

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: P238832

Luminaire Tested: **22EN-LD2-19-UNV-L950-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P238832  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-118-11)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22EN-LD2-19-UNV-L950-CD1-U  
Description: METALUX ENCOUNTER 2X2 LED TROFFER  
STANDARD OPTION  
Light Source: (168)5000K CCT, 90 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

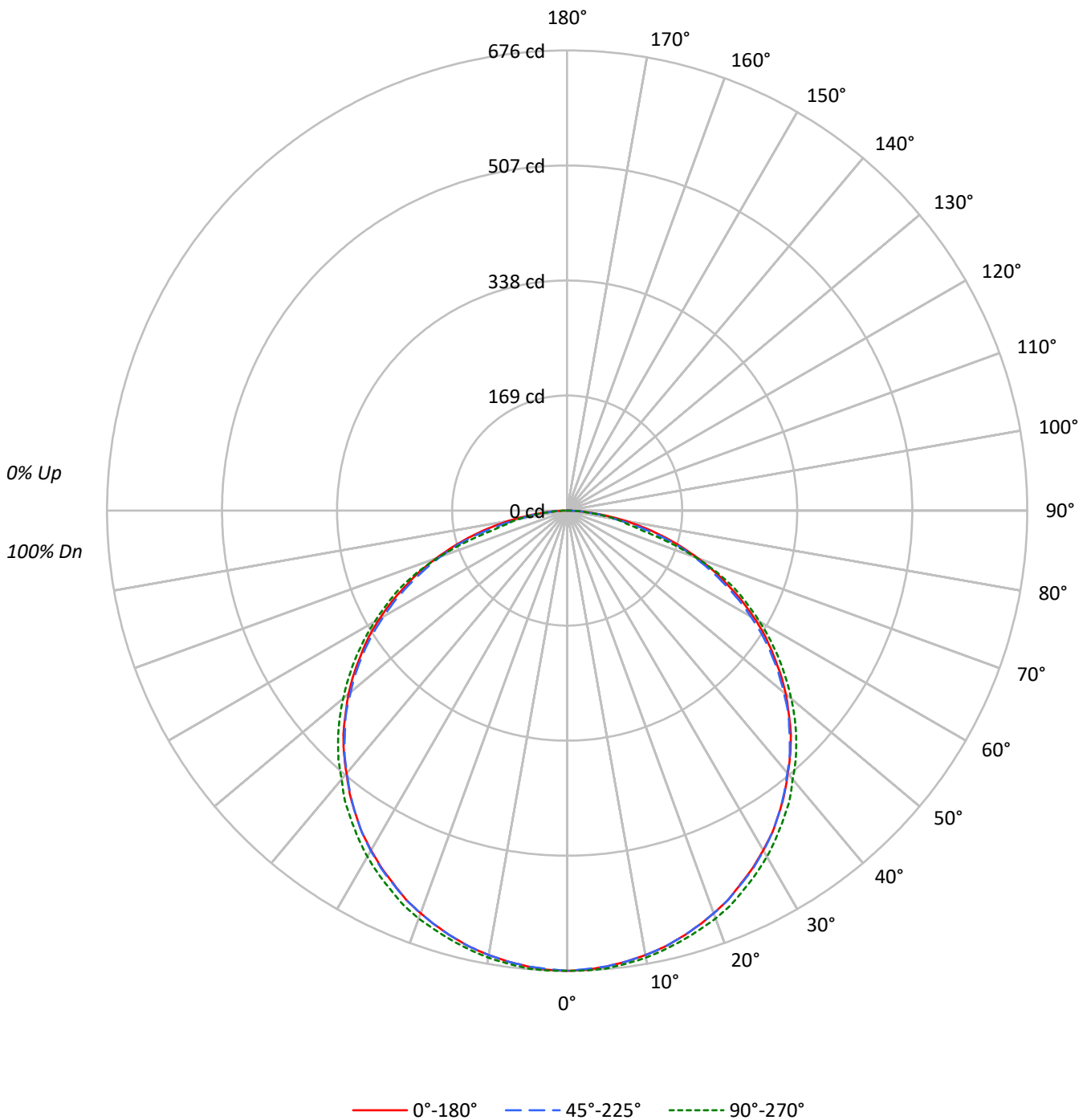
Lumens per Lamp: N/A  
Luminaire Lumens: 1995.7 lumens  
Efficiency: N/A  
Efficacy: 121.0 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.29 / 1.39  
Luminous Opening: Rectangular (W 1.83' x L: 1.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.5  
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   | 109 | 104 | 99  | 95  | 106 | 101 | 98  | 94  | 97  | 94  | 91  |  | 93  | 91  | 88  |  | 90  | 88  | 86  | 83  |
| 2   | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 85  | 79  | 75  |  | 81  | 77  | 73  |  | 78  | 75  | 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  | 42  |
| 6   | 69  | 56  | 47  | 40  | 68  | 55  | 46  | 40  | 53  | 46  | 40  |  | 51  | 45  | 39  |  | 50  | 44  | 39  | 37  |
| 7   | 64  | 51  | 42  | 36  | 63  | 50  | 41  | 35  | 48  | 41  | 35  |  | 47  | 40  | 35  |  | 45  | 39  | 35  | 33  |
| 8   | 60  | 46  | 38  | 32  | 58  | 45  | 37  | 32  | 44  | 37  | 31  |  | 43  | 36  | 31  |  | 42  | 36  | 31  | 29  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 41  | 33  | 28  |  | 39  | 33  | 28  |  | 38  | 32  | 28  | 26  |
| 10  | 52  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 30  | 26  |  | 37  | 30  | 25  |  | 36  | 30  | 25  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2165 | 2165 | 2165 |
| 5°  | 2160 | 2160 | 2170 |
| 10° | 2156 | 2156 | 2169 |
| 15° | 2151 | 2151 | 2168 |
| 20° | 2146 | 2146 | 2173 |
| 25° | 2135 | 2139 | 2171 |
| 30° | 2130 | 2134 | 2171 |
| 35° | 2122 | 2122 | 2165 |
| 40° | 2108 | 2104 | 2155 |
| 45° | 2106 | 2091 | 2156 |
| 50° | 2090 | 2069 | 2140 |
| 55° | 2065 | 2042 | 2122 |
| 60° | 2039 | 1994 | 2091 |
| 65° | 1983 | 1930 | 2060 |
| 70° | 1911 | 1855 | 1883 |
| 75° | 1800 | 1688 | 1438 |
| 80° | 1584 | 1324 | 1379 |
| 85° | 1150 | 1113 | 1077 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 63.9   | 3.2       |
| 10°-20°   | 183.5  | 9.2       |
| 20°-30°   | 280.2  | 14.0      |
| 30°-40°   | 341.2  | 17.1      |
| 40°-50°   | 359.2  | 18.0      |
| 50°-60°   | 330.7  | 16.6      |
| 60°-70°   | 257.4  | 12.9      |
| 70°-80°   | 142.9  | 7.2       |
| 80°-90°   | 36.7   | 1.8       |
| 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°    | 527.6  | 26.4      |
| 0°-40°    | 868.9  | 43.5      |
| 0°-60°    | 1558.7 | 78.1      |
| 0°-90°    | 1995.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1995.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 676 | 676   | 676 | 676   | 676 |      |
| 5°  | 672 | 672   | 672 | 674   | 675 | 64   |
| 15° | 649 | 649   | 649 | 652   | 654 | 183  |
| 25° | 604 | 605   | 605 | 610   | 614 | 279  |
| 35° | 543 | 543   | 543 | 549   | 554 | 340  |
| 45° | 465 | 462   | 462 | 469   | 476 | 358  |
| 55° | 370 | 369   | 366 | 372   | 380 | 331  |
| 65° | 262 | 259   | 255 | 263   | 272 | 259  |
| 75° | 146 | 142   | 136 | 121   | 116 | 153  |
| 85° | 31  | 29    | 30  | 29    | 29  | 39   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 676.1 | 676.1 | 676.1 | 676.1 | 676.1 |
| 2.5°  | 675.1 | 674.0 | 674.0 | 676.1 | 676.1 |
| 5°    | 672.0 | 672.0 | 672.0 | 674.0 | 675.1 |
| 7.5°  | 668.0 | 668.0 | 668.0 | 671.0 | 671.0 |
| 10°   | 662.9 | 661.9 | 662.9 | 665.0 | 667.0 |
| 12.5° | 656.9 | 655.9 | 656.9 | 658.9 | 660.9 |
| 15°   | 648.8 | 648.8 | 648.8 | 651.8 | 653.8 |
| 17.5° | 639.7 | 638.7 | 639.7 | 642.7 | 645.8 |
| 20°   | 629.6 | 629.6 | 629.6 | 633.6 | 637.7 |
| 22.5° | 618.5 | 617.5 | 618.5 | 623.5 | 627.6 |
| 25°   | 604.3 | 605.3 | 605.3 | 610.4 | 614.4 |
| 27.5° | 591.2 | 590.2 | 592.2 | 596.2 | 601.3 |
| 30°   | 576.0 | 576.0 | 577.0 | 582.1 | 587.1 |
| 32.5° | 560.9 | 559.9 | 560.9 | 565.9 | 571.0 |
| 35°   | 542.7 | 542.7 | 542.7 | 548.7 | 553.8 |
| 37.5° | 524.5 | 523.5 | 523.5 | 529.5 | 536.6 |
| 40°   | 504.3 | 503.3 | 503.3 | 510.3 | 515.4 |
| 42.5° | 485.1 | 484.1 | 484.1 | 490.1 | 497.2 |
| 45°   | 464.9 | 461.8 | 461.8 | 468.9 | 476.0 |
| 47.5° | 441.6 | 439.6 | 440.6 | 446.7 | 453.7 |
| 50°   | 419.4 | 416.4 | 415.3 | 422.4 | 429.5 |
| 52.5° | 395.1 | 394.1 | 391.1 | 397.2 | 405.2 |
| 55°   | 369.9 | 368.9 | 365.8 | 371.9 | 380.0 |
| 57.5° | 345.6 | 342.6 | 339.6 | 344.6 | 353.7 |
| 60°   | 318.3 | 315.3 | 311.3 | 318.3 | 326.4 |
| 62.5° | 291.0 | 287.0 | 284.0 | 290.0 | 299.1 |
| 65°   | 261.7 | 258.7 | 254.7 | 262.7 | 271.8 |
| 67.5° | 234.5 | 231.4 | 226.4 | 233.4 | 239.5 |
| 70°   | 204.1 | 200.1 | 198.1 | 199.1 | 201.1 |
| 72.5° | 174.8 | 172.8 | 169.8 | 161.7 | 159.7 |
| 75°   | 145.5 | 142.5 | 136.4 | 121.3 | 116.2 |
| 77.5° | 116.2 | 114.2 | 103.1 | 89.9  | 89.9  |
| 80°   | 85.9  | 84.9  | 71.8  | 73.8  | 74.8  |
| 82.5° | 58.6  | 56.6  | 52.5  | 51.5  | 51.5  |
| 85°   | 31.3  | 29.3  | 30.3  | 29.3  | 29.3  |
| 87.5° | 12.1  | 12.1  | 13.1  | 12.1  | 12.1  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)