

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
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Spectrum Lighting Photometric Lab

Luminaire

SGRTE8XT 30L 35K MD XX AR8466XT SG FG
N/A

Test Number

SP-01205_M-30L

Test Date

2/11/2021

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

Summary of Results

Power

| | |
|-------------|--------|
| Input Watts | 32.2 W |
|-------------|--------|

Lumen Output

| | |
|---------------|------------|
| Output Lumens | 1563 |
| Efficacy | 48.54 lm/W |

Luminous Dimensions

| | |
|-----------------|-------|
| 0° - 180° Size | -0.63 |
| 90° - 270° Size | -0.63 |
| Height | 0 |

Spacing Criterion

| | |
|---------------------------|------|
| Two luminaires, plane 0° | 0.72 |
| Two luminaires, plane 90° | 0.75 |
| Four luminaires | 0.78 |

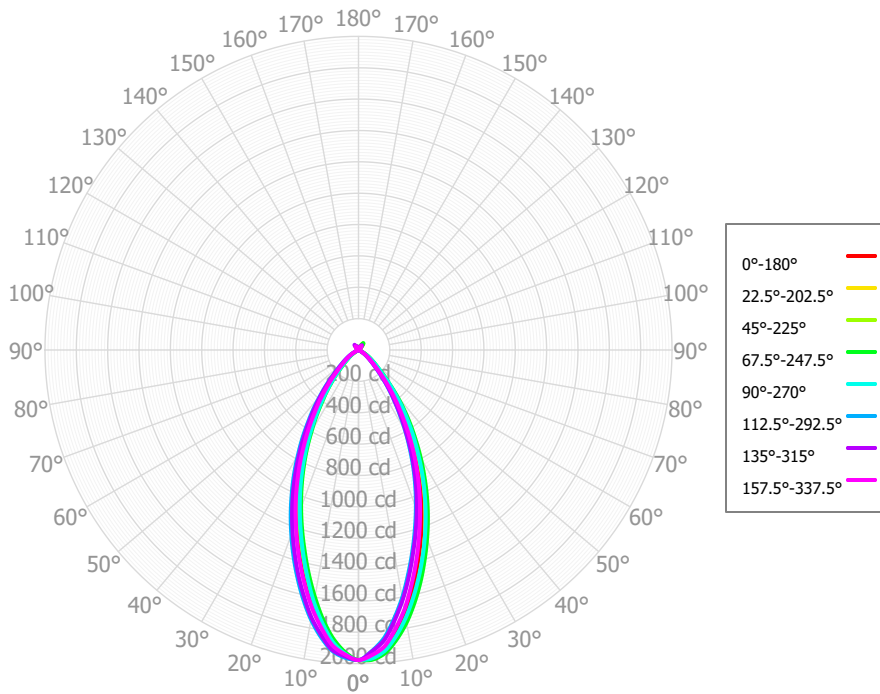
Full Beam Angle

| | |
|------------|-----|
| 0° - 180° | 47° |
| 90° - 270° | 47° |

IES File Header Contents

| Keyword | Value |
|-----------|--|
| TEST | SP-01205_M-30L |
| TESTLAB | Spectrum Lighting Photometric Lab, VLS-245-981 |
| MANUFAC | Spectrum Lighting |
| TESTDATE | 2/11/2021 |
| ISSUEDATE | 3/2/2021 |
| LUMCAT | SGRTE8XT 30L 35K MD XX AR8466XT SG FG |
| LUMINAIRE | N/A |
| OTHER | Beam Angle: 47 degrees |
| LAMPCAT | N/A |
| LAMP | 19mm LES |
| OTHER | LEDXT lumen output is the same for all available CCT's |
| OTHER | Total luminaire watts is approximate; includes 2 watts for thermal protector |
| OTHER | This report prepared by Spectrum Lighting, scaled from 50L |

Candela Polar Plot



Zonal Lumen Summary

| Zone | Lumens | % Fixture | Zone | Lumens | % Fixture |
|-----------------|---------|-----------|-------------------|---------|-----------|
| 0.00° - 10.00° | 175.90 | 11.25% | 90.00° - 100.00° | 0.98 | 0.06% |
| 10.00° - 20.00° | 394.75 | 25.26% | 100.00° - 110.00° | 0.97 | 0.06% |
| 20.00° - 30.00° | 419.19 | 26.82% | 100.00° - 120.00° | 2.56 | 0.16% |
| 30.00° - 40.00° | 300.89 | 19.25% | 120.00° - 130.00° | 4.77 | 0.31% |
| 40.00° - 50.00° | 148.87 | 9.52% | 130.00° - 140.00° | 10.58 | 0.68% |
| 50.00° - 60.00° | 62.54 | 4.00% | 140.00° - 150.00° | 17.27 | 1.10% |
| 60.00° - 70.00° | 10.73 | 0.69% | 150.00° - 160.00° | 9.33 | 0.60% |
| 70.00° - 80.00° | 1.01 | 0.06% | 160.00° - 170.00° | 2.50 | 0.16% |
| 80.00° - 90.00° | 1.01 | 0.06% | 170.00° - 180.00° | 0.17 | 0.01% |
| 0.00° - 90.00° | 1514.88 | 96.92% | 0.00° - 180.00° | 1563.04 | 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° | 1977.79 | 1977.79 | 1977.79 | 1977.79 | 1977.79 | 1977.79 | 1977.79 | 1977.79 | 1977.79 | 1977.79 | 1977.79 | 1977.79 | 1977.79 | 1977.79 | 1977.79 | 1977.79 | 1977.79 |
| 2.50° | 1962.88 | 1974.39 | 1973.96 | 1978.04 | 1969.22 | 1964.78 | 1956.78 | 1945.22 | 1951.09 | 1935.49 | 1937.87 | 1930.95 | 1941.13 | 1923.75 | 1926.37 | 1948.62 | 1962.88 |
| 5.00° | 1903.60 | 1931.12 | 1935.66 | 1941.35 | 1925.70 | 1926.00 | 1920.90 | 1893.06 | 1882.56 | 1855.45 | 1866.49 | 1848.61 | 1871.20 | 1847.80 | 1860.77 | 1898.64 | 1903.60 |
| 7.50° | 1816.35 | 1851.76 | 1851.92 | 1862.99 | 1839.96 | 1845.47 | 1831.77 | 1792.94 | 1785.69 | 1750.78 | 1752.82 | 1734.08 | 1759.86 | 1731.68 | 1745.10 | 1796.02 | 1816.35 |
| 10.00° | 1699.25 | 1747.62 | 1751.73 | 1765.89 | 1734.45 | 1745.72 | 1732.40 | 1682.45 | 1668.89 | 1626.30 | 1629.94 | 1600.51 | 1635.23 | 1604.48 | 1619.88 | 1682.83 | 1699.25 |
| 12.50° | 1573.65 | 1626.10 | 1632.05 | 1651.04 | 1615.52 | 1628.08 | 1609.32 | 1556.07 | 1541.74 | 1495.69 | 1493.46 | 1464.32 | 1494.80 | 1464.13 | 1482.13 | 1546.78 | 1573.65 |
| 15.00° | 1440.59 | 1499.64 | 1506.94 | 1529.56 | 1491.61 | 1503.92 | 1484.50 | 1427.32 | 1411.47 | 1360.99 | 1359.66 | 1326.87 | 1357.36 | 1328.21 | 1342.76 | 1411.34 | 1440.59 |
| 17.50° | 1308.37 | 1370.35 | 1381.31 | 1402.90 | 1367.20 | 1378.62 | 1356.43 | 1298.32 | 1279.87 | 1230.92 | 1229.09 | 1197.20 | 1222.85 | 1196.62 | 1213.73 | 1276.96 | 1308.37 |
| 20.00° | 1176.77 | 1242.77 | 1255.57 | 1278.73 | 1242.65 | 1252.98 | 1230.07 | 1169.29 | 1151.94 | 1103.36 | 1102.41 | 1070.53 | 1094.77 | 1070.14 | 1085.43 | 1146.31 | 1176.77 |
| 22.50° | 1048.99 | 1115.97 | 1129.40 | 1156.17 | 1119.24 | 1129.50 | 1106.30 | 1045.91 | 1025.21 | 980.11 | 979.60 | 948.72 | 971.94 | 947.84 | 963.53 | 1021.05 | 1048.99 |
| 25.00° | 923.49 | 991.31 | 1003.16 | 1033.23 | 996.08 | 1006.47 | 984.05 | 922.81 | 903.59 | 858.75 | 859.02 | 828.37 | 851.07 | 827.12 | 841.87 | 897.98 | 923.49 |
| 27.50° | 802.89 | 867.44 | 884.01 | 910.09 | 876.00 | 888.33 | 863.70 | 805.99 | 783.24 | 742.41 | 740.30 | 712.93 | 731.51 | 707.45 | 723.64 | 777.53 | 802.89 |
| 30.00° | 684.66 | 748.60 | 765.45 | 792.58 | 756.37 | 770.91 | 748.95 | 690.03 | 672.42 | 627.83 | 629.38 | 598.61 | 620.53 | 597.24 | 606.78 | 661.59 | 684.66 |
| 32.50° | 576.06 | 631.21 | 654.78 | 677.45 | 650.12 | 664.59 | 639.98 | 587.37 | 563.34 | 527.42 | 523.79 | 500.27 | 514.22 | 492.19 | 506.76 | 550.05 | 576.06 |
| 35.00° | 471.22 | 528.24 | 544.62 | 573.74 | 545.05 | 559.25 | 540.66 | 487.02 | 471.89 | 430.79 | 433.25 | 404.46 | 423.83 | 403.62 | 409.46 | 452.00 | 471.22 |
| 37.50° | 381.53 | 428.37 | 449.03 | 473.88 | 453.11 | 468.50 | 449.66 | 406.27 | 382.54 | 354.33 | 351.06 | 331.72 | 340.51 | 322.38 | 332.03 | 364.93 | 381.53 |
| 40.00° | 296.43 | 341.22 | 354.57 | 380.86 | 361.87 | 378.48 | 366.43 | 327.33 | 311.37 | 281.78 | 279.52 | 261.31 | 270.71 | 254.11 | 257.47 | 286.50 | 296.43 |
| 42.50° | 228.91 | 255.95 | 276.20 | 289.59 | 286.71 | 303.48 | 288.71 | 258.32 | 241.40 | 222.35 | 212.80 | 204.84 | 205.65 | 190.37 | 197.05 | 213.83 | 228.91 |
| 45.00° | 165.46 | 200.98 | 202.19 | 227.94 | 213.65 | 230.35 | 227.10 | 195.38 | 192.31 | 164.65 | 165.05 | 149.12 | 160.97 | 147.71 | 143.31 | 162.53 | 165.46 |
| 47.50° | 130.51 | 148.79 | 163.19 | 171.69 | 172.48 | 185.63 | 174.80 | 156.37 | 144.19 | 131.00 | 124.09 | 118.08 | 121.73 | 110.81 | 113.67 | 122.84 | 130.51 |
| 50.00° | 100.17 | 120.60 | 126.74 | 140.05 | 133.06 | 142.86 | 138.91 | 121.53 | 117.33 | 99.12 | 97.84 | 87.71 | 95.43 | 87.81 | 86.93 | 96.06 | 100.17 |
| 52.50° | 80.43 | 93.40 | 103.74 | 111.43 | 108.25 | 116.45 | 110.78 | 99.36 | 91.07 | 79.37 | 75.62 | 70.13 | 71.71 | 67.57 | 68.35 | 75.00 | 80.43 |
| 55.00° | 61.75 | 74.99 | 81.70 | 89.75 | 83.82 | 91.01 | 88.56 | 77.89 | 71.92 | 59.96 | 57.43 | 52.68 | 55.99 | 51.41 | 50.99 | 58.02 | 61.75 |
| 57.50° | 45.13 | 56.58 | 63.40 | 68.53 | 61.56 | 70.79 | 68.55 | 58.05 | 53.02 | 42.62 | 40.08 | 36.45 | 41.33 | 35.82 | 36.33 | 42.46 | 45.13 |
| 60.00° | 28.61 | 38.20 | 44.21 | 46.42 | 39.64 | 50.03 | 47.75 | 38.78 | 35.86 | 25.70 | 26.60 | 21.21 | 27.53 | 22.39 | 22.78 | 27.77 | 28.61 |
| 62.50° | 15.61 | 20.66 | 22.38 | 24.61 | 19.11 | 27.15 | 26.72 | 20.63 | 19.89 | 14.35 | 13.66 | 11.71 | 13.80 | 9.13 | 11.19 | 13.31 | 15.61 |
| 65.00° | 3.21 | 10.17 | 6.18 | 12.41 | 3.38 | 8.76 | 13.77 | 7.86 | 9.58 | 4.12 | 7.11 | 3.71 | 7.42 | 4.88 | 3.55 | 6.57 | 3.21 |
| 67.50° | 1.97 | 1.26 | 3.06 | 1.15 | 2.18 | 3.98 | 2.59 | 3.54 | 1.54 | 2.34 | 1.09 | 2.03 | 1.38 | 0.93 | 1.73 | 1.35 | 1.97 |
| 70.00° | 0.86 | 0.99 | 0.95 | 1.30 | 1.27 | 0.68 | 1.05 | 1.03 | 1.44 | 0.89 | 0.95 | 0.77 | 1.23 | 0.77 | 0.78 | 0.77 | 0.86 |
| 72.50° | 0.93 | 0.78 | 0.76 | 1.39 | 1.09 | 0.90 | 0.98 | 0.85 | 1.32 | 1.11 | 0.98 | 0.80 | 1.08 | 0.63 | 0.88 | 0.81 | 0.93 |
| 75.00° | 0.98 | 0.88 | 0.69 | 1.19 | 0.96 | 1.02 | 1.03 | 0.81 | 1.17 | 1.25 | 0.93 | 0.90 | 0.85 | 0.83 | 0.91 | 0.89 | 0.98 |
| 77.50° | 0.87 | 0.97 | 0.80 | 1.03 | 0.95 | 0.95 | 1.09 | 0.93 | 1.02 | 1.04 | 0.89 | 1.13 | 0.66 | 0.99 | 0.86 | 0.98 | 0.87 |
| 80.00° | 0.78 | 1.05 | 0.87 | 1.11 | 0.96 | 0.84 | 1.13 | 0.91 | 0.89 | 0.91 | 0.89 | 1.23 | 0.79 | 0.85 | 0.80 | 0.81 | 0.78 |
| 82.50° | 0.78 | 1.13 | 0.88 | 1.18 | 1.01 | 0.69 | 1.17 | 0.77 | 0.84 | 1.02 | 0.88 | 1.06 | 0.92 | 0.74 | 0.74 | 0.65 | 0.78 |
| 85.00° | 0.86 | 1.18 | 0.86 | 1.19 | 1.03 | 0.74 | 1.07 | 0.86 | 0.90 | 1.05 | 0.78 | 0.87 | 0.97 | 0.82 | 0.79 | 0.76 | 0.86 |
| 87.50° | 1.15 | 1.17 | 0.81 | 1.12 | 1.01 | 1.05 | 0.98 | 1.10 | 0.89 | 0.93 | 0.71 | 0.67 | 1.03 | 0.91 | 0.91 | 0.86 | 1.15 |
| 90.00° | 1.28 | 1.04 | 0.85 | 0.82 | 0.92 | 1.13 | 1.04 | 1.08 | 0.78 | 0.86 | 0.80 | 0.61 | 1.09 | 1.07 | 0.82 | 0.82 | 1.28 |
| 92.50° | 1.03 | 0.97 | 0.96 | 0.68 | 0.76 | 0.97 | 1.07 | 0.91 | 0.84 | 0.90 | 0.88 | 0.73 | 1.09 | 1.12 | 0.60 | 0.80 | 1.03 |
| 95.00° | 0.88 | 0.98 | 0.98 | 0.87 | 0.76 | 0.87 | 0.83 | 1.01 | 1.08 | 0.87 | 0.85 | 0.88 | 0.96 | 0.85 | 0.59 | 0.88 | 0.88 |
| 97.50° | 0.95 | 1.01 | 0.92 | 0.98 | 0.91 | 0.83 | 0.66 | 1.26 | 1.09 | 0.74 | 0.78 | 1.07 | 0.82 | 0.68 | 0.68 | 0.93 | 0.95 |
| 100.00° | 1.03 | 1.06 | 0.90 | 0.92 | 0.88 | 0.83 | 0.98 | 1.31 | 0.86 | 0.75 | 0.61 | 1.04 | 0.68 | 0.75 | 0.80 | 0.83 | 1.03 |
| 102.50° | 1.14 | 1.12 | 0.91 | 0.91 | 0.74 | 0.87 | 1.16 | 1.28 | 0.81 | 0.91 | 0.55 | 0.78 | 0.59 | 0.89 | 0.93 | 0.76 | 1.14 |
| 105.00° | 1.19 | 1.17 | 0.97 | 0.96 | 0.74 | 0.92 | 0.84 | 1.05 | 0.90 | 1.01 | 0.76 | 0.73 | 0.57 | 1.18 | 0.84 | 0.82 | 1.19 |
| 107.50° | 1.16 | 1.23 | 1.04 | 0.98 | 0.84 | 0.99 | 0.59 | 0.77 | 0.89 | 1.05 | 0.92 | 0.84 | 0.62 | 1.29 | 0.69 | 0.90 | 1.16 |
| 110.00° | 1.15 | 1.30 | 1.08 | 0.97 | 0.88 | 1.05 | 0.58 | 0.80 | 0.82 | 0.99 | 1.01 | 0.93 | 0.75 | 1.12 | 0.80 | 1.07 | 1.15 |
| 112.50° | 1.19 | 2.35 | 1.11 | 0.96 | 0.89 | 1.11 | 0.57 | 0.90 | 0.83 | 0.87 | 1.10 | 1.01 | 0.76 | 1.03 | 0.96 | 1.65 | 1.19 |

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 | 1849 | 1849 | 1849 | 1849 | 1801 | 1801 | 1801 | 1801 | 1710 | 1710 | 1710 | 1627 | 1627 | 1627 | 1551 | 1551 | 1515 |
| | 1 | 1757 | 1712 | 1671 | 1634 | 1713 | 1673 | 1636 | 1603 | 1601 | 1572 | 1545 | 1534 | 1512 | 1491 | 1473 | 1456 | 1439 |
| | 2 | 1663 | 1583 | 1516 | 1460 | 1624 | 1552 | 1491 | 1440 | 1493 | 1444 | 1401 | 1439 | 1399 | 1364 | 1389 | 1357 | 1329 |
| | 3 | 1573 | 1467 | 1385 | 1319 | 1537 | 1441 | 1366 | 1305 | 1393 | 1330 | 1278 | 1348 | 1296 | 1252 | 1306 | 1264 | 1227 |
| | 4 | 1487 | 1363 | 1272 | 1202 | 1454 | 1341 | 1257 | 1192 | 1301 | 1229 | 1173 | 1264 | 1203 | 1154 | 1229 | 1178 | 1135 |
| | 5 | 1407 | 1270 | 1174 | 1103 | 1377 | 1252 | 1162 | 1096 | 1218 | 1141 | 1081 | 1186 | 1120 | 1067 | 1157 | 1100 | 1054 |
| | 6 | 1332 | 1186 | 1088 | 1018 | 1305 | 1171 | 1079 | 1013 | 1142 | 1062 | 1002 | 1115 | 1045 | 991 | 1090 | 1029 | 981 |
| | 7 | 1263 | 1112 | 1013 | 945 | 1239 | 1099 | 1006 | 940 | 1074 | 992 | 932 | 1051 | 978 | 924 | 1029 | 965 | 916 |
| | 8 | 1199 | 1045 | 947 | 880 | 1177 | 1034 | 941 | 877 | 1012 | 930 | 870 | 992 | 918 | 864 | 973 | 907 | 858 |
| | 9 | 1141 | 984 | 889 | 824 | 1120 | 975 | 884 | 821 | 956 | 874 | 816 | 939 | 864 | 811 | 922 | 855 | 805 |
| | 10 | 1087 | 930 | 836 | 774 | 1068 | 921 | 832 | 772 | 905 | 824 | 767 | 890 | 815 | 763 | 875 | 808 | 759 |

Cone of Light

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 5.5 ft | 65.4 fc | 5.0 ft |
| 6.5 ft | 46.8 fc | 5.9 ft |
| 7.5 ft | 35.2 fc | 6.8 ft |
| 8.0 ft | 30.9 fc | 7.3 ft |
| 10.0 ft | 19.8 fc | 9.1 ft |
| 12.0 ft | 13.7 fc | 10.9 ft |
| 14.0 ft | 10.1 fc | 12.7 ft |
| 16.0 ft | 7.7 fc | 14.5 ft |
| 20.0 ft | 4.9 fc | 18.2 ft |
| 24.0 ft | 3.4 fc | 21.8 ft |
| 28.0 ft | 2.5 fc | 25.4 ft |

Average Luminaire Luminance [cd/m²]

| | 0.00° | 45.00° | 90.00° |
|--------|-------|--------|--------|
| 0.00° | 68293 | 68293 | 68293 |
| 45.00° | 8080 | 9874 | 10433 |
| 55.00° | 3717 | 4919 | 5046 |
| 65.00° | 262 | 505 | 276 |
| 75.00° | 131 | 92 | 128 |
| 85.00° | 339 | 341 | 407 |

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 | 10.0 | 11.0 | 10.4 | 11.4 | 11.8 | 10.8 | 11.9 | 11.3 | 12.3 | 12.7 |
| | 3H | 9.8 | 10.7 | 10.2 | 11.1 | 11.6 | 10.7 | 11.6 | 11.1 | 12.0 | 12.4 |
| | 4H | 9.7 | 10.5 | 10.2 | 11.0 | 11.4 | 10.6 | 11.4 | 11.0 | 11.8 | 12.3 |
| | 6H | 9.6 | 10.4 | 10.1 | 10.8 | 11.3 | 10.5 | 11.2 | 10.9 | 11.7 | 12.2 |
| | 8H | 9.6 | 10.3 | 10.0 | 10.7 | 11.2 | 10.4 | 11.2 | 10.9 | 11.6 | 12.1 |
| | 12H | 9.5 | 10.2 | 10.0 | 10.6 | 11.2 | 10.4 | 11.1 | 10.9 | 11.5 | 12.0 |
| 4H | 2H | 9.7 | 10.6 | 10.2 | 11.0 | 11.4 | 10.6 | 11.5 | 11.1 | 11.9 | 12.4 |
| | 3H | 9.5 | 10.2 | 10.0 | 10.7 | 11.2 | 10.5 | 11.1 | 10.9 | 11.6 | 12.1 |
| | 4H | 9.4 | 10.0 | 9.9 | 10.5 | 11.0 | 10.3 | 11.0 | 10.8 | 11.4 | 12.0 |
| | 6H | 9.3 | 9.9 | 9.9 | 10.4 | 10.9 | 10.3 | 10.8 | 10.8 | 11.3 | 11.8 |
| | 8H | 9.3 | 9.8 | 9.8 | 10.3 | 10.8 | 10.2 | 10.7 | 10.7 | 11.2 | 11.7 |
| | 12H | 9.2 | 9.6 | 9.8 | 10.2 | 10.7 | 10.1 | 10.6 | 10.7 | 11.1 | 11.7 |
| 8H | 4H | 9.3 | 9.7 | 9.8 | 10.3 | 10.8 | 10.2 | 10.7 | 10.7 | 11.2 | 11.7 |
| | 6H | 9.2 | 9.5 | 9.7 | 10.1 | 10.7 | 10.1 | 10.5 | 10.6 | 11.0 | 11.6 |
| | 8H | 9.1 | 9.4 | 9.7 | 10.0 | 10.6 | 10.0 | 10.4 | 10.6 | 10.9 | 11.5 |
| | 12H | 9.1 | 9.4 | 9.6 | 9.9 | 10.6 | 10.0 | 10.3 | 10.6 | 10.8 | 11.5 |
| 12H | 4H | 9.2 | 9.6 | 9.7 | 10.2 | 10.7 | 10.1 | 10.5 | 10.7 | 11.1 | 11.6 |
| | 6H | 9.1 | 9.4 | 9.7 | 10.0 | 10.6 | 10.0 | 10.4 | 10.6 | 10.9 | 11.5 |
| | 8H | 9.0 | 9.3 | 9.6 | 9.9 | 10.5 | 10.0 | 10.3 | 10.5 | 10.8 | 11.5 |

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0