

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

STT3PC 40L 30HK ND xx xx MW LN3ASO
Nom 3 inch dia Euro style tracklight with 90 CRI emitter and Solite lens

Test Number

SP-01456_1

Test Date

12/1/2022

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

Summary of Results

Power

| | |
|-------------|------|
| Input Watts | 35 W |
|-------------|------|

Lumen Output

| | |
|---------------|------------|
| Output Lumens | 2444 |
| Efficacy | 69.83 lm/W |

Luminous Dimensions

| | |
|-----------------|-------|
| 0° - 180° Size | -0.25 |
| 90° - 270° Size | -0.25 |
| Height | 0 |

Spacing Criterion

| | |
|---------------------------|------|
| Two luminaires, plane 0° | 0.46 |
| Two luminaires, plane 90° | 0.45 |
| Four luminaires | 0.5 |

Full Beam Angle

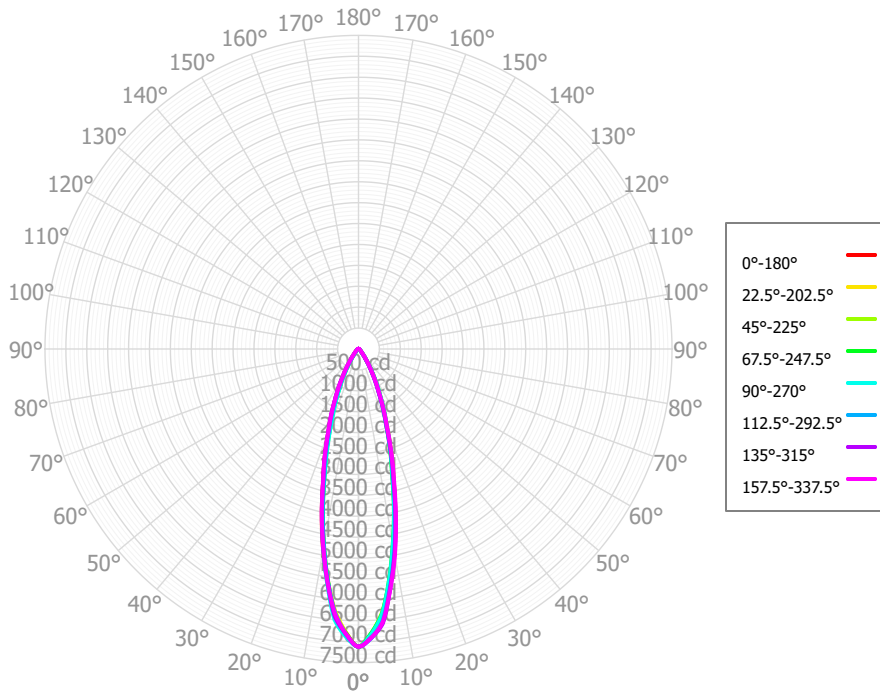
| | |
|------------|-----|
| 0° - 180° | 28° |
| 90° - 270° | 27° |

IES File Header Contents

| Keyword | Value |
|-----------|--|
| TEST | SP-01456_1 |
| TESTLAB | Spectrum Lighting Photometric lab, VLS-245-981 |
| MANUFAC | Spectrum Lighting |
| TESTDATE | 12/1/2022 |
| ISSUEDATE | 12/2/2022 |
| LUMCAT | STT3PC 40L 30HK ND xx xx MW LN3ASO |
| LUMINAIRE | Nom 3 inch dia Euro style tracklight with 90 CRI emitter and Solite lens |
| OTHER | Beam Angle: 28 deg |
| OTHER | Narrow Beam |
| OTHER | Reference project SL474.1 |
| LAMPCAT | N/A |
| LAMP | N/A |
| OTHER | Total luminaire wattage is approximate |
| OTHER | This report prepared by Spectrum Lighting |
| _CRI | 90 |
| _CCTMULT | 27HK x 0.96, 35HK x 1.05, 40HK x 1.08 |
| _LAMPMULT | 10L x 0.24, 20L x 0.49, 30L x 0.73 |

STT3PC 40L 30HK ND xx xx MW LN3ASO

Candela Polar Plot



Zonal Lumen Summary

| Zone | Lumens | % Fixture | Zone | Lumens | % Fixture |
|-----------------|---------|-----------|-------------------|---------|-----------|
| 0.00° - 10.00° | 564.65 | 23.10% | 90.00° - 100.00° | 2.04 | 0.08% |
| 10.00° - 20.00° | 887.44 | 36.31% | 100.00° - 110.00° | 1.98 | 0.08% |
| 20.00° - 30.00° | 566.62 | 23.18% | 100.00° - 120.00° | 4.00 | 0.16% |
| 30.00° - 40.00° | 226.25 | 9.26% | 120.00° - 130.00° | 1.87 | 0.08% |
| 40.00° - 50.00° | 80.96 | 3.31% | 130.00° - 140.00° | 1.73 | 0.07% |
| 50.00° - 60.00° | 49.60 | 2.03% | 140.00° - 150.00° | 1.58 | 0.06% |
| 60.00° - 70.00° | 33.36 | 1.37% | 150.00° - 160.00° | 1.19 | 0.05% |
| 70.00° - 80.00° | 16.69 | 0.68% | 160.00° - 170.00° | 0.70 | 0.03% |
| 80.00° - 90.00° | 5.10 | 0.21% | 170.00° - 180.00° | 0.24 | 0.01% |
| 0.00° - 90.00° | 2430.68 | 99.45% | 0.00° - 180.00° | 2444.04 | 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° | 7120.04 | 7120.04 | 7120.04 | 7120.04 | 7120.04 | 7120.04 | 7120.04 | 7120.04 | 7120.04 | 7120.04 | 7120.04 | 7120.04 | 7120.04 | 7120.04 | 7120.04 | 7120.04 | 7120.04 |
| 2.50° | 6882.58 | 6854.09 | 6827.46 | 6813.36 | 6839.49 | 6841.19 | 6828.98 | 6826.19 | 6809.78 | 6793.79 | 6808.29 | 6815.87 | 6890.84 | 6930.40 | 6915.20 | 6920.94 | 6882.58 |
| 5.00° | 6570.57 | 6460.51 | 6352.52 | 6379.75 | 6389.77 | 6356.88 | 6441.14 | 6375.66 | 6424.84 | 6316.78 | 6363.19 | 6411.89 | 6510.44 | 6546.49 | 6603.72 | 6571.59 | 6570.57 |
| 7.50° | 5764.36 | 5708.18 | 5632.67 | 5584.53 | 5597.15 | 5606.32 | 5645.42 | 5645.13 | 5651.36 | 5596.94 | 5606.15 | 5603.94 | 5690.79 | 5761.43 | 5788.71 | 5811.21 | 5764.36 |
| 10.00° | 4947.59 | 4910.32 | 4766.95 | 4726.57 | 4742.68 | 4758.60 | 4848.26 | 4835.54 | 4873.98 | 4766.36 | 4810.57 | 4785.26 | 4855.42 | 4934.33 | 4968.86 | 5012.78 | 4947.59 |
| 12.50° | 4084.49 | 4039.45 | 3944.90 | 3910.59 | 3931.15 | 3963.86 | 4048.51 | 4052.54 | 4057.70 | 3981.39 | 3966.77 | 3929.08 | 3965.50 | 4026.31 | 4091.68 | 4121.67 | 4084.49 |
| 15.00° | 3227.89 | 3251.83 | 3146.08 | 3100.63 | 3125.86 | 3186.31 | 3258.78 | 3275.94 | 3267.39 | 3214.79 | 3216.56 | 3129.68 | 3136.96 | 3203.04 | 3236.99 | 3296.02 | 3227.89 |
| 17.50° | 2595.99 | 2583.94 | 2519.40 | 2515.89 | 2546.31 | 2595.63 | 2681.42 | 2677.07 | 2672.34 | 2606.82 | 2571.79 | 2505.47 | 2492.81 | 2525.35 | 2584.03 | 2611.30 | 2595.99 |
| 20.00° | 1976.01 | 2018.90 | 1975.53 | 1956.00 | 1993.05 | 2058.43 | 2116.44 | 2115.05 | 2102.99 | 2055.95 | 2029.82 | 1940.33 | 1913.77 | 1943.57 | 1960.43 | 2009.01 | 1976.01 |
| 22.50° | 1564.03 | 1586.83 | 1562.01 | 1573.36 | 1603.04 | 1650.70 | 1713.15 | 1697.95 | 1687.12 | 1635.37 | 1592.21 | 1534.22 | 1505.65 | 1509.32 | 1539.79 | 1564.44 | 1564.03 |
| 25.00° | 1164.05 | 1217.15 | 1204.02 | 1204.74 | 1226.89 | 1274.63 | 1320.02 | 1305.58 | 1291.67 | 1255.63 | 1225.89 | 1164.54 | 1138.72 | 1140.11 | 1142.49 | 1177.78 | 1164.05 |
| 27.50° | 901.55 | 921.11 | 921.14 | 934.54 | 949.48 | 981.61 | 1025.46 | 1012.92 | 998.87 | 962.70 | 925.70 | 882.66 | 868.74 | 862.02 | 874.93 | 891.60 | 901.55 |
| 30.00° | 648.76 | 676.70 | 666.43 | 669.62 | 677.50 | 705.64 | 742.58 | 733.81 | 726.16 | 693.21 | 679.44 | 633.55 | 629.19 | 628.21 | 625.04 | 648.97 | 648.76 |
| 32.50° | 480.93 | 487.17 | 483.82 | 492.88 | 504.61 | 519.06 | 548.76 | 549.75 | 538.05 | 507.52 | 478.24 | 454.30 | 453.03 | 451.02 | 458.52 | 473.98 | 480.93 |
| 35.00° | 323.45 | 340.82 | 325.29 | 318.50 | 334.75 | 348.00 | 369.27 | 375.93 | 369.98 | 341.50 | 333.12 | 305.14 | 305.50 | 311.60 | 308.73 | 332.31 | 323.45 |
| 37.50° | 238.46 | 235.84 | 232.49 | 236.31 | 249.15 | 255.78 | 276.32 | 284.54 | 275.37 | 251.13 | 230.15 | 213.95 | 211.04 | 215.66 | 225.42 | 237.76 | 238.46 |
| 40.00° | 161.01 | 165.08 | 159.09 | 155.27 | 165.04 | 174.51 | 191.95 | 199.45 | 193.40 | 176.01 | 163.87 | 143.45 | 138.35 | 148.97 | 153.03 | 167.50 | 161.01 |
| 42.50° | 125.90 | 124.31 | 121.77 | 121.91 | 126.28 | 136.20 | 150.06 | 157.21 | 151.37 | 136.92 | 122.75 | 108.52 | 102.28 | 112.61 | 118.62 | 128.12 | 125.90 |
| 45.00° | 94.58 | 97.61 | 93.56 | 89.53 | 88.75 | 102.44 | 112.88 | 117.16 | 115.12 | 103.79 | 96.99 | 82.55 | 76.62 | 88.38 | 89.36 | 98.93 | 94.58 |
| 47.50° | 80.83 | 82.18 | 79.93 | 77.67 | 77.32 | 87.09 | 95.78 | 99.24 | 95.12 | 87.89 | 80.83 | 70.37 | 66.86 | 75.63 | 75.55 | 81.57 | 80.83 |
| 50.00° | 68.28 | 70.11 | 69.41 | 66.26 | 66.33 | 73.19 | 80.51 | 81.83 | 78.08 | 74.24 | 70.28 | 60.51 | 58.96 | 64.29 | 63.71 | 68.14 | 68.28 |
| 52.50° | 60.58 | 60.44 | 62.43 | 60.69 | 61.36 | 66.69 | 71.88 | 70.42 | 68.33 | 66.03 | 62.87 | 53.88 | 53.63 | 54.15 | 57.11 | 58.83 | 60.58 |
| 55.00° | 53.19 | 53.44 | 56.10 | 55.29 | 56.31 | 60.59 | 63.60 | 59.12 | 59.27 | 58.38 | 56.55 | 47.93 | 48.17 | 47.05 | 50.83 | 51.74 | 53.19 |
| 57.50° | 46.86 | 48.16 | 50.65 | 51.42 | 50.57 | 54.89 | 56.41 | 51.65 | 51.72 | 52.74 | 50.78 | 42.84 | 42.55 | 42.29 | 45.34 | 46.73 | 46.86 |
| 60.00° | 41.40 | 43.07 | 45.33 | 47.37 | 45.08 | 49.20 | 49.68 | 44.31 | 44.84 | 47.24 | 44.03 | 38.77 | 37.57 | 37.31 | 39.79 | 42.11 | 41.40 |
| 62.50° | 38.54 | 38.08 | 40.01 | 41.93 | 41.52 | 43.76 | 44.22 | 39.52 | 39.25 | 39.63 | 36.84 | 35.86 | 33.31 | 32.18 | 34.11 | 37.83 | 38.54 |
| 65.00° | 34.93 | 33.16 | 34.68 | 36.51 | 37.57 | 38.30 | 38.52 | 34.78 | 34.09 | 31.93 | 31.85 | 32.06 | 29.34 | 27.62 | 28.96 | 33.82 | 34.93 |
| 67.50° | 29.32 | 28.29 | 31.01 | 31.16 | 31.24 | 32.05 | 32.25 | 30.79 | 29.70 | 28.74 | 27.73 | 27.33 | 25.66 | 23.44 | 24.81 | 30.02 | 29.32 |
| 70.00° | 24.07 | 24.10 | 27.47 | 25.79 | 25.22 | 25.89 | 26.52 | 26.71 | 24.88 | 25.64 | 22.71 | 22.19 | 21.16 | 19.74 | 21.21 | 25.19 | 24.07 |
| 72.50° | 19.63 | 20.24 | 22.19 | 20.37 | 20.75 | 21.54 | 21.99 | 21.72 | 19.39 | 21.61 | 17.38 | 16.64 | 15.91 | 16.32 | 18.52 | 19.61 | 19.63 |
| 75.00° | 15.46 | 16.49 | 16.80 | 15.39 | 16.45 | 17.18 | 17.60 | 16.87 | 15.16 | 17.56 | 13.58 | 13.33 | 12.22 | 12.63 | 15.08 | 15.10 | 15.46 |
| 77.50° | 11.85 | 12.79 | 12.63 | 12.20 | 12.84 | 12.89 | 13.49 | 13.12 | 12.74 | 13.07 | 10.25 | 11.92 | 9.83 | 8.79 | 10.47 | 11.27 | 11.85 |
| 80.00° | 8.72 | 9.47 | 8.50 | 9.02 | 9.45 | 8.84 | 9.65 | 9.49 | 10.24 | 8.71 | 7.69 | 9.23 | 7.72 | 6.65 | 7.19 | 8.01 | 8.72 |
| 82.50° | 6.51 | 6.30 | 6.52 | 5.86 | 6.85 | 7.02 | 6.31 | 6.55 | 7.63 | 6.76 | 5.32 | 5.55 | 5.81 | 5.30 | 5.74 | 5.09 | 6.51 |
| 85.00° | 4.52 | 4.18 | 4.57 | 3.36 | 4.52 | 5.22 | 3.85 | 4.06 | 5.16 | 4.81 | 3.79 | 3.44 | 4.38 | 4.10 | 4.33 | 3.61 | 4.52 |
| 87.50° | 2.90 | 2.40 | 3.14 | 2.88 | 3.02 | 3.61 | 2.79 | 3.70 | 2.86 | 2.87 | 2.46 | 2.44 | 3.28 | 2.96 | 2.97 | 2.87 | 2.90 |
| 90.00° | 1.87 | 1.80 | 1.79 | 2.35 | 1.89 | 2.31 | 1.99 | 3.20 | 1.65 | 1.18 | 1.97 | 1.79 | 2.59 | 2.38 | 2.14 | 2.44 | 1.87 |
| 92.50° | 1.74 | 1.53 | 2.29 | 1.72 | 1.74 | 2.83 | 1.56 | 2.16 | 1.60 | 1.60 | 1.64 | 1.37 | 2.15 | 2.00 | 1.92 | 2.16 | 1.74 |
| 95.00° | 1.68 | 1.64 | 2.74 | 1.31 | 1.68 | 3.16 | 1.52 | 1.46 | 1.53 | 1.97 | 1.64 | 1.36 | 1.83 | 1.75 | 1.82 | 1.92 | 1.68 |
| 97.50° | 1.71 | 1.84 | 2.45 | 1.47 | 1.81 | 2.52 | 2.00 | 1.96 | 1.43 | 1.95 | 1.69 | 1.59 | 1.58 | 1.55 | 1.86 | 1.69 | 1.71 |
| 100.00° | 1.72 | 1.83 | 2.18 | 1.64 | 1.88 | 2.06 | 2.23 | 2.28 | 1.51 | 1.90 | 1.80 | 1.84 | 1.53 | 1.49 | 1.98 | 1.83 | 1.72 |

STT3PC 40L 30HK ND xx xx MW LN3ASO

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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% | 10% |
| | pw | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% |
| | 0 | 2906 | 2906 | 2906 | 2906 | 2837 | 2837 | 2837 | 2837 | 2708 | 2708 | 2708 | 2590 | 2590 | 2590 | 2482 | 2482 | 2431 |
| | 1 | 2781 | 2718 | 2662 | 2611 | 2720 | 2664 | 2614 | 2568 | 2564 | 2523 | 2487 | 2471 | 2439 | 2410 | 2385 | 2361 | 2339 |
| | 2 | 2661 | 2552 | 2462 | 2386 | 2607 | 2509 | 2428 | 2359 | 2429 | 2363 | 2305 | 2355 | 2301 | 2254 | 2287 | 2244 | 2199 |
| | 3 | 2547 | 2406 | 2297 | 2210 | 2499 | 2372 | 2272 | 2192 | 2308 | 2224 | 2155 | 2248 | 2179 | 2120 | 2192 | 2135 | 2094 |
| | 4 | 2442 | 2278 | 2159 | 2067 | 2399 | 2250 | 2140 | 2054 | 2198 | 2104 | 2029 | 2149 | 2069 | 2004 | 2104 | 2036 | 1998 |
| | 5 | 2343 | 2164 | 2039 | 1947 | 2305 | 2142 | 2025 | 1938 | 2098 | 1997 | 1920 | 2058 | 1971 | 1902 | 2020 | 1945 | 1910 |
| | 6 | 2252 | 2062 | 1935 | 1844 | 2218 | 2043 | 1924 | 1838 | 2007 | 1903 | 1824 | 1974 | 1882 | 1812 | 1942 | 1862 | 1830 |
| | 7 | 2166 | 1970 | 1843 | 1754 | 2136 | 1954 | 1835 | 1749 | 1924 | 1817 | 1740 | 1896 | 1801 | 1730 | 1869 | 1785 | 1755 |
| | 8 | 2087 | 1887 | 1761 | 1675 | 2059 | 1873 | 1754 | 1671 | 1847 | 1740 | 1664 | 1823 | 1727 | 1656 | 1800 | 1714 | 1687 |
| | 9 | 2012 | 1811 | 1687 | 1604 | 1987 | 1799 | 1681 | 1601 | 1777 | 1670 | 1595 | 1756 | 1659 | 1589 | 1736 | 1648 | 1624 |
| | 10 | 1943 | 1741 | 1620 | 1539 | 1920 | 1731 | 1615 | 1537 | 1712 | 1606 | 1533 | 1694 | 1597 | 1528 | 1676 | 1588 | 1565 |

Cone of Light

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 5.5 ft | 235.4 fc | 2.8 ft |
| 6.5 ft | 168.5 fc | 3.3 ft |
| 7.5 ft | 126.6 fc | 3.8 ft |
| 8.0 ft | 111.3 fc | 4.0 ft |
| 10.0 ft | 71.2 fc | 5.0 ft |
| 12.0 ft | 49.4 fc | 6.0 ft |
| 14.0 ft | 36.3 fc | 7.0 ft |
| 16.0 ft | 27.8 fc | 8.0 ft |
| 20.0 ft | 17.8 fc | 10.0 ft |
| 24.0 ft | 12.4 fc | 12.0 ft |
| 28.0 ft | 9.1 fc | 14.0 ft |

Average Luminaire Luminance [cd/m²]

| | 0.00° | 45.00° | 90.00° |
|---------------|---------|---------|---------|
| 0.00° | 1561286 | 1561286 | 1561286 |
| 45.00° | 29330 | 29013 | 27522 |
| 55.00° | 20335 | 21447 | 21528 |
| 65.00° | 18122 | 17996 | 19495 |
| 75.00° | 13101 | 14231 | 13935 |
| 85.00° | 11379 | 11496 | 11361 |

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 | 14.9 | 15.9 | 15.3 | 16.3 | 16.6 | 15.2 | 16.1 | 15.5 | 16.5 | 16.8 |
| | 3H | 16.5 | 17.3 | 16.9 | 17.7 | 18.1 | 16.6 | 17.4 | 17.0 | 17.8 | 18.2 |
| | 4H | 16.9 | 17.7 | 17.4 | 18.1 | 18.5 | 17.0 | 17.8 | 17.4 | 18.1 | 18.5 |
| | 6H | 17.2 | 18.0 | 17.6 | 18.3 | 18.7 | 17.2 | 18.0 | 17.7 | 18.4 | 18.8 |
| | 8H | 17.3 | 18.0 | 17.7 | 18.4 | 18.8 | 17.3 | 18.0 | 17.8 | 18.4 | 18.8 |
| | 12H | 17.4 | 18.0 | 17.8 | 18.4 | 18.9 | 17.4 | 18.0 | 17.8 | 18.4 | 18.9 |
| 4H | 2H | 15.3 | 16.2 | 15.8 | 16.5 | 16.9 | 15.7 | 16.5 | 16.1 | 16.8 | 17.2 |
| | 3H | 17.1 | 17.7 | 17.5 | 18.2 | 18.6 | 17.2 | 17.9 | 17.6 | 18.3 | 18.7 |
| | 4H | 17.6 | 18.2 | 18.1 | 18.7 | 19.1 | 17.7 | 18.3 | 18.2 | 18.7 | 19.2 |
| | 6H | 18.0 | 18.5 | 18.5 | 19.0 | 19.5 | 18.1 | 18.6 | 18.6 | 19.0 | 19.5 |
| | 8H | 18.1 | 18.6 | 18.6 | 19.1 | 19.6 | 18.2 | 18.7 | 18.7 | 19.1 | 19.6 |
| | 12H | 18.2 | 18.6 | 18.7 | 19.1 | 19.6 | 18.3 | 18.7 | 18.8 | 19.2 | 19.7 |
| 8H | 4H | 17.8 | 18.2 | 18.3 | 18.7 | 19.2 | 17.9 | 18.3 | 18.3 | 18.8 | 19.3 |
| | 6H | 18.3 | 18.6 | 18.8 | 19.1 | 19.6 | 18.3 | 18.7 | 18.9 | 19.2 | 19.7 |
| | 8H | 18.4 | 18.8 | 19.0 | 19.3 | 19.8 | 18.5 | 18.8 | 19.1 | 19.4 | 19.9 |
| | 12H | 18.6 | 18.9 | 19.1 | 19.4 | 20.0 | 18.7 | 19.0 | 19.2 | 19.5 | 20.1 |
| 12H | 4H | 17.7 | 18.2 | 18.2 | 18.6 | 19.1 | 17.8 | 18.2 | 18.3 | 18.7 | 19.2 |
| | 6H | 18.3 | 18.6 | 18.8 | 19.1 | 19.6 | 18.3 | 18.7 | 18.9 | 19.2 | 19.7 |
| | 8H | 18.5 | 18.8 | 19.0 | 19.3 | 19.9 | 18.6 | 18.9 | 19.1 | 19.4 | 20.0 |

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0