

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: P835358

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3STD-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835358
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-LD4-3STD-50-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

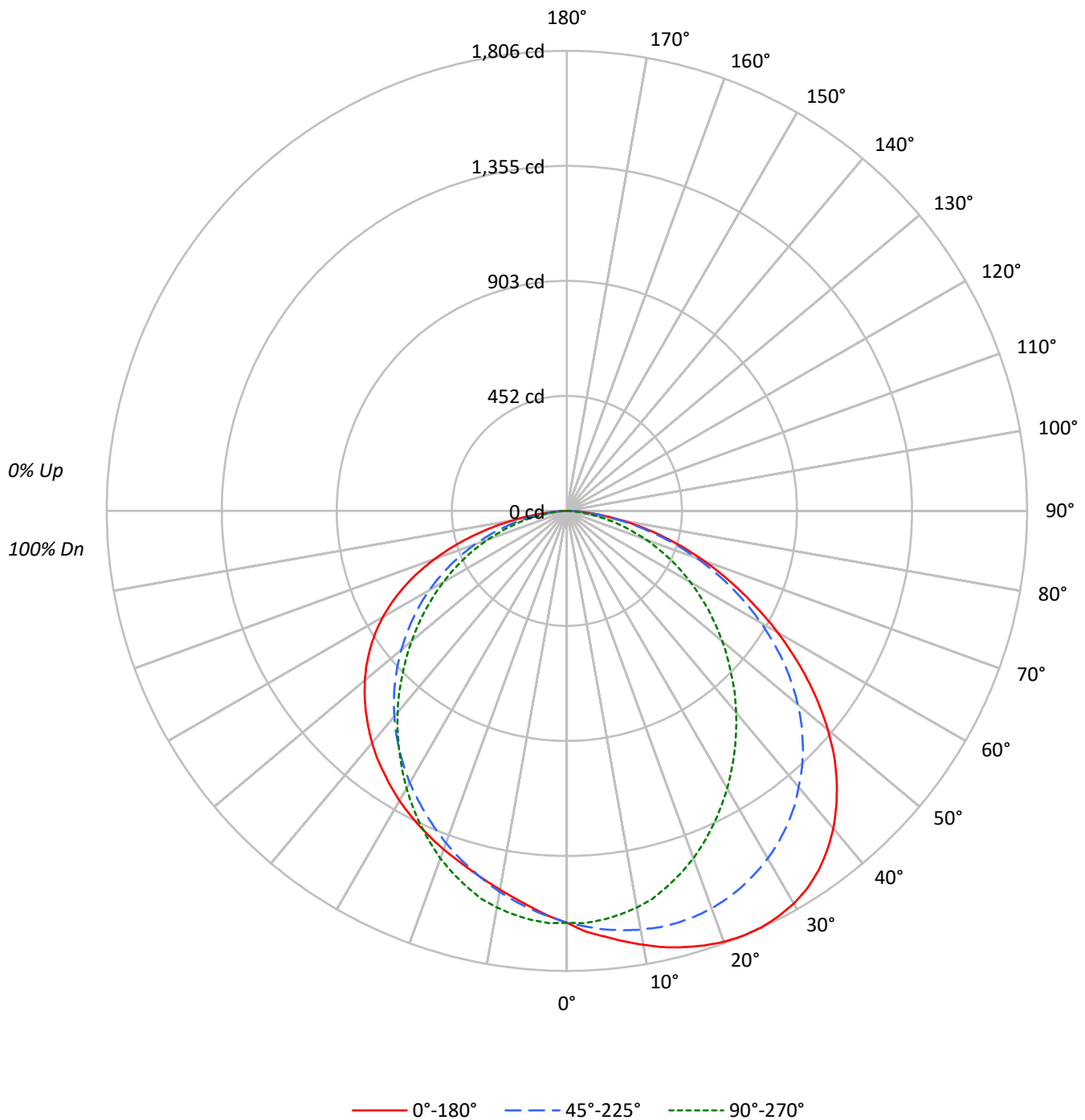
Lumens per Lamp: N/A
Luminaire Lumens: 4755.3 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 50
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°	4350	4350	4350
5°	4529	4353	4224
10°	4727	4320	4126
15°	4940	4251	4067
20°	5155	4157	4050
25°	5358	4036	4056
30°	5533	3910	4082
35°	5659	3770	4116
40°	5716	3631	4177
45°	5700	3478	4245
50°	5599	3332	4333
55°	5408	3178	4423
60°	5144	3014	4490
65°	4831	2830	4484
70°	4496	2611	4351
75°	4082	2293	4012
80°	3504	1884	3384
85°	2674	1288	2325



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.3	3.2
10°-20°	442.8	9.3
20°-30°	678.3	14.3
30°-40°	827.8	17.4
40°-50°	865.7	18.2
50°-60°	783.5	16.5
60°-70°	593.4	12.5
70°-80°	330.7	7.0
80°-90°	79.8	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°	1274.4	26.8
0°-40°	2102.2	44.2
0°-60°	3751.4	78.9
0°-90°	4755.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4755.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1617	1617	1617	1617	1617	
5°	1677	1649	1611	1572	1564	162
15°	1773	1674	1526	1455	1460	503
25°	1805	1627	1359	1311	1366	832
35°	1723	1507	1148	1146	1253	1076
45°	1498	1310	914	954	1116	1152
55°	1153	1041	677	737	943	1029
65°	759	713	444	505	704	753
75°	393	371	220	263	386	416
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°	1616.6	1616.6	1616.6	1616.6	1616.6	1616.6	1616.6	1616.6	1616.6	1616.6	1616.6
2.5°	1652.3	1644.5	1638.1	1640.6	1642.0	1637.1	1632.8	1633.6	1629.3	1637.4	1618.4
5°	1676.7	1669.6	1662.2	1665.0	1662.2	1654.8	1648.7	1647.0	1635.7	1640.3	1620.8
7.5°	1703.9	1696.1	1685.1	1688.3	1682.3	1668.5	1660.8	1656.2	1638.9	1639.2	1617.7
10°	1730.0	1723.3	1708.5	1710.6	1699.6	1681.3	1668.9	1662.5	1638.1	1634.6	1612.4
12.5°	1754.4	1745.2	1729.3	1730.4	1714.5	1690.1	1674.2	1665.0	1633.2	1622.6	1600.7
15°	1773.1	1764.3	1745.2	1744.9	1724.4	1692.6	1674.5	1661.8	1621.5	1604.9	1582.0
17.5°	1789.0	1780.9	1757.2	1756.5	1731.8	1691.5	1670.0	1654.1	1604.6	1584.1	1558.6
20°	1800.3	1792.2	1765.7	1763.2	1733.6	1686.2	1660.4	1640.3	1582.3	1557.9	1529.7
22.5°	1805.6	1797.5	1767.5	1763.9	1729.3	1675.6	1646.6	1623.0	1556.9	1525.1	1495.7
25°	1804.6	1796.8	1762.9	1759.3	1721.2	1659.7	1627.2	1600.0	1524.7	1487.3	1458.3
27.5°	1795.7	1789.7	1754.0	1749.5	1706.3	1638.1	1603.5	1573.5	1489.0	1447.3	1415.9
30°	1780.6	1776.0	1738.1	1733.9	1688.0	1614.5	1576.0	1541.3	1450.5	1403.5	1371.7
32.5°	1756.2	1751.9	1713.8	1709.9	1663.2	1584.1	1543.8	1508.1	1408.5	1356.5	1324.7
35°	1722.6	1720.1	1683.0	1678.8	1631.4	1549.5	1506.7	1467.5	1364.7	1306.0	1275.6
37.5°	1678.4	1678.4	1642.7	1638.1	1591.9	1507.1	1465.0	1423.3	1315.2	1253.0	1223.0
40°	1627.2	1631.8	1595.4	1590.8	1545.9	1461.5	1415.5	1371.7	1261.8	1197.2	1167.8
42.5°	1565.7	1570.0	1539.6	1535.3	1493.3	1408.8	1366.1	1318.4	1206.0	1140.3	1109.9
45°	1497.9	1503.5	1476.3	1473.1	1433.9	1351.2	1310.2	1261.8	1147.7	1080.9	1051.2
47.5°	1422.2	1429.7	1406.0	1404.2	1367.8	1292.2	1249.5	1200.3	1086.6	1019.1	991.2
50°	1337.4	1348.0	1328.6	1328.6	1296.1	1220.8	1183.7	1134.6	1023.0	955.5	927.9
52.5°	1246.6	1260.1	1245.6	1245.9	1219.4	1151.9	1113.4	1065.4	956.5	890.1	864.7
55°	1152.6	1165.7	1156.5	1157.9	1137.1	1075.6	1040.6	992.9	888.7	824.0	800.0
57.5°	1054.4	1068.5	1062.5	1065.4	1050.9	995.8	959.4	917.7	818.7	754.8	734.3
60°	955.8	969.3	966.1	970.0	960.8	913.1	879.9	836.7	748.4	686.9	668.9
62.5°	856.2	868.5	867.8	872.1	867.1	827.6	797.9	761.1	675.6	619.1	602.5
65°	758.7	769.3	768.5	773.1	772.1	740.3	713.4	679.9	602.8	550.9	536.4
67.5°	664.0	672.8	670.3	675.6	677.0	651.6	628.3	598.2	533.6	483.0	470.7
70°	571.4	577.4	574.2	577.7	580.9	561.8	542.0	515.5	459.7	415.2	404.9
72.5°	480.6	484.8	479.9	483.4	486.2	472.4	456.2	433.2	386.9	348.4	339.9
75°	392.6	398.6	388.3	391.9	394.0	380.2	370.7	351.9	312.0	282.3	276.7
77.5°	307.4	311.0	305.3	303.9	305.3	295.4	288.0	273.5	243.5	219.1	215.5
80°	226.1	228.3	222.6	221.2	222.3	215.2	209.5	198.9	177.7	159.4	157.9
82.5°	151.6	152.6	147.7	146.3	147.0	144.9	138.2	130.7	120.8	105.3	104.9
85°	86.6	86.6	83.0	81.6	82.3	78.8	76.3	72.4	68.6	58.0	58.7
87.5°	31.8	31.8	30.0	29.7	33.2	29.3	28.3	26.5	27.6	21.9	23.3
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1616.6	1616.6	1616.6	1616.6	1616.6	1616.6	1616.6	1616.6	1616.6	1616.6	1616.6
2.5°	1623.7	1620.1	1616.9	1606.0	1610.6	1599.3	1598.6	1594.3	1591.2	1585.1	1592.9
5°	1618.4	1611.3	1602.1	1589.0	1592.9	1579.5	1576.7	1571.7	1567.5	1559.7	1565.7
7.5°	1609.9	1598.2	1583.7	1567.1	1572.4	1555.8	1551.6	1546.3	1542.7	1533.6	1538.9
10°	1597.5	1580.9	1563.9	1543.8	1547.7	1529.7	1524.4	1518.7	1515.5	1507.4	1512.7
12.5°	1578.4	1558.3	1535.3	1513.4	1517.7	1500.7	1493.6	1487.6	1486.6	1479.8	1486.2
15°	1553.7	1525.8	1502.1	1478.8	1483.7	1463.9	1460.8	1454.8	1456.5	1451.9	1459.7
17.5°	1522.2	1490.1	1464.3	1439.2	1444.2	1427.6	1425.1	1422.2	1424.0	1423.3	1431.8
20°	1486.9	1451.6	1421.9	1397.2	1400.0	1386.9	1388.0	1387.3	1390.8	1394.7	1406.3
22.5°	1447.0	1407.1	1376.0	1350.5	1354.8	1343.5	1348.4	1349.8	1355.8	1364.7	1379.5
25°	1402.1	1359.4	1326.8	1302.8	1306.7	1299.3	1307.8	1311.3	1320.8	1335.7	1350.9
27.5°	1355.1	1309.9	1275.3	1252.3	1259.7	1252.3	1265.0	1272.1	1286.6	1302.8	1321.5
30°	1305.3	1258.3	1222.6	1202.1	1209.2	1202.5	1223.0	1232.5	1247.0	1269.2	1291.5
32.5°	1253.0	1203.5	1168.5	1152.6	1157.6	1156.5	1179.5	1190.1	1209.5	1235.0	1258.6
35°	1199.3	1147.7	1112.4	1098.9	1104.9	1106.4	1133.9	1146.3	1167.5	1198.2	1223.7
37.5°	1143.8	1091.2	1056.5	1045.6	1050.9	1056.2	1088.3	1100.7	1124.7	1158.3	1186.2
40°	1086.2	1033.6	999.6	990.8	996.1	1001.8	1036.7	1053.7	1079.8	1116.2	1146.6
42.5°	1027.9	975.3	942.4	936.0	941.3	952.3	989.4	1005.3	1032.9	1073.1	1106.7
45°	968.5	913.8	885.2	880.2	885.9	898.6	935.0	954.1	983.4	1027.6	1063.6
47.5°	908.5	855.1	827.9	824.7	830.4	844.5	884.8	902.1	933.2	980.2	1019.1
50°	847.7	795.8	769.6	768.5	773.8	789.0	827.6	848.0	880.2	932.9	972.8
52.5°	786.2	736.4	712.7	712.7	717.7	733.2	772.1	793.3	826.5	882.0	926.1
55°	724.7	677.4	654.8	656.5	663.6	677.0	714.8	737.1	770.7	828.3	874.9
57.5°	663.2	618.4	597.9	600.3	607.1	620.5	657.6	682.7	713.1	772.8	820.5
60°	602.5	560.1	542.0	544.9	550.9	564.3	602.8	624.4	654.8	715.5	763.2
62.5°	541.0	502.5	485.5	489.0	494.3	507.8	544.2	565.0	595.0	654.8	702.8
65°	480.2	444.5	430.0	433.6	438.5	450.9	485.2	505.3	533.9	592.2	638.2
67.5°	420.1	387.6	375.6	379.1	383.0	394.7	423.0	444.9	471.7	527.2	570.7
70°	360.8	331.8	321.2	324.7	328.3	338.9	363.6	383.7	408.5	459.4	499.6
72.5°	302.1	273.8	268.5	271.7	274.6	283.7	307.4	323.3	344.9	390.1	424.7
75°	244.9	220.5	217.0	220.1	222.6	229.7	249.5	263.2	281.3	320.5	348.8
77.5°	189.8	169.3	167.8	170.3	172.8	177.7	193.3	207.8	221.9	250.9	276.0
80°	138.2	121.6	121.6	124.0	123.3	129.3	140.3	151.9	162.2	183.0	201.4
82.5°	91.2	78.1	79.9	81.6	82.7	85.2	91.9	100.7	107.1	119.8	131.8
85°	50.5	41.7	43.5	44.9	44.2	47.0	50.5	55.8	59.0	65.0	71.4
87.5°	18.7	15.5	15.9	17.0	17.7	19.1	19.1	22.3	22.6	23.3	24.7
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°	1616.6	1616.6	1616.6
2.5°	1578.1	1586.6	1592.9
5°	1550.9	1557.9	1563.6
7.5°	1524.4	1530.7	1535.7
10°	1499.3	1506.3	1509.9
12.5°	1473.5	1481.6	1484.4
15°	1448.0	1456.2	1459.7
17.5°	1421.9	1432.5	1436.4
20°	1397.5	1410.9	1414.1
22.5°	1372.8	1386.6	1390.4
25°	1345.9	1362.2	1366.1
27.5°	1317.3	1336.7	1340.6
30°	1288.7	1309.9	1313.8
32.5°	1257.9	1280.9	1284.4
35°	1225.8	1248.8	1253.0
37.5°	1190.1	1215.2	1223.7
40°	1153.0	1180.2	1189.0
42.5°	1114.1	1143.8	1153.0
45°	1072.4	1104.9	1115.5
47.5°	1030.4	1067.1	1076.3
50°	984.8	1024.0	1035.0
52.5°	937.1	979.9	990.8
55°	887.6	930.7	942.7
57.5°	833.9	878.4	891.2
60°	777.7	822.3	834.3
62.5°	720.1	760.4	772.1
65°	655.8	693.6	704.2
67.5°	587.6	622.3	631.1
70°	515.2	545.2	553.0
72.5°	439.6	460.4	470.7
75°	361.5	378.1	385.9
77.5°	283.0	294.7	301.1
80°	206.4	213.1	218.4
82.5°	135.0	137.8	141.7
85°	72.8	72.8	75.3
87.5°	24.7	23.7	24.7
90°	0.0	0.0	0.0

(END OF REPORT)