

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: P581041

Luminaire Tested: **HCC4S05D010MW-HM40525840-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581041  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-9)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S05D010MW-HM40525840-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

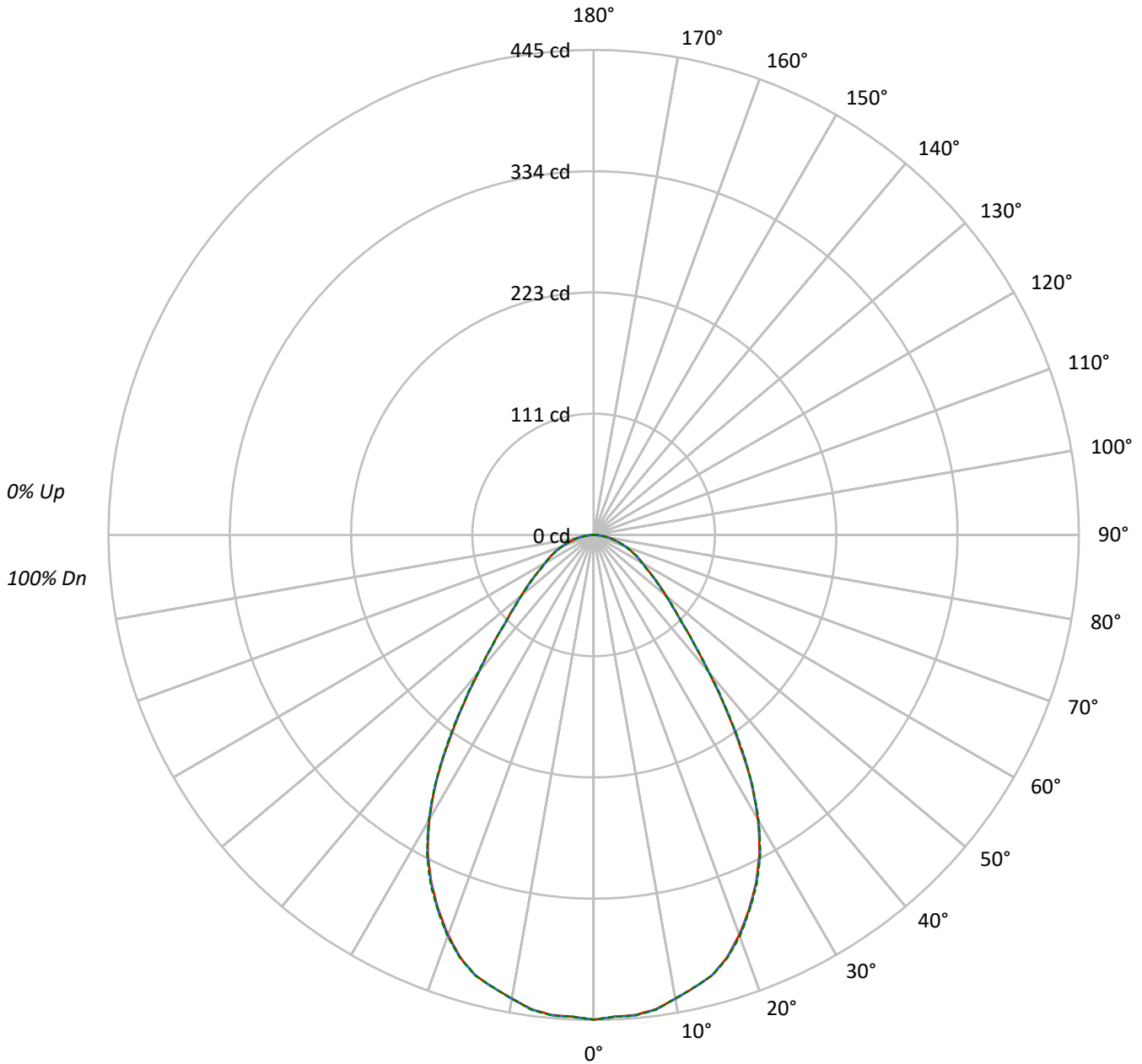
Lumens per Lamp: N/A  
Luminaire Lumens: 686.3 lumens  
Efficiency: N/A  
Efficacy: 114.4 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 6  
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



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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 |    |    |    |  |  |  |  |   |
| 1   | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 94  | 92  | 90  | 89  |    |    |    |  |  |  |  |   |
| 2   | 103 | 97  | 91  | 87  | 101 | 95  | 90  | 86  | 91  | 87  | 84  | 88  | 85  | 82  | 85  | 83  | 80  | 78  |    |    |    |  |  |  |  |   |
| 3   | 96  | 87  | 81  | 76  | 94  | 86  | 80  | 75  | 83  | 78  | 74  | 81  | 76  | 72  | 78  | 74  | 71  | 69  |    |    |    |  |  |  |  |   |
| 4   | 90  | 80  | 72  | 67  | 87  | 78  | 72  | 66  | 76  | 70  | 66  | 74  | 69  | 65  | 72  | 67  | 64  | 62  |    |    |    |  |  |  |  |   |
| 5   | 84  | 73  | 65  | 60  | 82  | 72  | 65  | 59  | 70  | 64  | 59  | 68  | 63  | 58  | 66  | 62  | 58  | 56  |    |    |    |  |  |  |  |   |
| 6   | 78  | 67  | 59  | 54  | 77  | 66  | 59  | 54  | 64  | 58  | 53  | 63  | 57  | 53  | 61  | 56  | 53  | 51  |    |    |    |  |  |  |  |   |
| 7   | 73  | 62  | 54  | 49  | 72  | 61  | 54  | 49  | 60  | 53  | 49  | 58  | 53  | 48  | 57  | 52  | 48  | 46  |    |    |    |  |  |  |  |   |
| 8   | 69  | 57  | 50  | 45  | 68  | 57  | 50  | 45  | 55  | 49  | 45  | 54  | 49  | 44  | 53  | 48  | 44  | 42  |    |    |    |  |  |  |  |   |
| 9   | 65  | 53  | 46  | 41  | 64  | 53  | 46  | 41  | 52  | 45  | 41  | 51  | 45  | 41  | 50  | 45  | 41  | 39  |    |    |    |  |  |  |  |   |
| 10  | 61  | 50  | 43  | 38  | 60  | 49  | 43  | 38  | 48  | 42  | 38  | 48  | 42  | 38  | 47  | 42  | 38  | 36  |    |    |    |  |  |  |  |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 54864 | 54864 | 54864 |
| 5°  | 54739 | 54789 | 54789 |
| 10° | 54095 | 54145 | 54095 |
| 15° | 53454 | 53454 | 53454 |
| 20° | 51245 | 51363 | 51428 |
| 25° | 47933 | 48015 | 48137 |
| 30° | 42956 | 43084 | 43084 |
| 35° | 34889 | 35160 | 35220 |
| 40° | 26310 | 26455 | 26535 |
| 45° | 20147 | 20078 | 20078 |
| 50° | 16618 | 16522 | 16522 |
| 55° | 14258 | 14150 | 14150 |
| 60° | 12705 | 12606 | 12606 |
| 65° | 11966 | 11966 | 11966 |
| 70° | 11144 | 11144 | 11144 |
| 75° | 10103 | 10342 | 10103 |
| 80° | 9518  | 9163  | 9518  |
| 85° | 7925  | 7925  | 7925  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 41.9   | 6.1       |
| 10°-20°   | 117.3  | 17.1      |
| 20°-30°   | 161.2  | 23.5      |
| 30°-40°   | 144.9  | 21.1      |
| 40°-50°   | 91.5   | 13.3      |
| 50°-60°   | 59.8   | 8.7       |
| 60°-70°   | 40.5   | 5.9       |
| 70°-80°   | 22.8   | 3.3       |
| 80°-90°   | 6.4    | 0.9       |
| 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°    | 320.3  | 46.7      |
| 0°-40°    | 465.2  | 67.8      |
| 0°-60°    | 616.5  | 89.8      |
| 0°-90°    | 686.3  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 686.3  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 445 | 445   | 445 | 445   | 445 |      |
| 5°  | 442 | 442   | 442 | 442   | 442 | 42   |
| 15° | 419 | 419   | 419 | 419   | 419 | 117  |
| 25° | 352 | 353   | 353 | 354   | 354 | 161  |
| 35° | 232 | 233   | 234 | 234   | 234 | 144  |
| 45° | 116 | 115   | 115 | 115   | 115 | 92   |
| 55° | 66  | 66    | 66  | 66    | 66  | 60   |
| 65° | 41  | 41    | 41  | 41    | 41  | 41   |
| 75° | 21  | 22    | 22  | 22    | 21  | 23   |
| 85° | 6   | 6     | 6   | 6     | 6   | 6    |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 444.8 | 444.8 | 444.8 | 444.8 | 444.8 |
| 2.5°  | 442.5 | 442.5 | 442.5 | 442.5 | 442.5 |
| 5°    | 442.1 | 442.1 | 442.5 | 442.5 | 442.5 |
| 7.5°  | 438.8 | 439.2 | 439.2 | 439.2 | 439.2 |
| 10°   | 431.9 | 431.9 | 432.3 | 432.3 | 431.9 |
| 12.5° | 425.4 | 425.4 | 425.4 | 426.0 | 425.4 |
| 15°   | 418.6 | 418.6 | 418.6 | 418.6 | 418.6 |
| 17.5° | 406.6 | 407.0 | 407.0 | 407.0 | 407.0 |
| 20°   | 390.4 | 391.3 | 391.3 | 391.8 | 391.8 |
| 22.5° | 372.1 | 372.5 | 373.0 | 373.4 | 373.0 |
| 25°   | 352.2 | 352.8 | 352.8 | 353.7 | 353.7 |
| 27.5° | 329.3 | 329.7 | 330.6 | 330.6 | 330.6 |
| 30°   | 301.6 | 302.0 | 302.5 | 302.5 | 302.5 |
| 32.5° | 268.9 | 268.9 | 269.8 | 270.2 | 269.8 |
| 35°   | 231.7 | 232.6 | 233.5 | 234.4 | 233.9 |
| 37.5° | 196.1 | 197.0 | 197.5 | 197.5 | 197.9 |
| 40°   | 163.4 | 164.3 | 164.3 | 165.3 | 164.8 |
| 42.5° | 137.7 | 137.2 | 137.2 | 138.1 | 137.7 |
| 45°   | 115.5 | 115.1 | 115.1 | 115.1 | 115.1 |
| 47.5° | 99.4  | 99.0  | 99.0  | 99.0  | 99.0  |
| 50°   | 86.6  | 86.1  | 86.1  | 86.1  | 86.1  |
| 52.5° | 75.9  | 75.5  | 75.5  | 75.5  | 75.0  |
| 55°   | 66.3  | 66.3  | 65.8  | 66.3  | 65.8  |
| 57.5° | 57.5  | 57.5  | 57.5  | 57.5  | 57.5  |
| 60°   | 51.5  | 51.1  | 51.1  | 51.1  | 51.1  |
| 62.5° | 46.1  | 46.1  | 46.1  | 46.1  | 46.1  |
| 65°   | 41.0  | 41.0  | 41.0  | 41.0  | 41.0  |
| 67.5° | 35.9  | 35.4  | 35.9  | 35.9  | 35.4  |
| 70°   | 30.9  | 30.4  | 30.9  | 30.9  | 30.9  |
| 72.5° | 25.8  | 25.8  | 25.8  | 26.2  | 25.8  |
| 75°   | 21.2  | 21.7  | 21.7  | 21.7  | 21.2  |
| 77.5° | 17.0  | 17.5  | 17.0  | 17.0  | 17.0  |
| 80°   | 13.4  | 12.9  | 12.9  | 12.9  | 13.4  |
| 82.5° | 9.2   | 9.2   | 9.2   | 9.2   | 9.2   |
| 85°   | 5.6   | 5.6   | 5.6   | 5.6   | 5.6   |
| 87.5° | 2.3   | 2.3   | 2.3   | 2.3   | 2.3   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

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Scaled Data Report



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Scaled Data Report



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

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