

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: P558451

Luminaire Tested: **22CBRK-21HE-UNV-L840-CD1-U**

Issue Date: 7/20/2021

**Test Information**

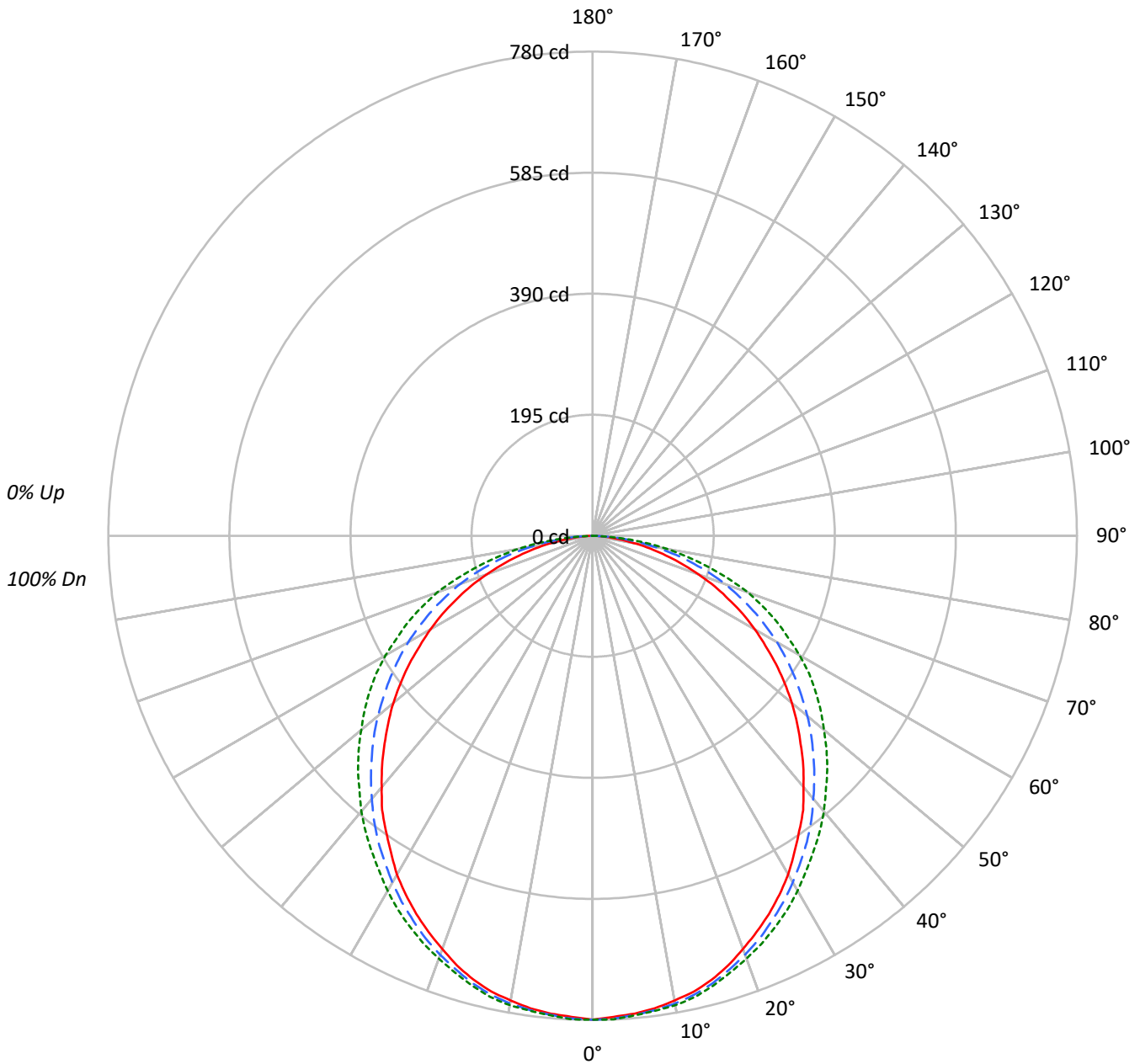
Test Method: LM-79-08  
Report Number: P558451  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-259-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 7/20/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CBRK-21HE-UNV-L840-CD1-U  
Description: 2X2 2100 LUMEN, HIGH EFFICACY, LED TROFFER RETROFIT KIT WITH 4000K AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2215.0 lumens  
Efficiency: N/A  
Efficacy: 164.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 13.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 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 | 0 |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 109 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 90  | 88  | 90  | 87  | 85  | 83  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 85  | 79  | 75  | 81  | 77  | 73  | 78  | 74  | 71  | 69  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 63  | 74  | 68  | 62  | 72  | 66  | 61  | 69  | 64  | 60  | 58  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  | 66  | 59  | 53  | 64  | 57  | 52  | 61  | 56  | 51  | 49  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  | 59  | 51  | 46  | 57  | 50  | 45  | 55  | 49  | 45  | 43  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 40  | 53  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 39  | 37  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 48  | 41  | 35  | 47  | 40  | 35  | 46  | 40  | 35  | 33  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 37  | 32  | 44  | 37  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 29  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 26  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 26  | 24  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2098 | 2098 | 2098 |
| 5°  | 2088 | 2093 | 2095 |
| 10° | 2077 | 2090 | 2098 |
| 15° | 2063 | 2079 | 2090 |
| 20° | 2028 | 2056 | 2076 |
| 25° | 1996 | 2031 | 2065 |
| 30° | 1958 | 2004 | 2052 |
| 35° | 1906 | 1977 | 2038 |
| 40° | 1857 | 1943 | 2035 |
| 45° | 1803 | 1915 | 2034 |
| 50° | 1755 | 1890 | 2037 |
| 55° | 1691 | 1865 | 2058 |
| 60° | 1625 | 1845 | 2072 |
| 65° | 1536 | 1817 | 2084 |
| 70° | 1422 | 1784 | 2090 |
| 75° | 1269 | 1697 | 1991 |
| 80° | 1044 | 1530 | 1877 |
| 85° | 664  | 1266 | 1417 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 73.6   | 3.3       |
| 10°-20°   | 210.2  | 9.5       |
| 20°-30°   | 315.1  | 14.2      |
| 30°-40°   | 376.1  | 17.0      |
| 40°-50°   | 388.8  | 17.6      |
| 50°-60°   | 356.3  | 16.1      |
| 60°-70°   | 281.3  | 12.7      |
| 70°-80°   | 169.3  | 7.6       |
| 80°-90°   | 44.2   | 2.0       |
| 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°    | 599.0  | 27.0      |
| 0°-40°    | 975.1  | 44.0      |
| 0°-60°    | 1720.2 | 77.7      |
| 0°-90°    | 2215.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2215.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 780 | 780   | 780 | 780   | 780 |      |
| 5°  | 773 | 773   | 775 | 776   | 776 | 73   |
| 15° | 741 | 742   | 746 | 749   | 750 | 209  |
| 25° | 672 | 675   | 684 | 693   | 696 | 309  |
| 35° | 580 | 586   | 602 | 616   | 620 | 363  |
| 45° | 474 | 482   | 503 | 525   | 534 | 366  |
| 55° | 360 | 370   | 398 | 427   | 439 | 322  |
| 65° | 241 | 253   | 285 | 315   | 327 | 240  |
| 75° | 122 | 136   | 163 | 185   | 192 | 130  |
| 85° | 22  | 29    | 41  | 47    | 46  | 29   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 779.6 | 779.6 | 779.6 | 779.6 | 779.6 |
| 2.5°  | 775.7 | 776.7 | 778.7 | 779.6 | 779.6 |
| 5°    | 772.8 | 772.8 | 774.7 | 775.7 | 775.7 |
| 7.5°  | 767.9 | 768.9 | 770.8 | 771.8 | 771.8 |
| 10°   | 760.1 | 762.0 | 765.0 | 767.9 | 767.9 |
| 12.5° | 752.3 | 753.3 | 757.2 | 760.1 | 761.1 |
| 15°   | 740.6 | 741.5 | 746.4 | 749.3 | 750.3 |
| 17.5° | 725.9 | 727.9 | 732.7 | 737.6 | 737.6 |
| 20°   | 708.3 | 711.2 | 718.1 | 723.0 | 724.9 |
| 22.5° | 690.7 | 694.6 | 702.5 | 708.3 | 711.2 |
| 25°   | 672.2 | 675.1 | 683.9 | 692.7 | 695.6 |
| 27.5° | 651.6 | 654.6 | 665.3 | 676.1 | 679.0 |
| 30°   | 630.2 | 634.1 | 644.8 | 655.6 | 660.4 |
| 32.5° | 604.8 | 610.6 | 623.3 | 637.0 | 639.9 |
| 35°   | 580.3 | 586.2 | 601.8 | 615.5 | 620.4 |
| 37.5° | 556.9 | 560.8 | 578.4 | 595.0 | 600.8 |
| 40°   | 528.5 | 535.4 | 553.0 | 571.5 | 579.4 |
| 42.5° | 502.2 | 509.0 | 528.5 | 549.1 | 555.9 |
| 45°   | 473.8 | 481.7 | 503.1 | 524.6 | 534.4 |
| 47.5° | 446.5 | 456.3 | 477.7 | 502.2 | 511.0 |
| 50°   | 419.1 | 427.9 | 451.4 | 476.8 | 486.5 |
| 52.5° | 389.8 | 398.6 | 424.0 | 452.3 | 463.1 |
| 55°   | 360.5 | 370.3 | 397.6 | 426.9 | 438.7 |
| 57.5° | 330.2 | 341.9 | 370.3 | 400.6 | 413.3 |
| 60°   | 301.9 | 311.7 | 342.9 | 373.2 | 384.9 |
| 62.5° | 272.6 | 283.3 | 313.6 | 343.9 | 354.6 |
| 65°   | 241.3 | 253.0 | 285.3 | 314.6 | 327.3 |
| 67.5° | 213.0 | 223.7 | 256.0 | 285.3 | 296.0 |
| 70°   | 180.7 | 194.4 | 226.7 | 254.0 | 265.7 |
| 72.5° | 151.4 | 165.1 | 195.4 | 219.8 | 228.6 |
| 75°   | 122.1 | 135.8 | 163.2 | 184.6 | 191.5 |
| 77.5° | 94.8  | 107.5 | 131.9 | 149.5 | 155.3 |
| 80°   | 67.4  | 80.1  | 98.7  | 115.3 | 121.1 |
| 82.5° | 43.0  | 53.7  | 69.4  | 81.1  | 84.0  |
| 85°   | 21.5  | 29.3  | 41.0  | 46.9  | 45.9  |
| 87.5° | 6.8   | 8.8   | 11.7  | 9.8   | 8.8   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)