

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: P834543

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1HI-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834543
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-30-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

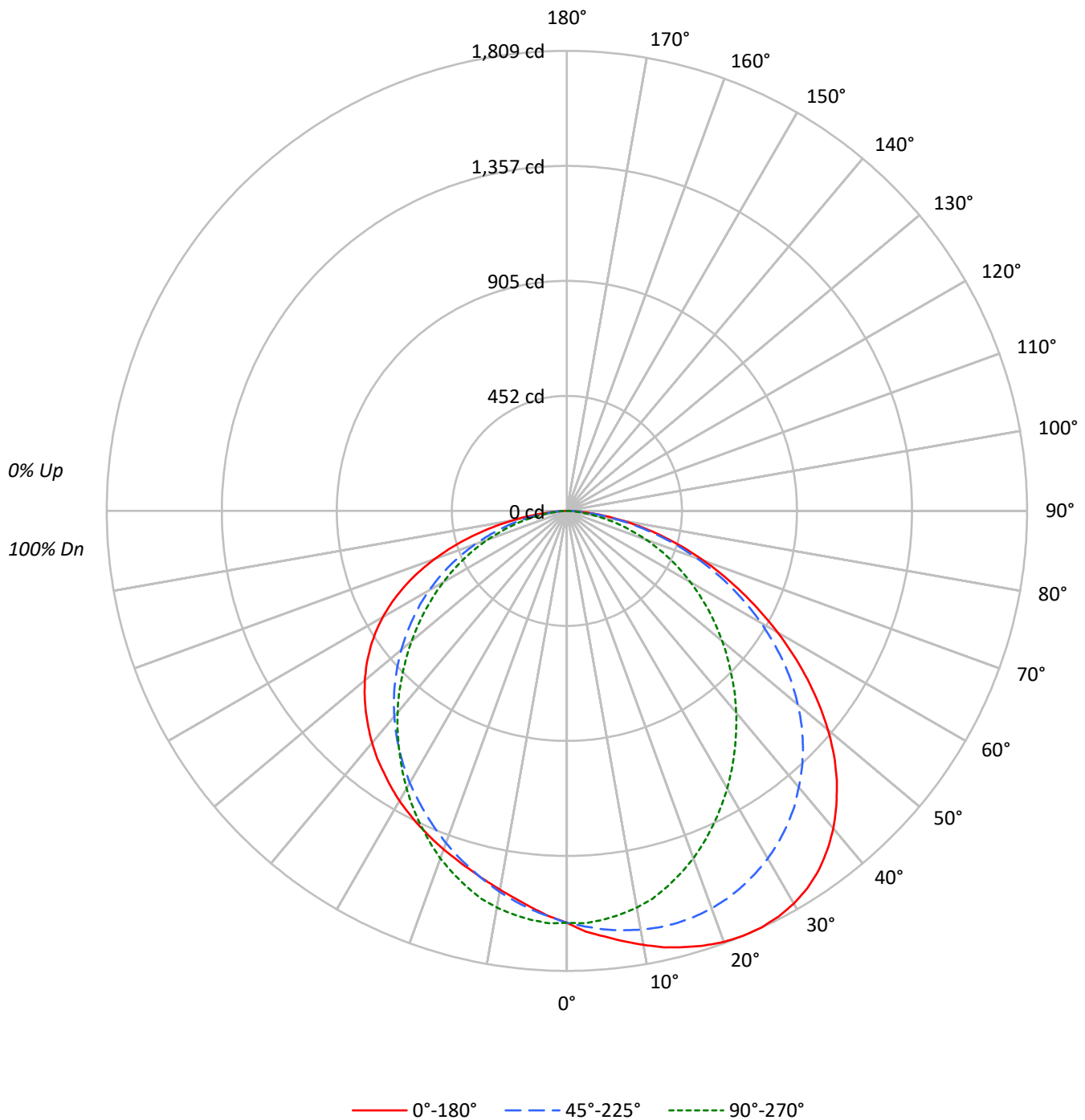
Lumens per Lamp: N/A
Luminaire Lumens: 4763.6 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	2179	2179	2179
5°	2269	2180	2115
10°	2368	2164	2066
15°	2474	2129	2037
20°	2582	2082	2028
25°	2684	2022	2032
30°	2771	1958	2045
35°	2834	1888	2062
40°	2863	1819	2092
45°	2855	1742	2126
50°	2804	1668	2170
55°	2709	1592	2215
60°	2577	1510	2249
65°	2420	1418	2246
70°	2252	1308	2179
75°	2045	1148	2009
80°	1755	944	1695
85°	1338	645	1164

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.6	3.2
10°-20°	443.5	9.3
20°-30°	679.5	14.3
30°-40°	829.2	17.4
40°-50°	867.2	18.2
50°-60°	784.9	16.5
60°-70°	594.4	12.5
70°-80°	331.3	7.0
80°-90°	79.9	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°	1276.6	26.8
0°-40°	2105.9	44.2
0°-60°	3758.0	78.9
0°-90°	4763.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4763.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1619	1619	1619	1619	1619	
5°	1680	1652	1614	1574	1566	162
15°	1776	1678	1528	1457	1462	504
25°	1808	1630	1362	1314	1368	834
35°	1726	1509	1150	1148	1255	1078
45°	1500	1312	915	956	1118	1154
55°	1155	1042	679	738	944	1030
65°	760	715	445	506	706	754
75°	393	371	221	264	386	417
85°	87	76	42	56	75	104
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°	1619.4	1619.4	1619.4	1619.4	1619.4	1619.4	1619.4	1619.4	1619.4	1619.4	1619.4
2.5°	1655.2	1647.4	1641.0	1643.5	1644.9	1640.0	1635.7	1636.4	1632.2	1640.3	1621.2
5°	1679.6	1672.5	1665.1	1667.9	1665.1	1657.7	1651.6	1649.9	1638.5	1643.1	1623.7
7.5°	1706.9	1699.1	1688.1	1691.3	1685.3	1671.5	1663.7	1659.1	1641.7	1642.1	1620.5
10°	1733.0	1726.3	1711.5	1713.6	1702.6	1684.2	1671.8	1665.4	1641.0	1637.5	1615.2
12.5°	1757.5	1748.3	1732.3	1733.4	1717.5	1693.0	1677.1	1667.9	1636.1	1625.4	1603.5
15°	1776.2	1767.4	1748.3	1747.9	1727.4	1695.5	1677.5	1664.7	1624.4	1607.7	1584.7
17.5°	1792.2	1784.0	1760.3	1759.6	1734.8	1694.5	1672.9	1656.9	1607.4	1586.9	1561.4
20°	1803.5	1795.3	1768.8	1766.3	1736.6	1689.2	1663.3	1643.1	1585.1	1560.7	1532.3
22.5°	1808.8	1800.7	1770.6	1767.0	1732.3	1678.5	1649.5	1625.8	1559.6	1527.7	1498.4
25°	1807.7	1799.9	1766.0	1762.4	1724.2	1662.6	1630.0	1602.8	1527.4	1489.9	1460.8
27.5°	1798.9	1792.9	1757.1	1752.5	1709.3	1641.0	1606.3	1576.2	1491.6	1449.9	1418.4
30°	1783.7	1779.1	1741.2	1736.9	1690.9	1617.3	1578.7	1544.0	1453.1	1406.0	1374.1
32.5°	1759.2	1755.0	1716.8	1712.9	1666.1	1586.9	1546.5	1510.8	1410.9	1358.9	1327.0
35°	1725.6	1723.1	1686.0	1681.7	1634.3	1552.2	1509.3	1470.0	1367.0	1308.3	1277.8
37.5°	1681.4	1681.4	1645.6	1641.0	1594.6	1509.7	1467.6	1425.8	1317.5	1255.2	1225.1
40°	1630.0	1634.6	1598.2	1593.6	1548.6	1464.0	1418.0	1374.1	1264.0	1199.3	1169.9
42.5°	1568.5	1572.7	1542.3	1538.0	1495.9	1411.3	1368.5	1320.7	1208.1	1142.3	1111.8
45°	1500.5	1506.2	1478.9	1475.7	1436.4	1353.6	1312.5	1264.0	1149.7	1082.8	1053.1
47.5°	1424.7	1432.2	1408.5	1406.7	1370.2	1294.5	1251.6	1202.4	1088.5	1020.9	992.9
50°	1339.8	1350.4	1330.9	1330.9	1298.4	1223.0	1185.8	1136.6	1024.7	957.1	929.5
52.5°	1248.8	1262.3	1247.8	1248.1	1221.6	1153.9	1115.4	1067.2	958.2	891.7	866.2
55°	1154.7	1167.8	1158.6	1160.0	1139.1	1077.5	1042.4	994.7	890.2	825.5	801.4
57.5°	1056.3	1070.4	1064.4	1067.2	1052.7	997.5	961.0	919.3	820.2	756.1	735.6
60°	957.5	970.9	967.8	971.7	962.4	914.7	881.4	838.2	749.7	688.1	670.1
62.5°	857.7	870.1	869.4	873.6	868.6	829.0	799.3	762.5	676.8	620.2	603.5
65°	760.0	770.6	769.9	774.5	773.4	741.6	714.7	681.0	603.9	551.8	537.3
67.5°	665.1	674.0	671.5	676.8	678.2	652.7	629.4	599.3	534.5	483.9	471.5
70°	572.4	578.4	575.2	578.7	581.9	562.8	543.0	516.4	460.5	415.9	405.7
72.5°	481.4	485.6	480.7	484.2	487.1	473.3	457.0	434.0	387.6	349.0	340.5
75°	393.3	399.3	389.0	392.6	394.7	380.9	371.3	352.6	312.6	282.8	277.2
77.5°	308.0	311.5	305.8	304.4	305.8	295.9	288.5	274.0	243.9	219.5	215.9
80°	226.5	228.7	223.0	221.6	222.6	215.6	209.9	199.3	178.0	159.6	158.2
82.5°	151.9	152.9	148.0	146.5	147.3	145.1	138.4	131.0	121.1	105.5	105.1
85°	86.7	86.7	83.2	81.8	82.5	78.9	76.5	72.6	68.7	58.1	58.8
87.5°	31.9	31.9	30.1	29.7	33.3	29.4	28.3	26.5	27.6	21.9	23.4
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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Peachtree City, GA 30269



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CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-1HI-30-120-EDD

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1619.4	1619.4	1619.4	1619.4	1619.4	1619.4	1619.4	1619.4	1619.4	1619.4	1619.4
2.5°	1626.5	1623.0	1619.8	1608.8	1613.4	1602.1	1601.4	1597.1	1593.9	1587.9	1595.7
5°	1621.2	1614.1	1604.9	1591.8	1595.7	1582.3	1579.4	1574.5	1570.2	1562.4	1568.5
7.5°	1612.7	1601.0	1586.5	1569.9	1575.2	1558.5	1554.3	1549.0	1545.4	1536.2	1541.5
10°	1600.3	1583.7	1566.7	1546.5	1550.4	1532.3	1527.0	1521.4	1518.2	1510.0	1515.4
12.5°	1581.2	1561.0	1538.0	1516.1	1520.3	1503.3	1496.2	1490.2	1489.2	1482.4	1488.8
15°	1556.4	1528.5	1504.7	1481.4	1486.3	1466.5	1463.3	1457.3	1459.1	1454.5	1462.3
17.5°	1524.9	1492.7	1466.9	1441.7	1446.7	1430.0	1427.6	1424.7	1426.5	1425.8	1434.3
20°	1489.5	1454.1	1424.4	1399.6	1402.4	1389.3	1390.4	1389.7	1393.2	1397.1	1408.8
22.5°	1449.5	1409.5	1378.4	1352.9	1357.1	1345.8	1350.8	1352.2	1358.2	1367.0	1381.9
25°	1404.6	1361.7	1329.2	1305.1	1309.0	1301.6	1310.1	1313.6	1323.1	1338.0	1353.2
27.5°	1357.5	1312.2	1277.5	1254.5	1261.9	1254.5	1267.2	1274.3	1288.8	1305.1	1323.9
30°	1307.6	1260.5	1224.7	1204.2	1211.3	1204.6	1225.1	1234.7	1249.2	1271.5	1293.8
32.5°	1255.2	1205.6	1170.6	1154.7	1159.6	1158.6	1181.6	1192.2	1211.6	1237.1	1260.8
35°	1201.4	1149.7	1114.3	1100.9	1106.9	1108.3	1135.9	1148.3	1169.5	1200.3	1225.8
37.5°	1145.8	1093.1	1058.4	1047.4	1052.7	1058.0	1090.2	1102.6	1126.7	1160.3	1188.3
40°	1088.1	1035.4	1001.4	992.5	997.8	1003.5	1038.6	1055.5	1081.7	1118.2	1148.6
42.5°	1029.7	977.0	944.0	937.7	943.0	954.0	991.1	1007.1	1034.7	1075.0	1108.6
45°	970.2	915.4	886.7	881.7	887.4	900.2	936.6	955.7	985.1	1029.4	1065.5
47.5°	910.1	856.6	829.4	826.2	831.8	846.0	886.3	903.7	934.8	981.9	1020.9
50°	849.2	797.1	771.0	769.9	775.2	790.4	829.0	849.5	881.7	934.5	974.5
52.5°	787.6	737.7	714.0	714.0	718.9	734.5	773.4	794.7	827.9	883.5	927.8
55°	726.0	678.6	655.9	657.7	664.8	678.2	716.1	738.4	772.0	829.7	876.4
57.5°	664.4	619.5	598.9	601.4	608.1	621.6	658.7	683.9	714.3	774.1	821.9
60°	603.5	561.0	543.0	545.8	551.8	565.3	603.9	625.5	655.9	716.8	764.6
62.5°	541.9	503.3	486.4	489.9	495.2	508.7	545.1	566.0	596.1	655.9	704.1
65°	481.0	445.3	430.8	434.3	439.3	451.7	486.0	506.2	534.9	593.3	639.3
67.5°	420.9	388.3	376.3	379.8	383.7	395.4	423.7	445.7	472.6	528.1	571.7
70°	361.4	332.4	321.8	325.3	328.8	339.5	364.2	384.4	409.2	460.2	500.5
72.5°	302.6	274.3	269.0	272.2	275.0	284.2	308.0	323.9	345.5	390.8	425.5
75°	245.3	220.9	217.3	220.5	223.0	230.1	249.9	263.7	281.8	321.1	349.4
77.5°	190.1	169.6	168.1	170.6	173.1	178.0	193.6	208.1	222.3	251.3	276.5
80°	138.4	121.8	121.8	124.2	123.5	129.6	140.5	152.2	162.5	183.4	201.8
82.5°	91.3	78.2	80.0	81.8	82.8	85.3	92.0	100.9	107.3	120.0	132.0
85°	50.6	41.8	43.5	45.0	44.2	47.1	50.6	55.9	59.1	65.1	71.5
87.5°	18.8	15.6	15.9	17.0	17.7	19.1	19.1	22.3	22.7	23.4	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):

	160°	170°	180°
0°	1619.4	1619.4	1619.4
2.5°	1580.8	1589.3	1595.7
5°	1553.6	1560.7	1566.3
7.5°	1527.0	1533.4	1538.4
10°	1501.9	1509.0	1512.5
12.5°	1476.1	1484.2	1487.0
15°	1450.6	1458.7	1462.3
17.5°	1424.4	1435.0	1438.9
20°	1400.0	1413.4	1416.6
22.5°	1375.2	1389.0	1392.9
25°	1348.3	1364.6	1368.5
27.5°	1319.6	1339.1	1343.0
30°	1290.9	1312.2	1316.1
32.5°	1260.1	1283.1	1286.7
35°	1227.9	1250.9	1255.2
37.5°	1192.2	1217.3	1225.8
40°	1155.0	1182.3	1191.1
42.5°	1116.1	1145.8	1155.0
45°	1074.3	1106.9	1117.5
47.5°	1032.2	1069.0	1078.2
50°	986.5	1025.8	1036.8
52.5°	938.7	981.6	992.5
55°	889.2	932.4	944.4
57.5°	835.4	880.0	892.7
60°	779.1	823.7	835.7
62.5°	721.4	761.7	773.4
65°	657.0	694.8	705.5
67.5°	588.7	623.3	632.2
70°	516.1	546.2	554.0
72.5°	440.3	461.2	471.5
75°	362.1	378.8	386.5
77.5°	283.5	295.2	301.6
80°	206.7	213.4	218.8
82.5°	135.2	138.0	141.9
85°	72.9	72.9	75.4
87.5°	24.8	23.7	24.8
90°	0.0	0.0	0.0

(END OF REPORT)