

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: P835272

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4HI-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835272
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-LD4-4HI-20-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

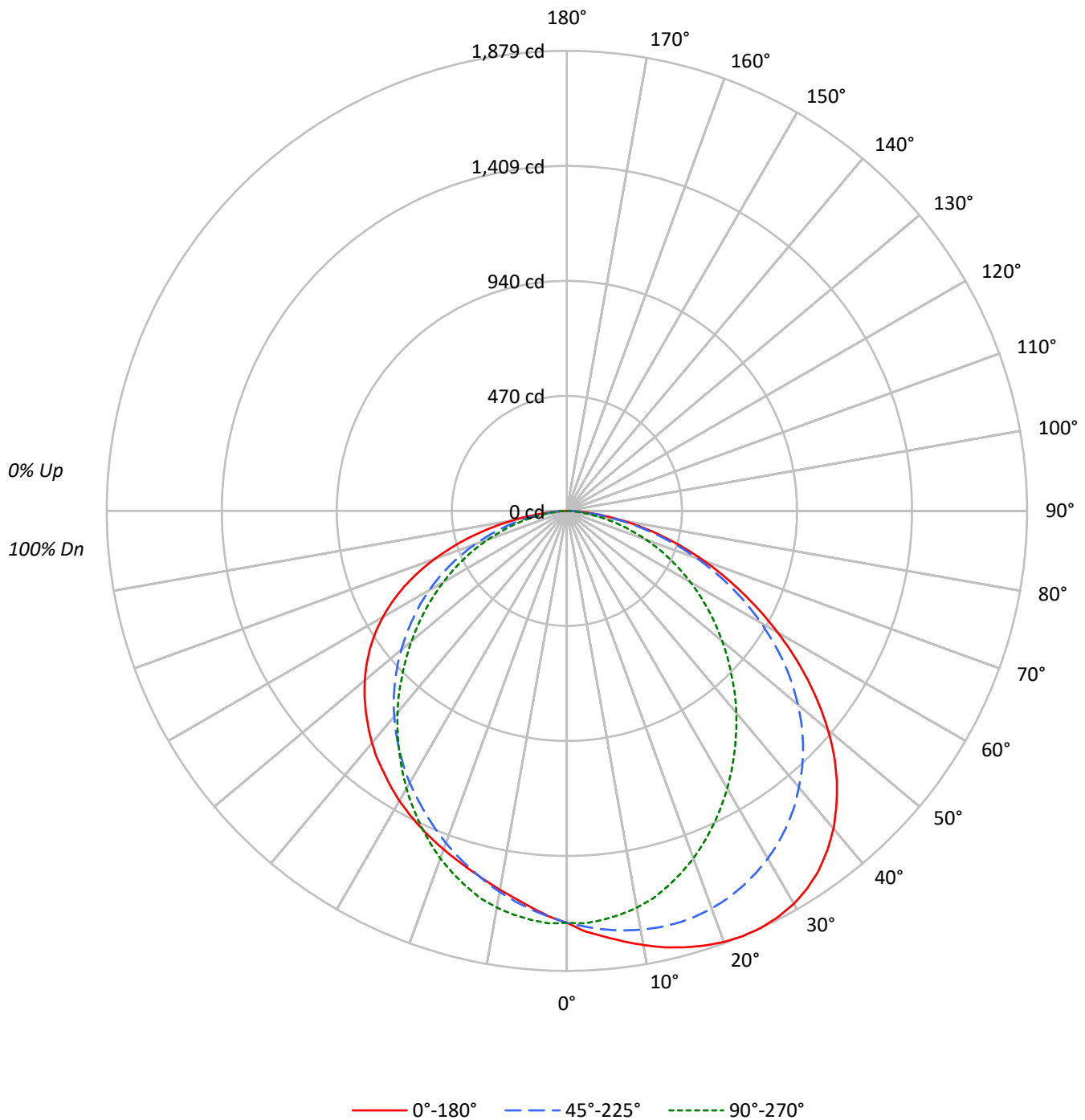
Lumens per Lamp: N/A
Luminaire Lumens: 4949.2 lumens
Efficiency: N/A
Efficacy: 56.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 88
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°	4528	4528	4528
5°	4714	4530	4396
10°	4920	4496	4294
15°	5141	4424	4232
20°	5366	4326	4215
25°	5577	4201	4222
30°	5758	4069	4249
35°	5889	3924	4284
40°	5949	3779	4347
45°	5933	3619	4418
50°	5827	3467	4510
55°	5628	3308	4603
60°	5354	3137	4673
65°	5028	2946	4667
70°	4679	2717	4528
75°	4248	2386	4175
80°	3648	1960	3522
85°	2782	1340	2418

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.6	3.2
10°-20°	460.8	9.3
20°-30°	706.0	14.3
30°-40°	861.6	17.4
40°-50°	901.0	18.2
50°-60°	815.5	16.5
60°-70°	617.6	12.5
70°-80°	344.2	7.0
80°-90°	83.0	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°	1326.4	26.8
0°-40°	2187.9	44.2
0°-60°	3904.4	78.9
0°-90°	4949.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4949.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1682	1682	1682	1682	1682	
5°	1745	1716	1677	1636	1627	168
15°	1845	1743	1588	1514	1519	523
25°	1878	1694	1415	1365	1422	866
35°	1793	1568	1194	1193	1304	1120
45°	1559	1364	951	993	1161	1199
55°	1200	1083	705	767	981	1070
65°	790	742	463	526	733	783
75°	409	386	230	274	402	433
85°	90	79	43	58	78	108
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°	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5
2.5°	1719.7	1711.6	1704.9	1707.5	1709.0	1703.8	1699.4	1700.2	1695.8	1704.2	1684.4
5°	1745.0	1737.7	1730.0	1732.9	1730.0	1722.2	1716.0	1714.1	1702.4	1707.2	1686.9
7.5°	1773.3	1765.3	1753.9	1757.2	1750.9	1736.6	1728.5	1723.7	1705.7	1706.0	1683.6
10°	1800.6	1793.6	1778.1	1780.3	1768.9	1749.8	1736.9	1730.3	1704.9	1701.3	1678.1
12.5°	1825.9	1816.4	1799.8	1800.9	1784.4	1759.0	1742.5	1732.9	1699.8	1688.8	1666.0
15°	1845.4	1836.2	1816.4	1816.0	1794.7	1761.6	1742.8	1729.6	1687.7	1670.4	1646.5
17.5°	1862.0	1853.5	1828.9	1828.1	1802.4	1760.5	1738.0	1721.5	1670.0	1648.7	1622.2
20°	1873.7	1865.3	1837.7	1835.1	1804.2	1755.0	1728.1	1707.2	1646.8	1621.5	1592.0
22.5°	1879.3	1870.8	1839.5	1835.9	1799.8	1743.9	1713.8	1689.1	1620.4	1587.3	1556.7
25°	1878.2	1870.1	1834.8	1831.1	1791.4	1727.4	1693.5	1665.2	1586.9	1547.9	1517.8
27.5°	1869.0	1862.7	1825.6	1820.8	1775.9	1704.9	1668.9	1637.6	1549.7	1506.4	1473.6
30°	1853.2	1848.4	1809.0	1804.6	1756.8	1680.3	1640.2	1604.2	1509.7	1460.8	1427.7
32.5°	1827.8	1823.4	1783.6	1779.6	1731.1	1648.7	1606.8	1569.6	1465.9	1411.8	1378.7
35°	1792.8	1790.3	1751.7	1747.2	1698.0	1612.6	1568.1	1527.3	1420.3	1359.2	1327.6
37.5°	1746.9	1746.9	1709.7	1704.9	1656.8	1568.5	1524.7	1481.3	1368.8	1304.1	1272.8
40°	1693.5	1698.3	1660.4	1655.7	1609.0	1521.1	1473.3	1427.7	1313.3	1246.0	1215.5
42.5°	1629.6	1634.0	1602.3	1597.9	1554.2	1466.3	1421.8	1372.1	1255.2	1186.8	1155.1
45°	1558.9	1564.8	1536.5	1533.2	1492.4	1406.3	1363.7	1313.3	1194.5	1125.0	1094.1
47.5°	1480.2	1488.0	1463.3	1461.5	1423.6	1344.9	1300.4	1249.3	1130.9	1060.6	1031.6
50°	1392.0	1403.0	1382.8	1382.8	1349.0	1270.6	1232.0	1180.9	1064.7	994.4	965.7
52.5°	1297.5	1311.4	1296.4	1296.7	1269.1	1198.9	1158.8	1108.8	995.5	926.4	899.9
55°	1199.6	1213.2	1203.7	1205.2	1183.5	1119.5	1083.1	1033.4	924.9	857.6	832.6
57.5°	1097.4	1112.1	1105.9	1108.8	1093.7	1036.4	998.5	955.1	852.1	785.5	764.2
60°	994.8	1008.8	1005.5	1009.5	999.9	950.3	915.7	870.9	778.9	714.9	696.2
62.5°	891.1	904.0	903.2	907.6	902.5	861.3	830.4	792.2	703.2	644.3	627.0
65°	789.6	800.6	799.9	804.7	803.6	770.5	742.5	707.6	627.4	573.3	558.3
67.5°	691.0	700.2	697.6	703.2	704.6	678.2	653.9	622.6	555.3	502.7	489.9
70°	594.7	600.9	597.6	601.3	604.6	584.7	564.1	536.6	478.5	432.1	421.5
72.5°	500.2	504.6	499.4	503.1	506.0	491.7	474.8	450.9	402.7	362.6	353.8
75°	408.6	414.8	404.2	407.8	410.1	395.7	385.8	366.3	324.7	293.8	288.0
77.5°	320.0	323.6	317.7	316.3	317.7	307.4	299.7	284.6	253.4	228.0	224.3
80°	235.4	237.6	231.7	230.2	231.3	224.0	218.1	207.1	185.0	165.9	164.4
82.5°	157.8	158.9	153.7	152.3	153.0	150.8	143.8	136.1	125.8	109.6	109.2
85°	90.1	90.1	86.4	85.0	85.7	82.0	79.4	75.4	71.3	60.3	61.0
87.5°	33.1	33.1	31.3	30.9	34.6	30.5	29.4	27.6	28.7	22.8	24.3
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°	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5
2.5°	1689.9	1686.2	1682.9	1671.5	1676.3	1664.5	1663.8	1659.3	1656.0	1649.8	1657.9
5°	1684.4	1677.0	1667.4	1653.8	1657.9	1643.9	1641.0	1635.8	1631.4	1623.3	1629.6
7.5°	1675.5	1663.4	1648.3	1631.0	1636.5	1619.3	1614.8	1609.3	1605.6	1596.1	1601.6
10°	1662.7	1645.4	1627.7	1606.8	1610.8	1592.0	1586.5	1580.6	1577.3	1568.9	1574.4
12.5°	1642.8	1621.8	1597.9	1575.1	1579.5	1561.9	1554.5	1548.3	1547.2	1540.2	1546.8
15°	1617.0	1588.0	1563.4	1539.1	1544.2	1523.6	1520.3	1514.1	1515.9	1511.1	1519.2
17.5°	1584.3	1550.9	1524.0	1497.9	1503.0	1485.8	1483.2	1480.2	1482.1	1481.3	1490.2
20°	1547.5	1510.8	1479.9	1454.1	1457.1	1443.5	1444.6	1443.8	1447.5	1451.6	1463.7
22.5°	1506.0	1464.4	1432.1	1405.6	1410.0	1398.2	1403.4	1404.9	1411.1	1420.3	1435.7
25°	1459.3	1414.8	1380.9	1355.9	1360.0	1352.3	1361.1	1364.8	1374.7	1390.1	1406.0
27.5°	1410.4	1363.3	1327.3	1303.3	1311.1	1303.3	1316.6	1323.9	1339.0	1355.9	1375.4
30°	1358.5	1309.6	1272.5	1251.1	1258.5	1251.5	1272.8	1282.8	1297.8	1321.0	1344.2
32.5°	1304.1	1252.6	1216.2	1199.6	1204.8	1203.7	1227.6	1238.6	1258.8	1285.3	1310.0
35°	1248.2	1194.5	1157.7	1143.7	1150.0	1151.5	1180.1	1193.0	1215.1	1247.1	1273.6
37.5°	1190.4	1135.6	1099.6	1088.2	1093.7	1099.2	1132.7	1145.6	1170.6	1205.5	1234.6
40°	1130.5	1075.7	1040.4	1031.2	1036.7	1042.6	1079.0	1096.7	1123.9	1161.8	1193.4
42.5°	1069.8	1015.0	980.8	974.2	979.7	991.1	1029.7	1046.3	1075.0	1116.9	1151.8
45°	1008.0	951.0	921.2	916.1	922.0	935.2	973.1	993.0	1023.5	1069.5	1107.0
47.5°	945.5	890.0	861.7	858.4	864.2	879.0	920.9	938.9	971.3	1020.2	1060.6
50°	882.3	828.2	801.0	799.9	805.4	821.2	861.3	882.6	916.1	970.9	1012.4
52.5°	818.3	766.4	741.8	741.8	746.9	763.1	803.6	825.6	860.2	917.9	963.9
55°	754.3	705.0	681.5	683.3	690.7	704.6	744.0	767.2	802.1	862.0	910.6
57.5°	690.3	643.6	622.3	624.8	631.8	645.8	684.4	710.5	742.1	804.3	853.9
60°	627.0	582.9	564.1	567.1	573.3	587.3	627.4	649.8	681.5	744.7	794.4
62.5°	563.0	523.0	505.3	509.0	514.5	528.5	566.4	588.1	619.3	681.5	731.5
65°	499.8	462.6	447.6	451.2	456.4	469.3	504.9	525.9	555.7	616.4	664.2
67.5°	437.3	403.4	390.9	394.6	398.7	410.8	440.2	463.0	491.0	548.7	593.9
70°	375.5	345.3	334.3	338.0	341.7	352.7	378.4	399.4	425.1	478.1	520.0
72.5°	314.4	285.0	279.5	282.8	285.8	295.3	320.0	336.5	358.9	406.0	442.0
75°	254.9	229.5	225.8	229.1	231.7	239.0	259.6	274.0	292.7	333.6	363.0
77.5°	197.5	176.2	174.7	177.3	179.8	185.0	201.2	216.2	231.0	261.1	287.2
80°	143.8	126.5	126.5	129.1	128.3	134.6	146.0	158.1	168.8	190.5	209.6
82.5°	94.9	81.3	83.1	85.0	86.1	88.6	95.6	104.8	111.4	124.7	137.2
85°	52.6	43.4	45.2	46.7	46.0	48.9	52.6	58.1	61.4	67.7	74.3
87.5°	19.5	16.2	16.5	17.7	18.4	19.9	19.9	23.2	23.5	24.3	25.7
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°	1682.5	1682.5	1682.5
2.5°	1642.4	1651.3	1657.9
5°	1614.1	1621.5	1627.3
7.5°	1586.5	1593.1	1598.3
10°	1560.4	1567.8	1571.4
12.5°	1533.6	1542.0	1545.0
15°	1507.1	1515.5	1519.2
17.5°	1479.9	1490.9	1495.0
20°	1454.5	1468.5	1471.8
22.5°	1428.8	1443.1	1447.1
25°	1400.8	1417.7	1421.8
27.5°	1371.0	1391.2	1395.3
30°	1341.2	1363.3	1367.3
32.5°	1309.2	1333.1	1336.8
35°	1275.8	1299.7	1304.1
37.5°	1238.6	1264.7	1273.6
40°	1200.0	1228.3	1237.5
42.5°	1159.6	1190.4	1200.0
45°	1116.2	1150.0	1161.0
47.5°	1072.4	1110.6	1120.2
50°	1025.0	1065.8	1077.2
52.5°	975.3	1019.8	1031.2
55°	923.8	968.7	981.2
57.5°	867.9	914.3	927.5
60°	809.4	855.8	868.3
62.5°	749.5	791.4	803.6
65°	682.6	721.9	732.9
67.5°	611.6	647.6	656.8
70°	536.2	567.5	575.5
72.5°	457.5	479.2	489.9
75°	376.2	393.5	401.6
77.5°	294.6	306.7	313.3
80°	214.8	221.8	227.3
82.5°	140.5	143.4	147.5
85°	75.8	75.8	78.3
87.5°	25.7	24.6	25.7
90°	0.0	0.0	0.0

(END OF REPORT)