

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: P592641

Luminaire Tested: **HCC4W15D010BZ-HM40525950-41NDH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P592641  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4W15D010BZ-HM40525950-41NDH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

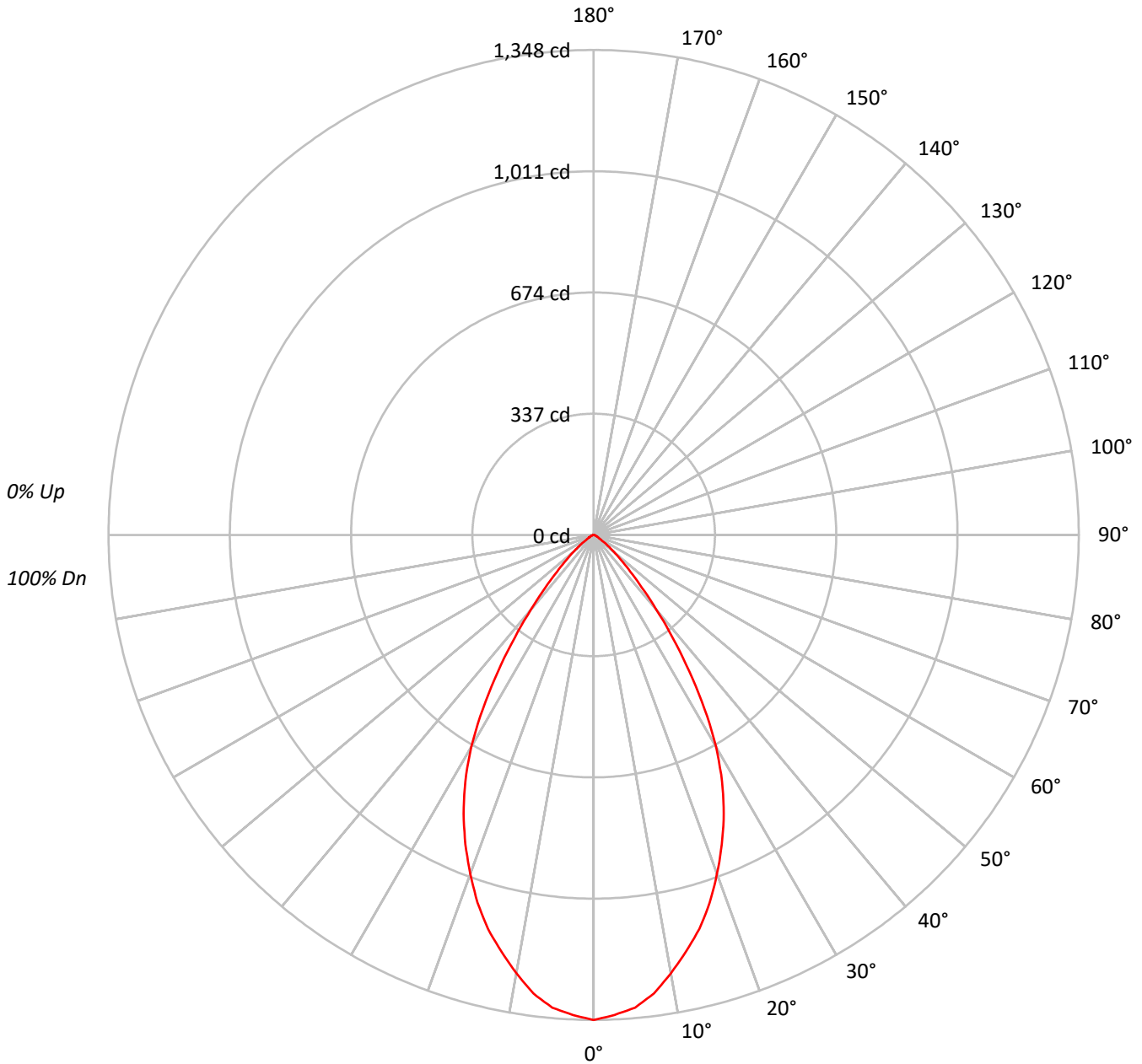
Lumens per Lamp: N/A  
Luminaire Lumens: 1282.2 lumens  
Efficiency: N/A  
Efficacy: 91.6 lumens/watt  
Spacing Criteria (0/90/45): 0.89 / 0.89 / 0.91  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 14  
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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 113 | 110 | 108 | 105 | 111 | 108 | 106 | 104 | 104 | 102 | 100 | 100 | 99  | 97  | 97  | 96  | 95  | 93  |
| 2   | 107 | 102 | 98  | 94  | 105 | 100 | 96  | 93  | 97  | 94  | 91  | 94  | 91  | 89  | 91  | 89  | 87  | 86  |
| 3   | 101 | 95  | 89  | 85  | 99  | 93  | 88  | 84  | 91  | 86  | 83  | 88  | 85  | 82  | 86  | 83  | 81  | 79  |
| 4   | 96  | 88  | 82  | 78  | 94  | 87  | 81  | 77  | 85  | 80  | 76  | 82  | 79  | 75  | 81  | 77  | 74  | 73  |
| 5   | 91  | 82  | 76  | 71  | 89  | 81  | 75  | 71  | 79  | 74  | 70  | 77  | 73  | 70  | 76  | 72  | 69  | 67  |
| 6   | 86  | 76  | 70  | 66  | 84  | 76  | 70  | 65  | 74  | 69  | 65  | 73  | 68  | 64  | 71  | 67  | 64  | 63  |
| 7   | 81  | 72  | 65  | 61  | 80  | 71  | 65  | 61  | 70  | 64  | 60  | 68  | 64  | 60  | 67  | 63  | 60  | 58  |
| 8   | 77  | 67  | 61  | 57  | 76  | 67  | 61  | 56  | 65  | 60  | 56  | 64  | 59  | 56  | 63  | 59  | 56  | 54  |
| 9   | 73  | 63  | 57  | 53  | 72  | 63  | 57  | 53  | 62  | 56  | 52  | 61  | 56  | 52  | 60  | 55  | 52  | 51  |
| 10  | 70  | 59  | 53  | 49  | 69  | 59  | 53  | 49  | 58  | 53  | 49  | 57  | 52  | 49  | 57  | 52  | 49  | 48  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 166319 |
| 5°  | 163290 |
| 10° | 154882 |
| 15° | 144808 |
| 20° | 131524 |
| 25° | 116376 |
| 30° | 96808  |
| 35° | 69808  |
| 40° | 43571  |
| 45° | 25136  |
| 50° | 14181  |
| 55° | 6752   |
| 60° | 3873   |
| 65° | 2948   |
| 70° | 2020   |
| 75° | 1287   |
| 80° | 1279   |
| 85° | 1274   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 123.3  | 9.6       |
| 10°-20°   | 316.4  | 24.7      |
| 20°-30°   | 389.1  | 30.3      |
| 30°-40°   | 289.0  | 22.5      |
| 40°-50°   | 117.5  | 9.2       |
| 50°-60°   | 32.5   | 2.5       |
| 60°-70°   | 10.1   | 0.8       |
| 70°-80°   | 3.4    | 0.3       |
| 80°-90°   | 1.0    | 0.1       |
| 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°    | 828.7  | 64.6      |
| 0°-40°    | 1117.7 | 87.2      |
| 0°-60°    | 1267.7 | 98.9      |
| 0°-90°    | 1282.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1282.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1348 |      |
| 5°  | 1319 | 123  |
| 15° | 1134 | 316  |
| 25° | 855  | 389  |
| 35° | 464  | 289  |
| 45° | 144  | 117  |
| 55° | 31   | 33   |
| 65° | 10   | 10   |
| 75° | 3    | 3    |
| 85° | 1    | 1    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1348.4 |
| 2.5°  | 1335.4 |
| 5°    | 1318.8 |
| 7.5°  | 1285.5 |
| 10°   | 1236.6 |
| 12.5° | 1185.8 |
| 15°   | 1134.0 |
| 17.5° | 1072.2 |
| 20°   | 1002.0 |
| 22.5° | 930.9  |
| 25°   | 855.1  |
| 27.5° | 772.9  |
| 30°   | 679.7  |
| 32.5° | 573.5  |
| 35°   | 463.6  |
| 37.5° | 360.2  |
| 40°   | 270.6  |
| 42.5° | 197.6  |
| 45°   | 144.1  |
| 47.5° | 103.5  |
| 50°   | 73.9   |
| 52.5° | 50.8   |
| 55°   | 31.4   |
| 57.5° | 20.4   |
| 60°   | 15.7   |
| 62.5° | 13.0   |
| 65°   | 10.1   |
| 67.5° | 7.4    |
| 70°   | 5.6    |
| 72.5° | 4.7    |
| 75°   | 2.7    |
| 77.5° | 1.8    |
| 80°   | 1.8    |
| 82.5° | 0.9    |
| 85°   | 0.9    |
| 87.5° | 0.9    |
| 90°   | 0.0    |

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— 0°-180°

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