

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: P835340

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3STD-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835340
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-LD4-3STD-40-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

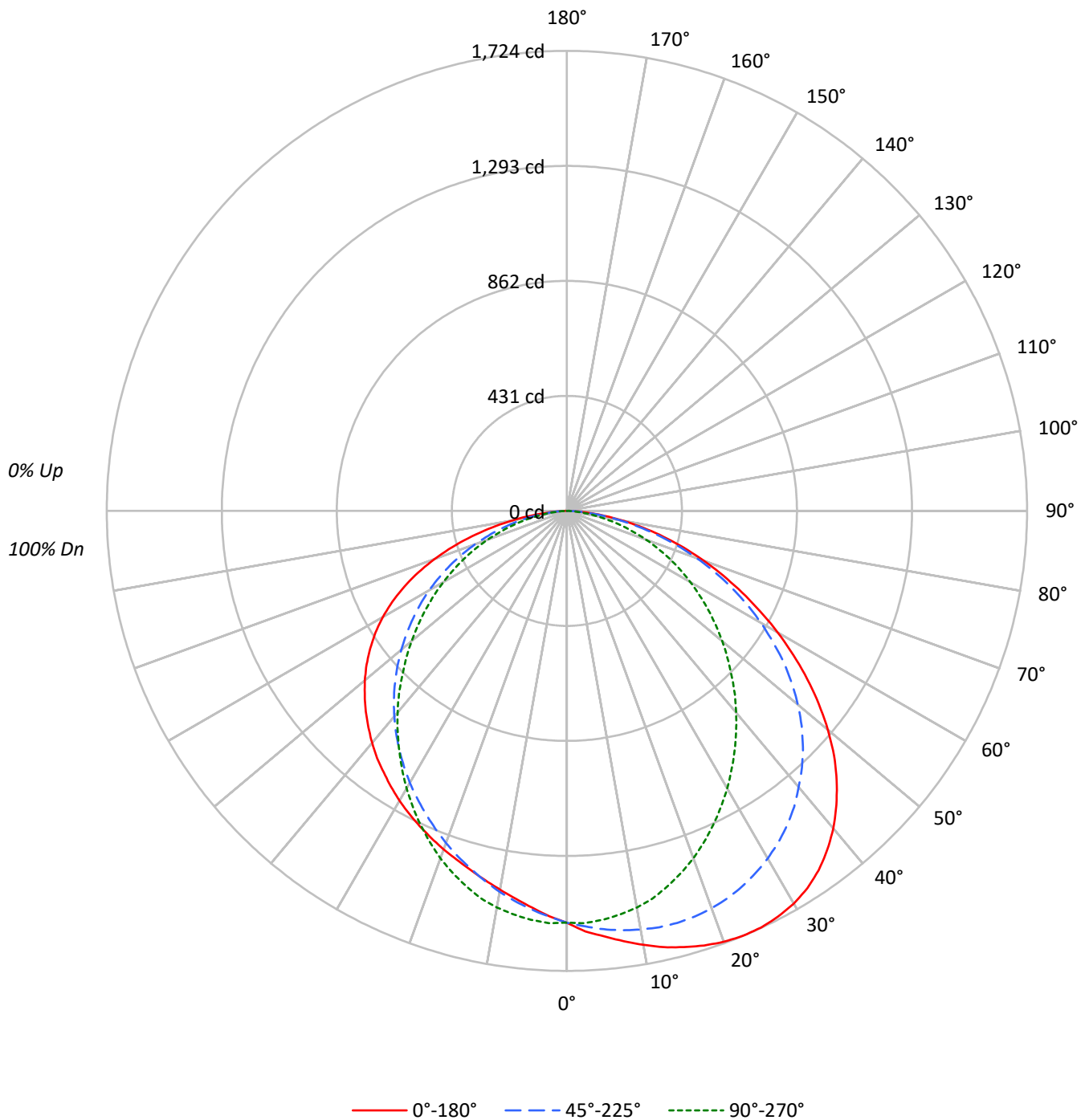
Lumens per Lamp: N/A
Luminaire Lumens: 4539.1 lumens
Efficiency: N/A
Efficacy: 90.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 50
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

TEST NUMBER: P835340

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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°	4152	4152	4152
5°	4323	4155	4032
10°	4512	4123	3938
15°	4715	4057	3882
20°	4921	3968	3865
25°	5115	3853	3872
30°	5281	3732	3897
35°	5402	3599	3929
40°	5456	3466	3987
45°	5441	3319	4052
50°	5345	3180	4136
55°	5162	3034	4222
60°	4910	2877	4286
65°	4611	2702	4280
70°	4291	2492	4153
75°	3896	2189	3829
80°	3346	1798	3230
85°	2550	1229	2217

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.4	3.2
10°-20°	422.6	9.3
20°-30°	647.5	14.3
30°-40°	790.2	17.4
40°-50°	826.4	18.2
50°-60°	747.9	16.5
60°-70°	566.4	12.5
70°-80°	315.7	7.0
80°-90°	76.1	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°	1216.5	26.8
0°-40°	2006.7	44.2
0°-60°	3580.9	78.9
0°-90°	4539.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4539.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1543	1543	1543	1543	1543	
5°	1600	1574	1538	1500	1492	154
15°	1692	1598	1456	1389	1393	480
25°	1723	1553	1298	1252	1304	795
35°	1644	1438	1096	1094	1196	1027
45°	1430	1251	872	911	1065	1100
55°	1100	993	647	704	900	982
65°	724	681	424	482	672	718
75°	375	354	210	251	368	397
85°	83	73	40	53	72	99
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°	1543.1	1543.1	1543.1	1543.1	1543.1	1543.1	1543.1	1543.1	1543.1	1543.1	1543.1
2.5°	1577.2	1569.8	1563.7	1566.0	1567.4	1562.7	1558.6	1559.3	1555.3	1563.0	1544.8
5°	1600.5	1593.7	1586.6	1589.3	1586.6	1579.5	1573.8	1572.1	1561.3	1565.7	1547.2
7.5°	1626.4	1619.0	1608.5	1611.6	1605.8	1592.7	1585.3	1580.9	1564.4	1564.7	1544.1
10°	1651.4	1645.0	1630.8	1632.8	1622.4	1604.8	1593.0	1587.0	1563.7	1560.3	1539.1
12.5°	1674.7	1665.9	1650.7	1651.7	1636.5	1613.3	1598.1	1589.3	1559.0	1548.8	1527.9
15°	1692.5	1684.1	1665.9	1665.6	1646.0	1615.6	1598.4	1586.3	1547.8	1532.0	1510.1
17.5°	1707.7	1700.0	1677.4	1676.7	1653.1	1614.6	1594.0	1578.9	1531.6	1512.1	1487.8
20°	1718.5	1710.7	1685.5	1683.1	1654.8	1609.6	1584.9	1565.7	1510.4	1487.1	1460.1
22.5°	1723.6	1715.8	1687.1	1683.8	1650.7	1599.4	1571.8	1549.2	1486.1	1455.8	1427.8
25°	1722.6	1715.1	1682.8	1679.4	1643.0	1584.3	1553.2	1527.3	1455.4	1419.7	1392.0
27.5°	1714.1	1708.4	1674.3	1669.9	1628.8	1563.7	1530.6	1502.0	1421.4	1381.5	1351.5
30°	1699.6	1695.2	1659.1	1655.1	1611.2	1541.1	1504.3	1471.3	1384.6	1339.7	1309.4
32.5°	1676.3	1672.3	1635.9	1632.2	1587.6	1512.1	1473.6	1439.6	1344.4	1294.9	1264.5
35°	1644.3	1641.9	1606.5	1602.5	1557.3	1479.0	1438.2	1400.8	1302.6	1246.6	1217.6
37.5°	1602.1	1602.1	1568.1	1563.7	1519.5	1438.6	1398.4	1358.6	1255.4	1196.0	1167.4
40°	1553.2	1557.6	1522.9	1518.5	1475.7	1395.0	1351.2	1309.4	1204.5	1142.7	1114.8
42.5°	1494.5	1498.6	1469.6	1465.5	1425.4	1344.8	1304.0	1258.4	1151.2	1088.4	1059.4
45°	1429.8	1435.2	1409.2	1406.2	1368.7	1289.8	1250.7	1204.5	1095.5	1031.8	1003.4
47.5°	1357.6	1364.7	1342.1	1340.4	1305.7	1233.5	1192.7	1145.8	1037.2	972.8	946.1
50°	1276.7	1286.8	1268.2	1268.2	1237.2	1165.3	1129.9	1083.0	976.5	912.0	885.7
52.5°	1190.0	1202.8	1189.0	1189.3	1164.0	1099.6	1062.8	1016.9	913.1	849.6	825.4
55°	1100.2	1112.7	1104.0	1105.3	1085.4	1026.7	993.3	947.8	848.3	786.6	763.6
57.5°	1006.5	1020.0	1014.2	1016.9	1003.1	950.5	915.7	875.9	781.5	720.5	700.9
60°	912.4	925.2	922.2	925.9	917.1	871.6	839.9	798.7	714.4	655.7	638.5
62.5°	817.3	829.1	828.4	832.4	827.7	789.9	761.6	726.5	644.9	590.9	575.1
65°	724.2	734.3	733.6	738.0	737.0	706.6	681.0	649.0	575.4	525.8	512.0
67.5°	633.8	642.2	639.8	644.9	646.3	622.0	599.7	571.0	509.3	461.1	449.3
70°	545.4	551.1	548.1	551.5	554.5	536.3	517.4	492.1	438.8	396.3	386.5
72.5°	458.7	462.8	458.0	461.4	464.1	451.0	435.4	413.5	369.3	332.6	324.5
75°	374.7	380.5	370.7	374.1	376.1	362.9	353.8	335.9	297.8	269.5	264.1
77.5°	293.4	296.8	291.4	290.1	291.4	282.0	274.9	261.1	232.4	209.1	205.7
80°	215.9	217.9	212.5	211.1	212.2	205.4	200.0	189.9	169.7	152.1	150.8
82.5°	144.7	145.7	141.0	139.6	140.3	138.3	131.9	124.8	115.4	100.5	100.2
85°	82.6	82.6	79.3	77.9	78.6	75.2	72.9	69.1	65.4	55.3	56.0
87.5°	30.4	30.4	28.7	28.3	31.7	28.0	27.0	25.3	26.3	20.9	22.3
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°	1543.1	1543.1	1543.1	1543.1	1543.1	1543.1	1543.1	1543.1	1543.1	1543.1	1543.1
2.5°	1549.9	1546.5	1543.5	1533.0	1537.4	1526.6	1525.9	1521.9	1518.8	1513.1	1520.5
5°	1544.8	1538.1	1529.3	1516.8	1520.5	1507.7	1505.0	1500.3	1496.2	1488.8	1494.5
7.5°	1536.7	1525.6	1511.7	1495.9	1501.0	1485.1	1481.1	1476.0	1472.6	1463.8	1468.9
10°	1524.9	1509.0	1492.9	1473.6	1477.3	1460.1	1455.1	1449.7	1446.6	1438.9	1443.9
12.5°	1506.7	1487.5	1465.5	1444.6	1448.7	1432.5	1425.7	1420.0	1419.0	1412.6	1418.7
15°	1483.1	1456.4	1433.8	1411.6	1416.3	1397.4	1394.4	1388.6	1390.3	1385.9	1393.4
17.5°	1453.1	1422.4	1397.7	1373.8	1378.5	1362.7	1360.3	1357.6	1359.3	1358.6	1366.7
20°	1419.3	1385.6	1357.3	1333.7	1336.4	1323.9	1324.9	1324.2	1327.6	1331.3	1342.4
22.5°	1381.2	1343.1	1313.4	1289.1	1293.2	1282.4	1287.1	1288.5	1294.2	1302.6	1316.8
25°	1338.4	1297.6	1266.5	1243.6	1247.3	1240.2	1248.3	1251.7	1260.8	1275.0	1289.5
27.5°	1293.5	1250.3	1217.3	1195.4	1202.4	1195.4	1207.5	1214.3	1228.1	1243.6	1261.5
30°	1246.0	1201.1	1167.0	1147.5	1154.2	1147.8	1167.4	1176.5	1190.3	1211.6	1232.8
32.5°	1196.0	1148.8	1115.4	1100.2	1105.0	1104.0	1125.9	1136.0	1154.6	1178.8	1201.4
35°	1144.8	1095.5	1061.8	1049.0	1054.7	1056.1	1082.4	1094.2	1114.4	1143.8	1168.0
37.5°	1091.8	1041.6	1008.5	998.0	1003.1	1008.2	1038.9	1050.7	1073.6	1105.6	1132.3
40°	1036.8	986.6	954.2	945.8	950.8	956.2	989.6	1005.8	1030.8	1065.5	1094.5
42.5°	981.2	930.9	899.6	893.5	898.5	909.0	944.4	959.6	985.9	1024.4	1056.4
45°	924.5	872.2	844.9	840.2	845.6	857.7	892.5	910.7	938.7	980.8	1015.3
47.5°	867.2	816.2	790.3	787.2	792.6	806.1	844.6	861.1	890.8	935.6	972.8
50°	809.2	759.6	734.6	733.6	738.7	753.2	789.9	809.5	840.2	890.5	928.6
52.5°	750.5	702.9	680.3	680.3	685.0	699.9	737.0	757.2	788.9	841.9	884.0
55°	691.8	646.6	625.0	626.7	633.4	646.3	682.3	703.6	735.6	790.6	835.1
57.5°	633.1	590.3	570.7	573.1	579.5	592.3	627.7	651.6	680.7	737.7	783.2
60°	575.1	534.6	517.4	520.1	525.8	538.7	575.4	596.0	625.0	683.0	728.6
62.5°	516.4	479.6	463.4	466.8	471.9	484.7	519.4	539.3	568.0	625.0	670.9
65°	458.4	424.3	410.5	413.9	418.6	430.4	463.1	482.3	509.6	565.3	609.2
67.5°	401.0	370.0	358.5	361.9	365.6	376.8	403.7	424.7	450.3	503.2	544.7
70°	344.4	316.7	306.6	310.0	313.3	323.5	347.1	366.3	389.9	438.5	476.9
72.5°	288.4	261.4	256.3	259.4	262.1	270.8	293.4	308.6	329.2	372.4	405.4
75°	233.7	210.5	207.1	210.1	212.5	219.2	238.1	251.3	268.5	305.9	332.9
77.5°	181.1	161.6	160.2	162.6	164.9	169.7	184.5	198.3	211.8	239.5	263.4
80°	131.9	116.0	116.0	118.4	117.7	123.4	133.9	145.0	154.8	174.7	192.3
82.5°	87.0	74.5	76.2	77.9	78.9	81.3	87.7	96.1	102.2	114.3	125.8
85°	48.2	39.8	41.5	42.8	42.2	44.9	48.2	53.3	56.3	62.1	68.1
87.5°	17.9	14.8	15.2	16.2	16.9	18.2	18.2	21.2	21.6	22.3	23.6
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°	1543.1	1543.1	1543.1
2.5°	1506.3	1514.4	1520.5
5°	1480.4	1487.1	1492.5
7.5°	1455.1	1461.2	1465.9
10°	1431.1	1437.9	1441.3
12.5°	1406.5	1414.3	1417.0
15°	1382.2	1390.0	1393.4
17.5°	1357.3	1367.4	1371.1
20°	1334.0	1346.8	1349.8
22.5°	1310.4	1323.5	1327.2
25°	1284.7	1300.3	1304.0
27.5°	1257.4	1276.0	1279.7
30°	1230.1	1250.3	1254.1
32.5°	1200.8	1222.7	1226.1
35°	1170.1	1192.0	1196.0
37.5°	1136.0	1159.9	1168.0
40°	1100.6	1126.6	1135.0
42.5°	1063.5	1091.8	1100.6
45°	1023.7	1054.7	1064.8
47.5°	983.5	1018.6	1027.4
50°	940.0	977.5	987.9
52.5°	894.5	935.3	945.8
55°	847.3	888.4	899.9
57.5°	796.0	838.5	850.7
60°	742.4	784.9	796.3
62.5°	687.4	725.9	737.0
65°	626.0	662.1	672.2
67.5°	560.9	594.0	602.4
70°	491.8	520.4	527.9
72.5°	419.6	439.5	449.3
75°	345.1	360.9	368.3
77.5°	270.2	281.3	287.4
80°	197.0	203.4	208.4
82.5°	128.8	131.5	135.3
85°	69.5	69.5	71.8
87.5°	23.6	22.6	23.6
90°	0.0	0.0	0.0

(END OF REPORT)