

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: P580569

Luminaire Tested: **HCC4S40D010BZ-HM43040830-41WDC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580569  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-7)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S40D010BZ-HM43040830-41WDC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

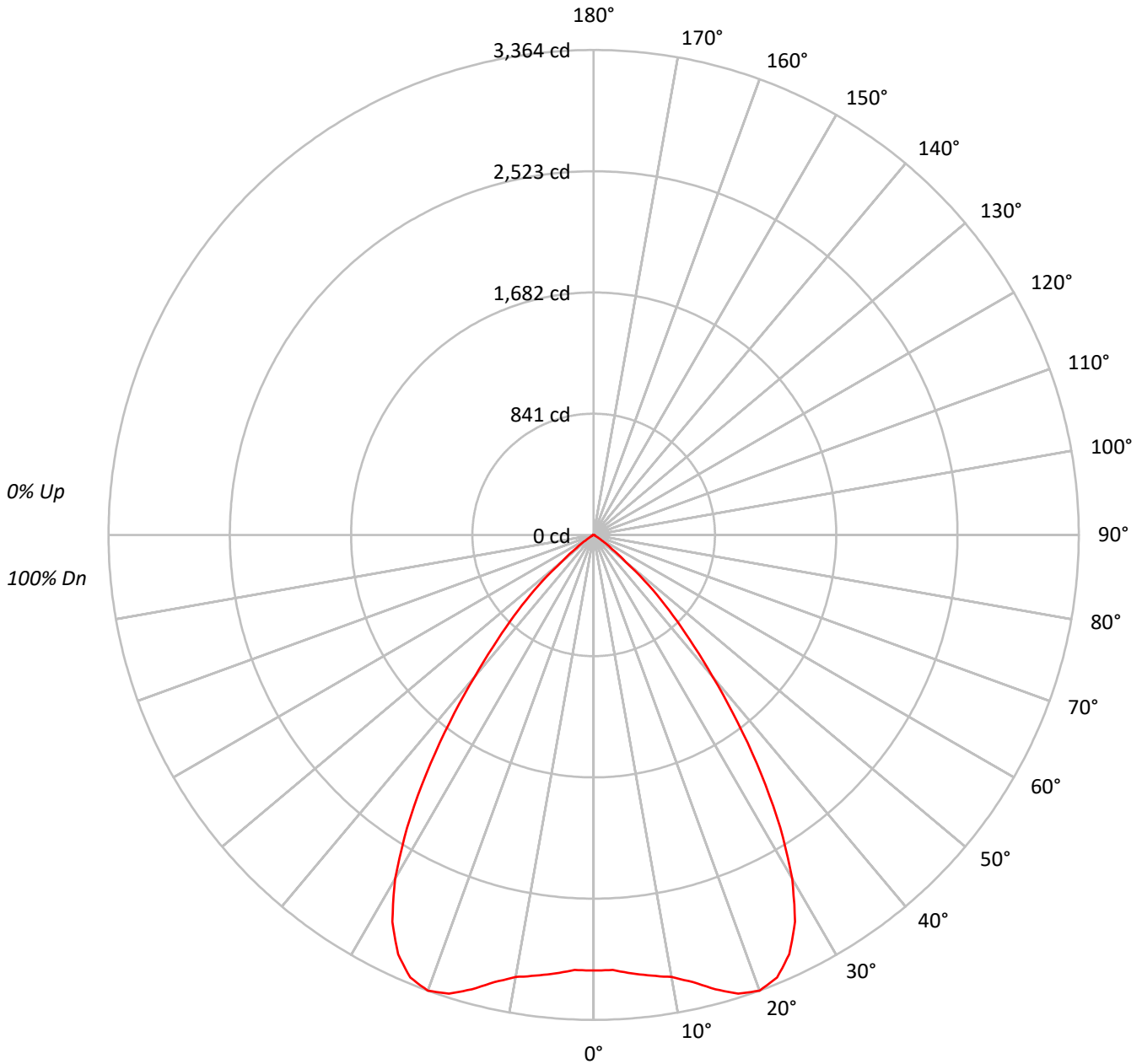
Lumens per Lamp: N/A  
Luminaire Lumens: 4612.9 lumens  
Efficiency: N/A  
Efficacy: 112.5 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.11  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 41  
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  |     |     |     | 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 | 100 | 100 | 100 |
| 1   | 113 | 110 | 107 | 105 | 110 | 108 | 105 | 103 | 104 | 102 | 100 | 100 | 98  | 97  | 97  | 95  | 94  | 92  | 92  | 92  | 92  |
| 2   | 107 | 101 | 97  | 93  | 104 | 100 | 96  | 92  | 96  | 93  | 90  | 93  | 91  | 88  | 91  | 88  | 86  | 85  | 85  | 85  | 85  |
| 3   | 101 | 93  | 88  | 84  | 98  | 92  | 87  | 83  | 89  | 85  | 82  | 87  | 83  | 80  | 85  | 82  | 79  | 77  | 77  | 77  | 77  |
| 4   | 95  | 86  | 80  | 76  | 93  | 85  | 79  | 75  | 83  | 78  | 74  | 81  | 77  | 73  | 79  | 75  | 72  | 71  | 71  | 71  | 71  |
| 5   | 89  | 80  | 73  | 69  | 87  | 79  | 73  | 68  | 77  | 72  | 68  | 75  | 71  | 67  | 74  | 70  | 66  | 65  | 65  | 65  | 65  |
| 6   | 84  | 74  | 67  | 63  | 82  | 73  | 67  | 62  | 72  | 66  | 62  | 70  | 65  | 62  | 69  | 65  | 61  | 60  | 60  | 60  | 60  |
| 7   | 79  | 69  | 62  | 57  | 78  | 68  | 62  | 57  | 67  | 61  | 57  | 65  | 60  | 57  | 64  | 60  | 56  | 55  | 55  | 55  | 55  |
| 8   | 75  | 64  | 57  | 53  | 73  | 63  | 57  | 53  | 62  | 57  | 53  | 61  | 56  | 52  | 60  | 56  | 52  | 51  | 51  | 51  | 51  |
| 9   | 70  | 60  | 53  | 49  | 69  | 59  | 53  | 49  | 58  | 53  | 49  | 57  | 52  | 48  | 56  | 52  | 48  | 47  | 47  | 47  | 47  |
| 10  | 67  | 56  | 50  | 45  | 66  | 55  | 49  | 45  | 55  | 49  | 45  | 54  | 49  | 45  | 53  | 48  | 45  | 43  | 43  | 43  | 43  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 372639 |
| 5°  | 378099 |
| 10° | 389974 |
| 15° | 416687 |
| 20° | 441538 |
| 25° | 436708 |
| 30° | 391946 |
| 35° | 305054 |
| 40° | 206664 |
| 45° | 129014 |
| 50° | 55840  |
| 55° | 18709  |
| 60° | 4712   |
| 65° | 3181   |
| 70° | 1984   |
| 75° | 1287   |
| 80° | 1918   |
| 85° | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 293.3  | 6.4       |
| 10°-20°   | 926.3  | 20.1      |
| 20°-30°   | 1451.4 | 31.5      |
| 30°-40°   | 1252.6 | 27.2      |
| 40°-50°   | 576.0  | 12.5      |
| 50°-60°   | 97.8   | 2.1       |
| 60°-70°   | 11.1   | 0.2       |
| 70°-80°   | 4.0    | 0.1       |
| 80°-90°   | 0.4    | 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°    | 2671.0 | 57.9      |
| 0°-40°    | 3923.6 | 85.1      |
| 0°-60°    | 4597.5 | 99.7      |
| 0°-90°    | 4612.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4612.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 3021 |      |
| 5°  | 3054 | 293  |
| 15° | 3263 | 926  |
| 25° | 3209 | 1451 |
| 35° | 2026 | 1253 |
| 45° | 740  | 576  |
| 55° | 87   | 98   |
| 65° | 11   | 11   |
| 75° | 3    | 4    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 3021.1 |
| 2.5°  | 3021.1 |
| 5°    | 3053.7 |
| 7.5°  | 3083.6 |
| 10°   | 3113.6 |
| 12.5° | 3176.1 |
| 15°   | 3263.1 |
| 17.5° | 3336.5 |
| 20°   | 3363.8 |
| 22.5° | 3323.0 |
| 25°   | 3208.8 |
| 27.5° | 3023.8 |
| 30°   | 2751.9 |
| 32.5° | 2409.3 |
| 35°   | 2025.9 |
| 37.5° | 1639.7 |
| 40°   | 1283.5 |
| 42.5° | 981.7  |
| 45°   | 739.6  |
| 47.5° | 519.4  |
| 50°   | 291.0  |
| 52.5° | 160.4  |
| 55°   | 87.0   |
| 57.5° | 43.5   |
| 60°   | 19.1   |
| 62.5° | 13.6   |
| 65°   | 10.9   |
| 67.5° | 8.2    |
| 70°   | 5.5    |
| 72.5° | 5.5    |
| 75°   | 2.7    |
| 77.5° | 2.7    |
| 80°   | 2.7    |
| 82.5° | 0.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |

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— 0°-180°

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