

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: P241951

Luminaire Tested: **PRS430D010-S4M24-41SNDC-3000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241951  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-58)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS430D010-S4M24-41SNDC-3000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, DEEP TRIM SPECULAR  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2087.0 lumens  
Efficiency: N/A  
Efficacy: 83.5 lumens/watt  
Spacing Criteria (0/90/45): 0.8 / 0.79 / 0.83  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

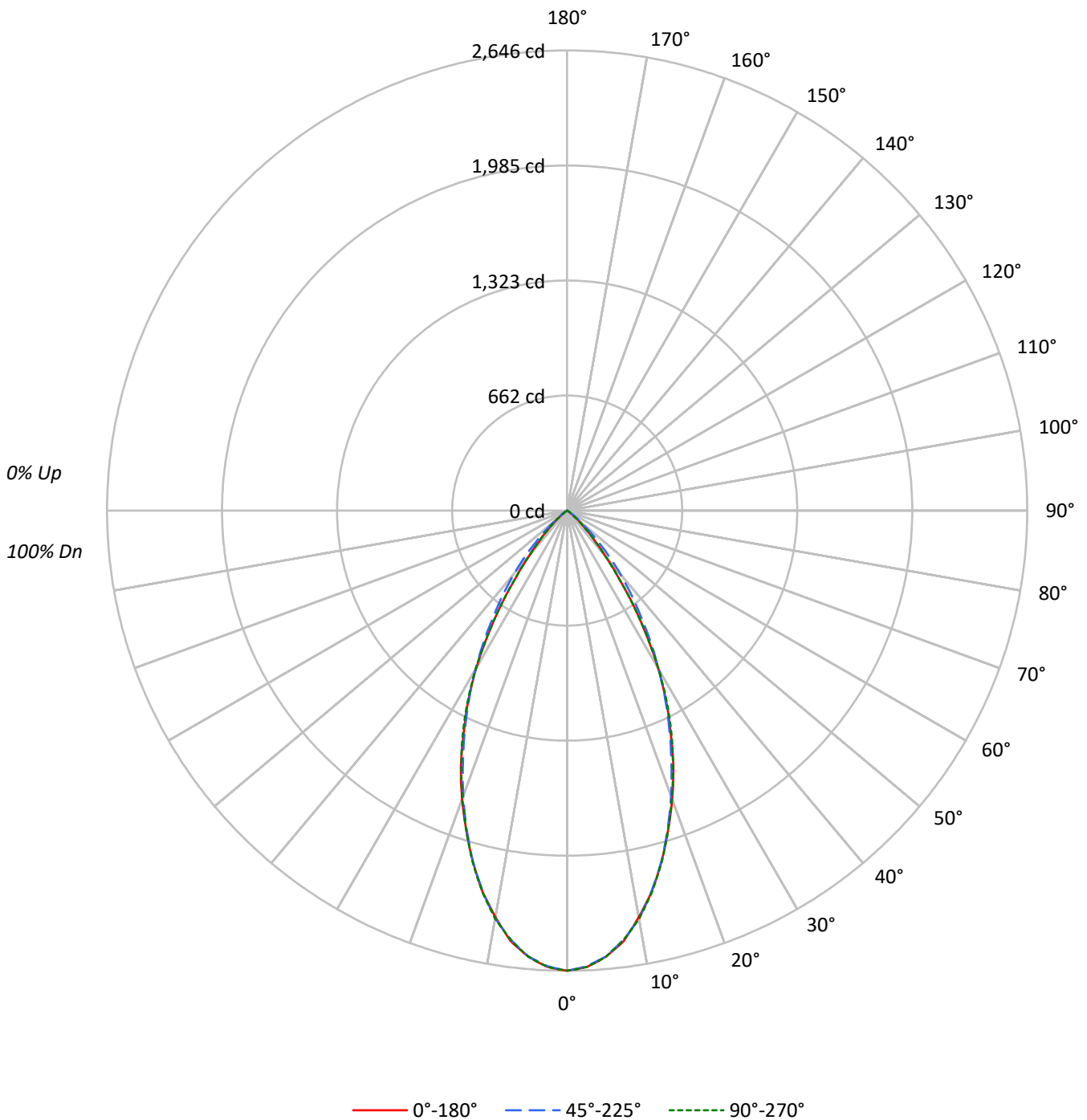
Input Watts (W): 25  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 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 | 106 | 104 | 105 | 103 | 101 | 101 | 100 | 98  | 97  | 96  | 95  | 94  |
| 2   | 108 | 103 | 99  | 96  | 106 | 101 | 98  | 95  | 98  | 95  | 93  | 95  | 93  | 91  | 92  | 91  | 89  | 87  |
| 3   | 103 | 96  | 91  | 87  | 101 | 95  | 90  | 87  | 92  | 88  | 85  | 90  | 87  | 84  | 87  | 85  | 83  | 81  |
| 4   | 97  | 90  | 84  | 80  | 96  | 89  | 84  | 80  | 87  | 82  | 79  | 85  | 81  | 78  | 83  | 80  | 77  | 75  |
| 5   | 92  | 84  | 78  | 74  | 91  | 83  | 78  | 74  | 81  | 77  | 73  | 80  | 76  | 72  | 78  | 75  | 72  | 70  |
| 6   | 88  | 79  | 73  | 69  | 86  | 78  | 73  | 68  | 77  | 72  | 68  | 75  | 71  | 68  | 74  | 70  | 67  | 66  |
| 7   | 83  | 74  | 68  | 64  | 82  | 74  | 68  | 64  | 72  | 67  | 63  | 71  | 67  | 63  | 70  | 66  | 63  | 61  |
| 8   | 79  | 70  | 64  | 60  | 78  | 69  | 64  | 60  | 68  | 63  | 59  | 67  | 63  | 59  | 66  | 62  | 59  | 58  |
| 9   | 76  | 66  | 60  | 56  | 75  | 66  | 60  | 56  | 65  | 59  | 56  | 64  | 59  | 56  | 63  | 59  | 55  | 54  |
| 10  | 72  | 62  | 57  | 53  | 71  | 62  | 57  | 53  | 61  | 56  | 53  | 60  | 56  | 52  | 60  | 55  | 52  | 51  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°     | 45°    | 90°    |
|-----|--------|--------|--------|
| 0°  | 202549 | 202549 | 202549 |
| 5°  | 197844 | 197660 | 197844 |
| 10° | 184478 | 185046 | 185240 |
| 15° | 165888 | 165690 | 166079 |
| 20° | 143900 | 142295 | 143501 |
| 25° | 118906 | 117453 | 120148 |
| 30° | 92512  | 92724  | 92945  |
| 35° | 61756  | 68418  | 61990  |
| 40° | 34612  | 47382  | 34123  |
| 45° | 17558  | 27127  | 17017  |
| 50° | 7312   | 11991  | 7312   |
| 55° | 334    | 4591   | 334    |
| 60° | 383    | 1133   | 383    |
| 65° | 0      | 0      | 0      |
| 70° | 0      | 0      | 0      |
| 75° | 0      | 0      | 0      |
| 80° | 0      | 0      | 0      |
| 85° | 0      | 0      | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 239.5  | 11.5      |
| 10°-20°   | 581.4  | 27.9      |
| 20°-30°   | 640.6  | 30.7      |
| 30°-40°   | 437.3  | 21.0      |
| 40°-50°   | 163.0  | 7.8       |
| 50°-60°   | 24.7   | 1.2       |
| 60°-70°   | 0.6    | 0.0       |
| 70°-80°   | 0.0    | 0.0       |
| 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°    | 1461.5 | 70.0      |
| 0°-40°    | 1898.8 | 91.0      |
| 0°-60°    | 2086.4 | 100.0     |
| 0°-90°    | 2087.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2087.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2646 | 2646  | 2646 | 2646  | 2646 |      |
| 5°  | 2575 | 2575  | 2572 | 2572  | 2575 | 240  |
| 15° | 2093 | 2091  | 2091 | 2091  | 2096 | 582  |
| 25° | 1408 | 1408  | 1391 | 1410  | 1423 | 643  |
| 35° | 661  | 700   | 732  | 703   | 663  | 413  |
| 45° | 162  | 194   | 251  | 189   | 157  | 134  |
| 55° | 2    | 20    | 34   | 20    | 2    | 14   |
| 65° | 0    | 0     | 0    | 0     | 0    | 0    |
| 75° | 0    | 0     | 0    | 0     | 0    | 0    |
| 85° | 0    | 0     | 0    | 0     | 0    | 0    |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2646.2 | 2646.2 | 2646.2 | 2646.2 | 2646.2 |
| 2.5°  | 2626.5 | 2626.5 | 2621.6 | 2621.6 | 2626.5 |
| 5°    | 2574.9 | 2574.9 | 2572.5 | 2572.5 | 2574.9 |
| 7.5°  | 2496.3 | 2491.4 | 2488.9 | 2491.4 | 2488.9 |
| 10°   | 2373.5 | 2375.9 | 2380.8 | 2380.8 | 2383.3 |
| 12.5° | 2245.7 | 2243.2 | 2243.2 | 2248.2 | 2248.2 |
| 15°   | 2093.4 | 2090.9 | 2090.9 | 2090.9 | 2095.8 |
| 17.5° | 1928.7 | 1928.7 | 1921.4 | 1926.3 | 1928.7 |
| 20°   | 1766.6 | 1759.2 | 1746.9 | 1761.7 | 1761.7 |
| 22.5° | 1597.0 | 1584.8 | 1565.1 | 1587.2 | 1589.7 |
| 25°   | 1407.9 | 1407.9 | 1390.7 | 1410.3 | 1422.6 |
| 27.5° | 1231.0 | 1221.1 | 1221.1 | 1228.5 | 1240.8 |
| 30°   | 1046.7 | 1049.1 | 1049.1 | 1051.6 | 1051.6 |
| 32.5° | 847.7  | 874.7  | 889.4  | 874.7  | 847.7  |
| 35°   | 660.9  | 700.2  | 732.2  | 702.7  | 663.4  |
| 37.5° | 481.6  | 538.1  | 597.1  | 535.6  | 484.0  |
| 40°   | 346.4  | 398.0  | 474.2  | 393.1  | 341.5  |
| 42.5° | 235.9  | 282.6  | 356.3  | 275.2  | 235.9  |
| 45°   | 162.2  | 194.1  | 250.6  | 189.2  | 157.2  |
| 47.5° | 105.7  | 130.2  | 162.2  | 127.8  | 105.7  |
| 50°   | 61.4   | 83.5   | 100.7  | 78.6   | 61.4   |
| 52.5° | 29.5   | 46.7   | 59.0   | 46.7   | 29.5   |
| 55°   | 2.5    | 19.7   | 34.4   | 19.7   | 2.5    |
| 57.5° | 2.5    | 2.5    | 17.2   | 2.5    | 2.5    |
| 60°   | 2.5    | 2.5    | 7.4    | 2.5    | 2.5    |
| 62.5° | 0.0    | 0.0    | 2.5    | 0.0    | 0.0    |
| 65°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 67.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 70°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 72.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 75°   | 0.0    | 0.0    | 0.0    | 0.0    | 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)