

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: P834257

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2STD-30-120-EDD-90**

Issue Date: 5/16/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P834257
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-30-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

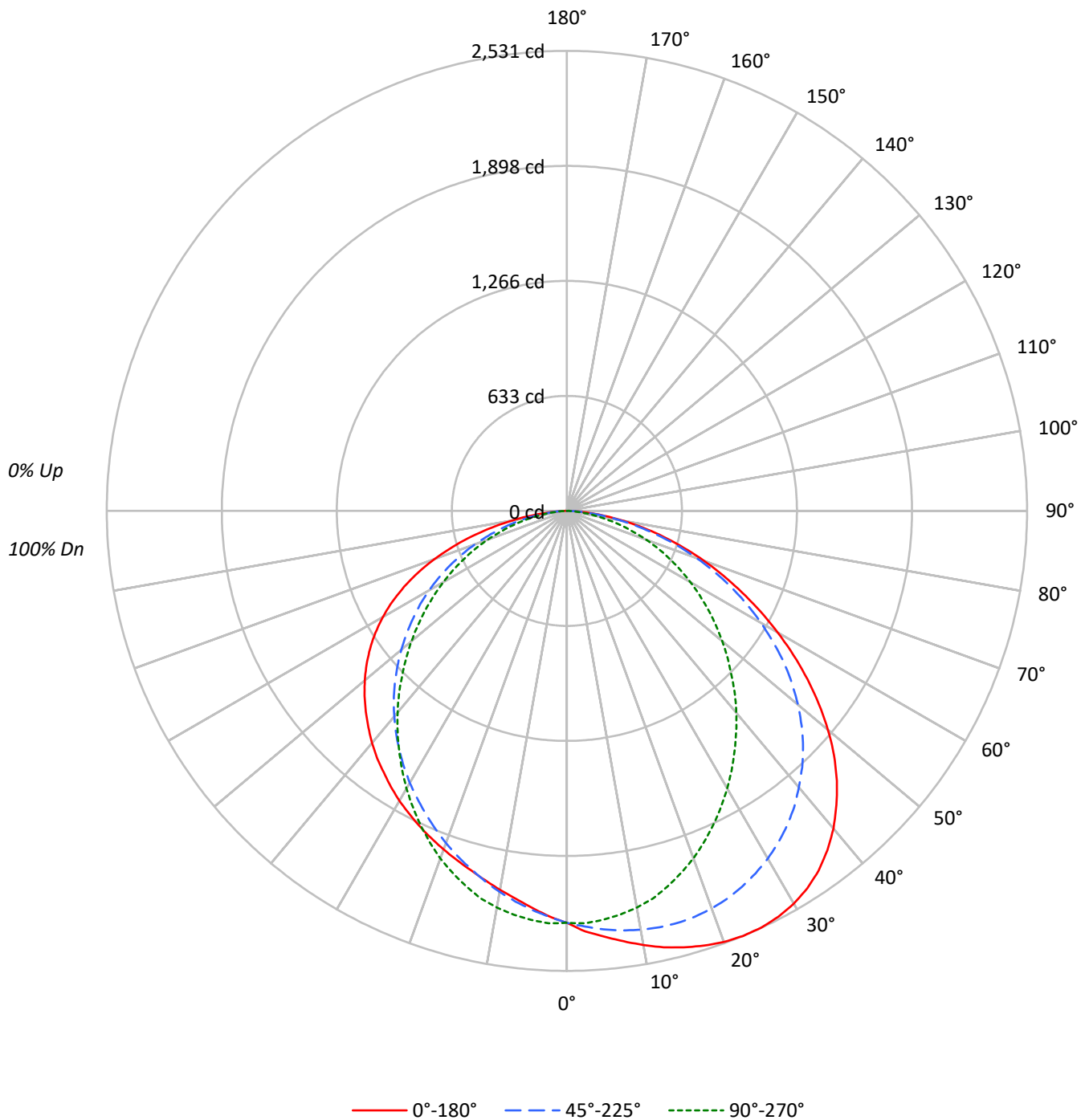
Lumens per Lamp: N/A
Luminaire Lumens: 6666.0 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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



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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°	6098	6098	6098
5°	6349	6101	5921
10°	6627	6055	5784
15°	6925	5959	5701
20°	7227	5827	5677
25°	7511	5658	5686
30°	7756	5481	5723
35°	7933	5285	5770
40°	8013	5090	5855
45°	7991	4875	5951
50°	7849	4670	6074
55°	7581	4455	6200
60°	7211	4225	6294
65°	6772	3968	6286
70°	6302	3659	6099
75°	5722	3214	5624
80°	4912	2641	4744
85°	3748	1803	3257



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.9	3.2
10°-20°	620.7	9.3
20°-30°	950.9	14.3
30°-40°	1160.4	17.4
40°-50°	1213.6	18.2
50°-60°	1098.3	16.5
60°-70°	831.8	12.5
70°-80°	463.6	7.0
80°-90°	111.8	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°	1786.5	26.8
0°-40°	2946.9	44.2
0°-60°	5258.8	78.9
0°-90°	6666.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6666.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2266	2266	2266	2266	2266	
5°	2350	2311	2259	2203	2192	227
15°	2486	2347	2139	2039	2046	705
25°	2530	2281	1906	1838	1915	1167
35°	2415	2112	1609	1607	1756	1508
45°	2100	1837	1281	1337	1564	1616
55°	1616	1459	950	1033	1322	1442
65°	1064	1000	623	708	987	1055
75°	550	520	309	369	541	584
85°	121	107	58	78	106	146
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°	2266.2	2266.2	2266.2	2266.2	2266.2	2266.2	2266.2	2266.2	2266.2	2266.2	2266.2
2.5°	2316.2	2305.3	2296.4	2299.9	2301.8	2294.9	2289.0	2290.0	2284.0	2295.4	2268.7
5°	2350.4	2340.5	2330.1	2334.0	2330.1	2319.7	2311.3	2308.8	2292.9	2299.4	2272.1
7.5°	2388.5	2377.6	2362.3	2366.7	2358.3	2339.0	2328.1	2321.7	2297.4	2297.9	2267.7
10°	2425.2	2415.8	2395.0	2397.9	2382.6	2356.8	2339.5	2330.6	2296.4	2291.4	2260.2
12.5°	2459.4	2446.5	2424.2	2425.7	2403.4	2369.2	2346.9	2334.0	2289.5	2274.6	2243.9
15°	2485.6	2473.2	2446.5	2446.0	2417.3	2372.7	2347.4	2329.6	2273.1	2249.8	2217.6
17.5°	2507.9	2496.5	2463.3	2462.3	2427.7	2371.2	2341.0	2318.7	2249.3	2220.6	2184.9
20°	2523.8	2512.4	2475.2	2471.7	2430.1	2363.8	2327.6	2299.4	2218.1	2183.9	2144.3
22.5°	2531.2	2519.8	2477.7	2472.7	2424.2	2348.9	2308.3	2275.1	2182.5	2137.9	2096.8
25°	2529.7	2518.8	2471.2	2466.3	2412.8	2326.6	2281.0	2242.9	2137.4	2084.9	2044.3
27.5°	2517.3	2508.9	2458.9	2452.4	2392.0	2296.4	2247.8	2205.7	2087.4	2028.9	1984.8
30°	2496.0	2489.6	2436.6	2430.6	2366.2	2263.2	2209.2	2160.7	2033.4	1967.5	1922.9
32.5°	2461.8	2455.9	2402.4	2396.9	2331.6	2220.6	2164.1	2114.1	1974.4	1901.6	1857.0
35°	2414.8	2411.3	2359.3	2353.4	2287.0	2172.1	2112.1	2057.1	1913.0	1830.8	1788.2
37.5°	2352.9	2352.9	2302.8	2296.4	2231.5	2112.6	2053.7	1995.2	1843.7	1756.5	1714.4
40°	2281.0	2287.5	2236.5	2230.0	2167.1	2048.7	1984.3	1922.9	1768.9	1678.2	1637.1
42.5°	2194.8	2200.8	2158.2	2152.2	2093.3	1974.9	1915.0	1848.1	1690.6	1598.5	1555.9
45°	2099.7	2107.7	2069.5	2065.1	2010.1	1894.2	1836.7	1768.9	1608.9	1515.2	1473.6
47.5°	1993.7	2004.1	1971.0	1968.5	1917.5	1811.5	1751.5	1682.7	1523.2	1428.6	1389.4
50°	1874.9	1889.7	1862.5	1862.5	1816.9	1711.4	1659.4	1590.5	1434.0	1339.4	1300.8
52.5°	1747.6	1766.4	1746.1	1746.6	1709.4	1614.8	1560.8	1493.4	1340.9	1247.8	1212.1
55°	1615.8	1634.1	1621.2	1623.2	1594.0	1507.8	1458.8	1391.9	1245.8	1155.1	1121.4
57.5°	1478.1	1497.9	1489.5	1493.4	1473.1	1395.9	1344.8	1286.4	1147.7	1058.0	1029.3
60°	1339.9	1358.7	1354.3	1359.7	1346.8	1280.0	1233.4	1173.0	1049.1	962.9	937.7
62.5°	1200.2	1217.5	1216.6	1222.5	1215.6	1160.1	1118.5	1067.0	947.1	867.8	844.6
65°	1063.5	1078.4	1077.4	1083.8	1082.3	1037.7	1000.1	953.0	845.0	772.2	751.9
67.5°	930.7	943.1	939.7	947.1	949.1	913.4	880.7	838.6	748.0	677.1	659.8
70°	801.0	809.4	804.9	809.9	814.3	787.6	759.8	722.7	644.4	582.0	567.7
72.5°	673.7	679.6	672.7	677.6	681.6	662.3	639.5	607.3	542.4	488.4	476.5
75°	550.3	558.7	544.4	549.3	552.3	533.0	519.6	493.4	437.4	395.8	387.9
77.5°	430.9	435.9	428.0	426.0	428.0	414.1	403.7	383.4	341.3	307.1	302.2
80°	317.0	320.0	312.1	310.1	311.6	301.7	293.7	278.9	249.2	223.4	221.4
82.5°	212.5	214.0	207.1	205.1	206.1	203.1	193.7	183.3	169.4	147.6	147.1
85°	121.4	121.4	116.4	114.4	115.4	110.5	107.0	101.5	96.1	81.2	82.2
87.5°	44.6	44.6	42.1	41.6	46.6	41.1	39.6	37.2	38.6	30.7	32.7
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°	2266.2	2266.2	2266.2	2266.2	2266.2	2266.2	2266.2	2266.2	2266.2	2266.2	2266.2
2.5°	2276.1	2271.1	2266.7	2251.3	2257.8	2241.9	2240.9	2235.0	2230.5	2222.1	2233.0
5°	2268.7	2258.7	2245.9	2227.5	2233.0	2214.2	2210.2	2203.3	2197.3	2186.4	2194.8
7.5°	2256.8	2240.4	2220.1	2196.8	2204.3	2181.0	2175.0	2167.6	2162.6	2149.8	2157.2
10°	2239.4	2216.1	2192.4	2164.1	2169.6	2144.3	2136.9	2129.0	2124.5	2113.1	2120.5
12.5°	2212.7	2184.4	2152.2	2121.5	2127.5	2103.7	2093.8	2085.4	2083.9	2074.5	2083.4
15°	2178.0	2138.9	2105.7	2073.0	2079.9	2052.2	2047.7	2039.3	2041.8	2035.3	2046.2
17.5°	2133.9	2088.8	2052.7	2017.5	2024.5	2001.2	1997.7	1993.7	1996.2	1995.2	2007.1
20°	2084.4	2034.9	1993.2	1958.6	1962.5	1944.2	1945.7	1944.7	1949.7	1955.1	1971.4
22.5°	2028.4	1972.4	1928.8	1893.2	1899.1	1883.3	1890.2	1892.2	1900.6	1913.0	1933.8
25°	1965.5	1905.6	1860.0	1826.3	1831.8	1821.4	1833.2	1838.2	1851.6	1872.4	1893.7
27.5°	1899.6	1836.2	1787.7	1755.5	1765.9	1755.5	1773.3	1783.2	1803.5	1826.3	1852.6
30°	1829.8	1763.9	1713.9	1685.1	1695.0	1685.6	1714.4	1727.7	1748.1	1779.3	1810.5
32.5°	1756.5	1687.1	1638.1	1615.8	1622.7	1621.2	1653.4	1668.3	1695.5	1731.2	1764.4
35°	1681.2	1608.9	1559.3	1540.5	1548.9	1550.9	1589.5	1606.9	1636.6	1679.7	1715.4
37.5°	1603.4	1529.6	1481.1	1465.7	1473.1	1480.6	1525.6	1543.0	1576.7	1623.7	1662.9
40°	1522.7	1448.9	1401.3	1388.9	1396.4	1404.3	1453.3	1477.1	1513.8	1564.8	1607.4
42.5°	1440.9	1367.1	1321.1	1312.2	1319.6	1334.9	1386.9	1409.2	1447.9	1504.3	1551.4
45°	1357.7	1280.9	1240.8	1233.9	1241.8	1259.6	1310.7	1337.4	1378.5	1440.4	1491.0
47.5°	1273.5	1198.7	1160.6	1156.1	1164.0	1183.9	1240.3	1264.6	1308.2	1374.1	1428.6
50°	1188.3	1115.5	1078.8	1077.4	1084.8	1106.1	1160.1	1188.8	1233.9	1307.7	1363.7
52.5°	1102.1	1032.3	999.1	999.1	1006.0	1027.8	1082.3	1112.0	1158.6	1236.4	1298.3
55°	1015.9	949.6	917.9	920.3	930.2	949.1	1002.1	1033.3	1080.3	1161.1	1226.5
57.5°	929.8	866.8	838.1	841.6	851.0	869.8	921.8	957.0	999.6	1083.3	1150.2
60°	844.6	785.1	759.8	763.8	772.2	791.1	845.0	875.3	917.9	1003.1	1069.9
62.5°	758.4	704.4	680.6	685.5	693.0	711.8	762.8	792.0	834.2	917.9	985.2
65°	673.2	623.1	602.8	607.8	614.7	632.1	680.1	708.3	748.5	830.2	894.6
67.5°	589.0	543.4	526.5	531.5	536.9	553.3	592.9	623.6	661.3	739.0	800.0
70°	505.7	465.1	450.3	455.2	460.2	475.0	509.7	537.9	572.6	643.9	700.4
72.5°	423.5	383.9	376.5	380.9	384.9	397.8	430.9	453.2	483.5	546.9	595.4
75°	343.3	309.1	304.1	308.6	312.1	322.0	349.7	369.0	394.3	449.3	488.9
77.5°	266.0	237.3	235.3	238.8	242.2	249.2	271.0	291.3	311.1	351.7	386.9
80°	193.7	170.4	170.4	173.9	172.9	181.3	196.6	213.0	227.4	256.6	282.3
82.5°	127.8	109.5	111.9	114.4	115.9	119.4	128.8	141.2	150.1	167.9	184.8
85°	70.8	58.4	60.9	62.9	61.9	65.9	70.8	78.3	82.7	91.1	100.1
87.5°	26.3	21.8	22.3	23.8	24.8	26.7	26.7	31.2	31.7	32.7	34.7
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°	2266.2	2266.2	2266.2
2.5°	2212.2	2224.1	2233.0
5°	2174.0	2183.9	2191.9
7.5°	2136.9	2145.8	2152.7
10°	2101.7	2111.6	2116.6
12.5°	2065.6	2077.0	2080.9
15°	2029.9	2041.3	2046.2
17.5°	1993.2	2008.1	2013.6
20°	1959.1	1977.9	1982.3
22.5°	1924.4	1943.7	1949.2
25°	1886.7	1909.5	1915.0
27.5°	1846.6	1873.9	1879.3
30°	1806.5	1836.2	1841.7
32.5°	1763.4	1795.6	1800.6
35°	1718.3	1750.5	1756.5
37.5°	1668.3	1703.5	1715.4
40°	1616.3	1654.4	1666.8
42.5°	1561.8	1603.4	1616.3
45°	1503.4	1548.9	1563.8
47.5°	1444.4	1495.9	1508.8
50°	1380.5	1435.5	1450.8
52.5°	1313.6	1373.6	1388.9
55°	1244.3	1304.7	1321.6
57.5°	1169.0	1231.4	1249.2
60°	1090.2	1152.7	1169.5
62.5°	1009.5	1066.0	1082.3
65°	919.3	972.4	987.2
67.5°	823.7	872.3	884.7
70°	722.2	764.3	775.2
72.5°	616.2	645.4	659.8
75°	506.7	530.0	540.9
77.5°	396.8	413.1	422.0
80°	289.3	298.7	306.1
82.5°	189.2	193.2	198.6
85°	102.0	102.0	105.5
87.5°	34.7	33.2	34.7
90°	0.0	0.0	0.0

(END OF REPORT)