

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: P834687

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1HI-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834687
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-40-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

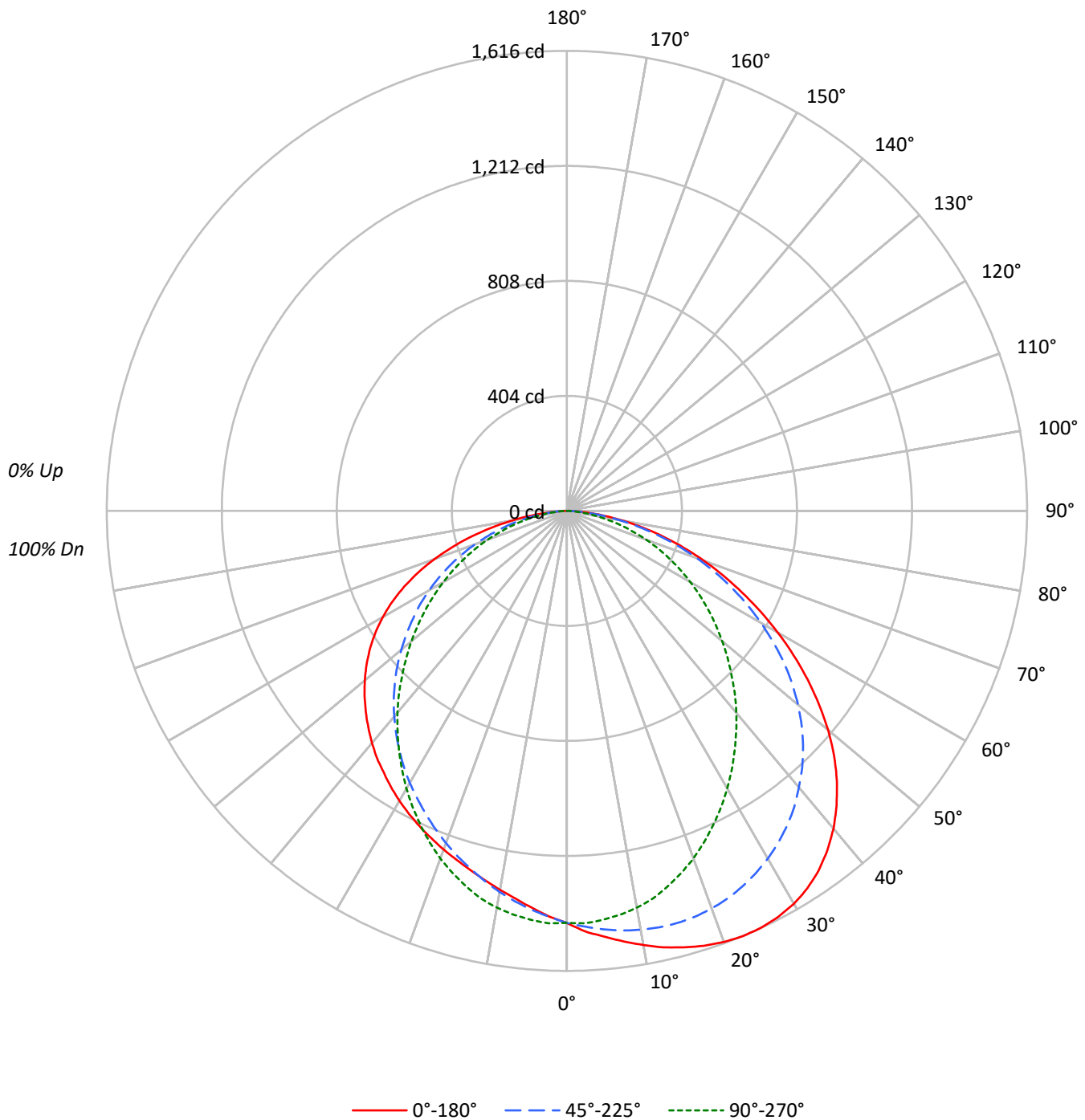
Lumens per Lamp: N/A
Luminaire Lumens: 4256.8 lumens
Efficiency: N/A
Efficacy: 96.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1947	1947	1947
5°	2027	1948	1890
10°	2116	1934	1847
15°	2211	1903	1820
20°	2308	1861	1813
25°	2398	1807	1815
30°	2476	1750	1827
35°	2533	1688	1842
40°	2558	1625	1870
45°	2551	1556	1900
50°	2506	1491	1939
55°	2420	1422	1980
60°	2302	1349	2010
65°	2162	1267	2007
70°	2012	1168	1947
75°	1827	1026	1796
80°	1568	843	1515
85°	1196	576	1041

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.3	3.2
10°-20°	396.4	9.3
20°-30°	607.2	14.3
30°-40°	741.0	17.4
40°-50°	775.0	18.2
50°-60°	701.4	16.5
60°-70°	531.2	12.5
70°-80°	296.0	7.0
80°-90°	71.4	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°	1140.8	26.8
0°-40°	1881.9	44.2
0°-60°	3358.2	78.9
0°-90°	4256.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4256.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1447	1447	1447	1447	1447	
5°	1501	1476	1442	1407	1400	145
15°	1587	1499	1366	1302	1307	450
25°	1615	1457	1217	1174	1223	745
35°	1542	1349	1027	1026	1122	963
45°	1341	1173	818	854	999	1032
55°	1032	932	606	660	844	921
65°	679	639	398	452	630	674
75°	351	332	197	236	345	373
85°	78	68	37	50	67	93
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°	1447.1	1447.1	1447.1	1447.1	1447.1	1447.1	1447.1	1447.1	1447.1	1447.1	1447.1
2.5°	1479.1	1472.1	1466.4	1468.7	1469.9	1465.5	1461.7	1462.3	1458.5	1465.8	1448.7
5°	1500.9	1494.6	1487.9	1490.5	1487.9	1481.3	1475.9	1474.3	1464.2	1468.3	1450.9
7.5°	1525.3	1518.3	1508.5	1511.4	1506.0	1493.6	1486.7	1482.6	1467.1	1467.4	1448.1
10°	1548.7	1542.7	1529.4	1531.3	1521.5	1505.0	1494.0	1488.3	1466.4	1463.3	1443.3
12.5°	1570.5	1562.3	1548.0	1549.0	1534.8	1512.9	1498.7	1490.5	1462.0	1452.5	1432.9
15°	1587.3	1579.4	1562.3	1562.0	1543.6	1515.2	1499.0	1487.6	1451.6	1436.7	1416.1
17.5°	1601.5	1594.2	1573.0	1572.4	1550.3	1514.2	1494.9	1480.7	1436.4	1418.0	1395.3
20°	1611.6	1604.4	1580.6	1578.4	1551.8	1509.5	1486.4	1468.3	1416.5	1394.6	1369.3
22.5°	1616.4	1609.1	1582.2	1579.0	1548.0	1500.0	1474.0	1452.8	1393.7	1365.2	1339.0
25°	1615.4	1608.5	1578.1	1574.9	1540.8	1485.7	1456.6	1432.3	1364.9	1331.4	1305.4
27.5°	1607.5	1602.1	1570.2	1566.1	1527.5	1466.4	1435.4	1408.6	1333.0	1295.6	1267.5
30°	1593.9	1589.8	1556.0	1552.2	1511.0	1445.2	1410.8	1379.8	1298.5	1256.4	1227.9
32.5°	1572.1	1568.3	1534.1	1530.7	1488.9	1418.0	1382.0	1350.0	1260.8	1214.3	1185.9
35°	1542.0	1539.8	1506.6	1502.8	1460.4	1387.0	1348.8	1313.7	1221.6	1169.1	1141.9
37.5°	1502.5	1502.5	1470.6	1466.4	1425.0	1349.1	1311.4	1274.1	1177.3	1121.7	1094.8
40°	1456.6	1460.7	1428.2	1424.1	1383.9	1308.3	1267.2	1227.9	1129.6	1071.7	1045.4
42.5°	1401.6	1405.4	1378.2	1374.4	1336.7	1261.1	1222.9	1180.2	1079.6	1020.7	993.5
45°	1340.9	1345.9	1321.6	1318.7	1283.6	1209.6	1172.9	1129.6	1027.4	967.6	941.0
47.5°	1273.2	1279.8	1258.6	1257.0	1224.5	1156.8	1118.5	1074.5	972.7	912.3	887.3
50°	1197.3	1206.7	1189.3	1189.3	1160.2	1092.9	1059.7	1015.7	915.7	855.3	830.6
52.5°	1116.0	1128.0	1115.0	1115.3	1091.6	1031.2	996.7	953.7	856.3	796.8	774.0
55°	1031.8	1043.5	1035.3	1036.6	1017.9	962.9	931.5	888.8	795.5	737.6	716.1
57.5°	943.9	956.5	951.2	953.7	940.7	891.4	858.8	821.5	732.9	675.6	657.3
60°	855.6	867.7	864.8	868.3	860.1	817.4	787.6	749.0	670.0	614.9	598.8
62.5°	766.4	777.5	776.9	780.7	776.2	740.8	714.2	681.3	604.8	554.2	539.3
65°	679.1	688.6	688.0	692.1	691.1	662.7	638.6	608.6	539.6	493.1	480.2
67.5°	594.4	602.3	600.1	604.8	606.1	583.3	562.4	535.5	477.6	432.4	421.3
70°	511.5	516.9	514.0	517.2	520.0	502.9	485.2	461.5	411.5	371.7	362.5
72.5°	430.2	434.0	429.6	432.7	435.3	422.9	408.4	387.8	346.4	311.9	304.3
75°	351.4	356.8	347.6	350.8	352.7	340.4	331.8	315.1	279.3	252.7	247.7
77.5°	275.2	278.4	273.3	272.0	273.3	264.4	257.8	244.8	217.9	196.1	193.0
80°	202.4	204.3	199.3	198.0	199.0	192.6	187.6	178.1	159.1	142.7	141.4
82.5°	135.7	136.6	132.2	131.0	131.6	129.7	123.7	117.0	108.2	94.3	93.9
85°	77.5	77.5	74.3	73.1	73.7	70.5	68.3	64.8	61.4	51.9	52.5
87.5°	28.5	28.5	26.9	26.6	29.7	26.3	25.3	23.7	24.7	19.6	20.9
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°	1447.1	1447.1	1447.1	1447.1	1447.1	1447.1	1447.1	1447.1	1447.1	1447.1	1447.1
2.5°	1453.5	1450.3	1447.5	1437.7	1441.8	1431.6	1431.0	1427.2	1424.4	1419.0	1425.9
5°	1448.7	1442.4	1434.2	1422.5	1425.9	1413.9	1411.4	1407.0	1403.2	1396.2	1401.6
7.5°	1441.1	1430.7	1417.7	1402.9	1407.6	1392.7	1388.9	1384.2	1381.0	1372.8	1377.6
10°	1430.1	1415.2	1400.0	1382.0	1385.5	1369.3	1364.6	1359.5	1356.7	1349.4	1354.1
12.5°	1413.0	1395.0	1374.4	1354.8	1358.6	1343.4	1337.1	1331.7	1330.7	1324.7	1330.4
15°	1390.8	1365.9	1344.7	1323.8	1328.2	1310.5	1307.6	1302.3	1303.9	1299.7	1306.7
17.5°	1362.7	1333.9	1310.8	1288.4	1292.8	1277.9	1275.7	1273.2	1274.8	1274.1	1281.7
20°	1331.1	1299.4	1272.9	1250.7	1253.2	1241.5	1242.5	1241.9	1245.0	1248.5	1258.9
22.5°	1295.3	1259.6	1231.7	1209.0	1212.8	1202.6	1207.1	1208.3	1213.7	1221.6	1234.9
25°	1255.1	1216.9	1187.8	1166.3	1169.7	1163.1	1170.7	1173.8	1182.4	1195.7	1209.3
27.5°	1213.1	1172.6	1141.6	1121.0	1127.7	1121.0	1132.4	1138.7	1151.7	1166.3	1183.0
30°	1168.5	1126.4	1094.5	1076.1	1082.4	1076.4	1094.8	1103.3	1116.3	1136.2	1156.1
32.5°	1121.7	1077.4	1046.1	1031.8	1036.2	1035.3	1055.9	1065.4	1082.7	1105.5	1126.7
35°	1073.6	1027.4	995.8	983.7	989.1	990.4	1015.1	1026.1	1045.1	1072.6	1095.4
37.5°	1023.9	976.8	945.8	936.0	940.7	945.5	974.3	985.3	1006.8	1036.9	1061.9
40°	972.4	925.2	894.9	886.9	891.7	896.8	928.1	943.3	966.7	999.2	1026.4
42.5°	920.2	873.0	843.6	837.9	842.7	852.5	885.7	899.9	924.6	960.6	990.7
45°	867.0	818.0	792.4	787.9	793.0	804.4	837.0	854.1	880.3	919.8	952.1
47.5°	813.2	765.5	741.1	738.3	743.3	756.0	792.1	807.6	835.4	877.5	912.3
50°	758.8	712.3	688.9	688.0	692.7	706.3	740.8	759.2	787.9	835.1	870.8
52.5°	703.8	659.2	638.0	638.0	642.4	656.4	691.1	710.1	739.9	789.5	829.1
55°	648.8	606.4	586.1	587.7	594.0	606.1	639.9	659.8	689.9	741.4	783.2
57.5°	593.7	553.6	535.2	537.4	543.4	555.4	588.7	611.1	638.3	691.8	734.5
60°	539.3	501.4	485.2	487.8	493.1	505.2	539.6	558.9	586.1	640.5	683.2
62.5°	484.3	449.8	434.6	437.8	442.5	454.5	487.1	505.8	532.7	586.1	629.2
65°	429.9	397.9	385.0	388.1	392.5	403.6	434.3	452.3	478.0	530.1	571.3
67.5°	376.1	347.0	336.2	339.4	342.9	353.3	378.6	398.2	422.3	471.9	510.8
70°	323.0	297.0	287.5	290.7	293.9	303.3	325.5	343.5	365.7	411.2	447.3
72.5°	270.4	245.1	240.4	243.2	245.8	254.0	275.2	289.4	308.7	349.2	380.2
75°	219.2	197.4	194.2	197.1	199.3	205.6	223.3	235.7	251.8	286.9	312.2
77.5°	169.9	151.5	150.2	152.5	154.7	159.1	173.0	186.0	198.6	224.6	247.0
80°	123.7	108.8	108.8	111.0	110.4	115.8	125.6	136.0	145.2	163.9	180.3
82.5°	81.6	69.9	71.5	73.1	74.0	76.2	82.2	90.1	95.8	107.2	118.0
85°	45.2	37.3	38.9	40.2	39.5	42.1	45.2	50.0	52.8	58.2	63.9
87.5°	16.8	13.9	14.2	15.2	15.8	17.1	17.1	19.9	20.2	20.9	22.1
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°	1447.1	1447.1	1447.1
2.5°	1412.7	1420.3	1425.9
5°	1388.3	1394.6	1399.7
7.5°	1364.6	1370.3	1374.7
10°	1342.1	1348.5	1351.6
12.5°	1319.0	1326.3	1328.8
15°	1296.3	1303.5	1306.7
17.5°	1272.9	1282.3	1285.8
20°	1251.0	1263.0	1265.9
22.5°	1228.9	1241.2	1244.7
25°	1204.8	1219.4	1222.9
27.5°	1179.2	1196.6	1200.1
30°	1153.6	1172.6	1176.1
32.5°	1126.1	1146.6	1149.8
35°	1097.3	1117.9	1121.7
37.5°	1065.4	1087.8	1095.4
40°	1032.1	1056.5	1064.4
42.5°	997.3	1023.9	1032.1
45°	960.0	989.1	998.6
47.5°	922.4	955.3	963.5
50°	881.6	916.7	926.5
52.5°	838.9	877.1	886.9
55°	794.6	833.2	843.9
57.5°	746.5	786.4	797.7
60°	696.2	736.1	746.8
62.5°	644.7	680.7	691.1
65°	587.1	620.9	630.4
67.5°	526.0	557.0	564.9
70°	461.2	488.1	495.0
72.5°	393.5	412.2	421.3
75°	323.6	338.5	345.4
77.5°	253.4	263.8	269.5
80°	184.7	190.7	195.5
82.5°	120.8	123.4	126.8
85°	65.2	65.2	67.4
87.5°	22.1	21.2	22.1
90°	0.0	0.0	0.0

(END OF REPORT)