

Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P580162

Luminaire Tested: **HCC4W25D010SL-HM40525835-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580162  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4W25D010SL-HM40525835-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

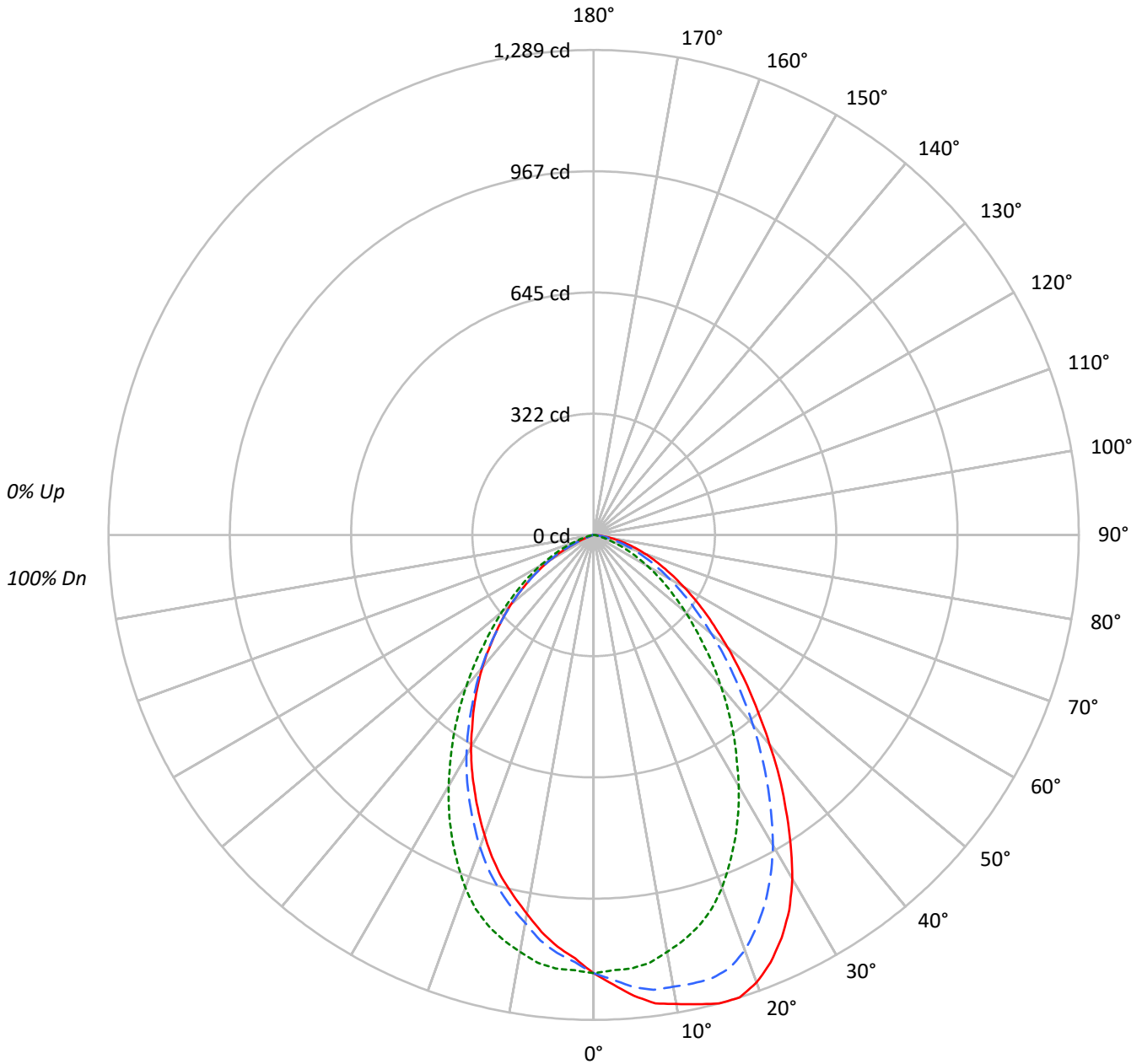
Lumens per Lamp: N/A  
Luminaire Lumens: 2012.2 lumens  
Efficiency: N/A  
Efficacy: 75.1 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 26.8  
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 |    |    |    |   |
| 1   | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99  | 97  | 97  | 95  | 94  | 94  | 92  | 91  | 89  |    |    |    |   |
| 2   | 103 | 97  | 91  | 87  | 101 | 95  | 90  | 86  | 92  | 87  | 84  | 88  | 85  | 82  | 85  | 83  | 80  | 78  |    |    |    |   |
| 3   | 96  | 87  | 80  | 75  | 94  | 86  | 79  | 74  | 83  | 78  | 73  | 80  | 76  | 72  | 78  | 74  | 71  | 69  |    |    |    |   |
| 4   | 89  | 79  | 72  | 66  | 87  | 78  | 71  | 65  | 75  | 69  | 65  | 73  | 68  | 64  | 71  | 67  | 63  | 61  |    |    |    |   |
| 5   | 83  | 72  | 64  | 58  | 81  | 71  | 64  | 58  | 69  | 62  | 58  | 67  | 61  | 57  | 65  | 60  | 56  | 55  |    |    |    |   |
| 6   | 77  | 66  | 58  | 52  | 75  | 65  | 57  | 52  | 63  | 57  | 52  | 61  | 56  | 51  | 60  | 55  | 51  | 49  |    |    |    |   |
| 7   | 72  | 60  | 53  | 47  | 71  | 59  | 52  | 47  | 58  | 51  | 47  | 57  | 51  | 46  | 55  | 50  | 46  | 44  |    |    |    |   |
| 8   | 68  | 56  | 48  | 43  | 66  | 55  | 48  | 43  | 54  | 47  | 42  | 53  | 47  | 42  | 51  | 46  | 42  | 40  |    |    |    |   |
| 9   | 64  | 52  | 44  | 39  | 62  | 51  | 44  | 39  | 50  | 43  | 39  | 49  | 43  | 39  | 48  | 43  | 39  | 37  |    |    |    |   |
| 10  | 60  | 48  | 41  | 36  | 59  | 47  | 41  | 36  | 46  | 40  | 36  | 46  | 40  | 36  | 45  | 39  | 36  | 34  |    |    |    |   |

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

|     | 0°     | 90°    | 180°   |
|-----|--------|--------|--------|
| 0°  | 143685 | 143685 | 143685 |
| 5°  | 152233 | 143219 | 136025 |
| 10° | 158552 | 140930 | 128054 |
| 15° | 164627 | 137542 | 120393 |
| 20° | 166164 | 130947 | 111362 |
| 25° | 160798 | 121113 | 101937 |
| 30° | 150332 | 109740 | 92749  |
| 35° | 133999 | 97559  | 83329  |
| 40° | 117123 | 84839  | 74164  |
| 45° | 102028 | 71973  | 64158  |
| 50° | 89038  | 61060  | 55015  |
| 55° | 78040  | 50600  | 44558  |
| 60° | 68259  | 40877  | 32687  |
| 65° | 59481  | 30470  | 18387  |
| 70° | 52004  | 19691  | 5987   |
| 75° | 42653  | 10294  | 1573   |
| 80° | 31751  | 4759   | 1208   |
| 85° | 18681  | 2406   | 2406   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 109.9  | 5.5       |
| 10°-20°   | 307.7  | 15.3      |
| 20°-30°   | 425.4  | 21.1      |
| 30°-40°   | 427.8  | 21.3      |
| 40°-50°   | 345.2  | 17.2      |
| 50°-60°   | 233.4  | 11.6      |
| 60°-70°   | 118.8  | 5.9       |
| 70°-80°   | 38.0   | 1.9       |
| 80°-90°   | 5.8    | 0.3       |
| 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°    | 843.1  | 41.9      |
| 0°-40°    | 1270.9 | 63.2      |
| 0°-60°    | 1849.5 | 91.9      |
| 0°-90°    | 2012.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2012.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 1165 | 1165 | 1165 | 1165 | 1165 |      |
| 5°  | 1230 | 1206 | 1157 | 1115 | 1099 | 118  |
| 15° | 1289 | 1220 | 1077 | 974  | 943  | 363  |
| 25° | 1182 | 1079 | 890  | 780  | 749  | 541  |
| 35° | 890  | 804  | 648  | 567  | 553  | 556  |
| 45° | 585  | 524  | 413  | 368  | 368  | 453  |
| 55° | 363  | 313  | 235  | 206  | 207  | 326  |
| 65° | 204  | 166  | 104  | 68   | 63   | 204  |
| 75° | 90   | 63   | 22   | 5    | 3    | 96   |
| 85° | 13   | 7    | 2    | 2    | 2    | 18   |
| 90° | 0    | 0    | 0    | 0    | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1164.9 | 1164.9 | 1164.9 | 1164.9 | 1164.9 | 1164.9 | 1164.9 | 1164.9 | 1164.9 |
| 2.5°  | 1196.4 | 1189.7 | 1183.1 | 1171.6 | 1158.2 | 1145.0 | 1136.7 | 1130.1 | 1126.7 |
| 5°    | 1229.5 | 1221.2 | 1206.3 | 1181.5 | 1156.7 | 1133.4 | 1115.2 | 1103.6 | 1098.6 |
| 7.5°  | 1256.0 | 1244.5 | 1219.5 | 1184.8 | 1146.7 | 1110.3 | 1087.0 | 1070.4 | 1063.9 |
| 10°   | 1265.9 | 1252.7 | 1219.5 | 1173.1 | 1125.2 | 1080.3 | 1047.3 | 1030.7 | 1022.4 |
| 12.5° | 1277.6 | 1262.7 | 1221.2 | 1163.2 | 1103.6 | 1050.5 | 1012.5 | 990.9  | 982.7  |
| 15°   | 1289.2 | 1269.3 | 1219.5 | 1148.3 | 1077.1 | 1015.8 | 974.3  | 952.8  | 942.8  |
| 17.5° | 1289.2 | 1265.9 | 1206.3 | 1123.5 | 1042.3 | 977.6  | 931.3  | 906.4  | 898.1  |
| 20°   | 1265.9 | 1239.4 | 1174.8 | 1083.7 | 997.6  | 927.9  | 883.2  | 858.4  | 848.4  |
| 22.5° | 1229.5 | 1199.7 | 1130.1 | 1035.6 | 944.5  | 876.6  | 831.8  | 808.6  | 798.7  |
| 25°   | 1181.5 | 1151.7 | 1078.8 | 981.0  | 889.9  | 821.9  | 780.5  | 758.9  | 749.0  |
| 27.5° | 1125.2 | 1092.0 | 1019.0 | 921.3  | 831.8  | 767.2  | 729.1  | 709.2  | 700.9  |
| 30°   | 1055.5 | 1024.0 | 952.8  | 856.7  | 770.5  | 710.8  | 676.0  | 657.9  | 651.2  |
| 32.5° | 974.3  | 947.8  | 878.2  | 788.7  | 707.5  | 652.9  | 621.4  | 606.5  | 599.8  |
| 35°   | 889.9  | 864.9  | 803.6  | 720.9  | 647.9  | 596.6  | 566.8  | 556.8  | 553.4  |
| 37.5° | 810.3  | 788.7  | 729.1  | 652.9  | 586.6  | 541.8  | 515.4  | 508.7  | 505.5  |
| 40°   | 727.4  | 712.5  | 657.9  | 588.2  | 526.9  | 487.2  | 465.6  | 460.6  | 460.6  |
| 42.5° | 652.9  | 636.3  | 588.2  | 525.3  | 470.6  | 430.8  | 415.9  | 411.0  | 412.6  |
| 45°   | 584.9  | 568.3  | 523.6  | 465.6  | 412.6  | 379.5  | 367.8  | 367.8  | 367.8  |
| 47.5° | 521.9  | 507.0  | 465.6  | 406.0  | 362.9  | 336.3  | 324.8  | 324.8  | 326.4  |
| 50°   | 464.0  | 454.1  | 407.7  | 356.3  | 318.2  | 293.3  | 285.0  | 283.4  | 286.7  |
| 52.5° | 409.3  | 397.7  | 356.3  | 309.9  | 273.4  | 253.6  | 245.2  | 243.6  | 245.2  |
| 55°   | 362.9  | 349.7  | 313.2  | 268.5  | 235.3  | 215.4  | 205.5  | 203.8  | 207.2  |
| 57.5° | 318.2  | 308.2  | 270.1  | 230.3  | 198.8  | 178.9  | 170.7  | 167.3  | 169.0  |
| 60°   | 276.7  | 266.8  | 232.0  | 193.8  | 165.7  | 145.9  | 134.2  | 130.9  | 132.5  |
| 62.5° | 238.7  | 230.3  | 197.2  | 160.8  | 132.5  | 114.4  | 102.7  | 94.5   | 97.8   |
| 65°   | 203.8  | 195.5  | 165.7  | 129.3  | 104.4  | 84.6   | 68.0   | 61.3   | 63.0   |
| 67.5° | 174.0  | 164.0  | 135.9  | 102.7  | 77.9   | 56.3   | 38.2   | 34.8   | 34.8   |
| 70°   | 144.2  | 134.2  | 109.4  | 79.6   | 54.6   | 29.8   | 16.6   | 16.6   | 16.6   |
| 72.5° | 115.9  | 107.7  | 84.6   | 59.6   | 34.8   | 13.2   | 6.7    | 6.7    | 6.7    |
| 75°   | 89.5   | 82.9   | 63.0   | 41.4   | 21.6   | 6.7    | 5.0    | 3.3    | 3.3    |
| 77.5° | 66.3   | 59.6   | 44.7   | 28.2   | 13.2   | 3.3    | 3.3    | 3.3    | 3.3    |
| 80°   | 44.7   | 39.7   | 29.8   | 16.6   | 6.7    | 1.7    | 1.7    | 1.7    | 1.7    |
| 82.5° | 26.5   | 23.1   | 16.6   | 8.2    | 3.3    | 1.7    | 1.7    | 1.7    | 1.7    |
| 85°   | 13.2   | 9.9    | 6.7    | 3.3    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    |
| 87.5° | 3.3    | 1.7    | 1.7    | 1.7    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

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Scaled Data Report



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Scaled Data Report



— 0°-180°    - - 45°-225°    - - - - 90°-270°

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