

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: P838328

Luminaire Tested: HCSQ607D010-HM60525935-61SQMW

Issue Date: 5/21/2024

**Test Information**

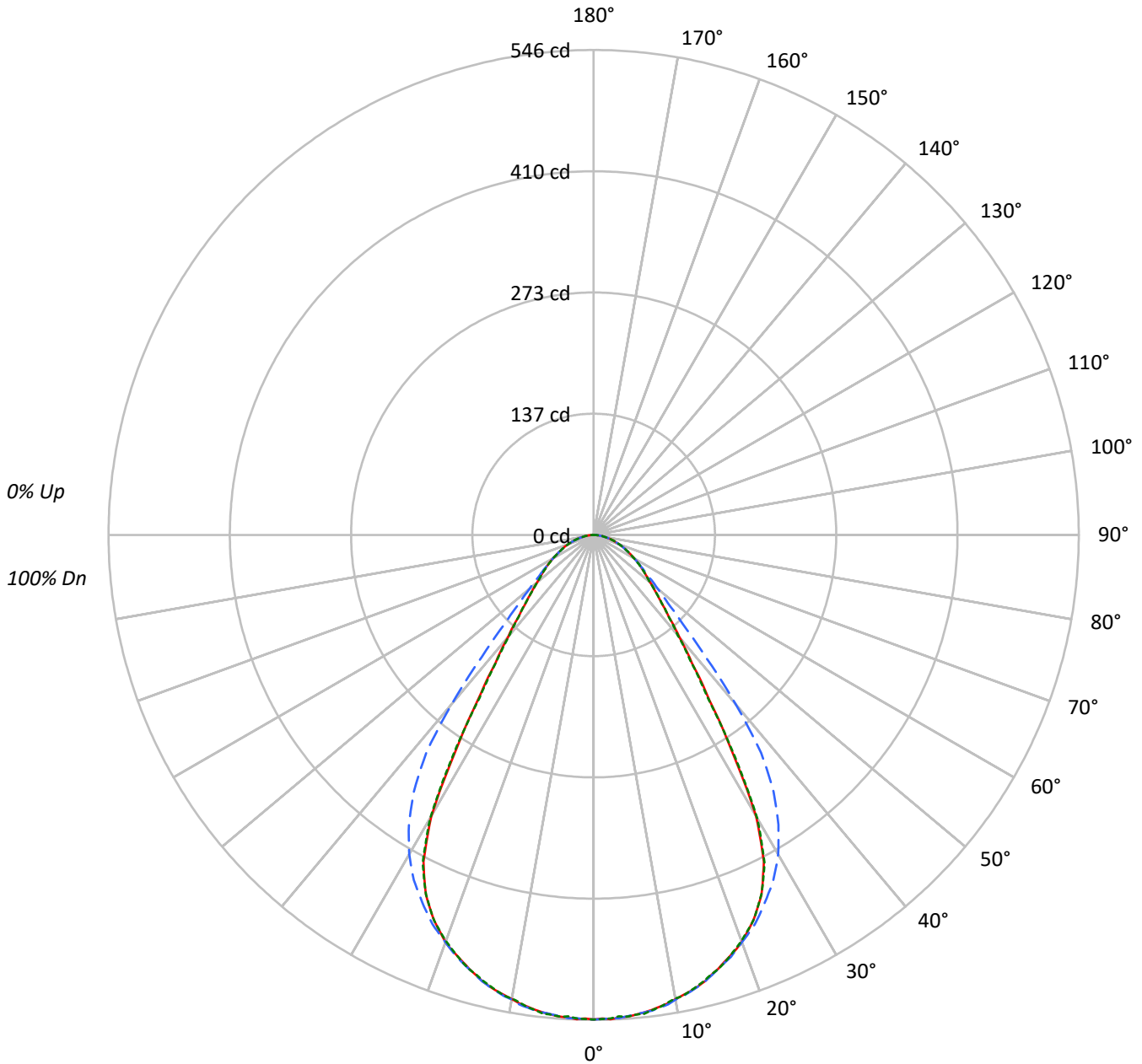
Test Method: LM-79-2019  
Report Number: P838328  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ607D010-HM60525935-61SQMW  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 804.8 lumens  
Efficiency: N/A  
Efficacy: 100.6 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): 8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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  |     |     |  |  |
| RW  | 70  | 50  | 30  | 10  | 70  | 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°  | 23491 | 23491 | 23491 |
| 5°  | 23434 | 23417 | 23434 |
| 10° | 23202 | 23220 | 23172 |
| 15° | 22858 | 22876 | 22822 |
| 20° | 22341 | 22360 | 22291 |
| 25° | 21226 | 21682 | 21212 |
| 30° | 18176 | 20642 | 18291 |
| 35° | 11942 | 18554 | 11763 |
| 40° | 8442  | 13995 | 8290  |
| 45° | 6546  | 8610  | 6594  |
| 50° | 5566  | 6283  | 5519  |
| 55° | 5007  | 5149  | 5007  |
| 60° | 4529  | 4529  | 4529  |
| 65° | 4157  | 4116  | 4116  |
| 70° | 3789  | 3789  | 3840  |
| 75° | 3560  | 3427  | 3493  |
| 80° | 3124  | 3124  | 3124  |
| 85° | 2618  | 2618  | 2618  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 8610 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 51.4   | 6.4       |
| 10°-20°   | 144.4  | 17.9      |
| 20°-30°   | 205.8  | 25.6      |
| 30°-40°   | 175.5  | 21.8      |
| 40°-50°   | 97.1   | 12.1      |
| 50°-60°   | 61.2   | 7.6       |
| 60°-70°   | 40.6   | 5.0       |
| 70°-80°   | 22.3   | 2.8       |
| 80°-90°   | 6.4    | 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°    | 401.7  | 49.9      |
| 0°-40°    | 577.2  | 71.7      |
| 0°-60°    | 735.5  | 91.4      |
| 0°-90°    | 804.8  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 804.8  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 546 | 546   | 546 | 546   | 546 |      |
| 5°  | 542 | 543   | 542 | 541   | 542 | 51   |
| 15° | 513 | 513   | 513 | 513   | 512 | 144  |
| 25° | 447 | 452   | 456 | 452   | 446 | 202  |
| 35° | 227 | 268   | 353 | 268   | 224 | 148  |
| 45° | 108 | 118   | 141 | 117   | 108 | 85   |
| 55° | 67  | 68    | 69  | 68    | 67  | 60   |
| 65° | 41  | 41    | 40  | 41    | 40  | 41   |
| 75° | 21  | 21    | 21  | 21    | 21  | 22   |
| 85° | 5   | 5     | 5   | 6     | 5   | 6    |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 545.6 | 545.6 | 545.6 | 545.6 | 545.6 |
| 1°    | 544.4 | 545.2 | 545.2 | 544.8 | 545.2 |
| 2°    | 545.6 | 544.4 | 544.4 | 544.4 | 544.8 |
| 3°    | 544.1 | 544.8 | 544.8 | 543.7 | 542.9 |
| 4°    | 543.7 | 543.3 | 543.3 | 544.4 | 543.7 |
| 5°    | 542.2 | 542.9 | 541.8 | 541.0 | 542.2 |
| 6°    | 540.6 | 541.0 | 540.6 | 541.0 | 542.2 |
| 7°    | 538.7 | 539.9 | 539.5 | 539.1 | 539.1 |
| 8°    | 536.4 | 538.0 | 537.2 | 537.2 | 536.8 |
| 9°    | 534.1 | 534.5 | 535.3 | 535.3 | 533.0 |
| 10°   | 530.7 | 531.9 | 531.1 | 531.5 | 530.0 |
| 11°   | 527.7 | 529.2 | 528.8 | 528.0 | 528.4 |
| 12°   | 525.0 | 525.8 | 525.4 | 524.2 | 524.6 |
| 13°   | 521.6 | 522.3 | 521.9 | 521.9 | 520.8 |
| 14°   | 517.8 | 517.0 | 518.1 | 517.4 | 517.0 |
| 15°   | 512.8 | 512.8 | 513.2 | 512.8 | 512.0 |
| 16°   | 508.2 | 508.6 | 508.6 | 508.2 | 508.6 |
| 17°   | 502.9 | 504.4 | 504.0 | 503.3 | 503.6 |
| 18°   | 497.9 | 499.1 | 499.5 | 499.1 | 497.9 |
| 19°   | 493.4 | 494.1 | 493.7 | 492.2 | 492.2 |
| 20°   | 487.6 | 488.0 | 488.0 | 487.3 | 486.5 |
| 22.5° | 469.7 | 472.4 | 474.3 | 472.8 | 469.7 |
| 25°   | 446.8 | 452.2 | 456.4 | 451.8 | 446.5 |
| 27.5° | 414.8 | 425.5 | 438.1 | 426.6 | 416.7 |
| 30°   | 365.6 | 390.0 | 415.2 | 392.3 | 367.9 |
| 32.5° | 290.9 | 338.9 | 387.0 | 343.5 | 295.5 |
| 35°   | 227.2 | 268.0 | 353.0 | 268.4 | 223.8 |
| 37.5° | 181.5 | 210.5 | 309.6 | 208.6 | 179.6 |
| 40°   | 150.2 | 169.7 | 249.0 | 168.9 | 147.5 |
| 42.5° | 125.4 | 140.3 | 186.4 | 138.8 | 125.4 |
| 45°   | 107.5 | 117.8 | 141.4 | 117.0 | 108.3 |
| 47.5° | 94.2  | 100.7 | 113.2 | 100.3 | 94.2  |
| 50°   | 83.1  | 86.9  | 93.8  | 86.5  | 82.4  |
| 52.5° | 74.3  | 76.6  | 79.3  | 75.9  | 73.6  |
| 55°   | 66.7  | 67.9  | 68.6  | 67.5  | 66.7  |
| 57.5° | 59.5  | 60.2  | 59.9  | 59.5  | 59.1  |
| 60°   | 52.6  | 53.0  | 52.6  | 53.0  | 52.6  |
| 62.5° | 46.5  | 46.9  | 46.1  | 46.5  | 46.1  |
| 65°   | 40.8  | 41.2  | 40.4  | 40.8  | 40.4  |
| 67.5° | 35.5  | 35.5  | 35.5  | 35.5  | 35.1  |
| 70°   | 30.1  | 30.5  | 30.1  | 30.5  | 30.5  |
| 72.5° | 25.5  | 25.5  | 25.2  | 25.5  | 25.5  |
| 75°   | 21.4  | 21.0  | 20.6  | 21.0  | 21.0  |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 82.5° | 9.2 | 9.2   | 8.8 | 9.2   | 9.2 |
| 85°   | 5.3 | 5.3   | 5.3 | 5.7   | 5.3 |
| 87.5° | 2.7 | 2.3   | 2.3 | 2.7   | 2.7 |
| 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  
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Scaled Data Report





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

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Scaled Data Report



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Scaled Data Report





|       |      |      |      |      |      |
|-------|------|------|------|------|------|
| 77.5° | 16.8 | 16.8 | 16.4 | 16.8 | 16.8 |
| 80°   | 12.6 | 13.0 | 12.6 | 13.0 | 12.6 |

Signify Classified - Internal  
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Scaled Data Report



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