

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: P835232

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3STD-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835232
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-LD4-3STD-40-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

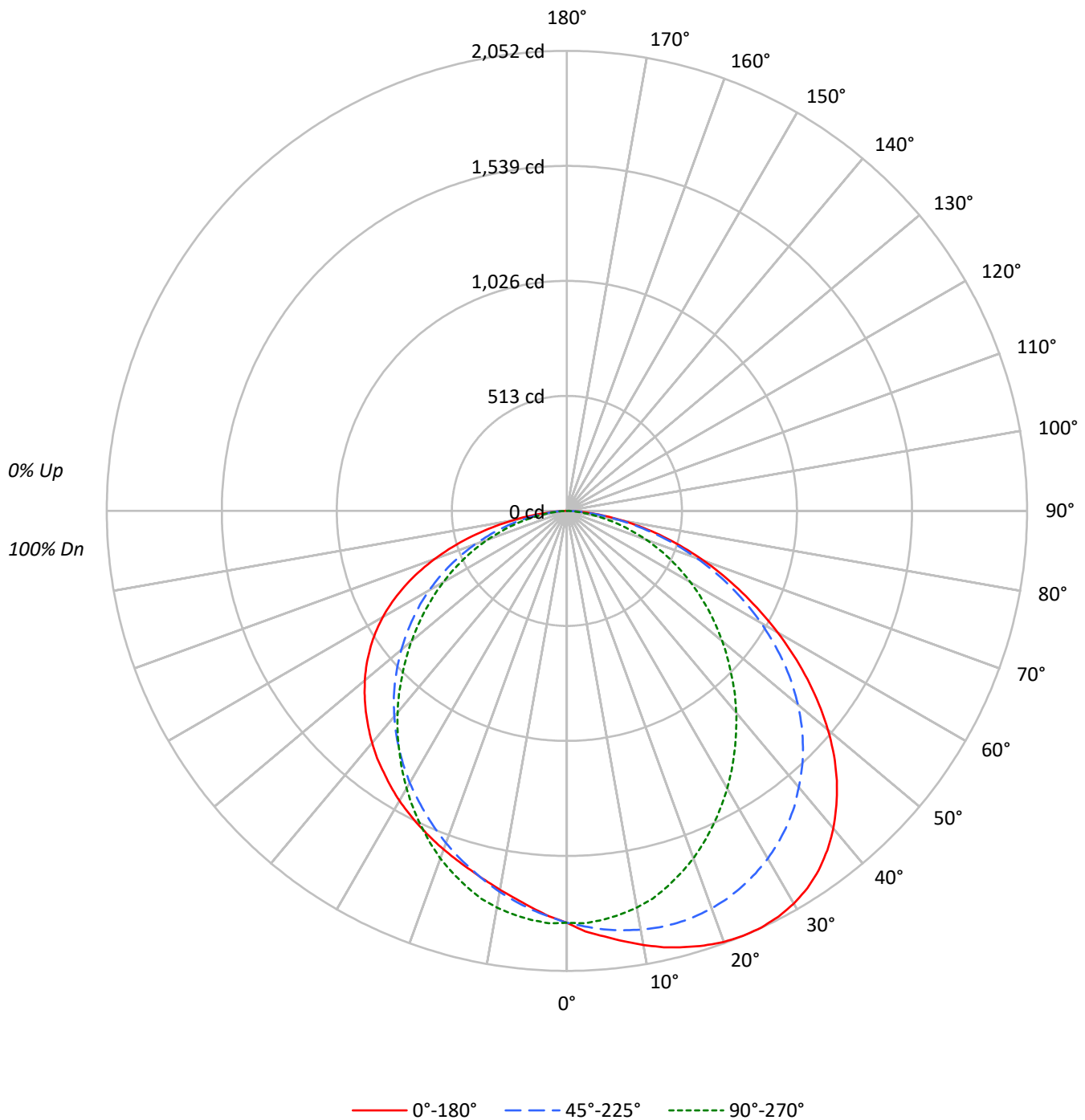
Lumens per Lamp: N/A
Luminaire Lumens: 5403.7 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 50
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	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°	4943	4943	4943
5°	5147	4946	4800
10°	5372	4909	4688
15°	5613	4830	4621
20°	5859	4724	4602
25°	6089	4586	4609
30°	6287	4443	4639
35°	6431	4284	4678
40°	6496	4126	4747
45°	6478	3952	4824
50°	6363	3786	4924
55°	6145	3611	5026
60°	5846	3425	5102
65°	5489	3216	5096
70°	5109	2966	4944
75°	4638	2606	4559
80°	3983	2140	3846
85°	3038	1463	2640

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.2	3.2
10°-20°	503.1	9.3
20°-30°	770.8	14.3
30°-40°	940.7	17.4
40°-50°	983.8	18.2
50°-60°	890.4	16.5
60°-70°	674.3	12.5
70°-80°	375.8	7.0
80°-90°	90.6	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°	1448.2	26.8
0°-40°	2388.9	44.2
0°-60°	4263.0	78.9
0°-90°	5403.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5403.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1837	1837	1837	1837	1837	
5°	1905	1874	1831	1786	1777	184
15°	2015	1903	1734	1653	1659	571
25°	2051	1849	1545	1490	1552	946
35°	1958	1712	1304	1303	1424	1222
45°	1702	1489	1038	1084	1268	1310
55°	1310	1182	770	838	1071	1169
65°	862	811	505	574	800	855
75°	446	421	251	299	438	473
85°	98	87	47	63	86	118
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°	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0
2.5°	1877.6	1868.8	1861.5	1864.3	1866.0	1860.3	1855.5	1856.3	1851.5	1860.7	1839.0
5°	1905.3	1897.3	1888.8	1892.1	1888.8	1880.4	1873.6	1871.6	1858.7	1863.9	1841.9
7.5°	1936.2	1927.4	1914.9	1918.6	1911.7	1896.1	1887.2	1882.0	1862.3	1862.7	1838.2
10°	1965.9	1958.3	1941.4	1943.8	1931.4	1910.5	1896.5	1889.2	1861.5	1857.5	1832.2
12.5°	1993.6	1983.2	1965.1	1966.3	1948.3	1920.6	1902.5	1892.1	1855.9	1843.9	1819.0
15°	2014.9	2004.9	1983.2	1982.8	1959.5	1923.4	1902.9	1888.4	1842.7	1823.8	1797.7
17.5°	2033.0	2023.8	1996.9	1996.0	1967.9	1922.2	1897.7	1879.6	1823.4	1800.1	1771.2
20°	2045.8	2036.6	2006.5	2003.7	1969.9	1916.1	1886.8	1863.9	1798.1	1770.4	1738.3
22.5°	2051.9	2042.6	2008.5	2004.5	1965.1	1904.1	1871.2	1844.3	1769.2	1733.0	1699.7
25°	2050.7	2041.8	2003.3	1999.3	1955.9	1886.0	1849.1	1818.2	1732.6	1690.1	1657.1
27.5°	2040.6	2033.8	1993.2	1988.0	1939.0	1861.5	1822.2	1788.1	1692.1	1644.7	1609.0
30°	2023.4	2018.1	1975.2	1970.4	1918.2	1834.6	1790.9	1751.5	1648.3	1594.9	1558.8
32.5°	1995.6	1990.8	1947.5	1943.0	1890.0	1800.1	1754.3	1713.8	1600.5	1541.5	1505.4
35°	1957.5	1954.7	1912.5	1907.7	1853.9	1760.7	1712.2	1667.6	1550.7	1484.1	1449.6
37.5°	1907.3	1907.3	1866.8	1861.5	1808.9	1712.6	1664.8	1617.4	1494.5	1423.9	1389.7
40°	1849.1	1854.3	1812.9	1807.7	1756.7	1660.8	1608.6	1558.8	1433.9	1360.4	1327.1
42.5°	1779.2	1784.0	1749.5	1744.7	1696.9	1600.9	1552.3	1498.1	1370.5	1295.8	1261.2
45°	1702.1	1708.5	1677.6	1674.0	1629.4	1535.5	1488.9	1433.9	1304.2	1228.3	1194.6
47.5°	1616.2	1624.6	1597.7	1595.7	1554.4	1468.4	1419.8	1364.0	1234.7	1158.0	1126.3
50°	1519.8	1531.9	1509.8	1509.8	1472.8	1387.3	1345.2	1289.3	1162.5	1085.8	1054.4
52.5°	1416.6	1431.9	1415.4	1415.8	1385.7	1309.0	1265.2	1210.6	1087.0	1011.5	982.6
55°	1309.8	1324.7	1314.2	1315.8	1292.2	1222.3	1182.5	1128.3	1009.9	936.4	909.1
57.5°	1198.2	1214.3	1207.4	1210.6	1194.2	1131.5	1090.2	1042.8	930.4	857.7	834.4
60°	1086.2	1101.4	1097.8	1102.2	1091.8	1037.6	999.8	950.8	850.5	780.6	760.1
62.5°	972.9	987.0	986.2	991.0	985.4	940.4	906.7	864.9	767.7	703.5	684.6
65°	862.1	874.1	873.3	878.6	877.4	841.2	810.7	772.6	685.0	626.0	609.5
67.5°	754.5	764.5	761.7	767.7	769.3	740.4	713.9	679.8	606.3	548.9	534.8
70°	649.3	656.1	652.5	656.5	660.1	638.4	616.0	585.8	522.4	471.8	460.2
72.5°	546.1	550.9	545.3	549.3	552.5	536.9	518.4	492.3	439.7	395.9	386.3
75°	446.1	452.9	441.3	445.3	447.7	432.1	421.2	399.9	354.6	320.8	314.4
77.5°	349.3	353.4	346.9	345.3	346.9	335.7	327.3	310.8	276.7	249.0	244.9
80°	257.0	259.4	253.0	251.4	252.6	244.5	238.1	226.1	202.0	181.1	179.5
82.5°	172.3	173.5	167.8	166.2	167.0	164.6	157.0	148.6	137.3	119.7	119.3
85°	98.4	98.4	94.4	92.8	93.6	89.5	86.7	82.3	77.9	65.9	66.7
87.5°	36.1	36.1	34.1	33.7	37.7	33.3	32.1	30.1	31.3	24.9	26.5
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°	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0	1837.0
2.5°	1845.1	1841.1	1837.4	1825.0	1830.2	1817.4	1816.6	1811.7	1808.1	1801.3	1810.1
5°	1839.0	1831.0	1820.6	1805.7	1810.1	1794.9	1791.7	1786.0	1781.2	1772.4	1779.2
7.5°	1829.4	1816.2	1799.7	1780.8	1786.8	1768.0	1763.2	1757.1	1753.1	1742.7	1748.7
10°	1815.4	1796.5	1777.2	1754.3	1758.7	1738.3	1732.2	1725.8	1722.2	1713.0	1719.0
12.5°	1793.7	1770.8	1744.7	1719.8	1724.6	1705.3	1697.3	1690.5	1689.3	1681.6	1688.9
15°	1765.6	1733.8	1706.9	1680.4	1686.1	1663.6	1660.0	1653.1	1655.1	1649.9	1658.8
17.5°	1729.8	1693.3	1664.0	1635.5	1641.1	1622.2	1619.4	1616.2	1618.2	1617.4	1627.0
20°	1689.7	1649.5	1615.8	1587.7	1590.9	1576.0	1577.2	1576.4	1580.5	1584.9	1598.1
22.5°	1644.3	1598.9	1563.6	1534.7	1539.5	1526.6	1532.3	1533.9	1540.7	1550.7	1567.6
25°	1593.3	1544.7	1507.8	1480.5	1484.9	1476.5	1486.1	1490.1	1501.0	1517.8	1535.1
27.5°	1539.9	1488.5	1449.2	1423.1	1431.5	1423.1	1437.5	1445.5	1462.0	1480.5	1501.8
30°	1483.3	1429.9	1389.3	1366.0	1374.1	1366.4	1389.7	1400.6	1417.0	1442.3	1467.6
32.5°	1423.9	1367.6	1327.9	1309.8	1315.4	1314.2	1340.3	1352.4	1374.5	1403.4	1430.3
35°	1362.8	1304.2	1264.0	1248.8	1255.6	1257.2	1288.5	1302.6	1326.7	1361.6	1390.5
37.5°	1299.8	1240.0	1200.6	1188.2	1194.2	1200.2	1236.7	1250.8	1278.1	1316.2	1348.0
40°	1234.3	1174.5	1136.0	1125.9	1131.9	1138.4	1178.1	1197.4	1227.1	1268.5	1303.0
42.5°	1168.1	1108.2	1070.9	1063.7	1069.7	1082.1	1124.3	1142.4	1173.7	1219.5	1257.6
45°	1100.6	1038.4	1005.9	1000.2	1006.7	1021.1	1062.5	1084.2	1117.5	1167.7	1208.6
47.5°	1032.4	971.7	940.8	937.2	943.6	959.7	1005.5	1025.1	1060.5	1113.9	1158.0
50°	963.3	904.3	874.6	873.3	879.4	896.6	940.4	963.7	1000.2	1060.1	1105.4
52.5°	893.4	836.8	809.9	809.9	815.5	833.2	877.4	901.5	939.2	1002.2	1052.4
55°	823.6	769.7	744.1	746.1	754.1	769.3	812.3	837.6	875.8	941.2	994.2
57.5°	753.7	702.7	679.4	682.2	689.8	705.1	747.3	775.8	810.3	878.2	932.4
60°	684.6	636.4	616.0	619.2	626.0	641.3	685.0	709.5	744.1	813.1	867.3
62.5°	614.8	571.0	551.7	555.7	561.8	577.0	618.4	642.1	676.2	744.1	798.7
65°	545.7	505.1	488.7	492.7	498.3	512.4	551.3	574.2	606.7	673.0	725.2
67.5°	477.4	440.5	426.8	430.9	435.3	448.5	480.6	505.5	536.1	599.1	648.5
70°	410.0	377.0	365.0	369.0	373.0	385.1	413.2	436.1	464.2	522.0	567.8
72.5°	343.3	311.2	305.2	308.8	312.0	322.4	349.3	367.4	391.9	443.3	482.6
75°	278.3	250.6	246.5	250.2	253.0	261.0	283.5	299.1	319.6	364.2	396.3
77.5°	215.6	192.3	190.7	193.5	196.4	202.0	219.6	236.1	252.2	285.1	313.6
80°	157.0	138.1	138.1	140.9	140.1	147.0	159.4	172.7	184.3	208.0	228.9
82.5°	103.6	88.7	90.7	92.8	94.0	96.8	104.4	114.4	121.7	136.1	149.8
85°	57.4	47.4	49.4	51.0	50.2	53.4	57.4	63.4	67.1	73.9	81.1
87.5°	21.3	17.7	18.1	19.3	20.1	21.7	21.7	25.3	25.7	26.5	28.1
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°	1837.0	1837.0	1837.0
2.5°	1793.3	1802.9	1810.1
5°	1762.4	1770.4	1776.8
7.5°	1732.2	1739.5	1745.1
10°	1703.7	1711.8	1715.8
12.5°	1674.4	1683.7	1686.9
15°	1645.5	1654.7	1658.8
17.5°	1615.8	1627.8	1632.3
20°	1588.1	1603.3	1607.0
22.5°	1560.0	1575.6	1580.1
25°	1529.5	1547.9	1552.3
27.5°	1496.9	1519.0	1523.4
30°	1464.4	1488.5	1492.9
32.5°	1429.5	1455.6	1459.6
35°	1392.9	1419.0	1423.9
37.5°	1352.4	1380.9	1390.5
40°	1310.2	1341.1	1351.2
42.5°	1266.1	1299.8	1310.2
45°	1218.7	1255.6	1267.7
47.5°	1170.9	1212.6	1223.1
50°	1119.1	1163.7	1176.1
52.5°	1064.9	1113.5	1125.9
55°	1008.7	1057.7	1071.3
57.5°	947.6	998.2	1012.7
60°	883.8	934.4	948.0
62.5°	818.3	864.1	877.4
65°	745.3	788.2	800.3
67.5°	667.8	707.1	717.1
70°	585.4	619.6	628.4
72.5°	499.5	523.2	534.8
75°	410.8	429.6	438.5
77.5°	321.6	334.9	342.1
80°	234.5	242.1	248.2
82.5°	153.4	156.6	161.0
85°	82.7	82.7	85.5
87.5°	28.1	26.9	28.1
90°	0.0	0.0	0.0

(END OF REPORT)