

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: P592725

Luminaire Tested: **HC425D010-HM40525950-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592725
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: HC425D010-HM40525950-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1862.0 lumens
Efficiency: N/A
Efficacy: 69.5 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

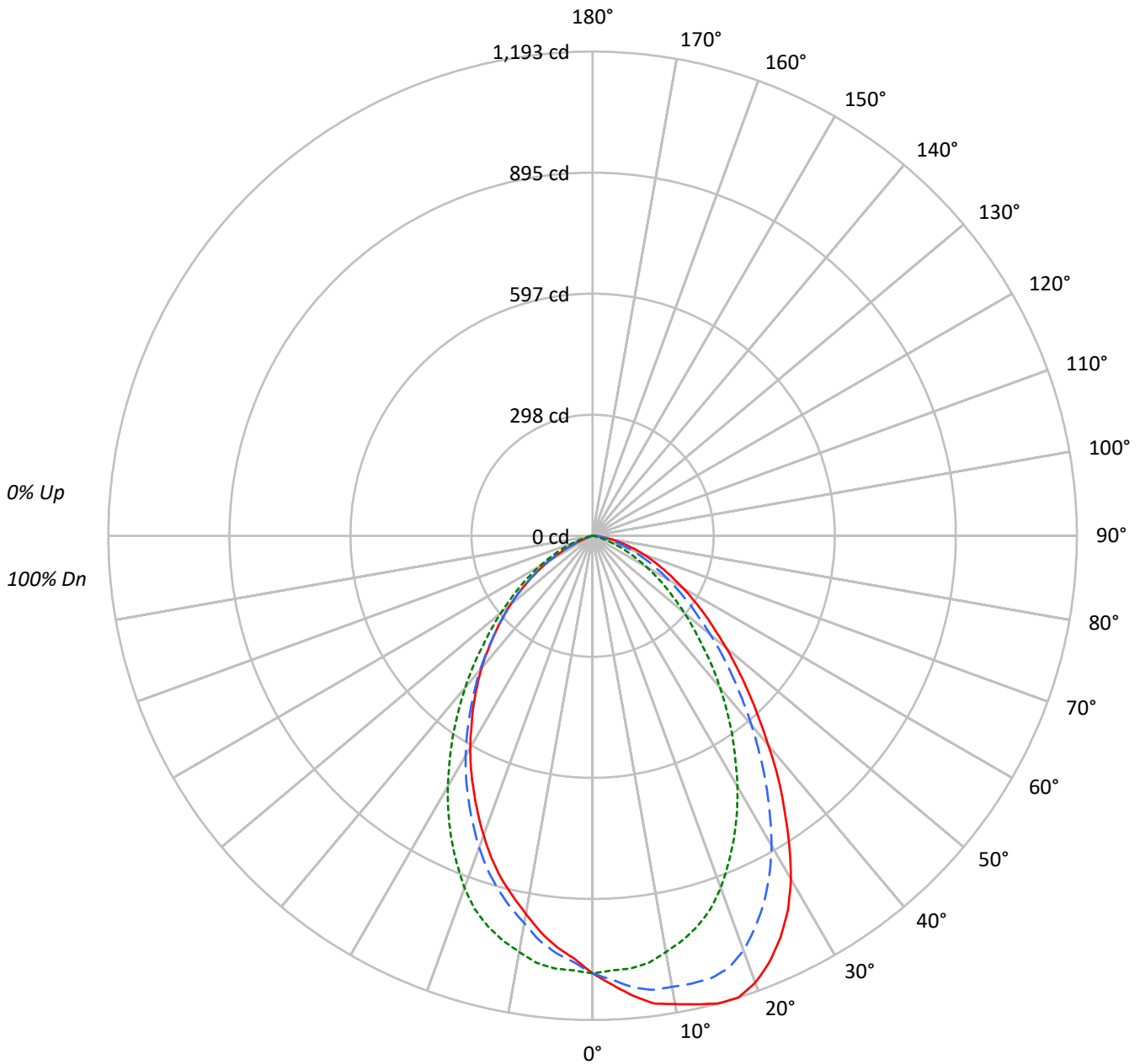
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 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 | | | 100 |
| 1 | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 97 | 97 | 95 | 94 | 94 | 92 | 91 | 89 | | | 89 |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 92 | 87 | 84 | 88 | 85 | 82 | 85 | 83 | 80 | 78 | | | 78 |
| 3 | 96 | 87 | 80 | 75 | 94 | 86 | 79 | 74 | 83 | 78 | 73 | 80 | 76 | 72 | 78 | 74 | 71 | 69 | | | 69 |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 65 | 75 | 69 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 61 | | | 61 |
| 5 | 83 | 72 | 64 | 58 | 81 | 71 | 64 | 58 | 69 | 62 | 58 | 67 | 61 | 57 | 65 | 60 | 56 | 55 | | | 55 |
| 6 | 77 | 66 | 58 | 52 | 75 | 65 | 57 | 52 | 63 | 57 | 52 | 61 | 56 | 51 | 60 | 55 | 51 | 49 | | | 49 |
| 7 | 72 | 60 | 53 | 47 | 71 | 59 | 52 | 47 | 58 | 51 | 47 | 57 | 51 | 46 | 55 | 50 | 46 | 44 | | | 44 |
| 8 | 68 | 56 | 48 | 43 | 66 | 55 | 48 | 43 | 54 | 47 | 42 | 53 | 47 | 42 | 51 | 46 | 42 | 40 | | | 40 |
| 9 | 64 | 52 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 | | | 37 |
| 10 | 60 | 48 | 41 | 36 | 59 | 47 | 41 | 36 | 46 | 40 | 36 | 46 | 40 | 36 | 45 | 39 | 36 | 34 | | | 34 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 132967 | 132967 | 132967 |
| 5° | 140879 | 132521 | 125885 |
| 10° | 146741 | 130409 | 118498 |
| 15° | 152342 | 127275 | 111415 |
| 20° | 153786 | 121168 | 103054 |
| 25° | 148795 | 112062 | 94329 |
| 30° | 139123 | 101565 | 85841 |
| 35° | 123985 | 90286 | 77111 |
| 40° | 108380 | 78512 | 68641 |
| 45° | 94405 | 66600 | 59378 |
| 50° | 82398 | 56493 | 50909 |
| 55° | 72213 | 46837 | 41224 |
| 60° | 63178 | 37818 | 30269 |
| 65° | 55074 | 28194 | 17015 |
| 70° | 48109 | 18248 | 5554 |
| 75° | 39460 | 9531 | 1430 |
| 80° | 29407 | 4333 | 1137 |
| 85° | 17407 | 2264 | 2264 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 101.7 | 5.5 |
| 10°-20° | 284.7 | 15.3 |
| 20°-30° | 393.7 | 21.1 |
| 30°-40° | 395.9 | 21.3 |
| 40°-50° | 319.4 | 17.2 |
| 50°-60° | 216.0 | 11.6 |
| 60°-70° | 109.9 | 5.9 |
| 70°-80° | 35.2 | 1.9 |
| 80°-90° | 5.4 | 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° | 780.2 | 41.9 |
| 0°-40° | 1176.1 | 63.2 |
| 0°-60° | 1711.5 | 91.9 |
| 0°-90° | 1862.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1862.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1078 | 1078 | 1078 | 1078 | 1078 | |
| 5° | 1138 | 1116 | 1070 | 1032 | 1017 | 110 |
| 15° | 1193 | 1128 | 997 | 902 | 872 | 336 |
| 25° | 1093 | 998 | 823 | 722 | 693 | 500 |
| 35° | 823 | 744 | 600 | 524 | 512 | 515 |
| 45° | 541 | 485 | 382 | 340 | 340 | 419 |
| 55° | 336 | 290 | 218 | 190 | 192 | 302 |
| 65° | 189 | 153 | 97 | 63 | 58 | 189 |
| 75° | 83 | 58 | 20 | 5 | 3 | 89 |
| 85° | 12 | 6 | 2 | 2 | 2 | 16 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P592725

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1078.0 | 1078.0 | 1078.0 | 1078.0 | 1078.0 | 1078.0 | 1078.0 | 1078.0 | 1078.0 |
| 2.5° | 1107.1 | 1101.0 | 1094.8 | 1084.1 | 1071.9 | 1059.6 | 1051.9 | 1045.8 | 1042.7 |
| 5° | 1137.8 | 1130.1 | 1116.4 | 1093.3 | 1070.3 | 1048.8 | 1032.0 | 1021.3 | 1016.7 |
| 7.5° | 1162.3 | 1151.6 | 1128.5 | 1096.4 | 1061.1 | 1027.4 | 1005.9 | 990.6 | 984.5 |
| 10° | 1171.6 | 1159.3 | 1128.5 | 1085.6 | 1041.2 | 999.7 | 969.1 | 953.8 | 946.1 |
| 12.5° | 1182.3 | 1168.4 | 1130.1 | 1076.5 | 1021.3 | 972.2 | 937.0 | 917.0 | 909.3 |
| 15° | 1193.0 | 1174.6 | 1128.5 | 1062.6 | 996.7 | 940.0 | 901.6 | 881.7 | 872.5 |
| 17.5° | 1193.0 | 1171.6 | 1116.4 | 1039.7 | 964.5 | 904.7 | 861.8 | 838.7 | 831.1 |
| 20° | 1171.6 | 1147.0 | 1087.2 | 1002.9 | 923.1 | 858.7 | 817.3 | 794.3 | 785.1 |
| 22.5° | 1137.8 | 1110.1 | 1045.8 | 958.4 | 874.1 | 811.2 | 769.8 | 748.3 | 739.0 |
| 25° | 1093.3 | 1065.7 | 998.3 | 907.7 | 823.4 | 760.6 | 722.2 | 702.4 | 693.1 |
| 27.5° | 1041.2 | 1010.5 | 943.1 | 852.6 | 769.8 | 709.9 | 674.7 | 656.3 | 648.6 |
| 30° | 976.8 | 947.7 | 881.7 | 792.8 | 713.1 | 657.9 | 625.6 | 608.8 | 602.7 |
| 32.5° | 901.6 | 877.1 | 812.7 | 729.9 | 654.7 | 604.1 | 575.0 | 561.2 | 555.1 |
| 35° | 823.4 | 800.5 | 743.7 | 667.0 | 599.6 | 552.0 | 524.4 | 515.3 | 512.1 |
| 37.5° | 749.9 | 729.9 | 674.7 | 604.1 | 542.8 | 501.4 | 476.9 | 470.8 | 467.6 |
| 40° | 673.1 | 659.3 | 608.8 | 544.4 | 487.6 | 450.8 | 430.9 | 426.3 | 426.3 |
| 42.5° | 604.1 | 588.8 | 544.4 | 486.0 | 435.5 | 398.6 | 384.9 | 380.2 | 381.8 |
| 45° | 541.2 | 526.0 | 484.6 | 430.9 | 381.8 | 351.1 | 340.4 | 340.4 | 340.4 |
| 47.5° | 483.0 | 469.2 | 430.9 | 375.7 | 335.8 | 311.3 | 300.5 | 300.5 | 302.1 |
| 50° | 429.4 | 420.1 | 377.2 | 329.7 | 294.4 | 271.4 | 263.7 | 262.3 | 265.3 |
| 52.5° | 378.8 | 368.1 | 329.7 | 286.8 | 253.0 | 234.6 | 226.9 | 225.5 | 226.9 |
| 55° | 335.8 | 323.6 | 289.8 | 248.4 | 217.8 | 199.4 | 190.1 | 188.7 | 191.7 |
| 57.5° | 294.4 | 285.2 | 250.0 | 213.2 | 184.0 | 165.6 | 157.9 | 154.9 | 156.4 |
| 60° | 256.1 | 246.9 | 214.6 | 179.4 | 153.3 | 134.9 | 124.2 | 121.1 | 122.7 |
| 62.5° | 220.8 | 213.2 | 182.4 | 148.7 | 122.7 | 105.8 | 95.1 | 87.4 | 90.4 |
| 65° | 188.7 | 181.0 | 153.3 | 119.6 | 96.6 | 78.2 | 62.9 | 56.8 | 58.3 |
| 67.5° | 161.0 | 151.9 | 125.8 | 95.1 | 72.0 | 52.2 | 35.2 | 32.2 | 32.2 |
| 70° | 133.4 | 124.2 | 101.2 | 73.6 | 50.6 | 27.5 | 15.4 | 15.4 | 15.4 |
| 72.5° | 107.4 | 99.7 | 78.2 | 55.2 | 32.2 | 12.3 | 6.1 | 6.1 | 6.1 |
| 75° | 82.8 | 76.7 | 58.3 | 38.4 | 20.0 | 6.1 | 4.6 | 3.0 | 3.0 |
| 77.5° | 61.3 | 55.2 | 41.4 | 26.1 | 12.3 | 3.0 | 3.0 | 3.0 | 3.0 |
| 80° | 41.4 | 36.8 | 27.5 | 15.4 | 6.1 | 1.6 | 1.6 | 1.6 | 1.6 |
| 82.5° | 24.5 | 21.5 | 15.4 | 7.7 | 3.0 | 1.6 | 1.6 | 1.6 | 1.6 |
| 85° | 12.3 | 9.1 | 6.1 | 3.0 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 87.5° | 3.0 | 1.6 | 1.6 | 1.6 | 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 |



Report Generated By 670245859 / DESKTOP-HRDQ47P





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)