

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: P835178

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3STD-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835178
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-27-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

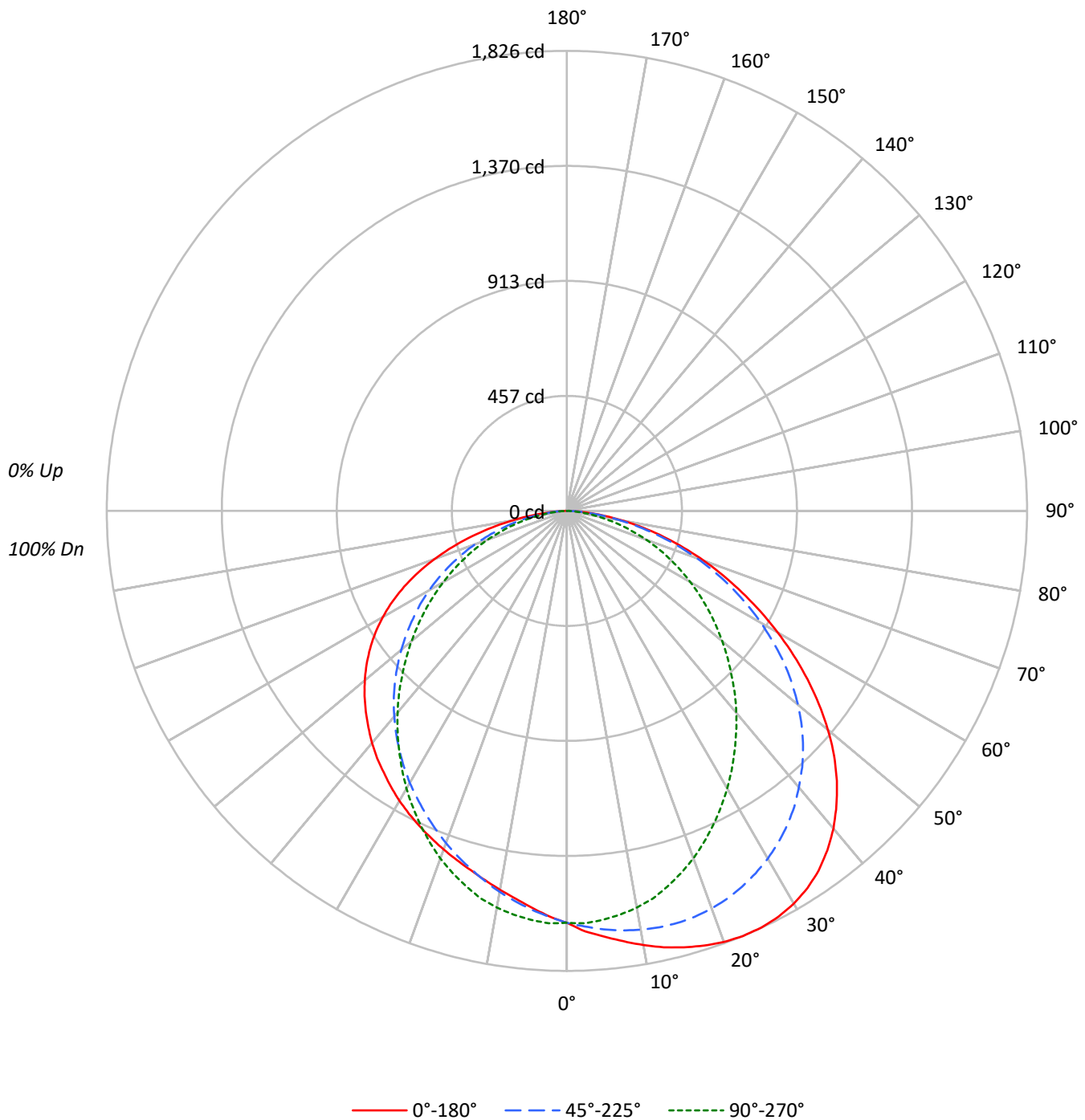
Lumens per Lamp: N/A
Luminaire Lumens: 4809.3 lumens
Efficiency: N/A
Efficacy: 96.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	4400	4400	4400
5°	4581	4402	4272
10°	4781	4369	4173
15°	4996	4299	4113
20°	5214	4204	4096
25°	5419	4082	4102
30°	5596	3954	4129
35°	5723	3813	4163
40°	5781	3672	4224
45°	5765	3517	4293
50°	5663	3369	4382
55°	5469	3214	4473
60°	5203	3048	4541
65°	4886	2863	4535
70°	4547	2640	4401
75°	4128	2319	4057
80°	3544	1905	3423
85°	2705	1303	2350

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.1	3.2
10°-20°	447.8	9.3
20°-30°	686.0	14.3
30°-40°	837.2	17.4
40°-50°	875.5	18.2
50°-60°	792.4	16.5
60°-70°	600.1	12.5
70°-80°	334.4	7.0
80°-90°	80.7	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°	1288.9	26.8
0°-40°	2126.1	44.2
0°-60°	3794.1	78.9
0°-90°	4809.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4809.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1635	1635	1635	1635	1635	
5°	1696	1668	1630	1590	1581	163
15°	1793	1694	1543	1471	1476	509
25°	1825	1646	1375	1326	1382	842
35°	1742	1524	1161	1159	1267	1088
45°	1515	1325	924	965	1128	1166
55°	1166	1052	685	746	954	1040
65°	767	722	450	511	712	761
75°	397	375	223	266	390	421
85°	88	77	42	56	76	105
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°	1635.0	1635.0	1635.0	1635.0	1635.0	1635.0	1635.0	1635.0	1635.0	1635.0	1635.0
2.5°	1671.1	1663.2	1656.8	1659.3	1660.7	1655.7	1651.4	1652.1	1647.8	1656.0	1636.8
5°	1695.7	1688.6	1681.1	1683.9	1681.1	1673.6	1667.5	1665.7	1654.3	1658.9	1639.3
7.5°	1723.2	1715.4	1704.3	1707.5	1701.4	1687.5	1679.6	1675.0	1657.5	1657.8	1636.0
10°	1749.7	1742.9	1727.9	1730.0	1718.9	1700.4	1687.9	1681.4	1656.8	1653.2	1630.7
12.5°	1774.3	1765.0	1749.0	1750.0	1734.0	1709.3	1693.2	1683.9	1651.8	1641.0	1618.9
15°	1793.3	1784.3	1765.0	1764.7	1744.0	1711.8	1693.6	1680.7	1640.0	1623.2	1599.9
17.5°	1809.4	1801.1	1777.2	1776.5	1751.5	1710.7	1688.9	1672.8	1622.8	1602.1	1576.4
20°	1820.8	1812.6	1785.8	1783.3	1753.3	1705.4	1679.3	1658.9	1600.3	1575.6	1547.1
22.5°	1826.2	1817.9	1787.6	1784.0	1749.0	1694.6	1665.3	1641.4	1574.6	1542.4	1512.7
25°	1825.1	1817.2	1782.9	1779.3	1740.7	1678.6	1645.7	1618.2	1542.0	1504.2	1474.9
27.5°	1816.2	1810.1	1774.0	1769.3	1725.7	1656.8	1621.7	1591.4	1506.0	1463.8	1432.0
30°	1800.8	1796.1	1757.9	1753.6	1707.2	1632.8	1593.9	1558.8	1467.0	1419.5	1387.3
32.5°	1776.1	1771.8	1733.2	1729.3	1682.1	1602.1	1561.3	1525.3	1424.5	1371.9	1339.8
35°	1742.2	1739.7	1702.2	1697.9	1650.0	1567.1	1523.8	1484.2	1380.2	1320.8	1290.1
37.5°	1697.5	1697.5	1661.4	1656.8	1609.9	1524.2	1481.7	1439.5	1330.1	1267.2	1236.9
40°	1645.7	1650.3	1613.5	1608.9	1563.5	1478.1	1431.6	1387.3	1276.2	1210.8	1181.1
42.5°	1583.5	1587.8	1557.1	1552.8	1510.2	1424.8	1381.6	1333.3	1219.7	1153.2	1122.5
45°	1514.9	1520.6	1493.1	1489.9	1450.2	1366.6	1325.1	1276.2	1160.7	1093.2	1063.2
47.5°	1438.4	1445.9	1422.0	1420.2	1383.4	1306.9	1263.7	1214.0	1098.9	1030.7	1002.4
50°	1352.6	1363.4	1343.7	1343.7	1310.8	1234.7	1197.2	1147.5	1034.6	966.3	938.5
52.5°	1260.8	1274.4	1259.7	1260.1	1233.3	1165.0	1126.1	1077.5	967.4	900.2	874.5
55°	1165.7	1179.0	1169.7	1171.1	1150.0	1087.8	1052.5	1004.2	898.8	833.4	809.1
57.5°	1066.4	1080.7	1074.6	1077.5	1062.8	1007.1	970.3	928.1	828.0	763.3	742.6
60°	966.7	980.3	977.0	981.0	971.7	923.4	889.8	846.3	756.9	694.7	676.5
62.5°	865.9	878.4	877.7	882.0	877.0	837.0	806.9	769.8	683.3	626.1	609.3
65°	767.3	778.0	777.3	781.9	780.9	748.7	721.5	687.6	609.7	557.1	542.5
67.5°	671.5	680.4	677.9	683.3	684.7	659.0	635.4	605.0	539.6	488.5	476.0
70°	577.9	583.9	580.7	584.3	587.5	568.2	548.2	521.4	464.9	419.9	409.5
72.5°	486.0	490.3	485.3	488.9	491.7	477.8	461.4	438.1	391.3	352.4	343.8
75°	397.0	403.1	392.7	396.3	398.5	384.5	374.9	355.9	315.6	285.5	279.8
77.5°	310.9	314.5	308.8	307.3	308.8	298.8	291.3	276.6	246.2	221.6	218.0
80°	228.7	230.9	225.1	223.7	224.8	217.6	211.9	201.2	179.8	161.2	159.7
82.5°	153.3	154.4	149.4	148.0	148.7	146.5	139.7	132.2	122.2	106.5	106.1
85°	87.6	87.6	84.0	82.6	83.3	79.7	77.2	73.3	69.3	58.6	59.3
87.5°	32.2	32.2	30.4	30.0	33.6	29.7	28.6	26.8	27.9	22.2	23.6
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°	1635.0	1635.0	1635.0	1635.0	1635.0	1635.0	1635.0	1635.0	1635.0	1635.0	1635.0
2.5°	1642.1	1638.5	1635.3	1624.2	1628.9	1617.5	1616.7	1612.5	1609.2	1603.2	1611.0
5°	1636.8	1629.6	1620.3	1607.1	1611.0	1597.4	1594.6	1589.6	1585.3	1577.4	1583.5
7.5°	1628.2	1616.4	1601.7	1584.9	1590.3	1573.5	1569.2	1563.8	1560.3	1551.0	1556.3
10°	1615.7	1598.9	1581.7	1561.3	1565.3	1547.1	1541.7	1536.0	1532.8	1524.5	1529.9
12.5°	1596.4	1576.0	1552.8	1530.6	1534.9	1517.7	1510.6	1504.5	1503.5	1496.7	1503.1
15°	1571.4	1543.1	1519.2	1495.6	1500.6	1480.6	1477.4	1471.3	1473.1	1468.4	1476.3
17.5°	1539.5	1507.0	1480.9	1455.6	1460.6	1443.8	1441.3	1438.4	1440.2	1439.5	1448.1
20°	1503.8	1468.1	1438.1	1413.0	1415.9	1402.7	1403.7	1403.0	1406.6	1410.5	1422.3
22.5°	1463.4	1423.0	1391.6	1365.9	1370.2	1358.7	1363.7	1365.2	1371.2	1380.2	1395.2
25°	1418.0	1374.8	1341.9	1317.6	1321.6	1314.0	1322.6	1326.2	1335.8	1350.9	1366.2
27.5°	1370.5	1324.8	1289.7	1266.5	1274.0	1266.5	1279.4	1286.5	1301.2	1317.6	1336.6
30°	1320.1	1272.6	1236.5	1215.8	1222.9	1216.1	1236.9	1246.5	1261.2	1283.7	1306.2
32.5°	1267.2	1217.2	1181.8	1165.7	1170.7	1169.7	1192.9	1203.6	1223.3	1249.0	1272.9
35°	1212.9	1160.7	1125.0	1111.4	1117.5	1118.9	1146.8	1159.3	1180.7	1211.8	1237.6
37.5°	1156.8	1103.6	1068.5	1057.5	1062.8	1068.2	1100.7	1113.2	1137.5	1171.5	1199.7
40°	1098.6	1045.3	1011.0	1002.1	1007.4	1013.1	1048.5	1065.7	1092.1	1128.9	1159.7
42.5°	1039.6	986.3	953.1	946.7	952.0	963.1	1000.6	1016.7	1044.6	1085.3	1119.3
45°	979.5	924.2	895.2	890.2	895.9	908.8	945.6	964.9	994.6	1039.2	1075.7
47.5°	918.8	864.8	837.3	834.1	839.8	854.1	894.9	912.4	943.8	991.3	1030.7
50°	857.3	804.8	778.4	777.3	782.6	798.0	837.0	857.7	890.2	943.5	983.8
52.5°	795.1	744.8	720.8	720.8	725.8	741.5	780.9	802.3	835.9	892.0	936.7
55°	733.0	685.1	662.2	664.0	671.1	684.7	723.0	745.5	779.4	837.7	884.8
57.5°	670.8	625.4	604.7	607.2	614.0	627.5	665.1	690.4	721.2	781.6	829.8
60°	609.3	566.4	548.2	551.1	557.1	570.7	609.7	631.5	662.2	723.7	771.9
62.5°	547.1	508.2	491.0	494.6	500.0	513.5	550.3	571.4	601.8	662.2	710.8
65°	485.7	449.6	434.9	438.5	443.5	456.0	490.7	511.0	540.0	599.0	645.4
67.5°	424.9	392.0	379.9	383.5	387.4	399.2	427.8	449.9	477.1	533.2	577.2
70°	364.9	335.6	324.8	328.4	332.0	342.7	367.7	388.1	413.1	464.6	505.3
72.5°	305.6	277.0	271.6	274.8	277.7	287.0	310.9	327.0	348.8	394.5	429.6
75°	247.7	223.0	219.4	222.6	225.1	232.3	252.3	266.2	284.5	324.1	352.7
77.5°	191.9	171.2	169.8	172.3	174.8	179.8	195.5	210.1	224.4	253.7	279.1
80°	139.7	122.9	122.9	125.4	124.7	130.8	141.9	153.7	164.0	185.1	203.7
82.5°	92.2	79.0	80.8	82.6	83.6	86.1	92.9	101.9	108.3	121.1	133.3
85°	51.1	42.2	44.0	45.4	44.7	47.5	51.1	56.5	59.7	65.8	72.2
87.5°	18.9	15.7	16.1	17.2	17.9	19.3	19.3	22.5	22.9	23.6	25.0
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°	1635.0	1635.0	1635.0
2.5°	1596.0	1604.6	1611.0
5°	1568.5	1575.6	1581.4
7.5°	1541.7	1548.1	1553.1
10°	1516.3	1523.5	1527.0
12.5°	1490.2	1498.4	1501.3
15°	1464.5	1472.7	1476.3
17.5°	1438.1	1448.8	1452.7
20°	1413.4	1427.0	1430.2
22.5°	1388.4	1402.3	1406.2
25°	1361.2	1377.7	1381.6
27.5°	1332.3	1351.9	1355.9
30°	1303.3	1324.8	1328.7
32.5°	1272.2	1295.5	1299.0
35°	1239.7	1262.9	1267.2
37.5°	1203.6	1229.0	1237.6
40°	1166.1	1193.6	1202.5
42.5°	1126.8	1156.8	1166.1
45°	1084.6	1117.5	1128.2
47.5°	1042.1	1079.3	1088.5
50°	996.0	1035.7	1046.7
52.5°	947.7	991.0	1002.1
55°	897.7	941.3	953.5
57.5°	843.4	888.4	901.3
60°	786.6	831.6	843.7
62.5°	728.3	769.1	780.9
65°	663.3	701.5	712.2
67.5°	594.3	629.3	638.3
70°	521.0	551.4	559.3
72.5°	444.6	465.7	476.0
75°	365.6	382.4	390.2
77.5°	286.3	298.0	304.5
80°	208.7	215.5	220.9
82.5°	136.5	139.4	143.3
85°	73.6	73.6	76.1
87.5°	25.0	23.9	25.0
90°	0.0	0.0	0.0

(END OF REPORT)