

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: P582744

Luminaire Tested: **HC650D010-HM64560835-61NDW**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582744  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC650D010-HM64560835-61NDW  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" NARROW DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4959.0 lumens  
Efficiency: N/A  
Efficacy: 103.3 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.03  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

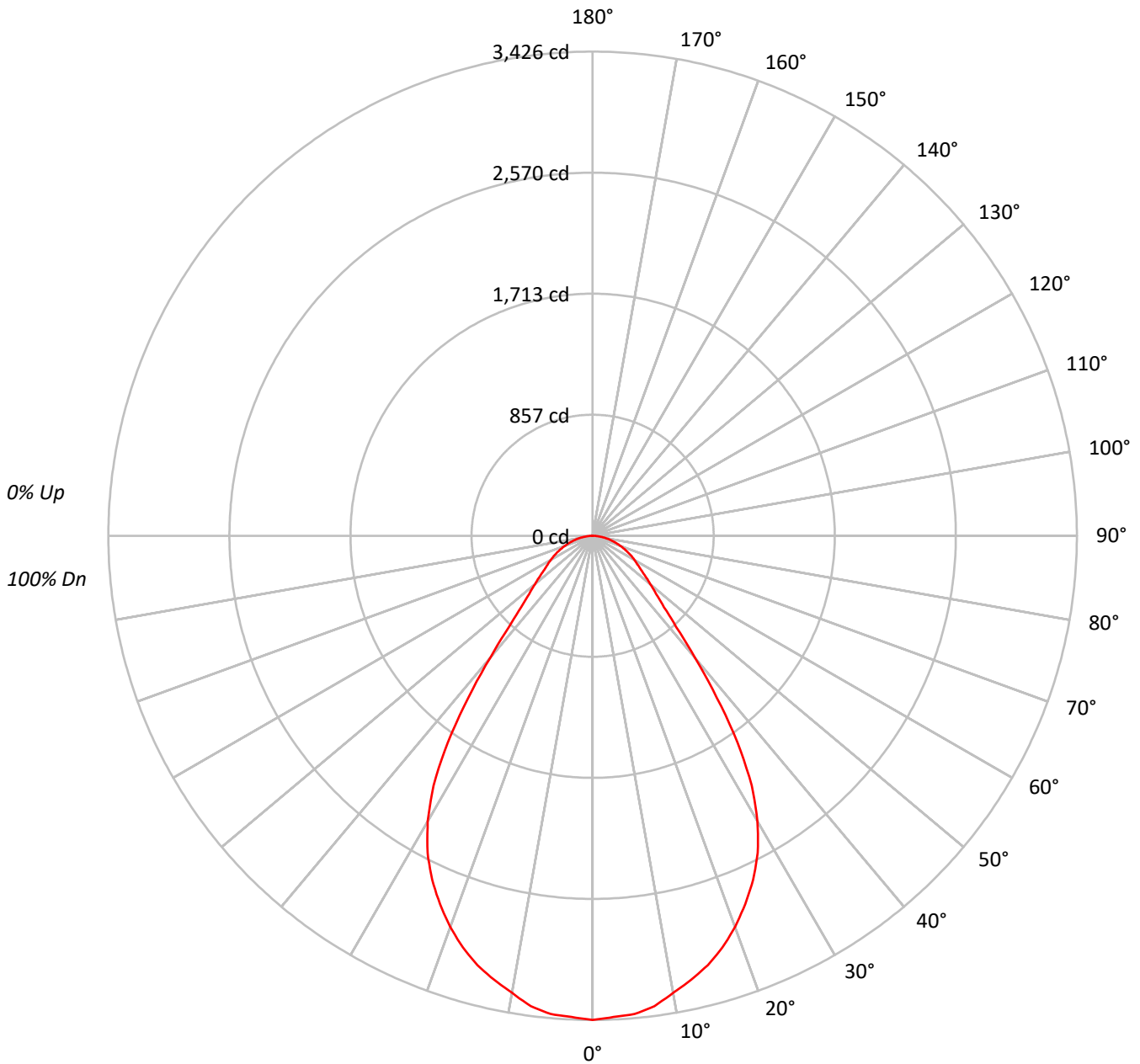
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |    | 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  | 96  | 97  | 95  | 94  | 94  | 92  | 91  | 89  |    |    | 89  |
| 2   | 104 | 97  | 92  | 87  | 101 | 95  | 90  | 86  | 92  | 88  | 84  | 89  | 85  | 83  | 86  | 83  | 81  | 79  |    |    | 79  |
| 3   | 97  | 88  | 82  | 77  | 94  | 87  | 81  | 76  | 84  | 79  | 75  | 81  | 77  | 73  | 79  | 75  | 72  | 70  |    |    | 70  |
| 4   | 90  | 81  | 73  | 68  | 88  | 79  | 73  | 68  | 77  | 71  | 67  | 75  | 70  | 66  | 73  | 69  | 65  | 63  |    |    | 63  |
| 5   | 84  | 74  | 67  | 61  | 83  | 73  | 66  | 61  | 71  | 65  | 60  | 69  | 64  | 60  | 67  | 63  | 59  | 57  |    |    | 57  |
| 6   | 79  | 68  | 61  | 55  | 77  | 67  | 60  | 55  | 66  | 59  | 55  | 64  | 59  | 54  | 63  | 58  | 54  | 52  |    |    | 52  |
| 7   | 74  | 63  | 56  | 50  | 73  | 62  | 55  | 50  | 61  | 55  | 50  | 60  | 54  | 50  | 58  | 53  | 49  | 48  |    |    | 48  |
| 8   | 70  | 59  | 51  | 46  | 69  | 58  | 51  | 46  | 57  | 50  | 46  | 56  | 50  | 46  | 54  | 49  | 46  | 44  |    |    | 44  |
| 9   | 66  | 55  | 48  | 43  | 65  | 54  | 47  | 43  | 53  | 47  | 42  | 52  | 46  | 42  | 51  | 46  | 42  | 41  |    |    | 41  |
| 10  | 62  | 51  | 44  | 40  | 61  | 51  | 44  | 40  | 50  | 44  | 39  | 49  | 43  | 39  | 48  | 43  | 39  | 38  |    |    | 38  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 187825 |
| 5°  | 186935 |
| 10° | 182807 |
| 15° | 178525 |
| 20° | 171812 |
| 25° | 162487 |
| 30° | 147662 |
| 35° | 119525 |
| 40° | 80601  |
| 45° | 55386  |
| 50° | 45389  |
| 55° | 39712  |
| 60° | 37563  |
| 65° | 35464  |
| 70° | 33291  |
| 75° | 31644  |
| 80° | 28792  |
| 85° | 25160  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 320.7  | 6.5       |
| 10°-20°   | 883.3  | 17.8      |
| 20°-30°   | 1227.3 | 24.7      |
| 30°-40°   | 1092.7 | 22.0      |
| 40°-50°   | 580.1  | 11.7      |
| 50°-60°   | 379.3  | 7.6       |
| 60°-70°   | 271.8  | 5.5       |
| 70°-80°   | 157.6  | 3.2       |
| 80°-90°   | 46.1   | 0.9       |
| 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°    | 2431.3 | 49.0      |
| 0°-40°    | 3524.0 | 71.1      |
| 0°-60°    | 4483.4 | 90.4      |
| 0°-90°    | 4959.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4959.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 3426 |      |
| 5°  | 3397 | 321  |
| 15° | 3146 | 883  |
| 25° | 2686 | 1227 |
| 35° | 1786 | 1093 |
| 45° | 714  | 580  |
| 55° | 416  | 379  |
| 65° | 273  | 272  |
| 75° | 149  | 158  |
| 85° | 40   | 46   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 3426.2 |
| 2.5°  | 3408.0 |
| 5°    | 3397.0 |
| 7.5°  | 3357.0 |
| 10°   | 3284.0 |
| 12.5° | 3218.5 |
| 15°   | 3145.6 |
| 17.5° | 3054.4 |
| 20°   | 2945.1 |
| 22.5° | 2821.2 |
| 25°   | 2686.3 |
| 27.5° | 2529.6 |
| 30°   | 2332.7 |
| 32.5° | 2095.8 |
| 35°   | 1786.0 |
| 37.5° | 1443.4 |
| 40°   | 1126.3 |
| 42.5° | 874.8  |
| 45°   | 714.4  |
| 47.5° | 608.7  |
| 50°   | 532.2  |
| 52.5° | 470.2  |
| 55°   | 415.5  |
| 57.5° | 375.4  |
| 60°   | 342.6  |
| 62.5° | 309.8  |
| 65°   | 273.4  |
| 67.5° | 240.6  |
| 70°   | 207.7  |
| 72.5° | 178.6  |
| 75°   | 149.4  |
| 77.5° | 120.2  |
| 80°   | 91.2   |
| 82.5° | 65.7   |
| 85°   | 40.0   |
| 87.5° | 18.2   |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)