

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: P835249

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3LO-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835249
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-LD4-3LO-50-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

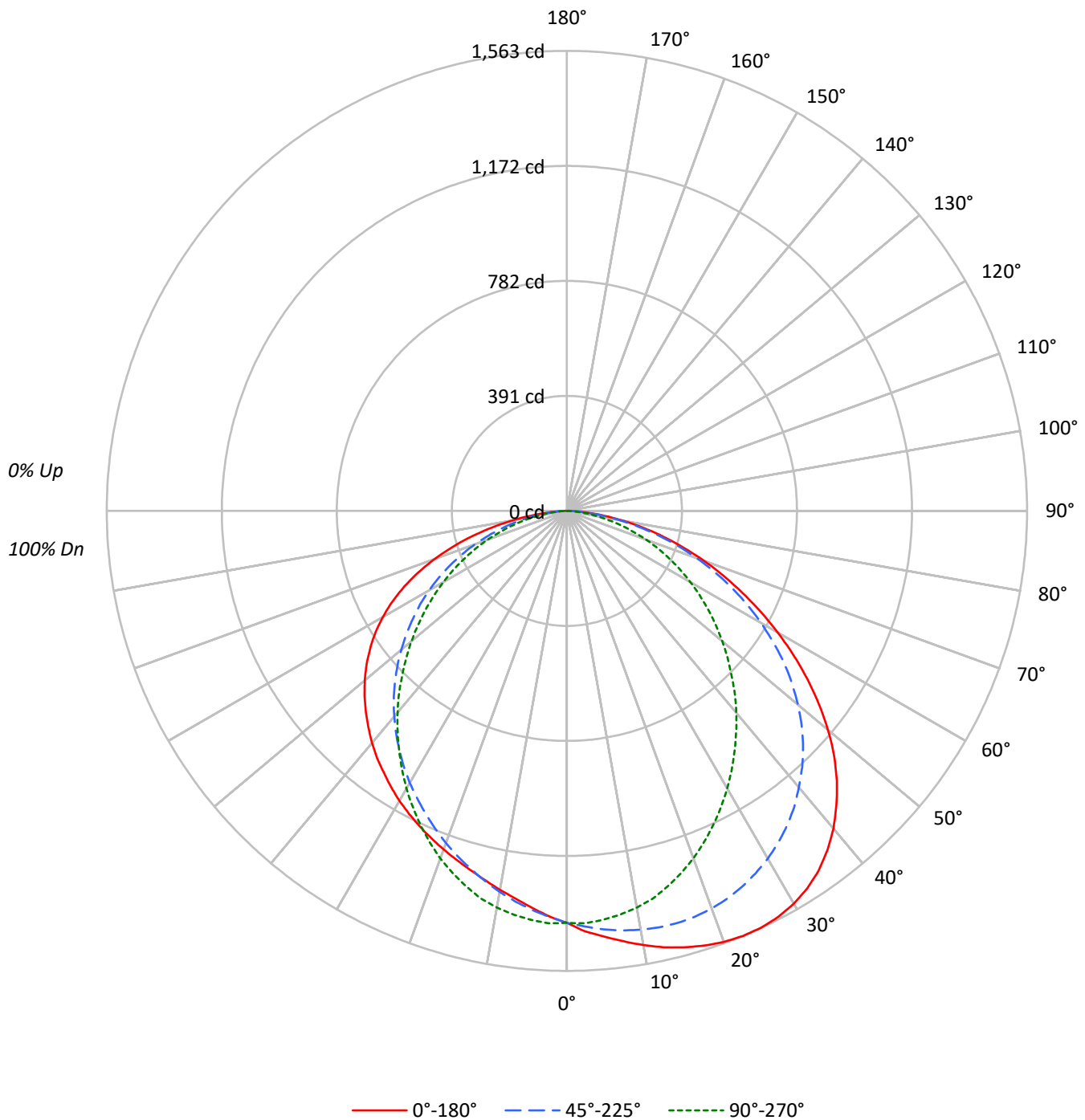
Lumens per Lamp: N/A
Luminaire Lumens: 4116.6 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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	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°	3766	3766	3766
5°	3921	3768	3656
10°	4092	3740	3572
15°	4276	3680	3521
20°	4463	3599	3506
25°	4638	3494	3511
30°	4790	3385	3534
35°	4899	3264	3563
40°	4949	3143	3616
45°	4935	3010	3675
50°	4847	2884	3751
55°	4681	2751	3829
60°	4454	2609	3887
65°	4182	2450	3882
70°	3891	2260	3766
75°	3534	1985	3473
80°	3034	1630	2929
85°	2313	1115	2013



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.7	3.2
10°-20°	383.3	9.3
20°-30°	587.2	14.3
30°-40°	716.6	17.4
40°-50°	749.4	18.2
50°-60°	678.3	16.5
60°-70°	513.7	12.5
70°-80°	286.3	7.0
80°-90°	69.1	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°	1103.2	26.8
0°-40°	1819.9	44.2
0°-60°	3247.6	78.9
0°-90°	4116.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4116.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1400	1400	1400	1400	1400	
5°	1452	1427	1395	1361	1354	140
15°	1535	1450	1321	1259	1264	435
25°	1562	1409	1177	1135	1183	721
35°	1491	1304	994	992	1085	931
45°	1297	1134	791	826	966	998
55°	998	901	586	638	816	890
65°	657	618	385	437	610	651
75°	340	321	191	228	334	360
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°	1399.5	1399.5	1399.5	1399.5	1399.5	1399.5	1399.5	1399.5	1399.5	1399.5	1399.5
2.5°	1430.4	1423.6	1418.1	1420.3	1421.5	1417.2	1413.5	1414.2	1410.5	1417.5	1401.0
5°	1451.5	1445.4	1438.9	1441.4	1438.9	1432.5	1427.3	1425.8	1416.0	1420.0	1403.1
7.5°	1475.0	1468.3	1458.8	1461.6	1456.4	1444.4	1437.7	1433.7	1418.7	1419.1	1400.4
10°	1497.7	1491.9	1479.0	1480.8	1471.4	1455.5	1444.8	1439.2	1418.1	1415.1	1395.8
12.5°	1518.8	1510.8	1497.1	1498.0	1484.2	1463.1	1449.3	1441.4	1413.9	1404.7	1385.7
15°	1535.0	1527.3	1510.8	1510.5	1492.8	1465.2	1449.6	1438.6	1403.8	1389.4	1369.5
17.5°	1548.8	1541.7	1521.2	1520.6	1499.2	1464.3	1445.7	1431.9	1389.1	1371.3	1349.3
20°	1558.5	1551.5	1528.6	1526.4	1500.7	1459.7	1437.4	1420.0	1369.8	1348.7	1324.2
22.5°	1563.1	1556.1	1530.1	1527.0	1497.1	1450.6	1425.5	1405.0	1347.8	1320.3	1294.9
25°	1562.2	1555.5	1526.1	1523.1	1490.0	1436.8	1408.7	1385.1	1319.9	1287.5	1262.4
27.5°	1554.6	1549.4	1518.5	1514.5	1477.2	1418.1	1388.2	1362.2	1289.0	1253.0	1225.7
30°	1541.4	1537.4	1504.7	1501.0	1461.3	1397.6	1364.3	1334.3	1255.7	1215.0	1187.5
32.5°	1520.3	1516.6	1483.6	1480.2	1439.9	1371.3	1336.5	1305.6	1219.3	1174.3	1146.8
35°	1491.2	1489.1	1457.0	1453.3	1412.3	1341.4	1304.3	1270.4	1181.4	1130.6	1104.3
37.5°	1453.0	1453.0	1422.1	1418.1	1378.1	1304.6	1268.2	1232.2	1138.5	1084.7	1058.7
40°	1408.7	1412.6	1381.1	1377.1	1338.3	1265.2	1225.4	1187.5	1092.4	1036.4	1011.0
42.5°	1355.4	1359.1	1332.8	1329.1	1292.7	1219.6	1182.6	1141.3	1044.0	987.1	960.8
45°	1296.7	1301.6	1278.0	1275.3	1241.3	1169.7	1134.3	1092.4	993.6	935.7	910.0
47.5°	1231.2	1237.7	1217.2	1215.6	1184.1	1118.7	1081.7	1039.1	940.6	882.2	858.0
50°	1157.8	1167.0	1150.2	1150.2	1122.0	1056.9	1024.8	982.2	885.6	827.1	803.3
52.5°	1079.2	1090.8	1078.3	1078.6	1055.6	997.2	963.9	922.3	828.1	770.6	748.5
55°	997.8	1009.2	1001.2	1002.4	984.4	931.1	900.9	859.6	769.3	713.4	692.6
57.5°	912.8	925.0	919.8	922.3	909.7	862.0	830.5	794.4	708.8	653.4	635.7
60°	827.5	839.1	836.3	839.7	831.7	790.4	761.7	724.4	647.9	594.7	579.1
62.5°	741.2	751.9	751.3	755.0	750.7	716.4	690.7	658.9	584.9	535.9	521.6
65°	656.8	665.9	665.3	669.3	668.4	640.9	617.6	588.5	521.9	476.9	464.4
67.5°	574.8	582.4	580.3	584.9	586.1	564.1	543.9	517.9	461.9	418.2	407.5
70°	494.6	499.8	497.1	500.1	502.9	486.4	469.2	446.3	398.0	359.4	350.6
72.5°	416.0	419.7	415.4	418.5	420.9	409.0	394.9	375.0	335.0	301.6	294.3
75°	339.9	345.1	336.2	339.2	341.1	329.1	320.9	304.7	270.1	244.4	239.5
77.5°	266.1	269.2	264.3	263.1	264.3	255.7	249.3	236.8	210.8	189.7	186.6
80°	195.8	197.6	192.7	191.5	192.4	186.3	181.4	172.2	153.9	138.0	136.7
82.5°	131.2	132.1	127.9	126.6	127.3	125.4	119.6	113.2	104.6	91.2	90.9
85°	74.9	74.9	71.9	70.7	71.3	68.2	66.1	62.7	59.3	50.2	50.8
87.5°	27.5	27.5	26.0	25.7	28.8	25.4	24.5	22.9	23.9	19.0	20.2
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1399.5	1399.5	1399.5	1399.5	1399.5	1399.5	1399.5	1399.5	1399.5	1399.5	1399.5
2.5°	1405.6	1402.5	1399.8	1390.3	1394.3	1384.5	1383.9	1380.2	1377.5	1372.3	1379.0
5°	1401.0	1394.9	1386.9	1375.6	1379.0	1367.4	1364.9	1360.6	1357.0	1350.2	1355.4
7.5°	1393.7	1383.6	1371.0	1356.7	1361.2	1346.9	1343.2	1338.6	1335.5	1327.6	1332.2
10°	1383.0	1368.6	1353.9	1336.5	1339.8	1324.2	1319.6	1314.7	1312.0	1305.0	1309.5
12.5°	1366.4	1349.0	1329.1	1310.2	1313.8	1299.1	1293.0	1287.8	1286.9	1281.1	1286.6
15°	1345.0	1320.9	1300.4	1280.2	1284.5	1267.3	1264.6	1259.4	1260.9	1256.9	1263.7
17.5°	1317.8	1290.0	1267.6	1245.9	1250.2	1235.8	1233.7	1231.2	1232.8	1232.2	1239.5
20°	1287.2	1256.6	1230.9	1209.5	1212.0	1200.6	1201.6	1201.0	1204.0	1207.4	1217.5
22.5°	1252.6	1218.1	1191.2	1169.1	1172.8	1163.0	1167.3	1168.5	1173.7	1181.4	1194.2
25°	1213.8	1176.8	1148.6	1127.8	1131.2	1124.8	1132.1	1135.2	1143.4	1156.3	1169.4
27.5°	1173.1	1134.0	1104.0	1084.1	1090.5	1084.1	1095.1	1101.2	1113.8	1127.8	1144.1
30°	1130.0	1089.3	1058.4	1040.7	1046.8	1041.0	1058.7	1067.0	1079.5	1098.8	1118.1
32.5°	1084.7	1041.9	1011.6	997.8	1002.1	1001.2	1021.1	1030.3	1047.1	1069.1	1089.6
35°	1038.2	993.6	963.0	951.3	956.5	957.8	981.6	992.3	1010.7	1037.3	1059.3
37.5°	990.2	944.6	914.6	905.1	909.7	914.3	942.2	952.9	973.7	1002.7	1026.9
40°	940.3	894.7	865.4	857.7	862.3	867.2	897.5	912.2	934.8	966.3	992.6
42.5°	889.9	844.3	815.8	810.3	814.9	824.4	856.5	870.3	894.1	929.0	958.1
45°	838.5	791.0	766.3	762.0	766.9	777.9	809.4	825.9	851.3	889.5	920.7
47.5°	786.5	740.3	716.7	714.0	718.9	731.1	766.0	781.0	807.9	848.6	882.2
50°	733.8	688.9	666.2	665.3	669.9	683.1	716.4	734.2	762.0	807.6	842.1
52.5°	680.6	637.5	617.0	617.0	621.3	634.7	668.4	686.7	715.5	763.5	801.8
55°	627.4	586.4	566.8	568.4	574.5	586.1	618.8	638.1	667.2	717.0	757.4
57.5°	574.2	535.3	517.6	519.7	525.5	537.2	569.3	591.0	617.3	669.0	710.3
60°	521.6	484.8	469.2	471.7	476.9	488.5	521.9	540.5	566.8	619.4	660.7
62.5°	468.3	435.0	420.3	423.4	427.9	439.6	471.1	489.1	515.1	566.8	608.4
65°	415.7	384.8	372.3	375.3	379.6	390.3	420.0	437.4	462.2	512.7	552.4
67.5°	363.7	335.6	325.2	328.2	331.6	341.7	366.2	385.1	408.4	456.4	494.0
70°	312.3	287.2	278.1	281.1	284.2	293.4	314.8	332.2	353.6	397.7	432.5
72.5°	261.5	237.1	232.5	235.2	237.7	245.6	266.1	279.9	298.6	337.7	367.7
75°	212.0	190.9	187.8	190.6	192.7	198.8	216.0	227.9	243.5	277.4	301.9
77.5°	164.3	146.5	145.3	147.4	149.6	153.9	167.3	179.9	192.1	217.2	238.9
80°	119.6	105.2	105.2	107.4	106.8	112.0	121.4	131.5	140.4	158.5	174.4
82.5°	78.9	67.6	69.1	70.7	71.6	73.7	79.5	87.2	92.7	103.7	114.1
85°	43.7	36.1	37.6	38.8	38.2	40.7	43.7	48.3	51.1	56.3	61.8
87.5°	16.2	13.5	13.8	14.7	15.3	16.5	16.5	19.3	19.6	20.2	21.4
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°	1399.5	1399.5	1399.5
2.5°	1366.1	1373.5	1379.0
5°	1342.6	1348.7	1353.6
7.5°	1319.6	1325.1	1329.4
10°	1297.9	1304.0	1307.1
12.5°	1275.6	1282.6	1285.1
15°	1253.6	1260.6	1263.7
17.5°	1230.9	1240.1	1243.5
20°	1209.8	1221.4	1224.2
22.5°	1188.4	1200.3	1203.7
25°	1165.2	1179.2	1182.6
27.5°	1140.4	1157.2	1160.6
30°	1115.6	1134.0	1137.3
32.5°	1089.0	1108.9	1111.9
35°	1061.2	1081.0	1084.7
37.5°	1030.3	1052.0	1059.3
40°	998.1	1021.7	1029.3
42.5°	964.5	990.2	998.1
45°	928.4	956.5	965.7
47.5°	892.0	923.8	931.8
50°	852.5	886.5	896.0
52.5°	811.2	848.3	857.7
55°	768.4	805.7	816.1
57.5°	721.9	760.5	771.5
60°	673.3	711.8	722.2
62.5°	623.4	658.3	668.4
65°	567.7	600.5	609.7
67.5°	508.7	538.7	546.3
70°	446.0	472.0	478.7
72.5°	380.5	398.6	407.5
75°	312.9	327.3	334.0
77.5°	245.0	255.1	260.6
80°	178.6	184.5	189.0
82.5°	116.9	119.3	122.7
85°	63.0	63.0	65.2
87.5°	21.4	20.5	21.4
90°	0.0	0.0	0.0

(END OF REPORT)