

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: P835163

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4STD-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835163
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-LD4-4STD-20-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

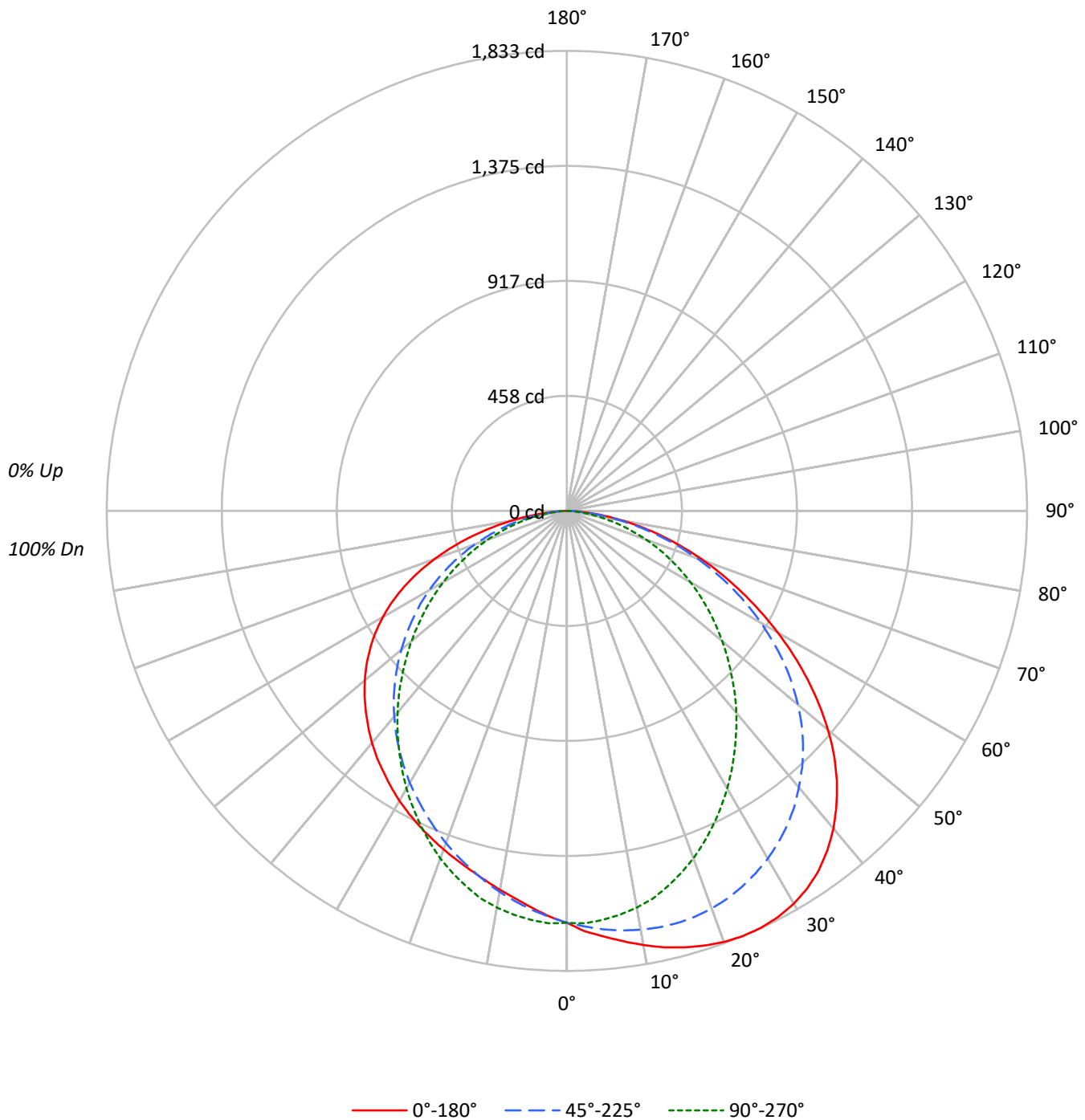
Lumens per Lamp: N/A
Luminaire Lumens: 4827.7 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	4416	4416	4416
5°	4598	4419	4288
10°	4799	4386	4189
15°	5015	4315	4129
20°	5234	4220	4111
25°	5440	4098	4118
30°	5617	3970	4144
35°	5745	3828	4179
40°	5803	3686	4241
45°	5787	3530	4310
50°	5684	3382	4399
55°	5490	3226	4490
60°	5223	3060	4559
65°	4904	2874	4553
70°	4564	2651	4417
75°	4144	2328	4073
80°	3558	1912	3436
85°	2714	1306	2359

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.7	3.2
10°-20°	449.5	9.3
20°-30°	688.7	14.3
30°-40°	840.4	17.4
40°-50°	878.9	18.2
50°-60°	795.5	16.5
60°-70°	602.4	12.5
70°-80°	335.7	7.0
80°-90°	81.0	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°	1293.8	26.8
0°-40°	2134.3	44.2
0°-60°	3808.6	78.9
0°-90°	4827.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4827.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1641	1641	1641	1641	1641	
5°	1702	1674	1636	1596	1587	164
15°	1800	1700	1549	1477	1482	511
25°	1832	1652	1380	1331	1387	845
35°	1749	1530	1165	1164	1272	1092
45°	1521	1330	928	969	1132	1170
55°	1170	1056	688	748	957	1044
65°	770	724	451	513	715	764
75°	399	376	224	267	392	423
85°	88	78	42	57	76	106
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°	1641.2	1641.2	1641.2	1641.2	1641.2	1641.2	1641.2	1641.2	1641.2	1641.2	1641.2
2.5°	1677.5	1669.6	1663.1	1665.6	1667.1	1662.0	1657.7	1658.5	1654.2	1662.4	1643.0
5°	1702.2	1695.0	1687.5	1690.4	1687.5	1680.0	1673.9	1672.1	1660.6	1665.3	1645.5
7.5°	1729.8	1722.0	1710.8	1714.1	1708.0	1694.0	1686.1	1681.4	1663.8	1664.2	1642.3
10°	1756.4	1749.6	1734.5	1736.7	1725.5	1706.9	1694.3	1687.9	1663.1	1659.5	1636.9
12.5°	1781.1	1771.8	1755.7	1756.8	1740.6	1715.9	1699.7	1690.4	1658.1	1647.3	1625.1
15°	1800.2	1791.2	1771.8	1771.5	1750.7	1718.4	1700.1	1687.2	1646.3	1629.4	1606.1
17.5°	1816.3	1808.1	1784.0	1783.3	1758.2	1717.3	1695.4	1679.3	1629.0	1608.2	1582.4
20°	1827.8	1819.5	1792.6	1790.1	1760.0	1711.9	1685.7	1665.3	1606.4	1581.7	1553.0
22.5°	1833.2	1824.9	1794.4	1790.8	1755.7	1701.1	1671.7	1647.7	1580.6	1548.3	1518.5
25°	1832.1	1824.2	1789.8	1786.2	1747.4	1685.0	1652.0	1624.4	1548.0	1509.9	1480.5
27.5°	1823.1	1817.0	1780.8	1776.1	1732.4	1663.1	1628.0	1597.5	1511.7	1469.4	1437.5
30°	1807.7	1803.0	1764.6	1760.3	1713.7	1639.1	1600.0	1564.8	1472.6	1424.9	1392.6
32.5°	1782.9	1778.6	1739.9	1735.9	1688.6	1608.2	1567.3	1531.1	1429.9	1377.2	1344.9
35°	1748.9	1746.3	1708.7	1704.4	1656.3	1573.1	1529.7	1489.8	1385.5	1325.9	1295.1
37.5°	1704.0	1704.0	1667.8	1663.1	1616.1	1530.0	1487.3	1445.0	1335.2	1272.1	1241.6
40°	1652.0	1656.7	1619.7	1615.0	1569.5	1483.8	1437.1	1392.6	1281.1	1215.4	1185.6
42.5°	1589.6	1593.9	1563.0	1558.7	1516.0	1430.3	1386.9	1338.5	1224.4	1157.7	1126.8
45°	1520.7	1526.4	1498.8	1495.6	1455.8	1371.8	1330.2	1281.1	1165.2	1097.4	1067.3
47.5°	1443.9	1451.5	1427.4	1425.6	1388.7	1311.9	1268.5	1218.6	1103.1	1034.6	1006.3
50°	1357.8	1368.6	1348.9	1348.9	1315.9	1239.4	1201.8	1151.9	1038.6	970.0	942.1
52.5°	1265.6	1279.3	1264.6	1264.9	1238.0	1169.5	1130.4	1081.6	971.1	903.7	877.8
55°	1170.2	1183.5	1174.2	1175.6	1154.4	1092.0	1056.5	1008.1	902.2	836.6	812.2
57.5°	1070.5	1084.8	1078.7	1081.6	1066.9	1010.9	974.0	931.6	831.2	766.3	745.5
60°	970.4	984.0	980.8	984.7	975.4	927.0	893.3	849.5	759.8	697.4	679.1
62.5°	869.2	881.8	881.1	885.4	880.3	840.2	810.0	772.7	685.9	628.5	611.7
65°	770.2	781.0	780.3	784.9	783.8	751.6	724.3	690.2	612.0	559.3	544.6
67.5°	674.1	683.0	680.5	685.9	687.3	661.5	637.8	607.3	541.7	490.4	477.8
70°	580.1	586.2	583.0	586.5	589.8	570.4	550.3	523.4	466.7	421.5	411.1
72.5°	487.9	492.2	487.2	490.8	493.6	479.6	463.1	439.8	392.8	353.7	345.1
75°	398.6	404.7	394.3	397.8	400.0	386.0	376.3	357.3	316.8	286.6	280.9
77.5°	312.1	315.7	310.0	308.5	310.0	299.9	292.4	277.7	247.2	222.4	218.8
80°	229.6	231.7	226.0	224.6	225.6	218.5	212.7	202.0	180.4	161.8	160.4
82.5°	153.9	155.0	150.0	148.5	149.2	147.1	140.3	132.7	122.7	106.9	106.5
85°	87.9	87.9	84.3	82.9	83.6	80.0	77.5	73.5	69.6	58.8	59.6
87.5°	32.3	32.3	30.5	30.1	33.7	29.8	28.7	26.9	28.0	22.2	23.7
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°	1641.2	1641.2	1641.2	1641.2	1641.2	1641.2	1641.2	1641.2	1641.2	1641.2	1641.2
2.5°	1648.4	1644.8	1641.6	1630.5	1635.1	1623.7	1622.9	1618.6	1615.4	1609.3	1617.2
5°	1643.0	1635.9	1626.5	1613.3	1617.2	1603.6	1600.7	1595.7	1591.4	1583.5	1589.6
7.5°	1634.4	1622.6	1607.9	1591.0	1596.4	1579.5	1575.2	1569.8	1566.3	1556.9	1562.3
10°	1621.9	1605.0	1587.8	1567.3	1571.3	1553.0	1547.6	1541.9	1538.6	1530.4	1535.8
12.5°	1602.5	1582.0	1558.7	1536.5	1540.8	1523.6	1516.4	1510.3	1509.2	1502.4	1508.9
15°	1577.4	1549.0	1525.0	1501.3	1506.4	1486.3	1483.0	1476.9	1478.7	1474.1	1482.0
17.5°	1545.5	1512.8	1486.6	1461.2	1466.2	1449.3	1446.8	1443.9	1445.7	1445.0	1453.6
20°	1509.6	1473.7	1443.6	1418.5	1421.3	1408.1	1409.1	1408.4	1412.0	1415.9	1427.8
22.5°	1469.0	1428.5	1396.9	1371.1	1375.4	1363.9	1369.0	1370.4	1376.5	1385.5	1400.5
25°	1423.5	1380.1	1347.1	1322.7	1326.6	1319.1	1327.7	1331.3	1341.0	1356.0	1371.5
27.5°	1375.8	1329.9	1294.7	1271.4	1278.9	1271.4	1284.3	1291.5	1306.2	1322.7	1341.7
30°	1325.2	1277.5	1241.2	1220.4	1227.6	1220.8	1241.6	1251.3	1266.0	1288.6	1311.2
32.5°	1272.1	1221.9	1186.4	1170.2	1175.2	1174.2	1197.5	1208.2	1228.0	1253.8	1277.8
35°	1217.6	1165.2	1129.3	1115.7	1121.8	1123.2	1151.2	1163.8	1185.3	1216.5	1242.3
37.5°	1161.2	1107.8	1072.6	1061.5	1066.9	1072.3	1104.9	1117.5	1141.9	1176.0	1204.3
40°	1102.8	1049.3	1014.9	1005.9	1011.3	1017.0	1052.5	1069.8	1096.3	1133.3	1164.1
42.5°	1043.6	990.1	956.8	950.3	955.7	966.8	1004.5	1020.6	1048.6	1089.5	1123.6
45°	983.3	927.7	898.6	893.6	899.4	912.3	949.2	968.6	998.4	1043.2	1079.8
47.5°	922.3	868.2	840.5	837.3	843.0	857.4	898.3	915.9	947.4	995.1	1034.6
50°	860.6	807.9	781.3	780.3	785.6	801.1	840.2	861.0	893.6	947.1	987.6
52.5°	798.2	747.6	723.6	723.6	728.6	744.4	783.8	805.4	839.1	895.4	940.3
55°	735.8	687.7	664.7	666.5	673.7	687.3	725.7	748.3	782.4	840.9	888.2
57.5°	673.4	627.8	607.0	609.5	616.3	629.9	667.6	693.1	723.9	784.6	833.0
60°	611.7	568.6	550.3	553.2	559.3	572.9	612.0	633.9	664.7	726.4	774.9
62.5°	549.2	510.1	492.9	496.5	501.9	515.5	552.5	573.6	604.1	664.7	713.5
65°	487.5	451.3	436.6	440.2	445.2	457.8	492.6	513.0	542.1	601.2	647.9
67.5°	426.5	393.5	381.3	384.9	388.9	400.7	429.4	451.7	478.9	535.2	579.4
70°	366.3	336.9	326.1	329.7	333.3	344.0	369.1	389.6	414.7	466.4	507.3
72.5°	306.7	278.0	272.6	275.9	278.7	288.1	312.1	328.2	350.1	396.0	431.2
75°	248.6	223.9	220.3	223.5	226.0	233.2	253.3	267.3	285.6	325.4	354.1
77.5°	192.6	171.8	170.4	172.9	175.4	180.4	196.2	210.9	225.3	254.7	280.2
80°	140.3	123.4	123.4	125.9	125.2	131.3	142.4	154.3	164.7	185.8	204.5
82.5°	92.6	79.3	81.1	82.9	83.9	86.5	93.3	102.2	108.7	121.6	133.8
85°	51.3	42.3	44.1	45.6	44.8	47.7	51.3	56.7	59.9	66.0	72.5
87.5°	19.0	15.8	16.1	17.2	17.9	19.4	19.4	22.6	23.0	23.7	25.1
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°	1641.2	1641.2	1641.2
2.5°	1602.1	1610.7	1617.2
5°	1574.5	1581.7	1587.4
7.5°	1547.6	1554.1	1559.1
10°	1522.1	1529.3	1532.9
12.5°	1495.9	1504.2	1507.1
15°	1470.1	1478.4	1482.0
17.5°	1443.6	1454.3	1458.3
20°	1418.8	1432.5	1435.7
22.5°	1393.7	1407.7	1411.6
25°	1366.4	1382.9	1386.9
27.5°	1337.4	1357.1	1361.1
30°	1308.3	1329.9	1333.8
32.5°	1277.1	1300.4	1304.0
35°	1244.5	1267.8	1272.1
37.5°	1208.2	1233.7	1242.3
40°	1170.6	1198.2	1207.2
42.5°	1131.1	1161.2	1170.6
45°	1088.8	1121.8	1132.5
47.5°	1046.1	1083.4	1092.7
50°	999.8	1039.6	1050.8
52.5°	951.4	994.8	1005.9
55°	901.2	944.9	957.1
57.5°	846.6	891.8	904.7
60°	789.6	834.8	847.0
62.5°	731.1	772.0	783.8
65°	665.8	704.2	715.0
67.5°	596.6	631.7	640.7
70°	523.0	553.5	561.4
72.5°	446.3	467.4	477.8
75°	367.0	383.9	391.7
77.5°	287.4	299.2	305.6
80°	209.5	216.3	221.7
82.5°	137.0	139.9	143.9
85°	73.9	73.9	76.4
87.5°	25.1	24.0	25.1
90°	0.0	0.0	0.0

(END OF REPORT)