

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P838757

Luminaire Tested: HCSQ660D010-HM64560927-61SQMB

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838757
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ660D010-HM64560927-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

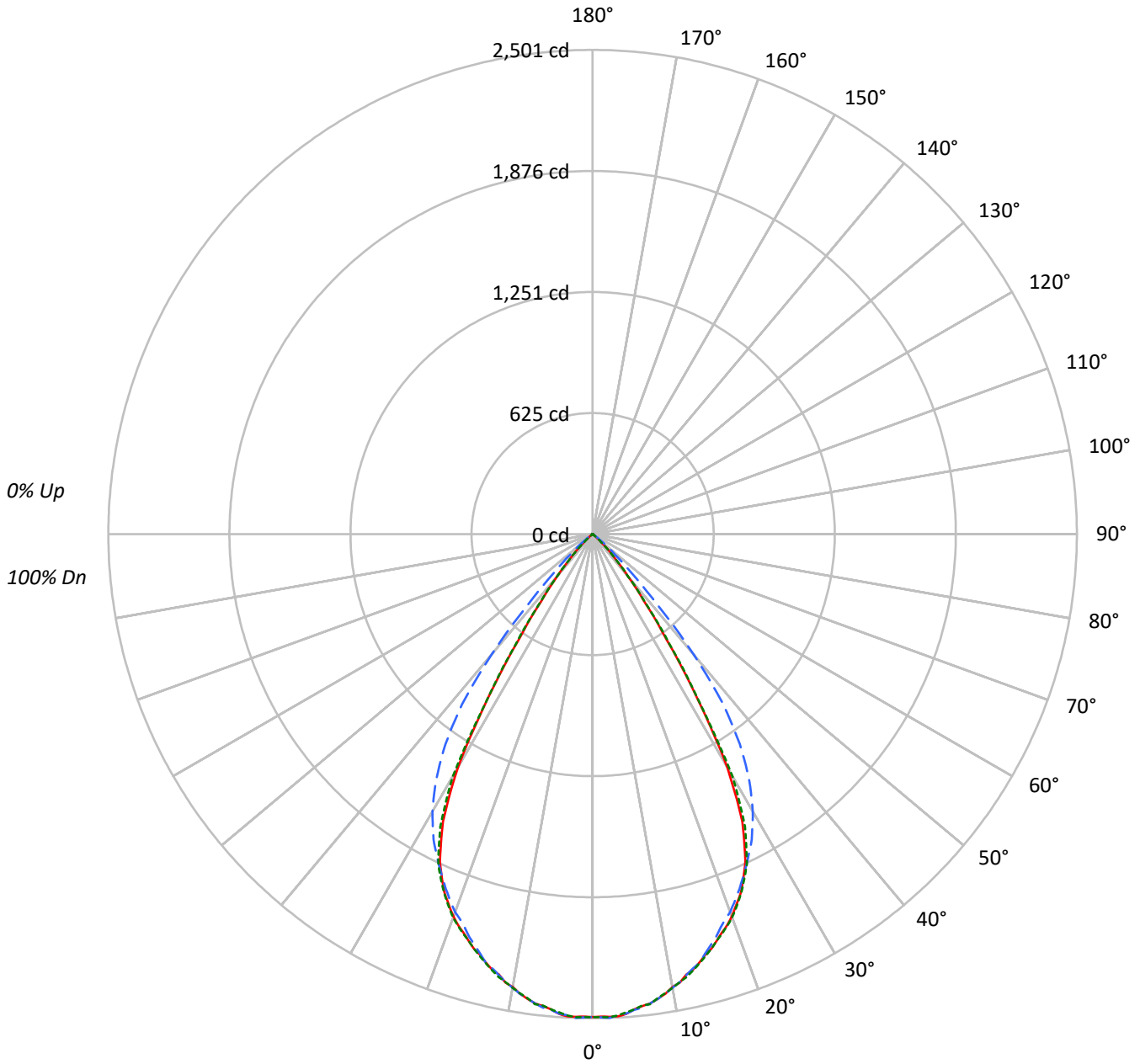
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2480.0 lumens
Efficiency: N/A
Efficacy: 44.3 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.01 / 1.03
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 56
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: 24 FT

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Luminous Intensity Polar Plot





TEST NUMBER: P838757

CATALOG NUMBER: HCSQ660D010-HM64560927-61SQMB

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 | | | | | | | | | | | | | | | | | | | |
| 1 | 114 | 111 | 108 | 106 | 111 | 109 | 106 | 104 | 105 | 103 | 101 | 101 | 99 | 98 | 97 | 96 | 95 | 93 | | | | | | | | | | | | | | | | | | | |
| 2 | 108 | 103 | 99 | 96 | 106 | 101 | 98 | 94 | 98 | 95 | 92 | 95 | 93 | 90 | 92 | 90 | 89 | 87 | | | | | | | | | | | | | | | | | | | |
| 3 | 102 | 96 | 91 | 87 | 100 | 94 | 90 | 86 | 92 | 88 | 85 | 89 | 86 | 83 | 87 | 85 | 82 | 81 | | | | | | | | | | | | | | | | | | | |
| 4 | 97 | 89 | 84 | 80 | 95 | 88 | 83 | 79 | 86 | 82 | 78 | 84 | 80 | 77 | 82 | 79 | 76 | 75 | | | | | | | | | | | | | | | | | | | |
| 5 | 92 | 84 | 78 | 73 | 90 | 83 | 77 | 73 | 81 | 76 | 72 | 79 | 75 | 72 | 78 | 74 | 71 | 70 | | | | | | | | | | | | | | | | | | | |
| 6 | 87 | 78 | 72 | 68 | 86 | 77 | 72 | 68 | 76 | 71 | 67 | 75 | 70 | 67 | 73 | 69 | 66 | 65 | | | | | | | | | | | | | | | | | | | |
| 7 | 83 | 73 | 67 | 63 | 81 | 73 | 67 | 63 | 71 | 66 | 63 | 70 | 66 | 62 | 69 | 65 | 62 | 60 | | | | | | | | | | | | | | | | | | | |
| 8 | 79 | 69 | 63 | 59 | 77 | 68 | 63 | 59 | 67 | 62 | 58 | 66 | 62 | 58 | 65 | 61 | 58 | 56 | | | | | | | | | | | | | | | | | | | |
| 9 | 75 | 65 | 59 | 55 | 74 | 64 | 59 | 55 | 63 | 58 | 55 | 63 | 58 | 54 | 62 | 57 | 54 | 53 | | | | | | | | | | | | | | | | | | | |
| 10 | 71 | 61 | 55 | 51 | 70 | 61 | 55 | 51 | 60 | 55 | 51 | 59 | 54 | 51 | 58 | 54 | 51 | 50 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 107415 | 107415 | 107415 |
| 5° | 106512 | 106602 | 106512 |
| 10° | 103848 | 104023 | 104023 |
| 15° | 100275 | 100003 | 100547 |
| 20° | 96298 | 95180 | 96572 |
| 25° | 88676 | 89346 | 89541 |
| 30° | 69121 | 82221 | 71741 |
| 35° | 35048 | 69665 | 36325 |
| 40° | 15945 | 45566 | 15945 |
| 45° | 6168 | 17153 | 6046 |
| 50° | 951 | 5432 | 951 |
| 55° | 308 | 1066 | 308 |
| 60° | 172 | 172 | 172 |
| 65° | 204 | 0 | 204 |
| 70° | 0 | 0 | 252 |
| 75° | 0 | 0 | 333 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 17153 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 232.9 | 9.4 |
| 10°-20° | 631.8 | 25.5 |
| 20°-30° | 851.6 | 34.3 |
| 30°-40° | 598.8 | 24.1 |
| 40°-50° | 152.9 | 6.2 |
| 50°-60° | 10.6 | 0.4 |
| 60°-70° | 1.3 | 0.1 |
| 70°-80° | 0.2 | 0.0 |
| 80°-90° | 0.0 | 0.0 |
| 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° | 1716.3 | 69.2 |
| 0°-40° | 2315.1 | 93.4 |
| 0°-60° | 2478.6 | 99.9 |
| 0°-90° | 2480.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2480.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2495 | 2495 | 2495 | 2495 | 2495 | |
| 5° | 2464 | 2468 | 2466 | 2468 | 2464 | 233 |
| 15° | 2250 | 2246 | 2244 | 2250 | 2256 | 633 |
| 25° | 1867 | 1873 | 1881 | 1887 | 1885 | 834 |
| 35° | 667 | 884 | 1325 | 906 | 691 | 449 |
| 45° | 101 | 152 | 282 | 154 | 99 | 88 |
| 55° | 4 | 4 | 14 | 4 | 4 | 5 |
| 65° | 2 | 2 | 0 | 2 | 2 | 2 |
| 75° | 0 | 0 | 0 | 0 | 2 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: HCSQ660D010-HM64560927-61SQMB

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2494.8 | 2494.8 | 2494.8 | 2494.8 | 2494.8 |
| 1° | 2492.8 | 2494.8 | 2496.9 | 2496.9 | 2494.8 |
| 2° | 2494.8 | 2488.7 | 2500.9 | 2494.8 | 2496.9 |
| 3° | 2494.8 | 2482.7 | 2488.7 | 2492.8 | 2490.8 |
| 4° | 2484.7 | 2476.6 | 2482.7 | 2480.6 | 2476.6 |
| 5° | 2464.4 | 2468.5 | 2466.5 | 2468.5 | 2464.4 |
| 6° | 2452.3 | 2456.3 | 2460.4 | 2454.3 | 2448.2 |
| 7° | 2442.1 | 2440.1 | 2442.1 | 2446.2 | 2446.2 |
| 8° | 2423.9 | 2427.9 | 2423.9 | 2425.9 | 2419.8 |
| 9° | 2403.6 | 2403.6 | 2403.6 | 2407.7 | 2401.6 |
| 10° | 2375.3 | 2385.4 | 2379.3 | 2383.4 | 2379.3 |
| 11° | 2361.1 | 2357.0 | 2357.0 | 2359.0 | 2357.0 |
| 12° | 2326.6 | 2330.7 | 2328.6 | 2332.7 | 2338.8 |
| 13° | 2308.4 | 2310.4 | 2302.3 | 2312.4 | 2312.4 |
| 14° | 2280.0 | 2278.0 | 2282.0 | 2280.0 | 2284.1 |
| 15° | 2249.6 | 2245.5 | 2243.5 | 2249.6 | 2255.7 |
| 16° | 2227.3 | 2217.2 | 2211.1 | 2219.2 | 2227.3 |
| 17° | 2194.9 | 2184.7 | 2176.6 | 2192.9 | 2194.9 |
| 18° | 2162.5 | 2158.4 | 2138.1 | 2158.4 | 2168.5 |
| 19° | 2136.1 | 2121.9 | 2103.7 | 2126.0 | 2138.1 |
| 20° | 2101.7 | 2089.5 | 2077.3 | 2089.5 | 2107.7 |
| 22.5° | 2002.3 | 1992.2 | 1982.1 | 1996.3 | 2006.4 |
| 25° | 1866.6 | 1872.6 | 1880.7 | 1886.8 | 1884.8 |
| 27.5° | 1674.0 | 1728.7 | 1779.4 | 1747.0 | 1704.4 |
| 30° | 1390.3 | 1528.1 | 1653.8 | 1550.4 | 1443.0 |
| 32.5° | 1007.3 | 1242.3 | 1503.8 | 1289.0 | 1017.4 |
| 35° | 666.8 | 883.6 | 1325.4 | 905.9 | 691.1 |
| 37.5° | 433.7 | 593.8 | 1106.6 | 595.8 | 454.0 |
| 40° | 283.7 | 387.1 | 810.7 | 395.2 | 283.7 |
| 42.5° | 174.3 | 245.2 | 492.5 | 255.4 | 174.3 |
| 45° | 101.3 | 152.0 | 281.7 | 154.0 | 99.3 |
| 47.5° | 46.6 | 83.1 | 160.1 | 81.1 | 48.6 |
| 50° | 14.2 | 36.5 | 81.1 | 36.5 | 14.2 |
| 52.5° | 6.1 | 10.1 | 38.5 | 10.1 | 6.1 |
| 55° | 4.1 | 4.1 | 14.2 | 4.1 | 4.1 |
| 57.5° | 4.1 | 2.0 | 4.1 | 4.1 | 4.1 |
| 60° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 62.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 65° | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 |
| 67.5° | 2.0 | 0.0 | 0.0 | 0.0 | 2.0 |
| 70° | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 |
| 72.5° | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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Scaled Data Report



| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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Scaled Data Report



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