

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: P579970

Luminaire Tested: **HCC4S15D010SL-HM40525940-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579970  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S15D010SL-HM40525940-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

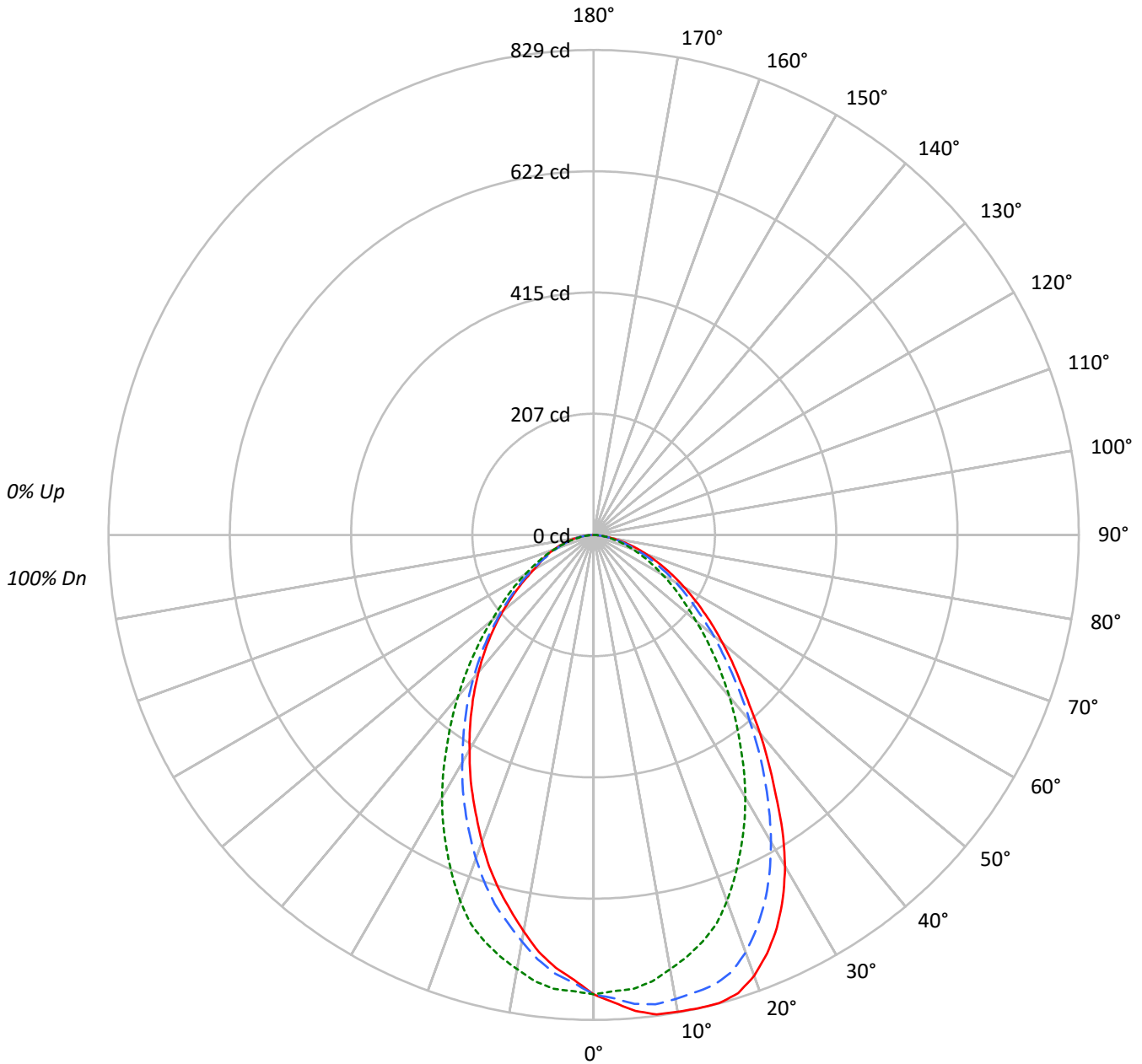
Lumens per Lamp: N/A  
Luminaire Lumens: 1402.3 lumens  
Efficiency: N/A  
Efficacy: 100.2 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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 |  |  |  |   |
| 1   | 111 | 106 | 103 | 100 | 108 | 104 | 101 | 98  | 100 | 97  | 95  | 96  | 94  | 92  | 93  | 91  | 89  | 87  |    |    |    | 87  |  |  |  |   |
| 2   | 102 | 95  | 89  | 84  | 100 | 93  | 88  | 83  | 90  | 85  | 81  | 87  | 83  | 80  | 84  | 81  | 78  | 76  |    |    |    | 76  |  |  |  |   |
| 3   | 94  | 85  | 78  | 72  | 92  | 84  | 77  | 72  | 81  | 75  | 71  | 78  | 73  | 69  | 76  | 72  | 68  | 66  |    |    |    | 66  |  |  |  |   |
| 4   | 87  | 77  | 69  | 63  | 85  | 76  | 68  | 63  | 73  | 67  | 62  | 71  | 66  | 61  | 69  | 64  | 60  | 58  |    |    |    | 58  |  |  |  |   |
| 5   | 81  | 70  | 62  | 56  | 79  | 69  | 61  | 56  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 54  | 52  |    |    |    | 52  |  |  |  |   |
| 6   | 76  | 64  | 56  | 50  | 74  | 63  | 55  | 50  | 61  | 54  | 49  | 59  | 53  | 49  | 58  | 53  | 48  | 47  |    |    |    | 47  |  |  |  |   |
| 7   | 71  | 58  | 50  | 45  | 69  | 58  | 50  | 45  | 56  | 49  | 44  | 55  | 49  | 44  | 53  | 48  | 44  | 42  |    |    |    | 42  |  |  |  |   |
| 8   | 66  | 54  | 46  | 41  | 65  | 53  | 46  | 41  | 52  | 45  | 40  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |    | 38  |  |  |  |   |
| 9   | 62  | 50  | 42  | 37  | 61  | 49  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 37  | 46  | 41  | 37  | 35  |    |    |    | 35  |  |  |  |   |
| 10  | 59  | 46  | 39  | 34  | 57  | 46  | 39  | 34  | 45  | 38  | 34  | 44  | 38  | 34  | 43  | 38  | 34  | 32  |    |    |    | 32  |  |  |  |   |

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

|     | 0°     | 90°   | 180°  |
|-----|--------|-------|-------|
| 0°  | 96863  | 96863 | 96863 |
| 5°  | 101121 | 96429 | 91971 |
| 10° | 103668 | 94412 | 86196 |
| 15° | 105810 | 91903 | 79989 |
| 20° | 105259 | 87433 | 73244 |
| 25° | 100848 | 80855 | 66633 |
| 30° | 93162  | 73806 | 60403 |
| 35° | 81658  | 65652 | 54660 |
| 40° | 71105  | 58014 | 49223 |
| 45° | 61873  | 50587 | 43993 |
| 50° | 55130  | 43617 | 38820 |
| 55° | 49267  | 38343 | 33569 |
| 60° | 43985  | 33501 | 28937 |
| 65° | 39080  | 29390 | 27522 |
| 70° | 34333  | 25353 | 25677 |
| 75° | 29023  | 21589 | 23781 |
| 80° | 22304  | 18397 | 21665 |
| 85° | 13020  | 14294 | 18398 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 73.6   | 5.2       |
| 10°-20°   | 203.0  | 14.5      |
| 20°-30°   | 277.4  | 19.8      |
| 30°-40°   | 278.5  | 19.9      |
| 40°-50°   | 230.4  | 16.4      |
| 50°-60°   | 167.0  | 11.9      |
| 60°-70°   | 105.8  | 7.5       |
| 70°-80°   | 53.5   | 3.8       |
| 80°-90°   | 13.1   | 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°    | 554.0  | 39.5      |
| 0°-40°    | 832.6  | 59.4      |
| 0°-60°    | 1230.0 | 87.7      |
| 0°-90°    | 1402.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1402.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 785 | 785 | 785 | 785  | 785  |      |
| 5°  | 817 | 805 | 779 | 753  | 743  | 78   |
| 15° | 829 | 796 | 720 | 653  | 626  | 233  |
| 25° | 741 | 692 | 594 | 519  | 490  | 339  |
| 35° | 542 | 510 | 436 | 382  | 363  | 340  |
| 45° | 355 | 334 | 290 | 261  | 252  | 276  |
| 55° | 229 | 209 | 178 | 163  | 156  | 206  |
| 65° | 134 | 119 | 101 | 90   | 94   | 133  |
| 75° | 61  | 53  | 45  | 47   | 50   | 65   |
| 85° | 9   | 9   | 10  | 12   | 13   | 13   |
| 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°    | 785.3 | 785.3 | 785.3 | 785.3 | 785.3 | 785.3  | 785.3 | 785.3  | 785.3 |
| 2.5°  | 800.1 | 797.3 | 792.7 | 787.1 | 780.7 | 773.3  | 766.8 | 763.2  | 761.2 |
| 5°    | 816.7 | 813.0 | 804.7 | 792.7 | 778.8 | 765.0  | 752.9 | 745.5  | 742.8 |
| 7.5°  | 826.8 | 821.3 | 809.3 | 790.8 | 769.5 | 749.3  | 731.7 | 721.5  | 718.8 |
| 10°   | 827.7 | 821.3 | 805.6 | 780.7 | 753.8 | 727.1  | 705.8 | 691.1  | 688.2 |
| 12.5° | 828.6 | 820.3 | 801.0 | 771.5 | 738.1 | 704.9  | 679.0 | 661.5  | 656.8 |
| 15°   | 828.6 | 820.3 | 796.4 | 761.2 | 719.7 | 681.9  | 653.2 | 632.9  | 626.4 |
| 17.5° | 821.3 | 812.0 | 783.4 | 742.8 | 697.5 | 655.0  | 621.7 | 600.4  | 594.1 |
| 20°   | 801.9 | 791.7 | 759.4 | 715.1 | 666.1 | 621.7  | 588.5 | 566.3  | 558.0 |
| 22.5° | 774.2 | 762.1 | 728.0 | 679.9 | 631.0 | 585.7  | 553.4 | 530.3  | 522.9 |
| 25°   | 741.0 | 728.9 | 692.0 | 644.8 | 594.1 | 551.6  | 519.2 | 498.0  | 489.6 |
| 27.5° | 700.3 | 687.3 | 651.3 | 604.2 | 557.1 | 514.6  | 485.0 | 465.6  | 457.3 |
| 30°   | 654.1 | 640.2 | 606.0 | 560.8 | 518.2 | 477.7  | 449.0 | 433.3  | 424.1 |
| 32.5° | 600.4 | 588.5 | 558.0 | 517.3 | 477.7 | 438.9  | 414.8 | 400.9  | 393.5 |
| 35°   | 542.3 | 535.9 | 509.9 | 474.8 | 436.0 | 403.7  | 382.5 | 369.5  | 363.0 |
| 37.5° | 490.6 | 484.1 | 462.0 | 432.4 | 398.2 | 368.6  | 351.1 | 340.0  | 334.4 |
| 40°   | 441.6 | 436.0 | 414.8 | 389.9 | 360.3 | 334.4  | 319.6 | 311.3  | 305.7 |
| 42.5° | 393.5 | 390.8 | 373.3 | 350.2 | 324.3 | 302.1  | 290.0 | 283.6  | 279.0 |
| 45°   | 354.7 | 351.1 | 334.4 | 312.2 | 290.0 | 271.6  | 261.4 | 256.8  | 252.2 |
| 47.5° | 320.5 | 316.0 | 298.3 | 279.0 | 258.7 | 242.1  | 232.9 | 228.2  | 226.4 |
| 50°   | 287.3 | 282.7 | 267.0 | 247.6 | 227.3 | 215.2  | 207.8 | 203.3  | 202.3 |
| 52.5° | 257.8 | 253.1 | 235.6 | 217.1 | 201.4 | 191.2  | 184.8 | 180.1  | 178.3 |
| 55°   | 229.1 | 223.5 | 208.8 | 191.2 | 178.3 | 169.1  | 162.6 | 157.9  | 156.1 |
| 57.5° | 203.3 | 197.7 | 184.8 | 168.2 | 156.1 | 147.8  | 142.2 | 137.7  | 135.8 |
| 60°   | 178.3 | 173.7 | 161.7 | 146.0 | 135.8 | 128.4  | 122.9 | 119.2  | 117.3 |
| 62.5° | 155.2 | 151.6 | 139.5 | 125.6 | 117.3 | 110.9  | 106.2 | 102.6  | 104.4 |
| 65°   | 133.9 | 130.3 | 119.2 | 107.2 | 100.7 | 94.3   | 90.5  | 90.5   | 94.3  |
| 67.5° | 113.6 | 109.9 | 100.7 | 90.5  | 85.0  | 80.4   | 77.7  | 80.4   | 83.1  |
| 70°   | 95.2  | 91.4  | 83.1  | 74.8  | 70.3  | 66.5   | 66.5  | 69.2   | 71.2  |
| 72.5° | 77.7  | 73.9  | 67.4  | 60.9  | 57.3  | 54.5   | 57.3  | 59.1   | 60.9  |
| 75°   | 60.9  | 58.2  | 52.6  | 48.1  | 45.3  | 44.3   | 47.1  | 49.0   | 49.9  |
| 77.5° | 45.3  | 43.4  | 39.7  | 36.0  | 34.2  | 35.1   | 37.9  | 38.8   | 39.7  |
| 80°   | 31.4  | 30.5  | 27.7  | 25.9  | 25.9  | 26.8   | 28.7  | 29.6   | 30.5  |
| 82.5° | 19.4  | 19.4  | 17.5  | 16.6  | 17.5  | 19.4   | 20.4  | 21.3   | 21.3  |
| 85°   | 9.2   | 10.1  | 9.2   | 9.2   | 10.1  | 12.1   | 12.1  | 13.0   | 13.0  |
| 87.5° | 2.7   | 2.7   | 3.8   | 3.8   | 4.7   | 4.7    | 4.7   | 4.7    | 5.6   |
| 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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





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Scaled Data Report



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

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