

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: P295558

Luminaire Tested: **14RLN-LD5-23-UNV-L82765-W2A1-U-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P295558
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1901-085-1)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14RLN-LD5-23-UNV-L82765-W2A1-U-2700K
Description: RLN LED 1x4 TUNABLE WHITE TROFFER
WITH STANDARD LENS
Light Source: (168) 80 CRI LEDS TUNED TO 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2172.0 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.01 / 1.18
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

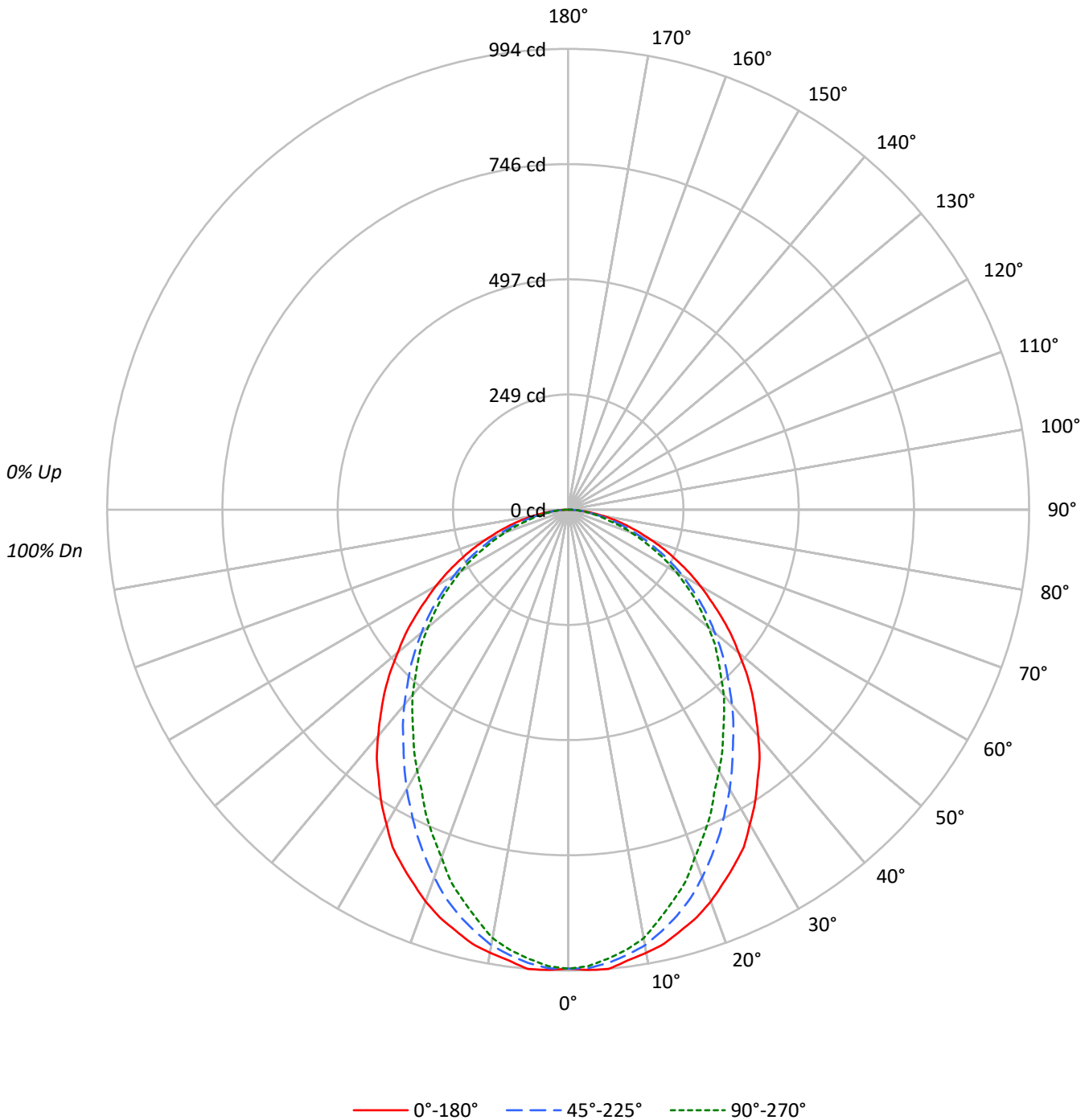
Input Watts (W): 20.646
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 110 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 77 | 74 | 72 |
| 3 | 92 | 82 | 74 | 68 | 89 | 80 | 73 | 67 | 77 | 71 | 66 | 75 | 69 | 65 | 72 | 68 | 64 | 62 |
| 4 | 85 | 73 | 65 | 58 | 82 | 72 | 64 | 58 | 69 | 63 | 57 | 67 | 61 | 56 | 65 | 60 | 56 | 54 |
| 5 | 78 | 66 | 57 | 51 | 76 | 65 | 57 | 51 | 63 | 55 | 50 | 61 | 54 | 49 | 59 | 53 | 49 | 47 |
| 6 | 72 | 60 | 51 | 45 | 70 | 59 | 50 | 45 | 57 | 50 | 44 | 55 | 49 | 44 | 54 | 48 | 43 | 41 |
| 7 | 67 | 54 | 46 | 40 | 66 | 53 | 45 | 40 | 52 | 45 | 39 | 51 | 44 | 39 | 49 | 43 | 39 | 37 |
| 8 | 63 | 50 | 42 | 36 | 61 | 49 | 41 | 36 | 48 | 41 | 36 | 47 | 40 | 35 | 45 | 40 | 35 | 33 |
| 9 | 59 | 46 | 38 | 33 | 57 | 45 | 38 | 32 | 44 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 |
| 10 | 55 | 42 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 29 | 40 | 34 | 29 | 39 | 33 | 29 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2664 | 2664 | 2664 |
| 5° | 2686 | 2652 | 2627 |
| 10° | 2652 | 2607 | 2564 |
| 15° | 2617 | 2525 | 2433 |
| 20° | 2575 | 2417 | 2286 |
| 25° | 2514 | 2294 | 2155 |
| 30° | 2435 | 2164 | 2021 |
| 35° | 2339 | 2034 | 1914 |
| 40° | 2240 | 1930 | 1834 |
| 45° | 2133 | 1829 | 1739 |
| 50° | 2009 | 1728 | 1652 |
| 55° | 1894 | 1631 | 1562 |
| 60° | 1773 | 1531 | 1447 |
| 65° | 1642 | 1414 | 1297 |
| 70° | 1494 | 1271 | 1148 |
| 75° | 1345 | 1135 | 935 |
| 80° | 1151 | 924 | 882 |
| 85° | 936 | 877 | 877 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 92.7 | 4.3 |
| 10°-20° | 254.4 | 11.7 |
| 20°-30° | 357.0 | 16.4 |
| 30°-40° | 396.0 | 18.2 |
| 40°-50° | 380.2 | 17.5 |
| 50°-60° | 318.6 | 14.7 |
| 60°-70° | 223.7 | 10.3 |
| 70°-80° | 116.8 | 5.4 |
| 80°-90° | 32.7 | 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° | 704.1 | 32.4 |
| 0°-40° | 1100.1 | 50.7 |
| 0°-60° | 1798.9 | 82.8 |
| 0°-90° | 2172.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2172.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 990 | 990 | 990 | 990 | 990 | |
| 5° | 994 | 982 | 982 | 975 | 972 | 94 |
| 15° | 940 | 923 | 906 | 883 | 873 | 265 |
| 25° | 847 | 816 | 772 | 735 | 726 | 390 |
| 35° | 712 | 672 | 619 | 589 | 583 | 446 |
| 45° | 561 | 517 | 481 | 462 | 457 | 432 |
| 55° | 404 | 373 | 348 | 337 | 333 | 361 |
| 65° | 258 | 240 | 222 | 208 | 204 | 256 |
| 75° | 129 | 119 | 109 | 96 | 90 | 137 |
| 85° | 30 | 28 | 28 | 28 | 28 | 36 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 989.9 | 989.9 | 989.9 | 989.9 | 989.9 |
| 2.5° | 993.6 | 988.1 | 989.9 | 989.9 | 985.3 |
| 5° | 994.5 | 981.7 | 981.7 | 975.2 | 972.5 |
| 7.5° | 980.7 | 970.6 | 968.8 | 960.6 | 957.8 |
| 10° | 970.6 | 960.6 | 954.1 | 943.1 | 938.5 |
| 12.5° | 958.7 | 943.1 | 931.2 | 912.8 | 905.5 |
| 15° | 939.5 | 922.9 | 906.4 | 882.6 | 873.4 |
| 17.5° | 922.0 | 902.8 | 878.0 | 851.4 | 841.3 |
| 20° | 899.1 | 876.1 | 844.0 | 807.3 | 798.2 |
| 22.5° | 872.5 | 845.9 | 808.3 | 768.8 | 761.5 |
| 25° | 846.8 | 816.5 | 772.5 | 734.9 | 725.7 |
| 27.5° | 820.2 | 783.5 | 733.0 | 692.7 | 683.5 |
| 30° | 783.5 | 745.9 | 696.3 | 656.9 | 650.5 |
| 32.5° | 749.5 | 711.9 | 657.8 | 625.7 | 618.4 |
| 35° | 711.9 | 672.5 | 619.3 | 589.0 | 582.6 |
| 37.5° | 678.0 | 632.1 | 585.3 | 556.0 | 552.3 |
| 40° | 637.6 | 596.3 | 549.5 | 527.5 | 522.0 |
| 42.5° | 598.2 | 556.9 | 512.8 | 493.6 | 487.2 |
| 45° | 560.6 | 517.4 | 480.7 | 462.4 | 456.9 |
| 47.5° | 521.1 | 481.7 | 446.8 | 432.1 | 428.4 |
| 50° | 479.8 | 445.0 | 412.8 | 399.1 | 394.5 |
| 52.5° | 443.1 | 407.3 | 380.7 | 367.9 | 362.4 |
| 55° | 403.7 | 373.4 | 347.7 | 336.7 | 333.0 |
| 57.5° | 364.2 | 339.5 | 314.7 | 304.6 | 299.1 |
| 60° | 329.4 | 304.6 | 284.4 | 272.5 | 268.8 |
| 62.5° | 293.6 | 272.5 | 253.2 | 242.2 | 237.6 |
| 65° | 257.8 | 240.4 | 222.0 | 208.3 | 203.7 |
| 67.5° | 224.8 | 205.5 | 190.8 | 178.9 | 174.3 |
| 70° | 189.9 | 176.1 | 161.5 | 150.5 | 145.9 |
| 72.5° | 157.8 | 147.7 | 134.9 | 122.9 | 118.3 |
| 75° | 129.4 | 119.3 | 109.2 | 96.3 | 89.9 |
| 77.5° | 100.9 | 94.5 | 84.4 | 73.4 | 73.4 |
| 80° | 74.3 | 70.6 | 59.6 | 57.8 | 56.9 |
| 82.5° | 51.4 | 49.5 | 43.1 | 42.2 | 42.2 |
| 85° | 30.3 | 28.4 | 28.4 | 28.4 | 28.4 |
| 87.5° | 12.8 | 13.8 | 14.7 | 14.7 | 15.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)