

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: P393671

Luminaire Tested: **24EN-LD2-70-UNV-L82765-W2A-1-U (5000K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P393671
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 (5000K)
Description: 2X4 ENCOUNTER, 7000 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 3000K/5000K CCT, CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6733.8 lumens
Efficiency: N/A
Efficacy: 131.8 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

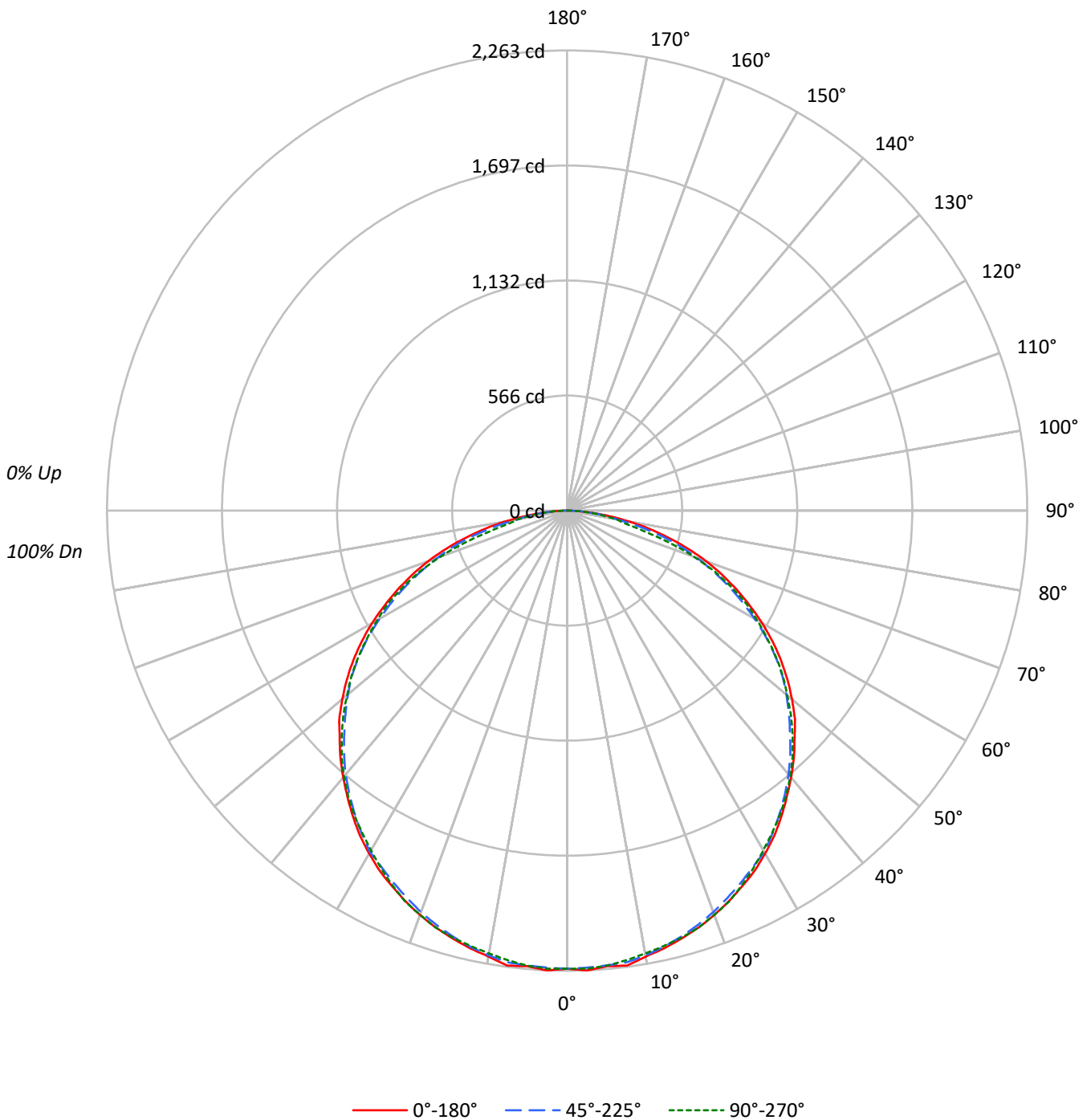
Input Watts (W): 51.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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° | 3031 | 3031 | 3031 |
| 5° | 3038 | 3032 | 3034 |
| 10° | 3042 | 3035 | 3021 |
| 15° | 3034 | 3022 | 3028 |
| 20° | 3030 | 3008 | 3029 |
| 25° | 3025 | 2998 | 3018 |
| 30° | 3026 | 3012 | 2997 |
| 35° | 3017 | 2992 | 2998 |
| 40° | 3009 | 2975 | 2997 |
| 45° | 3009 | 2949 | 2982 |
| 50° | 3021 | 2947 | 2957 |
| 55° | 3012 | 2933 | 2940 |
| 60° | 2982 | 2866 | 2904 |
| 65° | 2926 | 2782 | 2840 |
| 70° | 2860 | 2671 | 2610 |
| 75° | 2686 | 2471 | 2032 |
| 80° | 2381 | 1927 | 1882 |
| 85° | 1897 | 1735 | 1601 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 213.6 | 3.2 |
| 10°-20° | 612.6 | 9.1 |
| 20°-30° | 935.3 | 13.9 |
| 30°-40° | 1141.6 | 17.0 |
| 40°-50° | 1206.8 | 17.9 |
| 50°-60° | 1122.3 | 16.7 |
| 60°-70° | 878.2 | 13.0 |
| 70°-80° | 492.8 | 7.3 |
| 80°-90° | 130.7 | 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° | 1761.5 | 26.2 |
| 0°-40° | 2903.1 | 43.1 |
| 0°-60° | 5232.1 | 77.7 |
| 0°-90° | 6733.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6733.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2253 | 2253 | 2253 | 2253 | 2253 | |
| 5° | 2249 | 2246 | 2245 | 2243 | 2246 | 215 |
| 15° | 2178 | 2171 | 2169 | 2160 | 2174 | 615 |
| 25° | 2038 | 2027 | 2020 | 2031 | 2033 | 940 |
| 35° | 1837 | 1829 | 1822 | 1815 | 1826 | 1149 |
| 45° | 1582 | 1569 | 1550 | 1560 | 1567 | 1223 |
| 55° | 1284 | 1267 | 1250 | 1244 | 1253 | 1146 |
| 65° | 919 | 899 | 874 | 879 | 892 | 909 |
| 75° | 517 | 497 | 475 | 420 | 391 | 546 |
| 85° | 123 | 114 | 112 | 105 | 104 | 144 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P393671

CATALOG NUMBER: 24EN-LD2-70-UNV-L82765-W2A-1-U (5000K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2252.8 | 2252.8 | 2252.8 | 2252.8 | 2252.8 |
| 2.5° | 2263.4 | 2249.0 | 2249.9 | 2254.7 | 2254.7 |
| 5° | 2249.0 | 2246.1 | 2245.1 | 2243.2 | 2246.1 |
| 7.5° | 2256.6 | 2237.4 | 2240.3 | 2228.8 | 2229.8 |
| 10° | 2226.9 | 2219.2 | 2221.1 | 2212.5 | 2211.5 |
| 12.5° | 2204.8 | 2201.9 | 2197.1 | 2188.5 | 2193.3 |
| 15° | 2177.9 | 2171.2 | 2169.3 | 2159.7 | 2174.1 |
| 17.5° | 2150.0 | 2139.5 | 2136.6 | 2130.8 | 2150.0 |
| 20° | 2116.4 | 2106.8 | 2101.1 | 2100.1 | 2115.5 |
| 22.5° | 2079.0 | 2069.4 | 2060.7 | 2067.5 | 2080.9 |
| 25° | 2037.7 | 2027.1 | 2019.5 | 2031.0 | 2032.9 |
| 27.5° | 1997.4 | 1984.9 | 1977.2 | 1983.9 | 1983.0 |
| 30° | 1947.4 | 1936.9 | 1938.8 | 1932.1 | 1929.2 |
| 32.5° | 1895.6 | 1886.0 | 1881.2 | 1874.5 | 1877.3 |
| 35° | 1837.0 | 1829.3 | 1821.6 | 1814.9 | 1825.5 |
| 37.5° | 1774.6 | 1769.8 | 1759.2 | 1752.5 | 1768.8 |
| 40° | 1713.1 | 1702.6 | 1693.9 | 1689.1 | 1706.4 |
| 42.5° | 1650.7 | 1639.2 | 1623.8 | 1622.9 | 1641.1 |
| 45° | 1581.6 | 1569.1 | 1549.9 | 1559.5 | 1567.2 |
| 47.5° | 1520.1 | 1499.9 | 1478.8 | 1488.4 | 1493.2 |
| 50° | 1443.3 | 1427.0 | 1407.8 | 1411.6 | 1412.6 |
| 52.5° | 1365.5 | 1352.1 | 1333.8 | 1329.0 | 1337.7 |
| 55° | 1283.9 | 1266.6 | 1250.3 | 1244.5 | 1253.2 |
| 57.5° | 1197.5 | 1182.1 | 1161.0 | 1153.3 | 1164.8 |
| 60° | 1108.2 | 1088.0 | 1064.9 | 1064.9 | 1079.3 |
| 62.5° | 1014.0 | 997.7 | 969.9 | 973.7 | 994.8 |
| 65° | 919.0 | 898.8 | 873.8 | 878.6 | 892.1 |
| 67.5° | 823.9 | 803.7 | 774.0 | 780.7 | 786.5 |
| 70° | 726.9 | 702.0 | 678.9 | 672.2 | 663.5 |
| 72.5° | 622.3 | 599.2 | 583.8 | 547.4 | 533.0 |
| 75° | 516.6 | 497.4 | 475.3 | 419.6 | 390.8 |
| 77.5° | 412.9 | 400.4 | 364.9 | 299.6 | 288.1 |
| 80° | 307.3 | 301.5 | 248.7 | 243.9 | 242.9 |
| 82.5° | 209.3 | 205.5 | 189.2 | 175.7 | 172.8 |
| 85° | 122.9 | 114.3 | 112.4 | 104.7 | 103.7 |
| 87.5° | 42.3 | 46.1 | 45.1 | 46.1 | 45.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)