

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: P580360

Luminaire Tested: **HCC4W30D010MB-HM43040930-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580360
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: HCC4W30D010MB-HM43040930-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

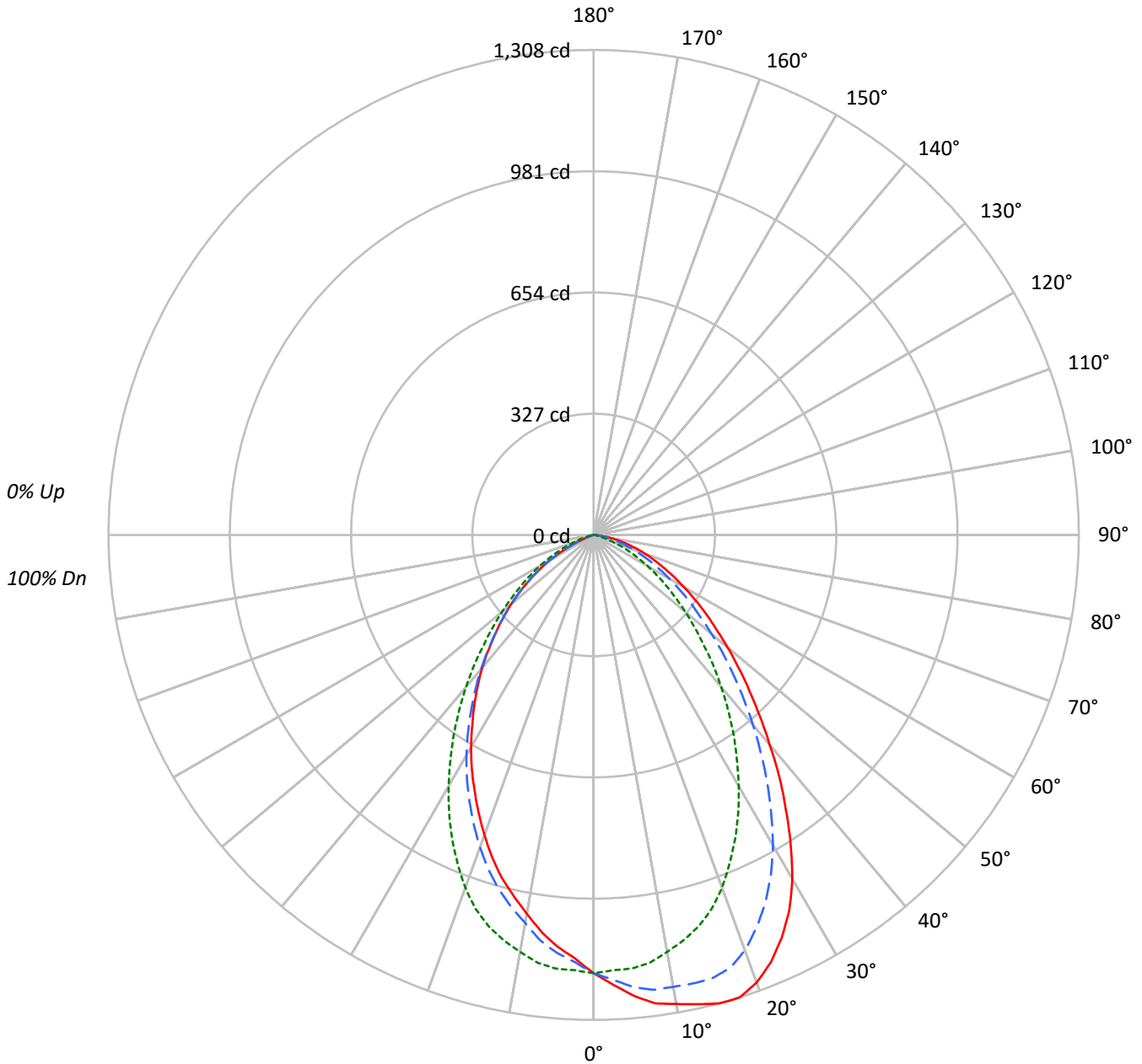
Lumens per Lamp: N/A
Luminaire Lumens: 2042.0 lumens
Efficiency: N/A
Efficacy: 72.9 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 28
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 | 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° | 145807 | 145807 | 145807 |
| 5° | 154486 | 145336 | 138043 |
| 10° | 160907 | 143009 | 129945 |
| 15° | 167066 | 139573 | 122180 |
| 20° | 168632 | 132876 | 113016 |
| 25° | 163180 | 122895 | 103434 |
| 30° | 152554 | 111364 | 94130 |
| 35° | 135971 | 99005 | 84564 |
| 40° | 118862 | 86112 | 75259 |
| 45° | 103546 | 73037 | 65117 |
| 50° | 90343 | 61943 | 55821 |
| 55° | 79202 | 51353 | 45181 |
| 60° | 69296 | 41493 | 33205 |
| 65° | 60386 | 30908 | 18621 |
| 70° | 52761 | 20015 | 6059 |
| 75° | 43273 | 10437 | 1620 |
| 80° | 32320 | 4830 | 1208 |
| 85° | 18964 | 2406 | 2406 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 111.6 | 5.5 |
| 10°-20° | 312.3 | 15.3 |
| 20°-30° | 431.7 | 21.1 |
| 30°-40° | 434.1 | 21.3 |
| 40°-50° | 350.3 | 17.2 |
| 50°-60° | 236.9 | 11.6 |
| 60°-70° | 120.6 | 5.9 |
| 70°-80° | 38.6 | 1.9 |
| 80°-90° | 5.9 | 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° | 855.6 | 41.9 |
| 0°-40° | 1289.7 | 63.2 |
| 0°-60° | 1876.9 | 91.9 |
| 0°-90° | 2042.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2042.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1182 | 1182 | 1182 | 1182 | 1182 | |
| 5° | 1248 | 1224 | 1174 | 1132 | 1115 | 120 |
| 15° | 1308 | 1238 | 1093 | 989 | 957 | 368 |
| 25° | 1199 | 1095 | 903 | 792 | 760 | 549 |
| 35° | 903 | 816 | 658 | 575 | 562 | 564 |
| 45° | 594 | 531 | 419 | 373 | 373 | 460 |
| 55° | 368 | 318 | 239 | 209 | 210 | 331 |
| 65° | 207 | 168 | 106 | 69 | 64 | 207 |
| 75° | 91 | 64 | 22 | 5 | 3 | 98 |
| 85° | 13 | 7 | 2 | 2 | 2 | 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° | 1182.1 | 1182.1 | 1182.1 | 1182.1 | 1182.1 | 1182.1 | 1182.1 | 1182.1 | 1182.1 |
| 2.5° | 1214.1 | 1207.4 | 1200.6 | 1188.9 | 1175.4 | 1162.0 | 1153.6 | 1146.8 | 1143.5 |
| 5° | 1247.7 | 1239.3 | 1224.2 | 1199.0 | 1173.8 | 1150.2 | 1131.7 | 1119.9 | 1114.9 |
| 7.5° | 1274.6 | 1262.9 | 1237.6 | 1202.3 | 1163.6 | 1126.6 | 1103.1 | 1086.3 | 1079.6 |
| 10° | 1284.7 | 1271.3 | 1237.6 | 1190.6 | 1141.8 | 1096.4 | 1062.8 | 1046.0 | 1037.5 |
| 12.5° | 1296.5 | 1281.4 | 1239.3 | 1180.5 | 1119.9 | 1066.1 | 1027.5 | 1005.6 | 997.2 |
| 15° | 1308.3 | 1288.1 | 1237.6 | 1165.3 | 1093.0 | 1030.8 | 988.8 | 966.9 | 956.8 |
| 17.5° | 1308.3 | 1284.7 | 1224.2 | 1140.1 | 1057.7 | 992.1 | 945.0 | 919.8 | 911.4 |
| 20° | 1284.7 | 1257.8 | 1192.3 | 1099.8 | 1012.3 | 941.7 | 896.3 | 871.0 | 861.0 |
| 22.5° | 1247.7 | 1217.5 | 1146.8 | 1051.0 | 958.5 | 889.5 | 844.2 | 820.6 | 810.5 |
| 25° | 1199.0 | 1168.7 | 1094.7 | 995.5 | 903.0 | 834.0 | 792.0 | 770.2 | 760.0 |
| 27.5° | 1141.8 | 1108.1 | 1034.2 | 935.0 | 844.2 | 778.5 | 739.9 | 719.7 | 711.3 |
| 30° | 1071.1 | 1039.2 | 966.9 | 869.3 | 781.9 | 721.4 | 686.0 | 667.6 | 660.9 |
| 32.5° | 988.8 | 961.8 | 891.2 | 800.4 | 718.1 | 662.6 | 630.6 | 615.4 | 608.8 |
| 35° | 903.0 | 877.8 | 815.5 | 731.5 | 657.5 | 605.4 | 575.1 | 565.0 | 561.6 |
| 37.5° | 822.3 | 800.4 | 739.9 | 662.6 | 595.2 | 549.9 | 522.9 | 516.3 | 512.9 |
| 40° | 738.2 | 723.0 | 667.6 | 596.9 | 534.8 | 494.4 | 472.5 | 467.4 | 467.4 |
| 42.5° | 662.6 | 645.8 | 596.9 | 533.1 | 477.6 | 437.2 | 422.1 | 417.0 | 418.7 |
| 45° | 593.6 | 576.7 | 531.4 | 472.5 | 418.7 | 385.1 | 373.3 | 373.3 | 373.3 |
| 47.5° | 529.7 | 514.6 | 472.5 | 411.9 | 368.3 | 341.3 | 329.6 | 329.6 | 331.3 |
| 50° | 470.8 | 460.8 | 413.6 | 361.5 | 322.8 | 297.7 | 289.2 | 287.5 | 290.9 |
| 52.5° | 415.3 | 403.6 | 361.5 | 314.5 | 277.5 | 257.3 | 248.8 | 247.1 | 248.8 |
| 55° | 368.3 | 354.9 | 317.9 | 272.4 | 238.8 | 218.6 | 208.6 | 206.9 | 210.1 |
| 57.5° | 322.8 | 312.8 | 274.1 | 233.7 | 201.8 | 181.6 | 173.1 | 169.9 | 171.6 |
| 60° | 280.9 | 270.7 | 235.4 | 196.7 | 168.2 | 148.0 | 136.3 | 132.9 | 134.6 |
| 62.5° | 242.2 | 233.7 | 200.1 | 163.1 | 134.6 | 116.1 | 104.2 | 95.9 | 99.3 |
| 65° | 206.9 | 198.4 | 168.2 | 131.2 | 105.9 | 85.7 | 68.9 | 62.3 | 63.8 |
| 67.5° | 176.5 | 166.5 | 137.8 | 104.2 | 79.1 | 57.2 | 38.7 | 35.3 | 35.3 |
| 70° | 146.3 | 136.3 | 111.0 | 80.8 | 55.5 | 30.2 | 16.8 | 16.8 | 16.8 |
| 72.5° | 117.8 | 109.3 | 85.7 | 60.6 | 35.3 | 13.4 | 6.8 | 6.8 | 6.8 |
| 75° | 90.8 | 84.0 | 63.8 | 42.1 | 21.9 | 6.8 | 5.1 | 3.4 | 3.4 |
| 77.5° | 67.2 | 60.6 | 45.5 | 28.5 | 13.4 | 3.4 | 3.4 | 3.4 | 3.4 |
| 80° | 45.5 | 40.4 | 30.2 | 16.8 | 6.8 | 1.7 | 1.7 | 1.7 | 1.7 |
| 82.5° | 27.0 | 23.6 | 16.8 | 8.5 | 3.4 | 1.7 | 1.7 | 1.7 | 1.7 |
| 85° | 13.4 | 10.0 | 6.8 | 3.4 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| 87.5° | 3.4 | 1.7 | 1.7 | 1.7 | 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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