

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: P835230

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2HI-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835230
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-LD4-2HI-40-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

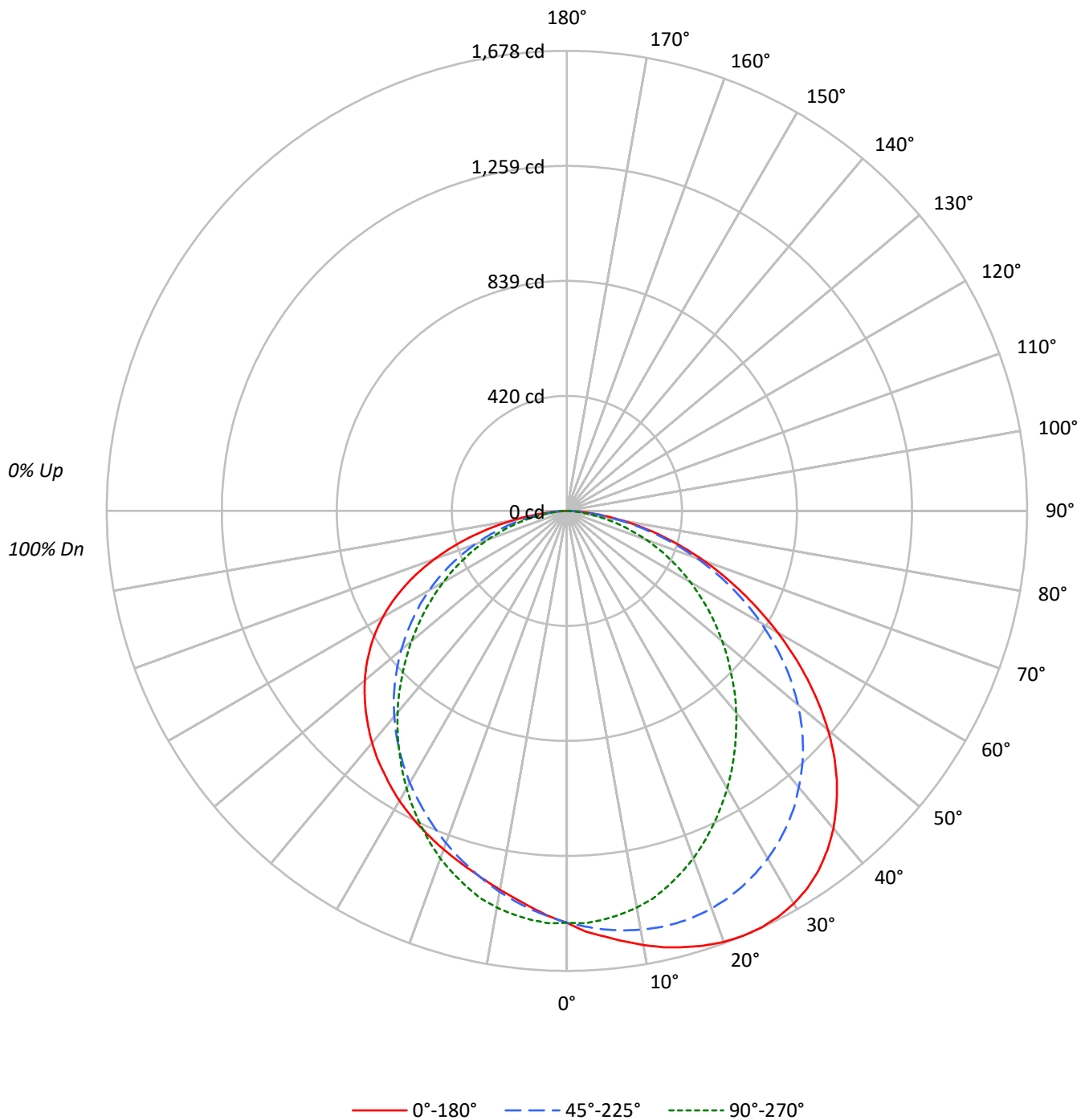
Lumens per Lamp: N/A
Luminaire Lumens: 4419.0 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	4043	4043	4043
5°	4209	4045	3925
10°	4393	4014	3834
15°	4590	3950	3779
20°	4791	3863	3763
25°	4979	3751	3769
30°	5141	3633	3794
35°	5259	3504	3825
40°	5312	3374	3881
45°	5297	3231	3945
50°	5203	3096	4026
55°	5025	2953	4110
60°	4780	2801	4173
65°	4489	2630	4167
70°	4178	2426	4043
75°	3793	2130	3728
80°	3257	1751	3144
85°	2482	1195	2158

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.5	3.2
10°-20°	411.5	9.3
20°-30°	630.3	14.3
30°-40°	769.3	17.4
40°-50°	804.5	18.2
50°-60°	728.1	16.5
60°-70°	551.4	12.5
70°-80°	307.3	7.0
80°-90°	74.1	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°	1184.3	26.8
0°-40°	1953.5	44.2
0°-60°	3486.1	78.9
0°-90°	4419.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4419.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1502	1502	1502	1502	1502	
5°	1558	1532	1497	1461	1453	150
15°	1648	1556	1418	1352	1356	467
25°	1677	1512	1263	1219	1269	774
35°	1601	1400	1066	1065	1164	1000
45°	1392	1218	849	887	1037	1071
55°	1071	967	630	685	876	956
65°	705	663	413	470	654	699
75°	365	344	205	245	359	387
85°	80	71	39	52	70	97
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°	1502.3	1502.3	1502.3	1502.3	1502.3	1502.3	1502.3	1502.3	1502.3	1502.3	1502.3
2.5°	1535.4	1528.2	1522.3	1524.6	1525.9	1521.3	1517.4	1518.0	1514.1	1521.6	1503.9
5°	1558.1	1551.5	1544.6	1547.2	1544.6	1537.7	1532.1	1530.5	1520.0	1524.3	1506.2
7.5°	1583.4	1576.1	1566.0	1568.9	1563.3	1550.5	1543.3	1539.0	1522.9	1523.3	1503.2
10°	1607.7	1601.4	1587.6	1589.6	1579.4	1562.3	1550.9	1544.9	1522.3	1519.0	1498.3
12.5°	1630.3	1621.8	1607.0	1608.0	1593.2	1570.6	1555.8	1547.2	1517.7	1507.8	1487.5
15°	1647.7	1639.5	1621.8	1621.5	1602.4	1572.9	1556.1	1544.3	1506.9	1491.4	1470.1
17.5°	1662.5	1654.9	1632.9	1632.3	1609.3	1571.9	1551.8	1537.1	1491.1	1472.0	1448.4
20°	1673.0	1665.5	1640.8	1638.5	1610.9	1566.9	1543.0	1524.3	1470.4	1447.8	1421.5
22.5°	1677.9	1670.4	1642.5	1639.2	1607.0	1557.1	1530.2	1508.2	1446.8	1417.2	1390.0
25°	1676.9	1669.7	1638.2	1634.9	1599.5	1542.3	1512.1	1486.8	1416.9	1382.1	1355.2
27.5°	1668.7	1663.2	1630.0	1625.7	1585.7	1522.3	1490.1	1462.2	1383.7	1345.0	1315.7
30°	1654.6	1650.4	1615.2	1611.3	1568.6	1500.3	1464.5	1432.3	1347.9	1304.3	1274.7
32.5°	1632.0	1628.0	1592.6	1588.9	1545.6	1472.0	1434.6	1401.5	1308.9	1260.6	1231.0
35°	1600.8	1598.5	1564.0	1560.1	1516.1	1439.9	1400.1	1363.7	1268.1	1213.6	1185.4
37.5°	1559.7	1559.7	1526.6	1522.3	1479.3	1400.5	1361.4	1322.6	1222.2	1164.4	1136.5
40°	1512.1	1516.4	1482.6	1478.3	1436.6	1358.1	1315.4	1274.7	1172.6	1112.5	1085.2
42.5°	1455.0	1458.9	1430.7	1426.7	1387.7	1309.2	1269.4	1225.1	1120.7	1059.6	1031.4
45°	1391.9	1397.2	1371.9	1368.9	1332.5	1255.7	1217.6	1172.6	1066.5	1004.5	976.9
47.5°	1321.7	1328.6	1306.6	1304.9	1271.1	1200.8	1161.1	1115.4	1009.7	947.0	921.1
50°	1242.9	1252.7	1234.6	1234.6	1204.4	1134.5	1100.0	1054.4	950.6	887.9	862.3
52.5°	1158.5	1170.9	1157.5	1157.8	1133.2	1070.5	1034.7	990.0	888.9	827.1	803.5
55°	1071.1	1083.3	1074.7	1076.0	1056.7	999.5	967.0	922.7	825.8	765.7	743.4
57.5°	979.8	993.0	987.4	990.0	976.6	925.3	891.5	852.8	760.8	701.4	682.3
60°	888.2	900.7	897.7	901.4	892.8	848.5	817.6	777.6	695.5	638.3	621.6
62.5°	795.6	807.1	806.5	810.4	805.8	769.0	741.4	707.3	627.8	575.3	559.9
65°	705.0	714.8	714.2	718.5	717.5	687.9	663.0	631.8	560.2	511.9	498.5
67.5°	617.0	625.2	622.9	627.8	629.1	605.5	583.8	555.9	495.8	448.9	437.4
70°	531.0	536.5	533.6	536.9	539.8	522.1	503.7	479.1	427.2	385.8	376.3
72.5°	446.6	450.5	445.9	449.2	451.8	439.0	423.9	402.6	359.6	323.8	315.9
75°	364.8	370.4	360.9	364.2	366.1	353.3	344.5	327.0	289.9	262.4	257.1
77.5°	285.7	289.0	283.7	282.4	283.7	274.5	267.6	254.2	226.2	203.6	200.3
80°	210.2	212.1	206.9	205.6	206.5	200.0	194.7	184.9	165.2	148.1	146.8
82.5°	140.9	141.9	137.3	135.9	136.6	134.6	128.4	121.5	112.3	97.9	97.5
85°	80.4	80.4	77.2	75.9	76.5	73.2	70.9	67.3	63.7	53.9	54.5
87.5°	29.6	29.6	27.9	27.6	30.9	27.3	26.3	24.6	25.6	20.4	21.7
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°	1502.3	1502.3	1502.3	1502.3	1502.3	1502.3	1502.3	1502.3	1502.3	1502.3	1502.3
2.5°	1508.8	1505.5	1502.6	1492.4	1496.7	1486.2	1485.5	1481.6	1478.6	1473.0	1480.3
5°	1503.9	1497.3	1488.8	1476.6	1480.3	1467.8	1465.2	1460.6	1456.6	1449.4	1455.0
7.5°	1496.0	1485.2	1471.7	1456.3	1461.2	1445.8	1441.8	1436.9	1433.6	1425.1	1430.0
10°	1484.5	1469.1	1453.3	1434.6	1438.2	1421.5	1416.6	1411.3	1408.3	1400.8	1405.7
12.5°	1466.8	1448.1	1426.7	1406.4	1410.3	1394.6	1388.0	1382.4	1381.4	1375.2	1381.1
15°	1443.8	1417.9	1395.9	1374.2	1378.8	1360.4	1357.5	1351.9	1353.5	1349.2	1356.5
17.5°	1414.6	1384.7	1360.7	1337.4	1342.0	1326.6	1324.3	1321.7	1323.3	1322.6	1330.5
20°	1381.7	1348.9	1321.3	1298.3	1301.0	1288.8	1289.8	1289.2	1292.4	1296.0	1306.9
22.5°	1344.6	1307.5	1278.6	1255.0	1258.9	1248.4	1253.0	1254.3	1259.9	1268.1	1281.9
25°	1302.9	1263.2	1233.0	1210.7	1214.3	1207.4	1215.3	1218.6	1227.4	1241.2	1255.3
27.5°	1259.3	1217.2	1185.1	1163.7	1170.6	1163.7	1175.5	1182.1	1195.6	1210.7	1228.1
30°	1213.0	1169.3	1136.1	1117.1	1123.7	1117.4	1136.5	1145.3	1158.8	1179.5	1200.2
32.5°	1164.4	1118.4	1085.9	1071.1	1075.7	1074.7	1096.1	1105.9	1124.0	1147.6	1169.6
35°	1114.5	1066.5	1033.7	1021.2	1026.8	1028.1	1053.7	1065.2	1084.9	1113.5	1137.1
37.5°	1062.9	1014.0	981.8	971.6	976.6	981.5	1011.4	1022.8	1045.2	1076.4	1102.3
40°	1009.4	960.5	928.9	920.7	925.7	930.9	963.4	979.2	1003.5	1037.3	1065.5
42.5°	955.2	906.3	875.7	869.8	874.8	884.9	919.4	934.2	959.8	997.2	1028.4
45°	900.0	849.1	822.5	818.0	823.2	835.0	868.8	886.6	913.8	954.9	988.4
47.5°	844.2	794.6	769.4	766.4	771.7	784.8	822.2	838.3	867.2	910.9	947.0
50°	787.7	739.5	715.2	714.2	719.1	733.2	769.0	788.1	818.0	866.9	904.0
52.5°	730.6	684.3	662.3	662.3	666.9	681.4	717.5	737.2	768.0	819.6	860.6
55°	673.5	629.5	608.5	610.1	616.7	629.1	664.3	685.0	716.2	769.7	813.0
57.5°	616.3	574.6	555.6	557.9	564.1	576.6	611.1	634.4	662.6	718.1	762.5
60°	559.9	520.5	503.7	506.3	511.9	524.4	560.2	580.2	608.5	664.9	709.3
62.5°	502.7	466.9	451.2	454.5	459.4	471.9	505.7	525.1	553.0	608.5	653.1
65°	446.2	413.1	399.6	402.9	407.5	419.0	450.8	469.6	496.2	550.3	593.0
67.5°	390.4	360.2	349.0	352.3	355.9	366.8	393.1	413.4	438.4	489.9	530.3
70°	335.3	308.3	298.5	301.8	305.0	314.9	337.9	356.6	379.6	426.9	464.3
72.5°	280.8	254.5	249.6	252.5	255.1	263.7	285.7	300.5	320.5	362.5	394.7
75°	227.6	204.9	201.6	204.6	206.9	213.4	231.8	244.6	261.4	297.8	324.1
77.5°	176.3	157.3	156.0	158.3	160.6	165.2	179.6	193.1	206.2	233.1	256.5
80°	128.4	113.0	113.0	115.3	114.6	120.2	130.4	141.2	150.7	170.1	187.2
82.5°	84.7	72.6	74.2	75.9	76.8	79.1	85.4	93.6	99.5	111.3	122.5
85°	47.0	38.7	40.4	41.7	41.0	43.7	47.0	51.9	54.8	60.4	66.3
87.5°	17.4	14.4	14.8	15.8	16.4	17.7	17.7	20.7	21.0	21.7	23.0
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°	1502.3	1502.3	1502.3
2.5°	1466.5	1474.3	1480.3
5°	1441.2	1447.8	1453.0
7.5°	1416.6	1422.5	1427.1
10°	1393.2	1399.8	1403.1
12.5°	1369.3	1376.8	1379.5
15°	1345.6	1353.2	1356.5
17.5°	1321.3	1331.2	1334.8
20°	1298.7	1311.2	1314.1
22.5°	1275.7	1288.5	1292.1
25°	1250.7	1265.8	1269.4
27.5°	1224.1	1242.2	1245.8
30°	1197.5	1217.2	1220.9
32.5°	1169.0	1190.3	1193.6
35°	1139.1	1160.4	1164.4
37.5°	1105.9	1129.2	1137.1
40°	1071.4	1096.7	1104.9
42.5°	1035.3	1062.9	1071.4
45°	996.6	1026.8	1036.6
47.5°	957.5	991.7	1000.2
50°	915.1	951.6	961.8
52.5°	870.8	910.5	920.7
55°	824.8	864.9	876.1
57.5°	774.9	816.3	828.1
60°	722.7	764.1	775.3
62.5°	669.2	706.6	717.5
65°	609.4	644.6	654.4
67.5°	546.1	578.2	586.5
70°	478.8	506.7	513.9
72.5°	408.5	427.9	437.4
75°	335.9	351.3	358.6
77.5°	263.0	273.9	279.8
80°	191.8	198.0	202.9
82.5°	125.4	128.1	131.7
85°	67.6	67.6	69.9
87.5°	23.0	22.0	23.0
90°	0.0	0.0	0.0

(END OF REPORT)