

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: P292199

Luminaire Tested: **22GR-LD5-36-A-UNV-L82765-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P292199  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33296)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-36-A-UNV-L82765-W2A1-U-4000K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH A LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3601.0 lumens  
Efficiency: N/A  
Efficacy: 126.5 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.22 / 1.25  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

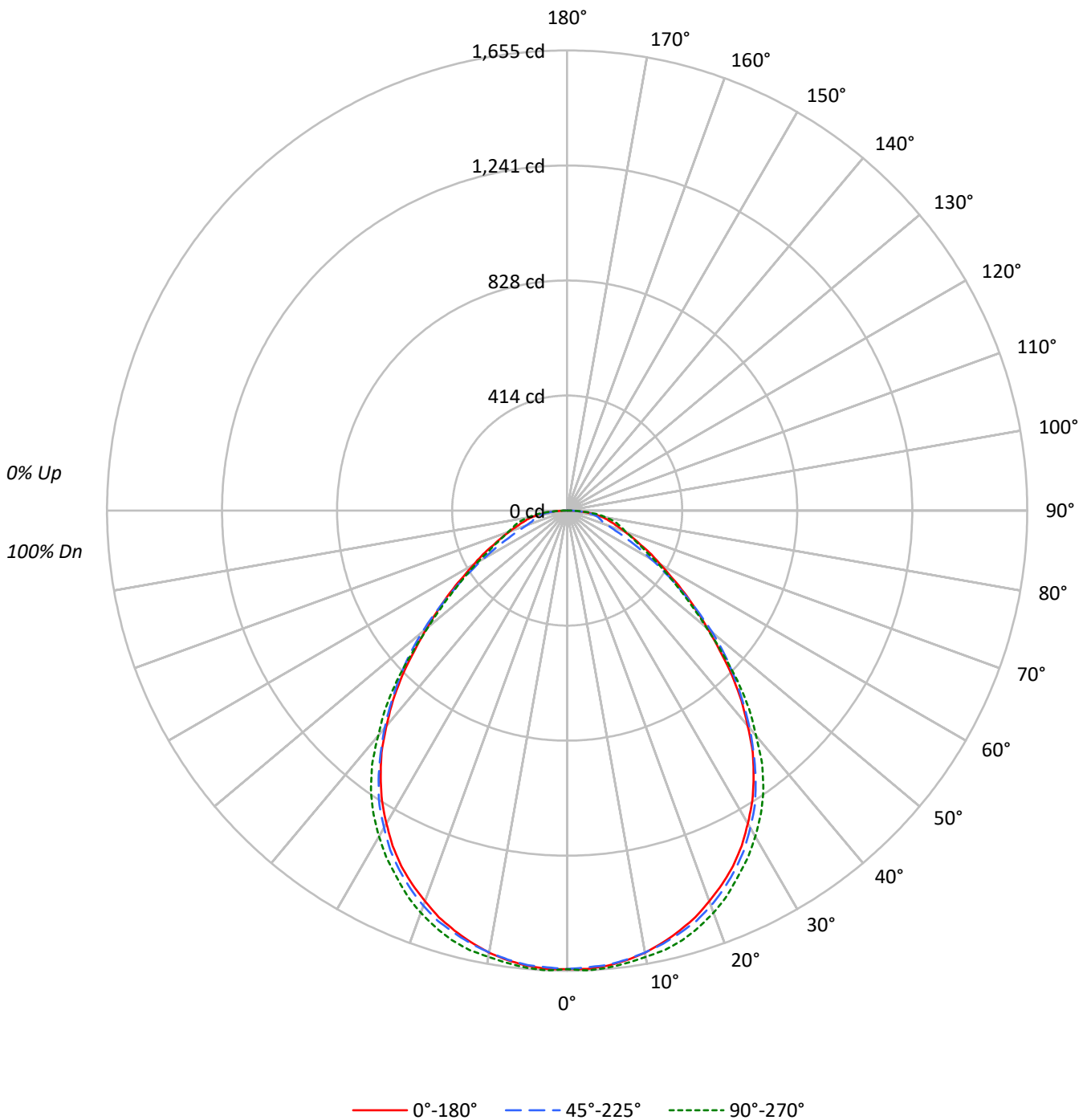
Input Watts (W): 28.458  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 110 | 106 | 102 | 98  | 107 | 103 | 100 | 97  | 99  | 96  | 94  | 95  | 93  | 91  | 92  | 90  | 88  | 86  |
| 2   | 101 | 94  | 87  | 82  | 99  | 92  | 86  | 81  | 88  | 84  | 79  | 85  | 81  | 78  | 82  | 79  | 76  | 74  |
| 3   | 93  | 84  | 76  | 70  | 91  | 82  | 75  | 70  | 79  | 73  | 68  | 76  | 71  | 67  | 74  | 70  | 66  | 64  |
| 4   | 86  | 75  | 67  | 61  | 84  | 74  | 66  | 60  | 71  | 65  | 60  | 69  | 63  | 59  | 67  | 62  | 58  | 56  |
| 5   | 80  | 68  | 59  | 53  | 78  | 67  | 59  | 53  | 65  | 58  | 53  | 63  | 57  | 52  | 61  | 56  | 51  | 49  |
| 6   | 74  | 62  | 53  | 47  | 72  | 61  | 53  | 47  | 59  | 52  | 47  | 57  | 51  | 46  | 56  | 50  | 46  | 44  |
| 7   | 69  | 56  | 48  | 42  | 67  | 55  | 48  | 42  | 54  | 47  | 42  | 53  | 46  | 42  | 51  | 46  | 41  | 39  |
| 8   | 64  | 52  | 44  | 38  | 63  | 51  | 43  | 38  | 50  | 43  | 38  | 48  | 42  | 38  | 47  | 42  | 37  | 36  |
| 9   | 60  | 48  | 40  | 35  | 59  | 47  | 40  | 35  | 46  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |
| 10  | 57  | 44  | 37  | 32  | 55  | 44  | 36  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 30  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4438 | 4438 | 4438 |
| 5°  | 4439 | 4432 | 4459 |
| 10° | 4412 | 4410 | 4454 |
| 15° | 4356 | 4379 | 4457 |
| 20° | 4281 | 4331 | 4408 |
| 25° | 4190 | 4237 | 4314 |
| 30° | 4039 | 4093 | 4205 |
| 35° | 3840 | 3884 | 4041 |
| 40° | 3550 | 3588 | 3715 |
| 45° | 3189 | 3247 | 3298 |
| 50° | 2757 | 2856 | 2729 |
| 55° | 2406 | 2343 | 2312 |
| 60° | 2083 | 1876 | 2003 |
| 65° | 1862 | 1473 | 1798 |
| 70° | 1727 | 1220 | 1773 |
| 75° | 1725 | 1289 | 1969 |
| 80° | 1909 | 1623 | 2221 |
| 85° | 1991 | 1760 | 2510 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 156.1  | 4.3       |
| 10°-20°   | 444.5  | 12.3      |
| 20°-30°   | 657.4  | 18.3      |
| 30°-40°   | 741.8  | 20.6      |
| 40°-50°   | 653.9  | 18.2      |
| 50°-60°   | 448.6  | 12.5      |
| 60°-70°   | 264.7  | 7.4       |
| 70°-80°   | 165.2  | 4.6       |
| 80°-90°   | 68.9   | 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°    | 1257.9 | 34.9      |
| 0°-40°    | 1999.7 | 55.5      |
| 0°-60°    | 3102.2 | 86.1      |
| 0°-90°    | 3601.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3601.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1649 | 1649  | 1649 | 1649  | 1649 |      |
| 5°  | 1643 | 1640  | 1641 | 1647  | 1651 | 156  |
| 15° | 1564 | 1565  | 1572 | 1591  | 1600 | 441  |
| 25° | 1411 | 1416  | 1427 | 1446  | 1453 | 648  |
| 35° | 1169 | 1179  | 1182 | 1211  | 1230 | 728  |
| 45° | 838  | 842   | 853  | 858   | 866  | 644  |
| 55° | 513  | 500   | 499  | 483   | 493  | 460  |
| 65° | 292  | 257   | 231  | 267   | 282  | 295  |
| 75° | 166  | 149   | 124  | 174   | 189  | 178  |
| 85° | 64   | 60    | 57   | 75    | 81   | 70   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1649.1 | 1649.1 | 1649.1 | 1649.1 | 1649.1 |
| 2.5°  | 1650.0 | 1645.8 | 1644.1 | 1650.8 | 1655.0 |
| 5°    | 1643.3 | 1639.9 | 1640.7 | 1646.6 | 1650.8 |
| 7.5°  | 1631.5 | 1629.0 | 1629.0 | 1637.4 | 1641.6 |
| 10°   | 1614.8 | 1613.9 | 1613.9 | 1624.0 | 1629.9 |
| 12.5° | 1591.3 | 1592.1 | 1595.5 | 1608.9 | 1619.0 |
| 15°   | 1563.7 | 1565.3 | 1572.0 | 1591.3 | 1599.7 |
| 17.5° | 1533.5 | 1533.5 | 1546.9 | 1562.0 | 1572.0 |
| 20°   | 1494.9 | 1497.5 | 1512.5 | 1529.3 | 1539.4 |
| 22.5° | 1455.6 | 1459.7 | 1472.3 | 1491.6 | 1500.8 |
| 25°   | 1411.1 | 1416.2 | 1427.1 | 1445.5 | 1453.0 |
| 27.5° | 1359.2 | 1365.9 | 1377.6 | 1391.0 | 1407.0 |
| 30°   | 1299.7 | 1309.7 | 1317.3 | 1335.7 | 1353.3 |
| 32.5° | 1239.4 | 1248.6 | 1257.0 | 1276.2 | 1296.3 |
| 35°   | 1169.0 | 1179.0 | 1182.4 | 1210.9 | 1230.1 |
| 37.5° | 1096.9 | 1101.1 | 1102.8 | 1131.3 | 1152.2 |
| 40°   | 1010.6 | 1019.0 | 1021.5 | 1044.1 | 1057.5 |
| 42.5° | 927.6  | 931.0  | 936.0  | 952.8  | 968.7  |
| 45°   | 838.0  | 842.2  | 853.1  | 858.1  | 866.5  |
| 47.5° | 744.1  | 756.7  | 769.3  | 753.3  | 754.2  |
| 50°   | 658.6  | 668.7  | 682.1  | 651.9  | 651.9  |
| 52.5° | 582.4  | 587.4  | 588.3  | 563.1  | 568.1  |
| 55°   | 512.8  | 500.3  | 499.4  | 482.7  | 492.7  |
| 57.5° | 443.3  | 426.5  | 420.7  | 415.6  | 427.4  |
| 60°   | 387.1  | 357.0  | 348.6  | 356.1  | 372.1  |
| 62.5° | 341.1  | 302.5  | 286.6  | 305.9  | 320.1  |
| 65°   | 292.5  | 257.3  | 231.3  | 267.3  | 282.4  |
| 67.5° | 254.7  | 221.2  | 187.7  | 238.8  | 249.7  |
| 70°   | 219.5  | 193.6  | 155.0  | 217.0  | 225.4  |
| 72.5° | 191.1  | 170.9  | 134.1  | 196.1  | 206.1  |
| 75°   | 165.9  | 149.2  | 124.0  | 173.5  | 189.4  |
| 77.5° | 145.8  | 127.4  | 115.6  | 150.0  | 169.3  |
| 80°   | 123.2  | 104.7  | 104.7  | 125.7  | 143.3  |
| 82.5° | 97.2   | 82.1   | 84.6   | 102.2  | 114.8  |
| 85°   | 64.5   | 60.3   | 57.0   | 74.6   | 81.3   |
| 87.5° | 32.7   | 33.5   | 30.2   | 38.5   | 39.4   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)