

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: P584478

Luminaire Tested: **HC835D010-HM82555935-81NDW**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584478  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC835D010-HM82555935-81NDW  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" NARROW DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3451.3 lumens  
Efficiency: N/A  
Efficacy: 102.4 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.06 / 0.92  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

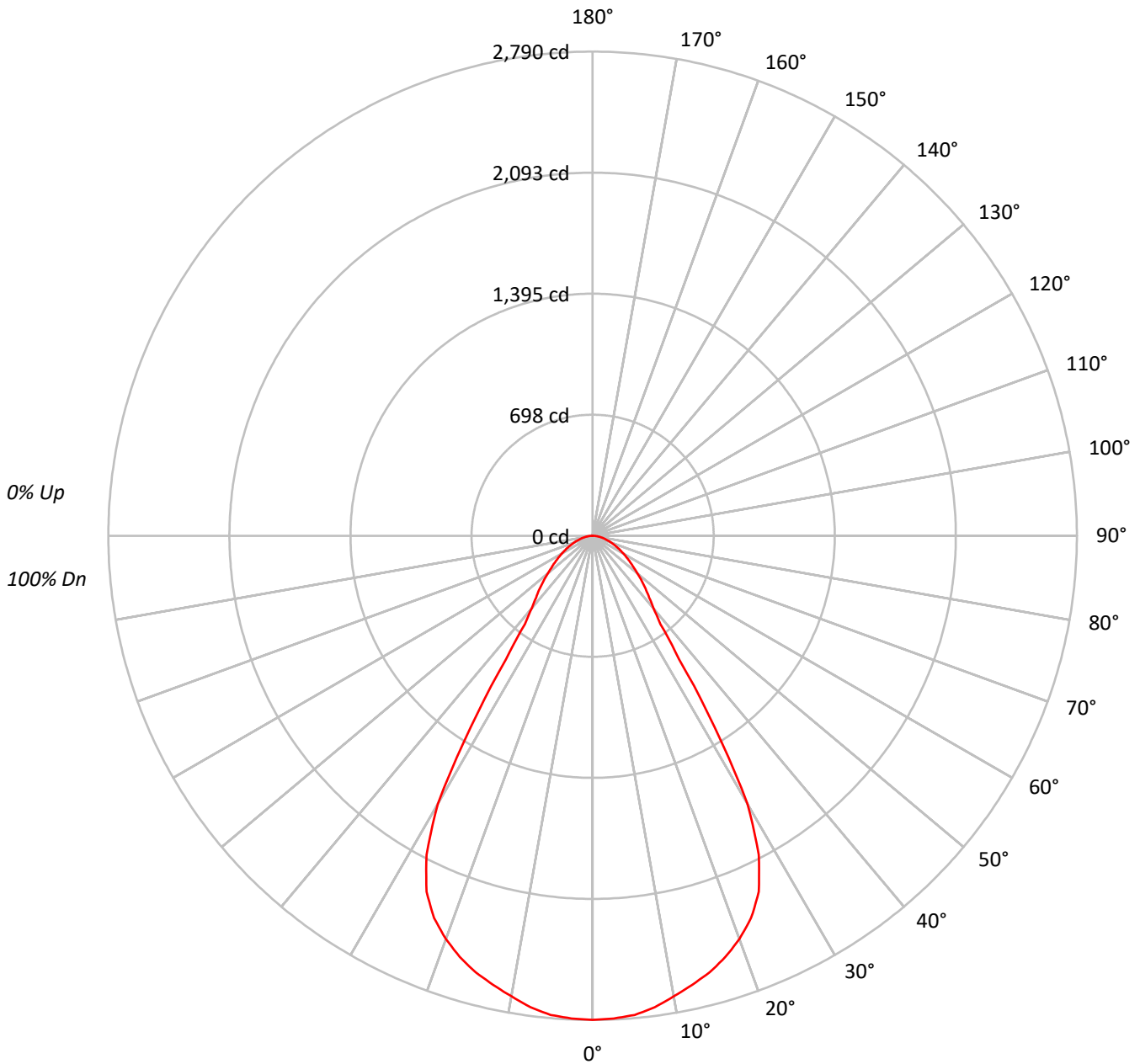
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98  | 98  | 96  | 95  | 95  | 93  | 92  | 90  |    |    | 90  |
| 2   | 105 | 99  | 94  | 90  | 102 | 97  | 92  | 88  | 94  | 90  | 87  | 91  | 87  | 85  | 88  | 85  | 83  | 81  |    |    | 81  |
| 3   | 98  | 90  | 84  | 79  | 96  | 89  | 83  | 79  | 86  | 81  | 77  | 84  | 80  | 76  | 81  | 78  | 75  | 73  |    |    | 73  |
| 4   | 92  | 83  | 76  | 71  | 90  | 82  | 76  | 71  | 80  | 74  | 70  | 77  | 73  | 69  | 75  | 72  | 68  | 67  |    |    | 67  |
| 5   | 87  | 77  | 70  | 65  | 85  | 76  | 69  | 64  | 74  | 68  | 64  | 72  | 67  | 63  | 70  | 66  | 63  | 61  |    |    | 61  |
| 6   | 82  | 71  | 64  | 59  | 80  | 70  | 64  | 59  | 69  | 63  | 58  | 67  | 62  | 58  | 66  | 61  | 58  | 56  |    |    | 56  |
| 7   | 77  | 66  | 59  | 54  | 76  | 66  | 59  | 54  | 64  | 58  | 54  | 63  | 58  | 54  | 62  | 57  | 53  | 52  |    |    | 52  |
| 8   | 73  | 62  | 55  | 50  | 71  | 61  | 55  | 50  | 60  | 54  | 50  | 59  | 54  | 50  | 58  | 53  | 49  | 48  |    |    | 48  |
| 9   | 69  | 58  | 51  | 47  | 68  | 57  | 51  | 47  | 56  | 51  | 46  | 55  | 50  | 46  | 55  | 50  | 46  | 45  |    |    | 45  |
| 10  | 65  | 55  | 48  | 44  | 64  | 54  | 48  | 44  | 53  | 47  | 43  | 52  | 47  | 43  | 52  | 47  | 43  | 42  |    |    | 42  |

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

|     |       |
|-----|-------|
|     | 0°    |
| 0°  | 86024 |
| 5°  | 85795 |
| 10° | 84364 |
| 15° | 83134 |
| 20° | 81139 |
| 25° | 77020 |
| 30° | 63529 |
| 35° | 32709 |
| 40° | 21898 |
| 45° | 18778 |
| 50° | 16200 |
| 55° | 14139 |
| 60° | 12563 |
| 65° | 11288 |
| 70° | 10233 |
| 75° | 9222  |
| 80° | 8240  |
| 85° | 8208  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 262.1  | 7.6       |
| 10°-20°   | 732.7  | 21.2      |
| 20°-30°   | 1015.1 | 29.4      |
| 30°-40°   | 609.7  | 17.7      |
| 40°-50°   | 333.8  | 9.7       |
| 50°-60°   | 237.1  | 6.9       |
| 60°-70°   | 153.9  | 4.5       |
| 70°-80°   | 82.3   | 2.4       |
| 80°-90°   | 24.5   | 0.7       |
| 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°    | 2009.8 | 58.2      |
| 0°-40°    | 2619.6 | 75.9      |
| 0°-60°    | 3190.5 | 92.4      |
| 0°-90°    | 3451.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3451.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2790 |      |
| 5°  | 2772 | 262  |
| 15° | 2604 | 733  |
| 25° | 2264 | 1015 |
| 35° | 869  | 610  |
| 45° | 431  | 334  |
| 55° | 263  | 237  |
| 65° | 155  | 154  |
| 75° | 77   | 82   |
| 85° | 23   | 25   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 2789.7 |
| 2.5°  | 2784.5 |
| 5°    | 2771.7 |
| 7.5°  | 2740.7 |
| 10°   | 2694.3 |
| 12.5° | 2650.5 |
| 15°   | 2604.1 |
| 17.5° | 2544.8 |
| 20°   | 2472.6 |
| 22.5° | 2385.0 |
| 25°   | 2263.7 |
| 27.5° | 2072.9 |
| 30°   | 1784.2 |
| 32.5° | 1307.1 |
| 35°   | 868.9  |
| 37.5° | 642.0  |
| 40°   | 544.0  |
| 42.5° | 482.2  |
| 45°   | 430.6  |
| 47.5° | 381.6  |
| 50°   | 337.7  |
| 52.5° | 296.5  |
| 55°   | 263.0  |
| 57.5° | 232.1  |
| 60°   | 203.7  |
| 62.5° | 177.9  |
| 65°   | 154.7  |
| 67.5° | 131.5  |
| 70°   | 113.5  |
| 72.5° | 92.8   |
| 75°   | 77.4   |
| 77.5° | 61.9   |
| 80°   | 46.4   |
| 82.5° | 33.5   |
| 85°   | 23.2   |
| 87.5° | 10.3   |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)