

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: P834184

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2LO-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834184
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-LD4-2LO-20-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

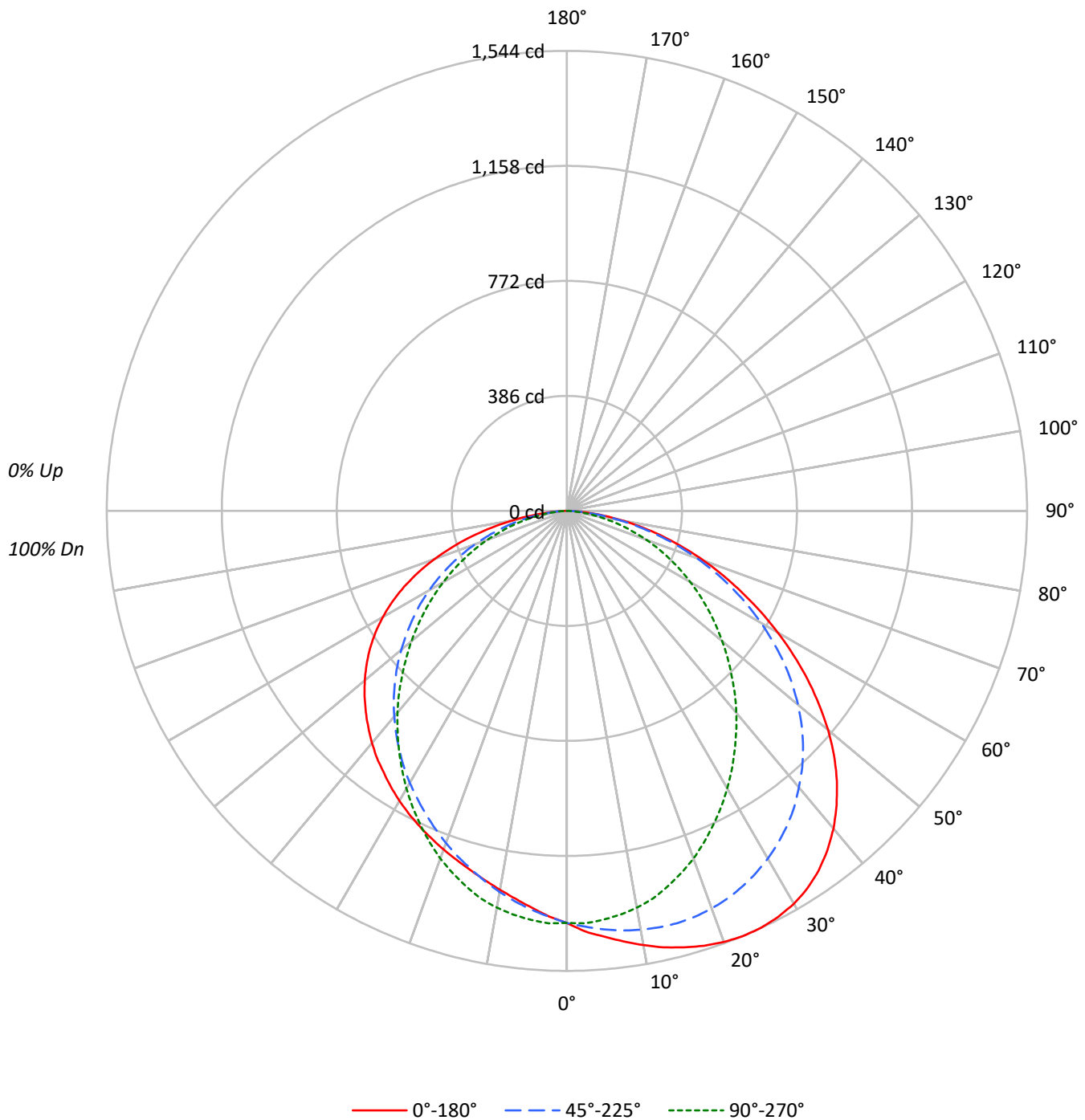
Lumens per Lamp: N/A
Luminaire Lumens: 4067.3 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3721	3721	3721
5°	3874	3723	3613
10°	4043	3695	3529
15°	4225	3636	3478
20°	4410	3556	3464
25°	4583	3452	3469
30°	4732	3344	3492
35°	4840	3225	3521
40°	4889	3105	3573
45°	4876	2974	3631
50°	4789	2849	3706
55°	4625	2718	3783
60°	4400	2578	3841
65°	4132	2421	3835
70°	3845	2233	3722
75°	3491	1961	3431
80°	2997	1612	2895
85°	2285	1102	1988

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.1	3.2
10°-20°	378.7	9.3
20°-30°	580.2	14.3
30°-40°	708.0	17.4
40°-50°	740.4	18.2
50°-60°	670.2	16.5
60°-70°	507.5	12.5
70°-80°	282.8	7.0
80°-90°	68.2	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°	1090.0	26.8
0°-40°	1798.1	44.2
0°-60°	3208.7	78.9
0°-90°	4067.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4067.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1383	1383	1383	1383	1383	
5°	1434	1410	1378	1344	1337	138
15°	1517	1432	1305	1244	1248	430
25°	1544	1392	1163	1122	1168	712
35°	1473	1289	982	980	1072	920
45°	1281	1121	782	816	954	986
55°	986	890	579	630	806	880
65°	649	610	380	432	602	644
75°	336	317	189	225	330	356
85°	74	65	36	48	64	89
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°	1382.7	1382.7	1382.7	1382.7	1382.7	1382.7	1382.7	1382.7	1382.7	1382.7	1382.7
2.5°	1413.2	1406.6	1401.1	1403.3	1404.5	1400.2	1396.6	1397.2	1393.6	1400.5	1384.2
5°	1434.1	1428.0	1421.7	1424.1	1421.7	1415.3	1410.2	1408.7	1399.0	1402.9	1386.3
7.5°	1457.4	1450.7	1441.3	1444.1	1438.9	1427.1	1420.5	1416.5	1401.7	1402.0	1383.6
10°	1479.7	1474.0	1461.3	1463.1	1453.7	1438.0	1427.4	1422.0	1401.1	1398.1	1379.1
12.5°	1500.6	1492.7	1479.1	1480.0	1466.4	1445.6	1432.0	1424.1	1396.9	1387.8	1369.1
15°	1516.6	1509.0	1492.7	1492.4	1474.9	1447.7	1432.3	1421.4	1386.9	1372.7	1353.1
17.5°	1530.2	1523.2	1503.0	1502.4	1481.2	1446.8	1428.3	1414.7	1372.4	1354.9	1333.1
20°	1539.9	1532.9	1510.2	1508.1	1482.7	1442.2	1420.2	1402.9	1353.4	1332.5	1308.4
22.5°	1544.4	1537.4	1511.8	1508.7	1479.1	1433.2	1408.4	1388.1	1331.6	1304.4	1279.3
25°	1543.5	1536.8	1507.8	1504.8	1472.2	1419.6	1391.8	1368.5	1304.1	1272.1	1247.3
27.5°	1535.9	1530.8	1500.3	1496.3	1459.5	1401.1	1371.5	1345.8	1273.6	1237.9	1211.0
30°	1522.9	1519.0	1486.7	1483.0	1443.8	1380.9	1347.9	1318.3	1240.7	1200.5	1173.3
32.5°	1502.1	1498.5	1465.8	1462.5	1422.6	1354.9	1320.4	1289.9	1204.7	1160.3	1133.1
35°	1473.4	1471.3	1439.5	1435.9	1395.4	1325.3	1288.7	1255.2	1167.2	1117.0	1091.0
37.5°	1435.6	1435.6	1405.1	1401.1	1361.5	1289.0	1253.0	1217.4	1124.9	1071.7	1046.0
40°	1391.8	1395.7	1364.6	1360.6	1322.3	1250.0	1210.7	1173.3	1079.3	1024.0	998.9
42.5°	1339.2	1342.8	1316.8	1313.2	1277.2	1205.0	1168.4	1127.6	1031.5	975.3	949.3
45°	1281.2	1286.0	1262.7	1260.0	1226.4	1155.7	1120.7	1079.3	981.6	924.5	899.1
47.5°	1216.5	1222.8	1202.6	1201.1	1169.9	1105.3	1068.7	1026.7	929.4	871.6	847.8
50°	1143.9	1153.0	1136.4	1136.4	1108.6	1044.2	1012.5	970.5	875.0	817.2	793.7
52.5°	1066.3	1077.8	1065.4	1065.7	1043.0	985.3	952.3	911.2	818.1	761.3	739.6
55°	985.9	997.1	989.2	990.4	972.6	920.0	890.1	849.3	760.1	704.8	684.2
57.5°	901.9	913.9	908.8	911.2	898.8	851.7	820.6	784.9	700.3	645.6	628.0
60°	817.5	829.0	826.3	829.6	821.8	781.0	752.6	715.7	640.1	587.5	572.1
62.5°	732.3	742.9	742.3	745.9	741.7	707.8	682.4	651.0	577.9	529.5	515.3
65°	648.9	658.0	657.3	661.3	660.4	633.2	610.2	581.5	515.6	471.2	458.8
67.5°	567.9	575.4	573.3	577.9	579.1	557.3	537.4	511.7	456.4	413.1	402.6
70°	488.7	493.8	491.1	494.1	496.9	480.5	463.6	441.0	393.2	355.1	346.4
72.5°	411.0	414.7	410.4	413.4	415.9	404.1	390.2	370.5	330.9	298.0	290.7
75°	335.8	340.9	332.2	335.2	337.0	325.2	317.0	301.0	266.9	241.5	236.6
77.5°	262.9	266.0	261.1	259.9	261.1	252.7	246.3	233.9	208.2	187.4	184.4
80°	193.4	195.2	190.4	189.2	190.1	184.1	179.2	170.2	152.0	136.3	135.1
82.5°	129.7	130.6	126.3	125.1	125.7	123.9	118.2	111.8	103.4	90.1	89.8
85°	74.0	74.0	71.0	69.8	70.4	67.4	65.3	62.0	58.6	49.6	50.2
87.5°	27.2	27.2	25.7	25.4	28.4	25.1	24.2	22.7	23.6	18.7	19.9
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1382.7	1382.7	1382.7	1382.7	1382.7	1382.7	1382.7	1382.7	1382.7	1382.7	1382.7
2.5°	1388.7	1385.7	1383.0	1373.6	1377.6	1367.9	1367.3	1363.7	1360.9	1355.8	1362.5
5°	1384.2	1378.2	1370.3	1359.1	1362.5	1351.0	1348.5	1344.3	1340.7	1334.0	1339.2
7.5°	1377.0	1367.0	1354.6	1340.4	1344.9	1330.7	1327.1	1322.6	1319.5	1311.7	1316.2
10°	1366.4	1352.2	1337.7	1320.4	1323.8	1308.4	1303.8	1299.0	1296.3	1289.3	1293.8
12.5°	1350.1	1332.8	1313.2	1294.4	1298.1	1283.6	1277.5	1272.4	1271.5	1265.7	1271.2
15°	1328.9	1305.0	1284.8	1264.8	1269.1	1252.1	1249.4	1244.3	1245.8	1241.9	1248.5
17.5°	1302.0	1274.5	1252.4	1231.0	1235.2	1221.0	1218.9	1216.5	1218.0	1217.4	1224.6
20°	1271.8	1241.6	1216.2	1195.0	1197.4	1186.3	1187.2	1186.6	1189.6	1192.9	1202.9
22.5°	1237.6	1203.5	1176.9	1155.1	1158.7	1149.1	1153.3	1154.5	1159.7	1167.2	1179.9
25°	1199.2	1162.7	1134.9	1114.3	1117.6	1111.3	1118.6	1121.6	1129.7	1142.4	1155.4
27.5°	1159.0	1120.4	1090.7	1071.1	1077.4	1071.1	1082.0	1088.0	1100.4	1114.3	1130.3
30°	1116.4	1076.2	1045.7	1028.2	1034.2	1028.5	1046.0	1054.2	1066.6	1085.6	1104.6
32.5°	1071.7	1029.4	999.5	985.9	990.1	989.2	1008.8	1017.9	1034.5	1056.3	1076.5
35°	1025.8	981.6	951.4	939.9	945.1	946.3	969.9	980.4	998.6	1024.9	1046.6
37.5°	978.3	933.3	903.7	894.3	898.8	903.4	930.9	941.4	962.0	990.7	1014.6
40°	929.1	884.0	855.0	847.5	852.0	856.8	886.7	901.2	923.6	954.7	980.7
42.5°	879.2	834.2	806.0	800.6	805.1	814.5	846.2	859.8	883.4	917.9	946.6
45°	828.4	781.6	757.1	752.9	757.7	768.6	799.7	816.0	841.1	878.9	909.7
47.5°	777.0	731.4	708.1	705.4	710.2	722.3	756.8	771.6	798.2	838.4	871.6
50°	725.0	680.6	658.3	657.3	661.9	674.9	707.8	725.4	752.9	797.9	832.0
52.5°	672.5	629.8	609.6	609.6	613.8	627.1	660.4	678.5	706.9	754.4	792.1
55°	619.9	579.4	560.0	561.5	567.6	579.1	611.4	630.5	659.2	708.4	748.3
57.5°	567.3	528.9	511.4	513.5	519.2	530.7	562.4	583.9	609.9	661.0	701.8
60°	515.3	479.0	463.6	466.0	471.2	482.7	515.6	534.0	560.0	612.0	652.8
62.5°	462.7	429.8	415.3	418.3	422.8	434.3	465.4	483.3	509.0	560.0	601.1
65°	410.7	380.2	367.8	370.8	375.1	385.6	415.0	432.2	456.7	506.5	545.8
67.5°	359.4	331.5	321.3	324.3	327.6	337.6	361.8	380.5	403.5	450.9	488.1
70°	308.6	283.8	274.7	277.7	280.8	289.8	311.0	328.2	349.4	392.9	427.4
72.5°	258.4	234.2	229.7	232.4	234.8	242.7	262.9	276.5	295.0	333.7	363.3
75°	209.4	188.6	185.6	188.3	190.4	196.4	213.4	225.2	240.6	274.1	298.3
77.5°	162.3	144.8	143.6	145.7	147.8	152.0	165.3	177.7	189.8	214.6	236.0
80°	118.2	104.0	104.0	106.1	105.5	110.6	120.0	130.0	138.7	156.6	172.3
82.5°	78.0	66.8	68.3	69.8	70.7	72.8	78.6	86.1	91.6	102.5	112.7
85°	43.2	35.7	37.2	38.4	37.8	40.2	43.2	47.8	50.5	55.6	61.1
87.5°	16.0	13.3	13.6	14.5	15.1	16.3	16.3	19.0	19.3	19.9	21.2
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°	1382.7	1382.7	1382.7
2.5°	1349.8	1357.0	1362.5
5°	1326.5	1332.5	1337.4
7.5°	1303.8	1309.3	1313.5
10°	1282.4	1288.4	1291.4
12.5°	1260.3	1267.2	1269.7
15°	1238.5	1245.5	1248.5
17.5°	1216.2	1225.2	1228.6
20°	1195.3	1206.8	1209.5
22.5°	1174.2	1185.9	1189.3
25°	1151.2	1165.1	1168.4
27.5°	1126.7	1143.3	1146.7
30°	1102.2	1120.4	1123.7
32.5°	1075.9	1095.6	1098.6
35°	1048.4	1068.1	1071.7
37.5°	1017.9	1039.4	1046.6
40°	986.2	1009.4	1017.0
42.5°	952.9	978.3	986.2
45°	917.3	945.1	954.1
47.5°	881.3	912.7	920.6
50°	842.3	875.9	885.2
52.5°	801.5	838.1	847.5
55°	759.2	796.1	806.3
57.5°	713.3	751.3	762.2
60°	665.2	703.3	713.6
62.5°	615.9	650.4	660.4
65°	560.9	593.3	602.3
67.5°	502.6	532.2	539.8
70°	440.7	466.3	473.0
72.5°	376.0	393.8	402.6
75°	309.2	323.4	330.0
77.5°	242.1	252.1	257.5
80°	176.5	182.2	186.8
82.5°	115.5	117.9	121.2
85°	62.3	62.3	64.4
87.5°	21.2	20.2	21.2
90°	0.0	0.0	0.0

(END OF REPORT)