



Spectrum Logo

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

CW0606TD-10L-30K-EX-GL-MW
Nom 6" diam cylinder luminaire

Test Number

SP-00816

Test Date

The results contained in this report pertain only to this IES file.

**Summary of Results****Power**

| | |
|-------------|--------|
| Input Watts | 15.9 W |
|-------------|--------|

Lumen Output

| | |
|---------------|------------|
| Output Lumens | 801 |
| Efficacy | 50.38 lm/W |

Luminous Dimensions

| | |
|-----------------|------|
| 0° - 180° Size | -0.5 |
| 90° - 270° Size | -0.5 |
| Height | 0 |

Spacing Criterion

| | |
|---------------------------|------|
| Two luminaires, plane 0° | 1.3 |
| Two luminaires, plane 90° | 1.3 |
| Four luminaires | 1.26 |

Full Beam Angle

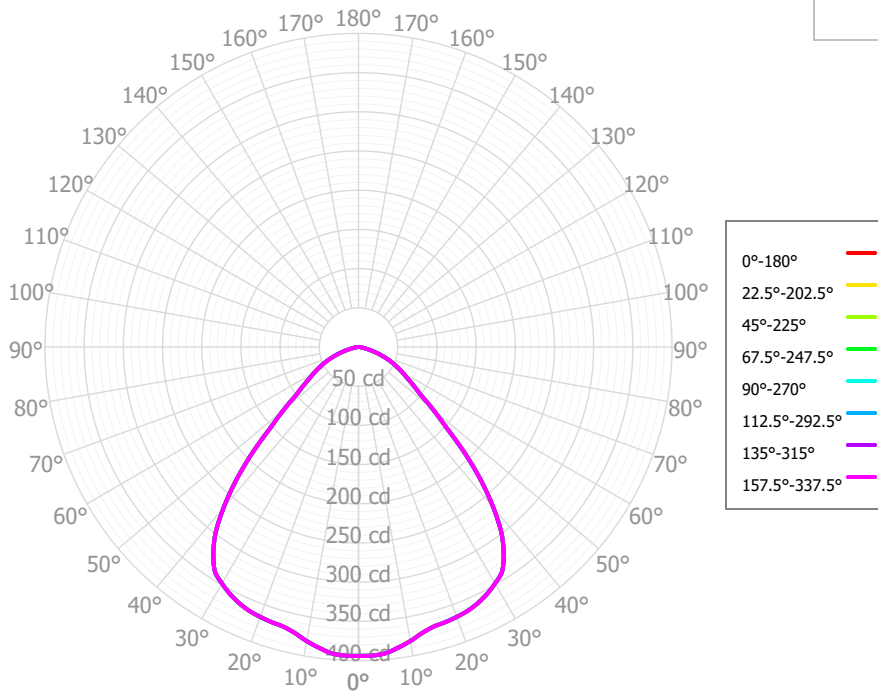
| | |
|------------|-----|
| 0° - 180° | 89° |
| 90° - 270° | 89° |

IES File Header Contents

| Keyword | Value |
|-----------|--|
| TEST | SP-00816 |
| TESTLAB | Spectrum Lighting Photometric Lab, VLS-245-981 |
| MANUFAC | Spectrum Lighting |
| ISSUEDATE | 3/28/2019 |
| UPDATE | 4/23/2019 |
| LUMCAT | CW0606TD-10L-30K-EX-GL-MW |
| LUMINAIRE | Nom 6" diam cylinder luminaire |
| OTHER | Beam Angle: 89.3 degrees |
| OTHER | Matte white trim; Clear glass lens |
| LAMPCAT | N/A |
| LAMP | N/A, White light |
| OTHER | CCT Output Multipliers: only 30K available |
| OTHER | Total luminaire wattages is approximate |
| OTHER | This report prepared by Spectrum Lighting |
| _CRI | 80 |
| _CCTMULT | only 30K available |
| _LAMPMULT | only 10L available |

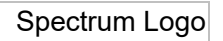


Candela Polar Plot



Zonal Lumen Summary

| Zone | Lumens | % Fixture | Zone | Lumens | % Fixture |
|-----------------|--------|-----------|-------------------|--------|-----------|
| 0.00° - 10.00° | 37.59 | 4.69% | 90.00° - 100.00° | 0.13 | 0.02% |
| 10.00° - 20.00° | 105.00 | 13.11% | 100.00° - 110.00° | 0.00 | 0.00% |
| 20.00° - 30.00° | 166.00 | 20.72% | 100.00° - 120.00° | 0.00 | 0.00% |
| 30.00° - 40.00° | 198.49 | 24.78% | 120.00° - 130.00° | 0.00 | 0.00% |
| 40.00° - 50.00° | 147.56 | 18.42% | 130.00° - 140.00° | 0.00 | 0.00% |
| 50.00° - 60.00° | 78.68 | 9.82% | 140.00° - 150.00° | 0.00 | 0.00% |
| 60.00° - 70.00° | 47.13 | 5.88% | 150.00° - 160.00° | 0.00 | 0.00% |
| 70.00° - 80.00° | 17.68 | 2.21% | 160.00° - 170.00° | 0.00 | 0.00% |
| 80.00° - 90.00° | 2.81 | 0.35% | 170.00° - 180.00° | 0.00 | 0.00% |
| 0.00° - 90.00° | 800.95 | 99.98% | 0.00° - 180.00° | 801.09 | 100.00% |



Candela Distribution

| | 0.00° | 22.50° | 45.00° | 67.50° | 90.00° | 112.50° | 135.00° | 157.50° | 180.00° | 202.50° | 225.00° | 247.50° | 270 00° | 292.50° | 315.00° | 337.50° | 360.00° |
|---------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.00° | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394 15 | 394.15 | 394.15 | 394.15 | 394.15 |
| 2.50° | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394.15 | 394 15 | 394.15 | 394.15 | 394.15 | 394.15 |
| 5.00° | 392.34 | 392.34 | 392.34 | 392.34 | 392.34 | 392.34 | 392.34 | 392.34 | 392.34 | 392.34 | 392.34 | 392.34 | 392.34 | 392.34 | 392.34 | 392.34 | 392.34 |
| 7.50° | 386.98 | 386.98 | 386.98 | 386.98 | 386.98 | 386.98 | 386.98 | 386.98 | 386.98 | 386.98 | 386.98 | 386.98 | 386.98 | 386.98 | 386.98 | 386.98 | 386.98 |
| 10.00° | 380.99 | 380.99 | 380.99 | 380.99 | 380.99 | 380.99 | 380.99 | 380.99 | 380.99 | 380.99 | 380.99 | 380.99 | 380.99 | 380.99 | 380.99 | 380.99 | 380.99 |
| 12.50° | 374.01 | 374.01 | 374.01 | 374.01 | 374.01 | 374.01 | 374.01 | 374.01 | 374.01 | 374.01 | 374.01 | 374.01 | 374.01 | 374.01 | 374.01 | 374.01 | 374.01 |
| 15.00° | 369.50 | 369.50 | 369.50 | 369.50 | 369.50 | 369.50 | 369.50 | 369.50 | 369.50 | 369.50 | 369.50 | 369.50 | 369.50 | 369.50 | 369.50 | 369.50 | 369.50 |
| 17.50° | 368.16 | 368.16 | 368.16 | 368.16 | 368.16 | 368.16 | 368.16 | 368.16 | 368.16 | 368.16 | 368.16 | 368.16 | 368.16 | 368.16 | 368.16 | 368.16 | 368.16 |
| 20.00° | 366.45 | 366.45 | 366.45 | 366.45 | 366.45 | 366.45 | 366.45 | 366.45 | 366.45 | 366.45 | 366.45 | 366.45 | 366.45 | 366.45 | 366.45 | 366.45 | 366.45 |
| 22.50° | 364.33 | 364.33 | 364.33 | 364.33 | 364.33 | 364.33 | 364.33 | 364.33 | 364.33 | 364.33 | 364.33 | 364.33 | 364.33 | 364.33 | 364.33 | 364.33 | 364.33 |
| 25.00° | 360.49 | 360.49 | 360.49 | 360.49 | 360.49 | 360.49 | 360.49 | 360.49 | 360.49 | 360.49 | 360.49 | 360.49 | 360.49 | 360.49 | 360.49 | 360.49 | 360.49 |
| 27.50° | 355.19 | 355.19 | 355.19 | 355.19 | 355.19 | 355.19 | 355.19 | 355.19 | 355.19 | 355.19 | 355.19 | 355.19 | 355.19 | 355.19 | 355.19 | 355.19 | 355.19 |
| 30.00° | 348.40 | 348.40 | 348.40 | 348.40 | 348.40 | 348.40 | 348.40 | 348.40 | 348.40 | 348.40 | 348.40 | 348.40 | 348.40 | 348.40 | 348.40 | 348.40 | 348.40 |
| 32.50° | 340.57 | 340.57 | 340.57 | 340.57 | 340.57 | 340.57 | 340.57 | 340.57 | 340.57 | 340.57 | 340.57 | 340.57 | 340.57 | 340.57 | 340.57 | 340.57 | 340.57 |
| 35.00° | 323.00 | 323.00 | 323.00 | 323.00 | 323.00 | 323.00 | 323.00 | 323.00 | 323.00 | 323.00 | 323.00 | 323.00 | 323.00 | 323.00 | 323.00 | 323.00 | 323.00 |
| 37.50° | 299.97 | 299.97 | 299.97 | 299.97 | 299.97 | 299.97 | 299.97 | 299.97 | 299.97 | 299.97 | 299.97 | 299.97 | 299.97 | 299.97 | 299.97 | 299.97 | 299.97 |
| 40.00° | 267.93 | 267.93 | 267.93 | 267.93 | 267.93 | 267.93 | 267.93 | 267.93 | 267.93 | 267.93 | 267.93 | 267.93 | 267.93 | 267.93 | 267.93 | 267.93 | 267.93 |
| 42.50° | 231.83 | 231.83 | 231.83 | 231.83 | 231.83 | 231.83 | 231.83 | 231.83 | 231.83 | 231.83 | 231.83 | 231.83 | 231.83 | 231.83 | 231.83 | 231.83 | 231.83 |
| 45.00° | 192.41 | 192.41 | 192.41 | 192.41 | 192.41 | 192.41 | 192.41 | 192.41 | 192.41 | 192.41 | 192.41 | 192.41 | 192.41 | 192.41 | 192.41 | 192.41 | 192.41 |
| 47.50° | 151.83 | 151.83 | 151.83 | 151.83 | 151.83 | 151.83 | 151.83 | 151.83 | 151.83 | 151.83 | 151.83 | 151.83 | 151.83 | 151.83 | 151.83 | 151.83 | 151.83 |
| 50.00° | 124.10 | 124.10 | 124.10 | 124.10 | 124.10 | 124.10 | 124.10 | 124.10 | 124.10 | 124.10 | 124.10 | 124.10 | 124.10 | 124.10 | 124.10 | 124.10 | 124.10 |
| 52.50° | 99.74 | 99.74 | 99.74 | 99.74 | 99.74 | 99.74 | 99.74 | 99.74 | 99.74 | 99.74 | 99.74 | 99.74 | 99.74 | 99.74 | 99.74 | 99.74 | 99.74 |
| 55.00° | 85.71 | 85.71 | 85.71 | 85.71 | 85.71 | 85.71 | 85.71 | 85.71 | 85.71 | 85.71 | 85.71 | 85.71 | 85.71 | 85.71 | 85.71 | 85.71 | 85.71 |
| 57.50° | 73.65 | 73.65 | 73.65 | 73.65 | 73.65 | 73.65 | 73.65 | 73.65 | 73.65 | 73.65 | 73.65 | 73.65 | 73.65 | 73.65 | 73.65 | 73.65 | 73.65 |
| 60.00° | 64.68 | 64.68 | 64.68 | 64.68 | 64.68 | 64.68 | 64.68 | 64.68 | 64.68 | 64.68 | 64.68 | 64.68 | 64.68 | 64.68 | 64.68 | 64.68 | 64.68 |
| 62.50° | 56.10 | 56.10 | 56.10 | 56.10 | 56.10 | 56.10 | 56.10 | 56.10 | 56.10 | 56.10 | 56.10 | 56.10 | 56.10 | 56.10 | 56.10 | 56.10 | 56.10 |
| 65.00° | 47.72 | 47.72 | 47.72 | 47.72 | 47.72 | 47.72 | 47.72 | 47.72 | 47.72 | 47.72 | 47.72 | 47.72 | 47.72 | 47.72 | 47.72 | 47.72 | 47.72 |
| 67.50° | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 |
| 70.00° | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 |
| 72.50° | 23.05 | 23.05 | 23.05 | 23.05 | 23.05 | 23.05 | 23.05 | 23.05 | 23.05 | 23.05 | 23.05 | 23.05 | 23.05 | 23.05 | 23.05 | 23.05 | 23.05 |
| 75.00° | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 |
| 77.50° | 10.09 | 10.09 | 10.09 | 10.09 | 10.09 | 10.09 | 10.09 | 10.09 | 10.09 | 10.09 | 10.09 | 10.09 | 10.09 | 10.09 | 10.09 | 10.09 | 10.09 |
| 80.00° | 5.94 | 5.94 | 5.94 | 5.94 | 5.94 | 5.94 | 5.94 | 5.94 | 5.94 | 5.94 | 5.94 | 5.94 | 5.94 | 5.94 | 5.94 | 5.94 | 5.94 |
| 82.50° | 3.43 | 3.43 | 3.43 | 3.43 | 3.43 | 3.43 | 3.43 | 3.43 | 3.43 | 3.43 | 3.43 | 3.43 | 3.43 | 3.43 | 3.43 | 3.43 | 3.43 |
| 85.00° | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 |
| 87.50° | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 |
| 90.00° | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| 92.50° | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95.00° | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 97.50° | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00° | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 102.50° | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 105.00° | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 107.50° | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 110.00° | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 112.50° | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

**Coefficients of Utilization – Zonal Cavity Method**

Values are lumens delivered to the workplane.

| | | | | | | | | | | | | | | | | | | |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RCR | pfc | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 0% |
| | pcc | 80% | 80% | 80% | 80% | 70% | 70% | 70% | 70% | 50% | 50% | 50% | 30% | 30% | 30% | 10% | 10% | 0% |
| | pw | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 30% |
| | 0 | 954 | 954 | 954 | 954 | 931 | 931 | 931 | 931 | 890 | 890 | 890 | 852 | 852 | 852 | 817 | 817 | 801 |
| | 1 | 891 | 861 | 834 | 809 | 870 | 843 | 818 | 796 | 810 | 790 | 771 | 779 | 763 | 748 | 751 | 738 | 723 |
| | 2 | 826 | 772 | 728 | 691 | 806 | 758 | 717 | 683 | 730 | 697 | 667 | 705 | 677 | 652 | 682 | 659 | 645 |
| | 3 | 765 | 695 | 640 | 597 | 747 | 683 | 632 | 592 | 660 | 617 | 582 | 639 | 603 | 572 | 620 | 589 | 577 |
| | 4 | 709 | 628 | 568 | 522 | 692 | 618 | 562 | 519 | 599 | 550 | 512 | 581 | 539 | 506 | 565 | 529 | 518 |
| | 5 | 659 | 570 | 507 | 461 | 643 | 561 | 503 | 459 | 545 | 494 | 454 | 530 | 485 | 450 | 516 | 477 | 467 |
| | 6 | 613 | 519 | 456 | 411 | 599 | 512 | 453 | 409 | 499 | 446 | 406 | 486 | 439 | 403 | 474 | 432 | 424 |
| | 7 | 572 | 476 | 413 | 369 | 559 | 470 | 410 | 368 | 458 | 405 | 366 | 447 | 399 | 363 | 437 | 394 | 386 |
| | 8 | 535 | 438 | 376 | 334 | 524 | 432 | 374 | 333 | 422 | 369 | 331 | 413 | 365 | 329 | 404 | 360 | 354 |
| | 9 | 502 | 404 | 344 | 303 | 491 | 399 | 342 | 303 | 391 | 338 | 301 | 383 | 335 | 300 | 375 | 331 | 325 |
| | 10 | 472 | 375 | 316 | 277 | 462 | 371 | 315 | 277 | 363 | 311 | 276 | 356 | 308 | 275 | 349 | 305 | 300 |

Cone of Light

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 5.5 ft | 13.0 fc | 10.9 ft |
| 6.5 ft | 9.3 fc | 12.9 ft |
| 7.5 ft | 7.0 fc | 14.8 ft |
| 8.0 ft | 6.2 fc | 15.8 ft |
| 10.0 ft | 3.9 fc | 19.8 ft |
| 12.0 ft | 2.7 fc | 23.8 ft |
| 14.0 ft | 2.0 fc | 27.7 ft |
| 16.0 ft | 1.5 fc | 31.7 ft |
| 20.0 ft | 1.0 fc | 39.6 ft |
| 24.0 ft | 0.7 fc | 47.5 ft |
| 28.0 ft | 0.5 fc | 55.4 ft |

Average Luminaire Luminance [cd/m²]

| | 0.00° | 45.00° | 90.00° |
|---------------|--------|--------|--------|
| 0.00° | 21,607 | 21,607 | 21,607 |
| 45.00° | 14,917 | 14,917 | 14,917 |
| 55.00° | 8,192 | 8,192 | 8,192 |
| 65.00° | 6,189 | 6,189 | 6,189 |
| 75.00° | 3,329 | 3,329 | 3,329 |
| 85.00° | 1,320 | 1,320 | 1,320 |

**UGR CIE 190:2010**

| | | | | | | | | | | | |
|----------------------------|------------|-------------------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|
| Ceiling reflectance | | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall reflectance | | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Plane reflectance | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| 2H | 2H | 16.6 | 18.0 | 17.0 | 18.3 | 18.6 | 16.6 | 18.0 | 17.0 | 18.3 | 18.6 |
| | 3H | 17.8 | 19.0 | 18.2 | 19.3 | 19.7 | 17.8 | 19.0 | 18.2 | 19.3 | 19.7 |
| | 4H | 18.0 | 19.2 | 18.4 | 19.5 | 19.9 | 18.0 | 19.2 | 18.4 | 19.5 | 19.9 |
| | 6H | 18.1 | 19.1 | 18.5 | 19.5 | 19.9 | 18.1 | 19.1 | 18.5 | 19.5 | 19.9 |
| | 8H | 18.1 | 19.1 | 18.5 | 19.4 | 19.9 | 18.1 | 19.1 | 18.5 | 19.4 | 19.9 |
| | 12H | 18.0 | 19.0 | 18.5 | 19.4 | 19.8 | 18.0 | 19.0 | 18.5 | 19.4 | 19.8 |
| 4H | 2H | 17.0 | 18.2 | 17.4 | 18.5 | 18.9 | 17.0 | 18.2 | 17.4 | 18.5 | 18.9 |
| | 3H | 18.4 | 19.3 | 18.8 | 19.7 | 20.1 | 18.4 | 19.3 | 18.8 | 19.7 | 20.1 |
| | 4H | 18.7 | 19.5 | 19.1 | 19.9 | 20.4 | 18.7 | 19.5 | 19.1 | 19.9 | 20.4 |
| | 6H | 18.7 | 19.5 | 19.2 | 19.9 | 20.4 | 18.7 | 19.5 | 19.2 | 19.9 | 20.4 |
| | 8H | 18.7 | 19.4 | 19.2 | 19.9 | 20.3 | 18.7 | 19.4 | 19.2 | 19.9 | 20.3 |
| | 12H | 18.7 | 19.3 | 19.2 | 19.8 | 20.3 | 18.7 | 19.3 | 19.2 | 19.8 | 20.3 |
| 8H | 4H | 18.7 | 19.4 | 19.2 | 19.8 | 20.3 | 18.7 | 19.4 | 19.2 | 19.8 | 20.3 |
| | 6H | 18.8 | 19.4 | 19.3 | 19.9 | 20.3 | 18.8 | 19.4 | 19.3 | 19.9 | 20.3 |
| | 8H | 18.8 | 19.3 | 19.3 | 19.8 | 20.3 | 18.8 | 19.3 | 19.3 | 19.8 | 20.3 |
| | 12H | 18.8 | 19.2 | 19.3 | 19.7 | 20.3 | 18.8 | 19.2 | 19.3 | 19.7 | 20.3 |
| 12H | 4H | 18.7 | 19.3 | 19.2 | 19.8 | 20.2 | 18.7 | 19.3 | 19.2 | 19.8 | 20.2 |
| | 6H | 18.8 | 19.3 | 19.3 | 19.7 | 20.3 | 18.8 | 19.3 | 19.3 | 19.7 | 20.3 |
| | 8H | 18.8 | 19.2 | 19.3 | 19.7 | 20.3 | 18.8 | 19.2 | 19.3 | 19.7 | 20.3 |

Corrected UGR values based on total output lumens

SHR = 1.0