

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: P835292

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5STD-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835292
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-LD4-5STD-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

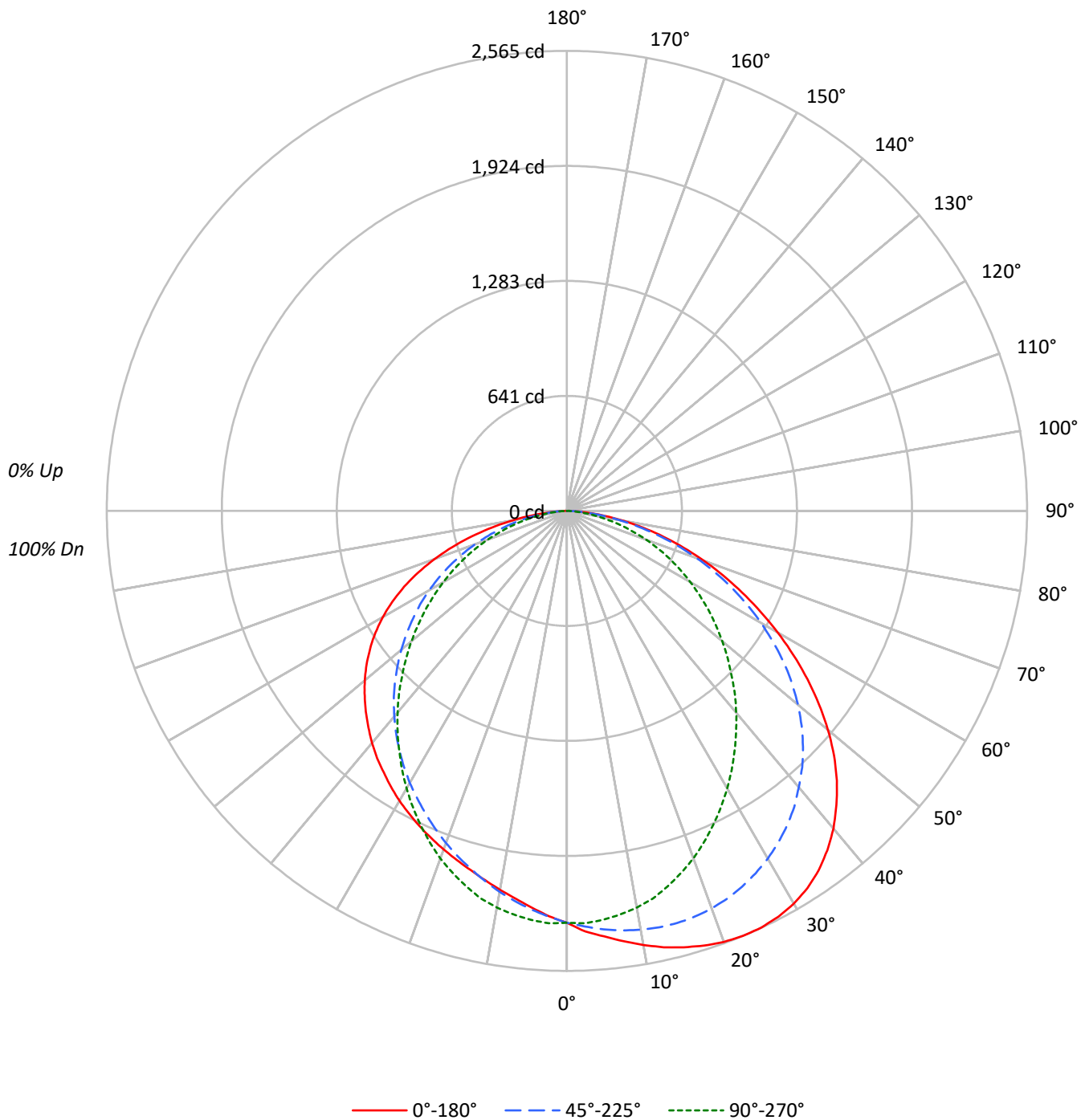
Lumens per Lamp: N/A
Luminaire Lumens: 6755.0 lumens
Efficiency: N/A
Efficacy: 81.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 83.2
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°	6180	6180	6180
5°	6434	6183	6000
10°	6715	6136	5861
15°	7017	6038	5777
20°	7324	5905	5753
25°	7611	5733	5762
30°	7859	5554	5799
35°	8039	5356	5847
40°	8120	5158	5934
45°	8098	4940	6030
50°	7954	4732	6155
55°	7682	4514	6283
60°	7308	4282	6378
65°	6862	4020	6370
70°	6386	3708	6180
75°	5798	3256	5699
80°	4978	2676	4807
85°	3798	1828	3301

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.8	3.2
10°-20°	629.0	9.3
20°-30°	963.6	14.3
30°-40°	1175.9	17.4
40°-50°	1229.7	18.2
50°-60°	1113.0	16.5
60°-70°	842.9	12.5
70°-80°	469.7	7.0
80°-90°	113.3	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°	1810.3	26.8
0°-40°	2986.2	44.2
0°-60°	5329.0	78.9
0°-90°	6755.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6755.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2296	2296	2296	2296	2296	
5°	2382	2342	2289	2233	2221	230
15°	2519	2379	2167	2066	2074	714
25°	2563	2312	1931	1863	1940	1183
35°	2447	2140	1630	1628	1780	1528
45°	2128	1861	1298	1355	1585	1637
55°	1637	1478	962	1047	1339	1461
65°	1078	1013	631	718	1000	1069
75°	558	526	313	374	548	591
85°	123	108	59	79	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°	2296.4	2296.4	2296.4	2296.4	2296.4	2296.4	2296.4	2296.4	2296.4	2296.4	2296.4
2.5°	2347.1	2336.1	2327.0	2330.5	2332.5	2325.5	2319.5	2320.5	2314.5	2326.0	2298.9
5°	2381.7	2371.7	2361.2	2365.2	2361.2	2350.6	2342.1	2339.6	2323.5	2330.0	2302.4
7.5°	2420.4	2409.3	2393.8	2398.3	2389.8	2370.2	2359.2	2352.6	2328.0	2328.5	2297.9
10°	2457.5	2448.0	2426.9	2429.9	2414.4	2388.3	2370.7	2361.7	2327.0	2322.0	2290.4
12.5°	2492.2	2479.1	2456.5	2458.0	2435.4	2400.8	2378.2	2365.2	2320.0	2304.9	2273.8
15°	2518.8	2506.2	2479.1	2478.6	2449.5	2404.3	2378.7	2360.7	2303.4	2279.8	2247.2
17.5°	2541.4	2529.8	2496.2	2495.2	2460.0	2402.8	2372.2	2349.6	2279.3	2250.2	2214.1
20°	2557.4	2545.9	2508.2	2504.7	2462.6	2395.3	2358.6	2330.0	2247.7	2213.1	2172.9
22.5°	2564.9	2553.4	2510.7	2505.7	2456.5	2380.2	2339.1	2305.4	2211.6	2166.4	2124.7
25°	2563.4	2552.4	2504.2	2499.2	2445.0	2357.6	2311.5	2272.8	2165.9	2112.7	2071.5
27.5°	2550.9	2542.4	2491.7	2485.1	2423.9	2327.0	2277.8	2235.2	2115.2	2056.0	2011.3
30°	2529.3	2522.8	2469.1	2463.1	2397.8	2293.4	2238.7	2189.5	2060.5	1993.7	1948.6
32.5°	2494.7	2488.7	2434.4	2428.9	2362.7	2250.2	2193.0	2142.3	2000.8	1927.0	1881.8
35°	2447.0	2443.5	2390.8	2384.8	2317.5	2201.0	2140.3	2084.6	1938.5	1855.2	1812.0
37.5°	2384.2	2384.2	2333.6	2327.0	2261.3	2140.8	2081.1	2021.8	1868.2	1779.9	1737.2
40°	2311.5	2318.0	2266.3	2259.8	2196.0	2076.1	2010.8	1948.6	1792.5	1700.6	1658.9
42.5°	2224.1	2230.2	2187.0	2181.0	2121.2	2001.3	1940.5	1872.8	1713.1	1619.8	1576.6
45°	2127.8	2135.8	2097.1	2092.6	2036.9	1919.4	1861.2	1792.5	1630.3	1535.5	1493.3
47.5°	2020.3	2030.9	1997.2	1994.7	1943.0	1835.6	1774.9	1705.1	1543.5	1447.6	1408.0
50°	1899.9	1914.9	1887.3	1887.3	1841.1	1734.2	1681.5	1611.8	1453.1	1357.3	1318.1
52.5°	1770.9	1789.9	1769.4	1769.9	1732.2	1636.3	1581.6	1513.4	1358.8	1264.4	1228.3
55°	1637.4	1655.9	1642.9	1644.9	1615.3	1527.9	1478.2	1410.5	1262.4	1170.5	1136.4
57.5°	1497.8	1517.9	1509.4	1513.4	1492.8	1414.5	1362.8	1303.6	1163.0	1072.2	1043.0
60°	1357.8	1376.8	1372.3	1377.8	1364.8	1297.0	1249.8	1188.6	1063.1	975.8	950.2
62.5°	1216.2	1233.8	1232.8	1238.8	1231.8	1175.6	1133.4	1081.2	959.7	879.4	855.8
65°	1077.7	1092.7	1091.7	1098.3	1096.8	1051.6	1013.4	965.7	856.3	782.5	762.0
67.5°	943.2	955.7	952.2	959.7	961.7	925.6	892.5	849.8	757.9	686.2	668.6
70°	811.6	820.2	815.7	820.7	825.2	798.1	770.0	732.3	653.0	589.8	575.2
72.5°	682.6	688.7	681.6	686.7	690.7	671.1	648.0	615.4	549.6	494.9	482.9
75°	557.7	566.2	551.6	556.7	559.7	540.1	526.5	499.9	443.2	401.1	393.0
77.5°	436.7	441.7	433.7	431.7	433.7	419.6	409.1	388.5	345.8	311.2	306.2
80°	321.2	324.3	316.2	314.2	315.7	305.7	297.7	282.6	252.5	226.4	224.4
82.5°	215.3	216.8	209.8	207.8	208.8	205.8	196.3	185.7	171.7	149.6	149.1
85°	123.0	123.0	118.0	115.9	117.0	111.9	108.4	102.9	97.4	82.3	83.3
87.5°	45.2	45.2	42.7	42.2	47.2	41.7	40.2	37.6	39.2	31.1	33.1
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°	2296.4	2296.4	2296.4	2296.4	2296.4	2296.4	2296.4	2296.4	2296.4	2296.4	2296.4
2.5°	2306.4	2301.4	2296.9	2281.3	2287.9	2271.8	2270.8	2264.8	2260.3	2251.7	2262.8
5°	2298.9	2288.9	2275.8	2257.3	2262.8	2243.7	2239.7	2232.7	2226.6	2215.6	2224.1
7.5°	2286.9	2270.3	2249.7	2226.1	2233.7	2210.1	2204.0	2196.5	2191.5	2178.5	2186.0
10°	2269.3	2245.7	2221.6	2193.0	2198.5	2172.9	2165.4	2157.4	2152.9	2141.3	2148.8
12.5°	2242.2	2213.6	2181.0	2149.8	2155.9	2131.8	2121.7	2113.2	2111.7	2102.2	2111.2
15°	2207.1	2167.4	2133.8	2100.6	2107.7	2079.6	2075.0	2066.5	2069.0	2062.5	2073.5
17.5°	2162.4	2116.7	2080.1	2044.4	2051.5	2027.9	2024.4	2020.3	2022.8	2021.8	2033.9
20°	2112.2	2062.0	2019.8	1984.7	1988.7	1970.1	1971.6	1970.6	1975.7	1981.2	1997.7
22.5°	2055.5	1998.8	1954.6	1918.4	1924.5	1908.4	1915.4	1917.4	1926.0	1938.5	1959.6
25°	1991.7	1931.0	1884.8	1850.7	1856.2	1845.7	1857.7	1862.7	1876.3	1897.4	1918.9
27.5°	1925.0	1860.7	1811.5	1778.9	1789.4	1778.9	1797.0	1807.0	1827.6	1850.7	1877.3
30°	1854.2	1787.4	1736.7	1707.6	1717.7	1708.1	1737.2	1750.8	1771.4	1803.0	1834.6
32.5°	1779.9	1709.6	1659.9	1637.4	1644.4	1642.9	1675.5	1690.6	1718.2	1754.3	1787.9
35°	1703.6	1630.3	1580.1	1561.1	1569.6	1571.6	1610.7	1628.3	1658.4	1702.1	1738.2
37.5°	1624.8	1550.0	1500.8	1485.3	1492.8	1500.3	1546.0	1563.6	1597.7	1645.4	1685.0
40°	1543.0	1468.2	1420.0	1407.5	1415.0	1423.0	1472.7	1496.8	1534.0	1585.7	1628.8
42.5°	1460.2	1385.4	1338.7	1329.7	1337.2	1352.7	1405.5	1428.0	1467.2	1524.4	1572.1
45°	1375.8	1298.0	1257.4	1250.4	1258.4	1276.5	1328.2	1355.3	1396.9	1459.7	1510.9
47.5°	1290.5	1214.7	1176.1	1171.5	1179.6	1199.7	1256.9	1281.5	1325.6	1392.4	1447.6
50°	1204.2	1130.4	1093.2	1091.7	1099.3	1120.8	1175.6	1204.7	1250.4	1325.1	1381.9
52.5°	1116.8	1046.1	1012.4	1012.4	1019.5	1041.5	1096.8	1126.9	1174.1	1252.9	1315.6
55°	1029.5	962.2	930.1	932.6	942.7	961.7	1015.4	1047.1	1094.7	1176.6	1242.8
57.5°	942.2	878.4	849.3	852.8	862.3	881.4	934.1	969.8	1012.9	1097.8	1165.5
60°	855.8	795.6	770.0	774.0	782.5	801.6	856.3	886.9	930.1	1016.4	1084.2
62.5°	768.5	713.8	689.7	694.7	702.2	721.3	773.0	802.6	845.3	930.1	998.4
65°	682.1	631.4	610.9	615.9	622.9	640.5	689.2	717.8	758.4	841.3	906.5
67.5°	596.8	550.6	533.6	538.6	544.1	560.7	600.8	632.0	670.1	748.9	810.6
70°	512.5	471.3	456.3	461.3	466.3	481.4	516.5	545.1	580.3	652.5	709.8
72.5°	429.2	389.0	381.5	386.0	390.0	403.1	436.7	459.3	489.9	554.1	603.3
75°	347.8	313.2	308.2	312.7	316.2	326.3	354.4	374.0	399.5	455.3	495.4
77.5°	269.5	240.4	238.4	241.9	245.5	252.5	274.6	295.1	315.2	356.4	392.0
80°	196.3	172.7	172.7	176.2	175.2	183.7	199.3	215.8	230.4	260.0	286.1
82.5°	129.5	110.9	113.4	115.9	117.5	121.0	130.5	143.1	152.1	170.2	187.2
85°	71.8	59.2	61.7	63.7	62.7	66.8	71.8	79.3	83.8	92.4	101.4
87.5°	26.6	22.1	22.6	24.1	25.1	27.1	27.1	31.6	32.1	33.1	35.1
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°	2296.4	2296.4	2296.4
2.5°	2241.7	2253.7	2262.8
5°	2203.0	2213.1	2221.1
7.5°	2165.4	2174.4	2181.5
10°	2129.8	2139.8	2144.8
12.5°	2093.1	2104.7	2108.7
15°	2057.0	2068.5	2073.5
17.5°	2019.8	2034.9	2040.4
20°	1985.2	2004.3	2008.8
22.5°	1950.1	1969.6	1975.2
25°	1911.9	1935.0	1940.5
27.5°	1871.3	1898.9	1904.4
30°	1830.6	1860.7	1866.2
32.5°	1786.9	1819.6	1824.6
35°	1741.3	1773.9	1779.9
37.5°	1690.6	1726.2	1738.2
40°	1637.9	1676.5	1689.1
42.5°	1582.6	1624.8	1637.9
45°	1523.4	1569.6	1584.6
47.5°	1463.7	1515.9	1528.9
50°	1398.9	1454.6	1470.2
52.5°	1331.2	1391.9	1407.5
55°	1260.9	1322.1	1339.2
57.5°	1184.6	1247.8	1265.9
60°	1104.8	1168.0	1185.1
62.5°	1023.0	1080.2	1096.8
65°	931.6	985.3	1000.4
67.5°	834.7	883.9	896.5
70°	731.8	774.5	785.5
72.5°	624.4	654.0	668.6
75°	513.5	537.1	548.1
77.5°	402.1	418.6	427.7
80°	293.1	302.7	310.2
82.5°	191.7	195.8	201.3
85°	103.4	103.4	106.9
87.5°	35.1	33.6	35.1
90°	0.0	0.0	0.0

(END OF REPORT)