

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P252964

Luminaire Tested: **PRS415D010-S4M12-41SWDMW**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P252964
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1805-776-2)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PRS415D010-S4M12-41SWDMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, DEEP TRIM MATTE WHITE
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1139.9 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.1 / 1.15
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')
CIE Type: Direct

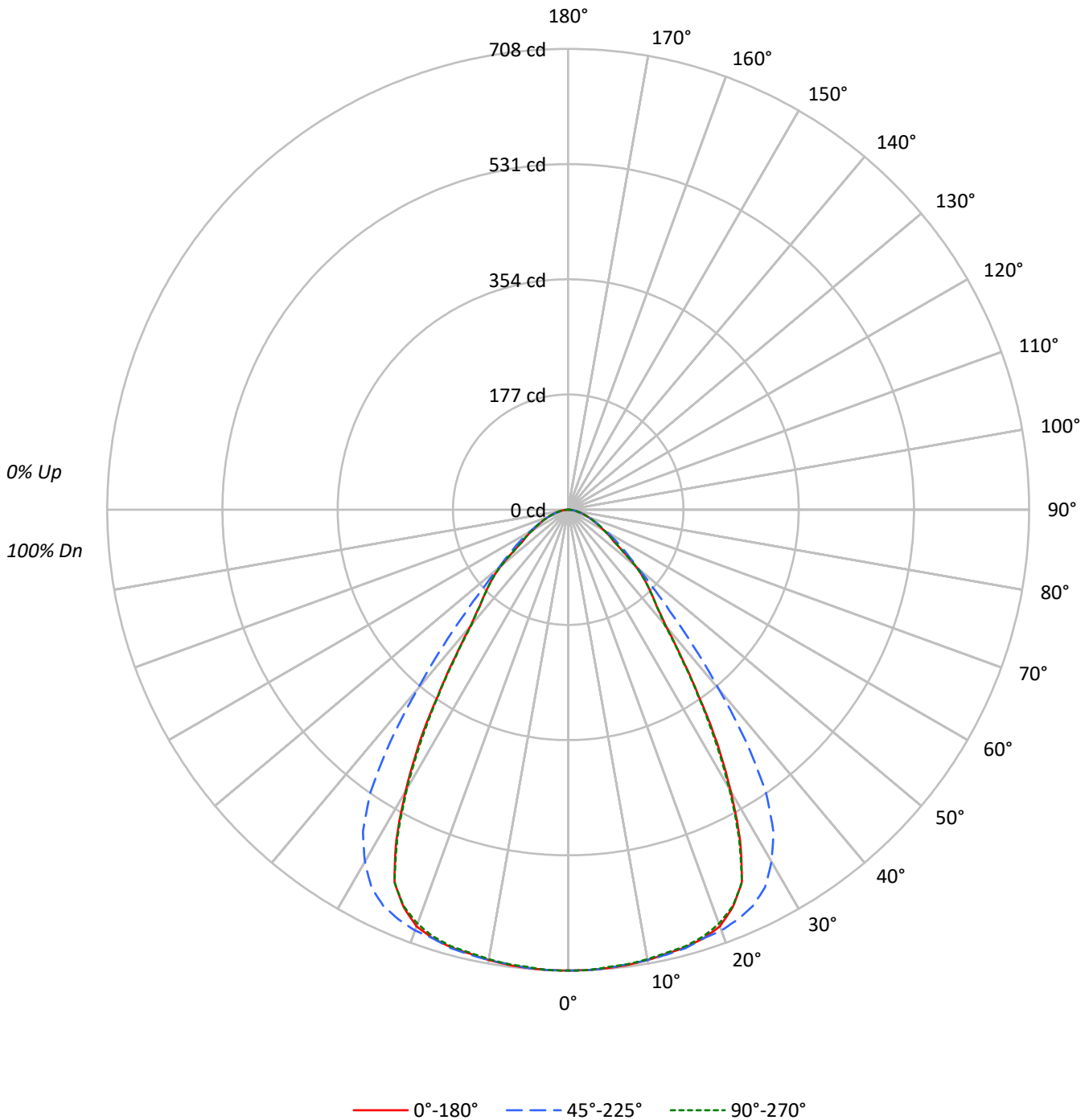
Input Watts (W): 12
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | 100 |
| 1 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 102 | 99 | 97 | 98 | 96 | 94 | 95 | 93 | 92 | 90 | | | | 90 |
| 2 | 104 | 98 | 93 | 88 | 102 | 96 | 91 | 87 | 93 | 89 | 86 | 90 | 86 | 84 | 87 | 84 | 82 | 80 | | | | 80 |
| 3 | 97 | 89 | 83 | 78 | 95 | 88 | 82 | 77 | 85 | 80 | 76 | 82 | 78 | 75 | 80 | 76 | 73 | 72 | | | | 72 |
| 4 | 91 | 81 | 74 | 69 | 89 | 80 | 74 | 69 | 78 | 72 | 68 | 76 | 71 | 67 | 74 | 70 | 66 | 64 | | | | 64 |
| 5 | 85 | 75 | 67 | 62 | 83 | 74 | 67 | 62 | 72 | 66 | 61 | 70 | 65 | 60 | 68 | 64 | 60 | 58 | | | | 58 |
| 6 | 80 | 69 | 61 | 56 | 78 | 68 | 61 | 56 | 66 | 60 | 55 | 65 | 59 | 55 | 63 | 58 | 55 | 53 | | | | 53 |
| 7 | 75 | 63 | 56 | 51 | 73 | 63 | 56 | 51 | 61 | 55 | 51 | 60 | 54 | 50 | 59 | 54 | 50 | 48 | | | | 48 |
| 8 | 70 | 59 | 52 | 47 | 69 | 58 | 51 | 47 | 57 | 51 | 46 | 56 | 50 | 46 | 55 | 50 | 46 | 44 | | | | 44 |
| 9 | 66 | 55 | 48 | 43 | 65 | 54 | 47 | 43 | 53 | 47 | 43 | 52 | 47 | 42 | 51 | 46 | 42 | 41 | | | | 41 |
| 10 | 63 | 51 | 44 | 40 | 61 | 51 | 44 | 40 | 50 | 44 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 38 | | | | 38 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 54193 | 54193 | 54193 |
| 5° | 54300 | 54300 | 54192 |
| 10° | 54609 | 54609 | 54508 |
| 15° | 55146 | 55249 | 55035 |
| 20° | 55480 | 56025 | 55146 |
| 25° | 53309 | 56721 | 53309 |
| 30° | 44104 | 55187 | 43742 |
| 35° | 32639 | 49403 | 32387 |
| 40° | 23311 | 35981 | 23042 |
| 45° | 19420 | 23945 | 19420 |
| 50° | 16219 | 16707 | 16219 |
| 55° | 11517 | 13318 | 11704 |
| 60° | 9706 | 10532 | 9706 |
| 65° | 8313 | 8549 | 8313 |
| 70° | 7251 | 7251 | 7251 |
| 75° | 6388 | 6388 | 6388 |
| 80° | 5334 | 5334 | 5334 |
| 85° | 4742 | 4742 | 4742 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 67.3 | 5.9 |
| 10°-20° | 196.6 | 17.2 |
| 20°-30° | 293.8 | 25.8 |
| 30°-40° | 261.5 | 22.9 |
| 40°-50° | 155.6 | 13.7 |
| 50°-60° | 88.2 | 7.7 |
| 60°-70° | 47.3 | 4.1 |
| 70°-80° | 23.2 | 2.0 |
| 80°-90° | 6.4 | 0.6 |
| 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° | 557.7 | 48.9 |
| 0°-40° | 819.3 | 71.9 |
| 0°-60° | 1063.0 | 93.3 |
| 0°-90° | 1139.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1139.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 708 | 708 | 708 | 708 | 708 | |
| 5° | 707 | 707 | 707 | 707 | 705 | 67 |
| 15° | 696 | 696 | 697 | 694 | 694 | 197 |
| 25° | 631 | 649 | 672 | 647 | 631 | 282 |
| 35° | 349 | 409 | 529 | 407 | 347 | 221 |
| 45° | 179 | 193 | 221 | 192 | 179 | 139 |
| 55° | 86 | 96 | 100 | 96 | 88 | 82 |
| 65° | 46 | 47 | 47 | 47 | 46 | 46 |
| 75° | 22 | 22 | 22 | 22 | 22 | 23 |
| 85° | 5 | 5 | 5 | 5 | 5 | 6 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P252964

CATALOG NUMBER: PRS415D010-S4M12-41SWDMW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 708.0 | 708.0 | 708.0 | 708.0 | 708.0 |
| 2.5° | 708.0 | 708.0 | 708.0 | 708.0 | 708.0 |
| 5° | 706.7 | 706.7 | 706.7 | 706.7 | 705.3 |
| 7.5° | 705.3 | 704.0 | 704.0 | 704.0 | 704.0 |
| 10° | 702.6 | 702.6 | 702.6 | 701.3 | 701.3 |
| 12.5° | 698.6 | 698.6 | 699.9 | 698.6 | 697.2 |
| 15° | 695.9 | 695.9 | 697.2 | 694.5 | 694.5 |
| 17.5° | 690.5 | 691.8 | 690.5 | 690.5 | 687.8 |
| 20° | 681.1 | 685.1 | 687.8 | 683.8 | 677.0 |
| 22.5° | 660.8 | 671.6 | 681.1 | 670.3 | 659.5 |
| 25° | 631.2 | 648.7 | 671.6 | 647.3 | 631.2 |
| 27.5° | 571.8 | 616.3 | 654.1 | 612.3 | 567.8 |
| 30° | 499.0 | 552.9 | 624.4 | 548.9 | 494.9 |
| 32.5° | 426.2 | 480.1 | 586.7 | 477.4 | 419.4 |
| 35° | 349.3 | 408.6 | 528.7 | 407.3 | 346.6 |
| 37.5° | 284.6 | 338.5 | 447.7 | 335.8 | 281.9 |
| 40° | 233.3 | 275.1 | 360.1 | 273.8 | 230.6 |
| 42.5° | 200.9 | 223.9 | 284.6 | 222.5 | 200.9 |
| 45° | 179.4 | 192.9 | 221.2 | 191.5 | 179.4 |
| 47.5° | 159.1 | 169.9 | 174.0 | 168.6 | 159.1 |
| 50° | 136.2 | 148.3 | 140.3 | 148.3 | 136.2 |
| 52.5° | 107.9 | 122.7 | 117.3 | 124.1 | 106.5 |
| 55° | 86.3 | 95.8 | 99.8 | 95.8 | 87.7 |
| 57.5° | 75.5 | 78.2 | 83.6 | 78.2 | 75.5 |
| 60° | 63.4 | 66.1 | 68.8 | 66.1 | 63.4 |
| 62.5° | 53.9 | 56.6 | 56.6 | 56.6 | 55.3 |
| 65° | 45.9 | 47.2 | 47.2 | 47.2 | 45.9 |
| 67.5° | 39.1 | 39.1 | 39.1 | 39.1 | 39.1 |
| 70° | 32.4 | 32.4 | 32.4 | 32.4 | 32.4 |
| 72.5° | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 |
| 75° | 21.6 | 21.6 | 21.6 | 21.6 | 21.6 |
| 77.5° | 17.5 | 17.5 | 16.2 | 17.5 | 16.2 |
| 80° | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 |
| 82.5° | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 |
| 85° | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| 87.5° | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)