

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: P294261

Luminaire Tested: **24GR-LD5-56-FGW080-UNV-L82765-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P294261
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-25)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-56-FGW080-UNV-L82765-W2A1-U-3500K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH FGW080 LENS
Light Source: (336) 80 CRI LEDS TUNED TO 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4799.0 lumens
Efficiency: N/A
Efficacy: 122.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

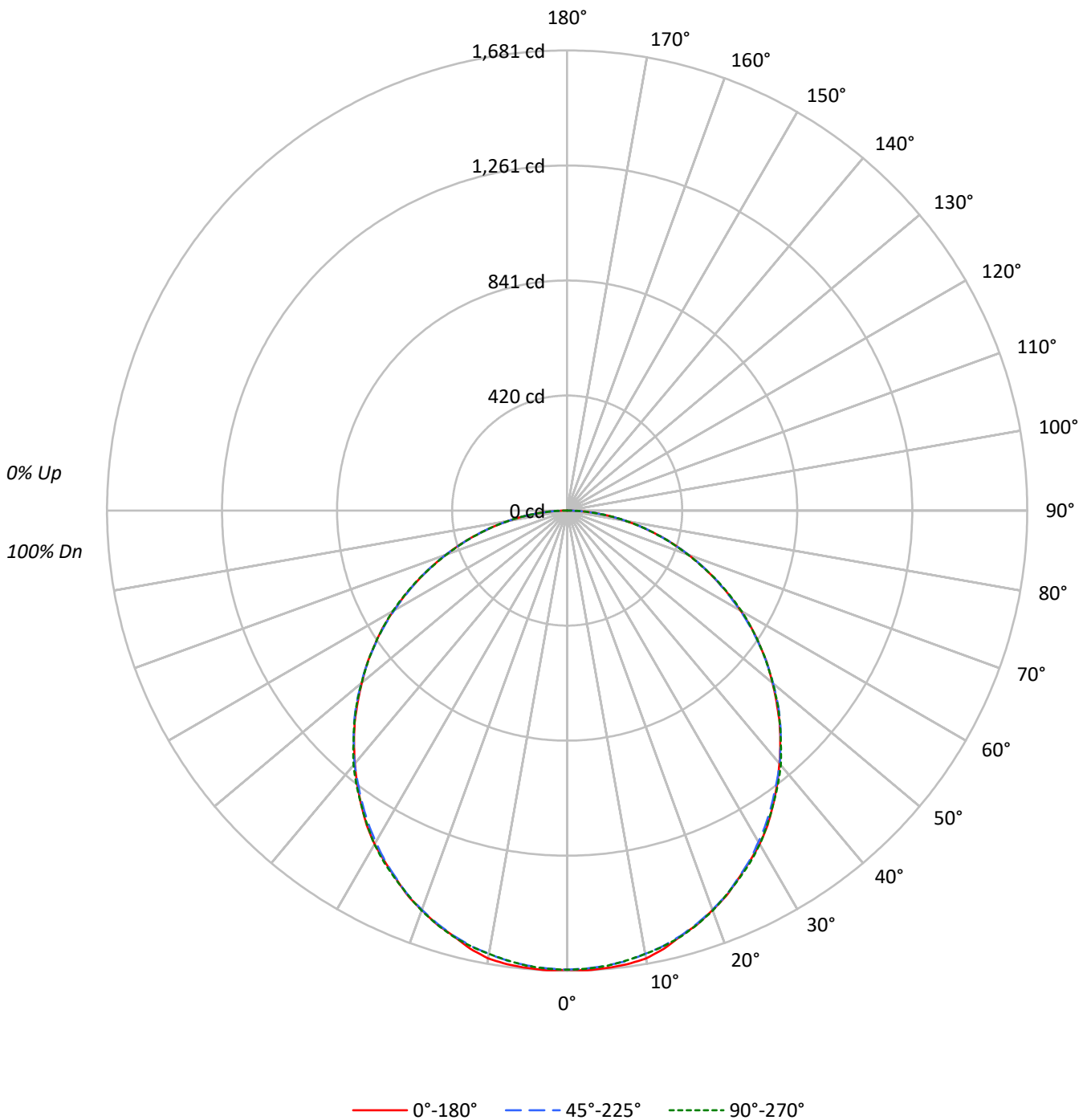
Input Watts (W): 39.153
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 84 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 63 | 74 | 68 | 62 | 71 | 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° | 2257 | 2257 | 2257 |
| 5° | 2265 | 2253 | 2255 |
| 10° | 2270 | 2247 | 2247 |
| 15° | 2240 | 2239 | 2243 |
| 20° | 2223 | 2222 | 2227 |
| 25° | 2199 | 2198 | 2204 |
| 30° | 2186 | 2172 | 2187 |
| 35° | 2155 | 2143 | 2155 |
| 40° | 2119 | 2121 | 2133 |
| 45° | 2089 | 2095 | 2091 |
| 50° | 2049 | 2056 | 2052 |
| 55° | 2018 | 2012 | 2018 |
| 60° | 1971 | 1964 | 1983 |
| 65° | 1910 | 1917 | 1924 |
| 70° | 1848 | 1857 | 1843 |
| 75° | 1783 | 1783 | 1783 |
| 80° | 1684 | 1684 | 1702 |
| 85° | 1555 | 1573 | 1521 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 158.6 | 3.3 |
| 10°-20° | 453.4 | 9.4 |
| 20°-30° | 683.3 | 14.2 |
| 30°-40° | 818.3 | 17.1 |
| 40°-50° | 847.1 | 17.7 |
| 50°-60° | 768.1 | 16.0 |
| 60°-70° | 595.5 | 12.4 |
| 70°-80° | 362.1 | 7.5 |
| 80°-90° | 112.7 | 2.3 |
| 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° | 1295.2 | 27.0 |
| 0°-40° | 2113.6 | 44.0 |
| 0°-60° | 3728.7 | 77.7 |
| 0°-90° | 4799.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4799.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1677 | 1677 | 1677 | 1677 | 1677 | |
| 5° | 1677 | 1667 | 1668 | 1666 | 1669 | 160 |
| 15° | 1608 | 1609 | 1607 | 1602 | 1610 | 455 |
| 25° | 1482 | 1482 | 1480 | 1485 | 1485 | 684 |
| 35° | 1312 | 1303 | 1305 | 1311 | 1312 | 821 |
| 45° | 1098 | 1100 | 1101 | 1097 | 1099 | 846 |
| 55° | 860 | 856 | 858 | 861 | 860 | 769 |
| 65° | 600 | 603 | 602 | 600 | 604 | 595 |
| 75° | 343 | 342 | 343 | 342 | 343 | 362 |
| 85° | 101 | 100 | 102 | 101 | 98 | 113 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1677.3 | 1677.3 | 1677.3 | 1677.3 | 1677.3 |
| 2.5° | 1680.7 | 1673.9 | 1673.9 | 1671.6 | 1675.0 |
| 5° | 1677.3 | 1667.1 | 1668.3 | 1666.0 | 1669.4 |
| 7.5° | 1671.6 | 1658.1 | 1659.2 | 1656.9 | 1658.1 |
| 10° | 1661.5 | 1645.6 | 1644.5 | 1643.4 | 1644.5 |
| 12.5° | 1638.8 | 1629.8 | 1628.6 | 1626.4 | 1629.8 |
| 15° | 1608.3 | 1609.4 | 1607.1 | 1601.5 | 1610.5 |
| 17.5° | 1584.5 | 1583.4 | 1581.1 | 1575.4 | 1584.5 |
| 20° | 1552.8 | 1553.9 | 1551.7 | 1549.4 | 1555.1 |
| 22.5° | 1522.3 | 1518.9 | 1520.0 | 1518.9 | 1520.0 |
| 25° | 1481.5 | 1481.5 | 1480.4 | 1484.9 | 1484.9 |
| 27.5° | 1444.2 | 1439.6 | 1441.9 | 1446.4 | 1448.7 |
| 30° | 1406.8 | 1395.5 | 1397.8 | 1402.3 | 1407.9 |
| 32.5° | 1362.7 | 1351.4 | 1353.6 | 1358.1 | 1360.4 |
| 35° | 1311.7 | 1302.7 | 1304.9 | 1310.6 | 1311.7 |
| 37.5° | 1259.7 | 1254.0 | 1256.3 | 1260.8 | 1264.2 |
| 40° | 1206.5 | 1204.2 | 1207.6 | 1206.5 | 1214.4 |
| 42.5° | 1152.2 | 1151.0 | 1154.4 | 1154.4 | 1155.6 |
| 45° | 1097.8 | 1100.1 | 1101.2 | 1096.7 | 1099.0 |
| 47.5° | 1037.8 | 1039.0 | 1043.5 | 1041.2 | 1042.4 |
| 50° | 979.0 | 977.9 | 982.4 | 983.5 | 980.1 |
| 52.5° | 922.4 | 916.7 | 921.3 | 923.5 | 921.3 |
| 55° | 860.2 | 855.6 | 857.9 | 861.3 | 860.2 |
| 57.5° | 799.0 | 794.5 | 795.6 | 801.3 | 799.0 |
| 60° | 732.3 | 731.1 | 730.0 | 734.5 | 736.8 |
| 62.5° | 666.6 | 665.5 | 663.2 | 667.8 | 670.0 |
| 65° | 599.8 | 603.2 | 602.1 | 599.8 | 604.4 |
| 67.5° | 536.5 | 539.9 | 536.5 | 534.2 | 534.2 |
| 70° | 469.7 | 473.1 | 472.0 | 469.7 | 468.6 |
| 72.5° | 407.4 | 407.4 | 405.2 | 404.0 | 405.2 |
| 75° | 342.9 | 341.8 | 342.9 | 341.8 | 342.9 |
| 77.5° | 279.6 | 280.7 | 280.7 | 280.7 | 279.6 |
| 80° | 217.3 | 217.3 | 217.3 | 218.4 | 219.6 |
| 82.5° | 159.6 | 156.2 | 159.6 | 157.3 | 158.4 |
| 85° | 100.7 | 99.6 | 101.9 | 100.7 | 98.5 |
| 87.5° | 45.3 | 46.4 | 46.4 | 47.5 | 47.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)