

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: P238152

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

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P238152  
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  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, WITH 6" MEDIUM DISTRIBUTION, DEEP TRIM MATTE BLACK  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

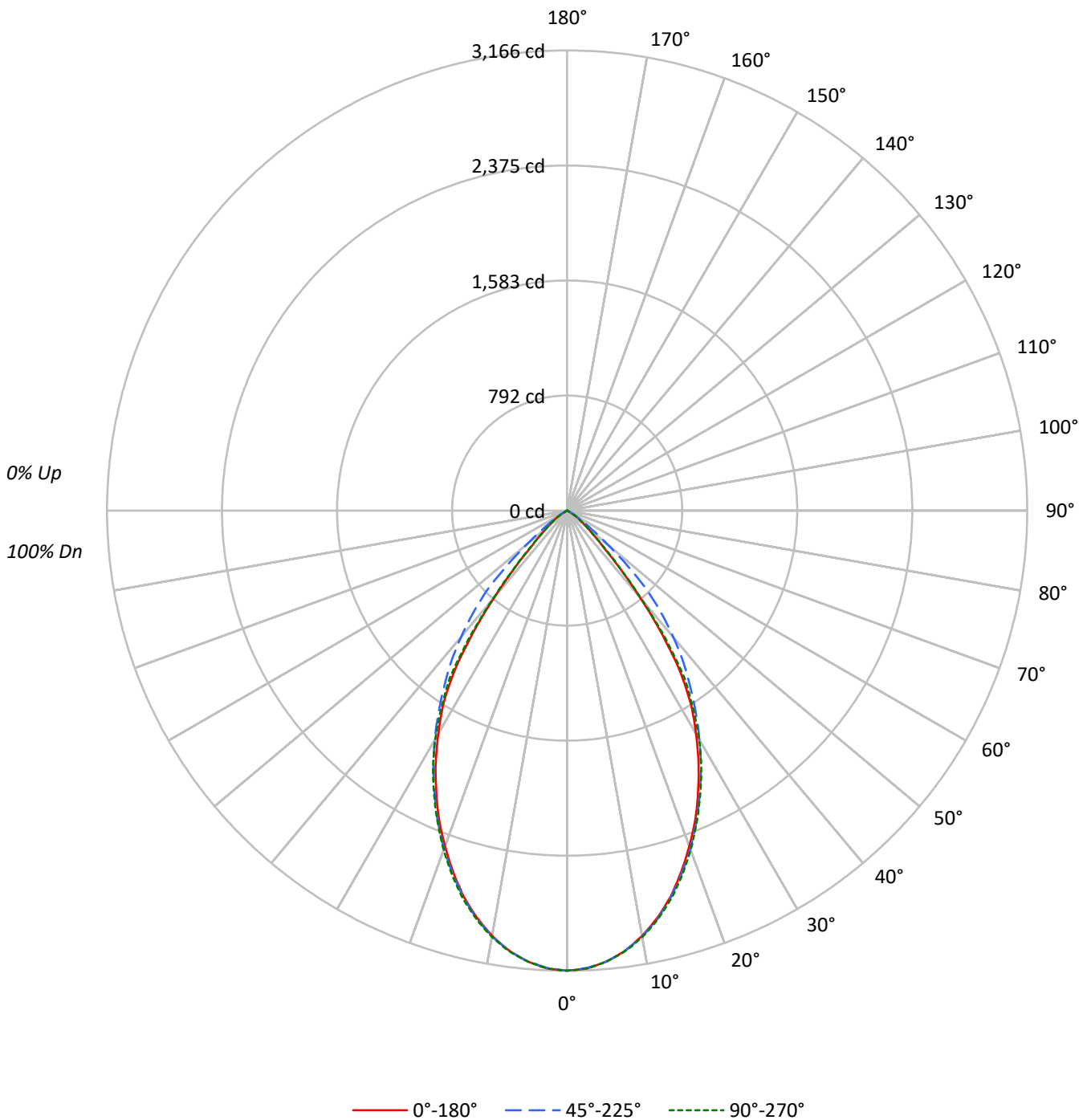
Lumens per Lamp: N/A  
Luminaire Lumens: 3467.9 lumens  
Efficiency: N/A  
Efficacy: 91.3 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 0.95 / 1  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

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°  | 136297 | 136297 | 136297 |
| 5°  | 134592 | 134592 | 134592 |
| 10° | 129922 | 130093 | 130268 |
| 15° | 122584 | 122758 | 123289 |
| 20° | 112591 | 113498 | 113860 |
| 25° | 101322 | 102448 | 102828 |
| 30° | 88132  | 90494  | 90295  |
| 35° | 71546  | 77575  | 74043  |
| 40° | 43812  | 63827  | 44706  |
| 45° | 20964  | 47945  | 21683  |
| 50° | 11662  | 23853  | 11662  |
| 55° | 6831   | 9804   | 7131   |
| 60° | 1705   | 4426   | 2041   |
| 65° | 0      | 1212   | 408    |
| 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°    | 292.9  | 8.4       |
| 10°-20°   | 770.5  | 22.2      |
| 20°-30°   | 985.5  | 28.4      |
| 30°-40°   | 879.2  | 25.4      |
| 40°-50°   | 420.3  | 12.1      |
| 50°-60°   | 110.1  | 3.2       |
| 60°-70°   | 9.3    | 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°    | 2049.0 | 59.1      |
| 0°-40°    | 2928.2 | 84.4      |
| 0°-60°    | 3458.5 | 99.7      |
| 0°-90°    | 3467.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3467.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 3166 | 3166  | 3166 | 3166  | 3166 |      |
| 5°  | 3114 | 3114  | 3114 | 3118  | 3114 | 293  |
| 15° | 2750 | 2750  | 2754 | 2762  | 2766 | 768  |
| 25° | 2133 | 2141  | 2156 | 2164  | 2164 | 975  |
| 35° | 1361 | 1428  | 1476 | 1448  | 1409 | 820  |
| 45° | 344  | 475   | 787  | 479   | 356  | 301  |
| 55° | 91   | 119   | 131  | 119   | 95   | 83   |
| 65° | 0    | 4     | 12   | 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°    | 3165.6 | 3165.6 | 3165.6 | 3165.6 | 3165.6 |
| 2.5°  | 3153.7 | 3153.7 | 3149.7 | 3153.7 | 3153.7 |
| 5°    | 3114.1 | 3114.1 | 3114.1 | 3118.1 | 3114.1 |
| 7.5°  | 3054.8 | 3054.8 | 3054.8 | 3058.7 | 3058.7 |
| 10°   | 2971.7 | 2971.7 | 2975.6 | 2979.6 | 2979.6 |
| 12.5° | 2868.8 | 2868.8 | 2876.7 | 2880.7 | 2880.7 |
| 15°   | 2750.1 | 2750.1 | 2754.0 | 2762.0 | 2765.9 |
| 17.5° | 2607.6 | 2611.6 | 2619.5 | 2627.4 | 2631.4 |
| 20°   | 2457.3 | 2461.2 | 2477.1 | 2485.0 | 2485.0 |
| 22.5° | 2303.0 | 2306.9 | 2322.7 | 2330.7 | 2326.7 |
| 25°   | 2132.8 | 2140.7 | 2156.5 | 2164.5 | 2164.5 |
| 27.5° | 1958.7 | 1970.6 | 1994.3 | 1990.4 | 1998.3 |
| 30°   | 1772.7 | 1792.5 | 1820.2 | 1820.2 | 1816.2 |
| 32.5° | 1590.7 | 1614.4 | 1646.1 | 1630.3 | 1610.5 |
| 35°   | 1361.2 | 1428.5 | 1475.9 | 1448.2 | 1408.7 |
| 37.5° | 1072.3 | 1222.7 | 1309.8 | 1250.4 | 1115.9 |
| 40°   | 779.5  | 957.6  | 1135.6 | 981.3  | 795.4  |
| 42.5° | 526.3  | 684.6  | 961.5  | 704.3  | 546.1  |
| 45°   | 344.3  | 474.8  | 787.4  | 478.8  | 356.1  |
| 47.5° | 237.4  | 316.6  | 569.8  | 320.5  | 241.4  |
| 50°   | 174.1  | 221.6  | 356.1  | 221.6  | 174.1  |
| 52.5° | 130.6  | 162.2  | 217.6  | 162.2  | 130.6  |
| 55°   | 91.0   | 118.7  | 130.6  | 118.7  | 95.0   |
| 57.5° | 55.4   | 79.1   | 79.1   | 79.1   | 55.4   |
| 60°   | 19.8   | 43.5   | 51.4   | 43.5   | 23.7   |
| 62.5° | 0.0    | 11.9   | 27.7   | 11.9   | 0.0    |
| 65°   | 0.0    | 4.0    | 11.9   | 0.0    | 4.0    |
| 67.5° | 0.0    | 0.0    | 4.0    | 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)