

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: P835183

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5LO-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835183
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-LD4-5LO-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

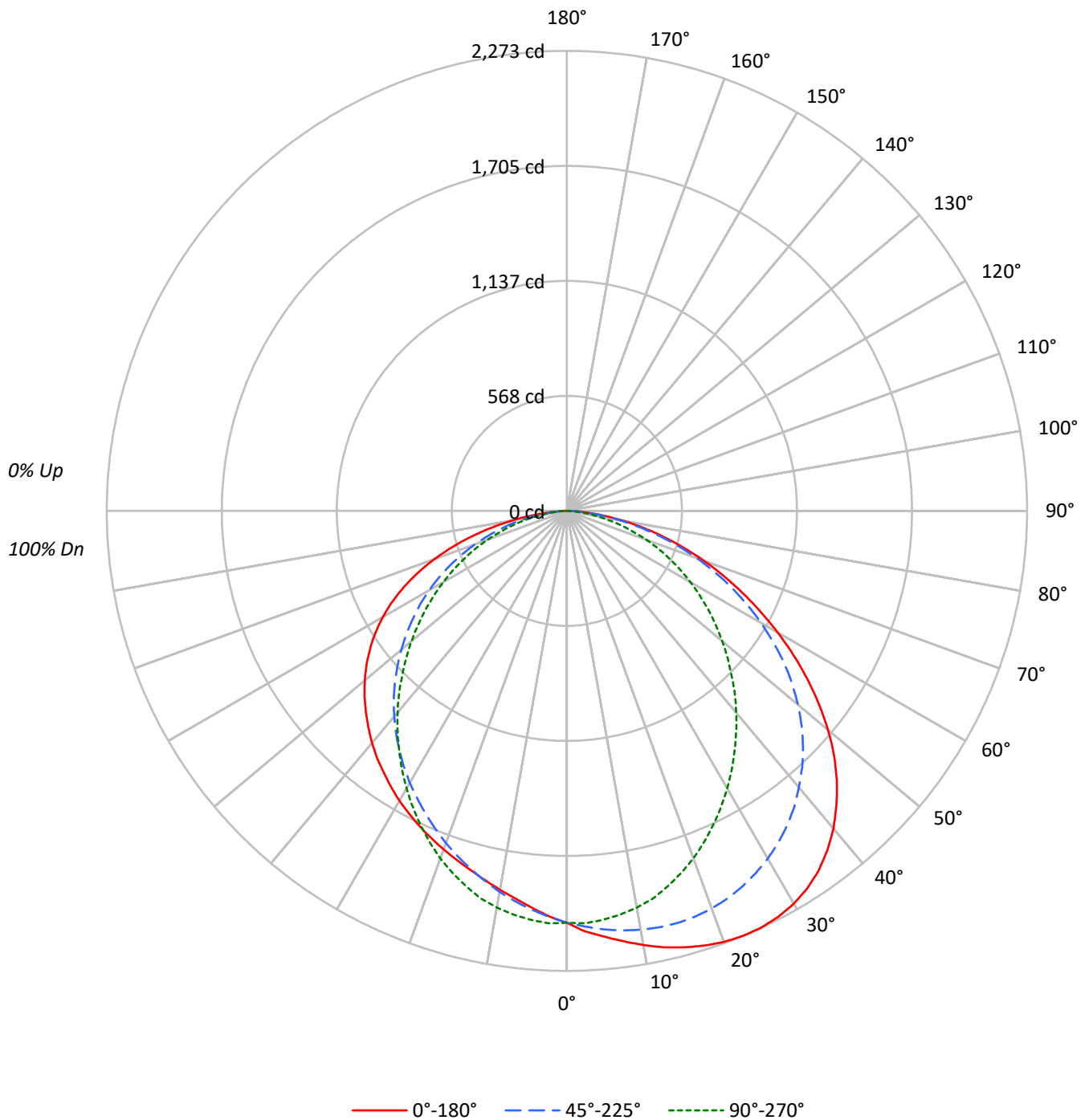
Lumens per Lamp: N/A
Luminaire Lumens: 5986.3 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 58.5
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°	5476	5476	5476
5°	5702	5479	5317
10°	5951	5438	5194
15°	6219	5351	5119
20°	6490	5233	5098
25°	6745	5081	5106
30°	6965	4922	5139
35°	7124	4746	5182
40°	7196	4571	5258
45°	7176	4378	5344
50°	7049	4194	5454
55°	6807	4001	5568
60°	6476	3795	5652
65°	6082	3563	5645
70°	5659	3286	5478
75°	5138	2886	5051
80°	4412	2371	4260
85°	3365	1621	2924

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.0	3.2
10°-20°	557.4	9.3
20°-30°	853.9	14.3
30°-40°	1042.1	17.4
40°-50°	1089.8	18.2
50°-60°	986.4	16.5
60°-70°	747.0	12.5
70°-80°	416.3	7.0
80°-90°	100.4	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°	1604.3	26.8
0°-40°	2646.4	44.2
0°-60°	4722.6	78.9
0°-90°	5986.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5986.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2035	2035	2035	2035	2035	
5°	2111	2076	2028	1979	1968	204
15°	2232	2108	1921	1831	1838	633
25°	2272	2048	1711	1651	1720	1048
35°	2169	1897	1445	1443	1577	1354
45°	1886	1649	1150	1201	1404	1451
55°	1451	1310	853	928	1187	1295
65°	955	898	560	636	887	947
75°	494	467	278	331	486	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°	2035.1	2035.1	2035.1	2035.1	2035.1	2035.1	2035.1	2035.1	2035.1	2035.1	2035.1
2.5°	2080.0	2070.3	2062.2	2065.4	2067.1	2060.9	2055.6	2056.5	2051.1	2061.4	2037.3
5°	2110.7	2101.8	2092.5	2096.1	2092.5	2083.2	2075.6	2073.4	2059.1	2064.9	2040.4
7.5°	2145.0	2135.2	2121.4	2125.4	2117.8	2100.5	2090.7	2084.9	2063.1	2063.6	2036.4
10°	2177.9	2169.4	2150.8	2153.4	2139.6	2116.5	2100.9	2092.9	2062.2	2057.8	2029.8
12.5°	2208.6	2197.0	2177.0	2178.3	2158.3	2127.6	2107.6	2096.1	2056.0	2042.7	2015.1
15°	2232.2	2221.0	2197.0	2196.6	2170.8	2130.7	2108.1	2092.0	2041.3	2020.4	1991.5
17.5°	2252.2	2242.0	2212.2	2211.3	2180.1	2129.4	2102.3	2082.3	2020.0	1994.2	1962.2
20°	2266.4	2256.2	2222.8	2219.7	2182.3	2122.7	2090.3	2064.9	1992.0	1961.3	1925.7
22.5°	2273.1	2262.9	2225.1	2220.6	2177.0	2109.4	2072.9	2043.1	1959.9	1919.9	1883.0
25°	2271.8	2262.0	2219.3	2214.8	2166.8	2089.4	2048.5	2014.2	1919.5	1872.3	1835.8
27.5°	2260.6	2253.1	2208.1	2202.4	2148.1	2062.2	2018.6	1980.8	1874.5	1822.0	1782.4
30°	2241.5	2235.7	2188.1	2182.8	2125.0	2032.4	1984.0	1940.4	1826.0	1766.9	1726.8
32.5°	2210.8	2205.5	2157.4	2152.5	2093.8	1994.2	1943.5	1898.5	1773.1	1707.7	1667.7
35°	2168.6	2165.4	2118.7	2113.4	2053.8	1950.6	1896.8	1847.4	1717.9	1644.1	1605.8
37.5°	2113.0	2113.0	2068.0	2062.2	2004.0	1897.2	1844.3	1791.8	1655.7	1577.4	1539.6
40°	2048.5	2054.2	2008.4	2002.6	1946.1	1839.8	1782.0	1726.8	1588.5	1507.1	1470.2
42.5°	1971.1	1976.4	1938.1	1932.8	1879.9	1773.5	1719.7	1659.7	1518.2	1435.5	1397.2
45°	1885.6	1892.8	1858.5	1854.5	1805.1	1701.0	1649.4	1588.5	1444.8	1360.7	1323.4
47.5°	1790.5	1799.8	1770.0	1767.8	1721.9	1626.8	1572.9	1511.1	1367.9	1282.9	1247.8
50°	1683.7	1697.0	1672.6	1672.6	1631.6	1536.9	1490.2	1428.4	1287.8	1202.8	1168.1
52.5°	1569.4	1586.3	1568.0	1568.5	1535.1	1450.2	1401.7	1341.2	1204.2	1120.5	1088.5
55°	1451.0	1467.5	1455.9	1457.7	1431.5	1354.1	1310.0	1250.0	1118.8	1037.3	1007.1
57.5°	1327.4	1345.2	1337.6	1341.2	1322.9	1253.5	1207.7	1155.2	1030.7	950.2	924.4
60°	1203.3	1220.2	1216.2	1221.1	1209.5	1149.4	1107.6	1053.4	942.2	864.8	842.1
62.5°	1077.8	1093.4	1092.5	1097.8	1091.6	1041.8	1004.4	958.2	850.5	779.3	758.4
65°	955.1	968.4	967.5	973.3	972.0	931.9	898.1	855.9	758.9	693.5	675.3
67.5°	835.8	847.0	843.8	850.5	852.3	820.3	790.9	753.1	671.7	608.1	592.5
70°	719.3	726.9	722.9	727.3	731.3	707.3	682.4	649.0	578.7	522.7	509.8
72.5°	605.0	610.3	604.1	608.5	612.1	594.7	574.3	545.4	487.1	438.6	427.9
75°	494.2	501.8	488.9	493.3	496.0	478.6	466.6	443.1	392.8	355.4	348.3
77.5°	387.0	391.5	384.3	382.6	384.3	371.9	362.5	344.3	306.5	275.8	271.3
80°	284.7	287.4	280.2	278.5	279.8	270.9	263.8	250.4	223.8	200.6	198.8
82.5°	190.8	192.2	185.9	184.2	185.1	182.4	173.9	164.6	152.1	132.6	132.1
85°	109.0	109.0	104.5	102.8	103.6	99.2	96.1	91.2	86.3	73.0	73.8
87.5°	40.0	40.0	37.8	37.4	41.8	36.9	35.6	33.4	34.7	27.6	29.4
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°	2035.1	2035.1	2035.1	2035.1	2035.1	2035.1	2035.1	2035.1	2035.1	2035.1	2035.1
2.5°	2044.0	2039.6	2035.6	2021.8	2027.5	2013.3	2012.4	2007.1	2003.1	1995.5	2005.3
5°	2037.3	2028.4	2016.9	2000.4	2005.3	1988.4	1984.8	1978.6	1973.3	1963.5	1971.1
7.5°	2026.7	2012.0	1993.7	1972.8	1979.5	1958.6	1953.3	1946.6	1942.1	1930.6	1937.2
10°	2011.1	1990.2	1968.8	1943.5	1948.4	1925.7	1919.0	1911.9	1907.9	1897.7	1904.3
12.5°	1987.1	1961.7	1932.8	1905.2	1910.6	1889.2	1880.3	1872.7	1871.4	1863.0	1871.0
15°	1955.9	1920.8	1891.0	1861.6	1867.9	1842.9	1838.9	1831.4	1833.6	1827.8	1837.6
17.5°	1916.3	1875.9	1843.4	1811.8	1818.0	1797.1	1794.0	1790.5	1792.7	1791.8	1802.5
20°	1871.9	1827.4	1790.0	1758.9	1762.4	1746.0	1747.3	1746.4	1750.9	1755.8	1770.4
22.5°	1821.6	1771.3	1732.2	1700.1	1705.5	1691.3	1697.5	1699.3	1706.8	1717.9	1736.6
25°	1765.1	1711.3	1670.3	1640.1	1645.0	1635.6	1646.3	1650.8	1662.8	1681.5	1700.6
27.5°	1705.9	1649.0	1605.4	1576.5	1585.8	1576.5	1592.5	1601.4	1619.6	1640.1	1663.7
30°	1643.2	1584.0	1539.1	1513.3	1522.2	1513.8	1539.6	1551.6	1569.8	1597.8	1625.9
32.5°	1577.4	1515.1	1471.1	1451.0	1457.3	1455.9	1484.9	1498.2	1522.7	1554.7	1584.5
35°	1509.8	1444.8	1400.3	1383.4	1391.0	1392.8	1427.5	1443.0	1469.7	1508.4	1540.5
37.5°	1439.9	1373.6	1330.0	1316.3	1322.9	1329.6	1370.1	1385.7	1415.9	1458.2	1493.3
40°	1367.4	1301.1	1258.4	1247.3	1254.0	1261.1	1305.1	1326.5	1359.4	1405.2	1443.5
42.5°	1294.0	1227.7	1186.4	1178.4	1185.0	1198.8	1245.5	1265.5	1300.2	1351.0	1393.2
45°	1219.3	1150.3	1114.3	1108.1	1115.2	1131.2	1177.0	1201.0	1238.0	1293.6	1338.9
47.5°	1143.7	1076.5	1042.2	1038.2	1045.4	1063.1	1113.9	1135.7	1174.8	1234.0	1282.9
50°	1067.2	1001.8	968.8	967.5	974.2	993.3	1041.8	1067.6	1108.1	1174.4	1224.6
52.5°	989.8	927.0	897.2	897.2	903.5	923.0	972.0	998.6	1040.5	1110.3	1165.9
55°	912.4	852.7	824.3	826.5	835.4	852.3	899.9	927.9	970.2	1042.7	1101.4
57.5°	835.0	778.5	752.7	755.8	764.2	781.1	827.8	859.4	897.7	972.8	1032.9
60°	758.4	705.1	682.4	685.9	693.5	710.4	758.9	786.0	824.3	900.8	960.8
62.5°	681.0	632.6	611.2	615.6	622.3	639.2	685.0	711.3	749.1	824.3	884.8
65°	604.5	559.6	541.4	545.8	552.0	567.6	610.8	636.1	672.1	745.5	803.4
67.5°	528.9	488.0	472.9	477.3	482.2	496.9	532.5	560.0	593.9	663.7	718.4
70°	454.2	417.7	404.4	408.8	413.2	426.6	457.7	483.1	514.2	578.3	629.0
72.5°	380.3	344.7	338.1	342.1	345.6	357.2	387.0	407.0	434.2	491.1	534.7
75°	308.3	277.6	273.1	277.1	280.2	289.1	314.1	331.4	354.1	403.5	439.0
77.5°	238.9	213.1	211.3	214.4	217.5	223.8	243.3	261.6	279.4	315.8	347.4
80°	173.9	153.0	153.0	156.1	155.2	162.8	176.6	191.3	204.2	230.4	253.6
82.5°	114.8	98.3	100.5	102.8	104.1	107.2	115.7	126.8	134.8	150.8	165.9
85°	63.6	52.5	54.7	56.5	55.6	59.2	63.6	70.3	74.3	81.8	89.9
87.5°	23.6	19.6	20.0	21.4	22.2	24.0	24.0	28.0	28.5	29.4	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°	2035.1	2035.1	2035.1
2.5°	1986.6	1997.3	2005.3
5°	1952.4	1961.3	1968.4
7.5°	1919.0	1927.0	1933.2
10°	1887.4	1896.3	1900.8
12.5°	1855.0	1865.2	1868.7
15°	1822.9	1833.2	1837.6
17.5°	1790.0	1803.4	1808.2
20°	1759.3	1776.2	1780.2
22.5°	1728.2	1745.5	1750.4
25°	1694.4	1714.8	1719.7
27.5°	1658.3	1682.8	1687.7
30°	1622.3	1649.0	1653.9
32.5°	1583.6	1612.5	1617.0
35°	1543.1	1572.0	1577.4
37.5°	1498.2	1529.8	1540.5
40°	1451.5	1485.7	1496.9
42.5°	1402.6	1439.9	1451.5
45°	1350.1	1391.0	1404.3
47.5°	1297.1	1343.4	1355.0
50°	1239.7	1289.1	1302.9
52.5°	1179.7	1233.5	1247.3
55°	1117.4	1171.7	1186.8
57.5°	1049.8	1105.9	1121.9
60°	979.1	1035.1	1050.2
62.5°	906.6	957.3	972.0
65°	825.6	873.2	886.6
67.5°	739.8	783.3	794.5
70°	648.6	686.4	696.2
72.5°	553.4	579.6	592.5
75°	455.1	476.0	485.8
77.5°	356.3	371.0	379.0
80°	259.8	268.2	274.9
82.5°	169.9	173.5	178.4
85°	91.6	91.6	94.7
87.5°	31.1	29.8	31.1
90°	0.0	0.0	0.0

(END OF REPORT)