

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: P835324

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4LO-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835324
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-35-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

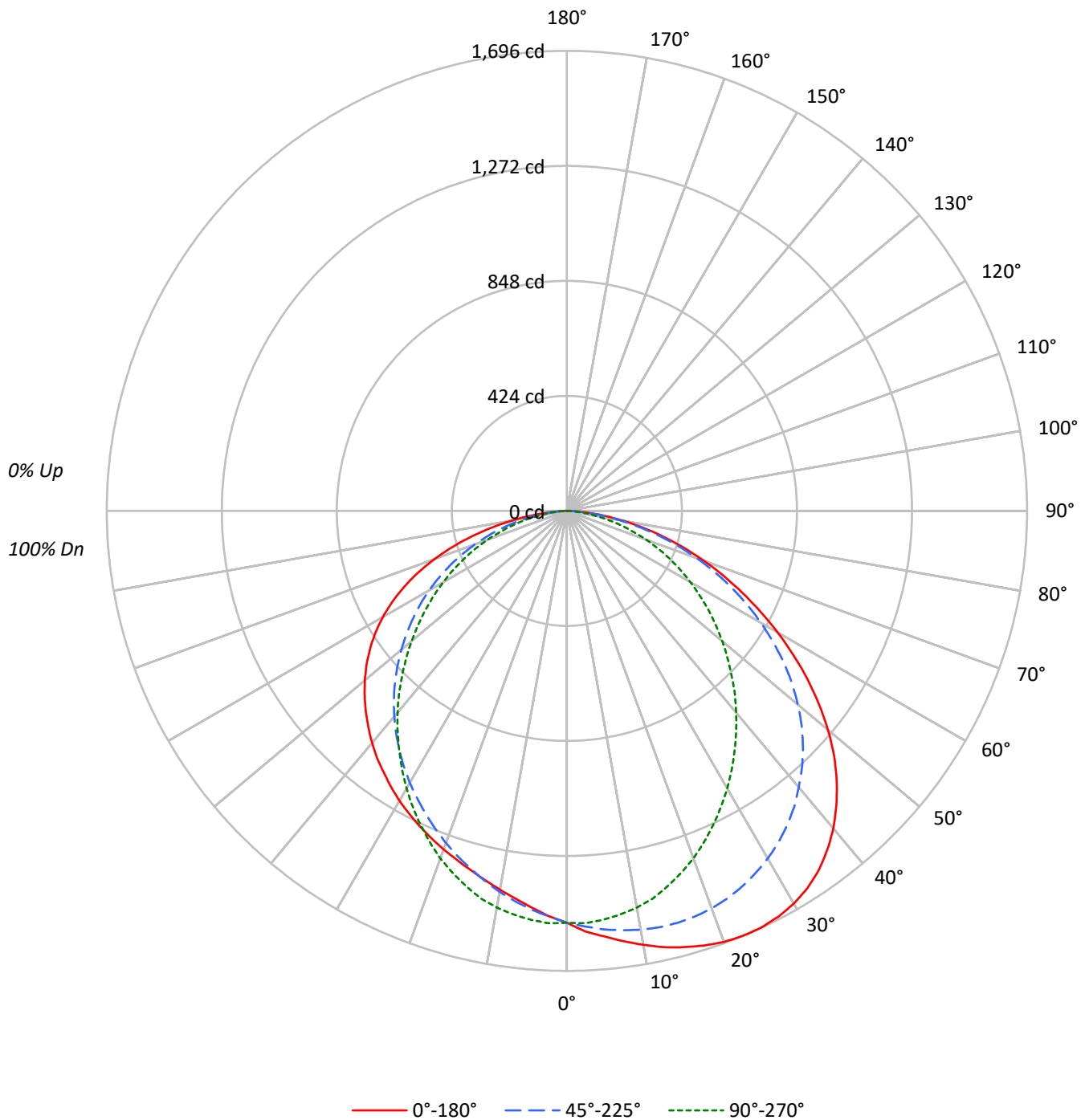
Lumens per Lamp: N/A
Luminaire Lumens: 4465.9 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P835324

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-4LO-35-120-EDD-90

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835324

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-4LO-35-120-EDD-90

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°	4085	4085	4085
5°	4253	4088	3967
10°	4439	4057	3875
15°	4639	3992	3819
20°	4842	3904	3803
25°	5032	3790	3809
30°	5196	3672	3834
35°	5315	3541	3866
40°	5368	3410	3923
45°	5353	3266	3987
50°	5259	3129	4069
55°	5079	2985	4154
60°	4831	2831	4217
65°	4537	2658	4211
70°	4222	2452	4086
75°	3833	2153	3768
80°	3292	1770	3178
85°	2510	1210	2183

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835324

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-4LO-35-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.0	3.2
10°-20°	415.8	9.3
20°-30°	637.0	14.3
30°-40°	777.4	17.4
40°-50°	813.0	18.2
50°-60°	735.8	16.5
60°-70°	557.3	12.5
70°-80°	310.6	7.0
80°-90°	74.9	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°	1196.9	26.8
0°-40°	1974.3	44.2
0°-60°	3523.1	78.9
0°-90°	4465.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4465.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1518	1518	1518	1518	1518	
5°	1575	1548	1513	1476	1468	152
15°	1665	1573	1433	1366	1371	472
25°	1695	1528	1277	1232	1283	782
35°	1618	1415	1078	1076	1177	1010
45°	1407	1230	858	896	1048	1082
55°	1082	977	636	692	885	966
65°	712	670	418	474	661	707
75°	369	348	207	247	362	391
85°	81	72	39	52	71	98
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835324

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-4LO-35-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1518.2	1518.2	1518.2	1518.2	1518.2	1518.2	1518.2	1518.2	1518.2	1518.2	1518.2
2.5°	1551.7	1544.4	1538.5	1540.8	1542.1	1537.5	1533.5	1534.1	1530.2	1537.8	1519.9
5°	1574.6	1568.0	1561.0	1563.7	1561.0	1554.1	1548.4	1546.8	1536.1	1540.4	1522.2
7.5°	1600.2	1592.9	1582.6	1585.6	1579.9	1567.0	1559.7	1555.4	1539.1	1539.4	1519.2
10°	1624.7	1618.4	1604.5	1606.5	1596.2	1578.9	1567.3	1561.4	1538.5	1535.1	1514.2
12.5°	1647.6	1639.0	1624.1	1625.1	1610.1	1587.2	1572.3	1563.7	1533.8	1523.9	1503.3
15°	1665.2	1656.9	1639.0	1638.7	1619.4	1589.6	1572.6	1560.7	1522.9	1507.3	1485.7
17.5°	1680.2	1672.5	1650.3	1649.6	1626.4	1588.6	1568.3	1553.4	1506.9	1487.7	1463.8
20°	1690.8	1683.1	1658.3	1655.9	1628.1	1583.6	1559.4	1540.4	1486.0	1463.1	1436.6
22.5°	1695.8	1688.1	1659.9	1656.6	1624.1	1573.6	1546.4	1524.2	1462.1	1432.3	1404.7
25°	1694.8	1687.5	1655.6	1652.3	1616.4	1558.7	1528.2	1502.6	1431.9	1396.8	1369.5
27.5°	1686.5	1680.8	1647.3	1643.0	1602.5	1538.5	1505.9	1477.7	1398.4	1359.3	1329.7
30°	1672.2	1667.9	1632.4	1628.4	1585.2	1516.2	1480.0	1447.5	1362.2	1318.1	1288.2
32.5°	1649.3	1645.3	1609.5	1605.8	1562.0	1487.7	1449.9	1416.3	1322.8	1274.0	1244.1
35°	1617.8	1615.4	1580.6	1576.6	1532.1	1455.2	1415.0	1378.2	1281.6	1226.5	1198.0
37.5°	1576.3	1576.3	1542.8	1538.5	1495.0	1415.3	1375.8	1336.7	1235.1	1176.7	1148.5
40°	1528.2	1532.5	1498.3	1494.0	1451.8	1372.5	1329.4	1288.2	1185.0	1124.3	1096.8
42.5°	1470.4	1474.4	1445.9	1441.9	1402.4	1323.1	1282.9	1238.1	1132.6	1070.9	1042.3
45°	1406.7	1412.0	1386.5	1383.5	1346.6	1269.0	1230.5	1185.0	1077.8	1015.1	987.3
47.5°	1335.7	1342.7	1320.4	1318.8	1284.6	1213.6	1173.4	1127.3	1020.4	957.1	930.8
50°	1256.1	1266.0	1247.8	1247.8	1217.2	1146.5	1111.7	1065.6	960.7	897.3	871.4
52.5°	1170.8	1183.4	1169.8	1170.1	1145.2	1081.8	1045.7	1000.5	898.3	835.9	812.0
55°	1082.5	1094.8	1086.1	1087.5	1067.9	1010.1	977.3	932.5	834.6	773.9	751.3
57.5°	990.2	1003.5	997.9	1000.5	986.9	935.2	901.0	861.8	768.9	708.8	689.6
60°	897.7	910.3	907.3	910.9	902.3	857.5	826.3	785.8	702.9	645.1	628.2
62.5°	804.1	815.7	815.0	819.0	814.4	777.2	749.3	714.8	634.5	581.4	565.8
65°	712.5	722.4	721.8	726.1	725.1	695.2	670.0	638.5	566.1	517.4	503.7
67.5°	623.5	631.8	629.5	634.5	635.8	611.9	590.0	561.8	501.1	453.6	442.0
70°	536.6	542.2	539.3	542.6	545.6	527.6	509.1	484.2	431.7	389.9	380.3
72.5°	451.3	455.3	450.7	454.0	456.6	443.7	428.4	406.8	363.4	327.2	319.2
75°	368.7	374.3	364.7	368.0	370.0	357.1	348.1	330.5	293.0	265.1	259.8
77.5°	288.7	292.0	286.7	285.4	286.7	277.4	270.5	256.9	228.6	205.7	202.4
80°	212.4	214.4	209.1	207.7	208.7	202.1	196.8	186.8	166.9	149.7	148.3
82.5°	142.4	143.4	138.7	137.4	138.0	136.1	129.8	122.8	113.5	98.9	98.6
85°	81.3	81.3	78.0	76.7	77.3	74.0	71.7	68.0	64.4	54.4	55.1
87.5°	29.9	29.9	28.2	27.9	31.2	27.5	26.5	24.9	25.9	20.6	21.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835324

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-4LO-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1518.2	1518.2	1518.2	1518.2	1518.2	1518.2	1518.2	1518.2	1518.2	1518.2	1518.2
2.5°	1524.8	1521.5	1518.5	1508.3	1512.6	1502.0	1501.3	1497.3	1494.3	1488.7	1496.0
5°	1519.9	1513.2	1504.6	1492.3	1496.0	1483.4	1480.7	1476.1	1472.1	1464.8	1470.4
7.5°	1511.9	1501.0	1487.3	1471.8	1476.7	1461.1	1457.2	1452.2	1448.9	1440.2	1445.2
10°	1500.3	1484.7	1468.8	1449.9	1453.5	1436.6	1431.6	1426.3	1423.3	1415.7	1420.6
12.5°	1482.4	1463.5	1441.9	1421.3	1425.3	1409.4	1402.7	1397.1	1396.1	1389.8	1395.8
15°	1459.1	1432.9	1410.7	1388.8	1393.4	1374.9	1371.9	1366.2	1367.9	1363.6	1370.9
17.5°	1429.6	1399.4	1375.2	1351.6	1356.3	1340.7	1338.3	1335.7	1337.4	1336.7	1344.7
20°	1396.4	1363.2	1335.4	1312.1	1314.8	1302.5	1303.5	1302.8	1306.2	1309.8	1320.8
22.5°	1358.9	1321.4	1292.2	1268.3	1272.3	1261.7	1266.3	1267.7	1273.3	1281.6	1295.5
25°	1316.8	1276.6	1246.1	1223.5	1227.2	1220.2	1228.2	1231.5	1240.5	1254.4	1268.7
27.5°	1272.6	1230.2	1197.6	1176.1	1183.0	1176.1	1188.0	1194.7	1208.3	1223.5	1241.1
30°	1225.9	1181.7	1148.2	1129.0	1135.6	1129.3	1148.5	1157.5	1171.1	1192.0	1212.9
32.5°	1176.7	1130.3	1097.4	1082.5	1087.1	1086.1	1107.7	1117.7	1135.9	1159.8	1182.0
35°	1126.3	1077.8	1044.7	1032.1	1037.7	1039.0	1064.9	1076.5	1096.4	1125.3	1149.2
37.5°	1074.2	1024.8	992.2	981.9	986.9	991.9	1022.1	1033.7	1056.3	1087.8	1114.0
40°	1020.1	970.7	938.8	930.5	935.5	940.8	973.6	989.6	1014.1	1048.3	1076.9
42.5°	965.4	915.9	885.0	879.1	884.0	894.3	929.2	944.1	970.0	1007.8	1039.4
45°	909.6	858.2	831.3	826.6	831.9	843.9	878.1	896.0	923.5	965.0	998.9
47.5°	853.2	803.1	777.5	774.5	779.8	793.1	831.0	847.2	876.4	920.6	957.1
50°	796.1	747.3	722.8	721.8	726.8	741.0	777.2	796.4	826.6	876.1	913.6
52.5°	738.4	691.6	669.3	669.3	674.0	688.6	725.1	745.0	776.2	828.3	869.8
55°	680.6	636.2	614.9	616.6	623.2	635.8	671.3	692.2	723.8	777.9	821.7
57.5°	622.9	580.7	561.5	563.8	570.1	582.7	617.6	641.1	669.7	725.8	770.6
60°	565.8	526.0	509.1	511.7	517.4	530.0	566.1	586.4	614.9	672.0	716.8
62.5°	508.1	471.9	456.0	459.3	464.3	476.9	511.0	530.6	558.8	614.9	660.0
65°	451.0	417.5	403.9	407.2	411.8	423.4	455.6	474.5	501.4	556.2	599.3
67.5°	394.6	364.0	352.8	356.1	359.7	370.7	397.2	417.8	443.0	495.1	535.9
70°	338.8	311.6	301.7	305.0	308.3	318.2	341.5	360.4	383.6	431.4	469.2
72.5°	283.7	257.2	252.2	255.2	257.8	266.5	288.7	303.6	323.9	366.4	398.9
75°	230.0	207.1	203.8	206.7	209.1	215.7	234.3	247.2	264.2	301.0	327.5
77.5°	178.2	159.0	157.6	160.0	162.3	166.9	181.5	195.1	208.4	235.6	259.2
80°	129.8	114.2	114.2	116.5	115.8	121.5	131.7	142.7	152.3	171.9	189.2
82.5°	85.6	73.3	75.0	76.7	77.7	80.0	86.3	94.6	100.6	112.5	123.8
85°	47.5	39.2	40.8	42.1	41.5	44.1	47.5	52.4	55.4	61.1	67.0
87.5°	17.6	14.6	14.9	15.9	16.6	17.9	17.9	20.9	21.2	21.9	23.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835324

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-4LO-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	1518.2	1518.2	1518.2
2.5°	1482.0	1490.0	1496.0
5°	1456.5	1463.1	1468.4
7.5°	1431.6	1437.6	1442.2
10°	1408.0	1414.7	1418.0
12.5°	1383.8	1391.4	1394.1
15°	1359.9	1367.6	1370.9
17.5°	1335.4	1345.3	1349.0
20°	1312.5	1325.1	1328.1
22.5°	1289.2	1302.2	1305.8
25°	1264.0	1279.3	1282.9
27.5°	1237.1	1255.4	1259.0
30°	1210.3	1230.2	1233.8
32.5°	1181.4	1203.0	1206.3
35°	1151.2	1172.8	1176.7
37.5°	1117.7	1141.2	1149.2
40°	1082.8	1108.4	1116.7
42.5°	1046.3	1074.2	1082.8
45°	1007.2	1037.7	1047.6
47.5°	967.7	1002.2	1010.8
50°	924.9	961.7	972.0
52.5°	880.1	920.2	930.5
55°	833.6	874.1	885.4
57.5°	783.2	825.0	836.9
60°	730.4	772.2	783.5
62.5°	676.3	714.1	725.1
65°	615.9	651.4	661.4
67.5°	551.9	584.4	592.7
70°	483.8	512.0	519.3
72.5°	412.8	432.4	442.0
75°	339.5	355.1	362.4
77.5°	265.8	276.8	282.7
80°	193.8	200.1	205.1
82.5°	126.8	129.4	133.1
85°	68.4	68.4	70.7
87.5°	23.2	22.2	23.2
90°	0.0	0.0	0.0

(END OF REPORT)