

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: P580561

Luminaire Tested: **HCC4S40D010MB-HM43040830-41WDBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580561  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-11)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S40D010MB-HM43040830-41WDBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

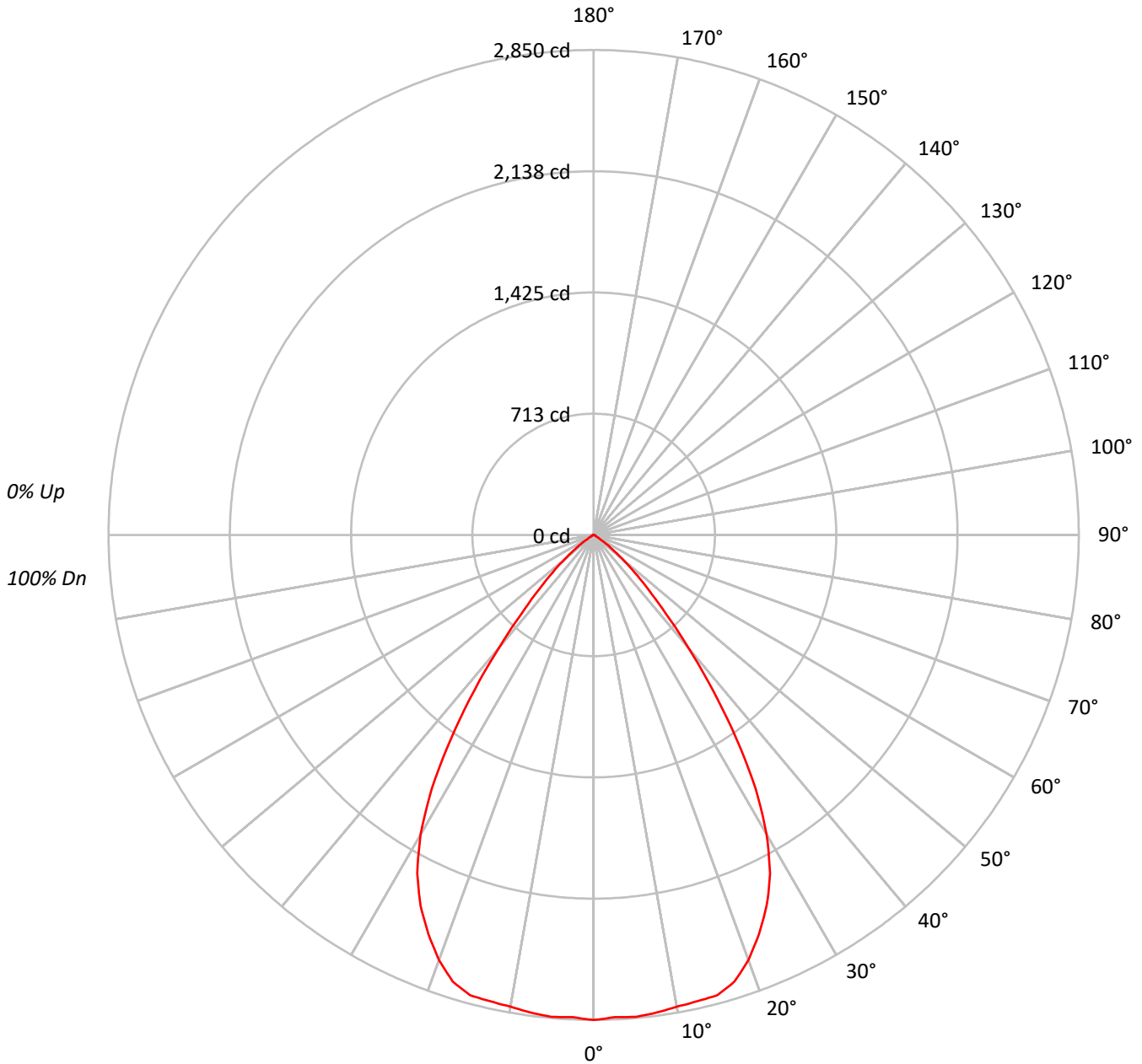
Lumens per Lamp: N/A  
Luminaire Lumens: 3525.6 lumens  
Efficiency: N/A  
Efficacy: 86.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1.1 / 1.03  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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  |     |    |    |     |
| 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 |
| 1   | 113 | 110 | 107 | 105 | 111 | 108 | 106 | 103 | 104 | 102 | 100 | 100 | 99  | 97  | 97  | 96  | 94  | 93  |    |    | 93  |
| 2   | 107 | 102 | 97  | 94  | 105 | 100 | 96  | 93  | 97  | 93  | 91  | 94  | 91  | 89  | 91  | 89  | 87  | 85  |    |    | 85  |
| 3   | 101 | 94  | 89  | 84  | 99  | 93  | 88  | 84  | 90  | 86  | 82  | 87  | 84  | 81  | 85  | 82  | 80  | 78  |    |    | 78  |
| 4   | 95  | 87  | 81  | 77  | 93  | 86  | 80  | 76  | 84  | 79  | 75  | 82  | 78  | 74  | 80  | 76  | 73  | 72  |    |    | 72  |
| 5   | 90  | 81  | 75  | 70  | 88  | 80  | 74  | 70  | 78  | 73  | 69  | 76  | 72  | 68  | 75  | 71  | 68  | 66  |    |    | 66  |
| 6   | 85  | 75  | 69  | 64  | 83  | 74  | 68  | 64  | 73  | 67  | 63  | 71  | 67  | 63  | 70  | 66  | 62  | 61  |    |    | 61  |
| 7   | 80  | 70  | 64  | 59  | 79  | 69  | 63  | 59  | 68  | 63  | 59  | 67  | 62  | 58  | 66  | 61  | 58  | 56  |    |    | 56  |
| 8   | 76  | 65  | 59  | 55  | 74  | 65  | 59  | 54  | 64  | 58  | 54  | 63  | 58  | 54  | 62  | 57  | 54  | 52  |    |    | 52  |
| 9   | 72  | 61  | 55  | 51  | 71  | 61  | 55  | 51  | 60  | 54  | 50  | 59  | 54  | 50  | 58  | 53  | 50  | 49  |    |    | 49  |
| 10  | 68  | 58  | 51  | 47  | 67  | 57  | 51  | 47  | 56  | 51  | 47  | 55  | 50  | 47  | 55  | 50  | 47  | 45  |    |    | 45  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 351597 |
| 5°  | 351937 |
| 10° | 352599 |
| 15° | 357755 |
| 20° | 348841 |
| 25° | 327299 |
| 30° | 289498 |
| 35° | 220129 |
| 40° | 138699 |
| 45° | 79631  |
| 50° | 42235  |
| 55° | 17526  |
| 60° | 4712   |
| 65° | 3969   |
| 70° | 2957   |
| 75° | 2573   |
| 80° | 1918   |
| 85° | 3821   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 270.3  | 7.7       |
| 10°-20°   | 784.5  | 22.3      |
| 20°-30°   | 1094.8 | 31.1      |
| 30°-40°   | 900.9  | 25.6      |
| 40°-50°   | 371.1  | 10.5      |
| 50°-60°   | 83.6   | 2.4       |
| 60°-70°   | 13.4   | 0.4       |
| 70°-80°   | 5.0    | 0.1       |
| 80°-90°   | 1.8    | 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°    | 2149.6 | 61.0      |
| 0°-40°    | 3050.6 | 86.5      |
| 0°-60°    | 3505.3 | 99.4      |
| 0°-90°    | 3525.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3525.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2850 |      |
| 5°  | 2842 | 270  |
| 15° | 2802 | 784  |
| 25° | 2405 | 1095 |
| 35° | 1462 | 901  |
| 45° | 456  | 371  |
| 55° | 82   | 84   |
| 65° | 14   | 13   |
| 75° | 5    | 5    |
| 85° | 3    | 2    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 2850.5 |
| 2.5°  | 2836.9 |
| 5°    | 2842.4 |
| 7.5°  | 2831.5 |
| 10°   | 2815.2 |
| 12.5° | 2807.0 |
| 15°   | 2801.6 |
| 17.5° | 2752.7 |
| 20°   | 2657.6 |
| 22.5° | 2538.1 |
| 25°   | 2404.9 |
| 27.5° | 2244.6 |
| 30°   | 2032.6 |
| 32.5° | 1771.7 |
| 35°   | 1461.9 |
| 37.5° | 1149.5 |
| 40°   | 861.4  |
| 42.5° | 627.8  |
| 45°   | 456.5  |
| 47.5° | 326.1  |
| 50°   | 220.1  |
| 52.5° | 138.6  |
| 55°   | 81.5   |
| 57.5° | 40.8   |
| 60°   | 19.1   |
| 62.5° | 16.3   |
| 65°   | 13.6   |
| 67.5° | 10.9   |
| 70°   | 8.2    |
| 72.5° | 5.4    |
| 75°   | 5.4    |
| 77.5° | 2.7    |
| 80°   | 2.7    |
| 82.5° | 2.7    |
| 85°   | 2.7    |
| 87.5° | 0.0    |
| 90°   | 0.0    |

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— 0°-180°

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