

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: P290972

Luminaire Tested: **14GR-LD5-36-A-UNV-L83050-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P290972  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33314)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14GR-LD5-36-A-UNV-L83050-W2A1-U-4500K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH A LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3916.0 lumens  
Efficiency: N/A  
Efficacy: 127.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.21 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

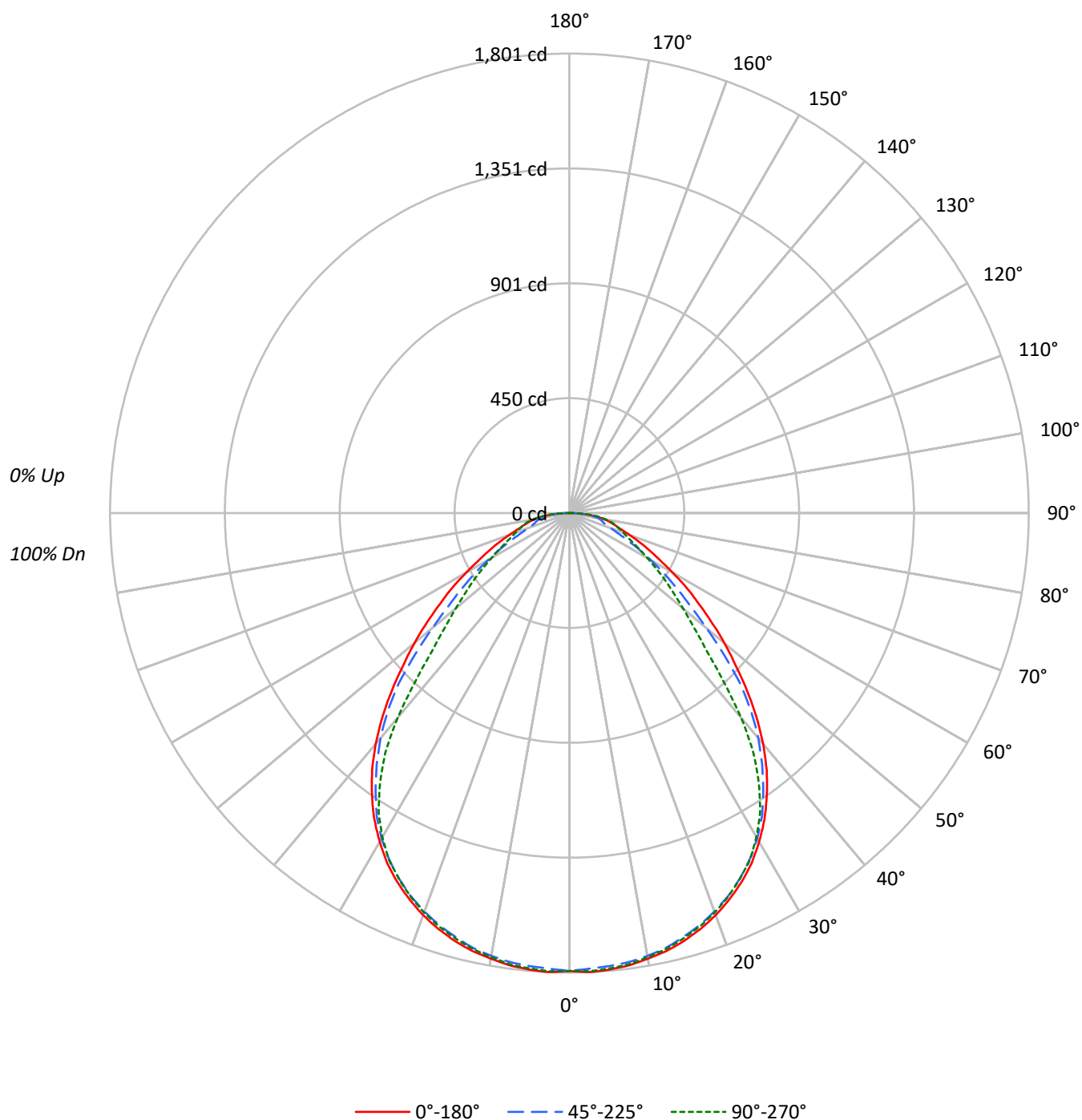
Input Watts (W): 30.69  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |  |  |
| 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 | 106 | 102 | 98  | 107 | 103 | 100 | 97  | 99  | 96  | 94  | 95  | 93  | 91  | 92  | 90  | 88  | 86  |  |  |
| 2   | 101 | 94  | 88  | 83  | 99  | 92  | 86  | 82  | 88  | 84  | 80  | 85  | 81  | 78  | 82  | 79  | 76  | 74  |  |  |
| 3   | 93  | 84  | 76  | 71  | 91  | 82  | 75  | 70  | 79  | 74  | 69  | 77  | 72  | 68  | 74  | 70  | 66  | 64  |  |  |
| 4   | 86  | 75  | 67  | 61  | 84  | 74  | 67  | 61  | 72  | 65  | 60  | 69  | 64  | 59  | 67  | 62  | 58  | 56  |  |  |
| 5   | 80  | 68  | 60  | 54  | 78  | 67  | 59  | 53  | 65  | 58  | 53  | 63  | 57  | 52  | 61  | 56  | 52  | 50  |  |  |
| 6   | 74  | 62  | 54  | 48  | 72  | 61  | 53  | 47  | 59  | 52  | 47  | 58  | 51  | 47  | 56  | 51  | 46  | 44  |  |  |
| 7   | 69  | 57  | 48  | 43  | 67  | 56  | 48  | 43  | 54  | 47  | 42  | 53  | 47  | 42  | 52  | 46  | 42  | 40  |  |  |
| 8   | 65  | 52  | 44  | 38  | 63  | 51  | 44  | 38  | 50  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 36  |  |  |
| 9   | 61  | 48  | 40  | 35  | 59  | 47  | 40  | 35  | 46  | 39  | 35  | 45  | 39  | 35  | 44  | 39  | 34  | 33  |  |  |
| 10  | 57  | 44  | 37  | 32  | 56  | 44  | 37  | 32  | 43  | 36  | 32  | 42  | 36  | 32  | 41  | 36  | 31  | 30  |  |  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4829 | 4829 | 4829 |
| 5°  | 4852 | 4816 | 4840 |
| 10° | 4846 | 4817 | 4829 |
| 15° | 4837 | 4794 | 4809 |
| 20° | 4803 | 4759 | 4771 |
| 25° | 4739 | 4693 | 4696 |
| 30° | 4624 | 4575 | 4556 |
| 35° | 4434 | 4353 | 4255 |
| 40° | 4150 | 4045 | 3681 |
| 45° | 3749 | 3607 | 2876 |
| 50° | 3324 | 2928 | 2433 |
| 55° | 2902 | 2403 | 2146 |
| 60° | 2516 | 1977 | 1894 |
| 65° | 2206 | 1587 | 1749 |
| 70° | 1968 | 1345 | 1760 |
| 75° | 1919 | 1418 | 1967 |
| 80° | 2128 | 1790 | 2255 |
| 85° | 2220 | 1908 | 2640 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 170.3  | 4.3       |
| 10°-20°   | 487.7  | 12.5      |
| 20°-30°   | 729.6  | 18.6      |
| 30°-40°   | 823.6  | 21.0      |
| 40°-50°   | 698.7  | 17.8      |
| 50°-60°   | 472.8  | 12.1      |
| 60°-70°   | 282.2  | 7.2       |
| 70°-80°   | 176.7  | 4.5       |
| 80°-90°   | 74.3   | 1.9       |
| 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°    | 1387.6 | 35.4      |
| 0°-40°    | 2211.2 | 56.5      |
| 0°-60°    | 3382.7 | 86.4      |
| 0°-90°    | 3916.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3916.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1794 | 1794  | 1794 | 1794  | 1794 |      |
| 5°  | 1796 | 1791  | 1783 | 1795  | 1792 | 171  |
| 15° | 1736 | 1733  | 1721 | 1733  | 1726 | 490  |
| 25° | 1596 | 1591  | 1581 | 1588  | 1582 | 734  |
| 35° | 1350 | 1341  | 1325 | 1313  | 1295 | 841  |
| 45° | 985  | 989   | 948  | 812   | 756  | 759  |
| 55° | 618  | 589   | 512  | 458   | 458  | 557  |
| 65° | 346  | 287   | 249  | 266   | 275  | 346  |
| 75° | 185  | 165   | 136  | 180   | 189  | 198  |
| 85° | 72   | 68    | 62   | 80    | 86   | 77   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1794.5 | 1794.5 | 1794.5 | 1794.5 | 1794.5 |
| 2.5°  | 1800.9 | 1795.4 | 1787.2 | 1798.1 | 1797.2 |
| 5°    | 1796.3 | 1790.8 | 1782.7 | 1795.4 | 1791.8 |
| 7.5°  | 1788.1 | 1783.6 | 1775.4 | 1787.2 | 1783.6 |
| 10°   | 1773.6 | 1769.9 | 1762.7 | 1772.7 | 1767.2 |
| 12.5° | 1758.1 | 1755.4 | 1746.3 | 1755.4 | 1749.9 |
| 15°   | 1736.3 | 1732.6 | 1720.8 | 1732.6 | 1726.3 |
| 17.5° | 1709.0 | 1704.4 | 1694.4 | 1704.4 | 1699.0 |
| 20°   | 1677.2 | 1671.7 | 1661.7 | 1671.7 | 1666.2 |
| 22.5° | 1639.0 | 1634.4 | 1625.3 | 1634.4 | 1627.1 |
| 25°   | 1596.2 | 1590.8 | 1580.7 | 1588.0 | 1581.7 |
| 27.5° | 1547.1 | 1539.8 | 1530.7 | 1536.2 | 1532.5 |
| 30°   | 1488.0 | 1478.9 | 1472.5 | 1472.5 | 1466.1 |
| 32.5° | 1423.4 | 1417.0 | 1406.1 | 1399.8 | 1391.6 |
| 35°   | 1349.7 | 1340.6 | 1325.2 | 1313.3 | 1295.2 |
| 37.5° | 1270.6 | 1259.7 | 1240.6 | 1210.6 | 1186.0 |
| 40°   | 1181.5 | 1167.8 | 1151.5 | 1092.3 | 1047.8 |
| 42.5° | 1086.0 | 1083.2 | 1055.0 | 954.1  | 892.2  |
| 45°   | 985.0  | 988.6  | 947.7  | 812.2  | 755.8  |
| 47.5° | 883.1  | 895.9  | 821.3  | 688.5  | 659.4  |
| 50°   | 794.0  | 798.6  | 699.4  | 597.6  | 581.2  |
| 52.5° | 702.2  | 694.9  | 596.6  | 525.7  | 513.9  |
| 55°   | 618.5  | 589.4  | 512.1  | 458.4  | 457.5  |
| 57.5° | 544.8  | 491.1  | 437.5  | 397.5  | 402.0  |
| 60°   | 467.5  | 407.5  | 367.4  | 345.6  | 352.0  |
| 62.5° | 399.3  | 342.0  | 306.5  | 300.1  | 311.1  |
| 65°   | 346.5  | 287.4  | 249.2  | 265.6  | 274.7  |
| 67.5° | 296.5  | 246.5  | 202.8  | 241.9  | 245.6  |
| 70°   | 250.1  | 213.7  | 171.0  | 222.8  | 223.7  |
| 72.5° | 211.9  | 189.2  | 148.3  | 201.9  | 204.6  |
| 75°   | 184.6  | 164.6  | 136.4  | 180.1  | 189.2  |
| 77.5° | 161.9  | 141.0  | 126.4  | 155.5  | 171.0  |
| 80°   | 137.3  | 113.7  | 115.5  | 130.1  | 145.5  |
| 82.5° | 105.5  | 88.2   | 91.9   | 107.3  | 118.2  |
| 85°   | 71.9   | 68.2   | 61.8   | 80.0   | 85.5   |
| 87.5° | 38.2   | 36.4   | 31.8   | 45.5   | 42.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)