

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: P834202

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2LO-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834202
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-2LO-30-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

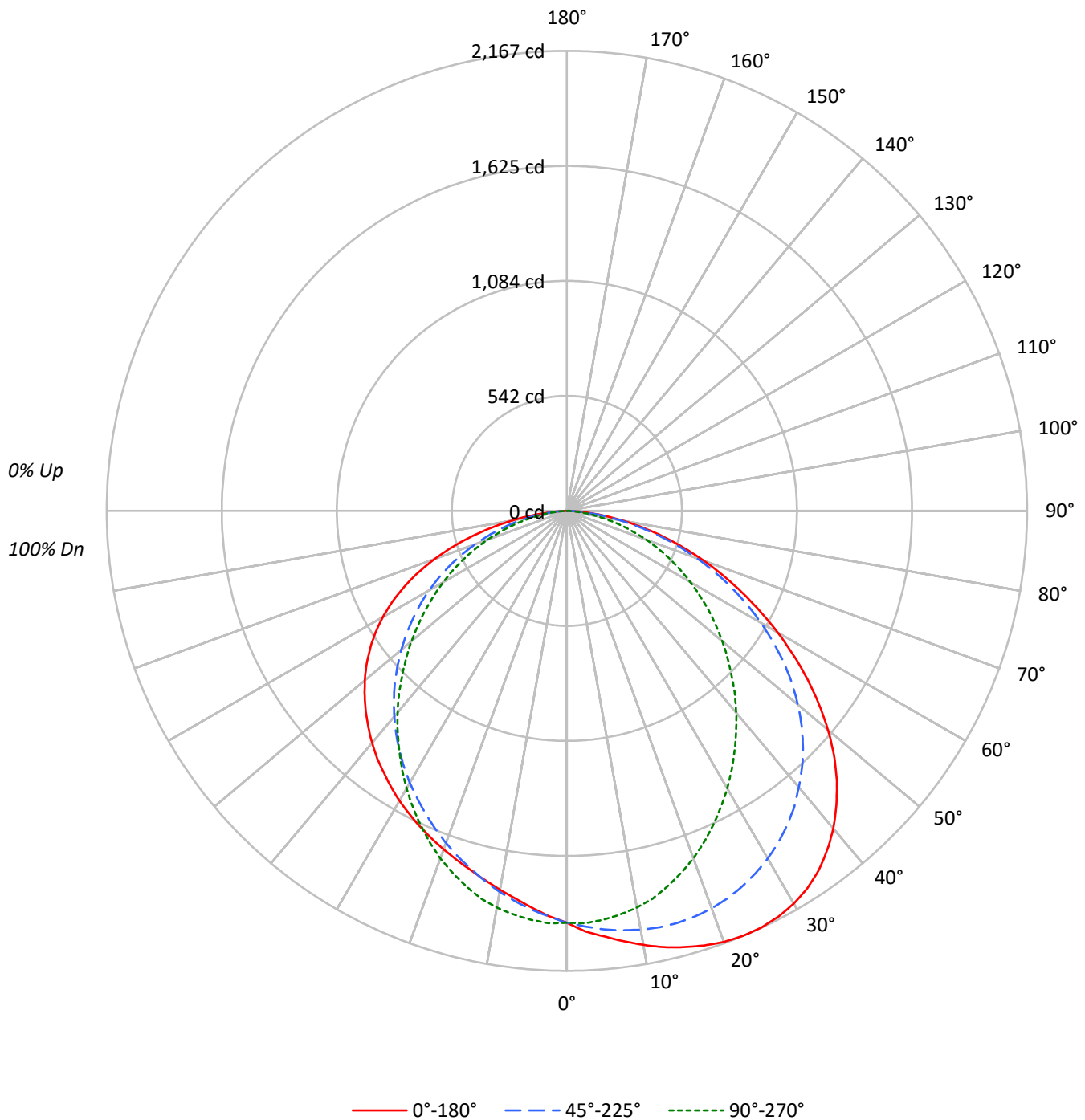
Lumens per Lamp: N/A
Luminaire Lumens: 5706.3 lumens
Efficiency: N/A
Efficacy: 121.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	5220	5220	5220
5°	5435	5223	5068
10°	5673	5184	4951
15°	5928	5101	4880
20°	6187	4988	4859
25°	6430	4843	4867
30°	6639	4692	4899
35°	6791	4524	4939
40°	6859	4357	5012
45°	6840	4173	5094
50°	6719	3998	5200
55°	6489	3814	5308
60°	6173	3617	5388
65°	5797	3396	5381
70°	5394	3133	5221
75°	4898	2751	4814
80°	4206	2261	4060
85°	3208	1544	2788



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.0	3.2
10°-20°	531.3	9.3
20°-30°	814.0	14.3
30°-40°	993.4	17.4
40°-50°	1038.8	18.2
50°-60°	940.2	16.5
60°-70°	712.1	12.5
70°-80°	396.8	7.0
80°-90°	95.7	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°	1529.3	26.8
0°-40°	2522.6	44.2
0°-60°	4501.7	78.9
0°-90°	5706.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5706.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1940	1940	1940	1940	1940	
5°	2012	1978	1934	1886	1876	194
15°	2128	2009	1831	1746	1752	603
25°	2166	1953	1631	1574	1639	999
35°	2067	1808	1377	1376	1504	1291
45°	1797	1572	1096	1145	1339	1383
55°	1383	1249	813	884	1131	1234
65°	910	856	533	606	845	903
75°	471	445	265	316	463	500
85°	104	92	50	67	90	125
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°	1939.9	1939.9	1939.9	1939.9	1939.9	1939.9	1939.9	1939.9	1939.9	1939.9	1939.9
2.5°	1982.7	1973.4	1965.8	1968.7	1970.4	1964.5	1959.4	1960.3	1955.2	1964.9	1942.0
5°	2012.0	2003.5	1994.6	1998.0	1994.6	1985.7	1978.5	1976.4	1962.8	1968.3	1945.0
7.5°	2044.6	2035.3	2022.2	2026.0	2018.8	2002.2	1992.9	1987.4	1966.6	1967.0	1941.2
10°	2076.0	2068.0	2050.2	2052.7	2039.6	2017.5	2002.7	1995.0	1965.8	1961.5	1934.8
12.5°	2105.3	2094.3	2075.2	2076.4	2057.4	2028.1	2009.0	1998.0	1959.8	1947.1	1920.8
15°	2127.7	2117.1	2094.3	2093.8	2069.2	2031.1	2009.4	1994.2	1945.8	1925.9	1898.4
17.5°	2146.8	2137.1	2108.7	2107.8	2078.1	2029.8	2003.9	1984.9	1925.5	1900.9	1870.4
20°	2160.4	2150.6	2118.8	2115.9	2080.3	2023.4	1992.5	1968.3	1898.8	1869.5	1835.6
22.5°	2166.8	2157.0	2121.0	2116.7	2075.2	2010.7	1975.9	1947.5	1868.2	1830.1	1794.9
25°	2165.5	2156.2	2115.5	2111.2	2065.4	1991.6	1952.6	1920.0	1829.7	1784.7	1749.9
27.5°	2154.9	2147.7	2104.9	2099.3	2047.6	1965.8	1924.2	1888.2	1786.8	1736.8	1699.1
30°	2136.7	2131.1	2085.8	2080.7	2025.6	1937.4	1891.1	1849.6	1740.6	1684.2	1646.1
32.5°	2107.4	2102.3	2056.5	2051.8	1995.9	1900.9	1852.6	1809.7	1690.2	1627.8	1589.7
35°	2067.1	2064.1	2019.6	2014.5	1957.7	1859.3	1808.0	1761.0	1637.6	1567.2	1530.7
37.5°	2014.1	2014.1	1971.3	1965.8	1910.2	1808.5	1758.0	1708.0	1578.2	1503.6	1467.5
40°	1952.6	1958.1	1914.5	1909.0	1855.1	1753.8	1698.6	1646.1	1514.2	1436.6	1401.4
42.5°	1878.8	1883.9	1847.5	1842.4	1791.9	1690.6	1639.3	1582.0	1447.2	1368.3	1331.9
45°	1797.4	1804.2	1771.6	1767.8	1720.7	1621.5	1572.3	1514.2	1377.2	1297.1	1261.5
47.5°	1706.7	1715.6	1687.2	1685.1	1641.4	1550.7	1499.3	1440.4	1303.9	1222.9	1189.4
50°	1604.9	1617.6	1594.3	1594.3	1555.3	1465.0	1420.5	1361.5	1227.5	1146.6	1113.5
52.5°	1496.0	1512.1	1494.7	1495.1	1463.3	1382.3	1336.1	1278.4	1147.8	1068.1	1037.6
55°	1383.2	1398.9	1387.8	1389.5	1364.5	1290.7	1248.7	1191.5	1066.4	988.8	960.0
57.5°	1265.3	1282.2	1275.0	1278.4	1261.0	1194.9	1151.2	1101.2	982.5	905.7	881.1
60°	1147.0	1163.1	1159.3	1163.9	1152.9	1095.7	1055.8	1004.1	898.1	824.3	802.7
62.5°	1027.4	1042.2	1041.4	1046.5	1040.6	993.1	957.4	913.3	810.7	742.9	723.0
65°	910.4	923.1	922.3	927.8	926.5	888.3	856.1	815.8	723.4	661.1	643.7
67.5°	796.7	807.3	804.4	810.7	812.4	781.9	753.9	717.9	640.3	579.6	564.8
70°	685.6	692.9	689.0	693.3	697.1	674.2	650.5	618.7	551.7	498.2	485.9
72.5°	576.7	581.8	575.8	580.1	583.5	566.9	547.4	519.9	464.3	418.1	407.9
75°	471.1	478.3	466.0	470.2	472.8	456.2	444.8	422.3	374.4	338.8	332.0
77.5°	368.9	373.1	366.4	364.7	366.4	354.5	345.6	328.2	292.2	262.9	258.7
80°	271.4	273.9	267.1	265.4	266.7	258.2	251.4	238.7	213.3	191.2	189.5
82.5°	181.9	183.2	177.2	175.5	176.4	173.8	165.8	156.9	145.0	126.4	125.9
85°	103.9	103.9	99.6	97.9	98.8	94.6	91.6	86.9	82.3	69.5	70.4
87.5°	38.2	38.2	36.0	35.6	39.9	35.2	33.9	31.8	33.1	26.3	28.0
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°	1939.9	1939.9	1939.9	1939.9	1939.9	1939.9	1939.9	1939.9	1939.9	1939.9	1939.9
2.5°	1948.4	1944.1	1940.3	1927.2	1932.7	1919.1	1918.3	1913.2	1909.4	1902.2	1911.5
5°	1942.0	1933.5	1922.5	1906.8	1911.5	1895.4	1892.0	1886.1	1881.0	1871.6	1878.8
7.5°	1931.9	1917.9	1900.5	1880.5	1886.9	1867.0	1861.9	1855.5	1851.3	1840.3	1846.6
10°	1917.0	1897.1	1876.7	1852.6	1857.2	1835.6	1829.2	1822.5	1818.6	1808.9	1815.2
12.5°	1894.1	1869.9	1842.4	1816.1	1821.2	1800.8	1792.3	1785.1	1783.9	1775.8	1783.4
15°	1864.4	1830.9	1802.5	1774.5	1780.5	1756.7	1752.9	1745.7	1747.8	1742.3	1751.6
17.5°	1826.7	1788.1	1757.2	1727.0	1733.0	1713.1	1710.1	1706.7	1708.8	1708.0	1718.1
20°	1784.3	1741.9	1706.3	1676.6	1680.0	1664.3	1665.6	1664.7	1669.0	1673.6	1687.6
22.5°	1736.4	1688.5	1651.1	1620.6	1625.7	1612.1	1618.1	1619.8	1627.0	1637.6	1655.4
25°	1682.5	1631.2	1592.2	1563.4	1568.0	1559.1	1569.3	1573.6	1585.0	1602.8	1621.0
27.5°	1626.1	1571.9	1530.3	1502.7	1511.6	1502.7	1518.0	1526.5	1543.9	1563.4	1585.8
30°	1566.3	1509.9	1467.1	1442.5	1451.0	1443.0	1467.5	1479.0	1496.4	1523.1	1549.8
32.5°	1503.6	1444.2	1402.2	1383.2	1389.1	1387.8	1415.4	1428.1	1451.4	1482.0	1510.4
35°	1439.1	1377.2	1334.8	1318.7	1325.9	1327.6	1360.7	1375.5	1401.0	1437.9	1468.4
37.5°	1372.6	1309.4	1267.8	1254.7	1261.0	1267.4	1306.0	1320.8	1349.7	1389.9	1423.4
40°	1303.4	1240.3	1199.6	1189.0	1195.3	1202.1	1244.1	1264.4	1295.8	1339.5	1376.0
42.5°	1233.5	1170.3	1130.9	1123.2	1129.6	1142.7	1187.3	1206.3	1239.4	1287.8	1328.0
45°	1162.2	1096.5	1062.2	1056.2	1063.0	1078.3	1122.0	1144.9	1180.1	1233.1	1276.3
47.5°	1090.2	1026.1	993.5	989.7	996.5	1013.4	1061.8	1082.5	1119.8	1176.2	1222.9
50°	1017.2	954.9	923.5	922.3	928.6	946.8	993.1	1017.7	1056.2	1119.4	1167.3
52.5°	943.5	883.7	855.3	855.3	861.2	879.8	926.5	951.9	991.8	1058.4	1111.4
55°	869.7	812.9	785.7	787.8	796.3	812.4	857.8	884.5	924.8	993.9	1049.9
57.5°	795.9	742.0	717.4	720.4	728.5	744.6	789.1	819.2	855.7	927.3	984.6
60°	723.0	672.1	650.5	653.8	661.1	677.2	723.4	749.2	785.7	858.6	915.9
62.5°	649.2	603.0	582.6	586.8	593.2	609.3	653.0	678.0	714.1	785.7	843.4
65°	576.2	533.4	516.0	520.3	526.2	541.1	582.2	606.4	640.7	710.7	765.8
67.5°	504.2	465.2	450.7	455.0	459.6	473.6	507.6	533.8	566.1	632.6	684.8
70°	432.9	398.2	385.4	389.7	393.9	406.6	436.3	460.5	490.2	551.2	599.6
72.5°	362.5	328.6	322.3	326.1	329.5	340.5	368.9	388.0	413.8	468.1	509.7
75°	293.8	264.6	260.4	264.2	267.1	275.6	299.4	315.9	337.5	384.6	418.5
77.5°	227.7	203.1	201.4	204.4	207.3	213.3	231.9	249.3	266.3	301.1	331.2
80°	165.8	145.9	145.9	148.8	148.0	155.2	168.3	182.3	194.6	219.6	241.7
82.5°	109.4	93.7	95.8	97.9	99.2	102.2	110.2	120.8	128.5	143.7	158.2
85°	60.6	50.0	52.2	53.9	53.0	56.4	60.6	67.0	70.8	78.0	85.7
87.5°	22.5	18.7	19.1	20.4	21.2	22.9	22.9	26.7	27.1	28.0	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):

	160°	170°	180°
0°	1939.9	1939.9	1939.9
2.5°	1893.7	1903.9	1911.5
5°	1861.0	1869.5	1876.3
7.5°	1829.2	1836.9	1842.8
10°	1799.1	1807.6	1811.9
12.5°	1768.2	1777.9	1781.3
15°	1737.6	1747.4	1751.6
17.5°	1706.3	1719.0	1723.7
20°	1677.0	1693.1	1696.9
22.5°	1647.3	1663.9	1668.5
25°	1615.1	1634.6	1639.3
27.5°	1580.8	1604.1	1608.7
30°	1546.4	1571.9	1576.5
32.5°	1509.5	1537.1	1541.3
35°	1470.9	1498.5	1503.6
37.5°	1428.1	1458.2	1468.4
40°	1383.6	1416.2	1426.8
42.5°	1336.9	1372.6	1383.6
45°	1286.9	1325.9	1338.6
47.5°	1236.5	1280.6	1291.6
50°	1181.8	1228.8	1242.0
52.5°	1124.5	1175.8	1189.0
55°	1065.1	1116.9	1131.3
57.5°	1000.7	1054.1	1069.4
60°	933.3	986.7	1001.1
62.5°	864.2	912.5	926.5
65°	787.0	832.4	845.1
67.5°	705.2	746.7	757.3
70°	618.2	654.3	663.6
72.5°	527.5	552.5	564.8
75°	433.8	453.7	463.0
77.5°	339.6	353.6	361.3
80°	247.6	255.7	262.0
82.5°	162.0	165.4	170.0
85°	87.3	87.3	90.3
87.5°	29.7	28.4	29.7
90°	0.0	0.0	0.0

(END OF REPORT)