

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: P241777

Luminaire Tested: **PRS440D010-S4M24-44SNDC**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P241777
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-46)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PRS440D010-S4M24-44SNDC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, SHALLOW TRIM SPECULAR
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3521.2 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 0.9 / 0.95
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')
CIE Type: Direct

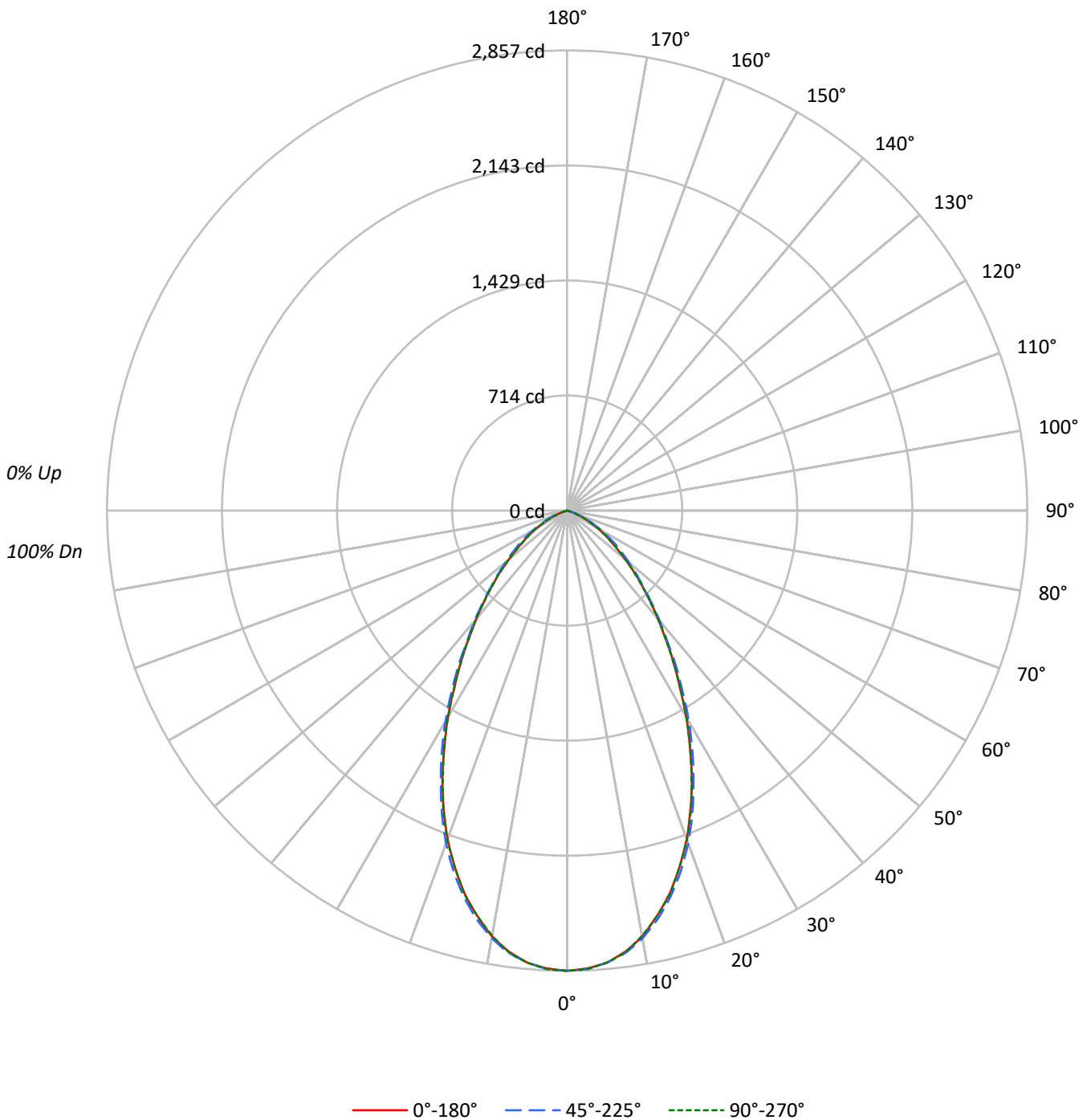
Input Watts (W): 38
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P241777

CATALOG NUMBER: PRS440D010-S4M24-44SNDC

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 | 112 | 109 | 106 | 103 | 110 | 107 | 104 | 102 | 103 | 100 | 98 | 99 | 97 | 96 | 95 | 94 | 93 | 91 | | | | | 91 | | | |
| 2 | 105 | 99 | 94 | 90 | 103 | 97 | 93 | 89 | 94 | 90 | 87 | 91 | 88 | 85 | 88 | 86 | 83 | 82 | | | | | 82 | | | |
| 3 | 98 | 90 | 84 | 80 | 96 | 89 | 83 | 79 | 86 | 81 | 78 | 84 | 80 | 76 | 81 | 78 | 75 | 73 | | | | | 73 | | | |
| 4 | 92 | 83 | 76 | 71 | 90 | 82 | 75 | 70 | 79 | 74 | 70 | 77 | 72 | 69 | 75 | 71 | 68 | 66 | | | | | 66 | | | |
| 5 | 86 | 76 | 69 | 64 | 84 | 75 | 68 | 63 | 73 | 67 | 63 | 71 | 66 | 62 | 70 | 65 | 62 | 60 | | | | | 60 | | | |
| 6 | 81 | 70 | 63 | 58 | 79 | 69 | 63 | 58 | 68 | 62 | 57 | 66 | 61 | 57 | 65 | 60 | 56 | 55 | | | | | 55 | | | |
| 7 | 76 | 65 | 58 | 53 | 74 | 64 | 57 | 53 | 63 | 57 | 52 | 62 | 56 | 52 | 60 | 55 | 52 | 50 | | | | | 50 | | | |
| 8 | 72 | 60 | 53 | 49 | 70 | 60 | 53 | 48 | 59 | 53 | 48 | 57 | 52 | 48 | 56 | 51 | 48 | 46 | | | | | 46 | | | |
| 9 | 68 | 56 | 49 | 45 | 66 | 56 | 49 | 45 | 55 | 49 | 45 | 54 | 48 | 44 | 53 | 48 | 44 | 43 | | | | | 43 | | | |
| 10 | 64 | 53 | 46 | 42 | 63 | 52 | 46 | 42 | 51 | 45 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 40 | | | | | 40 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 218715 | 218715 | 218715 |
| 5° | 216531 | 216531 | 216531 |
| 10° | 208666 | 209583 | 208363 |
| 15° | 195018 | 196572 | 195327 |
| 20° | 176800 | 179040 | 177117 |
| 25° | 154808 | 156793 | 154141 |
| 30° | 130783 | 133558 | 130783 |
| 35° | 107459 | 110028 | 107459 |
| 40° | 87460 | 89029 | 87850 |
| 45° | 70957 | 72224 | 70957 |
| 50° | 56087 | 59362 | 56087 |
| 55° | 43998 | 48709 | 43998 |
| 60° | 33648 | 37246 | 33648 |
| 65° | 22748 | 26298 | 22748 |
| 70° | 11414 | 14927 | 11414 |
| 75° | 0 | 3490 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 264.9 | 7.5 |
| 10°-20° | 689.8 | 19.6 |
| 20°-30° | 844.9 | 24.0 |
| 30°-40° | 731.7 | 20.8 |
| 40°-50° | 519.0 | 14.7 |
| 50°-60° | 313.7 | 8.9 |
| 60°-70° | 140.0 | 4.0 |
| 70°-80° | 17.1 | 0.5 |
| 80°-90° | 0.0 | 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° | 1799.6 | 51.1 |
| 0°-40° | 2531.3 | 71.9 |
| 0°-60° | 3364.1 | 95.5 |
| 0°-90° | 3521.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3521.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2857 | 2857 | 2857 | 2857 | 2857 | |
| 5° | 2818 | 2818 | 2818 | 2818 | 2818 | 265 |
| 15° | 2461 | 2473 | 2481 | 2477 | 2465 | 686 |
| 25° | 1833 | 1856 | 1856 | 1853 | 1825 | 836 |
| 35° | 1150 | 1174 | 1178 | 1170 | 1150 | 721 |
| 45° | 656 | 671 | 667 | 675 | 656 | 509 |
| 55° | 330 | 345 | 365 | 349 | 330 | 298 |
| 65° | 126 | 141 | 145 | 141 | 126 | 127 |
| 75° | 0 | 4 | 12 | 4 | 0 | 12 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P241777

CATALOG NUMBER: PRS440D010-S4M24-44SND

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2857.4 | 2857.4 | 2857.4 | 2857.4 | 2857.4 |
| 2.5° | 2845.6 | 2845.6 | 2849.5 | 2849.5 | 2849.5 |
| 5° | 2818.1 | 2818.1 | 2818.1 | 2818.1 | 2818.1 |
| 7.5° | 2763.2 | 2763.2 | 2771.0 | 2767.1 | 2767.1 |
| 10° | 2684.7 | 2684.7 | 2696.5 | 2688.6 | 2680.8 |
| 12.5° | 2578.7 | 2590.5 | 2598.3 | 2590.5 | 2578.7 |
| 15° | 2461.0 | 2472.7 | 2480.6 | 2476.7 | 2464.9 |
| 17.5° | 2319.7 | 2339.3 | 2347.1 | 2339.3 | 2319.7 |
| 20° | 2170.5 | 2186.2 | 2198.0 | 2186.2 | 2174.4 |
| 22.5° | 2001.7 | 2021.4 | 2033.1 | 2021.4 | 2009.6 |
| 25° | 1833.0 | 1856.5 | 1856.5 | 1852.6 | 1825.1 |
| 27.5° | 1648.5 | 1676.0 | 1683.8 | 1676.0 | 1652.4 |
| 30° | 1479.7 | 1499.3 | 1511.1 | 1499.3 | 1479.7 |
| 32.5° | 1303.1 | 1330.6 | 1334.5 | 1330.6 | 1307.0 |
| 35° | 1150.0 | 1173.6 | 1177.5 | 1169.6 | 1150.0 |
| 37.5° | 1004.8 | 1028.3 | 1020.5 | 1028.3 | 1004.8 |
| 40° | 875.3 | 894.9 | 891.0 | 894.9 | 879.2 |
| 42.5° | 761.4 | 777.1 | 773.2 | 777.1 | 757.5 |
| 45° | 655.5 | 671.2 | 667.2 | 675.1 | 655.5 |
| 47.5° | 561.3 | 577.0 | 580.9 | 577.0 | 561.3 |
| 50° | 471.0 | 494.5 | 498.5 | 494.5 | 471.0 |
| 52.5° | 392.5 | 412.1 | 427.8 | 416.0 | 392.5 |
| 55° | 329.7 | 345.4 | 365.0 | 349.3 | 329.7 |
| 57.5° | 270.8 | 286.5 | 302.2 | 290.4 | 270.8 |
| 60° | 219.8 | 235.5 | 243.3 | 235.5 | 219.8 |
| 62.5° | 168.8 | 188.4 | 192.3 | 188.4 | 168.8 |
| 65° | 125.6 | 141.3 | 145.2 | 141.3 | 125.6 |
| 67.5° | 86.3 | 102.0 | 102.0 | 102.0 | 86.3 |
| 70° | 51.0 | 62.8 | 66.7 | 66.7 | 51.0 |
| 72.5° | 19.6 | 31.4 | 35.3 | 31.4 | 23.5 |
| 75° | 0.0 | 3.9 | 11.8 | 3.9 | 0.0 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)