

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: P184446

Luminaire Tested: **612EN-LD2-74-UNV-L830-CD1-U**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P184446
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-LD2-74-UNV-L830-CD1-U
Description: METALUX ENCOUNTER 600X1200 TROFFER

Light Source: EATON LED 3000K
Ballast/Driver: OSRAM ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6976.6 lumens
Efficiency: N/A
Efficacy: 109.7 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

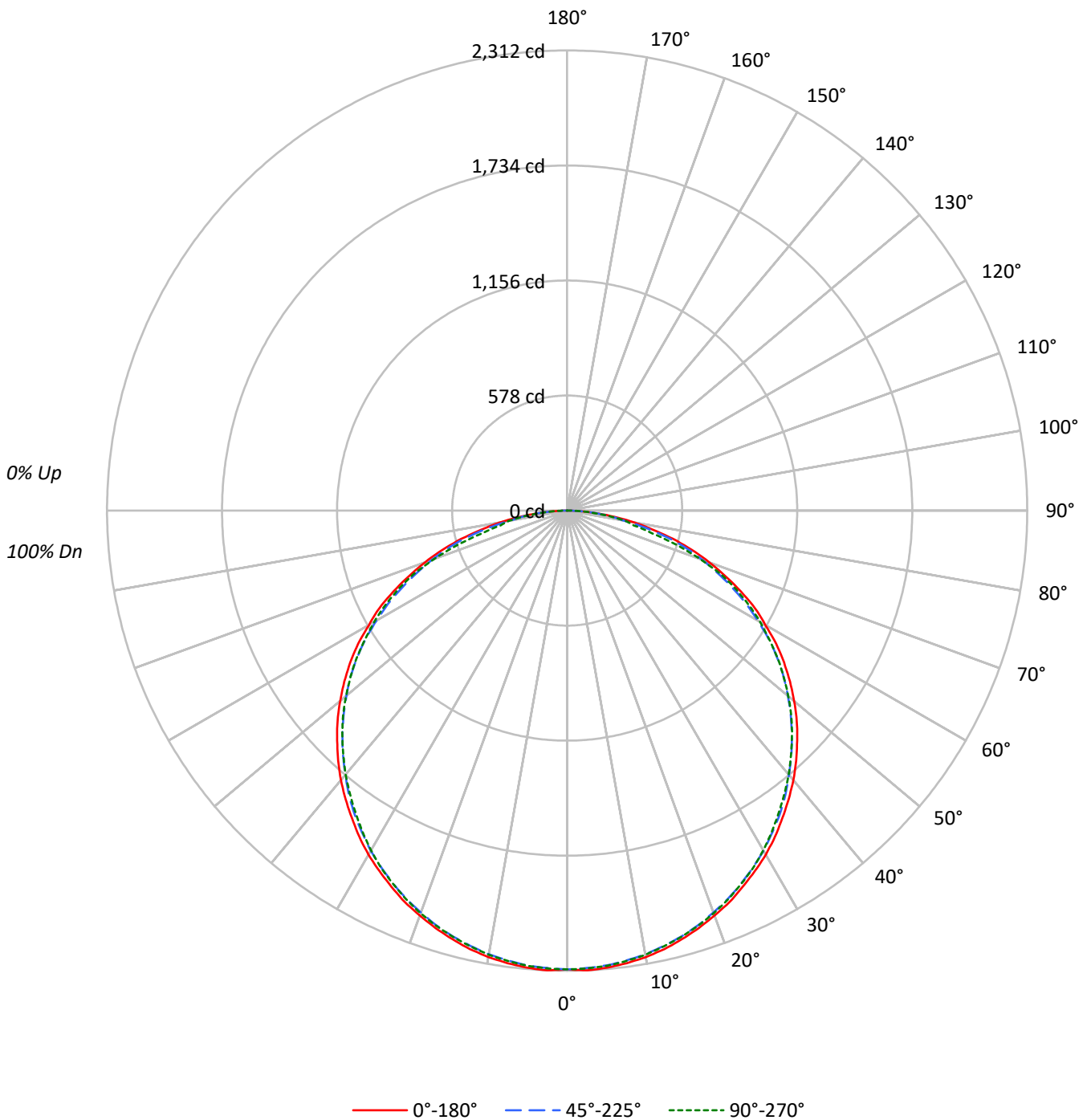
Input Watts (W): 63.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 3102 | 3102 | 3102 |
| 5° | 3113 | 3098 | 3101 |
| 10° | 3112 | 3093 | 3096 |
| 15° | 3105 | 3086 | 3089 |
| 20° | 3099 | 3076 | 3083 |
| 25° | 3097 | 3070 | 3073 |
| 30° | 3102 | 3066 | 3062 |
| 35° | 3097 | 3059 | 3044 |
| 40° | 3106 | 3045 | 3041 |
| 45° | 3110 | 3040 | 3040 |
| 50° | 3117 | 3030 | 3035 |
| 55° | 3120 | 3023 | 3028 |
| 60° | 3095 | 2978 | 3015 |
| 65° | 3068 | 2914 | 2980 |
| 70° | 2993 | 2838 | 2784 |
| 75° | 2864 | 2708 | 2301 |
| 80° | 2644 | 2214 | 2304 |
| 85° | 2206 | 2100 | 1993 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 218.1 | 3.1 |
| 10°-20° | 626.0 | 9.0 |
| 20°-30° | 955.1 | 13.7 |
| 30°-40° | 1166.8 | 16.7 |
| 40°-50° | 1239.3 | 17.8 |
| 50°-60° | 1158.7 | 16.6 |
| 60°-70° | 920.1 | 13.2 |
| 70°-80° | 536.7 | 7.7 |
| 80°-90° | 155.7 | 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° | 1799.3 | 25.8 |
| 0°-40° | 2966.1 | 42.5 |
| 0°-60° | 5364.1 | 76.9 |
| 0°-90° | 6976.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6976.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2305 | 2305 | 2305 | 2305 | 2305 | |
| 5° | 2305 | 2296 | 2294 | 2289 | 2296 | 219 |
| 15° | 2229 | 2222 | 2215 | 2208 | 2218 | 630 |
| 25° | 2086 | 2075 | 2068 | 2063 | 2070 | 963 |
| 35° | 1886 | 1874 | 1863 | 1849 | 1853 | 1181 |
| 45° | 1634 | 1621 | 1598 | 1591 | 1598 | 1262 |
| 55° | 1330 | 1316 | 1289 | 1282 | 1291 | 1187 |
| 65° | 964 | 940 | 915 | 924 | 936 | 951 |
| 75° | 551 | 530 | 521 | 463 | 443 | 580 |
| 85° | 143 | 136 | 136 | 134 | 129 | 166 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P184446

CATALOG NUMBER: 612EN-LD2-74-UNV-L830-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2305.2 | 2305.2 | 2305.2 | 2305.2 | 2305.2 |
| 2.5° | 2312.1 | 2302.9 | 2300.6 | 2296.0 | 2302.9 |
| 5° | 2305.2 | 2296.0 | 2293.7 | 2289.1 | 2296.0 |
| 7.5° | 2293.7 | 2284.5 | 2279.9 | 2275.2 | 2282.2 |
| 10° | 2277.6 | 2268.3 | 2263.7 | 2259.1 | 2266.0 |
| 12.5° | 2256.8 | 2245.3 | 2240.7 | 2236.1 | 2243.0 |
| 15° | 2229.1 | 2222.2 | 2215.3 | 2208.4 | 2217.6 |
| 17.5° | 2199.2 | 2190.0 | 2185.3 | 2180.7 | 2187.6 |
| 20° | 2164.6 | 2157.7 | 2148.5 | 2146.2 | 2153.1 |
| 22.5° | 2130.0 | 2116.2 | 2111.6 | 2104.7 | 2113.9 |
| 25° | 2086.2 | 2074.7 | 2067.8 | 2063.2 | 2070.1 |
| 27.5° | 2042.4 | 2030.9 | 2021.7 | 2017.1 | 2024.0 |
| 30° | 1996.3 | 1982.5 | 1973.3 | 1964.0 | 1971.0 |
| 32.5° | 1943.3 | 1929.5 | 1917.9 | 1908.7 | 1913.3 |
| 35° | 1885.7 | 1874.1 | 1862.6 | 1848.8 | 1853.4 |
| 37.5° | 1828.0 | 1816.5 | 1800.4 | 1788.8 | 1793.5 |
| 40° | 1768.1 | 1756.6 | 1733.5 | 1726.6 | 1731.2 |
| 42.5° | 1703.6 | 1689.7 | 1666.7 | 1659.8 | 1664.4 |
| 45° | 1634.4 | 1620.6 | 1597.5 | 1590.6 | 1597.5 |
| 47.5° | 1565.2 | 1549.1 | 1523.7 | 1519.1 | 1528.4 |
| 50° | 1489.2 | 1473.0 | 1447.7 | 1445.4 | 1450.0 |
| 52.5° | 1410.8 | 1392.3 | 1371.6 | 1364.7 | 1371.6 |
| 55° | 1330.1 | 1316.3 | 1288.6 | 1281.7 | 1290.9 |
| 57.5° | 1244.8 | 1224.1 | 1201.0 | 1194.1 | 1203.3 |
| 60° | 1150.3 | 1131.9 | 1106.5 | 1104.2 | 1120.3 |
| 62.5° | 1065.0 | 1039.7 | 1014.3 | 1012.0 | 1030.4 |
| 65° | 963.6 | 940.5 | 915.2 | 924.4 | 935.9 |
| 67.5° | 859.8 | 841.4 | 818.4 | 825.3 | 836.8 |
| 70° | 760.7 | 737.7 | 721.5 | 716.9 | 707.7 |
| 72.5° | 657.0 | 638.5 | 629.3 | 592.4 | 580.9 |
| 75° | 550.9 | 530.2 | 521.0 | 463.3 | 442.6 |
| 77.5° | 440.3 | 431.1 | 408.0 | 350.4 | 343.5 |
| 80° | 341.2 | 336.6 | 285.8 | 290.5 | 297.4 |
| 82.5° | 237.4 | 235.1 | 219.0 | 214.4 | 212.1 |
| 85° | 142.9 | 136.0 | 136.0 | 133.7 | 129.1 |
| 87.5° | 57.6 | 62.2 | 59.9 | 57.6 | 59.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)