

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: P835359

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3HI-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835359
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-50-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

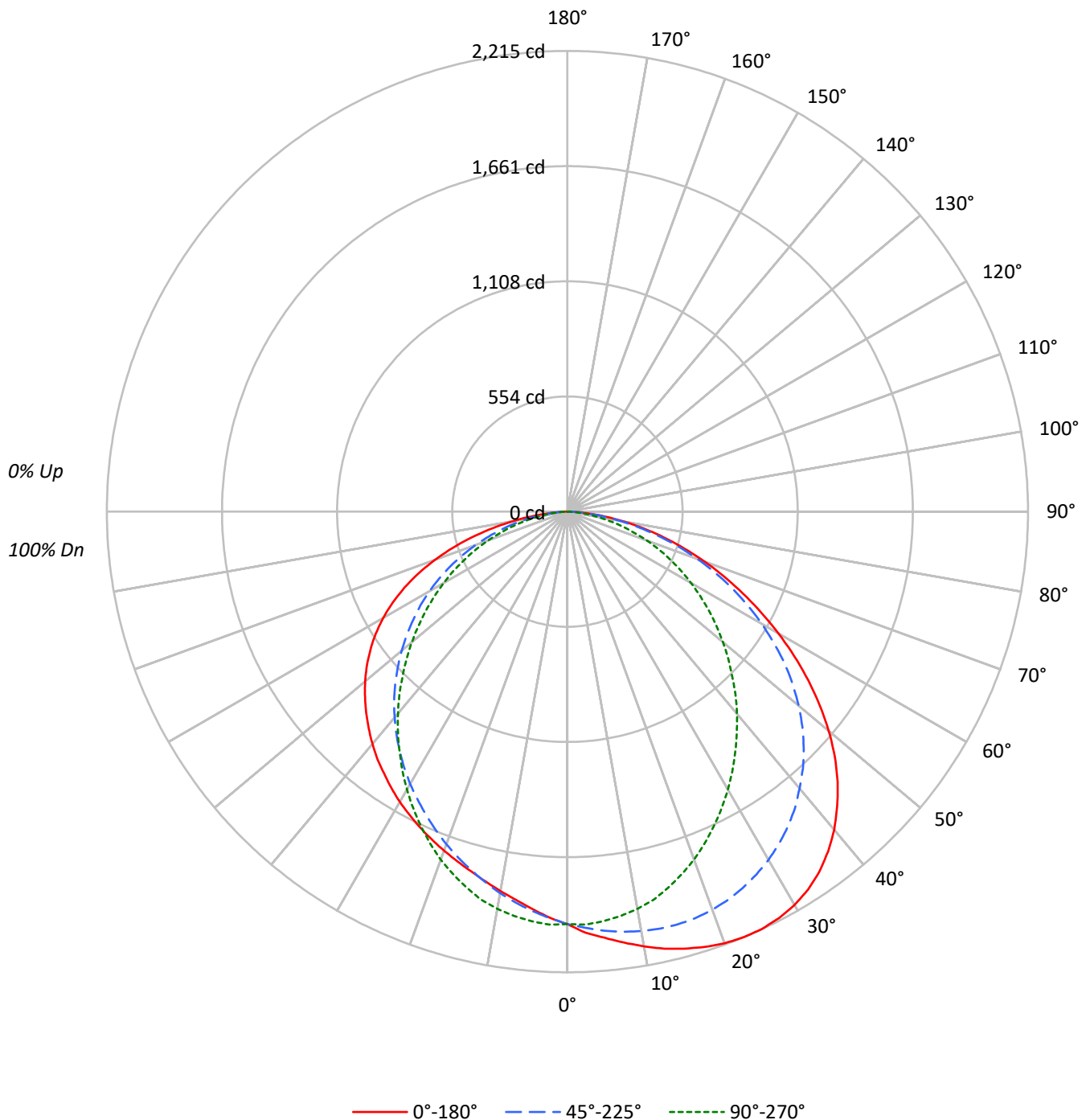
Lumens per Lamp: N/A
Luminaire Lumens: 5833.3 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5336	5336	5336
5°	5556	5339	5181
10°	5799	5299	5061
15°	6060	5214	4988
20°	6324	5099	4968
25°	6573	4951	4976
30°	6787	4796	5008
35°	6942	4625	5049
40°	7012	4454	5124
45°	6993	4266	5208
50°	6869	4087	5315
55°	6634	3899	5426
60°	6310	3697	5508
65°	5926	3472	5501
70°	5515	3202	5338
75°	5007	2812	4921
80°	4299	2311	4152
85°	3279	1578	2850



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.1	3.2
10°-20°	543.1	9.3
20°-30°	832.1	14.3
30°-40°	1015.5	17.4
40°-50°	1062.0	18.2
50°-60°	961.2	16.5
60°-70°	727.9	12.5
70°-80°	405.6	7.0
80°-90°	97.8	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°	1563.3	26.8
0°-40°	2578.8	44.2
0°-60°	4601.9	78.9
0°-90°	5833.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5833.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1983	1983	1983	1983	1983	
5°	2057	2022	1977	1928	1918	198
15°	2175	2054	1872	1785	1791	617
25°	2214	1996	1668	1609	1676	1021
35°	2113	1848	1408	1406	1537	1320
45°	1838	1607	1121	1170	1368	1414
55°	1414	1277	831	904	1156	1262
65°	931	875	545	620	864	923
75°	482	455	270	323	473	511
85°	106	94	51	68	92	128
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°	1983.1	1983.1	1983.1	1983.1	1983.1	1983.1	1983.1	1983.1	1983.1	1983.1	1983.1
2.5°	2026.9	2017.3	2009.5	2012.6	2014.3	2008.2	2003.0	2003.9	1998.7	2008.7	1985.3
5°	2056.8	2048.1	2039.0	2042.5	2039.0	2029.9	2022.5	2020.4	2006.5	2012.1	1988.3
7.5°	2090.2	2080.6	2067.2	2071.1	2063.7	2046.8	2037.3	2031.6	2010.4	2010.8	1984.4
10°	2122.2	2114.0	2095.8	2098.4	2085.0	2062.4	2047.3	2039.5	2009.5	2005.2	1977.9
12.5°	2152.2	2140.9	2121.4	2122.7	2103.2	2073.3	2053.8	2042.5	2003.5	1990.5	1963.6
15°	2175.1	2164.3	2140.9	2140.4	2115.3	2076.3	2054.2	2038.6	1989.2	1968.8	1940.6
17.5°	2194.6	2184.7	2155.6	2154.8	2124.4	2075.0	2048.6	2029.0	1968.4	1943.2	1912.0
20°	2208.5	2198.5	2166.0	2163.0	2126.6	2068.5	2036.8	2012.1	1941.1	1911.1	1876.5
22.5°	2215.0	2205.0	2168.2	2163.9	2121.4	2055.5	2019.9	1990.9	1909.8	1870.8	1834.9
25°	2213.7	2204.2	2162.6	2158.2	2111.4	2036.0	1996.1	1962.7	1870.4	1824.5	1788.9
27.5°	2202.9	2195.5	2151.7	2146.1	2093.2	2009.5	1967.1	1930.2	1826.6	1775.5	1736.9
30°	2184.2	2178.6	2132.2	2127.0	2070.7	1980.5	1933.3	1890.8	1779.4	1721.7	1682.7
32.5°	2154.3	2149.1	2102.3	2097.5	2040.3	1943.2	1893.8	1850.0	1727.8	1664.1	1625.1
35°	2113.1	2110.1	2064.6	2059.4	2001.3	1900.7	1848.3	1800.2	1674.0	1602.1	1564.8
37.5°	2059.0	2059.0	2015.2	2009.5	1952.8	1848.7	1797.1	1746.0	1613.4	1537.1	1500.2
40°	1996.1	2001.7	1957.1	1951.5	1896.4	1792.8	1736.5	1682.7	1547.9	1468.6	1432.6
42.5°	1920.7	1925.9	1888.6	1883.4	1831.8	1728.2	1675.8	1617.3	1479.4	1398.8	1361.5
45°	1837.5	1844.4	1811.0	1807.1	1759.0	1657.6	1607.3	1547.9	1407.9	1326.0	1289.6
47.5°	1744.7	1753.8	1724.8	1722.6	1677.9	1585.2	1532.7	1472.5	1332.9	1250.1	1215.9
50°	1640.7	1653.7	1629.8	1629.8	1589.9	1497.6	1452.1	1391.9	1254.9	1172.1	1138.3
52.5°	1529.3	1545.7	1528.0	1528.4	1495.9	1413.1	1365.8	1306.9	1173.4	1091.9	1060.7
55°	1414.0	1430.0	1418.7	1420.5	1394.9	1319.5	1276.6	1218.0	1090.2	1010.8	981.4
57.5°	1293.5	1310.8	1303.4	1306.9	1289.1	1221.5	1176.9	1125.7	1004.3	925.9	900.7
60°	1172.5	1189.0	1185.1	1189.9	1178.6	1120.1	1079.3	1026.4	918.1	842.7	820.5
62.5°	1050.3	1065.5	1064.6	1069.8	1063.7	1015.2	978.8	933.7	828.8	759.4	739.1
65°	930.6	943.7	942.8	948.4	947.1	908.1	875.2	834.0	739.5	675.8	658.0
67.5°	814.5	825.3	822.3	828.8	830.5	799.3	770.7	733.9	654.5	592.5	577.4
70°	700.9	708.3	704.4	708.7	712.6	689.2	664.9	632.4	563.9	509.3	496.8
72.5°	589.5	594.7	588.6	593.0	596.4	579.5	559.6	531.4	474.6	427.4	417.0
75°	481.6	488.9	476.4	480.7	483.3	466.4	454.7	431.7	382.7	346.3	339.4
77.5°	377.1	381.4	374.5	372.8	374.5	362.4	353.3	335.5	298.7	268.7	264.4
80°	277.4	280.0	273.1	271.3	272.6	264.0	257.0	244.0	218.0	195.5	193.8
82.5°	186.0	187.3	181.2	179.5	180.3	177.7	169.5	160.4	148.2	129.2	128.7
85°	106.2	106.2	101.9	100.1	101.0	96.7	93.6	88.9	84.1	71.1	72.0
87.5°	39.0	39.0	36.8	36.4	40.7	36.0	34.7	32.5	33.8	26.9	28.6
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°	1983.1	1983.1	1983.1	1983.1	1983.1	1983.1	1983.1	1983.1	1983.1	1983.1	1983.1
2.5°	1991.8	1987.4	1983.5	1970.1	1975.7	1961.9	1961.0	1955.8	1951.9	1944.5	1954.1
5°	1985.3	1976.6	1965.3	1949.3	1954.1	1937.6	1934.1	1928.0	1922.8	1913.3	1920.7
7.5°	1974.9	1960.6	1942.8	1922.4	1928.9	1908.5	1903.3	1896.8	1892.5	1881.2	1887.7
10°	1959.7	1939.3	1918.5	1893.8	1898.6	1876.5	1870.0	1863.0	1859.1	1849.2	1855.7
12.5°	1936.3	1911.6	1883.4	1856.5	1861.7	1840.9	1832.3	1824.9	1823.6	1815.3	1823.2
15°	1905.9	1871.7	1842.7	1814.0	1820.1	1795.8	1791.9	1784.6	1786.7	1781.1	1790.6
17.5°	1867.4	1827.9	1796.3	1765.5	1771.6	1751.2	1748.2	1744.7	1746.9	1746.0	1756.4
20°	1824.0	1780.7	1744.3	1713.9	1717.4	1701.3	1702.6	1701.8	1706.1	1710.9	1725.2
22.5°	1775.0	1726.1	1687.9	1656.7	1661.9	1648.0	1654.1	1655.8	1663.2	1674.0	1692.2
25°	1720.0	1667.5	1627.7	1598.2	1603.0	1593.8	1604.3	1608.6	1620.3	1638.5	1657.1
27.5°	1662.3	1606.9	1564.4	1536.2	1545.3	1536.2	1551.8	1560.5	1578.2	1598.2	1621.2
30°	1601.2	1543.6	1499.8	1474.6	1483.3	1475.1	1500.2	1511.9	1529.7	1557.0	1584.3
32.5°	1537.1	1476.4	1433.5	1414.0	1420.0	1418.7	1446.9	1459.9	1483.7	1515.0	1544.0
35°	1471.2	1407.9	1364.5	1348.1	1355.4	1357.2	1391.0	1406.2	1432.2	1469.9	1501.1
37.5°	1403.1	1338.5	1296.1	1282.6	1289.1	1295.6	1335.1	1350.2	1379.7	1420.9	1455.1
40°	1332.5	1267.9	1226.3	1215.4	1221.9	1228.9	1271.8	1292.6	1324.7	1369.3	1406.6
42.5°	1260.9	1196.4	1156.0	1148.2	1154.7	1168.2	1213.7	1233.2	1267.0	1316.4	1357.6
45°	1188.1	1120.9	1085.8	1079.8	1086.7	1102.3	1146.9	1170.4	1206.3	1260.5	1304.7
47.5°	1114.4	1049.0	1015.6	1011.7	1018.6	1036.0	1085.4	1106.6	1144.8	1202.4	1250.1
50°	1039.9	976.2	944.1	942.8	949.3	967.9	1015.2	1040.3	1079.8	1144.3	1193.3
52.5°	964.5	903.3	874.3	874.3	880.4	899.4	947.1	973.1	1013.9	1081.9	1136.1
55°	889.0	831.0	803.2	805.4	814.0	830.5	876.9	904.2	945.4	1016.0	1073.3
57.5°	813.6	758.6	733.4	736.5	744.7	761.2	806.7	837.5	874.7	948.0	1006.5
60°	739.1	687.0	664.9	668.4	675.8	692.2	739.5	765.9	803.2	877.8	936.3
62.5°	663.6	616.4	595.6	599.9	606.4	622.9	667.5	693.1	730.0	803.2	862.2
65°	589.1	545.3	527.5	531.9	537.9	553.1	595.1	619.9	655.0	726.5	782.8
67.5°	515.4	475.5	460.8	465.1	469.9	484.2	518.9	545.7	578.7	646.7	700.0
70°	442.6	407.0	394.0	398.4	402.7	415.7	446.0	470.7	501.1	563.5	612.9
72.5°	370.6	335.9	329.4	333.3	336.8	348.1	377.1	396.6	423.1	478.5	521.0
75°	300.4	270.5	266.1	270.0	273.1	281.8	306.0	322.9	345.0	393.2	427.8
77.5°	232.8	207.6	205.9	208.9	212.0	218.0	237.1	254.9	272.2	307.8	338.5
80°	169.5	149.1	149.1	152.1	151.3	158.6	172.1	186.4	199.0	224.5	247.1
82.5°	111.8	95.8	98.0	100.1	101.4	104.5	112.7	123.5	131.3	146.9	161.7
85°	62.0	51.1	53.3	55.0	54.2	57.7	62.0	68.5	72.4	79.8	87.6
87.5°	23.0	19.1	19.5	20.8	21.7	23.4	23.4	27.3	27.7	28.6	30.3
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):

	160°	170°	180°
0°	1983.1	1983.1	1983.1
2.5°	1935.9	1946.3	1954.1
5°	1902.5	1911.1	1918.1
7.5°	1870.0	1877.8	1883.8
10°	1839.2	1847.9	1852.2
12.5°	1807.5	1817.5	1821.0
15°	1776.3	1786.3	1790.6
17.5°	1744.3	1757.3	1762.0
20°	1714.4	1730.8	1734.7
22.5°	1684.0	1700.9	1705.7
25°	1651.1	1671.0	1675.8
27.5°	1616.0	1639.8	1644.6
30°	1580.8	1606.9	1611.6
32.5°	1543.1	1571.3	1575.6
35°	1503.7	1531.9	1537.1
37.5°	1459.9	1490.7	1501.1
40°	1414.4	1447.8	1458.6
42.5°	1366.7	1403.1	1414.4
45°	1315.6	1355.4	1368.4
47.5°	1264.0	1309.1	1320.3
50°	1208.1	1256.2	1269.6
52.5°	1149.5	1202.0	1215.4
55°	1088.9	1141.7	1156.5
57.5°	1023.0	1077.6	1093.2
60°	954.1	1008.7	1023.4
62.5°	883.4	932.8	947.1
65°	804.5	850.9	863.9
67.5°	720.9	763.3	774.2
70°	632.0	668.8	678.4
72.5°	539.2	564.8	577.4
75°	443.4	463.8	473.3
77.5°	347.2	361.5	369.3
80°	253.1	261.4	267.9
82.5°	165.6	169.1	173.8
85°	89.3	89.3	92.3
87.5°	30.3	29.0	30.3
90°	0.0	0.0	0.0

(END OF REPORT)