

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: P583801

Luminaire Tested: **HC810D010-HM80520935-81NDH**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583801  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC810D010-HM80520935-81NDH  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" NARROW DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1001.2 lumens  
Efficiency: N/A  
Efficacy: 101.1 lumens/watt  
Spacing Criteria (0/90/45): 0.42 / 0.42 / 0.57  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

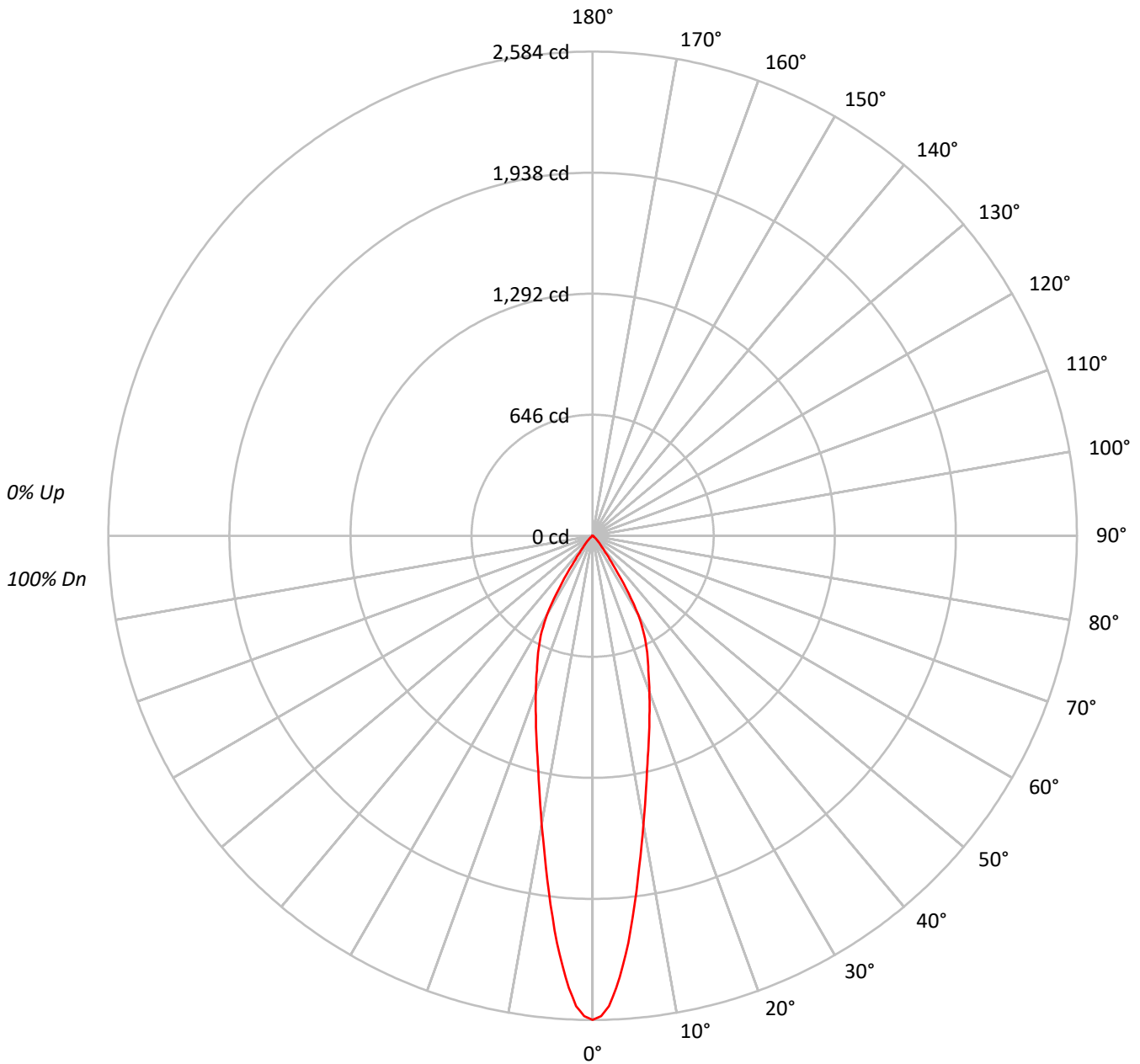
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 114 | 112 | 109 | 107 | 112 | 109 | 107 | 106 | 105 | 104 | 102 | 102 | 100 | 99  | 98  | 97  | 96  | 95  |    |    | 95  |
| 2   | 109 | 105 | 101 | 98  | 107 | 103 | 100 | 97  | 100 | 97  | 95  | 97  | 95  | 93  | 94  | 92  | 91  | 89  |    |    | 89  |
| 3   | 104 | 99  | 94  | 91  | 102 | 97  | 93  | 90  | 95  | 91  | 88  | 92  | 90  | 87  | 90  | 88  | 86  | 84  |    |    | 84  |
| 4   | 100 | 93  | 88  | 84  | 98  | 92  | 88  | 84  | 90  | 86  | 83  | 88  | 85  | 82  | 86  | 83  | 81  | 80  |    |    | 80  |
| 5   | 96  | 88  | 83  | 79  | 94  | 87  | 82  | 79  | 86  | 81  | 78  | 84  | 80  | 77  | 82  | 79  | 77  | 75  |    |    | 75  |
| 6   | 92  | 84  | 78  | 75  | 90  | 83  | 78  | 74  | 82  | 77  | 74  | 80  | 76  | 73  | 79  | 76  | 73  | 72  |    |    | 72  |
| 7   | 88  | 80  | 74  | 71  | 87  | 79  | 74  | 70  | 78  | 73  | 70  | 77  | 73  | 70  | 76  | 72  | 69  | 68  |    |    | 68  |
| 8   | 84  | 76  | 71  | 67  | 83  | 75  | 70  | 67  | 74  | 70  | 66  | 73  | 69  | 66  | 72  | 69  | 66  | 65  |    |    | 65  |
| 9   | 81  | 72  | 67  | 64  | 80  | 72  | 67  | 63  | 71  | 66  | 63  | 70  | 66  | 63  | 69  | 66  | 63  | 62  |    |    | 62  |
| 10  | 78  | 69  | 64  | 61  | 77  | 69  | 64  | 61  | 68  | 63  | 60  | 67  | 63  | 60  | 67  | 63  | 60  | 59  |    |    | 59  |

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

|     |       |
|-----|-------|
|     | 0°    |
| 0°  | 79672 |
| 5°  | 67502 |
| 10° | 48972 |
| 15° | 36777 |
| 20° | 29019 |
| 25° | 23405 |
| 30° | 17348 |
| 35° | 7028  |
| 40° | 2967  |
| 45° | 1587  |
| 50° | 715   |
| 55° | 360   |
| 60° | 228   |
| 65° | 168   |
| 70° | 126   |
| 75° | 83    |
| 80° | 124   |
| 85° | 248   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 187.2  | 18.7      |
| 10°-20°   | 323.6  | 32.3      |
| 20°-30°   | 312.8  | 31.2      |
| 30°-40°   | 137.4  | 13.7      |
| 40°-50°   | 29.7   | 3.0       |
| 50°-60°   | 6.7    | 0.7       |
| 60°-70°   | 2.3    | 0.2       |
| 70°-80°   | 0.8    | 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°    | 823.6  | 82.3      |
| 0°-40°    | 961.1  | 96.0      |
| 0°-60°    | 997.4  | 99.6      |
| 0°-90°    | 1001.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1001.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2584 |      |
| 5°  | 2181 | 187  |
| 15° | 1152 | 324  |
| 25° | 688  | 313  |
| 35° | 187  | 137  |
| 45° | 36   | 30   |
| 55° | 7    | 7    |
| 65° | 2    | 2    |
| 75° | 1    | 1    |
| 85° | 1    | 1    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 2583.7 |
| 1°    | 2564.3 |
| 2°    | 2511.6 |
| 3°    | 2416.4 |
| 4°    | 2302.6 |
| 5°    | 2180.7 |
| 6°    | 2047.5 |
| 7°    | 1913.6 |
| 8°    | 1788.0 |
| 9°    | 1671.1 |
| 10°   | 1564.0 |
| 11°   | 1463.0 |
| 12°   | 1372.2 |
| 13°   | 1289.6 |
| 14°   | 1216.8 |
| 15°   | 1152.0 |
| 17.5° | 1007.0 |
| 20°   | 884.3  |
| 22.5° | 776.5  |
| 25°   | 687.9  |
| 27.5° | 598.0  |
| 30°   | 487.2  |
| 32.5° | 330.9  |
| 35°   | 186.7  |
| 37.5° | 110.1  |
| 40°   | 73.7   |
| 42.5° | 52.0   |
| 45°   | 36.4   |
| 47.5° | 23.8   |
| 50°   | 14.9   |
| 52.5° | 8.9    |
| 55°   | 6.7    |
| 57.5° | 5.2    |
| 60°   | 3.7    |
| 62.5° | 3.0    |
| 65°   | 2.3    |
| 67.5° | 1.4    |
| 70°   | 1.4    |
| 72.5° | 0.7    |
| 75°   | 0.7    |
| 77.5° | 0.7    |
| 80°   | 0.7    |
| 82.5° | 0.7    |



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**CANDELA DISTRIBUTION (continued):**

0°  
90° | 0.0



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— 0°-180°







|       |  |     |
|-------|--|-----|
| 85°   |  | 0.7 |
| 87.5° |  | 0.7 |



(END OF REPORT)