

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: P835199

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4STD-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835199
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-30-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

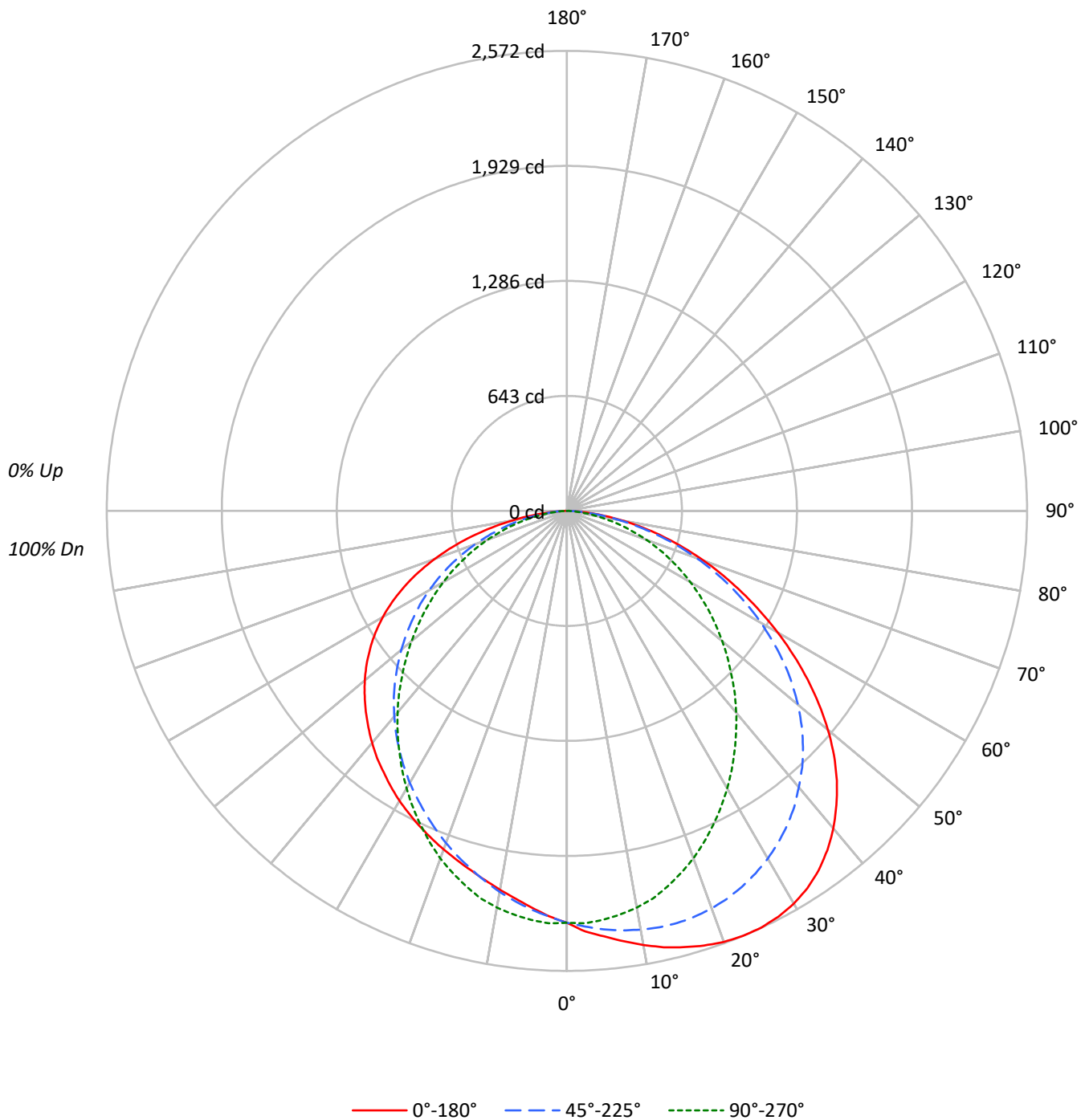
Lumens per Lamp: N/A
Luminaire Lumens: 6773.3 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6196	6196	6196
5°	6451	6200	6016
10°	6733	6153	5876
15°	7036	6055	5792
20°	7344	5921	5768
25°	7632	5749	5777
30°	7881	5569	5815
35°	8060	5370	5863
40°	8142	5172	5949
45°	8119	4953	6047
50°	7975	4745	6172
55°	7703	4526	6300
60°	7327	4293	6395
65°	6881	4032	6387
70°	6403	3718	6198
75°	5814	3266	5714
80°	4991	2682	4819
85°	3807	1834	3310

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.4	3.2
10°-20°	630.7	9.3
20°-30°	966.2	14.3
30°-40°	1179.1	17.4
40°-50°	1233.1	18.2
50°-60°	1116.0	16.5
60°-70°	845.2	12.5
70°-80°	471.0	7.0
80°-90°	113.6	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°	1815.2	26.8
0°-40°	2994.3	44.2
0°-60°	5343.4	78.9
0°-90°	6773.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6773.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2303	2303	2303	2303	2303	
5°	2388	2348	2295	2239	2227	230
15°	2526	2385	2173	2072	2079	716
25°	2570	2318	1936	1868	1946	1186
35°	2454	2146	1635	1633	1785	1532
45°	2134	1866	1302	1359	1589	1642
55°	1642	1482	965	1050	1343	1465
65°	1081	1016	633	720	1003	1072
75°	559	528	314	375	550	593
85°	123	109	59	80	107	148
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°	2302.6	2302.6	2302.6	2302.6	2302.6	2302.6	2302.6	2302.6	2302.6	2302.6	2302.6
2.5°	2353.5	2342.4	2333.3	2336.9	2338.9	2331.8	2325.8	2326.8	2320.8	2332.3	2305.1
5°	2388.2	2378.1	2367.6	2371.6	2367.6	2357.0	2348.4	2345.9	2329.8	2336.4	2308.7
7.5°	2426.9	2415.9	2400.3	2404.8	2396.2	2376.6	2365.5	2359.0	2334.3	2334.8	2304.1
10°	2464.2	2454.6	2433.5	2436.5	2420.9	2394.7	2377.1	2368.1	2333.3	2328.3	2296.6
12.5°	2498.9	2485.8	2463.2	2464.7	2442.0	2407.3	2384.7	2371.6	2326.3	2311.2	2280.0
15°	2525.6	2513.0	2485.8	2485.3	2456.1	2410.8	2385.2	2367.1	2309.7	2286.0	2253.3
17.5°	2548.2	2536.7	2502.9	2501.9	2466.7	2409.3	2378.6	2356.0	2285.5	2256.3	2220.1
20°	2564.4	2552.8	2515.0	2511.5	2469.2	2401.8	2365.0	2336.4	2253.8	2219.1	2178.8
22.5°	2571.9	2560.3	2517.5	2512.5	2463.2	2386.7	2345.4	2311.7	2217.6	2172.3	2130.5
25°	2570.4	2559.3	2511.0	2506.0	2451.6	2364.0	2317.7	2279.0	2171.8	2118.4	2077.2
27.5°	2557.8	2549.3	2498.4	2491.9	2430.5	2333.3	2284.0	2241.2	2120.9	2061.5	2016.8
30°	2536.2	2529.6	2475.8	2469.7	2404.3	2299.6	2244.8	2195.4	2066.1	1999.1	1953.8
32.5°	2501.4	2495.4	2441.0	2435.5	2369.1	2256.3	2199.0	2148.1	2006.2	1932.2	1886.9
35°	2453.6	2450.1	2397.3	2391.2	2323.8	2207.0	2146.1	2090.2	1943.8	1860.2	1816.9
37.5°	2390.7	2390.7	2339.9	2333.3	2267.4	2146.6	2086.7	2027.3	1873.3	1784.7	1741.9
40°	2317.7	2324.3	2272.4	2265.9	2202.0	2081.7	2016.3	1953.8	1797.3	1705.2	1663.4
42.5°	2230.2	2236.2	2192.9	2186.9	2127.0	2006.7	1945.8	1877.8	1717.8	1624.2	1580.9
45°	2133.5	2141.6	2102.8	2098.3	2042.4	1924.6	1866.3	1797.3	1634.7	1539.6	1497.3
47.5°	2025.8	2036.4	2002.7	2000.1	1948.3	1840.6	1779.7	1709.7	1547.7	1451.5	1411.8
50°	1905.0	1920.1	1892.4	1892.4	1846.1	1738.9	1686.1	1616.1	1457.1	1360.9	1321.7
52.5°	1775.7	1794.8	1774.2	1774.7	1736.9	1640.8	1585.9	1517.5	1362.5	1267.8	1231.6
55°	1641.8	1660.4	1647.3	1649.3	1619.6	1532.1	1482.2	1414.3	1265.8	1173.7	1139.5
57.5°	1501.9	1522.0	1513.4	1517.5	1496.8	1418.3	1366.5	1307.1	1166.2	1075.1	1045.9
60°	1361.4	1380.6	1376.0	1381.6	1368.5	1300.5	1253.2	1191.8	1066.0	978.4	952.8
62.5°	1219.5	1237.1	1236.1	1242.2	1235.1	1178.7	1136.5	1084.1	962.3	881.8	858.1
65°	1080.6	1095.7	1094.7	1101.2	1099.7	1054.4	1016.2	968.4	858.6	784.7	764.0
67.5°	945.7	958.3	954.8	962.3	964.3	928.1	894.9	852.1	760.0	688.0	670.4
70°	813.8	822.4	817.9	822.9	827.4	800.3	772.1	734.3	654.8	591.4	576.8
72.5°	684.5	690.5	683.5	688.5	692.6	672.9	649.8	617.1	551.1	496.3	484.2
75°	559.2	567.7	553.1	558.2	561.2	541.6	528.0	501.3	444.4	402.1	394.1
77.5°	437.9	442.9	434.9	432.8	434.9	420.8	410.2	389.6	346.8	312.1	307.0
80°	322.1	325.1	317.1	315.1	316.6	306.5	298.5	283.4	253.2	227.0	225.0
82.5°	215.9	217.4	210.4	208.4	209.4	206.4	196.8	186.2	172.1	150.0	149.5
85°	123.3	123.3	118.3	116.3	117.3	112.2	108.7	103.2	97.6	82.5	83.5
87.5°	45.3	45.3	42.8	42.3	47.3	41.8	40.3	37.7	39.3	31.2	33.2
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2302.6	2302.6	2302.6	2302.6	2302.6	2302.6	2302.6	2302.6	2302.6	2302.6	2302.6
2.5°	2312.7	2307.7	2303.1	2287.5	2294.1	2278.0	2277.0	2270.9	2266.4	2257.8	2268.9
5°	2305.1	2295.1	2282.0	2263.4	2268.9	2249.8	2245.8	2238.7	2232.7	2221.6	2230.2
7.5°	2293.1	2276.5	2255.8	2232.2	2239.7	2216.1	2210.0	2202.5	2197.4	2184.4	2191.9
10°	2275.5	2251.8	2227.6	2199.0	2204.5	2178.8	2171.3	2163.2	2158.7	2147.1	2154.7
12.5°	2248.3	2219.6	2186.9	2155.7	2161.7	2137.5	2127.5	2118.9	2117.4	2107.9	2116.9
15°	2213.0	2173.3	2139.6	2106.3	2113.4	2085.2	2080.7	2072.1	2074.6	2068.1	2079.2
17.5°	2168.2	2122.4	2085.7	2050.0	2057.0	2033.4	2029.8	2025.8	2028.3	2027.3	2039.4
20°	2117.9	2067.6	2025.3	1990.1	1994.1	1975.5	1977.0	1976.0	1981.0	1986.6	2003.2
22.5°	2061.0	2004.2	1959.9	1923.6	1929.7	1913.6	1920.6	1922.6	1931.2	1943.8	1964.9
25°	1997.1	1936.2	1889.9	1855.7	1861.2	1850.7	1862.7	1867.8	1881.4	1902.5	1924.1
27.5°	1930.2	1865.8	1816.4	1783.7	1794.3	1783.7	1801.8	1811.9	1832.5	1855.7	1882.4
30°	1859.2	1792.3	1741.4	1712.3	1722.3	1712.8	1741.9	1755.5	1776.2	1807.9	1839.6
32.5°	1784.7	1714.3	1664.4	1641.8	1648.8	1647.3	1680.0	1695.1	1722.8	1759.1	1792.8
35°	1708.2	1634.7	1584.4	1565.3	1573.8	1575.9	1615.1	1632.7	1662.9	1706.7	1743.0
37.5°	1629.2	1554.2	1504.9	1489.3	1496.8	1504.4	1550.2	1567.8	1602.0	1649.8	1689.6
40°	1547.2	1472.2	1423.9	1411.3	1418.8	1426.9	1476.7	1500.9	1538.1	1589.9	1633.2
42.5°	1464.1	1389.1	1342.3	1333.3	1340.8	1356.4	1409.3	1431.9	1471.2	1528.5	1576.4
45°	1379.6	1301.6	1260.8	1253.7	1261.8	1279.9	1331.8	1358.9	1400.7	1463.6	1515.0
47.5°	1294.0	1218.0	1179.2	1174.7	1182.8	1202.9	1260.3	1284.9	1329.2	1396.2	1451.5
50°	1207.4	1133.4	1096.2	1094.7	1102.2	1123.9	1178.7	1207.9	1253.7	1328.7	1385.6
52.5°	1119.9	1048.9	1015.2	1015.2	1022.2	1044.4	1099.7	1129.9	1177.2	1256.3	1319.2
55°	1032.3	964.8	932.6	935.1	945.2	964.3	1018.2	1049.9	1097.7	1179.8	1246.2
57.5°	944.7	880.8	851.6	855.1	864.7	883.8	936.7	972.4	1015.7	1100.7	1168.7
60°	858.1	797.7	772.1	776.1	784.7	803.8	858.6	889.3	932.6	1019.2	1087.1
62.5°	770.6	715.7	691.5	696.6	704.1	723.3	775.1	804.8	847.6	932.6	1001.1
65°	684.0	633.2	612.5	617.6	624.6	642.2	691.0	719.7	760.5	843.5	909.0
67.5°	598.4	552.1	535.0	540.0	545.6	562.2	602.5	633.7	671.9	750.9	812.8
70°	513.9	472.6	457.5	462.5	467.6	482.7	517.9	546.6	581.8	654.3	711.7
72.5°	430.3	390.1	382.5	387.0	391.1	404.2	437.9	460.5	491.2	555.7	605.0
75°	348.8	314.1	309.0	313.6	317.1	327.1	355.3	375.0	400.6	456.5	496.8
77.5°	270.3	241.1	239.1	242.6	246.1	253.2	275.3	295.9	316.1	357.3	393.1
80°	196.8	173.1	173.1	176.7	175.7	184.2	199.8	216.4	231.0	260.7	286.9
82.5°	129.9	111.2	113.7	116.3	117.8	121.3	130.9	143.4	152.5	170.6	187.7
85°	72.0	59.4	61.9	63.9	62.9	66.9	72.0	79.5	84.1	92.6	101.7
87.5°	26.7	22.1	22.6	24.2	25.2	27.2	27.2	31.7	32.2	33.2	35.2
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°	2302.6	2302.6	2302.6
2.5°	2247.8	2259.9	2268.9
5°	2209.0	2219.1	2227.1
7.5°	2171.3	2180.3	2187.4
10°	2135.5	2145.6	2150.6
12.5°	2098.8	2110.4	2114.4
15°	2062.6	2074.1	2079.2
17.5°	2025.3	2040.4	2045.9
20°	1990.6	2009.7	2014.2
22.5°	1955.4	1975.0	1980.5
25°	1917.1	1940.3	1945.8
27.5°	1876.3	1904.0	1909.5
30°	1835.6	1865.8	1871.3
32.5°	1791.8	1824.5	1829.5
35°	1746.0	1778.7	1784.7
37.5°	1695.1	1730.9	1743.0
40°	1642.3	1681.0	1693.6
42.5°	1586.9	1629.2	1642.3
45°	1527.5	1573.8	1588.9
47.5°	1467.6	1520.0	1533.1
50°	1402.7	1458.6	1474.2
52.5°	1334.8	1395.7	1411.3
55°	1264.3	1325.7	1342.8
57.5°	1187.8	1251.2	1269.3
60°	1107.8	1171.2	1188.3
62.5°	1025.7	1083.1	1099.7
65°	934.1	988.0	1003.1
67.5°	837.0	886.3	898.9
70°	733.8	776.6	787.7
72.5°	626.1	655.8	670.4
75°	514.9	538.5	549.6
77.5°	403.1	419.8	428.8
80°	293.9	303.5	311.0
82.5°	192.3	196.3	201.8
85°	103.7	103.7	107.2
87.5°	35.2	33.7	35.2
90°	0.0	0.0	0.0

(END OF REPORT)