

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: P580659

Luminaire Tested: **HC440D010-HM43040935-41WDC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580659  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-7)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC440D010-HM43040935-41WDC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4124.4 lumens  
Efficiency: N/A  
Efficacy: 100.6 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.11  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

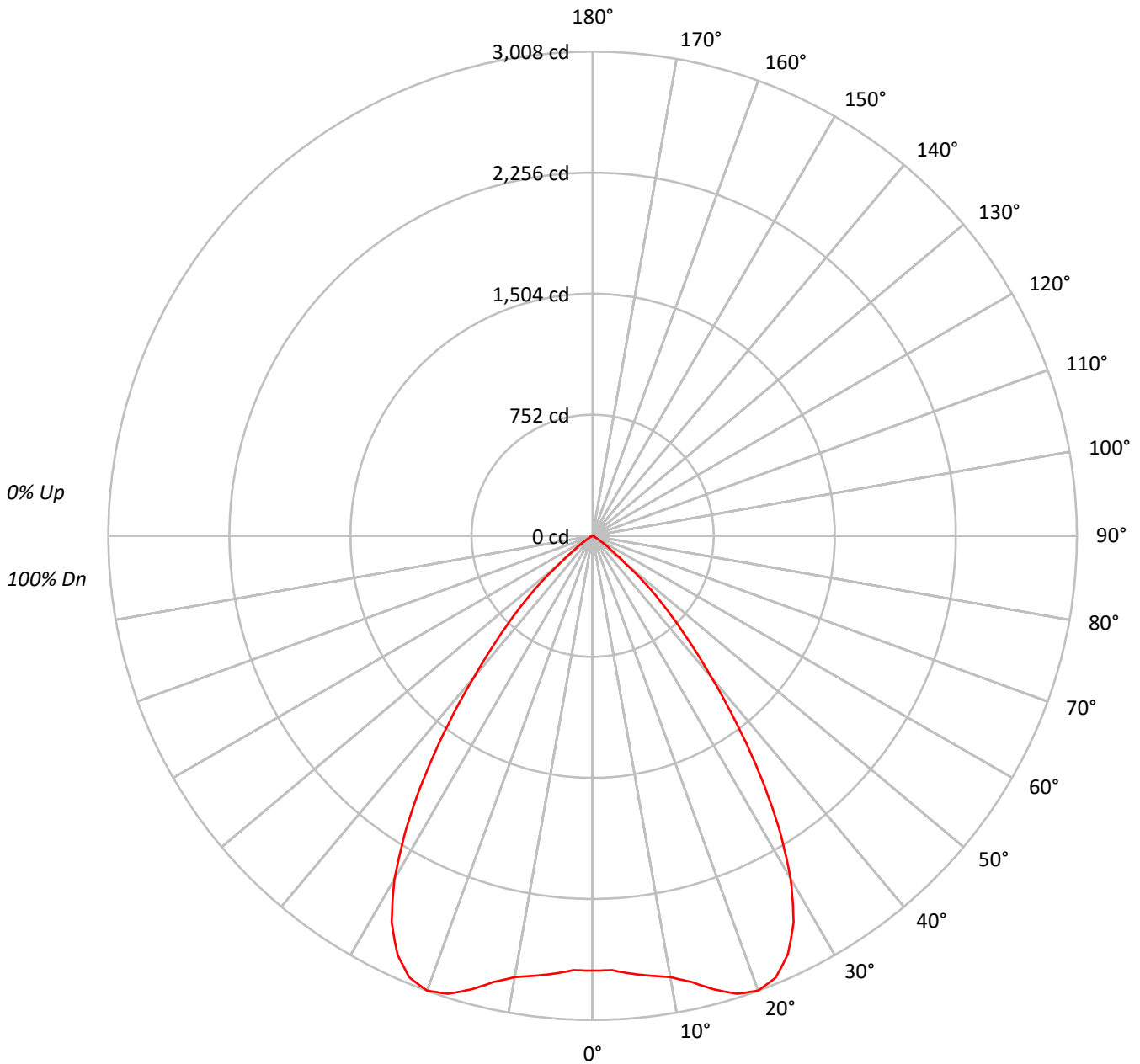
Input Watts (W): 41  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 100 | 100 |
| 1   | 113 | 110 | 107 | 105 | 110 | 108 | 105 | 103 | 104 | 102 | 100 | 100 | 98  | 97  | 97  | 95  | 94  | 92  | 92  | 92  | 92  |
| 2   | 107 | 101 | 97  | 93  | 104 | 100 | 96  | 92  | 96  | 93  | 90  | 93  | 91  | 88  | 91  | 88  | 86  | 85  | 85  | 85  | 85  |
| 3   | 101 | 93  | 88  | 84  | 98  | 92  | 87  | 83  | 89  | 85  | 82  | 87  | 83  | 80  | 85  | 82  | 79  | 77  | 77  | 77  | 77  |
| 4   | 95  | 86  | 80  | 76  | 93  | 85  | 79  | 75  | 83  | 78  | 74  | 81  | 77  | 73  | 79  | 75  | 72  | 71  | 71  | 71  | 71  |
| 5   | 89  | 80  | 73  | 69  | 87  | 79  | 73  | 68  | 77  | 72  | 68  | 75  | 71  | 67  | 74  | 70  | 66  | 65  | 65  | 65  | 65  |
| 6   | 84  | 74  | 67  | 63  | 82  | 73  | 67  | 62  | 72  | 66  | 62  | 70  | 65  | 62  | 69  | 65  | 61  | 60  | 60  | 60  | 60  |
| 7   | 79  | 69  | 62  | 57  | 78  | 68  | 62  | 57  | 67  | 61  | 57  | 65  | 60  | 57  | 64  | 60  | 56  | 55  | 55  | 55  | 55  |
| 8   | 75  | 64  | 57  | 53  | 73  | 63  | 57  | 53  | 62  | 57  | 53  | 61  | 56  | 52  | 60  | 56  | 52  | 51  | 51  | 51  | 51  |
| 9   | 70  | 60  | 53  | 49  | 69  | 59  | 53  | 49  | 58  | 53  | 49  | 57  | 52  | 48  | 56  | 52  | 48  | 47  | 47  | 47  | 47  |
| 10  | 67  | 56  | 50  | 45  | 66  | 55  | 49  | 45  | 55  | 49  | 45  | 54  | 49  | 45  | 53  | 48  | 45  | 43  | 43  | 43  | 43  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 333194 |
| 5°  | 338069 |
| 10° | 348679 |
| 15° | 372568 |
| 20° | 394769 |
| 25° | 390462 |
| 30° | 350442 |
| 35° | 272740 |
| 40° | 184782 |
| 45° | 115355 |
| 50° | 49930  |
| 55° | 16731  |
| 60° | 4194   |
| 65° | 2860   |
| 70° | 1731   |
| 75° | 1191   |
| 80° | 1776   |
| 85° | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 262.3  | 6.4       |
| 10°-20°   | 828.2  | 20.1      |
| 20°-30°   | 1297.7 | 31.5      |
| 30°-40°   | 1120.0 | 27.2      |
| 40°-50°   | 515.0  | 12.5      |
| 50°-60°   | 87.5   | 2.1       |
| 60°-70°   | 9.9    | 0.2       |
| 70°-80°   | 3.5    | 0.1       |
| 80°-90°   | 0.3    | 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°    | 2388.2 | 57.9      |
| 0°-40°    | 3508.2 | 85.1      |
| 0°-60°    | 4110.7 | 99.7      |
| 0°-90°    | 4124.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4124.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2701 |      |
| 5°  | 2730 | 262  |
| 15° | 2918 | 828  |
| 25° | 2869 | 1298 |
| 35° | 1811 | 1120 |
| 45° | 661  | 515  |
| 55° | 78   | 87   |
| 65° | 10   | 10   |
| 75° | 2    | 4    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 2701.3 |
| 2.5°  | 2701.3 |
| 5°    | 2730.4 |
| 7.5°  | 2757.1 |
| 10°   | 2783.9 |
| 12.5° | 2839.8 |
| 15°   | 2917.6 |
| 17.5° | 2983.3 |
| 20°   | 3007.5 |
| 22.5° | 2971.1 |
| 25°   | 2869.0 |
| 27.5° | 2703.6 |
| 30°   | 2460.5 |
| 32.5° | 2154.2 |
| 35°   | 1811.3 |
| 37.5° | 1466.2 |
| 40°   | 1147.6 |
| 42.5° | 877.7  |
| 45°   | 661.3  |
| 47.5° | 464.4  |
| 50°   | 260.2  |
| 52.5° | 143.5  |
| 55°   | 77.8   |
| 57.5° | 38.9   |
| 60°   | 17.0   |
| 62.5° | 12.1   |
| 65°   | 9.8    |
| 67.5° | 7.3    |
| 70°   | 4.8    |
| 72.5° | 4.8    |
| 75°   | 2.5    |
| 77.5° | 2.5    |
| 80°   | 2.5    |
| 82.5° | 0.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)