

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: P834578

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1STD-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834578
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-1STD-40-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

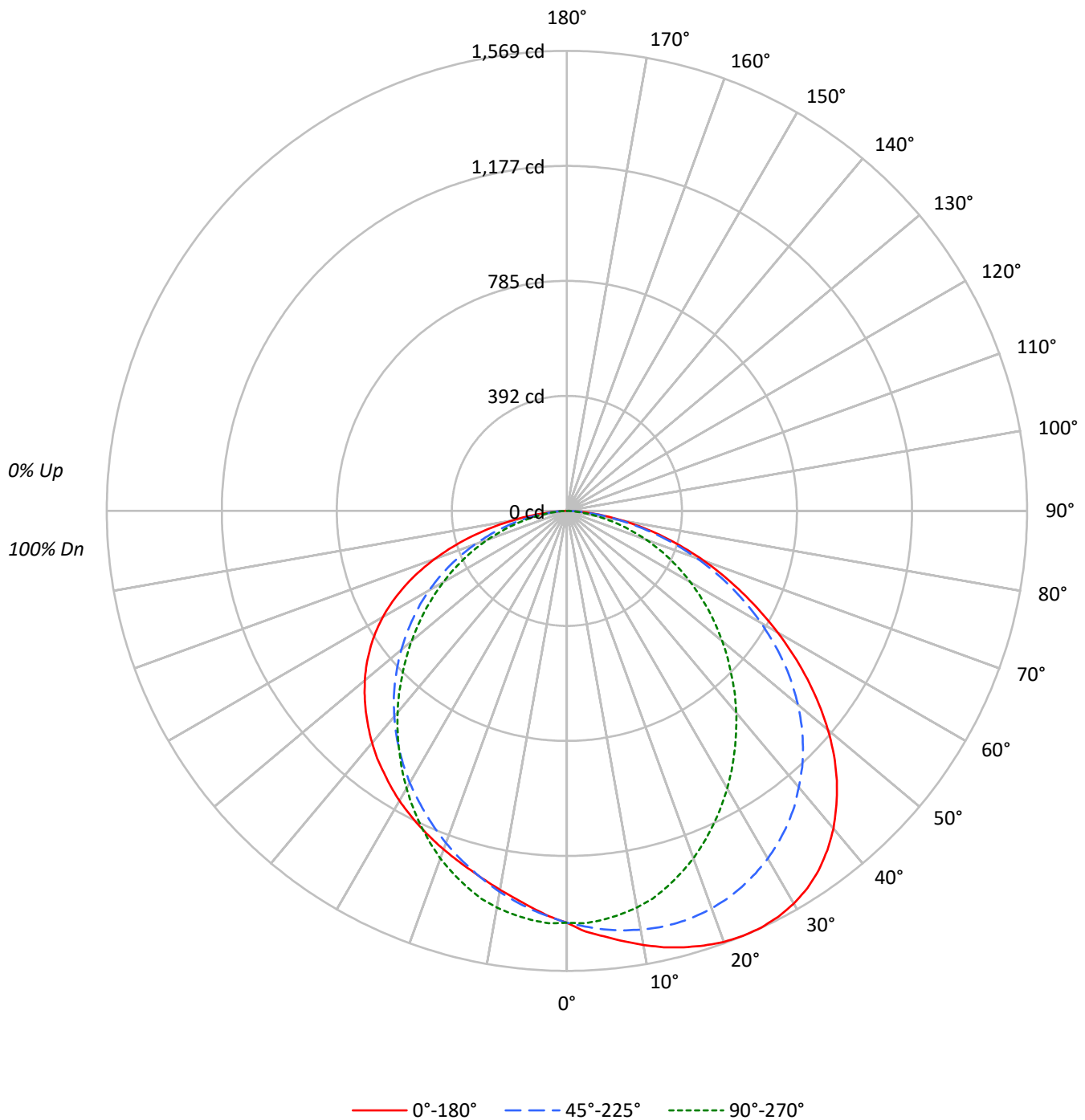
Lumens per Lamp: N/A
Luminaire Lumens: 4131.9 lumens
Efficiency: N/A
Efficacy: 124.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	1890	1890	1890
5°	1968	1891	1835
10°	2054	1877	1793
15°	2146	1847	1767
20°	2240	1806	1759
25°	2328	1754	1762
30°	2404	1699	1774
35°	2459	1638	1788
40°	2483	1577	1815
45°	2477	1511	1844
50°	2433	1447	1882
55°	2349	1381	1922
60°	2235	1310	1951
65°	2099	1230	1948
70°	1953	1134	1890
75°	1773	996	1743
80°	1523	818	1470
85°	1161	559	1010

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.2	3.2
10°-20°	384.7	9.3
20°-30°	589.4	14.3
30°-40°	719.3	17.4
40°-50°	752.2	18.2
50°-60°	680.8	16.5
60°-70°	515.6	12.5
70°-80°	287.3	7.0
80°-90°	69.3	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°	1107.4	26.8
0°-40°	1826.6	44.2
0°-60°	3259.7	78.9
0°-90°	4131.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4131.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1405	1405	1405	1405	1405	
5°	1457	1433	1400	1366	1359	140
15°	1541	1455	1326	1264	1268	437
25°	1568	1414	1181	1139	1187	723
35°	1497	1309	997	996	1089	935
45°	1302	1138	794	829	969	1001
55°	1002	904	589	640	819	894
65°	659	620	386	439	612	654
75°	341	322	192	229	335	362
85°	75	66	36	48	65	90
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°	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7
2.5°	1435.7	1428.9	1423.4	1425.6	1426.8	1422.5	1418.8	1419.4	1415.7	1422.8	1406.2
5°	1456.9	1450.7	1444.3	1446.7	1444.3	1437.8	1432.6	1431.1	1421.3	1425.3	1408.4
7.5°	1480.5	1473.8	1464.2	1467.0	1461.8	1449.8	1443.1	1439.1	1424.0	1424.3	1405.6
10°	1503.2	1497.4	1484.5	1486.4	1476.8	1460.9	1450.1	1444.6	1423.4	1420.3	1401.0
12.5°	1524.4	1516.4	1502.6	1503.5	1489.7	1468.5	1454.7	1446.7	1419.1	1409.9	1390.9
15°	1540.7	1533.0	1516.4	1516.1	1498.3	1470.7	1455.0	1444.0	1409.0	1394.6	1374.6
17.5°	1554.5	1547.5	1526.9	1526.3	1504.8	1469.8	1451.0	1437.2	1394.2	1376.4	1354.3
20°	1564.3	1557.3	1534.3	1532.1	1506.3	1465.2	1442.8	1425.3	1374.9	1353.7	1329.2
22.5°	1568.9	1561.9	1535.8	1532.7	1502.6	1456.0	1430.8	1410.2	1352.8	1325.2	1299.7
25°	1568.0	1561.3	1531.8	1528.7	1495.6	1442.1	1413.9	1390.3	1324.9	1292.3	1267.1
27.5°	1560.4	1555.1	1524.1	1520.1	1482.7	1423.4	1393.3	1367.2	1293.8	1257.6	1230.3
30°	1547.1	1543.2	1510.3	1506.6	1466.7	1402.8	1369.4	1339.3	1260.4	1219.5	1191.9
32.5°	1526.0	1522.3	1489.1	1485.7	1445.2	1376.4	1341.4	1310.4	1223.8	1178.7	1151.1
35°	1496.8	1494.6	1462.4	1458.7	1417.6	1346.3	1309.2	1275.1	1185.8	1134.8	1108.4
37.5°	1458.4	1458.4	1427.4	1423.4	1383.2	1309.5	1273.0	1236.7	1142.8	1088.7	1062.6
40°	1413.9	1417.9	1386.3	1382.3	1343.3	1269.9	1230.0	1191.9	1096.4	1040.2	1014.8
42.5°	1360.5	1364.2	1337.8	1334.1	1297.5	1224.1	1187.0	1145.5	1047.9	990.8	964.4
45°	1301.5	1306.4	1282.8	1280.0	1245.9	1174.1	1138.5	1096.4	997.2	939.2	913.4
47.5°	1235.8	1242.3	1221.7	1220.2	1188.5	1122.8	1085.7	1043.0	944.1	885.5	861.2
50°	1162.1	1171.3	1154.5	1154.5	1126.2	1060.8	1028.6	985.9	888.9	830.2	806.3
52.5°	1083.2	1094.9	1082.3	1082.6	1059.6	1000.9	967.5	925.7	831.1	773.4	751.3
55°	1001.5	1012.9	1004.9	1006.2	988.0	934.6	904.2	862.8	772.2	716.0	695.1
57.5°	916.2	928.5	923.3	925.7	913.1	865.2	833.6	797.4	711.4	655.8	638.0
60°	830.5	842.2	839.4	842.8	834.8	793.4	764.5	727.1	650.3	596.9	581.2
62.5°	743.9	754.7	754.1	757.8	753.5	719.1	693.3	661.4	587.1	537.9	523.5
65°	659.2	668.4	667.8	671.8	670.9	643.2	619.9	590.7	523.8	478.7	466.1
67.5°	576.9	584.6	582.4	587.1	588.3	566.2	545.9	519.8	463.6	419.7	409.0
70°	496.5	501.7	498.9	502.0	504.8	488.2	471.0	448.0	399.5	360.8	351.9
72.5°	417.6	421.3	417.0	420.0	422.5	410.5	396.4	376.4	336.2	302.7	295.4
75°	341.1	346.3	337.4	340.5	342.3	330.4	322.1	305.8	271.1	245.3	240.4
77.5°	267.1	270.2	265.3	264.0	265.3	256.7	250.2	237.6	211.5	190.4	187.3
80°	196.5	198.3	193.4	192.2	193.1	187.0	182.1	172.9	154.4	138.5	137.2
82.5°	131.7	132.6	128.3	127.1	127.7	125.9	120.1	113.6	105.0	91.5	91.2
85°	75.2	75.2	72.2	70.9	71.5	68.5	66.3	62.9	59.6	50.4	51.0
87.5°	27.6	27.6	26.1	25.8	28.9	25.5	24.6	23.0	23.9	19.0	20.3
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°	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7	1404.7
2.5°	1410.8	1407.8	1405.0	1395.5	1399.5	1389.6	1389.0	1385.3	1382.6	1377.4	1384.1
5°	1406.2	1400.1	1392.1	1380.7	1384.1	1372.4	1370.0	1365.7	1362.0	1355.3	1360.5
7.5°	1398.9	1388.7	1376.1	1361.7	1366.3	1351.9	1348.2	1343.6	1340.5	1332.5	1337.1
10°	1388.1	1373.7	1358.9	1341.4	1344.8	1329.2	1324.5	1319.6	1316.9	1309.8	1314.4
12.5°	1371.5	1354.0	1334.1	1315.0	1318.7	1304.0	1297.8	1292.6	1291.7	1285.9	1291.4
15°	1350.0	1325.8	1305.2	1284.9	1289.2	1272.0	1269.3	1264.1	1265.6	1261.6	1268.4
17.5°	1322.7	1294.8	1272.4	1250.6	1254.9	1240.4	1238.3	1235.8	1237.4	1236.7	1244.1
20°	1292.0	1261.3	1235.5	1214.0	1216.5	1205.1	1206.0	1205.4	1208.5	1211.9	1222.0
22.5°	1257.3	1222.6	1195.6	1173.5	1177.2	1167.3	1171.6	1172.9	1178.1	1185.8	1198.7
25°	1218.3	1181.2	1152.9	1132.0	1135.4	1129.0	1136.3	1139.4	1147.7	1160.6	1173.8
27.5°	1177.5	1138.2	1108.1	1088.1	1094.6	1088.1	1099.2	1105.3	1117.9	1132.0	1148.3
30°	1134.2	1093.4	1062.3	1044.5	1050.7	1044.8	1062.6	1070.9	1083.5	1102.9	1122.2
32.5°	1088.7	1045.8	1015.4	1001.5	1005.8	1004.9	1024.9	1034.1	1051.0	1073.1	1093.7
35°	1042.1	997.2	966.5	954.9	960.1	961.3	985.3	996.0	1014.4	1041.2	1063.3
37.5°	993.9	948.1	918.0	908.5	913.1	917.7	945.7	956.4	977.3	1006.5	1030.7
40°	943.8	898.1	868.6	860.9	865.5	870.4	900.8	915.6	938.3	969.9	996.3
42.5°	893.2	847.4	818.9	813.3	817.9	827.5	859.7	873.5	897.5	932.5	961.6
45°	841.6	794.0	769.1	764.8	769.7	780.8	812.4	829.0	854.5	892.9	924.2
47.5°	789.4	743.0	719.4	716.6	721.5	733.8	768.8	783.9	810.9	851.7	885.5
50°	736.6	691.4	668.7	667.8	672.4	685.6	719.1	736.9	764.8	810.6	845.3
52.5°	683.2	639.9	619.3	619.3	623.6	637.1	670.9	689.3	718.2	766.4	804.7
55°	629.7	588.6	568.9	570.5	576.6	588.3	621.1	640.5	669.6	719.7	760.2
57.5°	576.3	537.3	519.5	521.7	527.5	539.2	571.4	593.2	619.6	671.5	712.9
60°	523.5	486.7	471.0	473.4	478.7	490.3	523.8	542.5	568.9	621.7	663.2
62.5°	470.1	436.6	421.9	424.9	429.5	441.2	472.8	490.9	517.0	568.9	610.7
65°	417.3	386.2	373.7	376.7	381.0	391.8	421.6	439.1	463.9	514.6	554.5
67.5°	365.1	336.8	326.4	329.4	332.8	343.0	367.5	386.6	409.9	458.1	495.9
70°	313.5	288.3	279.1	282.2	285.2	294.4	315.9	333.4	354.9	399.1	434.1
72.5°	262.5	238.0	233.3	236.1	238.6	246.5	267.1	280.9	299.7	339.0	369.1
75°	212.8	191.6	188.5	191.3	193.4	199.6	216.8	228.7	244.4	278.5	303.0
77.5°	164.9	147.1	145.8	148.0	150.1	154.4	167.9	180.5	192.8	218.0	239.8
80°	120.1	105.6	105.6	107.8	107.2	112.4	121.9	132.0	140.9	159.0	175.0
82.5°	79.2	67.9	69.4	70.9	71.8	74.0	79.8	87.5	93.0	104.1	114.5
85°	43.9	36.2	37.8	39.0	38.4	40.8	43.9	48.5	51.3	56.5	62.0
87.5°	16.3	13.5	13.8	14.7	15.4	16.6	16.6	19.3	19.7	20.3	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):

	160°	170°	180°
0°	1404.7	1404.7	1404.7
2.5°	1371.2	1378.6	1384.1
5°	1347.6	1353.7	1358.6
7.5°	1324.5	1330.1	1334.4
10°	1302.7	1308.9	1312.0
12.5°	1280.3	1287.4	1289.9
15°	1258.2	1265.3	1268.4
17.5°	1235.5	1244.7	1248.1
20°	1214.3	1226.0	1228.8
22.5°	1192.8	1204.8	1208.2
25°	1169.5	1183.6	1187.0
27.5°	1144.6	1161.5	1164.9
30°	1119.8	1138.2	1141.6
32.5°	1093.0	1113.0	1116.1
35°	1065.1	1085.1	1088.7
37.5°	1034.1	1055.9	1063.3
40°	1001.9	1025.5	1033.2
42.5°	968.1	993.9	1001.9
45°	931.9	960.1	969.3
47.5°	895.3	927.2	935.2
50°	855.7	889.8	899.3
52.5°	814.3	851.4	860.9
55°	771.3	808.7	819.2
57.5°	724.6	763.3	774.3
60°	675.8	714.5	724.9
62.5°	625.7	660.7	670.9
65°	569.9	602.7	611.9
67.5°	510.6	540.7	548.4
70°	447.7	473.8	480.5
72.5°	382.0	400.1	409.0
75°	314.1	328.5	335.3
77.5°	245.9	256.1	261.6
80°	179.3	185.1	189.7
82.5°	117.3	119.7	123.1
85°	63.2	63.2	65.4
87.5°	21.5	20.6	21.5
90°	0.0	0.0	0.0

(END OF REPORT)