

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: P838714

Luminaire Tested: HCSQ655D010-HM64560927-61SQC

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838714
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: HCSQ655D010-HM64560927-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

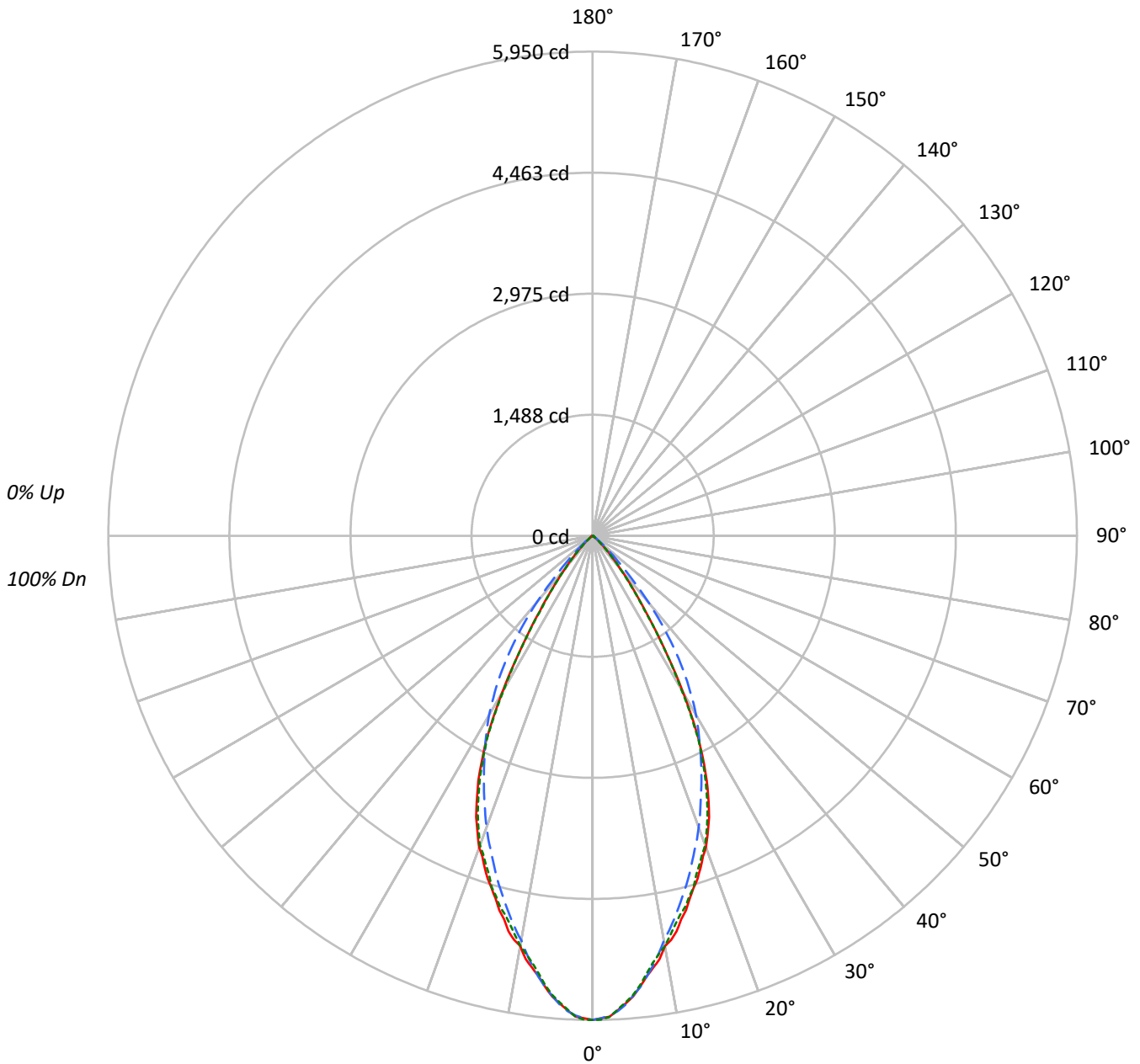
Lumens per Lamp: N/A
Luminaire Lumens: 4456.7 lumens
Efficiency: N/A
Efficacy: 82.5 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 54
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 | | | | | | | | | 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° | 256177 | 256177 | 256177 |
| 5° | 245732 | 245304 | 244959 |
| 10° | 223815 | 220772 | 223640 |
| 15° | 205689 | 198160 | 204450 |
| 20° | 186662 | 174643 | 185388 |
| 25° | 157760 | 150112 | 155589 |
| 30° | 110460 | 126364 | 108581 |
| 35° | 59331 | 96933 | 58180 |
| 40° | 29378 | 59982 | 29154 |
| 45° | 12830 | 25288 | 12586 |
| 50° | 4126 | 9183 | 4126 |
| 55° | 2087 | 2980 | 1937 |
| 60° | 1369 | 1369 | 1369 |
| 65° | 1009 | 1009 | 1009 |
| 70° | 755 | 755 | 755 |
| 75° | 665 | 665 | 665 |
| 80° | 496 | 496 | 496 |
| 85° | 988 | 988 | 988 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 25288 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 522.5 | 11.7 |
| 10°-20° | 1261.6 | 28.3 |
| 20°-30° | 1457.4 | 32.7 |
| 30°-40° | 910.1 | 20.4 |
| 40°-50° | 252.9 | 5.7 |
| 50°-60° | 35.4 | 0.8 |
| 60°-70° | 10.4 | 0.2 |
| 70°-80° | 4.5 | 0.1 |
| 80°-90° | 1.9 | 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° | 3241.5 | 72.7 |
| 0°-40° | 4151.7 | 93.2 |
| 0°-60° | 4439.9 | 99.6 |
| 0°-90° | 4456.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4456.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 5950 | 5950 | 5950 | 5950 | 5950 | |
| 5° | 5686 | 5670 | 5676 | 5668 | 5668 | 524 |
| 15° | 4614 | 4527 | 4446 | 4515 | 4587 | 1293 |
| 25° | 3321 | 3223 | 3160 | 3221 | 3275 | 1483 |
| 35° | 1129 | 1393 | 1844 | 1377 | 1107 | 750 |
| 45° | 211 | 268 | 415 | 266 | 207 | 183 |
| 55° | 28 | 28 | 40 | 28 | 26 | 28 |
| 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° | 5949.9 | 5949.9 | 5949.9 | 5949.9 | 5949.9 |
| 1° | 5932.1 | 5932.1 | 5932.1 | 5948.0 | 5948.0 |
| 2° | 5914.2 | 5910.2 | 5900.3 | 5912.2 | 5918.1 |
| 3° | 5840.6 | 5848.6 | 5852.6 | 5846.6 | 5832.7 |
| 4° | 5765.1 | 5757.2 | 5779.0 | 5765.1 | 5753.2 |
| 5° | 5685.6 | 5669.7 | 5675.7 | 5667.7 | 5667.7 |
| 6° | 5574.3 | 5594.2 | 5578.3 | 5564.4 | 5556.5 |
| 7° | 5453.1 | 5469.0 | 5459.1 | 5439.2 | 5425.3 |
| 8° | 5357.7 | 5347.8 | 5331.9 | 5327.9 | 5304.1 |
| 9° | 5266.3 | 5230.5 | 5194.8 | 5200.7 | 5206.7 |
| 10° | 5119.3 | 5123.2 | 5049.7 | 5105.3 | 5115.3 |
| 11° | 5057.7 | 5035.8 | 4938.4 | 4984.1 | 5000.0 |
| 12° | 4968.2 | 4898.7 | 4815.2 | 4853.0 | 4882.8 |
| 13° | 4839.0 | 4767.5 | 4692.0 | 4749.6 | 4779.4 |
| 14° | 4741.7 | 4660.2 | 4564.8 | 4638.3 | 4699.9 |
| 15° | 4614.5 | 4527.0 | 4445.6 | 4515.1 | 4586.7 |
| 16° | 4503.2 | 4401.8 | 4320.4 | 4387.9 | 4495.2 |
| 17° | 4405.8 | 4280.6 | 4181.3 | 4252.8 | 4356.1 |
| 18° | 4292.5 | 4147.5 | 4056.1 | 4131.6 | 4248.8 |
| 19° | 4167.3 | 4020.3 | 3938.8 | 4000.4 | 4135.5 |
| 20° | 4073.9 | 3909.0 | 3811.6 | 3871.2 | 4046.1 |
| 22.5° | 3740.1 | 3567.2 | 3477.8 | 3549.3 | 3688.4 |
| 25° | 3320.8 | 3223.4 | 3159.8 | 3221.4 | 3275.1 |
| 27.5° | 2823.9 | 2823.9 | 2845.8 | 2820.0 | 2804.1 |
| 30° | 2221.8 | 2382.8 | 2541.7 | 2374.8 | 2184.0 |
| 32.5° | 1621.6 | 1880.0 | 2199.9 | 1913.8 | 1619.6 |
| 35° | 1128.8 | 1393.1 | 1844.2 | 1377.2 | 1106.9 |
| 37.5° | 785.0 | 959.9 | 1454.7 | 969.8 | 775.0 |
| 40° | 522.7 | 643.9 | 1067.2 | 655.8 | 518.7 |
| 42.5° | 341.8 | 425.3 | 689.6 | 427.3 | 333.9 |
| 45° | 210.7 | 268.3 | 415.3 | 266.3 | 206.7 |
| 47.5° | 123.2 | 159.0 | 242.4 | 161.0 | 121.2 |
| 50° | 61.6 | 93.4 | 137.1 | 91.4 | 61.6 |
| 52.5° | 35.8 | 49.7 | 75.5 | 47.7 | 35.8 |
| 55° | 27.8 | 27.8 | 39.7 | 27.8 | 25.8 |
| 57.5° | 21.9 | 21.9 | 21.9 | 21.9 | 19.9 |
| 60° | 15.9 | 17.9 | 15.9 | 15.9 | 15.9 |
| 62.5° | 13.9 | 13.9 | 11.9 | 13.9 | 11.9 |
| 65° | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 |
| 67.5° | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 |
| 70° | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| 72.5° | 4.0 | 6.0 | 4.0 | 6.0 | 6.0 |
| 75° | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 82.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 85° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 87.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 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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Scaled Data Report



| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 77.5° | 4.0 | 4.0 | 4.0 | 4.0 | 2.0 |
| 80° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |

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Scaled Data Report



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