

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: P580408

Luminaire Tested: **HC435D010-HM43040827-41MDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580408  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-6)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC435D010-HM43040827-41MDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

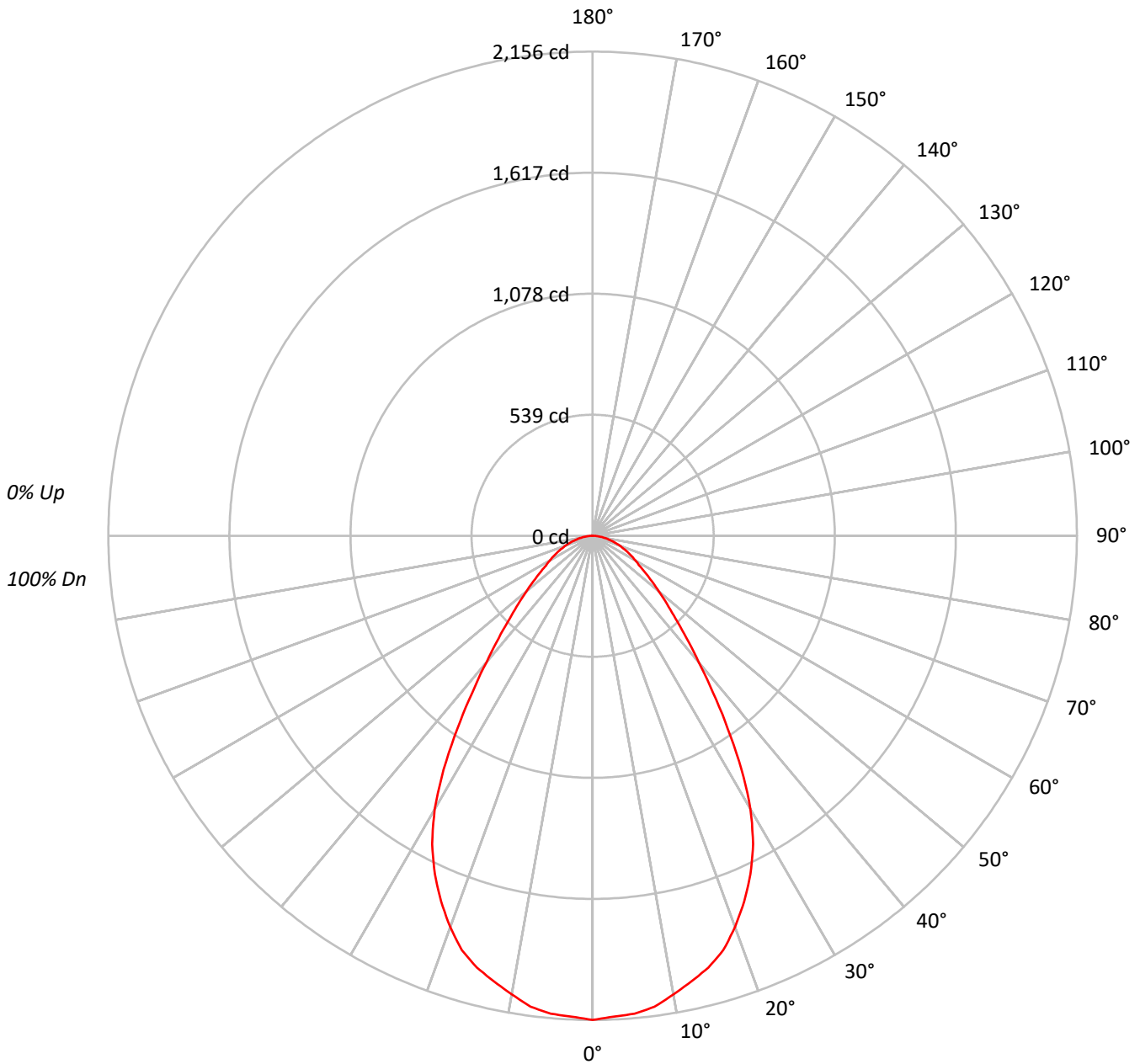
Lumens per Lamp: N/A  
Luminaire Lumens: 3136.7 lumens  
Efficiency: N/A  
Efficacy: 93.1 lumens/watt  
Spacing Criteria (0/90/45): 1.04 / 1.04 / 1.01  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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  | 97  | 97  | 95  | 94  | 94  | 92  | 91  | 89  |    |    | 89  |
| 2   | 104 | 97  | 92  | 87  | 101 | 95  | 90  | 86  | 92  | 88  | 84  | 89  | 85  | 82  | 86  | 83  | 81  | 79  |    |    | 79  |
| 3   | 97  | 88  | 82  | 76  | 94  | 87  | 81  | 76  | 84  | 79  | 75  | 81  | 77  | 73  | 79  | 75  | 72  | 70  |    |    | 70  |
| 4   | 90  | 80  | 73  | 68  | 88  | 79  | 73  | 67  | 77  | 71  | 67  | 75  | 70  | 66  | 73  | 68  | 65  | 63  |    |    | 63  |
| 5   | 84  | 74  | 66  | 61  | 82  | 73  | 66  | 61  | 71  | 65  | 60  | 69  | 64  | 59  | 67  | 63  | 59  | 57  |    |    | 57  |
| 6   | 79  | 68  | 60  | 55  | 77  | 67  | 60  | 55  | 65  | 59  | 54  | 64  | 58  | 54  | 62  | 57  | 54  | 52  |    |    | 52  |
| 7   | 74  | 63  | 55  | 50  | 73  | 62  | 55  | 50  | 61  | 54  | 50  | 59  | 54  | 49  | 58  | 53  | 49  | 47  |    |    | 47  |
| 8   | 70  | 58  | 51  | 46  | 68  | 58  | 51  | 46  | 56  | 50  | 46  | 55  | 50  | 45  | 54  | 49  | 45  | 44  |    |    | 44  |
| 9   | 66  | 54  | 47  | 42  | 65  | 54  | 47  | 42  | 53  | 46  | 42  | 52  | 46  | 42  | 51  | 46  | 42  | 40  |    |    | 40  |
| 10  | 62  | 51  | 44  | 39  | 61  | 50  | 44  | 39  | 49  | 43  | 39  | 48  | 43  | 39  | 48  | 42  | 39  | 37  |    |    | 37  |

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

|     | 0°     |
|-----|--------|
| 0°  | 265921 |
| 5°  | 264522 |
| 10° | 259690 |
| 15° | 254219 |
| 20° | 243346 |
| 25° | 226275 |
| 30° | 200267 |
| 35° | 158061 |
| 40° | 118283 |
| 45° | 90986  |
| 50° | 73802  |
| 55° | 61224  |
| 60° | 54149  |
| 65° | 50112  |
| 70° | 46234  |
| 75° | 42462  |
| 80° | 38570  |
| 85° | 30711  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 202.0  | 6.4       |
| 10°-20°   | 558.3  | 17.8      |
| 20°-30°   | 758.1  | 24.2      |
| 30°-40°   | 656.7  | 20.9      |
| 40°-50°   | 412.3  | 13.1      |
| 50°-60°   | 259.3  | 8.3       |
| 60°-70°   | 170.4  | 5.4       |
| 70°-80°   | 94.0   | 3.0       |
| 80°-90°   | 25.7   | 0.8       |
| 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°    | 1518.3 | 48.4      |
| 0°-40°    | 2175.0 | 69.3      |
| 0°-60°    | 2846.6 | 90.8      |
| 0°-90°    | 3136.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3136.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2156 |      |
| 5°  | 2136 | 202  |
| 15° | 1991 | 558  |
| 25° | 1663 | 758  |
| 35° | 1050 | 657  |
| 45° | 522  | 412  |
| 55° | 285  | 259  |
| 65° | 172  | 170  |
| 75° | 89   | 94   |
| 85° | 22   | 26   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 2155.9 |
| 2.5°  | 2142.9 |
| 5°    | 2136.4 |
| 7.5°  | 2114.7 |
| 10°   | 2073.4 |
| 12.5° | 2032.1 |
| 15°   | 1990.8 |
| 17.5° | 1934.3 |
| 20°   | 1853.9 |
| 22.5° | 1762.7 |
| 25°   | 1662.6 |
| 27.5° | 1547.4 |
| 30°   | 1406.1 |
| 32.5° | 1234.5 |
| 35°   | 1049.7 |
| 37.5° | 880.2  |
| 40°   | 734.6  |
| 42.5° | 619.4  |
| 45°   | 521.6  |
| 47.5° | 447.7  |
| 50°   | 384.6  |
| 52.5° | 330.3  |
| 55°   | 284.7  |
| 57.5° | 245.6  |
| 60°   | 219.5  |
| 62.5° | 195.6  |
| 65°   | 171.7  |
| 67.5° | 147.8  |
| 70°   | 128.2  |
| 72.5° | 106.4  |
| 75°   | 89.1   |
| 77.5° | 69.6   |
| 80°   | 54.3   |
| 82.5° | 37.0   |
| 85°   | 21.7   |
| 87.5° | 8.7    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)