

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: P834282

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1HI-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834282
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-1HI-50-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

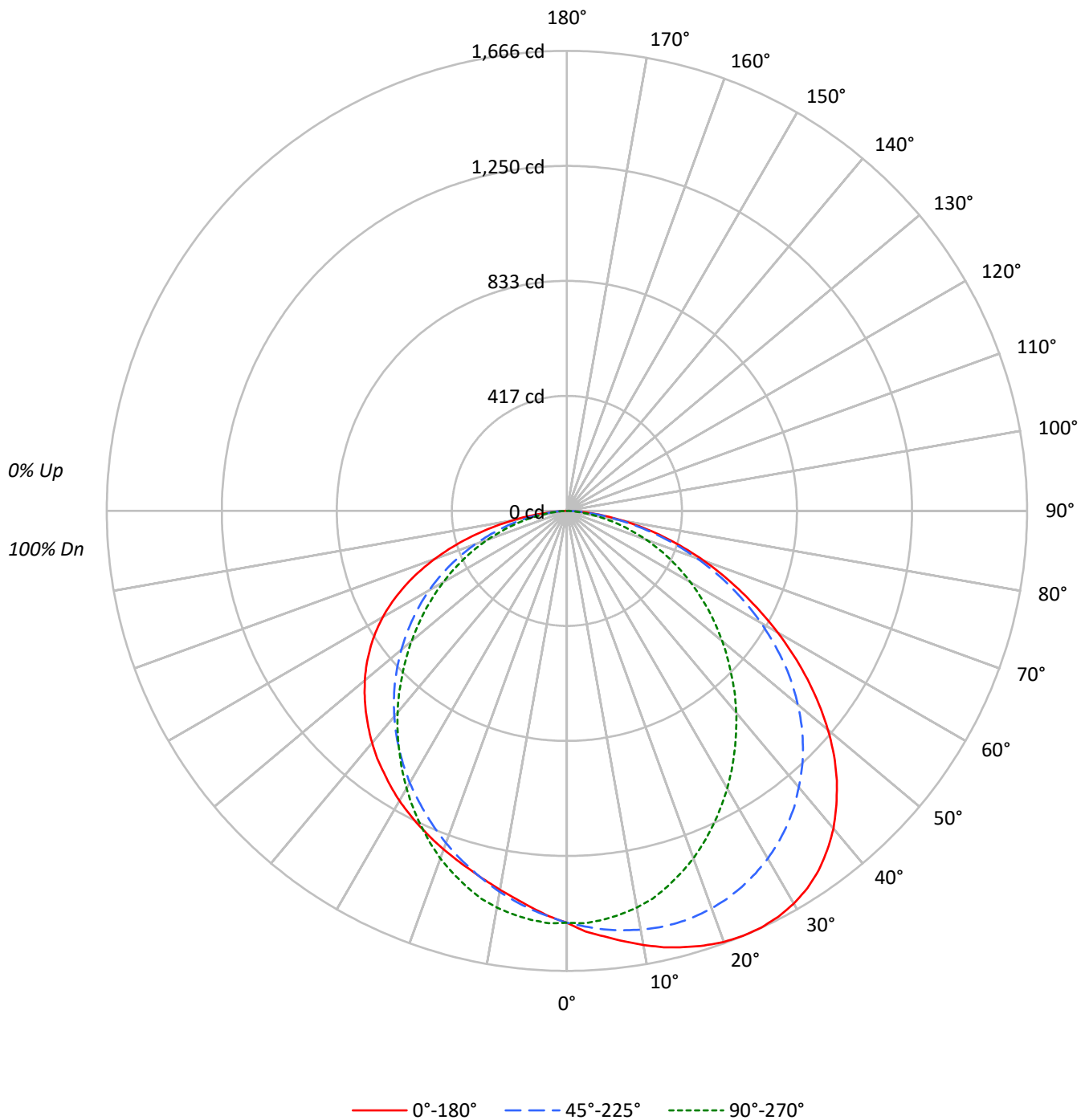
Lumens per Lamp: N/A
Luminaire Lumens: 4387.2 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44
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	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°	4014	4014	4014
5°	4179	4016	3897
10°	4361	3986	3806
15°	4557	3922	3752
20°	4757	3835	3736
25°	4943	3724	3742
30°	5104	3607	3766
35°	5221	3479	3798
40°	5274	3350	3854
45°	5259	3209	3917
50°	5166	3074	3998
55°	4989	2932	4081
60°	4746	2781	4142
65°	4457	2611	4137
70°	4148	2408	4014
75°	3766	2115	3701
80°	3233	1737	3123
85°	2467	1189	2143



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.5	3.2
10°-20°	408.5	9.3
20°-30°	625.8	14.3
30°-40°	763.7	17.4
40°-50°	798.7	18.2
50°-60°	722.9	16.5
60°-70°	547.5	12.5
70°-80°	305.1	7.0
80°-90°	73.6	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°	1175.8	26.8
0°-40°	1939.5	44.2
0°-60°	3461.1	78.9
0°-90°	4387.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4387.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1492	1492	1492	1492	1492	
5°	1547	1521	1487	1450	1443	149
15°	1636	1545	1408	1342	1347	464
25°	1665	1501	1254	1210	1260	768
35°	1589	1390	1059	1058	1156	992
45°	1382	1209	843	880	1029	1063
55°	1063	960	625	680	870	949
65°	700	658	410	466	650	694
75°	362	342	203	243	356	384
85°	80	70	38	52	69	96
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°	1491.5	1491.5	1491.5	1491.5	1491.5	1491.5	1491.5	1491.5	1491.5	1491.5	1491.5
2.5°	1524.4	1517.2	1511.4	1513.6	1515.0	1510.4	1506.5	1507.1	1503.2	1510.7	1493.1
5°	1546.9	1540.4	1533.5	1536.1	1533.5	1526.7	1521.1	1519.5	1509.1	1513.3	1495.4
7.5°	1572.0	1564.8	1554.7	1557.7	1552.1	1539.4	1532.2	1528.0	1512.0	1512.3	1492.5
10°	1596.1	1589.9	1576.2	1578.2	1568.1	1551.1	1539.7	1533.9	1511.4	1508.1	1487.6
12.5°	1618.6	1610.1	1595.5	1596.5	1581.8	1559.3	1544.6	1536.1	1506.8	1497.0	1476.8
15°	1635.9	1627.8	1610.1	1609.8	1590.9	1561.6	1544.9	1533.2	1496.0	1480.7	1459.5
17.5°	1650.6	1643.1	1621.2	1620.6	1597.8	1560.6	1540.7	1526.0	1480.4	1461.5	1438.0
20°	1661.0	1653.5	1629.1	1626.8	1599.4	1555.7	1531.9	1513.3	1459.9	1437.4	1411.3
22.5°	1665.9	1658.4	1630.7	1627.4	1595.5	1545.9	1519.2	1497.3	1436.4	1407.0	1380.0
25°	1664.9	1657.7	1626.4	1623.2	1588.0	1531.3	1501.3	1476.2	1406.7	1372.2	1345.4
27.5°	1656.8	1651.2	1618.3	1614.1	1574.3	1511.4	1479.4	1451.7	1373.8	1335.3	1306.3
30°	1642.7	1638.5	1603.6	1599.7	1557.3	1489.5	1454.0	1422.0	1338.3	1294.9	1265.6
32.5°	1620.3	1616.3	1581.1	1577.5	1534.5	1461.5	1424.3	1391.4	1299.5	1251.5	1222.2
35°	1589.3	1587.0	1552.8	1548.9	1505.2	1429.5	1390.1	1353.9	1259.0	1204.9	1176.9
37.5°	1548.5	1548.5	1515.6	1511.4	1468.7	1390.4	1351.6	1313.2	1213.4	1156.0	1128.3
40°	1501.3	1505.5	1471.9	1467.7	1426.3	1348.4	1306.0	1265.6	1164.2	1104.5	1077.5
42.5°	1444.5	1448.4	1420.4	1416.5	1377.7	1299.8	1260.3	1216.3	1112.7	1052.0	1024.0
45°	1381.9	1387.2	1362.1	1359.1	1322.9	1246.6	1208.8	1164.2	1058.9	997.3	969.9
47.5°	1312.2	1319.0	1297.2	1295.5	1262.0	1192.2	1152.8	1107.4	1002.5	940.2	914.4
50°	1233.9	1243.7	1225.8	1225.8	1195.8	1126.4	1092.1	1046.8	943.8	881.5	856.1
52.5°	1150.2	1162.5	1149.2	1149.5	1125.0	1062.8	1027.2	982.9	882.5	821.2	797.7
55°	1063.4	1075.5	1067.0	1068.3	1049.1	992.4	960.1	916.1	819.9	760.2	738.1
57.5°	972.8	985.8	980.3	982.9	969.5	918.7	885.1	846.6	755.4	696.3	677.4
60°	881.8	894.2	891.3	894.9	886.4	842.4	811.8	772.0	690.5	633.8	617.1
62.5°	789.9	801.3	800.7	804.6	800.0	763.5	736.1	702.2	623.3	571.2	555.8
65°	699.9	709.7	709.1	713.3	712.3	683.0	658.2	627.2	556.2	508.2	494.9
67.5°	612.6	620.7	618.4	623.3	624.6	601.2	579.6	551.9	492.3	445.7	434.2
70°	527.2	532.7	529.8	533.0	536.0	518.4	500.1	475.6	424.1	383.1	373.6
72.5°	443.4	447.3	442.7	446.0	448.6	435.9	420.9	399.7	357.0	321.4	313.6
75°	362.2	367.7	358.3	361.5	363.5	350.8	342.0	324.7	287.9	260.5	255.3
77.5°	283.6	286.9	281.7	280.4	281.7	272.5	265.7	252.3	224.6	202.1	198.9
80°	208.6	210.6	205.4	204.1	205.1	198.5	193.3	183.5	164.0	147.0	145.7
82.5°	139.9	140.8	136.3	135.0	135.6	133.7	127.5	120.6	111.5	97.1	96.8
85°	79.9	79.9	76.6	75.3	76.0	72.7	70.4	66.8	63.2	53.5	54.1
87.5°	29.3	29.3	27.7	27.4	30.6	27.1	26.1	24.5	25.4	20.2	21.5
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°	1491.5	1491.5	1491.5	1491.5	1491.5	1491.5	1491.5	1491.5	1491.5	1491.5	1491.5
2.5°	1498.0	1494.7	1491.8	1481.7	1485.9	1475.5	1474.9	1470.9	1468.0	1462.5	1469.6
5°	1493.1	1486.6	1478.1	1466.1	1469.6	1457.2	1454.6	1450.1	1446.2	1439.0	1444.5
7.5°	1485.3	1474.5	1461.2	1445.8	1450.7	1435.4	1431.5	1426.6	1423.3	1414.9	1419.8
10°	1473.9	1458.6	1442.9	1424.3	1427.9	1411.3	1406.4	1401.2	1398.2	1390.7	1395.6
12.5°	1456.3	1437.7	1416.5	1396.3	1400.2	1384.5	1378.0	1372.5	1371.5	1365.3	1371.2
15°	1433.5	1407.7	1385.9	1364.3	1368.9	1350.6	1347.7	1342.2	1343.8	1339.6	1346.7
17.5°	1404.4	1374.8	1351.0	1327.8	1332.4	1317.1	1314.8	1312.2	1313.8	1313.2	1321.0
20°	1371.8	1339.2	1311.8	1289.0	1291.6	1279.6	1280.6	1279.9	1283.2	1286.7	1297.5
22.5°	1335.0	1298.2	1269.5	1246.0	1249.9	1239.5	1244.0	1245.3	1250.9	1259.0	1272.7
25°	1293.6	1254.1	1224.2	1202.0	1205.6	1198.7	1206.5	1209.8	1218.6	1232.3	1246.3
27.5°	1250.2	1208.5	1176.6	1155.4	1162.2	1155.4	1167.1	1173.6	1187.0	1202.0	1219.3
30°	1204.3	1160.9	1128.0	1109.1	1115.6	1109.4	1128.3	1137.1	1150.5	1171.0	1191.6
32.5°	1156.0	1110.4	1078.1	1063.4	1068.0	1067.0	1088.2	1098.0	1115.9	1139.4	1161.2
35°	1106.5	1058.9	1026.3	1013.9	1019.4	1020.7	1046.2	1057.6	1077.1	1105.5	1129.0
37.5°	1055.3	1006.7	974.8	964.7	969.5	974.4	1004.1	1015.5	1037.7	1068.6	1094.4
40°	1002.1	953.6	922.3	914.1	919.0	924.2	956.5	972.2	996.3	1029.9	1057.9
42.5°	948.4	899.8	869.5	863.6	868.5	878.6	912.8	927.5	952.9	990.1	1021.1
45°	893.6	843.1	816.6	812.1	817.3	829.0	862.6	880.2	907.3	948.0	981.3
47.5°	838.2	788.9	763.8	760.9	766.1	779.2	816.3	832.3	861.0	904.3	940.2
50°	782.1	734.2	710.0	709.1	714.0	728.0	763.5	782.4	812.1	860.7	897.5
52.5°	725.4	679.4	657.6	657.6	662.1	676.5	712.3	731.9	762.5	813.7	854.5
55°	668.6	625.0	604.1	605.7	612.2	624.6	659.5	680.0	711.0	764.2	807.2
57.5°	611.9	570.5	551.6	553.9	560.1	572.5	606.7	629.8	657.9	713.0	757.0
60°	555.8	516.7	500.1	502.7	508.2	520.6	556.2	576.1	604.1	660.2	704.2
62.5°	499.1	463.6	447.9	451.2	456.1	468.5	502.0	521.3	549.0	604.1	648.4
65°	443.0	410.1	396.7	400.0	404.6	416.0	447.6	466.2	492.6	546.4	588.8
67.5°	387.6	357.6	346.5	349.8	353.4	364.1	390.2	410.4	435.2	486.4	526.5
70°	332.9	306.1	296.3	299.6	302.9	312.6	335.5	354.0	376.9	423.8	461.0
72.5°	278.7	252.7	247.8	250.7	253.3	261.8	283.6	298.3	318.2	359.9	391.9
75°	225.9	203.4	200.2	203.1	205.4	211.9	230.2	242.9	259.5	295.7	321.8
77.5°	175.1	156.2	154.9	157.1	159.4	164.0	178.3	191.7	204.7	231.5	254.6
80°	127.5	112.1	112.1	114.4	113.8	119.3	129.4	140.2	149.6	168.9	185.8
82.5°	84.1	72.0	73.7	75.3	76.3	78.6	84.8	92.9	98.8	110.5	121.6
85°	46.6	38.5	40.1	41.4	40.8	43.4	46.6	51.5	54.4	60.0	65.9
87.5°	17.3	14.3	14.7	15.6	16.3	17.6	17.6	20.5	20.9	21.5	22.8
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°	1491.5	1491.5	1491.5
2.5°	1455.9	1463.8	1469.6
5°	1430.8	1437.4	1442.6
7.5°	1406.4	1412.3	1416.8
10°	1383.2	1389.8	1393.0
12.5°	1359.4	1366.9	1369.6
15°	1336.0	1343.5	1346.7
17.5°	1311.8	1321.6	1325.2
20°	1289.4	1301.7	1304.7
22.5°	1266.5	1279.2	1282.8
25°	1241.8	1256.8	1260.3
27.5°	1215.4	1233.3	1236.9
30°	1188.9	1208.5	1212.1
32.5°	1160.6	1181.8	1185.0
35°	1130.9	1152.1	1156.0
37.5°	1098.0	1121.1	1129.0
40°	1063.8	1088.9	1097.0
42.5°	1027.9	1055.3	1063.8
45°	989.4	1019.4	1029.2
47.5°	950.6	984.5	993.0
50°	908.6	944.8	954.9
52.5°	864.6	904.0	914.1
55°	818.9	858.7	869.8
57.5°	769.4	810.5	822.2
60°	717.5	758.6	769.7
62.5°	664.4	701.6	712.3
65°	605.1	640.0	649.7
67.5°	542.1	574.1	582.2
70°	475.3	503.0	510.2
72.5°	405.6	424.8	434.2
75°	333.5	348.8	356.0
77.5°	261.1	271.9	277.8
80°	190.4	196.6	201.5
82.5°	124.5	127.1	130.7
85°	67.2	67.2	69.4
87.5°	22.8	21.8	22.8
90°	0.0	0.0	0.0

(END OF REPORT)