

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

ALAT18GV 37L 35K xx MWI xx xx

Nom 18.4" diam reflector x 10.7" H, Retro Pendant decorative luminaire

Test Number

SP-00730_M-37L

Test Date

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

Summary of Results

Power

| | |
|-------------|------|
| Input Watts | 26 W |
|-------------|------|

Lumen Output

| | |
|---------------|-------------|
| Output Lumens | 2756 |
| Efficacy | 105.98 lm/W |

Luminous Dimensions

| | |
|-----------------|-------|
| 0° - 180° Size | -1.53 |
| 90° - 270° Size | -1.53 |
| Height | 0 |

Spacing Criterion

| | |
|---------------------------|------|
| Two luminaires, plane 0° | 1.25 |
| Two luminaires, plane 90° | 1.25 |
| Four luminaires | 1.38 |

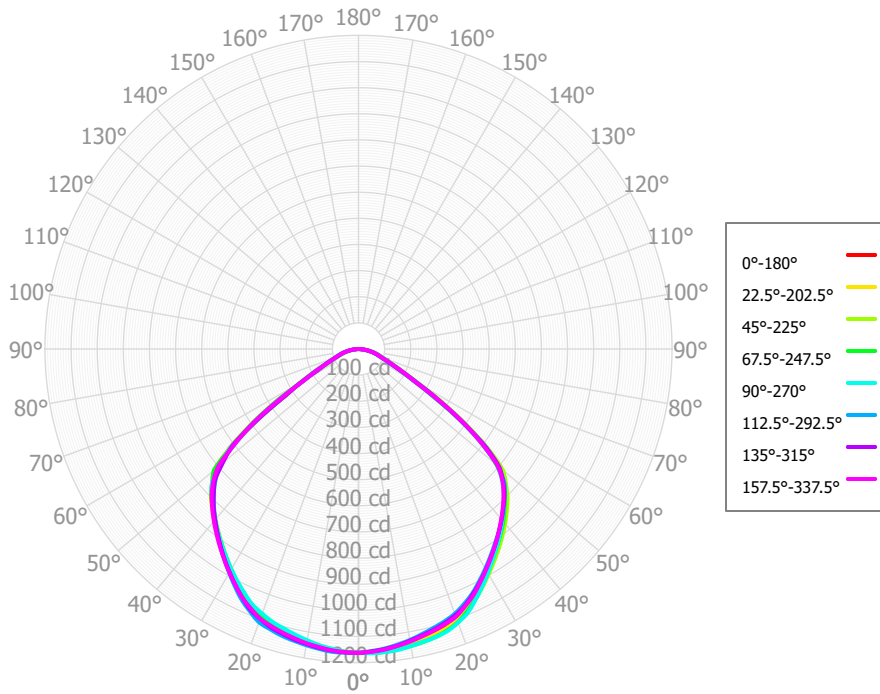
Full Beam Angle

| | |
|------------|------|
| 0° - 180° | 106° |
| 90° - 270° | 106° |

IES File Header Contents

| Keyword | Value |
|-----------|--|
| TEST | SP-00730_M-37L |
| TESTLAB | Spectrum Lighting Photometric Lab, VLS-245-981 |
| MANUFAC | Spectrum Lighting |
| ISSUEDATE | 10/30/2018 |
| UPDATE | 6/8/2018 |
| LUMCAT | ALAT18GV 37L 35K xx MWI xx xx |
| LUMINAIRE | Nom 18.4" diam reflector x 10.7" H, Retro Pendant decorative luminaire |
| OTHER | Matte white interior finish |
| OTHER | Platinum outside finish |
| OTHER | 4" Low profile frosted glass dome |
| OTHER | Beam Angle: 104.4 deg |
| LAMPCAT | N/A, Gen3 |
| LAMP | N/A |
| OTHER | Total Luminaire watts is approximate |
| OTHER | CCT multipliers: 27K x 0.971, 30K x 0.985, 40K x 1.03 |
| OTHER | This report generated by Spectrum Lighting, scaled from 55L |
| _CRI | 85+ |

Candela Polar Plot



Zonal Lumen Summary

| Zone | Lumens | % Fixture | Zone | Lumens | % Fixture |
|-----------------|---------|-----------|-------------------|---------|-----------|
| 0.00° - 10.00° | 111.62 | 4.05% | 90.00° - 100.00° | 0.05 | 0.00% |
| 10.00° - 20.00° | 316.99 | 11.50% | 100.00° - 110.00° | 0.00 | 0.00% |
| 20.00° - 30.00° | 480.90 | 17.45% | 100.00° - 120.00° | 0.00 | 0.00% |
| 30.00° - 40.00° | 575.81 | 20.90% | 120.00° - 130.00° | 0.00 | 0.00% |
| 40.00° - 50.00° | 607.90 | 22.06% | 130.00° - 140.00° | 0.00 | 0.00% |
| 50.00° - 60.00° | 425.73 | 15.45% | 140.00° - 150.00° | 0.00 | 0.00% |
| 60.00° - 70.00° | 150.89 | 5.48% | 150.00° - 160.00° | 0.00 | 0.00% |
| 70.00° - 80.00° | 69.03 | 2.51% | 160.00° - 170.00° | 0.00 | 0.00% |
| 80.00° - 90.00° | 16.64 | 0.60% | 170.00° - 180.00° | 0.00 | 0.00% |
| 0.00° - 90.00° | 2755.51 | 100.00% | 0.00° - 180.00° | 2755.56 | 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° | 1162.99 | 1162.99 | 1162.99 | 1162.99 | 1162.99 | 1162.99 | 1162.99 | 1162.99 | 1162.99 | 1162.99 | 1162.99 | 1162.99 | 1162.99 | 1162.99 | 1162.99 | 1162.99 | 1162.99 |
| 2.50° | 1161.08 | 1160.94 | 1163.91 | 1164.88 | 1165.66 | 1163.41 | 1162.68 | 1161.26 | 1161.24 | 1160.52 | 1159.40 | 1160.78 | 1160.07 | 1157.20 | 1158.93 | 1159.85 | 1161.08 |
| 5.00° | 1155.50 | 1157.48 | 1162.38 | 1163.81 | 1164.14 | 1163.22 | 1159.21 | 1157.89 | 1155.73 | 1155.43 | 1153.04 | 1155.71 | 1152.32 | 1150.96 | 1152.81 | 1155.07 | 1155.50 |
| 7.50° | 1149.15 | 1152.05 | 1158.49 | 1159.20 | 1161.68 | 1157.76 | 1153.82 | 1150.87 | 1148.64 | 1148.17 | 1144.43 | 1145.58 | 1143.87 | 1141.40 | 1144.98 | 1146.12 | 1149.15 |
| 10.00° | 1140.97 | 1145.99 | 1151.97 | 1154.28 | 1154.81 | 1151.33 | 1146.58 | 1143.74 | 1139.72 | 1139.22 | 1134.36 | 1134.07 | 1132.06 | 1131.13 | 1133.98 | 1137.07 | 1140.97 |
| 12.50° | 1132.96 | 1139.30 | 1145.76 | 1148.60 | 1147.97 | 1143.80 | 1138.63 | 1133.89 | 1130.27 | 1128.69 | 1123.32 | 1122.03 | 1119.83 | 1118.41 | 1123.10 | 1126.56 | 1132.96 |
| 15.00° | 1125.35 | 1130.82 | 1139.85 | 1141.07 | 1141.29 | 1136.10 | 1128.18 | 1123.91 | 1118.67 | 1117.06 | 1111.06 | 1109.87 | 1107.49 | 1105.74 | 1112.41 | 1115.93 | 1125.35 |
| 17.50° | 1114.87 | 1120.74 | 1128.87 | 1129.45 | 1132.07 | 1124.78 | 1116.87 | 1111.98 | 1106.52 | 1103.21 | 1098.04 | 1097.57 | 1095.13 | 1093.21 | 1099.76 | 1104.02 | 1114.87 |
| 20.00° | 1098.83 | 1103.41 | 1113.28 | 1112.84 | 1114.29 | 1113.01 | 1099.59 | 1099.13 | 1088.67 | 1087.97 | 1080.51 | 1085.23 | 1077.64 | 1078.10 | 1084.13 | 1090.73 | 1098.83 |
| 22.50° | 1078.30 | 1080.19 | 1089.42 | 1086.43 | 1092.63 | 1086.57 | 1080.53 | 1075.46 | 1069.56 | 1066.73 | 1060.44 | 1062.51 | 1059.81 | 1056.13 | 1063.36 | 1065.99 | 1078.30 |
| 25.00° | 1049.96 | 1052.28 | 1058.68 | 1056.92 | 1059.17 | 1058.79 | 1051.16 | 1050.99 | 1041.91 | 1042.03 | 1034.07 | 1038.00 | 1031.68 | 1031.67 | 1035.43 | 1040.24 | 1049.96 |
| 27.50° | 1019.99 | 1020.88 | 1027.38 | 1021.79 | 1025.26 | 1024.45 | 1019.06 | 1019.64 | 1012.71 | 1013.29 | 1004.55 | 1007.09 | 1003.13 | 1001.30 | 1006.08 | 1007.96 | 1019.99 |
| 30.00° | 987.45 | 989.65 | 995.67 | 987.59 | 990.14 | 989.65 | 986.48 | 988.21 | 981.24 | 982.47 | 973.63 | 975.28 | 972.95 | 970.82 | 974.90 | 975.83 | 987.45 |
| 32.50° | 955.61 | 958.54 | 964.85 | 954.90 | 955.90 | 955.63 | 953.80 | 956.24 | 949.45 | 951.49 | 942.06 | 944.47 | 942.75 | 940.13 | 944.02 | 944.52 | 955.61 |
| 35.00° | 924.77 | 927.17 | 934.65 | 923.31 | 923.70 | 921.65 | 920.40 | 924.32 | 918.81 | 920.44 | 911.42 | 913.78 | 912.89 | 910.20 | 913.49 | 913.20 | 924.77 |
| 37.50° | 893.31 | 895.66 | 903.79 | 893.37 | 890.94 | 887.69 | 886.86 | 892.71 | 888.32 | 889.86 | 881.15 | 884.16 | 883.03 | 881.72 | 882.71 | 881.81 | 893.31 |
| 40.00° | 861.03 | 863.62 | 872.53 | 861.61 | 856.99 | 853.73 | 853.77 | 860.94 | 857.46 | 859.49 | 851.17 | 854.64 | 853.29 | 852.82 | 851.67 | 850.25 | 861.03 |
| 42.50° | 828.21 | 831.29 | 839.84 | 827.40 | 822.43 | 818.62 | 820.75 | 828.42 | 826.57 | 829.09 | 821.30 | 825.58 | 823.55 | 823.19 | 820.63 | 818.07 | 828.21 |
| 45.00° | 794.76 | 796.50 | 806.35 | 790.98 | 786.72 | 783.35 | 783.51 | 794.61 | 792.65 | 798.68 | 790.19 | 796.55 | 793.86 | 791.63 | 789.58 | 784.81 | 794.76 |
| 47.50° | 754.62 | 760.48 | 765.53 | 751.87 | 745.40 | 742.65 | 745.73 | 755.41 | 758.55 | 760.42 | 758.68 | 759.31 | 761.02 | 757.07 | 750.36 | 747.77 | 754.62 |
| 50.00° | 707.26 | 692.13 | 720.95 | 689.70 | 694.55 | 698.33 | 678.35 | 701.77 | 689.58 | 719.63 | 691.40 | 721.83 | 691.91 | 695.23 | 704.07 | 695.27 | 707.26 |
| 52.50° | 616.62 | 609.50 | 620.99 | 601.91 | 611.92 | 594.65 | 608.04 | 596.85 | 619.22 | 618.83 | 614.13 | 607.81 | 614.91 | 594.31 | 610.44 | 596.06 | 616.62 |
| 55.00° | 483.80 | 482.75 | 495.76 | 488.93 | 479.30 | 489.32 | 470.59 | 485.05 | 474.08 | 500.59 | 481.72 | 493.14 | 468.58 | 478.19 | 479.40 | 488.45 | 483.80 |
| 57.50° | 366.11 | 338.48 | 377.23 | 350.37 | 360.75 | 364.02 | 328.24 | 352.11 | 328.95 | 378.04 | 336.18 | 365.59 | 330.30 | 342.50 | 362.96 | 358.62 | 366.11 |
| 60.00° | 261.93 | 250.77 | 261.39 | 251.86 | 262.10 | 246.16 | 250.57 | 240.03 | 250.15 | 254.42 | 249.97 | 241.21 | 248.57 | 241.65 | 257.03 | 250.01 | 261.93 |
| 62.50° | 192.30 | 183.13 | 196.93 | 190.00 | 189.66 | 193.80 | 175.75 | 185.97 | 172.78 | 191.50 | 176.22 | 187.82 | 173.74 | 181.24 | 188.55 | 192.54 | 192.30 |
| 65.00° | 150.42 | 144.42 | 151.11 | 146.68 | 150.32 | 144.86 | 141.75 | 139.34 | 138.18 | 141.60 | 137.06 | 136.21 | 137.85 | 137.21 | 144.16 | 145.06 | 150.42 |
| 67.50° | 120.49 | 113.00 | 122.48 | 116.49 | 119.83 | 118.14 | 109.38 | 110.60 | 105.25 | 112.48 | 103.89 | 110.12 | 105.52 | 108.47 | 114.72 | 115.27 | 120.49 |
| 70.00° | 96.76 | 95.43 | 98.43 | 97.42 | 96.58 | 94.69 | 91.74 | 88.23 | 87.41 | 86.98 | 86.86 | 86.30 | 86.97 | 89.54 | 91.70 | 94.37 | 96.76 |
| 72.50° | 82.19 | 79.98 | 85.13 | 81.99 | 83.37 | 81.62 | 75.78 | 75.66 | 71.74 | 74.86 | 71.82 | 73.57 | 71.92 | 74.85 | 78.96 | 80.13 | 82.19 |
| 75.00° | 68.99 | 67.91 | 71.30 | 69.58 | 71.42 | 68.76 | 64.17 | 63.00 | 61.00 | 63.25 | 60.90 | 61.74 | 62.04 | 63.33 | 66.29 | 67.08 | 68.99 |
| 77.50° | 56.77 | 53.20 | 57.01 | 55.02 | 57.56 | 56.10 | 50.93 | 50.44 | 49.35 | 51.72 | 49.65 | 51.05 | 50.10 | 50.77 | 52.91 | 53.87 | 56.77 |
| 80.00° | 43.12 | 37.80 | 42.87 | 39.71 | 42.63 | 41.78 | 37.33 | 39.16 | 37.15 | 39.87 | 37.89 | 38.52 | 37.27 | 37.31 | 39.39 | 40.08 | 43.12 |
| 82.50° | 27.70 | 23.14 | 28.20 | 25.34 | 28.71 | 27.39 | 24.70 | 24.75 | 24.49 | 27.31 | 24.55 | 25.61 | 23.83 | 23.73 | 27.12 | 25.57 | 27.70 |
| 85.00° | 13.41 | 9.92 | 13.96 | 11.36 | 14.43 | 14.18 | 10.50 | 12.15 | 11.00 | 14.49 | 12.43 | 13.35 | 10.71 | 11.13 | 14.14 | 12.45 | 13.41 |
| 87.50° | 3.28 | 1.48 | 3.24 | 2.09 | 3.54 | 4.22 | 2.10 | 3.46 | 3.07 | 5.29 | 2.48 | 4.19 | 2.63 | 2.39 | 3.91 | 2.30 | 3.28 |
| 90.00° | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.63 | 0.56 | 0.79 | 0.70 | 0.75 | 0.72 | 0.60 | 0.92 | 0.00 | 0.00 | 0.00 | 0.00 |
| 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 |

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 | 3280 | 3280 | 3280 | 3280 | 3204 | 3204 | 3204 | 3204 | 3062 | 3062 | 3062 | 2931 | 2931 | 2931 | 2812 | 2812 | 2756 |
| | 1 | 3050 | 2941 | 2843 | 2754 | 2978 | 2879 | 2790 | 2710 | 2764 | 2692 | 2625 | 2659 | 2600 | 2546 | 2561 | 2514 | 2462 |
| | 2 | 2812 | 2618 | 2457 | 2322 | 2744 | 2567 | 2420 | 2295 | 2472 | 2349 | 2242 | 2385 | 2282 | 2192 | 2304 | 2220 | 2144 |
| | 3 | 2591 | 2336 | 2138 | 1981 | 2526 | 2293 | 2111 | 1963 | 2214 | 2058 | 1930 | 2141 | 2008 | 1897 | 2073 | 1961 | 1866 |
| | 4 | 2389 | 2093 | 1876 | 1710 | 2329 | 2057 | 1855 | 1698 | 1991 | 1815 | 1676 | 1929 | 1777 | 1654 | 1871 | 1741 | 1633 |
| | 5 | 2208 | 1884 | 1659 | 1492 | 2153 | 1855 | 1643 | 1484 | 1798 | 1612 | 1469 | 1746 | 1582 | 1453 | 1697 | 1554 | 1439 |
| | 6 | 2045 | 1706 | 1478 | 1314 | 1995 | 1680 | 1465 | 1309 | 1633 | 1441 | 1298 | 1588 | 1417 | 1287 | 1546 | 1395 | 1277 |
| | 7 | 1900 | 1552 | 1326 | 1168 | 1855 | 1531 | 1316 | 1164 | 1490 | 1297 | 1156 | 1451 | 1278 | 1148 | 1415 | 1260 | 1141 |
| | 8 | 1771 | 1420 | 1198 | 1047 | 1730 | 1401 | 1190 | 1044 | 1366 | 1174 | 1038 | 1333 | 1159 | 1032 | 1302 | 1144 | 1026 |
| | 9 | 1656 | 1305 | 1090 | 944 | 1618 | 1289 | 1083 | 942 | 1258 | 1070 | 938 | 1230 | 1057 | 933 | 1202 | 1045 | 929 |
| | 10 | 1553 | 1205 | 997 | 858 | 1519 | 1191 | 991 | 856 | 1164 | 980 | 853 | 1139 | 969 | 849 | 1116 | 959 | 846 |

Cone of Light

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 5.5 ft | 38.4 fc | 14.7 ft |
| 6.5 ft | 27.5 fc | 17.3 ft |
| 7.5 ft | 20.7 fc | 20.0 ft |
| 8.0 ft | 18.2 fc | 21.3 ft |
| 10.0 ft | 11.6 fc | 26.7 ft |
| 12.0 ft | 8.1 fc | 32.0 ft |
| 14.0 ft | 5.9 fc | 37.3 ft |
| 16.0 ft | 4.5 fc | 42.7 ft |
| 20.0 ft | 2.9 fc | 53.3 ft |
| 24.0 ft | 2.0 fc | 64.0 ft |
| 28.0 ft | 1.5 fc | 74.7 ft |

Average Luminaire Luminance [cd/m²]

| | 0.00° | 45.00° | 90.00° |
|---------------|-------|--------|--------|
| 0.00° | 6809 | 6809 | 6809 |
| 45.00° | 6580 | 6676 | 6514 |
| 55.00° | 4938 | 5060 | 4892 |
| 65.00° | 2084 | 2093 | 2082 |
| 75.00° | 1561 | 1613 | 1615 |
| 85.00° | 901 | 937 | 969 |

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 | 15.2 | 16.7 | 15.5 | 17.0 | 17.3 | 15.3 | 16.8 | 15.7 | 17.2 | 17.5 |
| | 3H | 15.7 | 17.0 | 16.0 | 17.3 | 17.7 | 15.8 | 17.1 | 16.1 | 17.4 | 17.8 |
| | 4H | 15.9 | 17.1 | 16.3 | 17.5 | 17.8 | 15.9 | 17.2 | 16.3 | 17.5 | 17.9 |
| | 6H | 16.1 | 17.2 | 16.5 | 17.6 | 18.0 | 16.1 | 17.3 | 16.5 | 17.6 | 18.0 |
| | 8H | 16.1 | 17.2 | 16.5 | 17.6 | 18.0 | 16.1 | 17.2 | 16.6 | 17.6 | 18.0 |
| | 12H | 16.1 | 17.2 | 16.5 | 17.5 | 18.0 | 16.2 | 17.2 | 16.6 | 17.6 | 18.0 |
| 4H | 2H | 15.3 | 16.5 | 15.7 | 16.9 | 17.3 | 15.4 | 16.7 | 15.8 | 17.0 | 17.4 |
| | 3H | 15.9 | 17.0 | 16.4 | 17.4 | 17.8 | 16.0 | 17.0 | 16.4 | 17.4 | 17.8 |
| | 4H | 16.3 | 17.2 | 16.7 | 17.6 | 18.0 | 16.3 | 17.2 | 16.7 | 17.6 | 18.0 |
| | 6H | 16.5 | 17.3 | 17.0 | 17.8 | 18.2 | 16.5 | 17.3 | 17.0 | 17.8 | 18.2 |
| | 8H | 16.6 | 17.3 | 17.1 | 17.8 | 18.3 | 16.6 | 17.3 | 17.1 | 17.8 | 18.2 |
| | 12H | 16.6 | 17.3 | 17.1 | 17.8 | 18.2 | 16.6 | 17.3 | 17.1 | 17.8 | 18.2 |
| 8H | 4H | 16.3 | 17.1 | 16.8 | 17.5 | 18.0 | 16.3 | 17.1 | 16.8 | 17.5 | 18.0 |
| | 6H | 16.7 | 17.3 | 17.2 | 17.8 | 18.3 | 16.7 | 17.3 | 17.2 | 17.8 | 18.2 |
| | 8H | 16.8 | 17.3 | 17.3 | 17.9 | 18.3 | 16.8 | 17.3 | 17.3 | 17.8 | 18.3 |
| | 12H | 16.8 | 17.3 | 17.4 | 17.8 | 18.4 | 16.8 | 17.3 | 17.3 | 17.8 | 18.4 |
| 12H | 4H | 16.3 | 17.0 | 16.8 | 17.5 | 17.9 | 16.3 | 17.0 | 16.8 | 17.4 | 17.9 |
| | 6H | 16.7 | 17.2 | 17.2 | 17.7 | 18.3 | 16.7 | 17.2 | 17.2 | 17.7 | 18.2 |
| | 8H | 16.8 | 17.3 | 17.3 | 17.8 | 18.4 | 16.8 | 17.3 | 17.3 | 17.8 | 18.3 |

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0