

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: P583078

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

Issue Date: 9/16/2021

Test Information

Test Method: LM-41-14
Report Number: P583078
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/16/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC655D010-HM64560927-61WWW
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3892.2 lumens
Efficiency: N/A
Efficacy: 74.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1.06 / 1.14
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

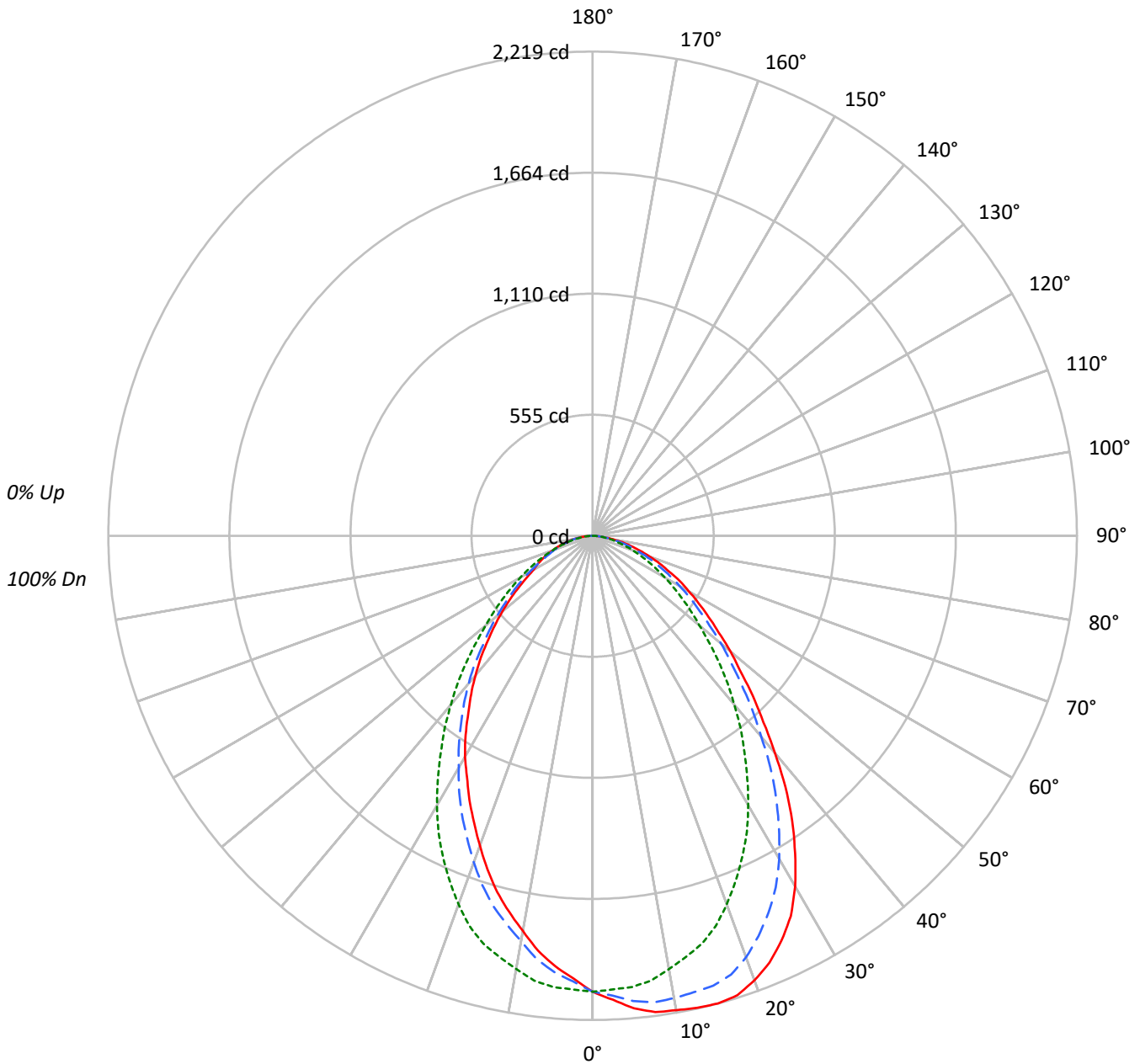
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | | | | |
| 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 | 110 | 106 | 103 | 99 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 93 | 91 | 89 | 87 | | | 87 |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 88 | 83 | 90 | 85 | 81 | 86 | 83 | 79 | 83 | 80 | 78 | 76 | | | 76 |
| 3 | 94 | 85 | 78 | 72 | 92 | 83 | 77 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 | | | 66 |
| 4 | 87 | 76 | 69 | 63 | 85 | 75 | 68 | 62 | 73 | 67 | 62 | 71 | 65 | 61 | 69 | 64 | 60 | 58 | | | 58 |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 53 | 51 | | | 51 |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 57 | 52 | 48 | 46 | | | 46 |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 43 | 42 | | | 42 |
| 8 | 66 | 53 | 46 | 40 | 64 | 53 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 49 | 44 | 39 | 38 | | | 38 |
| 9 | 62 | 49 | 42 | 37 | 60 | 49 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 34 | | | 34 |
| 10 | 58 | 46 | 39 | 34 | 57 | 45 | 38 | 34 | 44 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 32 | | | 32 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 114547 | 114547 | 114547 |
| 5° | 119629 | 114214 | 108953 |
| 10° | 122888 | 112245 | 102381 |
| 15° | 125926 | 109808 | 95926 |
| 20° | 126489 | 104834 | 88103 |
| 25° | 123836 | 98147 | 80799 |
| 30° | 117493 | 90254 | 74056 |
| 35° | 106716 | 81117 | 66441 |
| 40° | 92981 | 72250 | 59769 |
| 45° | 80450 | 63231 | 52540 |
| 50° | 70275 | 54437 | 46045 |
| 55° | 62086 | 47836 | 39502 |
| 60° | 55807 | 41937 | 34230 |
| 65° | 49979 | 36476 | 33194 |
| 70° | 44623 | 31095 | 31095 |
| 75° | 38719 | 26201 | 29187 |
| 80° | 31065 | 22193 | 26613 |
| 85° | 21197 | 19436 | 23021 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 196.4 | 5.0 |
| 10°-20° | 545.9 | 14.0 |
| 20°-30° | 760.8 | 19.5 |
| 30°-40° | 783.9 | 20.1 |
| 40°-50° | 649.6 | 16.7 |
| 50°-60° | 466.9 | 12.0 |
| 60°-70° | 297.3 | 7.6 |
| 70°-80° | 152.7 | 3.9 |
| 80°-90° | 38.8 | 1.0 |
| 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° | 1503.0 | 38.6 |
| 0°-40° | 2286.9 | 58.8 |
| 0°-60° | 3403.4 | 87.4 |
| 0°-90° | 3892.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3892.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 2090 | 2090 | 2090 | 2090 | 2090 | |
| 5° | 2174 | 2140 | 2076 | 2008 | 1980 | 208 |
| 15° | 2219 | 2134 | 1935 | 1758 | 1690 | 625 |
| 25° | 2047 | 1907 | 1623 | 1414 | 1336 | 938 |
| 35° | 1595 | 1465 | 1212 | 1052 | 993 | 990 |
| 45° | 1038 | 965 | 816 | 712 | 678 | 803 |
| 55° | 650 | 596 | 500 | 444 | 413 | 585 |
| 65° | 385 | 343 | 281 | 245 | 256 | 386 |
| 75° | 183 | 158 | 124 | 129 | 138 | 195 |
| 85° | 34 | 31 | 31 | 34 | 37 | 43 |
| 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° | 2089.5 | 2089.5 | 2089.5 | 2089.5 | 2089.5 | 2089.5 | 2089.5 | 2089.5 | 2089.5 |
| 2.5° | 2128.8 | 2120.4 | 2109.2 | 2097.9 | 2081.0 | 2061.4 | 2044.5 | 2038.9 | 2030.4 |
| 5° | 2173.9 | 2162.6 | 2140.2 | 2112.0 | 2075.5 | 2038.9 | 2007.9 | 1988.3 | 1979.9 |
| 7.5° | 2201.9 | 2188.0 | 2157.0 | 2109.2 | 2055.7 | 2002.3 | 1957.3 | 1929.2 | 1918.0 |
| 10° | 2207.6 | 2193.5 | 2151.4 | 2086.7 | 2016.4 | 1943.2 | 1887.0 | 1853.3 | 1839.2 |
| 12.5° | 2216.0 | 2196.4 | 2142.9 | 2066.9 | 1977.0 | 1892.7 | 1822.3 | 1780.2 | 1766.1 |
| 15° | 2218.8 | 2196.4 | 2134.5 | 2041.6 | 1934.8 | 1833.5 | 1757.7 | 1707.1 | 1690.2 |
| 17.5° | 2207.6 | 2182.3 | 2109.2 | 1996.7 | 1875.8 | 1768.9 | 1678.9 | 1625.4 | 1603.0 |
| 20° | 2168.2 | 2140.2 | 2055.7 | 1929.2 | 1797.0 | 1684.5 | 1591.7 | 1535.5 | 1510.2 |
| 22.5° | 2117.6 | 2081.0 | 1985.4 | 1850.4 | 1712.6 | 1594.6 | 1501.7 | 1445.5 | 1420.2 |
| 25° | 2047.3 | 2013.6 | 1906.6 | 1763.3 | 1622.6 | 1498.9 | 1414.5 | 1355.5 | 1335.8 |
| 27.5° | 1965.8 | 1926.4 | 1816.7 | 1673.2 | 1529.9 | 1406.1 | 1324.6 | 1271.1 | 1245.8 |
| 30° | 1856.1 | 1819.6 | 1709.8 | 1566.4 | 1425.8 | 1310.5 | 1226.2 | 1181.1 | 1169.9 |
| 32.5° | 1726.7 | 1695.8 | 1588.9 | 1453.9 | 1318.9 | 1212.1 | 1141.7 | 1093.9 | 1082.7 |
| 35° | 1594.6 | 1558.0 | 1465.1 | 1338.6 | 1212.1 | 1116.4 | 1051.8 | 1009.6 | 992.8 |
| 37.5° | 1451.1 | 1417.4 | 1338.6 | 1226.2 | 1113.7 | 1023.6 | 967.5 | 930.9 | 914.0 |
| 40° | 1299.3 | 1274.0 | 1200.9 | 1110.8 | 1009.6 | 930.9 | 883.0 | 852.1 | 835.2 |
| 42.5° | 1158.6 | 1133.3 | 1082.7 | 998.3 | 914.0 | 843.7 | 801.5 | 773.3 | 759.2 |
| 45° | 1037.7 | 1015.3 | 964.6 | 891.5 | 815.6 | 756.5 | 711.5 | 691.8 | 677.7 |
| 47.5° | 916.8 | 905.6 | 860.5 | 793.1 | 722.7 | 672.2 | 641.2 | 618.7 | 607.5 |
| 50° | 824.0 | 809.9 | 767.8 | 697.4 | 638.3 | 599.0 | 570.9 | 551.2 | 539.9 |
| 52.5° | 728.4 | 714.3 | 674.9 | 615.9 | 568.1 | 531.5 | 503.4 | 486.6 | 475.2 |
| 55° | 649.6 | 638.3 | 596.2 | 542.8 | 500.5 | 469.7 | 444.3 | 424.7 | 413.3 |
| 57.5° | 576.5 | 565.2 | 525.8 | 475.2 | 438.7 | 410.6 | 388.1 | 371.2 | 357.1 |
| 60° | 509.0 | 500.5 | 461.3 | 413.3 | 382.5 | 354.3 | 334.7 | 320.6 | 312.2 |
| 62.5° | 450.0 | 433.1 | 399.4 | 357.1 | 329.0 | 306.5 | 286.9 | 278.4 | 284.0 |
| 65° | 385.3 | 376.8 | 343.1 | 306.5 | 281.2 | 258.7 | 244.6 | 250.3 | 255.9 |
| 67.5° | 331.8 | 320.6 | 292.4 | 258.7 | 236.2 | 219.3 | 210.9 | 222.2 | 225.0 |
| 70° | 278.4 | 267.1 | 241.8 | 213.8 | 194.0 | 182.8 | 182.8 | 191.2 | 194.0 |
| 72.5° | 227.8 | 219.3 | 196.9 | 174.4 | 160.3 | 151.9 | 157.5 | 163.1 | 166.0 |
| 75° | 182.8 | 174.4 | 157.5 | 137.8 | 123.7 | 123.7 | 129.4 | 135.0 | 137.8 |
| 77.5° | 140.7 | 135.0 | 118.1 | 104.1 | 98.4 | 98.4 | 104.1 | 106.8 | 109.7 |
| 80° | 98.4 | 92.7 | 84.3 | 75.9 | 70.3 | 75.9 | 81.5 | 81.5 | 84.3 |
| 82.5° | 64.7 | 61.9 | 56.2 | 50.6 | 50.6 | 53.5 | 56.2 | 59.0 | 59.0 |
| 85° | 33.7 | 33.7 | 30.9 | 28.2 | 30.9 | 33.7 | 33.7 | 36.6 | 36.6 |
| 87.5° | 11.2 | 11.2 | 11.2 | 11.2 | 14.1 | 14.1 | 14.1 | 14.1 | 14.1 |
| 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)