

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: P580375

Luminaire Tested: **HCC4W30D010BZ-HM43040935-41WDW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580375
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-9)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W30D010BZ-HM43040935-41WDW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

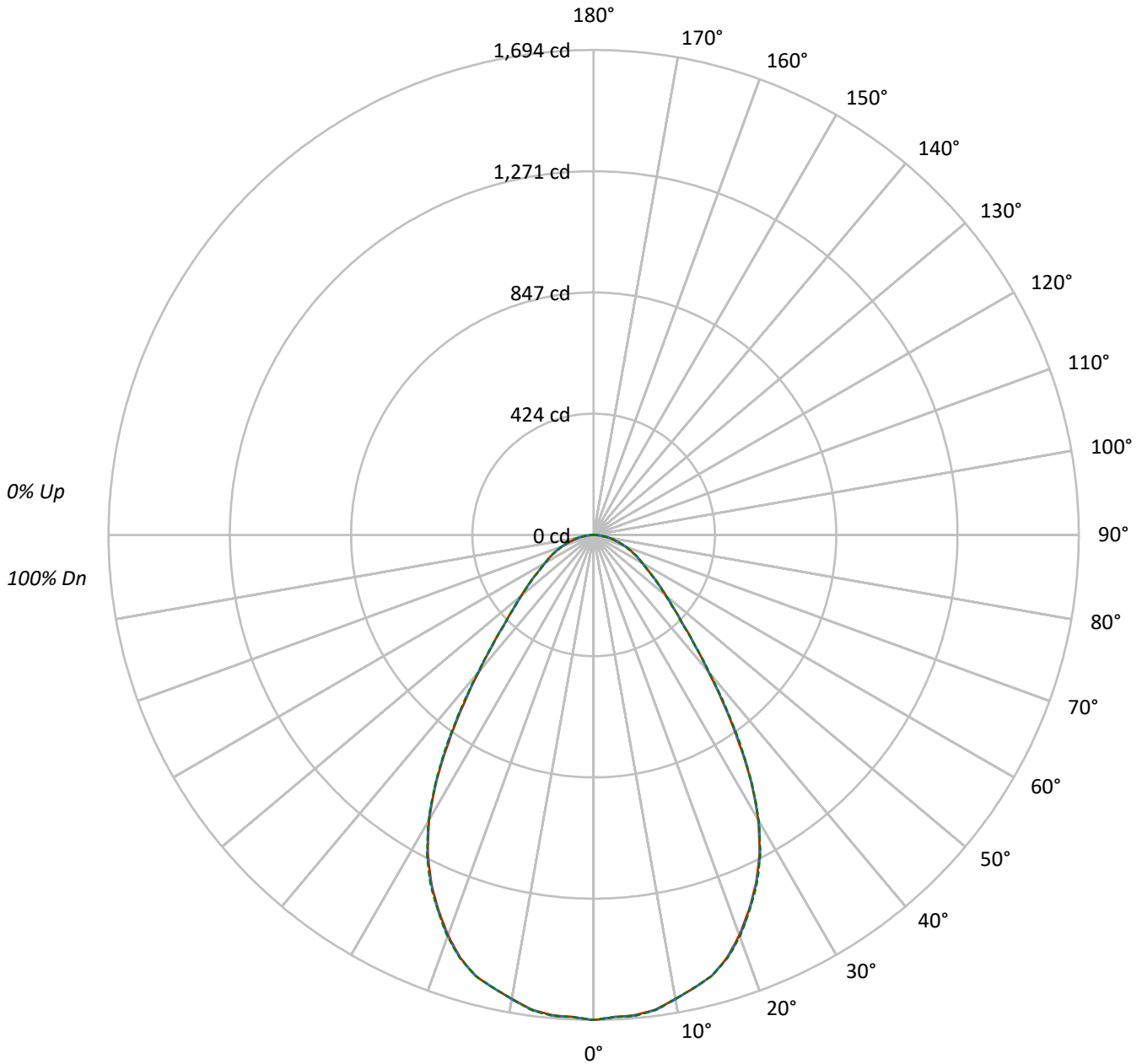
Lumens per Lamp: N/A
Luminaire Lumens: 2614.1 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 28
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 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 89 | | | | |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 91 | 87 | 84 | 88 | 85 | 82 | 85 | 83 | 80 | 78 | | | | |
| 3 | 96 | 87 | 81 | 76 | 94 | 86 | 80 | 75 | 83 | 78 | 74 | 81 | 76 | 72 | 78 | 74 | 71 | 69 | | | | |
| 4 | 90 | 80 | 72 | 67 | 87 | 78 | 72 | 66 | 76 | 70 | 66 | 74 | 69 | 65 | 72 | 67 | 64 | 62 | | | | |
| 5 | 84 | 73 | 65 | 60 | 82 | 72 | 65 | 59 | 70 | 64 | 59 | 68 | 63 | 58 | 66 | 62 | 58 | 56 | | | | |
| 6 | 78 | 67 | 59 | 54 | 77 | 66 | 59 | 54 | 64 | 58 | 53 | 63 | 57 | 53 | 61 | 56 | 53 | 51 | | | | |
| 7 | 73 | 62 | 54 | 49 | 72 | 61 | 54 | 49 | 60 | 53 | 49 | 58 | 53 | 48 | 57 | 52 | 48 | 46 | | | | |
| 8 | 69 | 57 | 50 | 45 | 68 | 57 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 44 | 53 | 48 | 44 | 42 | | | | |
| 9 | 65 | 53 | 46 | 41 | 64 | 53 | 46 | 41 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 39 | | | | |
| 10 | 61 | 50 | 43 | 38 | 60 | 49 | 43 | 38 | 48 | 42 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 208984 | 208984 | 208984 |
| 5° | 208470 | 208693 | 208693 |
| 10° | 206046 | 206272 | 206046 |
| 15° | 203574 | 203574 | 203574 |
| 20° | 195225 | 195685 | 195921 |
| 25° | 182615 | 182832 | 183309 |
| 30° | 163620 | 164119 | 164119 |
| 35° | 132839 | 133893 | 134164 |
| 40° | 100265 | 100828 | 101086 |
| 45° | 76805 | 76491 | 76491 |
| 50° | 63267 | 62940 | 62940 |
| 55° | 54321 | 53934 | 53934 |
| 60° | 48450 | 48031 | 48031 |
| 65° | 45559 | 45559 | 45559 |
| 70° | 42375 | 42375 | 42375 |
| 75° | 38459 | 39317 | 38459 |
| 80° | 36155 | 34877 | 36155 |
| 85° | 29861 | 29861 | 29861 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 159.6 | 6.1 |
| 10°-20° | 446.7 | 17.1 |
| 20°-30° | 613.8 | 23.5 |
| 30°-40° | 551.9 | 21.1 |
| 40°-50° | 348.7 | 13.3 |
| 50°-60° | 227.7 | 8.7 |
| 60°-70° | 154.3 | 5.9 |
| 70°-80° | 86.8 | 3.3 |
| 80°-90° | 24.4 | 0.9 |
| 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° | 1220.2 | 46.7 |
| 0°-40° | 1772.1 | 67.8 |
| 0°-60° | 2348.6 | 89.8 |
| 0°-90° | 2614.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2614.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1694 | 1694 | 1694 | 1694 | 1694 | |
| 5° | 1684 | 1684 | 1686 | 1686 | 1686 | 160 |
| 15° | 1594 | 1594 | 1594 | 1594 | 1594 | 446 |
| 25° | 1342 | 1343 | 1343 | 1347 | 1347 | 612 |
| 35° | 882 | 886 | 889 | 893 | 891 | 549 |
| 45° | 440 | 438 | 438 | 438 | 438 | 349 |
| 55° | 253 | 253 | 251 | 253 | 251 | 229 |
| 65° | 156 | 156 | 156 | 156 | 156 | 155 |
| 75° | 81 | 82 | 82 | 82 | 81 | 86 |
| 85° | 21 | 21 | 21 | 21 | 21 | 25 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1694.3 | 1694.3 | 1694.3 | 1694.3 | 1694.3 |
| 2.5° | 1685.5 | 1685.5 | 1685.5 | 1685.5 | 1685.5 |
| 5° | 1683.7 | 1683.7 | 1685.5 | 1685.5 | 1685.5 |
| 7.5° | 1671.5 | 1673.2 | 1673.2 | 1673.2 | 1673.2 |
| 10° | 1645.1 | 1645.1 | 1646.9 | 1646.9 | 1645.1 |
| 12.5° | 1620.6 | 1620.6 | 1620.6 | 1622.3 | 1620.6 |
| 15° | 1594.2 | 1594.2 | 1594.2 | 1594.2 | 1594.2 |
| 17.5° | 1548.6 | 1550.4 | 1550.4 | 1550.4 | 1550.4 |
| 20° | 1487.3 | 1490.8 | 1490.8 | 1492.6 | 1492.6 |
| 22.5° | 1417.1 | 1418.9 | 1420.6 | 1422.4 | 1420.6 |
| 25° | 1341.8 | 1343.4 | 1343.4 | 1346.9 | 1346.9 |
| 27.5° | 1254.0 | 1255.8 | 1259.3 | 1259.3 | 1259.3 |
| 30° | 1148.8 | 1150.6 | 1152.3 | 1152.3 | 1152.3 |
| 32.5° | 1024.2 | 1024.2 | 1027.7 | 1029.5 | 1027.7 |
| 35° | 882.2 | 885.7 | 889.2 | 892.7 | 891.0 |
| 37.5° | 747.2 | 750.7 | 752.4 | 752.4 | 754.2 |
| 40° | 622.7 | 626.2 | 626.2 | 629.6 | 627.8 |
| 42.5° | 524.4 | 522.6 | 522.6 | 526.2 | 524.4 |
| 45° | 440.3 | 438.5 | 438.5 | 438.5 | 438.5 |
| 47.5° | 378.8 | 377.1 | 377.1 | 377.1 | 377.1 |
| 50° | 329.7 | 328.0 | 328.0 | 328.0 | 328.0 |
| 52.5° | 289.3 | 287.6 | 287.6 | 287.6 | 285.8 |
| 55° | 252.6 | 252.6 | 250.8 | 252.6 | 250.8 |
| 57.5° | 219.3 | 219.3 | 219.3 | 219.3 | 219.3 |
| 60° | 196.4 | 194.7 | 194.7 | 194.7 | 194.7 |
| 62.5° | 175.4 | 175.4 | 175.4 | 175.4 | 175.4 |
| 65° | 156.1 | 156.1 | 156.1 | 156.1 | 156.1 |
| 67.5° | 136.8 | 135.0 | 136.8 | 136.8 | 135.0 |
| 70° | 117.5 | 115.7 | 117.5 | 117.5 | 117.5 |
| 72.5° | 98.2 | 98.2 | 98.2 | 99.9 | 98.2 |
| 75° | 80.7 | 82.5 | 82.5 | 82.5 | 80.7 |
| 77.5° | 64.9 | 66.7 | 64.9 | 64.9 | 64.9 |
| 80° | 50.9 | 49.1 | 49.1 | 49.1 | 50.9 |
| 82.5° | 35.1 | 35.1 | 35.1 | 35.1 | 35.1 |
| 85° | 21.1 | 21.1 | 21.1 | 21.1 | 21.1 |
| 87.5° | 8.8 | 8.8 | 8.8 | 8.8 | 8.8 |
| 90° | 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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— 0°-180° - - 45°-225° - - - - 90°-270°

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