

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: P593314

Luminaire Tested: **HC645D010-HM64560850-61NDW**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P593314  
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: HC645D010-HM64560850-61NDW  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" NARROW DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4879.6 lumens  
Efficiency: N/A  
Efficacy: 110.9 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

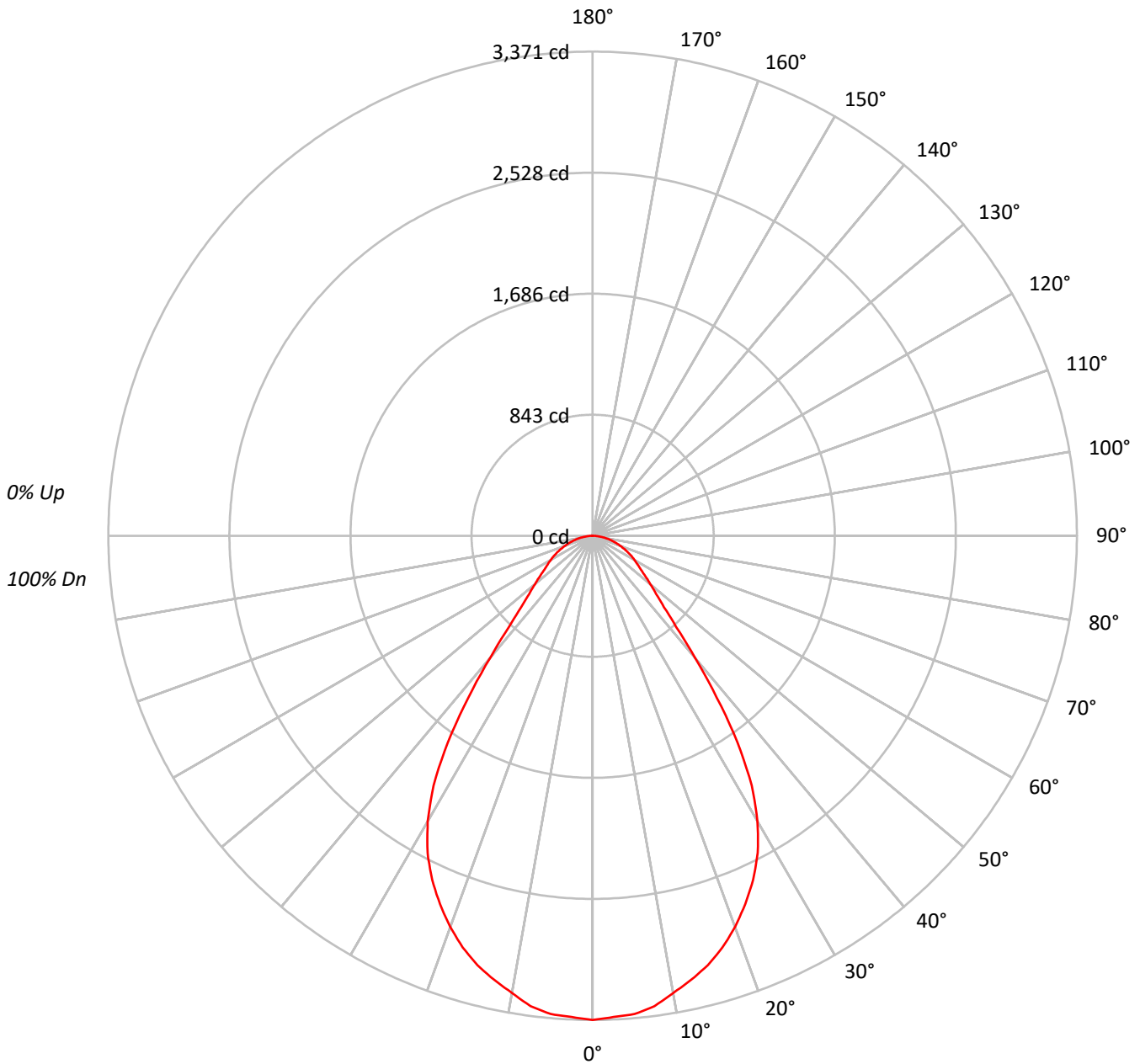
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |    | 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  | 63  | 51  | 44  | 40  | 61  | 51  | 44  | 40  | 50  | 44  | 39  | 49  | 43  | 39  | 48  | 43  | 39  | 38  |    |    | 38  |

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

|     | 0°     |
|-----|--------|
| 0°  | 184821 |
| 5°  | 183947 |
| 10° | 179884 |
| 15° | 175665 |
| 20° | 169065 |
| 25° | 159892 |
| 30° | 145301 |
| 35° | 117611 |
| 40° | 79313  |
| 45° | 54502  |
| 50° | 44655  |
| 55° | 39081  |
| 60° | 36960  |
| 65° | 34893  |
| 70° | 32778  |
| 75° | 31157  |
| 80° | 28286  |
| 85° | 24782  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 315.6  | 6.5       |
| 10°-20°   | 869.2  | 17.8      |
| 20°-30°   | 1207.6 | 24.7      |
| 30°-40°   | 1075.2 | 22.0      |
| 40°-50°   | 570.7  | 11.7      |
| 50°-60°   | 373.2  | 7.6       |
| 60°-70°   | 267.5  | 5.5       |
| 70°-80°   | 155.1  | 3.2       |
| 80°-90°   | 45.3   | 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°    | 2392.4 | 49.0      |
| 0°-40°    | 3467.6 | 71.1      |
| 0°-60°    | 4411.6 | 90.4      |
| 0°-90°    | 4879.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4879.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 3371 |      |
| 5°  | 3343 | 316  |
| 15° | 3095 | 869  |
| 25° | 2643 | 1208 |
| 35° | 1757 | 1075 |
| 45° | 703  | 571  |
| 55° | 409  | 373  |
| 65° | 269  | 268  |
| 75° | 147  | 155  |
| 85° | 39   | 45   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 3371.4 |
| 2.5°  | 3353.5 |
| 5°    | 3342.7 |
| 7.5°  | 3303.3 |
| 10°   | 3231.5 |
| 12.5° | 3167.0 |
| 15°   | 3095.2 |
| 17.5° | 3005.6 |
| 20°   | 2898.0 |
| 22.5° | 2776.0 |
| 25°   | 2643.4 |
| 27.5° | 2489.1 |
| 30°   | 2295.4 |
| 32.5° | 2062.3 |
| 35°   | 1757.4 |
| 37.5° | 1420.3 |
| 40°   | 1108.3 |
| 42.5° | 860.7  |
| 45°   | 703.0  |
| 47.5° | 598.9  |
| 50°   | 523.6  |
| 52.5° | 462.6  |
| 55°   | 408.9  |
| 57.5° | 369.4  |
| 60°   | 337.1  |
| 62.5° | 304.9  |
| 65°   | 269.0  |
| 67.5° | 236.7  |
| 70°   | 204.5  |
| 72.5° | 175.7  |
| 75°   | 147.1  |
| 77.5° | 118.4  |
| 80°   | 89.6   |
| 82.5° | 64.5   |
| 85°   | 39.4   |
| 87.5° | 17.9   |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)