

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: P593277

Luminaire Tested: **HC640D010-HM63040850-61MDW**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P593277  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-6)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC640D010-HM63040850-61MDW  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" MEDIUM DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4562.7 lumens  
Efficiency: N/A  
Efficacy: 111.3 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.03  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

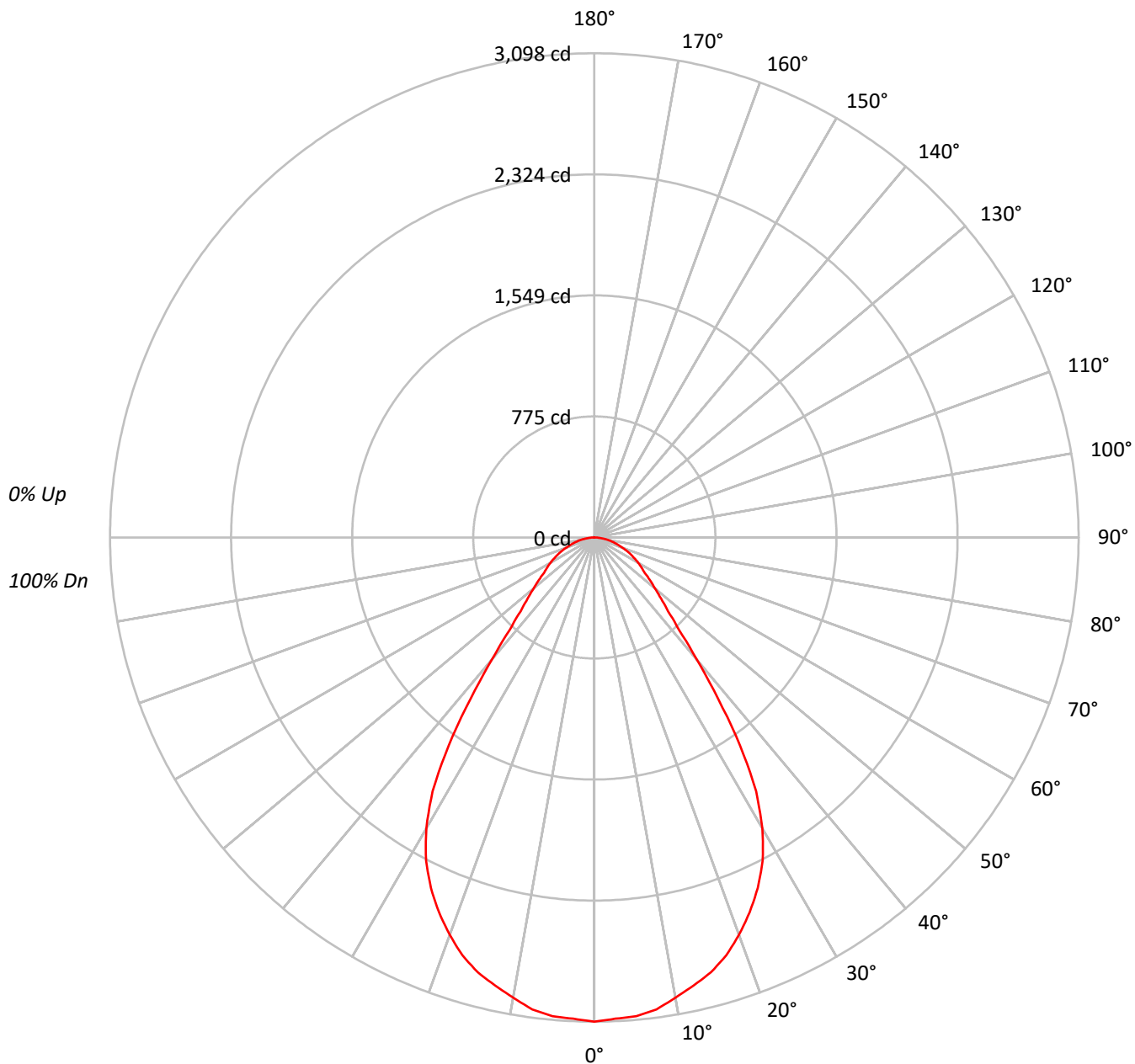
Input Watts (W): 41  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 30  | 10  |
| RCR |     |     |     |     |  |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
| 0   | 119 | 119 | 119 | 119 |  | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |
| 1   | 111 | 108 | 104 | 101 |  | 109 | 105 | 102 | 100 |  | 101 | 99  | 96  |  | 97  | 95  | 94  |  | 94  | 92  | 91  |
| 2   | 104 | 97  | 92  | 87  |  | 101 | 95  | 90  | 86  |  | 92  | 88  | 84  |  | 89  | 85  | 82  |  | 86  | 83  | 81  |
| 3   | 97  | 88  | 82  | 76  |  | 94  | 87  | 81  | 76  |  | 84  | 79  | 75  |  | 81  | 77  | 73  |  | 79  | 75  | 72  |
| 4   | 90  | 80  | 73  | 68  |  | 88  | 79  | 73  | 67  |  | 77  | 71  | 67  |  | 75  | 70  | 66  |  | 73  | 68  | 65  |
| 5   | 84  | 74  | 66  | 61  |  | 82  | 73  | 66  | 61  |  | 71  | 65  | 60  |  | 69  | 64  | 59  |  | 67  | 63  | 59  |
| 6   | 79  | 68  | 61  | 55  |  | 77  | 67  | 60  | 55  |  | 65  | 59  | 55  |  | 64  | 58  | 54  |  | 62  | 58  | 54  |
| 7   | 74  | 63  | 55  | 50  |  | 73  | 62  | 55  | 50  |  | 61  | 54  | 50  |  | 59  | 54  | 50  |  | 58  | 53  | 49  |
| 8   | 70  | 58  | 51  | 46  |  | 69  | 58  | 51  | 46  |  | 57  | 50  | 46  |  | 55  | 50  | 46  |  | 54  | 49  | 45  |
| 9   | 66  | 54  | 47  | 43  |  | 65  | 54  | 47  | 42  |  | 53  | 47  | 42  |  | 52  | 46  | 42  |  | 51  | 46  | 42  |
| 10  | 62  | 51  | 44  | 39  |  | 61  | 50  | 44  | 39  |  | 49  | 43  | 39  |  | 49  | 43  | 39  |  | 48  | 43  | 39  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 169849 |
| 5°  | 169227 |
| 10° | 166408 |
| 15° | 163469 |
| 20° | 157823 |
| 25° | 149646 |
| 30° | 136122 |
| 35° | 108757 |
| 40° | 72565  |
| 45° | 51734  |
| 50° | 43103  |
| 55° | 37571  |
| 60° | 35491  |
| 65° | 33415  |
| 70° | 30694  |
| 75° | 28700  |
| 80° | 26077  |
| 85° | 22832  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 290.8  | 6.4       |
| 10°-20°   | 808.7  | 17.7      |
| 20°-30°   | 1130.1 | 24.8      |
| 30°-40°   | 995.5  | 21.8      |
| 40°-50°   | 537.9  | 11.8      |
| 50°-60°   | 359.7  | 7.9       |
| 60°-70°   | 254.9  | 5.6       |
| 70°-80°   | 143.3  | 3.1       |
| 80°-90°   | 41.8   | 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°    | 2229.7 | 48.9      |
| 0°-40°    | 3225.3 | 70.7      |
| 0°-60°    | 4122.8 | 90.4      |
| 0°-90°    | 4562.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4562.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 3098 |      |
| 5°  | 3075 | 291  |
| 15° | 2880 | 809  |
| 25° | 2474 | 1130 |
| 35° | 1625 | 996  |
| 45° | 667  | 538  |
| 55° | 393  | 360  |
| 65° | 258  | 255  |
| 75° | 136  | 143  |
| 85° | 36   | 42   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 3098.3 |
| 2.5°  | 3081.8 |
| 5°    | 3075.2 |
| 7.5°  | 3045.6 |
| 10°   | 2989.4 |
| 12.5° | 2936.5 |
| 15°   | 2880.3 |
| 17.5° | 2804.3 |
| 20°   | 2705.3 |
| 22.5° | 2596.3 |
| 25°   | 2474.0 |
| 27.5° | 2332.0 |
| 30°   | 2150.4 |
| 32.5° | 1925.7 |
| 35°   | 1625.1 |
| 37.5° | 1298.2 |
| 40°   | 1014.0 |
| 42.5° | 799.3  |
| 45°   | 667.3  |
| 47.5° | 578.1  |
| 50°   | 505.4  |
| 52.5° | 446.0  |
| 55°   | 393.1  |
| 57.5° | 356.8  |
| 60°   | 323.7  |
| 62.5° | 290.7  |
| 65°   | 257.6  |
| 67.5° | 224.6  |
| 70°   | 191.5  |
| 72.5° | 161.8  |
| 75°   | 135.5  |
| 77.5° | 108.9  |
| 80°   | 82.6   |
| 82.5° | 59.5   |
| 85°   | 36.3   |
| 87.5° | 16.5   |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)