

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: INVUE

Report Number: P184428

Luminaire Tested: **612EN-LD2-54-UNV-L840-CD1-U**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P184428
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P34470)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: 612EN-LD2-54-UNV-L840-CD1-U
Description: METALUX ENCOUNTER 600X1200 TROFFER

Light Source: EATON LED 4000K
Ballast/Driver: OSRAM ELECTRONIC DRIVER

Summary

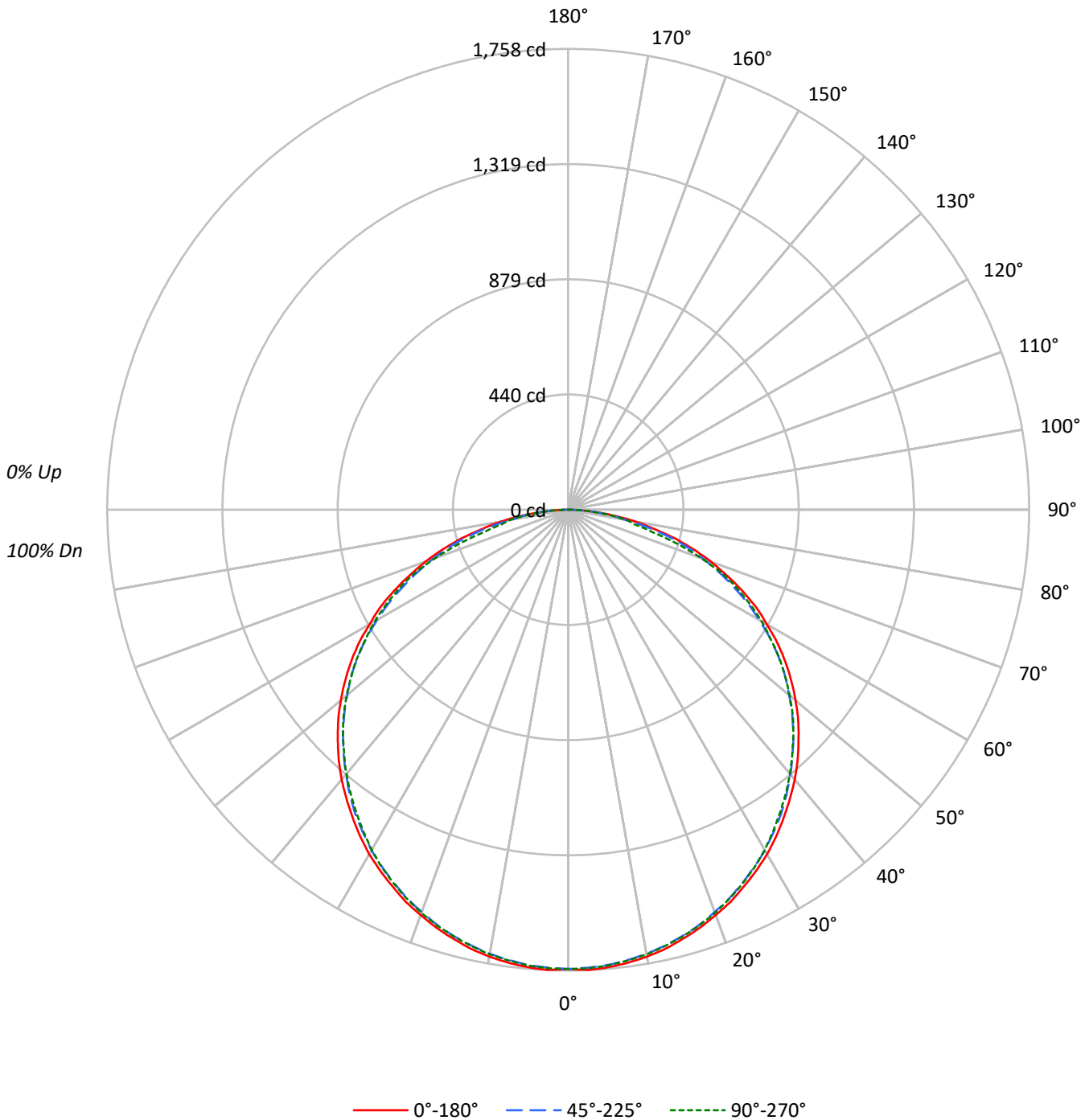
Lumens per Lamp: N/A
Luminaire Lumens: 5303.2 lumens
Efficiency: N/A
Efficacy: 123.3 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.27 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43
Input Voltage (V): NR
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 | 93 | 97 | 93 | 90 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 95 | 88 | 81 | 76 | 84 | 79 | 74 | 81 | 76 | 72 | 78 | 74 | 71 | 68 |
| 3 | 89 | 78 | 70 | 63 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 65 | 60 | 68 | 64 | 59 | 57 |
| 4 | 82 | 69 | 60 | 53 | 79 | 68 | 59 | 53 | 65 | 58 | 52 | 63 | 57 | 51 | 61 | 55 | 51 | 48 |
| 5 | 75 | 62 | 52 | 46 | 73 | 61 | 52 | 45 | 58 | 51 | 45 | 56 | 50 | 44 | 54 | 49 | 44 | 42 |
| 6 | 69 | 55 | 46 | 40 | 67 | 54 | 46 | 39 | 53 | 45 | 39 | 51 | 44 | 39 | 49 | 43 | 38 | 36 |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 41 | 35 | 48 | 40 | 35 | 46 | 39 | 34 | 45 | 39 | 34 | 32 |
| 8 | 59 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 44 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 30 | 28 |
| 9 | 56 | 42 | 34 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 27 | 38 | 32 | 27 | 25 |
| 10 | 52 | 39 | 31 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 30 | 25 | 35 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2358 | 2358 | 2358 |
| 5° | 2367 | 2355 | 2357 |
| 10° | 2365 | 2351 | 2353 |
| 15° | 2360 | 2346 | 2348 |
| 20° | 2356 | 2338 | 2343 |
| 25° | 2354 | 2333 | 2336 |
| 30° | 2358 | 2330 | 2328 |
| 35° | 2354 | 2326 | 2314 |
| 40° | 2361 | 2314 | 2311 |
| 45° | 2364 | 2311 | 2311 |
| 50° | 2370 | 2303 | 2307 |
| 55° | 2372 | 2298 | 2302 |
| 60° | 2353 | 2263 | 2292 |
| 65° | 2332 | 2215 | 2265 |
| 70° | 2275 | 2158 | 2116 |
| 75° | 2177 | 2059 | 1749 |
| 80° | 2009 | 1684 | 1751 |
| 85° | 1677 | 1596 | 1514 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 165.8 | 3.1 |
| 10°-20° | 475.9 | 9.0 |
| 20°-30° | 726.0 | 13.7 |
| 30°-40° | 886.9 | 16.7 |
| 40°-50° | 942.0 | 17.8 |
| 50°-60° | 880.8 | 16.6 |
| 60°-70° | 699.4 | 13.2 |
| 70°-80° | 408.0 | 7.7 |
| 80°-90° | 118.4 | 2.2 |
| 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° | 1367.7 | 25.8 |
| 0°-40° | 2254.6 | 42.5 |
| 0°-60° | 4077.4 | 76.9 |
| 0°-90° | 5303.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5303.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1752 | 1752 | 1752 | 1752 | 1752 | |
| 5° | 1752 | 1745 | 1744 | 1740 | 1745 | 167 |
| 15° | 1694 | 1689 | 1684 | 1679 | 1686 | 479 |
| 25° | 1586 | 1577 | 1572 | 1568 | 1574 | 732 |
| 35° | 1433 | 1425 | 1416 | 1405 | 1409 | 898 |
| 45° | 1242 | 1232 | 1214 | 1209 | 1214 | 959 |
| 55° | 1011 | 1001 | 980 | 974 | 981 | 902 |
| 65° | 732 | 715 | 696 | 703 | 711 | 723 |
| 75° | 419 | 403 | 396 | 352 | 336 | 441 |
| 85° | 109 | 103 | 103 | 102 | 98 | 126 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P184428

CATALOG NUMBER: 612EN-LD2-54-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1752.3 | 1752.3 | 1752.3 | 1752.3 | 1752.3 |
| 2.5° | 1757.5 | 1750.5 | 1748.8 | 1745.3 | 1750.5 |
| 5° | 1752.3 | 1745.3 | 1743.5 | 1740.0 | 1745.3 |
| 7.5° | 1743.5 | 1736.5 | 1733.0 | 1729.5 | 1734.8 |
| 10° | 1731.3 | 1724.2 | 1720.7 | 1717.2 | 1722.5 |
| 12.5° | 1715.5 | 1706.7 | 1703.2 | 1699.7 | 1705.0 |
| 15° | 1694.5 | 1689.2 | 1683.9 | 1678.7 | 1685.7 |
| 17.5° | 1671.7 | 1664.7 | 1661.2 | 1657.7 | 1662.9 |
| 20° | 1645.4 | 1640.1 | 1633.1 | 1631.4 | 1636.6 |
| 22.5° | 1619.1 | 1608.6 | 1605.1 | 1599.8 | 1606.8 |
| 25° | 1585.8 | 1577.1 | 1571.8 | 1568.3 | 1573.5 |
| 27.5° | 1552.5 | 1543.8 | 1536.7 | 1533.2 | 1538.5 |
| 30° | 1517.5 | 1507.0 | 1500.0 | 1492.9 | 1498.2 |
| 32.5° | 1477.2 | 1466.7 | 1457.9 | 1450.9 | 1454.4 |
| 35° | 1433.4 | 1424.6 | 1415.8 | 1405.3 | 1408.8 |
| 37.5° | 1389.6 | 1380.8 | 1368.5 | 1359.8 | 1363.3 |
| 40° | 1344.0 | 1335.2 | 1317.7 | 1312.5 | 1316.0 |
| 42.5° | 1294.9 | 1284.4 | 1266.9 | 1261.6 | 1265.1 |
| 45° | 1242.4 | 1231.9 | 1214.3 | 1209.1 | 1214.3 |
| 47.5° | 1189.8 | 1177.5 | 1158.3 | 1154.8 | 1161.8 |
| 50° | 1132.0 | 1119.7 | 1100.4 | 1098.7 | 1102.2 |
| 52.5° | 1072.4 | 1058.4 | 1042.6 | 1037.3 | 1042.6 |
| 55° | 1011.1 | 1000.6 | 979.5 | 974.3 | 981.3 |
| 57.5° | 946.2 | 930.5 | 912.9 | 907.7 | 914.7 |
| 60° | 874.4 | 860.4 | 841.1 | 839.3 | 851.6 |
| 62.5° | 809.6 | 790.3 | 771.0 | 769.3 | 783.3 |
| 65° | 732.5 | 714.9 | 695.7 | 702.7 | 711.4 |
| 67.5° | 653.6 | 639.6 | 622.1 | 627.3 | 636.1 |
| 70° | 578.3 | 560.7 | 548.5 | 545.0 | 537.9 |
| 72.5° | 499.4 | 485.4 | 478.4 | 450.3 | 441.6 |
| 75° | 418.8 | 403.0 | 396.0 | 352.2 | 336.4 |
| 77.5° | 334.7 | 327.7 | 310.2 | 266.3 | 261.1 |
| 80° | 259.3 | 255.8 | 217.3 | 220.8 | 226.0 |
| 82.5° | 180.5 | 178.7 | 166.5 | 163.0 | 161.2 |
| 85° | 108.6 | 103.4 | 103.4 | 101.6 | 98.1 |
| 87.5° | 43.8 | 47.3 | 45.6 | 43.8 | 45.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)