

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: P834219

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1HI-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834219
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-1HI-40-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

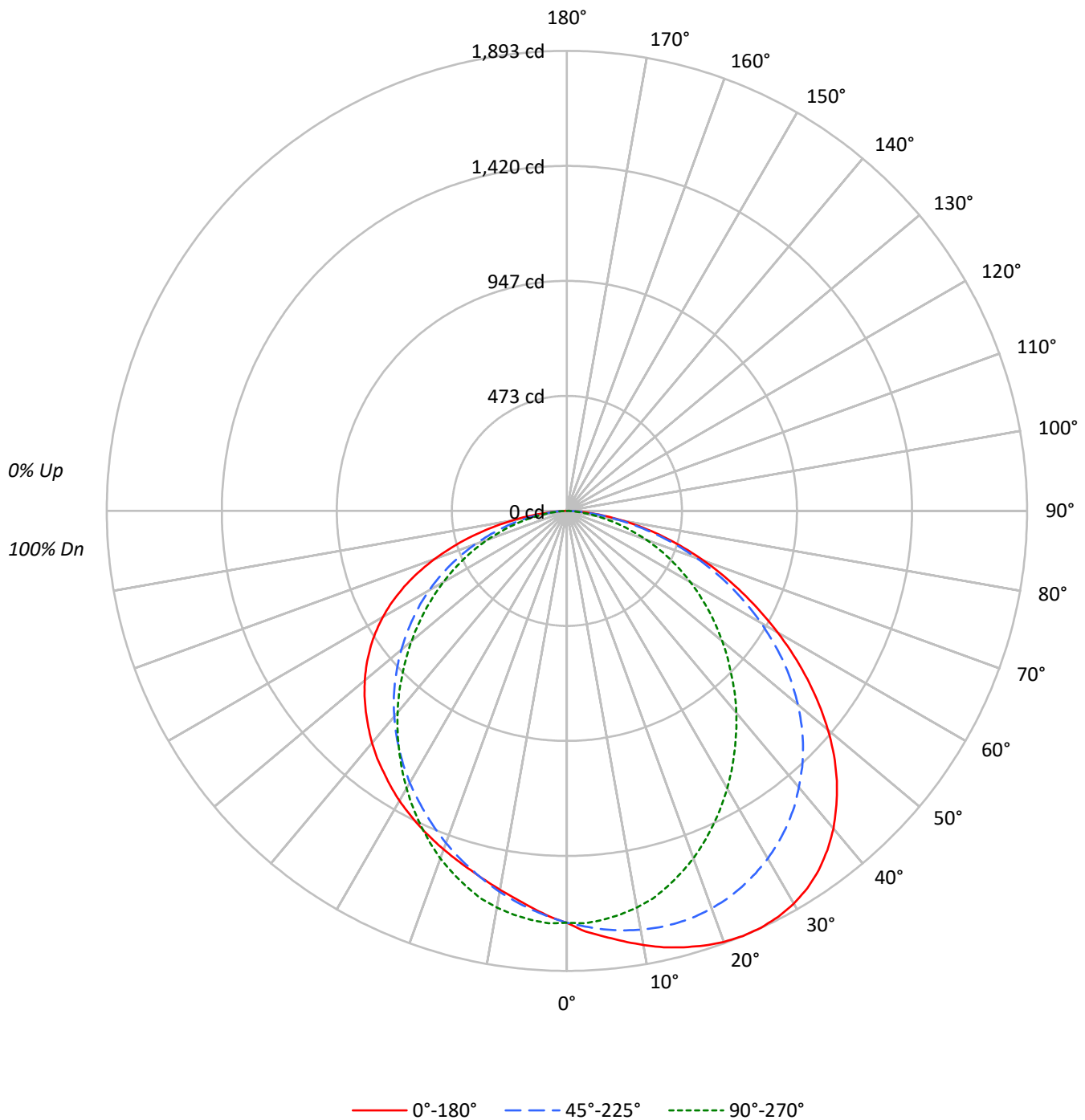
Lumens per Lamp: N/A
Luminaire Lumens: 4985.5 lumens
Efficiency: N/A
Efficacy: 113.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P834219

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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	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	4561	4561	4561
5°	4748	4563	4428
10°	4956	4529	4326
15°	5179	4457	4264
20°	5405	4358	4246
25°	5617	4232	4252
30°	5801	4099	4280
35°	5933	3953	4316
40°	5993	3806	4379
45°	5976	3646	4451
50°	5870	3493	4543
55°	5669	3332	4637
60°	5393	3160	4708
65°	5065	2967	4701
70°	4713	2737	4562
75°	4279	2404	4206
80°	3674	1974	3547
85°	2803	1349	2436

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.7	3.2
10°-20°	464.2	9.3
20°-30°	711.2	14.3
30°-40°	867.9	17.4
40°-50°	907.6	18.2
50°-60°	821.5	16.5
60°-70°	622.1	12.5
70°-80°	346.7	7.0
80°-90°	83.6	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°	1336.1	26.8
0°-40°	2204.0	44.2
0°-60°	3933.1	78.9
0°-90°	4985.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4985.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1695	1695	1695	1695	1695	
5°	1758	1729	1689	1648	1639	169
15°	1859	1756	1600	1525	1530	527
25°	1892	1706	1425	1375	1432	873
35°	1806	1580	1203	1202	1314	1128
45°	1570	1374	958	1000	1170	1208
55°	1208	1091	710	773	988	1078
65°	795	748	466	530	738	789
75°	412	389	231	276	404	437
85°	91	80	44	58	79	109
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°	1694.9	1694.9	1694.9	1694.9	1694.9	1694.9	1694.9	1694.9	1694.9	1694.9	1694.9
2.5°	1732.3	1724.1	1717.5	1720.1	1721.5	1716.3	1711.9	1712.6	1708.2	1716.7	1696.7
5°	1757.8	1750.4	1742.7	1745.6	1742.7	1734.9	1728.6	1726.7	1714.9	1719.7	1699.3
7.5°	1786.4	1778.2	1766.7	1770.1	1763.8	1749.3	1741.2	1736.4	1718.2	1718.6	1696.0
10°	1813.8	1806.7	1791.2	1793.4	1781.9	1762.7	1749.7	1743.0	1717.5	1713.8	1690.4
12.5°	1839.3	1829.7	1813.0	1814.2	1797.5	1771.9	1755.2	1745.6	1712.3	1701.2	1678.2
15°	1859.0	1849.7	1829.7	1829.3	1807.9	1774.5	1755.6	1742.3	1700.0	1682.6	1658.6
17.5°	1875.6	1867.1	1842.3	1841.6	1815.6	1773.4	1750.8	1734.1	1682.3	1660.8	1634.1
20°	1887.5	1879.0	1851.2	1848.6	1817.5	1767.8	1740.8	1719.7	1658.9	1633.4	1603.7
22.5°	1893.1	1884.5	1853.1	1849.3	1813.0	1756.7	1726.4	1701.5	1632.3	1598.9	1568.2
25°	1891.9	1883.8	1848.2	1844.5	1804.5	1740.1	1706.0	1677.5	1598.5	1559.3	1528.9
27.5°	1882.7	1876.4	1839.0	1834.2	1789.0	1717.5	1681.2	1649.7	1561.1	1517.4	1484.4
30°	1866.8	1861.9	1822.3	1817.9	1769.7	1692.6	1652.3	1616.0	1520.7	1471.5	1438.1
32.5°	1841.2	1836.8	1796.7	1792.7	1743.8	1660.8	1618.5	1581.1	1476.7	1422.2	1388.9
35°	1806.0	1803.4	1764.5	1760.1	1710.4	1624.5	1579.6	1538.5	1430.7	1369.2	1337.4
37.5°	1759.7	1759.7	1722.3	1717.5	1668.9	1580.0	1535.9	1492.2	1378.9	1313.7	1282.2
40°	1706.0	1710.8	1672.6	1667.8	1620.8	1532.2	1484.1	1438.1	1322.9	1255.1	1224.4
42.5°	1641.5	1646.0	1614.1	1609.7	1565.6	1477.0	1432.2	1382.2	1264.4	1195.5	1163.6
45°	1570.4	1576.3	1547.8	1544.5	1503.3	1416.6	1373.7	1322.9	1203.3	1133.2	1102.1
47.5°	1491.1	1498.9	1474.1	1472.2	1434.1	1354.8	1310.0	1258.5	1139.2	1068.4	1039.1
50°	1402.2	1413.3	1392.9	1392.9	1358.9	1279.9	1241.0	1189.6	1072.5	1001.7	972.8
52.5°	1307.0	1321.1	1305.9	1306.2	1278.5	1207.7	1167.3	1116.9	1002.8	933.2	906.5
55°	1208.4	1222.2	1212.5	1214.0	1192.1	1127.7	1091.0	1041.0	931.7	863.9	838.7
57.5°	1105.5	1120.3	1114.0	1116.9	1101.8	1044.0	1005.8	962.1	858.4	791.3	769.8
60°	1002.1	1016.2	1012.8	1016.9	1007.3	957.3	922.5	877.3	784.6	720.2	701.3
62.5°	897.6	910.6	909.9	914.3	909.1	867.6	836.5	798.0	708.3	649.0	631.6
65°	795.4	806.5	805.8	810.6	809.5	776.1	748.0	712.8	632.0	577.6	562.4
67.5°	696.1	705.4	702.8	708.3	709.8	683.1	658.7	627.2	559.4	506.4	493.5
70°	599.0	605.3	602.0	605.7	609.0	589.0	568.3	540.5	482.0	435.3	424.5
72.5°	503.8	508.3	503.1	506.8	509.8	495.3	478.3	454.2	405.7	365.3	356.4
75°	411.6	417.9	407.1	410.8	413.1	398.6	388.6	369.0	327.1	296.0	290.1
77.5°	322.3	326.0	320.1	318.6	320.1	309.7	301.9	286.7	255.2	229.7	226.0
80°	237.1	239.3	233.4	231.9	233.0	225.6	219.7	208.6	186.3	167.1	165.6
82.5°	158.9	160.0	154.9	153.4	154.1	151.9	144.9	137.1	126.7	110.4	110.0
85°	90.8	90.8	87.1	85.6	86.3	82.6	80.0	75.9	71.9	60.8	61.5
87.5°	33.3	33.3	31.5	31.1	34.8	30.7	29.6	27.8	28.9	23.0	24.5
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°	1694.9	1694.9	1694.9	1694.9	1694.9	1694.9	1694.9	1694.9	1694.9	1694.9	1694.9
2.5°	1702.3	1698.6	1695.2	1683.7	1688.6	1676.7	1676.0	1671.5	1668.2	1661.9	1670.0
5°	1696.7	1689.3	1679.7	1666.0	1670.0	1656.0	1653.0	1647.8	1643.4	1635.2	1641.5
7.5°	1687.8	1675.6	1660.4	1643.0	1648.6	1631.1	1626.7	1621.1	1617.4	1607.8	1613.4
10°	1674.9	1657.4	1639.7	1618.5	1622.6	1603.7	1598.2	1592.2	1588.9	1580.4	1585.9
12.5°	1654.9	1633.7	1609.7	1586.7	1591.1	1573.4	1565.9	1559.6	1558.5	1551.5	1558.2
15°	1628.9	1599.7	1574.8	1550.4	1555.6	1534.8	1531.5	1525.2	1527.0	1522.2	1530.4
17.5°	1595.9	1562.2	1535.2	1508.9	1514.1	1496.7	1494.1	1491.1	1493.0	1492.2	1501.1
20°	1558.9	1521.9	1490.7	1464.8	1467.8	1454.1	1455.2	1454.4	1458.1	1462.2	1474.4
22.5°	1517.0	1475.2	1442.6	1415.9	1420.4	1408.5	1413.7	1415.2	1421.5	1430.7	1446.3
25°	1470.0	1425.2	1391.1	1365.9	1370.0	1362.2	1371.1	1374.8	1384.8	1400.3	1416.3
27.5°	1420.7	1373.3	1337.0	1312.9	1320.7	1312.9	1326.3	1333.7	1348.9	1365.9	1385.5
30°	1368.5	1319.2	1281.8	1260.3	1267.7	1260.7	1282.2	1292.2	1307.4	1330.7	1354.0
32.5°	1313.7	1261.8	1225.1	1208.4	1213.6	1212.5	1236.6	1247.7	1268.1	1294.8	1319.6
35°	1257.3	1203.3	1166.2	1152.1	1158.4	1159.9	1188.8	1201.8	1224.0	1256.2	1282.9
37.5°	1199.2	1144.0	1107.7	1096.2	1101.8	1107.3	1141.0	1154.0	1179.2	1214.4	1243.6
40°	1138.8	1083.6	1048.0	1038.8	1044.3	1050.3	1086.9	1104.7	1132.1	1170.3	1202.1
42.5°	1077.7	1022.5	988.0	981.4	986.9	998.4	1037.3	1054.0	1082.9	1125.1	1160.3
45°	1015.4	958.0	928.0	922.8	928.7	942.1	980.2	1000.2	1031.0	1077.3	1115.1
47.5°	952.5	896.5	868.0	864.7	870.6	885.4	927.6	945.8	978.4	1027.7	1068.4
50°	888.7	834.3	806.9	805.8	811.3	827.2	867.6	889.1	922.8	978.0	1019.9
52.5°	824.3	772.0	747.2	747.2	752.4	768.7	809.5	831.7	866.5	924.7	971.0
55°	759.8	710.2	686.5	688.3	695.7	709.8	749.4	772.8	808.0	868.4	917.3
57.5°	695.4	648.3	626.8	629.4	636.5	650.5	689.4	715.7	747.6	810.2	860.2
60°	631.6	587.2	568.3	571.3	577.6	591.6	632.0	654.6	686.5	750.2	800.2
62.5°	567.2	526.8	509.0	512.7	518.3	532.4	570.5	592.4	623.9	686.5	736.8
65°	503.5	466.0	450.9	454.6	459.7	472.7	508.6	529.8	559.8	620.9	669.1
67.5°	440.5	406.4	393.8	397.5	401.6	413.8	443.4	466.4	494.6	552.7	598.3
70°	378.2	347.9	336.7	340.5	344.2	355.3	381.2	402.3	428.3	481.6	523.8
72.5°	316.7	287.1	281.6	284.9	287.8	297.5	322.3	339.0	361.6	409.0	445.3
75°	256.7	231.2	227.5	230.8	233.4	240.8	261.5	276.0	294.9	336.0	365.6
77.5°	198.9	177.5	176.0	178.6	181.2	186.3	202.6	217.8	232.7	263.0	289.3
80°	144.9	127.4	127.4	130.0	129.3	135.6	147.1	159.3	170.0	191.9	211.2
82.5°	95.6	81.9	83.7	85.6	86.7	89.3	96.3	105.6	112.2	125.6	138.2
85°	53.0	43.7	45.6	47.0	46.3	49.3	53.0	58.5	61.9	68.2	74.8
87.5°	19.6	16.3	16.7	17.8	18.5	20.0	20.0	23.3	23.7	24.5	25.9
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):

	160°	170°	180°
0°	1694.9	1694.9	1694.9
2.5°	1654.5	1663.4	1670.0
5°	1626.0	1633.4	1639.3
7.5°	1598.2	1604.8	1610.0
10°	1571.9	1579.3	1583.0
12.5°	1544.8	1553.3	1556.3
15°	1518.2	1526.7	1530.4
17.5°	1490.7	1501.9	1505.9
20°	1465.2	1479.3	1482.6
22.5°	1439.2	1453.7	1457.8
25°	1411.1	1428.1	1432.2
27.5°	1381.1	1401.5	1405.5
30°	1351.1	1373.3	1377.4
32.5°	1318.8	1342.9	1346.6
35°	1285.1	1309.2	1313.7
37.5°	1247.7	1274.0	1282.9
40°	1208.8	1237.3	1246.6
42.5°	1168.1	1199.2	1208.8
45°	1124.4	1158.4	1169.5
47.5°	1080.3	1118.8	1128.4
50°	1032.5	1073.6	1085.1
52.5°	982.5	1027.3	1038.8
55°	930.6	975.8	988.4
57.5°	874.3	921.0	934.3
60°	815.4	862.1	874.7
62.5°	755.0	797.2	809.5
65°	687.6	727.2	738.3
67.5°	616.1	652.4	661.6
70°	540.1	571.6	579.8
72.5°	460.9	482.7	493.5
75°	379.0	396.4	404.5
77.5°	296.7	309.0	315.6
80°	216.3	223.4	228.9
82.5°	141.5	144.5	148.6
85°	76.3	76.3	78.9
87.5°	25.9	24.8	25.9
90°	0.0	0.0	0.0

(END OF REPORT)