

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: P291532

Luminaire Tested: **14GR-LD5-43-A19/156-UNV-L92765-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P291532
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33288)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14GR-LD5-43-A19/156-UNV-L92765-W2A1-U-4500K
Description: GRLED 1x4 TUNABLE WHITE TROFFER
WITH A19/156 LENS
Light Source: (168) 90 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3844.0 lumens
Efficiency: N/A
Efficacy: 103.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.23 / 1.18
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

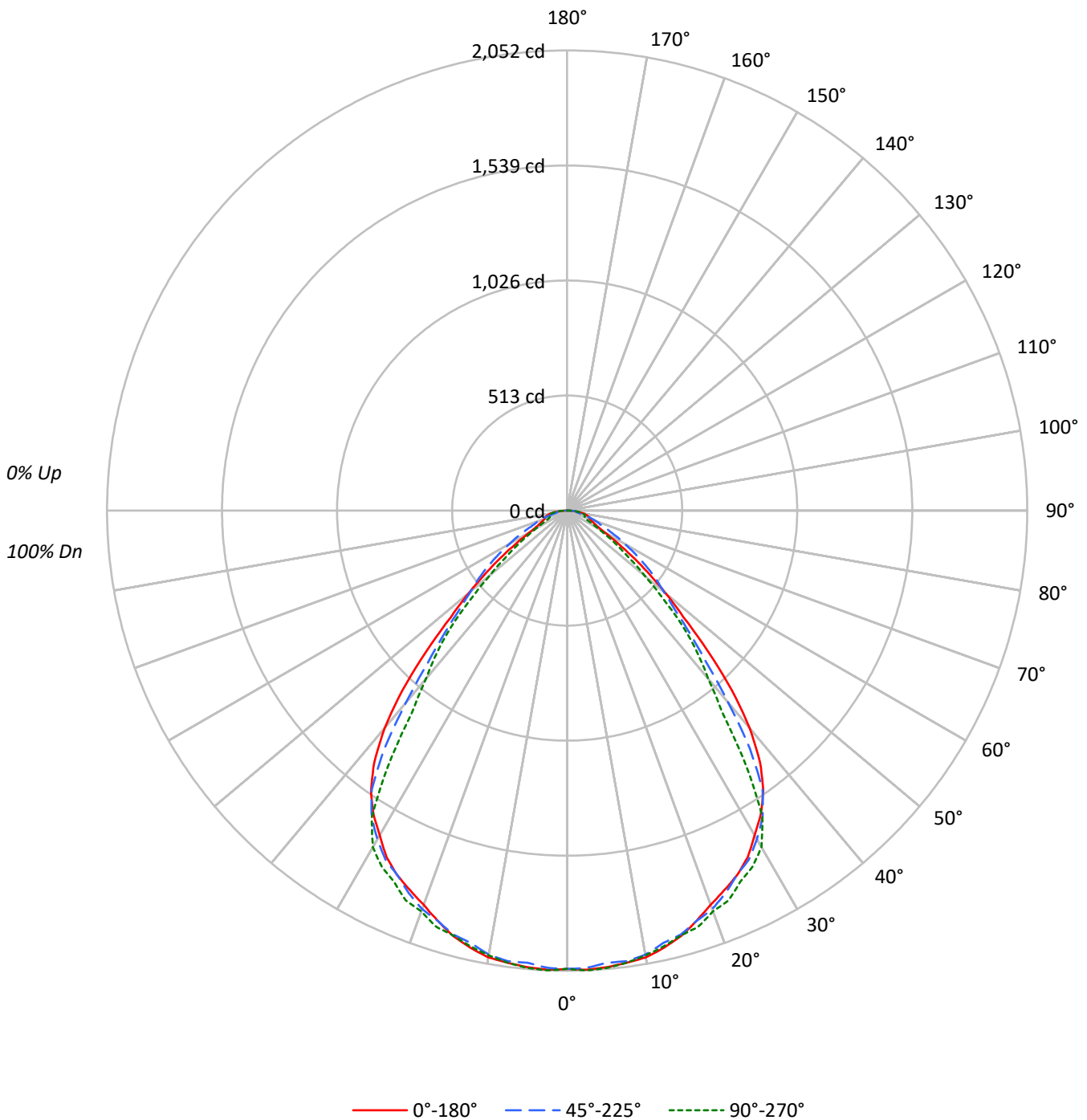
Input Watts (W): 37.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 111 | 107 | 104 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | | 88 | | | |
| 2 | 103 | 96 | 90 | 86 | 100 | 94 | 89 | 85 | 91 | 87 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 77 | | | | | 77 | | | |
| 3 | 95 | 87 | 80 | 74 | 93 | 85 | 79 | 74 | 82 | 77 | 73 | 80 | 75 | 71 | 77 | 73 | 70 | 68 | | | | | 68 | | | |
| 4 | 89 | 79 | 71 | 65 | 87 | 77 | 70 | 65 | 75 | 69 | 64 | 73 | 68 | 63 | 71 | 66 | 63 | 61 | | | | | 61 | | | |
| 5 | 83 | 71 | 64 | 58 | 81 | 70 | 63 | 58 | 68 | 62 | 57 | 67 | 61 | 57 | 65 | 60 | 56 | 54 | | | | | 54 | | | |
| 6 | 77 | 65 | 58 | 52 | 75 | 64 | 57 | 52 | 63 | 56 | 51 | 61 | 55 | 51 | 60 | 55 | 51 | 49 | | | | | 49 | | | |
| 7 | 72 | 60 | 52 | 47 | 70 | 59 | 52 | 47 | 58 | 51 | 46 | 56 | 51 | 46 | 55 | 50 | 46 | 44 | | | | | 44 | | | |
| 8 | 67 | 55 | 48 | 43 | 66 | 55 | 47 | 42 | 53 | 47 | 42 | 52 | 46 | 42 | 51 | 46 | 42 | 40 | | | | | 40 | | | |
| 9 | 63 | 51 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 38 | 48 | 42 | 38 | 37 | | | | | 37 | | | |
| 10 | 60 | 48 | 40 | 36 | 58 | 47 | 40 | 36 | 46 | 40 | 35 | 45 | 39 | 35 | 44 | 39 | 35 | 34 | | | | | 34 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5501 | 5501 | 5501 |
| 5° | 5519 | 5467 | 5531 |
| 10° | 5528 | 5494 | 5504 |
| 15° | 5472 | 5452 | 5464 |
| 20° | 5357 | 5415 | 5445 |
| 25° | 5325 | 5322 | 5424 |
| 30° | 5195 | 5258 | 5386 |
| 35° | 5009 | 4989 | 4585 |
| 40° | 4448 | 3926 | 3437 |
| 45° | 3376 | 2937 | 2779 |
| 50° | 2395 | 2350 | 1886 |
| 55° | 1639 | 2006 | 1296 |
| 60° | 1013 | 1601 | 866 |
| 65° | 835 | 1233 | 628 |
| 70° | 831 | 1073 | 644 |
| 75° | 997 | 768 | 860 |
| 80° | 1145 | 710 | 1077 |
| 85° | 1087 | 1250 | 1223 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 193.9 | 5.0 |
| 10°-20° | 553.6 | 14.4 |
| 20°-30° | 832.5 | 21.7 |
| 30°-40° | 907.5 | 23.6 |
| 40°-50° | 635.5 | 16.5 |
| 50°-60° | 359.7 | 9.4 |
| 60°-70° | 196.8 | 5.1 |
| 70°-80° | 119.3 | 3.1 |
| 80°-90° | 45.2 | 1.2 |
| 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° | 1580.0 | 41.1 |
| 0°-40° | 2487.5 | 64.7 |
| 0°-60° | 3482.6 | 90.6 |
| 0°-90° | 3844.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3844.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2044 | 2044 | 2044 | 2044 | 2044 | |
| 5° | 2043 | 2040 | 2024 | 2048 | 2048 | 194 |
| 15° | 1964 | 1959 | 1957 | 1985 | 1961 | 552 |
| 25° | 1793 | 1797 | 1792 | 1834 | 1827 | 824 |
| 35° | 1525 | 1518 | 1519 | 1441 | 1396 | 940 |
| 45° | 887 | 926 | 772 | 762 | 730 | 689 |
| 55° | 349 | 418 | 428 | 424 | 276 | 319 |
| 65° | 131 | 216 | 194 | 245 | 99 | 135 |
| 75° | 96 | 138 | 74 | 145 | 83 | 99 |
| 85° | 35 | 57 | 40 | 49 | 40 | 39 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P291532

CATALOG NUMBER: 14GR-LD5-43-A19/156-UNV-L92765-W2A1-U-4500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2044.1 | 2044.1 | 2044.1 | 2044.1 | 2044.1 |
| 2.5° | 2049.4 | 2046.7 | 2040.6 | 2052.9 | 2052.0 |
| 5° | 2043.2 | 2039.7 | 2023.9 | 2047.6 | 2047.6 |
| 7.5° | 2034.4 | 2025.6 | 2026.5 | 2039.7 | 2033.5 |
| 10° | 2023.0 | 2008.0 | 2010.7 | 2014.2 | 2014.2 |
| 12.5° | 1996.6 | 1982.5 | 1975.5 | 1986.9 | 1990.4 |
| 15° | 1964.0 | 1958.7 | 1957.0 | 1985.1 | 1961.4 |
| 17.5° | 1918.3 | 1929.7 | 1919.1 | 1942.0 | 1945.5 |
| 20° | 1870.7 | 1892.7 | 1891.0 | 1906.8 | 1901.5 |
| 22.5° | 1832.0 | 1846.1 | 1846.1 | 1865.5 | 1881.3 |
| 25° | 1793.3 | 1796.8 | 1792.4 | 1833.8 | 1826.7 |
| 27.5° | 1743.2 | 1740.5 | 1754.6 | 1775.7 | 1789.8 |
| 30° | 1671.9 | 1672.8 | 1692.1 | 1720.3 | 1733.5 |
| 32.5° | 1606.8 | 1598.8 | 1622.6 | 1634.9 | 1620.8 |
| 35° | 1524.9 | 1517.9 | 1518.8 | 1441.3 | 1395.6 |
| 37.5° | 1413.2 | 1419.3 | 1338.4 | 1196.7 | 1136.9 |
| 40° | 1266.2 | 1278.5 | 1117.5 | 1011.9 | 978.5 |
| 42.5° | 1088.5 | 1092.0 | 916.0 | 881.7 | 859.7 |
| 45° | 887.0 | 925.7 | 771.7 | 762.0 | 730.3 |
| 47.5° | 703.1 | 775.2 | 646.8 | 652.9 | 577.2 |
| 50° | 572.0 | 644.1 | 561.4 | 564.0 | 450.5 |
| 52.5° | 452.3 | 522.7 | 495.4 | 487.5 | 353.7 |
| 55° | 349.3 | 418.0 | 427.6 | 424.1 | 276.3 |
| 57.5° | 256.9 | 330.9 | 359.0 | 372.2 | 212.9 |
| 60° | 188.3 | 270.1 | 297.4 | 323.8 | 161.0 |
| 62.5° | 149.6 | 234.1 | 243.7 | 282.5 | 125.0 |
| 65° | 131.1 | 215.6 | 193.6 | 244.6 | 98.6 |
| 67.5° | 117.0 | 205.0 | 157.5 | 216.5 | 86.2 |
| 70° | 105.6 | 184.8 | 136.4 | 193.6 | 81.8 |
| 72.5° | 105.6 | 161.9 | 107.4 | 171.6 | 82.7 |
| 75° | 95.9 | 138.1 | 73.9 | 145.2 | 82.7 |
| 77.5° | 85.4 | 117.9 | 55.4 | 117.9 | 77.4 |
| 80° | 73.9 | 92.4 | 45.8 | 90.6 | 69.5 |
| 82.5° | 54.6 | 69.5 | 39.6 | 67.8 | 56.3 |
| 85° | 35.2 | 57.2 | 40.5 | 49.3 | 39.6 |
| 87.5° | 16.7 | 29.0 | 25.5 | 24.6 | 20.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)