

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: P252873

Luminaire Tested: **PRS410D010-S4M12-44SWDC**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P252873
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1804-748-2)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PRS410D010-S4M12-44SWDC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" WIDE 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: 971.0 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.29 / 1.41
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')
CIE Type: Direct

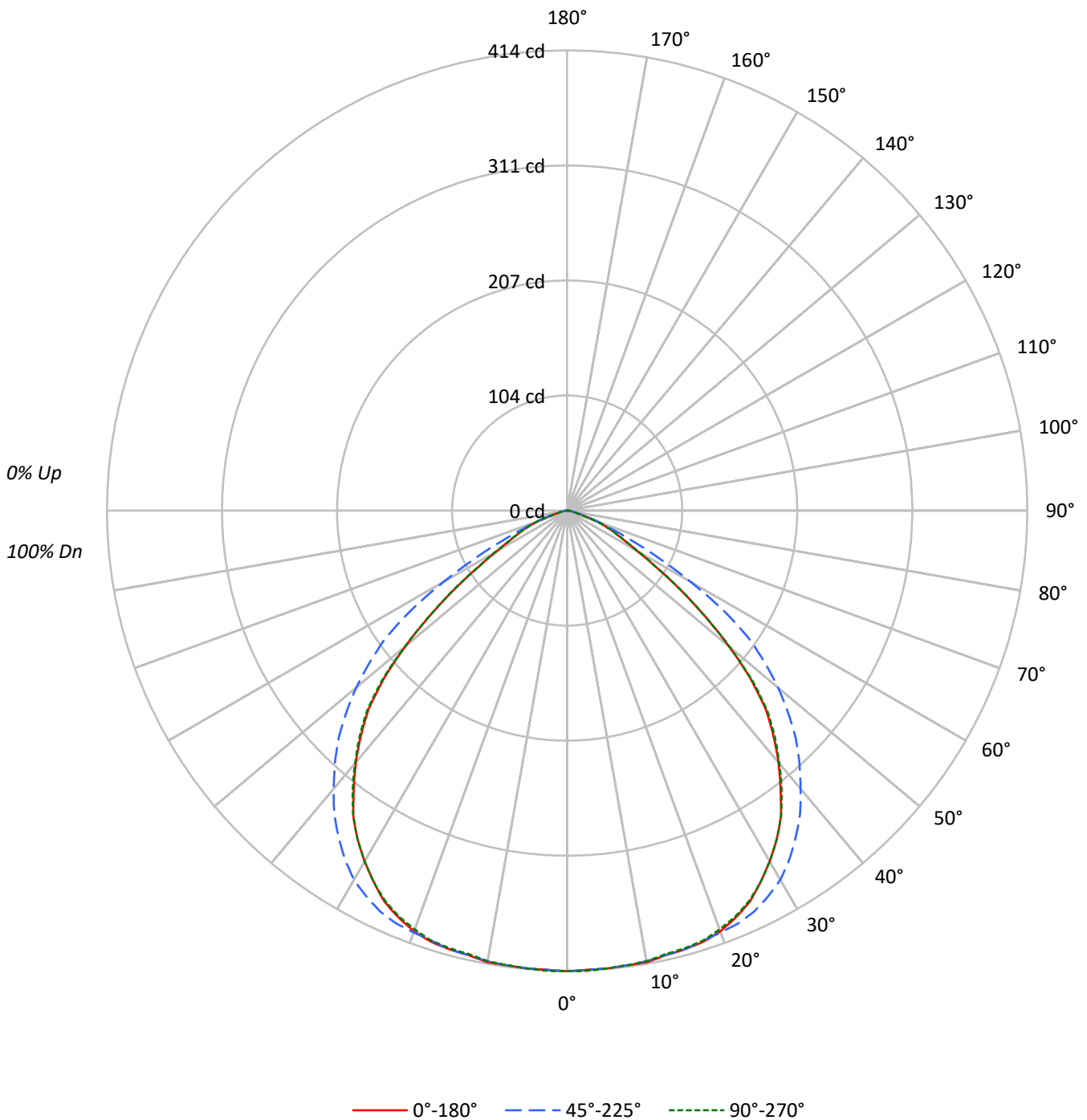
Input Watts (W): 10
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P252873

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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 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 88 | | | | | 88 | | | |
| 2 | 103 | 96 | 90 | 85 | 100 | 94 | 89 | 84 | 91 | 86 | 82 | 87 | 84 | 81 | 85 | 82 | 79 | 77 | | | | | 77 | | | |
| 3 | 95 | 86 | 79 | 73 | 92 | 84 | 78 | 73 | 81 | 76 | 71 | 79 | 74 | 70 | 76 | 72 | 69 | 67 | | | | | 67 | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 61 | 59 | | | | | 59 | | | |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 53 | 52 | | | | | 52 | | | |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 54 | 49 | 60 | 53 | 48 | 59 | 53 | 48 | 57 | 52 | 48 | 46 | | | | | 46 | | | |
| 7 | 70 | 57 | 49 | 44 | 68 | 57 | 49 | 43 | 55 | 48 | 43 | 54 | 47 | 43 | 52 | 47 | 43 | 41 | | | | | 41 | | | |
| 8 | 65 | 52 | 45 | 39 | 64 | 52 | 44 | 39 | 51 | 44 | 39 | 49 | 43 | 39 | 48 | 43 | 38 | 37 | | | | | 37 | | | |
| 9 | 61 | 48 | 41 | 35 | 59 | 48 | 40 | 35 | 47 | 40 | 35 | 46 | 39 | 35 | 45 | 39 | 35 | 33 | | | | | 33 | | | |
| 10 | 57 | 45 | 37 | 32 | 56 | 44 | 37 | 32 | 43 | 36 | 32 | 42 | 36 | 32 | 41 | 36 | 32 | 30 | | | | | 30 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 31727 | 31727 | 31727 |
| 5° | 31772 | 31772 | 31772 |
| 10° | 32069 | 31991 | 31991 |
| 15° | 32387 | 32387 | 32308 |
| 20° | 32819 | 32900 | 32664 |
| 25° | 32811 | 33622 | 32727 |
| 30° | 32207 | 33904 | 32207 |
| 35° | 31341 | 33508 | 31341 |
| 40° | 29566 | 32654 | 29666 |
| 45° | 27333 | 31511 | 27549 |
| 50° | 22613 | 29496 | 22732 |
| 55° | 16588 | 26503 | 16721 |
| 60° | 11221 | 19626 | 11359 |
| 65° | 8549 | 11863 | 8549 |
| 70° | 6266 | 6692 | 6043 |
| 75° | 2573 | 3697 | 2573 |
| 80° | 2116 | 2116 | 2116 |
| 85° | 1669 | 1669 | 1669 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 39.4 | 4.1 |
| 10°-20° | 115.5 | 11.9 |
| 20°-30° | 180.4 | 18.6 |
| 30°-40° | 215.8 | 22.2 |
| 40°-50° | 207.4 | 21.4 |
| 50°-60° | 139.3 | 14.3 |
| 60°-70° | 56.9 | 5.9 |
| 70°-80° | 14.1 | 1.5 |
| 80°-90° | 2.2 | 0.2 |
| 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° | 335.3 | 34.5 |
| 0°-40° | 551.1 | 56.8 |
| 0°-60° | 897.8 | 92.5 |
| 0°-90° | 971.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 971.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 414 | 414 | 414 | 414 | 414 | |
| 5° | 414 | 414 | 414 | 414 | 414 | 39 |
| 15° | 409 | 409 | 409 | 408 | 408 | 116 |
| 25° | 388 | 392 | 398 | 391 | 388 | 178 |
| 35° | 335 | 345 | 359 | 346 | 335 | 208 |
| 45° | 252 | 271 | 291 | 272 | 254 | 191 |
| 55° | 124 | 150 | 199 | 151 | 125 | 113 |
| 65° | 47 | 53 | 66 | 53 | 47 | 48 |
| 75° | 9 | 10 | 12 | 10 | 9 | 13 |
| 85° | 2 | 2 | 2 | 2 | 2 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P252873

CATALOG NUMBER: PRS410D010-S4M12-44SWDC

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 414.5 | 414.5 | 414.5 | 414.5 | 414.5 |
| 2.5° | 413.5 | 413.5 | 413.5 | 414.5 | 414.5 |
| 5° | 413.5 | 413.5 | 413.5 | 413.5 | 413.5 |
| 7.5° | 412.6 | 412.6 | 412.6 | 412.6 | 412.6 |
| 10° | 412.6 | 411.6 | 411.6 | 411.6 | 411.6 |
| 12.5° | 409.7 | 409.7 | 409.7 | 409.7 | 408.7 |
| 15° | 408.7 | 408.7 | 408.7 | 407.7 | 407.7 |
| 17.5° | 406.8 | 406.8 | 405.8 | 405.8 | 405.8 |
| 20° | 402.9 | 403.9 | 403.9 | 402.9 | 401.0 |
| 22.5° | 396.2 | 399.1 | 402.0 | 398.1 | 395.2 |
| 25° | 388.5 | 392.3 | 398.1 | 391.4 | 387.5 |
| 27.5° | 376.9 | 382.7 | 391.4 | 382.7 | 376.9 |
| 30° | 364.4 | 372.1 | 383.6 | 372.1 | 364.4 |
| 32.5° | 350.9 | 359.5 | 372.1 | 359.5 | 350.9 |
| 35° | 335.4 | 345.1 | 358.6 | 346.0 | 335.4 |
| 37.5° | 315.2 | 328.7 | 344.1 | 330.6 | 317.1 |
| 40° | 295.9 | 310.4 | 326.8 | 311.3 | 296.9 |
| 42.5° | 274.7 | 291.1 | 309.4 | 292.1 | 276.6 |
| 45° | 252.5 | 270.9 | 291.1 | 271.8 | 254.5 |
| 47.5° | 223.6 | 245.8 | 269.9 | 248.7 | 225.6 |
| 50° | 189.9 | 217.8 | 247.7 | 219.8 | 190.9 |
| 52.5° | 156.2 | 183.1 | 223.6 | 185.1 | 156.2 |
| 55° | 124.3 | 150.4 | 198.6 | 151.3 | 125.3 |
| 57.5° | 95.4 | 118.6 | 165.8 | 120.5 | 95.4 |
| 60° | 73.3 | 90.6 | 128.2 | 91.6 | 74.2 |
| 62.5° | 57.8 | 68.4 | 94.5 | 67.5 | 57.8 |
| 65° | 47.2 | 53.0 | 65.5 | 53.0 | 47.2 |
| 67.5° | 37.6 | 41.4 | 43.4 | 41.4 | 37.6 |
| 70° | 28.0 | 31.8 | 29.9 | 31.8 | 27.0 |
| 72.5° | 16.4 | 20.2 | 20.2 | 20.2 | 15.4 |
| 75° | 8.7 | 9.6 | 12.5 | 9.6 | 8.7 |
| 77.5° | 6.7 | 6.7 | 7.7 | 6.7 | 6.7 |
| 80° | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| 82.5° | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 85° | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 87.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)