

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: P580161

Luminaire Tested: **HCC4W25D010BZ-HM40525835-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580161
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W25D010BZ-HM40525835-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

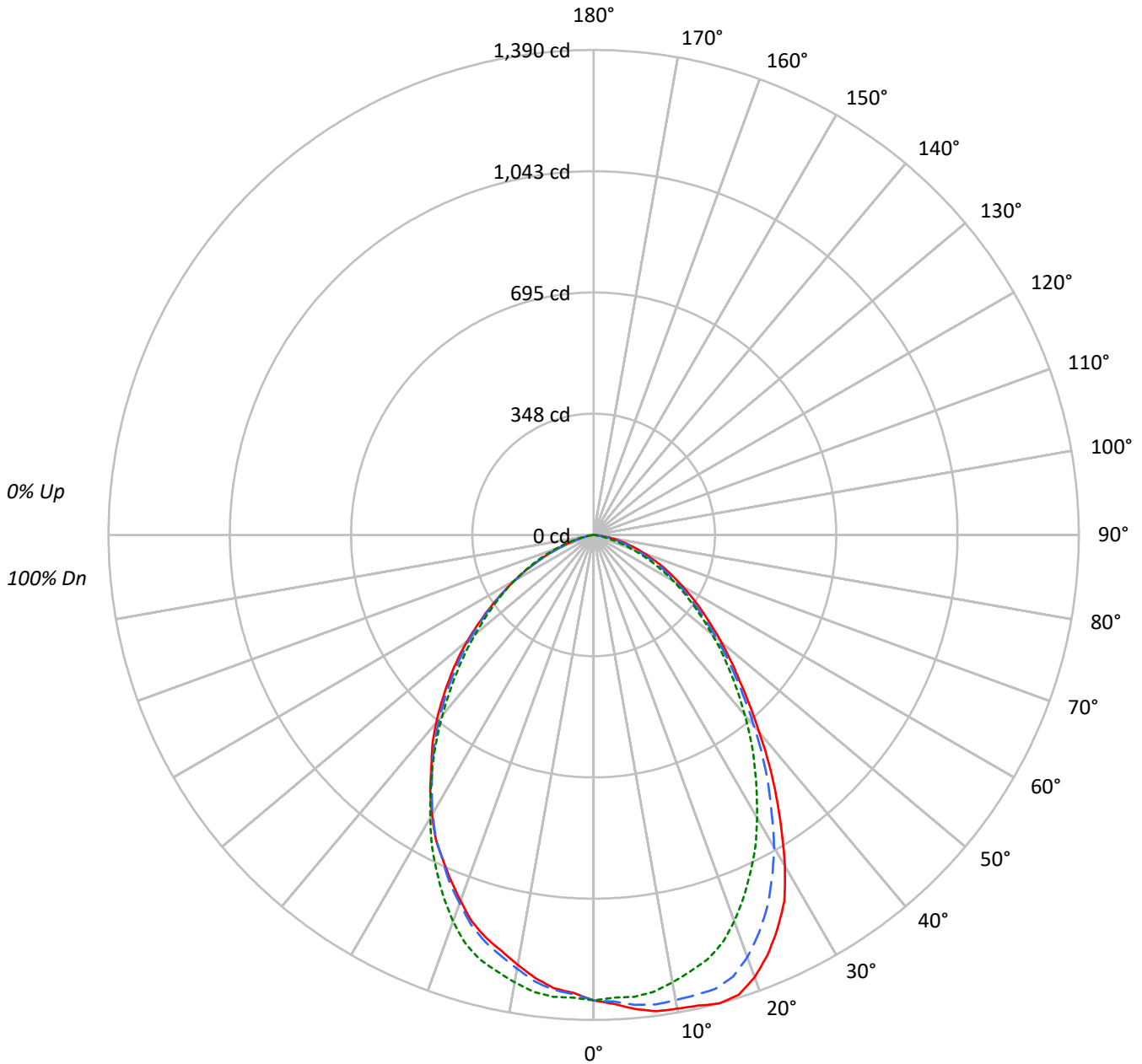
Lumens per Lamp: N/A
Luminaire Lumens: 2542.5 lumens
Efficiency: N/A
Efficacy: 94.9 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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 | 0 | | | | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | | | | |
| 1 | 111 | 107 | 104 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | | | | | |
| 2 | 103 | 96 | 90 | 85 | 100 | 94 | 89 | 84 | 90 | 86 | 82 | 87 | 84 | 80 | 84 | 81 | 79 | 77 | | | | | | | | |
| 3 | 95 | 86 | 79 | 73 | 92 | 84 | 78 | 73 | 81 | 76 | 71 | 79 | 74 | 70 | 76 | 72 | 69 | 67 | | | | | | | | |
| 4 | 88 | 77 | 70 | 64 | 86 | 76 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | | | | | | |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 55 | 63 | 58 | 54 | 52 | | | | | | | | |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 60 | 54 | 49 | 58 | 53 | 49 | 47 | | | | | | | | |
| 7 | 71 | 58 | 51 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 45 | 55 | 49 | 44 | 54 | 48 | 44 | 42 | | | | | | | | |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | | | | | |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | | | | | |
| 10 | 58 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 164531 | 164531 | 164531 |
| 5° | 168861 | 164540 | 161469 |
| 10° | 172680 | 163124 | 156686 |
| 15° | 177537 | 160821 | 152559 |
| 20° | 177046 | 154653 | 146383 |
| 25° | 169590 | 144793 | 139377 |
| 30° | 156015 | 133355 | 131930 |
| 35° | 137236 | 121019 | 122013 |
| 40° | 118717 | 108332 | 112872 |
| 45° | 103197 | 96272 | 102028 |
| 50° | 91571 | 84912 | 90630 |
| 55° | 81245 | 74492 | 77696 |
| 60° | 72355 | 64584 | 64584 |
| 65° | 64326 | 53673 | 50288 |
| 70° | 55574 | 40644 | 35884 |
| 75° | 46609 | 26831 | 22113 |
| 80° | 35303 | 12928 | 11791 |
| 85° | 18681 | 4670 | 4670 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 126.3 | 5.0 |
| 10°-20° | 358.1 | 14.1 |
| 20°-30° | 505.1 | 19.9 |
| 30°-40° | 521.8 | 20.5 |
| 40°-50° | 442.3 | 17.4 |
| 50°-60° | 321.8 | 12.7 |
| 60°-70° | 188.0 | 7.4 |
| 70°-80° | 69.9 | 2.7 |
| 80°-90° | 9.1 | 0.4 |
| 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° | 989.6 | 38.9 |
| 0°-40° | 1511.3 | 59.4 |
| 0°-60° | 2275.4 | 89.5 |
| 0°-90° | 2542.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2542.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1334 | 1334 | 1334 | 1334 | 1334 | |
| 5° | 1364 | 1352 | 1329 | 1309 | 1304 | 131 |
| 15° | 1390 | 1347 | 1259 | 1206 | 1195 | 391 |
| 25° | 1246 | 1176 | 1064 | 1026 | 1024 | 570 |
| 35° | 911 | 872 | 804 | 805 | 810 | 569 |
| 45° | 592 | 575 | 552 | 572 | 585 | 460 |
| 55° | 378 | 360 | 346 | 358 | 361 | 340 |
| 65° | 220 | 202 | 184 | 172 | 172 | 219 |
| 75° | 98 | 81 | 56 | 45 | 46 | 105 |
| 85° | 13 | 8 | 3 | 3 | 3 | 18 |
| 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° | 1333.9 | 1333.9 | 1333.9 | 1333.9 | 1333.9 | 1333.9 | 1333.9 | 1333.9 | 1333.9 |
| 2.5° | 1345.5 | 1342.3 | 1338.9 | 1333.9 | 1327.4 | 1322.4 | 1317.4 | 1314.0 | 1314.0 |
| 5° | 1363.8 | 1358.8 | 1352.2 | 1340.6 | 1328.9 | 1319.0 | 1309.1 | 1304.1 | 1304.1 |
| 7.5° | 1377.0 | 1370.4 | 1357.2 | 1340.6 | 1320.7 | 1305.8 | 1290.9 | 1284.2 | 1281.0 |
| 10° | 1378.7 | 1372.1 | 1353.8 | 1328.9 | 1302.4 | 1279.3 | 1262.7 | 1252.7 | 1251.0 |
| 12.5° | 1382.0 | 1373.8 | 1350.5 | 1315.7 | 1281.0 | 1252.7 | 1234.6 | 1224.6 | 1221.2 |
| 15° | 1390.3 | 1378.7 | 1347.2 | 1302.4 | 1259.4 | 1226.2 | 1206.3 | 1198.1 | 1194.7 |
| 17.5° | 1382.0 | 1365.4 | 1327.4 | 1274.3 | 1226.2 | 1189.7 | 1169.9 | 1161.6 | 1161.6 |
| 20° | 1348.8 | 1332.3 | 1287.5 | 1229.6 | 1178.2 | 1143.3 | 1123.5 | 1118.5 | 1115.2 |
| 22.5° | 1302.4 | 1284.2 | 1236.1 | 1174.8 | 1123.5 | 1092.0 | 1078.8 | 1072.1 | 1070.5 |
| 25° | 1246.1 | 1227.9 | 1176.5 | 1113.5 | 1063.9 | 1037.3 | 1025.7 | 1025.7 | 1024.1 |
| 27.5° | 1183.2 | 1159.9 | 1107.0 | 1052.2 | 1004.2 | 984.3 | 979.3 | 979.3 | 981.0 |
| 30° | 1095.4 | 1078.8 | 1034.1 | 981.0 | 936.3 | 923.0 | 923.0 | 926.3 | 926.3 |
| 32.5° | 1000.9 | 989.2 | 949.5 | 903.1 | 868.3 | 860.1 | 863.3 | 870.0 | 871.6 |
| 35° | 911.4 | 898.1 | 871.6 | 830.2 | 803.7 | 800.3 | 805.3 | 810.3 | 810.3 |
| 37.5° | 823.6 | 810.3 | 792.1 | 758.9 | 739.0 | 740.7 | 747.4 | 753.9 | 758.9 |
| 40° | 737.3 | 727.4 | 714.2 | 687.7 | 672.8 | 679.4 | 687.7 | 694.3 | 701.0 |
| 42.5° | 661.1 | 651.2 | 641.3 | 621.4 | 611.5 | 619.7 | 629.6 | 636.3 | 643.0 |
| 45° | 591.6 | 584.9 | 575.0 | 558.4 | 551.9 | 560.1 | 571.7 | 578.3 | 584.9 |
| 47.5° | 531.9 | 528.6 | 515.4 | 500.5 | 497.1 | 505.5 | 515.4 | 523.6 | 528.6 |
| 50° | 477.2 | 472.3 | 460.6 | 445.7 | 442.5 | 455.7 | 462.3 | 467.3 | 472.3 |
| 52.5° | 424.2 | 419.2 | 406.0 | 392.8 | 392.8 | 402.7 | 407.7 | 409.3 | 414.2 |
| 55° | 377.8 | 372.8 | 359.6 | 349.7 | 346.4 | 354.6 | 357.9 | 357.9 | 361.3 |
| 57.5° | 334.7 | 329.8 | 316.5 | 304.9 | 303.2 | 308.2 | 308.2 | 308.2 | 309.9 |
| 60° | 293.3 | 288.3 | 275.0 | 265.1 | 261.8 | 263.5 | 261.8 | 260.1 | 261.8 |
| 62.5° | 255.2 | 250.2 | 237.0 | 225.3 | 222.1 | 222.1 | 217.1 | 215.4 | 217.1 |
| 65° | 220.4 | 212.1 | 202.2 | 190.6 | 183.9 | 178.9 | 172.3 | 172.3 | 172.3 |
| 67.5° | 185.6 | 178.9 | 167.3 | 155.8 | 147.4 | 139.2 | 129.3 | 132.5 | 134.2 |
| 70° | 154.1 | 149.1 | 135.9 | 124.3 | 112.7 | 102.7 | 94.5 | 97.8 | 99.5 |
| 72.5° | 125.9 | 119.3 | 107.7 | 94.5 | 84.6 | 71.2 | 66.3 | 69.5 | 69.5 |
| 75° | 97.8 | 91.1 | 81.2 | 68.0 | 56.3 | 44.7 | 44.7 | 46.4 | 46.4 |
| 77.5° | 72.9 | 66.3 | 56.3 | 44.7 | 34.8 | 26.5 | 28.2 | 28.2 | 28.2 |
| 80° | 49.7 | 44.7 | 36.5 | 26.5 | 18.2 | 14.9 | 14.9 | 14.9 | 16.6 |
| 82.5° | 28.2 | 24.8 | 19.9 | 13.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 |
| 85° | 13.2 | 9.9 | 8.2 | 5.0 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |
| 87.5° | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| 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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