

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: P592702

Luminaire Tested: **HCC4S25D010BZ-HM40525850-41NDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P592702  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S25D010BZ-HM40525850-41NDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

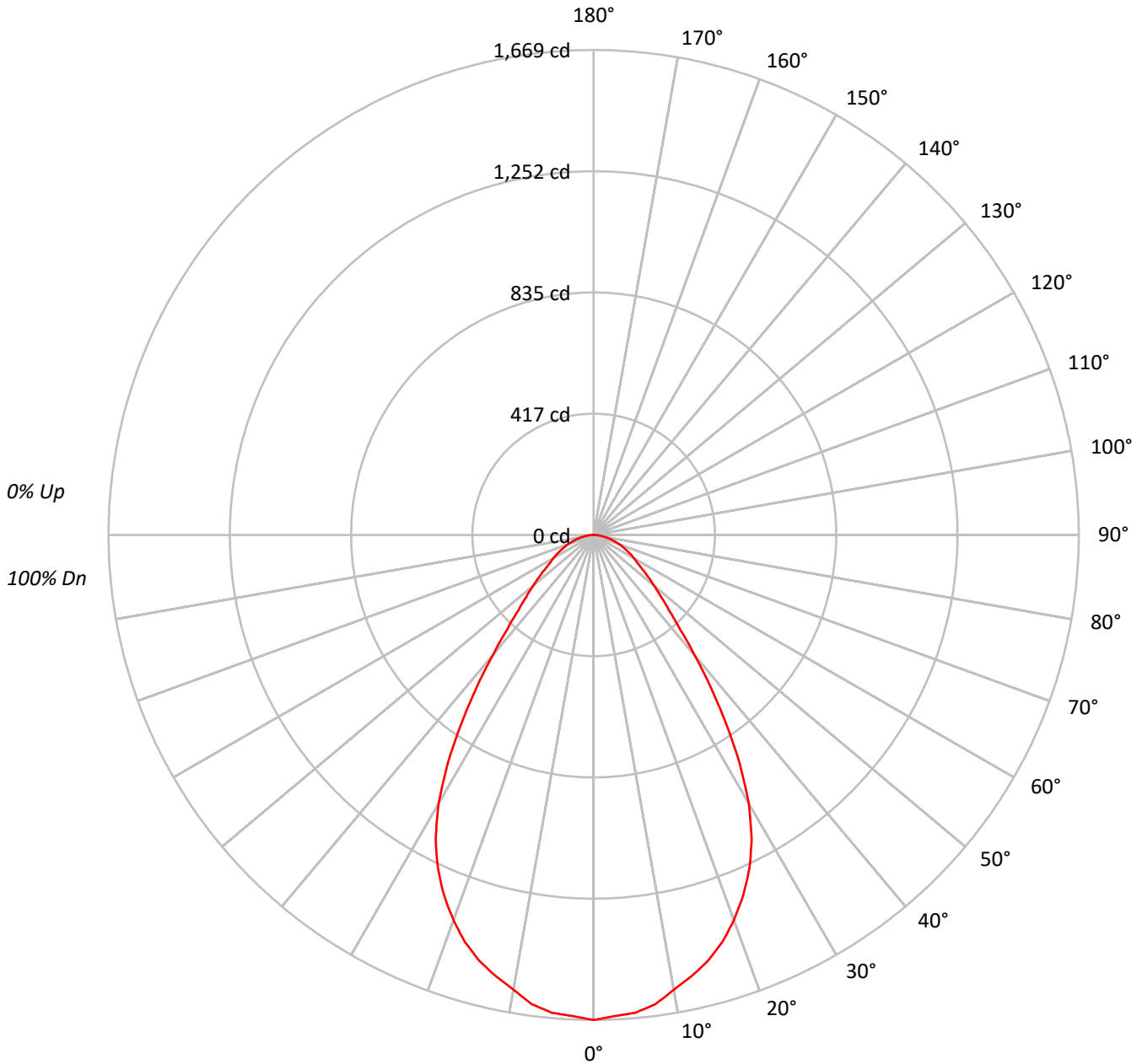
Lumens per Lamp: N/A  
Luminaire Lumens: 2343.6 lumens  
Efficiency: N/A  
Efficacy: 87.4 lumens/watt  
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.01  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 26.8  
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 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99  | 97  | 98  | 96  | 94  | 94  | 92  | 91  | 89  |    |    |    |   |
| 2   | 104 | 97  | 92  | 88  | 101 | 96  | 91  | 87  | 92  | 88  | 85  | 89  | 86  | 83  | 86  | 83  | 81  | 79  |    |    |    |   |
| 3   | 97  | 88  | 82  | 77  | 95  | 87  | 81  | 76  | 84  | 79  | 75  | 82  | 77  | 74  | 79  | 76  | 73  | 71  |    |    |    |   |
| 4   | 90  | 81  | 74  | 68  | 88  | 80  | 73  | 68  | 77  | 72  | 67  | 75  | 70  | 66  | 73  | 69  | 65  | 64  |    |    |    |   |
| 5   | 85  | 74  | 67  | 61  | 83  | 73  | 66  | 61  | 71  | 65  | 60  | 69  | 64  | 60  | 68  | 63  | 59  | 58  |    |    |    |   |
| 6   | 79  | 68  | 61  | 56  | 78  | 67  | 60  | 55  | 66  | 60  | 55  | 64  | 59  | 55  | 63  | 58  | 54  | 52  |    |    |    |   |
| 7   | 75  | 63  | 56  | 51  | 73  | 62  | 56  | 51  | 61  | 55  | 50  | 60  | 54  | 50  | 59  | 53  | 50  | 48  |    |    |    |   |
| 8   | 70  | 59  | 52  | 47  | 69  | 58  | 51  | 46  | 57  | 51  | 46  | 56  | 50  | 46  | 55  | 50  | 46  | 44  |    |    |    |   |
| 9   | 66  | 55  | 48  | 43  | 65  | 54  | 47  | 43  | 53  | 47  | 43  | 52  | 47  | 43  | 51  | 46  | 42  | 41  |    |    |    |   |
| 10  | 63  | 51  | 44  | 40  | 62  | 51  | 44  | 40  | 50  | 44  | 40  | 49  | 43  | 39  | 48  | 43  | 39  | 38  |    |    |    |   |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 205901 |
| 5°  | 204372 |
| 10° | 199045 |
| 15° | 193805 |
| 20° | 185118 |
| 25° | 172476 |
| 30° | 151870 |
| 35° | 119784 |
| 40° | 86949  |
| 45° | 63879  |
| 50° | 51964  |
| 55° | 43590  |
| 60° | 39495  |
| 65° | 36278  |
| 70° | 33792  |
| 75° | 30834  |
| 80° | 27845  |
| 85° | 24059  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 155.6  | 6.6       |
| 10°-20°   | 425.7  | 18.2      |
| 20°-30°   | 577.1  | 24.6      |
| 30°-40°   | 495.2  | 21.1      |
| 40°-50°   | 292.4  | 12.5      |
| 50°-60°   | 185.3  | 7.9       |
| 60°-70°   | 124.5  | 5.3       |
| 70°-80°   | 68.7   | 2.9       |
| 80°-90°   | 19.2   | 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°    | 1158.4 | 49.4      |
| 0°-40°    | 1653.6 | 70.6      |
| 0°-60°    | 2131.2 | 90.9      |
| 0°-90°    | 2343.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2343.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1669 |      |
| 5°  | 1651 | 156  |
| 15° | 1518 | 426  |
| 25° | 1267 | 577  |
| 35° | 796  | 495  |
| 45° | 366  | 292  |
| 55° | 203  | 185  |
| 65° | 124  | 124  |
| 75° | 65   | 69   |
| 85° | 17   | 19   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1669.3 |
| 2.5°  | 1657.4 |
| 5°    | 1650.6 |
| 7.5°  | 1628.5 |
| 10°   | 1589.2 |
| 12.5° | 1555.2 |
| 15°   | 1517.7 |
| 17.5° | 1470.0 |
| 20°   | 1410.3 |
| 22.5° | 1344.0 |
| 25°   | 1267.3 |
| 27.5° | 1177.0 |
| 30°   | 1066.3 |
| 32.5° | 935.2  |
| 35°   | 795.5  |
| 37.5° | 660.9  |
| 40°   | 540.0  |
| 42.5° | 439.5  |
| 45°   | 366.2  |
| 47.5° | 313.4  |
| 50°   | 270.8  |
| 52.5° | 235.1  |
| 55°   | 202.7  |
| 57.5° | 177.1  |
| 60°   | 160.1  |
| 62.5° | 143.0  |
| 65°   | 124.3  |
| 67.5° | 109.1  |
| 70°   | 93.7   |
| 72.5° | 78.4   |
| 75°   | 64.7   |
| 77.5° | 51.1   |
| 80°   | 39.2   |
| 82.5° | 27.2   |
| 85°   | 17.0   |
| 87.5° | 6.8    |
| 90°   | 0.0    |

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— 0°-180°

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