

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: P580124

Luminaire Tested: **HCC4W25D010MW-HM40525827-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580124
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: HCC4W25D010MW-HM40525827-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

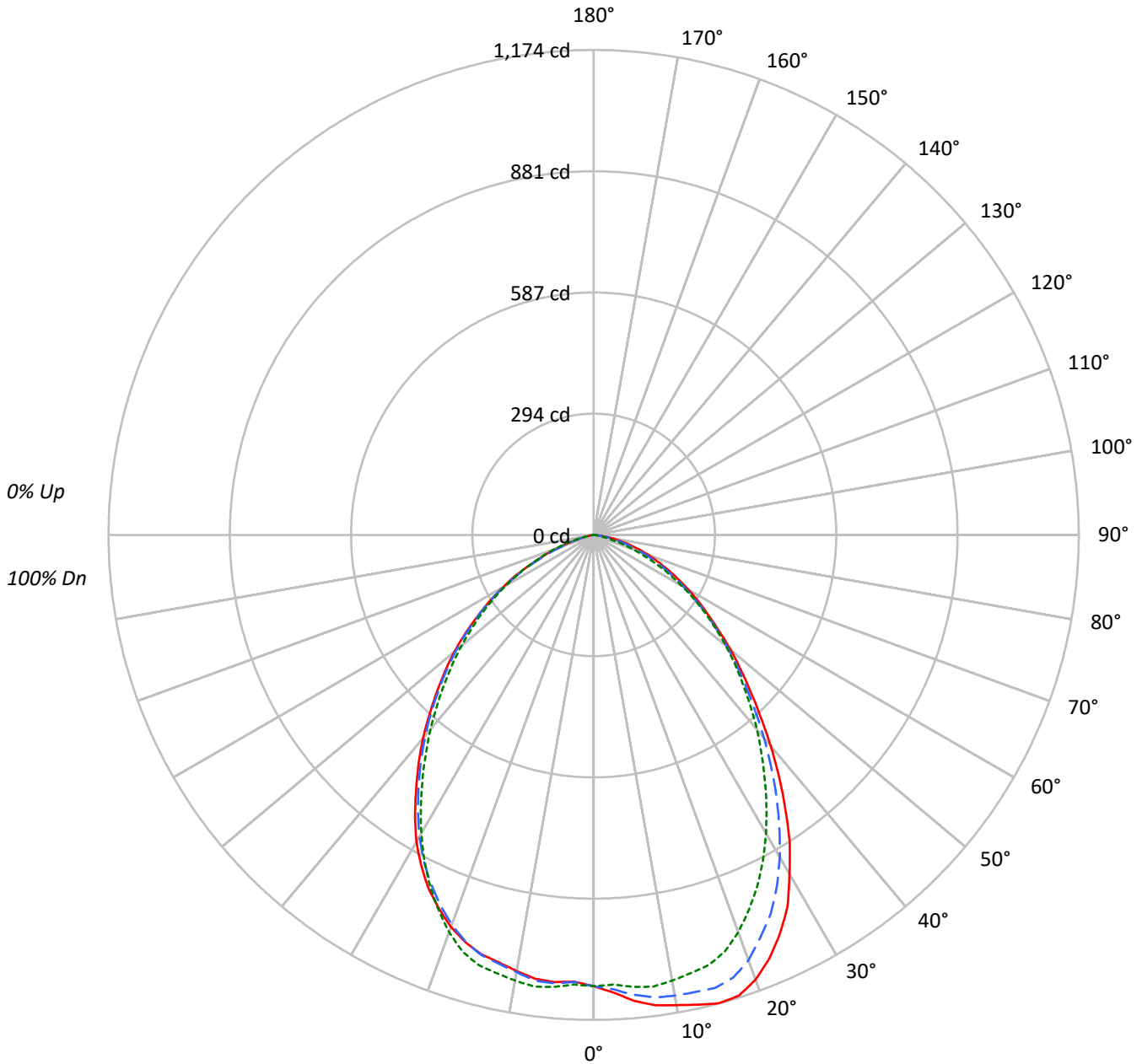
Lumens per Lamp: N/A
Luminaire Lumens: 2276.5 lumens
Efficiency: N/A
Efficacy: 84.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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 | | | | | | | | | | |
| 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 | 111 | 107 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | | 88 | | | |
| 2 | 102 | 95 | 90 | 85 | 100 | 94 | 88 | 84 | 90 | 86 | 82 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | | | | | 76 | | | |
| 3 | 95 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 74 | 70 | 76 | 72 | 69 | 67 | | | | | 67 | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | | 58 | | | |
| 5 | 81 | 70 | 62 | 56 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | | | 52 | | | |
| 6 | 75 | 63 | 55 | 49 | 74 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 | | | | | 46 | | | |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 49 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 41 | | | | | 41 | | | |
| 8 | 66 | 53 | 45 | 40 | 64 | 53 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | 37 | | | |
| 9 | 62 | 49 | 42 | 36 | 60 | 49 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | | 34 | | | |
| 10 | 58 | 46 | 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° | 134743 | 134743 | 134743 |
| 5° | 140198 | 135988 | 134527 |
| 10° | 144775 | 137197 | 134241 |
| 15° | 149865 | 137606 | 134222 |
| 20° | 150373 | 134294 | 132548 |
| 25° | 145066 | 127577 | 128598 |
| 30° | 134993 | 118799 | 122160 |
| 35° | 121606 | 108702 | 112692 |
| 40° | 107205 | 98896 | 103405 |
| 45° | 93742 | 89102 | 93481 |
| 50° | 82993 | 80153 | 84432 |
| 55° | 73008 | 70793 | 73653 |
| 60° | 65200 | 60464 | 62265 |
| 65° | 57292 | 49120 | 48274 |
| 70° | 50057 | 36208 | 33034 |
| 75° | 41462 | 21779 | 17585 |
| 80° | 31467 | 8453 | 5185 |
| 85° | 14718 | 2123 | 2123 |

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 105.4 | 4.6 |
| 10°-20° | 307.5 | 13.5 |
| 20°-30° | 445.3 | 19.6 |
| 30°-40° | 469.8 | 20.6 |
| 40°-50° | 406.6 | 17.9 |
| 50°-60° | 301.2 | 13.2 |
| 60°-70° | 173.6 | 7.6 |
| 70°-80° | 60.6 | 2.7 |
| 80°-90° | 6.4 | 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° | 858.2 | 37.7 |
| 0°-40° | 1328.0 | 58.3 |
| 0°-60° | 2035.8 | 89.4 |
| 0°-90° | 2276.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2276.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1092 | 1092 | 1092 | 1092 | 1092 | |
| 5° | 1132 | 1118 | 1098 | 1090 | 1086 | 109 |
| 15° | 1174 | 1135 | 1078 | 1053 | 1051 | 330 |
| 25° | 1066 | 1013 | 937 | 932 | 945 | 488 |
| 35° | 808 | 771 | 722 | 738 | 748 | 504 |
| 45° | 537 | 523 | 511 | 530 | 536 | 417 |
| 55° | 340 | 332 | 329 | 341 | 342 | 306 |
| 65° | 196 | 184 | 168 | 159 | 165 | 196 |
| 75° | 87 | 74 | 46 | 37 | 37 | 94 |
| 85° | 10 | 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° | 1092.4 | 1092.4 | 1092.4 | 1092.4 | 1092.4 | 1092.4 | 1092.4 | 1092.4 | 1092.4 |
| 2.5° | 1108.7 | 1105.7 | 1101.3 | 1095.4 | 1089.5 | 1085.1 | 1083.6 | 1082.1 | 1082.1 |
| 5° | 1132.3 | 1126.4 | 1117.5 | 1105.7 | 1098.3 | 1093.9 | 1089.5 | 1086.5 | 1086.5 |
| 7.5° | 1148.5 | 1142.7 | 1129.3 | 1113.1 | 1102.8 | 1093.9 | 1088.0 | 1083.6 | 1083.6 |
| 10° | 1155.9 | 1148.5 | 1132.3 | 1111.6 | 1095.4 | 1083.6 | 1074.7 | 1071.8 | 1071.8 |
| 12.5° | 1164.8 | 1155.9 | 1133.7 | 1107.2 | 1086.5 | 1071.8 | 1063.0 | 1060.0 | 1060.0 |
| 15° | 1173.6 | 1163.3 | 1135.2 | 1104.3 | 1077.6 | 1060.0 | 1052.6 | 1051.1 | 1051.1 |
| 17.5° | 1169.2 | 1155.9 | 1123.5 | 1086.5 | 1057.0 | 1039.2 | 1031.9 | 1031.9 | 1033.4 |
| 20° | 1145.6 | 1132.3 | 1095.4 | 1054.0 | 1023.1 | 1009.8 | 1003.9 | 1006.8 | 1009.8 |
| 22.5° | 1110.1 | 1093.9 | 1054.0 | 1014.2 | 981.7 | 969.9 | 969.9 | 974.3 | 978.7 |
| 25° | 1065.9 | 1051.1 | 1012.7 | 968.5 | 937.4 | 928.6 | 931.5 | 938.9 | 944.9 |
| 27.5° | 1015.6 | 999.4 | 959.5 | 918.2 | 887.3 | 882.8 | 890.2 | 900.5 | 903.4 |
| 30° | 947.8 | 934.5 | 900.5 | 860.6 | 834.1 | 832.6 | 842.9 | 850.4 | 857.7 |
| 32.5° | 882.8 | 868.1 | 835.6 | 797.2 | 778.0 | 779.5 | 791.3 | 800.1 | 804.5 |
| 35° | 807.6 | 794.3 | 770.7 | 739.6 | 721.9 | 724.8 | 738.1 | 746.9 | 748.4 |
| 37.5° | 736.7 | 727.8 | 704.2 | 680.6 | 667.2 | 673.2 | 685.0 | 695.4 | 695.4 |
| 40° | 665.8 | 658.4 | 640.7 | 621.5 | 614.2 | 621.5 | 633.4 | 642.2 | 642.2 |
| 42.5° | 597.9 | 593.5 | 578.7 | 565.4 | 561.0 | 571.3 | 581.7 | 589.0 | 587.5 |
| 45° | 537.4 | 532.9 | 522.6 | 512.2 | 510.8 | 521.1 | 530.0 | 534.4 | 535.9 |
| 47.5° | 482.8 | 479.8 | 470.9 | 463.6 | 463.6 | 473.8 | 481.3 | 485.7 | 487.2 |
| 50° | 432.5 | 429.6 | 422.2 | 416.3 | 417.7 | 428.1 | 434.0 | 438.5 | 440.0 |
| 52.5° | 382.4 | 380.9 | 374.9 | 367.6 | 372.0 | 379.5 | 386.8 | 389.7 | 391.2 |
| 55° | 339.5 | 339.5 | 332.2 | 326.3 | 329.2 | 336.6 | 341.1 | 342.5 | 342.5 |
| 57.5° | 301.1 | 299.6 | 290.8 | 285.0 | 286.4 | 293.8 | 296.7 | 298.2 | 298.2 |
| 60° | 264.3 | 262.8 | 253.9 | 245.1 | 245.1 | 249.5 | 251.0 | 252.4 | 252.4 |
| 62.5° | 228.8 | 227.4 | 217.0 | 209.7 | 206.7 | 205.3 | 205.3 | 208.2 | 214.1 |
| 65° | 196.3 | 194.9 | 184.5 | 172.7 | 168.3 | 163.8 | 159.4 | 162.4 | 165.4 |
| 67.5° | 166.9 | 163.8 | 153.5 | 143.2 | 132.9 | 125.4 | 118.1 | 122.5 | 128.5 |
| 70° | 138.8 | 135.8 | 124.0 | 112.2 | 100.4 | 88.6 | 82.6 | 88.6 | 91.6 |
| 72.5° | 112.2 | 109.3 | 97.4 | 85.6 | 70.9 | 59.0 | 57.6 | 59.0 | 60.5 |
| 75° | 87.0 | 85.6 | 73.8 | 60.5 | 45.7 | 36.9 | 36.9 | 36.9 | 36.9 |
| 77.5° | 64.9 | 62.0 | 50.2 | 38.4 | 26.5 | 20.7 | 19.2 | 19.2 | 19.2 |
| 80° | 44.3 | 41.3 | 31.0 | 22.1 | 11.9 | 8.8 | 8.8 | 7.3 | 7.3 |
| 82.5° | 25.1 | 23.6 | 16.3 | 8.8 | 4.4 | 2.9 | 2.9 | 2.9 | 2.9 |
| 85° | 10.4 | 8.8 | 5.9 | 2.9 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 87.5° | 1.5 | 1.5 | 1.5 | 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



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

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