

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: P579950

Luminaire Tested: **HCC4W15D010MW-HM40525935-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579950
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W15D010MW-HM40525935-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

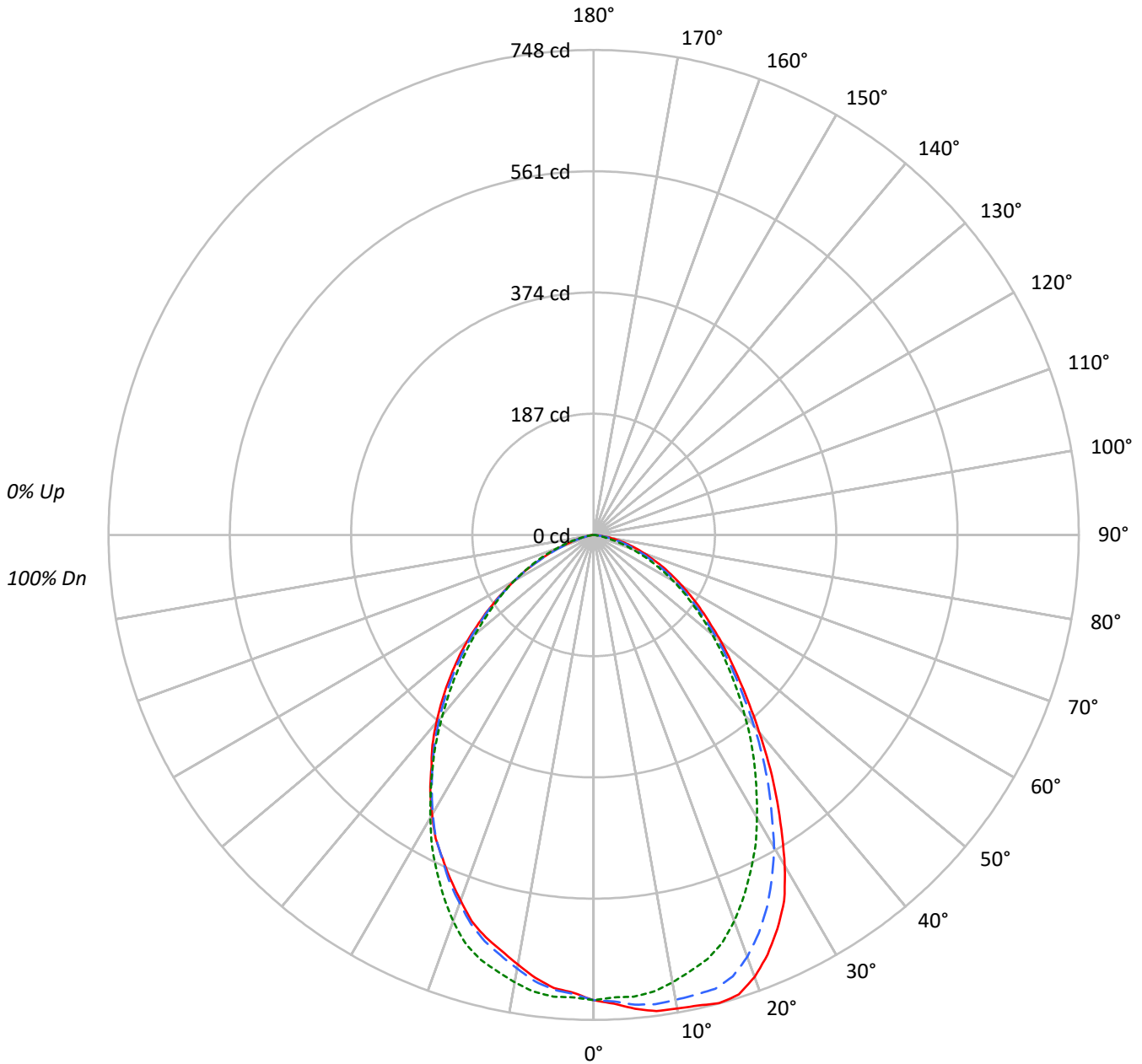
Lumens per Lamp: N/A
Luminaire Lumens: 1367.7 lumens
Efficiency: N/A
Efficacy: 97.7 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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 | 107 | 104 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | | | | | |
| 2 | 103 | 96 | 90 | 85 | 100 | 94 | 89 | 84 | 90 | 86 | 82 | 87 | 84 | 80 | 84 | 81 | 79 | 77 | | | | | | | | |
| 3 | 95 | 86 | 79 | 73 | 92 | 84 | 78 | 73 | 81 | 76 | 71 | 79 | 74 | 70 | 76 | 72 | 69 | 67 | | | | | | | | |
| 4 | 88 | 77 | 70 | 64 | 86 | 76 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | | | | | | |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 55 | 63 | 58 | 54 | 52 | | | | | | | | |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 60 | 54 | 49 | 58 | 53 | 49 | 47 | | | | | | | | |
| 7 | 71 | 58 | 51 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 45 | 55 | 49 | 44 | 54 | 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 | 41 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | | | | | |
| 10 | 58 | 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° | 88513 | 88513 | 88513 |
| 5° | 90832 | 88504 | 86857 |
| 10° | 92884 | 87749 | 84292 |
| 15° | 95492 | 86502 | 82058 |
| 20° | 95230 | 83194 | 78744 |
| 25° | 91226 | 77888 | 74976 |
| 30° | 83918 | 71726 | 70957 |
| 35° | 73828 | 65095 | 65622 |
| 40° | 63875 | 58272 | 60703 |
| 45° | 55506 | 51790 | 54878 |
| 50° | 49259 | 45670 | 48740 |
| 55° | 43697 | 40042 | 41784 |
| 60° | 38928 | 34759 | 34759 |
| 65° | 34615 | 28865 | 27055 |
| 70° | 29897 | 21855 | 19258 |
| 75° | 25068 | 14488 | 11914 |
| 80° | 18966 | 6961 | 6322 |
| 85° | 10190 | 2547 | 2547 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 68.0 | 5.0 |
| 10°-20° | 192.6 | 14.1 |
| 20°-30° | 271.7 | 19.9 |
| 30°-40° | 280.7 | 20.5 |
| 40°-50° | 237.9 | 17.4 |
| 50°-60° | 173.1 | 12.7 |
| 60°-70° | 101.2 | 7.4 |
| 70°-80° | 37.6 | 2.7 |
| 80°-90° | 4.9 | 0.4 |
| 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° | 532.3 | 38.9 |
| 0°-40° | 812.9 | 59.4 |
| 0°-60° | 1224.0 | 89.5 |
| 0°-90° | 1367.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1367.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 718 | 718 | 718 | 718 | 718 | |
| 5° | 734 | 727 | 715 | 704 | 702 | 70 |
| 15° | 748 | 725 | 677 | 649 | 643 | 210 |
| 25° | 670 | 633 | 572 | 552 | 551 | 307 |
| 35° | 490 | 469 | 432 | 433 | 436 | 306 |
| 45° | 318 | 309 | 297 | 308 | 315 | 248 |
| 55° | 203 | 193 | 186 | 192 | 194 | 183 |
| 65° | 119 | 109 | 99 | 93 | 93 | 118 |
| 75° | 53 | 44 | 30 | 24 | 25 | 56 |
| 85° | 7 | 4 | 2 | 2 | 2 | 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° | 717.6 | 717.6 | 717.6 | 717.6 | 717.6 | 717.6 | 717.6 | 717.6 | 717.6 |
| 2.5° | 723.8 | 722.0 | 720.2 | 717.6 | 713.9 | 711.3 | 708.6 | 706.9 | 706.9 |
| 5° | 733.6 | 730.9 | 727.3 | 721.1 | 714.8 | 709.5 | 704.1 | 701.5 | 701.5 |
| 7.5° | 740.8 | 737.1 | 730.1 | 721.1 | 710.4 | 702.3 | 694.4 | 690.8 | 689.0 |
| 10° | 741.6 | 738.0 | 728.2 | 714.8 | 700.6 | 688.1 | 679.2 | 673.9 | 673.0 |
| 12.5° | 743.4 | 738.9 | 726.4 | 707.8 | 689.0 | 673.9 | 664.0 | 658.7 | 657.0 |
| 15° | 747.8 | 741.6 | 724.6 | 700.6 | 677.4 | 659.6 | 648.9 | 644.5 | 642.6 |
| 17.5° | 743.4 | 734.5 | 713.9 | 685.5 | 659.6 | 640.0 | 629.3 | 624.8 | 624.8 |
| 20° | 725.5 | 716.7 | 692.5 | 661.4 | 633.8 | 615.0 | 604.3 | 601.7 | 599.9 |
| 22.5° | 700.6 | 690.8 | 664.9 | 631.9 | 604.3 | 587.4 | 580.2 | 576.7 | 575.8 |
| 25° | 670.3 | 660.5 | 632.9 | 599.0 | 572.3 | 557.9 | 551.8 | 551.8 | 550.9 |
| 27.5° | 636.4 | 624.0 | 595.4 | 566.0 | 540.2 | 529.5 | 526.8 | 526.8 | 527.7 |
| 30° | 589.2 | 580.2 | 556.2 | 527.7 | 503.6 | 496.5 | 496.5 | 498.2 | 498.2 |
| 32.5° | 538.4 | 532.1 | 510.7 | 485.8 | 467.1 | 462.6 | 464.4 | 468.0 | 468.9 |
| 35° | 490.3 | 483.1 | 468.9 | 446.6 | 432.3 | 430.5 | 433.2 | 435.8 | 435.8 |
| 37.5° | 443.0 | 435.8 | 426.0 | 408.2 | 397.5 | 398.4 | 402.0 | 405.6 | 408.2 |
| 40° | 396.7 | 391.4 | 384.2 | 369.9 | 361.9 | 365.4 | 369.9 | 373.5 | 377.0 |
| 42.5° | 355.7 | 350.3 | 345.0 | 334.3 | 328.9 | 333.4 | 338.7 | 342.2 | 345.9 |
| 45° | 318.2 | 314.6 | 309.3 | 300.4 | 296.9 | 301.3 | 307.6 | 311.1 | 314.6 |
| 47.5° | 286.1 | 284.4 | 277.2 | 269.2 | 267.4 | 271.9 | 277.2 | 281.6 | 284.4 |
| 50° | 256.7 | 254.0 | 247.8 | 239.8 | 238.0 | 245.1 | 248.7 | 251.4 | 254.0 |
| 52.5° | 228.2 | 225.5 | 218.4 | 211.3 | 211.3 | 216.6 | 219.3 | 220.1 | 222.9 |
| 55° | 203.2 | 200.6 | 193.4 | 188.1 | 186.2 | 190.8 | 192.5 | 192.5 | 194.3 |
| 57.5° | 180.1 | 177.4 | 170.2 | 164.0 | 163.2 | 165.8 | 165.8 | 165.8 | 166.7 |
| 60° | 157.8 | 155.1 | 147.9 | 142.6 | 140.9 | 141.7 | 140.9 | 140.0 | 140.9 |
| 62.5° | 137.2 | 134.6 | 127.5 | 121.2 | 119.4 | 119.4 | 116.8 | 115.9 | 116.8 |
| 65° | 118.6 | 114.0 | 108.7 | 102.6 | 98.9 | 96.3 | 92.7 | 92.7 | 92.7 |
| 67.5° | 99.8 | 96.3 | 90.1 | 83.8 | 79.4 | 74.9 | 69.5 | 71.3 | 72.2 |
| 70° | 82.9 | 80.3 | 73.1 | 66.9 | 60.6 | 55.3 | 50.8 | 52.6 | 53.4 |
| 72.5° | 67.8 | 64.1 | 58.0 | 50.8 | 45.5 | 38.3 | 35.7 | 37.4 | 37.4 |
| 75° | 52.6 | 49.0 | 43.7 | 36.5 | 30.4 | 24.1 | 24.1 | 25.0 | 25.0 |
| 77.5° | 39.2 | 35.7 | 30.4 | 24.1 | 18.8 | 14.2 | 15.1 | 15.1 | 15.1 |
| 80° | 26.7 | 24.1 | 19.6 | 14.2 | 9.8 | 8.1 | 8.1 | 8.1 | 8.9 |
| 82.5° | 15.1 | 13.4 | 10.7 | 7.2 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 85° | 7.2 | 5.3 | 4.4 | 2.7 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 87.5° | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| 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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