

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: P838387

Luminaire Tested: HCSQ615D010-HM60525835-61SQMB

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838387
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: HCSQ615D010-HM60525835-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

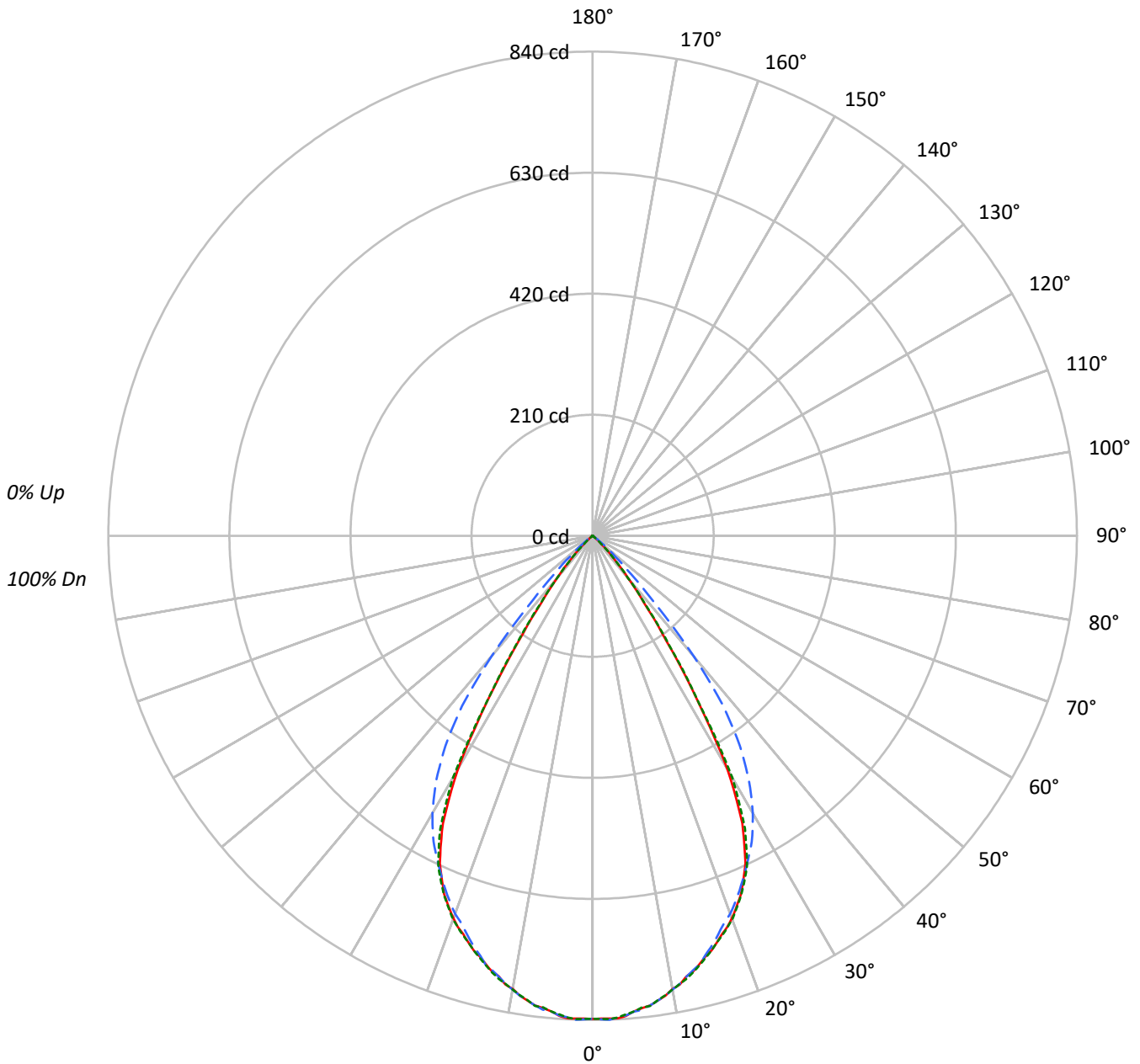
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 833.3 lumens
Efficiency: N/A
Efficacy: 59.5 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): 14
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





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|---|--|---|
| RF | 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 | 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 | 113 | 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° | 36094 | 36094 | 36094 |
| 5° | 35791 | 35817 | 35791 |
| 10° | 34893 | 34954 | 34954 |
| 15° | 33694 | 33600 | 33783 |
| 20° | 32357 | 31982 | 32449 |
| 25° | 29796 | 30019 | 30086 |
| 30° | 23223 | 27627 | 24107 |
| 35° | 11774 | 23411 | 12205 |
| 40° | 5356 | 15310 | 5356 |
| 45° | 2070 | 5766 | 2034 |
| 50° | 322 | 1822 | 322 |
| 55° | 105 | 360 | 105 |
| 60° | 60 | 60 | 60 |
| 65° | 71 | 0 | 71 |
| 70° | 0 | 0 | 88 |
| 75° | 0 | 0 | 116 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 5766 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 78.3 | 9.4 |
| 10°-20° | 212.3 | 25.5 |
| 20°-30° | 286.2 | 34.3 |
| 30°-40° | 201.2 | 24.1 |
| 40°-50° | 51.4 | 6.2 |
| 50°-60° | 3.6 | 0.4 |
| 60°-70° | 0.4 | 0.1 |
| 70°-80° | 0.1 | 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° | 576.7 | 69.2 |
| 0°-40° | 777.9 | 93.3 |
| 0°-60° | 832.8 | 99.9 |
| 0°-90° | 833.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 833.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 838 | 838 | 838 | 838 | 838 | |
| 5° | 828 | 829 | 829 | 829 | 828 | 78 |
| 15° | 756 | 754 | 754 | 756 | 758 | 213 |
| 25° | 627 | 629 | 632 | 634 | 633 | 280 |
| 35° | 224 | 297 | 445 | 304 | 232 | 151 |
| 45° | 34 | 51 | 95 | 52 | 33 | 30 |
| 55° | 1 | 1 | 5 | 1 | 1 | 2 |
| 65° | 1 | 1 | 0 | 1 | 1 | 1 |
| 75° | 0 | 0 | 0 | 0 | 1 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 838.3 | 838.3 | 838.3 | 838.3 | 838.3 |
| 1° | 837.6 | 838.3 | 839.0 | 839.0 | 838.3 |
| 2° | 838.3 | 836.2 | 840.3 | 838.3 | 839.0 |
| 3° | 838.3 | 834.2 | 836.2 | 837.6 | 836.9 |
| 4° | 834.9 | 832.2 | 834.2 | 833.5 | 832.2 |
| 5° | 828.1 | 829.4 | 828.7 | 829.4 | 828.1 |
| 6° | 824.0 | 825.3 | 826.7 | 824.7 | 822.6 |
| 7° | 820.6 | 819.9 | 820.6 | 821.9 | 821.9 |
| 8° | 814.4 | 815.8 | 814.4 | 815.1 | 813.1 |
| 9° | 807.6 | 807.6 | 807.6 | 809.0 | 807.0 |
| 10° | 798.1 | 801.5 | 799.5 | 800.8 | 799.5 |
| 11° | 793.3 | 792.0 | 792.0 | 792.7 | 792.0 |
| 12° | 781.8 | 783.1 | 782.4 | 783.8 | 785.8 |
| 13° | 775.6 | 776.3 | 773.6 | 777.0 | 777.0 |
| 14° | 766.1 | 765.4 | 766.8 | 766.1 | 767.5 |
| 15° | 755.9 | 754.5 | 753.8 | 755.9 | 757.9 |
| 16° | 748.4 | 745.0 | 742.9 | 745.7 | 748.4 |
| 17° | 737.5 | 734.1 | 731.4 | 736.8 | 737.5 |
| 18° | 726.6 | 725.2 | 718.4 | 725.2 | 728.6 |
| 19° | 717.7 | 713.0 | 706.9 | 714.3 | 718.4 |
| 20° | 706.2 | 702.1 | 698.0 | 702.1 | 708.2 |
| 22.5° | 672.8 | 669.4 | 666.0 | 670.8 | 674.2 |
| 25° | 627.2 | 629.2 | 631.9 | 634.0 | 633.3 |
| 27.5° | 562.5 | 580.9 | 597.9 | 587.0 | 572.7 |
| 30° | 467.1 | 513.5 | 555.7 | 520.9 | 484.9 |
| 32.5° | 338.4 | 417.4 | 505.3 | 433.1 | 341.8 |
| 35° | 224.0 | 296.9 | 445.4 | 304.4 | 232.2 |
| 37.5° | 145.7 | 199.5 | 371.8 | 200.2 | 152.5 |
| 40° | 95.3 | 130.1 | 272.4 | 132.8 | 95.3 |
| 42.5° | 58.6 | 82.4 | 165.5 | 85.8 | 58.6 |
| 45° | 34.0 | 51.1 | 94.7 | 51.8 | 33.4 |
| 47.5° | 15.7 | 27.9 | 53.8 | 27.2 | 16.3 |
| 50° | 4.8 | 12.3 | 27.2 | 12.3 | 4.8 |
| 52.5° | 2.0 | 3.4 | 12.9 | 3.4 | 2.0 |
| 55° | 1.4 | 1.4 | 4.8 | 1.4 | 1.4 |
| 57.5° | 1.4 | 0.7 | 1.4 | 1.4 | 1.4 |
| 60° | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 62.5° | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 65° | 0.7 | 0.7 | 0.0 | 0.7 | 0.7 |
| 67.5° | 0.7 | 0.0 | 0.0 | 0.0 | 0.7 |
| 70° | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 |
| 72.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 |



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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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| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 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



(END OF REPORT)