

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: P592675

Luminaire Tested: **HCC4W20D010MB-HM40525950-41WDWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P592675  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-10)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4W20D010MB-HM40525950-41WDWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

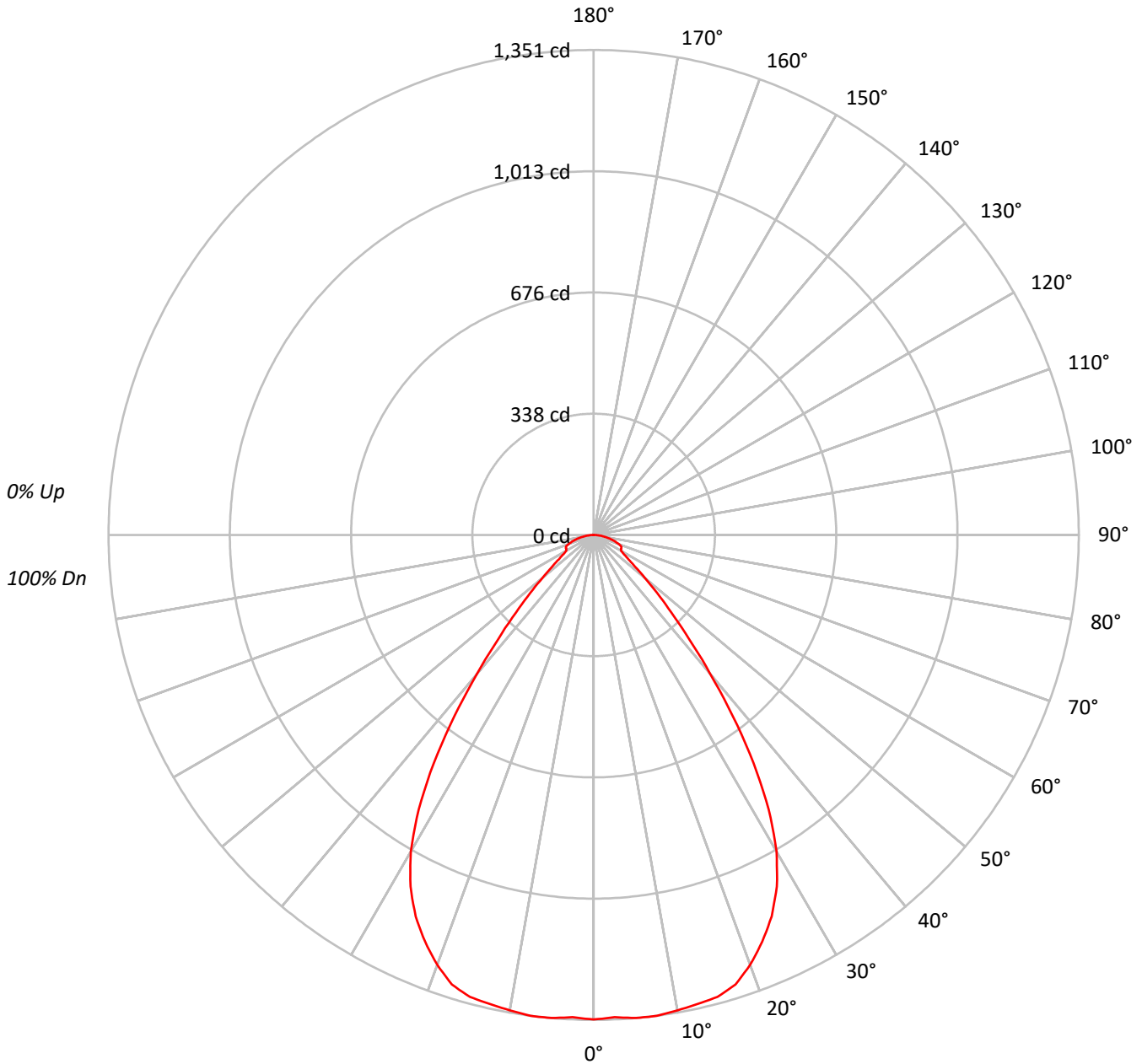
Lumens per Lamp: N/A  
Luminaire Lumens: 2027.9 lumens  
Efficiency: N/A  
Efficacy: 101.4 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.14 / 1.07  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 20  
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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 102 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 92  | 90  |
| 2   | 104 | 98  | 93  | 89  | 102 | 96  | 92  | 88  | 93  | 89  | 86  | 90  | 87  | 84  | 87  | 84  | 82  | 80  |
| 3   | 98  | 89  | 83  | 78  | 95  | 88  | 82  | 78  | 85  | 80  | 76  | 83  | 78  | 75  | 80  | 77  | 74  | 72  |
| 4   | 91  | 82  | 75  | 70  | 89  | 81  | 74  | 69  | 78  | 73  | 69  | 76  | 72  | 68  | 74  | 70  | 67  | 65  |
| 5   | 86  | 75  | 68  | 63  | 84  | 74  | 68  | 63  | 72  | 67  | 62  | 71  | 65  | 61  | 69  | 64  | 61  | 59  |
| 6   | 80  | 70  | 62  | 57  | 79  | 69  | 62  | 57  | 67  | 61  | 57  | 66  | 60  | 56  | 64  | 59  | 56  | 54  |
| 7   | 76  | 64  | 57  | 52  | 74  | 64  | 57  | 52  | 62  | 56  | 52  | 61  | 56  | 51  | 60  | 55  | 51  | 49  |
| 8   | 71  | 60  | 53  | 48  | 70  | 59  | 53  | 48  | 58  | 52  | 48  | 57  | 51  | 47  | 56  | 51  | 47  | 46  |
| 9   | 67  | 56  | 49  | 44  | 66  | 55  | 49  | 44  | 54  | 48  | 44  | 53  | 48  | 44  | 52  | 47  | 44  | 42  |
| 10  | 64  | 52  | 46  | 41  | 62  | 52  | 45  | 41  | 51  | 45  | 41  | 50  | 45  | 41  | 49  | 44  | 41  | 39  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 166492 |
| 5°  | 167289 |
| 10° | 168422 |
| 15° | 170105 |
| 20° | 167267 |
| 25° | 159587 |
| 30° | 144991 |
| 35° | 116938 |
| 40° | 81152  |
| 45° | 53256  |
| 50° | 35692  |
| 55° | 25397  |
| 60° | 21709  |
| 65° | 24954  |
| 70° | 26723  |
| 75° | 25735  |
| 80° | 23227  |
| 85° | 21228  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 128.8  | 6.3       |
| 10°-20°   | 374.2  | 18.5      |
| 20°-30°   | 534.7  | 26.4      |
| 30°-40°   | 477.6  | 23.6      |
| 40°-50°   | 245.0  | 12.1      |
| 50°-60°   | 111.4  | 5.5       |
| 60°-70°   | 83.1   | 4.1       |
| 70°-80°   | 56.5   | 2.8       |
| 80°-90°   | 16.7   | 0.8       |
| 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°    | 1037.7 | 51.2      |
| 0°-40°    | 1515.3 | 74.7      |
| 0°-60°    | 1871.6 | 92.3      |
| 0°-90°    | 2027.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2027.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1350 |      |
| 5°  | 1351 | 129  |
| 15° | 1332 | 374  |
| 25° | 1173 | 535  |
| 35° | 777  | 478  |
| 45° | 305  | 245  |
| 55° | 118  | 111  |
| 65° | 86   | 83   |
| 75° | 54   | 57   |
| 85° | 15   | 17   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 1349.8 |
| 2.5°  | 1344.7 |
| 5°    | 1351.1 |
| 7.5°  | 1351.1 |
| 10°   | 1344.7 |
| 12.5° | 1338.4 |
| 15°   | 1332.1 |
| 17.5° | 1313.3 |
| 20°   | 1274.3 |
| 22.5° | 1226.6 |
| 25°   | 1172.6 |
| 27.5° | 1104.7 |
| 30°   | 1018.0 |
| 32.5° | 907.4  |
| 35°   | 776.6  |
| 37.5° | 637.2  |
| 40°   | 504.0  |
| 42.5° | 393.3  |
| 45°   | 305.3  |
| 47.5° | 238.8  |
| 50°   | 186.0  |
| 52.5° | 145.8  |
| 55°   | 118.1  |
| 57.5° | 99.3   |
| 60°   | 88.0   |
| 62.5° | 85.5   |
| 65°   | 85.5   |
| 67.5° | 82.9   |
| 70°   | 74.1   |
| 72.5° | 64.1   |
| 75°   | 54.0   |
| 77.5° | 42.8   |
| 80°   | 32.7   |
| 82.5° | 23.9   |
| 85°   | 15.0   |
| 87.5° | 6.3    |
| 90°   | 0.0    |

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Scaled Data Report



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— 0°-180°

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