

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: P582689

Luminaire Tested: **HC645D010-HM64560940-61NDH**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582689  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC645D010-HM64560940-61NDH  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" NARROW DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4593.3 lumens  
Efficiency: N/A  
Efficacy: 104.4 lumens/watt  
Spacing Criteria (0/90/45): 0.89 / 0.89 / 0.89  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

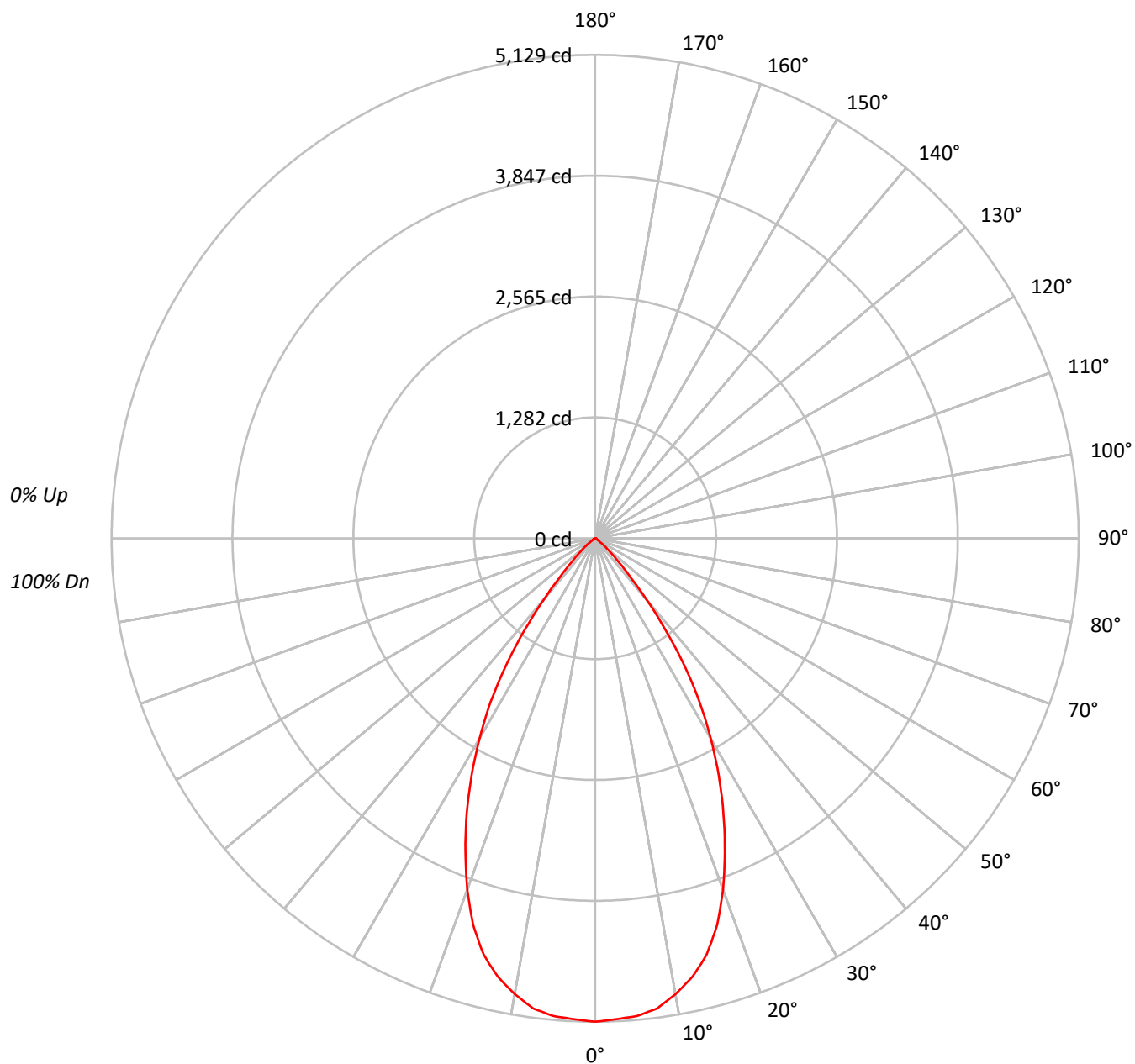
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 113 | 111 | 108 | 106 | 111 | 109 | 106 | 104 | 105 | 103 | 101 |  | 101 | 99  | 98  |  | 97  |
| 2   | 108 | 103 | 99  | 96  | 106 | 101 | 98  | 94  | 98  | 95  | 92  |  | 95  | 93  | 90  |  | 92  |
| 3   | 102 | 96  | 91  | 87  | 100 | 95  | 90  | 86  | 92  | 88  | 85  |  | 90  | 86  | 84  |  | 87  |
| 4   | 97  | 90  | 84  | 80  | 95  | 88  | 83  | 79  | 86  | 82  | 78  |  | 84  | 81  | 78  |  | 82  |
| 5   | 92  | 84  | 78  | 74  | 91  | 83  | 77  | 73  | 81  | 76  | 73  |  | 79  | 75  | 72  |  | 78  |
| 6   | 88  | 79  | 73  | 68  | 86  | 78  | 72  | 68  | 76  | 71  | 68  |  | 75  | 71  | 67  |  | 74  |
| 7   | 83  | 74  | 68  | 64  | 82  | 73  | 67  | 63  | 72  | 67  | 63  |  | 71  | 66  | 63  |  | 70  |
| 8   | 79  | 70  | 64  | 59  | 78  | 69  | 63  | 59  | 68  | 63  | 59  |  | 67  | 62  | 59  |  | 66  |
| 9   | 75  | 66  | 60  | 56  | 74  | 65  | 59  | 56  | 64  | 59  | 55  |  | 63  | 59  | 55  |  | 62  |
| 10  | 72  | 62  | 56  | 52  | 71  | 62  | 56  | 52  | 61  | 56  | 52  |  | 60  | 55  | 52  |  | 59  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 281178 |
| 5°  | 279985 |
| 10° | 273364 |
| 15° | 259485 |
| 20° | 231288 |
| 25° | 194836 |
| 30° | 155226 |
| 35° | 110751 |
| 40° | 59547  |
| 45° | 25507  |
| 50° | 11607  |
| 55° | 4234   |
| 60° | 2083   |
| 65° | 1647   |
| 70° | 1523   |
| 75° | 678    |
| 80° | 1010   |
| 85° | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 480.3  | 10.5      |
| 10°-20°   | 1267.4 | 27.6      |
| 20°-30°   | 1467.9 | 32.0      |
| 30°-40°   | 1015.0 | 22.1      |
| 40°-50°   | 293.1  | 6.4       |
| 50°-60°   | 50.4   | 1.1       |
| 60°-70°   | 12.9   | 0.3       |
| 70°-80°   | 5.0    | 0.1       |
| 80°-90°   | 1.3    | 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°    | 3215.5 | 70.0      |
| 0°-40°    | 4230.5 | 92.1      |
| 0°-60°    | 4574.0 | 99.6      |
| 0°-90°    | 4593.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4593.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 5129 |      |
| 5°  | 5088 | 480  |
| 15° | 4572 | 1267 |
| 25° | 3221 | 1468 |
| 35° | 1655 | 1015 |
| 45° | 329  | 293  |
| 55° | 44   | 50   |
| 65° | 13   | 13   |
| 75° | 3    | 5    |
| 85° | 0    | 1    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 5129.1 |
| 2.5°  | 5106.9 |
| 5°    | 5087.9 |
| 7.5°  | 5031.0 |
| 10°   | 4910.8 |
| 12.5° | 4765.2 |
| 15°   | 4572.1 |
| 17.5° | 4300.1 |
| 20°   | 3964.6 |
| 22.5° | 3594.4 |
| 25°   | 3221.1 |
| 27.5° | 2838.2 |
| 30°   | 2452.2 |
| 32.5° | 2066.1 |
| 35°   | 1654.9 |
| 37.5° | 1227.7 |
| 40°   | 832.1  |
| 42.5° | 525.3  |
| 45°   | 329.0  |
| 47.5° | 212.0  |
| 50°   | 136.1  |
| 52.5° | 82.2   |
| 55°   | 44.3   |
| 57.5° | 25.3   |
| 60°   | 19.0   |
| 62.5° | 15.8   |
| 65°   | 12.7   |
| 67.5° | 9.5    |
| 70°   | 9.5    |
| 72.5° | 6.3    |
| 75°   | 3.2    |
| 77.5° | 3.2    |
| 80°   | 3.2    |
| 82.5° | 3.2    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)