

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P583071

Luminaire Tested: **HC655D010-HM64560927-61RWWH**

Issue Date: 9/16/2021

Test Information

Test Method: LM-41-14
Report Number: P583071
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/16/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC655D010-HM64560927-61RWWH
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4204.4 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.19
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

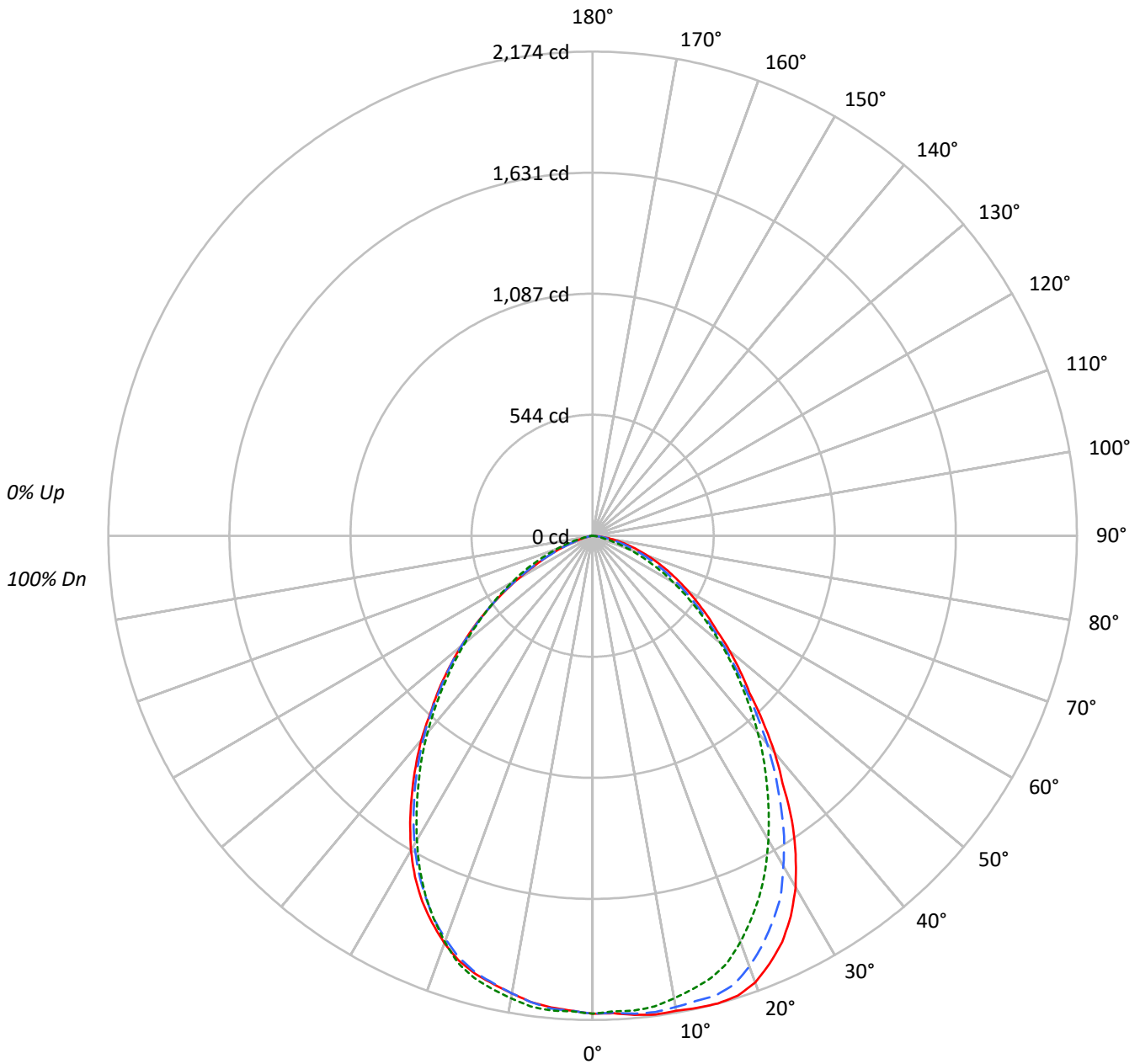
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 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 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | 100 |
| 1 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | 88 |
| 2 | 103 | 96 | 90 | 85 | 100 | 94 | 89 | 84 | 91 | 86 | 83 | 87 | 84 | 81 | 85 | 82 | 79 | 77 | | | | 77 |
| 3 | 95 | 86 | 79 | 74 | 93 | 84 | 78 | 73 | 82 | 76 | 72 | 79 | 74 | 70 | 77 | 73 | 69 | 67 | | | | 67 |
| 4 | 88 | 78 | 70 | 64 | 86 | 76 | 69 | 64 | 74 | 68 | 63 | 72 | 66 | 62 | 70 | 65 | 61 | 59 | | | | 59 |
| 5 | 82 | 70 | 62 | 57 | 80 | 69 | 62 | 56 | 67 | 61 | 56 | 65 | 60 | 55 | 64 | 59 | 55 | 53 | | | | 53 |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 56 | 50 | 61 | 55 | 50 | 60 | 54 | 49 | 58 | 53 | 49 | 47 | | | | 47 |
| 7 | 71 | 59 | 51 | 45 | 69 | 58 | 50 | 45 | 56 | 50 | 45 | 55 | 49 | 44 | 54 | 48 | 44 | 42 | | | | 42 |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 41 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | 38 |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | 35 |
| 10 | 59 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 | | | | 32 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 117628 | 117628 | 117628 |
| 5° | 118847 | 117763 | 116993 |
| 10° | 120539 | 117410 | 116152 |
| 15° | 123372 | 116669 | 115557 |
| 20° | 124523 | 113200 | 113527 |
| 25° | 121791 | 107504 | 109549 |
| 30° | 115353 | 99863 | 103244 |
| 35° | 104447 | 91276 | 94663 |
| 40° | 90963 | 82512 | 85532 |
| 45° | 77179 | 73031 | 75659 |
| 50° | 68356 | 63793 | 65482 |
| 55° | 60203 | 54564 | 54297 |
| 60° | 53954 | 45939 | 42244 |
| 65° | 48150 | 36839 | 30276 |
| 70° | 42379 | 26607 | 18929 |
| 75° | 35732 | 16076 | 10718 |
| 80° | 27529 | 7103 | 4451 |
| 85° | 15913 | 1761 | 1761 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 203.7 | 4.8 |
| 10°-20° | 585.4 | 13.9 |
| 20°-30° | 846.2 | 20.1 |
| 30°-40° | 890.4 | 21.2 |
| 40°-50° | 748.5 | 17.8 |
| 50°-60° | 525.3 | 12.5 |
| 60°-70° | 289.0 | 6.9 |
| 70°-80° | 102.6 | 2.4 |
| 80°-90° | 13.4 | 0.3 |
| 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° | 1635.2 | 38.9 |
| 0°-40° | 2525.6 | 60.1 |
| 0°-60° | 3799.4 | 90.4 |
| 0°-90° | 4204.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4204.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 2146 | 2146 | 2146 | 2146 | 2146 | |
| 5° | 2160 | 2154 | 2140 | 2132 | 2126 | 206 |
| 15° | 2174 | 2137 | 2056 | 2030 | 2036 | 613 |
| 25° | 2014 | 1912 | 1777 | 1780 | 1811 | 921 |
| 35° | 1561 | 1471 | 1364 | 1392 | 1414 | 967 |
| 45° | 996 | 967 | 942 | 965 | 976 | 781 |
| 55° | 630 | 596 | 571 | 571 | 568 | 567 |
| 65° | 371 | 332 | 284 | 233 | 233 | 369 |
| 75° | 169 | 135 | 76 | 51 | 51 | 181 |
| 85° | 25 | 14 | 3 | 3 | 3 | 35 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2145.7 | 2145.7 | 2145.7 | 2145.7 | 2145.7 | 2145.7 | 2145.7 | 2145.7 | 2145.7 |
| 2.5° | 2145.7 | 2145.7 | 2142.9 | 2142.9 | 2137.2 | 2137.2 | 2134.5 | 2134.5 | 2134.5 |
| 5° | 2159.7 | 2159.7 | 2154.1 | 2145.7 | 2140.0 | 2131.6 | 2131.6 | 2128.8 | 2126.0 |
| 7.5° | 2168.2 | 2165.4 | 2157.0 | 2145.7 | 2131.6 | 2117.6 | 2111.9 | 2114.7 | 2111.9 |
| 10° | 2165.4 | 2159.7 | 2148.4 | 2126.0 | 2109.2 | 2089.4 | 2086.6 | 2083.9 | 2086.6 |
| 12.5° | 2171.0 | 2162.5 | 2140.0 | 2111.9 | 2083.9 | 2061.3 | 2058.5 | 2058.5 | 2061.3 |
| 15° | 2173.8 | 2165.4 | 2137.2 | 2095.1 | 2055.7 | 2033.2 | 2030.4 | 2033.2 | 2036.1 |
| 17.5° | 2165.4 | 2154.1 | 2111.9 | 2055.7 | 2010.7 | 1988.1 | 1988.1 | 1993.8 | 1999.4 |
| 20° | 2134.5 | 2117.6 | 2058.5 | 1991.0 | 1940.4 | 1923.6 | 1929.1 | 1940.4 | 1946.0 |
| 22.5° | 2078.2 | 2058.5 | 1991.0 | 1915.0 | 1861.7 | 1847.6 | 1861.7 | 1875.8 | 1881.3 |
| 25° | 2013.5 | 1991.0 | 1912.3 | 1833.5 | 1777.3 | 1760.4 | 1780.1 | 1802.5 | 1811.1 |
| 27.5° | 1926.3 | 1901.0 | 1827.9 | 1737.9 | 1681.6 | 1673.2 | 1695.7 | 1721.0 | 1726.7 |
| 30° | 1822.3 | 1794.1 | 1712.6 | 1628.3 | 1577.6 | 1574.8 | 1600.1 | 1622.6 | 1631.0 |
| 32.5° | 1695.7 | 1670.4 | 1600.1 | 1515.8 | 1470.7 | 1470.7 | 1496.0 | 1515.8 | 1524.2 |
| 35° | 1560.7 | 1532.6 | 1470.7 | 1400.4 | 1363.9 | 1366.7 | 1392.0 | 1406.1 | 1414.5 |
| 37.5° | 1400.4 | 1392.0 | 1344.2 | 1285.2 | 1259.9 | 1265.5 | 1285.2 | 1296.4 | 1304.8 |
| 40° | 1271.1 | 1248.7 | 1217.7 | 1169.9 | 1153.0 | 1158.6 | 1178.3 | 1189.5 | 1195.2 |
| 42.5° | 1130.5 | 1116.4 | 1091.1 | 1057.4 | 1046.1 | 1054.5 | 1071.4 | 1079.8 | 1077.0 |
| 45° | 995.5 | 992.7 | 967.3 | 947.7 | 942.0 | 953.4 | 964.6 | 973.0 | 975.9 |
| 47.5° | 897.1 | 885.8 | 863.4 | 849.3 | 843.6 | 855.0 | 866.2 | 871.8 | 871.8 |
| 50° | 801.5 | 790.2 | 767.8 | 753.7 | 748.0 | 759.2 | 767.8 | 773.3 | 767.8 |
| 52.5° | 705.9 | 694.7 | 674.9 | 658.1 | 655.3 | 660.8 | 663.7 | 666.5 | 672.1 |
| 55° | 629.9 | 618.7 | 596.2 | 576.5 | 570.9 | 573.6 | 570.9 | 570.9 | 568.1 |
| 57.5° | 556.8 | 545.6 | 523.0 | 500.5 | 492.1 | 489.3 | 480.9 | 478.1 | 475.2 |
| 60° | 492.1 | 478.1 | 455.6 | 430.3 | 419.0 | 407.8 | 393.7 | 385.3 | 385.3 |
| 62.5° | 430.3 | 416.2 | 390.9 | 368.4 | 351.5 | 331.8 | 309.4 | 298.1 | 298.1 |
| 65° | 371.2 | 360.0 | 331.8 | 306.5 | 284.0 | 258.7 | 233.4 | 227.7 | 233.4 |
| 67.5° | 314.9 | 303.7 | 275.6 | 250.3 | 222.2 | 191.2 | 168.7 | 168.7 | 174.4 |
| 70° | 264.4 | 253.0 | 227.7 | 196.9 | 166.0 | 135.0 | 118.1 | 118.1 | 118.1 |
| 72.5° | 216.5 | 205.3 | 177.2 | 149.1 | 118.1 | 87.2 | 78.8 | 81.5 | 78.8 |
| 75° | 168.7 | 160.3 | 135.0 | 104.1 | 75.9 | 53.5 | 50.6 | 47.8 | 50.6 |
| 77.5° | 126.6 | 118.1 | 95.6 | 67.5 | 42.2 | 30.9 | 28.2 | 28.2 | 28.2 |
| 80° | 87.2 | 78.8 | 61.9 | 39.4 | 22.5 | 14.1 | 14.1 | 14.1 | 14.1 |
| 82.5° | 53.5 | 45.0 | 33.7 | 19.6 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 |
| 85° | 25.3 | 19.6 | 14.1 | 5.7 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 87.5° | 5.7 | 5.7 | 2.8 | 2.8 | 0.0 | 2.8 | 2.8 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)