

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: P593392

Luminaire Tested: **HC655D010-HM64560850-61WWW**

Issue Date: 9/16/2021

Test Information

Test Method: LM-41-14
Report Number: P593392
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/16/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC655D010-HM64560850-61WWW
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5500.4 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1.06 / 1.14
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

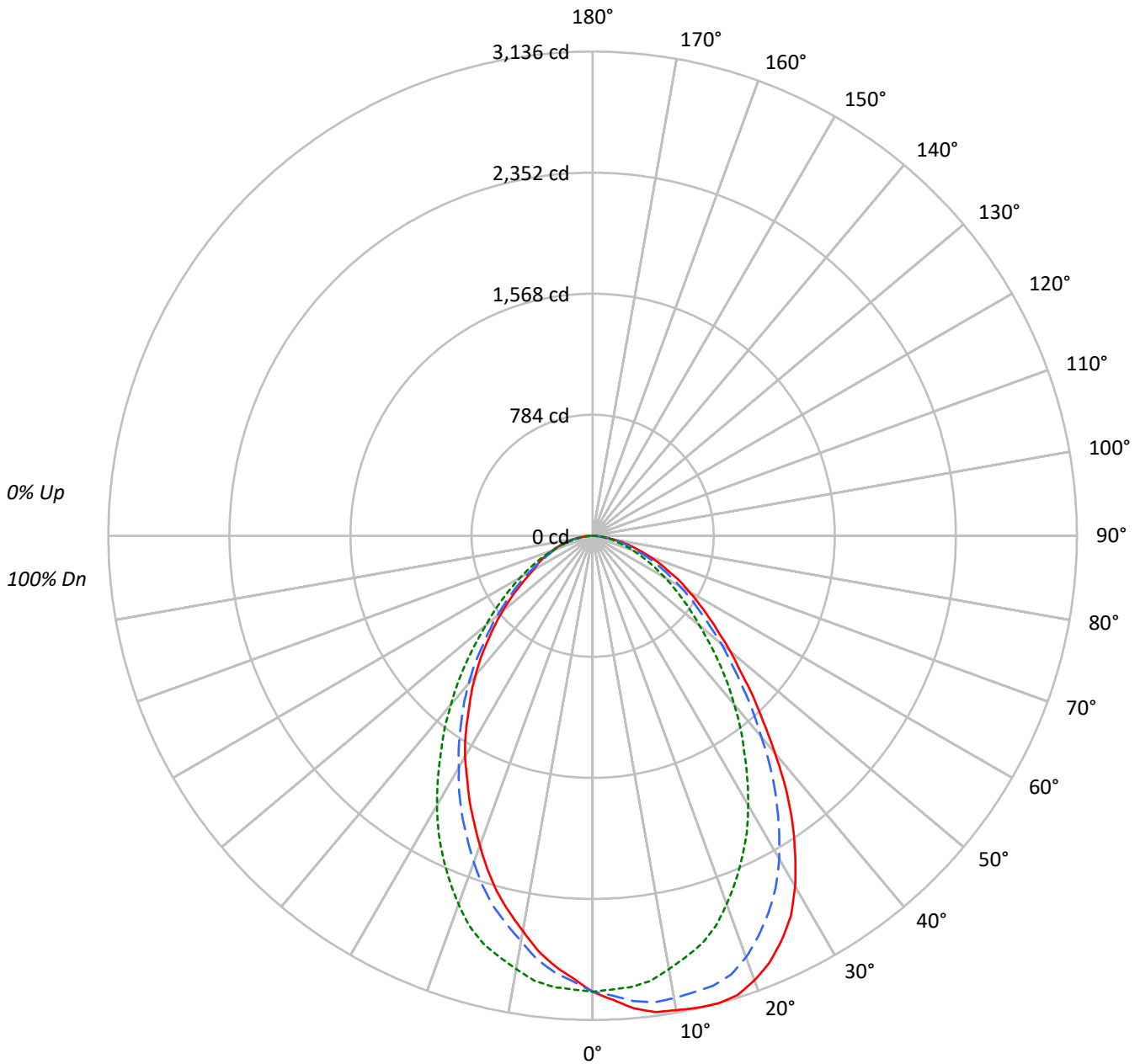
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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 | 110 | 106 | 103 | 99 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 93 | 91 | 89 | 87 | | | | | | | | |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 88 | 83 | 90 | 85 | 81 | 86 | 83 | 79 | 83 | 80 | 78 | 76 | | | | | | | | |
| 3 | 94 | 85 | 78 | 72 | 92 | 83 | 77 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 | | | | | | | | |
| 4 | 87 | 76 | 69 | 63 | 85 | 75 | 68 | 62 | 73 | 67 | 62 | 71 | 65 | 61 | 69 | 64 | 60 | 58 | | | | | | | | |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 53 | 51 | | | | | | | | |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 57 | 52 | 48 | 46 | | | | | | | | |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 43 | 42 | | | | | | | | |
| 8 | 66 | 53 | 46 | 40 | 64 | 53 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 49 | 44 | 39 | 38 | | | | | | | | |
| 9 | 62 | 49 | 42 | 37 | 60 | 49 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 34 | | | | | | | | |
| 10 | 58 | 46 | 39 | 34 | 57 | 45 | 38 | 34 | 44 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 32 | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 161878 | 161878 | 161878 |
| 5° | 169051 | 161402 | 153962 |
| 10° | 173661 | 158620 | 144687 |
| 15° | 177964 | 155183 | 135557 |
| 20° | 178755 | 148150 | 124500 |
| 25° | 175008 | 138704 | 114182 |
| 30° | 166032 | 127545 | 104649 |
| 35° | 150804 | 114633 | 93886 |
| 40° | 131396 | 102098 | 84465 |
| 45° | 113686 | 89350 | 74256 |
| 50° | 99306 | 76944 | 65072 |
| 55° | 87739 | 67610 | 55836 |
| 60° | 78875 | 59261 | 48362 |
| 65° | 70617 | 51549 | 46905 |
| 70° | 63072 | 43950 | 43950 |
| 75° | 54731 | 37024 | 41239 |
| 80° | 43913 | 31380 | 37631 |
| 85° | 30003 | 27550 | 32519 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 277.5 | 5.0 |
| 10°-20° | 771.4 | 14.0 |
| 20°-30° | 1075.1 | 19.5 |
| 30°-40° | 1107.7 | 20.1 |
| 40°-50° | 918.1 | 16.7 |
| 50°-60° | 659.8 | 12.0 |
| 60°-70° | 420.2 | 7.6 |
| 70°-80° | 215.8 | 3.9 |
| 80°-90° | 54.9 | 1.0 |
| 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° | 2124.1 | 38.6 |
| 0°-40° | 3231.8 | 58.8 |
| 0°-60° | 4809.6 | 87.4 |
| 0°-90° | 5500.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5500.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 2953 | 2953 | 2953 | 2953 | 2953 | |
| 5° | 3072 | 3024 | 2933 | 2838 | 2798 | 295 |
| 15° | 3136 | 3016 | 2734 | 2484 | 2388 | 884 |
| 25° | 2893 | 2694 | 2293 | 1999 | 1888 | 1326 |
| 35° | 2253 | 2071 | 1713 | 1486 | 1403 | 1400 |
| 45° | 1466 | 1363 | 1152 | 1005 | 958 | 1135 |
| 55° | 918 | 842 | 707 | 628 | 584 | 827 |
| 65° | 544 | 485 | 397 | 346 | 362 | 545 |
| 75° | 258 | 222 | 175 | 183 | 195 | 275 |
| 85° | 48 | 44 | 44 | 48 | 52 | 61 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P593392

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2952.9 | 2952.9 | 2952.9 | 2952.9 | 2952.9 | 2952.9 | 2952.9 | 2952.9 | 2952.9 |
| 2.5° | 3008.5 | 2996.5 | 2980.7 | 2964.7 | 2940.9 | 2913.1 | 2889.2 | 2881.3 | 2869.4 |
| 5° | 3072.0 | 3056.2 | 3024.3 | 2984.6 | 2933.0 | 2881.3 | 2837.5 | 2809.7 | 2797.8 |
| 7.5° | 3111.8 | 3091.9 | 3048.2 | 2980.7 | 2905.1 | 2829.6 | 2766.1 | 2726.3 | 2710.4 |
| 10° | 3119.7 | 3099.8 | 3040.3 | 2948.9 | 2849.5 | 2746.2 | 2666.7 | 2619.0 | 2599.2 |
| 12.5° | 3131.6 | 3103.8 | 3028.4 | 2921.1 | 2793.9 | 2674.6 | 2575.3 | 2515.6 | 2495.8 |
| 15° | 3135.7 | 3103.8 | 3016.4 | 2885.2 | 2734.3 | 2591.1 | 2483.8 | 2412.4 | 2388.5 |
| 17.5° | 3119.7 | 3084.0 | 2980.7 | 2821.7 | 2650.7 | 2499.8 | 2372.6 | 2297.0 | 2265.3 |
| 20° | 3064.1 | 3024.3 | 2905.1 | 2726.3 | 2539.5 | 2380.6 | 2249.4 | 2169.9 | 2134.1 |
| 22.5° | 2992.5 | 2940.9 | 2805.8 | 2615.0 | 2420.3 | 2253.4 | 2122.2 | 2042.7 | 2007.0 |
| 25° | 2893.3 | 2845.5 | 2694.5 | 2491.9 | 2293.1 | 2118.3 | 1999.0 | 1915.5 | 1887.7 |
| 27.5° | 2777.9 | 2722.3 | 2567.3 | 2364.7 | 2161.9 | 1987.1 | 1871.9 | 1796.4 | 1760.5 |
| 30° | 2622.9 | 2571.3 | 2416.3 | 2213.6 | 2014.9 | 1852.0 | 1732.7 | 1669.2 | 1653.2 |
| 32.5° | 2440.2 | 2396.4 | 2245.5 | 2054.6 | 1863.9 | 1712.9 | 1613.5 | 1545.9 | 1530.1 |
| 35° | 2253.4 | 2201.7 | 2070.6 | 1891.7 | 1712.9 | 1577.8 | 1486.3 | 1426.7 | 1402.9 |
| 37.5° | 2050.7 | 2002.9 | 1891.7 | 1732.7 | 1573.7 | 1446.6 | 1367.1 | 1315.5 | 1291.6 |
| 40° | 1836.1 | 1800.3 | 1697.0 | 1569.8 | 1426.7 | 1315.5 | 1247.9 | 1204.2 | 1180.3 |
| 42.5° | 1637.4 | 1601.5 | 1530.1 | 1410.8 | 1291.6 | 1192.2 | 1132.6 | 1092.9 | 1073.0 |
| 45° | 1466.4 | 1434.7 | 1363.2 | 1259.8 | 1152.5 | 1069.1 | 1005.4 | 977.6 | 957.8 |
| 47.5° | 1295.6 | 1279.7 | 1216.1 | 1120.8 | 1021.4 | 949.8 | 906.1 | 874.4 | 858.4 |
| 50° | 1164.4 | 1144.6 | 1084.9 | 985.6 | 902.2 | 846.6 | 806.8 | 778.9 | 763.0 |
| 52.5° | 1029.3 | 1009.5 | 953.9 | 870.3 | 802.8 | 751.1 | 711.3 | 687.6 | 671.6 |
| 55° | 918.0 | 902.2 | 842.5 | 767.1 | 707.4 | 663.7 | 627.9 | 600.1 | 584.2 |
| 57.5° | 814.7 | 798.8 | 743.2 | 671.6 | 620.0 | 580.3 | 548.4 | 524.5 | 504.7 |
| 60° | 719.4 | 707.4 | 651.7 | 584.2 | 540.5 | 500.8 | 473.0 | 453.1 | 441.1 |
| 62.5° | 635.9 | 612.1 | 564.3 | 504.7 | 465.0 | 433.2 | 405.4 | 393.5 | 401.4 |
| 65° | 544.4 | 532.6 | 484.8 | 433.2 | 397.4 | 365.7 | 345.8 | 353.7 | 361.6 |
| 67.5° | 468.9 | 453.1 | 413.3 | 365.7 | 333.8 | 309.9 | 298.1 | 314.0 | 318.0 |
| 70° | 393.5 | 377.5 | 341.8 | 302.0 | 274.2 | 258.4 | 258.4 | 270.2 | 274.2 |
| 72.5° | 321.9 | 309.9 | 278.2 | 246.4 | 226.5 | 214.6 | 222.5 | 230.4 | 234.5 |
| 75° | 258.4 | 246.4 | 222.5 | 194.7 | 174.8 | 174.8 | 182.8 | 190.8 | 194.7 |
| 77.5° | 198.7 | 190.8 | 166.9 | 147.0 | 139.1 | 139.1 | 147.0 | 151.1 | 155.0 |
| 80° | 139.1 | 131.2 | 119.2 | 107.3 | 99.4 | 107.3 | 115.2 | 115.2 | 119.2 |
| 82.5° | 91.4 | 87.4 | 79.5 | 71.6 | 71.6 | 75.5 | 79.5 | 83.4 | 83.4 |
| 85° | 47.7 | 47.7 | 43.8 | 39.7 | 43.8 | 47.7 | 47.7 | 51.7 | 51.7 |
| 87.5° | 15.9 | 15.9 | 15.9 | 15.9 | 19.9 | 19.9 | 19.9 | 19.9 | 19.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







(END OF REPORT)