

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: P579843

Luminaire Tested: **HCC4S15D010SL-HM40525827-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579843
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: HCC4S15D010SL-HM40525827-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

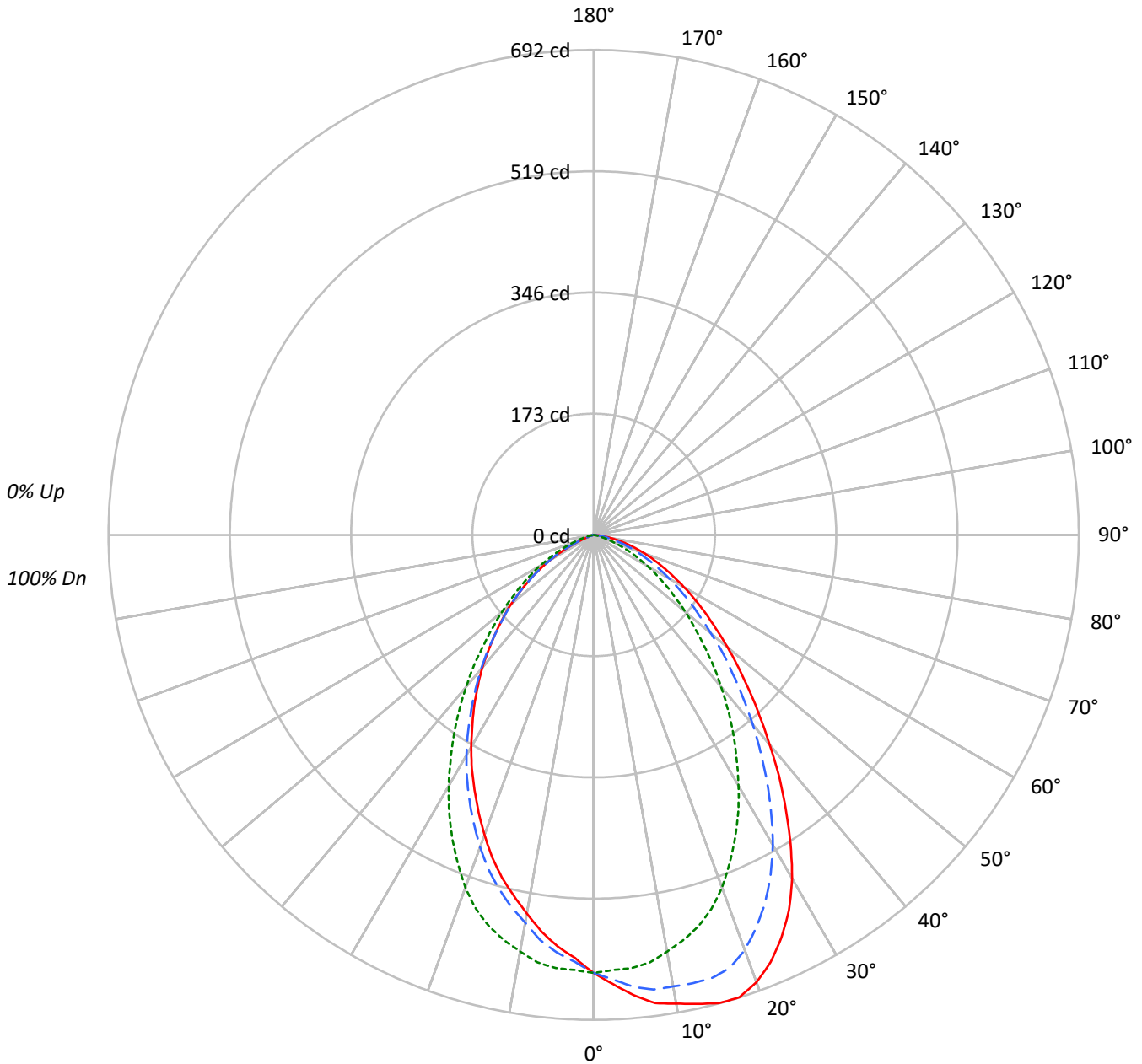
Lumens per Lamp: N/A
Luminaire Lumens: 1079.5 lumens
Efficiency: N/A
Efficacy: 77.1 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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 | | | | | | | | | |
| RC | 80 | | | | | | | | | 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° | 77091 | 77091 | 77091 |
| 5° | 81670 | 76828 | 72978 |
| 10° | 85056 | 75600 | 68699 |
| 15° | 88315 | 73783 | 64602 |
| 20° | 89140 | 70251 | 59737 |
| 25° | 86272 | 64973 | 54684 |
| 30° | 80642 | 58879 | 49764 |
| 35° | 71886 | 52341 | 44706 |
| 40° | 62829 | 45519 | 39803 |
| 45° | 54738 | 38620 | 34434 |
| 50° | 47762 | 32756 | 29513 |
| 55° | 41870 | 27139 | 23892 |
| 60° | 36634 | 21931 | 17540 |
| 65° | 31930 | 16373 | 9865 |
| 70° | 27877 | 10567 | 3210 |
| 75° | 22875 | 5528 | 858 |
| 80° | 17048 | 2486 | 639 |
| 85° | 10190 | 1274 | 1274 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 59.0 | 5.5 |
| 10°-20° | 165.1 | 15.3 |
| 20°-30° | 228.2 | 21.1 |
| 30°-40° | 229.5 | 21.3 |
| 40°-50° | 185.2 | 17.2 |
| 50°-60° | 125.2 | 11.6 |
| 60°-70° | 63.7 | 5.9 |
| 70°-80° | 20.4 | 1.9 |
| 80°-90° | 3.1 | 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° | 452.3 | 41.9 |
| 0°-40° | 681.8 | 63.2 |
| 0°-60° | 992.2 | 91.9 |
| 0°-90° | 1079.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1079.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 625 | 625 | 625 | 625 | 625 | |
| 5° | 660 | 647 | 620 | 598 | 589 | 64 |
| 15° | 692 | 654 | 578 | 523 | 506 | 195 |
| 25° | 634 | 579 | 477 | 419 | 402 | 290 |
| 35° | 477 | 431 | 348 | 304 | 297 | 298 |
| 45° | 314 | 281 | 221 | 197 | 197 | 243 |
| 55° | 195 | 168 | 126 | 110 | 111 | 175 |
| 65° | 109 | 89 | 56 | 36 | 34 | 110 |
| 75° | 48 | 34 | 12 | 3 | 2 | 52 |
| 85° | 7 | 4 | 1 | 1 | 1 | 10 |
| 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° | 625.0 | 625.0 | 625.0 | 625.0 | 625.0 | 625.0 | 625.0 | 625.0 | 625.0 |
| 2.5° | 641.8 | 638.3 | 634.8 | 628.5 | 621.4 | 614.3 | 609.9 | 606.2 | 604.5 |
| 5° | 659.6 | 655.1 | 647.2 | 633.9 | 620.5 | 608.1 | 598.3 | 592.0 | 589.4 |
| 7.5° | 673.9 | 667.6 | 654.3 | 635.6 | 615.2 | 595.6 | 583.2 | 574.3 | 570.8 |
| 10° | 679.1 | 672.1 | 654.3 | 629.4 | 603.6 | 579.6 | 561.8 | 552.9 | 548.5 |
| 12.5° | 685.4 | 677.4 | 655.1 | 624.1 | 592.0 | 563.6 | 543.1 | 531.7 | 527.1 |
| 15° | 691.6 | 680.9 | 654.3 | 616.0 | 577.8 | 545.0 | 522.7 | 511.2 | 505.9 |
| 17.5° | 691.6 | 679.1 | 647.2 | 602.7 | 559.2 | 524.5 | 499.6 | 486.3 | 481.9 |
| 20° | 679.1 | 664.9 | 630.2 | 581.3 | 535.2 | 497.8 | 473.8 | 460.5 | 455.1 |
| 22.5° | 659.6 | 643.7 | 606.2 | 555.7 | 506.8 | 470.3 | 446.3 | 433.9 | 428.5 |
| 25° | 633.9 | 617.8 | 578.7 | 526.3 | 477.4 | 440.9 | 418.8 | 407.2 | 401.8 |
| 27.5° | 603.6 | 585.8 | 546.7 | 494.3 | 446.3 | 411.6 | 391.1 | 380.4 | 376.0 |
| 30° | 566.2 | 549.4 | 511.2 | 459.6 | 413.4 | 381.3 | 362.7 | 352.9 | 349.4 |
| 32.5° | 522.7 | 508.5 | 471.2 | 423.2 | 379.6 | 350.3 | 333.4 | 325.4 | 321.8 |
| 35° | 477.4 | 464.0 | 431.2 | 386.7 | 347.6 | 320.1 | 304.0 | 298.7 | 296.9 |
| 37.5° | 434.7 | 423.2 | 391.1 | 350.3 | 314.7 | 290.7 | 276.5 | 272.9 | 271.2 |
| 40° | 390.2 | 382.3 | 352.9 | 315.6 | 282.7 | 261.4 | 249.8 | 247.2 | 247.2 |
| 42.5° | 350.3 | 341.3 | 315.6 | 281.9 | 252.4 | 231.2 | 223.1 | 220.5 | 221.4 |
| 45° | 313.8 | 304.9 | 281.0 | 249.8 | 221.4 | 203.5 | 197.4 | 197.4 | 197.4 |
| 47.5° | 280.0 | 272.1 | 249.8 | 217.8 | 194.7 | 180.4 | 174.2 | 174.2 | 175.1 |
| 50° | 248.9 | 243.5 | 218.6 | 191.1 | 170.7 | 157.4 | 152.9 | 152.0 | 153.8 |
| 52.5° | 219.6 | 213.3 | 191.1 | 166.2 | 146.7 | 136.0 | 131.6 | 130.6 | 131.6 |
| 55° | 194.7 | 187.6 | 168.0 | 144.1 | 126.2 | 115.5 | 110.3 | 109.4 | 111.1 |
| 57.5° | 170.7 | 165.3 | 144.9 | 123.6 | 106.7 | 96.0 | 91.5 | 89.8 | 90.7 |
| 60° | 148.5 | 143.1 | 124.5 | 104.0 | 88.9 | 78.2 | 72.0 | 70.3 | 71.1 |
| 62.5° | 128.0 | 123.6 | 105.7 | 86.2 | 71.1 | 61.3 | 55.1 | 50.7 | 52.4 |
| 65° | 109.4 | 104.9 | 88.9 | 69.4 | 56.1 | 45.4 | 36.5 | 32.9 | 33.8 |
| 67.5° | 93.3 | 88.0 | 72.9 | 55.1 | 41.7 | 30.2 | 20.5 | 18.6 | 18.6 |
| 70° | 77.3 | 72.0 | 58.7 | 42.6 | 29.3 | 16.0 | 8.9 | 8.9 | 8.9 |
| 72.5° | 62.2 | 57.8 | 45.4 | 31.9 | 18.6 | 7.2 | 3.5 | 3.5 | 3.5 |
| 75° | 48.0 | 44.5 | 33.8 | 22.2 | 11.6 | 3.5 | 2.6 | 1.8 | 1.8 |
| 77.5° | 35.6 | 31.9 | 24.0 | 15.1 | 7.2 | 1.8 | 1.8 | 1.8 | 1.8 |
| 80° | 24.0 | 21.4 | 16.0 | 8.9 | 3.5 | 0.9 | 0.9 | 0.9 | 0.9 |
| 82.5° | 14.2 | 12.4 | 8.9 | 4.4 | 1.8 | 0.9 | 0.9 | 0.9 | 0.9 |
| 85° | 7.2 | 5.3 | 3.5 | 1.8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| 87.5° | 1.8 | 0.9 | 0.9 | 0.9 | 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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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

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