

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: P834264

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1HI-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834264
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-35-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

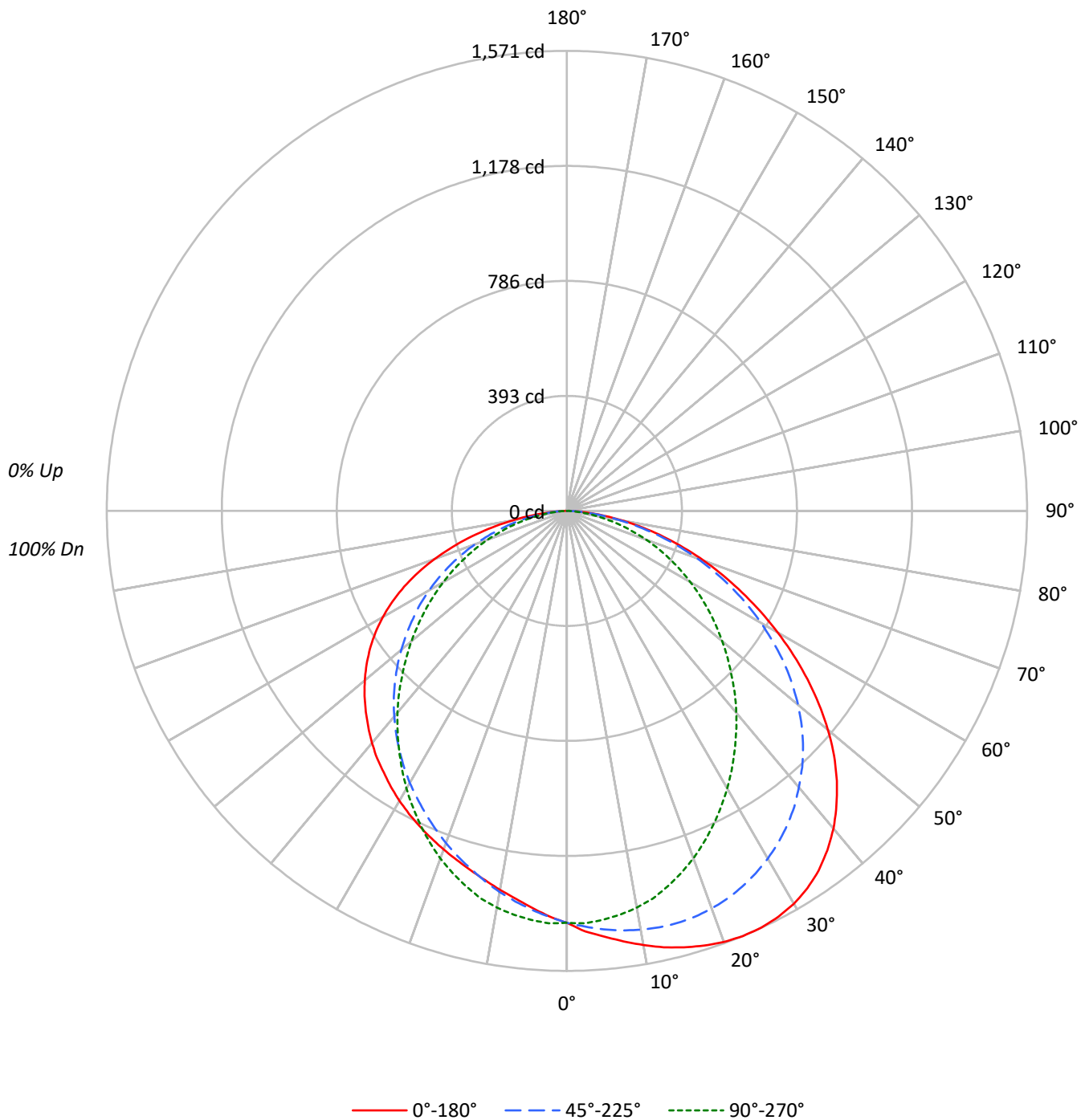
Lumens per Lamp: N/A
Luminaire Lumens: 4138.0 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

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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	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3785	3785	3785
5°	3941	3787	3675
10°	4113	3759	3590
15°	4299	3699	3539
20°	4486	3617	3524
25°	4662	3512	3529
30°	4814	3402	3552
35°	4924	3281	3582
40°	4974	3159	3635
45°	4960	3026	3694
50°	4872	2899	3770
55°	4706	2765	3849
60°	4476	2623	3907
65°	4204	2463	3902
70°	3912	2271	3786
75°	3552	1995	3491
80°	3050	1640	2944
85°	2325	1121	2022

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.4	3.2
10°-20°	385.3	9.3
20°-30°	590.3	14.3
30°-40°	720.3	17.4
40°-50°	753.3	18.2
50°-60°	681.8	16.5
60°-70°	516.4	12.5
70°-80°	287.8	7.0
80°-90°	69.4	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°	1109.0	26.8
0°-40°	1829.3	44.2
0°-60°	3264.4	78.9
0°-90°	4138.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4138.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1407	1407	1407	1407	1407	
5°	1459	1435	1402	1368	1361	141
15°	1543	1457	1328	1266	1270	438
25°	1570	1416	1183	1141	1189	724
35°	1499	1311	999	998	1090	936
45°	1303	1140	795	830	971	1003
55°	1003	906	589	641	820	895
65°	660	621	387	440	613	655
75°	342	323	192	229	336	362
85°	75	66	36	49	66	91
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°	1406.7	1406.7	1406.7	1406.7	1406.7	1406.7	1406.7	1406.7	1406.7	1406.7	1406.7
2.5°	1437.8	1431.0	1425.5	1427.6	1428.9	1424.6	1420.9	1421.5	1417.8	1424.9	1408.3
5°	1459.0	1452.9	1446.4	1448.9	1446.4	1439.9	1434.7	1433.2	1423.3	1427.3	1410.4
7.5°	1482.7	1475.9	1466.4	1469.2	1463.9	1451.9	1445.2	1441.2	1426.1	1426.4	1407.7
10°	1505.4	1499.6	1486.7	1488.5	1479.0	1463.0	1452.2	1446.7	1425.5	1422.4	1403.0
12.5°	1526.7	1518.7	1504.8	1505.7	1491.9	1470.7	1456.9	1448.9	1421.2	1412.0	1392.9
15°	1543.0	1535.3	1518.7	1518.4	1500.5	1472.8	1457.2	1446.1	1411.0	1396.6	1376.6
17.5°	1556.8	1549.7	1529.1	1528.5	1507.0	1471.9	1453.2	1439.3	1396.3	1378.4	1356.3
20°	1566.6	1559.6	1536.5	1534.3	1508.5	1467.3	1444.9	1427.3	1376.9	1355.7	1331.1
22.5°	1571.2	1564.2	1538.0	1535.0	1504.8	1458.1	1432.9	1412.3	1354.8	1327.1	1301.6
25°	1570.3	1563.6	1534.0	1531.0	1497.8	1444.2	1416.0	1392.3	1326.8	1294.2	1269.0
27.5°	1562.6	1557.4	1526.3	1522.4	1484.8	1425.5	1395.4	1369.2	1295.7	1259.5	1232.1
30°	1549.4	1545.4	1512.5	1508.8	1468.8	1404.9	1371.4	1341.2	1262.2	1221.3	1193.7
32.5°	1528.2	1524.5	1491.3	1487.9	1447.3	1378.4	1343.4	1312.3	1225.6	1180.4	1152.8
35°	1499.0	1496.8	1464.5	1460.9	1419.7	1348.3	1311.1	1277.0	1187.5	1136.5	1110.0
37.5°	1460.5	1460.5	1429.5	1425.5	1385.2	1311.4	1274.8	1238.5	1144.5	1090.3	1064.2
40°	1416.0	1420.0	1388.3	1384.3	1345.2	1271.8	1231.8	1193.7	1098.0	1041.8	1016.2
42.5°	1362.5	1366.1	1339.7	1336.0	1299.4	1225.9	1188.7	1147.2	1049.4	992.2	965.8
45°	1303.4	1308.3	1284.7	1281.9	1247.8	1175.8	1140.1	1098.0	998.7	940.6	914.8
47.5°	1237.6	1244.1	1223.5	1221.9	1190.3	1124.5	1087.3	1044.5	945.5	886.8	862.5
50°	1163.8	1173.0	1156.1	1156.1	1127.8	1062.4	1030.1	987.3	890.2	831.4	807.5
52.5°	1084.8	1096.5	1083.9	1084.2	1061.1	1002.4	968.9	927.1	832.4	774.6	752.4
55°	1003.0	1014.4	1006.4	1007.6	989.5	936.0	905.5	864.0	773.3	717.1	696.1
57.5°	917.5	929.8	924.6	927.1	914.5	866.5	834.8	798.5	712.4	656.8	639.0
60°	831.7	843.4	840.7	844.0	836.0	794.5	765.6	728.1	651.2	597.7	582.1
62.5°	745.0	755.8	755.2	758.9	754.6	720.1	694.3	662.3	587.9	538.7	524.3
65°	660.2	669.4	668.8	672.8	671.9	644.2	620.8	591.6	524.6	479.4	466.8
67.5°	577.8	585.4	583.3	587.9	589.1	567.0	546.7	520.6	464.3	420.3	409.6
70°	497.2	502.4	499.7	502.7	505.5	488.9	471.7	448.6	400.0	361.3	352.4
72.5°	418.2	421.9	417.6	420.6	423.1	411.1	397.0	377.0	336.7	303.2	295.8
75°	341.6	346.8	337.9	341.0	342.8	330.9	322.6	306.3	271.5	245.7	240.8
77.5°	267.5	270.6	265.7	264.4	265.7	257.1	250.6	238.0	211.9	190.6	187.6
80°	196.8	198.6	193.7	192.5	193.4	187.3	182.3	173.1	154.7	138.7	137.4
82.5°	131.9	132.8	128.5	127.3	127.9	126.1	120.2	113.8	105.2	91.6	91.3
85°	75.3	75.3	72.3	71.0	71.6	68.6	66.4	63.0	59.7	50.4	51.0
87.5°	27.7	27.7	26.1	25.8	28.9	25.5	24.6	23.1	24.0	19.1	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°	1406.7	1406.7	1406.7	1406.7	1406.7	1406.7	1406.7	1406.7	1406.7	1406.7	1406.7
2.5°	1412.9	1409.8	1407.0	1397.5	1401.5	1391.7	1391.1	1387.4	1384.6	1379.4	1386.1
5°	1408.3	1402.1	1394.1	1382.8	1386.1	1374.5	1372.0	1367.7	1364.0	1357.2	1362.5
7.5°	1400.9	1390.7	1378.1	1363.7	1368.3	1353.8	1350.2	1345.5	1342.5	1334.5	1339.1
10°	1390.1	1375.7	1360.9	1343.4	1346.8	1331.1	1326.5	1321.6	1318.8	1311.7	1316.3
12.5°	1373.5	1356.0	1336.0	1317.0	1320.6	1305.9	1299.7	1294.5	1293.6	1287.7	1293.3
15°	1352.0	1327.7	1307.1	1286.8	1291.1	1273.9	1271.1	1265.9	1267.4	1263.4	1270.2
17.5°	1324.6	1296.7	1274.2	1252.4	1256.7	1242.2	1240.1	1237.6	1239.2	1238.5	1245.9
20°	1293.9	1263.1	1237.3	1215.8	1218.2	1206.9	1207.8	1207.2	1210.3	1213.6	1223.8
22.5°	1259.1	1224.4	1197.3	1175.2	1178.9	1169.1	1173.4	1174.6	1179.8	1187.5	1200.4
25°	1220.1	1182.9	1154.6	1133.7	1137.1	1130.6	1138.0	1141.1	1149.4	1162.3	1175.5
27.5°	1179.2	1139.8	1109.7	1089.7	1096.2	1089.7	1100.8	1106.9	1119.5	1133.7	1150.0
30°	1135.8	1094.9	1063.9	1046.1	1052.2	1046.4	1064.2	1072.5	1085.1	1104.5	1123.9
32.5°	1090.3	1047.3	1016.8	1003.0	1007.3	1006.4	1026.4	1035.6	1052.5	1074.7	1095.3
35°	1043.6	998.7	968.0	956.3	961.5	962.7	986.7	997.5	1015.9	1042.7	1064.8
37.5°	995.3	949.5	919.4	909.8	914.5	919.1	947.0	957.8	978.7	1007.9	1032.2
40°	945.2	899.4	869.9	862.2	866.8	871.7	902.2	916.9	939.7	971.3	997.8
42.5°	894.5	848.7	820.1	814.5	819.1	828.7	861.0	874.8	898.8	933.8	963.0
45°	842.8	795.2	770.2	765.9	770.9	781.9	813.6	830.2	855.7	894.2	925.5
47.5°	790.5	744.1	720.4	717.7	722.6	734.9	769.9	785.0	812.1	853.0	886.8
50°	737.7	692.5	669.7	668.8	673.4	686.6	720.1	738.0	765.9	811.8	846.5
52.5°	684.2	640.8	620.2	620.2	624.5	638.0	671.9	690.3	719.2	767.5	805.9
55°	630.6	589.4	569.8	571.3	577.5	589.1	622.0	641.4	670.6	720.7	761.3
57.5°	577.1	538.1	520.3	522.4	528.3	539.9	572.2	594.1	620.5	672.5	714.0
60°	524.3	487.4	471.7	474.1	479.4	491.1	524.6	543.3	569.8	622.7	664.2
62.5°	470.8	437.2	422.5	425.6	430.2	441.9	473.5	491.7	517.8	569.8	611.6
65°	417.9	386.8	374.2	377.3	381.6	392.3	422.2	439.7	464.6	515.3	555.3
67.5°	365.6	337.3	326.9	329.9	333.3	343.5	368.1	387.1	410.5	458.8	496.6
70°	313.9	288.7	279.5	282.6	285.7	294.9	316.4	333.9	355.5	399.7	434.8
72.5°	262.9	238.3	233.7	236.5	238.9	246.9	267.5	281.3	300.1	339.5	369.6
75°	213.1	191.9	188.8	191.6	193.7	199.9	217.1	229.1	244.8	278.9	303.5
77.5°	165.1	147.3	146.1	148.2	150.4	154.7	168.2	180.8	193.1	218.3	240.1
80°	120.2	105.8	105.8	107.9	107.3	112.5	122.1	132.2	141.1	159.3	175.3
82.5°	79.3	68.0	69.5	71.0	72.0	74.1	79.9	87.6	93.2	104.2	114.7
85°	44.0	36.3	37.8	39.1	38.4	40.9	44.0	48.6	51.3	56.6	62.1
87.5°	16.3	13.5	13.8	14.8	15.4	16.6	16.6	19.4	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°	1406.7	1406.7	1406.7
2.5°	1373.2	1380.6	1386.1
5°	1349.5	1355.7	1360.6
7.5°	1326.5	1332.0	1336.3
10°	1304.7	1310.8	1313.9
12.5°	1282.2	1289.3	1291.7
15°	1260.1	1267.1	1270.2
17.5°	1237.3	1246.5	1249.9
20°	1216.1	1227.8	1230.5
22.5°	1194.6	1206.6	1209.9
25°	1171.2	1185.3	1188.7
27.5°	1146.3	1163.2	1166.6
30°	1121.4	1139.8	1143.2
32.5°	1094.6	1114.6	1117.7
35°	1066.7	1086.6	1090.3
37.5°	1035.6	1057.4	1064.8
40°	1003.3	1027.0	1034.7
42.5°	969.5	995.3	1003.3
45°	933.2	961.5	970.7
47.5°	896.6	928.6	936.6
50°	857.0	891.1	900.6
52.5°	815.4	852.7	862.2
55°	772.4	809.9	820.4
57.5°	725.7	764.4	775.5
60°	676.8	715.5	726.0
62.5°	626.7	661.7	671.9
65°	570.7	603.6	612.8
67.5°	511.3	541.5	549.2
70°	448.3	474.4	481.2
72.5°	382.5	400.7	409.6
75°	314.6	329.0	335.8
77.5°	246.3	256.4	262.0
80°	179.6	185.4	190.0
82.5°	117.5	119.9	123.3
85°	63.3	63.3	65.5
87.5°	21.5	20.6	21.5
90°	0.0	0.0	0.0

(END OF REPORT)