

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: P835217

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4STD-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835217
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-35-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

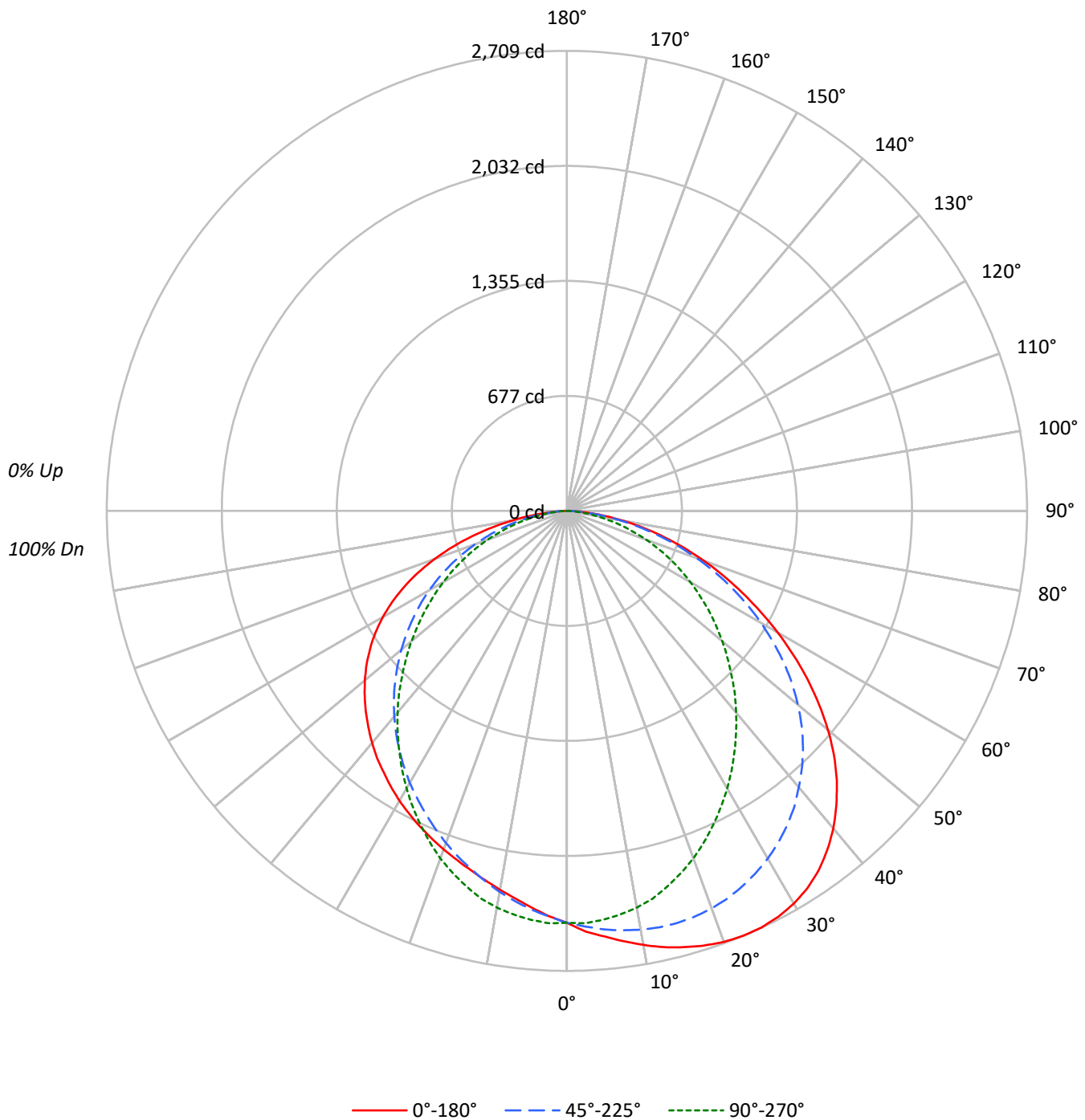
Lumens per Lamp: N/A
Luminaire Lumens: 7133.5 lumens
Efficiency: N/A
Efficacy: 107.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6526	6526	6526
5°	6794	6529	6336
10°	7092	6480	6189
15°	7410	6377	6101
20°	7734	6236	6075
25°	8038	6055	6085
30°	8300	5865	6124
35°	8489	5656	6175
40°	8575	5447	6266
45°	8551	5217	6369
50°	8400	4997	6500
55°	8112	4768	6635
60°	7717	4522	6736
65°	7247	4246	6727
70°	6744	3916	6527
75°	6123	3439	6018
80°	5258	2825	5077
85°	4011	1930	3486

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.0	3.2
10°-20°	664.2	9.3
20°-30°	1017.6	14.3
30°-40°	1241.8	17.4
40°-50°	1298.7	18.2
50°-60°	1175.4	16.5
60°-70°	890.2	12.5
70°-80°	496.1	7.0
80°-90°	119.7	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°	1911.8	26.8
0°-40°	3153.6	44.2
0°-60°	5627.7	78.9
0°-90°	7133.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7133.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2425	2425	2425	2425	2425	
5°	2515	2473	2417	2358	2346	243
15°	2660	2512	2289	2182	2190	754
25°	2707	2441	2039	1967	2049	1249
35°	2584	2260	1722	1720	1880	1614
45°	2247	1966	1371	1431	1674	1729
55°	1729	1561	1016	1106	1414	1543
65°	1138	1070	667	758	1056	1129
75°	589	556	331	395	579	625
85°	130	114	62	84	113	156
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°	2425.1	2425.1	2425.1	2425.1	2425.1	2425.1	2425.1	2425.1	2425.1	2425.1	2425.1
2.5°	2478.7	2467.0	2457.4	2461.2	2463.3	2455.9	2449.5	2450.6	2444.2	2456.4	2427.8
5°	2515.2	2504.6	2493.5	2497.7	2493.5	2482.4	2473.4	2470.7	2453.7	2460.6	2431.5
7.5°	2556.0	2544.4	2527.9	2532.7	2523.7	2503.0	2491.4	2484.5	2458.5	2459.0	2426.7
10°	2595.3	2585.2	2562.9	2566.1	2549.7	2522.1	2503.6	2494.0	2457.4	2452.1	2418.8
12.5°	2631.8	2618.1	2594.2	2595.8	2571.9	2535.4	2511.5	2497.7	2450.0	2434.1	2401.3
15°	2659.9	2646.7	2618.1	2617.5	2586.8	2539.1	2512.0	2493.0	2432.5	2407.6	2373.2
17.5°	2683.8	2671.6	2636.1	2635.0	2597.9	2537.5	2505.2	2481.3	2407.1	2376.3	2338.2
20°	2700.8	2688.6	2648.8	2645.1	2600.6	2529.5	2490.8	2460.6	2373.7	2337.1	2294.7
22.5°	2708.7	2696.5	2651.5	2646.2	2594.2	2513.6	2470.2	2434.7	2335.5	2287.8	2243.8
25°	2707.1	2695.5	2644.6	2639.3	2582.0	2489.8	2441.0	2400.2	2287.3	2231.1	2187.6
27.5°	2693.9	2684.9	2631.3	2624.4	2559.8	2457.4	2405.5	2360.4	2233.8	2171.2	2124.0
30°	2671.1	2664.2	2607.5	2601.1	2532.2	2421.9	2364.2	2312.2	2176.0	2105.5	2057.8
32.5°	2634.5	2628.1	2570.9	2565.1	2495.1	2376.3	2315.9	2262.4	2112.9	2035.0	1987.3
35°	2584.1	2580.4	2524.8	2518.4	2447.4	2324.4	2260.3	2201.4	2047.2	1959.2	1913.6
37.5°	2517.9	2517.9	2464.3	2457.4	2388.0	2260.8	2197.7	2135.2	1973.0	1879.7	1834.6
40°	2441.0	2447.9	2393.3	2386.4	2319.1	2192.4	2123.5	2057.8	1892.9	1795.9	1751.9
42.5°	2348.8	2355.1	2309.6	2303.2	2240.1	2113.4	2049.3	1977.7	1809.2	1710.6	1665.0
45°	2247.0	2255.5	2214.7	2209.9	2151.1	2027.0	1965.5	1892.9	1721.7	1621.5	1577.0
47.5°	2133.6	2144.7	2109.2	2106.5	2051.9	1938.5	1874.4	1800.7	1630.0	1528.7	1486.9
50°	2006.4	2022.3	1993.1	1993.1	1944.3	1831.4	1775.8	1702.1	1534.6	1433.3	1392.0
52.5°	1870.1	1890.3	1868.5	1869.1	1829.3	1728.1	1670.3	1598.2	1434.9	1335.3	1297.1
55°	1729.1	1748.7	1734.9	1737.1	1705.8	1613.6	1561.1	1489.5	1333.1	1236.1	1200.1
57.5°	1581.8	1603.0	1593.9	1598.2	1576.5	1493.8	1439.2	1376.6	1228.2	1132.2	1101.5
60°	1433.9	1454.0	1449.2	1455.1	1441.3	1369.7	1319.9	1255.2	1122.7	1030.5	1003.4
62.5°	1284.4	1302.9	1301.9	1308.2	1300.8	1241.4	1196.9	1141.8	1013.5	928.7	903.8
65°	1138.1	1154.0	1152.9	1159.8	1158.2	1110.5	1070.2	1019.9	904.3	826.4	804.7
67.5°	996.0	1009.3	1005.6	1013.5	1015.6	977.5	942.5	897.4	800.4	724.6	706.1
70°	857.1	866.1	861.4	866.7	871.5	842.8	813.1	773.4	689.6	622.8	607.5
72.5°	720.9	727.3	719.8	725.1	729.4	708.7	684.3	649.9	580.4	522.7	509.9
75°	588.9	597.9	582.6	587.9	591.0	570.4	556.1	528.0	468.1	423.5	415.1
77.5°	461.2	466.5	458.0	455.9	458.0	443.1	432.0	410.3	365.2	328.6	323.3
80°	339.3	342.4	333.9	331.8	333.4	322.8	314.3	298.4	266.6	239.1	236.9
82.5°	227.4	229.0	221.6	219.5	220.5	217.3	207.3	196.1	181.3	158.0	157.4
85°	129.9	129.9	124.6	122.4	123.5	118.2	114.5	108.7	102.8	86.9	88.0
87.5°	47.7	47.7	45.1	44.5	49.8	44.0	42.4	39.8	41.3	32.9	35.0
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°	2425.1	2425.1	2425.1	2425.1	2425.1	2425.1	2425.1	2425.1	2425.1	2425.1	2425.1
2.5°	2435.7	2430.4	2425.6	2409.2	2416.1	2399.1	2398.1	2391.7	2386.9	2377.9	2389.6
5°	2427.8	2417.2	2403.4	2383.8	2389.6	2369.5	2365.2	2357.8	2351.4	2339.8	2348.8
7.5°	2415.0	2397.5	2375.8	2350.9	2358.9	2333.9	2327.6	2319.6	2314.3	2300.5	2308.5
10°	2396.5	2371.6	2346.1	2315.9	2321.7	2294.7	2286.8	2278.3	2273.5	2261.3	2269.3
12.5°	2367.9	2337.6	2303.2	2270.3	2276.7	2251.2	2240.6	2231.6	2230.0	2220.0	2229.5
15°	2330.8	2288.9	2253.4	2218.4	2225.8	2196.1	2191.3	2182.3	2185.0	2178.1	2189.8
17.5°	2283.6	2235.3	2196.6	2159.0	2166.4	2141.5	2137.8	2133.6	2136.2	2135.2	2147.9
20°	2230.6	2177.6	2133.0	2095.9	2100.2	2080.6	2082.2	2081.1	2086.4	2092.2	2109.7
22.5°	2170.7	2110.8	2064.1	2026.0	2032.3	2015.4	2022.8	2024.9	2033.9	2047.2	2069.4
25°	2103.4	2039.2	1990.4	1954.4	1960.2	1949.1	1961.8	1967.1	1981.4	2003.7	2026.5
27.5°	2032.9	1965.0	1913.1	1878.6	1889.7	1878.6	1897.7	1908.3	1930.0	1954.4	1982.5
30°	1958.1	1887.6	1834.1	1803.3	1813.9	1803.9	1834.6	1848.9	1870.6	1904.0	1937.4
32.5°	1879.7	1805.5	1753.0	1729.1	1736.5	1734.9	1769.4	1785.3	1814.5	1852.6	1888.1
35°	1799.1	1721.7	1668.7	1648.5	1657.6	1659.7	1701.0	1719.6	1751.4	1797.5	1835.7
37.5°	1715.9	1636.9	1584.9	1568.5	1576.5	1584.4	1632.6	1651.2	1687.2	1737.6	1779.5
40°	1629.5	1550.5	1499.6	1486.3	1494.3	1502.8	1555.3	1580.7	1619.9	1674.5	1720.1
42.5°	1542.0	1463.0	1413.7	1404.2	1412.1	1428.6	1484.2	1508.1	1549.4	1609.9	1660.2
45°	1452.9	1370.8	1327.8	1320.4	1328.9	1348.0	1402.6	1431.2	1475.2	1541.5	1595.5
47.5°	1362.8	1282.8	1242.0	1237.2	1245.7	1266.9	1327.3	1353.3	1399.9	1470.4	1528.7
50°	1271.7	1193.7	1154.5	1152.9	1160.9	1183.7	1241.4	1272.2	1320.4	1399.4	1459.3
52.5°	1179.4	1104.7	1069.2	1069.2	1076.6	1099.9	1158.2	1190.0	1239.9	1323.1	1389.3
55°	1087.2	1016.2	982.2	984.9	995.5	1015.6	1072.4	1105.7	1156.1	1242.5	1312.5
57.5°	995.0	927.6	896.9	900.6	910.7	930.8	986.5	1024.1	1069.7	1159.3	1230.8
60°	903.8	840.2	813.1	817.4	826.4	846.5	904.3	936.7	982.2	1073.4	1145.0
62.5°	811.6	753.8	728.3	733.6	741.6	761.7	816.3	847.6	892.7	982.2	1054.3
65°	720.4	666.8	645.1	650.4	657.8	676.4	727.8	758.0	800.9	888.4	957.3
67.5°	630.3	581.5	563.5	568.8	574.6	592.1	634.5	667.4	707.7	790.9	856.1
70°	541.2	497.7	481.8	487.1	492.4	508.3	545.5	575.7	612.8	689.1	749.5
72.5°	453.2	410.8	402.9	407.6	411.9	425.7	461.2	485.0	517.4	585.2	637.2
75°	367.3	330.8	325.5	330.2	333.9	344.6	374.2	394.9	421.9	480.8	523.2
77.5°	284.7	253.9	251.8	255.5	259.2	266.6	290.0	311.7	332.9	376.4	414.0
80°	207.3	182.3	182.3	186.1	185.0	194.0	210.4	227.9	243.3	274.6	302.1
82.5°	136.8	117.1	119.8	122.4	124.0	127.7	137.8	151.1	160.6	179.7	197.7
85°	75.8	62.5	65.2	67.3	66.3	70.5	75.8	83.8	88.5	97.5	107.1
87.5°	28.1	23.3	23.9	25.4	26.5	28.6	28.6	33.4	33.9	35.0	37.1
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°	2425.1	2425.1	2425.1
2.5°	2367.3	2380.1	2389.6
5°	2326.5	2337.1	2345.6
7.5°	2286.8	2296.3	2303.7
10°	2249.1	2259.7	2265.0
12.5°	2210.4	2222.6	2226.9
15°	2172.3	2184.5	2189.8
17.5°	2133.0	2148.9	2154.8
20°	2096.5	2116.6	2121.4
22.5°	2059.4	2080.0	2085.9
25°	2019.1	2043.5	2049.3
27.5°	1976.1	2005.3	2011.1
30°	1933.2	1965.0	1970.8
32.5°	1887.1	1921.5	1926.8
35°	1838.8	1873.3	1879.7
37.5°	1785.3	1822.9	1835.7
40°	1729.6	1770.5	1783.7
42.5°	1671.3	1715.9	1729.6
45°	1608.8	1657.6	1673.5
47.5°	1545.7	1600.8	1614.6
50°	1477.3	1536.2	1552.6
52.5°	1405.8	1469.9	1486.3
55°	1331.6	1396.2	1414.3
57.5°	1251.0	1317.8	1336.9
60°	1166.7	1233.5	1251.5
62.5°	1080.3	1140.7	1158.2
65°	983.8	1040.5	1056.4
67.5°	881.5	933.5	946.7
70°	772.9	817.9	829.6
72.5°	659.4	690.7	706.1
75°	542.3	567.2	578.8
77.5°	424.6	442.1	451.6
80°	309.6	319.6	327.6
82.5°	202.5	206.7	212.6
85°	109.2	109.2	112.9
87.5°	37.1	35.5	37.1
90°	0.0	0.0	0.0

(END OF REPORT)