

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: P393701

Luminaire Tested: **24EN-LD2-74-UNV-L82765-W2A-1-U (4000K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P393701
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-563-40)
Test Lab: INNOVATION CENTER
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24EN-LD2-74-UNV-L82765-W2A-1-U (4000K)
Description: 2X4 ENCOUNTER, 7400 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 3000K/5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6885.5 lumens
Efficiency: N/A
Efficacy: 124.7 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.28 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

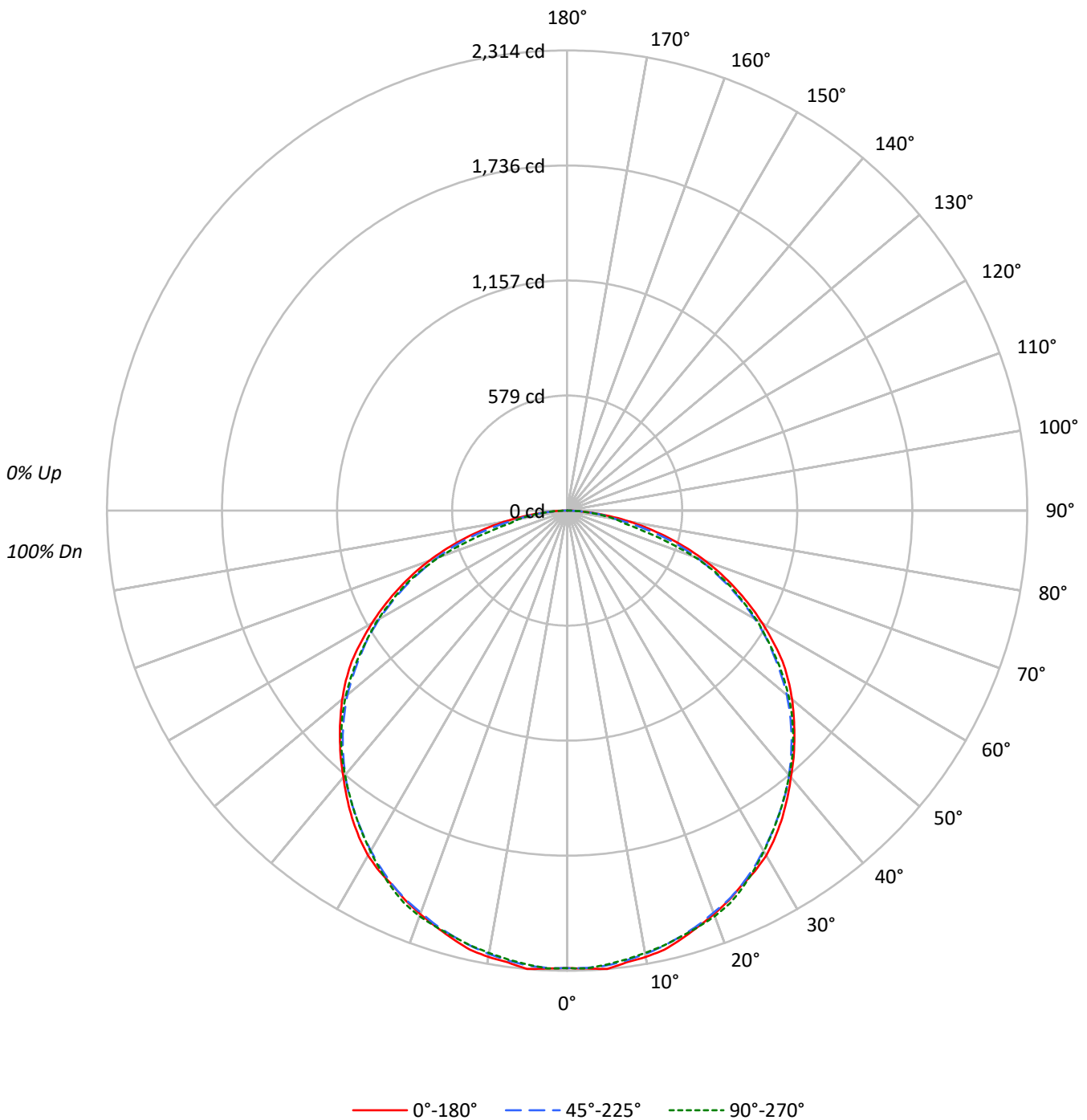
Input Watts (W): 55.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P393701

CATALOG NUMBER: 24EN-LD2-74-UNV-L82765-W2A-1-U (4000K)

Luminous Intensity Polar Plot





TEST NUMBER: P393701

CATALOG NUMBER: 24EN-LD2-74-UNV-L82765-W2A-1-U (4000K)

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 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 90 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 70 | 64 | 87 | 77 | 69 | 63 | 74 | 68 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 79 | 68 | 60 | 53 | 66 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 52 | 46 | 59 | 51 | 45 | 57 | 50 | 45 | 55 | 49 | 44 | 42 |
| 6 | 69 | 56 | 47 | 40 | 67 | 55 | 46 | 40 | 53 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 | 37 |
| 7 | 64 | 50 | 42 | 35 | 62 | 50 | 41 | 35 | 48 | 40 | 35 | 47 | 40 | 35 | 45 | 39 | 34 | 32 |
| 8 | 60 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 44 | 36 | 31 | 43 | 36 | 31 | 41 | 35 | 31 | 29 |
| 9 | 56 | 42 | 34 | 28 | 54 | 42 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |
| 10 | 52 | 39 | 31 | 26 | 51 | 38 | 31 | 25 | 37 | 30 | 25 | 36 | 30 | 25 | 35 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3096 | 3096 | 3096 |
| 5° | 3125 | 3101 | 3095 |
| 10° | 3114 | 3094 | 3086 |
| 15° | 3105 | 3087 | 3088 |
| 20° | 3092 | 3082 | 3109 |
| 25° | 3086 | 3084 | 3104 |
| 30° | 3112 | 3068 | 3074 |
| 35° | 3098 | 3053 | 3056 |
| 40° | 3075 | 3050 | 3052 |
| 45° | 3075 | 3038 | 3059 |
| 50° | 3090 | 3019 | 3045 |
| 55° | 3103 | 2978 | 3000 |
| 60° | 3052 | 2931 | 2961 |
| 65° | 2995 | 2846 | 2894 |
| 70° | 2903 | 2745 | 2683 |
| 75° | 2744 | 2520 | 2069 |
| 80° | 2446 | 1947 | 1911 |
| 85° | 1917 | 1803 | 1658 |



TEST NUMBER: P393701

CATALOG NUMBER: 24EN-LD2-74-UNV-L82765-W2A-1-U (4000K)

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 218.1 | 3.2 |
| 10°-20° | 626.6 | 9.1 |
| 20°-30° | 957.8 | 13.9 |
| 30°-40° | 1167.7 | 17.0 |
| 40°-50° | 1235.9 | 17.9 |
| 50°-60° | 1145.4 | 16.6 |
| 60°-70° | 898.6 | 13.1 |
| 70°-80° | 501.3 | 7.3 |
| 80°-90° | 134.1 | 1.9 |
| 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° | 1802.5 | 26.2 |
| 0°-40° | 2970.2 | 43.1 |
| 0°-60° | 5351.5 | 77.7 |
| 0°-90° | 6885.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6885.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2301 | 2301 | 2301 | 2301 | 2301 | |
| 5° | 2314 | 2292 | 2296 | 2292 | 2292 | 219 |
| 15° | 2229 | 2220 | 2216 | 2215 | 2217 | 629 |
| 25° | 2078 | 2080 | 2078 | 2069 | 2091 | 961 |
| 35° | 1886 | 1864 | 1859 | 1866 | 1861 | 1179 |
| 45° | 1616 | 1614 | 1596 | 1587 | 1608 | 1248 |
| 55° | 1323 | 1287 | 1270 | 1272 | 1279 | 1176 |
| 65° | 941 | 924 | 894 | 903 | 909 | 930 |
| 75° | 528 | 506 | 485 | 424 | 398 | 556 |
| 85° | 124 | 118 | 117 | 109 | 107 | 148 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P393701

CATALOG NUMBER: 24EN-LD2-74-UNV-L82765-W2A-1-U (4000K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2300.8 | 2300.8 | 2300.8 | 2300.8 | 2300.8 |
| 2.5° | 2304.5 | 2298.9 | 2301.7 | 2293.3 | 2304.5 |
| 5° | 2313.9 | 2292.4 | 2296.1 | 2291.5 | 2291.5 |
| 7.5° | 2291.5 | 2282.1 | 2282.1 | 2283.1 | 2276.5 |
| 10° | 2279.3 | 2267.2 | 2264.4 | 2267.2 | 2258.8 |
| 12.5° | 2261.6 | 2243.8 | 2241.9 | 2243.8 | 2240.1 |
| 15° | 2228.9 | 2220.5 | 2215.8 | 2214.9 | 2216.7 |
| 17.5° | 2193.4 | 2191.5 | 2186.8 | 2183.1 | 2195.2 |
| 20° | 2159.7 | 2161.6 | 2152.3 | 2149.5 | 2171.0 |
| 22.5° | 2122.4 | 2122.4 | 2118.6 | 2109.3 | 2138.3 |
| 25° | 2078.5 | 2080.3 | 2077.5 | 2069.1 | 2090.6 |
| 27.5° | 2044.8 | 2030.8 | 2028.0 | 2025.2 | 2036.4 |
| 30° | 2002.8 | 1977.6 | 1974.8 | 1975.7 | 1978.5 |
| 32.5° | 1947.7 | 1922.5 | 1917.8 | 1923.4 | 1919.7 |
| 35° | 1886.0 | 1863.6 | 1859.0 | 1865.5 | 1860.8 |
| 37.5° | 1819.7 | 1806.6 | 1801.0 | 1801.0 | 1799.2 |
| 40° | 1750.6 | 1745.0 | 1736.6 | 1733.8 | 1737.5 |
| 42.5° | 1685.2 | 1684.3 | 1666.5 | 1662.8 | 1676.8 |
| 45° | 1616.1 | 1614.2 | 1596.5 | 1587.1 | 1607.7 |
| 47.5° | 1546.9 | 1539.5 | 1519.9 | 1510.5 | 1533.9 |
| 50° | 1476.0 | 1458.2 | 1442.3 | 1439.5 | 1454.5 |
| 52.5° | 1402.2 | 1374.1 | 1355.4 | 1353.6 | 1368.5 |
| 55° | 1322.8 | 1287.3 | 1269.5 | 1272.3 | 1278.8 |
| 57.5° | 1228.4 | 1201.3 | 1183.6 | 1182.6 | 1186.4 |
| 60° | 1134.1 | 1110.7 | 1089.2 | 1092.0 | 1100.4 |
| 62.5° | 1037.8 | 1019.2 | 993.0 | 1001.4 | 1001.4 |
| 65° | 940.7 | 923.9 | 894.0 | 903.3 | 908.9 |
| 67.5° | 841.7 | 823.0 | 794.0 | 798.7 | 804.3 |
| 70° | 738.0 | 717.4 | 697.8 | 680.1 | 681.9 |
| 72.5° | 633.4 | 610.9 | 597.9 | 553.0 | 539.9 |
| 75° | 527.8 | 506.3 | 484.8 | 424.1 | 397.9 |
| 77.5° | 420.4 | 408.2 | 367.1 | 301.7 | 292.4 |
| 80° | 315.7 | 310.1 | 251.3 | 247.5 | 246.6 |
| 82.5° | 218.6 | 209.2 | 191.5 | 180.3 | 177.5 |
| 85° | 124.2 | 117.7 | 116.8 | 109.3 | 107.4 |
| 87.5° | 43.9 | 46.7 | 47.6 | 47.6 | 47.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)