

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: P834186

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2HI-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834186
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-LD4-2HI-20-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

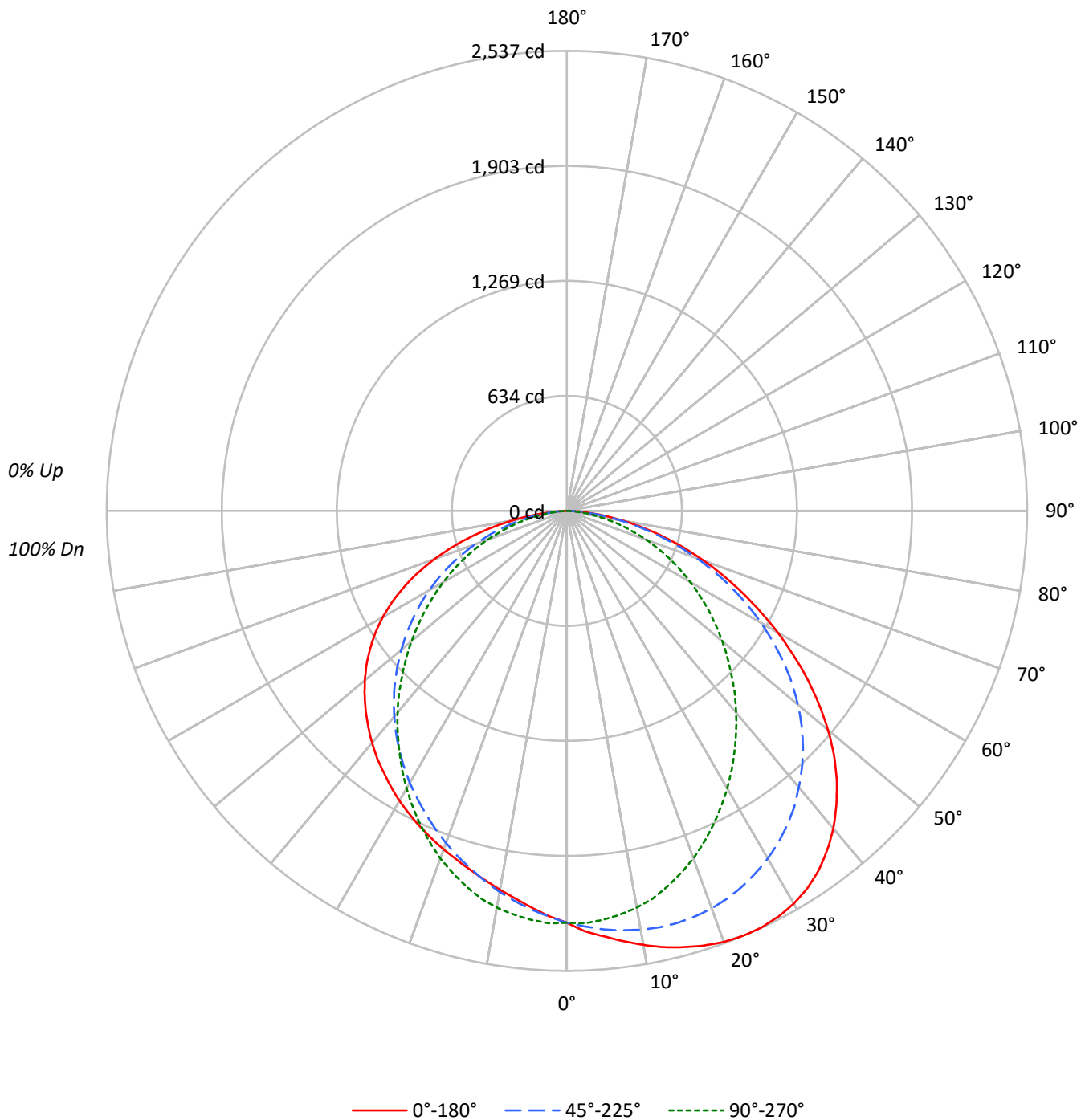
Lumens per Lamp: N/A
Luminaire Lumens: 6680.6 lumens
Efficiency: N/A
Efficacy: 75.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	6111	6111	6111
5°	6363	6115	5934
10°	6641	6069	5796
15°	6940	5972	5713
20°	7243	5840	5689
25°	7527	5670	5698
30°	7773	5493	5735
35°	7950	5297	5783
40°	8030	5101	5868
45°	8008	4885	5964
50°	7866	4680	6087
55°	7597	4465	6214
60°	7227	4235	6308
65°	6786	3976	6300
70°	6316	3667	6113
75°	5734	3221	5636
80°	4923	2647	4754
85°	3754	1809	3264

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.4	3.2
10°-20°	622.0	9.3
20°-30°	953.0	14.3
30°-40°	1163.0	17.4
40°-50°	1216.2	18.2
50°-60°	1100.7	16.5
60°-70°	833.6	12.5
70°-80°	464.6	7.0
80°-90°	112.1	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°	1790.4	26.8
0°-40°	2953.3	44.2
0°-60°	5270.3	78.9
0°-90°	6680.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6680.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2271	2271	2271	2271	2271	
5°	2356	2316	2264	2208	2197	227
15°	2491	2352	2144	2044	2051	706
25°	2535	2286	1910	1842	1919	1170
35°	2420	2117	1612	1610	1760	1511
45°	2104	1841	1284	1340	1567	1619
55°	1619	1462	952	1036	1324	1445
65°	1066	1002	624	710	989	1057
75°	552	521	310	370	542	585
85°	122	107	59	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°	2271.1	2271.1	2271.1	2271.1	2271.1	2271.1	2271.1	2271.1	2271.1	2271.1	2271.1
2.5°	2321.3	2310.3	2301.4	2304.9	2306.9	2299.9	2294.0	2294.9	2289.0	2300.4	2273.6
5°	2355.5	2345.6	2335.2	2339.1	2335.2	2324.7	2316.3	2313.8	2297.9	2304.4	2277.1
7.5°	2393.7	2382.8	2367.4	2371.9	2363.5	2344.1	2333.2	2326.7	2302.4	2302.9	2272.6
10°	2430.5	2421.0	2400.2	2403.2	2387.8	2362.0	2344.6	2335.7	2301.4	2296.4	2265.2
12.5°	2464.7	2451.8	2429.5	2431.0	2408.6	2374.4	2352.0	2339.1	2294.4	2279.6	2248.8
15°	2491.0	2478.6	2451.8	2451.3	2422.5	2377.8	2352.5	2334.7	2278.1	2254.7	2222.5
17.5°	2513.4	2502.0	2468.7	2467.7	2432.9	2376.4	2346.1	2323.7	2254.2	2225.4	2189.7
20°	2529.3	2517.8	2480.6	2477.1	2435.4	2368.9	2332.7	2304.4	2223.0	2188.7	2149.0
22.5°	2536.7	2525.3	2483.1	2478.1	2429.5	2354.0	2313.3	2280.1	2187.2	2142.5	2101.3
25°	2535.2	2524.3	2476.6	2471.7	2418.1	2331.7	2286.0	2247.8	2142.0	2089.4	2048.7
27.5°	2522.8	2514.4	2464.2	2457.8	2397.2	2301.4	2252.7	2210.6	2091.9	2033.3	1989.2
30°	2501.5	2495.0	2441.9	2435.9	2371.4	2268.1	2214.0	2165.4	2037.8	1971.8	1927.1
32.5°	2467.2	2461.2	2407.6	2402.2	2336.6	2225.4	2168.9	2118.7	1978.7	1905.8	1861.1
35°	2420.0	2416.6	2364.4	2358.5	2292.0	2176.8	2116.7	2061.6	1917.2	1834.8	1792.1
37.5°	2358.0	2358.0	2307.9	2301.4	2236.4	2117.2	2058.2	1999.6	1847.7	1760.3	1718.1
40°	2286.0	2292.5	2241.3	2234.9	2171.8	2053.2	1988.7	1927.1	1772.7	1681.9	1640.7
42.5°	2199.6	2205.6	2162.9	2156.9	2097.9	1979.2	1919.2	1852.1	1694.3	1601.9	1559.3
45°	2104.3	2112.3	2074.0	2069.6	2014.5	1898.3	1840.7	1772.7	1612.4	1518.5	1476.8
47.5°	1998.1	2008.5	1975.3	1972.8	1921.6	1815.4	1755.3	1686.3	1526.5	1431.7	1392.5
50°	1878.9	1893.8	1866.5	1866.5	1820.9	1715.1	1663.0	1594.0	1437.1	1342.3	1303.6
52.5°	1751.4	1770.2	1749.9	1750.4	1713.1	1618.3	1564.2	1496.7	1343.8	1250.5	1214.7
55°	1619.3	1637.7	1624.8	1626.8	1597.5	1511.1	1462.0	1394.9	1248.5	1157.6	1123.9
57.5°	1481.3	1501.2	1492.7	1496.7	1476.3	1398.9	1347.8	1289.2	1150.2	1060.4	1031.6
60°	1342.8	1361.7	1357.2	1362.7	1349.8	1282.7	1236.1	1175.5	1051.4	965.0	939.7
62.5°	1202.8	1220.2	1219.2	1225.2	1218.2	1162.6	1120.9	1069.3	949.2	869.7	846.4
65°	1065.8	1080.7	1079.7	1086.2	1084.7	1040.0	1002.3	955.1	846.9	773.9	753.6
67.5°	932.8	945.2	941.7	949.2	951.1	915.4	882.6	840.4	749.6	678.6	661.2
70°	802.7	811.1	806.7	811.6	816.1	789.3	761.5	724.3	645.8	583.3	568.9
72.5°	675.1	681.1	674.1	679.1	683.1	663.7	640.9	608.6	543.6	489.5	477.6
75°	551.5	560.0	545.6	550.5	553.5	534.1	520.7	494.4	438.3	396.6	388.7
77.5°	431.9	436.8	428.9	426.9	428.9	415.0	404.6	384.2	342.0	307.8	302.8
80°	317.7	320.7	312.7	310.8	312.2	302.3	294.4	279.5	249.7	223.9	221.9
82.5°	213.0	214.5	207.5	205.5	206.5	203.5	194.1	183.7	169.8	147.9	147.4
85°	121.6	121.6	116.7	114.7	115.7	110.7	107.2	101.8	96.3	81.4	82.4
87.5°	44.7	44.7	42.2	41.7	46.7	41.2	39.7	37.2	38.7	30.8	32.8
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°	2271.1	2271.1	2271.1	2271.1	2271.1	2271.1	2271.1	2271.1	2271.1	2271.1	2271.1
2.5°	2281.0	2276.1	2271.6	2256.2	2262.7	2246.8	2245.8	2239.8	2235.4	2226.9	2237.9
5°	2273.6	2263.7	2250.8	2232.4	2237.9	2219.0	2215.0	2208.1	2202.1	2191.2	2199.6
7.5°	2261.7	2245.3	2224.9	2201.6	2209.1	2185.7	2179.8	2172.3	2167.4	2154.5	2161.9
10°	2244.3	2221.0	2197.2	2168.9	2174.3	2149.0	2141.6	2133.6	2129.1	2117.7	2125.2
12.5°	2217.5	2189.2	2156.9	2126.2	2132.1	2108.3	2098.4	2089.9	2088.4	2079.0	2087.9
15°	2182.8	2143.5	2110.3	2077.5	2084.5	2056.7	2052.2	2043.8	2046.2	2039.8	2050.7
17.5°	2138.6	2093.4	2057.2	2021.9	2028.9	2005.5	2002.1	1998.1	2000.6	1999.6	2011.5
20°	2088.9	2039.3	1997.6	1962.8	1966.8	1948.4	1949.9	1948.9	1953.9	1959.4	1975.7
22.5°	2032.8	1976.7	1933.1	1897.3	1903.3	1887.4	1894.3	1896.3	1904.8	1917.2	1938.0
25°	1969.8	1909.7	1864.1	1830.3	1835.8	1825.3	1837.2	1842.2	1855.6	1876.5	1897.8
27.5°	1903.8	1840.2	1791.6	1759.3	1769.7	1759.3	1777.2	1787.1	1807.5	1830.3	1856.6
30°	1833.8	1767.7	1717.6	1688.8	1698.7	1689.3	1718.1	1731.5	1751.9	1783.1	1814.4
32.5°	1760.3	1690.8	1641.7	1619.3	1626.3	1624.8	1657.0	1671.9	1699.2	1735.0	1768.2
35°	1684.8	1612.4	1562.7	1543.9	1552.3	1554.3	1593.0	1610.4	1640.2	1683.4	1719.1
37.5°	1606.9	1532.9	1484.3	1468.9	1476.3	1483.8	1529.0	1546.3	1580.1	1627.3	1666.5
40°	1526.0	1452.0	1404.4	1392.0	1399.4	1407.3	1456.5	1480.3	1517.1	1568.2	1610.9
42.5°	1444.1	1370.1	1323.9	1315.0	1322.5	1337.8	1390.0	1412.3	1451.0	1507.6	1554.8
45°	1360.7	1283.7	1243.5	1236.6	1244.5	1262.4	1313.5	1340.3	1381.5	1443.6	1494.2
47.5°	1276.3	1201.3	1163.1	1158.6	1166.6	1186.4	1243.0	1267.4	1311.0	1377.1	1431.7
50°	1190.9	1117.9	1081.2	1079.7	1087.2	1108.5	1162.6	1191.4	1236.6	1310.5	1366.6
52.5°	1104.5	1034.5	1001.3	1001.3	1008.2	1030.1	1084.7	1114.5	1161.1	1239.1	1301.1
55°	1018.2	951.6	919.9	922.3	932.3	951.1	1004.3	1035.5	1082.7	1163.6	1229.1
57.5°	931.8	868.7	839.9	843.4	852.8	871.7	923.8	959.1	1001.8	1085.7	1152.7
60°	846.4	786.8	761.5	765.5	773.9	792.8	846.9	877.2	919.9	1005.2	1072.3
62.5°	760.0	705.9	682.1	687.0	694.5	713.4	764.5	793.8	836.0	919.9	987.4
65°	674.6	624.5	604.1	609.1	616.1	633.4	681.6	709.9	750.1	832.0	896.5
67.5°	590.2	544.6	527.7	532.7	538.1	554.5	594.2	625.0	662.7	740.7	801.7
70°	506.8	466.1	451.2	456.2	461.2	476.1	510.8	539.1	573.9	645.3	701.9
72.5°	424.4	384.7	377.3	381.7	385.7	398.6	431.9	454.2	484.5	548.0	596.7
75°	344.0	309.8	304.8	309.3	312.7	322.7	350.5	369.8	395.1	450.3	490.0
77.5°	266.6	237.8	235.8	239.3	242.7	249.7	271.5	291.9	311.8	352.5	387.7
80°	194.1	170.8	170.8	174.2	173.3	181.7	197.1	213.5	227.9	257.1	283.0
82.5°	128.1	109.7	112.2	114.7	116.2	119.6	129.1	141.5	150.4	168.3	185.2
85°	71.0	58.6	61.1	63.0	62.1	66.0	71.0	78.4	82.9	91.3	100.3
87.5°	26.3	21.8	22.3	23.8	24.8	26.8	26.8	31.3	31.8	32.8	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°	2271.1	2271.1	2271.1
2.5°	2217.0	2228.9	2237.9
5°	2178.8	2188.7	2196.7
7.5°	2141.6	2150.5	2157.4
10°	2106.3	2116.2	2121.2
12.5°	2070.1	2081.5	2085.5
15°	2034.3	2045.7	2050.7
17.5°	1997.6	2012.5	2017.9
20°	1963.3	1982.2	1986.7
22.5°	1928.6	1947.9	1953.4
25°	1890.9	1913.7	1919.2
27.5°	1850.6	1878.0	1883.4
30°	1810.4	1840.2	1845.7
32.5°	1767.3	1799.5	1804.5
35°	1722.1	1754.3	1760.3
37.5°	1671.9	1707.2	1719.1
40°	1619.8	1658.0	1670.4
42.5°	1565.2	1606.9	1619.8
45°	1506.6	1552.3	1567.2
47.5°	1447.6	1499.2	1512.1
50°	1383.5	1438.6	1454.0
52.5°	1316.5	1376.6	1392.0
55°	1247.0	1307.6	1324.4
57.5°	1171.5	1234.1	1252.0
60°	1092.6	1155.2	1172.0
62.5°	1011.7	1068.3	1084.7
65°	921.4	974.5	989.4
67.5°	825.5	874.2	886.6
70°	723.8	766.0	776.9
72.5°	617.5	646.8	661.2
75°	507.8	531.2	542.1
77.5°	397.6	414.0	422.9
80°	289.9	299.3	306.8
82.5°	189.6	193.6	199.1
85°	102.3	102.3	105.7
87.5°	34.7	33.3	34.7
90°	0.0	0.0	0.0

(END OF REPORT)