

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: P580251

Luminaire Tested: **HC425D010-HM40525940-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580251
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: HC425D010-HM40525940-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2352.8 lumens
Efficiency: N/A
Efficacy: 87.8 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

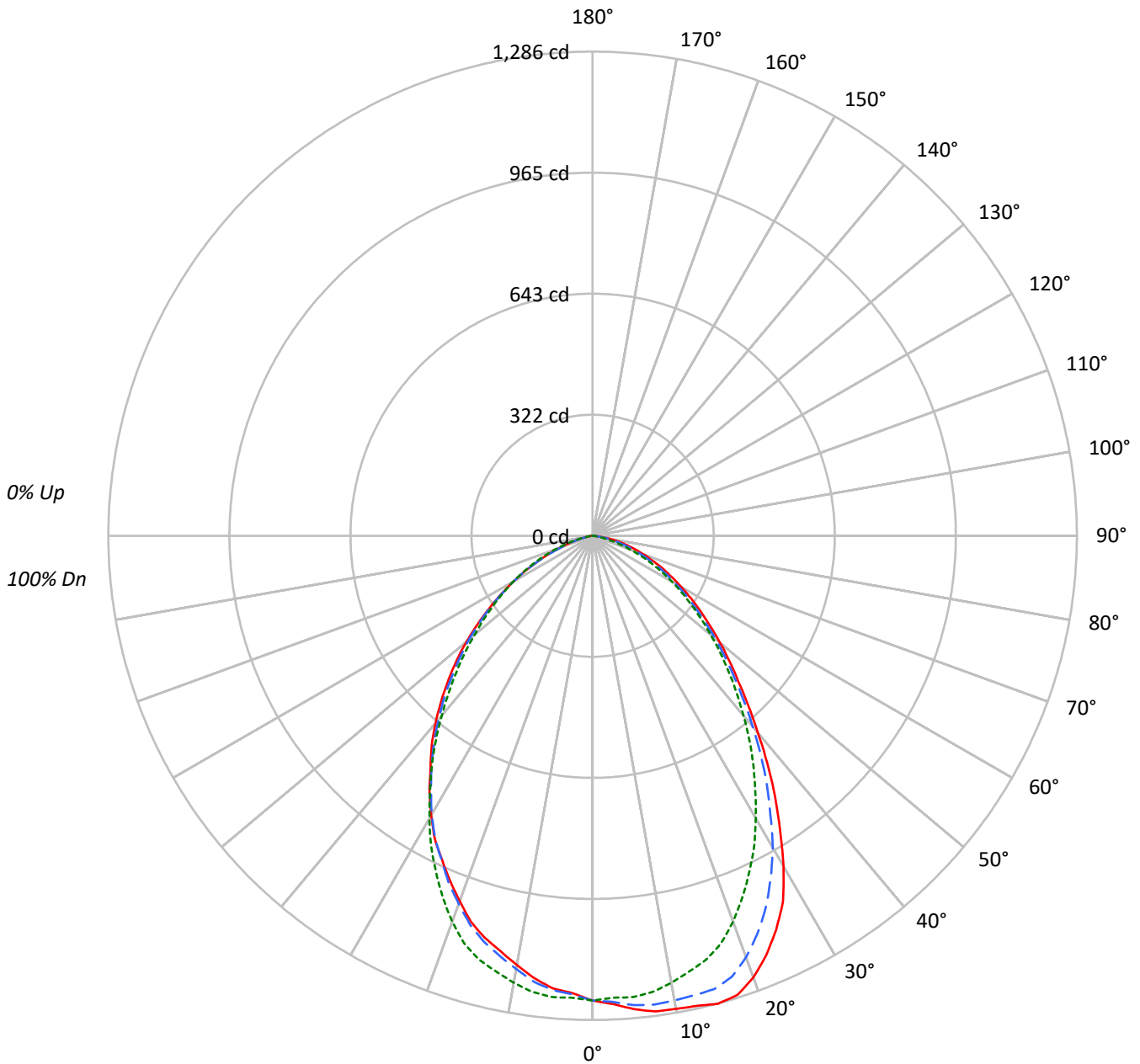
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 152258 | 152258 | 152258 |
| 5° | 156257 | 152270 | 149422 |
| 10° | 159792 | 150962 | 145013 |
| 15° | 164282 | 148818 | 141182 |
| 20° | 163841 | 143115 | 135462 |
| 25° | 156947 | 133987 | 128979 |
| 30° | 144364 | 123399 | 122074 |
| 35° | 126997 | 111984 | 112918 |
| 40° | 109878 | 100233 | 104435 |
| 45° | 95504 | 89068 | 94440 |
| 50° | 84759 | 78560 | 83857 |
| 55° | 75202 | 68922 | 71890 |
| 60° | 66952 | 59773 | 59773 |
| 65° | 59510 | 49704 | 46552 |
| 70° | 51427 | 37615 | 33179 |
| 75° | 43082 | 24877 | 20445 |
| 80° | 32675 | 11933 | 10939 |
| 85° | 17407 | 4246 | 4246 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 116.9 | 5.0 |
| 10°-20° | 331.4 | 14.1 |
| 20°-30° | 467.4 | 19.9 |
| 30°-40° | 482.8 | 20.5 |
| 40°-50° | 409.3 | 17.4 |
| 50°-60° | 297.8 | 12.7 |
| 60°-70° | 174.0 | 7.4 |
| 70°-80° | 64.7 | 2.7 |
| 80°-90° | 8.5 | 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° | 915.7 | 38.9 |
| 0°-40° | 1398.6 | 59.4 |
| 0°-60° | 2105.7 | 89.5 |
| 0°-90° | 2352.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2352.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1234 | 1234 | 1234 | 1234 | 1234 | |
| 5° | 1262 | 1251 | 1230 | 1211 | 1207 | 121 |
| 15° | 1286 | 1247 | 1165 | 1116 | 1106 | 362 |
| 25° | 1153 | 1089 | 984 | 949 | 948 | 527 |
| 35° | 843 | 807 | 744 | 745 | 750 | 527 |
| 45° | 548 | 532 | 511 | 529 | 541 | 426 |
| 55° | 350 | 333 | 320 | 331 | 334 | 315 |
| 65° | 204 | 187 | 170 | 160 | 160 | 202 |
| 75° | 90 | 75 | 52 | 41 | 43 | 97 |
| 85° | 12 | 8 | 3 | 3 | 3 | 17 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P580251

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1234.4 | 1234.4 | 1234.4 | 1234.4 | 1234.4 | 1234.4 | 1234.4 | 1234.4 | 1234.4 |
| 2.5° | 1245.2 | 1242.1 | 1239.0 | 1234.4 | 1228.2 | 1223.7 | 1219.1 | 1216.0 | 1216.0 |
| 5° | 1262.0 | 1257.4 | 1251.3 | 1240.5 | 1229.8 | 1220.6 | 1211.4 | 1206.8 | 1206.8 |
| 7.5° | 1274.3 | 1268.1 | 1255.9 | 1240.5 | 1222.1 | 1208.4 | 1194.6 | 1188.4 | 1185.3 |
| 10° | 1275.8 | 1269.7 | 1252.9 | 1229.8 | 1205.3 | 1183.8 | 1168.5 | 1159.3 | 1157.8 |
| 12.5° | 1278.9 | 1271.3 | 1249.8 | 1217.5 | 1185.3 | 1159.3 | 1142.4 | 1133.2 | 1130.1 |
| 15° | 1286.5 | 1275.8 | 1246.6 | 1205.3 | 1165.4 | 1134.8 | 1116.4 | 1108.7 | 1105.6 |
| 17.5° | 1278.9 | 1263.6 | 1228.2 | 1179.2 | 1134.8 | 1101.0 | 1082.6 | 1074.9 | 1074.9 |
| 20° | 1248.2 | 1232.9 | 1191.4 | 1137.8 | 1090.3 | 1058.1 | 1039.7 | 1035.1 | 1032.0 |
| 22.5° | 1205.3 | 1188.4 | 1143.9 | 1087.2 | 1039.7 | 1010.6 | 998.3 | 992.2 | 990.6 |
| 25° | 1153.2 | 1136.2 | 1088.7 | 1030.4 | 984.5 | 959.9 | 949.2 | 949.2 | 947.7 |
| 27.5° | 1094.9 | 1073.5 | 1024.3 | 973.8 | 929.3 | 910.9 | 906.2 | 906.2 | 907.8 |
| 30° | 1013.6 | 998.3 | 956.8 | 907.8 | 866.4 | 854.1 | 854.1 | 857.1 | 857.1 |
| 32.5° | 926.2 | 915.5 | 878.7 | 835.7 | 803.5 | 795.8 | 798.9 | 805.1 | 806.6 |
| 35° | 843.4 | 831.2 | 806.6 | 768.3 | 743.7 | 740.6 | 745.3 | 749.9 | 749.9 |
| 37.5° | 762.1 | 749.9 | 732.9 | 702.4 | 683.9 | 685.4 | 691.6 | 697.7 | 702.4 |
| 40° | 682.4 | 673.2 | 660.9 | 636.4 | 622.5 | 628.7 | 636.4 | 642.5 | 648.6 |
| 42.5° | 611.8 | 602.7 | 593.4 | 575.0 | 565.9 | 573.5 | 582.7 | 588.9 | 595.0 |
| 45° | 547.5 | 541.4 | 532.1 | 516.7 | 510.6 | 518.3 | 529.0 | 535.1 | 541.4 |
| 47.5° | 492.2 | 489.2 | 476.9 | 463.1 | 460.1 | 467.7 | 476.9 | 484.6 | 489.2 |
| 50° | 441.7 | 437.0 | 426.3 | 412.5 | 409.4 | 421.7 | 427.8 | 432.4 | 437.0 |
| 52.5° | 392.6 | 387.9 | 375.7 | 363.4 | 363.4 | 372.6 | 377.2 | 378.8 | 383.4 |
| 55° | 349.7 | 345.0 | 332.7 | 323.6 | 320.5 | 328.2 | 331.2 | 331.2 | 334.3 |
| 57.5° | 309.8 | 305.2 | 292.9 | 282.1 | 280.7 | 285.2 | 285.2 | 285.2 | 286.8 |
| 60° | 271.4 | 266.8 | 254.6 | 245.3 | 242.3 | 243.9 | 242.3 | 240.7 | 242.3 |
| 62.5° | 236.2 | 231.6 | 219.3 | 208.5 | 205.5 | 205.5 | 200.8 | 199.4 | 200.8 |
| 65° | 203.9 | 196.3 | 187.1 | 176.3 | 170.3 | 165.6 | 159.5 | 159.5 | 159.5 |
| 67.5° | 171.7 | 165.6 | 154.9 | 144.2 | 136.5 | 128.8 | 119.6 | 122.7 | 124.2 |
| 70° | 142.6 | 138.0 | 125.8 | 115.0 | 104.3 | 95.1 | 87.4 | 90.4 | 92.0 |
| 72.5° | 116.5 | 110.4 | 99.7 | 87.4 | 78.2 | 65.9 | 61.3 | 64.4 | 64.4 |
| 75° | 90.4 | 84.3 | 75.2 | 62.9 | 52.2 | 41.4 | 41.4 | 42.9 | 42.9 |
| 77.5° | 67.5 | 61.3 | 52.2 | 41.4 | 32.2 | 24.5 | 26.1 | 26.1 | 26.1 |
| 80° | 46.0 | 41.4 | 33.8 | 24.5 | 16.8 | 13.8 | 13.8 | 13.8 | 15.4 |
| 82.5° | 26.1 | 23.0 | 18.4 | 12.3 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 |
| 85° | 12.3 | 9.1 | 7.7 | 4.6 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 87.5° | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 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)