

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: P296231

Luminaire Tested: **24RLN-LD5-80-RDP-UNV-L82765-W2A1-U-5700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296231
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36059-R2)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24RLN-LD5-80-RDP-UNV-L82765-W2A1-U-5700K
Description: RLN LED 2x4 TUNABLE WHITE TROFFER
WITH RDP LENS
Light Source: (504) 80 CRI LEDS TUNED TO 5700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6970.0 lumens
Efficiency: N/A
Efficacy: 111.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

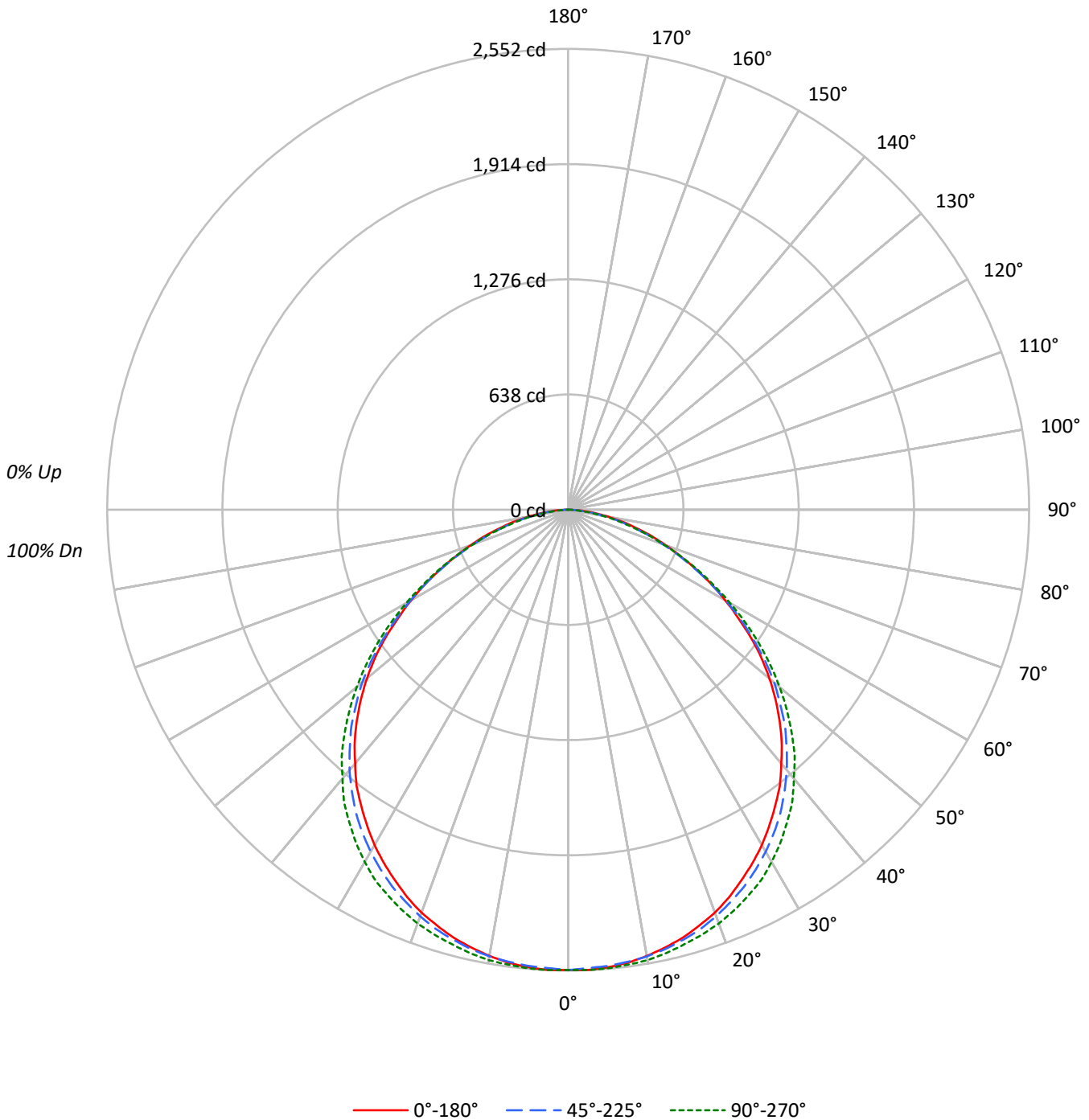
Input Watts (W): 62.403
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 73 | 71 | | | | | 71 | | | |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | 74 | 68 | 64 | 71 | 66 | 63 | 60 | | | | | 60 | | | |
| 4 | 83 | 72 | 63 | 57 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | 66 | 60 | 55 | 63 | 58 | 54 | 52 | | | | | 52 | | | |
| 5 | 77 | 64 | 55 | 49 | 75 | 63 | 55 | 49 | 61 | 54 | 48 | 59 | 53 | 48 | 57 | 52 | 47 | 45 | | | | | 45 | | | |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 49 | 43 | 55 | 48 | 42 | 53 | 47 | 42 | 52 | 46 | 41 | 39 | | | | | 39 | | | |
| 7 | 66 | 52 | 44 | 38 | 64 | 52 | 43 | 38 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 | 35 | | | | | 35 | | | |
| 8 | 61 | 48 | 39 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 33 | 45 | 38 | 33 | 43 | 37 | 33 | 31 | | | | | 31 | | | |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 | | | | | 28 | | | |
| 10 | 54 | 41 | 33 | 27 | 52 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 | | | | | 25 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3430 | 3430 | 3430 |
| 5° | 3436 | 3425 | 3443 |
| 10° | 3428 | 3432 | 3461 |
| 15° | 3418 | 3433 | 3470 |
| 20° | 3400 | 3430 | 3491 |
| 25° | 3364 | 3419 | 3502 |
| 30° | 3332 | 3397 | 3500 |
| 35° | 3283 | 3366 | 3470 |
| 40° | 3223 | 3307 | 3413 |
| 45° | 3150 | 3230 | 3331 |
| 50° | 3044 | 3116 | 3199 |
| 55° | 2897 | 2934 | 3021 |
| 60° | 2704 | 2718 | 2789 |
| 65° | 2483 | 2466 | 2525 |
| 70° | 2257 | 2195 | 2205 |
| 75° | 2007 | 1897 | 1883 |
| 80° | 1742 | 1557 | 1516 |
| 85° | 1428 | 1102 | 857 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 241.7 | 3.5 |
| 10°-20° | 696.9 | 10.0 |
| 20°-30° | 1063.8 | 15.3 |
| 30°-40° | 1282.4 | 18.4 |
| 40°-50° | 1307.8 | 18.8 |
| 50°-60° | 1119.2 | 16.1 |
| 60°-70° | 771.0 | 11.1 |
| 70°-80° | 395.2 | 5.7 |
| 80°-90° | 92.0 | 1.3 |
| 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° | 2002.4 | 28.7 |
| 0°-40° | 3284.8 | 47.1 |
| 0°-60° | 5711.8 | 81.9 |
| 0°-90° | 6970.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6970.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2549 | 2549 | 2549 | 2549 | 2549 | |
| 5° | 2544 | 2538 | 2536 | 2544 | 2549 | 242 |
| 15° | 2454 | 2451 | 2464 | 2483 | 2491 | 692 |
| 25° | 2266 | 2274 | 2303 | 2343 | 2359 | 1045 |
| 35° | 1999 | 2007 | 2049 | 2094 | 2113 | 1251 |
| 45° | 1655 | 1658 | 1698 | 1740 | 1750 | 1275 |
| 55° | 1235 | 1227 | 1251 | 1277 | 1288 | 1102 |
| 65° | 780 | 762 | 775 | 780 | 793 | 775 |
| 75° | 386 | 370 | 365 | 365 | 362 | 416 |
| 85° | 92 | 82 | 71 | 64 | 56 | 108 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P296231

CATALOG NUMBER: 24RLN-LD5-80-RDP-UNV-L82765-W2A1-U-5700K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2549.0 | 2549.0 | 2549.0 | 2549.0 | 2549.0 |
| 2.5° | 2551.6 | 2546.3 | 2541.0 | 2546.3 | 2551.6 |
| 5° | 2543.7 | 2538.4 | 2535.7 | 2543.7 | 2549.0 |
| 7.5° | 2530.4 | 2525.2 | 2525.2 | 2535.7 | 2541.0 |
| 10° | 2509.3 | 2506.6 | 2511.9 | 2522.5 | 2533.1 |
| 12.5° | 2482.9 | 2482.9 | 2490.8 | 2504.0 | 2514.6 |
| 15° | 2453.8 | 2451.1 | 2464.3 | 2482.9 | 2490.8 |
| 17.5° | 2414.1 | 2416.7 | 2435.3 | 2456.4 | 2467.0 |
| 20° | 2374.4 | 2377.1 | 2395.6 | 2424.7 | 2437.9 |
| 22.5° | 2324.2 | 2329.5 | 2350.6 | 2387.7 | 2400.9 |
| 25° | 2266.0 | 2274.0 | 2303.1 | 2342.7 | 2358.6 |
| 27.5° | 2207.9 | 2215.8 | 2247.5 | 2292.5 | 2313.6 |
| 30° | 2144.4 | 2155.0 | 2186.7 | 2234.3 | 2252.8 |
| 32.5° | 2073.0 | 2080.9 | 2120.6 | 2168.2 | 2186.7 |
| 35° | 1999.0 | 2006.9 | 2049.2 | 2094.2 | 2112.7 |
| 37.5° | 1924.9 | 1924.9 | 1967.2 | 2020.1 | 2038.6 |
| 40° | 1835.0 | 1837.7 | 1882.6 | 1932.9 | 1943.4 |
| 42.5° | 1750.4 | 1750.4 | 1790.1 | 1837.7 | 1856.2 |
| 45° | 1655.2 | 1657.9 | 1697.5 | 1739.8 | 1750.4 |
| 47.5° | 1557.4 | 1557.4 | 1591.8 | 1631.4 | 1642.0 |
| 50° | 1454.3 | 1449.0 | 1488.7 | 1520.4 | 1528.3 |
| 52.5° | 1348.5 | 1340.6 | 1372.3 | 1398.8 | 1409.3 |
| 55° | 1234.8 | 1226.9 | 1250.7 | 1277.1 | 1287.7 |
| 57.5° | 1115.8 | 1105.3 | 1131.7 | 1155.5 | 1160.8 |
| 60° | 1004.8 | 988.9 | 1010.1 | 1023.3 | 1036.5 |
| 62.5° | 893.7 | 875.2 | 891.1 | 899.0 | 909.6 |
| 65° | 780.0 | 761.5 | 774.7 | 780.0 | 793.2 |
| 67.5° | 671.6 | 658.4 | 661.0 | 669.0 | 674.3 |
| 70° | 573.8 | 557.9 | 557.9 | 557.9 | 560.6 |
| 72.5° | 483.9 | 460.1 | 457.4 | 460.1 | 460.1 |
| 75° | 386.0 | 370.2 | 364.9 | 364.9 | 362.2 |
| 77.5° | 309.4 | 288.2 | 285.6 | 280.3 | 275.0 |
| 80° | 224.8 | 206.2 | 201.0 | 198.3 | 195.7 |
| 82.5° | 156.0 | 140.1 | 134.9 | 129.6 | 121.6 |
| 85° | 92.5 | 82.0 | 71.4 | 63.5 | 55.5 |
| 87.5° | 34.4 | 31.7 | 26.4 | 23.8 | 23.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)