

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: P241774

Luminaire Tested: **PRS415D010-S4M12-44SNDC**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P241774
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: PRS415D010-S4M12-44SNDC
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

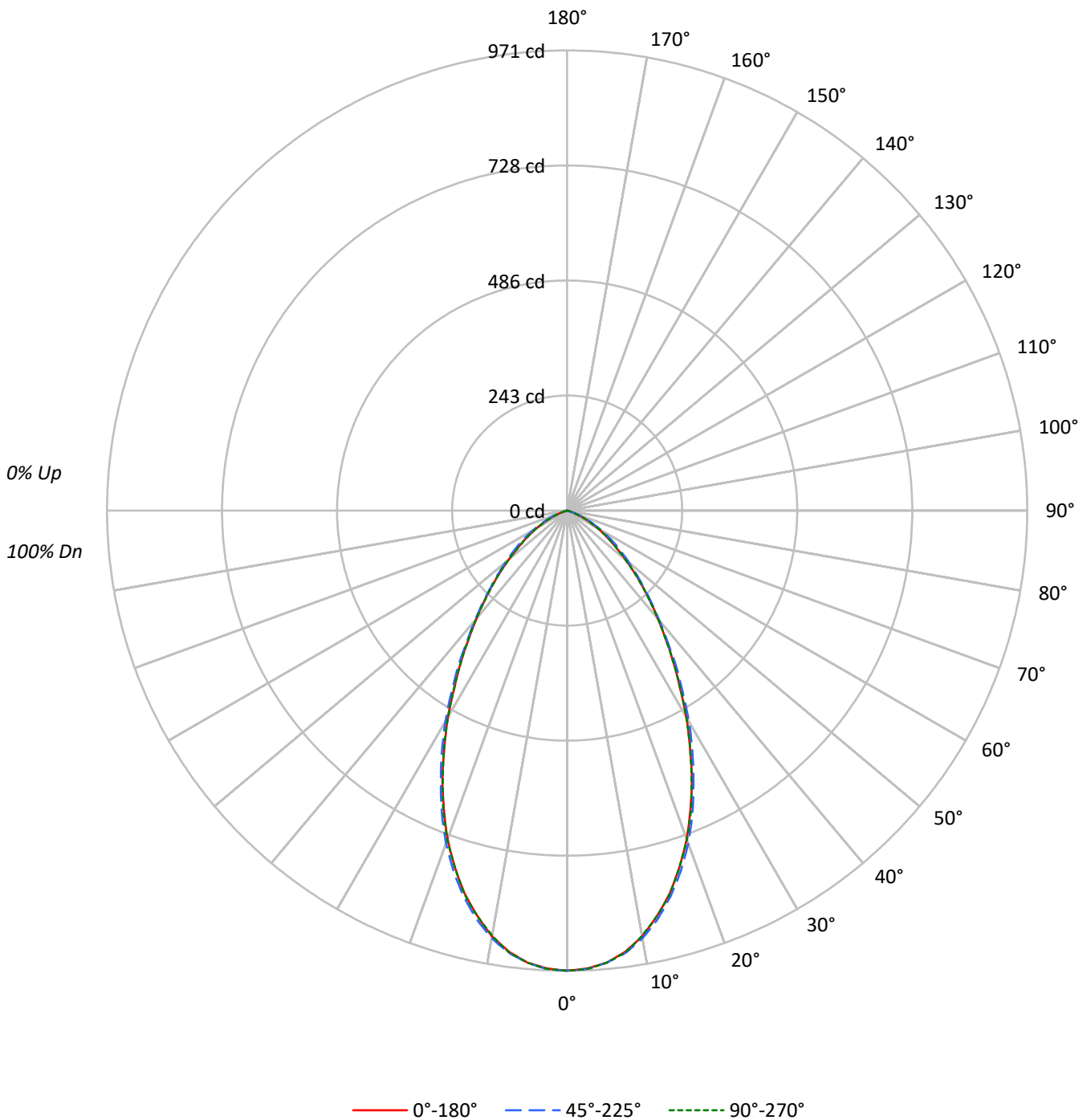
Lumens per Lamp: N/A
Luminaire Lumens: 1196.5 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 0.9 / 0.95
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')
CIE Type: Direct

Input Watts (W): 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 | 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° | 74316 | 74316 | 74316 |
| 5° | 73578 | 73578 | 73578 |
| 10° | 70900 | 71211 | 70799 |
| 15° | 66263 | 66794 | 66374 |
| 20° | 60074 | 60839 | 60188 |
| 25° | 52599 | 53275 | 52380 |
| 30° | 44440 | 45386 | 44440 |
| 35° | 36517 | 37386 | 36517 |
| 40° | 29716 | 30246 | 29846 |
| 45° | 24107 | 24540 | 24107 |
| 50° | 19053 | 20172 | 19053 |
| 55° | 14946 | 16548 | 14946 |
| 60° | 11436 | 12660 | 11436 |
| 65° | 7734 | 8929 | 7734 |
| 70° | 3872 | 5080 | 3872 |
| 75° | 0 | 1183 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 90.0 | 7.5 |
| 10°-20° | 234.4 | 19.6 |
| 20°-30° | 287.1 | 24.0 |
| 30°-40° | 248.6 | 20.8 |
| 40°-50° | 176.4 | 14.7 |
| 50°-60° | 106.6 | 8.9 |
| 60°-70° | 47.6 | 4.0 |
| 70°-80° | 5.8 | 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° | 611.5 | 51.1 |
| 0°-40° | 860.1 | 71.9 |
| 0°-60° | 1143.1 | 95.5 |
| 0°-90° | 1196.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1196.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 971 | 971 | 971 | 971 | 971 | |
| 5° | 958 | 958 | 958 | 958 | 958 | 90 |
| 15° | 836 | 840 | 843 | 842 | 838 | 233 |
| 25° | 623 | 631 | 631 | 630 | 620 | 284 |
| 35° | 391 | 399 | 400 | 397 | 391 | 245 |
| 45° | 223 | 228 | 227 | 229 | 223 | 173 |
| 55° | 112 | 117 | 124 | 119 | 112 | 101 |
| 65° | 43 | 48 | 49 | 48 | 43 | 43 |
| 75° | 0 | 1 | 4 | 1 | 0 | 4 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P241774

CATALOG NUMBER: PRS415D010-S4M12-44SNDC

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 970.9 | 970.9 | 970.9 | 970.9 | 970.9 |
| 2.5° | 966.9 | 966.9 | 968.3 | 968.3 | 968.3 |
| 5° | 957.6 | 957.6 | 957.6 | 957.6 | 957.6 |
| 7.5° | 938.9 | 938.9 | 941.6 | 940.3 | 940.3 |
| 10° | 912.2 | 912.2 | 916.2 | 913.6 | 910.9 |
| 12.5° | 876.2 | 880.2 | 882.9 | 880.2 | 876.2 |
| 15° | 836.2 | 840.2 | 842.9 | 841.6 | 837.6 |
| 17.5° | 788.2 | 794.9 | 797.5 | 794.9 | 788.2 |
| 20° | 737.5 | 742.9 | 746.9 | 742.9 | 738.9 |
| 22.5° | 680.2 | 686.9 | 690.9 | 686.9 | 682.9 |
| 25° | 622.8 | 630.8 | 630.8 | 629.5 | 620.2 |
| 27.5° | 560.2 | 569.5 | 572.2 | 569.5 | 561.5 |
| 30° | 502.8 | 509.5 | 513.5 | 509.5 | 502.8 |
| 32.5° | 442.8 | 452.1 | 453.5 | 452.1 | 444.1 |
| 35° | 390.8 | 398.8 | 400.1 | 397.4 | 390.8 |
| 37.5° | 341.4 | 349.4 | 346.8 | 349.4 | 341.4 |
| 40° | 297.4 | 304.1 | 302.7 | 304.1 | 298.7 |
| 42.5° | 258.7 | 264.1 | 262.7 | 264.1 | 257.4 |
| 45° | 222.7 | 228.1 | 226.7 | 229.4 | 222.7 |
| 47.5° | 190.7 | 196.1 | 197.4 | 196.1 | 190.7 |
| 50° | 160.0 | 168.0 | 169.4 | 168.0 | 160.0 |
| 52.5° | 133.4 | 140.0 | 145.4 | 141.4 | 133.4 |
| 55° | 112.0 | 117.4 | 124.0 | 118.7 | 112.0 |
| 57.5° | 92.0 | 97.4 | 102.7 | 98.7 | 92.0 |
| 60° | 74.7 | 80.0 | 82.7 | 80.0 | 74.7 |
| 62.5° | 57.3 | 64.0 | 65.4 | 64.0 | 57.3 |
| 65° | 42.7 | 48.0 | 49.3 | 48.0 | 42.7 |
| 67.5° | 29.3 | 34.7 | 34.7 | 34.7 | 29.3 |
| 70° | 17.3 | 21.3 | 22.7 | 22.7 | 17.3 |
| 72.5° | 6.7 | 10.7 | 12.0 | 10.7 | 8.0 |
| 75° | 0.0 | 1.3 | 4.0 | 1.3 | 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)