

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: P592654

Luminaire Tested: **HCC4S15D010SL-HM40525950-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592654
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-HM40525950-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

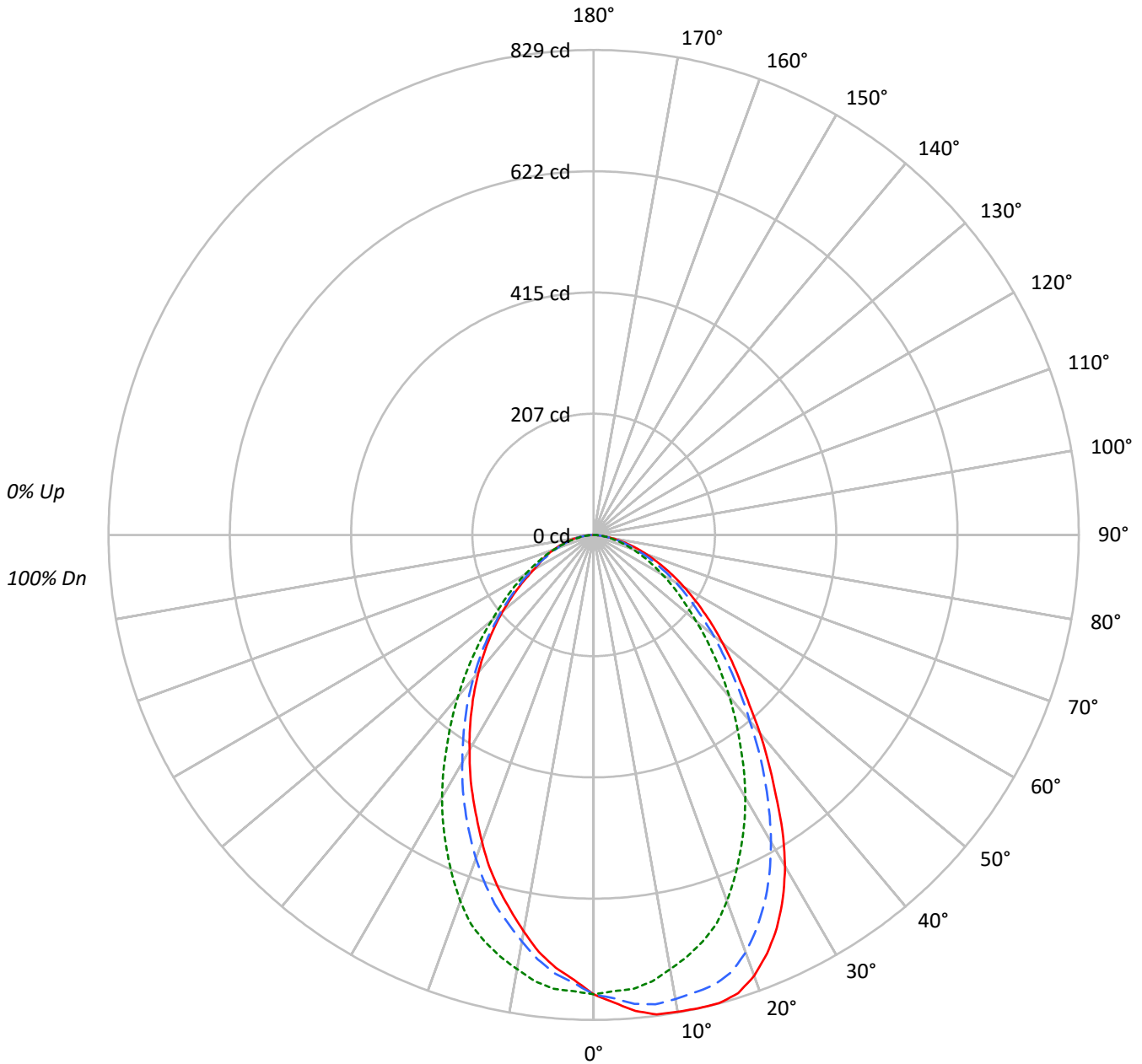
Lumens per Lamp: N/A
Luminaire Lumens: 1402.3 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): 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 | 106 | 103 | 100 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 93 | 91 | 89 | 87 | | | | | | | | |
| 2 | 102 | 95 | 89 | 84 | 100 | 93 | 88 | 83 | 90 | 85 | 81 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | | | | | | | | |
| 3 | 94 | 85 | 78 | 72 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 73 | 69 | 76 | 72 | 68 | 66 | | | | | | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | | | | | |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | | | | | | |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 53 | 48 | 47 | | | | | | | | |
| 7 | 71 | 58 | 50 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 53 | 48 | 44 | 42 | | | | | | | | |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | | | | | |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | | | | | |
| 10 | 59 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 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



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

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