

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: P838269

Luminaire Tested: HCSQ605D010-HM60525840-61SQC

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838269
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ605D010-HM60525840-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

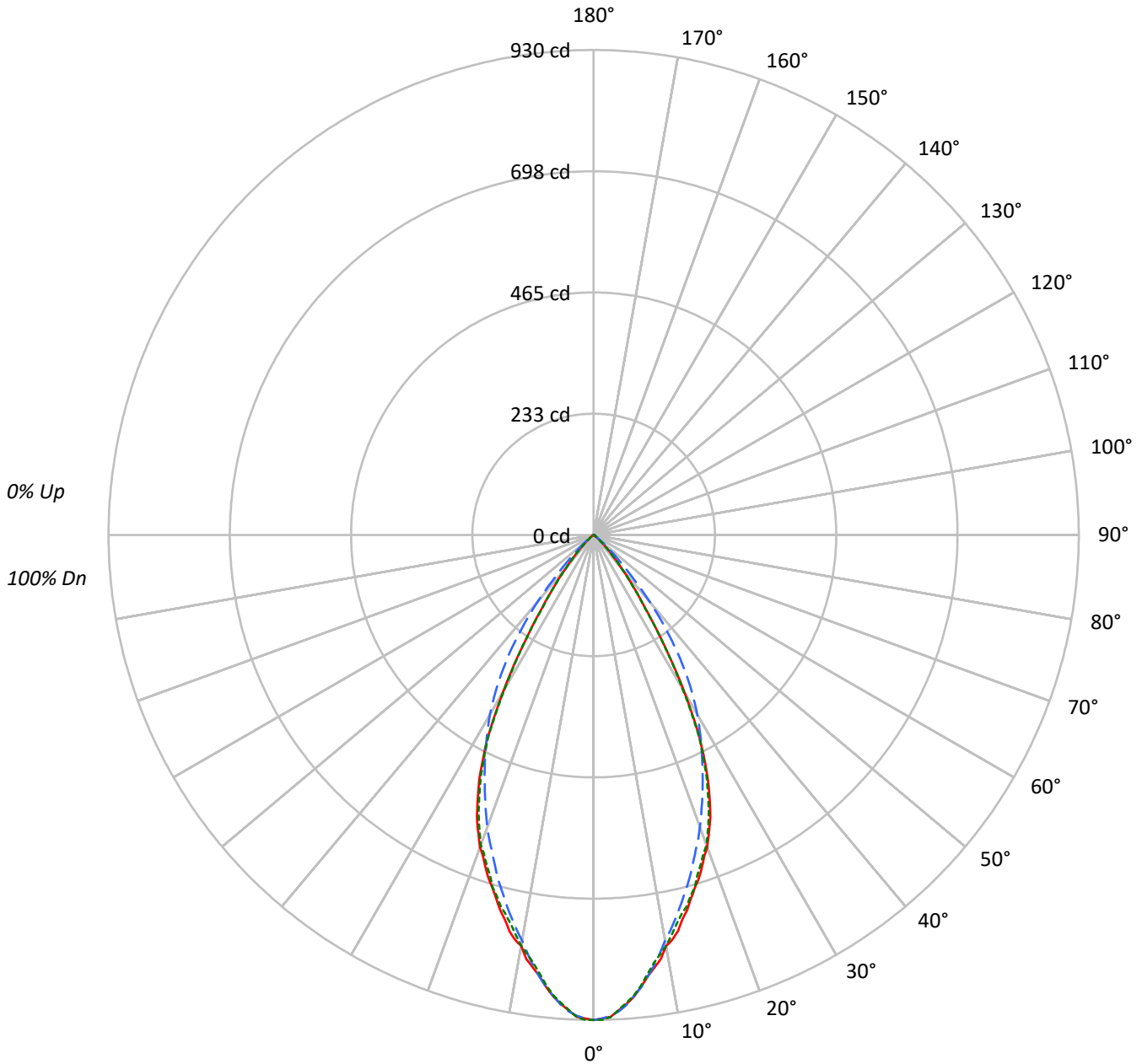
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 696.8 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 6
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

TEST NUMBER: P838269
CATALOG NUMBER: HCSQ605D010-HM60525840-61SQC

Luminous Intensity Polar Plot





TEST NUMBER: P838269

CATALOG NUMBER: HCSQ605D010-HM60525840-61SQC

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 | 107 | 105 | 105 | 103 | 101 | 101 | 100 | 98 | 98 | 96 | 95 | 94 | | | | | | | | | | | | | | | | | | | |
| 2 | 108 | 103 | 99 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 93 | 95 | 93 | 91 | 93 | 91 | 89 | 87 | | | | | | | | | | | | | | | | | | | |
| 3 | 103 | 97 | 92 | 88 | 101 | 95 | 91 | 87 | 93 | 89 | 86 | 90 | 87 | 84 | 88 | 85 | 83 | 81 | | | | | | | | | | | | | | | | | | | |
| 4 | 98 | 90 | 85 | 81 | 96 | 89 | 84 | 80 | 87 | 83 | 79 | 85 | 81 | 78 | 83 | 80 | 78 | 76 | | | | | | | | | | | | | | | | | | | |
| 5 | 93 | 85 | 79 | 75 | 91 | 84 | 78 | 74 | 82 | 77 | 74 | 80 | 76 | 73 | 79 | 75 | 72 | 71 | | | | | | | | | | | | | | | | | | | |
| 6 | 88 | 80 | 74 | 70 | 87 | 79 | 73 | 69 | 77 | 72 | 69 | 76 | 72 | 68 | 75 | 71 | 68 | 66 | | | | | | | | | | | | | | | | | | | |
| 7 | 84 | 75 | 69 | 65 | 83 | 74 | 69 | 65 | 73 | 68 | 64 | 72 | 67 | 64 | 71 | 67 | 64 | 62 | | | | | | | | | | | | | | | | | | | |
| 8 | 80 | 71 | 65 | 61 | 79 | 70 | 65 | 61 | 69 | 64 | 60 | 68 | 64 | 60 | 67 | 63 | 60 | 59 | | | | | | | | | | | | | | | | | | | |
| 9 | 76 | 67 | 61 | 57 | 75 | 66 | 61 | 57 | 65 | 60 | 57 | 65 | 60 | 57 | 64 | 60 | 56 | 55 | | | | | | | | | | | | | | | | | | | |
| 10 | 73 | 63 | 58 | 54 | 72 | 63 | 57 | 54 | 62 | 57 | 54 | 61 | 57 | 53 | 61 | 56 | 53 | 52 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 40055 | 40055 | 40055 |
| 5° | 38423 | 38354 | 38302 |
| 10° | 34993 | 34521 | 34967 |
| 15° | 32161 | 30984 | 31969 |
| 20° | 29187 | 27308 | 28985 |
| 25° | 24665 | 23473 | 24328 |
| 30° | 17271 | 19757 | 16978 |
| 35° | 9277 | 15159 | 9098 |
| 40° | 4592 | 9381 | 4558 |
| 45° | 2003 | 3952 | 1967 |
| 50° | 643 | 1433 | 643 |
| 55° | 330 | 465 | 300 |
| 60° | 215 | 215 | 215 |
| 65° | 163 | 163 | 163 |
| 70° | 113 | 113 | 113 |
| 75° | 100 | 100 | 100 |
| 80° | 74 | 74 | 74 |
| 85° | 148 | 148 | 148 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 3952 cd/sqm



TEST NUMBER: P838269
 CATALOG NUMBER: HCSQ605D010-HM60525840-61SQC

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 81.7 | 11.7 |
| 10°-20° | 197.3 | 28.3 |
| 20°-30° | 227.9 | 32.7 |
| 30°-40° | 142.3 | 20.4 |
| 40°-50° | 39.5 | 5.7 |
| 50°-60° | 5.5 | 0.8 |
| 60°-70° | 1.6 | 0.2 |
| 70°-80° | 0.7 | 0.1 |
| 80°-90° | 0.3 | 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° | 506.8 | 72.7 |
| 0°-40° | 649.2 | 93.2 |
| 0°-60° | 694.2 | 99.6 |
| 0°-90° | 696.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 696.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 930 | 930 | 930 | 930 | 930 | |
| 5° | 889 | 886 | 887 | 886 | 886 | 82 |
| 15° | 722 | 708 | 695 | 706 | 717 | 202 |
| 25° | 519 | 504 | 494 | 504 | 512 | 232 |
| 35° | 176 | 218 | 288 | 215 | 173 | 117 |
| 45° | 33 | 42 | 65 | 42 | 32 | 29 |
| 55° | 4 | 4 | 6 | 4 | 4 | 4 |
| 65° | 2 | 2 | 2 | 2 | 2 | 2 |
| 75° | 1 | 1 | 1 | 1 | 1 | 1 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P838269

CATALOG NUMBER: HCSQ605D010-HM60525840-61SQC

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 930.3 | 930.3 | 930.3 | 930.3 | 930.3 |
| 1° | 927.5 | 927.5 | 927.5 | 930.0 | 930.0 |
| 2° | 924.7 | 924.1 | 922.6 | 924.4 | 925.4 |
| 3° | 913.2 | 914.5 | 915.1 | 914.2 | 912.0 |
| 4° | 901.4 | 900.2 | 903.6 | 901.4 | 899.6 |
| 5° | 889.0 | 886.5 | 887.4 | 886.2 | 886.2 |
| 6° | 871.6 | 874.7 | 872.2 | 870.0 | 868.8 |
| 7° | 852.6 | 855.1 | 853.6 | 850.5 | 848.3 |
| 8° | 837.7 | 836.2 | 833.7 | 833.1 | 829.3 |
| 9° | 823.4 | 817.8 | 812.2 | 813.2 | 814.1 |
| 10° | 800.4 | 801.1 | 789.6 | 798.3 | 799.8 |
| 11° | 790.8 | 787.4 | 772.2 | 779.3 | 781.8 |
| 12° | 776.8 | 765.9 | 752.9 | 758.8 | 763.5 |
| 13° | 756.6 | 745.4 | 733.6 | 742.6 | 747.3 |
| 14° | 741.4 | 728.7 | 713.7 | 725.2 | 734.9 |
| 15° | 721.5 | 707.8 | 695.1 | 706.0 | 717.2 |
| 16° | 704.1 | 688.3 | 675.5 | 686.1 | 702.9 |
| 17° | 688.9 | 669.3 | 653.8 | 665.0 | 681.1 |
| 18° | 671.2 | 648.5 | 634.2 | 646.0 | 664.3 |
| 19° | 651.6 | 628.6 | 615.9 | 625.5 | 646.6 |
| 20° | 637.0 | 611.2 | 596.0 | 605.3 | 632.6 |
| 22.5° | 584.8 | 557.8 | 543.8 | 555.0 | 576.7 |
| 25° | 519.2 | 504.0 | 494.1 | 503.7 | 512.1 |
| 27.5° | 441.5 | 441.5 | 445.0 | 440.9 | 438.4 |
| 30° | 347.4 | 372.6 | 397.4 | 371.3 | 341.5 |
| 32.5° | 253.6 | 294.0 | 344.0 | 299.2 | 253.2 |
| 35° | 176.5 | 217.8 | 288.4 | 215.3 | 173.1 |
| 37.5° | 122.7 | 150.1 | 227.5 | 151.6 | 121.2 |
| 40° | 81.7 | 100.7 | 166.9 | 102.5 | 81.1 |
| 42.5° | 53.4 | 66.5 | 107.8 | 66.8 | 52.2 |
| 45° | 32.9 | 41.9 | 64.9 | 41.6 | 32.3 |
| 47.5° | 19.3 | 24.9 | 37.9 | 25.2 | 19.0 |
| 50° | 9.6 | 14.6 | 21.4 | 14.3 | 9.6 |
| 52.5° | 5.6 | 7.8 | 11.8 | 7.5 | 5.6 |
| 55° | 4.4 | 4.4 | 6.2 | 4.4 | 4.0 |
| 57.5° | 3.4 | 3.4 | 3.4 | 3.4 | 3.1 |
| 60° | 2.5 | 2.8 | 2.5 | 2.5 | 2.5 |
| 62.5° | 2.2 | 2.2 | 1.9 | 2.2 | 1.9 |
| 65° | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 67.5° | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 70° | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| 72.5° | 0.6 | 0.9 | 0.6 | 0.9 | 0.9 |
| 75° | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |



TEST NUMBER: P838269

CATALOG NUMBER: HCSQ605D010-HM60525840-61SQC

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 82.5° | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| 85° | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| 87.5° | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| 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°

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

Scaled Data Report



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

Scaled Data Report



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

Scaled Data Report



| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 77.5° | 0.6 | 0.6 | 0.6 | 0.6 | 0.3 |
| 80° | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |

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

Scaled Data Report



(END OF REPORT)