

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: P835325

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4STD-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835325
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-35-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

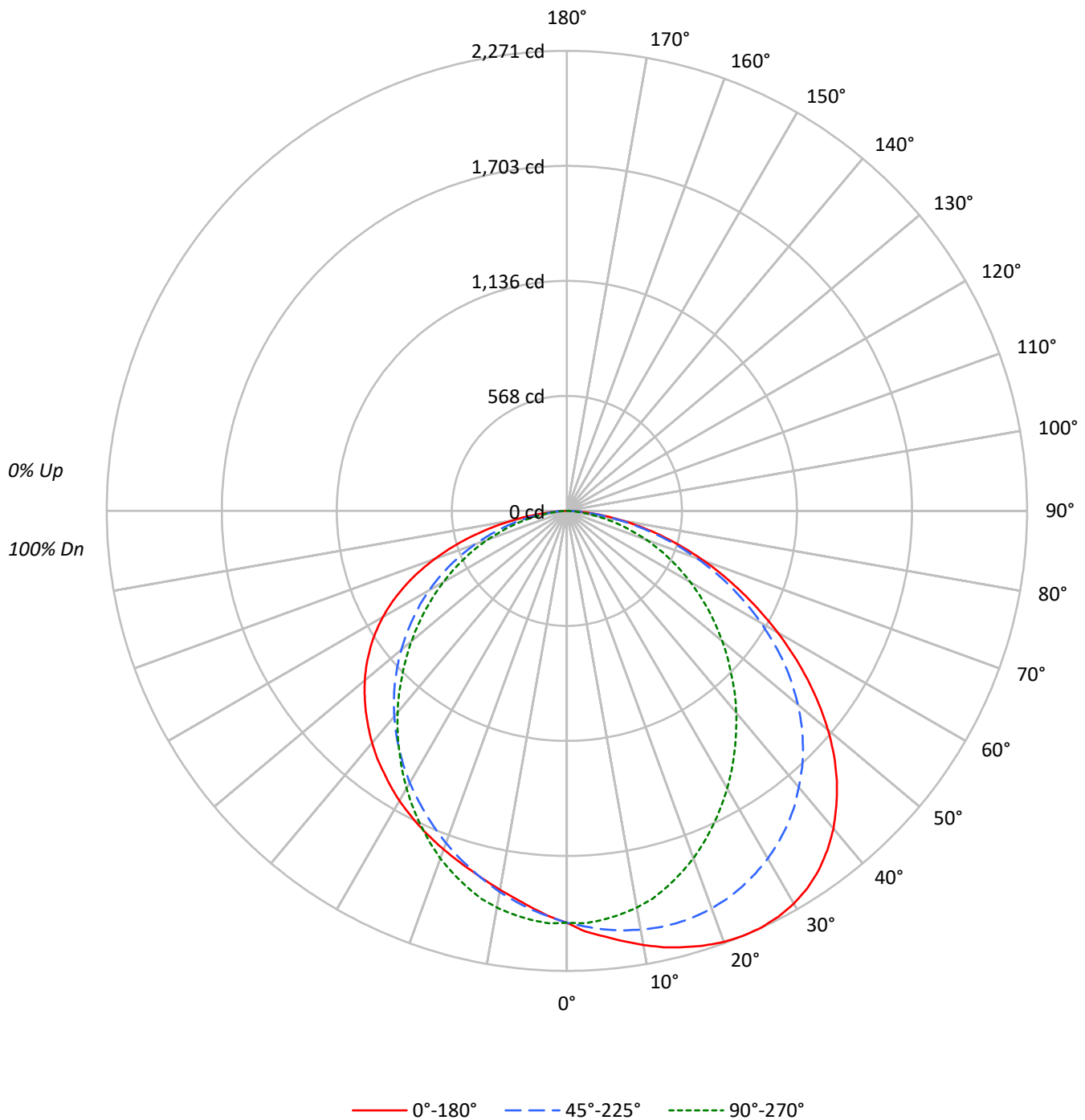
Lumens per Lamp: N/A
Luminaire Lumens: 5980.7 lumens
Efficiency: N/A
Efficacy: 89.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	5471	5471	5471
5°	5696	5474	5312
10°	5945	5433	5189
15°	6213	5346	5115
20°	6484	5228	5093
25°	6739	5076	5101
30°	6958	4917	5134
35°	7117	4742	5177
40°	7189	4566	5253
45°	7169	4373	5339
50°	7042	4190	5449
55°	6801	3997	5563
60°	6470	3791	5647
65°	6075	3560	5640
70°	5654	3283	5472
75°	5133	2883	5046
80°	4407	2369	4255
85°	3362	1618	2924

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.8	3.2
10°-20°	556.9	9.3
20°-30°	853.1	14.3
30°-40°	1041.1	17.4
40°-50°	1088.8	18.2
50°-60°	985.4	16.5
60°-70°	746.3	12.5
70°-80°	415.9	7.0
80°-90°	100.3	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°	1602.8	26.8
0°-40°	2643.9	44.2
0°-60°	4718.1	78.9
0°-90°	5980.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5980.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2033	2033	2033	2033	2033	
5°	2109	2074	2026	1977	1966	203
15°	2230	2106	1919	1830	1836	632
25°	2270	2046	1710	1649	1718	1047
35°	2166	1895	1443	1442	1576	1353
45°	1884	1648	1149	1200	1403	1449
55°	1450	1309	852	927	1186	1294
65°	954	897	559	636	886	946
75°	494	466	277	331	485	524
85°	109	96	52	70	95	131
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°	2033.2	2033.2	2033.2	2033.2	2033.2	2033.2	2033.2	2033.2	2033.2	2033.2	2033.2
2.5°	2078.1	2068.3	2060.3	2063.4	2065.2	2059.0	2053.6	2054.5	2049.2	2059.4	2035.4
5°	2108.7	2099.8	2090.5	2094.1	2090.5	2081.2	2073.6	2071.4	2057.2	2063.0	2038.5
7.5°	2142.9	2133.2	2119.4	2123.4	2115.8	2098.5	2088.7	2082.9	2061.2	2061.6	2034.5
10°	2175.8	2167.4	2148.7	2151.4	2137.6	2114.5	2098.9	2090.9	2060.3	2055.8	2027.8
12.5°	2206.5	2194.9	2174.9	2176.3	2156.3	2125.6	2105.6	2094.1	2054.1	2040.7	2013.2
15°	2230.0	2218.9	2194.9	2194.5	2168.7	2128.7	2106.1	2090.1	2039.4	2018.5	1989.6
17.5°	2250.0	2239.8	2210.1	2209.2	2178.1	2127.4	2100.3	2080.3	2018.1	1992.3	1960.3
20°	2264.3	2254.0	2220.7	2217.6	2180.3	2120.7	2088.3	2063.0	1990.1	1959.4	1923.9
22.5°	2270.9	2260.7	2222.9	2218.5	2174.9	2107.4	2071.0	2041.2	1958.1	1918.1	1881.2
25°	2269.6	2259.8	2217.2	2212.7	2164.7	2087.4	2046.5	2012.3	1917.6	1870.5	1834.1
27.5°	2258.5	2250.9	2206.1	2200.3	2146.1	2060.3	2016.7	1979.0	1872.7	1820.3	1780.8
30°	2239.4	2233.6	2186.1	2180.7	2122.9	2030.5	1982.1	1938.5	1824.3	1765.2	1725.2
32.5°	2208.7	2203.4	2155.4	2150.5	2091.8	1992.3	1941.6	1896.7	1771.4	1706.1	1666.1
35°	2166.5	2163.4	2116.7	2111.4	2051.8	1948.7	1895.0	1845.6	1716.3	1642.5	1604.3
37.5°	2110.9	2110.9	2066.1	2060.3	2002.1	1895.4	1842.5	1790.1	1654.1	1575.9	1538.1
40°	2046.5	2052.3	2006.5	2000.7	1944.3	1838.1	1780.3	1725.2	1587.0	1505.7	1468.8
42.5°	1969.2	1974.5	1936.3	1931.0	1878.1	1771.9	1718.1	1658.1	1516.8	1434.1	1395.9
45°	1883.9	1891.0	1856.7	1852.7	1803.4	1699.4	1647.9	1587.0	1443.4	1359.4	1322.1
47.5°	1788.7	1798.1	1768.3	1766.1	1720.3	1625.2	1571.4	1509.7	1366.6	1281.7	1246.6
50°	1682.1	1695.4	1671.0	1671.0	1630.1	1535.4	1488.8	1427.0	1286.6	1201.7	1167.0
52.5°	1567.9	1584.8	1566.5	1567.0	1533.7	1448.8	1400.3	1339.9	1203.0	1119.5	1087.5
55°	1449.7	1466.1	1454.6	1456.3	1430.1	1352.8	1308.8	1248.8	1117.7	1036.4	1006.1
57.5°	1326.1	1343.9	1336.3	1339.9	1321.7	1252.3	1206.6	1154.1	1029.7	949.3	923.5
60°	1202.1	1219.0	1215.0	1219.9	1208.4	1148.4	1106.6	1052.4	941.3	863.9	841.3
62.5°	1076.8	1092.4	1091.5	1096.8	1090.6	1040.8	1003.5	957.3	849.7	778.6	757.7
65°	954.1	967.5	966.6	972.4	971.0	931.0	897.3	855.0	758.2	692.8	674.6
67.5°	835.0	846.2	843.0	849.7	851.5	819.5	790.2	752.4	671.1	607.5	592.0
70°	718.6	726.2	722.2	726.6	730.6	706.6	681.7	648.4	578.2	522.2	509.3
72.5°	604.4	609.7	603.5	608.0	611.5	594.2	573.7	544.8	486.6	438.2	427.5
75°	493.7	501.3	488.4	492.9	495.5	478.2	466.2	442.6	392.4	355.1	348.0
77.5°	386.6	391.1	384.0	382.2	384.0	371.5	362.2	344.0	306.2	275.5	271.1
80°	284.4	287.1	280.0	278.2	279.5	270.6	263.5	250.2	223.5	200.4	198.7
82.5°	190.7	192.0	185.8	184.0	184.9	182.2	173.8	164.4	152.0	132.4	132.0
85°	108.9	108.9	104.4	102.7	103.5	99.1	96.0	91.1	86.2	72.9	73.8
87.5°	40.0	40.0	37.8	37.3	41.8	36.9	35.6	33.3	34.7	27.6	29.3
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°	2033.2	2033.2	2033.2	2033.2	2033.2	2033.2	2033.2	2033.2	2033.2	2033.2	2033.2
2.5°	2042.1	2037.6	2033.6	2019.8	2025.6	2011.4	2010.5	2005.2	2001.2	1993.6	2003.4
5°	2035.4	2026.5	2015.0	1998.5	2003.4	1986.5	1983.0	1976.7	1971.4	1961.6	1969.2
7.5°	2024.7	2010.1	1991.8	1971.0	1977.6	1956.7	1951.4	1944.7	1940.3	1928.7	1935.4
10°	2009.2	1988.3	1967.0	1941.6	1946.5	1923.9	1917.2	1910.1	1906.1	1895.9	1902.5
12.5°	1985.2	1959.8	1931.0	1903.4	1908.7	1887.4	1878.5	1871.0	1869.6	1861.2	1869.2
15°	1954.1	1919.0	1889.2	1859.9	1866.1	1841.2	1837.2	1829.6	1831.9	1826.1	1835.9
17.5°	1914.5	1874.1	1841.6	1810.1	1816.3	1795.4	1792.3	1788.7	1791.0	1790.1	1800.7
20°	1870.1	1825.6	1788.3	1757.2	1760.8	1744.3	1745.6	1744.8	1749.2	1754.1	1768.8
22.5°	1819.9	1769.6	1730.5	1698.5	1703.9	1689.6	1695.9	1697.6	1705.2	1716.3	1735.0
25°	1763.4	1709.6	1668.8	1638.5	1643.4	1634.1	1644.8	1649.2	1661.2	1679.9	1699.0
27.5°	1704.3	1647.4	1603.9	1575.0	1584.3	1575.0	1591.0	1599.9	1618.1	1638.5	1662.1
30°	1641.7	1582.5	1537.7	1511.9	1520.8	1512.3	1538.1	1550.1	1568.3	1596.3	1624.3
32.5°	1575.9	1513.7	1469.7	1449.7	1455.9	1454.6	1483.4	1496.8	1521.2	1553.2	1583.0
35°	1508.3	1443.4	1399.0	1382.1	1389.7	1391.4	1426.1	1441.7	1468.3	1507.0	1539.0
37.5°	1438.6	1372.3	1328.8	1315.0	1321.7	1328.3	1368.8	1384.3	1414.6	1456.8	1491.9
40°	1366.1	1299.9	1257.2	1246.1	1252.8	1259.9	1303.9	1325.2	1358.1	1403.9	1442.1
42.5°	1292.8	1226.6	1185.2	1177.2	1183.9	1197.7	1244.3	1264.3	1299.0	1349.7	1391.9
45°	1218.1	1149.2	1113.2	1107.0	1114.1	1130.1	1175.9	1199.9	1236.8	1292.3	1337.7
47.5°	1142.6	1075.5	1041.3	1037.3	1044.4	1062.1	1112.8	1134.6	1173.7	1232.8	1281.7
50°	1066.1	1000.8	967.9	966.6	973.3	992.4	1040.8	1066.6	1107.0	1173.2	1223.5
52.5°	988.8	926.2	896.4	896.4	902.6	922.2	971.0	997.7	1039.5	1109.2	1164.8
55°	911.5	851.9	823.5	825.7	834.6	851.5	899.0	927.0	969.3	1041.7	1100.4
57.5°	834.2	777.7	751.9	755.1	763.5	780.4	827.0	858.6	896.8	971.9	1031.9
60°	757.7	704.4	681.7	685.3	692.8	709.7	758.2	785.3	823.5	899.9	959.9
62.5°	680.4	632.0	610.6	615.1	621.7	638.6	684.4	710.6	748.4	823.5	883.9
65°	604.0	559.1	540.8	545.3	551.5	567.1	610.2	635.5	671.5	744.8	802.6
67.5°	528.4	487.5	472.4	476.9	481.7	496.4	532.0	559.5	593.3	663.1	717.7
70°	453.7	417.3	404.0	408.4	412.9	426.2	457.3	482.6	513.7	577.7	628.4
72.5°	380.0	344.4	337.8	341.8	345.3	356.9	386.6	406.6	433.7	490.6	534.2
75°	308.0	277.3	272.9	276.9	280.0	288.9	313.8	331.1	353.8	403.1	438.6
77.5°	238.6	212.9	211.1	214.2	217.3	223.5	243.1	261.3	279.1	315.5	347.1
80°	173.8	152.9	152.9	156.0	155.1	162.7	176.4	191.1	204.0	230.2	253.3
82.5°	114.7	98.2	100.4	102.7	104.0	107.1	115.5	126.7	134.7	150.7	165.8
85°	63.6	52.4	54.7	56.4	55.6	59.1	63.6	70.2	74.2	81.8	89.8
87.5°	23.6	19.6	20.0	21.3	22.2	24.0	24.0	28.0	28.4	29.3	31.1
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°	2033.2	2033.2	2033.2
2.5°	1984.7	1995.4	2003.4
5°	1950.5	1959.4	1966.5
7.5°	1917.2	1925.2	1931.4
10°	1885.6	1894.5	1899.0
12.5°	1853.2	1863.4	1867.0
15°	1821.2	1831.4	1835.9
17.5°	1788.3	1801.6	1806.5
20°	1757.6	1774.5	1778.5
22.5°	1726.5	1743.9	1748.8
25°	1692.8	1713.2	1718.1
27.5°	1656.8	1681.2	1686.1
30°	1620.8	1647.4	1652.3
32.5°	1582.1	1611.0	1615.4
35°	1541.7	1570.5	1575.9
37.5°	1496.8	1528.3	1539.0
40°	1450.1	1484.3	1495.4
42.5°	1401.2	1438.6	1450.1
45°	1348.8	1389.7	1403.0
47.5°	1295.9	1342.1	1353.7
50°	1238.6	1287.9	1301.7
52.5°	1178.6	1232.3	1246.1
55°	1116.4	1170.6	1185.7
57.5°	1048.8	1104.8	1120.8
60°	978.1	1034.1	1049.3
62.5°	905.7	956.4	971.0
65°	824.8	872.4	885.7
67.5°	739.1	782.6	793.7
70°	647.9	685.7	695.5
72.5°	552.8	579.1	592.0
75°	454.6	475.5	485.3
77.5°	356.0	370.6	378.6
80°	259.5	268.0	274.6
82.5°	169.8	173.3	178.2
85°	91.5	91.5	94.7
87.5°	31.1	29.8	31.1
90°	0.0	0.0	0.0

(END OF REPORT)