

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: P835361

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4STD-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835361
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-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

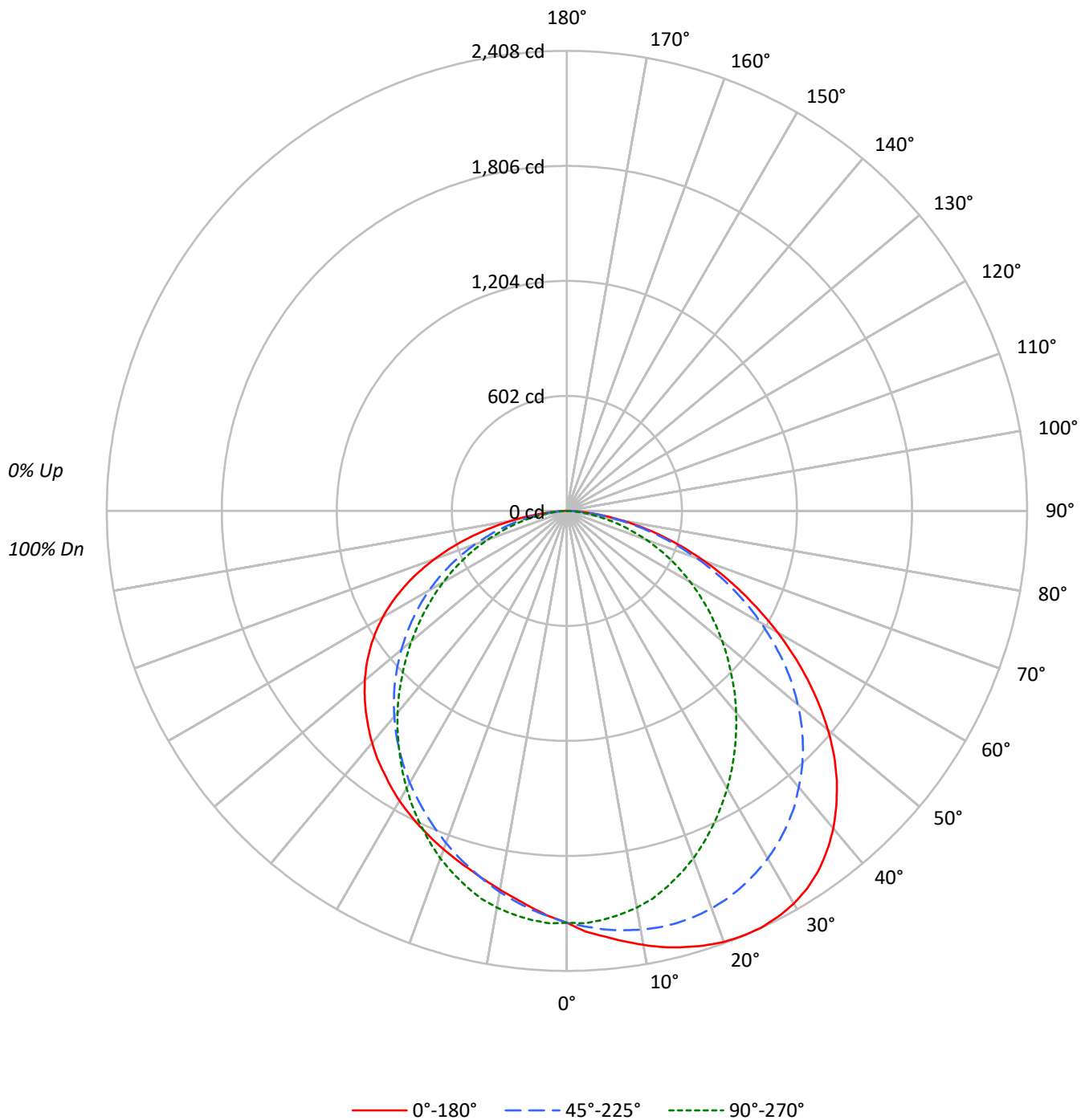
Lumens per Lamp: N/A
Luminaire Lumens: 6340.9 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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
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°	5801	5801	5801
5°	6039	5804	5632
10°	6304	5760	5502
15°	6587	5668	5423
20°	6875	5543	5400
25°	7145	5382	5409
30°	7378	5214	5444
35°	7546	5027	5489
40°	7622	4841	5570
45°	7601	4637	5661
50°	7466	4442	5778
55°	7211	4238	5898
60°	6859	4019	5987
65°	6441	3774	5980
70°	5995	3481	5802
75°	5443	3057	5349
80°	4674	2512	4513
85°	3563	1717	3100

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.4	3.2
10°-20°	590.4	9.3
20°-30°	904.5	14.3
30°-40°	1103.8	17.4
40°-50°	1154.4	18.2
50°-60°	1044.8	16.5
60°-70°	791.3	12.5
70°-80°	441.0	7.0
80°-90°	106.4	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°	1699.4	26.8
0°-40°	2803.2	44.2
0°-60°	5002.4	78.9
0°-90°	6340.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6340.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2156	2156	2156	2156	2156	
5°	2236	2198	2149	2096	2085	216
15°	2364	2233	2035	1940	1946	671
25°	2406	2170	1813	1749	1822	1110
35°	2297	2009	1530	1528	1671	1434
45°	1997	1747	1218	1272	1488	1537
55°	1537	1388	903	983	1257	1371
65°	1012	951	593	674	939	1003
75°	524	494	294	351	514	555
85°	115	102	56	74	100	139
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°	2155.7	2155.7	2155.7	2155.7	2155.7	2155.7	2155.7	2155.7	2155.7	2155.7	2155.7
2.5°	2203.2	2192.9	2184.4	2187.7	2189.6	2183.0	2177.3	2178.3	2172.6	2183.5	2158.0
5°	2235.8	2226.3	2216.4	2220.2	2216.4	2206.5	2198.5	2196.2	2181.1	2187.2	2161.3
7.5°	2272.0	2261.7	2247.1	2251.3	2243.3	2224.9	2214.6	2208.4	2185.3	2185.8	2157.1
10°	2306.9	2298.0	2278.2	2281.0	2266.4	2241.9	2225.4	2216.9	2184.4	2179.7	2150.0
12.5°	2339.4	2327.2	2306.0	2307.4	2286.2	2253.7	2232.5	2220.2	2177.8	2163.7	2134.5
15°	2364.4	2352.6	2327.2	2326.7	2299.4	2257.0	2232.9	2216.0	2162.3	2140.1	2109.5
17.5°	2385.6	2374.8	2343.2	2342.2	2309.3	2255.5	2226.8	2205.6	2139.6	2112.3	2078.4
20°	2400.7	2389.8	2354.5	2351.2	2311.6	2248.5	2214.1	2187.2	2110.0	2077.4	2039.7
22.5°	2407.7	2396.9	2356.9	2352.1	2306.0	2234.3	2195.7	2164.1	2076.0	2033.6	1994.5
25°	2406.3	2396.0	2350.7	2346.0	2295.1	2213.1	2169.8	2133.5	2033.1	1983.2	1944.6
27.5°	2394.5	2386.5	2338.9	2332.8	2275.3	2184.4	2138.2	2098.2	1985.6	1930.0	1888.0
30°	2374.3	2368.2	2317.7	2312.1	2250.8	2152.8	2101.5	2055.3	1934.2	1871.5	1829.1
32.5°	2341.8	2336.1	2285.2	2280.0	2217.9	2112.3	2058.6	2011.0	1878.1	1808.9	1766.5
35°	2297.0	2293.7	2244.2	2238.6	2175.4	2066.1	2009.1	1956.8	1819.7	1741.5	1701.0
37.5°	2238.1	2238.1	2190.5	2184.4	2122.7	2009.6	1953.5	1897.9	1753.7	1670.8	1630.8
40°	2169.8	2175.9	2127.4	2121.3	2061.4	1948.8	1887.6	1829.1	1682.6	1596.4	1557.3
42.5°	2087.8	2093.5	2052.9	2047.3	1991.2	1878.6	1821.6	1758.0	1608.1	1520.5	1480.0
45°	1997.3	2004.9	1968.6	1964.4	1912.1	1801.8	1747.1	1682.6	1530.4	1441.3	1401.8
47.5°	1896.5	1906.4	1874.8	1872.5	1823.9	1723.1	1666.1	1600.6	1448.9	1358.9	1321.7
50°	1783.4	1797.6	1771.6	1771.6	1728.3	1627.9	1578.5	1513.0	1364.1	1274.1	1237.3
52.5°	1662.3	1680.2	1660.9	1661.4	1626.0	1536.1	1484.7	1420.6	1275.5	1186.9	1153.0
55°	1537.0	1554.4	1542.2	1544.1	1516.3	1434.3	1387.6	1324.0	1185.0	1098.8	1066.8
57.5°	1406.0	1424.9	1416.8	1420.6	1401.3	1327.8	1279.3	1223.7	1091.7	1006.4	979.1
60°	1274.5	1292.5	1288.2	1293.4	1281.1	1217.5	1173.2	1115.8	998.0	916.0	891.9
62.5°	1141.7	1158.2	1157.2	1162.9	1156.3	1103.5	1063.9	1014.9	900.9	825.5	803.4
65°	1011.6	1025.8	1024.8	1030.9	1029.5	987.1	951.3	906.6	803.8	734.6	715.3
67.5°	885.4	897.1	893.8	900.9	902.8	868.9	837.8	797.7	711.5	644.1	627.6
70°	761.9	769.9	765.7	770.4	774.6	749.2	722.8	687.5	613.0	553.6	540.0
72.5°	640.8	646.5	639.9	644.6	648.3	630.0	608.3	577.7	515.9	464.6	453.3
75°	523.5	531.5	517.8	522.5	525.4	507.0	494.3	469.3	416.1	376.5	368.9
77.5°	409.9	414.6	407.1	405.2	407.1	393.9	384.0	364.7	324.6	292.1	287.4
80°	301.6	304.4	296.8	295.0	296.4	286.9	279.4	265.3	237.0	212.5	210.6
82.5°	202.1	203.6	197.0	195.1	196.0	193.2	184.2	174.3	161.1	140.4	139.9
85°	115.4	115.4	110.7	108.8	109.8	105.1	101.8	96.6	91.4	77.3	78.2
87.5°	42.4	42.4	40.1	39.6	44.3	39.1	37.7	35.3	36.8	29.2	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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2155.7	2155.7	2155.7	2155.7	2155.7	2155.7	2155.7	2155.7	2155.7	2155.7	2155.7
2.5°	2165.1	2160.4	2156.1	2141.5	2147.6	2132.6	2131.6	2126.0	2121.7	2113.7	2124.1
5°	2158.0	2148.6	2136.3	2118.9	2124.1	2106.2	2102.4	2095.8	2090.2	2079.8	2087.8
7.5°	2146.7	2131.2	2111.8	2089.7	2096.8	2074.6	2069.0	2061.9	2057.2	2044.9	2052.0
10°	2130.2	2108.1	2085.4	2058.6	2063.8	2039.7	2032.7	2025.1	2020.9	2010.1	2017.1
12.5°	2104.8	2077.9	2047.3	2018.1	2023.7	2001.1	1991.7	1983.7	1982.3	1973.3	1981.8
15°	2071.8	2034.6	2003.0	1971.9	1978.5	1952.1	1947.9	1939.9	1942.2	1936.1	1946.5
17.5°	2029.9	1987.0	1952.6	1919.1	1925.7	1903.6	1900.3	1896.5	1898.9	1897.9	1909.2
20°	1982.7	1935.6	1896.0	1863.1	1866.8	1849.4	1850.8	1849.9	1854.6	1859.8	1875.3
22.5°	1929.5	1876.2	1834.8	1800.9	1806.5	1791.4	1798.0	1799.9	1807.9	1819.7	1839.5
25°	1869.6	1812.6	1769.3	1737.2	1742.4	1732.5	1743.8	1748.6	1761.3	1781.1	1801.3
27.5°	1807.0	1746.7	1700.5	1669.9	1679.8	1669.9	1686.8	1696.3	1715.6	1737.2	1762.2
30°	1740.5	1677.9	1630.3	1603.0	1612.4	1603.4	1630.8	1643.5	1662.8	1692.5	1722.2
32.5°	1670.8	1604.8	1558.2	1537.0	1543.6	1542.2	1572.8	1586.9	1612.9	1646.8	1678.3
35°	1599.2	1530.4	1483.3	1465.4	1473.4	1475.3	1512.0	1528.5	1556.8	1597.8	1631.7
37.5°	1525.2	1455.0	1408.8	1394.2	1401.3	1408.4	1451.2	1467.7	1499.8	1544.5	1581.8
40°	1448.4	1378.2	1333.0	1321.2	1328.3	1335.8	1382.4	1405.1	1439.9	1488.5	1529.0
42.5°	1370.7	1300.5	1256.6	1248.2	1255.2	1269.8	1319.3	1340.5	1377.3	1431.0	1475.7
45°	1291.5	1218.5	1180.3	1173.7	1181.3	1198.2	1246.7	1272.2	1311.3	1370.2	1418.3
47.5°	1211.4	1140.3	1104.0	1099.7	1107.3	1126.1	1179.8	1202.9	1244.4	1307.1	1358.9
50°	1130.4	1061.1	1026.2	1024.8	1031.9	1052.1	1103.5	1130.8	1173.7	1243.9	1297.2
52.5°	1048.4	981.9	950.4	950.4	957.0	977.7	1029.5	1057.8	1102.1	1176.1	1235.0
55°	966.4	903.3	873.1	875.5	884.9	902.8	953.2	982.9	1027.6	1104.4	1166.6
57.5°	884.4	824.6	797.2	800.5	809.5	827.4	876.9	910.3	950.8	1030.5	1094.1
60°	803.4	746.8	722.8	726.6	734.6	752.5	803.8	832.6	873.1	954.1	1017.8
62.5°	721.4	670.0	647.4	652.1	659.2	677.1	725.6	753.4	793.5	873.1	937.2
65°	640.3	592.7	573.4	578.1	584.7	601.2	646.9	673.8	712.0	789.7	851.0
67.5°	560.2	516.9	500.9	505.6	510.8	526.3	564.0	593.2	629.0	703.0	761.0
70°	481.1	442.4	428.3	433.0	437.7	451.9	484.8	511.7	544.7	612.5	666.3
72.5°	402.9	365.2	358.1	362.3	366.1	378.4	409.9	431.1	459.9	520.2	566.4
75°	326.5	294.0	289.3	293.5	296.8	306.3	332.7	351.0	375.1	427.4	465.1
77.5°	253.0	225.7	223.8	227.1	230.4	237.0	257.7	277.1	295.9	334.5	368.0
80°	184.2	162.1	162.1	165.4	164.4	172.5	187.1	202.6	216.3	244.1	268.6
82.5°	121.6	104.1	106.5	108.8	110.3	113.6	122.5	134.3	142.8	159.7	175.8
85°	67.4	55.6	58.0	59.8	58.9	62.7	67.4	74.4	78.7	86.7	95.2
87.5°	25.0	20.7	21.2	22.6	23.6	25.4	25.4	29.7	30.2	31.1	33.0
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):

	160°	170°	180°
0°	2155.7	2155.7	2155.7
2.5°	2104.3	2115.6	2124.1
5°	2068.0	2077.4	2085.0
7.5°	2032.7	2041.2	2047.8
10°	1999.2	2008.6	2013.4
12.5°	1964.8	1975.7	1979.4
15°	1930.9	1941.7	1946.5
17.5°	1896.0	1910.2	1915.4
20°	1863.5	1881.4	1885.7
22.5°	1830.5	1848.9	1854.1
25°	1794.7	1816.4	1821.6
27.5°	1756.6	1782.5	1787.7
30°	1718.4	1746.7	1751.9
32.5°	1677.4	1708.0	1712.7
35°	1634.5	1665.2	1670.8
37.5°	1586.9	1620.4	1631.7
40°	1537.5	1573.7	1585.5
42.5°	1485.6	1525.2	1537.5
45°	1430.0	1473.4	1487.5
47.5°	1374.0	1423.0	1435.2
50°	1313.2	1365.5	1380.1
52.5°	1249.6	1306.6	1321.2
55°	1183.6	1241.1	1257.1
57.5°	1112.0	1171.4	1188.3
60°	1037.1	1096.4	1112.5
62.5°	960.3	1014.0	1029.5
65°	874.5	924.9	939.1
67.5°	783.6	829.8	841.5
70°	687.0	727.0	737.4
72.5°	586.1	613.9	627.6
75°	482.0	504.2	514.5
77.5°	377.4	393.0	401.4
80°	275.2	284.1	291.2
82.5°	180.0	183.8	188.9
85°	97.1	97.1	100.4
87.5°	33.0	31.6	33.0
90°	0.0	0.0	0.0

(END OF REPORT)