

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: P835165

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5LO-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835165
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-LD4-5LO-20-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

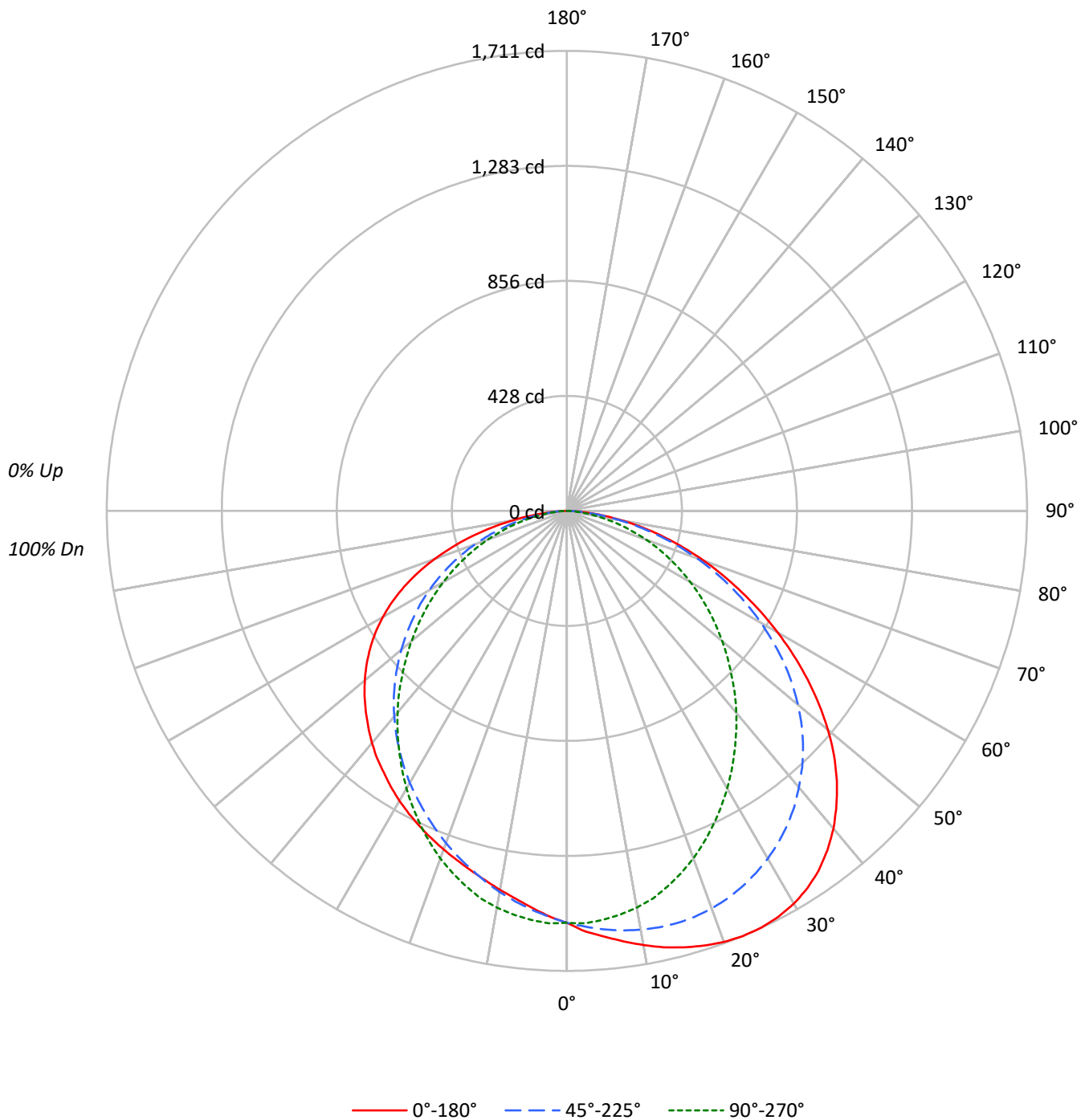
Lumens per Lamp: N/A
Luminaire Lumens: 4506.6 lumens
Efficiency: N/A
Efficacy: 77.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 58.5
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°	4123	4123	4123
5°	4292	4125	4003
10°	4480	4094	3910
15°	4681	4028	3854
20°	4886	3940	3838
25°	5078	3825	3844
30°	5243	3705	3869
35°	5363	3573	3901
40°	5417	3441	3959
45°	5402	3296	4023
50°	5306	3157	4106
55°	5125	3012	4191
60°	4875	2857	4255
65°	4578	2683	4250
70°	4260	2474	4124
75°	3868	2173	3802
80°	3321	1785	3208
85°	2532	1220	2201

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.3	3.2
10°-20°	419.6	9.3
20°-30°	642.8	14.3
30°-40°	784.5	17.4
40°-50°	820.4	18.2
50°-60°	742.5	16.5
60°-70°	562.4	12.5
70°-80°	313.4	7.0
80°-90°	75.6	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°	1207.8	26.8
0°-40°	1992.3	44.2
0°-60°	3555.2	78.9
0°-90°	4506.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4506.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1532	1532	1532	1532	1532	
5°	1589	1562	1527	1490	1482	153
15°	1680	1587	1446	1379	1383	477
25°	1710	1542	1288	1243	1295	789
35°	1632	1428	1088	1086	1188	1019
45°	1420	1242	866	904	1057	1092
55°	1092	986	642	698	893	975
65°	719	676	421	479	667	713
75°	372	351	209	250	366	395
85°	82	72	40	53	71	99
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°	1532.0	1532.0	1532.0	1532.0	1532.0	1532.0	1532.0	1532.0	1532.0	1532.0	1532.0
2.5°	1565.9	1558.5	1552.5	1554.8	1556.2	1551.5	1547.5	1548.1	1544.1	1551.8	1533.7
5°	1589.0	1582.3	1575.2	1577.9	1575.2	1568.2	1562.5	1560.8	1550.1	1554.5	1536.1
7.5°	1614.8	1607.4	1597.0	1600.0	1594.3	1581.3	1573.9	1569.6	1553.1	1553.5	1533.1
10°	1639.5	1633.2	1619.1	1621.1	1610.7	1593.3	1581.6	1575.6	1552.5	1549.1	1528.0
12.5°	1662.6	1653.9	1638.9	1639.9	1624.8	1601.7	1586.6	1577.9	1547.8	1537.7	1517.0
15°	1680.4	1672.0	1653.9	1653.6	1634.2	1604.0	1587.0	1574.9	1536.7	1521.0	1499.2
17.5°	1695.5	1687.8	1665.3	1664.7	1641.2	1603.0	1582.6	1567.5	1520.7	1501.2	1477.1
20°	1706.2	1698.5	1673.4	1671.0	1642.9	1598.0	1573.6	1554.5	1499.6	1476.5	1449.7
22.5°	1711.2	1703.5	1675.0	1671.7	1638.9	1588.0	1560.5	1538.1	1475.5	1445.3	1417.5
25°	1710.2	1702.8	1670.7	1667.3	1631.2	1572.9	1542.1	1516.3	1445.0	1409.5	1382.0
27.5°	1701.8	1696.1	1662.3	1658.0	1617.1	1552.5	1519.7	1491.2	1411.2	1371.6	1341.8
30°	1687.4	1683.1	1647.2	1643.2	1599.7	1530.0	1493.5	1460.7	1374.7	1330.1	1300.0
32.5°	1664.3	1660.3	1624.1	1620.5	1576.3	1501.2	1463.1	1429.2	1334.8	1285.6	1255.4
35°	1632.5	1630.2	1595.0	1591.0	1546.1	1468.4	1427.9	1390.7	1293.3	1237.7	1208.9
37.5°	1590.7	1590.7	1556.8	1552.5	1508.6	1428.2	1388.4	1348.9	1246.4	1187.5	1159.0
40°	1542.1	1546.4	1512.0	1507.6	1465.1	1385.0	1341.5	1300.0	1195.8	1134.6	1106.8
42.5°	1483.8	1487.8	1459.0	1455.0	1415.2	1335.1	1294.6	1249.4	1142.9	1080.6	1051.8
45°	1419.5	1424.9	1399.1	1396.1	1358.9	1280.6	1241.7	1195.8	1087.7	1024.4	996.2
47.5°	1347.9	1354.9	1332.5	1330.8	1296.3	1224.6	1184.1	1137.6	1029.7	965.8	939.3
50°	1267.5	1277.5	1259.1	1259.1	1228.3	1157.0	1121.8	1075.3	969.5	905.5	879.4
52.5°	1181.4	1194.2	1180.4	1180.8	1155.6	1091.7	1055.2	1009.6	906.5	843.5	819.4
55°	1092.4	1104.7	1096.0	1097.4	1077.6	1019.4	986.2	941.0	842.2	780.9	758.2
57.5°	999.3	1012.7	1007.0	1009.6	995.9	943.7	909.2	869.7	775.9	715.3	695.9
60°	905.8	918.6	915.5	919.2	910.5	865.3	833.8	793.0	709.3	651.0	633.9
62.5°	811.4	823.1	822.5	826.5	821.8	784.3	756.1	721.3	640.3	586.7	571.0
65°	719.0	729.0	728.4	732.7	731.7	701.6	676.1	644.3	571.3	522.1	508.3
67.5°	629.2	637.6	635.3	640.3	641.6	617.5	595.4	566.9	505.7	457.8	446.1
70°	541.5	547.2	544.2	547.5	550.5	532.4	513.7	488.6	435.7	393.5	383.8
72.5°	455.4	459.4	454.8	458.1	460.8	447.7	432.3	410.6	366.7	330.2	322.1
75°	372.0	377.7	368.0	371.4	373.4	360.3	351.3	333.5	295.7	267.6	262.2
77.5°	291.3	294.7	289.3	288.0	289.3	280.0	272.9	259.2	230.7	207.6	204.3
80°	214.3	216.3	211.0	209.6	210.6	203.9	198.6	188.5	168.4	151.0	149.7
82.5°	143.7	144.7	140.0	138.6	139.3	137.3	130.9	123.9	114.5	99.8	99.5
85°	82.0	82.0	78.7	77.4	78.0	74.7	72.3	68.6	65.0	54.9	55.6
87.5°	30.1	30.1	28.5	28.1	31.5	27.8	26.8	25.1	26.1	20.8	22.1
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°	1532.0	1532.0	1532.0	1532.0	1532.0	1532.0	1532.0	1532.0	1532.0	1532.0	1532.0
2.5°	1538.7	1535.4	1532.4	1522.0	1526.4	1515.6	1515.0	1511.0	1507.9	1502.2	1509.6
5°	1533.7	1527.0	1518.3	1505.9	1509.6	1496.9	1494.2	1489.5	1485.5	1478.1	1483.8
7.5°	1525.7	1514.6	1500.9	1485.2	1490.2	1474.4	1470.4	1465.4	1462.1	1453.4	1458.4
10°	1514.0	1498.2	1482.2	1463.1	1466.7	1449.7	1444.6	1439.3	1436.3	1428.6	1433.6
12.5°	1495.9	1476.8	1455.0	1434.3	1438.3	1422.2	1415.5	1409.8	1408.8	1402.5	1408.5
15°	1472.4	1446.0	1423.5	1401.4	1406.1	1387.4	1384.4	1378.7	1380.4	1376.0	1383.4
17.5°	1442.6	1412.2	1387.7	1363.9	1368.6	1352.9	1350.5	1347.9	1349.5	1348.9	1356.9
20°	1409.1	1375.7	1347.5	1324.1	1326.8	1314.4	1315.4	1314.7	1318.1	1321.7	1332.8
22.5°	1371.3	1333.5	1304.0	1279.9	1283.9	1273.2	1277.9	1279.2	1284.9	1293.3	1307.3
25°	1328.8	1288.3	1257.5	1234.7	1238.4	1231.3	1239.4	1242.7	1251.8	1265.8	1280.2
27.5°	1284.2	1241.4	1208.6	1186.8	1193.8	1186.8	1198.8	1205.5	1219.3	1234.7	1252.4
30°	1237.0	1192.5	1158.7	1139.2	1145.9	1139.6	1159.0	1168.0	1181.8	1202.9	1224.0
32.5°	1187.5	1140.6	1107.4	1092.4	1097.0	1096.0	1117.8	1127.9	1146.3	1170.4	1192.8
35°	1136.6	1087.7	1054.2	1041.5	1047.2	1048.5	1074.6	1086.3	1106.4	1135.6	1159.7
37.5°	1084.0	1034.1	1001.3	990.9	995.9	1000.9	1031.4	1043.1	1065.9	1097.7	1124.2
40°	1029.4	979.5	947.4	939.0	944.0	949.4	982.5	998.6	1023.4	1057.9	1086.7
42.5°	974.1	924.3	893.1	887.1	892.1	902.5	937.6	952.7	978.8	1017.0	1048.8
45°	917.9	866.0	838.9	834.2	839.5	851.6	886.1	904.2	932.0	973.8	1008.0
47.5°	861.0	810.4	784.6	781.6	787.0	800.3	838.5	854.9	884.4	928.9	965.8
50°	803.4	754.1	729.4	728.4	733.4	747.8	784.3	803.7	834.2	884.1	921.9
52.5°	745.1	697.9	675.4	675.4	680.1	694.9	731.7	751.8	783.3	835.8	877.7
55°	686.8	642.0	620.5	622.2	628.9	641.6	677.4	698.5	730.4	784.9	829.1
57.5°	628.6	586.0	566.6	569.0	575.3	588.0	623.2	647.0	675.8	732.4	777.6
60°	571.0	530.8	513.7	516.4	522.1	534.8	571.3	591.7	620.5	678.1	723.3
62.5°	512.7	476.2	460.1	463.5	468.5	481.2	515.7	535.5	563.9	620.5	666.1
65°	455.1	421.3	407.5	410.9	415.6	427.3	459.8	478.9	506.0	561.2	604.8
67.5°	398.2	367.4	356.0	359.3	363.0	374.1	400.8	421.6	447.1	499.6	540.8
70°	341.9	314.4	304.4	307.7	311.1	321.1	344.6	363.7	387.1	435.3	473.5
72.5°	286.3	259.5	254.5	257.5	260.2	268.9	291.3	306.4	326.8	369.7	402.5
75°	232.1	209.0	205.6	208.6	211.0	217.7	236.4	249.5	266.6	303.7	330.5
77.5°	179.8	160.4	159.1	161.4	163.8	168.4	183.2	196.9	210.3	237.8	261.5
80°	130.9	115.2	115.2	117.5	116.9	122.6	132.9	144.0	153.7	173.5	190.9
82.5°	86.4	74.0	75.7	77.4	78.4	80.7	87.1	95.4	101.5	113.5	124.9
85°	47.9	39.5	41.2	42.5	41.9	44.5	47.9	52.9	55.9	61.6	67.6
87.5°	17.7	14.7	15.1	16.1	16.7	18.1	18.1	21.1	21.4	22.1	23.4
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°	1532.0	1532.0	1532.0
2.5°	1495.5	1503.6	1509.6
5°	1469.8	1476.5	1481.8
7.5°	1444.6	1450.7	1455.4
10°	1420.9	1427.6	1430.9
12.5°	1396.4	1404.1	1406.8
15°	1372.3	1380.0	1383.4
17.5°	1347.5	1357.6	1361.3
20°	1324.4	1337.2	1340.2
22.5°	1301.0	1314.0	1317.7
25°	1275.5	1290.9	1294.6
27.5°	1248.4	1266.8	1270.5
30°	1221.3	1241.4	1245.1
32.5°	1192.2	1213.9	1217.3
35°	1161.7	1183.4	1187.5
37.5°	1127.9	1151.6	1159.7
40°	1092.7	1118.5	1126.9
42.5°	1055.9	1084.0	1092.7
45°	1016.3	1047.2	1057.2
47.5°	976.5	1011.3	1020.0
50°	933.3	970.5	980.8
52.5°	888.1	928.6	939.0
55°	841.2	882.1	893.4
57.5°	790.3	832.5	844.6
60°	737.1	779.3	790.6
62.5°	682.5	720.6	731.7
65°	621.5	657.4	667.4
67.5°	556.9	589.7	598.1
70°	488.2	516.7	524.1
72.5°	416.6	436.3	446.1
75°	342.6	358.3	365.7
77.5°	268.2	279.3	285.3
80°	195.6	201.9	207.0
82.5°	127.9	130.6	134.3
85°	69.0	69.0	71.3
87.5°	23.4	22.4	23.4
90°	0.0	0.0	0.0

(END OF REPORT)