

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: P835322

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3STD-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835322
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-LD4-3STD-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

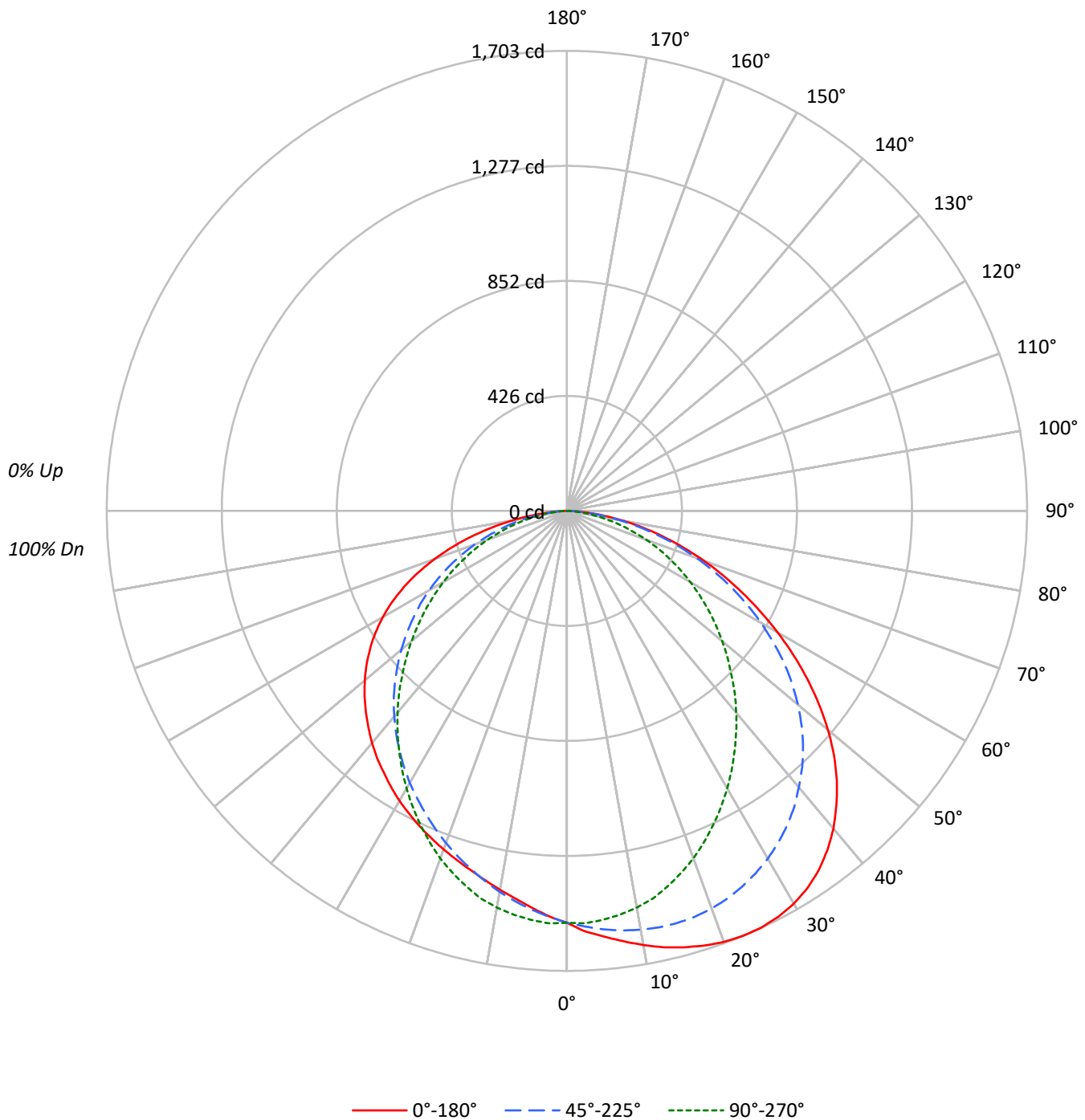
Lumens per Lamp: N/A
Luminaire Lumens: 4485.1 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 50
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: P835322

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-3STD-35-120-EDD-90

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835322

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-3STD-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	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	4103	4103	4103
5°	4272	4105	3984
10°	4459	4074	3891
15°	4659	4009	3836
20°	4863	3921	3820
25°	5054	3807	3825
30°	5218	3688	3850
35°	5337	3556	3882
40°	5391	3424	3940
45°	5377	3280	4004
50°	5281	3142	4087
55°	5100	2997	4172
60°	4852	2843	4235
65°	4556	2670	4229
70°	4240	2462	4104
75°	3850	2163	3784
80°	3305	1776	3192
85°	2523	1213	2192

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835322

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-3STD-35-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.6	3.2
10°-20°	417.6	9.3
20°-30°	639.8	14.3
30°-40°	780.8	17.4
40°-50°	816.5	18.2
50°-60°	739.0	16.5
60°-70°	559.7	12.5
70°-80°	311.9	7.0
80°-90°	75.2	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°	1202.0	26.8
0°-40°	1982.8	44.2
0°-60°	3538.3	78.9
0°-90°	4485.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4485.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1525	1525	1525	1525	1525	
5°	1581	1555	1520	1482	1475	152
15°	1672	1579	1439	1372	1377	474
25°	1702	1535	1282	1237	1288	785
35°	1625	1421	1082	1081	1182	1015
45°	1413	1236	862	900	1052	1087
55°	1087	982	639	695	889	970
65°	716	673	419	477	664	710
75°	370	350	208	248	364	393
85°	82	72	39	53	71	98
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835322

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-3STD-35-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1524.7	1524.7	1524.7	1524.7	1524.7	1524.7	1524.7	1524.7	1524.7	1524.7	1524.7
2.5°	1558.4	1551.1	1545.1	1547.4	1548.7	1544.1	1540.1	1540.7	1536.7	1544.4	1526.4
5°	1581.4	1574.7	1567.7	1570.4	1567.7	1560.7	1555.1	1553.4	1542.7	1547.1	1528.7
7.5°	1607.1	1599.7	1589.4	1592.4	1586.7	1573.7	1566.4	1562.1	1545.7	1546.1	1525.7
10°	1631.7	1625.4	1611.4	1613.4	1603.1	1585.7	1574.1	1568.1	1545.1	1541.7	1520.7
12.5°	1654.7	1646.1	1631.1	1632.1	1617.1	1594.1	1579.1	1570.4	1540.4	1530.4	1509.7
15°	1672.4	1664.1	1646.1	1645.7	1626.4	1596.4	1579.4	1567.4	1529.4	1513.7	1492.1
17.5°	1687.4	1679.7	1657.4	1656.7	1633.4	1595.4	1575.1	1560.1	1513.4	1494.1	1470.1
20°	1698.0	1690.4	1665.4	1663.1	1635.1	1590.4	1566.1	1547.1	1492.4	1469.4	1442.8
22.5°	1703.0	1695.4	1667.1	1663.7	1631.1	1580.4	1553.1	1530.7	1468.4	1438.4	1410.8
25°	1702.0	1694.7	1662.7	1659.4	1623.4	1565.4	1534.7	1509.1	1438.1	1402.8	1375.4
27.5°	1693.7	1688.0	1654.4	1650.1	1609.4	1545.1	1512.4	1484.1	1404.4	1365.1	1335.4
30°	1679.4	1675.1	1639.4	1635.4	1592.1	1522.7	1486.4	1453.8	1368.1	1323.8	1293.8
32.5°	1656.4	1652.4	1616.4	1612.7	1568.7	1494.1	1456.1	1422.4	1328.4	1279.5	1249.5
35°	1624.7	1622.4	1587.4	1583.4	1538.7	1461.4	1421.1	1384.1	1287.1	1231.8	1203.1
37.5°	1583.1	1583.1	1549.4	1545.1	1501.4	1421.4	1381.8	1342.4	1240.5	1181.8	1153.5
40°	1534.7	1539.1	1504.7	1500.4	1458.1	1378.4	1335.1	1293.8	1190.1	1129.1	1101.5
42.5°	1476.8	1480.8	1452.1	1448.1	1408.4	1328.8	1288.4	1243.5	1137.5	1075.5	1046.8
45°	1412.8	1418.1	1392.4	1389.4	1352.4	1274.5	1235.8	1190.1	1082.5	1019.5	991.5
47.5°	1341.4	1348.4	1326.1	1324.4	1290.1	1218.8	1178.5	1132.1	1024.8	961.2	934.8
50°	1261.5	1271.5	1253.1	1253.1	1222.5	1151.5	1116.5	1070.2	964.8	901.2	875.2
52.5°	1175.8	1188.5	1174.8	1175.1	1150.1	1086.5	1050.2	1004.8	902.2	839.5	815.5
55°	1087.1	1099.5	1090.8	1092.1	1072.5	1014.5	981.5	936.5	838.2	777.2	754.5
57.5°	994.5	1007.8	1002.2	1004.8	991.2	939.2	904.8	865.5	772.2	711.9	692.5
60°	901.5	914.2	911.2	914.8	906.2	861.2	829.9	789.2	705.9	647.9	630.9
62.5°	807.5	819.2	818.5	822.5	817.9	780.5	752.5	717.9	637.2	583.9	568.2
65°	715.5	725.5	724.9	729.2	728.2	698.2	672.9	641.2	568.6	519.6	505.9
67.5°	626.2	634.6	632.2	637.2	638.6	614.6	592.6	564.2	503.2	455.6	443.9
70°	538.9	544.6	541.6	544.9	547.9	529.9	511.2	486.3	433.6	391.6	381.9
72.5°	453.3	457.3	452.6	455.9	458.6	445.6	430.3	408.6	364.9	328.6	320.6
75°	370.3	375.9	366.3	369.6	371.6	358.6	349.6	331.9	294.3	266.3	261.0
77.5°	290.0	293.3	288.0	286.6	288.0	278.6	271.6	258.0	229.6	206.6	203.3
80°	213.3	215.3	210.0	208.6	209.6	203.0	197.6	187.6	167.6	150.3	149.0
82.5°	143.0	144.0	139.3	138.0	138.6	136.6	130.3	123.3	114.0	99.3	99.0
85°	81.7	81.7	78.3	77.0	77.7	74.3	72.0	68.3	64.7	54.7	55.3
87.5°	30.0	30.0	28.3	28.0	31.3	27.7	26.7	25.0	26.0	20.7	22.0
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: P835322

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-3STD-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1524.7	1524.7	1524.7	1524.7	1524.7	1524.7	1524.7	1524.7	1524.7	1524.7	1524.7
2.5°	1531.4	1528.1	1525.1	1514.7	1519.1	1508.4	1507.7	1503.7	1500.7	1495.1	1502.4
5°	1526.4	1519.7	1511.1	1498.7	1502.4	1489.7	1487.1	1482.4	1478.4	1471.1	1476.8
7.5°	1518.4	1507.4	1493.7	1478.1	1483.1	1467.4	1463.4	1458.4	1455.1	1446.4	1451.4
10°	1506.7	1491.1	1475.1	1456.1	1459.8	1442.8	1437.8	1432.4	1429.4	1421.8	1426.8
12.5°	1488.7	1469.8	1448.1	1427.4	1431.4	1415.4	1408.8	1403.1	1402.1	1395.8	1401.8
15°	1465.4	1439.1	1416.8	1394.8	1399.4	1380.8	1377.8	1372.1	1373.8	1369.4	1376.8
17.5°	1435.8	1405.4	1381.1	1357.4	1362.1	1346.4	1344.1	1341.4	1343.1	1342.4	1350.4
20°	1402.4	1369.1	1341.1	1317.8	1320.4	1308.1	1309.1	1308.4	1311.8	1315.4	1326.4
22.5°	1364.8	1327.1	1297.8	1273.8	1277.8	1267.1	1271.8	1273.1	1278.8	1287.1	1301.1
25°	1322.4	1282.1	1251.5	1228.8	1232.5	1225.5	1233.5	1236.8	1245.8	1259.8	1274.1
27.5°	1278.1	1235.5	1202.8	1181.1	1188.1	1181.1	1193.1	1199.8	1213.5	1228.8	1246.5
30°	1231.1	1186.8	1153.1	1133.8	1140.5	1134.1	1153.5	1162.5	1176.1	1197.1	1218.1
32.5°	1181.8	1135.1	1102.1	1087.1	1091.8	1090.8	1112.5	1122.5	1140.8	1164.8	1187.1
35°	1131.1	1082.5	1049.2	1036.5	1042.2	1043.5	1069.5	1081.2	1101.1	1130.1	1154.1
37.5°	1078.8	1029.2	996.5	986.2	991.2	996.2	1026.5	1038.2	1060.8	1092.5	1118.8
40°	1024.5	974.8	942.8	934.5	939.5	944.8	977.8	993.8	1018.5	1052.8	1081.5
42.5°	969.5	919.8	888.8	882.9	887.9	898.2	933.2	948.2	974.2	1012.2	1043.8
45°	913.5	861.9	834.9	830.2	835.5	847.5	881.9	899.8	927.5	969.2	1003.2
47.5°	856.9	806.5	780.9	777.9	783.2	796.5	834.5	850.9	880.2	924.5	961.2
50°	799.5	750.5	725.9	724.9	729.9	744.2	780.5	799.9	830.2	879.9	917.5
52.5°	741.5	694.5	672.2	672.2	676.9	691.5	728.2	748.2	779.5	831.9	873.5
55°	683.6	638.9	617.6	619.2	625.9	638.6	674.2	695.2	726.9	781.2	825.2
57.5°	625.6	583.2	563.9	566.2	572.6	585.2	620.2	643.9	672.6	728.9	773.9
60°	568.2	528.2	511.2	513.9	519.6	532.2	568.6	588.9	617.6	674.9	719.9
62.5°	510.2	473.9	457.9	461.3	466.3	478.9	513.2	532.9	561.2	617.6	662.9
65°	452.9	419.3	405.6	408.9	413.6	425.3	457.6	476.6	503.6	558.6	601.9
67.5°	396.3	365.6	354.3	357.6	361.3	372.3	398.9	419.6	444.9	497.2	538.2
70°	340.3	312.9	302.9	306.3	309.6	319.6	342.9	361.9	385.3	433.3	471.3
72.5°	285.0	258.3	253.3	256.3	259.0	267.6	290.0	304.9	325.3	367.9	400.6
75°	231.0	208.0	204.6	207.6	210.0	216.6	235.3	248.3	265.3	302.3	328.9
77.5°	179.0	159.6	158.3	160.6	163.0	167.6	182.3	196.0	209.3	236.6	260.3
80°	130.3	114.6	114.6	117.0	116.3	122.0	132.3	143.3	153.0	172.6	190.0
82.5°	86.0	73.7	75.3	77.0	78.0	80.3	86.7	95.0	101.0	113.0	124.3
85°	47.7	39.3	41.0	42.3	41.7	44.3	47.7	52.7	55.7	61.3	67.3
87.5°	17.7	14.7	15.0	16.0	16.7	18.0	18.0	21.0	21.3	22.0	23.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P835322

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-3STD-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	1524.7	1524.7	1524.7
2.5°	1488.4	1496.4	1502.4
5°	1462.8	1469.4	1474.8
7.5°	1437.8	1443.8	1448.4
10°	1414.1	1420.8	1424.1
12.5°	1389.8	1397.4	1400.1
15°	1365.8	1373.4	1376.8
17.5°	1341.1	1351.1	1354.8
20°	1318.1	1330.8	1333.8
22.5°	1294.8	1307.8	1311.4
25°	1269.5	1284.8	1288.4
27.5°	1242.5	1260.8	1264.5
30°	1215.5	1235.5	1239.1
32.5°	1186.5	1208.1	1211.5
35°	1156.1	1177.8	1181.8
37.5°	1122.5	1146.1	1154.1
40°	1087.5	1113.1	1121.5
42.5°	1050.8	1078.8	1087.5
45°	1011.5	1042.2	1052.2
47.5°	971.8	1006.5	1015.2
50°	928.8	965.8	976.2
52.5°	883.9	924.2	934.5
55°	837.2	877.9	889.2
57.5°	786.5	828.5	840.5
60°	733.5	775.5	786.9
62.5°	679.2	717.2	728.2
65°	618.6	654.2	664.2
67.5°	554.2	586.9	595.2
70°	485.9	514.2	521.6
72.5°	414.6	434.3	443.9
75°	340.9	356.6	363.9
77.5°	267.0	278.0	284.0
80°	194.6	201.0	206.0
82.5°	127.3	130.0	133.6
85°	68.7	68.7	71.0
87.5°	23.3	22.3	23.3
90°	0.0	0.0	0.0

(END OF REPORT)