

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: P580164

Luminaire Tested: **HCC4W25D010MB-HM40525835-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580164
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: HCC4W25D010MB-HM40525835-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

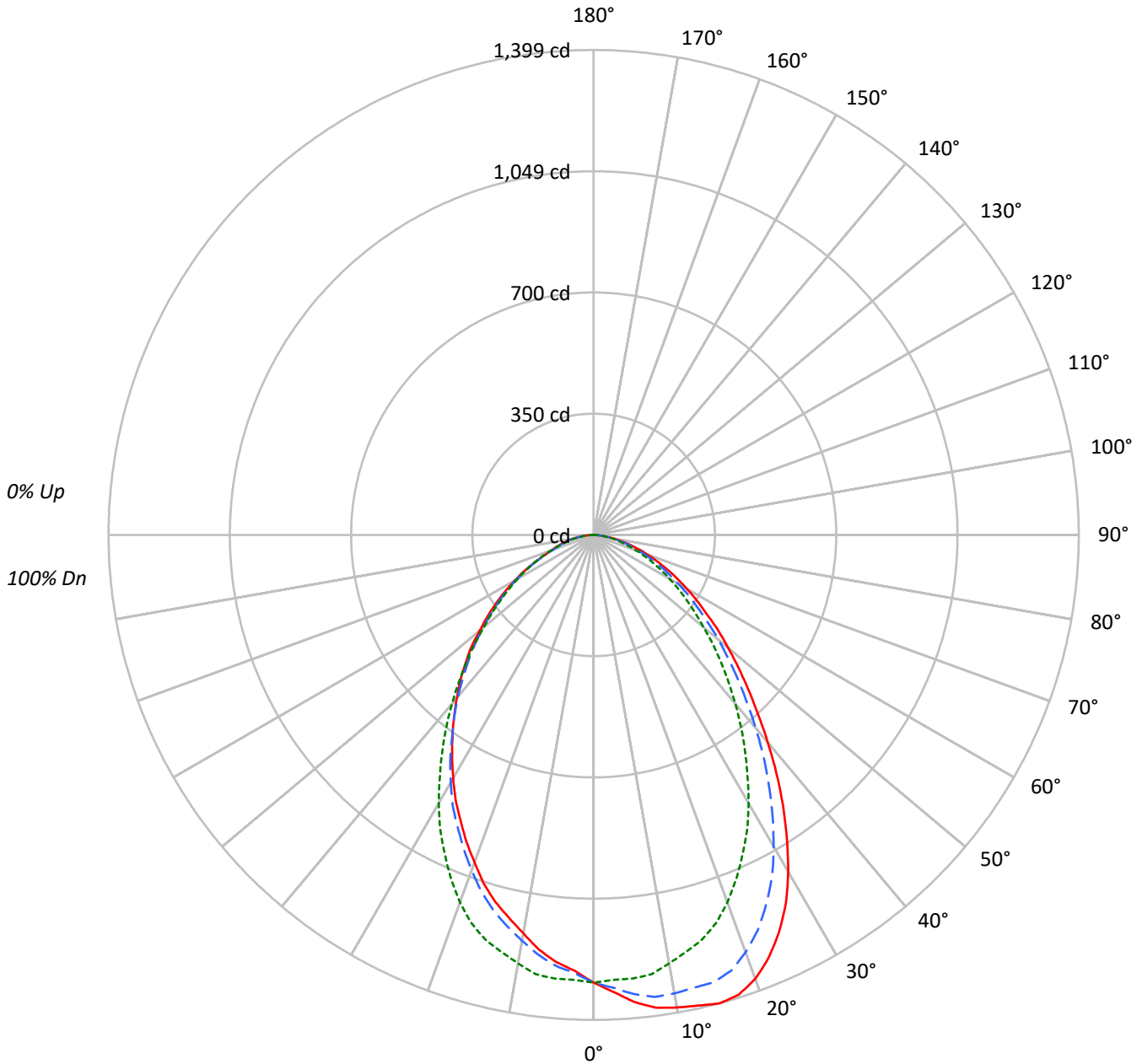
Lumens per Lamp: N/A
Luminaire Lumens: 2504.4 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 159289 | 159289 | 159289 |
| 5° | 167487 | 159067 | 153124 |
| 10° | 173369 | 157174 | 146165 |
| 15° | 178673 | 154322 | 139930 |
| 20° | 178870 | 147971 | 131865 |
| 25° | 172135 | 138302 | 123630 |
| 30° | 159846 | 127259 | 115452 |
| 35° | 143274 | 114574 | 106835 |
| 40° | 125722 | 102229 | 98767 |
| 45° | 109895 | 90515 | 91091 |
| 50° | 97020 | 79213 | 82072 |
| 55° | 85567 | 70234 | 73782 |
| 60° | 76474 | 62166 | 64608 |
| 65° | 67741 | 54665 | 54665 |
| 70° | 59217 | 46631 | 46631 |
| 75° | 50564 | 39508 | 44226 |
| 80° | 39991 | 35303 | 39991 |
| 85° | 25899 | 30569 | 37504 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 122.3 | 4.9 |
| 10°-20° | 344.6 | 13.8 |
| 20°-30° | 482.7 | 19.3 |
| 30°-40° | 497.3 | 19.9 |
| 40°-50° | 423.4 | 16.9 |
| 50°-60° | 313.7 | 12.5 |
| 60°-70° | 196.9 | 7.9 |
| 70°-80° | 97.8 | 3.9 |
| 80°-90° | 25.7 | 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° | 949.6 | 37.9 |
| 0°-40° | 1446.9 | 57.8 |
| 0°-60° | 2184.1 | 87.2 |
| 0°-90° | 2504.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2504.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1291 | 1291 | 1291 | 1291 | 1291 | |
| 5° | 1353 | 1330 | 1285 | 1248 | 1237 | 130 |
| 15° | 1399 | 1336 | 1208 | 1121 | 1096 | 393 |
| 25° | 1265 | 1177 | 1016 | 928 | 908 | 578 |
| 35° | 952 | 880 | 761 | 711 | 710 | 593 |
| 45° | 630 | 587 | 519 | 509 | 522 | 489 |
| 55° | 398 | 366 | 327 | 333 | 343 | 360 |
| 65° | 232 | 209 | 187 | 184 | 187 | 231 |
| 75° | 106 | 94 | 83 | 90 | 93 | 113 |
| 85° | 18 | 18 | 22 | 25 | 26 | 23 |
| 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° | 1291.4 | 1291.4 | 1291.4 | 1291.4 | 1291.4 | 1291.4 | 1291.4 | 1291.4 | 1291.4 |
| 2.5° | 1319.6 | 1314.6 | 1307.9 | 1296.3 | 1284.7 | 1274.8 | 1264.8 | 1259.9 | 1258.3 |
| 5° | 1352.7 | 1342.7 | 1329.5 | 1307.9 | 1284.7 | 1264.8 | 1248.2 | 1240.0 | 1236.7 |
| 7.5° | 1375.9 | 1366.0 | 1344.4 | 1311.2 | 1278.1 | 1248.2 | 1221.7 | 1210.2 | 1206.8 |
| 10° | 1384.2 | 1372.6 | 1342.7 | 1298.0 | 1254.9 | 1218.4 | 1188.6 | 1173.7 | 1167.0 |
| 12.5° | 1390.8 | 1375.9 | 1337.8 | 1284.7 | 1231.7 | 1186.9 | 1155.4 | 1135.5 | 1130.6 |
| 15° | 1399.2 | 1382.6 | 1336.2 | 1271.5 | 1208.5 | 1155.4 | 1120.6 | 1102.4 | 1095.8 |
| 17.5° | 1390.8 | 1372.6 | 1317.9 | 1244.9 | 1173.7 | 1115.7 | 1077.5 | 1060.9 | 1054.3 |
| 20° | 1362.7 | 1342.7 | 1281.4 | 1203.5 | 1127.3 | 1067.6 | 1029.4 | 1012.8 | 1004.6 |
| 22.5° | 1319.6 | 1298.0 | 1235.0 | 1152.1 | 1074.2 | 1016.2 | 979.7 | 963.1 | 958.2 |
| 25° | 1264.8 | 1243.3 | 1177.0 | 1092.4 | 1016.2 | 959.9 | 928.4 | 913.4 | 908.4 |
| 27.5° | 1200.2 | 1178.7 | 1114.0 | 1031.1 | 958.2 | 905.1 | 880.3 | 865.4 | 862.0 |
| 30° | 1122.3 | 1100.8 | 1037.8 | 961.5 | 893.5 | 843.8 | 823.9 | 812.3 | 810.6 |
| 32.5° | 1036.1 | 1017.8 | 959.9 | 890.2 | 825.5 | 784.1 | 769.2 | 760.9 | 759.3 |
| 35° | 951.5 | 931.7 | 880.3 | 817.3 | 760.9 | 724.5 | 711.2 | 709.5 | 709.5 |
| 37.5° | 865.4 | 845.4 | 804.0 | 745.9 | 697.9 | 664.8 | 659.8 | 661.5 | 661.5 |
| 40° | 780.8 | 762.5 | 726.1 | 678.0 | 634.9 | 610.0 | 608.4 | 611.7 | 613.4 |
| 42.5° | 701.2 | 686.3 | 653.1 | 611.7 | 575.2 | 555.4 | 557.0 | 563.6 | 568.6 |
| 45° | 630.0 | 616.7 | 586.9 | 550.4 | 518.9 | 504.0 | 509.0 | 517.2 | 522.2 |
| 47.5° | 565.3 | 553.7 | 525.5 | 492.4 | 465.8 | 455.9 | 462.6 | 472.5 | 479.0 |
| 50° | 505.6 | 495.6 | 469.1 | 434.3 | 412.8 | 406.1 | 414.5 | 424.4 | 427.7 |
| 52.5° | 452.6 | 442.6 | 414.5 | 384.5 | 368.1 | 364.7 | 373.0 | 381.3 | 386.2 |
| 55° | 397.9 | 389.6 | 366.4 | 339.8 | 326.6 | 324.9 | 333.2 | 339.8 | 343.1 |
| 57.5° | 353.2 | 344.8 | 323.2 | 300.1 | 288.5 | 286.8 | 295.1 | 300.1 | 301.7 |
| 60° | 310.0 | 301.7 | 281.8 | 260.2 | 252.0 | 252.0 | 257.0 | 260.2 | 261.9 |
| 62.5° | 270.2 | 261.9 | 243.6 | 225.5 | 218.8 | 218.8 | 218.8 | 220.5 | 225.5 |
| 65° | 232.1 | 225.5 | 208.9 | 192.3 | 187.3 | 184.0 | 184.0 | 184.0 | 187.3 |
| 67.5° | 197.2 | 190.7 | 177.4 | 162.5 | 157.5 | 152.5 | 150.8 | 154.2 | 154.2 |
| 70° | 164.2 | 159.2 | 145.9 | 134.2 | 129.3 | 124.3 | 122.7 | 129.3 | 129.3 |
| 72.5° | 134.2 | 129.3 | 121.0 | 109.4 | 104.4 | 102.7 | 106.1 | 109.4 | 111.1 |
| 75° | 106.1 | 101.2 | 94.5 | 87.8 | 82.9 | 84.6 | 89.5 | 91.2 | 92.8 |
| 77.5° | 79.6 | 77.9 | 71.2 | 66.3 | 66.3 | 68.0 | 71.2 | 74.6 | 76.2 |
| 80° | 56.3 | 54.8 | 51.4 | 48.1 | 49.7 | 53.1 | 54.8 | 58.0 | 56.3 |
| 82.5° | 34.8 | 34.8 | 33.2 | 33.2 | 34.8 | 38.2 | 39.7 | 41.4 | 43.1 |
| 85° | 18.3 | 18.3 | 18.3 | 19.9 | 21.6 | 23.3 | 24.8 | 26.5 | 26.5 |
| 87.5° | 5.0 | 6.7 | 6.7 | 8.2 | 9.9 | 9.9 | 11.6 | 11.6 | 11.6 |
| 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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