

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: P834579

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1HI-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834579
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-LD4-1HI-40-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

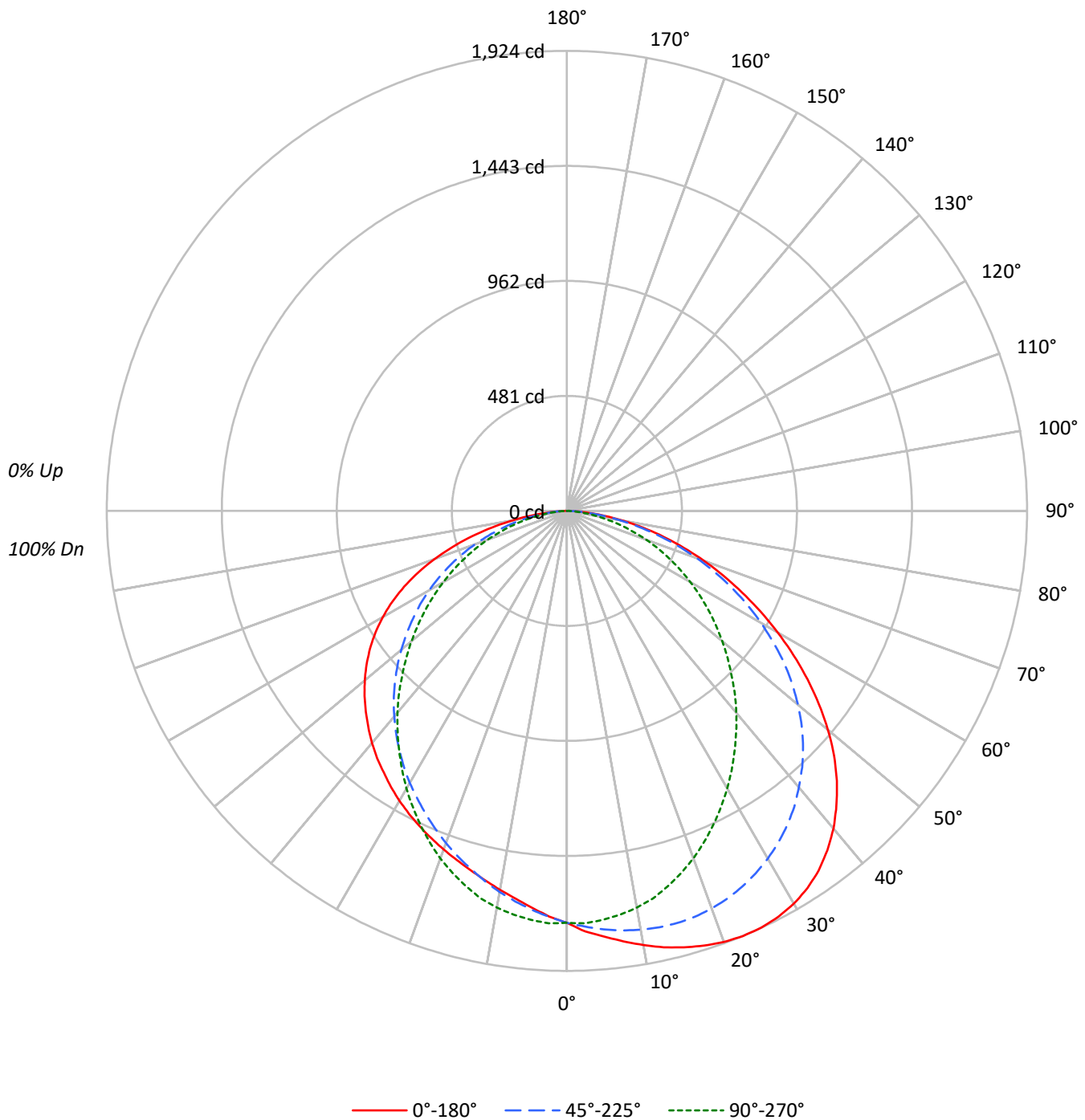
Lumens per Lamp: N/A
Luminaire Lumens: 5067.6 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44
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°	2318	2318	2318
5°	2413	2319	2251
10°	2519	2302	2198
15°	2632	2265	2167
20°	2747	2215	2158
25°	2855	2151	2161
30°	2948	2083	2175
35°	3015	2009	2193
40°	3046	1935	2226
45°	3037	1853	2262
50°	2983	1775	2309
55°	2882	1693	2357
60°	2741	1606	2393
65°	2574	1508	2389
70°	2395	1391	2318
75°	2175	1222	2138
80°	1867	1003	1803
85°	1425	685	1238

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.4	3.2
10°-20°	471.9	9.3
20°-30°	722.9	14.3
30°-40°	882.2	17.4
40°-50°	922.6	18.2
50°-60°	835.0	16.5
60°-70°	632.4	12.5
70°-80°	352.4	7.0
80°-90°	85.0	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°	1358.1	26.8
0°-40°	2240.3	44.2
0°-60°	3997.9	78.9
0°-90°	5067.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5067.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1723	1723	1723	1723	1723	
5°	1787	1757	1717	1675	1666	172
15°	1890	1784	1626	1550	1556	536
25°	1923	1734	1449	1397	1456	887
35°	1836	1606	1223	1222	1335	1146
45°	1596	1396	974	1017	1189	1228
55°	1228	1109	722	786	1005	1096
65°	808	760	474	538	750	802
75°	418	395	235	280	411	444
85°	92	81	44	60	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°	1722.8	1722.8	1722.8	1722.8	1722.8	1722.8	1722.8	1722.8	1722.8	1722.8	1722.8
2.5°	1760.8	1752.5	1745.8	1748.4	1749.9	1744.6	1740.1	1740.9	1736.3	1745.0	1724.7
5°	1786.8	1779.3	1771.4	1774.4	1771.4	1763.5	1757.1	1755.2	1743.1	1748.0	1727.3
7.5°	1815.8	1807.5	1795.8	1799.2	1792.8	1778.1	1769.9	1765.0	1746.5	1746.9	1723.9
10°	1843.7	1836.5	1820.7	1823.0	1811.3	1791.7	1778.5	1771.7	1745.8	1742.0	1718.3
12.5°	1869.7	1859.9	1842.9	1844.0	1827.1	1801.1	1784.2	1774.4	1740.5	1729.2	1705.8
15°	1889.6	1880.2	1859.9	1859.5	1837.6	1803.8	1784.5	1771.0	1728.1	1710.4	1685.9
17.5°	1906.6	1897.9	1872.7	1871.9	1845.5	1802.6	1779.7	1762.7	1710.0	1688.1	1661.0
20°	1918.6	1909.9	1881.7	1879.1	1847.4	1797.0	1769.5	1748.0	1686.3	1660.3	1630.2
22.5°	1924.3	1915.6	1883.6	1879.8	1842.9	1785.7	1754.8	1729.6	1659.1	1625.3	1594.0
25°	1923.1	1914.8	1878.7	1874.9	1834.3	1768.7	1734.1	1705.1	1624.9	1585.0	1554.1
27.5°	1913.7	1907.3	1869.3	1864.4	1818.4	1745.8	1708.9	1676.8	1586.8	1542.4	1508.9
30°	1897.5	1892.6	1852.3	1847.8	1798.9	1720.5	1679.5	1642.6	1545.8	1495.7	1461.8
32.5°	1871.5	1867.0	1826.3	1822.2	1772.5	1688.1	1645.2	1607.2	1501.0	1445.6	1411.7
35°	1835.8	1833.1	1793.6	1789.1	1738.6	1651.2	1605.7	1563.9	1454.3	1391.8	1359.4
37.5°	1788.7	1788.7	1750.7	1745.8	1696.4	1606.1	1561.2	1516.8	1401.6	1335.3	1303.3
40°	1734.1	1739.0	1700.2	1695.3	1647.5	1557.5	1508.5	1461.8	1344.7	1275.8	1244.6
42.5°	1668.6	1673.1	1640.7	1636.2	1591.4	1501.4	1455.8	1405.0	1285.2	1215.2	1182.8
45°	1596.3	1602.3	1573.3	1569.9	1528.1	1440.0	1396.3	1344.7	1223.1	1151.9	1120.3
47.5°	1515.7	1523.6	1498.4	1496.5	1457.7	1377.1	1331.5	1279.2	1157.9	1086.0	1056.3
50°	1425.3	1436.6	1415.9	1415.9	1381.2	1301.0	1261.5	1209.2	1090.2	1018.2	988.9
52.5°	1328.5	1342.8	1327.4	1327.8	1299.5	1227.6	1186.6	1135.3	1019.4	948.6	921.5
55°	1228.4	1242.3	1232.5	1234.0	1211.8	1146.3	1109.0	1058.2	947.1	878.2	852.5
57.5°	1123.7	1138.7	1132.3	1135.3	1119.9	1061.2	1022.4	977.9	872.5	804.3	782.5
60°	1018.6	1032.9	1029.5	1033.7	1023.9	973.0	937.6	891.7	797.6	732.0	712.8
62.5°	912.4	925.6	924.8	929.4	924.1	881.9	850.3	811.1	720.0	659.7	642.0
65°	808.5	819.8	819.0	823.9	822.8	788.9	760.3	724.5	642.4	587.1	571.6
67.5°	707.6	717.0	714.3	720.0	721.5	694.4	669.5	637.5	568.6	514.8	501.6
70°	608.9	615.3	611.9	615.7	619.1	598.7	577.7	549.4	489.9	442.5	431.5
72.5°	512.1	516.6	511.4	515.1	518.2	503.5	486.1	461.7	412.3	371.3	362.3
75°	418.4	424.8	413.8	417.6	419.9	405.2	395.0	375.1	332.5	300.9	294.9
77.5°	327.6	331.4	325.4	323.8	325.4	314.8	306.9	291.5	259.5	233.5	229.7
80°	241.0	243.3	237.2	235.7	236.9	229.3	223.3	212.0	189.4	169.8	168.3
82.5°	161.5	162.7	157.4	155.9	156.7	154.4	147.2	139.3	128.8	112.2	111.8
85°	92.3	92.3	88.5	87.0	87.7	84.0	81.3	77.2	73.1	61.8	62.5
87.5°	33.9	33.9	32.0	31.6	35.4	31.3	30.1	28.2	29.4	23.3	24.9
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°	1722.8	1722.8	1722.8	1722.8	1722.8	1722.8	1722.8	1722.8	1722.8	1722.8	1722.8
2.5°	1730.3	1726.6	1723.2	1711.5	1716.4	1704.3	1703.6	1699.1	1695.7	1689.3	1697.6
5°	1724.7	1717.1	1707.4	1693.4	1697.6	1683.2	1680.2	1675.0	1670.4	1662.2	1668.6
7.5°	1715.6	1703.2	1687.8	1670.1	1675.7	1658.0	1653.5	1647.9	1644.1	1634.3	1639.9
10°	1702.5	1684.8	1666.7	1645.2	1649.4	1630.2	1624.5	1618.5	1615.1	1606.4	1612.1
12.5°	1682.1	1660.7	1636.2	1612.8	1617.4	1599.3	1591.7	1585.3	1584.2	1577.1	1583.8
15°	1655.8	1626.0	1600.8	1575.9	1581.2	1560.1	1556.7	1550.3	1552.2	1547.3	1555.6
17.5°	1622.2	1588.0	1560.5	1533.8	1539.0	1521.3	1518.7	1515.7	1517.6	1516.8	1525.8
20°	1584.6	1546.9	1515.3	1488.9	1492.0	1478.0	1479.2	1478.4	1482.2	1486.3	1498.7
22.5°	1542.0	1499.5	1466.3	1439.2	1443.8	1431.7	1437.0	1438.5	1444.9	1454.3	1470.1
25°	1494.2	1448.6	1414.0	1388.4	1392.5	1384.6	1393.7	1397.4	1407.6	1423.4	1439.6
27.5°	1444.1	1395.9	1359.0	1334.5	1342.5	1334.5	1348.1	1355.6	1371.1	1388.4	1408.4
30°	1391.0	1341.0	1302.9	1281.1	1288.6	1281.5	1303.3	1313.5	1328.9	1352.6	1376.3
32.5°	1335.3	1282.6	1245.3	1228.4	1233.6	1232.5	1257.0	1268.3	1289.0	1316.1	1341.3
35°	1278.1	1223.1	1185.4	1171.1	1177.5	1179.0	1208.4	1221.6	1244.2	1276.9	1304.0
37.5°	1218.9	1162.8	1125.9	1114.3	1119.9	1125.6	1159.8	1173.0	1198.6	1234.4	1264.1
40°	1157.6	1101.5	1065.3	1055.9	1061.5	1067.6	1104.8	1122.9	1150.8	1189.6	1222.0
42.5°	1095.4	1039.3	1004.3	997.5	1003.2	1014.8	1054.4	1071.3	1100.7	1143.6	1179.4
45°	1032.2	973.8	943.3	938.0	944.1	957.6	996.4	1016.7	1048.0	1095.1	1133.5
47.5°	968.2	911.3	882.3	878.9	884.9	900.0	942.9	961.4	994.5	1044.6	1086.0
50°	903.4	848.0	820.2	819.0	824.7	840.9	881.9	903.8	938.0	994.1	1036.7
52.5°	837.9	784.8	759.5	759.5	764.8	781.4	822.8	845.4	880.8	939.9	987.0
55°	772.3	721.9	697.8	699.7	707.2	721.5	761.8	785.5	821.3	882.7	932.4
57.5°	706.8	659.0	637.1	639.8	646.9	661.2	700.8	727.5	759.9	823.5	874.4
60°	642.0	596.9	577.7	580.7	587.1	601.4	642.4	665.4	697.8	762.5	813.4
62.5°	576.5	535.5	517.4	521.2	526.8	541.1	579.9	602.1	634.1	697.8	749.0
65°	511.8	473.7	458.3	462.0	467.3	480.5	517.0	538.5	569.0	631.1	680.1
67.5°	447.7	413.1	400.3	404.1	408.2	420.6	450.7	474.1	502.7	561.8	608.2
70°	384.5	353.6	342.3	346.1	349.8	361.1	387.5	409.0	435.3	489.5	532.5
72.5°	322.0	291.8	286.2	289.6	292.6	302.4	327.6	344.6	367.5	415.7	452.6
75°	261.0	235.0	231.2	234.6	237.2	244.8	265.9	280.5	299.7	341.5	371.7
77.5°	202.2	180.4	178.9	181.5	184.1	189.4	206.0	221.4	236.5	267.4	294.1
80°	147.2	129.5	129.5	132.2	131.4	137.8	149.5	161.9	172.8	195.1	214.6
82.5°	97.2	83.2	85.1	87.0	88.1	90.8	97.9	107.3	114.1	127.7	140.5
85°	53.8	44.4	46.3	47.8	47.1	50.1	53.8	59.5	62.9	69.3	76.1
87.5°	20.0	16.6	16.9	18.1	18.8	20.3	20.3	23.7	24.1	24.9	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):

	160°	170°	180°
0°	1722.8	1722.8	1722.8
2.5°	1681.7	1690.8	1697.6
5°	1652.7	1660.3	1666.3
7.5°	1624.5	1631.3	1636.6
10°	1597.8	1605.3	1609.1
12.5°	1570.3	1578.9	1582.0
15°	1543.2	1551.8	1555.6
17.5°	1515.3	1526.6	1530.7
20°	1489.3	1503.6	1507.0
22.5°	1463.0	1477.6	1481.8
25°	1434.3	1451.7	1455.8
27.5°	1403.8	1424.5	1428.7
30°	1373.3	1395.9	1400.1
32.5°	1340.6	1365.1	1368.8
35°	1306.3	1330.8	1335.3
37.5°	1268.3	1295.0	1304.0
40°	1228.7	1257.7	1267.1
42.5°	1187.3	1218.9	1228.7
45°	1142.9	1177.5	1188.8
47.5°	1098.1	1137.2	1147.0
50°	1049.5	1091.3	1103.0
52.5°	998.7	1044.2	1055.9
55°	945.9	991.9	1004.7
57.5°	888.7	936.1	949.7
60°	828.8	876.3	889.1
62.5°	767.4	810.4	822.8
65°	698.9	739.2	750.5
67.5°	626.2	663.1	672.5
70°	549.0	581.0	589.3
72.5°	468.4	490.7	501.6
75°	385.2	402.9	411.2
77.5°	301.6	314.1	320.8
80°	219.9	227.1	232.7
82.5°	143.8	146.9	151.0
85°	77.6	77.6	80.2
87.5°	26.4	25.2	26.4
90°	0.0	0.0	0.0

(END OF REPORT)