

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: P835274

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5STD-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835274
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-LD4-5STD-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

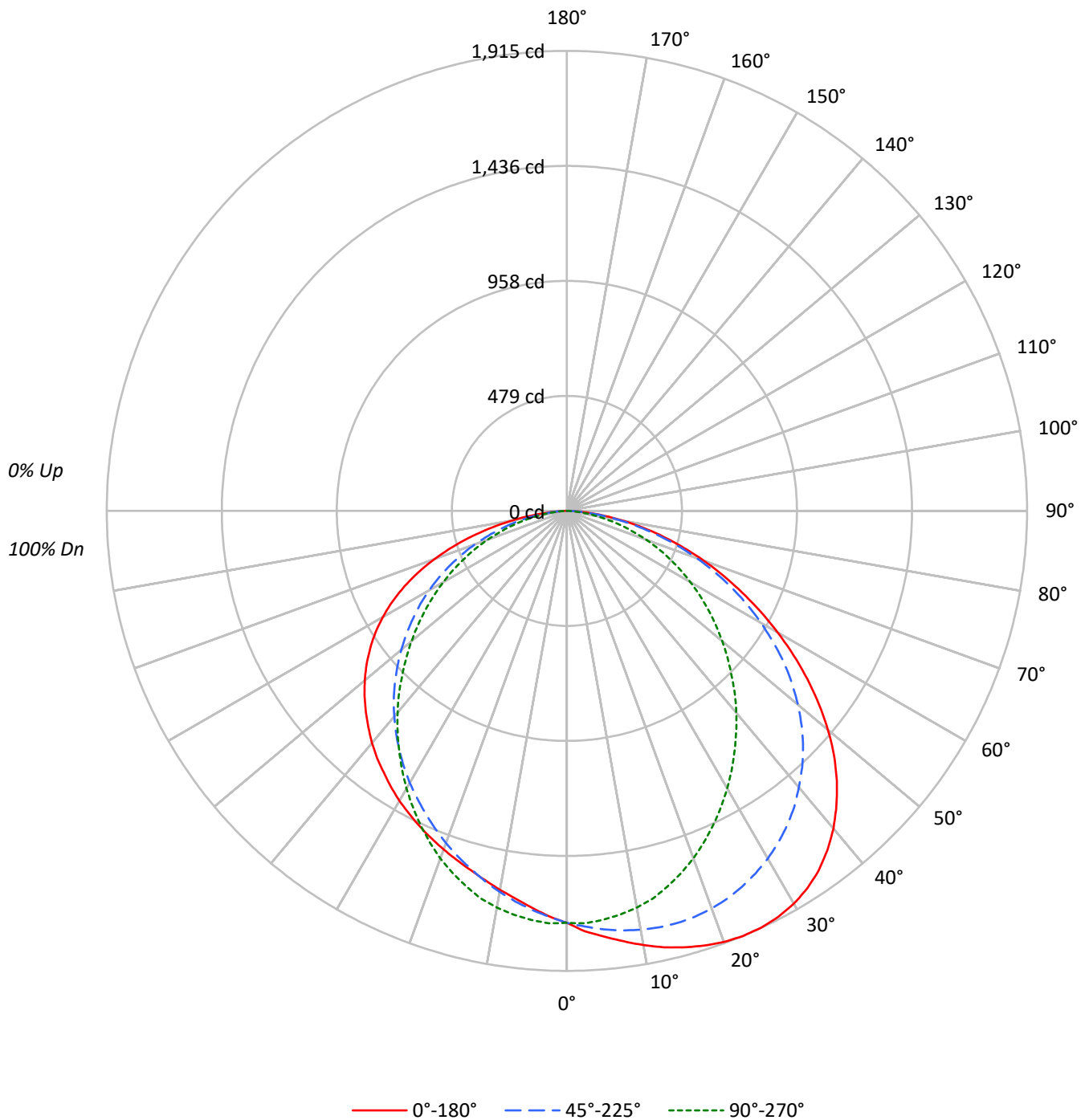
Lumens per Lamp: N/A
Luminaire Lumens: 5043.7 lumens
Efficiency: N/A
Efficacy: 60.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 83.2
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°	4614	4614	4614
5°	4804	4616	4480
10°	5014	4582	4376
15°	5239	4508	4313
20°	5468	4409	4295
25°	5683	4281	4302
30°	5868	4147	4330
35°	6002	3999	4366
40°	6063	3851	4430
45°	6046	3688	4503
50°	5939	3533	4596
55°	5736	3371	4691
60°	5456	3197	4762
65°	5124	3002	4756
70°	4768	2769	4615
75°	4329	2432	4256
80°	3718	1998	3589
85°	2834	1365	2464

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.6	3.2
10°-20°	469.6	9.3
20°-30°	719.5	14.3
30°-40°	878.0	17.4
40°-50°	918.2	18.2
50°-60°	831.0	16.5
60°-70°	629.4	12.5
70°-80°	350.7	7.0
80°-90°	84.6	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°	1351.7	26.8
0°-40°	2229.7	44.2
0°-60°	3979.0	78.9
0°-90°	5043.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5043.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1715	1715	1715	1715	1715	
5°	1778	1749	1709	1667	1658	171
15°	1881	1776	1618	1543	1548	533
25°	1914	1726	1442	1391	1449	883
35°	1827	1598	1217	1216	1329	1141
45°	1589	1390	969	1012	1183	1222
55°	1223	1104	718	782	1000	1091
65°	805	757	472	536	747	798
75°	416	393	234	279	409	442
85°	92	81	44	59	80	110
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°	1714.7	1714.7	1714.7	1714.7	1714.7	1714.7	1714.7	1714.7	1714.7	1714.7	1714.7
2.5°	1752.5	1744.3	1737.5	1740.1	1741.6	1736.4	1731.9	1732.6	1728.1	1736.8	1716.5
5°	1778.4	1770.9	1763.0	1766.0	1763.0	1755.1	1748.8	1746.9	1734.9	1739.8	1719.1
7.5°	1807.2	1799.0	1787.4	1790.7	1784.4	1769.7	1761.5	1756.6	1738.3	1738.6	1715.8
10°	1835.0	1827.8	1812.1	1814.3	1802.7	1783.2	1770.1	1763.4	1737.5	1733.8	1710.2
12.5°	1860.8	1851.1	1834.2	1835.3	1818.5	1792.6	1775.7	1766.0	1732.3	1721.0	1697.8
15°	1880.7	1871.3	1851.1	1850.7	1829.0	1795.2	1776.1	1762.6	1719.9	1702.3	1677.9
17.5°	1897.5	1888.9	1863.8	1863.1	1836.8	1794.1	1771.2	1754.4	1701.9	1680.2	1653.2
20°	1909.5	1900.9	1872.8	1870.2	1838.7	1788.5	1761.1	1739.8	1678.3	1652.4	1622.5
22.5°	1915.2	1906.5	1874.7	1870.9	1834.2	1777.2	1746.5	1721.4	1651.3	1617.6	1586.5
25°	1914.0	1905.8	1869.8	1866.1	1825.6	1760.4	1725.9	1697.0	1617.2	1577.5	1546.7
27.5°	1904.7	1898.3	1860.4	1855.6	1809.8	1737.5	1700.8	1668.9	1579.4	1535.1	1501.8
30°	1888.6	1883.7	1843.6	1839.1	1790.4	1712.4	1671.6	1634.8	1538.5	1488.7	1454.9
32.5°	1862.7	1858.2	1817.7	1813.6	1764.1	1680.2	1637.4	1599.6	1493.9	1438.8	1405.1
35°	1827.1	1824.5	1785.1	1780.6	1730.4	1643.4	1598.1	1556.5	1447.4	1385.2	1353.0
37.5°	1780.2	1780.2	1742.4	1737.5	1688.4	1598.5	1553.9	1509.6	1395.0	1329.0	1297.1
40°	1725.9	1730.8	1692.2	1687.3	1639.7	1550.1	1501.4	1454.9	1338.4	1269.8	1238.7
42.5°	1660.7	1665.2	1632.9	1628.5	1583.9	1494.3	1448.9	1398.3	1279.1	1209.4	1177.2
45°	1588.7	1594.7	1565.9	1562.5	1520.9	1433.2	1389.7	1338.4	1217.3	1146.5	1115.0
47.5°	1508.5	1516.4	1491.3	1489.4	1450.8	1370.6	1325.2	1273.2	1152.5	1080.9	1051.3
50°	1418.6	1429.8	1409.2	1409.2	1374.7	1294.9	1255.5	1203.4	1085.0	1013.4	984.2
52.5°	1322.2	1336.5	1321.1	1321.5	1293.4	1221.8	1181.0	1130.0	1014.5	944.1	917.1
55°	1222.6	1236.4	1226.7	1228.2	1206.1	1140.9	1103.7	1053.2	942.6	874.0	848.5
57.5°	1118.4	1133.4	1127.0	1130.0	1114.6	1056.2	1017.5	973.3	868.4	800.5	778.8
60°	1013.8	1028.0	1024.7	1028.8	1019.0	968.5	933.2	887.5	793.8	728.6	709.5
62.5°	908.1	921.2	920.5	925.0	919.7	877.8	846.3	807.3	716.6	656.6	639.0
65°	804.7	815.9	815.2	820.0	818.9	785.2	756.7	721.1	639.4	584.3	568.9
67.5°	704.2	713.6	711.0	716.6	718.1	691.1	666.4	634.5	565.9	512.3	499.2
70°	606.0	612.4	609.0	612.8	616.2	595.9	574.9	546.8	487.6	440.4	429.5
72.5°	509.7	514.2	509.0	512.7	515.7	501.1	483.9	459.5	410.4	369.5	360.5
75°	416.4	422.8	411.9	415.6	417.9	403.3	393.2	373.3	330.9	299.5	293.5
77.5°	326.1	329.8	323.8	322.3	323.8	313.3	305.5	290.1	258.2	232.4	228.6
80°	239.9	242.1	236.1	234.6	235.7	228.2	222.2	211.0	188.5	169.0	167.5
82.5°	160.8	161.9	156.7	155.2	155.9	153.7	146.5	138.7	128.2	111.7	111.3
85°	91.8	91.8	88.1	86.6	87.3	83.6	81.0	76.8	72.7	61.5	62.2
87.5°	33.7	33.7	31.9	31.5	35.2	31.1	30.0	28.1	29.2	23.2	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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1714.7	1714.7	1714.7	1714.7	1714.7	1714.7	1714.7	1714.7	1714.7	1714.7	1714.7
2.5°	1722.1	1718.4	1715.0	1703.4	1708.3	1696.3	1695.5	1691.0	1687.7	1681.3	1689.5
5°	1716.5	1709.0	1699.3	1685.4	1689.5	1675.3	1672.3	1667.1	1662.6	1654.3	1660.7
7.5°	1707.5	1695.2	1679.8	1662.2	1667.8	1650.2	1645.7	1640.1	1636.3	1626.6	1632.2
10°	1694.4	1676.8	1658.8	1637.4	1641.6	1622.5	1616.8	1610.8	1607.5	1598.8	1604.5
12.5°	1674.2	1652.8	1628.5	1605.2	1609.7	1591.7	1584.2	1577.9	1576.7	1569.6	1576.4
15°	1647.9	1618.3	1593.2	1568.5	1573.7	1552.7	1549.4	1543.0	1544.9	1540.0	1548.2
17.5°	1614.6	1580.5	1553.1	1526.5	1531.8	1514.1	1511.5	1508.5	1510.4	1509.6	1518.6
20°	1577.1	1539.6	1508.1	1481.9	1484.9	1471.0	1472.2	1471.4	1475.2	1479.3	1491.7
22.5°	1534.8	1492.4	1459.4	1432.4	1436.9	1424.9	1430.2	1431.7	1438.1	1447.4	1463.2
25°	1487.2	1441.8	1407.3	1381.8	1386.0	1378.1	1387.1	1390.8	1401.0	1416.7	1432.8
27.5°	1437.3	1389.3	1352.6	1328.2	1336.1	1328.2	1341.7	1349.2	1364.6	1381.8	1401.7
30°	1384.5	1334.6	1296.8	1275.0	1282.5	1275.4	1297.1	1307.3	1322.6	1346.2	1369.8
32.5°	1329.0	1276.5	1239.4	1222.6	1227.8	1226.7	1251.0	1262.3	1282.9	1309.9	1335.0
35°	1272.0	1217.3	1179.8	1165.6	1172.0	1173.5	1202.7	1215.8	1238.3	1270.9	1297.9
37.5°	1213.2	1157.3	1120.6	1109.0	1114.6	1120.2	1154.3	1167.5	1192.9	1228.6	1258.2
40°	1152.1	1096.3	1060.3	1050.9	1056.5	1062.5	1099.6	1117.6	1145.3	1184.0	1216.2
42.5°	1090.3	1034.4	999.6	992.8	998.4	1010.1	1049.4	1066.3	1095.5	1138.2	1173.8
45°	1027.3	969.2	938.8	933.6	939.6	953.1	991.7	1011.9	1043.0	1089.9	1128.1
47.5°	963.6	907.0	878.1	874.8	880.7	895.7	938.5	956.8	989.8	1039.7	1080.9
50°	899.1	844.0	816.3	815.2	820.8	836.9	877.8	899.5	933.6	989.4	1031.8
52.5°	833.9	781.1	755.9	755.9	761.2	777.7	818.9	841.4	876.6	935.5	982.3
55°	768.7	718.5	694.5	696.4	703.9	718.1	758.2	781.8	817.4	878.5	928.0
57.5°	703.5	655.9	634.1	636.8	643.9	658.1	697.5	724.1	756.3	819.7	870.3
60°	639.0	594.0	574.9	577.9	584.3	598.5	639.4	662.2	694.5	758.9	809.5
62.5°	573.8	532.9	515.0	518.7	524.3	538.6	577.2	599.3	631.1	694.5	745.5
65°	509.3	471.5	456.1	459.9	465.1	478.2	514.6	535.9	566.3	628.1	676.9
67.5°	445.6	411.1	398.4	402.1	406.3	418.6	448.6	471.9	500.3	559.2	605.3
70°	382.7	351.9	340.7	344.4	348.2	359.4	385.7	407.0	433.3	487.2	529.9
72.5°	320.4	290.5	284.8	288.2	291.2	301.0	326.1	342.9	365.8	413.8	450.5
75°	259.7	233.9	230.1	233.5	236.1	243.6	264.6	279.2	298.3	339.9	369.9
77.5°	201.3	179.5	178.0	180.6	183.3	188.5	205.0	220.4	235.4	266.1	292.7
80°	146.5	128.9	128.9	131.6	130.8	137.2	148.8	161.2	172.0	194.1	213.6
82.5°	96.7	82.8	84.7	86.6	87.7	90.3	97.4	106.8	113.6	127.1	139.8
85°	53.6	44.2	46.1	47.6	46.8	49.8	53.6	59.2	62.6	69.0	75.7
87.5°	19.9	16.5	16.9	18.0	18.7	20.2	20.2	23.6	24.0	24.7	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):

	160°	170°	180°
0°	1714.7	1714.7	1714.7
2.5°	1673.8	1682.8	1689.5
5°	1644.9	1652.4	1658.4
7.5°	1616.8	1623.6	1628.8
10°	1590.2	1597.7	1601.5
12.5°	1562.9	1571.5	1574.5
15°	1535.9	1544.5	1548.2
17.5°	1508.1	1519.4	1523.5
20°	1482.3	1496.5	1499.9
22.5°	1456.0	1470.7	1474.8
25°	1427.6	1444.8	1448.9
27.5°	1397.2	1417.8	1421.9
30°	1366.8	1389.3	1393.5
32.5°	1334.2	1358.6	1362.4
35°	1300.1	1324.5	1329.0
37.5°	1262.3	1288.9	1297.9
40°	1222.9	1251.8	1261.2
42.5°	1181.7	1213.2	1222.9
45°	1137.5	1172.0	1183.2
47.5°	1092.9	1131.9	1141.6
50°	1044.5	1086.1	1097.8
52.5°	993.9	1039.3	1050.9
55°	941.5	987.2	999.9
57.5°	884.5	931.7	945.2
60°	824.9	872.1	884.9
62.5°	763.8	806.5	818.9
65°	695.6	735.7	747.0
67.5°	623.3	660.0	669.4
70°	546.4	578.3	586.5
72.5°	466.2	488.3	499.2
75°	383.4	401.0	409.3
77.5°	300.2	312.6	319.3
80°	218.9	226.0	231.6
82.5°	143.2	146.2	150.3
85°	77.2	77.2	79.8
87.5°	26.2	25.1	26.2
90°	0.0	0.0	0.0

(END OF REPORT)