

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: P592727

Luminaire Tested: **HCC4W25D010MW-HM40525950-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592727
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: HCC4W25D010MW-HM40525950-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2317.5 lumens
Efficiency: N/A
Efficacy: 86.5 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

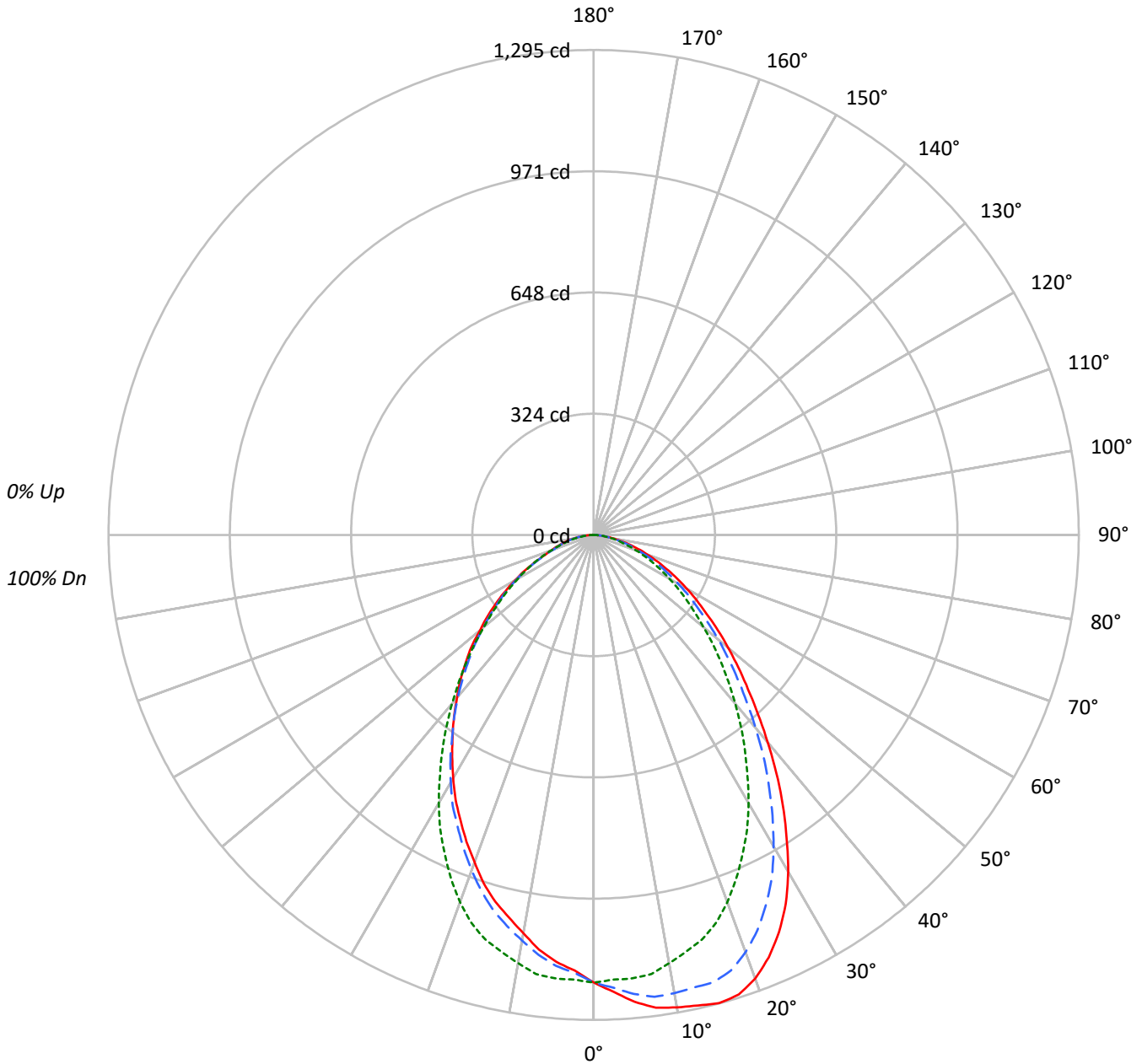
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 147398 | 147398 | 147398 |
| 5° | 154981 | 147193 | 141696 |
| 10° | 160443 | 145451 | 135268 |
| 15° | 165329 | 142803 | 129485 |
| 20° | 165521 | 136932 | 122021 |
| 25° | 159288 | 127972 | 114417 |
| 30° | 147925 | 117773 | 106835 |
| 35° | 132583 | 106036 | 98854 |
| 40° | 116350 | 94597 | 91377 |
| 45° | 101679 | 83765 | 84288 |
| 50° | 89786 | 73283 | 75951 |
| 55° | 79180 | 64987 | 68299 |
| 60° | 70776 | 57504 | 59798 |
| 65° | 62662 | 50579 | 50579 |
| 70° | 54781 | 43168 | 43168 |
| 75° | 46799 | 36553 | 40937 |
| 80° | 37079 | 32746 | 37079 |
| 85° | 23776 | 28305 | 34673 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 113.2 | 4.9 |
| 10°-20° | 318.8 | 13.8 |
| 20°-30° | 446.7 | 19.3 |
| 30°-40° | 460.2 | 19.9 |
| 40°-50° | 391.8 | 16.9 |
| 50°-60° | 290.3 | 12.5 |
| 60°-70° | 182.2 | 7.9 |
| 70°-80° | 90.5 | 3.9 |
| 80°-90° | 23.8 | 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° | 878.8 | 37.9 |
| 0°-40° | 1339.0 | 57.8 |
| 0°-60° | 2021.1 | 87.2 |
| 0°-90° | 2317.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2317.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1195 | 1195 | 1195 | 1195 | 1195 | |
| 5° | 1252 | 1230 | 1189 | 1155 | 1144 | 120 |
| 15° | 1295 | 1236 | 1118 | 1037 | 1014 | 364 |
| 25° | 1170 | 1089 | 940 | 859 | 841 | 535 |
| 35° | 880 | 815 | 704 | 658 | 656 | 549 |
| 45° | 583 | 543 | 480 | 471 | 483 | 452 |
| 55° | 368 | 339 | 302 | 308 | 318 | 333 |
| 65° | 215 | 193 | 173 | 170 | 173 | 214 |
| 75° | 98 | 87 | 77 | 83 | 86 | 105 |
| 85° | 17 | 17 | 20 | 23 | 24 | 22 |
| 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° | 1195.0 | 1195.0 | 1195.0 | 1195.0 | 1195.0 | 1195.0 | 1195.0 | 1195.0 | 1195.0 |
| 2.5° | 1221.1 | 1216.5 | 1210.4 | 1199.6 | 1188.8 | 1179.7 | 1170.4 | 1165.9 | 1164.3 |
| 5° | 1251.7 | 1242.6 | 1230.3 | 1210.4 | 1188.8 | 1170.4 | 1155.1 | 1147.4 | 1144.4 |
| 7.5° | 1273.3 | 1264.0 | 1244.0 | 1213.4 | 1182.7 | 1155.1 | 1130.6 | 1119.9 | 1116.8 |
| 10° | 1281.0 | 1270.1 | 1242.6 | 1201.1 | 1161.3 | 1127.5 | 1099.9 | 1086.1 | 1080.0 |
| 12.5° | 1287.1 | 1273.3 | 1237.9 | 1188.8 | 1139.8 | 1098.4 | 1069.3 | 1050.8 | 1046.2 |
| 15° | 1294.7 | 1279.4 | 1236.5 | 1176.6 | 1118.3 | 1069.3 | 1037.0 | 1020.2 | 1014.0 |
| 17.5° | 1287.1 | 1270.1 | 1219.5 | 1152.0 | 1086.1 | 1032.4 | 997.1 | 981.8 | 975.7 |
| 20° | 1261.0 | 1242.6 | 1185.8 | 1113.8 | 1043.2 | 987.9 | 952.7 | 937.3 | 929.6 |
| 22.5° | 1221.1 | 1201.1 | 1142.9 | 1066.1 | 994.1 | 940.3 | 906.6 | 891.2 | 886.7 |
| 25° | 1170.4 | 1150.6 | 1089.1 | 1010.9 | 940.3 | 888.2 | 859.1 | 845.3 | 840.7 |
| 27.5° | 1110.6 | 1090.7 | 1030.9 | 954.1 | 886.7 | 837.6 | 814.6 | 800.8 | 797.8 |
| 30° | 1038.6 | 1018.6 | 960.3 | 889.8 | 826.9 | 780.8 | 762.4 | 751.7 | 750.1 |
| 32.5° | 958.7 | 941.9 | 888.2 | 823.8 | 764.0 | 725.6 | 711.8 | 704.2 | 702.6 |
| 35° | 880.5 | 862.1 | 814.6 | 756.3 | 704.2 | 670.4 | 658.1 | 656.5 | 656.5 |
| 37.5° | 800.8 | 782.4 | 744.0 | 690.3 | 645.8 | 615.2 | 610.6 | 612.0 | 612.0 |
| 40° | 722.6 | 705.6 | 671.9 | 627.4 | 587.5 | 564.5 | 563.0 | 566.1 | 567.5 |
| 42.5° | 648.9 | 635.1 | 604.4 | 566.1 | 532.3 | 513.9 | 515.4 | 521.6 | 526.2 |
| 45° | 582.9 | 570.7 | 543.0 | 509.3 | 480.2 | 466.4 | 470.9 | 478.6 | 483.2 |
| 47.5° | 523.1 | 512.3 | 486.3 | 455.6 | 431.1 | 421.9 | 428.0 | 437.1 | 443.4 |
| 50° | 467.9 | 458.7 | 434.1 | 401.9 | 381.9 | 375.8 | 383.5 | 392.7 | 395.8 |
| 52.5° | 418.7 | 409.6 | 383.5 | 355.9 | 340.5 | 337.5 | 345.1 | 352.8 | 357.4 |
| 55° | 368.2 | 360.5 | 339.0 | 314.4 | 302.2 | 300.7 | 308.3 | 314.4 | 317.6 |
| 57.5° | 326.7 | 319.1 | 299.2 | 277.6 | 266.9 | 265.4 | 273.1 | 277.6 | 279.2 |
| 60° | 286.9 | 279.2 | 260.8 | 240.8 | 233.1 | 233.1 | 237.8 | 240.8 | 242.4 |
| 62.5° | 250.1 | 242.4 | 225.5 | 208.6 | 202.5 | 202.5 | 202.5 | 204.0 | 208.6 |
| 65° | 214.7 | 208.6 | 193.3 | 177.9 | 173.3 | 170.3 | 170.3 | 170.3 | 173.3 |
| 67.5° | 182.6 | 176.5 | 164.2 | 150.4 | 145.8 | 141.1 | 139.5 | 142.7 | 142.7 |
| 70° | 151.9 | 147.2 | 135.0 | 124.3 | 119.7 | 115.0 | 113.5 | 119.7 | 119.7 |
| 72.5° | 124.3 | 119.7 | 112.0 | 101.3 | 96.6 | 95.1 | 98.2 | 101.3 | 102.7 |
| 75° | 98.2 | 93.6 | 87.4 | 81.3 | 76.7 | 78.2 | 82.9 | 84.3 | 85.9 |
| 77.5° | 73.6 | 72.1 | 65.9 | 61.4 | 61.4 | 62.9 | 65.9 | 69.0 | 70.6 |
| 80° | 52.2 | 50.6 | 47.5 | 44.5 | 46.1 | 49.1 | 50.6 | 53.7 | 52.2 |
| 82.5° | 32.2 | 32.2 | 30.7 | 30.7 | 32.2 | 35.3 | 36.8 | 38.4 | 39.9 |
| 85° | 16.8 | 16.8 | 16.8 | 18.4 | 20.0 | 21.5 | 23.0 | 24.5 | 24.5 |
| 87.5° | 4.6 | 6.1 | 6.1 | 7.7 | 9.3 | 9.3 | 10.7 | 10.7 | 10.7 |
| 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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report



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

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