

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: P581240

Luminaire Tested: **HC455D010-HM44560935-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581240
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC455D010-HM44560935-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4461.2 lumens
Efficiency: N/A
Efficacy: 85.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

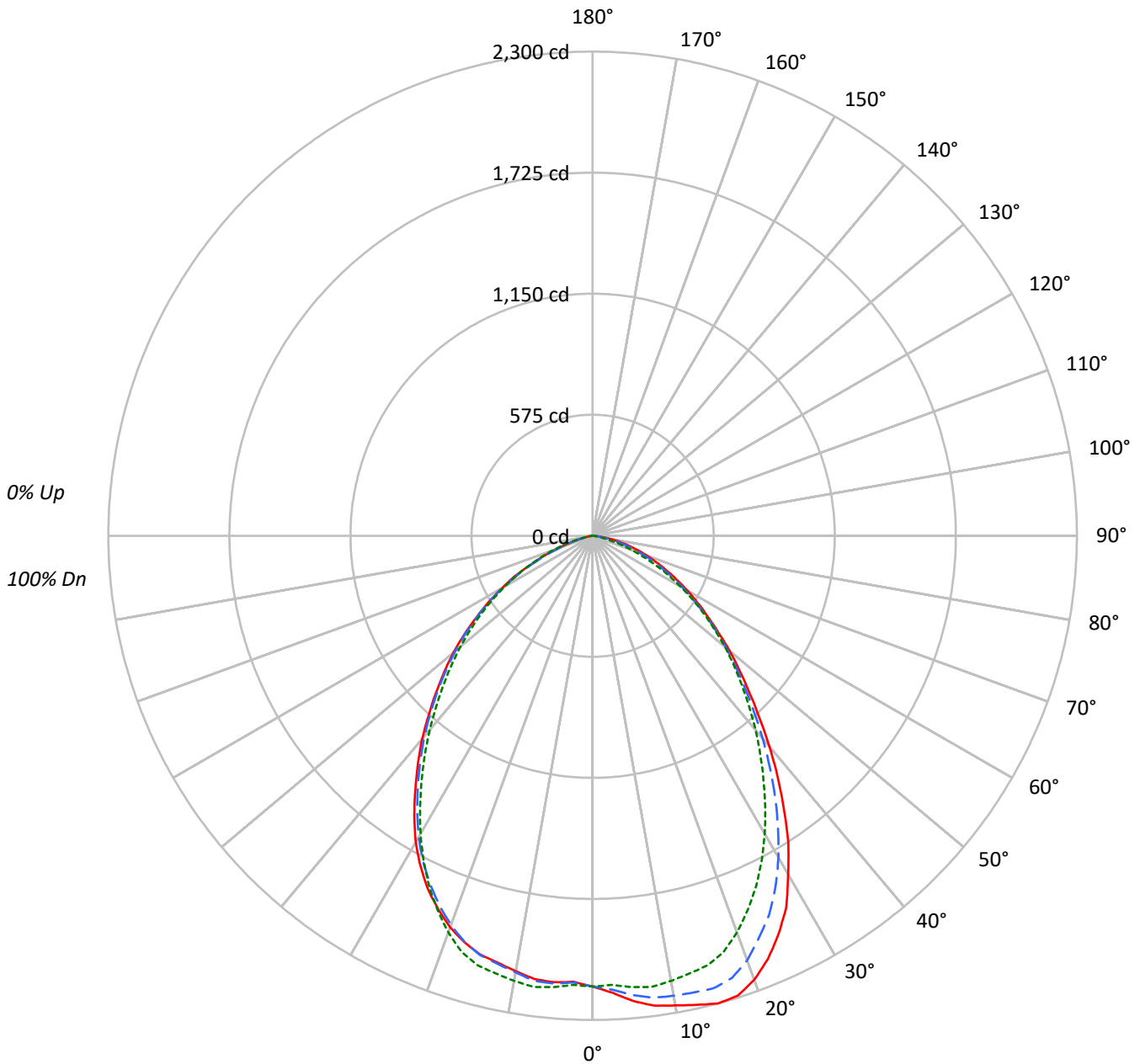
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P581240

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|-----|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| RC | 80 | | | | | | | | | 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 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | 88 | | | | | | | | | | | | | | | |
| 2 | 102 | 95 | 90 | 85 | 100 | 94 | 88 | 84 | 90 | 86 | 82 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | | | | 76 | | | | | | | | | | | | | | | |
| 3 | 95 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 74 | 70 | 76 | 72 | 69 | 67 | | | | 67 | | | | | | | | | | | | | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | 58 | | | | | | | | | | | | | | | |
| 5 | 81 | 70 | 62 | 56 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | | 52 | | | | | | | | | | | | | | | |
| 6 | 75 | 63 | 55 | 49 | 74 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 | | | | 46 | | | | | | | | | | | | | | | |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 49 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 41 | | | | 41 | | | | | | | | | | | | | | | |
| 8 | 66 | 53 | 45 | 40 | 64 | 53 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | 37 | | | | | | | | | | | | | | | |
| 9 | 62 | 49 | 42 | 36 | 60 | 49 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | 34 | | | | | | | | | | | | | | | |
| 10 | 58 | 46 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | | | | 31 | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 264071 | 264071 | 264071 |
| 5° | 274749 | 266516 | 263643 |
| 10° | 283725 | 268858 | 263072 |
| 15° | 293703 | 269696 | 263043 |
| 20° | 294682 | 263167 | 259754 |
| 25° | 284279 | 250024 | 251983 |
| 30° | 264544 | 232812 | 239406 |
| 35° | 238288 | 213022 | 220867 |
| 40° | 210094 | 193783 | 202639 |
| 45° | 183700 | 174611 | 183194 |
| 50° | 162667 | 157121 | 165430 |
| 55° | 143092 | 138748 | 144339 |
| 60° | 127737 | 118486 | 122038 |
| 65° | 112308 | 96256 | 94563 |
| 70° | 98058 | 70974 | 64662 |
| 75° | 81351 | 42748 | 34456 |
| 80° | 61585 | 16479 | 10300 |
| 85° | 28588 | 4104 | 4104 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 206.5 | 4.6 |
| 10°-20° | 602.6 | 13.5 |
| 20°-30° | 872.7 | 19.6 |
| 30°-40° | 920.7 | 20.6 |
| 40°-50° | 796.8 | 17.9 |
| 50°-60° | 590.3 | 13.2 |
| 60°-70° | 340.3 | 7.6 |
| 70°-80° | 118.8 | 2.7 |
| 80°-90° | 12.5 | 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° | 1681.8 | 37.7 |
| 0°-40° | 2602.5 | 58.3 |
| 0°-60° | 3989.7 | 89.4 |
| 0°-90° | 4461.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4461.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 2141 | 2141 | 2141 | 2141 | 2141 | |
| 5° | 2219 | 2190 | 2152 | 2135 | 2129 | 213 |
| 15° | 2300 | 2225 | 2112 | 2063 | 2060 | 647 |
| 25° | 2089 | 1985 | 1837 | 1826 | 1852 | 956 |
| 35° | 1582 | 1510 | 1415 | 1446 | 1467 | 988 |
| 45° | 1053 | 1024 | 1001 | 1039 | 1050 | 817 |
| 55° | 665 | 651 | 645 | 668 | 671 | 600 |
| 65° | 385 | 362 | 330 | 312 | 324 | 384 |
| 75° | 171 | 145 | 90 | 72 | 72 | 184 |
| 85° | 20 | 12 | 3 | 3 | 3 | 31 |
| 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° | 2140.9 | 2140.9 | 2140.9 | 2140.9 | 2140.9 | 2140.9 | 2140.9 | 2140.9 | 2140.9 |
| 2.5° | 2172.7 | 2166.9 | 2158.2 | 2146.6 | 2135.1 | 2126.4 | 2123.5 | 2120.6 | 2120.6 |
| 5° | 2219.0 | 2207.4 | 2190.0 | 2166.9 | 2152.5 | 2143.8 | 2135.1 | 2129.3 | 2129.3 |
| 7.5° | 2250.8 | 2239.2 | 2213.2 | 2181.4 | 2161.1 | 2143.8 | 2132.2 | 2123.5 | 2123.5 |
| 10° | 2265.3 | 2250.8 | 2219.0 | 2178.5 | 2146.6 | 2123.5 | 2106.1 | 2100.4 | 2100.4 |
| 12.5° | 2282.6 | 2265.3 | 2221.9 | 2169.8 | 2129.3 | 2100.4 | 2083.0 | 2077.2 | 2077.2 |
| 15° | 2300.0 | 2279.7 | 2224.8 | 2164.0 | 2112.0 | 2077.2 | 2062.8 | 2059.9 | 2059.9 |
| 17.5° | 2291.3 | 2265.3 | 2201.6 | 2129.3 | 2071.5 | 2036.7 | 2022.3 | 2022.3 | 2025.1 |
| 20° | 2245.0 | 2219.0 | 2146.6 | 2065.6 | 2004.9 | 1978.9 | 1967.3 | 1973.0 | 1978.9 |
| 22.5° | 2175.6 | 2143.8 | 2065.6 | 1987.5 | 1923.9 | 1900.8 | 1900.8 | 1909.5 | 1918.1 |
| 25° | 2088.8 | 2059.9 | 1984.6 | 1897.9 | 1837.1 | 1819.7 | 1825.5 | 1839.9 | 1851.5 |
| 27.5° | 1990.5 | 1958.6 | 1880.6 | 1799.4 | 1738.7 | 1730.0 | 1744.5 | 1764.8 | 1770.5 |
| 30° | 1857.4 | 1831.3 | 1764.8 | 1686.7 | 1634.6 | 1631.7 | 1652.0 | 1666.5 | 1680.9 |
| 32.5° | 1730.0 | 1701.1 | 1637.4 | 1562.3 | 1524.6 | 1527.5 | 1550.7 | 1568.0 | 1576.7 |
| 35° | 1582.5 | 1556.4 | 1510.2 | 1449.4 | 1414.7 | 1420.5 | 1446.5 | 1463.9 | 1466.8 |
| 37.5° | 1443.6 | 1426.3 | 1380.0 | 1333.7 | 1307.7 | 1319.3 | 1342.4 | 1362.6 | 1362.6 |
| 40° | 1304.8 | 1290.3 | 1255.6 | 1218.0 | 1203.5 | 1218.0 | 1241.1 | 1258.5 | 1258.5 |
| 42.5° | 1171.7 | 1163.0 | 1134.1 | 1108.0 | 1099.4 | 1119.6 | 1139.9 | 1154.4 | 1151.4 |
| 45° | 1053.1 | 1044.4 | 1024.2 | 1004.0 | 1001.0 | 1021.3 | 1038.6 | 1047.3 | 1050.2 |
| 47.5° | 946.0 | 940.3 | 922.8 | 908.4 | 908.4 | 928.7 | 943.1 | 951.9 | 954.7 |
| 50° | 847.7 | 841.8 | 827.4 | 815.8 | 818.8 | 839.0 | 850.6 | 859.3 | 862.1 |
| 52.5° | 749.2 | 746.4 | 734.8 | 720.3 | 729.0 | 743.5 | 758.0 | 763.8 | 766.7 |
| 55° | 665.4 | 665.4 | 650.9 | 639.3 | 645.2 | 659.6 | 668.2 | 671.2 | 671.2 |
| 57.5° | 590.2 | 587.2 | 569.9 | 558.3 | 561.3 | 575.8 | 581.5 | 584.4 | 584.4 |
| 60° | 517.8 | 514.9 | 497.6 | 480.3 | 480.3 | 488.9 | 491.8 | 494.7 | 494.7 |
| 62.5° | 448.4 | 445.5 | 425.2 | 410.8 | 405.0 | 402.2 | 402.2 | 407.9 | 419.5 |
| 65° | 384.8 | 381.9 | 361.7 | 338.5 | 329.8 | 321.1 | 312.4 | 318.3 | 324.0 |
| 67.5° | 326.9 | 321.1 | 300.8 | 280.6 | 260.3 | 245.9 | 231.4 | 240.1 | 251.7 |
| 70° | 271.9 | 266.2 | 243.0 | 219.8 | 196.8 | 173.6 | 162.0 | 173.6 | 179.3 |
| 72.5° | 219.8 | 214.1 | 190.9 | 167.8 | 138.8 | 115.8 | 112.8 | 115.8 | 118.6 |
| 75° | 170.7 | 167.8 | 144.7 | 118.6 | 89.7 | 72.3 | 72.3 | 72.3 | 72.3 |
| 77.5° | 127.4 | 121.5 | 98.3 | 75.3 | 52.1 | 40.5 | 37.6 | 37.6 | 37.6 |
| 80° | 86.7 | 81.0 | 60.8 | 43.4 | 23.2 | 17.3 | 17.3 | 14.5 | 14.5 |
| 82.5° | 49.2 | 46.2 | 31.8 | 17.3 | 8.7 | 5.7 | 5.7 | 5.7 | 5.7 |
| 85° | 20.2 | 17.3 | 11.6 | 5.7 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 87.5° | 2.9 | 2.9 | 2.9 | 0.0 | 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)