

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: P252900

Luminaire Tested: **PRS420D010-S4M12-44SWDMW-3000K**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P252900
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1804-748-2)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PRS420D010-S4M12-44SWDMW-3000K
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, SHALLOW TRIM MATTE WHITE
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2082.2 lumens
Efficiency: N/A
Efficacy: 104.1 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.29 / 1.41
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')
CIE Type: Direct

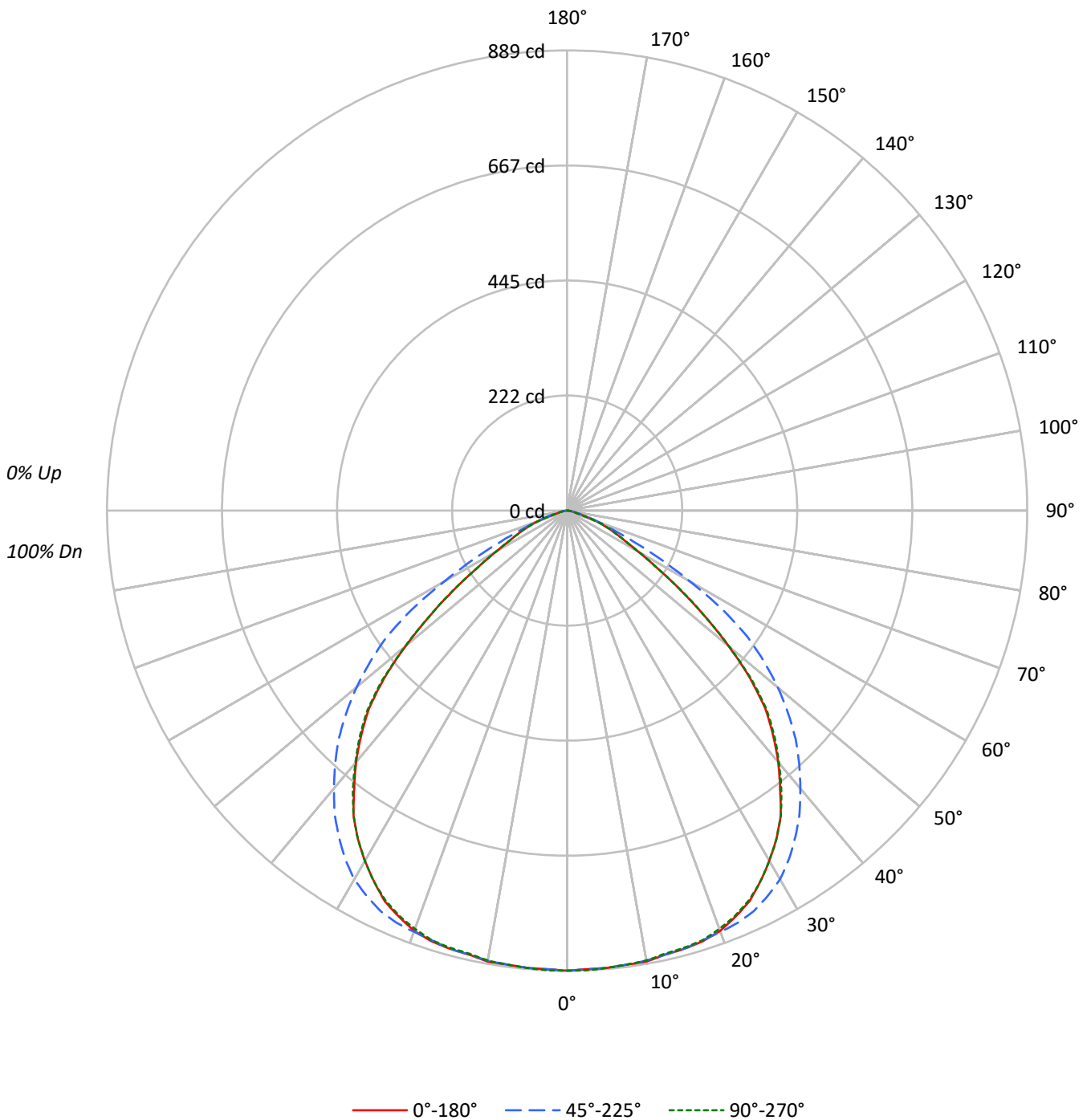
Input Watts (W): 20
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 88 | | | | | 88 | | | |
| 2 | 103 | 96 | 90 | 85 | 100 | 94 | 89 | 84 | 91 | 86 | 82 | 87 | 84 | 81 | 85 | 82 | 79 | 77 | | | | | 77 | | | |
| 3 | 95 | 86 | 79 | 73 | 92 | 84 | 78 | 73 | 81 | 76 | 71 | 79 | 74 | 70 | 76 | 72 | 69 | 67 | | | | | 67 | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 61 | 59 | | | | | 59 | | | |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 53 | 52 | | | | | 52 | | | |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 54 | 49 | 60 | 53 | 48 | 59 | 53 | 48 | 57 | 52 | 48 | 46 | | | | | 46 | | | |
| 7 | 70 | 57 | 49 | 44 | 68 | 57 | 49 | 43 | 55 | 48 | 43 | 54 | 47 | 43 | 52 | 47 | 43 | 41 | | | | | 41 | | | |
| 8 | 65 | 52 | 45 | 39 | 64 | 52 | 44 | 39 | 51 | 44 | 39 | 49 | 43 | 39 | 48 | 43 | 38 | 37 | | | | | 37 | | | |
| 9 | 61 | 48 | 41 | 35 | 59 | 48 | 40 | 35 | 47 | 40 | 35 | 46 | 39 | 35 | 45 | 39 | 35 | 33 | | | | | 33 | | | |
| 10 | 57 | 45 | 37 | 32 | 56 | 44 | 37 | 32 | 43 | 36 | 32 | 42 | 36 | 32 | 41 | 36 | 32 | 30 | | | | | 30 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 68032 | 68032 | 68032 |
| 5° | 68130 | 68130 | 68130 |
| 10° | 68755 | 68599 | 68599 |
| 15° | 69449 | 69449 | 69283 |
| 20° | 70378 | 70541 | 70036 |
| 25° | 70352 | 72092 | 70175 |
| 30° | 69055 | 72705 | 69055 |
| 35° | 67213 | 71848 | 67213 |
| 40° | 63399 | 70014 | 63609 |
| 45° | 58617 | 67569 | 59071 |
| 50° | 48490 | 63256 | 48728 |
| 55° | 35578 | 56823 | 35858 |
| 60° | 24050 | 42084 | 24371 |
| 65° | 18347 | 25447 | 18347 |
| 70° | 13405 | 14345 | 12958 |
| 75° | 5501 | 7955 | 5501 |
| 80° | 4540 | 4540 | 4540 |
| 85° | 3601 | 3601 | 3601 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 84.5 | 4.1 |
| 10°-20° | 247.7 | 11.9 |
| 20°-30° | 386.9 | 18.6 |
| 30°-40° | 462.7 | 22.2 |
| 40°-50° | 444.7 | 21.4 |
| 50°-60° | 298.7 | 14.3 |
| 60°-70° | 122.0 | 5.9 |
| 70°-80° | 30.3 | 1.5 |
| 80°-90° | 4.8 | 0.2 |
| 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° | 719.0 | 34.5 |
| 0°-40° | 1181.7 | 56.8 |
| 0°-60° | 1925.2 | 92.5 |
| 0°-90° | 2082.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2082.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 889 | 889 | 889 | 889 | 889 | |
| 5° | 887 | 887 | 887 | 887 | 887 | 85 |
| 15° | 876 | 876 | 876 | 874 | 874 | 248 |
| 25° | 833 | 841 | 854 | 839 | 831 | 382 |
| 35° | 719 | 740 | 769 | 742 | 719 | 447 |
| 45° | 542 | 581 | 624 | 583 | 546 | 410 |
| 55° | 267 | 322 | 426 | 324 | 269 | 242 |
| 65° | 101 | 114 | 140 | 114 | 101 | 102 |
| 75° | 19 | 21 | 27 | 21 | 19 | 27 |
| 85° | 4 | 4 | 4 | 4 | 4 | 5 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P252900

CATALOG NUMBER: PRS420D010-S4M12-44SWDMW-3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 888.8 | 888.8 | 888.8 | 888.8 | 888.8 |
| 2.5° | 886.7 | 886.7 | 886.7 | 888.8 | 888.8 |
| 5° | 886.7 | 886.7 | 886.7 | 886.7 | 886.7 |
| 7.5° | 884.6 | 884.6 | 884.6 | 884.6 | 884.6 |
| 10° | 884.6 | 882.6 | 882.6 | 882.6 | 882.6 |
| 12.5° | 878.4 | 878.4 | 878.4 | 878.4 | 876.4 |
| 15° | 876.4 | 876.4 | 876.4 | 874.3 | 874.3 |
| 17.5° | 872.2 | 872.2 | 870.2 | 870.2 | 870.2 |
| 20° | 864.0 | 866.0 | 866.0 | 864.0 | 859.8 |
| 22.5° | 849.5 | 855.7 | 861.9 | 853.6 | 847.4 |
| 25° | 833.0 | 841.2 | 853.6 | 839.2 | 830.9 |
| 27.5° | 808.2 | 820.6 | 839.2 | 820.6 | 808.2 |
| 30° | 781.3 | 797.8 | 822.6 | 797.8 | 781.3 |
| 32.5° | 752.3 | 771.0 | 797.8 | 771.0 | 752.3 |
| 35° | 719.3 | 739.9 | 768.9 | 742.0 | 719.3 |
| 37.5° | 675.9 | 704.8 | 737.9 | 708.9 | 680.0 |
| 40° | 634.5 | 665.5 | 700.7 | 667.6 | 636.6 |
| 42.5° | 589.1 | 624.2 | 663.5 | 626.3 | 593.2 |
| 45° | 541.5 | 580.8 | 624.2 | 582.9 | 545.7 |
| 47.5° | 479.5 | 527.1 | 578.7 | 533.3 | 483.7 |
| 50° | 407.2 | 467.1 | 531.2 | 471.3 | 409.2 |
| 52.5° | 334.8 | 392.7 | 479.5 | 396.8 | 334.8 |
| 55° | 266.6 | 322.4 | 425.8 | 324.5 | 268.7 |
| 57.5° | 204.6 | 254.2 | 355.5 | 258.4 | 204.6 |
| 60° | 157.1 | 194.3 | 274.9 | 196.4 | 159.2 |
| 62.5° | 124.0 | 146.7 | 202.6 | 144.7 | 124.0 |
| 65° | 101.3 | 113.7 | 140.5 | 113.7 | 101.3 |
| 67.5° | 80.6 | 88.9 | 93.0 | 88.9 | 80.6 |
| 70° | 59.9 | 68.2 | 64.1 | 68.2 | 57.9 |
| 72.5° | 35.1 | 43.4 | 43.4 | 43.4 | 33.1 |
| 75° | 18.6 | 20.7 | 26.9 | 20.7 | 18.6 |
| 77.5° | 14.5 | 14.5 | 16.5 | 14.5 | 14.5 |
| 80° | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 |
| 82.5° | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 |
| 85° | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 87.5° | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)