

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: P834273

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1HI-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834273
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-40-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

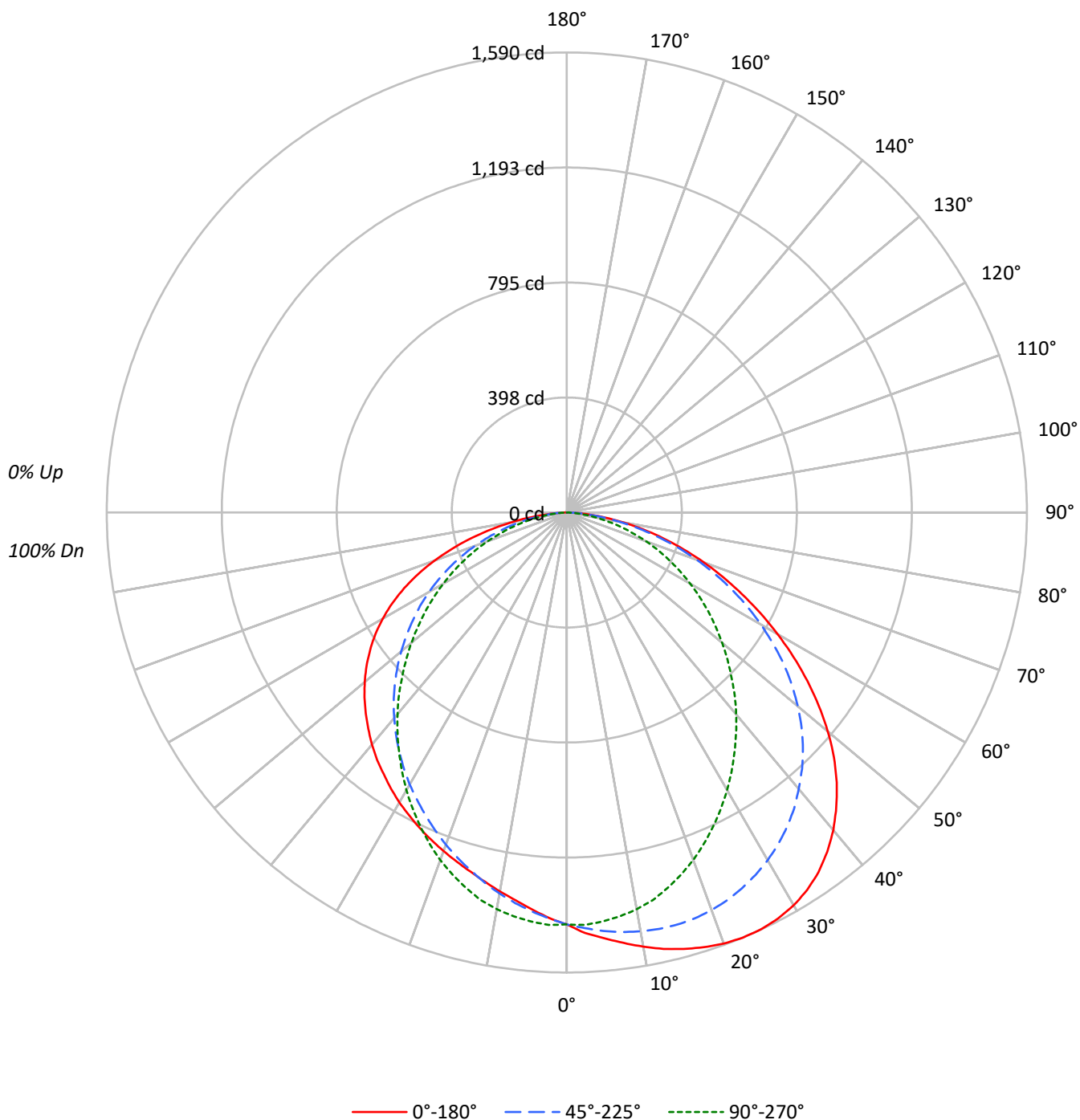
Lumens per Lamp: N/A
Luminaire Lumens: 4187.8 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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
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°	3831	3831	3831
5°	3989	3833	3720
10°	4163	3804	3633
15°	4350	3743	3581
20°	4540	3661	3566
25°	4719	3554	3572
30°	4873	3443	3595
35°	4983	3320	3625
40°	5034	3197	3678
45°	5020	3062	3739
50°	4931	2934	3816
55°	4762	2799	3895
60°	4531	2654	3954
65°	4254	2493	3949
70°	3959	2299	3832
75°	3594	2019	3533
80°	3087	1658	2980
85°	2353	1133	2047

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.0	3.2
10°-20°	389.9	9.3
20°-30°	597.4	14.3
30°-40°	729.0	17.4
40°-50°	762.4	18.2
50°-60°	690.0	16.5
60°-70°	522.6	12.5
70°-80°	291.2	7.0
80°-90°	70.2	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°	1122.3	26.8
0°-40°	1851.4	44.2
0°-60°	3303.8	78.9
0°-90°	4187.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4187.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1424	1424	1424	1424	1424	
5°	1477	1452	1419	1384	1377	142
15°	1562	1475	1344	1281	1286	443
25°	1589	1433	1197	1155	1203	733
35°	1517	1327	1011	1010	1104	947
45°	1319	1154	805	840	982	1015
55°	1015	916	596	649	830	906
65°	668	628	392	445	620	663
75°	346	326	194	232	340	367
85°	76	67	37	49	66	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°	1423.7	1423.7	1423.7	1423.7	1423.7	1423.7	1423.7	1423.7	1423.7	1423.7	1423.7
2.5°	1455.1	1448.3	1442.7	1444.8	1446.1	1441.7	1438.0	1438.6	1434.9	1442.0	1425.2
5°	1476.6	1470.4	1463.8	1466.3	1463.8	1457.3	1452.0	1450.4	1440.5	1444.5	1427.4
7.5°	1500.5	1493.7	1484.1	1486.9	1481.6	1469.4	1462.6	1458.5	1443.3	1443.6	1424.6
10°	1523.6	1517.7	1504.6	1506.5	1496.8	1480.6	1469.7	1464.1	1442.7	1439.6	1420.0
12.5°	1545.0	1537.0	1523.0	1523.9	1509.9	1488.4	1474.4	1466.3	1438.3	1429.0	1409.7
15°	1561.5	1553.8	1537.0	1536.6	1518.6	1490.6	1474.7	1463.5	1428.0	1413.4	1393.2
17.5°	1575.5	1568.4	1547.5	1546.9	1525.1	1489.7	1470.7	1456.7	1413.1	1395.1	1372.7
20°	1585.5	1578.3	1555.0	1552.8	1526.7	1485.0	1462.3	1444.5	1393.5	1372.0	1347.1
22.5°	1590.2	1583.0	1556.6	1553.5	1523.0	1475.7	1450.1	1429.3	1371.1	1343.1	1317.3
25°	1589.2	1582.4	1552.5	1549.4	1515.8	1461.6	1433.0	1409.1	1342.8	1309.8	1284.3
27.5°	1581.5	1576.2	1544.7	1540.7	1502.7	1442.7	1412.2	1385.7	1311.3	1274.6	1246.9
30°	1568.1	1564.0	1530.7	1527.0	1486.5	1421.8	1387.9	1357.4	1277.4	1236.0	1208.0
32.5°	1546.6	1542.9	1509.3	1505.8	1464.8	1395.1	1359.6	1328.2	1240.4	1194.7	1166.6
35°	1517.0	1514.9	1482.2	1478.5	1436.8	1364.6	1326.9	1292.4	1201.8	1150.2	1123.4
37.5°	1478.1	1478.1	1446.7	1442.7	1401.9	1327.2	1290.2	1253.5	1158.2	1103.5	1077.0
40°	1433.0	1437.1	1405.0	1401.0	1361.4	1287.1	1246.6	1208.0	1111.3	1054.3	1028.5
42.5°	1378.9	1382.6	1355.8	1352.1	1315.1	1240.7	1203.1	1161.0	1062.1	1004.2	977.4
45°	1319.1	1324.1	1300.1	1297.3	1262.8	1190.0	1153.9	1111.3	1010.7	951.9	925.8
47.5°	1252.5	1259.1	1238.2	1236.7	1204.6	1138.0	1100.4	1057.1	956.9	897.5	872.9
50°	1177.8	1187.2	1170.1	1170.1	1141.4	1075.2	1042.5	999.2	900.9	841.5	817.2
52.5°	1097.9	1109.7	1096.9	1097.2	1073.9	1014.5	980.6	938.2	842.4	783.9	761.5
55°	1015.1	1026.6	1018.5	1019.8	1001.4	947.3	916.4	874.4	782.6	725.7	704.5
57.5°	928.6	941.0	935.7	938.2	925.5	876.9	844.9	808.2	721.0	664.7	646.6
60°	841.8	853.6	850.8	854.2	846.1	804.1	774.9	736.9	659.1	604.9	589.1
62.5°	754.0	764.9	764.3	768.0	763.7	728.8	702.7	670.3	595.0	545.2	530.6
65°	668.1	677.5	676.8	680.9	679.9	651.9	628.3	598.7	530.9	485.1	472.4
67.5°	584.7	592.5	590.3	595.0	596.2	573.8	553.3	526.8	469.9	425.4	414.5
70°	503.2	508.5	505.7	508.8	511.6	494.8	477.4	454.0	404.9	365.6	356.6
72.5°	423.2	426.9	422.6	425.7	428.2	416.1	401.7	381.5	340.8	306.8	299.4
75°	345.7	351.0	342.0	345.1	347.0	334.8	326.4	309.9	274.8	248.6	243.7
77.5°	270.7	273.8	268.9	267.6	268.9	260.2	253.6	240.9	214.4	192.9	189.8
80°	199.2	201.0	196.0	194.8	195.7	189.5	184.5	175.2	156.5	140.3	139.1
82.5°	133.5	134.4	130.1	128.8	129.5	127.6	121.7	115.1	106.4	92.7	92.4
85°	76.2	76.2	73.1	71.9	72.5	69.4	67.2	63.8	60.4	51.0	51.7
87.5°	28.0	28.0	26.5	26.1	29.3	25.8	24.9	23.3	24.3	19.3	20.5
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1423.7	1423.7	1423.7	1423.7	1423.7	1423.7	1423.7	1423.7	1423.7	1423.7	1423.7
2.5°	1429.9	1426.8	1424.0	1414.3	1418.4	1408.4	1407.8	1404.1	1401.3	1396.0	1402.8
5°	1425.2	1419.0	1410.9	1399.4	1402.8	1391.0	1388.5	1384.2	1380.4	1373.6	1378.9
7.5°	1417.8	1407.5	1394.7	1380.1	1384.8	1370.2	1366.4	1361.8	1358.6	1350.6	1355.2
10°	1406.9	1392.3	1377.3	1359.6	1363.0	1347.1	1342.5	1337.5	1334.7	1327.5	1332.2
12.5°	1390.1	1372.3	1352.1	1332.8	1336.6	1321.6	1315.4	1310.1	1309.2	1303.3	1308.9
15°	1368.3	1343.7	1322.9	1302.3	1306.7	1289.3	1286.5	1281.2	1282.7	1278.7	1285.5
17.5°	1340.6	1312.3	1289.6	1267.5	1271.8	1257.2	1255.0	1252.5	1254.1	1253.5	1260.9
20°	1309.5	1278.4	1252.2	1230.4	1232.9	1221.4	1222.3	1221.7	1224.8	1228.3	1238.5
22.5°	1274.3	1239.2	1211.8	1189.4	1193.1	1183.1	1187.5	1188.7	1194.0	1201.8	1214.9
25°	1234.8	1197.1	1168.5	1147.4	1150.8	1144.2	1151.7	1154.8	1163.2	1176.3	1189.7
27.5°	1193.4	1153.6	1123.1	1102.9	1109.4	1102.9	1114.1	1120.3	1133.0	1147.4	1163.8
30°	1149.5	1108.1	1076.7	1058.7	1064.9	1059.0	1077.0	1085.4	1098.2	1117.8	1137.4
32.5°	1103.5	1059.9	1029.1	1015.1	1019.5	1018.5	1038.7	1048.1	1065.2	1087.6	1108.5
35°	1056.2	1010.7	979.6	967.8	973.1	974.3	998.6	1009.5	1028.2	1055.2	1077.6
37.5°	1007.3	960.9	930.5	920.8	925.5	930.1	958.5	969.4	990.5	1020.1	1044.7
40°	956.6	910.2	880.4	872.6	877.2	882.2	913.0	928.0	951.0	983.0	1009.8
42.5°	905.2	858.9	829.9	824.3	829.0	838.7	871.3	885.3	909.6	945.1	974.6
45°	853.0	804.7	779.5	775.2	780.1	791.4	823.4	840.2	866.0	904.9	936.7
47.5°	800.1	753.1	729.1	726.3	731.3	743.7	779.2	794.5	821.8	863.2	897.5
50°	746.5	700.8	677.8	676.8	681.5	694.9	728.8	746.9	775.2	821.5	856.7
52.5°	692.4	648.5	627.7	627.7	632.0	645.7	679.9	698.6	727.9	776.7	815.6
55°	638.2	596.5	576.6	578.2	584.4	596.2	629.5	649.1	678.7	729.4	770.5
57.5°	584.1	544.6	526.5	528.7	534.6	546.4	579.1	601.2	628.0	680.6	722.6
60°	530.6	493.2	477.4	479.9	485.1	497.0	530.9	549.9	576.6	630.2	672.2
62.5°	476.4	442.5	427.6	430.7	435.4	447.2	479.2	497.6	524.0	576.6	619.0
65°	422.9	391.5	378.7	381.8	386.2	397.1	427.3	445.0	470.2	521.6	562.0
67.5°	370.0	341.4	330.8	333.9	337.3	347.6	372.5	391.8	415.4	464.3	502.6
70°	317.7	292.2	282.9	286.0	289.1	298.4	320.2	338.0	359.7	404.5	440.0
72.5°	266.1	241.2	236.5	239.3	241.8	249.9	270.7	284.7	303.7	343.6	374.0
75°	215.7	194.2	191.1	193.9	196.0	202.3	219.7	231.8	247.7	282.2	307.1
77.5°	167.1	149.1	147.8	150.0	152.2	156.5	170.2	183.0	195.4	220.9	243.0
80°	121.7	107.0	107.0	109.2	108.6	113.9	123.5	133.8	142.8	161.2	177.4
82.5°	80.3	68.8	70.3	71.9	72.8	75.0	80.9	88.7	94.3	105.5	116.1
85°	44.5	36.7	38.3	39.5	38.9	41.4	44.5	49.2	52.0	57.3	62.9
87.5°	16.5	13.7	14.0	14.9	15.6	16.8	16.8	19.6	19.9	20.5	21.8
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°	1423.7	1423.7	1423.7
2.5°	1389.8	1397.2	1402.8
5°	1365.8	1372.0	1377.0
7.5°	1342.5	1348.1	1352.4
10°	1320.4	1326.6	1329.7
12.5°	1297.7	1304.8	1307.3
15°	1275.2	1282.4	1285.5
17.5°	1252.2	1261.6	1265.0
20°	1230.7	1242.6	1245.4
22.5°	1209.0	1221.1	1224.5
25°	1185.3	1199.6	1203.1
27.5°	1160.1	1177.2	1180.6
30°	1134.9	1153.6	1157.0
32.5°	1107.8	1128.1	1131.2
35°	1079.5	1099.7	1103.5
37.5°	1048.1	1070.2	1077.6
40°	1015.4	1039.4	1047.1
42.5°	981.2	1007.3	1015.4
45°	944.5	973.1	982.4
47.5°	907.4	939.8	947.9
50°	867.3	901.8	911.5
52.5°	825.3	862.9	872.6
55°	781.7	819.7	830.2
57.5°	734.4	773.6	784.8
60°	684.9	724.1	734.7
62.5°	634.2	669.7	679.9
65°	577.6	610.9	620.2
67.5°	517.5	548.0	555.8
70°	453.7	480.2	487.0
72.5°	387.1	405.5	414.5
75°	318.3	333.0	339.8
77.5°	249.3	259.5	265.1
80°	181.7	187.6	192.3
82.5°	118.9	121.4	124.8
85°	64.1	64.1	66.3
87.5°	21.8	20.8	21.8
90°	0.0	0.0	0.0

(END OF REPORT)