

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: P834596

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1STD-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834596
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-50-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

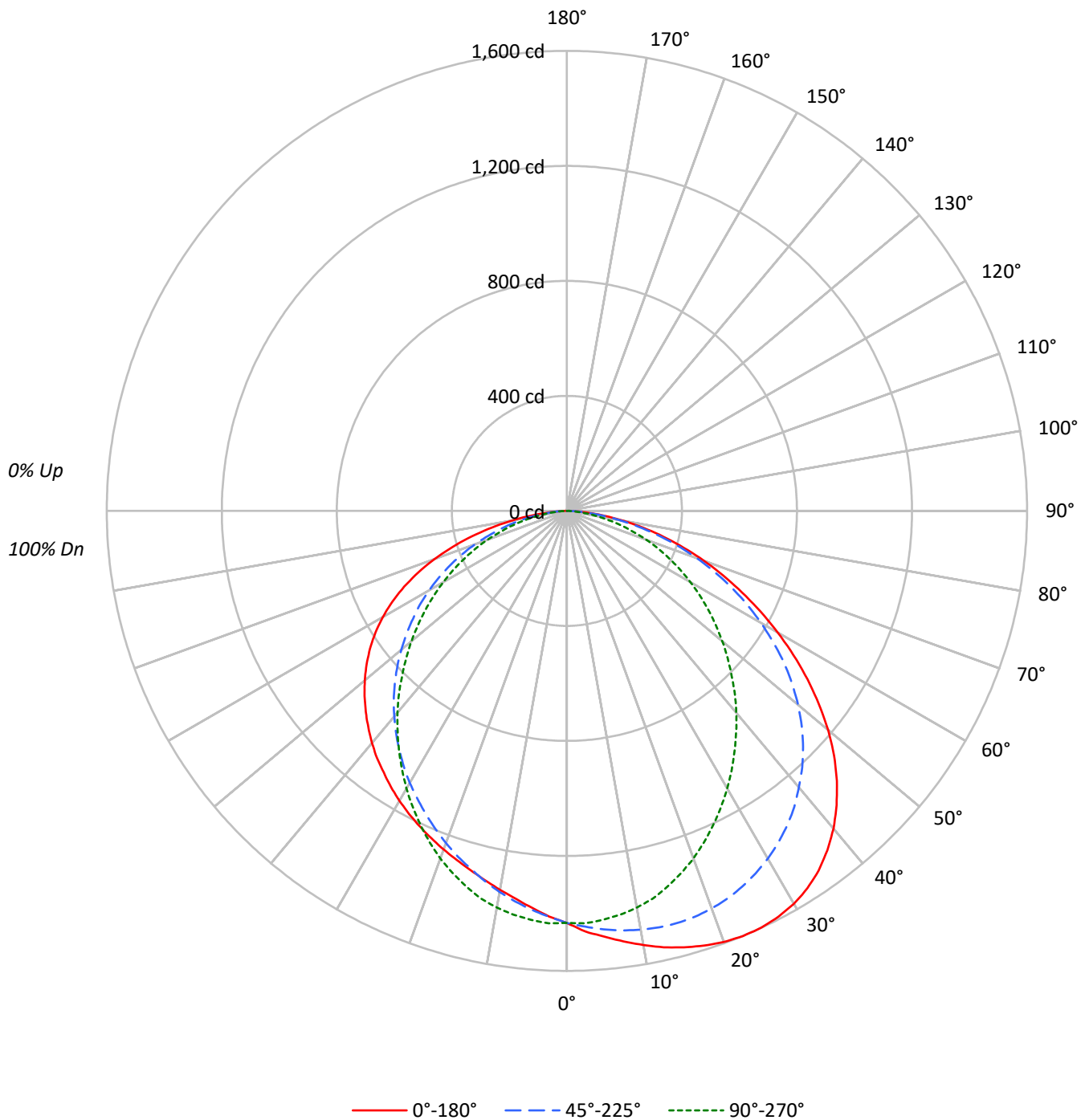
Lumens per Lamp: N/A
Luminaire Lumens: 4214.6 lumens
Efficiency: N/A
Efficacy: 126.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	1928	1928	1928
5°	2007	1929	1872
10°	2095	1914	1828
15°	2189	1884	1802
20°	2285	1842	1795
25°	2374	1789	1797
30°	2452	1733	1809
35°	2508	1671	1824
40°	2533	1609	1851
45°	2526	1541	1881
50°	2481	1476	1920
55°	2396	1408	1960
60°	2280	1336	1990
65°	2141	1254	1987
70°	1992	1157	1928
75°	1809	1016	1778
80°	1553	834	1499
85°	1184	571	1030

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.9	3.2
10°-20°	392.4	9.3
20°-30°	601.2	14.3
30°-40°	733.7	17.4
40°-50°	767.3	18.2
50°-60°	694.4	16.5
60°-70°	525.9	12.5
70°-80°	293.1	7.0
80°-90°	70.7	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°	1129.5	26.8
0°-40°	1863.2	44.2
0°-60°	3324.9	78.9
0°-90°	4214.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4214.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1433	1433	1433	1433	1433	
5°	1486	1461	1428	1393	1386	143
15°	1572	1484	1352	1289	1294	446
25°	1599	1442	1205	1162	1211	738
35°	1527	1335	1017	1016	1110	953
45°	1328	1161	810	846	989	1021
55°	1022	922	600	653	836	912
65°	672	632	394	448	624	667
75°	348	328	195	233	342	369
85°	77	68	37	50	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°	1432.8	1432.8	1432.8	1432.8	1432.8	1432.8	1432.8	1432.8	1432.8	1432.8	1432.8
2.5°	1464.4	1457.5	1451.9	1454.1	1455.3	1450.9	1447.2	1447.8	1444.1	1451.3	1434.3
5°	1486.0	1479.8	1473.2	1475.7	1473.2	1466.6	1461.3	1459.7	1449.7	1453.8	1436.5
7.5°	1510.1	1503.2	1493.5	1496.4	1491.0	1478.8	1471.9	1467.9	1452.5	1452.8	1433.7
10°	1533.3	1527.4	1514.2	1516.1	1506.4	1490.1	1479.1	1473.5	1451.9	1448.8	1429.0
12.5°	1554.9	1546.8	1532.7	1533.6	1519.5	1497.9	1483.8	1475.7	1447.5	1438.1	1418.7
15°	1571.5	1563.7	1546.8	1546.5	1528.3	1500.1	1484.1	1472.9	1437.2	1422.4	1402.1
17.5°	1585.6	1578.4	1557.4	1556.8	1534.9	1499.2	1480.1	1466.0	1422.1	1404.0	1381.4
20°	1595.6	1588.4	1564.9	1562.7	1536.4	1494.5	1471.6	1453.8	1402.4	1380.8	1355.7
22.5°	1600.3	1593.1	1566.5	1563.4	1532.7	1485.1	1459.4	1438.4	1379.9	1351.7	1325.7
25°	1599.4	1592.5	1562.4	1559.3	1525.5	1471.0	1442.2	1418.1	1351.4	1318.2	1292.5
27.5°	1591.6	1586.2	1554.6	1550.5	1512.3	1451.9	1421.2	1394.6	1319.7	1282.8	1254.9
30°	1578.1	1574.0	1540.5	1536.8	1496.0	1430.9	1396.8	1366.1	1285.6	1243.9	1215.7
32.5°	1556.5	1552.7	1518.9	1515.5	1474.1	1404.0	1368.3	1336.6	1248.3	1202.3	1174.1
35°	1526.7	1524.5	1491.7	1487.9	1445.9	1373.3	1335.4	1300.6	1209.5	1157.5	1130.6
37.5°	1487.6	1487.6	1456.0	1451.9	1410.9	1335.7	1298.4	1261.5	1165.6	1110.5	1083.9
40°	1442.2	1446.2	1414.0	1409.9	1370.1	1295.3	1254.6	1215.7	1118.3	1061.0	1035.0
42.5°	1387.7	1391.4	1364.5	1360.7	1323.5	1248.6	1210.7	1168.5	1068.9	1010.6	983.7
45°	1327.6	1332.6	1308.4	1305.6	1270.9	1197.6	1161.3	1118.3	1017.2	958.0	931.7
47.5°	1260.5	1267.1	1246.1	1244.6	1212.3	1145.3	1107.4	1063.9	963.0	903.2	878.5
50°	1185.4	1194.8	1177.5	1177.5	1148.7	1082.0	1049.1	1005.6	906.6	846.8	822.4
52.5°	1104.9	1116.8	1103.9	1104.3	1080.8	1021.0	986.8	944.2	847.8	788.9	766.3
55°	1021.6	1033.2	1025.0	1026.3	1007.8	953.3	922.3	880.0	787.6	730.3	709.0
57.5°	934.5	947.0	941.7	944.2	931.4	882.5	850.3	813.3	725.6	668.9	650.8
60°	847.1	859.0	856.2	859.7	851.5	809.2	779.8	741.6	663.3	608.8	592.8
62.5°	758.8	769.8	769.2	772.9	768.5	733.5	707.2	674.6	598.8	548.7	534.0
65°	672.4	681.8	681.2	685.2	684.3	656.1	632.3	602.5	534.3	488.2	475.4
67.5°	588.5	596.3	594.1	598.8	600.0	577.5	556.8	530.2	472.9	428.1	417.1
70°	506.4	511.7	508.9	512.0	514.9	497.9	480.4	456.9	407.4	368.0	358.9
72.5°	425.9	429.7	425.3	428.4	430.9	418.7	404.3	384.0	342.9	308.8	301.3
75°	347.9	353.3	344.2	347.3	349.2	337.0	328.5	311.9	276.5	250.2	245.2
77.5°	272.5	275.6	270.6	269.3	270.6	261.8	255.2	242.4	215.8	194.2	191.0
80°	200.4	202.3	197.3	196.0	197.0	190.7	185.7	176.3	157.5	141.2	140.0
82.5°	134.4	135.3	130.9	129.7	130.3	128.4	122.5	115.9	107.1	93.3	93.0
85°	76.7	76.7	73.6	72.3	73.0	69.8	67.6	64.2	60.8	51.4	52.0
87.5°	28.2	28.2	26.6	26.3	29.4	26.0	25.1	23.5	24.4	19.4	20.7
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°	1432.8	1432.8	1432.8	1432.8	1432.8	1432.8	1432.8	1432.8	1432.8	1432.8	1432.8
2.5°	1439.0	1435.9	1433.1	1423.4	1427.5	1417.4	1416.8	1413.0	1410.2	1404.9	1411.8
5°	1434.3	1428.1	1419.9	1408.4	1411.8	1399.9	1397.4	1393.0	1389.2	1382.4	1387.7
7.5°	1426.8	1416.5	1403.7	1388.9	1393.6	1378.9	1375.2	1370.5	1367.3	1359.2	1363.9
10°	1415.9	1401.1	1386.1	1368.3	1371.7	1355.7	1351.0	1346.0	1343.2	1336.0	1340.7
12.5°	1399.0	1381.1	1360.7	1341.3	1345.1	1330.1	1323.8	1318.5	1317.5	1311.6	1317.2
15°	1377.0	1352.3	1331.3	1310.6	1315.0	1297.5	1294.7	1289.3	1290.9	1286.8	1293.7
17.5°	1349.2	1320.7	1297.8	1275.6	1279.9	1265.2	1263.0	1260.5	1262.1	1261.5	1269.0
20°	1317.8	1286.5	1260.2	1238.3	1240.8	1229.2	1230.2	1229.5	1232.7	1236.1	1246.4
22.5°	1282.5	1247.1	1219.5	1197.0	1200.7	1190.7	1195.1	1196.3	1201.7	1209.5	1222.6
25°	1242.7	1204.8	1176.0	1154.7	1158.1	1151.5	1159.1	1162.2	1170.7	1183.8	1197.3
27.5°	1201.0	1160.9	1130.3	1109.9	1116.5	1109.9	1121.2	1127.4	1140.3	1154.7	1171.3
30°	1156.9	1115.2	1083.6	1065.4	1071.7	1065.7	1083.9	1092.4	1105.2	1124.9	1144.7
32.5°	1110.5	1066.7	1035.7	1021.6	1026.0	1025.0	1045.4	1054.8	1072.0	1094.5	1115.5
35°	1062.9	1017.2	985.9	974.0	979.3	980.6	1005.0	1015.9	1034.7	1062.0	1084.5
37.5°	1013.7	967.1	936.4	926.7	931.4	936.1	964.6	975.5	996.8	1026.6	1051.3
40°	962.7	916.0	886.0	878.1	882.8	887.9	918.9	933.9	957.1	989.3	1016.3
42.5°	911.0	864.4	835.2	829.6	834.3	844.0	876.9	891.0	915.4	951.1	980.9
45°	858.4	809.9	784.5	780.1	785.1	796.4	828.7	845.6	871.6	910.7	942.7
47.5°	805.2	757.9	733.8	731.0	736.0	748.5	784.2	799.5	827.1	868.7	903.2
50°	751.3	705.3	682.1	681.2	685.9	699.3	733.5	751.6	780.1	826.8	862.2
52.5°	696.8	652.7	631.7	631.7	636.1	649.8	684.3	703.1	732.5	781.7	820.8
55°	642.3	600.4	580.3	581.9	588.1	600.0	633.6	653.3	683.0	734.1	775.4
57.5°	587.8	548.1	529.9	532.1	538.0	549.9	582.8	605.1	632.0	684.9	727.2
60°	534.0	496.4	480.4	482.9	488.2	500.1	534.3	553.4	580.3	634.2	676.5
62.5°	479.5	445.3	430.3	433.4	438.1	450.0	482.3	500.8	527.4	580.3	622.9
65°	425.6	394.0	381.1	384.3	388.7	399.6	430.0	447.8	473.2	524.9	565.6
67.5°	372.4	343.6	332.9	336.0	339.5	349.8	374.9	394.3	418.1	467.3	505.8
70°	319.8	294.1	284.7	287.8	290.9	300.3	322.3	340.1	362.0	407.1	442.8
72.5°	267.8	242.7	238.0	240.8	243.3	251.5	272.5	286.6	305.7	345.7	376.4
75°	217.0	195.4	192.3	195.1	197.3	203.6	221.1	233.3	249.3	284.1	309.1
77.5°	168.2	150.0	148.8	151.0	153.1	157.5	171.3	184.1	196.7	222.4	244.6
80°	122.5	107.7	107.7	109.9	109.3	114.6	124.3	134.7	143.7	162.2	178.5
82.5°	80.8	69.2	70.8	72.3	73.3	75.5	81.4	89.3	94.9	106.2	116.8
85°	44.8	37.0	38.5	39.8	39.1	41.7	44.8	49.5	52.3	57.6	63.3
87.5°	16.6	13.8	14.1	15.0	15.7	16.9	16.9	19.7	20.0	20.7	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°	1432.8	1432.8	1432.8
2.5°	1398.6	1406.2	1411.8
5°	1374.5	1380.8	1385.8
7.5°	1351.0	1356.7	1361.1
10°	1328.8	1335.1	1338.2
12.5°	1305.9	1313.1	1315.7
15°	1283.4	1290.6	1293.7
17.5°	1260.2	1269.6	1273.1
20°	1238.6	1250.5	1253.3
22.5°	1216.7	1228.9	1232.3
25°	1192.9	1207.3	1210.7
27.5°	1167.5	1184.7	1188.2
30°	1142.2	1160.9	1164.4
32.5°	1114.9	1135.3	1138.4
35°	1086.4	1106.8	1110.5
37.5°	1054.8	1077.0	1084.5
40°	1021.9	1046.0	1053.8
42.5°	987.4	1013.7	1021.9
45°	950.5	979.3	988.7
47.5°	913.2	945.8	953.9
50°	872.8	907.6	917.3
52.5°	830.5	868.4	878.1
55°	786.7	824.9	835.6
57.5°	739.1	778.6	789.8
60°	689.3	728.8	739.4
62.5°	638.3	674.0	684.3
65°	581.3	614.8	624.2
67.5°	520.8	551.5	559.3
70°	456.6	483.2	490.1
72.5°	389.6	408.1	417.1
75°	320.4	335.1	342.0
77.5°	250.9	261.2	266.8
80°	182.9	188.8	193.5
82.5°	119.6	122.1	125.6
85°	64.5	64.5	66.7
87.5°	21.9	21.0	21.9
90°	0.0	0.0	0.0

(END OF REPORT)