

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: P580392

Luminaire Tested: **HCC4S30D010MW-HM43040940-41PSMDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580392  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-12)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S30D010MW-HM43040940-41PSMDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" PLASTIC TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

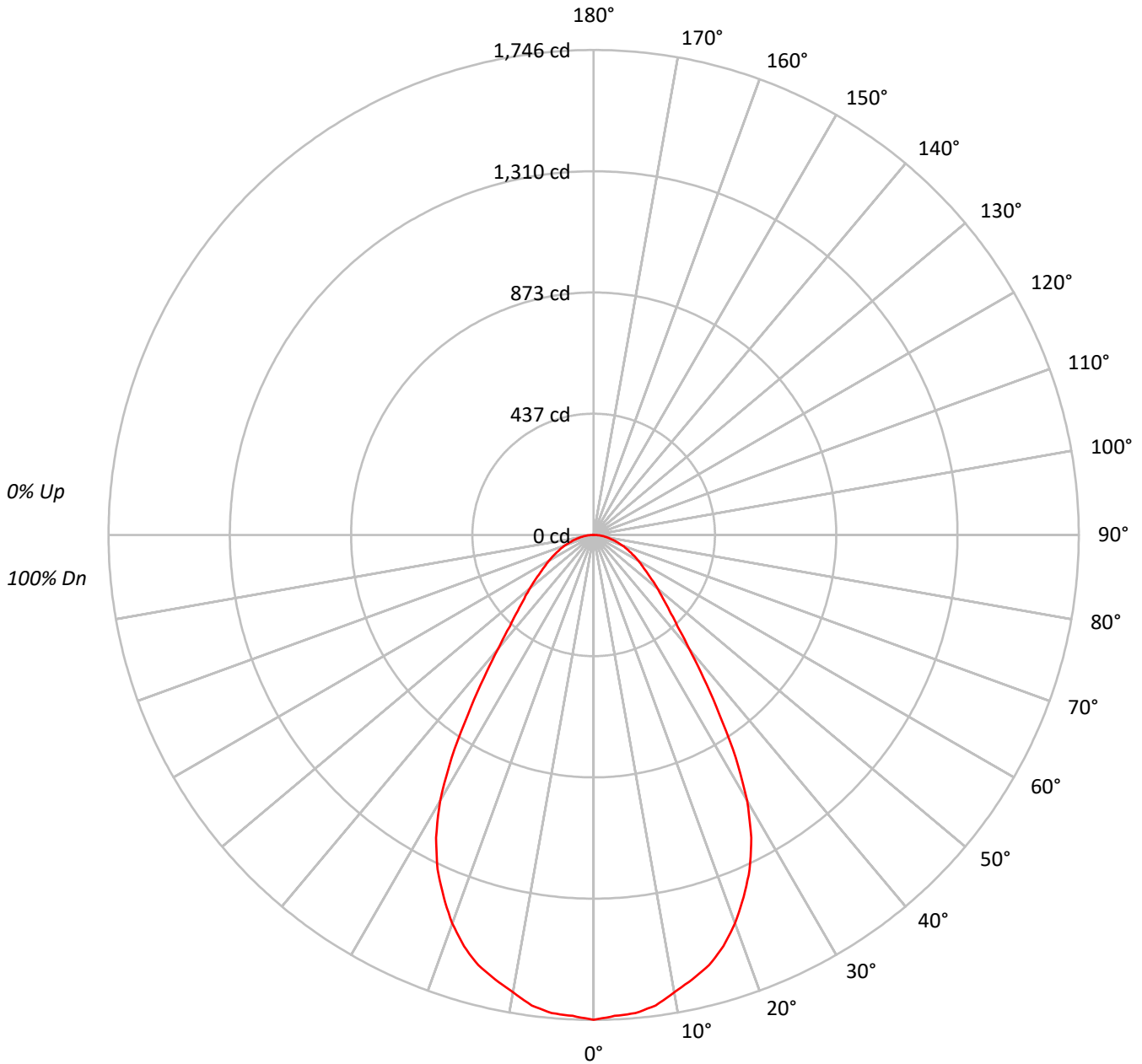
Lumens per Lamp: N/A  
Luminaire Lumens: 2479.0 lumens  
Efficiency: N/A  
Efficacy: 88.5 lumens/watt  
Spacing Criteria (0/90/45): 1.03 / 1.03 / 0.99  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |
| 1   | 111 | 107 | 104 | 101 | 109 | 105 | 102 | 99  | 101 | 99  | 96  | 97  | 95  | 93  | 94  | 92  | 91  | 89  |    |    |
| 2   | 103 | 97  | 91  | 87  | 101 | 95  | 90  | 86  | 92  | 88  | 84  | 89  | 85  | 82  | 86  | 83  | 80  | 78  |    |    |
| 3   | 96  | 88  | 81  | 76  | 94  | 86  | 80  | 75  | 84  | 78  | 74  | 81  | 77  | 73  | 79  | 75  | 72  | 70  |    |    |
| 4   | 90  | 80  | 73  | 68  | 88  | 79  | 72  | 67  | 77  | 71  | 66  | 74  | 69  | 65  | 72  | 68  | 65  | 63  |    |    |
| 5   | 84  | 74  | 66  | 61  | 82  | 72  | 66  | 60  | 71  | 64  | 60  | 69  | 63  | 59  | 67  | 62  | 59  | 57  |    |    |
| 6   | 79  | 68  | 60  | 55  | 77  | 67  | 60  | 55  | 65  | 59  | 54  | 64  | 58  | 54  | 62  | 57  | 53  | 52  |    |    |
| 7   | 74  | 63  | 55  | 50  | 73  | 62  | 55  | 50  | 61  | 54  | 50  | 59  | 54  | 49  | 58  | 53  | 49  | 47  |    |    |
| 8   | 70  | 58  | 51  | 46  | 68  | 58  | 51  | 46  | 56  | 50  | 46  | 55  | 50  | 45  | 54  | 49  | 45  | 44  |    |    |
| 9   | 66  | 54  | 47  | 42  | 65  | 54  | 47  | 42  | 53  | 47  | 42  | 52  | 46  | 42  | 51  | 46  | 42  | 40  |    |    |
| 10  | 62  | 51  | 44  | 39  | 61  | 50  | 44  | 39  | 49  | 43  | 39  | 49  | 43  | 39  | 48  | 43  | 39  | 37  |    |    |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 215324 |
| 5°  | 213968 |
| 10° | 209415 |
| 15° | 204787 |
| 20° | 195330 |
| 25° | 180818 |
| 30° | 157268 |
| 35° | 118760 |
| 40° | 86079  |
| 45° | 67263  |
| 50° | 57510  |
| 55° | 49762  |
| 60° | 45835  |
| 65° | 41940  |
| 70° | 39165  |
| 75° | 35933  |
| 80° | 33669  |
| 85° | 32267  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 163.2  | 6.6       |
| 10°-20°   | 449.2  | 18.1      |
| 20°-30°   | 604.1  | 24.4      |
| 30°-40°   | 496.7  | 20.0      |
| 40°-50°   | 305.0  | 12.3      |
| 50°-60°   | 211.1  | 8.5       |
| 60°-70°   | 143.9  | 5.8       |
| 70°-80°   | 80.2   | 3.2       |
| 80°-90°   | 25.6   | 1.0       |
| 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°    | 1216.5 | 49.1      |
| 0°-40°    | 1713.2 | 69.1      |
| 0°-60°    | 2229.3 | 89.9      |
| 0°-90°    | 2479.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2479.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1746 |      |
| 5°  | 1728 | 163  |
| 15° | 1604 | 449  |
| 25° | 1329 | 604  |
| 35° | 789  | 497  |
| 45° | 386  | 305  |
| 55° | 231  | 211  |
| 65° | 144  | 144  |
| 75° | 75   | 80   |
| 85° | 23   | 26   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 1745.7 |
| 2.5°  | 1733.4 |
| 5°    | 1728.1 |
| 7.5°  | 1708.8 |
| 10°   | 1672.0 |
| 12.5° | 1638.8 |
| 15°   | 1603.7 |
| 17.5° | 1552.8 |
| 20°   | 1488.1 |
| 22.5° | 1410.9 |
| 25°   | 1328.6 |
| 27.5° | 1228.6 |
| 30°   | 1104.2 |
| 32.5° | 951.7  |
| 35°   | 788.7  |
| 37.5° | 648.5  |
| 40°   | 534.6  |
| 42.5° | 446.9  |
| 45°   | 385.6  |
| 47.5° | 338.3  |
| 50°   | 299.7  |
| 52.5° | 264.6  |
| 55°   | 231.4  |
| 57.5° | 206.8  |
| 60°   | 185.8  |
| 62.5° | 164.8  |
| 65°   | 143.7  |
| 67.5° | 126.2  |
| 70°   | 108.6  |
| 72.5° | 91.1   |
| 75°   | 75.4   |
| 77.5° | 59.6   |
| 80°   | 47.4   |
| 82.5° | 35.1   |
| 85°   | 22.8   |
| 87.5° | 12.3   |
| 90°   | 0.0    |

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— 0°-180°

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