

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

CF06XXPC 40L 35K WD XX SO XX
Nom 6" diam Gamma Cylinder (damp location), SO lens

Test Number

SP-01289_M-40L

Test Date

5/2/2022

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

Summary of Results

Power

| | |
|-------------|------|
| Input Watts | 27 W |
|-------------|------|

Lumen Output

| | |
|---------------|-------------|
| Output Lumens | 2843 |
| Efficacy | 105.31 lm/W |

Luminous Dimensions

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

Spacing Criterion

| | |
|---------------------------|------|
| Two luminaires, plane 0° | 0.83 |
| Two luminaires, plane 90° | 0.8 |
| Four luminaires | 0.84 |

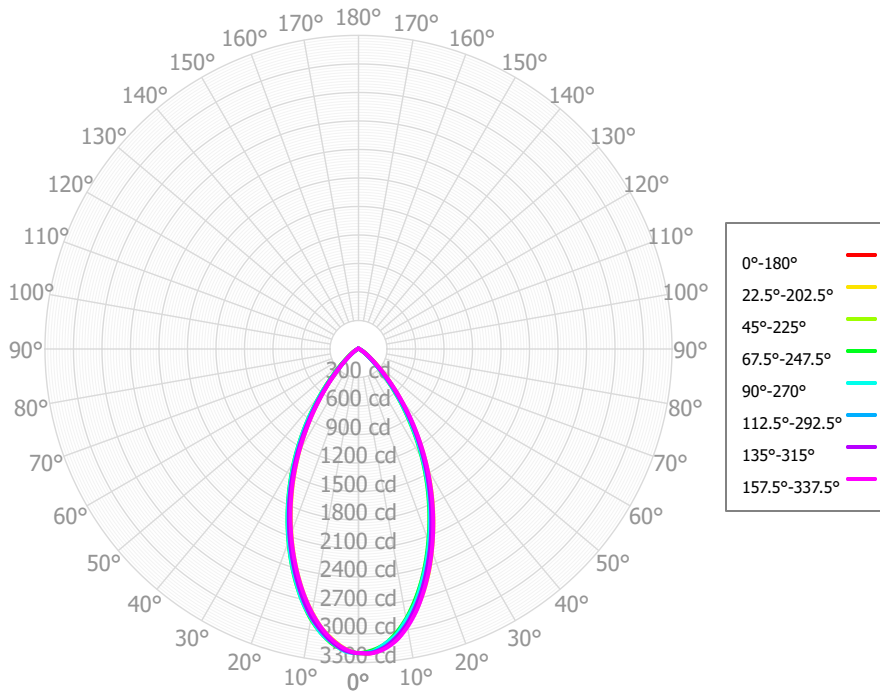
Full Beam Angle

| | |
|------------|-----|
| 0° - 180° | 54° |
| 90° - 270° | 54° |

IES File Header Contents

| Keyword | Value |
|-----------|--|
| TEST | SP-01289_M-40L |
| TESTLAB | Spectrum Lighting Photometric Lab, VLS-245-981 |
| MANUFAC | Spectrum Lighting |
| TESTDATE | 5/2/2022 |
| ISSUEDATE | 5/18/2022 |
| LUMCAT | CF06XXPC 40L 35K WD XX SO XX |
| LUMINAIRE | Nom 6" diam Gamma Cylinder (damp location), SO lens |
| OTHER | Beam angle: 54 deg |
| OTHER | Wide optic |
| OTHER | G7 converted to G6 |
| LAMPCAT | N/A |
| LAMP | N/A |
| OTHER | CCT Output Multipliers: 27K x 0.97, 30K x 0.98, 40K x 1.04, 27HK x 0.78, 30HK x 0.83 |
| OTHER | Total luminaire wattage is approximate |
| OTHER | This report prepared by Spectrum Lighting |
| _CRI | 80 |
| _CCTMULT | 27K x 0.97, 30K x 0.98, 40K x 1.04 |

Candela Polar Plot



Zonal Lumen Summary

| Zone | Lumens | % Fixture | Zone | Lumens | % Fixture |
|-----------------|---------|-----------|-------------------|---------|-----------|
| 0.00° - 10.00° | 294.41 | 10.35% | 90.00° - 100.00° | 2.10 | 0.07% |
| 10.00° - 20.00° | 708.02 | 24.90% | 100.00° - 110.00° | 2.06 | 0.07% |
| 20.00° - 30.00° | 799.13 | 28.10% | 100.00° - 120.00° | 3.96 | 0.14% |
| 30.00° - 40.00° | 595.28 | 20.93% | 120.00° - 130.00° | 1.70 | 0.06% |
| 40.00° - 50.00° | 279.25 | 9.82% | 130.00° - 140.00° | 1.67 | 0.06% |
| 50.00° - 60.00° | 98.70 | 3.47% | 140.00° - 150.00° | 1.47 | 0.05% |
| 60.00° - 70.00° | 37.08 | 1.30% | 150.00° - 160.00° | 1.09 | 0.04% |
| 70.00° - 80.00° | 14.60 | 0.51% | 160.00° - 170.00° | 0.67 | 0.02% |
| 80.00° - 90.00° | 4.13 | 0.15% | 170.00° - 180.00° | 0.23 | 0.01% |
| 0.00° - 90.00° | 2830.59 | 99.55% | 0.00° - 180.00° | 2843.48 | 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° | 3201.27 | 3201.27 | 3201.27 | 3201.27 | 3201.27 | 3201.27 | 3201.27 | 3201.27 | 3201.27 | 3201.27 | 3201.27 | 3201.27 | 3201.27 | 3201.27 | 3201.27 | 3201.27 | 3201.27 |
| 2.50° | 3203.66 | 3200.24 | 3188.03 | 3176.70 | 3190.92 | 3171.88 | 3177.62 | 3161.44 | 3170.63 | 3158.63 | 3174.63 | 3175.82 | 3186.43 | 3196.31 | 3201.08 | 3205.98 | 3203.66 |
| 5.00° | 3154.52 | 3153.88 | 3128.11 | 3121.22 | 3119.75 | 3100.78 | 3102.93 | 3079.53 | 3084.61 | 3072.59 | 3103.49 | 3118.58 | 3109.06 | 3148.34 | 3153.53 | 3168.00 | 3154.52 |
| 7.50° | 3082.81 | 3079.74 | 3038.38 | 3017.51 | 3034.09 | 2991.85 | 2993.38 | 2963.74 | 2978.16 | 2962.70 | 3004.22 | 3016.38 | 3017.75 | 3059.48 | 3060.68 | 3089.95 | 3082.81 |
| 10.00° | 2956.33 | 2953.98 | 2908.76 | 2883.15 | 2893.99 | 2852.82 | 2862.98 | 2817.89 | 2831.27 | 2813.31 | 2863.39 | 2886.93 | 2876.06 | 2935.75 | 2938.82 | 2969.51 | 2956.33 |
| 12.50° | 2808.46 | 2812.74 | 2757.76 | 2721.04 | 2743.42 | 2685.45 | 2696.93 | 2649.24 | 2670.91 | 2647.36 | 2704.66 | 2723.26 | 2725.07 | 2782.86 | 2778.36 | 2821.07 | 2808.46 |
| 15.00° | 2630.83 | 2644.66 | 2579.57 | 2542.69 | 2557.05 | 2503.17 | 2510.95 | 2465.52 | 2486.07 | 2461.15 | 2521.51 | 2546.07 | 2539.93 | 2606.62 | 2602.33 | 2645.23 | 2630.83 |
| 17.50° | 2442.66 | 2462.85 | 2387.78 | 2350.02 | 2366.84 | 2307.91 | 2316.23 | 2271.25 | 2294.60 | 2267.21 | 2330.84 | 2352.96 | 2349.40 | 2414.76 | 2407.14 | 2456.86 | 2442.66 |
| 20.00° | 2243.07 | 2259.14 | 2189.47 | 2149.64 | 2164.79 | 2108.91 | 2117.01 | 2072.19 | 2091.90 | 2065.23 | 2130.69 | 2155.25 | 2150.46 | 2211.34 | 2207.81 | 2257.00 | 2243.07 |
| 22.50° | 2039.76 | 2056.71 | 1988.18 | 1948.32 | 1963.22 | 1906.89 | 1915.42 | 1869.99 | 1889.23 | 1860.42 | 1928.80 | 1952.53 | 1950.37 | 2009.96 | 2003.76 | 2054.76 | 2039.76 |
| 25.00° | 1834.84 | 1856.18 | 1784.41 | 1746.51 | 1762.94 | 1703.98 | 1712.70 | 1665.60 | 1686.62 | 1655.88 | 1724.86 | 1750.20 | 1745.02 | 1809.98 | 1801.03 | 1850.52 | 1834.84 |
| 27.50° | 1629.45 | 1653.24 | 1579.59 | 1545.61 | 1562.25 | 1500.41 | 1506.33 | 1459.88 | 1481.44 | 1451.42 | 1521.31 | 1548.26 | 1539.08 | 1609.46 | 1599.72 | 1647.39 | 1629.45 |
| 30.00° | 1427.05 | 1446.99 | 1375.28 | 1345.11 | 1360.51 | 1297.77 | 1298.38 | 1253.09 | 1272.56 | 1249.05 | 1318.17 | 1348.42 | 1340.93 | 1408.60 | 1401.64 | 1445.15 | 1427.05 |
| 32.50° | 1225.43 | 1242.28 | 1171.15 | 1145.94 | 1161.05 | 1095.78 | 1096.49 | 1045.70 | 1072.33 | 1047.26 | 1121.22 | 1150.59 | 1143.46 | 1211.84 | 1206.75 | 1247.80 | 1225.43 |
| 35.00° | 1033.13 | 1039.52 | 979.26 | 947.34 | 966.87 | 904.79 | 897.02 | 857.67 | 883.76 | 866.29 | 930.55 | 960.36 | 954.18 | 1017.49 | 1016.86 | 1054.05 | 1033.13 |
| 37.50° | 843.03 | 851.95 | 791.64 | 770.11 | 781.62 | 720.87 | 720.34 | 679.68 | 709.53 | 690.71 | 754.94 | 776.79 | 765.48 | 833.36 | 831.55 | 871.70 | 843.03 |
| 40.00° | 679.52 | 682.52 | 631.47 | 601.17 | 615.38 | 561.09 | 552.03 | 530.14 | 553.19 | 546.99 | 593.64 | 613.05 | 604.28 | 654.75 | 661.95 | 697.09 | 679.52 |
| 42.50° | 521.52 | 533.47 | 480.12 | 464.73 | 465.35 | 415.84 | 421.61 | 394.11 | 420.38 | 410.54 | 458.19 | 465.36 | 444.42 | 504.61 | 505.83 | 546.09 | 521.52 |
| 45.00° | 403.08 | 406.92 | 368.43 | 339.72 | 347.44 | 307.70 | 303.76 | 295.69 | 314.73 | 316.10 | 345.45 | 348.44 | 337.46 | 368.83 | 378.60 | 409.89 | 403.08 |
| 47.50° | 291.74 | 304.33 | 268.18 | 253.97 | 248.42 | 220.12 | 226.09 | 213.87 | 232.05 | 230.06 | 256.99 | 254.90 | 232.17 | 271.53 | 274.29 | 306.10 | 291.74 |
| 50.00° | 222.68 | 226.23 | 201.94 | 180.90 | 183.74 | 161.73 | 160.66 | 160.25 | 174.24 | 177.21 | 188.26 | 187.77 | 179.33 | 191.99 | 198.76 | 221.31 | 222.68 |
| 52.50° | 160.29 | 16716 | 144.65 | 135.90 | 131.26 | 118.18 | 121.98 | 117.96 | 130.52 | 130.24 | 139.14 | 139.17 | 127.28 | 142.38 | 144.32 | 162.97 | 160.29 |
| 55.00° | 123.68 | 126.34 | 109.92 | 99.03 | 99.19 | 89.52 | 90.59 | 91.67 | 100.93 | 102.01 | 104.96 | 104.86 | 98.54 | 105.37 | 106.37 | 118.89 | 123.68 |
| 57.50° | 90.47 | 95.28 | 80.43 | 75.93 | 73.38 | 67.90 | 71.00 | 71.34 | 77.87 | 76.61 | 79.99 | 79.79 | 70.15 | 79.19 | 79.74 | 88.63 | 90.47 |
| 60.00° | 70.16 | 72.88 | 63.15 | 56.48 | 57.36 | 53.81 | 54.27 | 56.93 | 60.87 | 61.19 | 61.49 | 60.84 | 56.27 | 57.22 | 59.47 | 65.20 | 70.16 |
| 62.50° | 51.24 | 54.70 | 48.36 | 45.90 | 44.63 | 42.99 | 43.30 | 44.50 | 47.30 | 47.04 | 47.30 | 45.58 | 42.57 | 43.31 | 43.22 | 49.11 | 51.24 |
| 65.00° | 39.11 | 39.97 | 37.50 | 37.38 | 36.65 | 34.45 | 33.59 | 35.53 | 36.71 | 36.91 | 35.90 | 35.27 | 32.89 | 32.26 | 31.76 | 36.39 | 39.11 |
| 67.50° | 27.58 | 30.25 | 27.36 | 30.16 | 29.94 | 26.83 | 27.80 | 27.61 | 29.09 | 27.21 | 27.11 | 27.72 | 23.49 | 25.00 | 23.10 | 27.96 | 27.58 |
| 70.00° | 22.03 | 24.40 | 22.16 | 23.19 | 24.93 | 22.41 | 22.76 | 22.42 | 23.86 | 23.15 | 19.92 | 22.13 | 18.41 | 18.96 | 17.44 | 21.32 | 22.03 |
| 72.50° | 16.87 | 19.13 | 17.73 | 18.71 | 19.94 | 19.16 | 17.87 | 17.97 | 19.33 | 19.55 | 15.87 | 17.55 | 13.54 | 14.43 | 13.41 | 16.64 | 16.87 |
| 75.00° | 12.70 | 14.29 | 13.63 | 14.69 | 15.00 | 15.38 | 13.01 | 14.74 | 15.34 | 15.61 | 13.58 | 13.29 | 11.20 | 10.35 | 10.27 | 12.70 | 12.70 |
| 77.50° | 8.58 | 10.42 | 9.57 | 10.86 | 11.40 | 11.42 | 9.97 | 11.80 | 11.37 | 11.64 | 11.09 | 9.20 | 8.84 | 8.12 | 7.57 | 9.56 | 8.58 |
| 80.00° | 6.31 | 7.19 | 7.08 | 7.07 | 9.36 | 8.20 | 7.19 | 8.21 | 7.41 | 8.08 | 8.49 | 6.50 | 6.31 | 6.38 | 5.45 | 6.69 | 6.31 |
| 82.50° | 4.09 | 4.89 | 4.77 | 5.26 | 7.05 | 5.20 | 5.23 | 4.47 | 4.97 | 4.54 | 6.05 | 4.41 | 3.95 | 4.56 | 3.60 | 4.78 | 4.09 |
| 85.00° | 3.22 | 3.17 | 3.37 | 3.70 | 4.44 | 3.57 | 3.37 | 3.09 | 3.52 | 3.34 | 3.69 | 3.32 | 2.93 | 2.73 | 2.52 | 3.17 | 3.22 |
| 87.50° | 2.37 | 2.28 | 2.04 | 2.79 | 2.93 | 2.30 | 2.44 | 2.18 | 2.60 | 2.19 | 2.46 | 2.62 | 2.02 | 2.30 | 1.78 | 2.51 | 2.37 |
| 90.00° | 2.28 | 1.85 | 1.86 | 1.94 | 2.50 | 1.88 | 1.61 | 2.09 | 1.99 | 1.89 | 1.72 | 2.22 | 1.89 | 2.15 | 1.91 | 2.11 | 2.28 |
| 92.50° | 2.20 | 1.76 | 1.74 | 1.73 | 2.34 | 1.68 | 1.72 | 2.13 | 1.84 | 1.59 | 1.48 | 1.92 | 1.82 | 2.03 | 2.37 | 2.10 | 2.20 |
| 95.00° | 2.08 | 1.86 | 1.65 | 1.57 | 2.40 | 1.77 | 1.89 | 2.18 | 1.93 | 1.67 | 1.45 | 1.84 | 2.04 | 1.91 | 2.22 | 2.19 | 2.08 |
| 97.50° | 1.96 | 1.88 | 1.55 | 1.91 | 2.29 | 1.93 | 1.87 | 2.22 | 2.03 | 1.76 | 1.47 | 1.83 | 2.19 | 2.04 | 1.84 | 2.04 | 1.96 |
| 100.00° | 1.85 | 1.86 | 1.89 | 2.28 | 2.02 | 2.07 | 1.83 | 1.86 | 2.13 | 1.90 | 1.52 | 1.71 | 2.05 | 2.21 | 1.89 | 1.82 | 1.85 |

CF06XXPC 40L 35K WD XX SO XX

© Spectrum Lighting

Page 4 of 6

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% | 20% | 0% |
| | pcc | 80% | 80% | 80% | 80% | 70% | 70% | 70% | 70% | 50% | 50% | 50% | 30% | 30% | 30% | 10% | 10% | 10% | 0% |
| | pw | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 30% |
| | 0 | 3382 | 3382 | 3382 | 3382 | 3302 | 3302 | 3302 | 3302 | 3152 | 3152 | 3152 | 3015 | 3015 | 3015 | 2890 | 2890 | 2890 | 2831 |
| | 1 | 3210 | 3126 | 3050 | 2981 | 3138 | 3063 | 2994 | 2933 | 2945 | 2890 | 2840 | 2836 | 2793 | 2753 | 2736 | 2702 | 2671 | 2647 |
| | 2 | 3036 | 2887 | 2763 | 2660 | 2970 | 2836 | 2724 | 2629 | 2741 | 2648 | 2569 | 2653 | 2578 | 2511 | 2572 | 2511 | 2457 | 2460 |
| | 3 | 2869 | 2672 | 2520 | 2399 | 2809 | 2631 | 2491 | 2378 | 2553 | 2435 | 2338 | 2481 | 2383 | 2300 | 2415 | 2333 | 2262 | 2286 |
| | 4 | 2711 | 2480 | 2312 | 2183 | 2657 | 2447 | 2290 | 2169 | 2382 | 2248 | 2142 | 2323 | 2208 | 2115 | 2267 | 2170 | 2089 | 2128 |
| | 5 | 2563 | 2309 | 2132 | 2001 | 2514 | 2281 | 2115 | 1991 | 2227 | 2083 | 1972 | 2177 | 2052 | 1953 | 2131 | 2022 | 1934 | 1984 |
| | 6 | 2426 | 2156 | 1975 | 1845 | 2381 | 2132 | 1962 | 1838 | 2087 | 1936 | 1824 | 2045 | 1912 | 1810 | 2005 | 1888 | 1797 | 1854 |
| | 7 | 2298 | 2018 | 1837 | 1710 | 2258 | 1998 | 1826 | 1705 | 1960 | 1806 | 1694 | 1924 | 1787 | 1684 | 1890 | 1768 | 1674 | 1737 |
| | 8 | 2181 | 1895 | 1715 | 1591 | 2144 | 1877 | 1706 | 1587 | 1845 | 1690 | 1580 | 1814 | 1674 | 1572 | 1784 | 1659 | 1564 | 1631 |
| | 9 | 2072 | 1783 | 1606 | 1487 | 2039 | 1768 | 1599 | 1484 | 1740 | 1586 | 1478 | 1713 | 1573 | 1472 | 1688 | 1560 | 1466 | 1535 |
| | 10 | 1972 | 1683 | 1509 | 1394 | 1941 | 1670 | 1504 | 1392 | 1645 | 1492 | 1387 | 1621 | 1481 | 1383 | 1599 | 1471 | 1378 | 1448 |

Cone of Light

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 5.5 ft | 105.8 fc | 5.6 ft |
| 6.5 ft | 75.8 fc | 6.6 ft |
| 7.5 ft | 56.9 fc | 7.6 ft |
| 8.0 ft | 50.0 fc | 8.1 ft |
| 10.0 ft | 32.0 fc | 10.2 ft |
| 12.0 ft | 22.2 fc | 12.2 ft |
| 14.0 ft | 16.3 fc | 14.2 ft |
| 16.0 ft | 12.5 fc | 16.3 ft |
| 20.0 ft | 8.0 fc | 20.3 ft |
| 24.0 ft | 5.6 fc | 24.4 ft |
| 28.0 ft | 4.1 fc | 28.4 ft |

Average Luminaire Luminance [cd/m²]

| | 0.00° | 45.00° | 90.00° |
|---------------|--------|--------|--------|
| 0.00° | 175494 | 175494 | 175494 |
| 45.00° | 31249 | 28563 | 26936 |
| 55.00° | 11820 | 10505 | 9480 |
| 65.00° | 5073 | 4865 | 4755 |
| 75.00° | 2691 | 2887 | 3177 |
| 85.00° | 2024 | 2118 | 2795 |

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 | 14.0 | 15.1 | 14.4 | 15.4 | 15.7 | 12.5 | 13.6 | 12.9 | 13.9 | 14.2 |
| | 3H | 14.3 | 15.3 | 14.7 | 15.6 | 16.0 | 13.0 | 14.0 | 13.4 | 14.3 | 14.7 |
| | 4H | 14.4 | 15.3 | 14.8 | 15.7 | 16.1 | 13.2 | 14.1 | 13.6 | 14.4 | 14.8 |
| | 6H | 14.4 | 15.2 | 14.8 | 15.6 | 16.0 | 13.3 | 14.1 | 13.7 | 14.5 | 14.9 |
| | 8H | 14.4 | 15.1 | 14.8 | 15.6 | 16.0 | 13.3 | 14.1 | 13.7 | 14.5 | 14.9 |
| | 12H | 14.4 | 15.1 | 14.8 | 15.5 | 15.9 | 13.3 | 14.0 | 13.7 | 14.4 | 14.9 |
| 4H | 2H | 14.0 | 14.9 | 14.4 | 15.2 | 15.6 | 12.6 | 13.5 | 13.0 | 13.8 | 14.2 |
| | 3H | 14.4 | 15.1 | 14.9 | 15.6 | 16.0 | 13.3 | 14.0 | 13.7 | 14.4 | 14.8 |
| | 4H | 14.6 | 15.2 | 15.0 | 15.6 | 16.1 | 13.5 | 14.2 | 14.0 | 14.6 | 15.1 |
| | 6H | 14.6 | 15.2 | 15.1 | 15.6 | 16.1 | 13.7 | 14.2 | 14.2 | 14.7 | 15.2 |
| | 8H | 14.6 | 15.1 | 15.1 | 15.6 | 16.0 | 13.7 | 14.2 | 14.2 | 14.7 | 15.2 |
| | 12H | 14.6 | 15.0 | 15.1 | 15.5 | 16.0 | 13.8 | 14.2 | 14.3 | 14.7 | 15.2 |
| 8H | 4H | 14.5 | 15.0 | 15.0 | 15.5 | 15.9 | 13.5 | 14.0 | 14.0 | 14.5 | 15.0 |
| | 6H | 14.6 | 15.0 | 15.1 | 15.5 | 16.0 | 13.8 | 14.2 | 14.3 | 14.7 | 15.2 |
| | 8H | 14.6 | 15.0 | 15.1 | 15.5 | 16.0 | 13.8 | 14.2 | 14.4 | 14.7 | 15.2 |
| | 12H | 14.6 | 14.9 | 15.1 | 15.4 | 16.0 | 13.9 | 14.2 | 14.4 | 14.7 | 15.3 |
| 12H | 4H | 14.4 | 14.9 | 14.9 | 15.4 | 15.9 | 13.5 | 13.9 | 14.0 | 14.4 | 14.9 |
| | 6H | 14.5 | 14.9 | 15.1 | 15.4 | 15.9 | 13.7 | 14.1 | 14.3 | 14.6 | 15.1 |
| | 8H | 14.6 | 14.9 | 15.1 | 15.4 | 16.0 | 13.8 | 14.2 | 14.4 | 14.7 | 15.3 |

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0