

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: P834669

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1HI-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834669
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-LD4-1HI-35-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

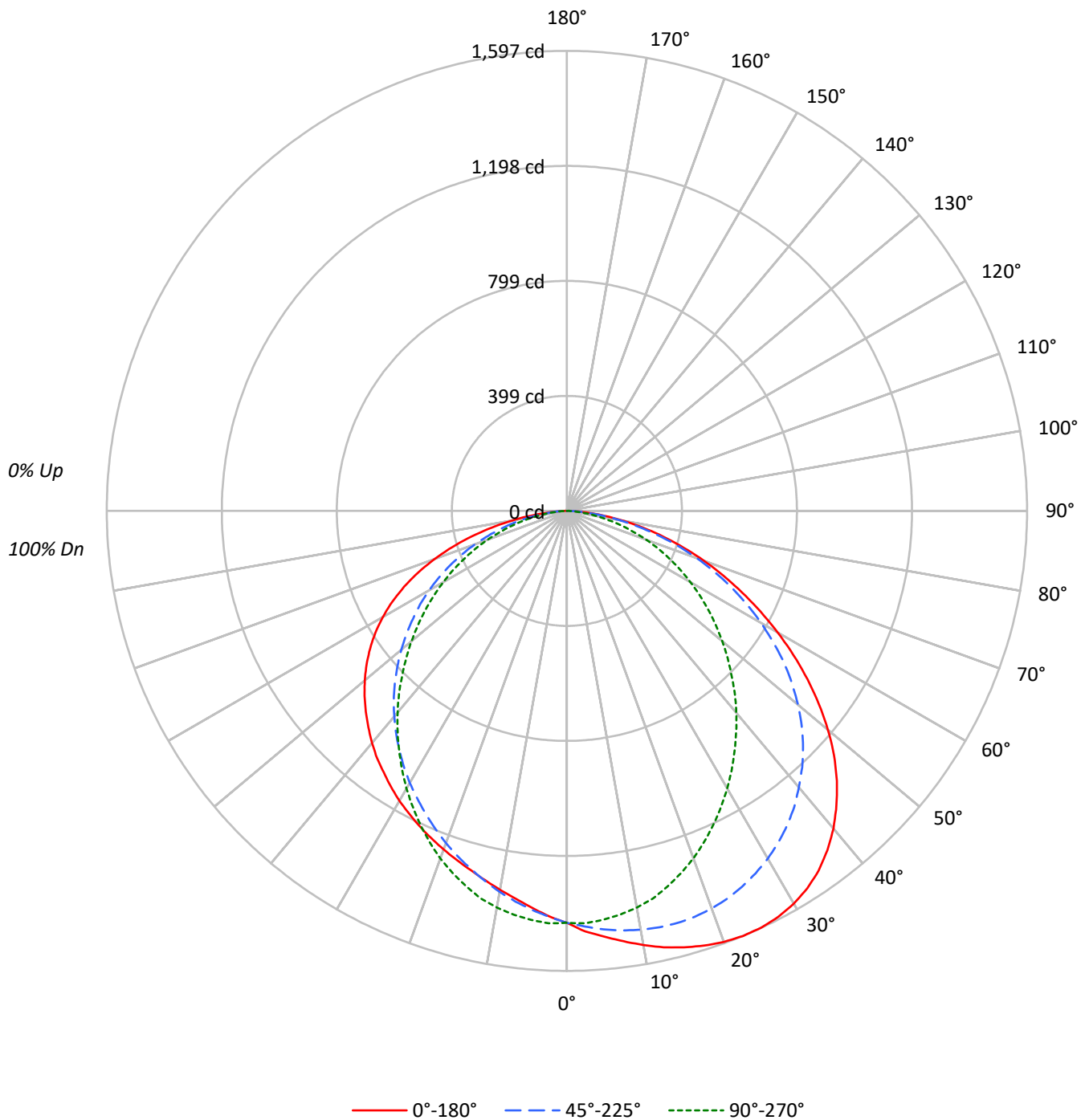
Lumens per Lamp: N/A
Luminaire Lumens: 4206.1 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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
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°	1924	1924	1924
5°	2003	1925	1868
10°	2091	1910	1825
15°	2185	1880	1798
20°	2280	1838	1791
25°	2370	1785	1794
30°	2447	1729	1805
35°	2503	1668	1820
40°	2528	1606	1847
45°	2521	1538	1878
50°	2476	1473	1916
55°	2392	1406	1956
60°	2275	1333	1986
65°	2136	1252	1983
70°	1988	1155	1924
75°	1805	1014	1774
80°	1550	833	1497
85°	1183	570	1028

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.6	3.2
10°-20°	391.6	9.3
20°-30°	600.0	14.3
30°-40°	732.2	17.4
40°-50°	765.7	18.2
50°-60°	693.0	16.5
60°-70°	524.9	12.5
70°-80°	292.5	7.0
80°-90°	70.6	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°	1127.2	26.8
0°-40°	1859.5	44.2
0°-60°	3318.2	78.9
0°-90°	4206.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4206.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1430	1430	1430	1430	1430	
5°	1483	1458	1425	1390	1383	143
15°	1568	1481	1350	1287	1291	445
25°	1596	1439	1202	1160	1208	736
35°	1524	1333	1015	1014	1108	951
45°	1325	1159	808	844	987	1019
55°	1020	920	599	652	834	910
65°	671	631	393	447	623	666
75°	347	328	195	233	341	368
85°	77	68	37	49	67	92
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°	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9
2.5°	1461.5	1454.6	1449.0	1451.2	1452.4	1448.0	1444.3	1444.9	1441.2	1448.4	1431.5
5°	1483.0	1476.8	1470.2	1472.7	1470.2	1463.7	1458.4	1456.8	1446.8	1450.9	1433.7
7.5°	1507.1	1500.2	1490.5	1493.4	1488.0	1475.9	1469.0	1464.9	1449.6	1449.9	1430.9
10°	1530.2	1524.3	1511.2	1513.1	1503.4	1487.1	1476.2	1470.5	1449.0	1445.9	1426.2
12.5°	1551.8	1543.7	1529.6	1530.6	1516.5	1494.9	1480.9	1472.7	1444.6	1435.2	1415.9
15°	1568.4	1560.6	1543.7	1543.4	1525.2	1497.1	1481.2	1469.9	1434.3	1419.6	1399.3
17.5°	1582.4	1575.3	1554.3	1553.7	1531.8	1496.2	1477.1	1463.0	1419.3	1401.2	1378.7
20°	1592.4	1585.3	1561.8	1559.6	1533.4	1491.5	1468.7	1450.9	1399.6	1378.0	1353.0
22.5°	1597.1	1589.9	1563.4	1560.2	1529.6	1482.1	1456.5	1435.5	1377.1	1349.0	1323.0
25°	1596.2	1589.3	1559.3	1556.2	1522.4	1468.0	1439.3	1415.2	1348.7	1315.5	1289.9
27.5°	1588.4	1583.1	1551.5	1547.4	1509.3	1449.0	1418.4	1391.8	1317.1	1280.2	1252.4
30°	1574.9	1570.9	1537.4	1533.7	1493.1	1428.0	1394.0	1363.3	1283.0	1241.4	1213.3
32.5°	1553.4	1549.6	1515.9	1512.4	1471.2	1401.2	1365.5	1334.0	1245.8	1199.9	1171.7
35°	1523.7	1521.5	1488.7	1484.9	1443.0	1370.5	1332.7	1298.0	1207.1	1155.2	1128.3
37.5°	1484.6	1484.6	1453.0	1449.0	1408.0	1333.0	1295.8	1259.0	1163.3	1108.3	1081.7
40°	1439.3	1443.4	1411.2	1407.1	1367.4	1292.7	1252.1	1213.3	1116.1	1058.9	1033.0
42.5°	1384.9	1388.7	1361.8	1358.0	1320.8	1246.1	1208.3	1166.1	1066.7	1008.6	981.7
45°	1324.9	1329.9	1305.8	1303.0	1268.3	1195.2	1158.9	1116.1	1015.2	956.1	929.8
47.5°	1258.0	1264.6	1243.6	1242.1	1209.9	1143.0	1105.2	1061.7	961.1	901.4	876.7
50°	1183.0	1192.4	1175.2	1175.2	1146.4	1079.9	1047.0	1003.6	904.8	845.1	820.8
52.5°	1102.7	1114.6	1101.7	1102.1	1078.6	1018.9	984.8	942.3	846.1	787.3	764.8
55°	1019.5	1031.1	1023.0	1024.2	1005.8	951.4	920.5	878.3	786.1	728.9	707.6
57.5°	932.6	945.2	939.8	942.3	929.5	880.8	848.6	811.7	724.2	667.6	649.5
60°	845.4	857.3	854.5	857.9	849.8	807.6	778.2	740.1	662.0	607.6	591.7
62.5°	757.3	768.2	767.6	771.4	767.0	732.0	705.7	673.2	597.6	547.6	532.9
65°	671.0	680.4	679.8	683.9	682.9	654.8	631.0	601.3	533.2	487.3	474.5
67.5°	587.3	595.1	592.9	597.6	598.8	576.3	555.7	529.1	472.0	427.3	416.3
70°	505.4	510.7	507.9	511.0	513.8	497.0	479.5	456.0	406.6	367.2	358.2
72.5°	425.1	428.8	424.4	427.6	430.1	417.9	403.5	383.2	342.2	308.2	300.7
75°	347.2	352.6	343.5	346.6	348.5	336.3	327.9	311.3	276.0	249.7	244.7
77.5°	271.9	275.0	270.0	268.8	270.0	261.3	254.7	241.9	215.3	193.8	190.7
80°	200.0	201.9	196.9	195.7	196.6	190.3	185.3	176.0	157.2	141.0	139.7
82.5°	134.1	135.0	130.6	129.4	130.0	128.1	122.2	115.6	106.9	93.1	92.8
85°	76.6	76.6	73.4	72.2	72.8	69.7	67.5	64.1	60.6	51.3	51.9
87.5°	28.1	28.1	26.6	26.3	29.4	25.9	25.0	23.4	24.4	19.4	20.6
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°	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9
2.5°	1436.2	1433.0	1430.2	1420.5	1424.6	1414.6	1414.0	1410.2	1407.4	1402.1	1409.0
5°	1431.5	1425.2	1417.1	1405.5	1409.0	1397.1	1394.6	1390.2	1386.5	1379.6	1384.9
7.5°	1424.0	1413.7	1400.8	1386.2	1390.8	1376.2	1372.4	1367.7	1364.6	1356.5	1361.2
10°	1413.0	1398.3	1383.3	1365.5	1369.0	1353.0	1348.3	1343.3	1340.5	1333.3	1338.0
12.5°	1396.2	1378.3	1358.0	1338.7	1342.4	1327.4	1321.1	1315.8	1314.9	1309.0	1314.6
15°	1374.3	1349.6	1328.6	1308.0	1312.4	1294.9	1292.1	1286.8	1288.3	1284.3	1291.1
17.5°	1346.5	1318.0	1295.2	1273.0	1277.4	1262.7	1260.5	1258.0	1259.6	1259.0	1266.5
20°	1315.2	1284.0	1257.7	1235.8	1238.3	1226.8	1227.7	1227.1	1230.2	1233.6	1243.9
22.5°	1279.9	1244.6	1217.1	1194.6	1198.3	1188.3	1192.7	1193.9	1199.3	1207.1	1220.2
25°	1240.2	1202.4	1173.6	1152.4	1155.8	1149.2	1156.7	1159.9	1168.3	1181.4	1194.9
27.5°	1198.6	1158.6	1128.0	1107.7	1114.2	1107.7	1118.9	1125.2	1138.0	1152.4	1168.9
30°	1154.6	1113.0	1081.4	1063.3	1069.5	1063.6	1081.7	1090.2	1103.0	1122.7	1142.4
32.5°	1108.3	1064.5	1033.6	1019.5	1023.9	1023.0	1043.3	1052.7	1069.9	1092.4	1113.3
35°	1060.8	1015.2	983.9	972.0	977.3	978.6	1003.0	1013.9	1032.7	1059.9	1082.4
37.5°	1011.7	965.2	934.5	924.8	929.5	934.2	962.7	973.6	994.8	1024.5	1049.2
40°	960.8	914.2	884.2	876.4	881.1	886.1	917.0	932.0	955.2	987.3	1014.2
42.5°	909.2	862.6	833.6	827.9	832.6	842.3	875.1	889.2	913.6	949.2	978.9
45°	856.7	808.3	782.9	778.6	783.6	794.8	827.0	843.9	869.8	908.9	940.8
47.5°	803.6	756.4	732.3	729.5	734.5	747.0	782.6	797.9	825.4	867.0	901.4
50°	749.8	703.9	680.7	679.8	684.5	697.9	732.0	750.1	778.6	825.1	860.4
52.5°	695.4	651.4	630.4	630.4	634.8	648.5	682.9	701.7	731.1	780.1	819.2
55°	641.0	599.2	579.2	580.7	587.0	598.8	632.3	652.0	681.7	732.6	773.9
57.5°	586.7	547.0	528.8	531.0	537.0	548.8	581.7	603.8	630.7	683.5	725.7
60°	532.9	495.4	479.5	482.0	487.3	499.1	533.2	552.3	579.2	632.9	675.1
62.5°	478.5	444.4	429.4	432.6	437.3	449.1	481.3	499.8	526.3	579.2	621.7
65°	424.8	393.2	380.4	383.5	387.9	398.8	429.1	446.9	472.3	523.8	564.5
67.5°	371.6	342.9	332.2	335.4	338.8	349.1	374.1	393.5	417.3	466.3	504.8
70°	319.1	293.5	284.1	287.2	290.4	299.7	321.6	339.4	361.3	406.3	441.9
72.5°	267.2	242.2	237.5	240.4	242.9	251.0	271.9	286.0	305.0	345.1	375.7
75°	216.6	195.0	191.9	194.7	196.9	203.2	220.7	232.8	248.8	283.5	308.5
77.5°	167.8	149.7	148.5	150.6	152.8	157.2	171.0	183.8	196.3	221.9	244.1
80°	122.2	107.5	107.5	109.7	109.1	114.4	124.1	134.4	143.5	161.9	178.2
82.5°	80.6	69.1	70.6	72.2	73.1	75.3	81.3	89.1	94.7	106.0	116.6
85°	44.7	36.9	38.4	39.7	39.1	41.6	44.7	49.4	52.2	57.5	63.1
87.5°	16.6	13.8	14.1	15.0	15.6	16.9	16.9	19.7	20.0	20.6	21.9
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°	1429.9	1429.9	1429.9
2.5°	1395.8	1403.3	1409.0
5°	1371.8	1378.0	1383.0
7.5°	1348.3	1354.0	1358.3
10°	1326.1	1332.4	1335.5
12.5°	1303.3	1310.5	1313.0
15°	1280.8	1288.0	1291.1
17.5°	1257.7	1267.1	1270.5
20°	1236.1	1248.0	1250.8
22.5°	1214.3	1226.4	1229.9
25°	1190.5	1204.9	1208.3
27.5°	1165.2	1182.4	1185.8
30°	1139.9	1158.6	1162.1
32.5°	1112.7	1133.0	1136.1
35°	1084.2	1104.6	1108.3
37.5°	1052.7	1074.9	1082.4
40°	1019.8	1043.9	1051.7
42.5°	985.5	1011.7	1019.8
45°	948.6	977.3	986.7
47.5°	911.4	943.9	952.0
50°	871.1	905.8	915.5
52.5°	828.9	866.7	876.4
55°	785.1	823.3	833.9
57.5°	737.6	777.0	788.3
60°	687.9	727.3	737.9
62.5°	637.0	672.6	682.9
65°	580.1	613.5	622.9
67.5°	519.8	550.4	558.2
70°	455.7	482.3	489.1
72.5°	388.8	407.3	416.3
75°	319.7	334.4	341.3
77.5°	250.4	260.7	266.3
80°	182.5	188.5	193.2
82.5°	119.4	121.9	125.3
85°	64.4	64.4	66.6
87.5°	21.9	20.9	21.9
90°	0.0	0.0	0.0

(END OF REPORT)