

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: P838723

Luminaire Tested: HCSQ655D010-HM64560930-61SQMW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838723
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ655D010-HM64560930-61SQMW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

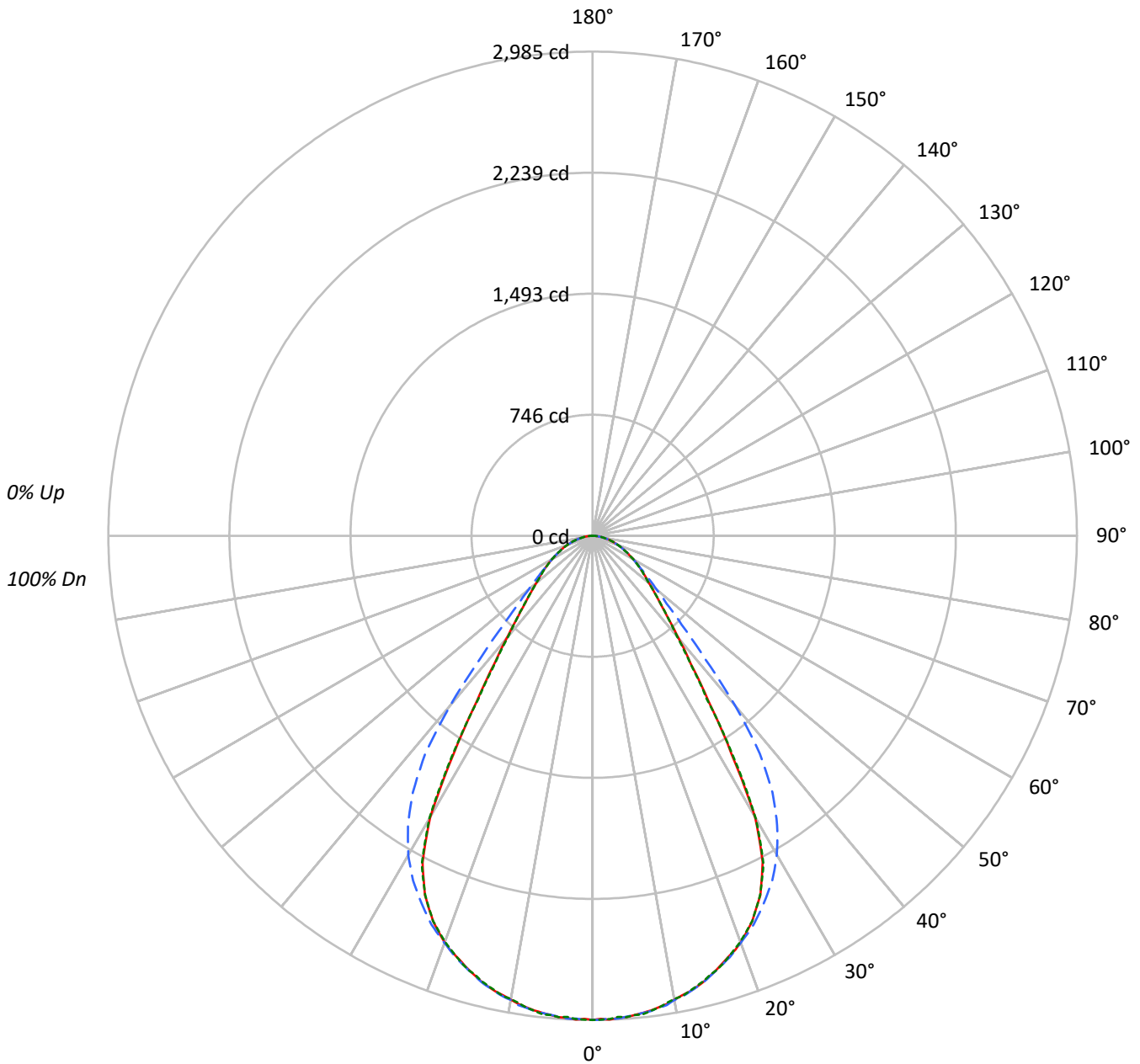
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4403.4 lumens
Efficiency: N/A
Efficacy: 81.5 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.11
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 54
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: P838723

CATALOG NUMBER: HCSQ655D010-HM64560930-61SQMW

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 | 111 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 | 89 | | | | | | | | | | | | | | | | | | | |
| 2 | 104 | 98 | 92 | 88 | 102 | 96 | 91 | 87 | 92 | 88 | 85 | 89 | 86 | 83 | 86 | 84 | 81 | 79 | | | | | | | | | | | | | | | | | | | |
| 3 | 97 | 89 | 82 | 77 | 95 | 87 | 81 | 77 | 84 | 79 | 75 | 82 | 78 | 74 | 79 | 76 | 73 | 71 | | | | | | | | | | | | | | | | | | | |
| 4 | 91 | 81 | 74 | 69 | 89 | 80 | 73 | 68 | 77 | 72 | 67 | 75 | 70 | 67 | 73 | 69 | 66 | 64 | | | | | | | | | | | | | | | | | | | |
| 5 | 85 | 74 | 67 | 62 | 83 | 73 | 66 | 61 | 71 | 65 | 61 | 70 | 64 | 60 | 68 | 63 | 60 | 58 | | | | | | | | | | | | | | | | | | | |
| 6 | 80 | 69 | 61 | 56 | 78 | 68 | 61 | 56 | 66 | 60 | 55 | 64 | 59 | 55 | 63 | 58 | 54 | 53 | | | | | | | | | | | | | | | | | | | |
| 7 | 75 | 63 | 56 | 51 | 73 | 63 | 56 | 51 | 61 | 55 | 51 | 60 | 54 | 50 | 59 | 54 | 50 | 48 | | | | | | | | | | | | | | | | | | | |
| 8 | 70 | 59 | 52 | 47 | 69 | 58 | 51 | 47 | 57 | 51 | 46 | 56 | 50 | 46 | 55 | 50 | 46 | 44 | | | | | | | | | | | | | | | | | | | |
| 9 | 66 | 55 | 48 | 43 | 65 | 54 | 48 | 43 | 53 | 47 | 43 | 52 | 47 | 43 | 51 | 46 | 43 | 41 | | | | | | | | | | | | | | | | | | | |
| 10 | 63 | 51 | 45 | 40 | 62 | 51 | 44 | 40 | 50 | 44 | 40 | 49 | 44 | 40 | 48 | 43 | 40 | 38 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 128534 | 128534 | 128534 |
| 5° | 128217 | 128126 | 128217 |
| 10° | 126962 | 127054 | 126779 |
| 15° | 125072 | 125165 | 124884 |
| 20° | 122254 | 122350 | 121970 |
| 25° | 116154 | 118634 | 116054 |
| 30° | 99468 | 112951 | 100089 |
| 35° | 65355 | 101538 | 64367 |
| 40° | 46201 | 76568 | 45380 |
| 45° | 35822 | 47129 | 36077 |
| 50° | 30464 | 34376 | 30182 |
| 55° | 27406 | 28187 | 27406 |
| 60° | 24791 | 24791 | 24791 |
| 65° | 22739 | 22525 | 22525 |
| 70° | 20746 | 20746 | 21010 |
| 75° | 19430 | 18748 | 19081 |
| 80° | 17059 | 17059 | 17059 |
| 85° | 14425 | 14425 | 14425 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 47129 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 281.5 | 6.4 |
| 10°-20° | 790.4 | 17.9 |
| 20°-30° | 1126.3 | 25.6 |
| 30°-40° | 960.3 | 21.8 |
| 40°-50° | 531.3 | 12.1 |
| 50°-60° | 334.6 | 7.6 |
| 60°-70° | 222.2 | 5.0 |
| 70°-80° | 122.1 | 2.8 |
| 80°-90° | 34.8 | 0.8 |
| 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° | 2198.1 | 49.9 |
| 0°-40° | 3158.5 | 71.7 |
| 0°-60° | 4024.4 | 91.4 |
| 0°-90° | 4403.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4403.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2985 | 2985 | 2985 | 2985 | 2985 | |
| 5° | 2967 | 2971 | 2964 | 2960 | 2967 | 281 |
| 15° | 2806 | 2806 | 2808 | 2806 | 2802 | 790 |
| 25° | 2445 | 2474 | 2497 | 2472 | 2443 | 1104 |
| 35° | 1243 | 1467 | 1932 | 1469 | 1225 | 808 |
| 45° | 588 | 645 | 774 | 640 | 592 | 466 |
| 55° | 365 | 371 | 376 | 369 | 365 | 328 |
| 65° | 223 | 225 | 221 | 223 | 221 | 222 |
| 75° | 117 | 115 | 113 | 115 | 115 | 123 |
| 85° | 29 | 29 | 29 | 31 | 29 | 35 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P838723

CATALOG NUMBER: HCSQ655D010-HM64560930-61SQMW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2985.3 | 2985.3 | 2985.3 | 2985.3 | 2985.3 |
| 1° | 2979.1 | 2983.2 | 2983.2 | 2981.2 | 2983.2 |
| 2° | 2985.3 | 2979.1 | 2979.1 | 2979.1 | 2981.2 |
| 3° | 2977.0 | 2981.2 | 2981.2 | 2974.9 | 2970.7 |
| 4° | 2974.9 | 2972.8 | 2972.8 | 2979.1 | 2974.9 |
| 5° | 2966.6 | 2970.7 | 2964.5 | 2960.3 | 2966.6 |
| 6° | 2958.2 | 2960.3 | 2958.2 | 2960.3 | 2966.6 |
| 7° | 2947.8 | 2954.0 | 2952.0 | 2949.9 | 2949.9 |
| 8° | 2935.3 | 2943.6 | 2939.4 | 2939.4 | 2937.4 |
| 9° | 2922.7 | 2924.8 | 2929.0 | 2929.0 | 2916.5 |
| 10° | 2904.0 | 2910.2 | 2906.1 | 2908.1 | 2899.8 |
| 11° | 2887.3 | 2895.6 | 2893.5 | 2889.4 | 2891.5 |
| 12° | 2872.7 | 2876.9 | 2874.8 | 2868.5 | 2870.6 |
| 13° | 2853.9 | 2858.1 | 2856.0 | 2856.0 | 2849.7 |
| 14° | 2833.0 | 2828.9 | 2835.1 | 2831.0 | 2828.9 |
| 15° | 2805.9 | 2805.9 | 2808.0 | 2805.9 | 2801.7 |
| 16° | 2780.9 | 2783.0 | 2783.0 | 2780.9 | 2783.0 |
| 17° | 2751.7 | 2760.0 | 2757.9 | 2753.8 | 2755.9 |
| 18° | 2724.6 | 2730.8 | 2732.9 | 2730.8 | 2724.6 |
| 19° | 2699.5 | 2703.7 | 2701.6 | 2693.3 | 2693.3 |
| 20° | 2668.2 | 2670.3 | 2670.3 | 2666.1 | 2662.0 |
| 22.5° | 2570.2 | 2584.8 | 2595.2 | 2586.9 | 2570.2 |
| 25° | 2445.0 | 2474.2 | 2497.2 | 2472.1 | 2442.9 |
| 27.5° | 2269.8 | 2328.2 | 2397.0 | 2334.4 | 2280.2 |
| 30° | 2000.7 | 2134.2 | 2271.9 | 2146.7 | 2013.2 |
| 32.5° | 1591.8 | 1854.6 | 2117.5 | 1879.7 | 1616.8 |
| 35° | 1243.4 | 1466.6 | 1931.8 | 1468.7 | 1224.6 |
| 37.5° | 993.0 | 1151.6 | 1694.0 | 1141.1 | 982.6 |
| 40° | 822.0 | 928.4 | 1362.3 | 924.2 | 807.4 |
| 42.5° | 686.4 | 767.7 | 1020.1 | 759.4 | 686.4 |
| 45° | 588.3 | 644.6 | 774.0 | 640.5 | 592.5 |
| 47.5° | 515.3 | 550.8 | 619.6 | 548.7 | 515.3 |
| 50° | 454.8 | 475.7 | 513.2 | 473.6 | 450.6 |
| 52.5° | 406.8 | 419.3 | 433.9 | 415.2 | 402.6 |
| 55° | 365.1 | 371.3 | 375.5 | 369.3 | 365.1 |
| 57.5° | 325.4 | 329.6 | 327.5 | 325.4 | 323.4 |
| 60° | 287.9 | 290.0 | 287.9 | 290.0 | 287.9 |
| 62.5° | 254.5 | 256.6 | 252.4 | 254.5 | 252.4 |
| 65° | 223.2 | 225.3 | 221.1 | 223.2 | 221.1 |
| 67.5° | 194.0 | 194.0 | 194.0 | 194.0 | 191.9 |
| 70° | 164.8 | 166.9 | 164.8 | 166.9 | 166.9 |
| 72.5° | 139.8 | 139.8 | 137.7 | 139.8 | 139.8 |
| 75° | 116.8 | 114.7 | 112.7 | 114.7 | 114.7 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|------|-------|------|-------|------|
| 82.5° | 50.1 | 50.1 | 48.0 | 50.1 | 50.1 |
| 85° | 29.2 | 29.2 | 29.2 | 31.3 | 29.2 |
| 87.5° | 14.6 | 12.5 | 12.5 | 14.6 | 14.6 |
| 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

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

Scaled Data Report





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

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Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





| | | | | | |
|-------|------|------|------|------|------|
| 77.5° | 91.8 | 91.8 | 89.7 | 91.8 | 91.8 |
| 80° | 68.8 | 70.9 | 68.8 | 70.9 | 68.8 |

Signify Classified - Internal
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Scaled Data Report



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