

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: P593815

Luminaire Tested: **HC850D010-HM82555950-81PSMDW**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P593815  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-12)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC850D010-HM82555950-81PSMDW  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" PLASTIC TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5503.8 lumens  
Efficiency: N/A  
Efficacy: 114.7 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.06 / 0.97  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

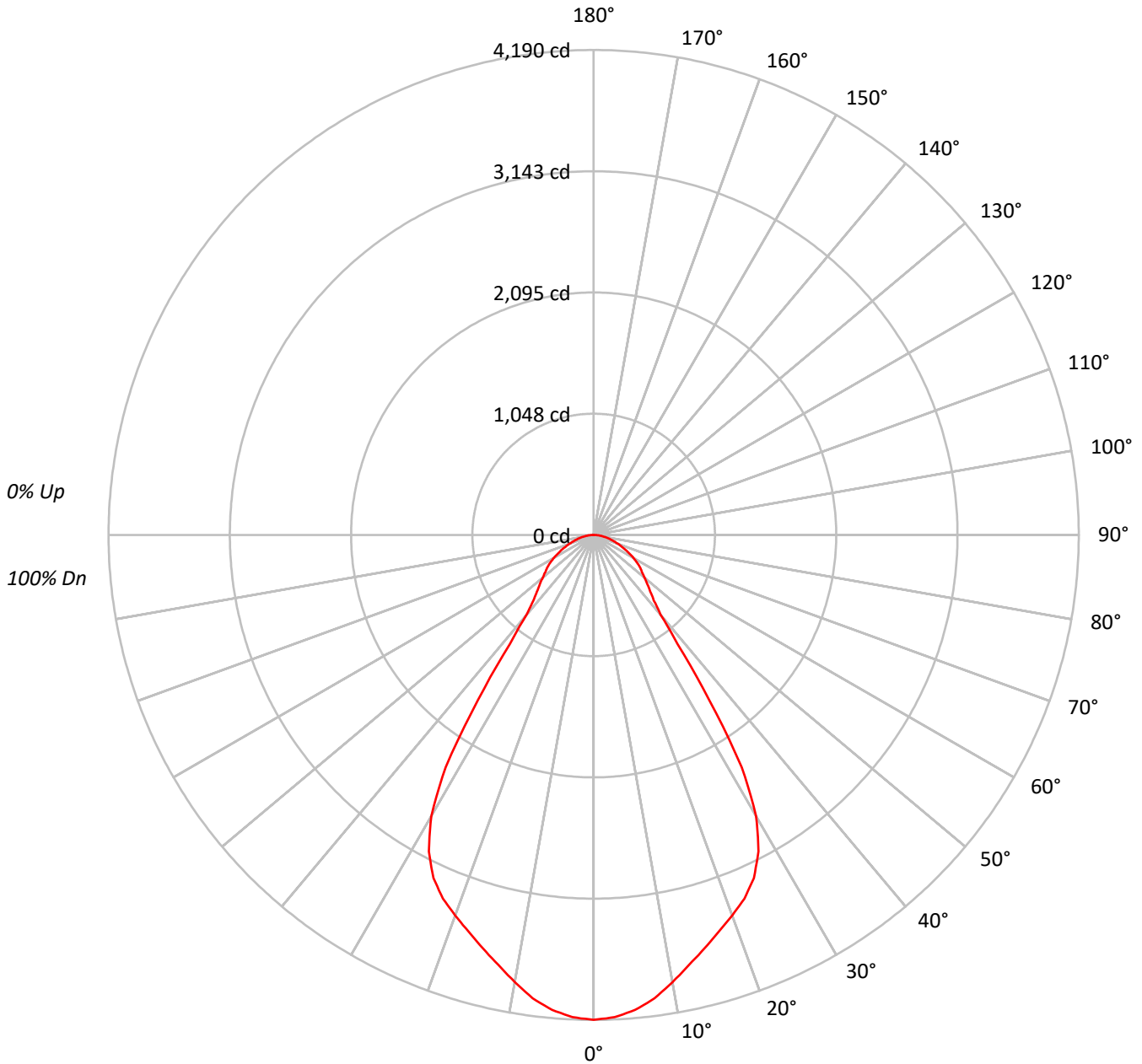
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 111 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 101 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 91  | 89  |    |    | 89  |
| 2   | 104 | 98  | 92  | 88  | 102 | 96  | 91  | 87  | 92  | 88  | 85  | 89  | 86  | 83  | 86  | 84  | 81  | 79  |    |    | 79  |
| 3   | 97  | 89  | 83  | 77  | 95  | 87  | 82  | 77  | 85  | 80  | 76  | 82  | 78  | 74  | 80  | 76  | 73  | 71  |    |    | 71  |
| 4   | 91  | 81  | 74  | 69  | 89  | 80  | 74  | 69  | 78  | 72  | 68  | 76  | 71  | 67  | 74  | 70  | 66  | 64  |    |    | 64  |
| 5   | 85  | 75  | 68  | 62  | 83  | 74  | 67  | 62  | 72  | 66  | 61  | 70  | 65  | 61  | 68  | 64  | 60  | 58  |    |    | 58  |
| 6   | 80  | 69  | 62  | 57  | 78  | 68  | 61  | 56  | 67  | 61  | 56  | 65  | 60  | 56  | 64  | 59  | 55  | 53  |    |    | 53  |
| 7   | 75  | 64  | 57  | 52  | 74  | 63  | 57  | 52  | 62  | 56  | 51  | 61  | 55  | 51  | 60  | 55  | 51  | 49  |    |    | 49  |
| 8   | 71  | 60  | 53  | 48  | 70  | 59  | 52  | 48  | 58  | 52  | 47  | 57  | 51  | 47  | 56  | 51  | 47  | 45  |    |    | 45  |
| 9   | 67  | 56  | 49  | 44  | 66  | 55  | 49  | 44  | 54  | 48  | 44  | 53  | 48  | 44  | 52  | 47  | 44  | 42  |    |    | 42  |
| 10  | 64  | 52  | 46  | 41  | 62  | 52  | 45  | 41  | 51  | 45  | 41  | 50  | 45  | 41  | 49  | 44  | 41  | 39  |    |    | 39  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 129192 |
| 5°  | 127506 |
| 10° | 122837 |
| 15° | 118033 |
| 20° | 114768 |
| 25° | 111317 |
| 30° | 99891  |
| 35° | 65482  |
| 40° | 36200  |
| 45° | 30178  |
| 50° | 27517  |
| 55° | 26262  |
| 60° | 24429  |
| 65° | 22145  |
| 70° | 20024  |
| 75° | 18074  |
| 80° | 16426  |
| 85° | 15709  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 387.0  | 7.0       |
| 10°-20°   | 1043.1 | 19.0      |
| 20°-30°   | 1484.5 | 27.0      |
| 30°-40°   | 1098.7 | 20.0      |
| 40°-50°   | 544.2  | 9.9       |
| 50°-60°   | 434.3  | 7.9       |
| 60°-70°   | 301.5  | 5.5       |
| 70°-80°   | 162.5  | 3.0       |
| 80°-90°   | 47.8   | 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°    | 2914.7 | 53.0      |
| 0°-40°    | 4013.4 | 72.9      |
| 0°-60°    | 4991.9 | 90.7      |
| 0°-90°    | 5503.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5503.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 4190 |      |
| 5°  | 4119 | 387  |
| 15° | 3697 | 1043 |
| 25° | 3272 | 1485 |
| 35° | 1740 | 1099 |
| 45° | 692  | 544  |
| 55° | 488  | 434  |
| 65° | 304  | 302  |
| 75° | 152  | 163  |
| 85° | 44   | 48   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 4189.6 |
| 2.5°  | 4171.0 |
| 5°    | 4119.2 |
| 7.5°  | 4037.8 |
| 10°   | 3923.0 |
| 12.5° | 3804.6 |
| 15°   | 3697.3 |
| 17.5° | 3593.7 |
| 20°   | 3497.4 |
| 22.5° | 3401.2 |
| 25°   | 3271.7 |
| 27.5° | 3082.9 |
| 30°   | 2805.4 |
| 32.5° | 2379.7 |
| 35°   | 1739.5 |
| 37.5° | 1188.1 |
| 40°   | 899.3  |
| 42.5° | 769.8  |
| 45°   | 692.0  |
| 47.5° | 629.2  |
| 50°   | 573.6  |
| 52.5° | 525.6  |
| 55°   | 488.5  |
| 57.5° | 444.1  |
| 60°   | 396.1  |
| 62.5° | 347.9  |
| 65°   | 303.5  |
| 67.5° | 259.1  |
| 70°   | 222.1  |
| 72.5° | 185.1  |
| 75°   | 151.7  |
| 77.5° | 122.2  |
| 80°   | 92.5   |
| 82.5° | 66.6   |
| 85°   | 44.4   |
| 87.5° | 18.5   |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)