

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: P593264

Luminaire Tested: **HC635D010-HM63040950-61RWWH**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P593264  
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: HC635D010-HM63040950-61RWWH  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3709.3 lumens  
Efficiency: N/A  
Efficacy: 110.1 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

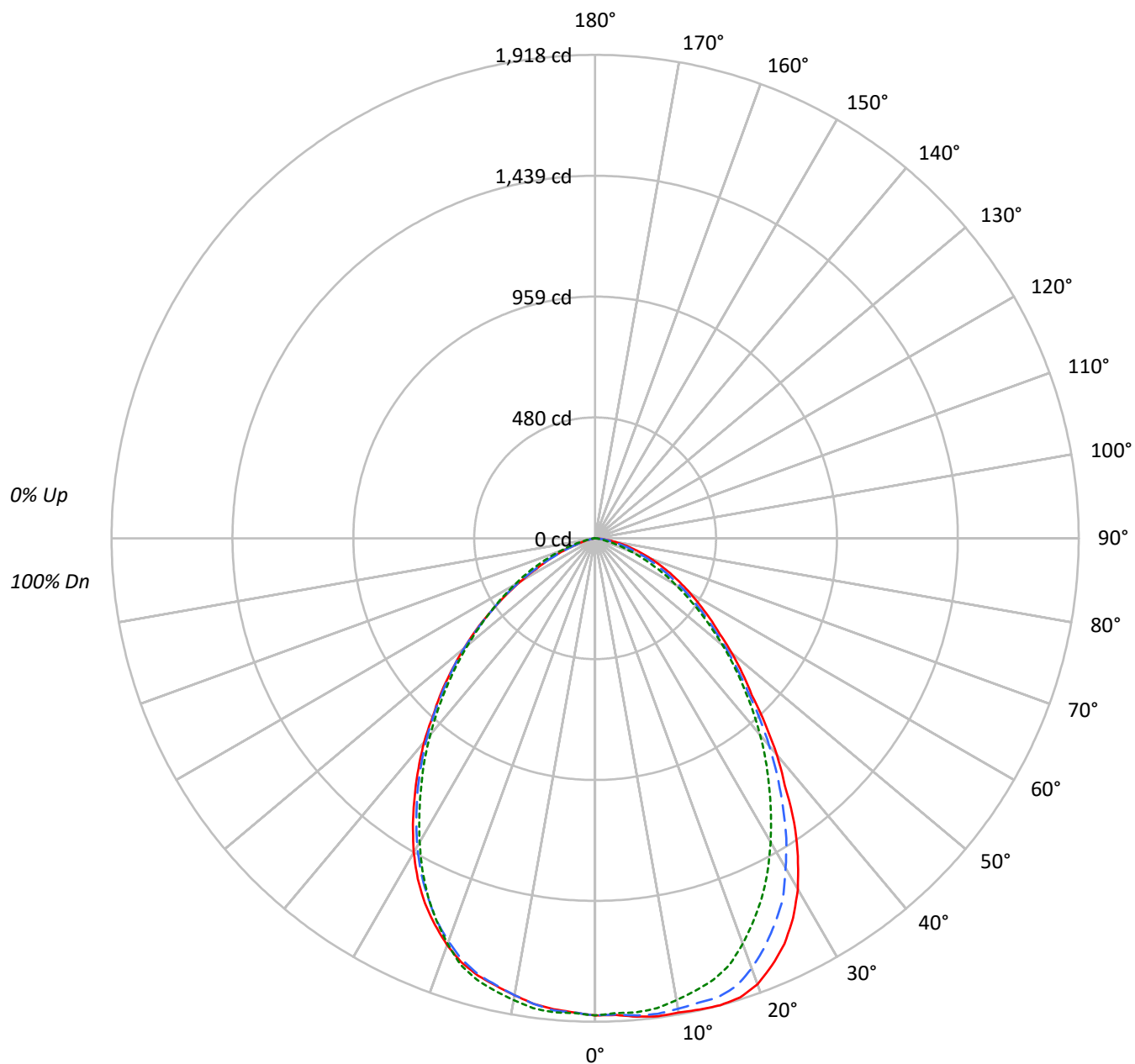
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P593264

CATALOG NUMBER: HC635D010-HM63040950-61RWWH

### Luminous Intensity Polar Plot





TEST NUMBER: P593264

CATALOG NUMBER: HC635D010-HM63040950-61RWWH

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|
| RF  | 20  |     |     |     | 20  |     |     |     |     | 20  |     |     |     |     | 20  |     |     |     |    | 20 |
| RC  | 80  |     |     |     | 70  |     |     |     |     | 50  |     |     |     |     | 30  |     |     |     |    | 10 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |
| 1   | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 93  | 92  | 90  | 88  |    |    |
| 2   | 103 | 96  | 90  | 85  | 100 | 94  | 89  | 84  | 91  | 86  | 83  | 87  | 84  | 81  | 85  | 82  | 79  | 77  |    |    |
| 3   | 95  | 86  | 79  | 74  | 93  | 84  | 78  | 73  | 82  | 76  | 72  | 79  | 74  | 70  | 77  | 73  | 69  | 67  |    |    |
| 4   | 88  | 78  | 70  | 64  | 86  | 76  | 69  | 64  | 74  | 68  | 63  | 72  | 66  | 62  | 70  | 65  | 61  | 59  |    |    |
| 5   | 82  | 70  | 62  | 57  | 80  | 69  | 62  | 56  | 67  | 61  | 56  | 65  | 60  | 55  | 64  | 59  | 55  | 53  |    |    |
| 6   | 76  | 64  | 56  | 50  | 74  | 63  | 56  | 50  | 61  | 55  | 50  | 60  | 54  | 49  | 58  | 53  | 49  | 47  |    |    |
| 7   | 71  | 59  | 51  | 45  | 69  | 58  | 50  | 45  | 56  | 50  | 45  | 55  | 49  | 44  | 54  | 48  | 44  | 42  |    |    |
| 8   | 66  | 54  | 46  | 41  | 65  | 53  | 46  | 41  | 52  | 45  | 41  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |
| 9   | 62  | 50  | 42  | 37  | 61  | 49  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 37  | 46  | 41  | 37  | 35  |    |    |
| 10  | 59  | 46  | 39  | 34  | 57  | 46  | 39  | 34  | 45  | 38  | 34  | 44  | 38  | 34  | 43  | 38  | 34  | 32  |    |    |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°     | 90°    | 180°   |
|-----|--------|--------|--------|
| 0°  | 103775 | 103775 | 103775 |
| 5°  | 104853 | 103896 | 103213 |
| 10° | 106344 | 103583 | 102475 |
| 15° | 108843 | 102929 | 101942 |
| 20° | 109857 | 99870  | 100161 |
| 25° | 107450 | 94844  | 96641  |
| 30° | 101769 | 88108  | 91084  |
| 35° | 92146  | 80529  | 83520  |
| 40° | 80250  | 72794  | 75456  |
| 45° | 68092  | 64433  | 66743  |
| 50° | 60305  | 56280  | 57764  |
| 55° | 53112  | 48142  | 47893  |
| 60° | 47595  | 40534  | 37267  |
| 65° | 42482  | 32507  | 26721  |
| 70° | 37378  | 23449  | 16702  |
| 75° | 31538  | 14191  | 9468   |
| 80° | 24277  | 6251   | 3915   |
| 85° | 14026  | 1572   | 1572   |



TEST NUMBER: P593264

CATALOG NUMBER: HC635D010-HM63040950-61RWWH

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 179.7  | 4.8       |
| 10°-20°   | 516.4  | 13.9      |
| 20°-30°   | 746.5  | 20.1      |
| 30°-40°   | 785.5  | 21.2      |
| 40°-50°   | 660.3  | 17.8      |
| 50°-60°   | 463.5  | 12.5      |
| 60°-70°   | 254.9  | 6.9       |
| 70°-80°   | 90.5   | 2.4       |
| 80°-90°   | 11.9   | 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°    | 1442.6 | 38.9      |
| 0°-40°    | 2228.2 | 60.1      |
| 0°-60°    | 3352.0 | 90.4      |
| 0°-90°    | 3709.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3709.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 1893 | 1893 | 1893 | 1893 | 1893 |      |
| 5°  | 1905 | 1900 | 1888 | 1881 | 1876 | 182  |
| 15° | 1918 | 1886 | 1814 | 1791 | 1796 | 541  |
| 25° | 1776 | 1687 | 1568 | 1570 | 1598 | 813  |
| 35° | 1377 | 1298 | 1203 | 1228 | 1248 | 853  |
| 45° | 878  | 853  | 831  | 851  | 861  | 689  |
| 55° | 556  | 526  | 504  | 504  | 501  | 500  |
| 65° | 328  | 293  | 251  | 206  | 206  | 326  |
| 75° | 149  | 119  | 67   | 45   | 45   | 160  |
| 85° | 22   | 12   | 2    | 2    | 2    | 31   |
| 90° | 0    | 0    | 0    | 0    | 0    |      |



TEST NUMBER: P593264

CATALOG NUMBER: HC635D010-HM63040950-61RWWH

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1893.0 | 1893.0 | 1893.0 | 1893.0 | 1893.0 | 1893.0 | 1893.0 | 1893.0 | 1893.0 |
| 2.5°  | 1893.0 | 1893.0 | 1890.5 | 1890.5 | 1885.5 | 1885.5 | 1883.1 | 1883.1 | 1883.1 |
| 5°    | 1905.4 | 1905.4 | 1900.5 | 1893.0 | 1888.0 | 1880.6 | 1880.6 | 1878.1 | 1875.6 |
| 7.5°  | 1912.8 | 1910.4 | 1902.9 | 1893.0 | 1880.6 | 1868.1 | 1863.2 | 1865.7 | 1863.2 |
| 10°   | 1910.4 | 1905.4 | 1895.4 | 1875.6 | 1860.8 | 1843.4 | 1840.9 | 1838.4 | 1840.9 |
| 12.5° | 1915.3 | 1907.9 | 1888.0 | 1863.2 | 1838.4 | 1818.5 | 1816.1 | 1816.1 | 1818.5 |
| 15°   | 1917.8 | 1910.4 | 1885.5 | 1848.3 | 1813.6 | 1793.8 | 1791.2 | 1793.8 | 1796.2 |
| 17.5° | 1910.4 | 1900.5 | 1863.2 | 1813.6 | 1774.0 | 1754.0 | 1754.0 | 1759.0 | 1763.9 |
| 20°   | 1883.1 | 1868.1 | 1816.1 | 1756.6 | 1711.9 | 1696.9 | 1702.0 | 1711.9 | 1716.9 |
| 22.5° | 1833.5 | 1816.1 | 1756.6 | 1689.6 | 1642.4 | 1629.9 | 1642.4 | 1654.8 | 1659.8 |
| 25°   | 1776.4 | 1756.6 | 1687.0 | 1617.6 | 1568.0 | 1553.0 | 1570.4 | 1590.3 | 1597.7 |
| 27.5° | 1699.5 | 1677.1 | 1612.7 | 1533.2 | 1483.6 | 1476.1 | 1496.0 | 1518.4 | 1523.3 |
| 30°   | 1607.7 | 1582.9 | 1510.9 | 1436.5 | 1391.9 | 1389.3 | 1411.7 | 1431.6 | 1438.9 |
| 32.5° | 1496.0 | 1473.7 | 1411.7 | 1337.3 | 1297.6 | 1297.6 | 1319.9 | 1337.3 | 1344.7 |
| 35°   | 1376.9 | 1352.1 | 1297.6 | 1235.5 | 1203.3 | 1205.7 | 1228.0 | 1240.5 | 1248.0 |
| 37.5° | 1235.5 | 1228.0 | 1185.9 | 1133.9 | 1111.5 | 1116.5 | 1133.9 | 1143.8 | 1151.1 |
| 40°   | 1121.4 | 1101.5 | 1074.2 | 1032.1 | 1017.2 | 1022.2 | 1039.6 | 1049.5 | 1054.4 |
| 42.5° | 997.3  | 984.9  | 962.7  | 932.9  | 923.0  | 930.3  | 945.3  | 952.7  | 950.2  |
| 45°   | 878.3  | 875.8  | 853.4  | 836.0  | 831.1  | 841.1  | 851.0  | 858.4  | 860.9  |
| 47.5° | 791.5  | 781.5  | 761.7  | 749.2  | 744.3  | 754.2  | 764.2  | 769.1  | 769.1  |
| 50°   | 707.1  | 697.2  | 677.3  | 665.0  | 659.9  | 669.9  | 677.3  | 682.2  | 677.3  |
| 52.5° | 622.7  | 612.8  | 595.4  | 580.6  | 578.0  | 583.0  | 585.5  | 587.9  | 593.0  |
| 55°   | 555.7  | 545.8  | 526.0  | 508.6  | 503.7  | 506.1  | 503.7  | 503.7  | 501.1  |
| 57.5° | 491.2  | 481.3  | 461.4  | 441.6  | 434.1  | 431.7  | 424.2  | 421.8  | 419.3  |
| 60°   | 434.1  | 421.8  | 401.9  | 379.6  | 369.7  | 359.8  | 347.3  | 339.9  | 339.9  |
| 62.5° | 379.6  | 367.1  | 344.8  | 325.0  | 310.1  | 292.8  | 273.0  | 263.0  | 263.0  |
| 65°   | 327.5  | 317.5  | 292.8  | 270.4  | 250.6  | 228.3  | 206.0  | 201.0  | 206.0  |
| 67.5° | 277.9  | 267.9  | 243.1  | 220.8  | 195.9  | 168.7  | 148.9  | 148.9  | 153.8  |
| 70°   | 233.2  | 223.2  | 201.0  | 173.6  | 146.3  | 119.0  | 104.2  | 104.2  | 104.2  |
| 72.5° | 191.0  | 181.1  | 156.3  | 131.5  | 104.2  | 76.9   | 69.4   | 72.0   | 69.4   |
| 75°   | 148.9  | 141.4  | 119.0  | 91.8   | 67.0   | 47.1   | 44.7   | 42.1   | 44.7   |
| 77.5° | 111.7  | 104.2  | 84.4   | 59.5   | 37.2   | 27.3   | 24.9   | 24.9   | 24.9   |
| 80°   | 76.9   | 69.4   | 54.6   | 34.8   | 19.8   | 12.4   | 12.4   | 12.4   | 12.4   |
| 82.5° | 47.1   | 39.7   | 29.8   | 17.4   | 7.5    | 7.5    | 7.5    | 7.5    | 7.5    |
| 85°   | 22.3   | 17.4   | 12.4   | 5.0    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    |
| 87.5° | 5.0    | 5.0    | 2.5    | 2.5    | 0.0    | 2.5    | 2.5    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



Report Generated By 670245859 / DESKTOP-HRDQ47P







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







(END OF REPORT)