

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: P579864

Luminaire Tested: **HC415D010-HM40525835-41WDBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579864  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-11)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC415D010-HM40525835-41WDBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1294.8 lumens  
Efficiency: N/A  
Efficacy: 92.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1.1 / 1.03  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

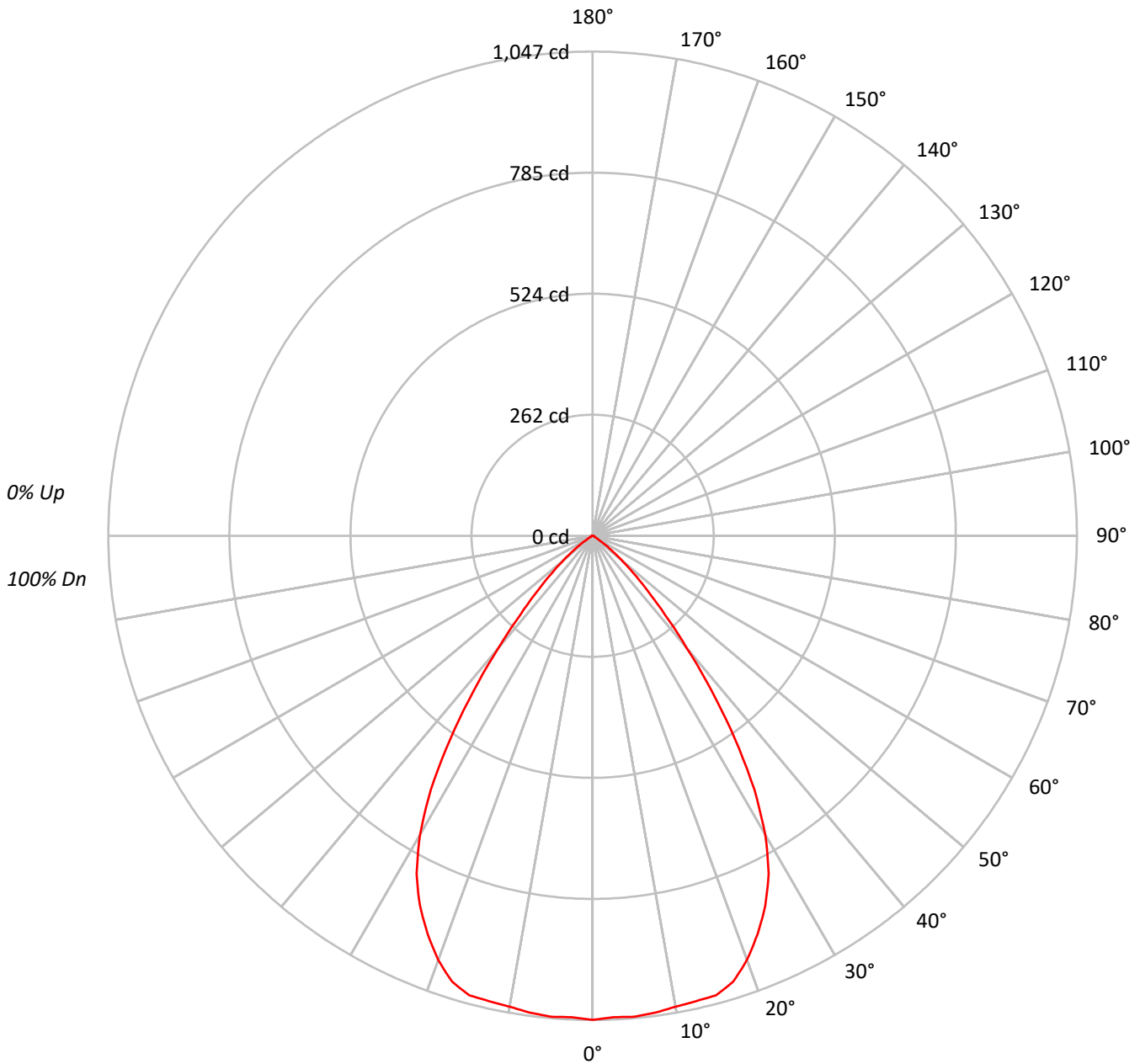
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 111 | 108 | 106 | 103 | 104 | 102 | 100 | 100 | 99  | 97  | 97  | 96  | 94  | 93  | 93  | 93  | 93  |
| 2   | 107 | 102 | 97  | 94  | 105 | 100 | 96  | 93  | 97  | 93  | 91  | 94  | 91  | 89  | 91  | 89  | 87  | 85  | 85  | 85  | 85  |
| 3   | 101 | 94  | 89  | 84  | 99  | 93  | 88  | 84  | 90  | 86  | 82  | 87  | 84  | 81  | 85  | 82  | 80  | 78  | 78  | 78  | 78  |
| 4   | 95  | 87  | 81  | 77  | 93  | 86  | 80  | 76  | 84  | 79  | 75  | 82  | 78  | 74  | 80  | 76  | 73  | 72  | 72  | 72  | 72  |
| 5   | 90  | 81  | 75  | 70  | 88  | 80  | 74  | 70  | 78  | 73  | 69  | 76  | 72  | 68  | 75  | 71  | 68  | 66  | 66  | 66  | 66  |
| 6   | 85  | 75  | 69  | 64  | 83  | 74  | 68  | 64  | 73  | 67  | 63  | 71  | 67  | 63  | 70  | 66  | 62  | 61  | 61  | 61  | 61  |
| 7   | 80  | 70  | 64  | 59  | 79  | 69  | 63  | 59  | 68  | 63  | 59  | 67  | 62  | 58  | 66  | 61  | 58  | 56  | 56  | 56  | 56  |
| 8   | 76  | 65  | 59  | 55  | 74  | 65  | 59  | 54  | 64  | 58  | 54  | 63  | 58  | 54  | 62  | 57  | 54  | 52  | 52  | 52  | 52  |
| 9   | 72  | 61  | 55  | 51  | 71  | 61  | 55  | 51  | 60  | 54  | 50  | 59  | 54  | 50  | 58  | 53  | 50  | 49  | 49  | 49  | 49  |
| 10  | 68  | 58  | 51  | 47  | 67  | 57  | 51  | 47  | 56  | 51  | 47  | 55  | 50  | 47  | 55  | 50  | 47  | 45  | 45  | 45  | 45  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 129118 |
| 5°  | 129252 |
| 10° | 129494 |
| 15° | 131387 |
| 20° | 128111 |
| 25° | 120201 |
| 30° | 106308 |
| 35° | 80845  |
| 40° | 50929  |
| 45° | 29253  |
| 50° | 15505  |
| 55° | 6430   |
| 60° | 1702   |
| 65° | 1459   |
| 70° | 1082   |
| 75° | 953    |
| 80° | 710    |
| 85° | 1415   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 99.3   | 7.7       |
| 10°-20°   | 288.1  | 22.3      |
| 20°-30°   | 402.1  | 31.1      |
| 30°-40°   | 330.9  | 25.6      |
| 40°-50°   | 136.3  | 10.5      |
| 50°-60°   | 30.7   | 2.4       |
| 60°-70°   | 4.9    | 0.4       |
| 70°-80°   | 1.8    | 0.1       |
| 80°-90°   | 0.7    | 0.1       |
| 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°    | 789.4  | 61.0      |
| 0°-40°    | 1120.3 | 86.5      |
| 0°-60°    | 1287.3 | 99.4      |
| 0°-90°    | 1294.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1294.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1047 |      |
| 5°  | 1044 | 99   |
| 15° | 1029 | 288  |
| 25° | 883  | 402  |
| 35° | 537  | 331  |
| 45° | 168  | 136  |
| 55° | 30   | 31   |
| 65° | 5    | 5    |
| 75° | 2    | 2    |
| 85° | 1    | 1    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 1046.8 |
| 2.5°  | 1041.9 |
| 5°    | 1043.9 |
| 7.5°  | 1039.9 |
| 10°   | 1033.9 |
| 12.5° | 1030.9 |
| 15°   | 1028.9 |
| 17.5° | 1010.9 |
| 20°   | 976.0  |
| 22.5° | 932.1  |
| 25°   | 883.2  |
| 27.5° | 824.3  |
| 30°   | 746.4  |
| 32.5° | 650.7  |
| 35°   | 536.9  |
| 37.5° | 422.2  |
| 40°   | 316.3  |
| 42.5° | 230.6  |
| 45°   | 167.7  |
| 47.5° | 119.7  |
| 50°   | 80.8   |
| 52.5° | 50.9   |
| 55°   | 29.9   |
| 57.5° | 15.0   |
| 60°   | 6.9    |
| 62.5° | 6.0    |
| 65°   | 5.0    |
| 67.5° | 4.0    |
| 70°   | 3.0    |
| 72.5° | 2.0    |
| 75°   | 2.0    |
| 77.5° | 1.0    |
| 80°   | 1.0    |
| 82.5° | 1.0    |
| 85°   | 1.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)