

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: P241725

Luminaire Tested: **PRS420D010-S4M12-44SNDH-3000K**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P241725
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-43)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PRS420D010-S4M12-44SNDH-3000K
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, SHALLOW TRIM HAZE
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1846.5 lumens
Efficiency: N/A
Efficacy: 92.3 lumens/watt
Spacing Criteria (0/90/45): 0.88 / 0.88 / 0.92
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')
CIE Type: Direct

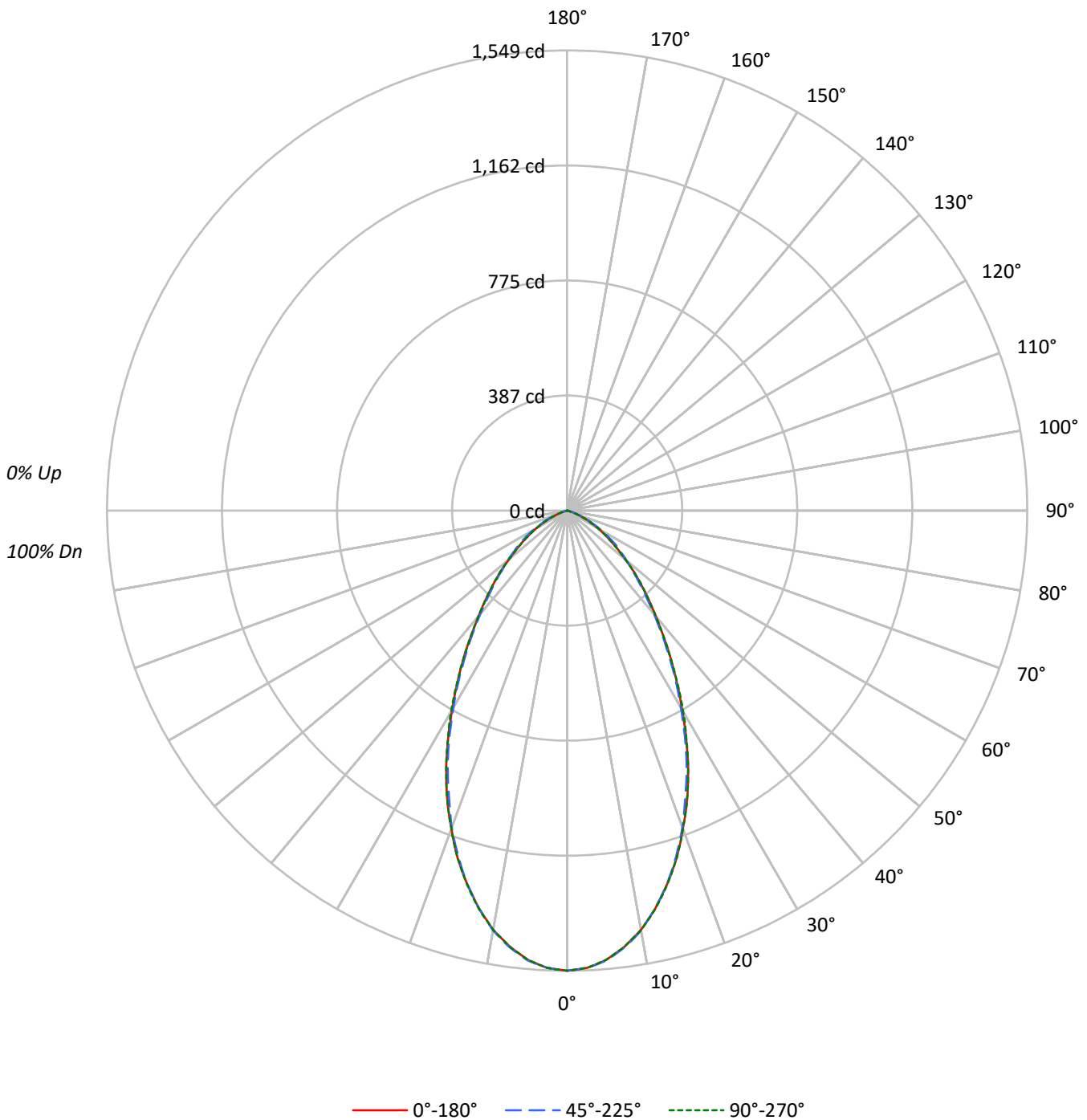
Input Watts (W): 20
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 112 | 109 | 106 | 103 | 110 | 107 | 104 | 102 | 103 | 100 | 98 | 99 | 97 | 95 | 95 | 94 | 93 | 91 | | | | | 91 | | | |
| 2 | 105 | 99 | 94 | 90 | 103 | 97 | 93 | 89 | 94 | 90 | 87 | 91 | 88 | 85 | 88 | 86 | 83 | 81 | | | | | 81 | | | |
| 3 | 98 | 90 | 84 | 79 | 96 | 89 | 83 | 79 | 86 | 81 | 77 | 84 | 80 | 76 | 81 | 78 | 75 | 73 | | | | | 73 | | | |
| 4 | 92 | 83 | 76 | 71 | 90 | 81 | 75 | 70 | 79 | 74 | 69 | 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 | 62 | 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 | 52 | 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 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 40 | | | | | 40 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 118566 | 118566 | 118566 |
| 5° | 116637 | 116790 | 116637 |
| 10° | 111394 | 111550 | 111394 |
| 15° | 103080 | 103080 | 103246 |
| 20° | 92819 | 92485 | 92819 |
| 25° | 81391 | 80343 | 81391 |
| 30° | 68366 | 67632 | 69090 |
| 35° | 56813 | 55850 | 56813 |
| 40° | 46283 | 45464 | 46493 |
| 45° | 38060 | 37162 | 38277 |
| 50° | 30532 | 31032 | 30294 |
| 55° | 24008 | 26223 | 24008 |
| 60° | 18355 | 20269 | 18355 |
| 65° | 12733 | 14616 | 12352 |
| 70° | 6490 | 8325 | 6490 |
| 75° | 621 | 2455 | 621 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 142.2 | 7.7 |
| 10°-20° | 363.0 | 19.7 |
| 20°-30° | 437.7 | 23.7 |
| 30°-40° | 378.3 | 20.5 |
| 40°-50° | 270.8 | 14.7 |
| 50°-60° | 167.5 | 9.1 |
| 60°-70° | 76.3 | 4.1 |
| 70°-80° | 10.7 | 0.6 |
| 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° | 942.9 | 51.1 |
| 0°-40° | 1321.2 | 71.6 |
| 0°-60° | 1759.5 | 95.3 |
| 0°-90° | 1846.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1846.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1549 | 1549 | 1549 | 1549 | 1549 | |
| 5° | 1518 | 1518 | 1520 | 1518 | 1518 | 142 |
| 15° | 1301 | 1301 | 1301 | 1303 | 1303 | 363 |
| 25° | 964 | 958 | 951 | 960 | 964 | 440 |
| 35° | 608 | 602 | 598 | 606 | 608 | 380 |
| 45° | 352 | 347 | 343 | 350 | 354 | 273 |
| 55° | 180 | 184 | 196 | 184 | 180 | 163 |
| 65° | 70 | 76 | 81 | 76 | 68 | 70 |
| 75° | 2 | 4 | 8 | 4 | 2 | 8 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P241725

CATALOG NUMBER: PRS420D010-S4M12-44SNDH-3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1549.0 | 1549.0 | 1549.0 | 1549.0 | 1549.0 |
| 2.5° | 1540.7 | 1540.7 | 1540.7 | 1540.7 | 1540.7 |
| 5° | 1518.0 | 1518.0 | 1520.0 | 1518.0 | 1518.0 |
| 7.5° | 1480.7 | 1482.8 | 1482.8 | 1482.8 | 1480.7 |
| 10° | 1433.2 | 1433.2 | 1435.2 | 1433.2 | 1433.2 |
| 12.5° | 1371.1 | 1371.1 | 1371.1 | 1373.2 | 1373.2 |
| 15° | 1300.8 | 1300.8 | 1300.8 | 1302.9 | 1302.9 |
| 17.5° | 1226.4 | 1224.3 | 1220.2 | 1222.2 | 1226.4 |
| 20° | 1139.5 | 1137.4 | 1135.4 | 1137.4 | 1139.5 |
| 22.5° | 1054.7 | 1046.4 | 1040.2 | 1050.6 | 1054.7 |
| 25° | 963.7 | 957.5 | 951.3 | 959.6 | 963.7 |
| 27.5° | 868.6 | 864.4 | 858.2 | 864.4 | 870.6 |
| 30° | 773.5 | 773.5 | 765.2 | 773.5 | 781.7 |
| 32.5° | 688.7 | 686.6 | 680.4 | 684.5 | 690.7 |
| 35° | 608.0 | 601.8 | 597.7 | 605.9 | 608.0 |
| 37.5° | 531.5 | 529.4 | 523.2 | 529.4 | 531.5 |
| 40° | 463.2 | 459.1 | 455.0 | 461.2 | 465.3 |
| 42.5° | 405.3 | 401.2 | 395.0 | 401.2 | 405.3 |
| 45° | 351.6 | 347.4 | 343.3 | 349.5 | 353.6 |
| 47.5° | 304.0 | 301.9 | 297.8 | 301.9 | 304.0 |
| 50° | 256.4 | 260.6 | 260.6 | 258.5 | 254.4 |
| 52.5° | 215.1 | 217.1 | 225.4 | 217.1 | 215.1 |
| 55° | 179.9 | 184.1 | 196.5 | 184.1 | 179.9 |
| 57.5° | 148.9 | 153.0 | 163.4 | 153.0 | 148.9 |
| 60° | 119.9 | 126.2 | 132.4 | 126.2 | 119.9 |
| 62.5° | 93.1 | 101.3 | 103.4 | 99.3 | 93.1 |
| 65° | 70.3 | 76.5 | 80.7 | 76.5 | 68.2 |
| 67.5° | 47.6 | 55.8 | 57.9 | 55.8 | 47.6 |
| 70° | 29.0 | 37.2 | 37.2 | 37.2 | 29.0 |
| 72.5° | 14.5 | 18.6 | 20.7 | 18.6 | 14.5 |
| 75° | 2.1 | 4.1 | 8.3 | 4.1 | 2.1 |
| 77.5° | 0.0 | 0.0 | 2.1 | 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)