

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: P835275

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5HI-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835275
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-LD4-5HI-20-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

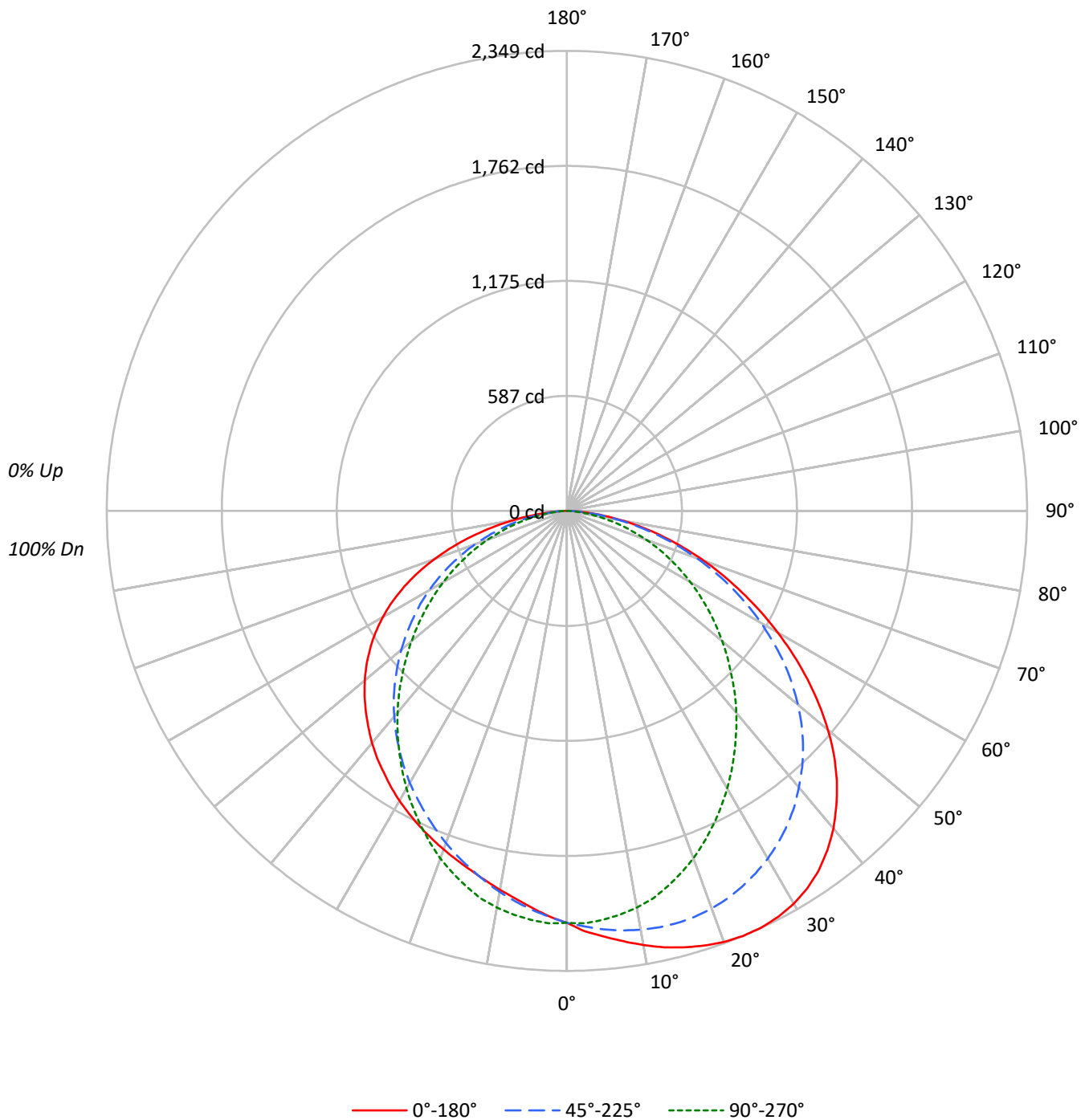
Lumens per Lamp: N/A
Luminaire Lumens: 6186.7 lumens
Efficiency: N/A
Efficacy: 56.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 110
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	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°	5660	5660	5660
5°	5893	5663	5495
10°	6150	5620	5368
15°	6427	5530	5291
20°	6708	5408	5269
25°	6971	5251	5277
30°	7198	5087	5311
35°	7362	4905	5355
40°	7437	4724	5434
45°	7416	4524	5523
50°	7284	4334	5637
55°	7035	4135	5754
60°	6692	3922	5842
65°	6285	3682	5834
70°	5849	3397	5661
75°	5310	2983	5219
80°	4559	2450	4403
85°	3477	1673	3023

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.5	3.2
10°-20°	576.0	9.3
20°-30°	882.5	14.3
30°-40°	1077.0	17.4
40°-50°	1126.3	18.2
50°-60°	1019.4	16.5
60°-70°	772.0	12.5
70°-80°	430.2	7.0
80°-90°	103.8	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°	1658.0	26.8
0°-40°	2735.0	44.2
0°-60°	4880.7	78.9
0°-90°	6186.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6186.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2103	2103	2103	2103	2103	
5°	2181	2145	2096	2045	2034	210
15°	2307	2179	1985	1893	1899	654
25°	2348	2117	1768	1706	1777	1083
35°	2241	1960	1493	1491	1630	1399
45°	1949	1705	1189	1241	1451	1499
55°	1500	1354	881	959	1226	1338
65°	987	928	578	657	916	979
75°	511	482	287	342	502	542
85°	113	99	54	73	98	136
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°	2103.2	2103.2	2103.2	2103.2	2103.2	2103.2	2103.2	2103.2	2103.2	2103.2	2103.2
2.5°	2149.7	2139.5	2131.3	2134.5	2136.3	2129.9	2124.4	2125.3	2119.8	2130.3	2105.5
5°	2181.4	2172.2	2162.5	2166.2	2162.5	2152.9	2145.1	2142.8	2128.0	2134.0	2108.7
7.5°	2216.8	2206.7	2192.4	2196.5	2188.7	2170.8	2160.7	2154.7	2132.2	2132.6	2104.6
10°	2250.8	2242.1	2222.7	2225.5	2211.3	2187.3	2171.3	2163.0	2131.3	2126.7	2097.7
12.5°	2282.5	2270.6	2249.9	2251.2	2230.6	2198.8	2178.2	2166.2	2124.8	2111.0	2082.5
15°	2306.9	2295.4	2270.6	2270.1	2243.4	2202.1	2178.6	2162.1	2109.7	2088.0	2058.2
17.5°	2327.6	2317.0	2286.2	2285.3	2253.1	2200.7	2172.6	2151.9	2087.6	2060.9	2027.8
20°	2342.3	2331.7	2297.2	2294.0	2255.4	2193.8	2160.2	2134.0	2058.6	2026.9	1990.1
22.5°	2349.2	2338.6	2299.5	2294.9	2249.9	2180.0	2142.3	2111.5	2025.5	1984.2	1946.0
25°	2347.8	2337.7	2293.5	2288.9	2239.3	2159.3	2117.0	2081.6	1983.7	1935.0	1897.3
27.5°	2336.3	2328.5	2282.0	2276.1	2220.0	2131.3	2086.2	2047.1	1937.3	1883.0	1842.1
30°	2316.5	2310.6	2261.4	2255.8	2196.1	2100.5	2050.4	2005.3	1887.2	1826.0	1784.6
32.5°	2284.8	2279.3	2229.6	2224.6	2163.9	2060.9	2008.5	1962.1	1832.4	1764.9	1723.5
35°	2241.1	2237.9	2189.6	2184.1	2122.5	2015.9	1960.2	1909.2	1775.4	1699.1	1659.6
37.5°	2183.7	2183.7	2137.2	2131.3	2071.0	1960.7	1906.0	1851.8	1711.1	1630.2	1591.1
40°	2117.0	2123.0	2075.6	2069.7	2011.3	1901.4	1841.6	1784.6	1641.7	1557.5	1519.4
42.5°	2037.0	2042.5	2003.0	1997.5	1942.8	1832.9	1777.3	1715.2	1569.0	1483.5	1444.0
45°	1948.8	1956.1	1920.7	1916.6	1865.5	1758.0	1704.6	1641.7	1493.2	1406.3	1367.7
47.5°	1850.4	1860.0	1829.2	1826.9	1779.6	1681.2	1625.6	1561.7	1413.6	1325.8	1289.5
50°	1740.0	1753.8	1728.5	1728.5	1686.3	1588.3	1540.1	1476.2	1330.9	1243.1	1207.2
52.5°	1621.9	1639.4	1620.5	1621.0	1586.5	1498.7	1448.6	1386.1	1244.5	1158.0	1124.9
55°	1499.6	1516.6	1504.7	1506.5	1479.4	1399.4	1353.9	1291.8	1156.2	1072.1	1040.8
57.5°	1371.8	1390.2	1382.4	1386.1	1367.2	1295.5	1248.1	1193.9	1065.2	982.0	955.3
60°	1243.5	1261.0	1256.9	1261.9	1250.0	1187.9	1144.7	1088.6	973.7	893.7	870.2
62.5°	1113.9	1130.0	1129.1	1134.6	1128.2	1076.7	1038.0	990.2	879.0	805.4	783.8
65°	987.0	1000.8	999.9	1005.9	1004.5	963.1	928.2	884.5	784.3	716.7	697.9
67.5°	863.8	875.3	872.1	879.0	880.8	847.7	817.4	778.3	694.2	628.4	612.3
70°	743.4	751.2	747.0	751.6	755.8	731.0	705.2	670.7	598.1	540.2	526.8
72.5°	625.2	630.7	624.3	628.9	632.6	614.6	593.5	563.6	503.4	453.3	442.3
75°	510.7	518.6	505.2	509.8	512.6	494.7	482.2	457.9	405.9	367.3	360.0
77.5°	400.0	404.6	397.2	395.4	397.2	384.3	374.7	355.8	316.7	285.0	280.4
80°	294.2	297.0	289.6	287.8	289.2	280.0	272.6	258.8	231.2	207.3	205.5
82.5°	197.2	198.6	192.2	190.3	191.2	188.5	179.8	170.1	157.2	137.0	136.5
85°	112.6	112.6	108.0	106.2	107.1	102.5	99.3	94.2	89.2	75.4	76.3
87.5°	41.4	41.4	39.1	38.6	43.2	38.2	36.8	34.5	35.9	28.5	30.3
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°	2103.2	2103.2	2103.2	2103.2	2103.2	2103.2	2103.2	2103.2	2103.2	2103.2	2103.2
2.5°	2112.4	2107.8	2103.7	2089.4	2095.4	2080.7	2079.8	2074.3	2070.1	2062.3	2072.4
5°	2105.5	2096.3	2084.4	2067.4	2072.4	2054.9	2051.3	2044.8	2039.3	2029.2	2037.0
7.5°	2094.5	2079.3	2060.5	2038.9	2045.8	2024.1	2018.6	2011.7	2007.1	1995.2	2002.1
10°	2078.4	2056.8	2034.7	2008.5	2013.6	1990.1	1983.2	1975.9	1971.7	1961.2	1968.1
12.5°	2053.6	2027.4	1997.5	1969.0	1974.5	1952.4	1943.2	1935.4	1934.0	1925.3	1933.6
15°	2021.4	1985.1	1954.3	1923.9	1930.4	1904.6	1900.5	1892.7	1895.0	1889.0	1899.1
17.5°	1980.5	1938.6	1905.1	1872.4	1878.9	1857.3	1854.1	1850.4	1852.7	1851.8	1862.8
20°	1934.5	1888.5	1849.9	1817.7	1821.4	1804.4	1805.8	1804.9	1809.5	1814.5	1829.7
22.5°	1882.6	1830.6	1790.1	1757.0	1762.6	1747.9	1754.3	1756.1	1763.9	1775.4	1794.7
25°	1824.2	1768.5	1726.2	1695.0	1700.0	1690.4	1701.4	1706.0	1718.4	1737.7	1757.5
27.5°	1763.0	1704.2	1659.1	1629.2	1638.9	1629.2	1645.8	1655.0	1673.8	1695.0	1719.4
30°	1698.2	1637.1	1590.6	1564.0	1573.2	1564.4	1591.1	1603.5	1622.4	1651.3	1680.3
32.5°	1630.2	1565.8	1520.3	1499.6	1506.0	1504.7	1534.5	1548.3	1573.6	1606.7	1637.5
35°	1560.3	1493.2	1447.2	1429.7	1437.5	1439.4	1475.2	1491.3	1518.9	1558.9	1592.0
37.5°	1488.1	1419.6	1374.6	1360.3	1367.2	1374.1	1415.9	1432.0	1463.3	1507.0	1543.3
40°	1413.2	1344.7	1300.5	1289.1	1296.0	1303.3	1348.8	1370.9	1404.9	1452.3	1491.8
42.5°	1337.3	1268.8	1226.1	1217.8	1224.7	1238.9	1287.2	1307.9	1343.8	1396.2	1439.8
45°	1260.1	1188.8	1151.6	1145.2	1152.5	1169.1	1216.4	1241.2	1279.4	1336.9	1383.8
47.5°	1181.9	1112.5	1077.1	1073.0	1080.3	1098.7	1151.1	1173.7	1214.1	1275.3	1325.8
50°	1102.9	1035.3	1001.3	999.9	1006.8	1026.6	1076.7	1103.3	1145.2	1213.7	1265.6
52.5°	1022.9	958.1	927.3	927.3	933.7	953.9	1004.5	1032.1	1075.3	1147.5	1204.9
55°	942.9	881.3	851.9	854.2	863.4	880.8	930.0	959.0	1002.6	1077.6	1138.3
57.5°	862.9	804.5	777.8	781.1	789.8	807.3	855.5	888.2	927.7	1005.4	1067.5
60°	783.8	728.7	705.2	708.9	716.7	734.2	784.3	812.3	851.9	930.9	993.0
62.5°	703.8	653.7	631.7	636.3	643.1	660.6	708.0	735.1	774.2	851.9	914.4
65°	624.8	578.3	559.5	564.1	570.5	586.6	631.2	657.4	694.6	770.5	830.3
67.5°	546.6	504.3	488.7	493.3	498.3	513.5	550.3	578.8	613.7	685.9	742.4
70°	469.4	431.7	417.9	422.5	427.1	440.9	473.1	499.3	531.4	597.6	650.0
72.5°	393.1	356.3	349.4	353.5	357.2	369.2	400.0	420.6	448.7	507.5	552.6
75°	318.6	286.9	282.3	286.4	289.6	298.8	324.6	342.5	365.9	417.0	453.7
77.5°	246.9	220.2	218.4	221.6	224.8	231.2	251.5	270.3	288.7	326.4	359.0
80°	179.8	158.1	158.1	161.4	160.4	168.3	182.5	197.7	211.0	238.1	262.0
82.5°	118.6	101.6	103.9	106.2	107.6	110.8	119.5	131.0	139.3	155.8	171.5
85°	65.7	54.2	56.5	58.4	57.5	61.1	65.7	72.6	76.8	84.6	92.9
87.5°	24.4	20.2	20.7	22.1	23.0	24.8	24.8	29.0	29.4	30.3	32.2
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°	2103.2	2103.2	2103.2
2.5°	2053.1	2064.1	2072.4
5°	2017.7	2026.9	2034.3
7.5°	1983.2	1991.5	1997.9
10°	1950.6	1959.8	1964.4
12.5°	1917.0	1927.6	1931.3
15°	1883.9	1894.5	1899.1
17.5°	1849.9	1863.7	1868.8
20°	1818.2	1835.7	1839.8
22.5°	1786.0	1803.9	1809.0
25°	1751.1	1772.2	1777.3
27.5°	1713.8	1739.1	1744.2
30°	1676.6	1704.2	1709.2
32.5°	1636.6	1666.5	1671.1
35°	1594.8	1624.7	1630.2
37.5°	1548.3	1581.0	1592.0
40°	1500.1	1535.5	1547.0
42.5°	1449.5	1488.1	1500.1
45°	1395.3	1437.5	1451.3
47.5°	1340.5	1388.4	1400.3
50°	1281.2	1332.3	1346.5
52.5°	1219.2	1274.8	1289.1
55°	1154.8	1210.9	1226.5
57.5°	1084.9	1142.9	1159.4
60°	1011.8	1069.8	1085.4
62.5°	936.9	989.3	1004.5
65°	853.2	902.4	916.2
67.5°	764.5	809.6	821.1
70°	670.3	709.3	719.5
72.5°	571.9	599.0	612.3
75°	470.3	491.9	502.0
77.5°	368.2	383.4	391.7
80°	268.5	277.2	284.1
82.5°	175.6	179.3	184.3
85°	94.7	94.7	97.9
87.5°	32.2	30.8	32.2
90°	0.0	0.0	0.0

(END OF REPORT)