

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: P579863

Luminaire Tested: **HCC4W15D010MW-HM40525830-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579863
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W15D010MW-HM40525830-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

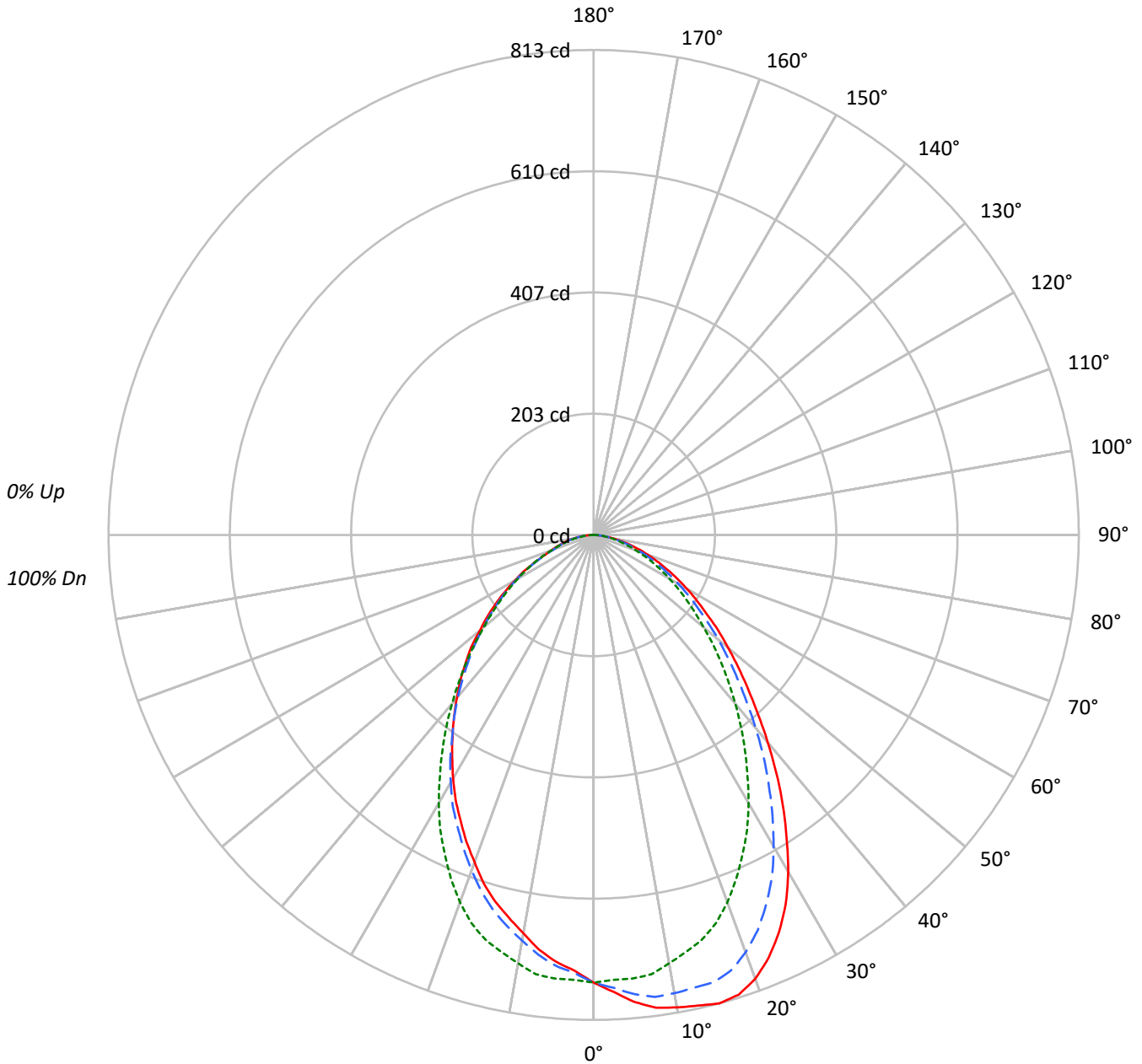
Lumens per Lamp: N/A
Luminaire Lumens: 1455.2 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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 | 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 | 110 | 106 | 103 | 99 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 92 | 91 | 89 | 87 | | | | | 87 | | | |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | 75 | | | | | 75 | | | |
| 3 | 94 | 85 | 77 | 72 | 92 | 83 | 76 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 | | | | | 66 | | | |
| 4 | 87 | 76 | 68 | 62 | 85 | 75 | 68 | 62 | 72 | 66 | 61 | 70 | 65 | 60 | 68 | 63 | 60 | 58 | | | | | 58 | | | |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 60 | 55 | 66 | 59 | 54 | 64 | 58 | 53 | 62 | 57 | 53 | 51 | | | | | 51 | | | |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 54 | 49 | 60 | 53 | 48 | 59 | 53 | 48 | 57 | 52 | 47 | 46 | | | | | 46 | | | |
| 7 | 70 | 58 | 50 | 44 | 68 | 57 | 49 | 44 | 55 | 48 | 43 | 54 | 48 | 43 | 53 | 47 | 43 | 41 | | | | | 41 | | | |
| 8 | 65 | 53 | 45 | 40 | 64 | 52 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | 37 | | | |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | | 34 | | | |
| 10 | 58 | 45 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | | | | | 31 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|-------|-------|
| 0° | 92559 | 92559 | 92559 |
| 5° | 97320 | 92442 | 88975 |
| 10° | 100737 | 91331 | 84931 |
| 15° | 103817 | 89669 | 81305 |
| 20° | 103933 | 85976 | 76617 |
| 25° | 100031 | 80352 | 71846 |
| 30° | 92891 | 73948 | 67097 |
| 35° | 83254 | 66585 | 62083 |
| 40° | 73053 | 59415 | 57386 |
| 45° | 63844 | 52593 | 52942 |
| 50° | 56378 | 46035 | 47685 |
| 55° | 49719 | 40816 | 42880 |
| 60° | 44429 | 36116 | 37546 |
| 65° | 39343 | 31754 | 31754 |
| 70° | 34405 | 27120 | 27120 |
| 75° | 29357 | 22971 | 25687 |
| 80° | 23227 | 20528 | 23227 |
| 85° | 15001 | 17690 | 21936 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 71.1 | 4.9 |
| 10°-20° | 200.2 | 13.8 |
| 20°-30° | 280.5 | 19.3 |
| 30°-40° | 289.0 | 19.9 |
| 40°-50° | 246.0 | 16.9 |
| 50°-60° | 182.3 | 12.5 |
| 60°-70° | 114.4 | 7.9 |
| 70°-80° | 56.8 | 3.9 |
| 80°-90° | 14.9 | 1.0 |
| 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° | 551.8 | 37.9 |
| 0°-40° | 840.8 | 57.8 |
| 0°-60° | 1269.1 | 87.2 |
| 0°-90° | 1455.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1455.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 750 | 750 | 750 | 750 | 750 | |
| 5° | 786 | 773 | 747 | 725 | 719 | 76 |
| 15° | 813 | 776 | 702 | 651 | 637 | 229 |
| 25° | 735 | 684 | 590 | 539 | 528 | 336 |
| 35° | 553 | 512 | 442 | 413 | 412 | 345 |
| 45° | 366 | 341 | 302 | 296 | 304 | 284 |
| 55° | 231 | 213 | 190 | 194 | 199 | 209 |
| 65° | 135 | 121 | 109 | 107 | 109 | 134 |
| 75° | 62 | 55 | 48 | 52 | 54 | 66 |
| 85° | 11 | 11 | 12 | 14 | 16 | 14 |
| 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° | 750.4 | 750.4 | 750.4 | 750.4 | 750.4 | 750.4 | 750.4 | 750.4 | 750.4 |
| 2.5° | 766.8 | 763.8 | 760.0 | 753.3 | 746.6 | 740.8 | 735.0 | 732.1 | 731.1 |
| 5° | 786.0 | 780.2 | 772.6 | 760.0 | 746.6 | 735.0 | 725.3 | 720.5 | 718.6 |
| 7.5° | 799.5 | 793.7 | 781.2 | 761.9 | 742.7 | 725.3 | 709.9 | 703.2 | 701.3 |
| 10° | 804.3 | 797.6 | 780.2 | 754.3 | 729.2 | 708.0 | 690.6 | 682.0 | 678.1 |
| 12.5° | 808.2 | 799.5 | 777.4 | 746.6 | 715.7 | 689.7 | 671.4 | 659.8 | 657.0 |
| 15° | 813.0 | 803.4 | 776.3 | 738.8 | 702.2 | 671.4 | 651.2 | 640.6 | 636.7 |
| 17.5° | 808.2 | 797.6 | 765.8 | 723.4 | 682.0 | 648.3 | 626.1 | 616.5 | 612.6 |
| 20° | 791.8 | 780.2 | 744.6 | 699.4 | 655.0 | 620.3 | 598.2 | 588.5 | 583.7 |
| 22.5° | 766.8 | 754.3 | 717.7 | 669.5 | 624.2 | 590.4 | 569.3 | 559.6 | 556.8 |
| 25° | 735.0 | 722.4 | 683.9 | 634.8 | 590.4 | 557.7 | 539.4 | 530.8 | 527.9 |
| 27.5° | 697.4 | 684.9 | 647.3 | 599.2 | 556.8 | 526.0 | 511.5 | 502.8 | 500.8 |
| 30° | 652.2 | 639.6 | 603.0 | 558.7 | 519.2 | 490.3 | 478.8 | 472.0 | 471.1 |
| 32.5° | 602.0 | 591.5 | 557.7 | 517.2 | 479.7 | 455.6 | 447.0 | 442.2 | 441.2 |
| 35° | 552.9 | 541.3 | 511.5 | 474.9 | 442.2 | 420.9 | 413.2 | 412.3 | 412.3 |
| 37.5° | 502.8 | 491.3 | 467.2 | 433.4 | 405.6 | 386.2 | 383.4 | 384.3 | 384.3 |
| 40° | 453.7 | 443.1 | 421.9 | 394.0 | 369.0 | 354.5 | 353.5 | 355.4 | 356.4 |
| 42.5° | 407.5 | 398.7 | 379.5 | 355.4 | 334.3 | 322.7 | 323.7 | 327.5 | 330.4 |
| 45° | 366.0 | 358.4 | 341.0 | 319.8 | 301.5 | 292.8 | 295.7 | 300.5 | 303.5 |
| 47.5° | 328.5 | 321.8 | 305.4 | 286.1 | 270.7 | 264.9 | 268.8 | 274.6 | 278.3 |
| 50° | 293.8 | 288.0 | 272.7 | 252.4 | 239.9 | 236.0 | 240.8 | 246.6 | 248.5 |
| 52.5° | 263.0 | 257.2 | 240.8 | 223.5 | 213.9 | 211.9 | 216.7 | 221.6 | 224.4 |
| 55° | 231.2 | 226.4 | 212.8 | 197.5 | 189.8 | 188.9 | 193.6 | 197.5 | 199.4 |
| 57.5° | 205.2 | 200.3 | 187.8 | 174.3 | 167.6 | 166.7 | 171.5 | 174.3 | 175.3 |
| 60° | 180.1 | 175.3 | 163.7 | 151.2 | 146.4 | 146.4 | 149.3 | 151.2 | 152.2 |
| 62.5° | 157.0 | 152.2 | 141.6 | 131.0 | 127.1 | 127.1 | 127.1 | 128.1 | 131.0 |
| 65° | 134.8 | 131.0 | 121.3 | 111.8 | 108.8 | 106.9 | 106.9 | 106.9 | 108.8 |
| 67.5° | 114.6 | 110.7 | 103.1 | 94.4 | 91.5 | 88.6 | 87.7 | 89.6 | 89.6 |
| 70° | 95.4 | 92.4 | 84.8 | 78.0 | 75.2 | 72.2 | 71.3 | 75.2 | 75.2 |
| 72.5° | 78.0 | 75.2 | 70.3 | 63.6 | 60.7 | 59.7 | 61.6 | 63.6 | 64.6 |
| 75° | 61.6 | 58.8 | 54.9 | 51.1 | 48.2 | 49.1 | 52.0 | 53.0 | 53.9 |
| 77.5° | 46.3 | 45.3 | 41.4 | 38.5 | 38.5 | 39.5 | 41.4 | 43.3 | 44.3 |
| 80° | 32.7 | 31.8 | 29.9 | 28.0 | 28.9 | 30.8 | 31.8 | 33.8 | 32.7 |
| 82.5° | 20.2 | 20.2 | 19.2 | 19.2 | 20.2 | 22.2 | 23.1 | 24.1 | 25.0 |
| 85° | 10.6 | 10.6 | 10.6 | 11.6 | 12.5 | 13.5 | 14.4 | 15.5 | 15.5 |
| 87.5° | 2.8 | 3.9 | 3.9 | 4.8 | 5.8 | 5.8 | 6.7 | 6.7 | 6.7 |
| 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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