

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: P580214

Luminaire Tested: **HCC4S25D010MW-HM40525930-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580214
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4S25D010MW-HM40525930-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

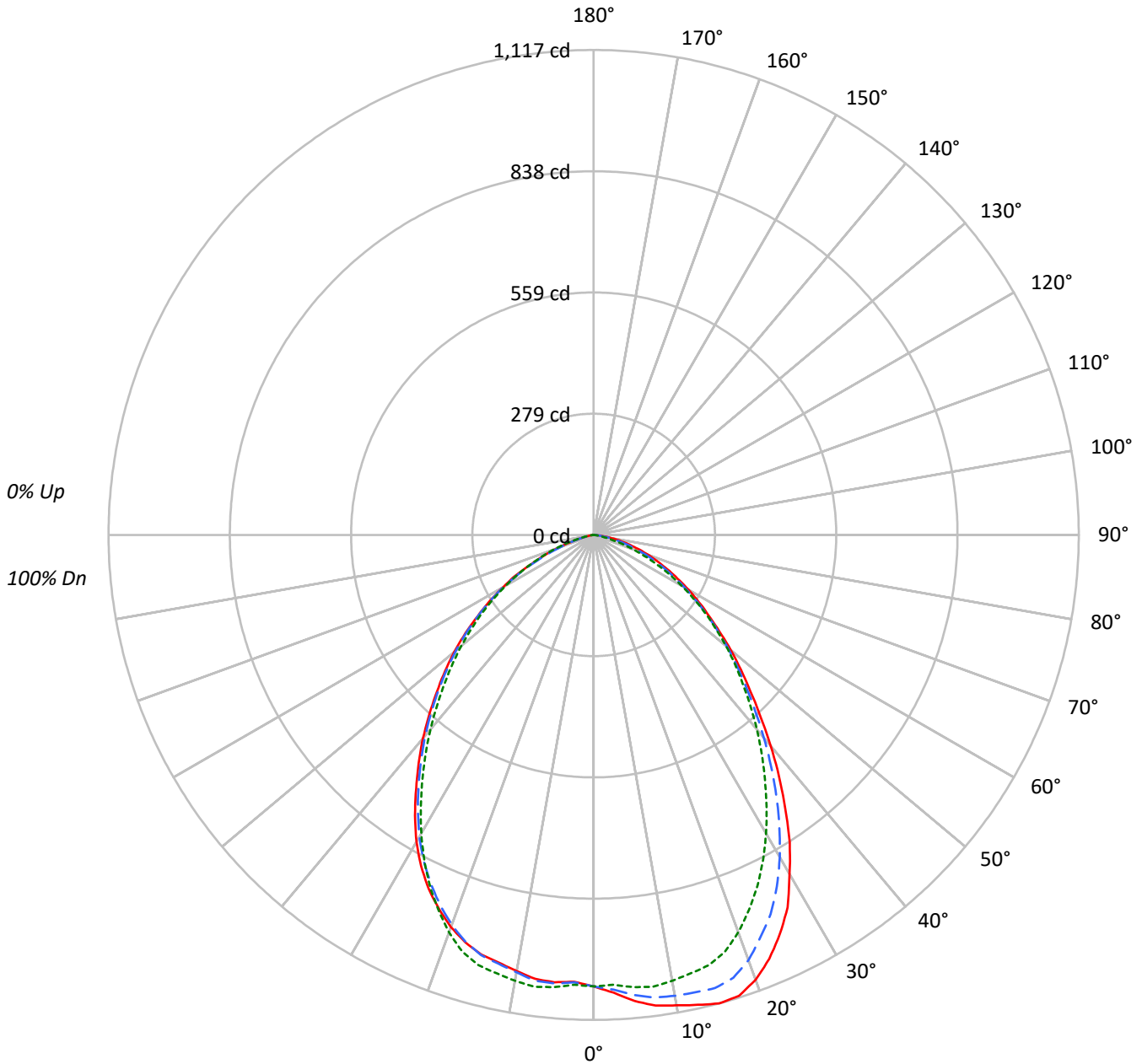
Lumens per Lamp: N/A
Luminaire Lumens: 2166.9 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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 | 107 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | | | | | |
| 2 | 102 | 95 | 90 | 85 | 100 | 94 | 88 | 84 | 90 | 86 | 82 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | | | | | | | | |
| 3 | 95 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 74 | 70 | 76 | 72 | 69 | 67 | | | | | | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | | | | | |
| 5 | 81 | 70 | 61 | 56 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | | | | | | |
| 6 | 75 | 63 | 55 | 49 | 74 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 | | | | | | | | |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 49 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 41 | | | | | | | | |
| 8 | 66 | 53 | 45 | 40 | 64 | 53 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | | | | |
| 9 | 62 | 49 | 42 | 36 | 60 | 49 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | | | | | |
| 10 | 58 | 46 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 128255 | 128255 | 128255 |
| 5° | 133437 | 129450 | 128051 |
| 10° | 137798 | 130584 | 127778 |
| 15° | 142650 | 130991 | 127761 |
| 20° | 143128 | 127823 | 126156 |
| 25° | 138070 | 121426 | 122405 |
| 30° | 128498 | 113073 | 116278 |
| 35° | 115734 | 103462 | 107271 |
| 40° | 102036 | 94130 | 98413 |
| 45° | 89207 | 84794 | 88980 |
| 50° | 79002 | 76296 | 80345 |
| 55° | 69503 | 67396 | 70127 |
| 60° | 62043 | 57553 | 59280 |
| 65° | 54520 | 46756 | 45939 |
| 70° | 47640 | 34441 | 31448 |
| 75° | 39508 | 20778 | 16728 |
| 80° | 29904 | 8027 | 4972 |
| 85° | 13869 | 1981 | 1981 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 100.3 | 4.6 |
| 10°-20° | 292.7 | 13.5 |
| 20°-30° | 423.9 | 19.6 |
| 30°-40° | 447.2 | 20.6 |
| 40°-50° | 387.0 | 17.9 |
| 50°-60° | 286.7 | 13.2 |
| 60°-70° | 165.3 | 7.6 |
| 70°-80° | 57.7 | 2.7 |
| 80°-90° | 6.1 | 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° | 816.9 | 37.7 |
| 0°-40° | 1264.1 | 58.3 |
| 0°-60° | 1937.8 | 89.4 |
| 0°-90° | 2166.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2166.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1040 | 1040 | 1040 | 1040 | 1040 | |
| 5° | 1078 | 1064 | 1046 | 1037 | 1034 | 104 |
| 15° | 1117 | 1081 | 1026 | 1002 | 1000 | 314 |
| 25° | 1014 | 964 | 892 | 887 | 899 | 464 |
| 35° | 769 | 734 | 687 | 703 | 712 | 480 |
| 45° | 511 | 497 | 486 | 504 | 510 | 397 |
| 55° | 323 | 316 | 313 | 325 | 326 | 291 |
| 65° | 187 | 176 | 160 | 152 | 157 | 187 |
| 75° | 83 | 70 | 44 | 35 | 35 | 89 |
| 85° | 10 | 6 | 1 | 1 | 1 | 15 |
| 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° | 1039.8 | 1039.8 | 1039.8 | 1039.8 | 1039.8 | 1039.8 | 1039.8 | 1039.8 | 1039.8 |
| 2.5° | 1055.3 | 1052.5 | 1048.3 | 1042.6 | 1037.0 | 1032.8 | 1031.5 | 1030.0 | 1030.0 |
| 5° | 1077.7 | 1072.2 | 1063.7 | 1052.5 | 1045.5 | 1041.3 | 1037.0 | 1034.2 | 1034.2 |
| 7.5° | 1093.2 | 1087.6 | 1074.9 | 1059.5 | 1049.6 | 1041.3 | 1035.6 | 1031.5 | 1031.5 |
| 10° | 1100.2 | 1093.2 | 1077.7 | 1058.1 | 1042.6 | 1031.5 | 1023.0 | 1020.2 | 1020.2 |
| 12.5° | 1108.7 | 1100.2 | 1079.2 | 1053.9 | 1034.2 | 1020.2 | 1011.7 | 1008.9 | 1008.9 |
| 15° | 1117.1 | 1107.3 | 1080.6 | 1051.1 | 1025.8 | 1008.9 | 1001.9 | 1000.5 | 1000.5 |
| 17.5° | 1112.9 | 1100.2 | 1069.4 | 1034.2 | 1006.2 | 989.2 | 982.2 | 982.2 | 983.6 |
| 20° | 1090.4 | 1077.7 | 1042.6 | 1003.3 | 973.8 | 961.1 | 955.5 | 958.3 | 961.1 |
| 22.5° | 1056.7 | 1041.3 | 1003.3 | 965.4 | 934.5 | 923.2 | 923.2 | 927.5 | 931.7 |
| 25° | 1014.5 | 1000.5 | 963.9 | 921.8 | 892.2 | 883.9 | 886.7 | 893.7 | 899.4 |
| 27.5° | 966.8 | 951.3 | 913.4 | 874.1 | 844.5 | 840.3 | 847.3 | 857.1 | 860.0 |
| 30° | 902.2 | 889.4 | 857.1 | 819.2 | 793.9 | 792.6 | 802.4 | 809.4 | 816.4 |
| 32.5° | 840.3 | 826.2 | 795.4 | 758.8 | 740.5 | 742.0 | 753.2 | 761.6 | 765.8 |
| 35° | 768.6 | 756.0 | 733.5 | 704.0 | 687.1 | 689.9 | 702.6 | 711.0 | 712.4 |
| 37.5° | 701.2 | 692.8 | 670.3 | 647.8 | 635.2 | 640.8 | 652.0 | 661.8 | 661.8 |
| 40° | 633.7 | 626.7 | 609.9 | 591.6 | 584.6 | 591.6 | 602.8 | 611.2 | 611.2 |
| 42.5° | 569.1 | 564.8 | 550.8 | 538.2 | 534.0 | 543.8 | 553.7 | 560.7 | 559.3 |
| 45° | 511.4 | 507.3 | 497.4 | 487.6 | 486.1 | 496.1 | 504.4 | 508.7 | 510.1 |
| 47.5° | 459.5 | 456.7 | 448.2 | 441.2 | 441.2 | 451.0 | 458.0 | 462.3 | 463.7 |
| 50° | 411.7 | 408.9 | 401.9 | 396.3 | 397.6 | 407.5 | 413.1 | 417.4 | 418.7 |
| 52.5° | 364.0 | 362.5 | 356.9 | 349.9 | 354.1 | 361.2 | 368.2 | 371.0 | 372.3 |
| 55° | 323.2 | 323.2 | 316.1 | 310.6 | 313.4 | 320.4 | 324.6 | 326.1 | 326.1 |
| 57.5° | 286.7 | 285.3 | 276.8 | 271.2 | 272.7 | 279.7 | 282.5 | 283.8 | 283.8 |
| 60° | 251.5 | 250.1 | 241.7 | 233.3 | 233.3 | 237.4 | 238.9 | 240.3 | 240.3 |
| 62.5° | 217.8 | 216.4 | 206.6 | 199.5 | 196.7 | 195.3 | 195.3 | 198.1 | 203.8 |
| 65° | 186.8 | 185.5 | 175.7 | 164.4 | 160.2 | 156.0 | 151.7 | 154.6 | 157.4 |
| 67.5° | 158.7 | 156.0 | 146.1 | 136.3 | 126.4 | 119.4 | 112.4 | 116.6 | 122.3 |
| 70° | 132.1 | 129.3 | 118.0 | 106.8 | 95.5 | 84.3 | 78.7 | 84.3 | 87.2 |
| 72.5° | 106.8 | 104.0 | 92.7 | 81.5 | 67.4 | 56.2 | 54.8 | 56.2 | 57.6 |
| 75° | 82.9 | 81.5 | 70.2 | 57.6 | 43.6 | 35.1 | 35.1 | 35.1 | 35.1 |
| 77.5° | 61.9 | 59.0 | 47.8 | 36.6 | 25.3 | 19.6 | 18.3 | 18.3 | 18.3 |
| 80° | 42.1 | 39.3 | 29.5 | 21.1 | 11.3 | 8.5 | 8.5 | 7.0 | 7.0 |
| 82.5° | 23.9 | 22.5 | 15.5 | 8.5 | 4.2 | 2.8 | 2.8 | 2.8 | 2.8 |
| 85° | 9.8 | 8.5 | 5.6 | 2.8 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| 87.5° | 1.4 | 1.4 | 1.4 | 0.0 | 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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