

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: P582812

Luminaire Tested: **HC650D010-HM64560935-61MDH**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582812  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-5)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC650D010-HM64560935-61MDH  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" MEDIUM DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4598.8 lumens  
Efficiency: N/A  
Efficacy: 95.8 lumens/watt  
Spacing Criteria (0/90/45): 1.01 / 1.01 / 0.97  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

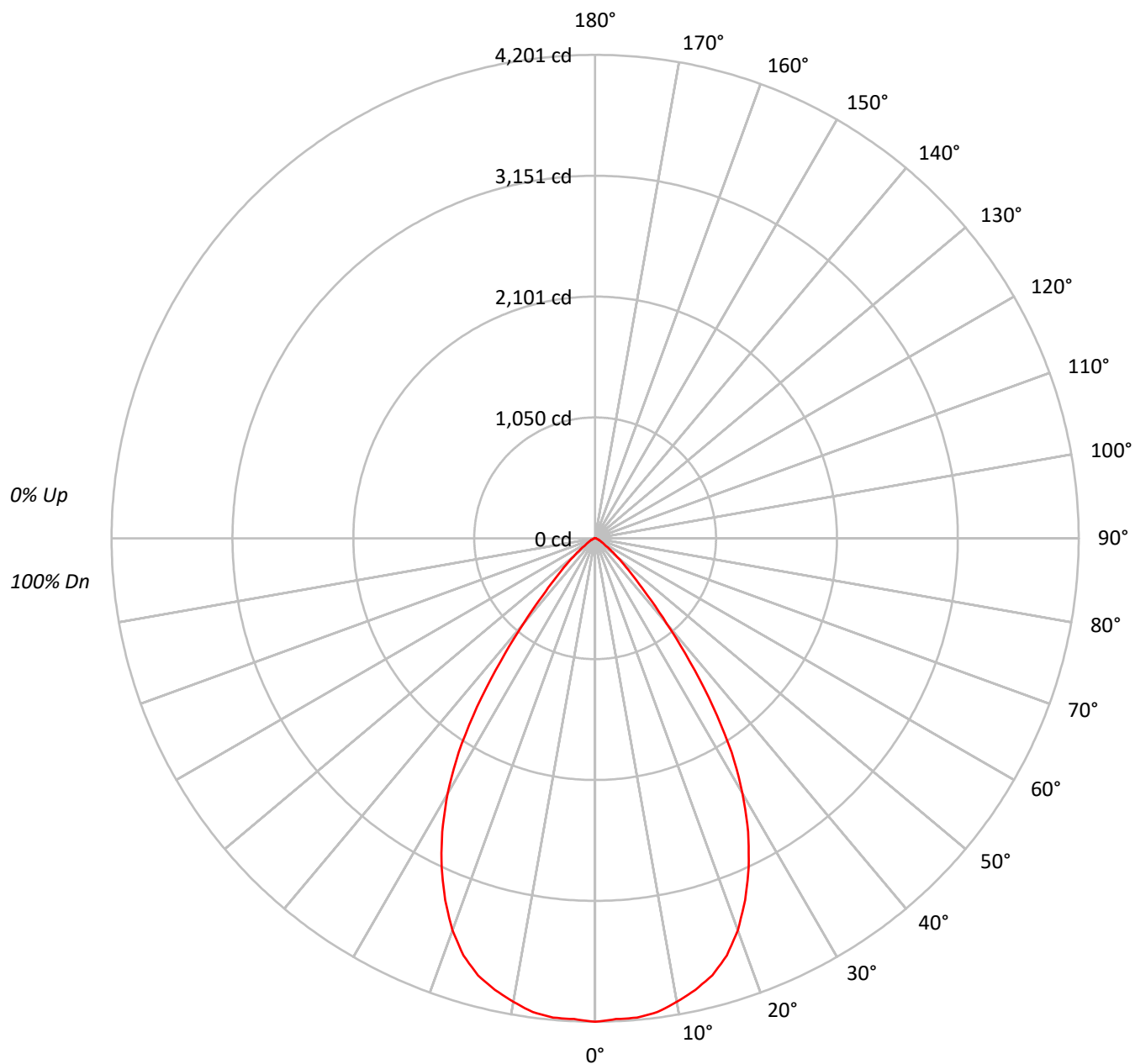
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 110 | 108 | 105 | 111 | 108 | 106 | 104 |  | 104 | 102 | 100 |  |  | 100 | 99  | 97  |  |  | 97  |
| 2   | 107 | 102 | 98  | 94  | 105 | 100 | 96  | 93  |  | 97  | 94  | 91  |  |  | 94  | 91  | 89  |  |  | 91  |
| 3   | 101 | 94  | 89  | 85  | 99  | 93  | 88  | 84  |  | 90  | 86  | 83  |  |  | 88  | 84  | 81  |  |  | 86  |
| 4   | 96  | 88  | 82  | 77  | 94  | 86  | 81  | 77  |  | 84  | 79  | 76  |  |  | 82  | 78  | 75  |  |  | 80  |
| 5   | 90  | 81  | 75  | 71  | 89  | 80  | 75  | 70  |  | 79  | 74  | 70  |  |  | 77  | 73  | 69  |  |  | 75  |
| 6   | 85  | 76  | 70  | 65  | 84  | 75  | 69  | 65  |  | 74  | 68  | 64  |  |  | 72  | 67  | 64  |  |  | 71  |
| 7   | 81  | 71  | 65  | 60  | 79  | 70  | 64  | 60  |  | 69  | 64  | 60  |  |  | 68  | 63  | 59  |  |  | 67  |
| 8   | 77  | 67  | 60  | 56  | 75  | 66  | 60  | 56  |  | 65  | 59  | 55  |  |  | 64  | 59  | 55  |  |  | 63  |
| 9   | 73  | 62  | 56  | 52  | 72  | 62  | 56  | 52  |  | 61  | 56  | 52  |  |  | 60  | 55  | 52  |  |  | 59  |
| 10  | 69  | 59  | 53  | 49  | 68  | 58  | 52  | 48  |  | 57  | 52  | 48  |  |  | 57  | 52  | 48  |  |  | 56  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 230321 |
| 5°  | 230128 |
| 10° | 227729 |
| 15° | 223151 |
| 20° | 211389 |
| 25° | 190898 |
| 30° | 162164 |
| 35° | 119725 |
| 40° | 69244  |
| 45° | 36756  |
| 50° | 20767  |
| 55° | 10857  |
| 60° | 7127   |
| 65° | 5059   |
| 70° | 3638   |
| 75° | 2754   |
| 80° | 2052   |
| 85° | 2013   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 396.3  | 8.6       |
| 10°-20°   | 1099.7 | 23.9      |
| 20°-30°   | 1435.4 | 31.2      |
| 30°-40°   | 1096.9 | 23.9      |
| 40°-50°   | 397.2  | 8.6       |
| 50°-60°   | 115.3  | 2.5       |
| 60°-70°   | 41.3   | 0.9       |
| 70°-80°   | 14.1   | 0.3       |
| 80°-90°   | 2.6    | 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°    | 2931.4 | 63.7      |
| 0°-40°    | 4028.3 | 87.6      |
| 0°-60°    | 4540.8 | 98.7      |
| 0°-90°    | 4598.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4598.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 4201 |      |
| 5°  | 4182 | 396  |
| 15° | 3932 | 1100 |
| 25° | 3156 | 1435 |
| 35° | 1789 | 1097 |
| 45° | 474  | 397  |
| 55° | 114  | 115  |
| 65° | 39   | 41   |
| 75° | 13   | 14   |
| 85° | 3    | 3    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 4201.4 |
| 2.5°  | 4181.9 |
| 5°    | 4181.9 |
| 7.5°  | 4152.8 |
| 10°   | 4091.0 |
| 12.5° | 4019.7 |
| 15°   | 3931.9 |
| 17.5° | 3802.1 |
| 20°   | 3623.5 |
| 22.5° | 3402.7 |
| 25°   | 3156.0 |
| 27.5° | 2876.7 |
| 30°   | 2561.8 |
| 32.5° | 2207.9 |
| 35°   | 1789.0 |
| 37.5° | 1350.7 |
| 40°   | 967.6  |
| 42.5° | 668.8  |
| 45°   | 474.1  |
| 47.5° | 341.0  |
| 50°   | 243.5  |
| 52.5° | 172.1  |
| 55°   | 113.6  |
| 57.5° | 81.1   |
| 60°   | 65.0   |
| 62.5° | 52.0   |
| 65°   | 39.0   |
| 67.5° | 32.5   |
| 70°   | 22.7   |
| 72.5° | 16.2   |
| 75°   | 13.0   |
| 77.5° | 9.7    |
| 80°   | 6.5    |
| 82.5° | 3.2    |
| 85°   | 3.2    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)