

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: P834652

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-2LO-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834652
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-2LO-30-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

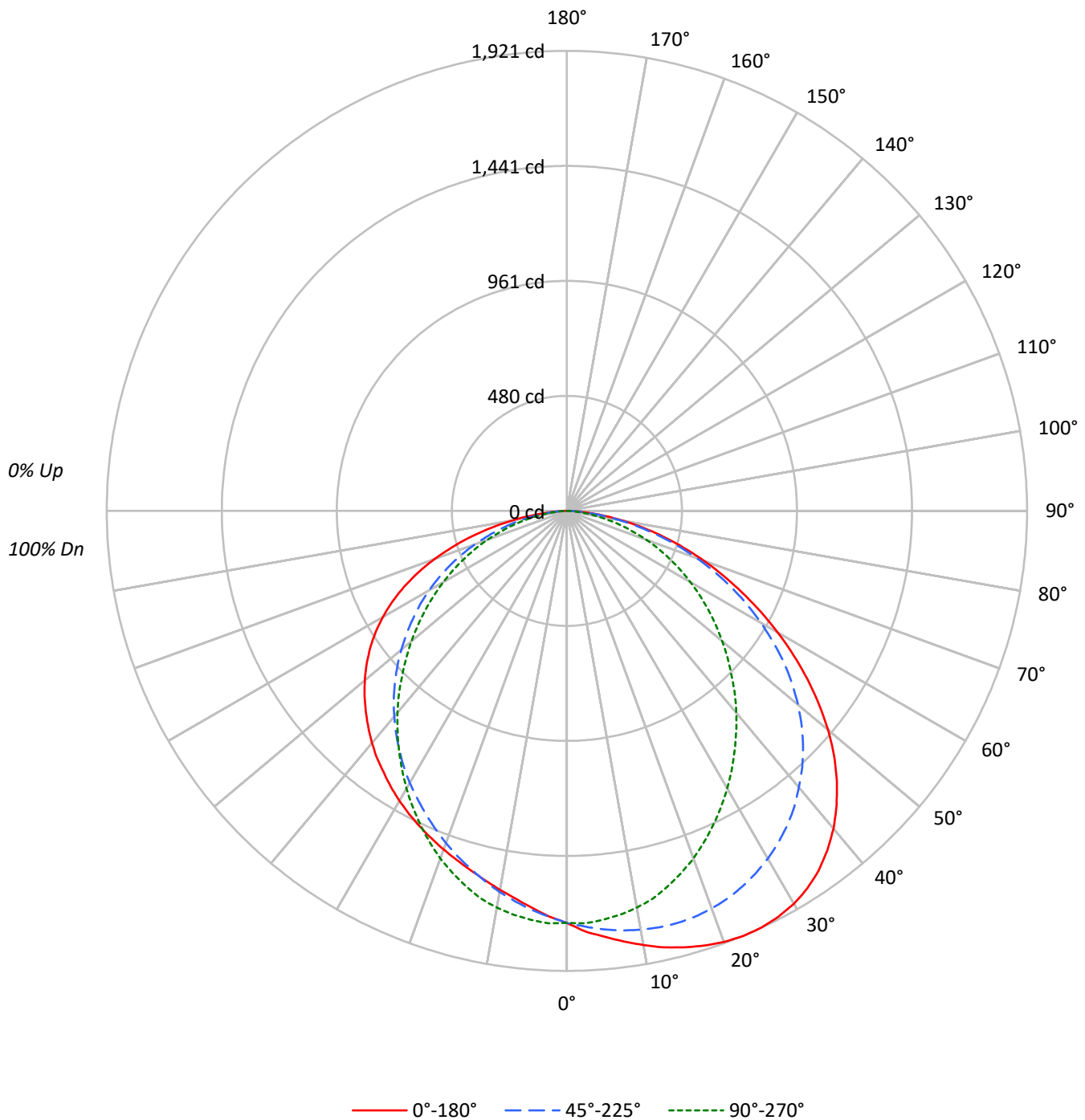
Lumens per Lamp: N/A
Luminaire Lumens: 5060.1 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	2315	2315	2315
5°	2410	2316	2247
10°	2515	2298	2195
15°	2628	2262	2164
20°	2743	2212	2155
25°	2851	2147	2158
30°	2944	2080	2172
35°	3011	2006	2190
40°	3041	1932	2222
45°	3033	1850	2259
50°	2979	1773	2305
55°	2877	1691	2353
60°	2737	1604	2389
65°	2570	1506	2386
70°	2392	1389	2315
75°	2171	1220	2135
80°	1864	1002	1801
85°	1422	685	1237

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.1	3.2
10°-20°	471.1	9.3
20°-30°	721.8	14.3
30°-40°	880.9	17.4
40°-50°	921.2	18.2
50°-60°	833.7	16.5
60°-70°	631.4	12.5
70°-80°	351.9	7.0
80°-90°	84.9	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°	1356.1	26.8
0°-40°	2237.0	44.2
0°-60°	3991.9	78.9
0°-90°	5060.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5060.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1720	1720	1720	1720	1720	
5°	1784	1754	1715	1672	1664	172
15°	1887	1782	1624	1548	1553	535
25°	1920	1732	1446	1395	1454	886
35°	1833	1603	1221	1220	1333	1145
45°	1594	1394	972	1015	1187	1226
55°	1226	1107	721	784	1003	1094
65°	807	759	473	538	749	801
75°	418	394	235	280	411	443
85°	92	81	44	59	80	111
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°	1720.2	1720.2	1720.2	1720.2	1720.2	1720.2	1720.2	1720.2	1720.2	1720.2	1720.2
2.5°	1758.2	1749.9	1743.1	1745.8	1747.3	1742.0	1737.5	1738.3	1733.7	1742.4	1722.1
5°	1784.1	1776.6	1768.7	1771.7	1768.7	1760.8	1754.4	1752.5	1740.5	1745.4	1724.7
7.5°	1813.1	1804.8	1793.2	1796.5	1790.1	1775.5	1767.2	1762.3	1743.9	1744.3	1721.3
10°	1840.9	1833.8	1818.0	1820.2	1808.6	1789.0	1775.9	1769.1	1743.1	1739.4	1715.7
12.5°	1866.9	1857.1	1840.2	1841.3	1824.4	1798.4	1781.5	1771.7	1737.9	1726.6	1703.3
15°	1886.8	1877.4	1857.1	1856.7	1834.9	1801.1	1781.9	1768.3	1725.5	1707.8	1683.4
17.5°	1903.7	1895.1	1869.9	1869.1	1842.8	1799.9	1777.0	1760.1	1707.4	1685.6	1658.5
20°	1915.7	1907.1	1878.9	1876.3	1844.7	1794.3	1766.8	1745.4	1683.7	1657.8	1627.7
22.5°	1921.4	1912.7	1880.8	1877.0	1840.2	1783.0	1752.2	1727.0	1656.7	1622.8	1591.6
25°	1920.2	1912.0	1875.9	1872.1	1831.5	1766.1	1731.5	1702.5	1622.5	1582.6	1551.8
27.5°	1910.8	1904.5	1866.5	1861.6	1815.7	1743.1	1706.3	1674.3	1584.5	1540.1	1506.6
30°	1894.7	1889.8	1849.6	1845.0	1796.2	1718.0	1677.0	1640.1	1543.5	1493.5	1459.6
32.5°	1868.7	1864.2	1823.6	1819.5	1769.8	1685.6	1642.8	1604.8	1498.7	1443.5	1409.6
35°	1833.0	1830.4	1790.9	1786.4	1736.0	1648.8	1603.3	1561.5	1452.1	1389.7	1357.4
37.5°	1786.0	1786.0	1748.0	1743.1	1693.9	1603.7	1558.9	1514.5	1399.5	1333.3	1301.3
40°	1731.5	1736.4	1697.7	1692.8	1645.0	1555.1	1506.3	1459.6	1342.7	1273.9	1242.7
42.5°	1666.1	1670.6	1638.2	1633.7	1589.0	1499.1	1453.6	1402.9	1283.3	1213.4	1181.0
45°	1593.9	1599.9	1570.9	1567.6	1525.8	1437.8	1394.2	1342.7	1221.3	1150.2	1118.6
47.5°	1513.4	1521.3	1496.1	1494.2	1455.5	1375.0	1329.5	1277.3	1156.2	1084.4	1054.7
50°	1423.2	1434.4	1413.8	1413.8	1379.2	1299.1	1259.6	1207.3	1088.5	1016.7	987.4
52.5°	1326.5	1340.8	1325.4	1325.8	1297.6	1225.8	1184.8	1133.6	1017.8	947.2	920.1
55°	1226.5	1240.4	1230.7	1232.2	1210.0	1144.6	1107.3	1056.6	945.6	876.8	851.3
57.5°	1122.0	1137.0	1130.6	1133.6	1118.2	1059.6	1020.8	976.5	871.2	803.1	781.3
60°	1017.1	1031.4	1028.0	1032.1	1022.4	971.6	936.2	890.4	796.4	730.9	711.8
62.5°	911.1	924.2	923.5	928.0	922.7	880.6	849.0	809.9	718.9	658.8	641.1
65°	807.3	818.6	817.8	822.7	821.6	787.7	759.1	723.4	641.5	586.2	570.8
67.5°	706.5	715.9	713.3	718.9	720.4	693.3	668.5	636.6	567.8	514.0	500.8
70°	608.0	614.4	611.0	614.8	618.1	597.8	576.8	548.6	489.2	441.8	430.9
72.5°	511.4	515.9	510.6	514.4	517.4	502.7	485.4	461.0	411.7	370.7	361.7
75°	417.7	424.1	413.2	417.0	419.2	404.6	394.4	374.5	332.0	300.4	294.4
77.5°	327.1	330.9	324.9	323.4	324.9	314.3	306.4	291.0	259.1	233.1	229.4
80°	240.6	242.9	236.9	235.4	236.5	229.0	223.0	211.7	189.1	169.6	168.1
82.5°	161.3	162.4	157.2	155.7	156.4	154.2	147.0	139.1	128.6	112.0	111.7
85°	92.1	92.1	88.4	86.9	87.6	83.8	81.2	77.1	72.9	61.7	62.4
87.5°	33.8	33.8	32.0	31.6	35.3	31.2	30.1	28.2	29.3	23.3	24.8
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°	1720.2	1720.2	1720.2	1720.2	1720.2	1720.2	1720.2	1720.2	1720.2	1720.2	1720.2
2.5°	1727.7	1724.0	1720.6	1708.9	1713.8	1701.8	1701.0	1696.5	1693.1	1686.7	1695.0
5°	1722.1	1714.6	1704.8	1690.9	1695.0	1680.7	1677.7	1672.5	1667.9	1659.7	1666.1
7.5°	1713.1	1700.7	1685.2	1667.6	1673.2	1655.5	1651.0	1645.4	1641.6	1631.9	1637.5
10°	1699.9	1682.2	1664.2	1642.8	1646.9	1627.7	1622.1	1616.1	1612.7	1604.0	1609.7
12.5°	1679.6	1658.2	1633.7	1610.4	1614.9	1596.9	1589.4	1583.0	1581.8	1574.7	1581.5
15°	1653.3	1623.6	1598.4	1573.6	1578.8	1557.8	1554.4	1548.0	1549.9	1545.0	1553.3
17.5°	1619.8	1585.6	1558.2	1531.5	1536.7	1519.0	1516.4	1513.4	1515.3	1514.5	1523.6
20°	1582.2	1544.6	1513.0	1486.7	1489.7	1475.8	1476.9	1476.2	1479.9	1484.1	1496.5
22.5°	1539.7	1497.2	1464.2	1437.1	1441.6	1429.6	1434.8	1436.3	1442.7	1452.1	1467.9
25°	1492.0	1446.5	1411.9	1386.3	1390.5	1382.6	1391.6	1395.3	1405.5	1421.3	1437.5
27.5°	1442.0	1393.8	1357.0	1332.6	1340.4	1332.6	1346.1	1353.6	1369.0	1386.3	1406.2
30°	1389.0	1338.9	1301.0	1279.2	1286.7	1279.5	1301.3	1311.5	1326.9	1350.6	1374.3
32.5°	1333.3	1280.7	1243.4	1226.5	1231.8	1230.7	1255.1	1266.4	1287.1	1314.1	1339.3
35°	1276.2	1221.3	1183.7	1169.4	1175.8	1177.3	1206.6	1219.8	1242.3	1275.0	1302.1
37.5°	1217.1	1161.1	1124.2	1112.6	1118.2	1123.9	1158.1	1171.2	1196.8	1232.5	1262.2
40°	1155.8	1099.8	1063.7	1054.3	1060.0	1066.0	1103.2	1121.2	1149.1	1187.8	1220.1
42.5°	1093.8	1037.8	1002.8	996.0	1001.7	1013.3	1052.8	1069.7	1099.1	1141.9	1177.6
45°	1030.6	972.3	941.9	936.6	942.6	956.2	994.9	1015.2	1046.4	1093.4	1131.8
47.5°	966.7	909.9	881.0	877.6	883.6	898.6	941.5	959.9	993.0	1043.0	1084.4
50°	902.0	846.8	818.9	817.8	823.4	839.6	880.6	902.4	936.6	992.6	1035.1
52.5°	836.6	783.6	758.4	758.4	763.7	780.2	821.6	844.1	879.5	938.5	985.5
55°	771.2	720.8	696.7	698.6	706.1	720.4	760.7	784.3	820.1	881.3	931.0
57.5°	705.8	658.0	636.2	638.8	646.0	660.3	699.7	726.4	758.8	822.3	873.1
60°	641.1	596.0	576.8	579.8	586.2	600.5	641.5	664.4	696.7	761.4	812.2
62.5°	575.7	534.7	516.6	520.4	526.0	540.3	579.0	601.2	633.2	696.7	747.9
65°	511.0	473.0	457.6	461.4	466.6	479.8	516.3	537.7	568.1	630.2	679.1
67.5°	447.1	412.5	399.7	403.5	407.6	420.0	450.1	473.4	502.0	561.0	607.2
70°	383.9	353.1	341.8	345.5	349.3	360.6	386.9	408.3	434.7	488.8	531.7
72.5°	321.5	291.4	285.8	289.1	292.2	301.9	327.1	344.0	367.0	415.1	452.0
75°	260.6	234.6	230.9	234.2	236.9	244.4	265.5	280.1	299.3	341.0	371.1
77.5°	201.9	180.1	178.6	181.2	183.9	189.1	205.7	221.1	236.1	267.0	293.7
80°	147.0	129.3	129.3	132.0	131.2	137.6	149.3	161.7	172.6	194.8	214.3
82.5°	97.0	83.1	85.0	86.9	88.0	90.6	97.8	107.2	113.9	127.5	140.2
85°	53.8	44.4	46.2	47.8	47.0	50.0	53.8	59.4	62.8	69.2	76.0
87.5°	19.9	16.5	16.9	18.0	18.8	20.3	20.3	23.7	24.1	24.8	26.3
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°	1720.2	1720.2	1720.2
2.5°	1679.2	1688.3	1695.0
5°	1650.3	1657.8	1663.8
7.5°	1622.1	1628.8	1634.1
10°	1595.4	1602.9	1606.7
12.5°	1567.9	1576.6	1579.6
15°	1540.9	1549.5	1553.3
17.5°	1513.0	1524.3	1528.4
20°	1487.1	1501.4	1504.8
22.5°	1460.8	1475.4	1479.6
25°	1432.2	1449.5	1453.6
27.5°	1401.7	1422.4	1426.6
30°	1371.3	1393.8	1398.0
32.5°	1338.6	1363.0	1366.8
35°	1304.4	1328.8	1333.3
37.5°	1266.4	1293.1	1302.1
40°	1226.9	1255.8	1265.2
42.5°	1185.5	1217.1	1226.9
45°	1141.2	1175.8	1187.0
47.5°	1096.4	1135.5	1145.3
50°	1047.9	1089.7	1101.3
52.5°	997.2	1042.7	1054.3
55°	944.5	990.4	1003.2
57.5°	887.4	934.7	948.3
60°	827.6	875.0	887.7
62.5°	766.3	809.2	821.6
65°	697.9	738.1	749.4
67.5°	625.3	662.1	671.5
70°	548.2	580.2	588.4
72.5°	467.7	489.9	500.8
75°	384.7	402.3	410.6
77.5°	301.2	313.6	320.4
80°	219.6	226.7	232.4
82.5°	143.6	146.6	150.8
85°	77.5	77.5	80.1
87.5°	26.3	25.2	26.3
90°	0.0	0.0	0.0

(END OF REPORT)