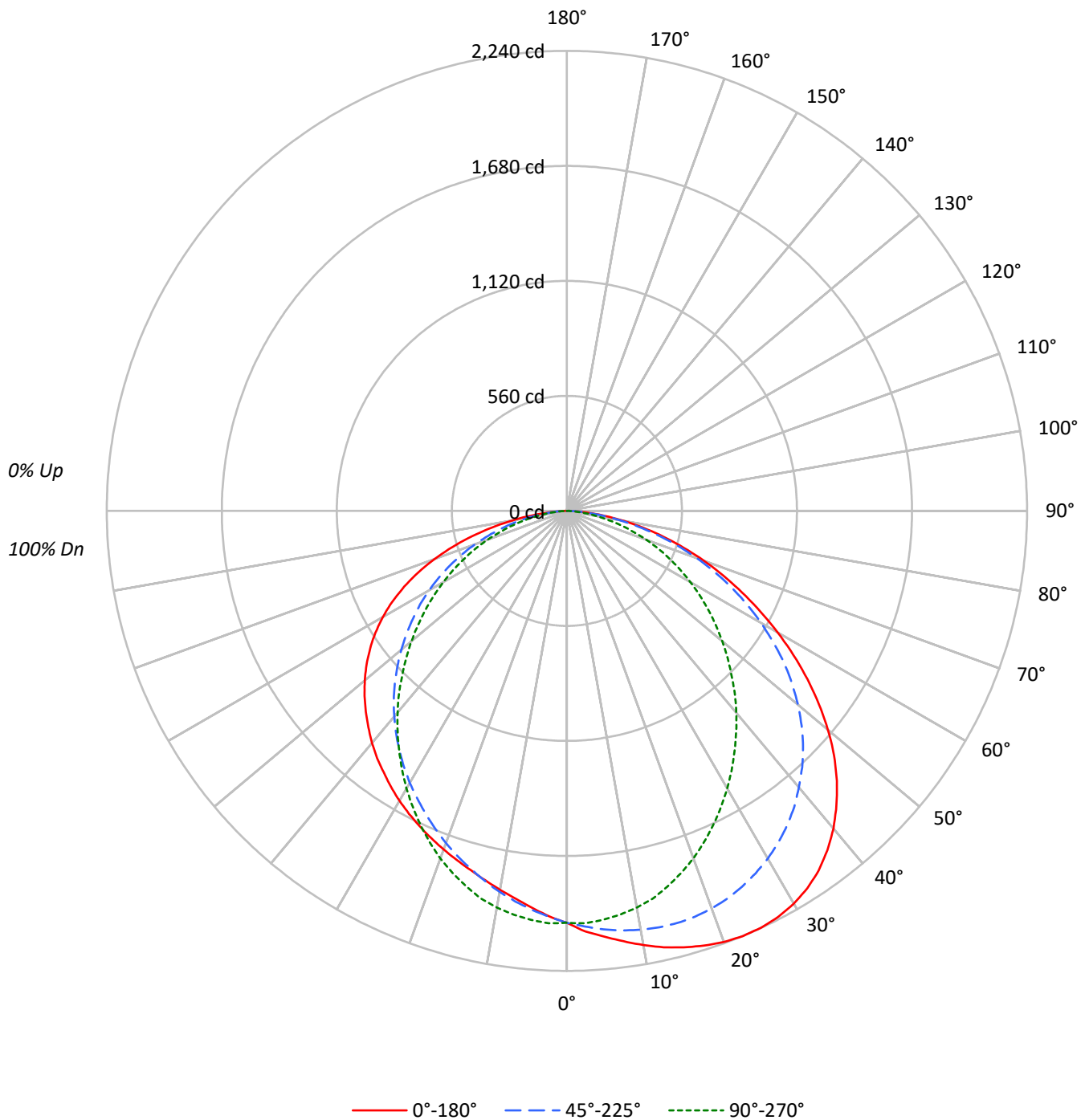
Lumens per Lamp: N/A
Luminaire Lumens: 5899.6 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66
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	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°	5397	5397	5397
5°	5619	5400	5240
10°	5865	5360	5119
15°	6128	5274	5045
20°	6396	5157	5024
25°	6648	5007	5032
30°	6864	4851	5065
35°	7021	4678	5107
40°	7092	4504	5182
45°	7072	4314	5267
50°	6947	4133	5375
55°	6709	3943	5487
60°	6382	3739	5570
65°	5993	3512	5563
70°	5578	3238	5398
75°	5064	2845	4977
80°	4348	2337	4198
85°	3316	1596	2884

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.2	3.2
10°-20°	549.3	9.3
20°-30°	841.6	14.3
30°-40°	1027.0	17.4
40°-50°	1074.0	18.2
50°-60°	972.1	16.5
60°-70°	736.2	12.5
70°-80°	410.3	7.0
80°-90°	99.0	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°	1581.1	26.8
0°-40°	2608.1	44.2
0°-60°	4654.2	78.9
0°-90°	5899.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5899.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2006	2006	2006	2006	2006	
5°	2080	2046	1999	1950	1940	201
15°	2200	2078	1893	1805	1811	624
25°	2239	2019	1686	1627	1695	1033
35°	2137	1869	1424	1422	1554	1335
45°	1858	1626	1134	1184	1384	1430
55°	1430	1291	840	914	1170	1276
65°	941	885	552	627	874	934
75°	487	460	274	327	479	517
85°	107	95	52	69	93	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°	2005.6	2005.6	2005.6	2005.6	2005.6	2005.6	2005.6	2005.6	2005.6	2005.6	2005.6
2.5°	2049.9	2040.3	2032.4	2035.4	2037.2	2031.1	2025.8	2026.7	2021.4	2031.5	2007.8
5°	2080.2	2071.4	2062.2	2065.7	2062.2	2053.0	2045.5	2043.3	2029.3	2035.0	2010.9
7.5°	2113.9	2104.3	2090.7	2094.6	2087.2	2070.1	2060.4	2054.7	2033.3	2033.7	2007.0
10°	2146.4	2138.0	2119.6	2122.2	2108.7	2085.9	2070.5	2062.6	2032.4	2028.0	2000.4
12.5°	2176.6	2165.2	2145.5	2146.8	2127.1	2096.8	2077.1	2065.7	2026.2	2013.1	1985.9
15°	2199.8	2188.9	2165.2	2164.8	2139.3	2099.9	2077.5	2061.7	2011.8	1991.2	1962.7
17.5°	2219.6	2209.5	2180.1	2179.2	2148.6	2098.6	2071.8	2052.1	1990.7	1965.3	1933.7
20°	2233.6	2223.5	2190.6	2187.6	2150.7	2092.0	2060.0	2035.0	1963.1	1932.9	1897.8
22.5°	2240.2	2230.1	2192.8	2188.4	2145.5	2078.8	2042.9	2013.5	1931.5	1892.1	1855.7
25°	2238.9	2229.2	2187.1	2182.7	2135.4	2059.1	2018.8	1985.0	1891.7	1845.2	1809.2
27.5°	2227.9	2220.4	2176.2	2170.5	2117.0	2032.4	1989.4	1952.2	1847.4	1795.6	1756.6
30°	2209.0	2203.3	2156.4	2151.2	2094.2	2003.0	1955.2	1912.3	1799.6	1741.3	1701.8
32.5°	2178.8	2173.5	2126.2	2121.4	2063.5	1965.3	1915.3	1871.0	1747.4	1683.0	1643.5
35°	2137.2	2134.1	2088.1	2082.8	2024.0	1922.3	1869.3	1820.6	1693.1	1620.3	1582.6
37.5°	2082.4	2082.4	2038.1	2032.4	1974.9	1869.7	1817.6	1765.8	1631.7	1554.5	1517.3
40°	2018.8	2024.5	1979.3	1973.6	1918.0	1813.2	1756.2	1701.8	1565.5	1485.3	1448.9
42.5°	1942.5	1947.8	1910.1	1904.8	1852.6	1747.9	1694.8	1635.6	1496.2	1414.7	1377.0
45°	1858.3	1865.4	1831.6	1827.6	1779.0	1676.4	1625.6	1565.5	1423.9	1341.0	1304.2
47.5°	1764.5	1773.7	1744.4	1742.2	1697.0	1603.2	1550.1	1489.2	1348.0	1264.3	1229.7
50°	1659.3	1672.5	1648.3	1648.3	1608.0	1514.6	1468.6	1407.7	1269.1	1185.4	1151.2
52.5°	1546.6	1563.3	1545.3	1545.8	1512.9	1429.2	1381.4	1321.7	1186.7	1104.3	1072.7
55°	1430.0	1446.2	1434.9	1436.6	1410.7	1334.5	1291.1	1231.9	1102.6	1022.3	992.5
57.5°	1308.2	1325.7	1318.2	1321.7	1303.8	1235.4	1190.2	1138.5	1015.7	936.4	911.0
60°	1185.8	1202.5	1198.6	1203.4	1192.0	1132.8	1091.6	1038.1	928.5	852.2	829.9
62.5°	1062.2	1077.6	1076.7	1081.9	1075.8	1026.7	989.9	944.3	838.2	768.1	747.5
65°	941.2	954.4	953.5	959.2	957.9	918.4	885.1	843.5	747.9	683.5	665.5
67.5°	823.7	834.7	831.6	838.2	840.0	808.4	779.5	742.2	662.0	599.3	583.9
70°	708.9	716.3	712.4	716.8	720.7	697.0	672.5	639.6	570.3	515.1	502.4
72.5°	596.2	601.5	595.3	599.7	603.2	586.1	566.0	537.5	480.0	432.3	421.7
75°	487.1	494.5	481.8	486.2	488.8	471.7	459.9	436.6	387.1	350.3	343.3
77.5°	381.4	385.8	378.8	377.0	378.8	366.5	357.3	339.3	302.1	271.8	267.4
80°	280.6	283.2	276.2	274.4	275.7	267.0	260.0	246.8	220.5	197.7	196.0
82.5°	188.1	189.4	183.2	181.5	182.4	179.7	171.4	162.2	149.9	130.6	130.2
85°	107.4	107.4	103.0	101.3	102.1	97.8	94.7	89.9	85.0	71.9	72.8
87.5°	39.5	39.5	37.3	36.8	41.2	36.4	35.1	32.9	34.2	27.2	28.9
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°	2005.6	2005.6	2005.6	2005.6	2005.6	2005.6	2005.6	2005.6	2005.6	2005.6	2005.6
2.5°	2014.4	2010.0	2006.1	1992.5	1998.2	1984.2	1983.3	1978.0	1974.1	1966.6	1976.3
5°	2007.8	1999.1	1987.7	1971.4	1976.3	1959.6	1956.1	1950.0	1944.7	1935.1	1942.5
7.5°	1997.3	1982.8	1964.9	1944.3	1950.8	1930.2	1925.0	1918.4	1914.0	1902.6	1909.2
10°	1982.0	1961.4	1940.3	1915.3	1920.1	1897.8	1891.2	1884.2	1880.3	1870.2	1876.7
12.5°	1958.3	1933.3	1904.8	1877.6	1882.9	1861.8	1853.1	1845.6	1844.3	1836.0	1843.9
15°	1927.6	1893.0	1863.6	1834.7	1840.8	1816.3	1812.3	1804.9	1807.0	1801.3	1811.0
17.5°	1888.6	1848.7	1816.7	1785.6	1791.7	1771.1	1768.0	1764.5	1766.7	1765.8	1776.4
20°	1844.7	1800.9	1764.1	1733.4	1736.9	1720.7	1722.0	1721.1	1725.5	1730.3	1744.8
22.5°	1795.2	1745.7	1707.1	1675.5	1680.8	1666.8	1672.9	1674.7	1682.1	1693.1	1711.5
25°	1739.5	1686.5	1646.2	1616.3	1621.2	1612.0	1622.5	1626.9	1638.7	1657.1	1676.0
27.5°	1681.2	1625.1	1582.2	1553.7	1562.9	1553.7	1569.4	1578.2	1596.2	1616.3	1639.6
30°	1619.4	1561.1	1516.8	1491.4	1500.2	1491.8	1517.3	1529.1	1547.1	1574.7	1602.3
32.5°	1554.5	1493.2	1449.8	1430.0	1436.2	1434.9	1463.3	1476.5	1500.6	1532.2	1561.5
35°	1487.9	1423.9	1380.1	1363.4	1370.8	1372.6	1406.8	1422.1	1448.4	1486.6	1518.1
37.5°	1419.1	1353.7	1310.8	1297.2	1303.8	1310.3	1350.2	1365.6	1395.4	1437.0	1471.7
40°	1347.6	1282.3	1240.2	1229.2	1235.8	1242.8	1286.2	1307.3	1339.7	1384.9	1422.6
42.5°	1275.3	1210.0	1169.2	1161.3	1167.9	1181.5	1227.5	1247.2	1281.4	1331.4	1373.0
45°	1201.6	1133.7	1098.2	1092.0	1099.0	1114.8	1160.0	1183.7	1220.0	1274.8	1319.6
47.5°	1127.1	1060.9	1027.1	1023.2	1030.2	1047.8	1097.7	1119.2	1157.8	1216.1	1264.3
50°	1051.7	987.3	954.8	953.5	960.1	978.9	1026.7	1052.1	1092.0	1157.3	1206.9
52.5°	975.4	913.6	884.2	884.2	890.4	909.7	957.9	984.2	1025.4	1094.2	1149.0
55°	899.1	840.4	812.3	814.5	823.3	840.0	886.9	914.5	956.1	1027.6	1085.5
57.5°	822.9	767.2	741.8	744.8	753.2	769.8	815.8	847.0	884.7	958.8	1017.9
60°	747.5	694.8	672.5	676.0	683.5	700.1	747.9	774.6	812.3	887.7	946.9
62.5°	671.2	623.4	602.3	606.7	613.3	630.0	675.1	701.0	738.2	812.3	872.0
65°	595.8	551.5	533.5	537.9	544.0	559.4	601.9	626.9	662.4	734.7	791.7
67.5°	521.2	480.9	466.0	470.4	475.2	489.7	524.8	551.9	585.3	654.1	708.0
70°	447.6	411.6	398.5	402.9	407.3	420.4	451.1	476.1	506.8	569.9	619.9
72.5°	374.8	339.8	333.2	337.1	340.6	352.0	381.4	401.1	427.9	484.0	526.9
75°	303.8	273.6	269.2	273.1	276.2	285.0	309.5	326.6	349.0	397.6	432.7
77.5°	235.4	210.0	208.2	211.3	214.4	220.5	239.8	257.8	275.3	311.3	342.4
80°	171.4	150.8	150.8	153.9	153.0	160.5	174.0	188.5	201.2	227.1	249.9
82.5°	113.1	96.9	99.1	101.3	102.6	105.7	114.0	124.9	132.8	148.6	163.5
85°	62.7	51.7	53.9	55.7	54.8	58.3	62.7	69.3	73.2	80.7	88.6
87.5°	23.2	19.3	19.7	21.0	21.9	23.7	23.7	27.6	28.1	28.9	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°	2005.6	2005.6	2005.6
2.5°	1957.9	1968.4	1976.3
5°	1924.1	1932.9	1939.9
7.5°	1891.2	1899.1	1905.2
10°	1860.1	1868.9	1873.2
12.5°	1828.1	1838.2	1841.7
15°	1796.5	1806.6	1811.0
17.5°	1764.1	1777.2	1782.1
20°	1733.8	1750.5	1754.4
22.5°	1703.1	1720.2	1725.1
25°	1669.8	1690.0	1694.8
27.5°	1634.3	1658.4	1663.3
30°	1598.8	1625.1	1629.9
32.5°	1560.7	1589.2	1593.5
35°	1520.8	1549.3	1554.5
37.5°	1476.5	1507.6	1518.1
40°	1430.5	1464.2	1475.2
42.5°	1382.2	1419.1	1430.5
45°	1330.5	1370.8	1384.0
47.5°	1278.3	1323.9	1335.3
50°	1221.8	1270.5	1284.0
52.5°	1162.6	1215.7	1229.2
55°	1101.2	1154.7	1169.6
57.5°	1034.6	1089.8	1105.6
60°	964.9	1020.1	1035.0
62.5°	893.4	943.4	957.9
65°	813.7	860.6	873.7
67.5°	729.0	772.0	783.0
70°	639.2	676.4	686.1
72.5°	545.4	571.2	583.9
75°	448.5	469.1	478.7
77.5°	351.2	365.6	373.5
80°	256.0	264.3	270.9
82.5°	167.5	171.0	175.8
85°	90.3	90.3	93.4
87.5°	30.7	29.4	30.7
90°	0.0	0.0	0.0

(END OF REPORT)