

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: P581503

Luminaire Tested: **HCC4S07D010BZ-HM40525930-41MDC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581503  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S07D010BZ-HM40525930-41MDC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 775.9 lumens  
Efficiency: N/A  
Efficacy: 97.0 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1 / 0.96  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

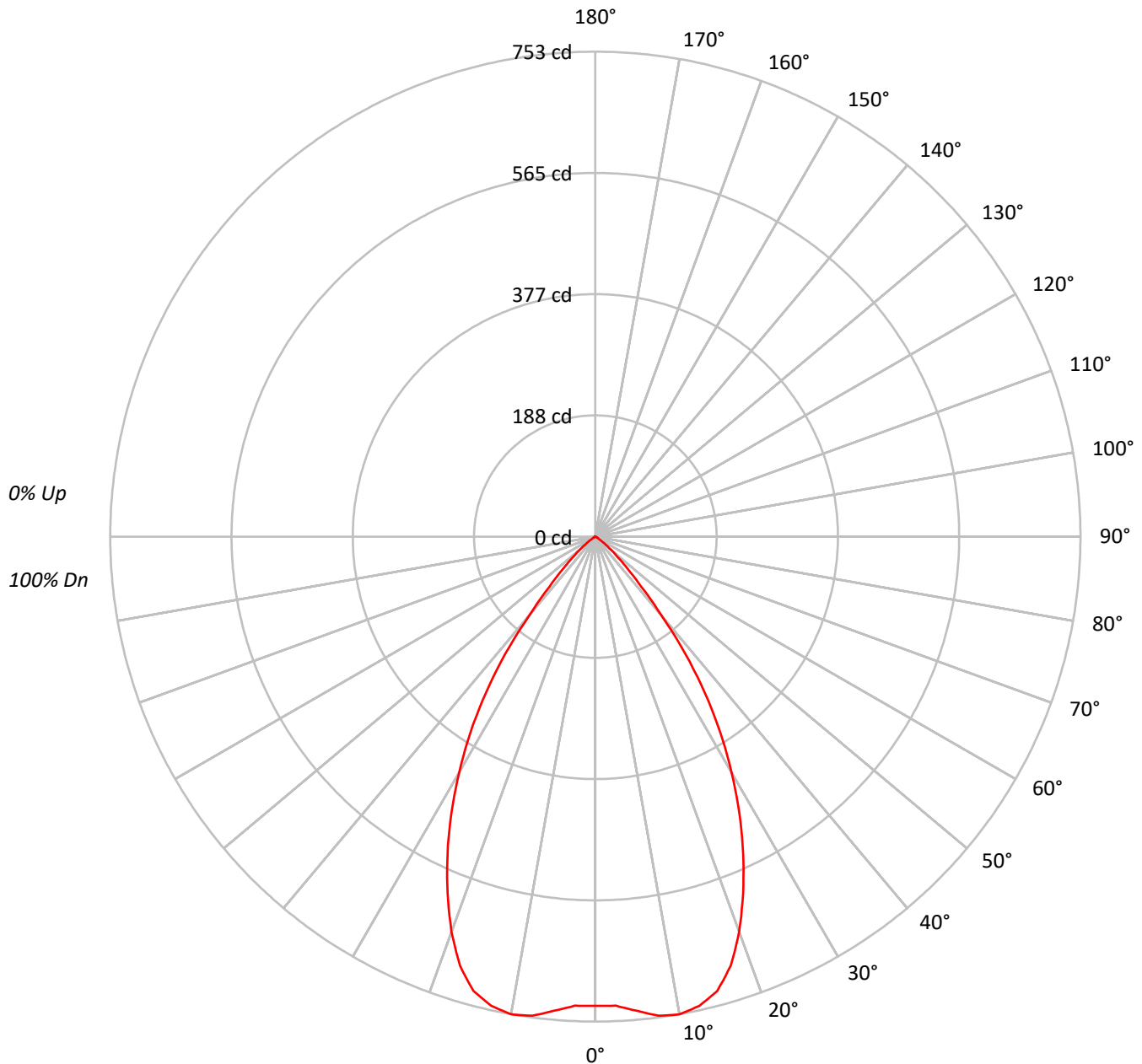
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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

|     |     |     |     |     |  |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
|-----|-----|-----|-----|-----|--|-----|-----|-----|-----|--|-----|-----|-----|--|-----|-----|-----|--|-----|-----|-----|
| RF  | 20  |     |     |     |  | 20  |     |     |     |  | 20  |     |     |  |     | 20  |     |  |     |     | 20  |
| RC  | 80  |     |     |     |  | 70  |     |     |     |  | 50  |     |     |  |     | 30  |     |  |     |     | 10  |
| RW  | 70  | 50  | 30  | 10  |  | 70  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |
| RCR |     |     |     |     |  |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
| 0   | 119 | 119 | 119 | 119 |  | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |
| 1   | 113 | 111 | 108 | 106 |  | 111 | 108 | 106 | 104 |  | 104 | 103 | 101 |  | 101 | 99  | 98  |  | 97  | 96  | 95  |
| 2   | 108 | 103 | 98  | 95  |  | 105 | 101 | 97  | 94  |  | 98  | 95  | 92  |  | 95  | 92  | 90  |  | 92  | 90  | 88  |
| 3   | 102 | 95  | 90  | 86  |  | 100 | 94  | 89  | 86  |  | 91  | 87  | 84  |  | 89  | 86  | 83  |  | 87  | 84  | 82  |
| 4   | 97  | 89  | 83  | 79  |  | 95  | 88  | 82  | 78  |  | 86  | 81  | 77  |  | 84  | 80  | 77  |  | 82  | 78  | 76  |
| 5   | 91  | 83  | 77  | 72  |  | 90  | 82  | 76  | 72  |  | 80  | 75  | 72  |  | 78  | 74  | 71  |  | 77  | 73  | 70  |
| 6   | 87  | 78  | 71  | 67  |  | 85  | 77  | 71  | 67  |  | 75  | 70  | 66  |  | 74  | 69  | 66  |  | 72  | 68  | 65  |
| 7   | 82  | 73  | 66  | 62  |  | 81  | 72  | 66  | 62  |  | 71  | 65  | 62  |  | 69  | 65  | 61  |  | 68  | 64  | 61  |
| 8   | 78  | 68  | 62  | 58  |  | 77  | 68  | 62  | 58  |  | 67  | 61  | 57  |  | 65  | 61  | 57  |  | 64  | 60  | 57  |
| 9   | 74  | 64  | 58  | 54  |  | 73  | 64  | 58  | 54  |  | 63  | 57  | 54  |  | 62  | 57  | 54  |  | 61  | 57  | 53  |
| 10  | 70  | 61  | 55  | 51  |  | 69  | 60  | 54  | 51  |  | 59  | 54  | 50  |  | 58  | 54  | 50  |  | 58  | 53  | 50  |

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

|     |       |
|-----|-------|
|     | 0°    |
| 0°  | 89882 |
| 5°  | 91525 |
| 10° | 94337 |
| 15° | 93295 |
| 20° | 85688 |
| 25° | 73914 |
| 30° | 60232 |
| 35° | 44601 |
| 40° | 25585 |
| 45° | 12368 |
| 50° | 5891  |
| 55° | 2064  |
| 60° | 765   |
| 65° | 438   |
| 70° | 361   |
| 75° | 238   |
| 80° | 0     |
| 85° | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 71.1   | 9.2       |
| 10°-20°   | 202.6  | 26.1      |
| 20°-30°   | 247.4  | 31.9      |
| 30°-40°   | 181.8  | 23.4      |
| 40°-50°   | 60.3   | 7.8       |
| 50°-60°   | 10.7   | 1.4       |
| 60°-70°   | 1.6    | 0.2       |
| 70°-80°   | 0.5    | 0.1       |
| 80°-90°   | 0.0    | 0.0       |
| 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°    | 521.0  | 67.1      |
| 0°-40°    | 702.9  | 90.6      |
| 0°-60°    | 773.8  | 99.7      |
| 0°-90°    | 775.9  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 775.9  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | Flux |
|-----|-----|------|
| 0°  | 729 |      |
| 5°  | 739 | 71   |
| 15° | 731 | 203  |
| 25° | 543 | 247  |
| 35° | 296 | 182  |
| 45° | 71  | 60   |
| 55° | 10  | 11   |
| 65° | 2   | 2    |
| 75° | 0   | 1    |
| 85° | 0   | 0    |
| 90° | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    |
|-------|-------|
| 0°    | 728.7 |
| 2.5°  | 729.1 |
| 5°    | 739.2 |
| 7.5°  | 750.3 |
| 10°   | 753.2 |
| 12.5° | 746.2 |
| 15°   | 730.6 |
| 17.5° | 698.5 |
| 20°   | 652.8 |
| 22.5° | 599.4 |
| 25°   | 543.1 |
| 27.5° | 484.2 |
| 30°   | 422.9 |
| 32.5° | 361.5 |
| 35°   | 296.2 |
| 37.5° | 229.8 |
| 40°   | 158.9 |
| 42.5° | 105.2 |
| 45°   | 70.9  |
| 47.5° | 47.2  |
| 50°   | 30.7  |
| 52.5° | 18.1  |
| 55°   | 9.6   |
| 57.5° | 4.0   |
| 60°   | 3.1   |
| 62.5° | 2.0   |
| 65°   | 1.5   |
| 67.5° | 1.0   |
| 70°   | 1.0   |
| 72.5° | 0.5   |
| 75°   | 0.5   |
| 77.5° | 0.5   |
| 80°   | 0.0   |
| 82.5° | 0.0   |
| 85°   | 0.0   |
| 87.5° | 0.0   |
| 90°   | 0.0   |

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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## Scaled Data Report



— 0°-180°

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Scaled Data Report



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