

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: P582581

Luminaire Tested: **HC645D010-HM64560830-61NDH**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582581  
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-HM64560830-61NDH  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" NARROW DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4784.3 lumens  
Efficiency: N/A  
Efficacy: 108.7 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

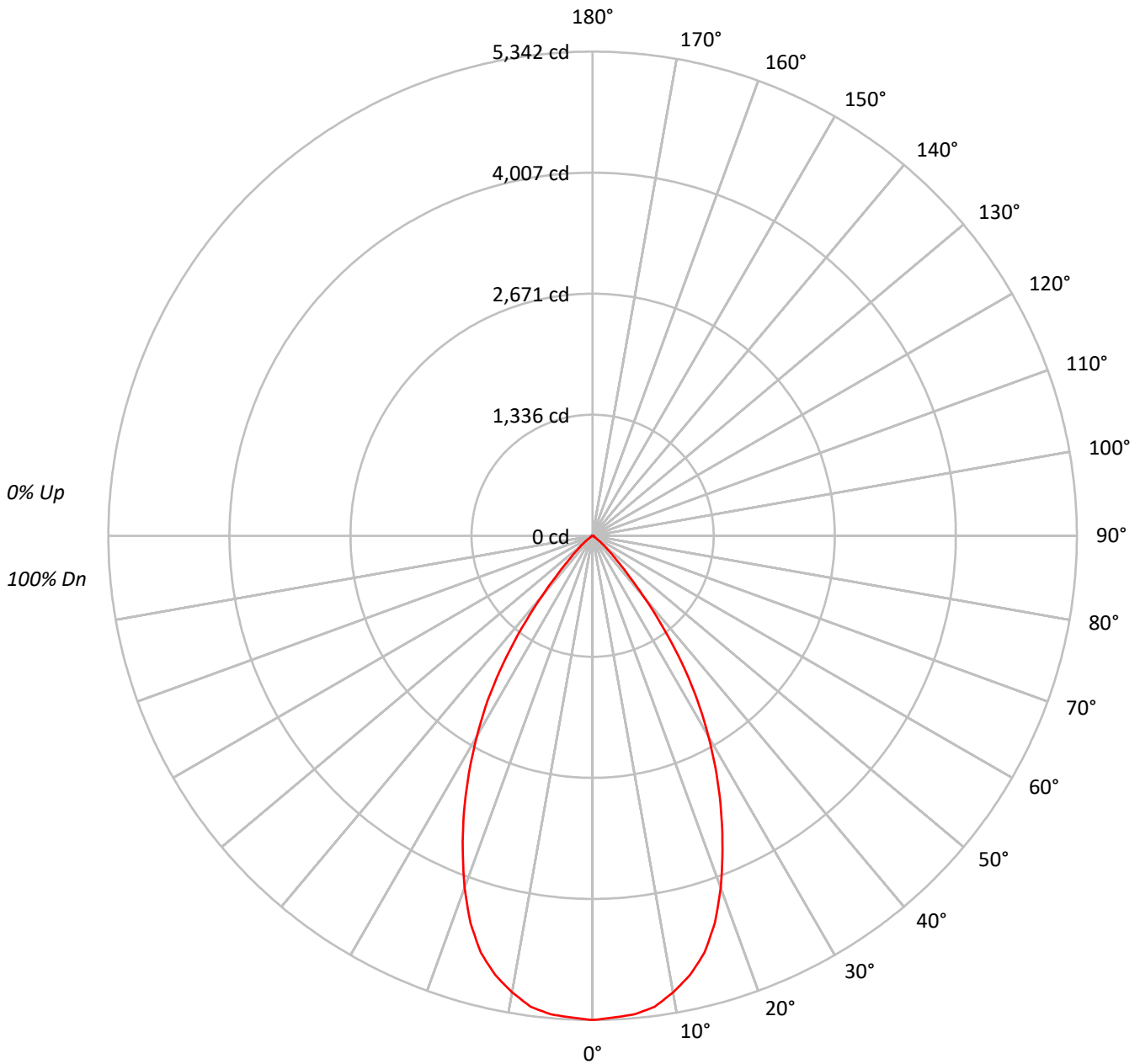
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |    | 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 |    |    |   |
| 1   | 113 | 111 | 108 | 106 | 111 | 109 | 106 | 104 | 105 | 103 | 101 | 101 | 99  | 98  | 97  | 96  | 95  | 93  |    |    |   |
| 2   | 108 | 103 | 99  | 96  | 106 | 101 | 98  | 94  | 98  | 95  | 92  | 95  | 93  | 90  | 92  | 90  | 89  | 87  |    |    |   |
| 3   | 102 | 96  | 91  | 87  | 100 | 95  | 90  | 86  | 92  | 88  | 85  | 90  | 86  | 84  | 87  | 85  | 82  | 81  |    |    |   |
| 4   | 97  | 90  | 84  | 80  | 95  | 88  | 83  | 79  | 86  | 82  | 78  | 84  | 81  | 78  | 82  | 79  | 77  | 75  |    |    |   |
| 5   | 92  | 84  | 78  | 74  | 91  | 83  | 77  | 73  | 81  | 76  | 73  | 79  | 75  | 72  | 78  | 74  | 71  | 70  |    |    |   |
| 6   | 88  | 79  | 73  | 68  | 86  | 78  | 72  | 68  | 76  | 71  | 68  | 75  | 71  | 67  | 74  | 70  | 67  | 65  |    |    |   |
| 7   | 83  | 74  | 68  | 64  | 82  | 73  | 67  | 63  | 72  | 67  | 63  | 71  | 66  | 63  | 70  | 66  | 62  | 61  |    |    |   |
| 8   | 79  | 70  | 64  | 59  | 78  | 69  | 63  | 59  | 68  | 63  | 59  | 67  | 62  | 59  | 66  | 62  | 59  | 57  |    |    |   |
| 9   | 75  | 66  | 60  | 56  | 74  | 65  | 59  | 56  | 64  | 59  | 55  | 63  | 59  | 55  | 62  | 58  | 55  | 54  |    |    |   |
| 10  | 72  | 62  | 56  | 52  | 71  | 62  | 56  | 52  | 61  | 56  | 52  | 60  | 55  | 52  | 59  | 55  | 52  | 51  |    |    |   |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 292871 |
| 5°  | 291635 |
| 10° | 284731 |
| 15° | 270285 |
| 20° | 240908 |
| 25° | 202941 |
| 30° | 161683 |
| 35° | 115355 |
| 40° | 62023  |
| 45° | 26576  |
| 50° | 12085  |
| 55° | 4406   |
| 60° | 2171   |
| 65° | 1699   |
| 70° | 1587   |
| 75° | 699    |
| 80° | 1042   |
| 85° | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 500.3  | 10.5      |
| 10°-20°   | 1320.1 | 27.6      |
| 20°-30°   | 1528.9 | 32.0      |
| 30°-40°   | 1057.2 | 22.1      |
| 40°-50°   | 305.3  | 6.4       |
| 50°-60°   | 52.6   | 1.1       |
| 60°-70°   | 13.4   | 0.3       |
| 70°-80°   | 5.2    | 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°    | 3349.3 | 70.0      |
| 0°-40°    | 4406.5 | 92.1      |
| 0°-60°    | 4764.4 | 99.6      |
| 0°-90°    | 4784.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4784.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 5342 |      |
| 5°  | 5300 | 500  |
| 15° | 4762 | 1320 |
| 25° | 3355 | 1529 |
| 35° | 1724 | 1057 |
| 45° | 343  | 305  |
| 55° | 46   | 53   |
| 65° | 13   | 13   |
| 75° | 3    | 5    |
| 85° | 0    | 1    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 5342.4 |
| 2.5°  | 5319.3 |
| 5°    | 5299.6 |
| 7.5°  | 5240.3 |
| 10°   | 5115.0 |
| 12.5° | 4963.4 |
| 15°   | 4762.4 |
| 17.5° | 4479.0 |
| 20°   | 4129.5 |
| 22.5° | 3744.0 |
| 25°   | 3355.1 |
| 27.5° | 2956.3 |
| 30°   | 2554.2 |
| 32.5° | 2152.1 |
| 35°   | 1723.7 |
| 37.5° | 1278.8 |
| 40°   | 866.7  |
| 42.5° | 547.1  |
| 45°   | 342.8  |
| 47.5° | 220.8  |
| 50°   | 141.7  |
| 52.5° | 85.7   |
| 55°   | 46.1   |
| 57.5° | 26.4   |
| 60°   | 19.8   |
| 62.5° | 16.4   |
| 65°   | 13.1   |
| 67.5° | 9.9    |
| 70°   | 9.9    |
| 72.5° | 6.6    |
| 75°   | 3.3    |
| 77.5° | 3.3    |
| 80°   | 3.3    |
| 82.5° | 3.3    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)