

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: P210595

Luminaire Tested: **PR8S10D010 - PR8M12WW - 3500K**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P210595
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: PR8S10D010 - PR8M12WW - 3500K
Description: HALO 8" ROUND DOWNLIGHT, WALLWASH, MATTE WHITE FINISH
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 955.7 lumens
Efficiency: N/A
Efficacy: 91.0 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

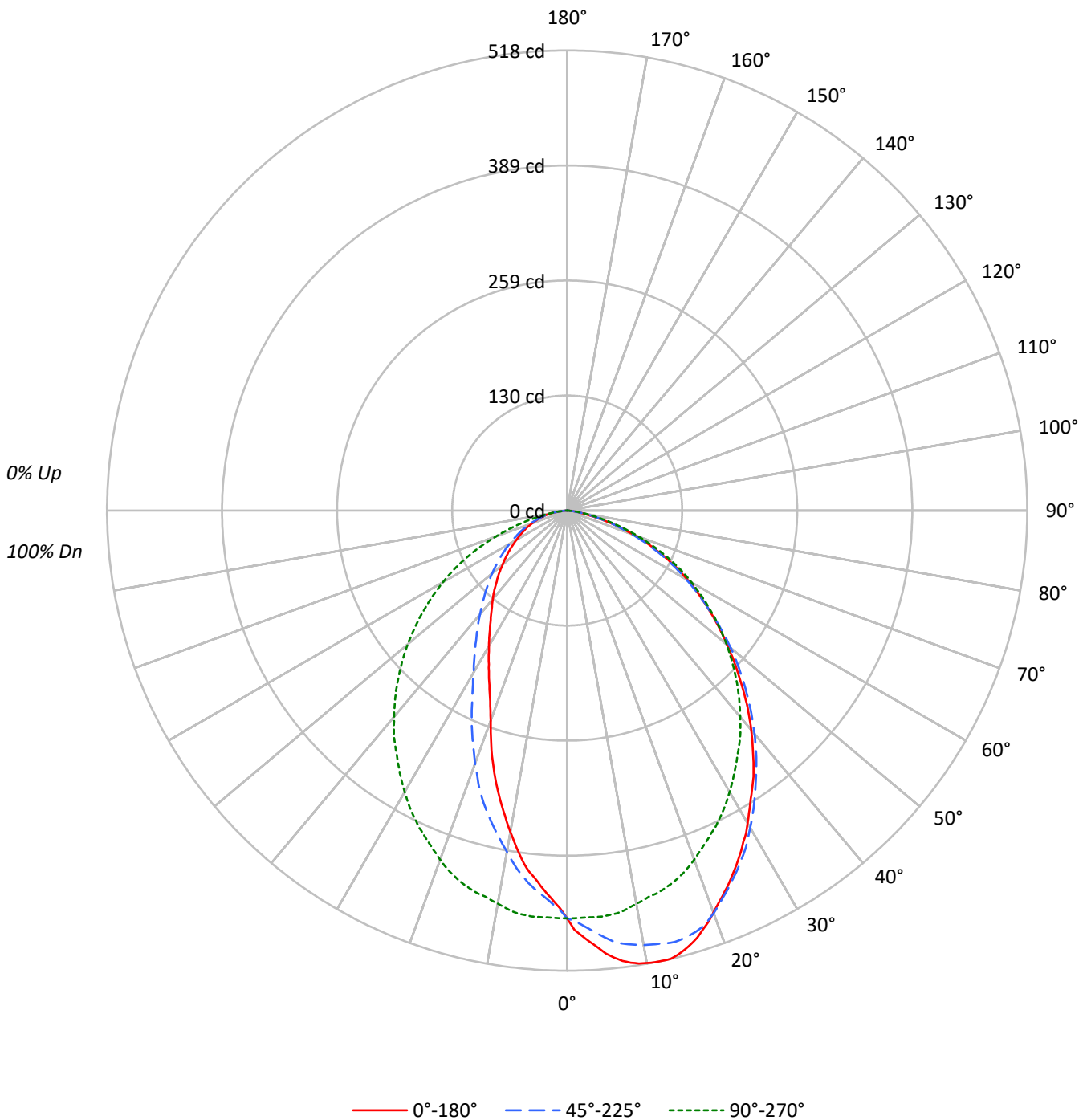
Input Watts (W): 10.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 14157 | 14157 | 14157 |
| 5° | 15493 | 14196 | 12858 |
| 10° | 16195 | 14068 | 11510 |
| 15° | 16332 | 13973 | 9983 |
| 20° | 15797 | 13723 | 8266 |
| 25° | 15178 | 13405 | 7084 |
| 30° | 14460 | 13021 | 6270 |
| 35° | 13766 | 12596 | 5650 |
| 40° | 12982 | 12197 | 5237 |
| 45° | 12119 | 11753 | 4884 |
| 50° | 11278 | 11235 | 4548 |
| 55° | 10494 | 10645 | 4296 |
| 60° | 9689 | 9972 | 4070 |
| 65° | 8646 | 9084 | 3933 |
| 70° | 7204 | 7709 | 3769 |
| 75° | 5147 | 5921 | 3658 |
| 80° | 3054 | 3871 | 3463 |
| 85° | 1628 | 1486 | 1628 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 43.2 | 4.5 |
| 10°-20° | 119.0 | 12.5 |
| 20°-30° | 164.2 | 17.2 |
| 30°-40° | 179.4 | 18.8 |
| 40°-50° | 168.7 | 17.6 |
| 50°-60° | 137.6 | 14.4 |
| 60°-70° | 93.5 | 9.8 |
| 70°-80° | 43.0 | 4.5 |
| 80°-90° | 7.1 | 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° | 326.4 | 34.2 |
| 0°-40° | 505.8 | 52.9 |
| 0°-60° | 812.1 | 85.0 |
| 0°-90° | 955.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 955.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 459 | 459 | 459 | 459 | 459 | |
| 5° | 500 | 482 | 459 | 427 | 415 | 48 |
| 15° | 512 | 500 | 438 | 350 | 313 | 143 |
| 25° | 446 | 450 | 394 | 254 | 208 | 205 |
| 35° | 366 | 370 | 335 | 179 | 150 | 228 |
| 45° | 278 | 284 | 270 | 130 | 112 | 215 |
| 55° | 195 | 196 | 198 | 92 | 80 | 175 |
| 65° | 118 | 116 | 124 | 60 | 54 | 117 |
| 75° | 43 | 45 | 50 | 32 | 31 | 47 |
| 85° | 5 | 4 | 4 | 5 | 5 | 6 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P210595

CATALOG NUMBER: PR8S10D010 - PR8M12WW - 3500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 0° | 459.1 | 459.1 | 459.1 | 459.1 | 459.1 | 459.1 | 459.1 | 459.1 | 459.1 |
| 1° | 472.1 | 467.0 | 461.9 | 460.5 | 459.1 | 452.1 | 449.8 | 450.3 | 447.9 |
| 2° | 479.1 | 473.5 | 466.5 | 462.8 | 458.6 | 448.9 | 443.8 | 442.8 | 439.6 |
| 3° | 486.1 | 480.5 | 471.6 | 465.1 | 458.6 | 445.6 | 437.7 | 434.9 | 431.7 |
| 4° | 493.0 | 487.9 | 476.8 | 468.4 | 458.6 | 442.8 | 432.2 | 427.5 | 423.8 |
| 5° | 500.5 | 494.0 | 482.3 | 471.2 | 458.6 | 440.1 | 427.0 | 419.6 | 415.4 |
| 6° | 506.0 | 500.0 | 487.0 | 473.5 | 457.7 | 436.3 | 421.0 | 411.7 | 408.9 |
| 7° | 510.7 | 504.6 | 490.7 | 474.9 | 456.8 | 432.6 | 414.0 | 403.3 | 400.1 |
| 8° | 513.9 | 508.4 | 493.0 | 475.4 | 454.9 | 427.5 | 407.1 | 393.6 | 389.4 |
| 9° | 516.3 | 510.7 | 494.9 | 475.8 | 452.1 | 421.9 | 398.7 | 383.8 | 378.7 |
| 10° | 517.2 | 512.5 | 496.7 | 475.8 | 449.3 | 416.8 | 389.9 | 373.1 | 367.6 |
| 11° | 518.1 | 513.9 | 497.7 | 475.8 | 447.0 | 411.7 | 382.0 | 362.9 | 356.4 |
| 12° | 518.1 | 513.9 | 498.6 | 475.8 | 444.2 | 406.1 | 374.1 | 352.7 | 345.3 |
| 13° | 518.1 | 514.4 | 500.0 | 476.3 | 442.8 | 401.9 | 366.2 | 342.9 | 334.6 |
| 14° | 515.3 | 513.9 | 500.5 | 476.3 | 440.5 | 396.4 | 358.3 | 332.2 | 323.9 |
| 15° | 511.6 | 511.1 | 499.5 | 475.8 | 437.7 | 390.8 | 349.9 | 321.6 | 312.7 |
| 16° | 507.4 | 506.5 | 498.1 | 475.4 | 434.9 | 385.2 | 342.0 | 310.9 | 300.6 |
| 17° | 502.3 | 501.9 | 495.8 | 473.5 | 431.2 | 379.2 | 332.7 | 299.3 | 289.0 |
| 18° | 495.3 | 496.3 | 492.6 | 471.2 | 427.5 | 373.1 | 323.4 | 287.6 | 276.9 |
| 19° | 489.3 | 489.8 | 487.9 | 467.5 | 422.9 | 365.2 | 312.3 | 276.0 | 263.9 |
| 20° | 481.4 | 482.8 | 482.3 | 464.7 | 418.2 | 357.8 | 303.0 | 263.9 | 251.9 |
| 21° | 474.4 | 475.8 | 475.8 | 461.0 | 413.1 | 350.8 | 292.7 | 252.3 | 241.2 |
| 22° | 467.5 | 468.9 | 469.3 | 457.2 | 408.0 | 343.9 | 283.0 | 242.1 | 231.4 |
| 23° | 460.5 | 461.9 | 462.8 | 453.5 | 403.3 | 336.9 | 273.2 | 232.3 | 223.0 |
| 24° | 453.5 | 454.9 | 456.3 | 448.9 | 398.2 | 329.5 | 263.9 | 224.0 | 215.1 |
| 25° | 446.1 | 447.9 | 449.8 | 445.2 | 394.0 | 323.0 | 254.2 | 216.1 | 208.2 |
| 26° | 438.7 | 440.5 | 442.8 | 440.5 | 388.5 | 315.1 | 244.4 | 208.6 | 201.2 |
| 27° | 430.8 | 433.1 | 435.9 | 435.4 | 383.4 | 308.1 | 235.1 | 201.7 | 194.2 |
| 28° | 422.4 | 425.2 | 428.9 | 430.3 | 377.8 | 300.6 | 226.3 | 194.7 | 188.2 |
| 29° | 415.4 | 416.8 | 420.5 | 424.3 | 371.7 | 292.7 | 218.4 | 188.2 | 181.7 |
| 30° | 406.1 | 408.5 | 412.2 | 417.3 | 365.7 | 285.3 | 210.5 | 182.2 | 176.1 |
| 32.5° | 384.8 | 387.5 | 391.7 | 401.0 | 350.4 | 266.3 | 193.8 | 168.2 | 162.2 |
| 35° | 365.7 | 366.2 | 370.3 | 381.5 | 334.6 | 247.2 | 178.9 | 154.7 | 150.1 |
| 37.5° | 343.9 | 346.2 | 349.9 | 363.8 | 320.2 | 228.6 | 165.4 | 143.6 | 139.4 |
| 40° | 322.5 | 324.3 | 328.1 | 341.5 | 303.0 | 210.0 | 152.9 | 133.8 | 130.1 |
| 42.5° | 300.6 | 302.5 | 306.2 | 321.6 | 286.7 | 191.4 | 140.8 | 124.5 | 121.3 |
| 45° | 277.9 | 279.7 | 283.9 | 299.7 | 269.5 | 174.3 | 130.1 | 115.2 | 112.0 |
| 47.5° | 256.5 | 257.0 | 262.1 | 277.9 | 251.9 | 159.4 | 119.9 | 106.4 | 103.6 |
| 50° | 235.1 | 235.6 | 240.2 | 256.0 | 234.2 | 144.5 | 110.6 | 97.1 | 94.8 |
| 52.5° | 215.1 | 215.1 | 217.9 | 233.7 | 216.1 | 131.0 | 100.4 | 88.8 | 87.4 |
| 55° | 195.2 | 194.7 | 195.6 | 211.4 | 198.0 | 119.0 | 91.5 | 81.3 | 79.9 |
| 57.5° | 176.1 | 174.7 | 175.2 | 189.6 | 179.8 | 106.9 | 83.2 | 74.3 | 73.0 |
| 60° | 157.1 | 156.1 | 154.3 | 168.2 | 161.7 | 94.3 | 74.8 | 67.4 | 66.0 |
| 62.5° | 138.0 | 137.1 | 135.7 | 146.8 | 143.6 | 83.6 | 66.9 | 60.9 | 59.9 |
| 65° | 118.5 | 118.5 | 115.7 | 125.0 | 124.5 | 73.0 | 59.5 | 54.4 | 53.9 |



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CATALOG NUMBER: PR8S10D010 - PR8M12WW - 3500K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|------|-------|------|-------|-------|--------|------|--------|------|
| 67.5° | 99.0 | 98.0 | 96.2 | 103.6 | 105.0 | 62.7 | 52.0 | 47.9 | 47.9 |
| 70° | 79.9 | 79.9 | 77.1 | 82.2 | 85.5 | 53.0 | 45.1 | 42.3 | 41.8 |
| 72.5° | 61.3 | 61.8 | 59.9 | 63.7 | 67.4 | 43.2 | 38.1 | 36.7 | 36.2 |
| 75° | 43.2 | 45.1 | 44.6 | 47.4 | 49.7 | 33.9 | 31.6 | 30.7 | 30.7 |
| 77.5° | 26.5 | 29.3 | 30.7 | 33.0 | 34.4 | 25.6 | 25.1 | 25.1 | 25.1 |
| 80° | 17.2 | 17.7 | 18.6 | 20.9 | 21.8 | 17.7 | 18.1 | 19.1 | 19.5 |
| 82.5° | 9.8 | 9.8 | 10.2 | 11.2 | 12.1 | 10.7 | 11.6 | 12.5 | 12.5 |
| 85° | 4.6 | 4.2 | 4.2 | 4.2 | 4.2 | 4.6 | 4.6 | 5.1 | 4.6 |
| 87.5° | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)