

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: P835214

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3STD-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835214
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-35-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

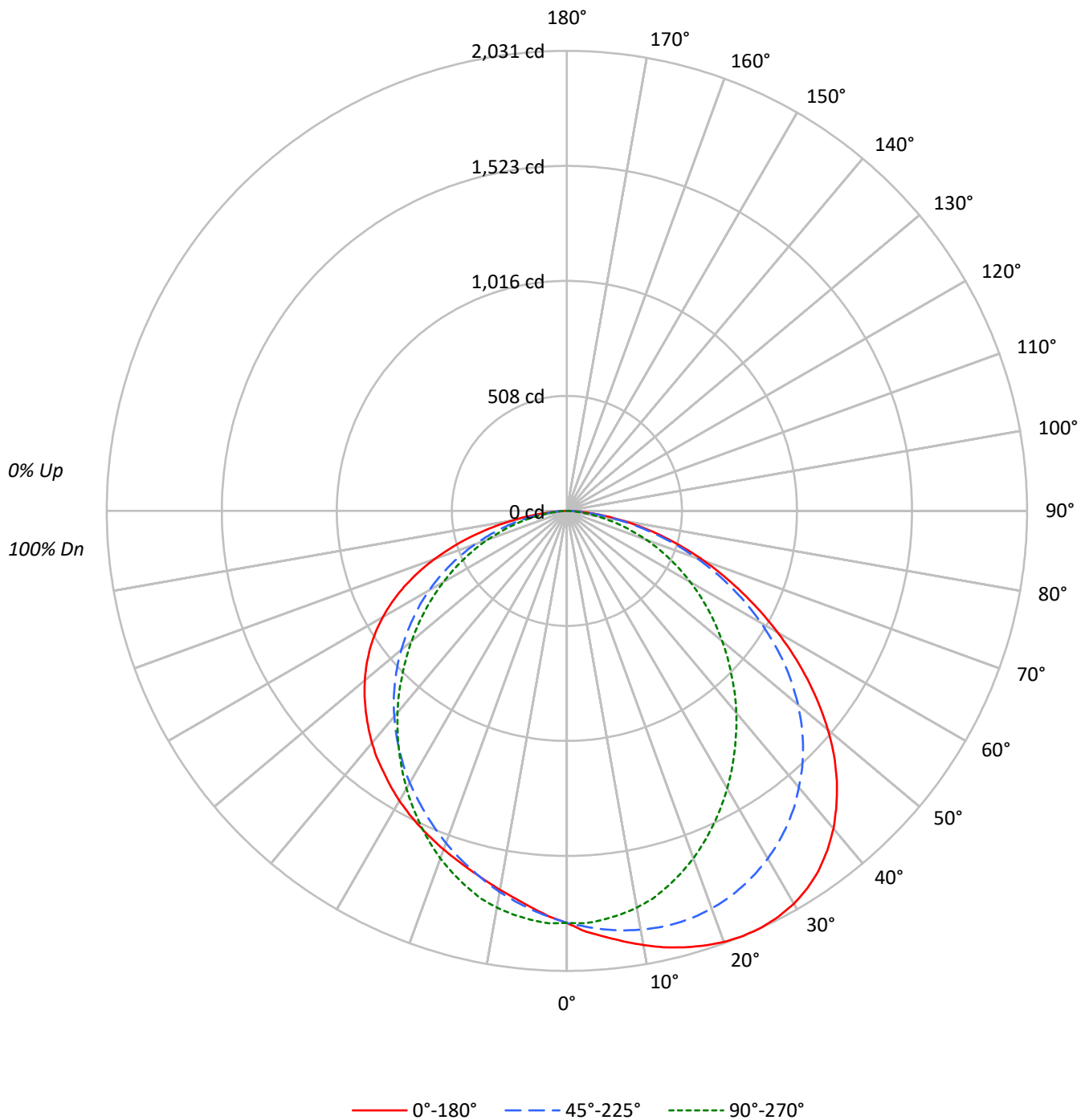
Lumens per Lamp: N/A
Luminaire Lumens: 5349.7 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	4894	4894	4894
5°	5095	4897	4752
10°	5318	4860	4641
15°	5557	4782	4575
20°	5800	4676	4556
25°	6028	4541	4563
30°	6224	4399	4593
35°	6366	4242	4631
40°	6431	4085	4699
45°	6413	3912	4776
50°	6299	3748	4874
55°	6084	3575	4976
60°	5787	3391	5052
65°	5435	3184	5045
70°	5057	2937	4895
75°	4591	2580	4513
80°	3942	2118	3808
85°	3007	1448	2615

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.5	3.2
10°-20°	498.1	9.3
20°-30°	763.1	14.3
30°-40°	931.3	17.4
40°-50°	973.9	18.2
50°-60°	881.5	16.5
60°-70°	667.6	12.5
70°-80°	372.0	7.0
80°-90°	89.7	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°	1433.7	26.8
0°-40°	2365.0	44.2
0°-60°	4220.4	78.9
0°-90°	5349.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5349.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1819	1819	1819	1819	1819	
5°	1886	1855	1813	1768	1759	182
15°	1995	1884	1716	1637	1642	566
25°	2030	1831	1529	1475	1537	937
35°	1938	1695	1291	1290	1410	1210
45°	1685	1474	1028	1073	1255	1296
55°	1297	1171	762	829	1061	1157
65°	854	803	500	568	792	847
75°	442	417	248	296	434	468
85°	97	86	47	63	85	117
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°	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7
2.5°	1858.8	1850.1	1842.9	1845.7	1847.3	1841.7	1837.0	1837.7	1833.0	1842.1	1820.7
5°	1886.2	1878.3	1869.9	1873.1	1869.9	1861.6	1854.8	1852.9	1840.1	1845.3	1823.4
7.5°	1916.9	1908.1	1895.8	1899.4	1892.6	1877.1	1868.4	1863.2	1843.7	1844.1	1819.9
10°	1946.3	1938.7	1922.0	1924.4	1912.1	1891.4	1877.5	1870.3	1842.9	1838.9	1813.9
12.5°	1973.7	1963.4	1945.5	1946.7	1928.8	1901.4	1883.5	1873.1	1837.4	1825.4	1800.8
15°	1994.8	1984.8	1963.4	1963.0	1939.9	1904.1	1883.9	1869.6	1824.2	1805.6	1779.7
17.5°	2012.7	2003.5	1976.9	1976.1	1948.3	1902.9	1878.7	1860.8	1805.2	1782.1	1753.5
20°	2025.4	2016.2	1986.4	1983.6	1950.2	1897.0	1868.0	1845.3	1780.1	1752.7	1720.9
22.5°	2031.3	2022.2	1988.4	1984.4	1945.5	1885.1	1852.5	1825.8	1751.5	1715.7	1682.7
25°	2030.2	2021.4	1983.2	1979.3	1936.3	1867.2	1830.6	1800.0	1715.3	1673.2	1640.6
27.5°	2020.2	2013.5	1973.3	1968.1	1919.6	1842.9	1804.0	1770.2	1675.2	1628.3	1592.9
30°	2003.1	1998.0	1955.4	1950.6	1899.0	1816.3	1773.0	1734.0	1631.8	1579.0	1543.2
32.5°	1975.7	1970.9	1928.0	1923.6	1871.1	1782.1	1736.8	1696.6	1584.5	1526.1	1490.3
35°	1937.9	1935.1	1893.4	1888.6	1835.4	1743.1	1695.0	1650.9	1535.2	1469.2	1435.1
37.5°	1888.2	1888.2	1848.1	1842.9	1790.8	1695.4	1648.1	1601.2	1479.6	1409.6	1375.8
40°	1830.6	1835.8	1794.8	1789.6	1739.2	1644.2	1592.5	1543.2	1419.6	1346.8	1313.8
42.5°	1761.4	1766.2	1732.0	1727.2	1679.9	1584.9	1536.8	1483.2	1356.7	1282.8	1248.6
45°	1685.1	1691.5	1660.9	1657.3	1613.1	1520.1	1474.0	1419.6	1291.2	1216.0	1182.6
47.5°	1600.0	1608.4	1581.7	1579.8	1538.8	1453.7	1405.6	1350.4	1222.4	1146.5	1115.1
50°	1504.6	1516.6	1494.7	1494.7	1458.1	1373.4	1331.7	1276.4	1150.8	1074.9	1043.9
52.5°	1402.5	1417.6	1401.3	1401.7	1371.9	1295.9	1252.6	1198.5	1076.1	1001.4	972.7
55°	1296.7	1311.4	1301.1	1302.7	1279.2	1210.1	1170.7	1117.0	999.8	927.0	900.0
57.5°	1186.2	1202.1	1195.4	1198.5	1182.2	1120.2	1079.3	1032.4	921.1	849.1	826.1
60°	1075.3	1090.4	1086.8	1091.2	1080.9	1027.2	989.8	941.3	842.0	772.8	752.5
62.5°	963.2	977.1	976.3	981.1	975.5	931.0	897.6	856.3	760.1	696.5	677.8
65°	853.5	865.4	864.6	869.8	868.6	832.8	802.6	764.8	678.2	619.7	603.4
67.5°	746.9	756.9	754.1	760.1	761.7	733.0	706.8	673.0	600.3	543.4	529.5
70°	642.8	649.6	646.0	650.0	653.5	632.1	609.8	580.0	517.2	467.1	455.6
72.5°	540.6	545.4	539.8	543.8	547.0	531.5	513.2	487.4	435.3	392.0	382.4
75°	441.6	448.4	436.9	440.9	443.2	427.7	417.0	395.9	351.0	317.6	311.3
77.5°	345.8	349.8	343.5	341.9	343.5	332.3	324.0	307.7	273.9	246.5	242.5
80°	254.4	256.8	250.4	248.8	250.0	242.1	235.7	223.8	200.0	179.3	177.7
82.5°	170.5	171.7	166.2	164.6	165.4	163.0	155.4	147.1	136.0	118.5	118.1
85°	97.4	97.4	93.4	91.8	92.6	88.6	85.9	81.5	77.1	65.2	66.0
87.5°	35.8	35.8	33.8	33.4	37.4	33.0	31.8	29.8	31.0	24.6	26.2
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°	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7
2.5°	1826.6	1822.6	1819.1	1806.7	1811.9	1799.2	1798.4	1793.6	1790.0	1783.3	1792.0
5°	1820.7	1812.7	1802.4	1787.7	1792.0	1776.9	1773.7	1768.2	1763.4	1754.7	1761.4
7.5°	1811.1	1798.0	1781.7	1763.0	1769.0	1750.3	1745.5	1739.6	1735.6	1725.3	1731.2
10°	1797.2	1778.5	1759.4	1736.8	1741.2	1720.9	1714.9	1708.6	1705.0	1695.8	1701.8
12.5°	1775.7	1753.1	1727.2	1702.6	1707.4	1688.3	1680.3	1673.6	1672.4	1664.8	1672.0
15°	1747.9	1716.5	1689.9	1663.6	1669.2	1646.9	1643.4	1636.6	1638.6	1633.4	1642.2
17.5°	1712.5	1676.4	1647.3	1619.1	1624.7	1606.0	1603.2	1600.0	1602.0	1601.2	1610.8
20°	1672.8	1633.0	1599.6	1571.8	1575.0	1560.3	1561.5	1560.7	1564.7	1569.0	1582.1
22.5°	1627.9	1582.9	1548.0	1519.3	1524.1	1511.4	1516.9	1518.5	1525.3	1535.2	1551.9
25°	1577.4	1529.3	1492.7	1465.7	1470.0	1461.7	1471.2	1475.2	1485.9	1502.6	1519.7
27.5°	1524.5	1473.6	1434.7	1408.8	1417.2	1408.8	1423.1	1431.1	1447.4	1465.7	1486.7
30°	1468.5	1415.6	1375.4	1352.4	1360.3	1352.8	1375.8	1386.6	1402.9	1427.9	1452.9
32.5°	1409.6	1354.0	1314.6	1296.7	1302.3	1301.1	1326.9	1338.9	1360.7	1389.3	1416.0
35°	1349.2	1291.2	1251.4	1236.3	1243.1	1244.6	1275.7	1289.6	1313.4	1348.0	1376.6
37.5°	1286.8	1227.6	1188.6	1176.3	1182.2	1188.2	1224.4	1238.3	1265.3	1303.1	1334.5
40°	1222.0	1162.8	1124.6	1114.7	1120.6	1127.0	1166.3	1185.4	1214.8	1255.8	1290.0
42.5°	1156.4	1097.2	1060.2	1053.0	1059.0	1071.3	1113.1	1131.0	1162.0	1207.3	1245.0
45°	1089.6	1028.0	995.8	990.2	996.6	1010.9	1051.8	1073.3	1106.3	1156.0	1196.5
47.5°	1022.0	962.0	931.4	927.8	934.2	950.1	995.4	1014.9	1049.9	1102.7	1146.5
50°	953.7	895.2	865.8	864.6	870.6	887.7	931.0	954.1	990.2	1049.5	1094.4
52.5°	884.5	828.4	801.8	801.8	807.4	824.9	868.6	892.4	929.8	992.2	1041.9
55°	815.3	762.1	736.6	738.6	746.5	761.7	804.2	829.2	867.0	931.8	984.3
57.5°	746.2	695.7	672.6	675.4	682.9	698.1	739.8	768.0	802.2	869.4	923.0
60°	677.8	630.1	609.8	613.0	619.7	634.8	678.2	702.4	736.6	805.0	858.7
62.5°	608.6	565.3	546.2	550.2	556.1	571.2	612.2	635.6	669.4	736.6	790.7
65°	540.2	500.1	483.8	487.8	493.3	507.2	545.8	568.5	600.7	666.2	717.9
67.5°	472.7	436.1	422.6	426.5	430.9	444.0	475.8	500.5	530.7	593.1	642.0
70°	405.9	373.3	361.3	365.3	369.3	381.2	409.1	431.7	459.5	516.8	562.1
72.5°	339.9	308.1	302.1	305.7	308.9	319.2	345.8	363.7	388.0	438.9	477.8
75°	275.5	248.1	244.1	247.7	250.4	258.4	280.7	296.2	316.4	360.6	392.4
77.5°	213.5	190.4	188.8	191.6	194.4	200.0	217.4	233.7	249.6	282.2	310.5
80°	155.4	136.7	136.7	139.5	138.7	145.5	157.8	170.9	182.5	205.9	226.6
82.5°	102.6	87.9	89.8	91.8	93.0	95.8	103.4	113.3	120.4	134.8	148.3
85°	56.8	46.9	48.9	50.5	49.7	52.9	56.8	62.8	66.4	73.1	80.3
87.5°	21.1	17.5	17.9	19.1	19.9	21.5	21.5	25.0	25.4	26.2	27.8
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°	1818.7	1818.7	1818.7
2.5°	1775.3	1784.9	1792.0
5°	1744.7	1752.7	1759.0
7.5°	1714.9	1722.1	1727.6
10°	1686.7	1694.6	1698.6
12.5°	1657.7	1666.8	1670.0
15°	1629.1	1638.2	1642.2
17.5°	1599.6	1611.6	1615.9
20°	1572.2	1587.3	1590.9
22.5°	1544.4	1559.9	1564.3
25°	1514.2	1532.5	1536.8
27.5°	1482.0	1503.8	1508.2
30°	1449.8	1473.6	1478.0
32.5°	1415.2	1441.0	1445.0
35°	1379.0	1404.8	1409.6
37.5°	1338.9	1367.1	1376.6
40°	1297.1	1327.7	1337.7
42.5°	1253.4	1286.8	1297.1
45°	1206.5	1243.1	1255.0
47.5°	1159.2	1200.5	1210.9
50°	1107.9	1152.0	1164.3
52.5°	1054.2	1102.3	1114.7
55°	998.6	1047.1	1060.6
57.5°	938.2	988.2	1002.6
60°	874.9	925.0	938.6
62.5°	810.2	855.5	868.6
65°	737.8	780.3	792.3
67.5°	661.1	700.0	710.0
70°	579.6	613.4	622.1
72.5°	494.5	518.0	529.5
75°	406.7	425.3	434.1
77.5°	318.4	331.5	338.7
80°	232.2	239.7	245.7
82.5°	151.9	155.0	159.4
85°	81.9	81.9	84.7
87.5°	27.8	26.6	27.8
90°	0.0	0.0	0.0

(END OF REPORT)