

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: P210239

Luminaire Tested: **PR815D010 - PR8M12WW - 3000K**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P210239
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29047)
Test Lab: INNOVATION CENTER-P2
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PR815D010 - PR8M12WW - 3000K
Description: HALO 8" ROUND DOWNLIGHT, WALLWASH, MATTE WHITE FINISH
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1349.4 lumens
Efficiency: N/A
Efficacy: 90.0 lumens/watt
Spacing Criteria (0/90/45): 0.99 / 1.19 / 1.17
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

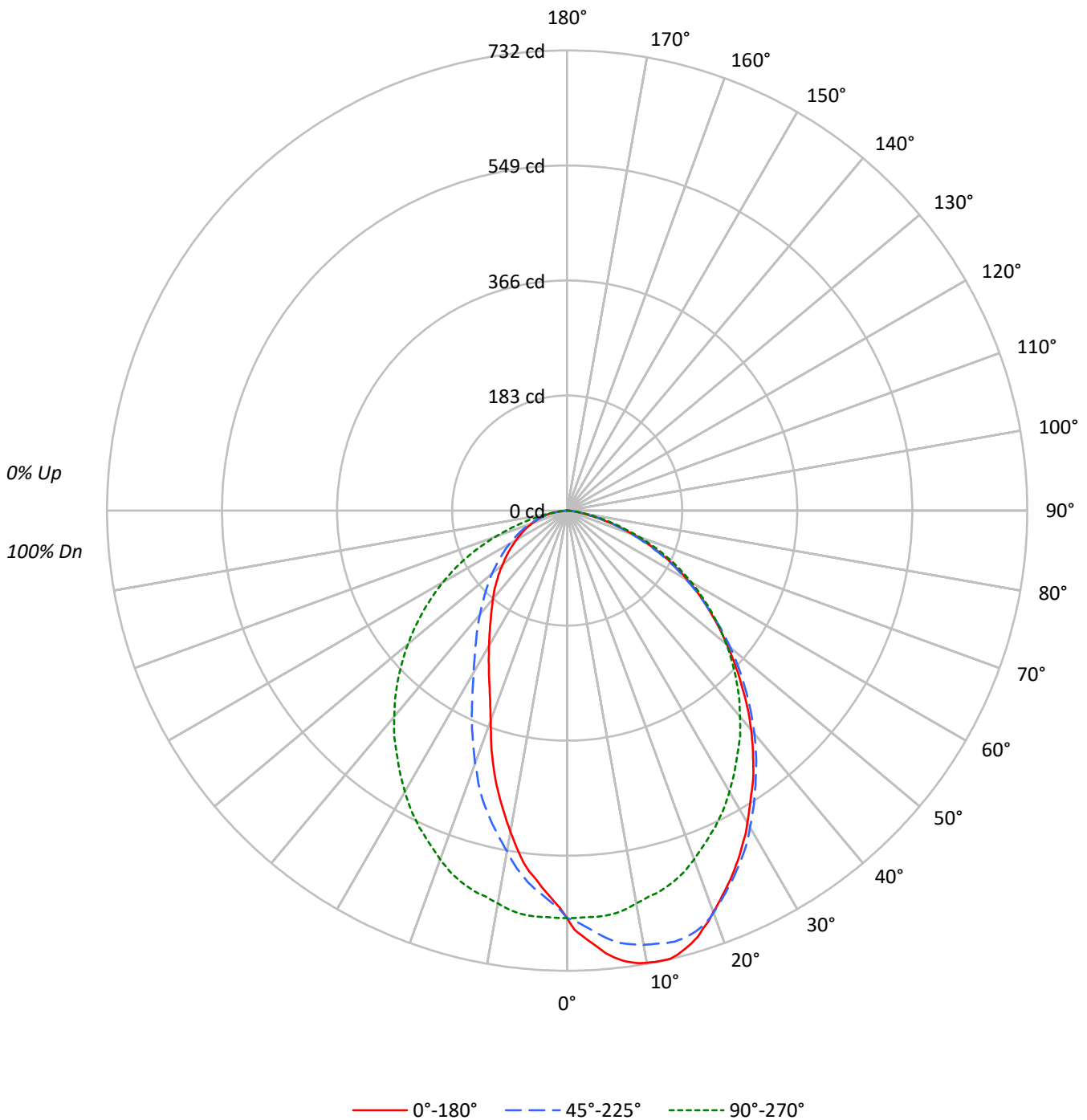
Input Watts (W): 15
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 110 | 106 | 102 | 99 | 107 | 104 | 100 | 97 | 99 | 97 | 94 | 96 | 93 | 91 | 92 | 90 | 88 | 86 | | | | | 86 | | | |
| 2 | 101 | 94 | 87 | 82 | 98 | 92 | 86 | 81 | 88 | 83 | 79 | 85 | 81 | 78 | 82 | 79 | 76 | 74 | | | | | 74 | | | |
| 3 | 93 | 83 | 76 | 70 | 90 | 82 | 75 | 69 | 79 | 73 | 68 | 76 | 71 | 67 | 73 | 69 | 66 | 63 | | | | | 63 | | | |
| 4 | 85 | 74 | 66 | 60 | 83 | 73 | 65 | 60 | 71 | 64 | 59 | 68 | 63 | 58 | 66 | 61 | 57 | 55 | | | | | 55 | | | |
| 5 | 79 | 67 | 59 | 52 | 77 | 66 | 58 | 52 | 64 | 57 | 52 | 62 | 56 | 51 | 60 | 55 | 50 | 48 | | | | | 48 | | | |
| 6 | 73 | 61 | 52 | 46 | 71 | 60 | 52 | 46 | 58 | 51 | 46 | 56 | 50 | 45 | 55 | 49 | 45 | 43 | | | | | 43 | | | |
| 7 | 68 | 55 | 47 | 41 | 67 | 55 | 47 | 41 | 53 | 46 | 41 | 52 | 45 | 41 | 50 | 45 | 40 | 38 | | | | | 38 | | | |
| 8 | 64 | 51 | 43 | 37 | 62 | 50 | 43 | 37 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 37 | 35 | | | | | 35 | | | |
| 9 | 60 | 47 | 39 | 34 | 58 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 33 | 43 | 37 | 33 | 32 | | | | | 32 | | | |
| 10 | 56 | 44 | 36 | 31 | 55 | 43 | 36 | 31 | 42 | 35 | 31 | 41 | 35 | 31 | 40 | 35 | 30 | 29 | | | | | 29 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 19991 | 19991 | 19991 |
| 5° | 21875 | 20046 | 18158 |
| 10° | 22867 | 19867 | 16251 |
| 15° | 23062 | 19732 | 14098 |
| 20° | 22308 | 19377 | 11669 |
| 25° | 21432 | 18931 | 10000 |
| 30° | 20420 | 18387 | 8855 |
| 35° | 19439 | 17783 | 7977 |
| 40° | 18332 | 17221 | 7395 |
| 45° | 17112 | 16598 | 6895 |
| 50° | 15927 | 15865 | 6424 |
| 55° | 14817 | 15026 | 6070 |
| 60° | 13679 | 14080 | 5748 |
| 65° | 12207 | 12827 | 5553 |
| 70° | 10179 | 10882 | 5328 |
| 75° | 7268 | 8364 | 5159 |
| 80° | 4315 | 5469 | 4901 |
| 85° | 2335 | 2087 | 2335 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 61.0 | 4.5 |
| 10°-20° | 168.0 | 12.5 |
| 20°-30° | 231.9 | 17.2 |
| 30°-40° | 253.3 | 18.8 |
| 40°-50° | 238.1 | 17.6 |
| 50°-60° | 194.3 | 14.4 |
| 60°-70° | 132.0 | 9.8 |
| 70°-80° | 60.8 | 4.5 |
| 80°-90° | 10.0 | 0.7 |
| 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° | 460.9 | 34.2 |
| 0°-40° | 714.2 | 52.9 |
| 0°-60° | 1146.6 | 85.0 |
| 0°-90° | 1349.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1349.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 648 | 648 | 648 | 648 | 648 | |
| 5° | 707 | 681 | 648 | 603 | 587 | 68 |
| 15° | 722 | 705 | 618 | 494 | 442 | 202 |
| 25° | 630 | 635 | 556 | 359 | 294 | 290 |
| 35° | 516 | 523 | 472 | 253 | 212 | 322 |
| 45° | 392 | 401 | 381 | 184 | 158 | 303 |
| 55° | 276 | 276 | 280 | 129 | 113 | 247 |
| 65° | 167 | 163 | 176 | 84 | 76 | 165 |
| 75° | 61 | 63 | 70 | 45 | 43 | 67 |
| 85° | 7 | 6 | 6 | 7 | 7 | 9 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P210239

CATALOG NUMBER: PR815D010 - PR8M12WW - 3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 0° | 648.3 | 648.3 | 648.3 | 648.3 | 648.3 | 648.3 | 648.3 | 648.3 | 648.3 |
| 1° | 666.6 | 659.4 | 652.2 | 650.2 | 648.3 | 638.4 | 635.1 | 635.8 | 632.5 |
| 2° | 676.5 | 668.6 | 658.8 | 653.5 | 647.6 | 633.8 | 626.6 | 625.3 | 620.7 |
| 3° | 686.3 | 678.4 | 666.0 | 656.8 | 647.6 | 629.2 | 618.1 | 614.1 | 609.5 |
| 4° | 696.2 | 688.9 | 673.2 | 661.4 | 647.6 | 625.3 | 610.2 | 603.6 | 598.4 |
| 5° | 706.7 | 697.5 | 681.1 | 665.3 | 647.6 | 621.4 | 603.0 | 592.5 | 586.6 |
| 6° | 714.5 | 706.0 | 687.6 | 668.6 | 646.3 | 616.1 | 594.5 | 581.3 | 577.4 |
| 7° | 721.1 | 712.6 | 692.9 | 670.6 | 645.0 | 610.9 | 584.6 | 569.5 | 564.9 |
| 8° | 725.7 | 717.8 | 696.2 | 671.2 | 642.4 | 603.6 | 574.8 | 555.7 | 549.8 |
| 9° | 729.0 | 721.1 | 698.8 | 671.9 | 638.4 | 595.8 | 563.0 | 542.0 | 534.7 |
| 10° | 730.3 | 723.7 | 701.4 | 671.9 | 634.5 | 588.6 | 550.5 | 526.9 | 519.0 |
| 11° | 731.6 | 725.7 | 702.7 | 671.9 | 631.2 | 581.3 | 539.3 | 512.4 | 503.3 |
| 12° | 731.6 | 725.7 | 704.0 | 671.9 | 627.3 | 573.5 | 528.2 | 498.0 | 487.5 |
| 13° | 731.6 | 726.3 | 706.0 | 672.5 | 625.3 | 567.6 | 517.0 | 484.2 | 472.4 |
| 14° | 727.7 | 725.7 | 706.7 | 672.5 | 622.0 | 559.7 | 505.9 | 469.1 | 457.3 |
| 15° | 722.4 | 721.7 | 705.3 | 671.9 | 618.1 | 551.8 | 494.1 | 454.0 | 441.6 |
| 16° | 716.5 | 715.2 | 703.4 | 671.2 | 614.1 | 543.9 | 482.9 | 439.0 | 424.5 |
| 17° | 709.3 | 708.6 | 700.1 | 668.6 | 608.9 | 535.4 | 469.8 | 422.5 | 408.1 |
| 18° | 699.4 | 700.7 | 695.5 | 665.3 | 603.6 | 526.9 | 456.7 | 406.1 | 391.1 |
| 19° | 690.9 | 691.6 | 688.9 | 660.1 | 597.1 | 515.7 | 440.9 | 389.7 | 372.7 |
| 20° | 679.8 | 681.7 | 681.1 | 656.1 | 590.5 | 505.2 | 427.8 | 372.7 | 355.6 |
| 21° | 669.9 | 671.9 | 671.9 | 650.9 | 583.3 | 495.4 | 413.4 | 356.3 | 340.5 |
| 22° | 660.1 | 662.0 | 662.7 | 645.6 | 576.1 | 485.5 | 399.6 | 341.8 | 326.8 |
| 23° | 650.2 | 652.2 | 653.5 | 640.4 | 569.5 | 475.7 | 385.8 | 328.1 | 314.9 |
| 24° | 640.4 | 642.4 | 644.3 | 633.8 | 562.3 | 465.2 | 372.7 | 316.3 | 303.8 |
| 25° | 629.9 | 632.5 | 635.1 | 628.6 | 556.4 | 456.0 | 358.9 | 305.1 | 293.9 |
| 26° | 619.4 | 622.0 | 625.3 | 622.0 | 548.5 | 444.9 | 345.1 | 294.6 | 284.1 |
| 27° | 608.2 | 611.5 | 615.5 | 614.8 | 541.3 | 435.0 | 332.0 | 284.8 | 274.3 |
| 28° | 596.4 | 600.4 | 605.6 | 607.6 | 533.4 | 424.5 | 319.5 | 274.9 | 265.7 |
| 29° | 586.6 | 588.6 | 593.8 | 599.0 | 524.9 | 413.4 | 308.4 | 265.7 | 256.5 |
| 30° | 573.5 | 576.7 | 582.0 | 589.2 | 516.4 | 402.9 | 297.2 | 257.2 | 248.7 |
| 32.5° | 543.3 | 547.2 | 553.1 | 566.2 | 494.7 | 376.0 | 273.6 | 237.5 | 229.0 |
| 35° | 516.4 | 517.0 | 522.9 | 538.7 | 472.4 | 349.1 | 252.6 | 218.5 | 211.9 |
| 37.5° | 485.5 | 488.8 | 494.1 | 513.8 | 452.1 | 322.8 | 233.6 | 202.7 | 196.8 |
| 40° | 455.4 | 458.0 | 463.2 | 482.3 | 427.8 | 296.6 | 215.9 | 189.0 | 183.7 |
| 42.5° | 424.5 | 427.1 | 432.4 | 454.0 | 404.8 | 270.3 | 198.8 | 175.8 | 171.3 |
| 45° | 392.4 | 395.0 | 400.9 | 423.2 | 380.6 | 246.0 | 183.7 | 162.7 | 158.1 |
| 47.5° | 362.2 | 362.8 | 370.1 | 392.4 | 355.6 | 225.1 | 169.3 | 150.3 | 146.3 |
| 50° | 332.0 | 332.7 | 339.2 | 361.5 | 330.7 | 204.1 | 156.2 | 137.1 | 133.9 |
| 52.5° | 303.8 | 303.8 | 307.7 | 330.0 | 305.1 | 185.0 | 141.7 | 125.3 | 123.4 |
| 55° | 275.6 | 274.9 | 276.2 | 298.5 | 279.5 | 168.0 | 129.3 | 114.8 | 112.9 |
| 57.5° | 248.7 | 246.7 | 247.4 | 267.7 | 253.9 | 150.9 | 117.4 | 105.0 | 103.0 |
| 60° | 221.8 | 220.5 | 217.8 | 237.5 | 228.3 | 133.2 | 105.6 | 95.1 | 93.2 |
| 62.5° | 194.9 | 193.6 | 191.6 | 207.3 | 202.7 | 118.1 | 94.5 | 86.0 | 84.6 |
| 65° | 167.3 | 167.3 | 163.4 | 176.5 | 175.8 | 103.0 | 84.0 | 76.8 | 76.1 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|-------|-------|-------|-------|-------|--------|------|--------|------|
| 67.5° | 139.8 | 138.4 | 135.8 | 146.3 | 148.3 | 88.6 | 73.5 | 67.6 | 67.6 |
| 70° | 112.9 | 112.9 | 108.9 | 116.1 | 120.7 | 74.8 | 63.6 | 59.7 | 59.1 |
| 72.5° | 86.6 | 87.3 | 84.6 | 89.9 | 95.1 | 61.0 | 53.8 | 51.8 | 51.2 |
| 75° | 61.0 | 63.6 | 63.0 | 66.9 | 70.2 | 47.9 | 44.6 | 43.3 | 43.3 |
| 77.5° | 37.4 | 41.3 | 43.3 | 46.6 | 48.6 | 36.1 | 35.4 | 35.4 | 35.4 |
| 80° | 24.3 | 24.9 | 26.2 | 29.5 | 30.8 | 24.9 | 25.6 | 26.9 | 27.6 |
| 82.5° | 13.8 | 13.8 | 14.4 | 15.7 | 17.1 | 15.1 | 16.4 | 17.7 | 17.7 |
| 85° | 6.6 | 5.9 | 5.9 | 5.9 | 5.9 | 6.6 | 6.6 | 7.2 | 6.6 |
| 87.5° | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)