

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: P238157

Luminaire Tested: **PRS640D010-S6M24-61SMDMB-4000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P238157  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-14)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS640D010-S6M24-61SMDMB-4000K  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, WITH 6" MEDIUM DISTRIBUTION, DEEP TRIM MATTE BLACK  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3307.1 lumens  
Efficiency: N/A  
Efficacy: 87.0 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 0.95 / 1  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

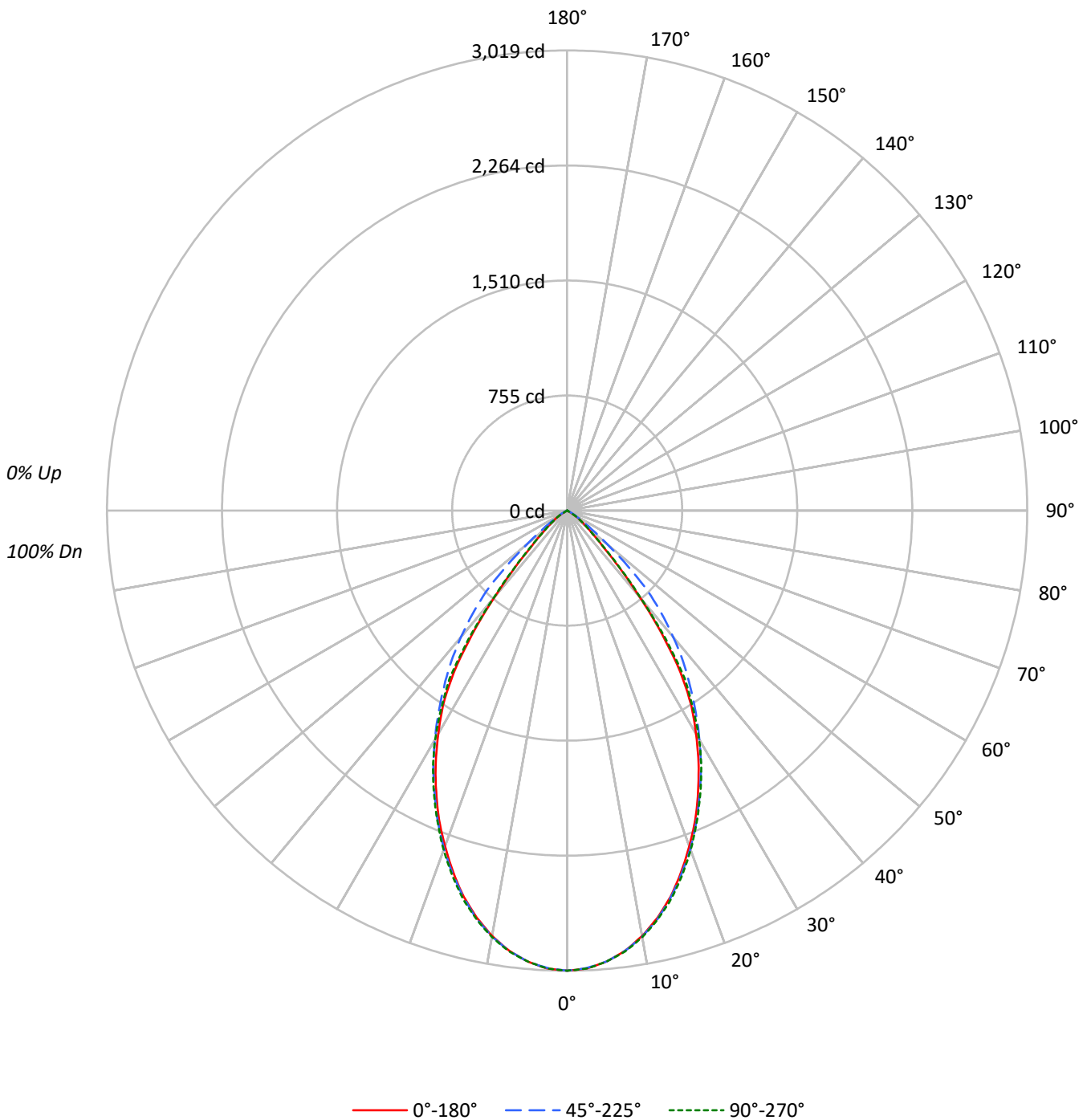
Input Watts (W): 38  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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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   | 113 | 110 | 107 | 105 | 111 | 108 | 106 | 103 | 104 | 102 | 100 | 100 | 99  | 97  | 97  | 96  | 94  | 93  |    |    |    |    | 93  |   |  |   |
| 2   | 107 | 102 | 97  | 94  | 105 | 100 | 96  | 93  | 97  | 93  | 91  | 94  | 91  | 89  | 91  | 89  | 87  | 85  |    |    |    |    | 85  |   |  |   |
| 3   | 101 | 94  | 88  | 84  | 99  | 92  | 88  | 84  | 90  | 86  | 82  | 87  | 84  | 81  | 85  | 82  | 80  | 78  |    |    |    |    | 78  |   |  |   |
| 4   | 95  | 87  | 81  | 76  | 93  | 86  | 80  | 76  | 83  | 79  | 75  | 81  | 77  | 74  | 80  | 76  | 73  | 72  |    |    |    |    | 72  |   |  |   |
| 5   | 90  | 81  | 74  | 70  | 88  | 80  | 74  | 69  | 78  | 73  | 69  | 76  | 72  | 68  | 74  | 70  | 67  | 66  |    |    |    |    | 66  |   |  |   |
| 6   | 85  | 75  | 68  | 64  | 83  | 74  | 68  | 63  | 73  | 67  | 63  | 71  | 66  | 63  | 70  | 65  | 62  | 61  |    |    |    |    | 61  |   |  |   |
| 7   | 80  | 70  | 63  | 59  | 78  | 69  | 63  | 59  | 68  | 62  | 58  | 67  | 62  | 58  | 65  | 61  | 58  | 56  |    |    |    |    | 56  |   |  |   |
| 8   | 76  | 65  | 59  | 54  | 74  | 65  | 58  | 54  | 63  | 58  | 54  | 62  | 57  | 54  | 61  | 57  | 53  | 52  |    |    |    |    | 52  |   |  |   |
| 9   | 72  | 61  | 55  | 50  | 70  | 61  | 54  | 50  | 60  | 54  | 50  | 59  | 54  | 50  | 58  | 53  | 50  | 48  |    |    |    |    | 48  |   |  |   |
| 10  | 68  | 57  | 51  | 47  | 67  | 57  | 51  | 47  | 56  | 51  | 47  | 55  | 50  | 47  | 54  | 50  | 46  | 45  |    |    |    |    | 45  |   |  |   |

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

|     | 0°     | 45°    | 90°    |
|-----|--------|--------|--------|
| 0°  | 129976 | 129976 | 129976 |
| 5°  | 128355 | 128355 | 128355 |
| 10° | 123898 | 124064 | 124230 |
| 15° | 116901 | 117070 | 117574 |
| 20° | 107372 | 108233 | 108582 |
| 25° | 96624  | 97702  | 98059  |
| 30° | 84046  | 86298  | 86114  |
| 35° | 68230  | 73980  | 70611  |
| 40° | 41783  | 60870  | 42632  |
| 45° | 19990  | 45722  | 20678  |
| 50° | 11119  | 22747  | 11119  |
| 55° | 6516   | 9346   | 6801   |
| 60° | 1628   | 4228   | 1946   |
| 65° | 0      | 1151   | 387    |
| 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°    | 279.4  | 8.4       |
| 10°-20°   | 734.8  | 22.2      |
| 20°-30°   | 939.8  | 28.4      |
| 30°-40°   | 838.4  | 25.4      |
| 40°-50°   | 400.8  | 12.1      |
| 50°-60°   | 105.0  | 3.2       |
| 60°-70°   | 8.9    | 0.3       |
| 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°    | 1954.0 | 59.1      |
| 0°-40°    | 2792.4 | 84.4      |
| 0°-60°    | 3298.2 | 99.7      |
| 0°-90°    | 3307.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3307.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 3019 | 3019  | 3019 | 3019  | 3019 |      |
| 5°  | 2970 | 2970  | 2970 | 2974  | 2970 | 279  |
| 15° | 2623 | 2623  | 2626 | 2634  | 2638 | 732  |
| 25° | 2034 | 2042  | 2057 | 2064  | 2064 | 930  |
| 35° | 1298 | 1362  | 1408 | 1381  | 1343 | 782  |
| 45° | 328  | 453   | 751  | 457   | 340  | 287  |
| 55° | 87   | 113   | 124  | 113   | 91   | 79   |
| 65° | 0    | 4     | 11   | 0     | 4    | 2    |
| 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°    | 3018.8 | 3018.8 | 3018.8 | 3018.8 | 3018.8 |
| 2.5°  | 3007.5 | 3007.5 | 3003.7 | 3007.5 | 3007.5 |
| 5°    | 2969.8 | 2969.8 | 2969.8 | 2973.6 | 2969.8 |
| 7.5°  | 2913.2 | 2913.2 | 2913.2 | 2917.0 | 2917.0 |
| 10°   | 2833.9 | 2833.9 | 2837.7 | 2841.5 | 2841.5 |
| 12.5° | 2735.8 | 2735.8 | 2743.4 | 2747.1 | 2747.1 |
| 15°   | 2622.6 | 2622.6 | 2626.4 | 2633.9 | 2637.7 |
| 17.5° | 2486.8 | 2490.5 | 2498.1 | 2505.6 | 2509.4 |
| 20°   | 2343.4 | 2347.1 | 2362.2 | 2369.8 | 2369.8 |
| 22.5° | 2196.2 | 2200.0 | 2215.1 | 2222.6 | 2218.8 |
| 25°   | 2033.9 | 2041.5 | 2056.6 | 2064.1 | 2064.1 |
| 27.5° | 1867.9 | 1879.2 | 1901.9 | 1898.1 | 1905.6 |
| 30°   | 1690.5 | 1709.4 | 1735.8 | 1735.8 | 1732.1 |
| 32.5° | 1517.0 | 1539.6 | 1569.8 | 1554.7 | 1535.8 |
| 35°   | 1298.1 | 1362.3 | 1407.5 | 1381.1 | 1343.4 |
| 37.5° | 1022.6 | 1166.0 | 1249.0 | 1192.4 | 1064.1 |
| 40°   | 743.4  | 913.2  | 1083.0 | 935.8  | 758.5  |
| 42.5° | 501.9  | 652.8  | 917.0  | 671.7  | 520.7  |
| 45°   | 328.3  | 452.8  | 750.9  | 456.6  | 339.6  |
| 47.5° | 226.4  | 301.9  | 543.4  | 305.7  | 230.2  |
| 50°   | 166.0  | 211.3  | 339.6  | 211.3  | 166.0  |
| 52.5° | 124.5  | 154.7  | 207.5  | 154.7  | 124.5  |
| 55°   | 86.8   | 113.2  | 124.5  | 113.2  | 90.6   |
| 57.5° | 52.8   | 75.5   | 75.5   | 75.5   | 52.8   |
| 60°   | 18.9   | 41.5   | 49.1   | 41.5   | 22.6   |
| 62.5° | 0.0    | 11.3   | 26.4   | 11.3   | 0.0    |
| 65°   | 0.0    | 3.8    | 11.3   | 0.0    | 3.8    |
| 67.5° | 0.0    | 0.0    | 3.8    | 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)