

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: P838734

Luminaire Tested: HCSQ660D010-HM64560827-61SQC

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838734
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: HCSQ660D010-HM64560827-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

Summary

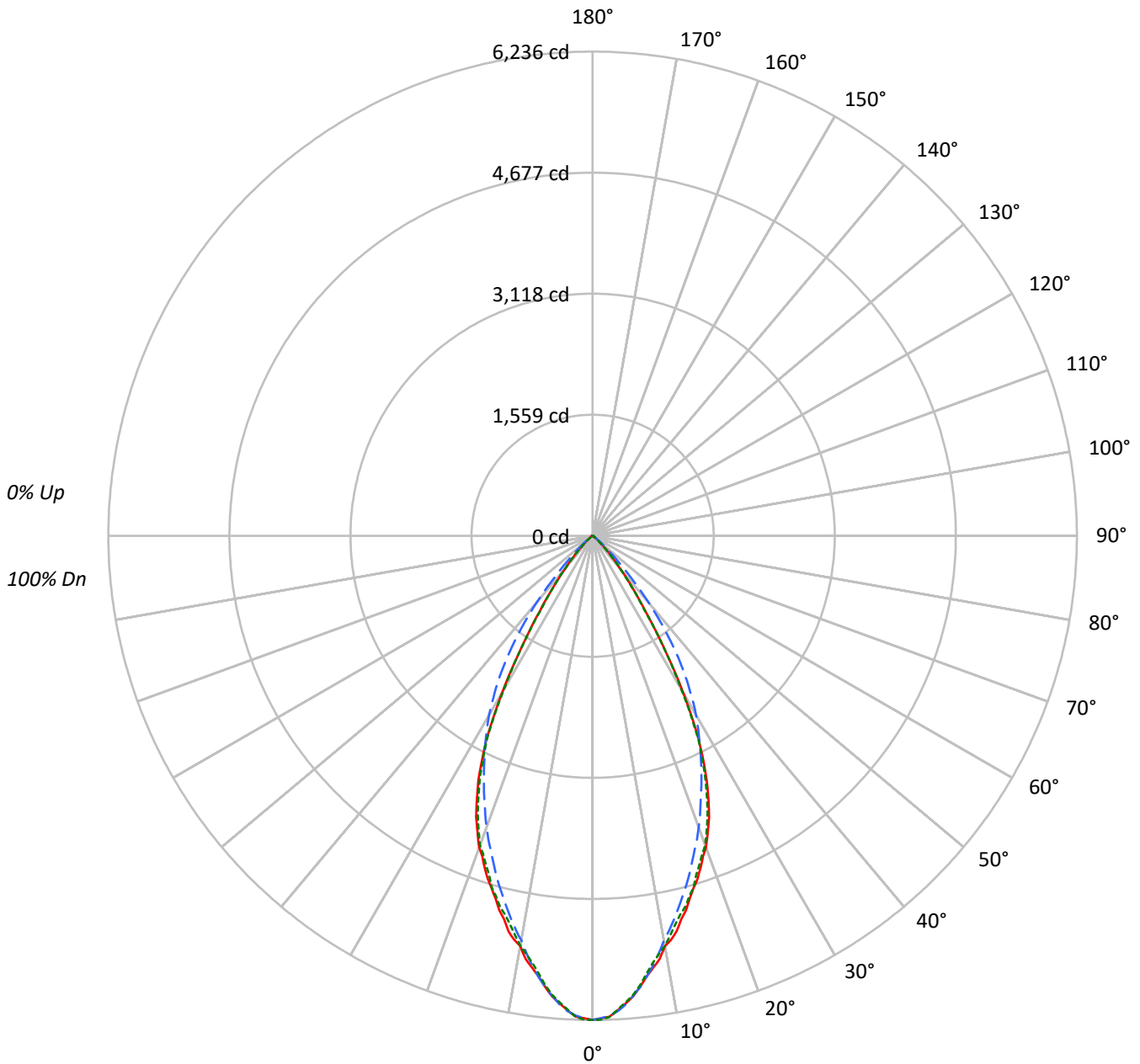
Lumens per Lamp: N/A
Luminaire Lumens: 4670.9 lumens
Efficiency: N/A
Efficacy: 83.4 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 56
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: P838734

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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° | 268491 | 268491 | 268491 |
| 5° | 257544 | 257095 | 256736 |
| 10° | 234570 | 231383 | 234387 |
| 15° | 215576 | 207682 | 214274 |
| 20° | 195633 | 183037 | 194300 |
| 25° | 165342 | 157328 | 163067 |
| 30° | 115770 | 132440 | 113801 |
| 35° | 62180 | 101590 | 60976 |
| 40° | 30789 | 62865 | 30553 |
| 45° | 13444 | 26505 | 13189 |
| 50° | 4327 | 9625 | 4327 |
| 55° | 2192 | 3130 | 2034 |
| 60° | 1438 | 1438 | 1438 |
| 65° | 1060 | 1060 | 1060 |
| 70° | 780 | 780 | 780 |
| 75° | 699 | 699 | 699 |
| 80° | 521 | 521 | 521 |
| 85° | 1037 | 1037 | 1037 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 26505 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 547.6 | 11.7 |
| 10°-20° | 1322.3 | 28.3 |
| 20°-30° | 1527.5 | 32.7 |
| 30°-40° | 953.9 | 20.4 |
| 40°-50° | 265.0 | 5.7 |
| 50°-60° | 37.1 | 0.8 |
| 60°-70° | 10.9 | 0.2 |
| 70°-80° | 4.7 | 0.1 |
| 80°-90° | 2.0 | 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° | 3397.3 | 72.7 |
| 0°-40° | 4351.2 | 93.2 |
| 0°-60° | 4653.3 | 99.6 |
| 0°-90° | 4670.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4670.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 6236 | 6236 | 6236 | 6236 | 6236 | |
| 5° | 5959 | 5942 | 5948 | 5940 | 5940 | 549 |
| 15° | 4836 | 4745 | 4659 | 4732 | 4807 | 1355 |
| 25° | 3480 | 3378 | 3312 | 3376 | 3432 | 1554 |
| 35° | 1183 | 1460 | 1933 | 1443 | 1160 | 786 |
| 45° | 221 | 281 | 435 | 279 | 217 | 191 |
| 55° | 29 | 29 | 42 | 29 | 27 | 29 |
| 65° | 10 | 10 | 10 | 10 | 10 | 11 |
| 75° | 4 | 4 | 4 | 4 | 4 | 4 |
| 85° | 2 | 2 | 2 | 2 | 2 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 6235.9 | 6235.9 | 6235.9 | 6235.9 | 6235.9 |
| 1° | 6217.2 | 6217.2 | 6217.2 | 6233.8 | 6233.8 |
| 2° | 6198.4 | 6194.3 | 6183.8 | 6196.3 | 6202.6 |
| 3° | 6121.4 | 6129.7 | 6133.9 | 6127.6 | 6113.0 |
| 4° | 6042.2 | 6033.9 | 6056.8 | 6042.2 | 6029.7 |
| 5° | 5958.9 | 5942.2 | 5948.5 | 5940.2 | 5940.2 |
| 6° | 5842.3 | 5863.1 | 5846.4 | 5831.9 | 5823.5 |
| 7° | 5715.2 | 5731.9 | 5721.5 | 5700.6 | 5686.1 |
| 8° | 5615.2 | 5604.8 | 5588.2 | 5584.0 | 5559.0 |
| 9° | 5519.4 | 5481.9 | 5444.5 | 5450.7 | 5456.9 |
| 10° | 5365.3 | 5369.5 | 5292.4 | 5350.7 | 5361.1 |
| 11° | 5300.7 | 5277.8 | 5175.8 | 5223.7 | 5240.3 |
| 12° | 5207.0 | 5134.1 | 5046.6 | 5086.2 | 5117.5 |
| 13° | 5071.6 | 4996.6 | 4917.5 | 4977.9 | 5009.1 |
| 14° | 4969.6 | 4884.2 | 4784.2 | 4861.3 | 4925.8 |
| 15° | 4836.3 | 4744.6 | 4659.2 | 4732.1 | 4807.1 |
| 16° | 4719.6 | 4613.4 | 4528.0 | 4598.8 | 4711.3 |
| 17° | 4617.6 | 4486.4 | 4382.2 | 4457.2 | 4565.5 |
| 18° | 4498.9 | 4346.8 | 4251.0 | 4330.2 | 4453.0 |
| 19° | 4367.6 | 4213.5 | 4128.1 | 4192.7 | 4334.3 |
| 20° | 4269.7 | 4096.9 | 3994.8 | 4057.3 | 4240.6 |
| 22.5° | 3919.8 | 3738.6 | 3644.9 | 3719.9 | 3865.7 |
| 25° | 3480.4 | 3378.3 | 3311.7 | 3376.2 | 3432.5 |
| 27.5° | 2959.7 | 2959.7 | 2982.6 | 2955.5 | 2938.8 |
| 30° | 2328.6 | 2497.3 | 2663.9 | 2489.0 | 2289.0 |
| 32.5° | 1699.6 | 1970.3 | 2305.7 | 2005.7 | 1697.5 |
| 35° | 1183.0 | 1460.0 | 1932.8 | 1443.4 | 1160.1 |
| 37.5° | 822.7 | 1006.0 | 1524.6 | 1016.4 | 812.3 |
| 40° | 547.8 | 674.8 | 1118.5 | 687.3 | 543.6 |
| 42.5° | 358.2 | 445.7 | 722.7 | 447.8 | 349.9 |
| 45° | 220.8 | 281.2 | 435.3 | 279.1 | 216.6 |
| 47.5° | 129.1 | 166.6 | 254.1 | 168.7 | 127.1 |
| 50° | 64.6 | 97.9 | 143.7 | 95.8 | 64.6 |
| 52.5° | 37.5 | 52.1 | 79.1 | 50.0 | 37.5 |
| 55° | 29.2 | 29.2 | 41.7 | 29.2 | 27.1 |
| 57.5° | 22.9 | 22.9 | 22.9 | 22.9 | 20.8 |
| 60° | 16.7 | 18.7 | 16.7 | 16.7 | 16.7 |
| 62.5° | 14.6 | 14.6 | 12.5 | 14.6 | 12.5 |
| 65° | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 |
| 67.5° | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 |
| 70° | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 |
| 72.5° | 4.2 | 6.2 | 4.2 | 6.2 | 6.2 |
| 75° | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 82.5° | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| 85° | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| 87.5° | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| 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° | 4.2 | 4.2 | 4.2 | 4.2 | 2.1 |
| 80° | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |

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