

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: P580128

Luminaire Tested: **HCC4S25D010BZ-HM40525827-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580128
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: HCC4S25D010BZ-HM40525827-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

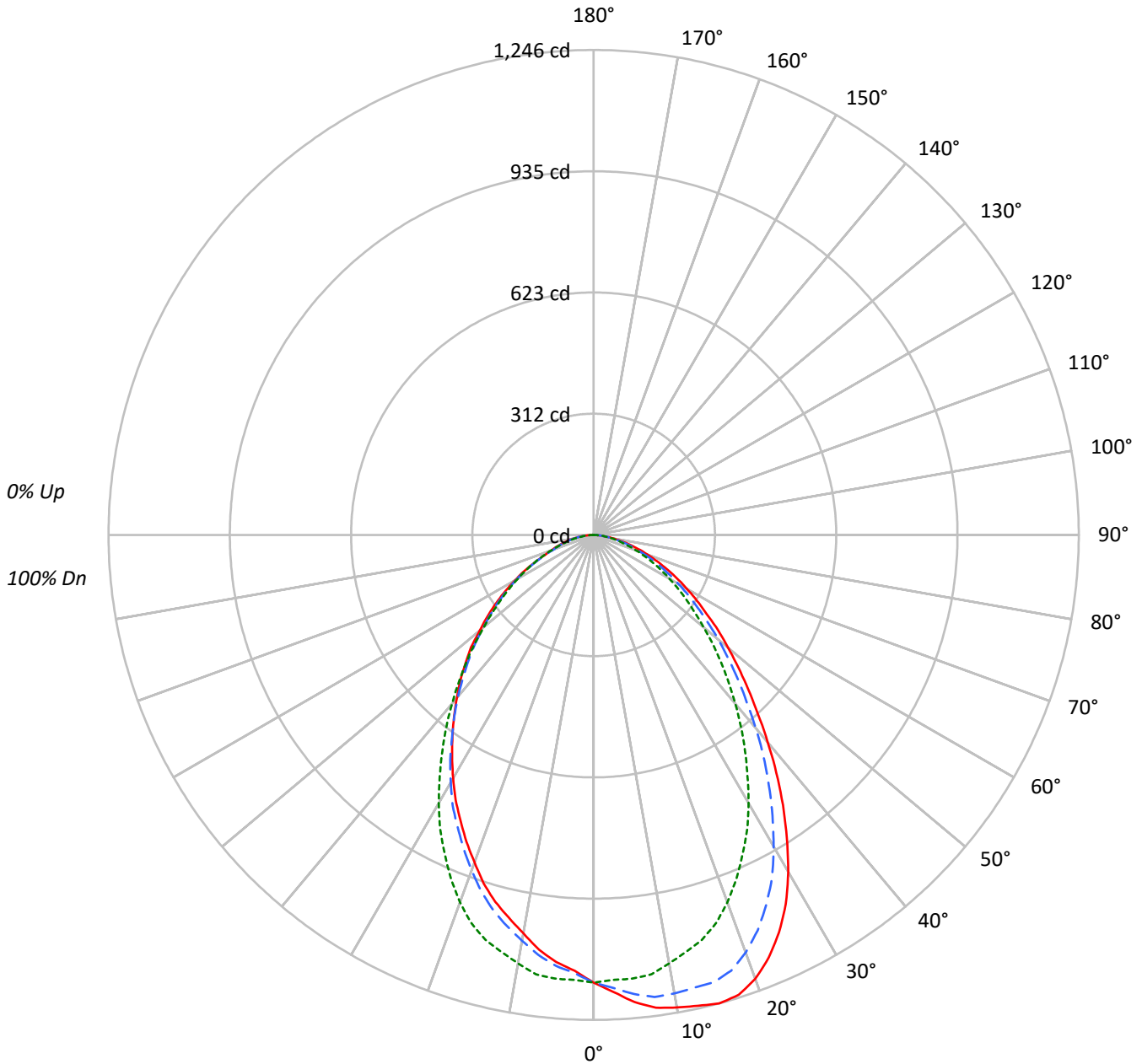
Lumens per Lamp: N/A
Luminaire Lumens: 2230.7 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (Ain): 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 | | | | | | | | |
| 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° | 141872 | 141872 | 141872 |
| 5° | 149187 | 141696 | 136397 |
| 10° | 154431 | 139990 | 130196 |
| 15° | 159136 | 137453 | 124632 |
| 20° | 159325 | 131787 | 117453 |
| 25° | 153327 | 123181 | 110130 |
| 30° | 142370 | 113344 | 102832 |
| 35° | 127614 | 102046 | 95165 |
| 40° | 111987 | 91055 | 87963 |
| 45° | 97877 | 80625 | 81131 |
| 50° | 86428 | 70559 | 73092 |
| 55° | 76212 | 62536 | 65718 |
| 60° | 68136 | 55358 | 57553 |
| 65° | 60328 | 48712 | 48712 |
| 70° | 52725 | 41546 | 41546 |
| 75° | 45036 | 35171 | 39365 |
| 80° | 35658 | 31467 | 35658 |
| 85° | 23068 | 27172 | 33399 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 109.0 | 4.9 |
| 10°-20° | 306.9 | 13.8 |
| 20°-30° | 430.0 | 19.3 |
| 30°-40° | 443.0 | 19.9 |
| 40°-50° | 377.1 | 16.9 |
| 50°-60° | 279.4 | 12.5 |
| 60°-70° | 175.4 | 7.9 |
| 70°-80° | 87.1 | 3.9 |
| 80°-90° | 22.9 | 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° | 845.8 | 37.9 |
| 0°-40° | 1288.8 | 57.8 |
| 0°-60° | 1945.3 | 87.2 |
| 0°-90° | 2230.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2230.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1150 | 1150 | 1150 | 1150 | 1150 | |
| 5° | 1205 | 1184 | 1144 | 1112 | 1102 | 116 |
| 15° | 1246 | 1190 | 1076 | 998 | 976 | 350 |
| 25° | 1127 | 1048 | 905 | 827 | 809 | 515 |
| 35° | 848 | 784 | 678 | 634 | 632 | 528 |
| 45° | 561 | 523 | 462 | 453 | 465 | 435 |
| 55° | 354 | 326 | 291 | 297 | 306 | 320 |
| 65° | 207 | 186 | 167 | 164 | 167 | 206 |
| 75° | 94 | 84 | 74 | 80 | 83 | 101 |
| 85° | 16 | 16 | 19 | 22 | 24 | 21 |
| 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° | 1150.2 | 1150.2 | 1150.2 | 1150.2 | 1150.2 | 1150.2 | 1150.2 | 1150.2 | 1150.2 |
| 2.5° | 1175.4 | 1170.9 | 1165.0 | 1154.6 | 1144.4 | 1135.4 | 1126.6 | 1122.2 | 1120.8 |
| 5° | 1204.9 | 1196.1 | 1184.2 | 1165.0 | 1144.4 | 1126.6 | 1111.8 | 1104.5 | 1101.6 |
| 7.5° | 1225.5 | 1216.7 | 1197.5 | 1168.0 | 1138.5 | 1111.8 | 1088.2 | 1077.9 | 1074.9 |
| 10° | 1233.0 | 1222.6 | 1196.1 | 1156.2 | 1117.7 | 1085.3 | 1058.7 | 1045.5 | 1039.5 |
| 12.5° | 1238.9 | 1225.5 | 1191.5 | 1144.4 | 1097.0 | 1057.2 | 1029.2 | 1011.5 | 1007.1 |
| 15° | 1246.2 | 1231.5 | 1190.1 | 1132.5 | 1076.4 | 1029.2 | 998.1 | 981.9 | 976.0 |
| 17.5° | 1238.9 | 1222.6 | 1173.8 | 1108.9 | 1045.5 | 993.7 | 959.8 | 945.0 | 939.1 |
| 20° | 1213.8 | 1196.1 | 1141.4 | 1072.0 | 1004.0 | 951.0 | 917.0 | 902.2 | 894.8 |
| 22.5° | 1175.4 | 1156.2 | 1100.1 | 1026.3 | 956.8 | 905.1 | 872.6 | 857.9 | 853.4 |
| 25° | 1126.6 | 1107.4 | 1048.4 | 973.1 | 905.1 | 854.9 | 826.9 | 813.6 | 809.2 |
| 27.5° | 1069.1 | 1049.9 | 992.3 | 918.4 | 853.4 | 806.2 | 784.1 | 770.8 | 767.8 |
| 30° | 999.6 | 980.4 | 924.3 | 856.5 | 795.8 | 751.6 | 733.8 | 723.5 | 722.0 |
| 32.5° | 922.8 | 906.6 | 854.9 | 792.9 | 735.3 | 698.4 | 685.1 | 677.7 | 676.3 |
| 35° | 847.5 | 829.8 | 784.1 | 728.0 | 677.7 | 645.2 | 633.5 | 632.0 | 632.0 |
| 37.5° | 770.8 | 753.0 | 716.1 | 664.4 | 621.6 | 592.0 | 587.6 | 589.1 | 589.1 |
| 40° | 695.5 | 679.2 | 646.7 | 603.9 | 565.5 | 543.4 | 541.9 | 544.9 | 546.3 |
| 42.5° | 624.6 | 611.4 | 581.8 | 544.9 | 512.3 | 494.6 | 496.1 | 502.1 | 506.5 |
| 45° | 561.1 | 549.3 | 522.7 | 490.2 | 462.2 | 448.9 | 453.3 | 460.7 | 465.1 |
| 47.5° | 503.5 | 493.1 | 468.1 | 438.5 | 414.9 | 406.1 | 412.0 | 420.8 | 426.8 |
| 50° | 450.4 | 441.4 | 417.8 | 386.9 | 367.7 | 361.7 | 369.2 | 378.0 | 380.9 |
| 52.5° | 403.1 | 394.2 | 369.2 | 342.5 | 327.7 | 324.8 | 332.3 | 339.6 | 344.0 |
| 55° | 354.4 | 346.9 | 326.3 | 302.7 | 290.8 | 289.4 | 296.8 | 302.7 | 305.6 |
| 57.5° | 314.5 | 307.1 | 287.9 | 267.2 | 257.0 | 255.5 | 262.8 | 267.2 | 268.7 |
| 60° | 276.2 | 268.7 | 251.0 | 231.8 | 224.4 | 224.4 | 228.8 | 231.8 | 233.3 |
| 62.5° | 240.7 | 233.3 | 217.1 | 200.8 | 194.9 | 194.9 | 194.9 | 196.3 | 200.8 |
| 65° | 206.7 | 200.8 | 186.1 | 171.3 | 166.9 | 163.9 | 163.9 | 163.9 | 166.9 |
| 67.5° | 175.7 | 169.8 | 157.9 | 144.7 | 140.2 | 135.8 | 134.4 | 137.3 | 137.3 |
| 70° | 146.2 | 141.8 | 129.9 | 119.6 | 115.2 | 110.8 | 109.3 | 115.2 | 115.2 |
| 72.5° | 119.6 | 115.2 | 107.8 | 97.4 | 93.0 | 91.6 | 94.5 | 97.4 | 98.9 |
| 75° | 94.5 | 90.1 | 84.1 | 78.2 | 73.8 | 75.3 | 79.7 | 81.2 | 82.6 |
| 77.5° | 70.9 | 69.4 | 63.4 | 59.0 | 59.0 | 60.5 | 63.4 | 66.5 | 68.0 |
| 80° | 50.2 | 48.8 | 45.7 | 42.8 | 44.3 | 47.3 | 48.8 | 51.7 | 50.2 |
| 82.5° | 31.0 | 31.0 | 29.6 | 29.6 | 31.0 | 34.0 | 35.5 | 36.9 | 38.4 |
| 85° | 16.3 | 16.3 | 16.3 | 17.7 | 19.2 | 20.7 | 22.1 | 23.6 | 23.6 |
| 87.5° | 4.4 | 5.9 | 5.9 | 7.3 | 8.8 | 8.8 | 10.4 | 10.4 | 10.4 |
| 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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— 0°-180° - - 45°-225° - - - - 90°-270°

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