

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: P130709

Luminaire Tested: **TBLED-LD1-8-W-UNV-L840-CD1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P130709
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25252)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: TBLED-LD1-8-W-UNV-L840-CD1
Description: METALUX TOP BAY LED LOW-BAY LUMINAIRE.
WIDE DISTRIBUTION.
Light Source: (160) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

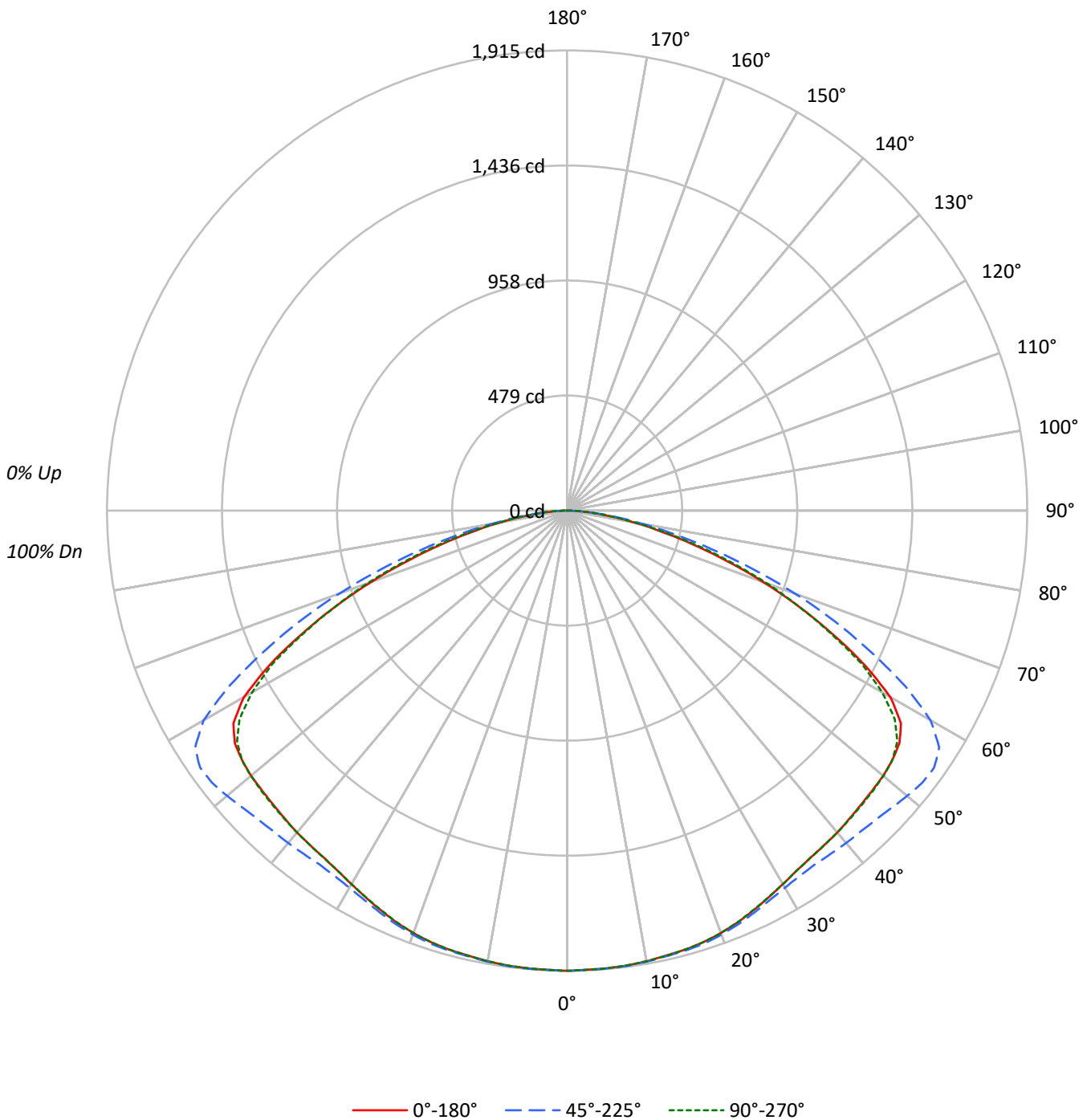
Lumens per Lamp: N/A
Luminaire Lumens: 7699.1 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.42 / 1.71
Luminous Opening: Circular (Dia: 1.12' x H: 0')
CIE Type: Direct

Input Watts (W): 77
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 | 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 | | | | | 100 | | | |
| 1 | 108 | 103 | 98 | 94 | 105 | 100 | 96 | 92 | 96 | 93 | 89 | 92 | 89 | 87 | 88 | 86 | 84 | 82 | | | | | 82 | | | |
| 2 | 97 | 88 | 81 | 74 | 94 | 86 | 79 | 73 | 82 | 77 | 72 | 79 | 74 | 70 | 76 | 72 | 68 | 66 | | | | | 66 | | | |
| 3 | 87 | 76 | 67 | 60 | 85 | 74 | 66 | 59 | 71 | 64 | 58 | 68 | 62 | 57 | 66 | 61 | 56 | 54 | | | | | 54 | | | |
| 4 | 79 | 66 | 57 | 49 | 77 | 65 | 56 | 49 | 62 | 55 | 48 | 60 | 53 | 48 | 58 | 52 | 47 | 45 | | | | | 45 | | | |
| 5 | 72 | 58 | 49 | 42 | 70 | 57 | 48 | 41 | 55 | 47 | 41 | 53 | 46 | 40 | 51 | 45 | 40 | 38 | | | | | 38 | | | |
| 6 | 66 | 52 | 42 | 36 | 64 | 51 | 42 | 35 | 49 | 41 | 35 | 47 | 40 | 35 | 46 | 39 | 34 | 32 | | | | | 32 | | | |
| 7 | 61 | 47 | 37 | 31 | 59 | 46 | 37 | 31 | 44 | 36 | 30 | 43 | 36 | 30 | 41 | 35 | 30 | 28 | | | | | 28 | | | |
| 8 | 57 | 42 | 33 | 27 | 55 | 42 | 33 | 27 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 26 | 24 | | | | | 24 | | | |
| 9 | 53 | 39 | 30 | 24 | 51 | 38 | 30 | 24 | 37 | 29 | 24 | 36 | 29 | 24 | 35 | 28 | 23 | 22 | | | | | 22 | | | |
| 10 | 49 | 35 | 27 | 22 | 48 | 35 | 27 | 21 | 34 | 26 | 21 | 33 | 26 | 21 | 32 | 26 | 21 | 19 | | | | | 19 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 20737 | 20737 | 20737 |
| 5° | 20784 | 20794 | 20784 |
| 10° | 20936 | 20958 | 20936 |
| 15° | 21211 | 21255 | 21211 |
| 20° | 21561 | 21641 | 21561 |
| 25° | 21925 | 22044 | 21913 |
| 30° | 22444 | 22657 | 22444 |
| 35° | 23319 | 23768 | 23332 |
| 40° | 24724 | 25529 | 24724 |
| 45° | 26493 | 27841 | 26539 |
| 50° | 28925 | 31115 | 28942 |
| 55° | 31868 | 35210 | 31660 |
| 60° | 33656 | 37835 | 32789 |
| 65° | 31311 | 35846 | 31055 |
| 70° | 27482 | 31946 | 27925 |
| 75° | 22467 | 26107 | 23346 |
| 80° | 17523 | 19893 | 17897 |
| 85° | 12425 | 13791 | 12673 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 182.3 | 2.4 |
| 10°-20° | 536.1 | 7.0 |
| 20°-30° | 850.8 | 11.1 |
| 30°-40° | 1121.5 | 14.6 |
| 40°-50° | 1376.8 | 17.9 |
| 50°-60° | 1571.6 | 20.4 |
| 60°-70° | 1292.9 | 16.8 |
| 70°-80° | 634.4 | 8.2 |
| 80°-90° | 132.8 | 1.7 |
| 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° | 1569.2 | 20.4 |
| 0°-40° | 2690.7 | 34.9 |
| 0°-60° | 5639.0 | 73.2 |
| 0°-90° | 7699.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 7699.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1915 | 1915 | 1915 | 1915 | 1915 | |
| 5° | 1912 | 1913 | 1913 | 1913 | 1912 | 182 |
| 15° | 1892 | 1894 | 1896 | 1894 | 1892 | 535 |
| 25° | 1835 | 1841 | 1845 | 1841 | 1834 | 848 |
| 35° | 1764 | 1782 | 1798 | 1782 | 1765 | 1110 |
| 45° | 1730 | 1774 | 1818 | 1778 | 1733 | 1340 |
| 55° | 1688 | 1783 | 1865 | 1778 | 1677 | 1496 |
| 65° | 1222 | 1319 | 1399 | 1317 | 1212 | 1206 |
| 75° | 537 | 589 | 624 | 596 | 558 | 581 |
| 85° | 100 | 108 | 111 | 108 | 102 | 123 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P130709

CATALOG NUMBER: TBLED-LD1-8-W-UNV-L840-CD1

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 0° | 1915 | 1915 | 1915 | 1915 | 1915 | 1915 | 1915 | 1915 | 1915 | 1915 | 1915 |
| 2.5° | 1913 | 1913 | 1913 | 1913 | 1914 | 1914 | 1914 | 1914 | 1914 | 1914 | 1913 |
| 5° | 1912 | 1912 | 1912 | 1912 | 1913 | 1913 | 1913 | 1913 | 1913 | 1913 | 1913 |
| 7.5° | 1909 | 1909 | 1910 | 1910 | 1910 | 1910 | 1910 | 1911 | 1911 | 1911 | 1911 |
| 10° | 1904 | 1904 | 1904 | 1904 | 1905 | 1905 | 1906 | 1906 | 1906 | 1906 | 1906 |
| 12.5° | 1897 | 1897 | 1898 | 1898 | 1898 | 1899 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 15° | 1892 | 1892 | 1892 | 1893 | 1893 | 1894 | 1895 | 1895 | 1896 | 1896 | 1896 |
| 17.5° | 1884 | 1885 | 1885 | 1885 | 1886 | 1887 | 1889 | 1889 | 1890 | 1890 | 1890 |
| 20° | 1871 | 1871 | 1872 | 1873 | 1874 | 1875 | 1877 | 1878 | 1878 | 1878 | 1879 |
| 22.5° | 1855 | 1855 | 1856 | 1857 | 1859 | 1860 | 1862 | 1863 | 1863 | 1863 | 1863 |
| 25° | 1835 | 1836 | 1837 | 1838 | 1840 | 1842 | 1844 | 1846 | 1846 | 1845 | 1846 |
| 27.5° | 1815 | 1816 | 1817 | 1819 | 1821 | 1823 | 1825 | 1827 | 1827 | 1827 | 1828 |
| 30° | 1795 | 1796 | 1798 | 1800 | 1803 | 1805 | 1808 | 1811 | 1812 | 1812 | 1811 |
| 32.5° | 1777 | 1778 | 1781 | 1784 | 1788 | 1792 | 1796 | 1799 | 1802 | 1802 | 1800 |
| 35° | 1764 | 1765 | 1769 | 1774 | 1780 | 1785 | 1790 | 1794 | 1798 | 1798 | 1797 |
| 37.5° | 1756 | 1757 | 1762 | 1768 | 1777 | 1784 | 1791 | 1796 | 1800 | 1801 | 1800 |
| 40° | 1749 | 1750 | 1756 | 1764 | 1774 | 1784 | 1793 | 1800 | 1804 | 1806 | 1806 |
| 42.5° | 1739 | 1741 | 1747 | 1758 | 1770 | 1782 | 1793 | 1803 | 1808 | 1810 | 1809 |
| 45° | 1730 | 1732 | 1740 | 1753 | 1767 | 1782 | 1796 | 1808 | 1815 | 1818 | 1816 |
| 47.5° | 1723 | 1726 | 1736 | 1751 | 1768 | 1787 | 1804 | 1818 | 1827 | 1831 | 1828 |
| 50° | 1717 | 1721 | 1732 | 1750 | 1772 | 1796 | 1816 | 1832 | 1843 | 1847 | 1844 |
| 52.5° | 1706 | 1713 | 1726 | 1748 | 1775 | 1802 | 1826 | 1845 | 1858 | 1862 | 1858 |
| 55° | 1688 | 1695 | 1710 | 1735 | 1768 | 1798 | 1827 | 1848 | 1860 | 1865 | 1859 |
| 57.5° | 1647 | 1654 | 1669 | 1698 | 1731 | 1765 | 1795 | 1818 | 1833 | 1836 | 1824 |
| 60° | 1554 | 1559 | 1582 | 1611 | 1643 | 1676 | 1707 | 1733 | 1746 | 1747 | 1730 |
| 62.5° | 1400 | 1408 | 1431 | 1462 | 1492 | 1519 | 1548 | 1575 | 1585 | 1589 | 1576 |
| 65° | 1222 | 1233 | 1250 | 1278 | 1308 | 1330 | 1362 | 1385 | 1395 | 1399 | 1394 |
| 67.5° | 1045 | 1055 | 1064 | 1091 | 1118 | 1139 | 1170 | 1191 | 1199 | 1205 | 1202 |
| 70° | 868 | 877 | 885 | 907 | 928 | 955 | 973 | 993 | 998 | 1009 | 1004 |
| 72.5° | 696 | 703 | 711 | 732 | 745 | 774 | 782 | 799 | 808 | 811 | 806 |
| 75° | 537 | 542 | 551 | 568 | 578 | 600 | 603 | 618 | 624 | 624 | 622 |
| 77.5° | 398 | 402 | 412 | 422 | 432 | 447 | 444 | 454 | 458 | 460 | 458 |
| 80° | 281 | 286 | 288 | 296 | 305 | 311 | 309 | 314 | 315 | 319 | 318 |
| 82.5° | 180 | 185 | 182 | 187 | 193 | 197 | 198 | 198 | 198 | 201 | 200 |
| 85° | 100 | 104 | 102 | 104 | 107 | 110 | 108 | 109 | 110 | 111 | 110 |
| 87.5° | 33 | 37 | 34 | 35 | 37 | 39 | 40 | 37 | 39 | 39 | 39 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P130709

CATALOG NUMBER: TBLED-LD1-8-W-UNV-L840-CD1

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|------|------|------|------|------|------|------|------|
| 0° | 1915 | 1915 | 1915 | 1915 | 1915 | 1915 | 1915 | 1915 |
| 2.5° | 1913 | 1913 | 1913 | 1913 | 1913 | 1913 | 1913 | 1913 |
| 5° | 1913 | 1913 | 1913 | 1913 | 1912 | 1912 | 1912 | 1912 |
| 7.5° | 1910 | 1910 | 1910 | 1910 | 1909 | 1909 | 1909 | 1909 |
| 10° | 1905 | 1905 | 1905 | 1904 | 1904 | 1904 | 1904 | 1904 |
| 12.5° | 1900 | 1899 | 1899 | 1899 | 1899 | 1898 | 1898 | 1898 |
| 15° | 1896 | 1895 | 1895 | 1894 | 1893 | 1893 | 1892 | 1892 |
| 17.5° | 1889 | 1889 | 1888 | 1887 | 1886 | 1885 | 1885 | 1884 |
| 20° | 1878 | 1877 | 1875 | 1874 | 1874 | 1873 | 1872 | 1871 |
| 22.5° | 1862 | 1861 | 1860 | 1858 | 1857 | 1856 | 1855 | 1854 |
| 25° | 1844 | 1843 | 1842 | 1840 | 1839 | 1837 | 1836 | 1834 |
| 27.5° | 1826 | 1826 | 1823 | 1821 | 1819 | 1817 | 1816 | 1814 |
| 30° | 1810 | 1809 | 1807 | 1803 | 1801 | 1798 | 1796 | 1795 |
| 32.5° | 1798 | 1797 | 1793 | 1788 | 1784 | 1780 | 1779 | 1777 |
| 35° | 1795 | 1791 | 1785 | 1779 | 1774 | 1769 | 1766 | 1765 |
| 37.5° | 1798 | 1791 | 1784 | 1776 | 1769 | 1762 | 1758 | 1756 |
| 40° | 1801 | 1794 | 1786 | 1775 | 1765 | 1757 | 1752 | 1749 |
| 42.5° | 1803 | 1795 | 1785 | 1772 | 1760 | 1750 | 1744 | 1741 |
| 45° | 1808 | 1799 | 1786 | 1770 | 1755 | 1744 | 1737 | 1733 |
| 47.5° | 1819 | 1806 | 1790 | 1771 | 1753 | 1738 | 1730 | 1726 |
| 50° | 1833 | 1817 | 1797 | 1774 | 1752 | 1733 | 1723 | 1718 |
| 52.5° | 1846 | 1827 | 1803 | 1776 | 1748 | 1726 | 1711 | 1706 |
| 55° | 1846 | 1823 | 1793 | 1762 | 1730 | 1704 | 1684 | 1677 |
| 57.5° | 1807 | 1782 | 1745 | 1711 | 1676 | 1645 | 1624 | 1617 |
| 60° | 1707 | 1685 | 1642 | 1609 | 1570 | 1536 | 1520 | 1514 |
| 62.5° | 1554 | 1538 | 1499 | 1470 | 1428 | 1401 | 1382 | 1383 |
| 65° | 1376 | 1362 | 1330 | 1304 | 1266 | 1245 | 1226 | 1212 |
| 67.5° | 1189 | 1173 | 1147 | 1124 | 1093 | 1078 | 1057 | 1044 |
| 70° | 993 | 981 | 957 | 941 | 915 | 902 | 882 | 882 |
| 72.5° | 797 | 791 | 774 | 760 | 740 | 728 | 712 | 715 |
| 75° | 615 | 618 | 601 | 591 | 575 | 565 | 553 | 558 |
| 77.5° | 461 | 457 | 445 | 439 | 425 | 421 | 409 | 413 |
| 80° | 319 | 318 | 308 | 304 | 296 | 294 | 284 | 287 |
| 82.5° | 201 | 201 | 197 | 193 | 190 | 188 | 181 | 183 |
| 85° | 111 | 110 | 109 | 106 | 104 | 105 | 100 | 102 |
| 87.5° | 39 | 38 | 38 | 36 | 34 | 37 | 33 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)