

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: P835304

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3STD-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835304
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-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

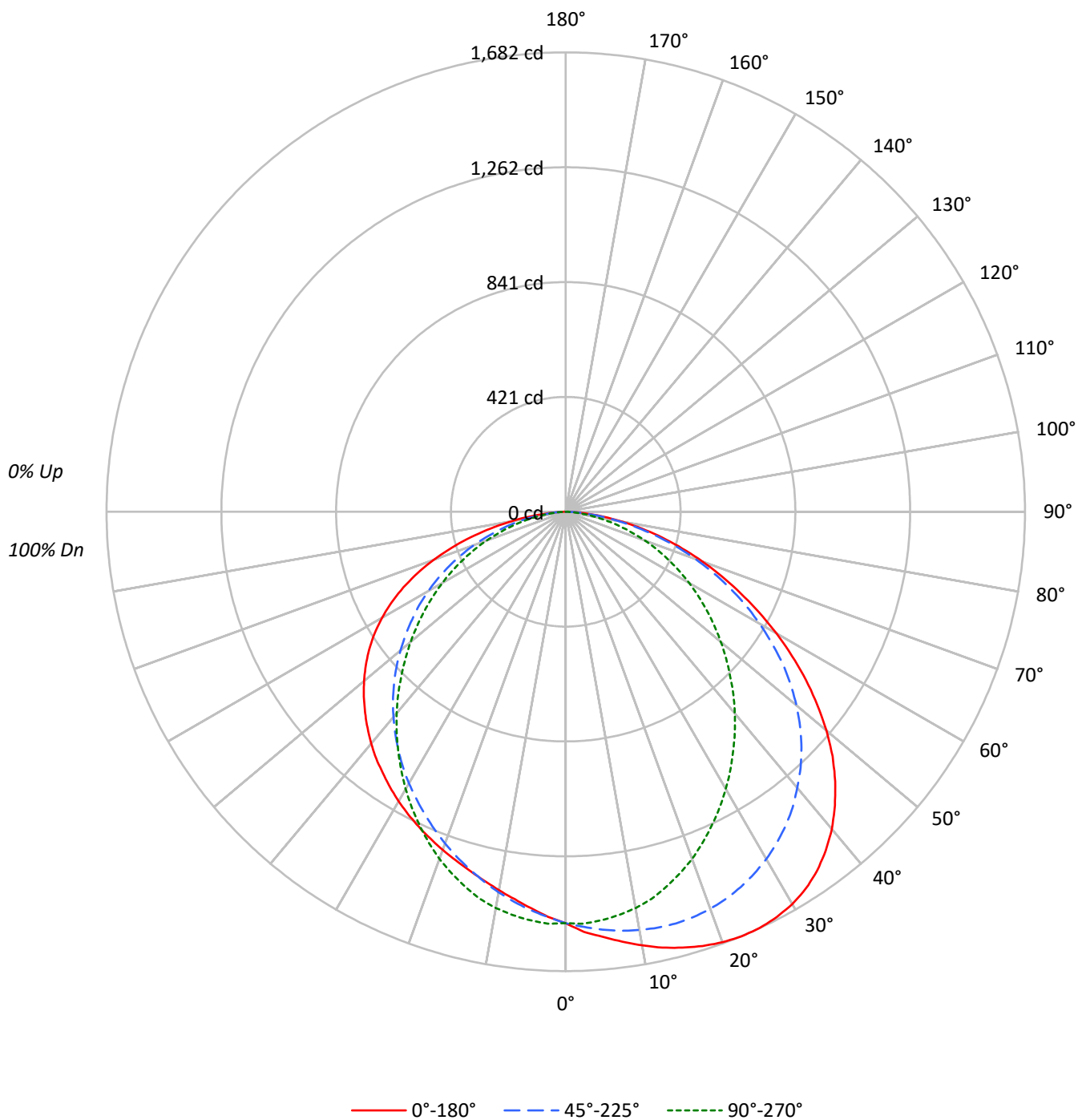
Lumens per Lamp: N/A
Luminaire Lumens: 4431.0 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	4054	4054	4054
5°	4220	4056	3936
10°	4405	4025	3844
15°	4603	3961	3789
20°	4804	3873	3773
25°	4993	3761	3779
30°	5155	3643	3804
35°	5273	3513	3836
40°	5326	3383	3892
45°	5312	3240	3956
50°	5218	3104	4037
55°	5039	2961	4122
60°	4794	2809	4184
65°	4501	2637	4178
70°	4189	2433	4054
75°	3803	2137	3739
80°	3265	1756	3154
85°	2492	1201	2164

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.9	3.2
10°-20°	412.6	9.3
20°-30°	632.1	14.3
30°-40°	771.4	17.4
40°-50°	806.7	18.2
50°-60°	730.1	16.5
60°-70°	552.9	12.5
70°-80°	308.1	7.0
80°-90°	74.3	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°	1187.5	26.8
0°-40°	1958.9	44.2
0°-60°	3495.6	78.9
0°-90°	4431.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4431.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1506	1506	1506	1506	1506	
5°	1562	1536	1501	1465	1457	151
15°	1652	1560	1422	1356	1360	469
25°	1682	1516	1267	1222	1273	776
35°	1605	1404	1069	1068	1168	1002
45°	1396	1221	852	889	1040	1074
55°	1074	970	631	687	878	958
65°	707	665	414	471	656	701
75°	366	345	206	245	360	388
85°	81	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°	1506.4	1506.4	1506.4	1506.4	1506.4	1506.4	1506.4	1506.4	1506.4	1506.4	1506.4
2.5°	1539.6	1532.4	1526.5	1528.8	1530.1	1525.5	1521.5	1522.2	1518.2	1525.8	1508.0
5°	1562.3	1555.8	1548.8	1551.5	1548.8	1541.9	1536.3	1534.7	1524.2	1528.4	1510.3
7.5°	1587.7	1580.5	1570.2	1573.2	1567.6	1554.8	1547.5	1543.2	1527.1	1527.4	1507.4
10°	1612.1	1605.8	1592.0	1594.0	1583.7	1566.6	1555.1	1549.2	1526.5	1523.2	1502.4
12.5°	1634.8	1626.2	1611.4	1612.4	1597.6	1574.9	1560.0	1551.5	1521.8	1512.0	1491.6
15°	1652.2	1644.0	1626.2	1625.9	1606.8	1577.2	1560.4	1548.5	1511.0	1495.5	1474.1
17.5°	1667.1	1659.5	1637.4	1636.8	1613.7	1576.2	1556.1	1541.3	1495.2	1476.1	1452.4
20°	1677.6	1670.0	1645.3	1643.0	1615.4	1571.2	1547.2	1528.4	1474.4	1451.7	1425.4
22.5°	1682.5	1675.0	1647.0	1643.7	1611.4	1561.4	1534.4	1512.3	1450.7	1421.1	1393.8
25°	1681.5	1674.3	1642.7	1639.4	1603.8	1546.5	1516.3	1490.9	1420.8	1385.9	1358.9
27.5°	1673.3	1667.7	1634.5	1630.2	1590.0	1526.5	1494.2	1466.2	1387.5	1348.7	1319.4
30°	1659.1	1654.9	1619.6	1615.7	1572.9	1504.4	1468.5	1436.2	1351.6	1307.8	1278.2
32.5°	1636.4	1632.5	1596.9	1593.3	1549.8	1476.1	1438.5	1405.3	1312.4	1264.0	1234.4
35°	1605.2	1602.8	1568.3	1564.3	1520.2	1443.8	1404.0	1367.4	1271.6	1217.0	1188.6
37.5°	1564.0	1564.0	1530.7	1526.5	1483.3	1404.3	1365.1	1326.3	1225.5	1167.6	1139.6
40°	1516.3	1520.5	1486.6	1482.3	1440.5	1361.8	1319.0	1278.2	1175.8	1115.5	1088.2
42.5°	1459.0	1462.9	1434.6	1430.6	1391.5	1312.8	1272.9	1228.5	1123.8	1062.5	1034.2
45°	1395.7	1401.0	1375.7	1372.7	1336.1	1259.1	1220.9	1175.8	1069.4	1007.2	979.6
47.5°	1325.3	1332.2	1310.1	1308.5	1274.6	1204.1	1164.3	1118.5	1012.5	949.6	923.6
50°	1246.3	1256.1	1238.0	1238.0	1207.7	1137.6	1103.0	1057.3	953.2	890.3	864.6
52.5°	1161.6	1174.1	1160.6	1161.0	1136.3	1073.4	1037.5	992.7	891.3	829.4	805.7
55°	1074.1	1086.2	1077.7	1079.0	1059.6	1002.3	969.7	925.2	828.1	767.8	745.4
57.5°	982.5	995.7	990.1	992.7	979.2	927.9	893.9	855.1	762.9	703.3	684.2
60°	890.7	903.2	900.2	903.8	895.3	850.8	819.9	779.7	697.4	640.1	623.3
62.5°	797.8	809.3	808.7	812.6	808.0	771.1	743.5	709.2	629.5	576.9	561.4
65°	706.9	716.8	716.1	720.4	719.4	689.8	664.8	633.5	561.7	513.3	499.8
67.5°	618.7	626.9	624.6	629.5	630.9	607.2	585.4	557.4	497.2	450.1	438.6
70°	532.4	538.0	535.1	538.3	541.3	523.5	505.1	480.4	428.4	386.9	377.3
72.5°	447.8	451.7	447.1	450.4	453.1	440.2	425.1	403.7	360.5	324.7	316.7
75°	365.8	371.4	361.9	365.2	367.1	354.3	345.4	327.9	290.7	263.1	257.8
77.5°	286.5	289.8	284.5	283.2	284.5	275.3	268.3	254.8	226.9	204.1	200.8
80°	210.7	212.7	207.4	206.1	207.1	200.5	195.3	185.4	165.6	148.5	147.2
82.5°	141.3	142.2	137.6	136.3	137.0	135.0	128.7	121.8	112.6	98.1	97.8
85°	80.7	80.7	77.4	76.1	76.7	73.4	71.1	67.5	63.9	54.0	54.7
87.5°	29.6	29.6	28.0	27.7	31.0	27.3	26.3	24.7	25.7	20.4	21.7
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°	1506.4	1506.4	1506.4	1506.4	1506.4	1506.4	1506.4	1506.4	1506.4	1506.4	1506.4
2.5°	1513.0	1509.7	1506.7	1496.5	1500.8	1490.2	1489.6	1485.6	1482.7	1477.1	1484.3
5°	1508.0	1501.4	1492.9	1480.7	1484.3	1471.8	1469.2	1464.6	1460.6	1453.4	1459.0
7.5°	1500.1	1489.3	1475.8	1460.3	1465.2	1449.7	1445.8	1440.8	1437.6	1429.0	1433.9
10°	1488.6	1473.1	1457.3	1438.5	1442.2	1425.4	1420.4	1415.2	1412.2	1404.6	1409.6
12.5°	1470.8	1452.0	1430.6	1410.2	1414.2	1398.4	1391.8	1386.2	1385.2	1378.9	1384.9
15°	1447.8	1421.8	1399.7	1378.0	1382.6	1364.1	1361.2	1355.6	1357.2	1352.9	1360.2
17.5°	1418.5	1388.5	1364.5	1341.1	1345.7	1330.2	1327.9	1325.3	1326.9	1326.3	1334.2
20°	1385.5	1352.6	1324.9	1301.9	1304.5	1292.4	1293.3	1292.7	1296.0	1299.6	1310.5
22.5°	1348.3	1311.1	1282.1	1258.4	1262.4	1251.9	1256.5	1257.8	1263.4	1271.6	1285.4
25°	1306.5	1266.7	1236.4	1214.0	1217.6	1210.7	1218.6	1221.9	1230.8	1244.6	1258.8
27.5°	1262.7	1220.6	1188.3	1166.9	1173.8	1166.9	1178.8	1185.3	1198.8	1214.0	1231.4
30°	1216.3	1172.5	1139.2	1120.1	1126.7	1120.5	1139.6	1148.5	1162.0	1182.7	1203.5
32.5°	1167.6	1121.5	1088.9	1074.1	1078.7	1077.7	1099.1	1109.0	1127.1	1150.8	1172.8
35°	1117.5	1069.4	1036.5	1024.0	1029.6	1030.9	1056.6	1068.1	1087.9	1116.5	1140.2
37.5°	1065.8	1016.8	984.5	974.3	979.2	984.2	1014.1	1025.7	1048.0	1079.3	1105.3
40°	1012.2	963.1	931.5	923.2	928.2	933.5	966.1	981.9	1006.2	1040.1	1068.5
42.5°	957.8	908.8	878.1	872.2	877.2	887.4	921.9	936.7	962.4	1000.0	1031.2
45°	902.5	851.5	824.8	820.2	825.5	837.3	871.2	889.0	916.3	957.5	991.1
47.5°	846.5	796.8	771.5	768.5	773.8	786.9	824.5	840.6	869.6	913.4	949.6
50°	789.9	741.5	717.1	716.1	721.1	735.2	771.1	790.2	820.2	869.3	906.5
52.5°	732.6	686.2	664.1	664.1	668.7	683.2	719.4	739.2	770.1	821.8	863.0
55°	675.3	631.2	610.1	611.8	618.4	630.9	666.1	686.8	718.1	771.8	815.3
57.5°	618.0	576.2	557.1	559.4	565.7	578.2	612.8	636.1	664.5	720.1	764.5
60°	561.4	521.9	505.1	507.7	513.3	525.8	561.7	581.8	610.1	666.8	711.2
62.5°	504.1	468.2	452.4	455.7	460.6	473.1	507.1	526.5	554.5	610.1	654.9
65°	447.5	414.2	400.7	404.0	408.6	420.1	452.1	470.8	497.5	551.8	594.6
67.5°	391.5	361.2	350.0	353.3	356.9	367.8	394.1	414.5	439.6	491.3	531.8
70°	336.2	309.2	299.3	302.6	305.9	315.8	338.8	357.6	380.6	428.0	465.6
72.5°	281.5	255.2	250.2	253.2	255.8	264.4	286.5	301.3	321.4	363.5	395.8
75°	228.2	205.5	202.2	205.1	207.4	214.0	232.5	245.3	262.1	298.6	325.0
77.5°	176.8	157.7	156.4	158.7	161.0	165.6	180.1	193.6	206.8	233.8	257.2
80°	128.7	113.3	113.3	115.6	114.9	120.5	130.7	141.6	151.1	170.6	187.7
82.5°	84.9	72.8	74.4	76.1	77.0	79.4	85.6	93.8	99.8	111.6	122.8
85°	47.1	38.9	40.5	41.8	41.2	43.8	47.1	52.0	55.0	60.6	66.5
87.5°	17.5	14.5	14.8	15.8	16.5	17.8	17.8	20.7	21.1	21.7	23.0
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°	1506.4	1506.4	1506.4
2.5°	1470.5	1478.4	1484.3
5°	1445.1	1451.7	1457.0
7.5°	1420.4	1426.4	1431.0
10°	1397.1	1403.6	1406.9
12.5°	1373.0	1380.6	1383.2
15°	1349.3	1356.9	1360.2
17.5°	1324.9	1334.8	1338.4
20°	1302.2	1314.7	1317.7
22.5°	1279.2	1292.0	1295.6
25°	1254.2	1269.3	1272.9
27.5°	1227.5	1245.6	1249.2
30°	1200.8	1220.6	1224.2
32.5°	1172.2	1193.6	1196.9
35°	1142.2	1163.6	1167.6
37.5°	1109.0	1132.3	1140.2
40°	1074.4	1099.7	1108.0
42.5°	1038.2	1065.8	1074.4
45°	999.3	1029.6	1039.5
47.5°	960.1	994.4	1002.9
50°	917.7	954.2	964.4
52.5°	873.2	913.0	923.2
55°	827.1	867.3	878.5
57.5°	777.1	818.5	830.4
60°	724.7	766.2	777.4
62.5°	671.0	708.6	719.4
65°	611.1	646.3	656.2
67.5°	547.6	579.8	588.1
70°	480.1	508.1	515.3
72.5°	409.6	429.0	438.6
75°	336.8	352.3	359.6
77.5°	263.7	274.6	280.5
80°	192.3	198.5	203.5
82.5°	125.8	128.4	132.0
85°	67.8	67.8	70.1
87.5°	23.0	22.1	23.0
90°	0.0	0.0	0.0

(END OF REPORT)