

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: P835287

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3HI-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835287
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-LD4-3HI-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

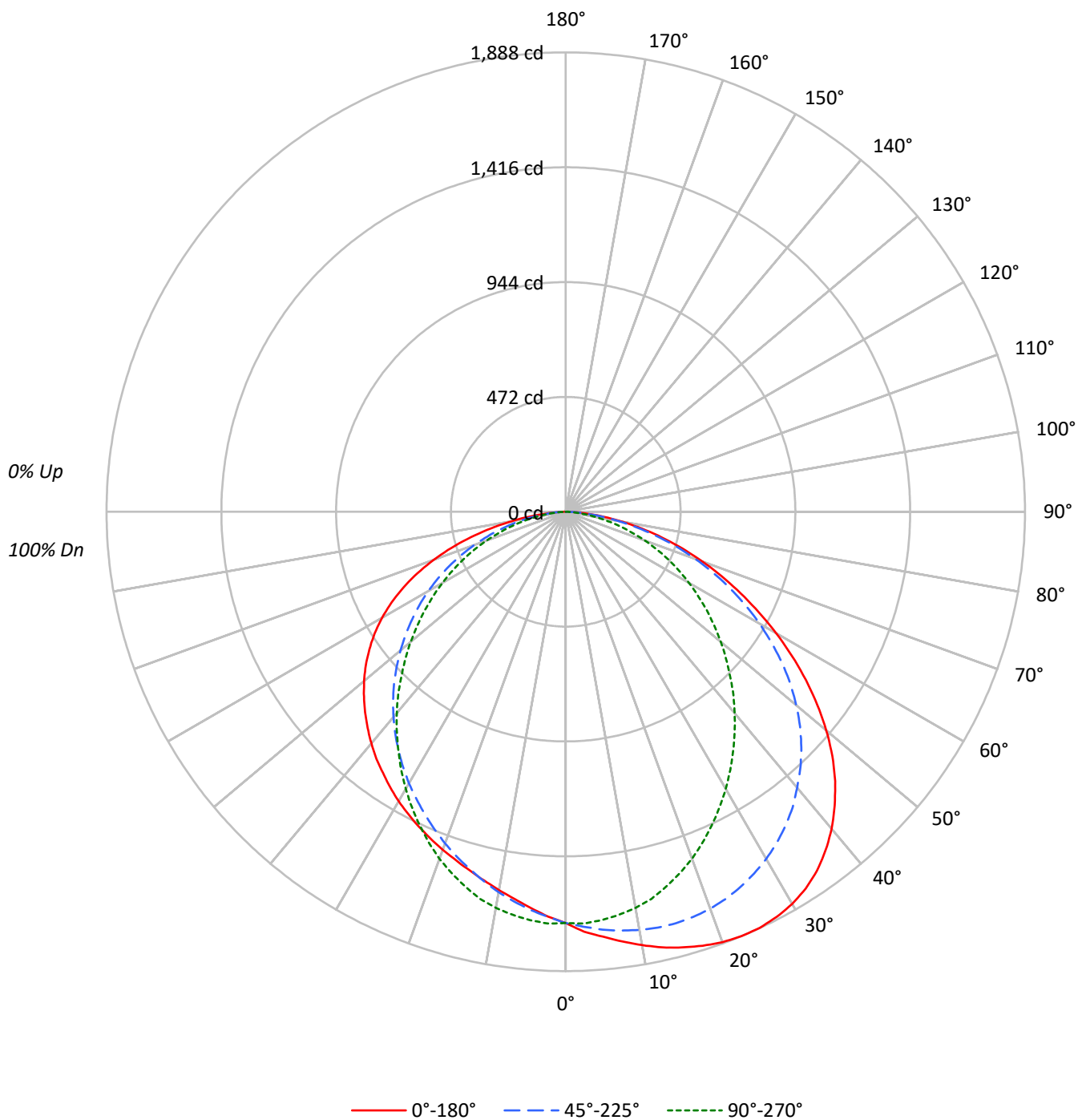
Lumens per Lamp: N/A
Luminaire Lumens: 4971.6 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66
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	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°	4548	4548	4548
5°	4735	4551	4416
10°	4942	4516	4314
15°	5165	4444	4252
20°	5390	4346	4234
25°	5602	4220	4241
30°	5785	4088	4268
35°	5916	3942	4303
40°	5976	3796	4367
45°	5960	3636	4438
50°	5854	3483	4530
55°	5654	3323	4624
60°	5378	3151	4694
65°	5051	2959	4688
70°	4700	2729	4549
75°	4267	2397	4194
80°	3663	1970	3538
85°	2794	1346	2430



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.3	3.2
10°-20°	462.9	9.3
20°-30°	709.2	14.3
30°-40°	865.5	17.4
40°-50°	905.1	18.2
50°-60°	819.2	16.5
60°-70°	620.4	12.5
70°-80°	345.7	7.0
80°-90°	83.4	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°	1332.4	26.8
0°-40°	2197.9	44.2
0°-60°	3922.1	78.9
0°-90°	4971.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4971.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1690	1690	1690	1690	1690	
5°	1753	1724	1685	1643	1635	169
15°	1854	1751	1595	1521	1526	526
25°	1887	1701	1421	1371	1428	870
35°	1801	1575	1200	1198	1310	1125
45°	1566	1370	955	998	1166	1205
55°	1205	1088	708	771	986	1075
65°	793	746	465	528	736	787
75°	410	388	230	275	403	435
85°	90	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°	1690.1	1690.1	1690.1	1690.1	1690.1	1690.1	1690.1	1690.1	1690.1	1690.1	1690.1
2.5°	1727.5	1719.3	1712.7	1715.3	1716.7	1711.6	1707.1	1707.9	1703.4	1711.9	1692.0
5°	1752.9	1745.6	1737.8	1740.8	1737.8	1730.0	1723.8	1721.9	1710.1	1714.9	1694.6
7.5°	1781.4	1773.3	1761.8	1765.1	1758.9	1744.4	1736.3	1731.5	1713.4	1713.8	1691.3
10°	1808.7	1801.7	1786.2	1788.4	1777.0	1757.7	1744.8	1738.2	1712.7	1709.0	1685.7
12.5°	1834.2	1824.6	1808.0	1809.1	1792.5	1767.0	1750.4	1740.8	1707.5	1696.4	1673.5
15°	1853.8	1844.6	1824.6	1824.2	1802.8	1769.6	1750.7	1737.4	1695.3	1678.0	1653.9
17.5°	1870.4	1861.9	1837.2	1836.4	1810.6	1768.5	1745.9	1729.3	1677.6	1656.2	1629.6
20°	1882.2	1873.7	1846.0	1843.5	1812.4	1762.9	1736.0	1714.9	1654.3	1628.8	1599.3
22.5°	1887.8	1879.3	1847.9	1844.2	1808.0	1751.8	1721.5	1696.8	1627.7	1594.5	1563.8
25°	1886.7	1878.6	1843.1	1839.4	1799.5	1735.2	1701.2	1672.8	1594.1	1554.9	1524.6
27.5°	1877.4	1871.2	1833.8	1829.0	1784.0	1712.7	1676.5	1645.1	1556.8	1513.2	1480.3
30°	1861.6	1856.8	1817.2	1812.8	1764.8	1687.9	1647.7	1611.5	1516.5	1467.4	1434.1
32.5°	1836.1	1831.6	1791.7	1787.7	1738.9	1656.2	1614.0	1576.7	1472.5	1418.2	1385.0
35°	1801.0	1798.4	1759.6	1755.2	1705.7	1620.0	1575.2	1534.2	1426.7	1365.4	1333.6
37.5°	1754.8	1754.8	1717.5	1712.7	1664.3	1575.6	1531.7	1488.1	1375.0	1310.0	1278.6
40°	1701.2	1706.0	1668.0	1663.2	1616.3	1528.0	1479.9	1434.1	1319.2	1251.6	1221.0
42.5°	1636.9	1641.4	1609.6	1605.2	1561.2	1472.9	1428.2	1378.3	1260.9	1192.2	1160.4
45°	1566.0	1571.9	1543.5	1540.2	1499.1	1412.7	1369.8	1319.2	1199.9	1130.1	1099.1
47.5°	1487.0	1494.7	1470.0	1468.1	1430.1	1351.0	1306.3	1255.0	1136.0	1065.4	1036.3
50°	1398.3	1409.4	1389.1	1389.1	1355.1	1276.4	1237.6	1186.2	1069.5	998.9	970.1
52.5°	1303.3	1317.4	1302.2	1302.6	1274.9	1204.3	1164.1	1113.8	1000.0	930.6	904.0
55°	1205.1	1218.7	1209.1	1210.6	1188.8	1124.5	1088.0	1038.1	929.1	861.5	836.4
57.5°	1102.4	1117.2	1110.9	1113.8	1098.7	1041.1	1003.0	959.4	856.0	789.1	767.7
60°	999.3	1013.3	1010.0	1014.1	1004.5	954.6	919.9	874.8	782.5	718.2	699.3
62.5°	895.1	908.1	907.3	911.8	906.6	865.2	834.2	795.8	706.3	647.2	629.9
65°	793.2	804.2	803.5	808.3	807.2	774.0	745.9	710.8	630.2	575.9	560.8
67.5°	694.2	703.4	700.8	706.3	707.8	681.2	656.8	625.4	557.8	505.0	492.1
70°	597.4	603.6	600.3	604.0	607.3	587.4	566.7	539.0	480.6	434.1	423.4
72.5°	502.4	506.9	501.7	505.4	508.3	493.9	476.9	452.9	404.5	364.3	355.4
75°	410.4	416.7	406.0	409.7	411.9	397.5	387.5	368.0	326.2	295.2	289.3
77.5°	321.4	325.1	319.2	317.7	319.2	308.8	301.1	285.9	254.5	229.0	225.4
80°	236.4	238.7	232.7	231.3	232.4	225.0	219.1	208.0	185.8	166.6	165.1
82.5°	158.5	159.6	154.4	152.9	153.7	151.5	144.4	136.7	126.3	110.1	109.7
85°	90.5	90.5	86.8	85.3	86.1	82.4	79.8	75.7	71.7	60.6	61.3
87.5°	33.2	33.2	31.4	31.0	34.7	30.7	29.6	27.7	28.8	22.9	24.4
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1690.1	1690.1	1690.1	1690.1	1690.1	1690.1	1690.1	1690.1	1690.1	1690.1	1690.1
2.5°	1697.5	1693.8	1690.5	1679.1	1683.9	1672.0	1671.3	1666.9	1663.5	1657.3	1665.4
5°	1692.0	1684.6	1675.0	1661.3	1665.4	1651.4	1648.4	1643.2	1638.8	1630.7	1636.9
7.5°	1683.1	1670.9	1655.8	1638.4	1644.0	1626.6	1622.2	1616.6	1612.9	1603.3	1608.9
10°	1670.2	1652.8	1635.1	1614.0	1618.1	1599.3	1593.7	1587.8	1584.5	1576.0	1581.5
12.5°	1650.2	1629.2	1605.2	1582.3	1586.7	1569.0	1561.6	1555.3	1554.2	1547.2	1553.8
15°	1624.4	1595.2	1570.4	1546.1	1551.2	1530.5	1527.2	1520.9	1522.8	1518.0	1526.1
17.5°	1591.5	1557.9	1530.9	1504.7	1509.9	1492.5	1489.9	1487.0	1488.8	1488.1	1496.9
20°	1554.6	1517.6	1486.6	1460.7	1463.7	1450.0	1451.1	1450.4	1454.1	1458.1	1470.3
22.5°	1512.8	1471.1	1438.6	1412.0	1416.4	1404.6	1409.7	1411.2	1417.5	1426.7	1442.3
25°	1465.9	1421.2	1387.2	1362.1	1366.2	1358.4	1367.3	1371.0	1380.9	1396.4	1412.3
27.5°	1416.8	1369.5	1333.3	1309.3	1317.0	1309.3	1322.6	1329.9	1345.1	1362.1	1381.7
30°	1364.7	1315.5	1278.2	1256.8	1264.2	1257.2	1278.6	1288.6	1303.7	1327.0	1350.3
32.5°	1310.0	1258.3	1221.7	1205.1	1210.3	1209.1	1233.2	1244.2	1264.6	1291.2	1315.9
35°	1253.8	1199.9	1163.0	1148.9	1155.2	1156.7	1185.5	1198.4	1220.6	1252.7	1279.3
37.5°	1195.8	1140.8	1104.6	1093.1	1098.7	1104.2	1137.8	1150.8	1175.9	1211.0	1240.2
40°	1135.6	1080.6	1045.1	1035.9	1041.4	1047.3	1083.9	1101.6	1129.0	1167.0	1198.8
42.5°	1074.7	1019.6	985.3	978.6	984.2	995.6	1034.4	1051.0	1079.8	1122.0	1157.1
45°	1012.6	955.3	925.4	920.2	926.2	939.5	977.5	997.5	1028.1	1074.3	1112.0
47.5°	949.8	894.0	865.6	862.2	868.2	882.9	925.1	943.2	975.7	1024.8	1065.4
50°	886.3	832.0	804.6	803.5	809.1	824.9	865.2	886.6	920.2	975.3	1017.0
52.5°	822.0	769.9	745.1	745.1	750.3	766.6	807.2	829.4	864.1	922.1	968.3
55°	757.7	708.2	684.6	686.4	693.8	707.8	747.4	770.6	805.7	865.9	914.7
57.5°	693.4	646.5	625.1	627.7	634.7	648.7	687.5	713.7	745.5	807.9	857.8
60°	629.9	585.5	566.7	569.7	575.9	590.0	630.2	652.8	684.6	748.1	798.0
62.5°	565.6	525.3	507.6	511.3	516.8	530.9	568.9	590.7	622.1	684.6	734.8
65°	502.1	464.7	449.6	453.3	458.5	471.4	507.2	528.3	558.2	619.2	667.2
67.5°	439.3	405.3	392.7	396.4	400.5	412.7	442.2	465.1	493.2	551.2	596.6
70°	377.2	346.9	335.8	339.5	343.2	354.3	380.1	401.2	427.1	480.3	522.4
72.5°	315.9	286.3	280.8	284.1	287.0	296.7	321.4	338.0	360.6	407.9	444.1
75°	256.0	230.5	226.8	230.2	232.7	240.1	260.8	275.2	294.1	335.1	364.6
77.5°	198.4	177.0	175.5	178.1	180.7	185.8	202.1	217.2	232.0	262.3	288.5
80°	144.4	127.1	127.1	129.7	128.9	135.2	146.7	158.9	169.6	191.4	210.6
82.5°	95.3	81.6	83.5	85.3	86.4	89.0	96.1	105.3	111.9	125.2	137.8
85°	52.8	43.6	45.4	46.9	46.2	49.1	52.8	58.4	61.7	68.0	74.6
87.5°	19.6	16.3	16.6	17.7	18.5	19.9	19.9	23.3	23.6	24.4	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°	1690.1	1690.1	1690.1
2.5°	1649.9	1658.7	1665.4
5°	1621.4	1628.8	1634.7
7.5°	1593.7	1600.4	1605.5
10°	1567.5	1574.9	1578.6
12.5°	1540.5	1549.0	1552.0
15°	1513.9	1522.4	1526.1
17.5°	1486.6	1497.7	1501.7
20°	1461.1	1475.1	1478.5
22.5°	1435.2	1449.6	1453.7
25°	1407.2	1424.2	1428.2
27.5°	1377.2	1397.6	1401.6
30°	1347.3	1369.5	1373.5
32.5°	1315.2	1339.2	1342.9
35°	1281.6	1305.6	1310.0
37.5°	1244.2	1270.5	1279.3
40°	1205.4	1233.9	1243.1
42.5°	1164.8	1195.8	1205.4
45°	1121.2	1155.2	1166.3
47.5°	1077.3	1115.7	1125.3
50°	1029.6	1070.6	1082.1
52.5°	979.7	1024.4	1035.9
55°	928.0	973.1	985.6
57.5°	871.9	918.4	931.7
60°	813.1	859.7	872.2
62.5°	752.9	795.0	807.2
65°	685.7	725.2	736.3
67.5°	614.4	650.6	659.8
70°	538.6	570.0	578.2
72.5°	459.6	481.4	492.1
75°	377.9	395.3	403.4
77.5°	295.9	308.1	314.8
80°	215.7	222.8	228.3
82.5°	141.1	144.1	148.1
85°	76.1	76.1	78.7
87.5°	25.9	24.8	25.9
90°	0.0	0.0	0.0

(END OF REPORT)