

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: P834248

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2STD-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834248
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-LD4-2STD-27-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

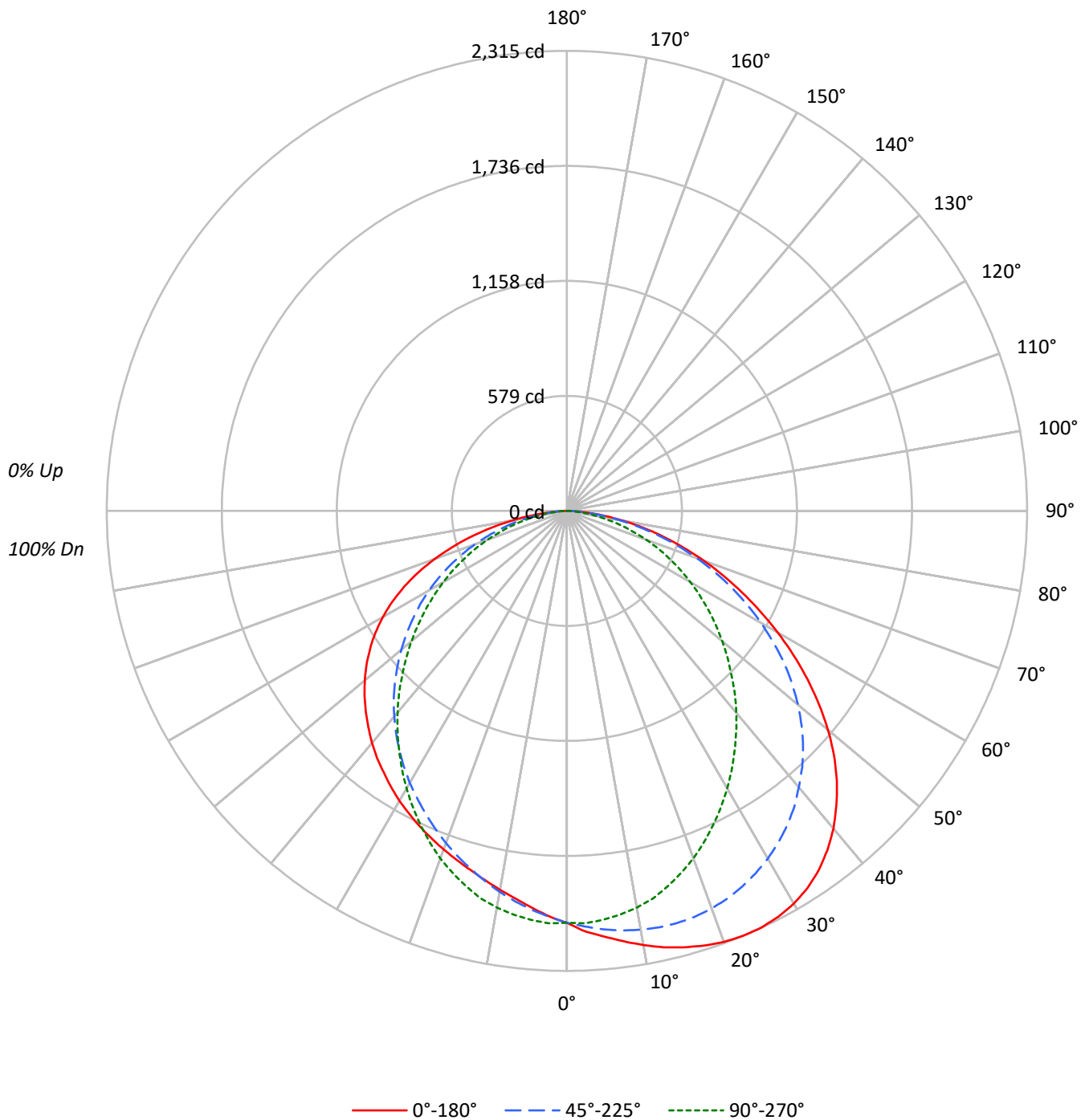
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6097.0 lumens
Efficiency: N/A
Efficacy: 91.5 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): 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

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°	5578	5578	5578
5°	5807	5581	5415
10°	6061	5539	5290
15°	6333	5450	5214
20°	6610	5330	5192
25°	6870	5175	5200
30°	7094	5013	5234
35°	7255	4834	5277
40°	7329	4655	5355
45°	7309	4459	5443
50°	7179	4271	5555
55°	6934	4075	5671
60°	6596	3865	5757
65°	6194	3629	5749
70°	5764	3347	5578
75°	5233	2939	5143
80°	4494	2416	4339
85°	3427	1652	2979

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.6	3.2
10°-20°	567.7	9.3
20°-30°	869.7	14.3
30°-40°	1061.4	17.4
40°-50°	1110.0	18.2
50°-60°	1004.6	16.5
60°-70°	760.8	12.5
70°-80°	424.0	7.0
80°-90°	102.3	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°	1634.0	26.8
0°-40°	2695.4	44.2
0°-60°	4809.9	78.9
0°-90°	6097.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6097.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2073	2073	2073	2073	2073	
5°	2150	2114	2066	2015	2005	207
15°	2273	2147	1956	1865	1872	645
25°	2314	2086	1743	1681	1752	1067
35°	2209	1932	1472	1470	1606	1379
45°	1920	1680	1172	1223	1430	1478
55°	1478	1334	868	945	1209	1319
65°	973	915	570	648	903	965
75°	503	475	283	338	495	534
85°	111	98	54	72	96	134
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°	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7
2.5°	2118.5	2108.5	2100.4	2103.5	2105.3	2099.0	2093.6	2094.5	2089.0	2099.5	2075.0
5°	2149.7	2140.7	2131.2	2134.8	2131.2	2121.7	2113.9	2111.7	2097.2	2103.1	2078.2
7.5°	2184.6	2174.7	2160.6	2164.7	2157.0	2139.3	2129.4	2123.5	2101.3	2101.7	2074.1
10°	2218.2	2209.5	2190.5	2193.2	2179.2	2155.6	2139.8	2131.6	2100.4	2095.8	2067.3
12.5°	2249.4	2237.6	2217.2	2218.6	2198.2	2167.0	2146.6	2134.8	2094.0	2080.4	2052.3
15°	2273.4	2262.1	2237.6	2237.2	2210.9	2170.1	2147.0	2130.7	2079.1	2057.8	2028.3
17.5°	2293.8	2283.4	2253.0	2252.1	2220.4	2168.8	2141.1	2120.7	2057.3	2031.0	1998.4
20°	2308.3	2297.9	2263.9	2260.7	2222.7	2162.0	2128.9	2103.1	2028.8	1997.5	1961.3
22.5°	2315.1	2304.7	2266.2	2261.6	2217.2	2148.4	2111.2	2080.9	1996.2	1955.4	1917.8
25°	2313.7	2303.8	2260.3	2255.8	2206.8	2128.0	2086.3	2051.4	1954.9	1906.9	1869.8
27.5°	2302.4	2294.7	2249.0	2243.1	2187.8	2100.4	2056.0	2017.4	1909.2	1855.7	1815.4
30°	2282.9	2277.0	2228.6	2223.1	2164.2	2070.0	2020.6	1976.2	1859.8	1799.5	1758.8
32.5°	2251.7	2246.2	2197.3	2192.3	2132.5	2031.0	1979.4	1933.6	1805.9	1739.3	1698.5
35°	2208.6	2205.5	2157.9	2152.5	2091.7	1986.6	1931.8	1881.5	1749.7	1674.5	1635.5
37.5°	2152.0	2152.0	2106.2	2100.4	2041.0	1932.3	1878.4	1824.9	1686.3	1606.5	1568.0
40°	2086.3	2092.2	2045.5	2039.6	1982.1	1873.8	1814.9	1758.8	1617.9	1534.9	1497.3
42.5°	2007.5	2012.9	1974.0	1968.5	1914.6	1806.3	1751.5	1690.3	1546.3	1462.0	1423.0
45°	1920.5	1927.7	1892.9	1888.8	1838.5	1732.5	1679.9	1617.9	1471.5	1385.9	1347.8
47.5°	1823.5	1833.1	1802.7	1800.4	1753.8	1656.8	1602.0	1539.0	1393.1	1306.6	1270.8
50°	1714.8	1728.4	1703.5	1703.5	1661.8	1565.3	1517.7	1454.8	1311.6	1225.1	1189.7
52.5°	1598.4	1615.6	1597.0	1597.5	1563.5	1477.0	1427.6	1366.0	1226.4	1141.2	1108.6
55°	1477.9	1494.6	1482.8	1484.7	1457.9	1379.1	1334.2	1273.1	1139.4	1056.5	1025.7
57.5°	1351.9	1370.0	1362.3	1366.0	1347.4	1276.7	1230.0	1176.6	1049.7	967.7	941.4
60°	1225.5	1242.7	1238.6	1243.6	1231.9	1170.7	1128.1	1072.8	959.6	880.7	857.6
62.5°	1097.7	1113.6	1112.7	1118.1	1111.8	1061.1	1023.0	975.9	866.2	793.8	772.5
65°	972.7	986.3	985.4	991.3	989.9	949.1	914.7	871.7	772.9	706.3	687.7
67.5°	851.3	862.6	859.4	866.2	868.1	835.4	805.5	767.0	684.1	619.3	603.5
70°	732.6	740.3	736.2	740.7	744.8	720.4	695.0	661.0	589.4	532.3	519.2
72.5°	616.2	621.6	615.2	619.8	623.4	605.7	584.9	555.4	496.1	446.7	435.8
75°	503.3	511.0	497.9	502.4	505.2	487.5	475.3	451.2	400.0	362.0	354.7
77.5°	394.2	398.7	391.4	389.6	391.4	378.8	369.2	350.7	312.2	280.9	276.4
80°	290.0	292.7	285.4	283.6	285.0	275.9	268.7	255.1	227.9	204.3	202.5
82.5°	194.4	195.7	189.4	187.6	188.5	185.8	177.1	167.6	154.9	135.0	134.6
85°	111.0	111.0	106.5	104.7	105.6	101.0	97.9	92.9	87.9	74.3	75.2
87.5°	40.8	40.8	38.5	38.1	42.6	37.6	36.2	34.0	35.3	28.1	29.9
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°	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7
2.5°	2081.8	2077.3	2073.2	2059.1	2065.0	2050.5	2049.6	2044.2	2040.1	2032.4	2042.4
5°	2075.0	2065.9	2054.1	2037.4	2042.4	2025.2	2021.5	2015.2	2009.7	1999.8	2007.5
7.5°	2064.1	2049.2	2030.6	2009.3	2016.1	1994.8	1989.4	1982.6	1978.0	1966.3	1973.0
10°	2048.3	2027.0	2005.2	1979.4	1984.4	1961.3	1954.5	1947.2	1943.1	1932.7	1939.5
12.5°	2023.8	1998.0	1968.5	1940.4	1945.9	1924.1	1915.1	1907.4	1906.0	1897.4	1905.5
15°	1992.1	1956.3	1925.9	1896.0	1902.4	1877.0	1872.9	1865.2	1867.5	1861.6	1871.6
17.5°	1951.8	1910.5	1877.5	1845.3	1851.6	1830.3	1827.2	1823.5	1825.8	1824.9	1835.8
20°	1906.5	1861.1	1823.1	1791.4	1795.0	1778.2	1779.6	1778.7	1783.2	1788.2	1803.2
22.5°	1855.3	1804.1	1764.2	1731.6	1737.0	1722.5	1728.9	1730.7	1738.4	1749.7	1768.7
25°	1797.7	1742.9	1701.2	1670.4	1675.4	1665.9	1676.8	1681.3	1693.5	1712.5	1732.0
27.5°	1737.5	1679.5	1635.1	1605.6	1615.1	1605.6	1621.9	1631.0	1649.6	1670.4	1694.4
30°	1673.6	1613.3	1567.6	1541.3	1550.4	1541.7	1568.0	1580.3	1598.8	1627.4	1655.9
32.5°	1606.5	1543.1	1498.2	1477.9	1484.2	1482.8	1512.3	1525.9	1550.8	1583.4	1613.8
35°	1537.7	1471.5	1426.2	1409.0	1416.7	1418.5	1453.8	1469.7	1496.9	1536.3	1568.9
37.5°	1466.5	1399.0	1354.6	1340.6	1347.4	1354.2	1395.4	1411.3	1442.1	1485.1	1520.9
40°	1392.7	1325.2	1281.7	1270.4	1277.2	1284.4	1329.3	1351.0	1384.5	1431.2	1470.2
42.5°	1317.9	1250.4	1208.3	1200.1	1206.9	1221.0	1268.6	1288.9	1324.3	1375.9	1419.0
45°	1241.8	1171.6	1134.9	1128.6	1135.8	1152.1	1198.8	1223.2	1260.8	1317.5	1363.7
47.5°	1164.8	1096.4	1061.5	1057.4	1064.7	1082.8	1134.4	1156.6	1196.5	1256.8	1306.6
50°	1086.9	1020.3	986.8	985.4	992.2	1011.7	1061.1	1087.3	1128.6	1196.1	1247.3
52.5°	1008.0	944.2	913.8	913.8	920.2	940.1	989.9	1017.1	1059.7	1130.8	1187.5
55°	929.2	868.5	839.5	841.8	850.8	868.1	916.5	945.1	988.1	1062.0	1121.8
57.5°	850.4	792.8	766.6	769.7	778.3	795.6	843.1	875.3	914.3	990.8	1052.0
60°	772.5	718.1	695.0	698.6	706.3	723.5	772.9	800.5	839.5	917.4	978.6
62.5°	693.6	644.2	622.5	627.0	633.8	651.0	697.7	724.4	762.9	839.5	901.1
65°	615.7	569.9	551.4	555.9	562.2	578.1	622.0	647.9	684.6	759.3	818.2
67.5°	538.7	497.0	481.6	486.1	491.1	506.1	542.3	570.4	604.8	676.0	731.7
70°	462.6	425.4	411.8	416.4	420.9	434.5	466.2	492.0	523.7	589.0	640.6
72.5°	387.4	351.1	344.3	348.4	352.0	363.8	394.2	414.5	442.2	500.2	544.6
75°	314.0	282.7	278.2	282.3	285.4	294.5	319.9	337.5	360.6	410.9	447.2
77.5°	243.3	217.0	215.2	218.4	221.5	227.9	247.8	266.4	284.5	321.7	353.8
80°	177.1	155.9	155.9	159.0	158.1	165.8	179.9	194.8	208.0	234.7	258.2
82.5°	116.9	100.1	102.4	104.7	106.0	109.2	117.8	129.1	137.3	153.6	169.0
85°	64.8	53.5	55.7	57.5	56.6	60.3	64.8	71.6	75.7	83.4	91.5
87.5°	24.0	19.9	20.4	21.7	22.7	24.5	24.5	28.5	29.0	29.9	31.7
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):

	160°	170°	180°
0°	2072.7	2072.7	2072.7
2.5°	2023.3	2034.2	2042.4
5°	1988.5	1997.5	2004.8
7.5°	1954.5	1962.6	1969.0
10°	1922.3	1931.4	1935.9
12.5°	1889.2	1899.7	1903.3
15°	1856.6	1867.0	1871.6
17.5°	1823.1	1836.7	1841.7
20°	1791.8	1809.0	1813.1
22.5°	1760.1	1777.8	1782.8
25°	1725.7	1746.5	1751.5
27.5°	1689.0	1713.9	1718.9
30°	1652.3	1679.5	1684.5
32.5°	1612.9	1642.3	1646.9
35°	1571.6	1601.1	1606.5
37.5°	1525.9	1558.1	1568.9
40°	1478.3	1513.2	1524.5
42.5°	1428.5	1466.5	1478.3
45°	1375.0	1416.7	1430.3
47.5°	1321.1	1368.2	1380.0
50°	1262.7	1313.0	1327.0
52.5°	1201.5	1256.3	1270.4
55°	1138.1	1193.3	1208.7
57.5°	1069.2	1126.3	1142.6
60°	997.2	1054.3	1069.7
62.5°	923.3	975.0	989.9
65°	840.9	889.3	902.9
67.5°	753.4	797.8	809.2
70°	660.6	699.1	709.0
72.5°	563.6	590.3	603.5
75°	463.5	484.8	494.7
77.5°	362.9	377.8	386.0
80°	264.6	273.2	280.0
82.5°	173.1	176.7	181.7
85°	93.3	93.3	96.5
87.5°	31.7	30.4	31.7
90°	0.0	0.0	0.0

(END OF REPORT)