

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: P835306

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4LO-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835306
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-LD4-4LO-30-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

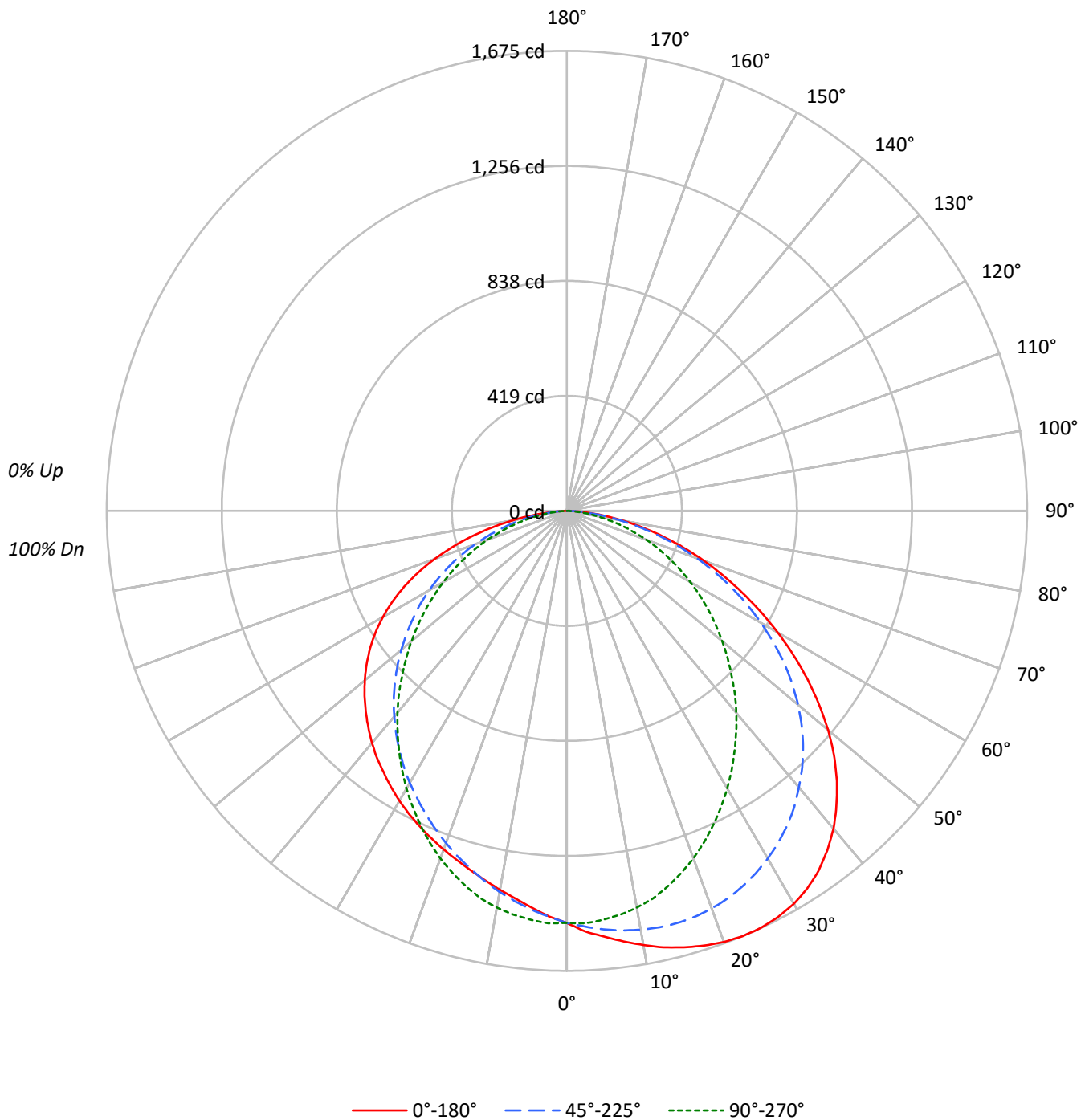
Lumens per Lamp: N/A
Luminaire Lumens: 4412.1 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	4036	4036	4036
5°	4202	4038	3919
10°	4386	4008	3828
15°	4583	3944	3773
20°	4783	3857	3757
25°	4971	3745	3763
30°	5133	3628	3788
35°	5251	3498	3819
40°	5304	3369	3875
45°	5289	3226	3939
50°	5195	3091	4020
55°	5018	2949	4104
60°	4773	2796	4166
65°	4482	2626	4160
70°	4171	2423	4037
75°	3787	2127	3722
80°	3251	1748	3140
85°	2479	1195	2155

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.3	3.2
10°-20°	410.8	9.3
20°-30°	629.4	14.3
30°-40°	768.1	17.4
40°-50°	803.2	18.2
50°-60°	727.0	16.5
60°-70°	550.6	12.5
70°-80°	306.8	7.0
80°-90°	74.0	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°	1182.4	26.8
0°-40°	1950.5	44.2
0°-60°	3480.7	78.9
0°-90°	4412.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4412.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1500	1500	1500	1500	1500	
5°	1556	1530	1495	1458	1451	150
15°	1645	1554	1416	1350	1354	467
25°	1674	1510	1261	1217	1268	772
35°	1598	1398	1065	1064	1163	998
45°	1390	1216	848	885	1035	1069
55°	1070	966	628	684	875	954
65°	704	662	412	469	653	698
75°	364	344	205	244	358	386
85°	80	71	39	52	70	97
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°	1499.9	1499.9	1499.9	1499.9	1499.9	1499.9	1499.9	1499.9	1499.9	1499.9	1499.9
2.5°	1533.0	1525.8	1519.9	1522.2	1523.5	1518.9	1515.0	1515.7	1511.7	1519.3	1501.6
5°	1555.7	1549.1	1542.2	1544.8	1542.2	1535.3	1529.8	1528.1	1517.6	1521.9	1503.9
7.5°	1580.9	1573.7	1563.5	1566.5	1560.9	1548.1	1540.9	1536.6	1520.6	1520.9	1500.9
10°	1605.2	1598.9	1585.2	1587.1	1577.0	1559.9	1548.4	1542.5	1519.9	1516.6	1496.0
12.5°	1627.8	1619.3	1604.5	1605.5	1590.7	1568.1	1553.4	1544.8	1515.3	1505.5	1485.2
15°	1645.2	1637.0	1619.3	1618.9	1599.9	1570.4	1553.7	1541.9	1504.5	1489.1	1467.8
17.5°	1659.9	1652.4	1630.4	1629.7	1606.8	1569.4	1549.4	1534.7	1488.8	1469.8	1446.2
20°	1670.4	1662.9	1638.3	1636.0	1608.4	1564.5	1540.6	1521.9	1468.1	1445.5	1419.3
22.5°	1675.3	1667.8	1639.9	1636.6	1604.5	1554.7	1527.8	1505.8	1444.5	1415.0	1387.8
25°	1674.3	1667.1	1635.7	1632.4	1597.0	1539.9	1509.8	1484.5	1414.7	1379.9	1353.0
27.5°	1666.1	1660.6	1627.5	1623.2	1583.2	1519.9	1487.8	1459.9	1381.6	1342.9	1313.7
30°	1652.0	1647.8	1612.7	1608.8	1566.1	1498.0	1462.2	1430.1	1345.8	1302.2	1272.7
32.5°	1629.4	1625.5	1590.1	1586.5	1543.2	1469.8	1432.4	1399.3	1306.8	1258.6	1229.1
35°	1598.3	1596.0	1561.6	1557.6	1513.7	1437.6	1398.0	1361.6	1266.2	1211.7	1183.5
37.5°	1557.3	1557.3	1524.2	1519.9	1477.0	1398.3	1359.3	1320.6	1220.3	1162.6	1134.7
40°	1509.8	1514.0	1480.2	1476.0	1434.3	1356.0	1313.4	1272.7	1170.8	1110.8	1083.5
42.5°	1452.7	1456.6	1428.4	1424.5	1385.5	1307.1	1267.5	1223.2	1119.0	1058.0	1029.8
45°	1389.8	1395.0	1369.8	1366.8	1330.4	1253.7	1215.7	1170.8	1064.9	1002.9	975.4
47.5°	1319.6	1326.5	1304.5	1302.9	1269.1	1199.0	1159.3	1113.7	1008.1	945.5	919.6
50°	1240.9	1250.8	1232.7	1232.7	1202.6	1132.7	1098.3	1052.7	949.1	886.5	860.9
52.5°	1156.7	1169.1	1155.7	1156.0	1131.4	1068.8	1033.1	988.5	887.5	825.9	802.3
55°	1069.5	1081.6	1073.1	1074.4	1055.0	998.0	965.5	921.3	824.5	764.5	742.3
57.5°	978.3	991.4	985.8	988.5	975.0	923.9	890.1	851.4	759.6	700.3	681.3
60°	886.8	899.3	896.3	900.0	891.4	847.2	816.3	776.4	694.4	637.3	620.6
62.5°	794.4	805.9	805.2	809.1	804.5	767.8	740.3	706.2	626.9	574.4	559.0
65°	703.9	713.7	713.1	717.3	716.4	686.8	661.9	630.8	559.3	511.1	497.7
67.5°	616.0	624.2	621.9	626.9	628.2	604.6	582.9	555.1	495.1	448.2	436.7
70°	530.1	535.7	532.8	536.0	539.0	521.3	502.9	478.3	426.5	385.2	375.7
72.5°	445.9	449.8	445.2	448.5	451.1	438.3	423.3	401.9	359.0	323.3	315.4
75°	364.2	369.8	360.3	363.6	365.6	352.8	343.9	326.5	289.5	262.0	256.7
77.5°	285.2	288.5	283.3	282.0	283.3	274.1	267.2	253.8	225.9	203.3	200.0
80°	209.8	211.8	206.5	205.2	206.2	199.7	194.4	184.6	164.9	147.9	146.5
82.5°	140.6	141.6	137.0	135.7	136.4	134.4	128.2	121.3	112.1	97.7	97.4
85°	80.3	80.3	77.0	75.7	76.4	73.1	70.8	67.2	63.6	53.8	54.4
87.5°	29.5	29.5	27.9	27.5	30.8	27.2	26.2	24.6	25.6	20.3	21.6
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°	1499.9	1499.9	1499.9	1499.9	1499.9	1499.9	1499.9	1499.9	1499.9	1499.9	1499.9
2.5°	1506.5	1503.2	1500.2	1490.1	1494.3	1483.9	1483.2	1479.3	1476.3	1470.7	1478.0
5°	1501.6	1495.0	1486.5	1474.3	1478.0	1465.5	1462.9	1458.3	1454.3	1447.1	1452.7
7.5°	1493.7	1482.9	1469.4	1454.0	1458.9	1443.5	1439.6	1434.7	1431.4	1422.9	1427.8
10°	1482.2	1466.8	1451.1	1432.4	1436.0	1419.3	1414.4	1409.1	1406.2	1398.6	1403.5
12.5°	1464.5	1445.8	1424.5	1404.2	1408.1	1392.4	1385.8	1380.3	1379.3	1373.0	1378.9
15°	1441.6	1415.7	1393.7	1372.1	1376.6	1358.3	1355.3	1349.8	1351.4	1347.1	1354.4
17.5°	1412.4	1382.5	1358.6	1335.3	1339.9	1324.5	1322.2	1319.6	1321.2	1320.6	1328.5
20°	1379.6	1346.8	1319.3	1296.3	1298.9	1286.8	1287.8	1287.1	1290.4	1294.0	1304.8
22.5°	1342.6	1305.5	1276.7	1253.0	1257.0	1246.5	1251.1	1252.4	1258.0	1266.2	1279.9
25°	1300.9	1261.2	1231.1	1208.8	1212.4	1205.5	1213.4	1216.7	1225.5	1239.3	1253.4
27.5°	1257.3	1215.3	1183.2	1161.9	1168.8	1161.9	1173.7	1180.3	1193.7	1208.8	1226.2
30°	1211.1	1167.5	1134.4	1115.4	1121.9	1115.7	1134.7	1143.5	1157.0	1177.6	1198.3
32.5°	1162.6	1116.7	1084.2	1069.5	1074.0	1073.1	1094.4	1104.2	1122.2	1145.8	1167.8
35°	1112.7	1064.9	1032.1	1019.6	1025.2	1026.5	1052.1	1063.5	1083.2	1111.7	1135.3
37.5°	1061.3	1012.4	980.3	970.1	975.0	979.9	1009.8	1021.3	1043.6	1074.7	1100.6
40°	1007.8	959.0	927.5	919.3	924.2	929.5	961.9	977.7	1001.9	1035.7	1063.9
42.5°	953.7	904.9	874.4	868.5	873.4	883.6	918.0	932.7	958.3	995.7	1026.8
45°	898.6	847.8	821.3	816.7	821.9	833.7	867.5	885.2	912.4	953.4	986.8
47.5°	842.9	793.4	768.2	765.2	770.5	783.6	820.9	837.0	865.9	909.5	945.5
50°	786.5	738.3	714.1	713.1	718.0	732.1	767.8	786.8	816.7	865.5	902.6
52.5°	729.5	683.2	661.3	661.3	665.9	680.3	716.4	736.0	766.8	818.3	859.3
55°	672.4	628.5	607.5	609.1	615.7	628.2	663.2	683.9	715.0	768.5	811.8
57.5°	615.4	573.7	554.7	557.0	563.2	575.7	610.1	633.4	661.6	717.0	761.3
60°	559.0	519.6	502.9	505.5	511.1	523.6	559.3	579.3	607.5	663.9	708.2
62.5°	501.9	466.2	450.5	453.7	458.7	471.1	504.9	524.2	552.1	607.5	652.1
65°	445.5	412.4	399.0	402.3	406.9	418.3	450.1	468.8	495.4	549.5	592.1
67.5°	389.8	359.7	348.5	351.8	355.4	366.2	392.4	412.8	437.7	489.2	529.5
70°	334.7	307.9	298.0	301.3	304.6	314.4	337.4	356.0	379.0	426.2	463.6
72.5°	280.3	254.1	249.2	252.1	254.7	263.3	285.2	300.0	320.0	361.9	394.1
75°	227.2	204.6	201.3	204.3	206.5	213.1	231.5	244.2	261.0	297.4	323.6
77.5°	176.1	157.0	155.7	158.0	160.3	164.9	179.3	192.8	205.9	232.8	256.1
80°	128.2	112.8	112.8	115.1	114.4	120.0	130.2	141.0	150.5	169.8	186.9
82.5°	84.6	72.5	74.1	75.7	76.7	79.0	85.2	93.4	99.3	111.1	122.3
85°	46.9	38.7	40.3	41.6	41.0	43.6	46.9	51.8	54.8	60.3	66.2
87.5°	17.4	14.4	14.8	15.7	16.4	17.7	17.7	20.7	21.0	21.6	22.9
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°	1499.9	1499.9	1499.9
2.5°	1464.2	1472.1	1478.0
5°	1438.9	1445.5	1450.7
7.5°	1414.4	1420.3	1424.8
10°	1391.1	1397.6	1400.9
12.5°	1367.1	1374.7	1377.3
15°	1343.5	1351.1	1354.4
17.5°	1319.3	1329.1	1332.7
20°	1296.7	1309.1	1312.1
22.5°	1273.7	1286.5	1290.1
25°	1248.8	1263.9	1267.5
27.5°	1222.2	1240.3	1243.9
30°	1195.7	1215.3	1219.0
32.5°	1167.2	1188.5	1191.7
35°	1137.3	1158.6	1162.6
37.5°	1104.2	1127.5	1135.3
40°	1069.8	1095.0	1103.2
42.5°	1033.7	1061.3	1069.8
45°	995.0	1025.2	1035.0
47.5°	956.0	990.1	998.6
50°	913.7	950.1	960.3
52.5°	869.5	909.1	919.3
55°	823.6	863.6	874.7
57.5°	773.7	815.0	826.8
60°	721.6	762.9	774.1
62.5°	668.2	705.5	716.4
65°	608.5	643.6	653.4
67.5°	545.2	577.3	585.5
70°	478.0	505.9	513.1
72.5°	407.8	427.2	436.7
75°	335.4	350.8	358.0
77.5°	262.6	273.4	279.3
80°	191.5	197.7	202.6
82.5°	125.2	127.9	131.5
85°	67.5	67.5	69.8
87.5°	22.9	22.0	22.9
90°	0.0	0.0	0.0

(END OF REPORT)