

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: P834510

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834510
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-2HI-20-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

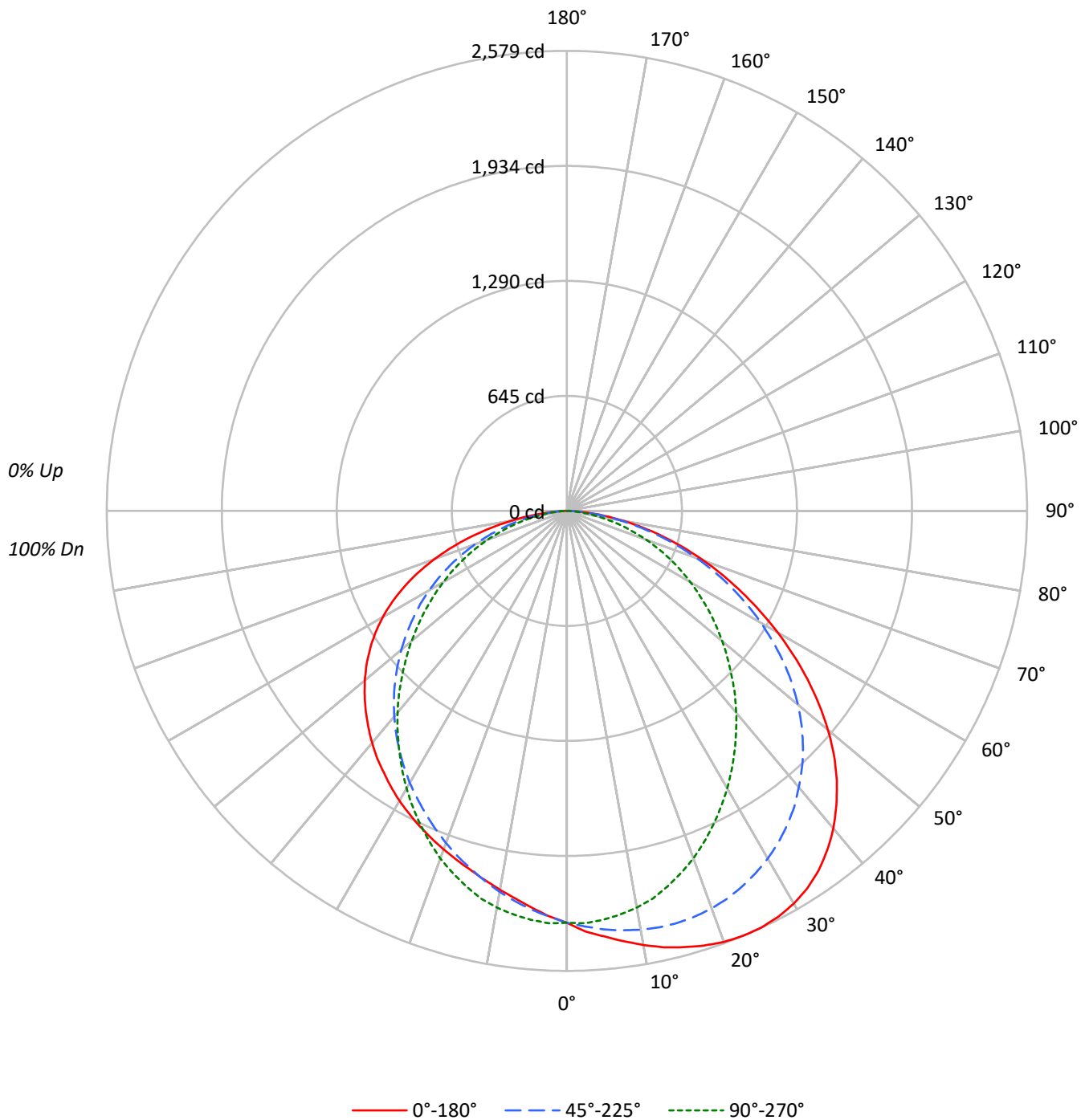
Lumens per Lamp: N/A
Luminaire Lumens: 6791.3 lumens
Efficiency: N/A
Efficacy: 77.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 88
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°	3106	3106	3106
5°	3234	3108	3016
10°	3376	3085	2946
15°	3527	3035	2904
20°	3682	2968	2892
25°	3826	2882	2896
30°	3951	2792	2915
35°	4041	2692	2939
40°	4082	2593	2983
45°	4070	2483	3032
50°	3998	2379	3094
55°	3862	2269	3158
60°	3673	2153	3206
65°	3450	2021	3202
70°	3210	1864	3107
75°	2915	1637	2865
80°	2503	1345	2417
85°	1908	919	1660

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.0	3.2
10°-20°	632.3	9.3
20°-30°	968.7	14.3
30°-40°	1182.2	17.4
40°-50°	1236.4	18.2
50°-60°	1119.0	16.5
60°-70°	847.5	12.5
70°-80°	472.3	7.0
80°-90°	113.9	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°	1820.1	26.8
0°-40°	3002.3	44.2
0°-60°	5357.6	78.9
0°-90°	6791.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6791.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2309	2309	2309	2309	2309	
5°	2395	2355	2301	2245	2233	231
15°	2532	2392	2179	2078	2085	718
25°	2577	2324	1941	1873	1951	1189
35°	2460	2152	1639	1637	1790	1536
45°	2139	1871	1305	1362	1593	1646
55°	1646	1486	967	1053	1346	1469
65°	1084	1019	635	722	1006	1075
75°	561	529	315	376	551	595
85°	124	109	60	80	108	149
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°	2308.8	2308.8	2308.8	2308.8	2308.8	2308.8	2308.8	2308.8	2308.8	2308.8	2308.8
2.5°	2359.7	2348.6	2339.5	2343.1	2345.1	2338.0	2332.0	2333.0	2326.9	2338.5	2311.3
5°	2394.6	2384.5	2373.9	2377.9	2373.9	2363.3	2354.7	2352.2	2336.0	2342.6	2314.8
7.5°	2433.4	2422.3	2406.7	2411.2	2402.6	2382.9	2371.8	2365.3	2340.6	2341.1	2310.3
10°	2470.8	2461.2	2440.0	2443.0	2427.4	2401.1	2383.4	2374.4	2339.5	2334.5	2302.7
12.5°	2505.6	2492.5	2469.7	2471.3	2448.5	2413.7	2391.0	2377.9	2332.5	2317.3	2286.1
15°	2532.3	2519.7	2492.5	2491.9	2462.7	2417.3	2391.5	2373.4	2315.8	2292.1	2259.3
17.5°	2555.0	2543.4	2509.6	2508.6	2473.3	2415.7	2385.0	2362.3	2291.6	2262.3	2226.0
20°	2571.2	2559.6	2521.7	2518.2	2475.8	2408.2	2371.3	2342.6	2259.8	2225.0	2184.6
22.5°	2578.7	2567.1	2524.2	2519.2	2469.7	2393.0	2351.7	2317.8	2223.5	2178.1	2136.2
25°	2577.2	2566.1	2517.7	2512.6	2458.1	2370.3	2323.9	2285.0	2177.6	2124.1	2082.7
27.5°	2564.6	2556.0	2505.1	2498.5	2436.9	2339.5	2290.1	2247.2	2126.6	2067.0	2022.1
30°	2542.9	2536.4	2482.4	2476.3	2410.7	2305.7	2250.7	2201.3	2071.6	2004.5	1959.0
32.5°	2508.1	2502.0	2447.5	2442.0	2375.4	2262.3	2204.8	2153.8	2011.5	1937.3	1891.9
35°	2460.2	2456.6	2403.6	2397.6	2330.0	2212.9	2151.8	2095.8	1948.9	1865.2	1821.8
37.5°	2397.1	2397.1	2346.1	2339.5	2273.4	2152.3	2092.3	2032.7	1878.3	1789.5	1746.6
40°	2323.9	2330.5	2278.5	2271.9	2207.8	2087.2	2021.6	1959.0	1802.1	1709.7	1667.9
42.5°	2236.1	2242.1	2198.7	2192.7	2132.6	2012.0	1951.0	1882.8	1722.4	1628.5	1585.1
45°	2139.2	2147.3	2108.4	2103.9	2047.9	1929.8	1871.2	1802.1	1639.1	1543.7	1501.3
47.5°	2031.2	2041.8	2008.0	2005.5	1953.5	1845.5	1784.4	1714.3	1551.8	1455.4	1415.5
50°	1910.1	1925.2	1897.5	1897.5	1851.0	1743.6	1690.6	1620.4	1461.0	1364.6	1325.2
52.5°	1780.4	1799.6	1778.9	1779.4	1741.5	1645.2	1590.1	1521.5	1366.1	1271.2	1234.9
55°	1646.2	1664.8	1651.7	1653.7	1624.0	1536.1	1486.2	1418.1	1269.2	1176.8	1142.5
57.5°	1505.9	1526.1	1517.5	1521.5	1500.8	1422.1	1370.1	1310.6	1169.3	1077.9	1048.7
60°	1365.1	1384.2	1379.7	1385.3	1372.1	1304.0	1256.6	1195.0	1068.8	981.0	955.3
62.5°	1222.8	1240.4	1239.4	1245.5	1238.4	1181.9	1139.5	1087.0	964.9	884.1	860.4
65°	1083.5	1098.6	1097.6	1104.2	1102.7	1057.2	1018.9	970.9	860.9	786.7	766.1
67.5°	948.2	960.8	957.3	964.9	966.9	930.6	897.3	854.4	762.0	689.9	672.2
70°	816.0	824.6	820.1	825.1	829.6	802.4	774.1	736.3	656.5	593.0	578.3
72.5°	686.3	692.4	685.3	690.4	694.4	674.7	651.5	618.7	552.6	497.6	485.5
75°	560.7	569.2	554.6	559.7	562.7	543.0	529.4	502.6	445.6	403.2	395.1
77.5°	439.0	444.1	436.0	434.0	436.0	421.9	411.3	390.6	347.7	312.9	307.8
80°	323.0	326.0	317.9	315.9	317.4	307.3	299.3	284.1	253.8	227.6	225.6
82.5°	216.5	218.0	210.9	208.9	209.9	206.9	197.3	186.7	172.6	150.4	149.9
85°	123.6	123.6	118.6	116.6	117.6	112.5	109.0	103.5	97.9	82.8	83.8
87.5°	45.4	45.4	42.9	42.4	47.4	41.9	40.4	37.8	39.4	31.3	33.3
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°	2308.8	2308.8	2308.8	2308.8	2308.8	2308.8	2308.8	2308.8	2308.8	2308.8	2308.8
2.5°	2318.9	2313.8	2309.3	2293.6	2300.2	2284.0	2283.0	2277.0	2272.4	2263.8	2275.0
5°	2311.3	2301.2	2288.1	2269.4	2275.0	2255.8	2251.7	2244.7	2238.6	2227.5	2236.1
7.5°	2299.2	2282.5	2261.8	2238.1	2245.7	2222.0	2215.9	2208.3	2203.3	2190.2	2197.7
10°	2281.5	2257.8	2233.6	2204.8	2210.4	2184.6	2177.0	2169.0	2164.4	2152.8	2160.4
12.5°	2254.3	2225.5	2192.7	2161.4	2167.5	2143.2	2133.1	2124.6	2123.1	2113.5	2122.5
15°	2218.9	2179.1	2145.3	2111.9	2119.0	2090.8	2086.2	2077.6	2080.2	2073.6	2084.7
17.5°	2174.0	2128.1	2091.3	2055.4	2062.5	2038.8	2035.2	2031.2	2033.7	2032.7	2044.8
20°	2123.6	2073.1	2030.7	1995.4	1999.4	1980.7	1982.3	1981.2	1986.3	1991.8	2008.5
22.5°	2066.5	2009.5	1965.1	1928.8	1934.8	1918.7	1925.7	1927.8	1936.3	1948.9	1970.1
25°	2002.4	1941.4	1895.0	1860.6	1866.2	1855.6	1867.7	1872.7	1886.4	1907.6	1929.3
27.5°	1935.3	1870.7	1821.3	1788.5	1799.1	1788.5	1806.6	1816.7	1837.4	1860.6	1887.4
30°	1864.2	1797.0	1746.1	1716.8	1726.9	1717.3	1746.6	1760.2	1780.9	1812.7	1844.5
32.5°	1789.5	1718.8	1668.9	1646.2	1653.2	1651.7	1684.5	1699.7	1727.4	1763.7	1797.6
35°	1712.8	1639.1	1588.6	1569.5	1578.0	1580.1	1619.4	1637.1	1667.4	1711.3	1747.6
37.5°	1633.5	1558.4	1508.9	1493.3	1500.8	1508.4	1554.3	1572.0	1606.3	1654.2	1694.1
40°	1551.3	1476.1	1427.6	1415.0	1422.6	1430.7	1480.6	1504.9	1542.2	1594.2	1637.6
42.5°	1468.0	1392.8	1345.9	1336.8	1344.4	1360.0	1413.0	1435.7	1475.1	1532.6	1580.6
45°	1383.2	1305.0	1264.1	1257.1	1265.2	1283.3	1335.3	1362.5	1404.4	1467.5	1519.0
47.5°	1297.4	1221.2	1182.4	1177.8	1185.9	1206.1	1263.6	1288.4	1332.8	1399.9	1455.4
50°	1210.6	1136.5	1099.1	1097.6	1105.2	1126.9	1181.9	1211.2	1257.1	1332.3	1389.3
52.5°	1122.8	1051.7	1017.9	1017.9	1024.9	1047.1	1102.7	1132.9	1180.4	1259.6	1322.7
55°	1035.0	967.4	935.1	937.6	947.7	966.9	1020.9	1052.7	1100.6	1182.9	1249.5
57.5°	947.2	883.1	853.9	857.4	867.0	886.2	939.1	975.0	1018.4	1103.7	1171.8
60°	860.4	799.9	774.1	778.2	786.7	805.9	860.9	891.7	935.1	1021.9	1090.0
62.5°	772.6	717.6	693.4	698.4	706.0	725.2	777.2	806.9	849.8	935.1	1003.7
65°	685.8	634.8	614.2	619.2	626.3	643.9	692.9	721.6	762.5	845.8	911.4
67.5°	600.0	553.6	536.4	541.5	547.0	563.7	604.1	635.4	673.7	752.9	815.0
70°	515.2	473.9	458.7	463.8	468.8	484.0	519.3	548.0	583.4	656.0	713.6
72.5°	431.5	391.1	383.5	388.1	392.1	405.2	439.0	461.8	492.5	557.1	606.6
75°	349.7	314.9	309.9	314.4	317.9	328.0	356.3	376.0	401.7	457.7	498.1
77.5°	271.0	241.7	239.7	243.2	246.8	253.8	276.0	296.7	316.9	358.3	394.1
80°	197.3	173.6	173.6	177.1	176.1	184.7	200.3	217.0	231.6	261.4	287.6
82.5°	130.2	111.5	114.1	116.6	118.1	121.6	131.2	143.8	152.9	171.1	188.2
85°	72.2	59.5	62.1	64.1	63.1	67.1	72.2	79.7	84.3	92.9	101.9
87.5°	26.7	22.2	22.7	24.2	25.2	27.3	27.3	31.8	32.3	33.3	35.3
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):

	160°	170°	180°
0°	2308.8	2308.8	2308.8
2.5°	2253.8	2265.9	2275.0
5°	2214.9	2225.0	2233.1
7.5°	2177.0	2186.1	2193.2
10°	2141.2	2151.3	2156.4
12.5°	2104.4	2116.0	2120.0
15°	2068.0	2079.7	2084.7
17.5°	2030.7	2045.8	2051.4
20°	1995.9	2015.1	2019.6
22.5°	1960.6	1980.2	1985.8
25°	1922.2	1945.4	1951.0
27.5°	1881.3	1909.1	1914.6
30°	1840.4	1870.7	1876.3
32.5°	1796.5	1829.3	1834.4
35°	1750.6	1783.4	1789.5
37.5°	1699.7	1735.5	1747.6
40°	1646.7	1685.5	1698.1
42.5°	1591.2	1633.5	1646.7
45°	1531.6	1578.0	1593.2
47.5°	1471.6	1524.0	1537.2
50°	1406.5	1462.5	1478.1
52.5°	1338.3	1399.4	1415.0
55°	1267.7	1329.2	1346.4
57.5°	1191.0	1254.6	1272.7
60°	1110.7	1174.3	1191.5
62.5°	1028.5	1086.0	1102.7
65°	936.6	990.6	1005.8
67.5°	839.2	888.7	901.3
70°	735.8	778.7	789.8
72.5°	627.8	657.6	672.2
75°	516.3	540.0	551.1
77.5°	404.2	420.9	430.0
80°	294.7	304.3	311.9
82.5°	192.8	196.8	202.4
85°	104.0	104.0	107.5
87.5°	35.3	33.8	35.3
90°	0.0	0.0	0.0

(END OF REPORT)