

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: P593389

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

Issue Date: 9/16/2021

Test Information

Test Method: LM-41-14
Report Number: P593389
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/16/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC655D010-HM64560850-61RWWC
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5921.7 lumens
Efficiency: N/A
Efficacy: 113.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.15 / 1.2
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

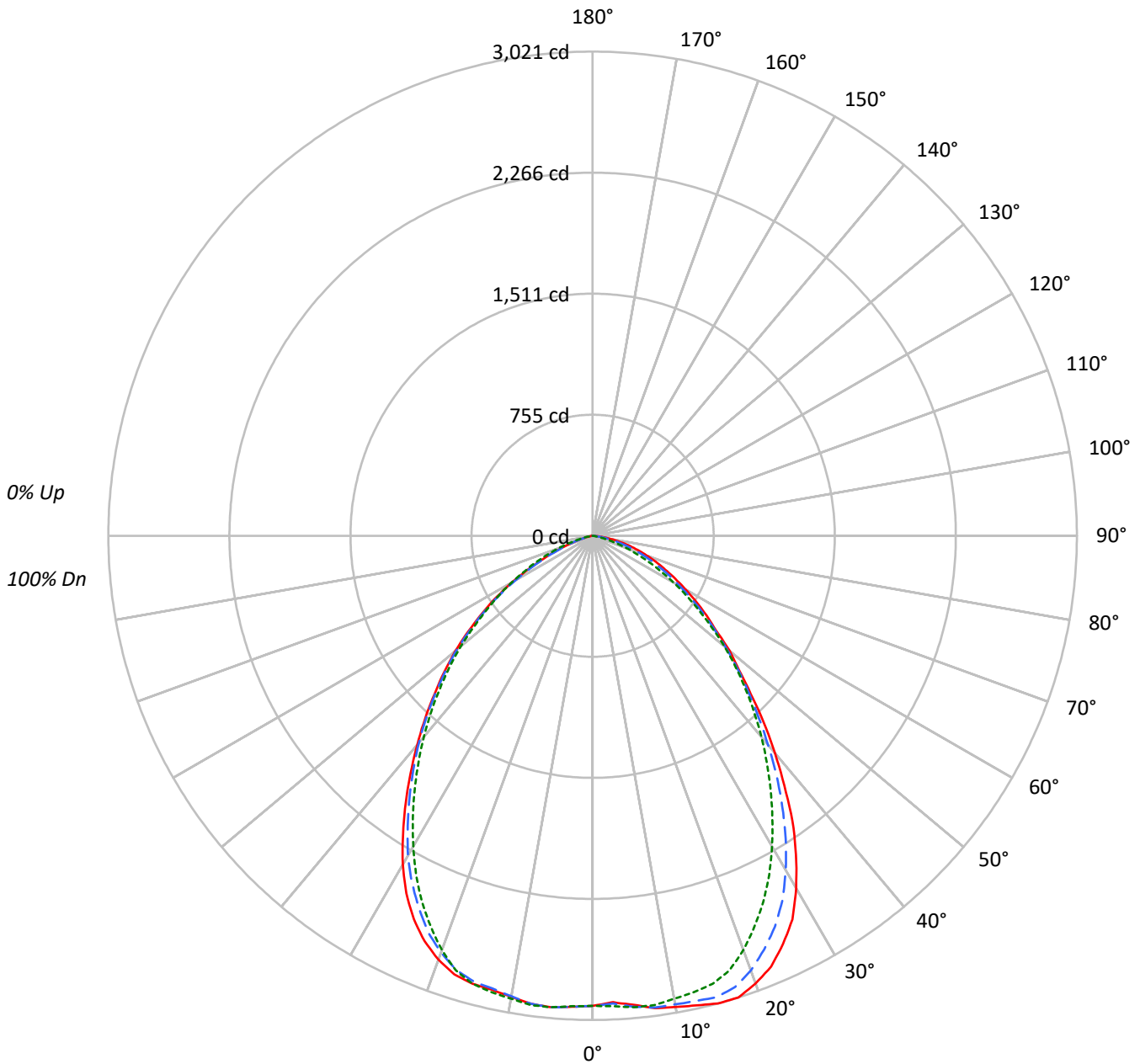
Input Watts (W): 52
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 88 | | | 88 |
| 2 | 103 | 96 | 90 | 86 | 100 | 94 | 89 | 85 | 91 | 86 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 77 | | | 77 |
| 3 | 95 | 86 | 79 | 74 | 93 | 85 | 78 | 73 | 82 | 76 | 72 | 79 | 75 | 71 | 77 | 73 | 69 | 68 | | | 68 |
| 4 | 88 | 78 | 70 | 64 | 86 | 76 | 69 | 64 | 74 | 68 | 63 | 72 | 67 | 62 | 70 | 65 | 61 | 60 | | | 60 |
| 5 | 82 | 70 | 62 | 57 | 80 | 69 | 62 | 56 | 67 | 61 | 56 | 65 | 60 | 55 | 64 | 59 | 55 | 53 | | | 53 |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 56 | 50 | 62 | 55 | 50 | 60 | 54 | 49 | 58 | 53 | 49 | 47 | | | 47 |
| 7 | 71 | 59 | 51 | 45 | 69 | 58 | 50 | 45 | 56 | 50 | 45 | 55 | 49 | 45 | 54 | 48 | 44 | 42 | | | 42 |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 41 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | 38 |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | 35 |
| 10 | 59 | 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° | 160793 | 160793 | 160793 |
| 5° | 161633 | 162502 | 162502 |
| 10° | 166151 | 163274 | 162617 |
| 15° | 171437 | 164212 | 164212 |
| 20° | 173434 | 160454 | 164164 |
| 25° | 169969 | 152416 | 159626 |
| 30° | 160765 | 141642 | 149947 |
| 35° | 145491 | 129536 | 135921 |
| 40° | 126573 | 117184 | 121728 |
| 45° | 108151 | 104453 | 108151 |
| 50° | 94905 | 91519 | 95255 |
| 55° | 82807 | 77111 | 80150 |
| 60° | 73207 | 64063 | 63197 |
| 65° | 64962 | 50511 | 43299 |
| 70° | 57333 | 35663 | 26110 |
| 75° | 48843 | 20185 | 12624 |
| 80° | 36368 | 6282 | 3757 |
| 85° | 20002 | 2516 | 2516 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 281.4 | 4.8 |
| 10°-20° | 823.2 | 13.9 |
| 20°-30° | 1202.3 | 20.3 |
| 30°-40° | 1260.9 | 21.3 |
| 40°-50° | 1062.3 | 17.9 |
| 50°-60° | 744.3 | 12.6 |
| 60°-70° | 399.0 | 6.7 |
| 70°-80° | 133.8 | 2.3 |
| 80°-90° | 14.6 | 0.2 |
| 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° | 2306.9 | 39.0 |
| 0°-40° | 3567.8 | 60.2 |
| 0°-60° | 5374.3 | 90.8 |
| 0°-90° | 5921.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5921.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 2933 | 2933 | 2933 | 2933 | 2933 | |
| 5° | 2937 | 2949 | 2953 | 2953 | 2953 | 282 |
| 15° | 3021 | 2981 | 2893 | 2878 | 2893 | 852 |
| 25° | 2810 | 2691 | 2520 | 2564 | 2639 | 1287 |
| 35° | 2174 | 2063 | 1936 | 1991 | 2031 | 1349 |
| 45° | 1395 | 1371 | 1347 | 1383 | 1395 | 1087 |
| 55° | 866 | 839 | 807 | 823 | 839 | 780 |
| 65° | 501 | 457 | 389 | 322 | 334 | 500 |
| 75° | 231 | 179 | 95 | 60 | 60 | 244 |
| 85° | 32 | 16 | 4 | 4 | 4 | 44 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P593389

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2933.1 | 2933.1 | 2933.1 | 2933.1 | 2933.1 | 2933.1 | 2933.1 | 2933.1 | 2933.1 |
| 2.5° | 2913.3 | 2913.3 | 2921.3 | 2929.2 | 2937.2 | 2937.2 | 2941.2 | 2945.1 | 2941.2 |
| 5° | 2937.2 | 2937.2 | 2949.1 | 2953.0 | 2953.0 | 2949.1 | 2953.0 | 2953.0 | 2953.0 |
| 7.5° | 2972.9 | 2965.0 | 2969.0 | 2961.0 | 2953.0 | 2949.1 | 2945.1 | 2945.1 | 2945.1 |
| 10° | 2984.8 | 2976.9 | 2969.0 | 2953.0 | 2933.1 | 2921.3 | 2917.3 | 2921.3 | 2921.3 |
| 12.5° | 3000.8 | 2992.8 | 2972.9 | 2941.2 | 2917.3 | 2897.4 | 2893.4 | 2901.4 | 2901.4 |
| 15° | 3020.7 | 3012.6 | 2980.9 | 2929.2 | 2893.4 | 2873.6 | 2877.5 | 2885.5 | 2893.4 |
| 17.5° | 3020.7 | 3004.7 | 2953.0 | 2885.5 | 2841.8 | 2821.9 | 2837.8 | 2857.7 | 2869.6 |
| 20° | 2972.9 | 2957.0 | 2885.5 | 2802.1 | 2750.4 | 2738.4 | 2766.2 | 2802.1 | 2814.0 |
| 22.5° | 2909.4 | 2877.5 | 2794.1 | 2694.8 | 2639.0 | 2639.0 | 2678.8 | 2722.6 | 2738.4 |
| 25° | 2810.0 | 2786.1 | 2690.7 | 2575.5 | 2519.8 | 2515.9 | 2563.6 | 2623.2 | 2639.0 |
| 27.5° | 2698.7 | 2666.8 | 2563.6 | 2444.3 | 2384.7 | 2388.7 | 2440.3 | 2499.9 | 2515.9 |
| 30° | 2539.7 | 2499.9 | 2408.6 | 2293.2 | 2237.6 | 2253.5 | 2305.2 | 2349.0 | 2368.8 |
| 32.5° | 2360.9 | 2325.1 | 2241.7 | 2134.4 | 2086.6 | 2102.5 | 2146.2 | 2185.9 | 2201.9 |
| 35° | 2174.0 | 2134.4 | 2062.8 | 1967.3 | 1935.6 | 1951.5 | 1991.2 | 2023.0 | 2031.0 |
| 37.5° | 1963.4 | 1935.6 | 1883.9 | 1808.5 | 1784.6 | 1804.4 | 1836.3 | 1856.1 | 1864.1 |
| 40° | 1768.7 | 1744.8 | 1701.0 | 1645.4 | 1637.5 | 1653.4 | 1685.2 | 1697.1 | 1701.0 |
| 42.5° | 1577.9 | 1558.0 | 1530.2 | 1490.5 | 1490.5 | 1506.3 | 1534.1 | 1542.2 | 1546.1 |
| 45° | 1395.0 | 1383.2 | 1371.2 | 1339.4 | 1347.3 | 1367.2 | 1383.2 | 1395.0 | 1395.0 |
| 47.5° | 1236.1 | 1240.0 | 1224.2 | 1200.3 | 1208.2 | 1228.1 | 1240.0 | 1252.0 | 1252.0 |
| 50° | 1112.8 | 1100.9 | 1085.0 | 1061.2 | 1073.1 | 1089.1 | 1104.9 | 1112.8 | 1116.9 |
| 52.5° | 969.8 | 965.8 | 953.9 | 926.1 | 934.0 | 941.9 | 957.9 | 969.8 | 973.7 |
| 55° | 866.4 | 854.5 | 838.6 | 806.8 | 806.8 | 814.7 | 822.8 | 830.7 | 838.6 |
| 57.5° | 767.1 | 755.1 | 731.3 | 695.5 | 691.6 | 691.6 | 687.6 | 695.5 | 707.4 |
| 60° | 667.7 | 663.8 | 627.9 | 596.2 | 584.3 | 572.3 | 556.5 | 560.4 | 576.4 |
| 62.5° | 580.3 | 572.3 | 540.5 | 500.8 | 477.0 | 457.1 | 437.2 | 433.2 | 449.1 |
| 65° | 500.8 | 492.8 | 457.1 | 417.4 | 389.4 | 353.7 | 321.9 | 321.9 | 333.8 |
| 67.5° | 429.2 | 413.3 | 381.5 | 337.9 | 302.0 | 258.4 | 226.5 | 234.5 | 238.5 |
| 70° | 357.7 | 345.8 | 310.1 | 266.3 | 222.5 | 178.9 | 159.0 | 162.9 | 162.9 |
| 72.5° | 294.1 | 278.2 | 242.4 | 198.7 | 155.0 | 115.2 | 107.3 | 103.4 | 103.4 |
| 75° | 230.6 | 214.6 | 178.9 | 135.1 | 95.3 | 67.5 | 59.6 | 59.6 | 59.6 |
| 77.5° | 166.9 | 155.0 | 123.3 | 83.5 | 51.7 | 31.8 | 27.8 | 23.9 | 23.9 |
| 80° | 115.2 | 103.4 | 75.5 | 43.8 | 19.9 | 11.9 | 11.9 | 11.9 | 11.9 |
| 82.5° | 67.5 | 55.6 | 35.7 | 19.9 | 7.9 | 4.0 | 4.0 | 4.0 | 4.0 |
| 85° | 31.8 | 23.9 | 15.9 | 7.9 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 87.5° | 4.0 | 4.0 | 4.0 | 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 |



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







(END OF REPORT)