

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: P580363

Luminaire Tested: **HCC4S30D010BZ-HM43040935-41WDBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580363  
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: HCC4S30D010BZ-HM43040935-41WDBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

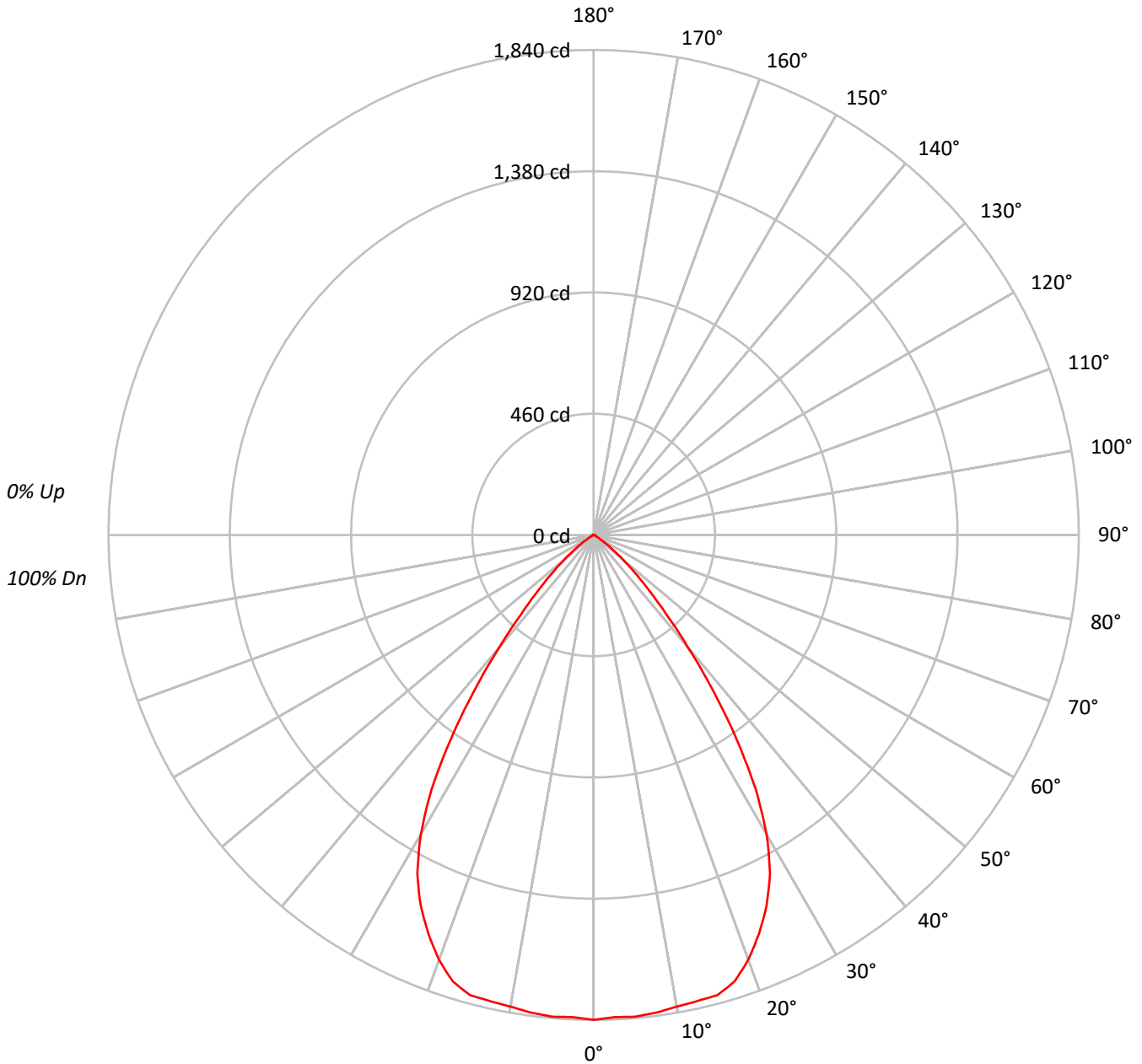
Lumens per Lamp: N/A  
Luminaire Lumens: 2275.5 lumens  
Efficiency: N/A  
Efficacy: 81.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1.1 / 1.03  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 28  
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 | 100 | 100 |
| 1   | 113 | 110 | 107 | 105 | 111 | 108 | 106 | 103 | 104 | 102 | 100 | 100 | 99  | 97  | 97  | 96  | 94  | 93  | 93  | 93  | 93  |
| 2   | 107 | 102 | 97  | 94  | 105 | 100 | 96  | 93  | 97  | 93  | 91  | 94  | 91  | 89  | 91  | 89  | 87  | 85  | 85  | 85  | 85  |
| 3   | 101 | 94  | 89  | 84  | 99  | 93  | 88  | 84  | 90  | 86  | 82  | 87  | 84  | 81  | 85  | 82  | 80  | 78  | 78  | 78  | 78  |
| 4   | 95  | 87  | 81  | 77  | 93  | 86  | 80  | 76  | 84  | 79  | 75  | 82  | 78  | 74  | 80  | 76  | 73  | 72  | 72  | 72  | 72  |
| 5   | 90  | 81  | 75  | 70  | 88  | 80  | 74  | 70  | 78  | 73  | 69  | 76  | 72  | 68  | 75  | 71  | 68  | 66  | 66  | 66  | 66  |
| 6   | 85  | 75  | 69  | 64  | 83  | 74  | 68  | 64  | 73  | 67  | 63  | 71  | 67  | 63  | 70  | 66  | 62  | 61  | 61  | 61  | 61  |
| 7   | 80  | 70  | 64  | 59  | 79  | 69  | 63  | 59  | 68  | 63  | 59  | 67  | 62  | 58  | 66  | 61  | 58  | 56  | 56  | 56  | 56  |
| 8   | 76  | 65  | 59  | 55  | 74  | 65  | 59  | 54  | 64  | 58  | 54  | 63  | 58  | 54  | 62  | 57  | 54  | 52  | 52  | 52  | 52  |
| 9   | 72  | 61  | 55  | 51  | 71  | 61  | 55  | 51  | 60  | 54  | 50  | 59  | 54  | 50  | 58  | 53  | 50  | 49  | 49  | 49  | 49  |
| 10  | 68  | 58  | 51  | 47  | 67  | 57  | 51  | 47  | 56  | 51  | 47  | 55  | 50  | 47  | 55  | 50  | 47  | 45  | 45  | 45  | 45  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 226931 |
| 5°  | 227142 |
| 10° | 227576 |
| 15° | 230901 |
| 20° | 225140 |
| 25° | 211236 |
| 30° | 186850 |
| 35° | 142085 |
| 40° | 89525  |
| 45° | 51389  |
| 50° | 27249  |
| 55° | 11311  |
| 60° | 3034   |
| 65° | 2568   |
| 70° | 1911   |
| 75° | 1668   |
| 80° | 1279   |
| 85° | 2547   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 174.5  | 7.7       |
| 10°-20°   | 506.3  | 22.3      |
| 20°-30°   | 706.6  | 31.1      |
| 30°-40°   | 581.5  | 25.6      |
| 40°-50°   | 239.5  | 10.5      |
| 50°-60°   | 54.0   | 2.4       |
| 60°-70°   | 8.7    | 0.4       |
| 70°-80°   | 3.3    | 0.1       |
| 80°-90°   | 1.2    | 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°    | 1387.4 | 61.0      |
| 0°-40°    | 1968.9 | 86.5      |
| 0°-60°    | 2262.4 | 99.4      |
| 0°-90°    | 2275.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2275.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1840 |      |
| 5°  | 1834 | 174  |
| 15° | 1808 | 506  |
| 25° | 1552 | 707  |
| 35° | 944  | 581  |
| 45° | 295  | 240  |
| 55° | 53   | 54   |
| 65° | 9    | 9    |
| 75° | 4    | 3    |
| 85° | 2    | 1    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 1839.8 |
| 2.5°  | 1831.0 |
| 5°    | 1834.5 |
| 7.5°  | 1827.5 |
| 10°   | 1817.0 |
| 12.5° | 1811.7 |
| 15°   | 1808.2 |
| 17.5° | 1776.6 |
| 20°   | 1715.2 |
| 22.5° | 1638.1 |
| 25°   | 1552.1 |
| 27.5° | 1448.7 |
| 30°   | 1311.9 |
| 32.5° | 1143.5 |
| 35°   | 943.6  |
| 37.5° | 741.9  |
| 40°   | 556.0  |
| 42.5° | 405.2  |
| 45°   | 294.6  |
| 47.5° | 210.5  |
| 50°   | 142.0  |
| 52.5° | 89.5   |
| 55°   | 52.6   |
| 57.5° | 26.3   |
| 60°   | 12.3   |
| 62.5° | 10.5   |
| 65°   | 8.8    |
| 67.5° | 7.0    |
| 70°   | 5.3    |
| 72.5° | 3.5    |
| 75°   | 3.5    |
| 77.5° | 1.8    |
| 80°   | 1.8    |
| 82.5° | 1.8    |
| 85°   | 1.8    |
| 87.5° | 0.0    |
| 90°   | 0.0    |

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— 0°-180°

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