

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: P834617

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834617
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-2STD-20-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

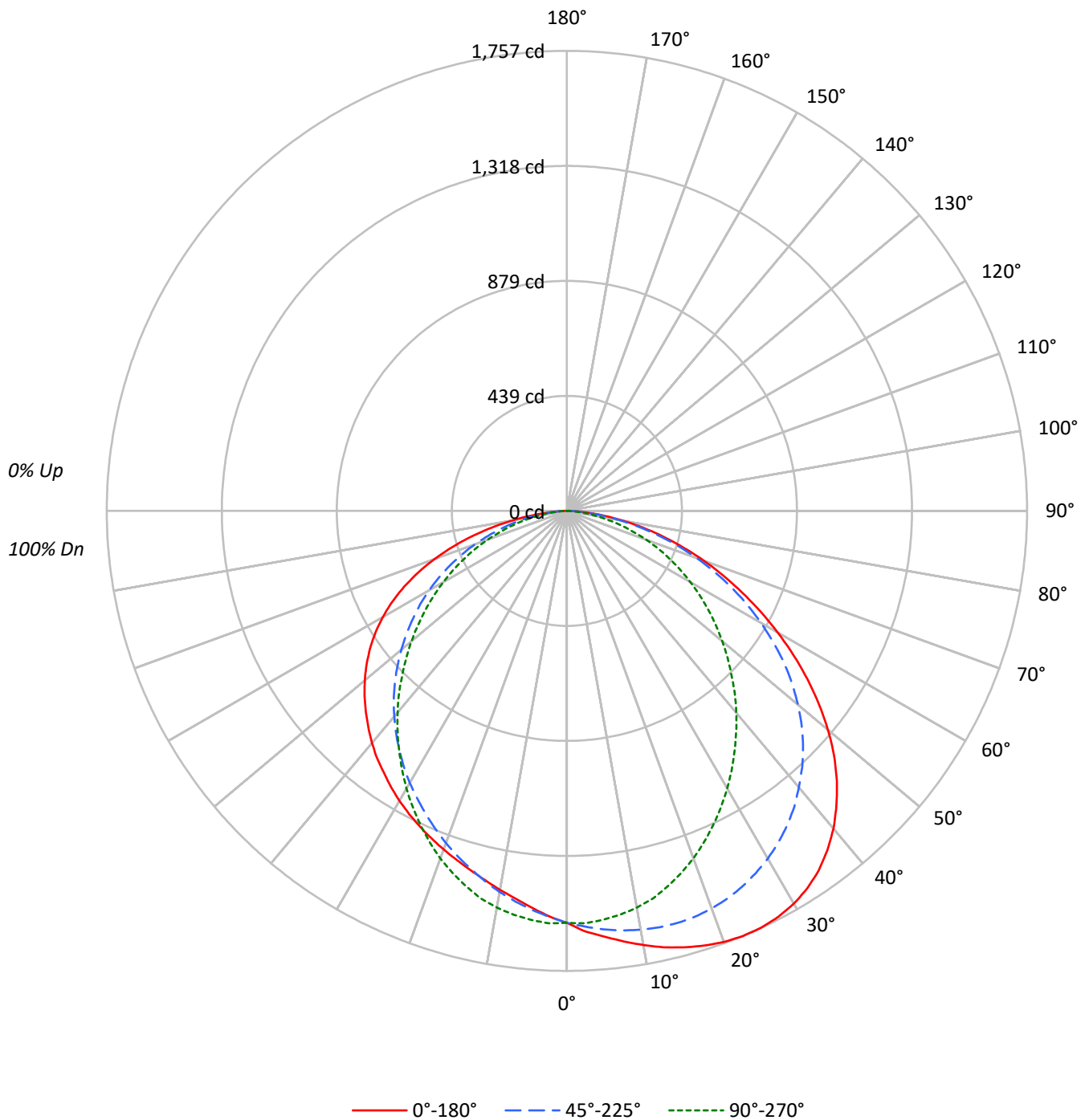
Lumens per Lamp: N/A
Luminaire Lumens: 4627.8 lumens
Efficiency: N/A
Efficacy: 69.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	2117	2117	2117
5°	2204	2118	2055
10°	2300	2102	2008
15°	2404	2068	1979
20°	2509	2023	1970
25°	2607	1964	1974
30°	2692	1903	1986
35°	2754	1835	2003
40°	2781	1767	2033
45°	2774	1692	2066
50°	2725	1621	2108
55°	2631	1546	2152
60°	2503	1467	2185
65°	2351	1377	2182
70°	2188	1270	2117
75°	1986	1116	1952
80°	1705	917	1647
85°	1301	627	1130

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.2	3.2
10°-20°	430.9	9.3
20°-30°	660.1	14.3
30°-40°	805.6	17.4
40°-50°	842.5	18.2
50°-60°	762.5	16.5
60°-70°	577.5	12.5
70°-80°	321.8	7.0
80°-90°	77.6	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°	1240.2	26.8
0°-40°	2045.8	44.2
0°-60°	3650.8	78.9
0°-90°	4627.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4627.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1573	1573	1573	1573	1573	
5°	1632	1604	1568	1530	1522	157
15°	1726	1630	1485	1416	1421	489
25°	1756	1584	1323	1276	1329	810
35°	1676	1466	1117	1116	1219	1047
45°	1458	1275	889	928	1086	1122
55°	1122	1013	659	717	918	1001
65°	738	694	433	492	685	732
75°	382	361	215	256	376	405
85°	84	74	41	54	73	101
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°	1573.2	1573.2	1573.2	1573.2	1573.2	1573.2	1573.2	1573.2	1573.2	1573.2	1573.2
2.5°	1608.0	1600.4	1594.2	1596.6	1598.0	1593.2	1589.1	1589.8	1585.6	1593.5	1575.0
5°	1631.7	1624.8	1617.6	1620.4	1617.6	1610.4	1604.5	1602.8	1591.8	1596.3	1577.4
7.5°	1658.2	1650.6	1640.0	1643.1	1637.2	1623.8	1616.2	1611.8	1594.9	1595.3	1574.3
10°	1683.6	1677.1	1662.7	1664.7	1654.1	1636.2	1624.1	1618.0	1594.2	1590.8	1569.1
12.5°	1707.4	1698.4	1682.9	1684.0	1668.5	1644.8	1629.3	1620.4	1589.4	1579.1	1557.8
15°	1725.6	1717.0	1698.4	1698.1	1678.1	1647.2	1629.6	1617.3	1578.1	1561.9	1539.5
17.5°	1741.1	1733.2	1710.1	1709.4	1685.4	1646.1	1625.2	1609.7	1561.6	1541.6	1516.9
20°	1752.1	1744.2	1718.4	1716.0	1687.1	1641.0	1615.9	1596.3	1539.9	1516.2	1488.7
22.5°	1757.2	1749.3	1720.1	1716.6	1682.9	1630.7	1602.5	1579.4	1515.1	1484.2	1455.6
25°	1756.2	1748.6	1715.6	1712.2	1675.0	1615.2	1583.6	1557.1	1483.8	1447.4	1419.2
27.5°	1747.6	1741.7	1707.0	1702.5	1660.6	1594.2	1560.5	1531.3	1449.1	1408.5	1377.9
30°	1732.8	1728.3	1691.5	1687.4	1642.7	1571.2	1533.7	1500.0	1411.6	1365.9	1334.9
32.5°	1709.1	1705.0	1667.8	1664.0	1618.6	1541.6	1502.4	1467.7	1370.7	1320.2	1289.2
35°	1676.4	1674.0	1637.9	1633.8	1587.7	1507.9	1466.3	1428.1	1328.1	1271.0	1241.4
37.5°	1633.4	1633.4	1598.7	1594.2	1549.2	1466.6	1425.7	1385.1	1279.9	1219.4	1190.2
40°	1583.6	1588.0	1552.6	1548.1	1504.5	1422.3	1377.6	1334.9	1228.0	1165.1	1136.5
42.5°	1523.7	1527.9	1498.3	1494.2	1453.2	1371.0	1329.4	1283.0	1173.7	1109.7	1080.1
45°	1457.7	1463.2	1436.7	1433.6	1395.5	1315.0	1275.1	1228.0	1116.9	1051.9	1023.0
47.5°	1384.1	1391.3	1368.3	1366.6	1331.2	1257.6	1216.0	1168.2	1057.4	991.7	964.6
50°	1301.6	1311.9	1293.0	1293.0	1261.3	1188.1	1152.0	1104.2	995.5	929.8	903.0
52.5°	1213.2	1226.3	1212.2	1212.5	1186.7	1121.0	1083.6	1036.8	930.9	866.2	841.5
55°	1121.7	1134.5	1125.5	1126.9	1106.6	1046.8	1012.7	966.3	864.9	801.9	778.5
57.5°	1026.1	1039.9	1034.0	1036.8	1022.7	969.1	933.6	893.1	796.8	734.5	714.6
60°	930.2	943.3	940.2	943.9	935.0	888.6	856.3	814.3	728.3	668.5	651.0
62.5°	833.2	845.3	844.6	848.7	843.9	805.4	776.5	740.7	657.5	602.5	586.3
65°	738.3	748.6	747.9	752.4	751.4	720.4	694.3	661.6	586.7	536.1	522.0
67.5°	646.1	654.7	652.3	657.5	658.9	634.1	611.4	582.2	519.3	470.1	458.0
70°	556.1	561.9	558.8	562.2	565.3	546.8	527.5	501.7	447.4	404.1	394.1
72.5°	467.7	471.8	467.0	470.4	473.2	459.8	443.9	421.6	376.5	339.1	330.8
75°	382.0	387.9	377.9	381.4	383.4	370.0	360.7	342.5	303.6	274.8	269.3
77.5°	299.2	302.6	297.1	295.7	297.1	287.5	280.3	266.2	236.9	213.2	209.8
80°	220.1	222.1	216.6	215.3	216.3	209.4	203.9	193.6	173.0	155.1	153.7
82.5°	147.5	148.6	143.7	142.4	143.1	141.0	134.5	127.2	117.6	102.5	102.1
85°	84.3	84.3	80.8	79.4	80.1	76.7	74.3	70.5	66.7	56.4	57.1
87.5°	30.9	30.9	29.2	28.9	32.3	28.5	27.5	25.8	26.8	21.3	22.7
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°	1573.2	1573.2	1573.2	1573.2	1573.2	1573.2	1573.2	1573.2	1573.2	1573.2	1573.2
2.5°	1580.1	1576.7	1573.6	1562.9	1567.4	1556.4	1555.7	1551.6	1548.5	1542.6	1550.2
5°	1575.0	1568.1	1559.1	1546.4	1550.2	1537.1	1534.4	1529.6	1525.4	1517.9	1523.7
7.5°	1566.7	1555.4	1541.3	1525.1	1530.3	1514.1	1510.0	1504.8	1501.4	1492.4	1497.6
10°	1554.7	1538.5	1522.0	1502.4	1506.2	1488.7	1483.5	1478.0	1474.9	1467.0	1472.1
12.5°	1536.1	1516.5	1494.2	1472.8	1477.0	1460.5	1453.6	1447.7	1446.7	1440.2	1446.4
15°	1512.0	1484.9	1461.8	1439.1	1443.9	1424.7	1421.6	1415.7	1417.5	1413.0	1420.6
17.5°	1481.4	1450.1	1425.0	1400.6	1405.4	1389.3	1386.9	1384.1	1385.8	1385.1	1393.4
20°	1447.0	1412.7	1383.8	1359.7	1362.4	1349.7	1350.8	1350.1	1353.5	1357.3	1368.6
22.5°	1408.2	1369.3	1339.1	1314.3	1318.4	1307.4	1312.2	1313.6	1319.5	1328.1	1342.5
25°	1364.5	1322.9	1291.3	1267.9	1271.7	1264.4	1272.7	1276.1	1285.4	1299.9	1314.6
27.5°	1318.8	1274.8	1241.1	1218.7	1225.9	1218.7	1231.1	1238.0	1252.1	1267.9	1286.1
30°	1270.3	1224.6	1189.8	1169.9	1176.8	1170.2	1190.2	1199.5	1213.5	1235.2	1256.9
32.5°	1219.4	1171.3	1137.2	1121.7	1126.5	1125.5	1147.9	1158.2	1177.1	1201.9	1224.9
35°	1167.1	1116.9	1082.5	1069.5	1075.3	1076.7	1103.5	1115.5	1136.2	1166.1	1190.9
37.5°	1113.1	1061.9	1028.2	1017.5	1022.7	1027.9	1059.1	1071.2	1094.6	1127.2	1154.4
40°	1057.1	1005.8	972.8	964.2	969.4	974.9	1008.9	1025.4	1050.9	1086.3	1115.9
42.5°	1000.3	949.1	917.1	910.9	916.1	926.8	962.9	978.3	1005.2	1044.4	1077.0
45°	942.6	889.3	861.4	856.6	862.1	874.5	909.9	928.5	957.0	1000.0	1035.1
47.5°	884.1	832.2	805.7	802.6	808.1	821.9	861.1	877.9	908.2	953.9	991.7
50°	825.0	774.4	749.0	747.9	753.1	767.9	805.4	825.3	856.6	907.8	946.7
52.5°	765.1	716.6	693.6	693.6	698.4	713.5	751.4	772.0	804.3	858.3	901.3
55°	705.3	659.2	637.2	638.9	645.8	658.9	695.7	717.3	750.0	806.1	851.4
57.5°	645.5	601.8	581.8	584.3	590.8	603.9	640.0	664.4	693.9	752.1	798.5
60°	586.3	545.0	527.5	530.3	536.1	549.2	586.7	607.6	637.2	696.4	742.8
62.5°	526.5	489.0	472.5	475.9	481.1	494.2	529.6	549.9	579.1	637.2	684.0
65°	467.3	432.6	418.5	421.9	426.8	438.8	472.1	491.7	519.6	576.3	621.0
67.5°	408.9	377.2	365.5	369.0	372.8	384.1	411.6	432.9	459.1	513.1	555.4
70°	351.1	322.9	312.6	316.0	319.5	329.8	353.9	373.5	397.5	447.0	486.2
72.5°	294.0	266.5	261.3	264.4	267.2	276.1	299.2	314.6	335.6	379.6	413.3
75°	238.3	214.6	211.1	214.2	216.6	223.5	242.8	256.2	273.7	311.9	339.4
77.5°	184.7	164.7	163.3	165.7	168.2	173.0	188.1	202.2	216.0	244.2	268.6
80°	134.5	118.3	118.3	120.7	120.0	125.9	136.5	147.9	157.8	178.1	196.0
82.5°	88.7	76.0	77.7	79.4	80.5	82.9	89.4	98.0	104.2	116.6	128.3
85°	49.2	40.6	42.3	43.7	43.0	45.7	49.2	54.3	57.4	63.3	69.5
87.5°	18.2	15.1	15.5	16.5	17.2	18.6	18.6	21.7	22.0	22.7	24.1
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°	1573.2	1573.2	1573.2
2.5°	1535.8	1544.0	1550.2
5°	1509.3	1516.2	1521.7
7.5°	1483.5	1489.7	1494.5
10°	1459.1	1466.0	1469.4
12.5°	1434.0	1441.9	1444.6
15°	1409.2	1417.1	1420.6
17.5°	1383.8	1394.1	1397.9
20°	1360.0	1373.1	1376.2
22.5°	1336.0	1349.4	1353.2
25°	1309.8	1325.7	1329.4
27.5°	1282.0	1300.9	1304.7
30°	1254.1	1274.8	1278.5
32.5°	1224.2	1246.6	1250.0
35°	1192.9	1215.3	1219.4
37.5°	1158.2	1182.6	1190.9
40°	1122.1	1148.6	1157.2
42.5°	1084.3	1113.1	1122.1
45°	1043.7	1075.3	1085.6
47.5°	1002.8	1038.5	1047.5
50°	958.4	996.6	1007.2
52.5°	912.0	953.6	964.2
55°	863.8	905.8	917.5
57.5°	811.6	854.9	867.3
60°	756.9	800.2	811.9
62.5°	700.8	740.0	751.4
65°	638.2	675.0	685.4
67.5°	571.9	605.6	614.2
70°	501.4	530.6	538.2
72.5°	427.8	448.1	458.0
75°	351.8	368.0	375.5
77.5°	275.4	286.8	293.0
80°	200.8	207.4	212.5
82.5°	131.4	134.1	137.9
85°	70.8	70.8	73.2
87.5°	24.1	23.0	24.1
90°	0.0	0.0	0.0

(END OF REPORT)