

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: P838347

Luminaire Tested: HCSQ610D010-HM60525835-61SQMB

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838347
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: HCSQ610D010-HM60525835-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

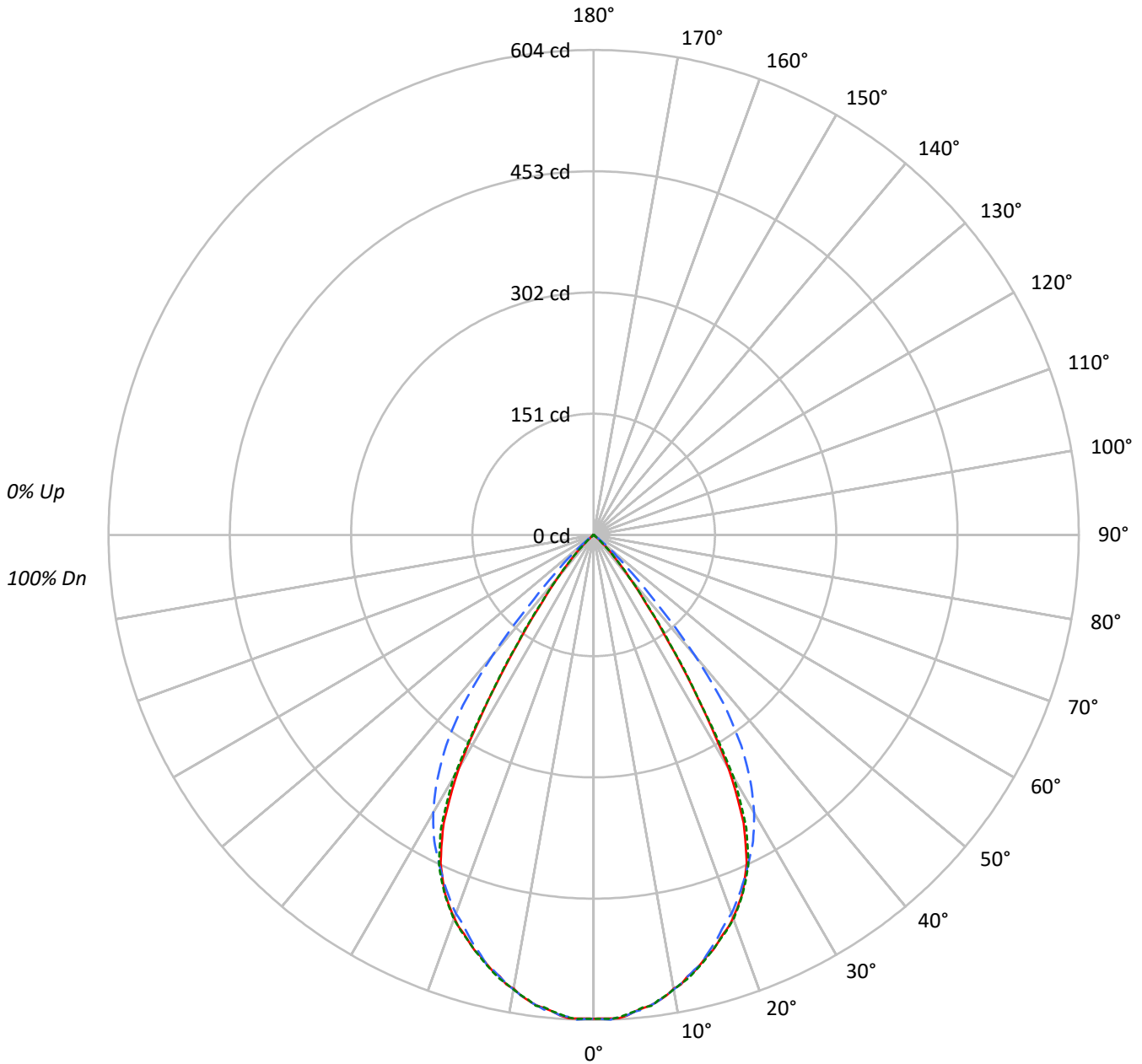
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 599.1 lumens
Efficiency: N/A
Efficacy: 60.5 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): 9.9
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 | | | | | 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 | | | | | 100 | | | |
| 1 | 114 | 111 | 108 | 106 | 111 | 109 | 106 | 104 | 105 | 103 | 101 | 101 | 99 | 98 | 97 | 96 | 95 | 93 | | | | | 93 | | | |
| 2 | 108 | 103 | 99 | 96 | 106 | 101 | 98 | 94 | 98 | 95 | 92 | 95 | 93 | 90 | 92 | 90 | 89 | 87 | | | | | 87 | | | |
| 3 | 102 | 96 | 91 | 87 | 100 | 94 | 90 | 86 | 92 | 88 | 85 | 89 | 86 | 83 | 87 | 85 | 82 | 81 | | | | | 81 | | | |
| 4 | 97 | 89 | 84 | 80 | 95 | 88 | 83 | 79 | 86 | 82 | 78 | 84 | 80 | 77 | 82 | 79 | 76 | 75 | | | | | 75 | | | |
| 5 | 92 | 84 | 78 | 73 | 90 | 83 | 77 | 73 | 81 | 76 | 72 | 79 | 75 | 72 | 78 | 74 | 71 | 70 | | | | | 70 | | | |
| 6 | 87 | 78 | 72 | 68 | 86 | 77 | 72 | 68 | 76 | 71 | 67 | 75 | 70 | 67 | 73 | 69 | 66 | 65 | | | | | 65 | | | |
| 7 | 83 | 73 | 67 | 63 | 81 | 73 | 67 | 63 | 71 | 66 | 63 | 70 | 66 | 62 | 69 | 65 | 62 | 60 | | | | | 60 | | | |
| 8 | 79 | 69 | 63 | 59 | 77 | 68 | 63 | 59 | 67 | 62 | 58 | 66 | 62 | 58 | 65 | 61 | 58 | 56 | | | | | 56 | | | |
| 9 | 75 | 65 | 59 | 55 | 74 | 64 | 59 | 55 | 63 | 58 | 55 | 63 | 58 | 54 | 62 | 57 | 54 | 53 | | | | | 53 | | | |
| 10 | 71 | 61 | 55 | 51 | 70 | 61 | 55 | 51 | 60 | 55 | 51 | 59 | 54 | 51 | 58 | 54 | 51 | 50 | | | | | 50 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 25950 | 25950 | 25950 |
| 5° | 25729 | 25751 | 25729 |
| 10° | 25086 | 25130 | 25130 |
| 15° | 24222 | 24159 | 24289 |
| 20° | 23262 | 22992 | 23331 |
| 25° | 21421 | 21582 | 21630 |
| 30° | 16700 | 19862 | 17331 |
| 35° | 8468 | 16830 | 8772 |
| 40° | 3850 | 11005 | 3850 |
| 45° | 1492 | 4147 | 1461 |
| 50° | 228 | 1313 | 228 |
| 55° | 75 | 255 | 75 |
| 60° | 43 | 43 | 43 |
| 65° | 51 | 0 | 51 |
| 70° | 0 | 0 | 63 |
| 75° | 0 | 0 | 83 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 4147 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 56.3 | 9.4 |
| 10°-20° | 152.6 | 25.5 |
| 20°-30° | 205.7 | 34.3 |
| 30°-40° | 144.6 | 24.1 |
| 40°-50° | 36.9 | 6.2 |
| 50°-60° | 2.6 | 0.4 |
| 60°-70° | 0.3 | 0.1 |
| 70°-80° | 0.0 | 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° | 414.6 | 69.2 |
| 0°-40° | 559.3 | 93.3 |
| 0°-60° | 598.7 | 99.9 |
| 0°-90° | 599.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 599.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 603 | 603 | 603 | 603 | 603 | |
| 5° | 595 | 596 | 596 | 596 | 595 | 56 |
| 15° | 543 | 542 | 542 | 543 | 545 | 153 |
| 25° | 451 | 452 | 454 | 456 | 455 | 202 |
| 35° | 161 | 214 | 320 | 219 | 167 | 108 |
| 45° | 24 | 37 | 68 | 37 | 24 | 21 |
| 55° | 1 | 1 | 3 | 1 | 1 | 1 |
| 65° | 0 | 0 | 0 | 0 | 0 | 0 |
| 75° | 0 | 0 | 0 | 0 | 0 | 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° | 602.7 | 602.7 | 602.7 | 602.7 | 602.7 |
| 1° | 602.2 | 602.7 | 603.2 | 603.2 | 602.7 |
| 2° | 602.7 | 601.2 | 604.1 | 602.7 | 603.2 |
| 3° | 602.7 | 599.7 | 601.2 | 602.2 | 601.7 |
| 4° | 600.2 | 598.3 | 599.7 | 599.2 | 598.3 |
| 5° | 595.3 | 596.3 | 595.8 | 596.3 | 595.3 |
| 6° | 592.4 | 593.4 | 594.3 | 592.9 | 591.4 |
| 7° | 589.9 | 589.5 | 589.9 | 590.9 | 590.9 |
| 8° | 585.5 | 586.5 | 585.5 | 586.0 | 584.6 |
| 9° | 580.6 | 580.6 | 580.6 | 581.6 | 580.2 |
| 10° | 573.8 | 576.2 | 574.8 | 575.7 | 574.8 |
| 11° | 570.4 | 569.4 | 569.4 | 569.9 | 569.4 |
| 12° | 562.0 | 563.0 | 562.5 | 563.5 | 565.0 |
| 13° | 557.6 | 558.1 | 556.2 | 558.6 | 558.6 |
| 14° | 550.8 | 550.3 | 551.3 | 550.8 | 551.8 |
| 15° | 543.4 | 542.5 | 542.0 | 543.4 | 544.9 |
| 16° | 538.0 | 535.6 | 534.1 | 536.1 | 538.0 |
| 17° | 530.2 | 527.8 | 525.8 | 529.7 | 530.2 |
| 18° | 522.4 | 521.4 | 516.5 | 521.4 | 523.8 |
| 19° | 516.0 | 512.6 | 508.2 | 513.6 | 516.5 |
| 20° | 507.7 | 504.8 | 501.8 | 504.8 | 509.2 |
| 22.5° | 483.7 | 481.3 | 478.8 | 482.2 | 484.7 |
| 25° | 450.9 | 452.4 | 454.3 | 455.8 | 455.3 |
| 27.5° | 404.4 | 417.6 | 429.9 | 422.0 | 411.7 |
| 30° | 335.9 | 369.1 | 399.5 | 374.5 | 348.6 |
| 32.5° | 243.3 | 300.1 | 363.3 | 311.4 | 245.8 |
| 35° | 161.1 | 213.5 | 320.2 | 218.8 | 166.9 |
| 37.5° | 104.8 | 143.4 | 267.3 | 143.9 | 109.7 |
| 40° | 68.5 | 93.5 | 195.8 | 95.5 | 68.5 |
| 42.5° | 42.1 | 59.2 | 119.0 | 61.7 | 42.1 |
| 45° | 24.5 | 36.7 | 68.1 | 37.2 | 24.0 |
| 47.5° | 11.3 | 20.1 | 38.7 | 19.6 | 11.7 |
| 50° | 3.4 | 8.8 | 19.6 | 8.8 | 3.4 |
| 52.5° | 1.5 | 2.4 | 9.3 | 2.4 | 1.5 |
| 55° | 1.0 | 1.0 | 3.4 | 1.0 | 1.0 |
| 57.5° | 1.0 | 0.5 | 1.0 | 1.0 | 1.0 |
| 60° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 62.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 65° | 0.5 | 0.5 | 0.0 | 0.5 | 0.5 |
| 67.5° | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 |
| 70° | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 |
| 72.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 |



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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



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