

Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P580664

Luminaire Tested: **HCC4W40D010MW-HM43040935-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580664  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4W40D010MW-HM43040935-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

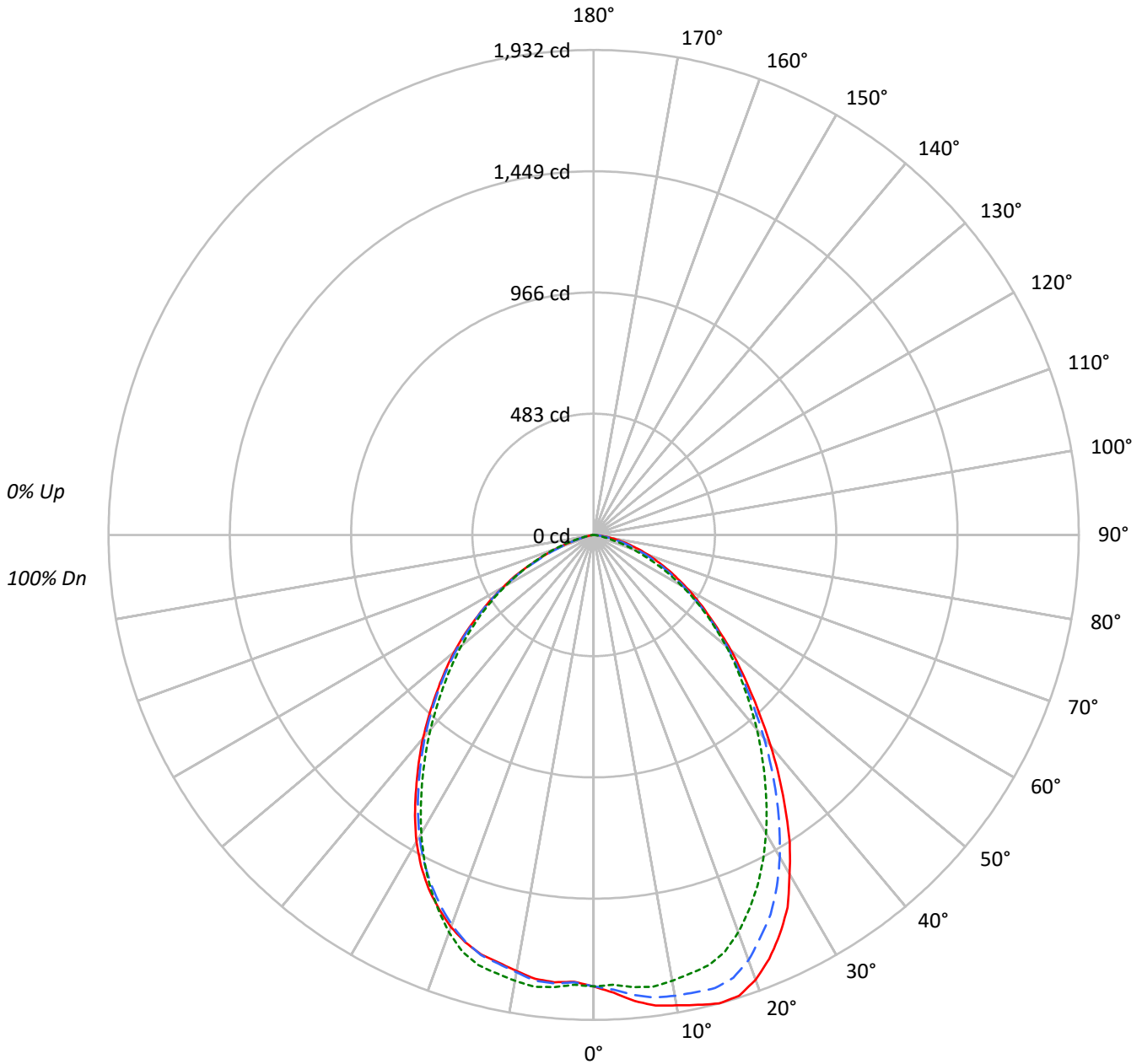
Lumens per Lamp: N/A  
Luminaire Lumens: 3747.7 lumens  
Efficiency: N/A  
Efficacy: 91.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 41  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P580664  
CATALOG NUMBER: HCC4W40D010MW-HM43040935-41RWWC

### Luminous Intensity Polar Plot





TEST NUMBER: P580664

CATALOG NUMBER: HCC4W40D010MW-HM43040935-41RWWC

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|--|--|--|--|---|
| RF  | 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 |    |    |    |  |  |  |  |   |
| 1   | 111 | 107 | 103 | 100 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 93  | 92  | 90  | 88  |    |    |    |  |  |  |  |   |
| 2   | 102 | 95  | 90  | 85  | 100 | 94  | 88  | 84  | 90  | 86  | 82  | 87  | 83  | 80  | 84  | 81  | 78  | 76  |    |    |    |  |  |  |  |   |
| 3   | 95  | 85  | 78  | 73  | 92  | 84  | 77  | 72  | 81  | 75  | 71  | 78  | 74  | 70  | 76  | 72  | 69  | 67  |    |    |    |  |  |  |  |   |
| 4   | 87  | 77  | 69  | 63  | 85  | 76  | 68  | 63  | 73  | 67  | 62  | 71  | 66  | 61  | 69  | 64  | 60  | 58  |    |    |    |  |  |  |  |   |
| 5   | 81  | 70  | 61  | 56  | 79  | 68  | 61  | 55  | 66  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 54  | 52  |    |    |    |  |  |  |  |   |
| 6   | 75  | 63  | 55  | 49  | 74  | 62  | 55  | 49  | 61  | 54  | 49  | 59  | 53  | 48  | 58  | 52  | 48  | 46  |    |    |    |  |  |  |  |   |
| 7   | 70  | 58  | 50  | 44  | 69  | 57  | 49  | 44  | 56  | 49  | 44  | 54  | 48  | 44  | 53  | 47  | 43  | 41  |    |    |    |  |  |  |  |   |
| 8   | 66  | 53  | 45  | 40  | 64  | 53  | 45  | 40  | 51  | 44  | 40  | 50  | 44  | 39  | 49  | 43  | 39  | 37  |    |    |    |  |  |  |  |   |
| 9   | 62  | 49  | 42  | 36  | 60  | 49  | 41  | 36  | 47  | 41  | 36  | 46  | 40  | 36  | 45  | 40  | 36  | 34  |    |    |    |  |  |  |  |   |
| 10  | 58  | 46  | 38  | 33  | 57  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 42  | 37  | 33  | 31  |    |    |    |  |  |  |  |   |

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

|     | 0°     | 90°    | 180°   |
|-----|--------|--------|--------|
| 0°  | 221825 | 221825 | 221825 |
| 5°  | 230807 | 223886 | 221483 |
| 10° | 238348 | 225873 | 221001 |
| 15° | 246736 | 226547 | 220967 |
| 20° | 247560 | 221071 | 218196 |
| 25° | 238809 | 210038 | 211685 |
| 30° | 222229 | 195567 | 201107 |
| 35° | 200177 | 178961 | 185541 |
| 40° | 176490 | 162787 | 170226 |
| 45° | 154324 | 146684 | 153888 |
| 50° | 136646 | 131964 | 138987 |
| 55° | 120190 | 116555 | 121265 |
| 60° | 107335 | 99515  | 102525 |
| 65° | 94329  | 80875  | 79444  |
| 70° | 82406  | 59577  | 54348  |
| 75° | 68340  | 35886  | 28976  |
| 80° | 51782  | 13780  | 8595   |
| 85° | 24059  | 3538   | 3538   |



TEST NUMBER: P580664

CATALOG NUMBER: HCC4W40D010MW-HM43040935-41RWWC

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 173.5  | 4.6       |
| 10°-20°   | 506.2  | 13.5      |
| 20°-30°   | 733.1  | 19.6      |
| 30°-40°   | 773.5  | 20.6      |
| 40°-50°   | 669.4  | 17.9      |
| 50°-60°   | 495.9  | 13.2      |
| 60°-70°   | 285.8  | 7.6       |
| 70°-80°   | 99.8   | 2.7       |
| 80°-90°   | 10.5   | 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°    | 1412.8 | 37.7      |
| 0°-40°    | 2186.3 | 58.3      |
| 0°-60°    | 3351.5 | 89.4      |
| 0°-90°    | 3747.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3747.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 1798 | 1798 | 1798 | 1798 | 1798 |      |
| 5°  | 1864 | 1840 | 1808 | 1794 | 1789 | 179  |
| 15° | 1932 | 1869 | 1774 | 1733 | 1730 | 543  |
| 25° | 1755 | 1667 | 1543 | 1534 | 1555 | 803  |
| 35° | 1329 | 1269 | 1188 | 1215 | 1232 | 830  |
| 45° | 885  | 860  | 841  | 872  | 882  | 687  |
| 55° | 559  | 547  | 542  | 561  | 564  | 504  |
| 65° | 323  | 304  | 277  | 262  | 272  | 323  |
| 75° | 143  | 122  | 75   | 61   | 61   | 154  |
| 85° | 17   | 10   | 2    | 2    | 2    | 26   |
| 90° | 0    | 0    | 0    | 0    | 0    |      |



TEST NUMBER: P580664

CATALOG NUMBER: HCC4W40D010MW-HM43040935-41RWWC

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1798.4 | 1798.4 | 1798.4 | 1798.4 | 1798.4 | 1798.4 | 1798.4 | 1798.4 | 1798.4 |
| 2.5°  | 1825.2 | 1820.3 | 1813.0 | 1803.4 | 1793.6 | 1786.3 | 1783.8 | 1781.5 | 1781.5 |
| 5°    | 1864.1 | 1854.4 | 1839.8 | 1820.3 | 1808.2 | 1800.9 | 1793.6 | 1788.8 | 1788.8 |
| 7.5°  | 1890.8 | 1881.0 | 1859.2 | 1832.5 | 1815.5 | 1800.9 | 1791.1 | 1783.8 | 1783.8 |
| 10°   | 1903.0 | 1890.8 | 1864.1 | 1830.0 | 1803.4 | 1783.8 | 1769.3 | 1764.5 | 1764.5 |
| 12.5° | 1917.6 | 1903.0 | 1866.5 | 1822.7 | 1788.8 | 1764.5 | 1749.9 | 1744.9 | 1744.9 |
| 15°   | 1932.2 | 1915.1 | 1868.9 | 1817.9 | 1774.1 | 1744.9 | 1732.8 | 1730.4 | 1730.4 |
| 17.5° | 1924.9 | 1903.0 | 1849.5 | 1788.8 | 1740.1 | 1711.0 | 1698.8 | 1698.8 | 1701.2 |
| 20°   | 1886.0 | 1864.1 | 1803.4 | 1735.3 | 1684.2 | 1662.3 | 1652.6 | 1657.5 | 1662.3 |
| 22.5° | 1827.6 | 1800.9 | 1735.3 | 1669.6 | 1616.1 | 1596.8 | 1596.8 | 1604.0 | 1611.3 |
| 25°   | 1754.7 | 1730.4 | 1667.3 | 1594.3 | 1543.3 | 1528.7 | 1533.5 | 1545.7 | 1555.4 |
| 27.5° | 1672.1 | 1645.3 | 1579.7 | 1511.7 | 1460.7 | 1453.4 | 1465.5 | 1482.5 | 1487.3 |
| 30°   | 1560.3 | 1538.5 | 1482.5 | 1416.8 | 1373.1 | 1370.8 | 1387.7 | 1399.9 | 1412.0 |
| 32.5° | 1453.4 | 1429.1 | 1375.6 | 1312.4 | 1280.7 | 1283.2 | 1302.7 | 1317.3 | 1324.6 |
| 35°   | 1329.4 | 1307.5 | 1268.6 | 1217.6 | 1188.5 | 1193.3 | 1215.2 | 1229.7 | 1232.2 |
| 37.5° | 1212.7 | 1198.1 | 1159.2 | 1120.4 | 1098.5 | 1108.2 | 1127.7 | 1144.7 | 1144.7 |
| 40°   | 1096.1 | 1083.9 | 1054.7 | 1023.1 | 1011.0 | 1023.1 | 1042.6 | 1057.2 | 1057.2 |
| 42.5° | 984.2  | 977.0  | 952.7  | 930.8  | 923.5  | 940.5  | 957.6  | 969.7  | 967.3  |
| 45°   | 884.7  | 877.4  | 860.4  | 843.3  | 840.9  | 857.9  | 872.5  | 879.8  | 882.2  |
| 47.5° | 794.7  | 789.9  | 775.3  | 763.2  | 763.2  | 780.1  | 792.3  | 799.6  | 802.0  |
| 50°   | 712.1  | 707.2  | 695.1  | 685.4  | 687.7  | 704.8  | 714.5  | 721.8  | 724.3  |
| 52.5° | 629.4  | 627.0  | 617.3  | 605.1  | 612.4  | 624.6  | 636.7  | 641.7  | 644.0  |
| 55°   | 558.9  | 558.9  | 546.8  | 537.1  | 542.0  | 554.1  | 561.4  | 563.9  | 563.9  |
| 57.5° | 495.8  | 493.4  | 478.8  | 469.0  | 471.5  | 483.6  | 488.5  | 490.9  | 490.9  |
| 60°   | 435.1  | 432.6  | 418.0  | 403.4  | 403.4  | 410.7  | 413.2  | 415.6  | 415.6  |
| 62.5° | 376.7  | 374.3  | 357.3  | 345.2  | 340.2  | 337.9  | 337.9  | 342.7  | 352.4  |
| 65°   | 323.2  | 320.8  | 303.8  | 284.4  | 277.1  | 269.7  | 262.4  | 267.4  | 272.2  |
| 67.5° | 274.6  | 269.7  | 252.8  | 235.7  | 218.7  | 206.6  | 194.4  | 201.7  | 211.4  |
| 70°   | 228.5  | 223.6  | 204.1  | 184.7  | 165.2  | 145.8  | 136.1  | 145.8  | 150.7  |
| 72.5° | 184.7  | 179.8  | 160.4  | 140.9  | 116.7  | 97.2   | 94.8   | 97.2   | 99.7   |
| 75°   | 143.4  | 140.9  | 121.5  | 99.7   | 75.3   | 60.8   | 60.8   | 60.8   | 60.8   |
| 77.5° | 106.9  | 102.1  | 82.6   | 63.2   | 43.7   | 34.1   | 31.6   | 31.6   | 31.6   |
| 80°   | 72.9   | 68.0   | 51.0   | 36.4   | 19.4   | 14.6   | 14.6   | 12.1   | 12.1   |
| 82.5° | 41.4   | 38.9   | 26.7   | 14.6   | 7.3    | 4.8    | 4.8    | 4.8    | 4.8    |
| 85°   | 17.0   | 14.6   | 9.8    | 4.8    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    |
| 87.5° | 2.5    | 2.5    | 2.5    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report





Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



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

Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)