

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: P393669

Luminaire Tested: **24EN-LD2-70-UNV-L82765-W2A-1-U (4000K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P393669
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-563-39)
Test Lab: INNOVATION CENTER
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24EN-LD2-70-UNV-L82765-W2A-1-U (4000K)
Description: 2X4 ENCOUNTER, 7000 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 3000K/5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6550.6 lumens
Efficiency: N/A
Efficacy: 127.2 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

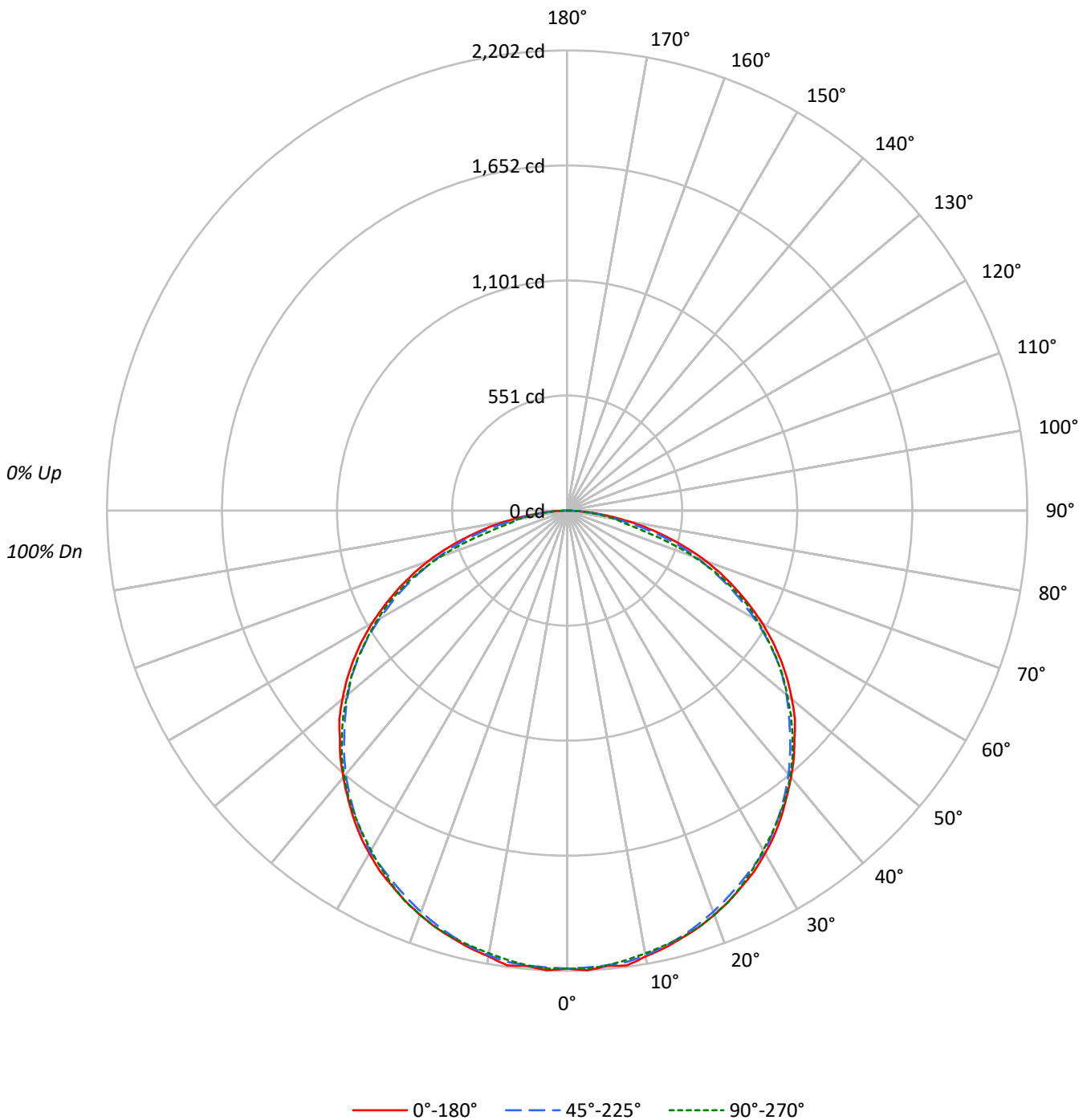
Input Watts (W): 51.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P393669

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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 | 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° | 2949 | 2949 | 2949 |
| 5° | 2955 | 2950 | 2951 |
| 10° | 2960 | 2952 | 2939 |
| 15° | 2951 | 2939 | 2946 |
| 20° | 2948 | 2927 | 2947 |
| 25° | 2943 | 2916 | 2936 |
| 30° | 2943 | 2930 | 2916 |
| 35° | 2935 | 2911 | 2917 |
| 40° | 2927 | 2894 | 2916 |
| 45° | 2927 | 2869 | 2901 |
| 50° | 2939 | 2867 | 2876 |
| 55° | 2930 | 2853 | 2860 |
| 60° | 2901 | 2788 | 2826 |
| 65° | 2846 | 2706 | 2763 |
| 70° | 2782 | 2598 | 2539 |
| 75° | 2613 | 2404 | 1976 |
| 80° | 2316 | 1874 | 1831 |
| 85° | 1846 | 1687 | 1558 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 207.8 | 3.2 |
| 10°-20° | 595.9 | 9.1 |
| 20°-30° | 909.9 | 13.9 |
| 30°-40° | 1110.5 | 17.0 |
| 40°-50° | 1174.0 | 17.9 |
| 50°-60° | 1091.7 | 16.7 |
| 60°-70° | 854.4 | 13.0 |
| 70°-80° | 479.4 | 7.3 |
| 80°-90° | 127.1 | 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° | 1713.6 | 26.2 |
| 0°-40° | 2824.1 | 43.1 |
| 0°-60° | 5089.8 | 77.7 |
| 0°-90° | 6550.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6550.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2192 | 2192 | 2192 | 2192 | 2192 | |
| 5° | 2188 | 2185 | 2184 | 2182 | 2185 | 209 |
| 15° | 2119 | 2112 | 2110 | 2101 | 2115 | 599 |
| 25° | 1982 | 1972 | 1964 | 1976 | 1978 | 915 |
| 35° | 1787 | 1780 | 1772 | 1766 | 1776 | 1118 |
| 45° | 1538 | 1526 | 1508 | 1517 | 1524 | 1190 |
| 55° | 1249 | 1232 | 1216 | 1211 | 1219 | 1115 |
| 65° | 894 | 874 | 850 | 855 | 868 | 885 |
| 75° | 503 | 484 | 462 | 408 | 380 | 531 |
| 85° | 120 | 111 | 109 | 102 | 101 | 140 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P393669

CATALOG NUMBER: 24EN-LD2-70-UNV-L82765-W2A-1-U (4000K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2191.5 | 2191.5 | 2191.5 | 2191.5 | 2191.5 |
| 2.5° | 2201.8 | 2187.8 | 2188.7 | 2193.4 | 2193.4 |
| 5° | 2187.8 | 2185.0 | 2184.0 | 2182.2 | 2185.0 |
| 7.5° | 2195.2 | 2176.6 | 2179.4 | 2168.2 | 2169.1 |
| 10° | 2166.3 | 2158.8 | 2160.7 | 2152.3 | 2151.3 |
| 12.5° | 2144.8 | 2142.0 | 2137.3 | 2128.9 | 2133.6 |
| 15° | 2118.6 | 2112.1 | 2110.2 | 2100.9 | 2114.9 |
| 17.5° | 2091.6 | 2081.3 | 2078.5 | 2072.9 | 2091.6 |
| 20° | 2058.9 | 2049.5 | 2043.9 | 2043.0 | 2057.9 |
| 22.5° | 2022.4 | 2013.1 | 2004.7 | 2011.2 | 2024.3 |
| 25° | 1982.3 | 1972.0 | 1964.5 | 1975.7 | 1977.6 |
| 27.5° | 1943.0 | 1930.9 | 1923.4 | 1929.9 | 1929.0 |
| 30° | 1894.4 | 1884.2 | 1886.0 | 1879.5 | 1876.7 |
| 32.5° | 1844.0 | 1834.7 | 1830.0 | 1823.5 | 1826.3 |
| 35° | 1787.0 | 1779.5 | 1772.1 | 1765.5 | 1775.8 |
| 37.5° | 1726.3 | 1721.6 | 1711.4 | 1704.8 | 1720.7 |
| 40° | 1666.5 | 1656.2 | 1647.8 | 1643.2 | 1660.0 |
| 42.5° | 1605.8 | 1594.6 | 1579.6 | 1578.7 | 1596.5 |
| 45° | 1538.5 | 1526.4 | 1507.7 | 1517.1 | 1524.5 |
| 47.5° | 1478.8 | 1459.1 | 1438.6 | 1447.9 | 1452.6 |
| 50° | 1404.0 | 1388.1 | 1369.5 | 1373.2 | 1374.1 |
| 52.5° | 1328.4 | 1315.3 | 1297.5 | 1292.9 | 1301.3 |
| 55° | 1249.0 | 1232.1 | 1216.3 | 1210.7 | 1219.1 |
| 57.5° | 1164.9 | 1149.9 | 1129.4 | 1121.9 | 1133.1 |
| 60° | 1078.0 | 1058.4 | 1036.0 | 1036.0 | 1050.0 |
| 62.5° | 986.5 | 970.6 | 943.5 | 947.2 | 967.8 |
| 65° | 894.0 | 874.4 | 850.1 | 854.7 | 867.8 |
| 67.5° | 801.5 | 781.9 | 752.9 | 759.5 | 765.1 |
| 70° | 707.1 | 682.9 | 660.4 | 653.9 | 645.5 |
| 72.5° | 605.3 | 582.9 | 568.0 | 532.5 | 518.5 |
| 75° | 502.6 | 483.9 | 462.4 | 408.2 | 380.2 |
| 77.5° | 401.7 | 389.5 | 355.0 | 291.5 | 280.2 |
| 80° | 298.9 | 293.3 | 241.9 | 237.3 | 236.3 |
| 82.5° | 203.6 | 199.9 | 184.0 | 170.9 | 168.1 |
| 85° | 119.6 | 111.2 | 109.3 | 101.8 | 100.9 |
| 87.5° | 41.1 | 44.8 | 43.9 | 44.8 | 43.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)