

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: P292916

Luminaire Tested: **24GR-LD5-34-F1-UNV-L83050-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292916
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-12)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-34-F1-UNV-L83050-W2A1-U-4000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH F1 LENS
Light Source: (336) 80 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3666.0 lumens
Efficiency: N/A
Efficacy: 155.8 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.18 / 1.25
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

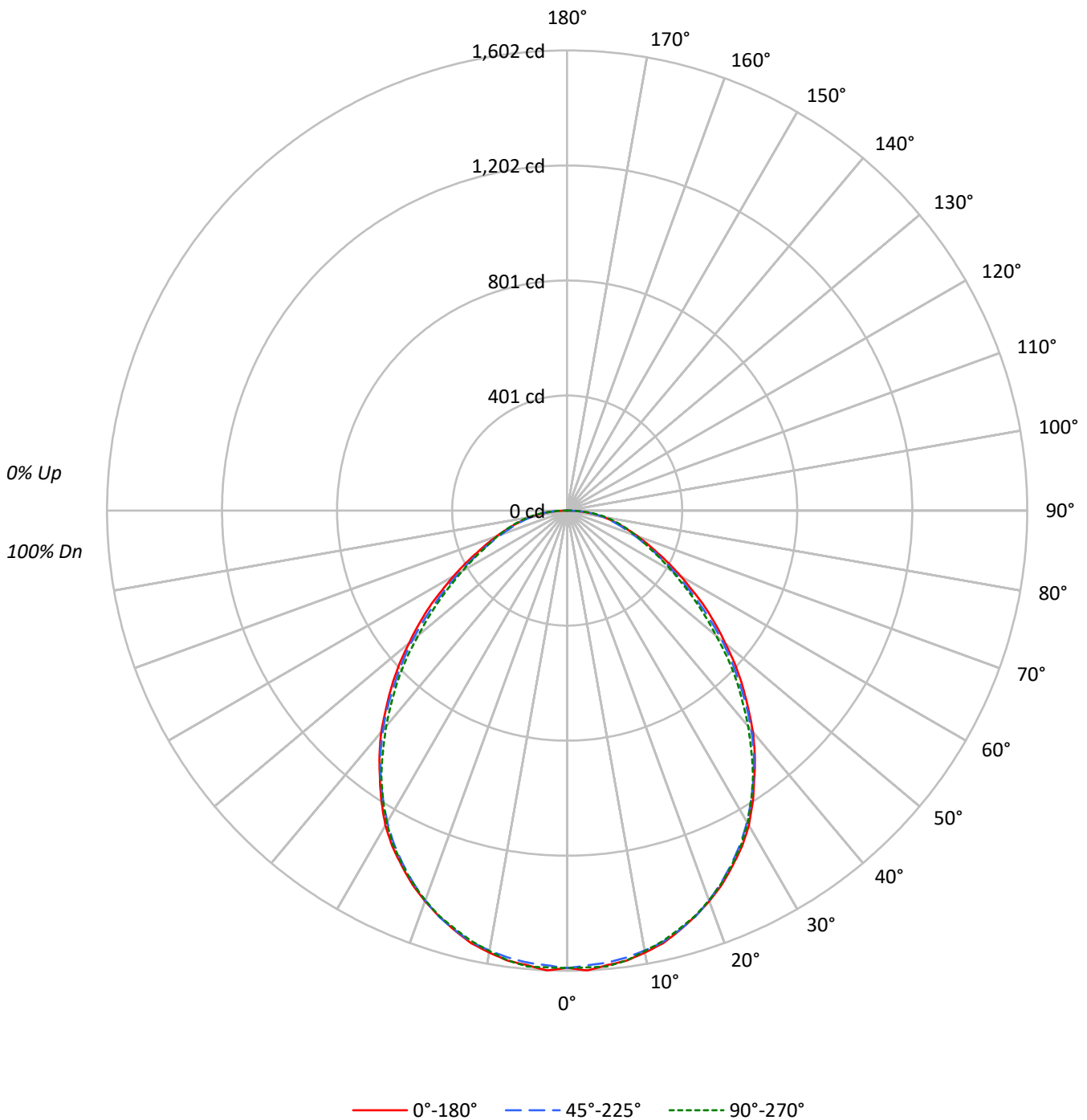
Input Watts (W): 23.529
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 98 | 95 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 93 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 78 | 75 | 72 |
| 3 | 92 | 82 | 74 | 68 | 90 | 81 | 73 | 68 | 78 | 72 | 67 | 75 | 70 | 65 | 72 | 68 | 64 | 62 |
| 4 | 85 | 73 | 65 | 59 | 83 | 72 | 64 | 58 | 70 | 63 | 58 | 67 | 62 | 57 | 65 | 60 | 56 | 54 |
| 5 | 78 | 66 | 58 | 51 | 76 | 65 | 57 | 51 | 63 | 56 | 50 | 61 | 55 | 50 | 59 | 54 | 49 | 47 |
| 6 | 73 | 60 | 51 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 45 | 56 | 49 | 44 | 54 | 48 | 44 | 42 |
| 7 | 68 | 55 | 46 | 40 | 66 | 54 | 46 | 40 | 52 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 37 |
| 8 | 63 | 50 | 42 | 36 | 62 | 49 | 42 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 34 |
| 9 | 59 | 46 | 38 | 33 | 58 | 46 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 32 | 42 | 37 | 32 | 31 |
| 10 | 56 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 39 | 34 | 30 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2143 | 2143 | 2143 |
| 5° | 2146 | 2133 | 2152 |
| 10° | 2134 | 2125 | 2127 |
| 15° | 2108 | 2105 | 2100 |
| 20° | 2072 | 2068 | 2068 |
| 25° | 2024 | 2013 | 2017 |
| 30° | 1965 | 1945 | 1951 |
| 35° | 1867 | 1858 | 1853 |
| 40° | 1768 | 1752 | 1721 |
| 45° | 1643 | 1614 | 1583 |
| 50° | 1505 | 1472 | 1416 |
| 55° | 1375 | 1312 | 1268 |
| 60° | 1225 | 1166 | 1135 |
| 65° | 1103 | 1045 | 1030 |
| 70° | 1023 | 961 | 1000 |
| 75° | 979 | 936 | 1014 |
| 80° | 979 | 979 | 1084 |
| 85° | 1016 | 1027 | 1144 |



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CATALOG NUMBER: 24GR-LD5-34-F1-UNV-L83050-W2A1-U-4000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 150.4 | 4.1 |
| 10°-20° | 425.6 | 11.6 |
| 20°-30° | 624.6 | 17.0 |
| 30°-40° | 706.2 | 19.3 |
| 40°-50° | 652.6 | 17.8 |
| 50°-60° | 502.8 | 13.7 |
| 60°-70° | 333.0 | 9.1 |
| 70°-80° | 198.2 | 5.4 |
| 80°-90° | 72.6 | 2.0 |
| 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° | 1200.6 | 32.7 |
| 0°-40° | 1906.7 | 52.0 |
| 0°-60° | 3062.2 | 83.5 |
| 0°-90° | 3666.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3666.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1592 | 1592 | 1592 | 1592 | 1592 | |
| 5° | 1589 | 1589 | 1580 | 1580 | 1593 | 151 |
| 15° | 1513 | 1510 | 1512 | 1511 | 1508 | 426 |
| 25° | 1363 | 1360 | 1356 | 1354 | 1359 | 628 |
| 35° | 1136 | 1135 | 1131 | 1126 | 1128 | 711 |
| 45° | 864 | 858 | 848 | 833 | 832 | 665 |
| 55° | 586 | 574 | 560 | 544 | 541 | 523 |
| 65° | 346 | 341 | 328 | 325 | 324 | 347 |
| 75° | 188 | 184 | 180 | 188 | 195 | 201 |
| 85° | 66 | 62 | 66 | 73 | 74 | 70 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P292916

CATALOG NUMBER: 24GR-LD5-34-F1-UNV-L83050-W2A1-U-4000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1592.4 | 1592.4 | 1592.4 | 1592.4 | 1592.4 |
| 2.5° | 1602.3 | 1593.9 | 1584.9 | 1584.9 | 1591.7 |
| 5° | 1588.6 | 1588.6 | 1579.6 | 1580.3 | 1593.2 |
| 7.5° | 1580.3 | 1575.8 | 1569.7 | 1569.7 | 1579.6 |
| 10° | 1562.2 | 1558.4 | 1555.4 | 1553.9 | 1556.9 |
| 12.5° | 1542.5 | 1536.5 | 1538.7 | 1536.5 | 1535.7 |
| 15° | 1513.0 | 1510.0 | 1511.5 | 1510.8 | 1507.7 |
| 17.5° | 1481.3 | 1479.8 | 1482.8 | 1477.5 | 1479.8 |
| 20° | 1447.2 | 1442.7 | 1444.2 | 1441.2 | 1444.2 |
| 22.5° | 1408.7 | 1405.7 | 1401.9 | 1398.1 | 1404.1 |
| 25° | 1363.3 | 1359.5 | 1355.8 | 1354.2 | 1358.8 |
| 27.5° | 1317.9 | 1311.9 | 1306.6 | 1305.1 | 1311.9 |
| 30° | 1265.0 | 1258.2 | 1252.2 | 1250.6 | 1255.9 |
| 32.5° | 1202.3 | 1200.7 | 1193.2 | 1190.2 | 1192.4 |
| 35° | 1136.5 | 1135.0 | 1131.2 | 1125.9 | 1128.2 |
| 37.5° | 1073.7 | 1073.0 | 1067.7 | 1058.6 | 1052.5 |
| 40° | 1006.4 | 1001.1 | 997.3 | 984.5 | 980.0 |
| 42.5° | 932.3 | 930.8 | 924.0 | 909.6 | 904.3 |
| 45° | 863.5 | 857.5 | 848.4 | 833.3 | 831.8 |
| 47.5° | 792.4 | 784.1 | 775.8 | 756.9 | 756.1 |
| 50° | 719.1 | 713.0 | 703.2 | 684.3 | 676.7 |
| 52.5° | 651.0 | 642.7 | 629.1 | 611.0 | 607.2 |
| 55° | 586.0 | 573.9 | 559.5 | 544.4 | 540.6 |
| 57.5° | 516.4 | 511.1 | 493.8 | 481.7 | 477.1 |
| 60° | 455.2 | 450.7 | 433.3 | 421.9 | 421.9 |
| 62.5° | 400.0 | 393.2 | 378.1 | 370.5 | 370.5 |
| 65° | 346.3 | 341.0 | 328.2 | 325.1 | 323.6 |
| 67.5° | 300.2 | 293.4 | 284.3 | 283.6 | 287.3 |
| 70° | 260.1 | 251.8 | 244.2 | 251.8 | 254.1 |
| 72.5° | 222.3 | 217.0 | 210.2 | 220.0 | 224.6 |
| 75° | 188.3 | 183.7 | 180.0 | 188.3 | 195.1 |
| 77.5° | 157.3 | 152.7 | 152.7 | 161.8 | 167.9 |
| 80° | 126.3 | 123.3 | 126.3 | 133.8 | 139.9 |
| 82.5° | 96.8 | 94.5 | 98.3 | 105.9 | 109.6 |
| 85° | 65.8 | 62.0 | 66.5 | 73.3 | 74.1 |
| 87.5° | 31.0 | 30.2 | 33.3 | 37.8 | 37.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)