

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: P580126

Luminaire Tested: **HCC4W25D010BZ-HM40525827-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580126
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W25D010BZ-HM40525827-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

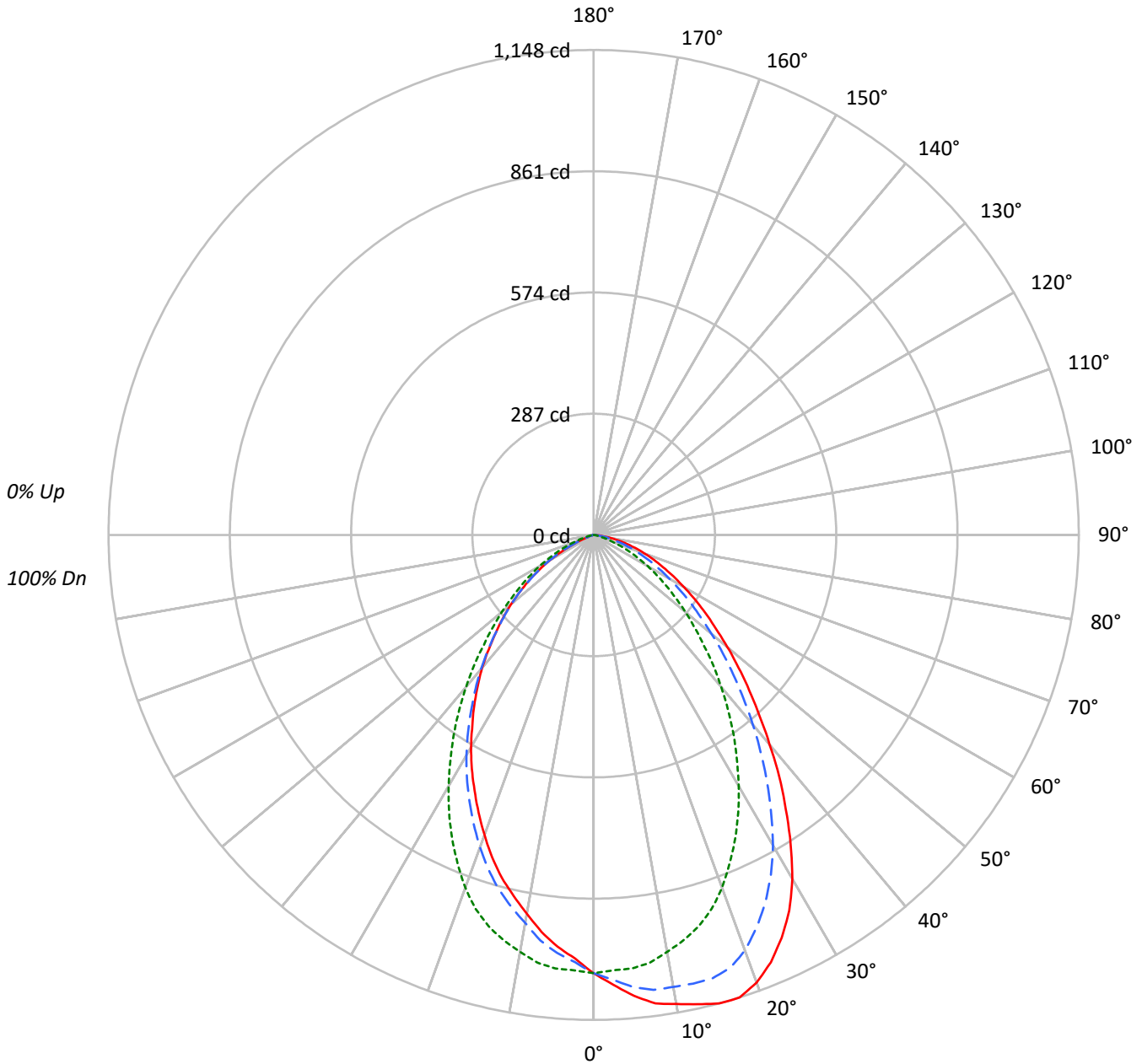
Lumens per Lamp: N/A
Luminaire Lumens: 1792.3 lumens
Efficiency: N/A
Efficacy: 66.9 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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 | | | | | | | | |
| 1 | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 97 | 97 | 95 | 94 | 94 | 92 | 91 | 89 | | | | | | | | |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 92 | 87 | 84 | 88 | 85 | 82 | 85 | 83 | 80 | 78 | | | | | | | | |
| 3 | 96 | 87 | 80 | 75 | 94 | 86 | 79 | 74 | 83 | 78 | 73 | 80 | 76 | 72 | 78 | 74 | 71 | 69 | | | | | | | | |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 65 | 75 | 69 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 61 | | | | | | | | |
| 5 | 83 | 72 | 64 | 58 | 81 | 71 | 64 | 58 | 69 | 62 | 58 | 67 | 61 | 57 | 65 | 60 | 56 | 55 | | | | | | | | |
| 6 | 77 | 66 | 58 | 52 | 75 | 65 | 57 | 52 | 63 | 57 | 52 | 61 | 56 | 51 | 60 | 55 | 51 | 49 | | | | | | | | |
| 7 | 72 | 60 | 53 | 47 | 71 | 59 | 52 | 47 | 58 | 51 | 47 | 57 | 51 | 46 | 55 | 50 | 46 | 44 | | | | | | | | |
| 8 | 68 | 56 | 48 | 43 | 66 | 55 | 48 | 43 | 54 | 47 | 42 | 53 | 47 | 42 | 51 | 46 | 42 | 40 | | | | | | | | |
| 9 | 64 | 52 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 | | | | | | | | |
| 10 | 60 | 48 | 41 | 36 | 59 | 47 | 41 | 36 | 46 | 40 | 36 | 46 | 40 | 36 | 45 | 39 | 36 | 34 | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 127983 | 127983 | 127983 |
| 5° | 135592 | 127556 | 121155 |
| 10° | 141230 | 125524 | 114064 |
| 15° | 146634 | 122512 | 107253 |
| 20° | 148011 | 116626 | 99181 |
| 25° | 143215 | 107870 | 90790 |
| 30° | 133910 | 97748 | 82622 |
| 35° | 119347 | 86898 | 74220 |
| 40° | 104322 | 75565 | 66065 |
| 45° | 90882 | 64106 | 57146 |
| 50° | 79290 | 54382 | 49009 |
| 55° | 69503 | 45052 | 39676 |
| 60° | 60809 | 36412 | 29134 |
| 65° | 52973 | 27143 | 16373 |
| 70° | 46306 | 17563 | 5337 |
| 75° | 37983 | 9150 | 1382 |
| 80° | 28342 | 4191 | 1065 |
| 85° | 16841 | 2123 | 2123 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 97.9 | 5.5 |
| 10°-20° | 274.1 | 15.3 |
| 20°-30° | 378.9 | 21.1 |
| 30°-40° | 381.0 | 21.3 |
| 40°-50° | 307.5 | 17.2 |
| 50°-60° | 207.9 | 11.6 |
| 60°-70° | 105.8 | 5.9 |
| 70°-80° | 33.9 | 1.9 |
| 80°-90° | 5.2 | 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° | 751.0 | 41.9 |
| 0°-40° | 1132.0 | 63.2 |
| 0°-60° | 1647.4 | 91.9 |
| 0°-90° | 1792.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1792.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1038 | 1038 | 1038 | 1038 | 1038 | |
| 5° | 1095 | 1074 | 1030 | 993 | 978 | 106 |
| 15° | 1148 | 1086 | 959 | 868 | 840 | 323 |
| 25° | 1052 | 961 | 793 | 695 | 667 | 482 |
| 35° | 793 | 716 | 577 | 505 | 493 | 495 |
| 45° | 521 | 466 | 368 | 328 | 328 | 404 |
| 55° | 323 | 279 | 210 | 183 | 184 | 290 |
| 65° | 182 | 148 | 93 | 60 | 56 | 182 |
| 75° | 80 | 56 | 19 | 4 | 3 | 86 |
| 85° | 12 | 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° | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 |
| 2.5° | 1065.7 | 1059.8 | 1053.8 | 1043.5 | 1031.7 | 1019.9 | 1012.5 | 1006.6 | 1003.7 |
| 5° | 1095.1 | 1087.8 | 1074.5 | 1052.3 | 1030.2 | 1009.6 | 993.3 | 983.0 | 978.5 |
| 7.5° | 1118.7 | 1108.5 | 1086.3 | 1055.3 | 1021.4 | 988.9 | 968.2 | 953.4 | 947.6 |
| 10° | 1127.6 | 1115.8 | 1086.3 | 1045.0 | 1002.2 | 962.4 | 932.8 | 918.0 | 910.7 |
| 12.5° | 1137.9 | 1124.7 | 1087.8 | 1036.1 | 983.0 | 935.7 | 901.8 | 882.7 | 875.2 |
| 15° | 1148.3 | 1130.6 | 1086.3 | 1022.9 | 959.4 | 904.8 | 867.9 | 848.7 | 839.9 |
| 17.5° | 1148.3 | 1127.6 | 1074.5 | 1000.7 | 928.4 | 870.8 | 829.5 | 807.3 | 800.0 |
| 20° | 1127.6 | 1104.0 | 1046.5 | 965.3 | 888.5 | 826.5 | 786.7 | 764.6 | 755.6 |
| 22.5° | 1095.1 | 1068.6 | 1006.6 | 922.5 | 841.3 | 780.8 | 741.0 | 720.3 | 711.4 |
| 25° | 1052.3 | 1025.8 | 960.9 | 873.7 | 792.6 | 732.0 | 695.1 | 675.9 | 667.1 |
| 27.5° | 1002.2 | 972.6 | 907.7 | 820.7 | 741.0 | 683.4 | 649.4 | 631.7 | 624.3 |
| 30° | 940.2 | 912.1 | 848.7 | 763.1 | 686.3 | 633.1 | 602.2 | 586.0 | 580.1 |
| 32.5° | 867.9 | 844.3 | 782.3 | 702.6 | 630.2 | 581.5 | 553.4 | 540.2 | 534.2 |
| 35° | 792.6 | 770.4 | 715.8 | 642.1 | 577.1 | 531.3 | 504.8 | 496.0 | 492.9 |
| 37.5° | 721.8 | 702.6 | 649.4 | 581.5 | 522.5 | 482.6 | 459.1 | 453.1 | 450.1 |
| 40° | 647.9 | 634.6 | 586.0 | 524.0 | 469.3 | 434.0 | 414.8 | 410.3 | 410.3 |
| 42.5° | 581.5 | 566.8 | 524.0 | 467.9 | 419.2 | 383.7 | 370.4 | 366.0 | 367.5 |
| 45° | 521.0 | 506.2 | 466.4 | 414.8 | 367.5 | 338.0 | 327.6 | 327.6 | 327.6 |
| 47.5° | 464.9 | 451.6 | 414.8 | 361.6 | 323.2 | 299.6 | 289.2 | 289.2 | 290.7 |
| 50° | 413.2 | 404.4 | 363.1 | 317.4 | 283.4 | 261.3 | 253.9 | 252.4 | 255.4 |
| 52.5° | 364.6 | 354.3 | 317.4 | 276.0 | 243.5 | 225.8 | 218.5 | 217.0 | 218.5 |
| 55° | 323.2 | 311.4 | 279.0 | 239.1 | 209.5 | 191.9 | 183.0 | 181.5 | 184.5 |
| 57.5° | 283.4 | 274.6 | 240.6 | 205.1 | 177.1 | 159.4 | 152.1 | 149.0 | 150.5 |
| 60° | 246.5 | 237.7 | 206.6 | 172.7 | 147.6 | 129.8 | 119.6 | 116.6 | 118.1 |
| 62.5° | 212.6 | 205.1 | 175.7 | 143.2 | 118.1 | 101.8 | 91.6 | 84.1 | 87.0 |
| 65° | 181.5 | 174.2 | 147.6 | 115.2 | 93.0 | 75.3 | 60.5 | 54.6 | 56.1 |
| 67.5° | 155.0 | 146.1 | 121.0 | 91.6 | 69.3 | 50.1 | 34.0 | 31.0 | 31.0 |
| 70° | 128.4 | 119.6 | 97.4 | 70.9 | 48.7 | 26.5 | 14.8 | 14.8 | 14.8 |
| 72.5° | 103.3 | 96.0 | 75.3 | 53.2 | 31.0 | 11.9 | 5.9 | 5.9 | 5.9 |
| 75° | 79.7 | 73.8 | 56.1 | 36.9 | 19.2 | 5.9 | 4.4 | 2.9 | 2.9 |
| 77.5° | 59.0 | 53.2 | 39.9 | 25.1 | 11.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 80° | 39.9 | 35.5 | 26.5 | 14.8 | 5.9 | 1.5 | 1.5 | 1.5 | 1.5 |
| 82.5° | 23.6 | 20.7 | 14.8 | 7.3 | 2.9 | 1.5 | 1.5 | 1.5 | 1.5 |
| 85° | 11.9 | 8.8 | 5.9 | 2.9 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 87.5° | 2.9 | 1.5 | 1.5 | 1.5 | 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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