

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: METALUX

Report Number: P229861

Luminaire Tested: **24RLN-LD5-55-UNV-L840-CD1-SVPD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P229861
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36062)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24RLN-LD5-55-UNV-L840-CD1-SVPD1-U
Description: METALUX 2X4 RLN LED TROFFER WITH SENSOR
Light Source: (252)4000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5486.0 lumens
Efficiency: N/A
Efficacy: 128.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.22 / 1.31
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

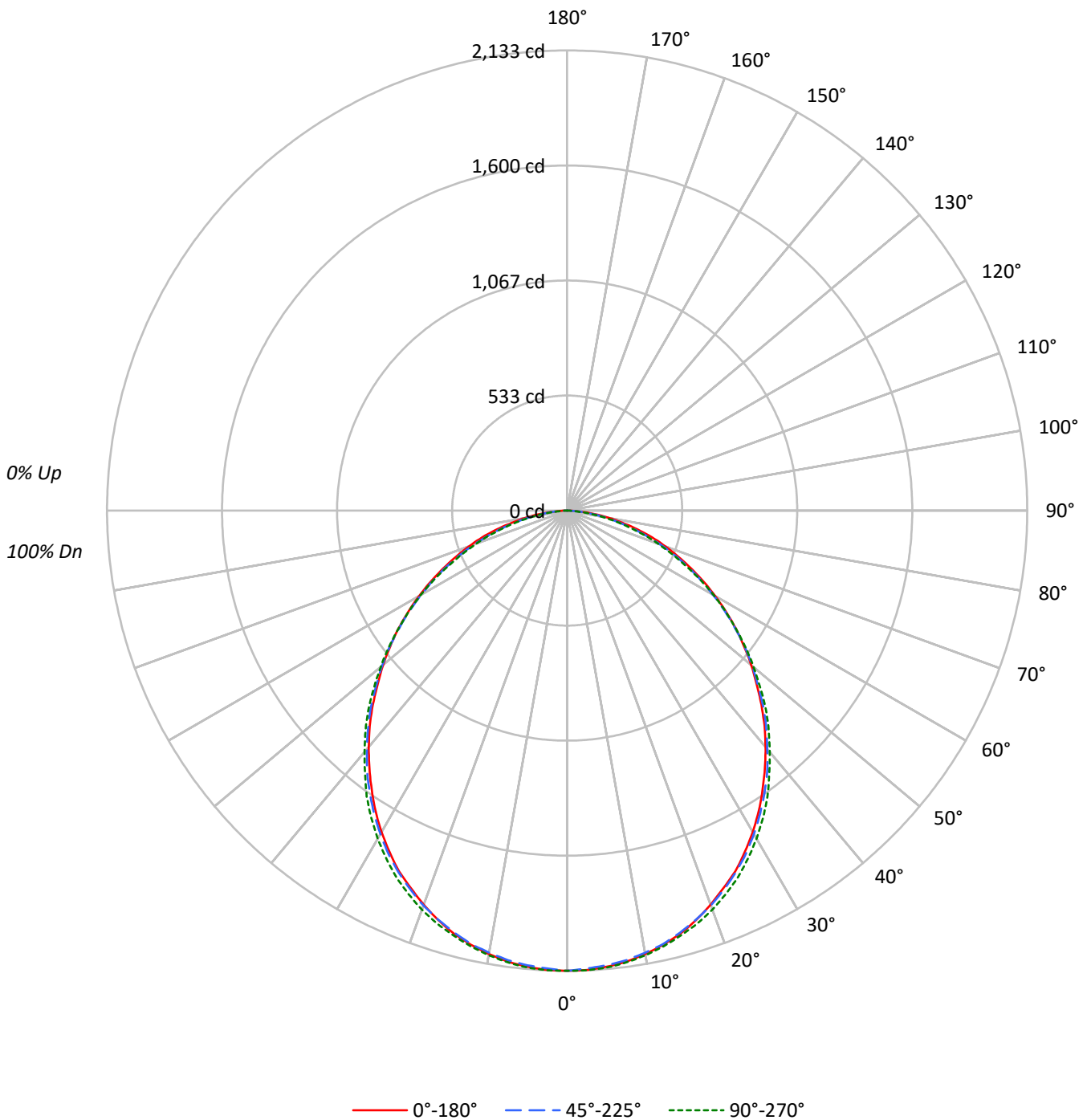
Input Watts (W): 42.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P229861

CATALOG NUMBER: 24RLN-LD5-55-UNV-L840-CD1-SVPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P229861

CATALOG NUMBER: 24RLN-LD5-55-UNV-L840-CD1-SVPD1-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | |
| RC | 80 | | | | 70 | | | | 50 | | | | 30 | | | | 10 | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 109 | 105 | 101 | 97 | 107 | 102 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 89 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 75 | 80 | 76 | 73 | 71 |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | 74 | 68 | 64 | 71 | 66 | 63 | 60 |
| 4 | 84 | 72 | 63 | 57 | 81 | 71 | 63 | 56 | 68 | 61 | 56 | 66 | 60 | 55 | 64 | 58 | 54 | 52 |
| 5 | 77 | 64 | 56 | 49 | 75 | 63 | 55 | 49 | 61 | 54 | 48 | 59 | 53 | 48 | 57 | 52 | 47 | 45 |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 49 | 43 | 55 | 48 | 42 | 54 | 47 | 42 | 52 | 46 | 42 | 40 |
| 7 | 66 | 53 | 44 | 38 | 64 | 52 | 44 | 38 | 50 | 43 | 38 | 49 | 42 | 37 | 48 | 42 | 37 | 35 |
| 8 | 62 | 48 | 40 | 34 | 60 | 48 | 40 | 34 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 33 | 31 |
| 9 | 58 | 44 | 36 | 31 | 56 | 44 | 36 | 31 | 43 | 35 | 31 | 42 | 35 | 30 | 41 | 35 | 30 | 28 |
| 10 | 54 | 41 | 33 | 28 | 53 | 40 | 33 | 28 | 39 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 28 | 26 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3267 | 3267 | 3267 |
| 5° | 3264 | 3253 | 3269 |
| 10° | 3247 | 3236 | 3255 |
| 15° | 3219 | 3211 | 3233 |
| 20° | 3169 | 3175 | 3209 |
| 25° | 3118 | 3127 | 3168 |
| 30° | 3043 | 3062 | 3105 |
| 35° | 2953 | 2982 | 3028 |
| 40° | 2861 | 2885 | 2920 |
| 45° | 2759 | 2785 | 2823 |
| 50° | 2656 | 2668 | 2689 |
| 55° | 2552 | 2538 | 2547 |
| 60° | 2430 | 2392 | 2403 |
| 65° | 2292 | 2241 | 2203 |
| 70° | 2167 | 2050 | 2003 |
| 75° | 1996 | 1820 | 1758 |
| 80° | 1757 | 1541 | 1448 |
| 85° | 1381 | 1074 | 798 |



TEST NUMBER: P229861

CATALOG NUMBER: 24RLN-LD5-55-UNV-L840-CD1-SVPD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 201.3 | 3.7 |
| 10°-20° | 572.4 | 10.4 |
| 20°-30° | 853.2 | 15.6 |
| 30°-40° | 997.5 | 18.2 |
| 40°-50° | 990.5 | 18.1 |
| 50°-60° | 850.6 | 15.5 |
| 60°-70° | 612.7 | 11.2 |
| 70°-80° | 329.9 | 6.0 |
| 80°-90° | 77.8 | 1.4 |
| 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° | 1627.0 | 29.7 |
| 0°-40° | 2624.5 | 47.8 |
| 0°-60° | 4465.6 | 81.4 |
| 0°-90° | 5486.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5486.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2133 | 2133 | 2133 | 2133 | 2133 | |
| 5° | 2123 | 2121 | 2116 | 2123 | 2126 | 202 |
| 15° | 2030 | 2025 | 2025 | 2037 | 2039 | 572 |
| 25° | 1845 | 1838 | 1850 | 1869 | 1874 | 848 |
| 35° | 1579 | 1578 | 1595 | 1612 | 1620 | 988 |
| 45° | 1274 | 1270 | 1286 | 1296 | 1303 | 982 |
| 55° | 956 | 947 | 950 | 956 | 954 | 853 |
| 65° | 632 | 622 | 618 | 613 | 608 | 628 |
| 75° | 337 | 316 | 308 | 299 | 297 | 357 |
| 85° | 79 | 72 | 61 | 49 | 45 | 95 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P229861

CATALOG NUMBER: 24RLN-LD5-55-UNV-L840-CD1-SVPD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2133.1 | 2133.1 | 2133.1 | 2133.1 | 2133.1 |
| 2.5° | 2131.3 | 2129.6 | 2124.3 | 2131.3 | 2133.1 |
| 5° | 2122.6 | 2120.8 | 2115.6 | 2122.6 | 2126.1 |
| 7.5° | 2108.6 | 2105.1 | 2101.6 | 2108.6 | 2112.1 |
| 10° | 2087.6 | 2084.1 | 2080.7 | 2089.4 | 2092.9 |
| 12.5° | 2061.4 | 2057.9 | 2057.9 | 2064.9 | 2068.4 |
| 15° | 2030.0 | 2024.8 | 2024.8 | 2037.0 | 2038.7 |
| 17.5° | 1989.8 | 1986.3 | 1988.1 | 2002.0 | 2007.3 |
| 20° | 1944.4 | 1942.6 | 1947.9 | 1963.6 | 1968.8 |
| 22.5° | 1893.7 | 1892.0 | 1900.7 | 1919.9 | 1923.4 |
| 25° | 1844.8 | 1837.8 | 1850.1 | 1869.3 | 1874.5 |
| 27.5° | 1783.7 | 1778.4 | 1794.1 | 1811.6 | 1816.9 |
| 30° | 1720.8 | 1715.5 | 1731.3 | 1750.5 | 1755.7 |
| 32.5° | 1652.6 | 1649.1 | 1664.9 | 1684.1 | 1689.3 |
| 35° | 1579.3 | 1577.5 | 1595.0 | 1612.5 | 1619.5 |
| 37.5° | 1505.9 | 1504.2 | 1523.4 | 1537.3 | 1539.1 |
| 40° | 1430.8 | 1427.3 | 1443.0 | 1458.7 | 1460.5 |
| 42.5° | 1353.9 | 1348.7 | 1366.1 | 1378.4 | 1383.6 |
| 45° | 1273.5 | 1270.1 | 1285.8 | 1296.3 | 1303.2 |
| 47.5° | 1191.4 | 1191.4 | 1200.2 | 1212.4 | 1214.2 |
| 50° | 1114.6 | 1109.3 | 1119.8 | 1126.8 | 1128.5 |
| 52.5° | 1034.2 | 1029.0 | 1037.7 | 1039.5 | 1042.9 |
| 55° | 955.6 | 946.9 | 950.4 | 955.6 | 953.9 |
| 57.5° | 873.5 | 859.5 | 866.5 | 866.5 | 870.0 |
| 60° | 793.1 | 780.9 | 780.9 | 780.9 | 784.4 |
| 62.5° | 712.8 | 700.5 | 700.5 | 698.8 | 697.0 |
| 65° | 632.4 | 621.9 | 618.4 | 613.2 | 607.9 |
| 67.5° | 555.5 | 543.3 | 536.3 | 529.3 | 524.1 |
| 70° | 483.9 | 462.9 | 457.7 | 447.2 | 447.2 |
| 72.5° | 412.3 | 391.3 | 380.8 | 373.9 | 372.1 |
| 75° | 337.2 | 316.2 | 307.5 | 298.7 | 297.0 |
| 77.5° | 263.8 | 249.8 | 235.8 | 228.9 | 225.4 |
| 80° | 199.2 | 186.9 | 174.7 | 162.5 | 164.2 |
| 82.5° | 136.3 | 124.0 | 115.3 | 104.8 | 101.3 |
| 85° | 78.6 | 71.6 | 61.1 | 48.9 | 45.4 |
| 87.5° | 33.2 | 24.5 | 17.5 | 17.5 | 17.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)