

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: P295986

Luminaire Tested: **24RLN-LD5-60-UNV-L93050-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P295986
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-085-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24RLN-LD5-60-UNV-L93050-W2A1-U-4500K
Description: RLN LED 2x4 TUNABLE WHITE TROFFER
WITH STANDARD LENS
Light Source: (504) 90 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5626.0 lumens
Efficiency: N/A
Efficacy: 124.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.19 / 1.29
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

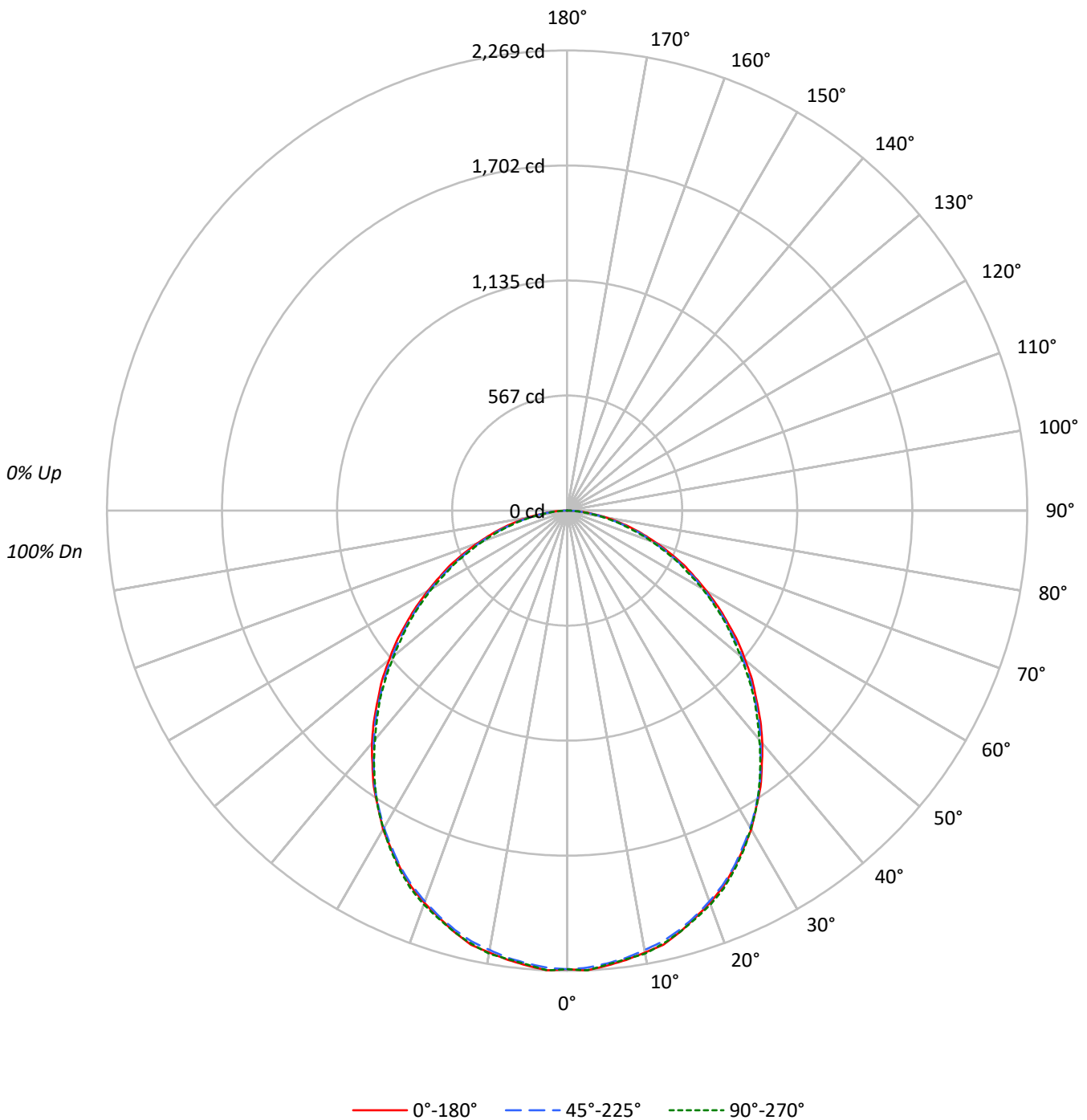
Input Watts (W): 45.105
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | | | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 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 | | | | | 100 | | | |
| 1 | 109 | 105 | 101 | 97 | 107 | 102 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 90 | 91 | 89 | 87 | 85 | | | | | 85 | | | |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 75 | 80 | 77 | 74 | 72 | | | | | 72 | | | |
| 3 | 91 | 81 | 73 | 67 | 89 | 80 | 72 | 66 | 77 | 70 | 65 | 74 | 69 | 64 | 71 | 67 | 63 | 61 | | | | | 61 | | | |
| 4 | 84 | 72 | 64 | 57 | 82 | 71 | 63 | 57 | 68 | 62 | 56 | 66 | 60 | 55 | 64 | 59 | 55 | 52 | | | | | 52 | | | |
| 5 | 77 | 65 | 56 | 50 | 75 | 64 | 55 | 49 | 62 | 54 | 49 | 60 | 53 | 48 | 58 | 52 | 48 | 46 | | | | | 46 | | | |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 49 | 43 | 56 | 48 | 43 | 54 | 48 | 43 | 53 | 47 | 42 | 40 | | | | | 40 | | | |
| 7 | 66 | 53 | 45 | 39 | 65 | 52 | 44 | 39 | 51 | 44 | 38 | 49 | 43 | 38 | 48 | 42 | 38 | 36 | | | | | 36 | | | |
| 8 | 62 | 49 | 40 | 35 | 60 | 48 | 40 | 35 | 47 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 | | | | | 32 | | | |
| 9 | 58 | 45 | 37 | 31 | 57 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 | | | | | 29 | | | |
| 10 | 54 | 41 | 34 | 28 | 53 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 | | | | | 26 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3043 | 3043 | 3043 |
| 5° | 3042 | 3027 | 3035 |
| 10° | 3023 | 3005 | 3030 |
| 15° | 2996 | 2981 | 2996 |
| 20° | 2947 | 2937 | 2960 |
| 25° | 2889 | 2883 | 2899 |
| 30° | 2820 | 2806 | 2814 |
| 35° | 2731 | 2719 | 2713 |
| 40° | 2630 | 2605 | 2589 |
| 45° | 2511 | 2487 | 2476 |
| 50° | 2397 | 2359 | 2333 |
| 55° | 2269 | 2235 | 2214 |
| 60° | 2134 | 2095 | 2071 |
| 65° | 2017 | 1941 | 1924 |
| 70° | 1849 | 1778 | 1742 |
| 75° | 1698 | 1594 | 1528 |
| 80° | 1491 | 1392 | 1308 |
| 85° | 1204 | 1121 | 953 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 213.4 | 3.8 |
| 10°-20° | 604.9 | 10.8 |
| 20°-30° | 894.8 | 15.9 |
| 30°-40° | 1032.7 | 18.4 |
| 40°-50° | 1008.6 | 17.9 |
| 50°-60° | 851.7 | 15.1 |
| 60°-70° | 606.7 | 10.8 |
| 70°-80° | 328.5 | 5.8 |
| 80°-90° | 84.8 | 1.5 |
| 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° | 1713.1 | 30.4 |
| 0°-40° | 2745.8 | 48.8 |
| 0°-60° | 4606.1 | 81.9 |
| 0°-90° | 5626.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5626.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2262 | 2262 | 2262 | 2262 | 2262 | |
| 5° | 2252 | 2252 | 2242 | 2247 | 2247 | 214 |
| 15° | 2151 | 2142 | 2140 | 2149 | 2151 | 606 |
| 25° | 1946 | 1935 | 1942 | 1949 | 1953 | 896 |
| 35° | 1662 | 1650 | 1655 | 1650 | 1652 | 1038 |
| 45° | 1320 | 1309 | 1307 | 1301 | 1301 | 1020 |
| 55° | 967 | 955 | 953 | 944 | 944 | 867 |
| 65° | 633 | 621 | 610 | 603 | 604 | 624 |
| 75° | 327 | 316 | 307 | 300 | 294 | 346 |
| 85° | 78 | 76 | 73 | 64 | 62 | 92 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P295986

CATALOG NUMBER: 24RLN-LD5-60-UNV-L93050-W2A1-U-4500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2261.5 | 2261.5 | 2261.5 | 2261.5 | 2261.5 |
| 2.5° | 2268.8 | 2259.7 | 2256.0 | 2257.9 | 2268.8 |
| 5° | 2252.4 | 2252.4 | 2241.5 | 2247.0 | 2247.0 |
| 7.5° | 2234.3 | 2236.1 | 2225.2 | 2234.3 | 2230.6 |
| 10° | 2212.5 | 2207.0 | 2199.8 | 2214.3 | 2217.9 |
| 12.5° | 2192.5 | 2179.8 | 2176.2 | 2185.3 | 2187.1 |
| 15° | 2150.8 | 2141.7 | 2139.9 | 2149.0 | 2150.8 |
| 17.5° | 2103.6 | 2105.4 | 2098.1 | 2110.8 | 2109.0 |
| 20° | 2058.2 | 2054.6 | 2051.0 | 2065.5 | 2067.3 |
| 22.5° | 2007.4 | 1996.5 | 2000.1 | 2012.8 | 2016.5 |
| 25° | 1945.7 | 1934.8 | 1942.1 | 1949.3 | 1952.9 |
| 27.5° | 1880.3 | 1874.9 | 1873.1 | 1882.2 | 1885.8 |
| 30° | 1815.0 | 1805.9 | 1805.9 | 1816.8 | 1811.4 |
| 32.5° | 1735.1 | 1727.9 | 1731.5 | 1735.1 | 1737.0 |
| 35° | 1662.5 | 1649.8 | 1655.3 | 1649.8 | 1651.7 |
| 37.5° | 1577.2 | 1568.2 | 1566.3 | 1564.5 | 1564.5 |
| 40° | 1497.4 | 1490.1 | 1482.9 | 1482.9 | 1473.8 |
| 42.5° | 1410.3 | 1401.2 | 1397.6 | 1392.1 | 1386.7 |
| 45° | 1319.5 | 1308.6 | 1306.8 | 1301.4 | 1301.4 |
| 47.5° | 1237.8 | 1221.5 | 1219.7 | 1208.8 | 1208.8 |
| 50° | 1145.3 | 1134.4 | 1127.1 | 1119.9 | 1114.4 |
| 52.5° | 1061.8 | 1050.9 | 1040.0 | 1032.7 | 1027.3 |
| 55° | 967.4 | 954.7 | 952.9 | 943.8 | 943.8 |
| 57.5° | 882.1 | 871.2 | 863.9 | 853.1 | 854.9 |
| 60° | 793.2 | 782.3 | 778.6 | 769.6 | 769.6 |
| 62.5° | 709.7 | 700.6 | 695.1 | 686.1 | 678.8 |
| 65° | 633.4 | 620.7 | 609.8 | 602.6 | 604.4 |
| 67.5° | 549.9 | 535.4 | 530.0 | 522.7 | 517.3 |
| 70° | 470.1 | 461.0 | 451.9 | 442.9 | 442.9 |
| 72.5° | 395.7 | 386.6 | 381.2 | 370.3 | 366.6 |
| 75° | 326.7 | 315.8 | 306.7 | 299.5 | 294.0 |
| 77.5° | 257.7 | 246.8 | 241.4 | 232.3 | 232.3 |
| 80° | 192.4 | 185.1 | 179.7 | 176.1 | 168.8 |
| 82.5° | 132.5 | 128.9 | 123.4 | 118.0 | 112.5 |
| 85° | 78.0 | 76.2 | 72.6 | 63.5 | 61.7 |
| 87.5° | 30.9 | 30.9 | 27.2 | 25.4 | 23.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)