

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: P229661

Luminaire Tested: **22RLN-LD5-44-UNV-L840-CD1-SVPD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P229661  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36063)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22RLN-LD5-44-UNV-L840-CD1-SVPD1-U  
Description: METALUX 2X2 RLN LED TROFFER WITH SENSOR  
Light Source: (126)4000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4253.0 lumens  
Efficiency: N/A  
Efficacy: 107.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.21 / 1.29  
Luminous Opening: Rectangular (W 1.83' x L: 1.83' x H: 0')  
CIE Type: Direct

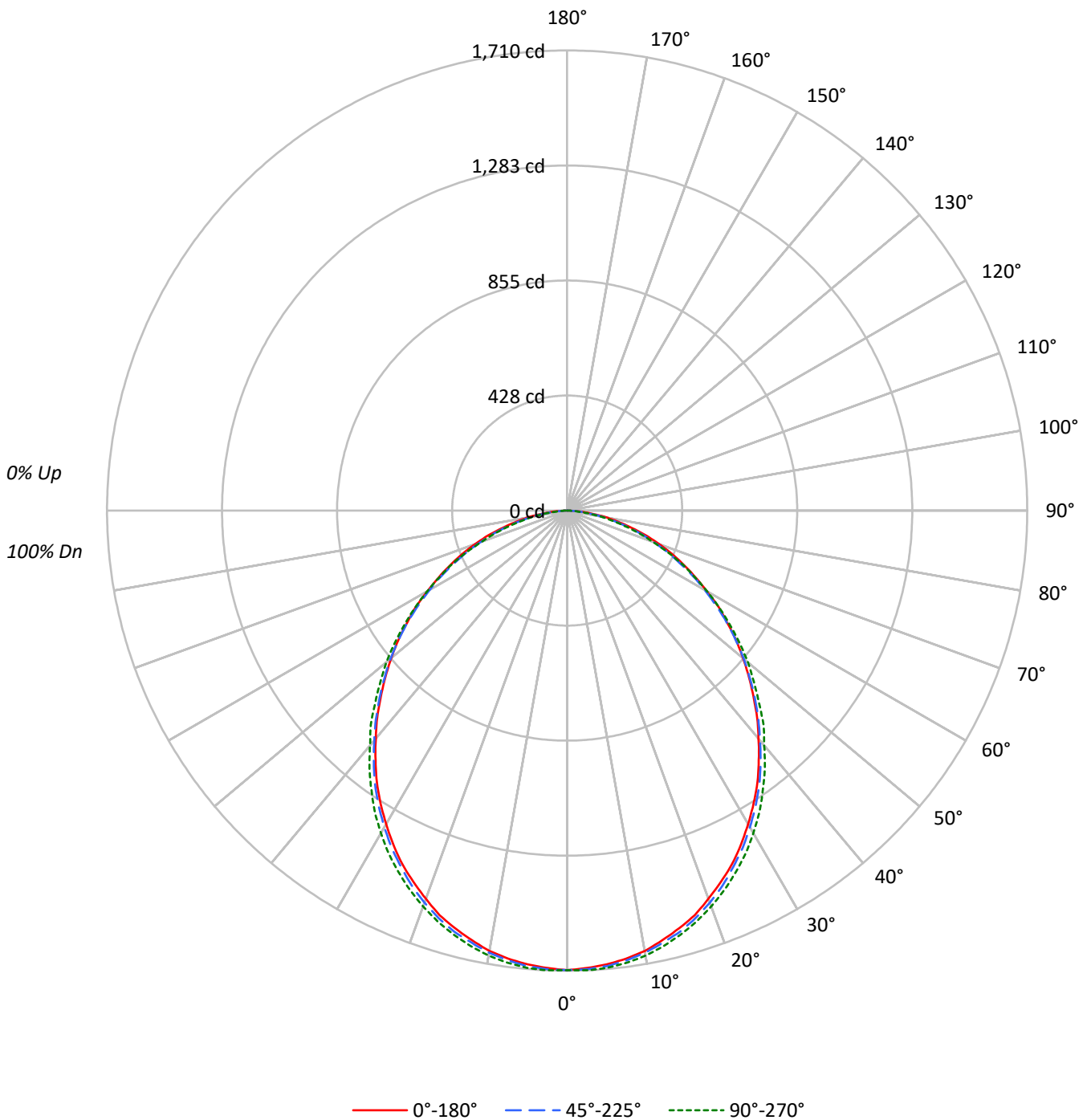
Input Watts (W): 39.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 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 | 105 | 101 | 97  | 107 | 103 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 90  | 91  | 89  | 87  | 85  |
| 2   | 100 | 92  | 85  | 80  | 97  | 90  | 84  | 79  | 87  | 81  | 77  | 83  | 79  | 75  | 80  | 77  | 74  | 72  |
| 3   | 91  | 81  | 73  | 67  | 89  | 80  | 72  | 66  | 77  | 70  | 65  | 74  | 69  | 64  | 71  | 67  | 63  | 61  |
| 4   | 84  | 72  | 64  | 57  | 82  | 71  | 63  | 57  | 68  | 62  | 56  | 66  | 60  | 55  | 64  | 59  | 55  | 52  |
| 5   | 77  | 65  | 56  | 50  | 75  | 64  | 55  | 49  | 62  | 54  | 49  | 60  | 53  | 48  | 58  | 52  | 48  | 46  |
| 6   | 72  | 58  | 50  | 44  | 70  | 58  | 49  | 43  | 56  | 48  | 43  | 54  | 48  | 43  | 53  | 47  | 42  | 40  |
| 7   | 66  | 53  | 45  | 39  | 65  | 52  | 44  | 38  | 51  | 44  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 36  |
| 8   | 62  | 49  | 40  | 35  | 60  | 48  | 40  | 34  | 47  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |
| 9   | 58  | 45  | 37  | 31  | 57  | 44  | 36  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 41  | 35  | 31  | 29  |
| 10  | 54  | 41  | 34  | 28  | 53  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 5469 | 5469 | 5469 |
| 5°  | 5441 | 5462 | 5483 |
| 10° | 5405 | 5426 | 5461 |
| 15° | 5329 | 5372 | 5409 |
| 20° | 5232 | 5284 | 5336 |
| 25° | 5123 | 5162 | 5239 |
| 30° | 4973 | 5022 | 5119 |
| 35° | 4822 | 4864 | 4959 |
| 40° | 4626 | 4662 | 4763 |
| 45° | 4437 | 4467 | 4566 |
| 50° | 4249 | 4271 | 4369 |
| 55° | 4054 | 4041 | 4115 |
| 60° | 3838 | 3782 | 3851 |
| 65° | 3629 | 3496 | 3579 |
| 70° | 3399 | 3215 | 3153 |
| 75° | 3085 | 2841 | 2733 |
| 80° | 2783 | 2420 | 2259 |
| 85° | 2168 | 1687 | 1448 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 161.2  | 3.8       |
| 10°-20°   | 456.3  | 10.7      |
| 20°-30°   | 673.8  | 15.8      |
| 30°-40°   | 779.1  | 18.3      |
| 40°-50°   | 764.2  | 18.0      |
| 50°-60°   | 649.9  | 15.3      |
| 60°-70°   | 463.0  | 10.9      |
| 70°-80°   | 247.0  | 5.8       |
| 80°-90°   | 58.7   | 1.4       |
| 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°    | 1291.2 | 30.4      |
| 0°-40°    | 2070.3 | 48.7      |
| 0°-60°    | 3484.4 | 81.9      |
| 0°-90°    | 4253.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4253.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1708 | 1708  | 1708 | 1708  | 1708 |      |
| 5°  | 1692 | 1695  | 1699 | 1703  | 1706 | 161  |
| 15° | 1607 | 1609  | 1620 | 1629  | 1631 | 453  |
| 25° | 1450 | 1452  | 1461 | 1476  | 1483 | 667  |
| 35° | 1233 | 1229  | 1244 | 1264  | 1268 | 770  |
| 45° | 980  | 977   | 986  | 1004  | 1008 | 756  |
| 55° | 726  | 719   | 724  | 732   | 737  | 651  |
| 65° | 479  | 464   | 461  | 464   | 472  | 475  |
| 75° | 249  | 236   | 230  | 225   | 221  | 267  |
| 85° | 59   | 52    | 46   | 39    | 39   | 70   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1707.8 | 1707.8 | 1707.8 | 1707.8 | 1707.8 |
| 2.5°  | 1701.2 | 1703.4 | 1705.6 | 1710.0 | 1710.0 |
| 5°    | 1692.5 | 1694.7 | 1699.1 | 1703.4 | 1705.6 |
| 7.5°  | 1679.4 | 1679.4 | 1685.9 | 1690.3 | 1694.7 |
| 10°   | 1661.9 | 1664.1 | 1668.4 | 1675.0 | 1679.4 |
| 12.5° | 1635.6 | 1640.0 | 1644.4 | 1653.1 | 1657.5 |
| 15°   | 1607.2 | 1609.4 | 1620.3 | 1629.1 | 1631.3 |
| 17.5° | 1576.6 | 1576.6 | 1587.5 | 1596.3 | 1600.7 |
| 20°   | 1535.1 | 1539.4 | 1550.4 | 1561.3 | 1565.7 |
| 22.5° | 1493.5 | 1497.9 | 1508.8 | 1519.7 | 1526.3 |
| 25°   | 1449.8 | 1452.0 | 1460.7 | 1476.0 | 1482.6 |
| 27.5° | 1399.5 | 1403.9 | 1412.6 | 1427.9 | 1436.7 |
| 30°   | 1344.8 | 1349.2 | 1357.9 | 1375.4 | 1384.2 |
| 32.5° | 1290.1 | 1294.5 | 1303.3 | 1320.8 | 1329.5 |
| 35°   | 1233.3 | 1228.9 | 1244.2 | 1263.9 | 1268.3 |
| 37.5° | 1169.9 | 1172.1 | 1180.8 | 1198.3 | 1207.1 |
| 40°   | 1106.5 | 1106.5 | 1115.2 | 1134.9 | 1139.3 |
| 42.5° | 1045.2 | 1043.1 | 1051.8 | 1069.3 | 1080.2 |
| 45°   | 979.6  | 977.4  | 986.2  | 1003.7 | 1008.1 |
| 47.5° | 916.2  | 911.8  | 920.6  | 935.9  | 940.3  |
| 50°   | 852.8  | 848.4  | 857.2  | 870.3  | 876.9  |
| 52.5° | 791.6  | 782.8  | 789.4  | 800.3  | 806.9  |
| 55°   | 726.0  | 719.4  | 723.8  | 732.5  | 736.9  |
| 57.5° | 666.9  | 653.8  | 656.0  | 664.8  | 669.1  |
| 60°   | 599.2  | 588.2  | 590.4  | 599.2  | 601.3  |
| 62.5° | 537.9  | 527.0  | 527.0  | 529.2  | 533.6  |
| 65°   | 478.9  | 463.6  | 461.4  | 463.6  | 472.3  |
| 67.5° | 422.0  | 406.7  | 402.4  | 402.4  | 404.5  |
| 70°   | 363.0  | 347.7  | 343.3  | 341.1  | 336.7  |
| 72.5° | 308.3  | 288.6  | 286.5  | 279.9  | 282.1  |
| 75°   | 249.3  | 236.2  | 229.6  | 225.2  | 220.9  |
| 77.5° | 196.8  | 185.9  | 177.1  | 170.6  | 170.6  |
| 80°   | 150.9  | 135.6  | 131.2  | 122.5  | 122.5  |
| 82.5° | 100.6  | 94.0   | 85.3   | 78.7   | 76.5   |
| 85°   | 59.0   | 52.5   | 45.9   | 39.4   | 39.4   |
| 87.5° | 21.9   | 17.5   | 15.3   | 15.3   | 15.3   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)