

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: P580234

Luminaire Tested: **HCC4W25D010MW-HM40525935-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580234
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: HCC4W25D010MW-HM40525935-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

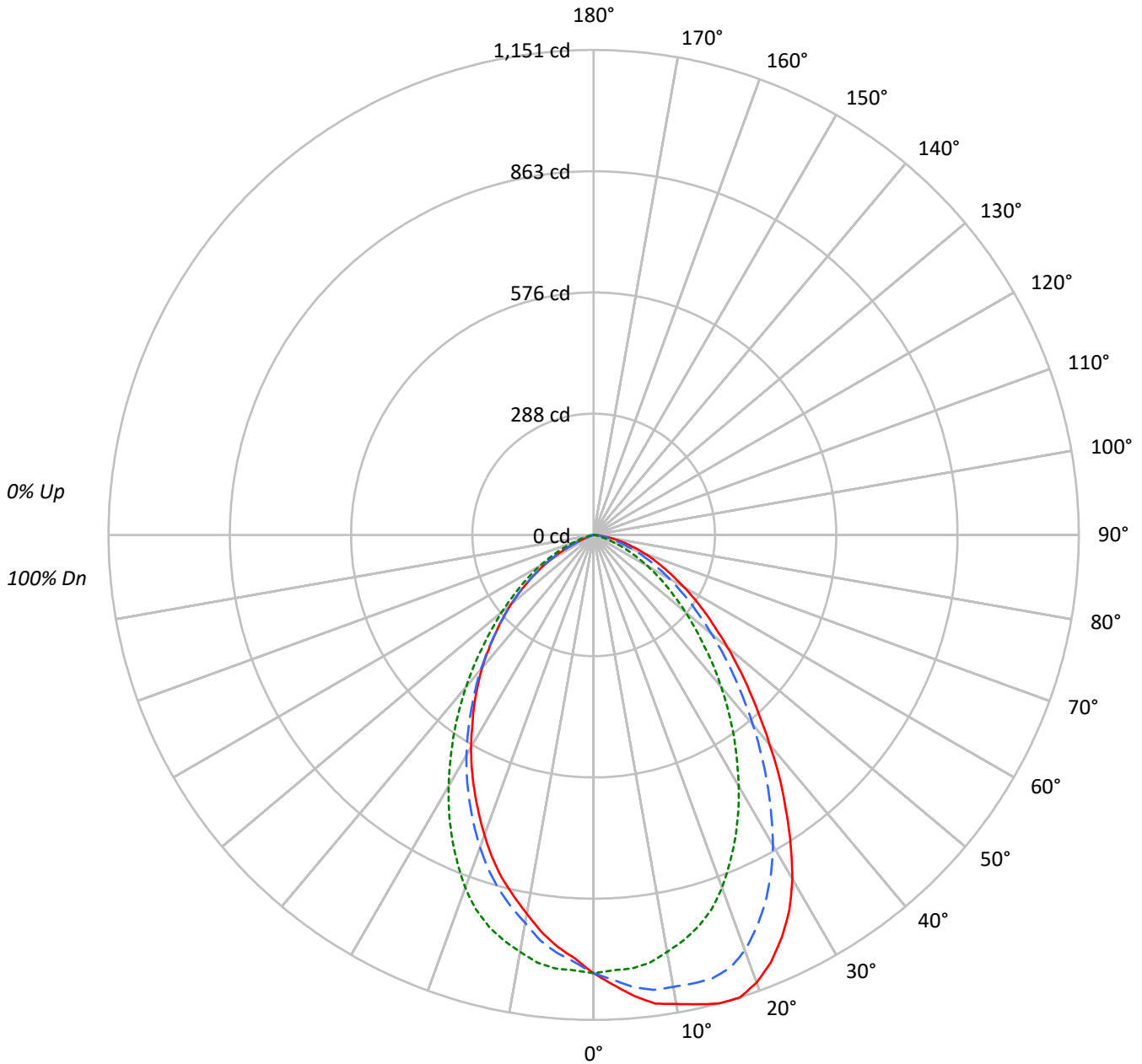
Lumens per Lamp: N/A
Luminaire Lumens: 1797.0 lumens
Efficiency: N/A
Efficacy: 67.1 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 26.8
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 | 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° | 128329 | 128329 | 128329 |
| 5° | 135963 | 127890 | 121477 |
| 10° | 141606 | 125850 | 114352 |
| 15° | 147030 | 122832 | 107521 |
| 20° | 148404 | 116941 | 99457 |
| 25° | 143609 | 108156 | 91035 |
| 30° | 134266 | 98004 | 82821 |
| 35° | 119664 | 87124 | 74430 |
| 40° | 104596 | 75774 | 66242 |
| 45° | 91126 | 64280 | 57303 |
| 50° | 79501 | 54536 | 49143 |
| 55° | 69697 | 45181 | 39762 |
| 60° | 60957 | 36510 | 29208 |
| 65° | 53119 | 27231 | 16403 |
| 70° | 46414 | 17635 | 5337 |
| 75° | 38078 | 9150 | 1382 |
| 80° | 28413 | 4191 | 1065 |
| 85° | 16841 | 2123 | 2123 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 98.2 | 5.5 |
| 10°-20° | 274.8 | 15.3 |
| 20°-30° | 379.9 | 21.1 |
| 30°-40° | 382.0 | 21.3 |
| 40°-50° | 308.3 | 17.2 |
| 50°-60° | 208.5 | 11.6 |
| 60°-70° | 106.1 | 5.9 |
| 70°-80° | 34.0 | 1.9 |
| 80°-90° | 5.2 | 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° | 752.9 | 41.9 |
| 0°-40° | 1135.0 | 63.2 |
| 0°-60° | 1651.7 | 91.9 |
| 0°-90° | 1797.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1797.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1040 | 1040 | 1040 | 1040 | 1040 | |
| 5° | 1098 | 1077 | 1033 | 996 | 981 | 106 |
| 15° | 1151 | 1089 | 962 | 870 | 842 | 324 |
| 25° | 1055 | 963 | 795 | 697 | 669 | 483 |
| 35° | 795 | 718 | 579 | 506 | 494 | 497 |
| 45° | 522 | 468 | 368 | 328 | 328 | 405 |
| 55° | 324 | 280 | 210 | 184 | 185 | 291 |
| 65° | 182 | 148 | 93 | 61 | 56 | 182 |
| 75° | 80 | 56 | 19 | 4 | 3 | 86 |
| 85° | 12 | 6 | 2 | 2 | 2 | 16 |
| 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° | 1040.4 | 1040.4 | 1040.4 | 1040.4 | 1040.4 | 1040.4 | 1040.4 | 1040.4 | 1040.4 |
| 2.5° | 1068.5 | 1062.5 | 1056.6 | 1046.2 | 1034.4 | 1022.5 | 1015.2 | 1009.2 | 1006.3 |
| 5° | 1098.1 | 1090.6 | 1077.3 | 1055.2 | 1032.9 | 1012.3 | 995.9 | 985.6 | 981.1 |
| 7.5° | 1121.8 | 1111.4 | 1089.1 | 1058.1 | 1024.0 | 991.5 | 970.8 | 956.0 | 950.1 |
| 10° | 1130.6 | 1118.7 | 1089.1 | 1047.7 | 1004.8 | 964.8 | 935.3 | 920.5 | 913.0 |
| 12.5° | 1141.0 | 1127.6 | 1090.6 | 1038.9 | 985.6 | 938.2 | 904.2 | 884.9 | 877.6 |
| 15° | 1151.4 | 1133.5 | 1089.1 | 1025.6 | 961.9 | 907.2 | 870.1 | 850.9 | 842.0 |
| 17.5° | 1151.4 | 1130.6 | 1077.3 | 1003.3 | 930.9 | 873.2 | 831.6 | 809.5 | 802.0 |
| 20° | 1130.6 | 1107.0 | 1049.2 | 967.8 | 890.9 | 828.7 | 788.7 | 766.6 | 757.7 |
| 22.5° | 1098.1 | 1071.4 | 1009.2 | 924.9 | 843.5 | 782.8 | 742.9 | 722.2 | 713.3 |
| 25° | 1055.2 | 1028.5 | 963.4 | 876.1 | 794.7 | 734.0 | 697.0 | 677.7 | 668.9 |
| 27.5° | 1004.8 | 975.2 | 910.1 | 822.8 | 742.9 | 685.2 | 651.1 | 633.4 | 626.0 |
| 30° | 942.7 | 914.6 | 850.9 | 765.1 | 688.1 | 634.8 | 603.8 | 587.5 | 581.5 |
| 32.5° | 870.1 | 846.5 | 784.3 | 704.4 | 631.9 | 583.0 | 554.9 | 541.6 | 535.7 |
| 35° | 794.7 | 772.5 | 717.7 | 643.8 | 578.6 | 532.8 | 506.1 | 497.2 | 494.3 |
| 37.5° | 723.7 | 704.4 | 651.1 | 583.0 | 523.9 | 483.9 | 460.2 | 454.3 | 451.4 |
| 40° | 649.6 | 636.3 | 587.5 | 525.3 | 470.6 | 435.1 | 415.8 | 411.4 | 411.4 |
| 42.5° | 583.0 | 568.2 | 525.3 | 469.1 | 420.3 | 384.8 | 371.4 | 367.0 | 368.5 |
| 45° | 522.4 | 507.6 | 467.6 | 415.8 | 368.5 | 338.9 | 328.5 | 328.5 | 328.5 |
| 47.5° | 466.2 | 452.8 | 415.8 | 362.5 | 324.1 | 300.4 | 290.0 | 290.0 | 291.5 |
| 50° | 414.3 | 405.4 | 364.0 | 318.2 | 284.2 | 261.9 | 254.6 | 253.0 | 256.1 |
| 52.5° | 365.6 | 355.2 | 318.2 | 276.7 | 244.2 | 226.4 | 219.0 | 217.6 | 219.0 |
| 55° | 324.1 | 312.3 | 279.7 | 239.7 | 210.1 | 192.4 | 183.5 | 182.0 | 184.9 |
| 57.5° | 284.2 | 275.3 | 241.3 | 205.7 | 177.6 | 159.9 | 152.4 | 149.5 | 150.9 |
| 60° | 247.1 | 238.2 | 207.2 | 173.2 | 148.0 | 130.2 | 119.9 | 117.0 | 118.4 |
| 62.5° | 213.0 | 205.7 | 176.1 | 143.5 | 118.4 | 102.1 | 91.8 | 84.3 | 87.3 |
| 65° | 182.0 | 174.7 | 148.0 | 115.4 | 93.3 | 75.4 | 60.6 | 54.8 | 56.2 |
| 67.5° | 155.4 | 146.5 | 121.4 | 91.8 | 69.5 | 50.4 | 34.0 | 31.0 | 31.0 |
| 70° | 128.7 | 119.9 | 97.7 | 71.0 | 48.9 | 26.6 | 14.8 | 14.8 | 14.8 |
| 72.5° | 103.6 | 96.2 | 75.4 | 53.3 | 31.0 | 11.9 | 5.9 | 5.9 | 5.9 |
| 75° | 79.9 | 73.9 | 56.2 | 37.0 | 19.2 | 5.9 | 4.4 | 2.9 | 2.9 |
| 77.5° | 59.2 | 53.3 | 40.0 | 25.2 | 11.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 80° | 40.0 | 35.6 | 26.6 | 14.8 | 5.9 | 1.5 | 1.5 | 1.5 | 1.5 |
| 82.5° | 23.7 | 20.8 | 14.8 | 7.5 | 2.9 | 1.5 | 1.5 | 1.5 | 1.5 |
| 85° | 11.9 | 8.9 | 5.9 | 2.9 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 87.5° | 2.9 | 1.5 | 1.5 | 1.5 | 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



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Scaled Data Report



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

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