

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: P835234

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4LO-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835234
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-LD4-4LO-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

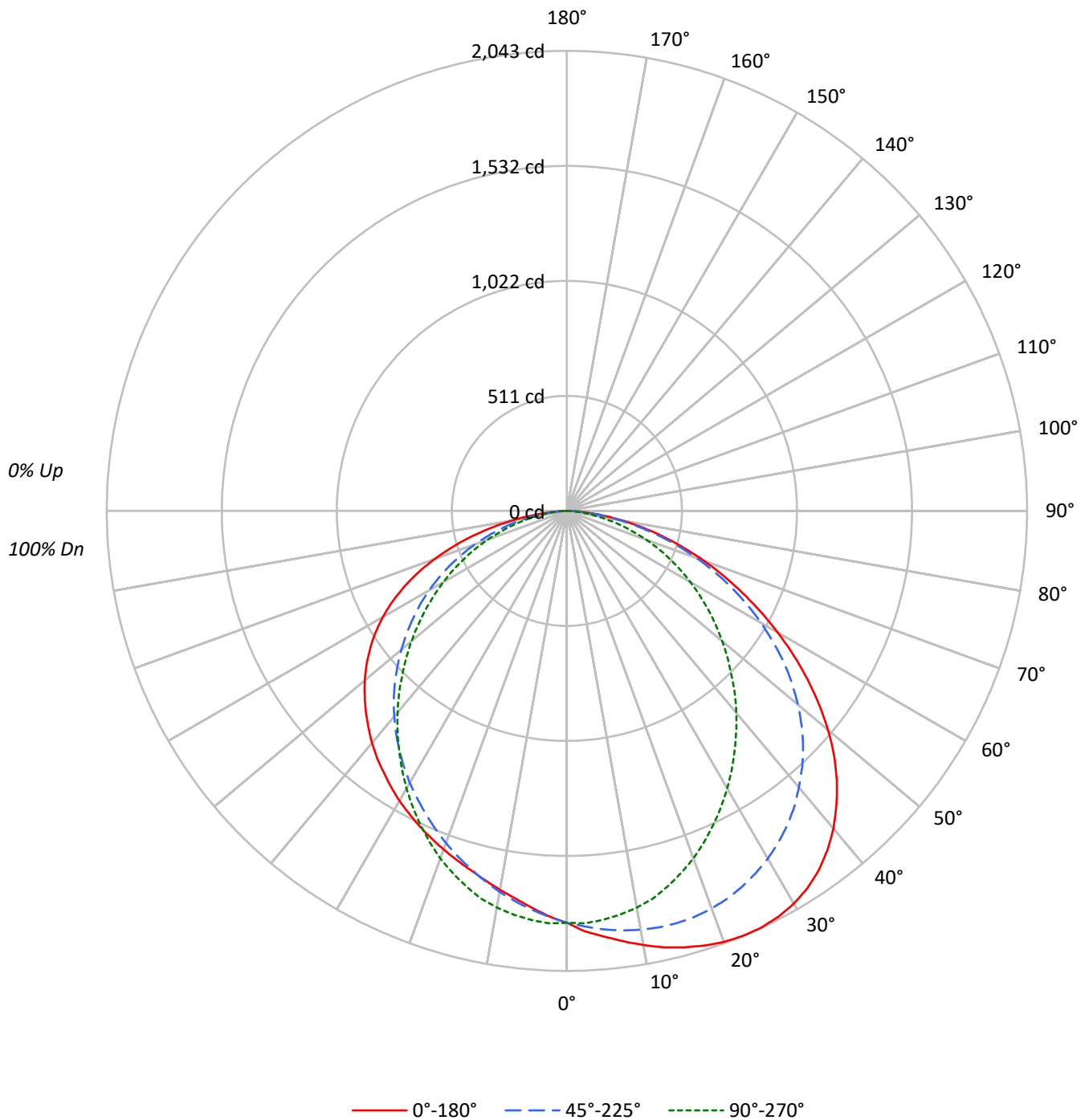
Lumens per Lamp: N/A
Luminaire Lumens: 5380.6 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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
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°	4922	4922	4922
5°	5125	4925	4779
10°	5349	4888	4668
15°	5589	4810	4601
20°	5834	4704	4582
25°	6063	4567	4589
30°	6260	4424	4619
35°	6403	4266	4658
40°	6468	4108	4726
45°	6450	3935	4803
50°	6335	3769	4903
55°	6119	3596	5005
60°	5821	3411	5081
65°	5466	3203	5074
70°	5087	2954	4923
75°	4618	2594	4539
80°	3966	2131	3829
85°	3026	1457	2631

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.5	3.2
10°-20°	501.0	9.3
20°-30°	767.5	14.3
30°-40°	936.7	17.4
40°-50°	979.5	18.2
50°-60°	886.5	16.5
60°-70°	671.4	12.5
70°-80°	374.2	7.0
80°-90°	90.3	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°	1442.0	26.8
0°-40°	2378.6	44.2
0°-60°	4244.7	78.9
0°-90°	5380.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5380.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1829	1829	1829	1829	1829	
5°	1897	1866	1823	1778	1769	183
15°	2006	1895	1726	1646	1652	569
25°	2042	1841	1538	1484	1546	942
35°	1949	1705	1299	1297	1418	1217
45°	1695	1482	1034	1080	1262	1304
55°	1304	1178	766	834	1067	1164
65°	858	807	503	572	797	852
75°	444	419	250	298	437	471
85°	98	86	47	63	85	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°	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2
2.5°	1869.6	1860.8	1853.6	1856.4	1858.0	1852.4	1847.6	1848.4	1843.6	1852.8	1831.2
5°	1897.1	1889.1	1880.7	1883.9	1880.7	1872.4	1865.6	1863.6	1850.8	1856.0	1834.0
7.5°	1927.9	1919.1	1906.7	1910.3	1903.5	1887.9	1879.1	1874.0	1854.4	1854.8	1830.4
10°	1957.5	1949.9	1933.1	1935.5	1923.1	1902.3	1888.3	1881.1	1853.6	1849.6	1824.4
12.5°	1985.1	1974.7	1956.7	1957.9	1939.9	1912.3	1894.3	1883.9	1848.0	1836.0	1811.2
15°	2006.3	1996.3	1974.7	1974.3	1951.1	1915.1	1894.7	1880.3	1834.8	1816.0	1790.0
17.5°	2024.3	2015.1	1988.3	1987.5	1959.5	1913.9	1889.5	1871.6	1815.6	1792.4	1763.6
20°	2037.1	2027.9	1997.9	1995.1	1961.5	1907.9	1878.7	1856.0	1790.4	1762.8	1730.8
22.5°	2043.1	2033.9	1999.9	1995.9	1956.7	1895.9	1863.2	1836.4	1761.6	1725.6	1692.4
25°	2041.9	2033.1	1994.7	1990.7	1947.5	1877.9	1841.2	1810.4	1725.2	1682.8	1650.1
27.5°	2031.9	2025.1	1984.7	1979.5	1930.7	1853.6	1814.4	1780.4	1684.8	1637.7	1602.1
30°	2014.7	2009.5	1966.7	1961.9	1909.9	1826.8	1783.2	1744.0	1641.3	1588.1	1552.1
32.5°	1987.1	1982.3	1939.1	1934.7	1881.9	1792.4	1746.8	1706.4	1593.7	1534.9	1498.9
35°	1949.1	1946.3	1904.3	1899.5	1846.0	1753.2	1704.8	1660.4	1544.1	1477.7	1443.3
37.5°	1899.1	1899.1	1858.8	1853.6	1801.2	1705.2	1657.6	1610.5	1488.1	1417.8	1383.8
40°	1841.2	1846.4	1805.2	1800.0	1749.2	1653.6	1601.7	1552.1	1427.8	1354.6	1321.4
42.5°	1771.6	1776.4	1742.0	1737.2	1689.6	1594.1	1545.7	1491.7	1364.6	1290.2	1255.8
45°	1694.8	1701.2	1670.4	1666.8	1622.5	1528.9	1482.5	1427.8	1298.6	1223.0	1189.5
47.5°	1609.3	1617.7	1590.9	1588.9	1547.7	1462.1	1413.8	1358.2	1229.4	1153.1	1121.5
50°	1513.3	1525.3	1503.3	1503.3	1466.5	1381.4	1339.4	1283.8	1157.5	1081.1	1049.9
52.5°	1410.6	1425.8	1409.4	1409.8	1379.8	1303.4	1259.8	1205.5	1082.3	1007.1	978.4
55°	1304.2	1319.0	1308.6	1310.2	1286.6	1217.0	1177.5	1123.5	1005.5	932.4	905.2
57.5°	1193.1	1209.1	1202.3	1205.5	1189.1	1126.7	1085.5	1038.3	926.4	854.0	830.8
60°	1081.5	1096.7	1093.1	1097.5	1087.1	1033.1	995.5	946.8	846.8	777.2	756.9
62.5°	968.8	982.8	982.0	986.8	981.2	936.4	902.8	861.2	764.5	700.5	681.7
65°	858.4	870.4	869.6	874.8	873.6	837.6	807.2	769.3	682.1	623.3	606.9
67.5°	751.3	761.3	758.5	764.5	766.1	737.3	710.9	676.9	603.7	546.6	532.6
70°	646.5	653.3	649.7	653.7	657.3	635.7	613.3	583.3	520.2	469.8	458.2
72.5°	543.8	548.6	543.0	547.0	550.2	534.6	516.2	490.2	437.8	394.2	384.6
75°	444.2	451.0	439.4	443.4	445.8	430.2	419.4	398.2	353.0	319.5	313.1
77.5°	347.8	351.8	345.4	343.8	345.4	334.2	325.9	309.5	275.5	247.9	243.9
80°	255.9	258.3	251.9	250.3	251.5	243.5	237.1	225.1	201.1	180.3	178.7
82.5°	171.5	172.7	167.1	165.5	166.3	163.9	156.3	147.9	136.7	119.1	118.7
85°	98.0	98.0	94.0	92.4	93.2	89.2	86.4	82.0	77.6	65.6	66.4
87.5°	36.0	36.0	34.0	33.6	37.6	33.2	32.0	30.0	31.2	24.8	26.4
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°	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2
2.5°	1837.2	1833.2	1829.6	1817.2	1822.4	1809.6	1808.8	1804.0	1800.4	1793.6	1802.4
5°	1831.2	1823.2	1812.8	1798.0	1802.4	1787.2	1784.0	1778.4	1773.6	1764.8	1771.6
7.5°	1821.6	1808.4	1792.0	1773.2	1779.2	1760.4	1755.6	1749.6	1745.6	1735.2	1741.2
10°	1807.6	1788.8	1769.6	1746.8	1751.2	1730.8	1724.8	1718.4	1714.8	1705.6	1711.6
12.5°	1786.0	1763.2	1737.2	1712.4	1717.2	1698.0	1690.0	1683.2	1682.0	1674.4	1681.6
15°	1758.0	1726.4	1699.6	1673.2	1678.8	1656.4	1652.9	1646.1	1648.1	1642.9	1651.7
17.5°	1722.4	1686.0	1656.8	1628.5	1634.1	1615.3	1612.5	1609.3	1611.3	1610.5	1620.1
20°	1682.4	1642.5	1608.9	1580.9	1584.1	1569.3	1570.5	1569.7	1573.7	1578.1	1591.3
22.5°	1637.3	1592.1	1556.9	1528.1	1532.9	1520.1	1525.7	1527.3	1534.1	1544.1	1560.9
25°	1586.5	1538.1	1501.3	1474.1	1478.5	1470.1	1479.7	1483.7	1494.5	1511.3	1528.5
27.5°	1533.3	1482.1	1442.9	1417.0	1425.4	1417.0	1431.4	1439.3	1455.7	1474.1	1495.3
30°	1476.9	1423.8	1383.4	1360.2	1368.2	1360.6	1383.8	1394.6	1411.0	1436.1	1461.3
32.5°	1417.8	1361.8	1322.2	1304.2	1309.8	1308.6	1334.6	1346.6	1368.6	1397.4	1424.2
35°	1357.0	1298.6	1258.6	1243.4	1250.2	1251.8	1283.0	1297.0	1321.0	1355.8	1384.6
37.5°	1294.2	1234.6	1195.5	1183.1	1189.1	1195.1	1231.4	1245.4	1272.6	1310.6	1342.2
40°	1229.0	1169.5	1131.1	1121.1	1127.1	1133.5	1173.1	1192.3	1221.8	1263.0	1297.4
42.5°	1163.1	1103.5	1066.3	1059.1	1065.1	1077.5	1119.5	1137.5	1168.7	1214.2	1252.2
45°	1095.9	1033.9	1001.5	995.9	1002.3	1016.7	1057.9	1079.5	1112.7	1162.7	1203.5
47.5°	1027.9	967.6	936.8	933.2	939.6	955.6	1001.1	1020.7	1055.9	1109.1	1153.1
50°	959.2	900.4	870.8	869.6	875.6	892.8	936.4	959.6	995.9	1055.5	1100.7
52.5°	889.6	833.2	806.4	806.4	812.0	829.6	873.6	897.6	935.2	997.9	1047.9
55°	820.0	766.5	740.9	742.9	750.9	766.1	808.8	834.0	872.0	937.2	990.0
57.5°	750.5	699.7	676.5	679.3	686.9	702.1	744.1	772.4	806.8	874.4	928.4
60°	681.7	633.7	613.3	616.5	623.3	638.5	682.1	706.5	740.9	809.6	863.6
62.5°	612.1	568.5	549.4	553.3	559.3	574.5	615.7	639.3	673.3	740.9	795.2
65°	543.4	503.0	486.6	490.6	496.2	510.2	549.0	571.7	604.1	670.1	722.1
67.5°	475.4	438.6	425.0	429.0	433.4	446.6	478.6	503.4	533.8	596.5	645.7
70°	408.2	375.4	363.4	367.4	371.4	383.4	411.4	434.2	462.2	519.8	565.3
72.5°	341.8	309.9	303.9	307.5	310.7	321.1	347.8	365.8	390.2	441.4	480.6
75°	277.1	249.5	245.5	249.1	251.9	259.9	282.3	297.9	318.3	362.6	394.6
77.5°	214.7	191.5	189.9	192.7	195.5	201.1	218.7	235.1	251.1	283.9	312.3
80°	156.3	137.5	137.5	140.3	139.5	146.3	158.7	171.9	183.5	207.1	227.9
82.5°	103.2	88.4	90.4	92.4	93.6	96.4	104.0	113.9	121.1	135.5	149.1
85°	57.2	47.2	49.2	50.8	50.0	53.2	57.2	63.2	66.8	73.6	80.8
87.5°	21.2	17.6	18.0	19.2	20.0	21.6	21.6	25.2	25.6	26.4	28.0
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°	1829.2	1829.2	1829.2
2.5°	1785.6	1795.2	1802.4
5°	1754.8	1762.8	1769.2
7.5°	1724.8	1732.0	1737.6
10°	1696.4	1704.4	1708.4
12.5°	1667.2	1676.4	1679.6
15°	1638.5	1647.7	1651.7
17.5°	1608.9	1620.9	1625.3
20°	1581.3	1596.5	1600.1
22.5°	1553.3	1568.9	1573.3
25°	1522.9	1541.3	1545.7
27.5°	1490.5	1512.5	1516.9
30°	1458.1	1482.1	1486.5
32.5°	1423.4	1449.3	1453.3
35°	1387.0	1413.0	1417.8
37.5°	1346.6	1375.0	1384.6
40°	1304.6	1335.4	1345.4
42.5°	1260.6	1294.2	1304.6
45°	1213.4	1250.2	1262.2
47.5°	1165.9	1207.5	1217.8
50°	1114.3	1158.7	1171.1
52.5°	1060.3	1108.7	1121.1
55°	1004.3	1053.1	1066.7
57.5°	943.6	993.9	1008.3
60°	880.0	930.4	944.0
62.5°	814.8	860.4	873.6
65°	742.1	784.8	796.8
67.5°	664.9	704.1	714.1
70°	582.9	616.9	625.7
72.5°	497.4	521.0	532.6
75°	409.0	427.8	436.6
77.5°	320.3	333.4	340.6
80°	233.5	241.1	247.1
82.5°	152.7	155.9	160.3
85°	82.4	82.4	85.2
87.5°	28.0	26.8	28.0
90°	0.0	0.0	0.0

(END OF REPORT)