

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: P293549

Luminaire Tested: **24GR-LD5-38-A-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293549
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33306)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-38-A-UNV-L93050-W2A1-U-3000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH A LENS
Light Source: (336) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3029.0 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.2 / 1.26
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

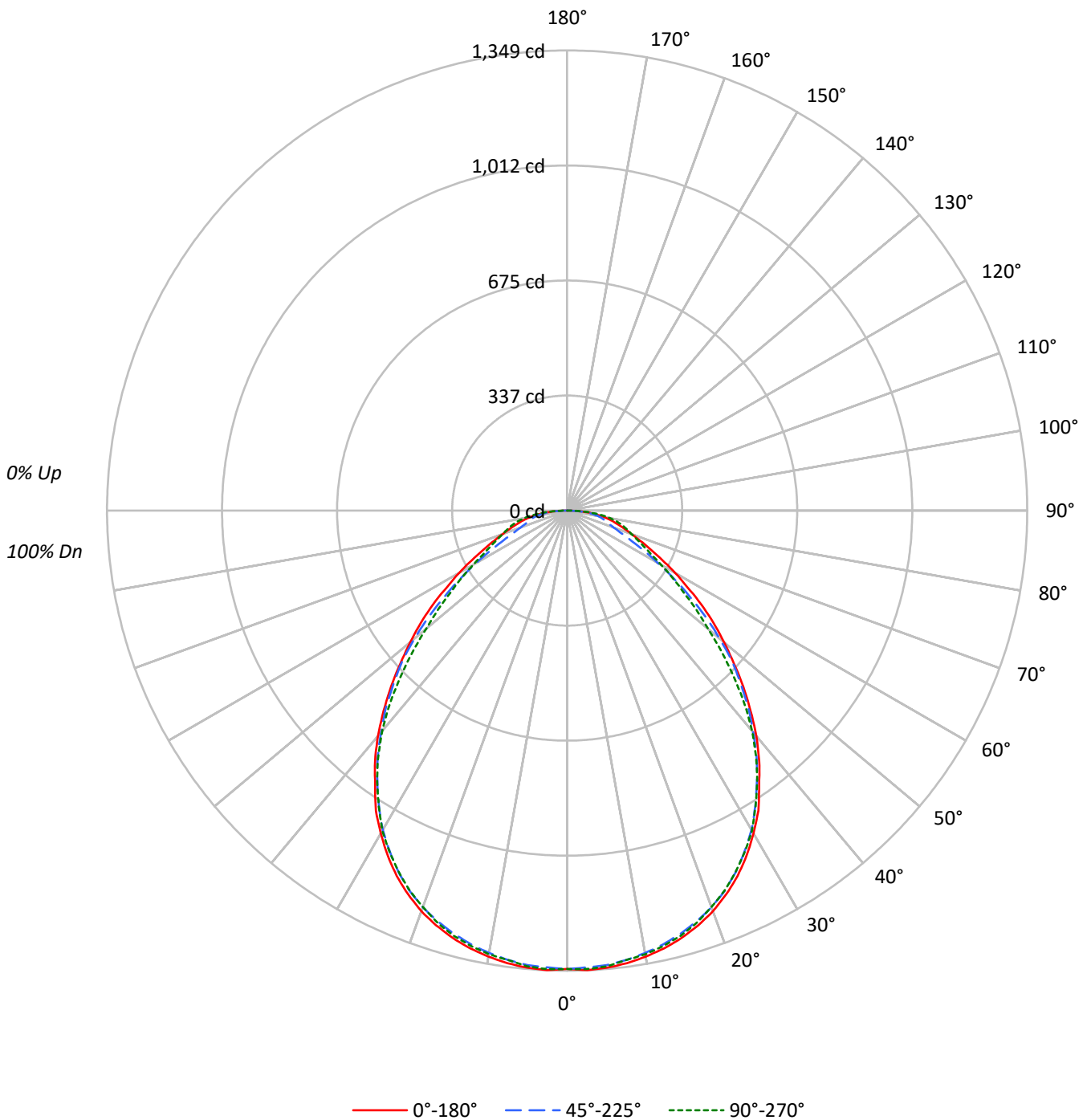
Input Watts (W): 25.972947
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P293549

CATALOG NUMBER: 24GR-LD5-38-A-UNV-L93050-W2A1-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P293549

CATALOG NUMBER: 24GR-LD5-38-A-UNV-L93050-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 | 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 | | | | | 100 | | | |
| 1 | 110 | 105 | 101 | 98 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 93 | 90 | 91 | 89 | 88 | 86 | | | | | 86 | | | |
| 2 | 101 | 93 | 87 | 82 | 98 | 91 | 86 | 81 | 88 | 83 | 79 | 85 | 81 | 77 | 82 | 78 | 75 | 73 | | | | | 73 | | | |
| 3 | 93 | 83 | 75 | 69 | 90 | 81 | 74 | 69 | 79 | 73 | 68 | 76 | 71 | 67 | 73 | 69 | 65 | 63 | | | | | 63 | | | |
| 4 | 86 | 74 | 66 | 60 | 83 | 73 | 65 | 60 | 71 | 64 | 59 | 68 | 63 | 58 | 66 | 61 | 57 | 55 | | | | | 55 | | | |
| 5 | 79 | 67 | 59 | 53 | 77 | 66 | 58 | 52 | 64 | 57 | 52 | 62 | 56 | 51 | 60 | 55 | 51 | 49 | | | | | 49 | | | |
| 6 | 73 | 61 | 53 | 46 | 72 | 60 | 52 | 46 | 58 | 51 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 43 | | | | | 43 | | | |
| 7 | 68 | 56 | 47 | 42 | 67 | 55 | 47 | 41 | 53 | 46 | 41 | 52 | 46 | 41 | 51 | 45 | 41 | 39 | | | | | 39 | | | |
| 8 | 64 | 51 | 43 | 37 | 62 | 50 | 43 | 37 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 37 | 35 | | | | | 35 | | | |
| 9 | 60 | 47 | 39 | 34 | 58 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 33 | 43 | 38 | 33 | 32 | | | | | 32 | | | |
| 10 | 56 | 44 | 36 | 31 | 55 | 43 | 36 | 31 | 42 | 35 | 31 | 41 | 35 | 31 | 40 | 35 | 30 | 29 | | | | | 29 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1808 | 1808 | 1808 |
| 5° | 1817 | 1807 | 1811 |
| 10° | 1814 | 1799 | 1804 |
| 15° | 1807 | 1789 | 1796 |
| 20° | 1790 | 1771 | 1771 |
| 25° | 1755 | 1736 | 1735 |
| 30° | 1697 | 1679 | 1683 |
| 35° | 1612 | 1593 | 1596 |
| 40° | 1516 | 1489 | 1480 |
| 45° | 1389 | 1370 | 1316 |
| 50° | 1256 | 1221 | 1129 |
| 55° | 1127 | 1026 | 974 |
| 60° | 987 | 826 | 856 |
| 65° | 861 | 649 | 788 |
| 70° | 788 | 567 | 788 |
| 75° | 788 | 603 | 869 |
| 80° | 855 | 711 | 989 |
| 85° | 939 | 801 | 1062 |



TEST NUMBER: P293549

CATALOG NUMBER: 24GR-LD5-38-A-UNV-L93050-W2A1-U-3000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 127.3 | 4.2 |
| 10°-20° | 363.2 | 12.0 |
| 20°-30° | 538.5 | 17.8 |
| 30°-40° | 607.5 | 20.1 |
| 40°-50° | 550.3 | 18.2 |
| 50°-60° | 397.0 | 13.1 |
| 60°-70° | 237.0 | 7.8 |
| 70°-80° | 146.5 | 4.8 |
| 80°-90° | 61.7 | 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° | 1029.0 | 34.0 |
| 0°-40° | 1636.5 | 54.0 |
| 0°-60° | 2583.8 | 85.3 |
| 0°-90° | 3029.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3029.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1344 | 1344 | 1344 | 1344 | 1344 | |
| 5° | 1345 | 1344 | 1338 | 1336 | 1341 | 128 |
| 15° | 1297 | 1289 | 1284 | 1284 | 1290 | 366 |
| 25° | 1182 | 1176 | 1169 | 1165 | 1168 | 543 |
| 35° | 981 | 980 | 970 | 970 | 971 | 614 |
| 45° | 730 | 725 | 720 | 702 | 692 | 563 |
| 55° | 481 | 466 | 438 | 416 | 415 | 429 |
| 65° | 270 | 238 | 204 | 232 | 248 | 272 |
| 75° | 152 | 132 | 116 | 145 | 167 | 162 |
| 85° | 61 | 53 | 52 | 68 | 69 | 64 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P293549

CATALOG NUMBER: 24GR-LD5-38-A-UNV-L93050-W2A1-U-3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1343.9 | 1343.9 | 1343.9 | 1343.9 | 1343.9 |
| 2.5° | 1348.6 | 1344.9 | 1340.2 | 1343.0 | 1345.3 |
| 5° | 1345.3 | 1343.5 | 1337.8 | 1336.4 | 1341.1 |
| 7.5° | 1338.3 | 1333.6 | 1328.5 | 1330.8 | 1329.0 |
| 10° | 1327.6 | 1323.3 | 1316.8 | 1317.3 | 1320.5 |
| 12.5° | 1314.5 | 1309.3 | 1302.3 | 1304.2 | 1307.0 |
| 15° | 1297.1 | 1289.2 | 1284.0 | 1284.5 | 1289.7 |
| 17.5° | 1275.1 | 1269.1 | 1262.5 | 1263.9 | 1266.3 |
| 20° | 1249.9 | 1246.6 | 1237.2 | 1234.4 | 1236.8 |
| 22.5° | 1218.1 | 1212.0 | 1206.8 | 1205.4 | 1205.9 |
| 25° | 1182.0 | 1175.5 | 1169.4 | 1165.2 | 1168.5 |
| 27.5° | 1139.9 | 1134.3 | 1126.3 | 1124.9 | 1127.7 |
| 30° | 1092.2 | 1088.0 | 1080.9 | 1079.1 | 1083.3 |
| 32.5° | 1043.5 | 1036.5 | 1026.7 | 1026.7 | 1027.6 |
| 35° | 981.3 | 979.9 | 970.0 | 970.5 | 971.4 |
| 37.5° | 925.1 | 918.6 | 913.0 | 907.3 | 910.1 |
| 40° | 862.9 | 855.4 | 847.9 | 844.2 | 842.8 |
| 42.5° | 796.0 | 790.4 | 787.1 | 773.5 | 770.2 |
| 45° | 730.0 | 725.3 | 720.2 | 702.4 | 691.6 |
| 47.5° | 662.6 | 661.7 | 657.5 | 626.1 | 615.3 |
| 50° | 599.9 | 598.5 | 583.5 | 550.3 | 539.5 |
| 52.5° | 540.5 | 531.1 | 511.5 | 478.7 | 476.8 |
| 55° | 480.6 | 465.6 | 437.5 | 416.0 | 415.1 |
| 57.5° | 417.4 | 399.6 | 371.1 | 359.4 | 365.5 |
| 60° | 366.9 | 339.7 | 307.0 | 308.4 | 318.2 |
| 62.5° | 314.5 | 284.0 | 251.8 | 265.8 | 277.5 |
| 65° | 270.5 | 238.2 | 204.0 | 231.6 | 247.5 |
| 67.5° | 232.1 | 202.2 | 169.4 | 206.4 | 221.8 |
| 70° | 200.3 | 175.9 | 144.1 | 183.0 | 200.3 |
| 72.5° | 175.0 | 152.5 | 127.7 | 164.2 | 184.4 |
| 75° | 151.6 | 131.5 | 116.0 | 144.6 | 167.1 |
| 77.5° | 131.5 | 111.8 | 104.8 | 127.7 | 149.7 |
| 80° | 110.4 | 92.7 | 91.7 | 111.4 | 127.7 |
| 82.5° | 86.1 | 73.9 | 73.9 | 93.1 | 102.9 |
| 85° | 60.8 | 53.3 | 51.9 | 67.9 | 68.8 |
| 87.5° | 31.4 | 29.9 | 27.1 | 35.6 | 35.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)