

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: P292919

Luminaire Tested: **24GR-LD5-38-F1-UNV-L83050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292919
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-LD5-38-F1-UNV-L83050-W2A1-U-3000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH F1 LENS
Light Source: (336) 80 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3636.0 lumens
Efficiency: N/A
Efficacy: 143.7 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

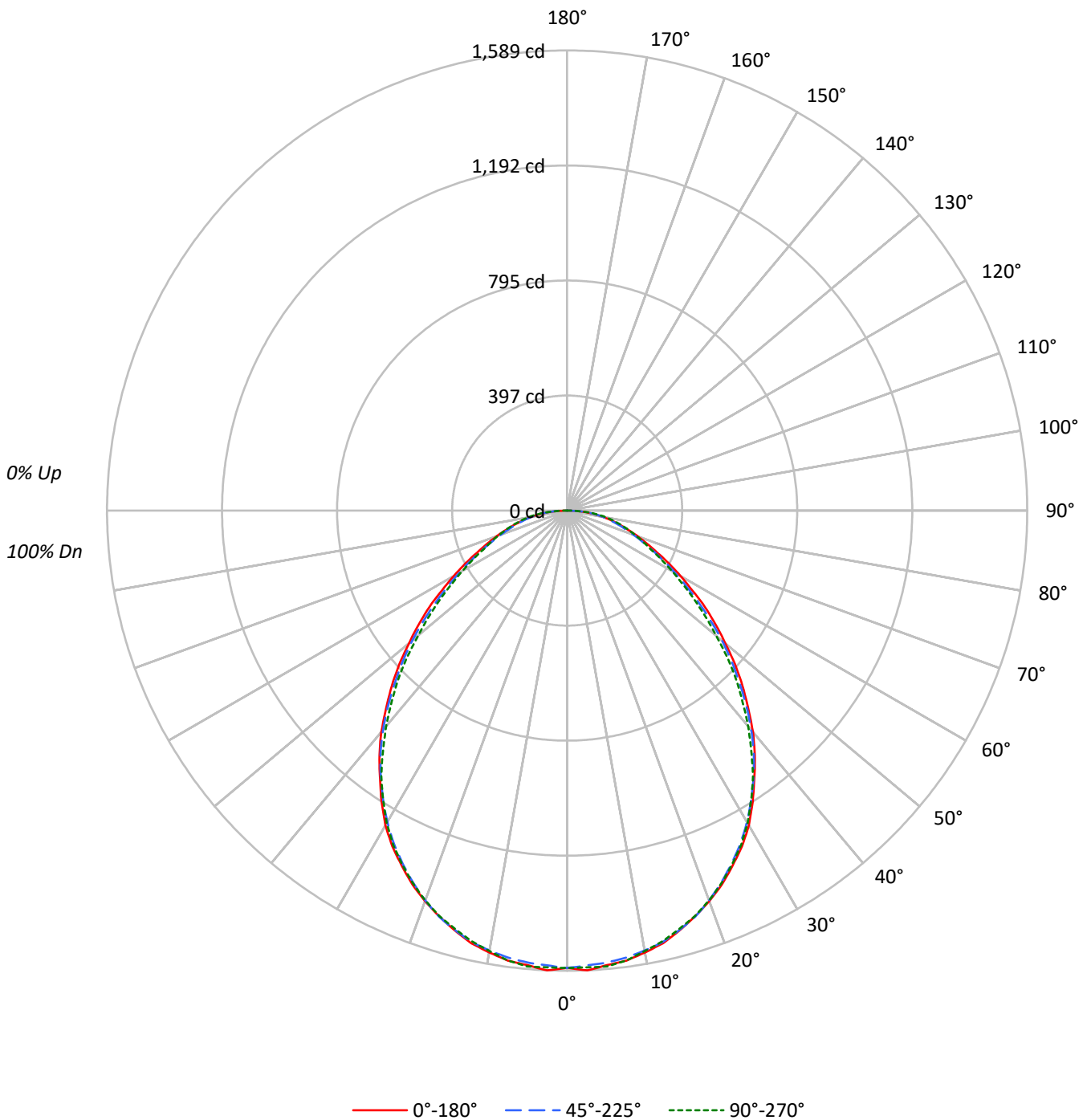
Input Watts (W): 25.296
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P292919

CATALOG NUMBER: 24GR-LD5-38-F1-UNV-L83050-W2A1-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P292919

CATALOG NUMBER: 24GR-LD5-38-F1-UNV-L83050-W2A1-U-3000K

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° | 2125 | 2125 | 2125 |
| 5° | 2128 | 2116 | 2134 |
| 10° | 2117 | 2108 | 2110 |
| 15° | 2090 | 2088 | 2083 |
| 20° | 2055 | 2051 | 2051 |
| 25° | 2007 | 1996 | 2001 |
| 30° | 1949 | 1929 | 1935 |
| 35° | 1851 | 1843 | 1838 |
| 40° | 1753 | 1737 | 1707 |
| 45° | 1630 | 1601 | 1570 |
| 50° | 1493 | 1460 | 1405 |
| 55° | 1363 | 1302 | 1258 |
| 60° | 1215 | 1156 | 1126 |
| 65° | 1094 | 1036 | 1022 |
| 70° | 1015 | 953 | 991 |
| 75° | 971 | 928 | 1006 |
| 80° | 970 | 970 | 1075 |
| 85° | 1007 | 1019 | 1135 |



TEST NUMBER: P292919

CATALOG NUMBER: 24GR-LD5-38-F1-UNV-L83050-W2A1-U-3000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 149.2 | 4.1 |
| 10°-20° | 422.1 | 11.6 |
| 20°-30° | 619.5 | 17.0 |
| 30°-40° | 700.4 | 19.3 |
| 40°-50° | 647.3 | 17.8 |
| 50°-60° | 498.7 | 13.7 |
| 60°-70° | 330.2 | 9.1 |
| 70°-80° | 196.6 | 5.4 |
| 80°-90° | 72.0 | 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° | 1190.8 | 32.7 |
| 0°-40° | 1891.1 | 52.0 |
| 0°-60° | 3037.1 | 83.5 |
| 0°-90° | 3636.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3636.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1579 | 1579 | 1579 | 1579 | 1579 | |
| 5° | 1576 | 1576 | 1567 | 1567 | 1580 | 150 |
| 15° | 1501 | 1498 | 1499 | 1498 | 1495 | 423 |
| 25° | 1352 | 1348 | 1345 | 1343 | 1348 | 623 |
| 35° | 1127 | 1126 | 1122 | 1117 | 1119 | 705 |
| 45° | 856 | 850 | 841 | 826 | 825 | 660 |
| 55° | 581 | 569 | 555 | 540 | 536 | 518 |
| 65° | 344 | 338 | 326 | 322 | 321 | 344 |
| 75° | 187 | 182 | 178 | 187 | 194 | 199 |
| 85° | 65 | 62 | 66 | 73 | 74 | 69 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P292919

CATALOG NUMBER: 24GR-LD5-38-F1-UNV-L83050-W2A1-U-3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1579.4 | 1579.4 | 1579.4 | 1579.4 | 1579.4 |
| 2.5° | 1589.1 | 1580.9 | 1571.9 | 1571.9 | 1578.6 |
| 5° | 1575.6 | 1575.6 | 1566.6 | 1567.4 | 1580.1 |
| 7.5° | 1567.4 | 1562.9 | 1556.9 | 1556.9 | 1566.6 |
| 10° | 1549.4 | 1545.6 | 1542.6 | 1541.1 | 1544.1 |
| 12.5° | 1529.9 | 1523.9 | 1526.1 | 1523.9 | 1523.1 |
| 15° | 1500.6 | 1497.6 | 1499.1 | 1498.4 | 1495.4 |
| 17.5° | 1469.1 | 1467.6 | 1470.6 | 1465.4 | 1467.6 |
| 20° | 1435.4 | 1430.9 | 1432.4 | 1429.4 | 1432.4 |
| 22.5° | 1397.2 | 1394.2 | 1390.4 | 1386.7 | 1392.7 |
| 25° | 1352.2 | 1348.4 | 1344.7 | 1343.2 | 1347.7 |
| 27.5° | 1307.2 | 1301.2 | 1295.9 | 1294.4 | 1301.2 |
| 30° | 1254.7 | 1247.9 | 1241.9 | 1240.4 | 1245.7 |
| 32.5° | 1192.4 | 1190.9 | 1183.4 | 1180.4 | 1182.7 |
| 35° | 1127.2 | 1125.7 | 1121.9 | 1116.7 | 1118.9 |
| 37.5° | 1064.9 | 1064.2 | 1058.9 | 1049.9 | 1043.9 |
| 40° | 998.2 | 992.9 | 989.2 | 976.4 | 971.9 |
| 42.5° | 924.7 | 923.2 | 916.4 | 902.2 | 896.9 |
| 45° | 856.4 | 850.4 | 841.4 | 826.4 | 824.9 |
| 47.5° | 785.9 | 777.7 | 769.4 | 750.7 | 749.9 |
| 50° | 713.2 | 707.2 | 697.5 | 678.7 | 671.2 |
| 52.5° | 645.7 | 637.5 | 624.0 | 606.0 | 602.2 |
| 55° | 581.2 | 569.2 | 555.0 | 540.0 | 536.2 |
| 57.5° | 512.2 | 507.0 | 489.7 | 477.7 | 473.2 |
| 60° | 451.5 | 447.0 | 429.7 | 418.5 | 418.5 |
| 62.5° | 396.7 | 390.0 | 375.0 | 367.5 | 367.5 |
| 65° | 343.5 | 338.2 | 325.5 | 322.5 | 321.0 |
| 67.5° | 297.7 | 291.0 | 282.0 | 281.2 | 285.0 |
| 70° | 258.0 | 249.7 | 242.2 | 249.7 | 252.0 |
| 72.5° | 220.5 | 215.2 | 208.5 | 218.2 | 222.7 |
| 75° | 186.7 | 182.2 | 178.5 | 186.7 | 193.5 |
| 77.5° | 156.0 | 151.5 | 151.5 | 160.5 | 166.5 |
| 80° | 125.2 | 122.2 | 125.2 | 132.7 | 138.7 |
| 82.5° | 96.0 | 93.7 | 97.5 | 105.0 | 108.7 |
| 85° | 65.2 | 61.5 | 66.0 | 72.7 | 73.5 |
| 87.5° | 30.7 | 30.0 | 33.0 | 37.5 | 36.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)