

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: P581507

Luminaire Tested: **HC407D010-HM40525930-41NDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581507  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC407D010-HM40525930-41NDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

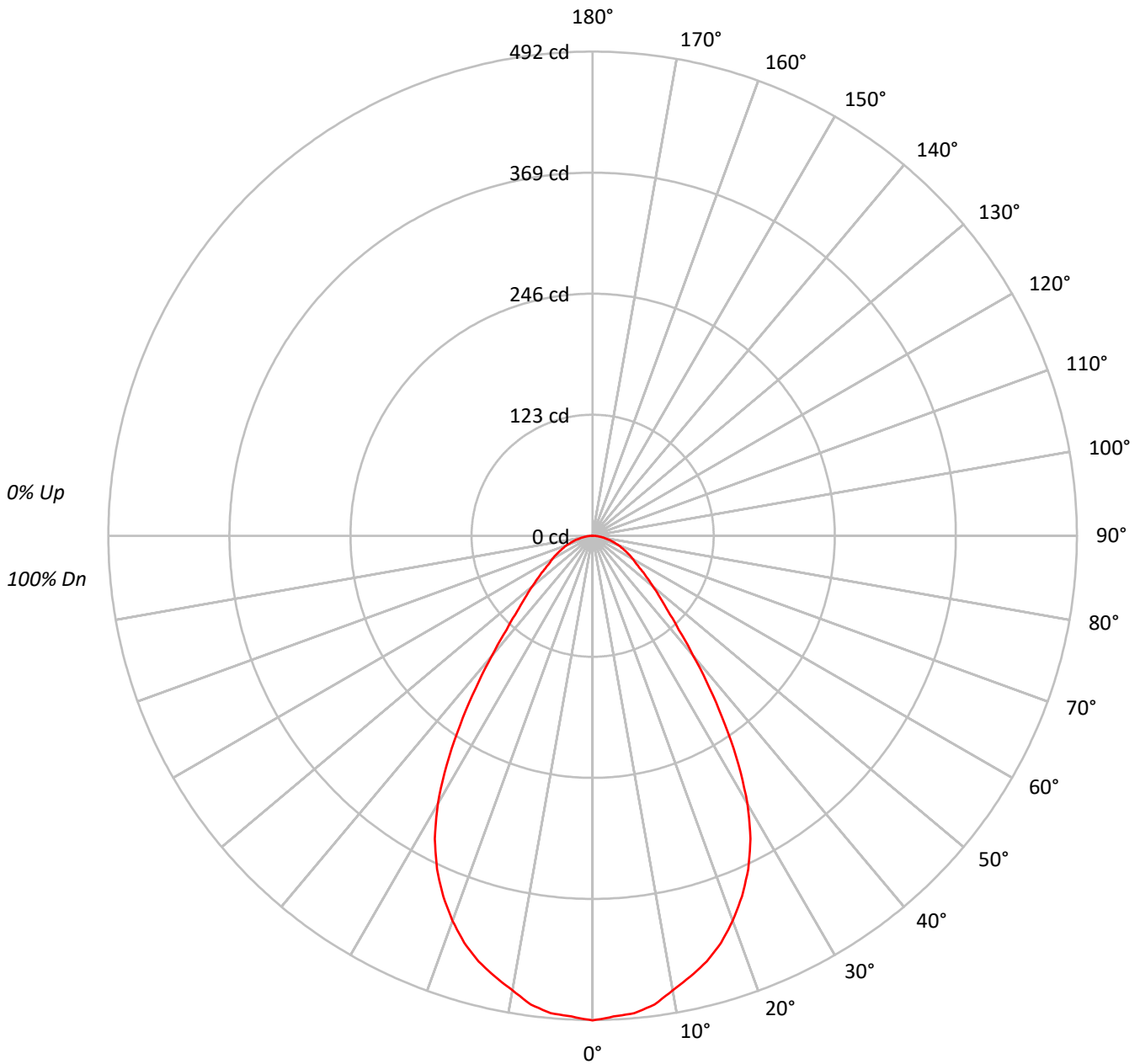
Lumens per Lamp: N/A  
Luminaire Lumens: 691.5 lumens  
Efficiency: N/A  
Efficacy: 86.4 lumens/watt  
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.01  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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   | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99  | 97  | 98  | 96  | 94  | 94  | 92  | 91  | 89  |    |    | 89  |
| 2   | 104 | 97  | 92  | 88  | 101 | 96  | 91  | 87  | 92  | 88  | 85  | 89  | 86  | 83  | 86  | 83  | 81  | 79  |    |    | 79  |
| 3   | 97  | 88  | 82  | 77  | 95  | 87  | 81  | 76  | 84  | 79  | 75  | 82  | 77  | 74  | 79  | 76  | 73  | 71  |    |    | 71  |
| 4   | 90  | 81  | 74  | 68  | 88  | 80  | 73  | 68  | 77  | 72  | 67  | 75  | 70  | 66  | 73  | 69  | 65  | 64  |    |    | 64  |
| 5   | 85  | 74  | 67  | 61  | 83  | 73  | 66  | 61  | 71  | 65  | 60  | 69  | 64  | 60  | 68  | 63  | 59  | 58  |    |    | 58  |
| 6   | 79  | 68  | 61  | 56  | 78  | 67  | 60  | 55  | 66  | 60  | 55  | 64  | 59  | 55  | 63  | 58  | 54  | 52  |    |    | 52  |
| 7   | 75  | 63  | 56  | 51  | 73  | 62  | 56  | 51  | 61  | 55  | 50  | 60  | 54  | 50  | 59  | 53  | 50  | 48  |    |    | 48  |
| 8   | 70  | 59  | 52  | 47  | 69  | 58  | 51  | 46  | 57  | 51  | 46  | 56  | 50  | 46  | 55  | 50  | 46  | 44  |    |    | 44  |
| 9   | 66  | 55  | 48  | 43  | 65  | 54  | 47  | 43  | 53  | 47  | 43  | 52  | 47  | 43  | 51  | 46  | 42  | 41  |    |    | 41  |
| 10  | 63  | 51  | 44  | 40  | 62  | 51  | 44  | 40  | 50  | 44  | 40  | 49  | 43  | 39  | 48  | 43  | 39  | 38  |    |    | 38  |

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

|     |       |
|-----|-------|
|     | 0°    |
| 0°  | 60748 |
| 5°  | 60299 |
| 10° | 58729 |
| 15° | 57183 |
| 20° | 54631 |
| 25° | 50887 |
| 30° | 44822 |
| 35° | 35340 |
| 40° | 25650 |
| 45° | 18857 |
| 50° | 15332 |
| 55° | 12881 |
| 60° | 11644 |
| 65° | 10682 |
| 70° | 9990  |
| 75° | 9103  |
| 80° | 8240  |
| 85° | 7076  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 45.9   | 6.6       |
| 10°-20°   | 125.6  | 18.2      |
| 20°-30°   | 170.3  | 24.6      |
| 30°-40°   | 146.1  | 21.1      |
| 40°-50°   | 86.3   | 12.5      |
| 50°-60°   | 54.7   | 7.9       |
| 60°-70°   | 36.7   | 5.3       |
| 70°-80°   | 20.3   | 2.9       |
| 80°-90°   | 5.7    | 0.8       |
| 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°    | 341.8  | 49.4      |
| 0°-40°    | 487.9  | 70.6      |
| 0°-60°    | 628.8  | 90.9      |
| 0°-90°    | 691.5  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 691.5  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | Flux |
|-----|-----|------|
| 0°  | 492 |      |
| 5°  | 487 | 46   |
| 15° | 448 | 126  |
| 25° | 374 | 170  |
| 35° | 235 | 146  |
| 45° | 108 | 86   |
| 55° | 60  | 55   |
| 65° | 37  | 37   |
| 75° | 19  | 20   |
| 85° | 5   | 6    |
| 90° | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    |
|-------|-------|
| 0°    | 492.5 |
| 2.5°  | 489.0 |
| 5°    | 487.0 |
| 7.5°  | 480.5 |
| 10°   | 468.9 |
| 12.5° | 458.8 |
| 15°   | 447.8 |
| 17.5° | 433.7 |
| 20°   | 416.2 |
| 22.5° | 396.5 |
| 25°   | 373.9 |
| 27.5° | 347.3 |
| 30°   | 314.7 |
| 32.5° | 276.0 |
| 35°   | 234.7 |
| 37.5° | 195.1 |
| 40°   | 159.3 |
| 42.5° | 129.6 |
| 45°   | 108.1 |
| 47.5° | 92.5  |
| 50°   | 79.9  |
| 52.5° | 69.3  |
| 55°   | 59.9  |
| 57.5° | 52.2  |
| 60°   | 47.2  |
| 62.5° | 42.2  |
| 65°   | 36.6  |
| 67.5° | 32.2  |
| 70°   | 27.7  |
| 72.5° | 23.1  |
| 75°   | 19.1  |
| 77.5° | 15.0  |
| 80°   | 11.6  |
| 82.5° | 8.1   |
| 85°   | 5.0   |
| 87.5° | 2.0   |
| 90°   | 0.0   |



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— 0°-180°







(END OF REPORT)