

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

SLO3IND2 25L 35HK LA xx xx MW
Specline Linear Pendant, 1.8" aperture x 2' Long, Matte White Refl

Test Number

SP-01322_4

Test Date

6/3/2022

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

Summary of Results

Power

| | |
|-------------|------|
| Input Watts | 38 W |
|-------------|------|

Lumen Output

| | |
|---------------|------------|
| Output Lumens | 3141 |
| Efficacy | 82.66 lm/W |

Luminous Dimensions

| | |
|-----------------|------|
| 0° - 180° Size | 0.15 |
| 90° - 270° Size | 2 |
| Height | 0 |

Spacing Criterion

| | |
|---------------------------|------|
| Two luminaires, plane 0° | 1.4 |
| Two luminaires, plane 90° | 1.15 |
| Four luminaires | 1.24 |

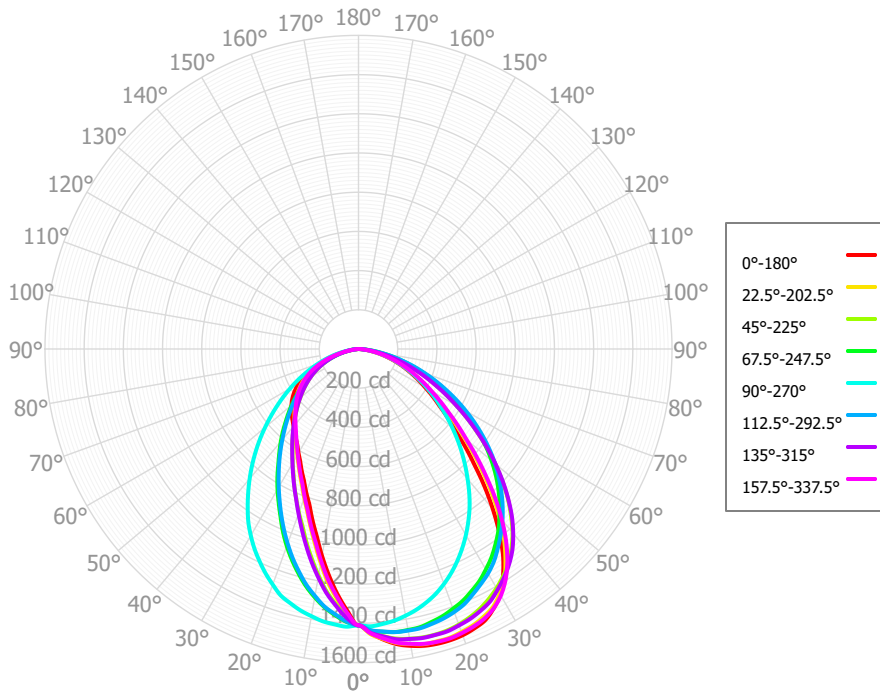
Full Beam Angle

| | |
|------------|-----|
| 0° - 180° | 67° |
| 90° - 270° | 87° |

IES File Header Contents

| Keyword | Value |
|-----------|--|
| TEST | SP-01322_4 |
| TESTLAB | Spectrum Lighting Photometric Lab, VLS-245-981 |
| MANUFAC | Spectrum Lighting |
| TESTDATE | 6/3/2022 |
| ISSUEDATE | 11/2/2022 |
| LUMCAT | SL03IND2 25L 35HK LA xx xx MW |
| LUMINAIRE | SpecLine Linear Pendant, 1.8" aperture x 2' Long, Matte White Refl |
| OTHER | Extruded Acrylic Lens, Asymmetric Distribution |
| OTHER | Data for 2' IND fixture, or 2' module for continuous ROW |
| OTHER | 66 Degree x 88 Degree Beam Angle |
| LAMP | N/A, Min. 90 CRI |
| LAMPCAT | N/A |
| OTHER | Reference project SL473 |
| OTHER | 25L designation for Spectrum linear product indicates 1570 Source Lm/Ft. |
| OTHER | CCT Output Multipliers: 40DK x 1.01, 30DK x 0.98 |
| OTHER | Total Luminaire Watts is approximate |
| OTHER | This report prepared by Spectrum Lighting |

Candela Polar Plot



Zonal Lumen Summary

| Zone | Lumens | % Fixture | Zone | Lumens | % Fixture |
|-----------------|---------|-----------|-------------------|---------|-----------|
| 0.00° - 10.00° | 133.26 | 4.24% | 90.00° - 100.00° | 0.00 | 0.00% |
| 10.00° - 20.00° | 359.60 | 11.45% | 100.00° - 110.00° | 0.00 | 0.00% |
| 20.00° - 30.00° | 521.54 | 16.60% | 100.00° - 120.00° | 0.00 | 0.00% |
| 30.00° - 40.00° | 595.65 | 18.96% | 120.00° - 130.00° | 0.00 | 0.00% |
| 40.00° - 50.00° | 563.24 | 17.93% | 130.00° - 140.00° | 0.00 | 0.00% |
| 50.00° - 60.00° | 458.18 | 14.59% | 140.00° - 150.00° | 0.00 | 0.00% |
| 60.00° - 70.00° | 317.94 | 10.12% | 150.00° - 160.00° | 0.00 | 0.00% |
| 70.00° - 80.00° | 160.19 | 5.10% | 160.00° - 170.00° | 0.00 | 0.00% |
| 80.00° - 90.00° | 31.42 | 1.00% | 170.00° - 180.00° | 0.00 | 0.00% |
| 0.00° - 90.00° | 3141.01 | 100.00% | 0.00° - 180.00° | 3141.01 | 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° | 1410.18 | 1410.18 | 1410.18 | 1410.18 | 1410.18 | 1410.18 | 1410.18 | 1410.18 | 1410.18 | 1410.18 | 1410.18 | 1410.18 | 1410.18 | 1410.18 | 1410.18 | 1410.18 | 1410.18 |
| 2.50° | 1452.88 | 1457.91 | 1448.16 | 1438.14 | 1416.64 | 1392.03 | 1373.83 | 1347.18 | 1335.67 | 1352.84 | 1367.13 | 1394.32 | 1418.41 | 1436.57 | 1450.46 | 1453.57 | 1452.88 |
| 5.00° | 1489.83 | 1486.84 | 1471.85 | 1448.76 | 1408.59 | 1359.62 | 1316.14 | 1268.30 | 1252.78 | 1277.81 | 1309.33 | 1363.89 | 1410.58 | 1447.38 | 1472.99 | 1483.96 | 1489.83 |
| 7.50° | 1519.79 | 1513.77 | 1491.16 | 1456.73 | 1398.35 | 1326.17 | 1255.52 | 1187.77 | 1163.01 | 1199.54 | 1247.90 | 1329.34 | 1401.44 | 1457.17 | 1494.32 | 1511.65 | 1519.79 |
| 10.00° | 1538.27 | 1528.60 | 1501.23 | 1456.09 | 1382.01 | 1279.68 | 1183.32 | 1098.62 | 1072.11 | 1109.04 | 1173.82 | 1286.61 | 1384.42 | 1459.26 | 1502.70 | 1527.71 | 1538.27 |
| 12.50° | 1551.20 | 1542.60 | 1507.96 | 1453.99 | 1363.05 | 1231.81 | 1110.41 | 1010.46 | 980.93 | 1021.62 | 1097.84 | 1239.28 | 1366.76 | 1459.52 | 1510.52 | 1541.16 | 1551.20 |
| 15.00° | 1557.18 | 1544.62 | 1509.39 | 1442.13 | 1338.78 | 1175.49 | 1035.53 | 935.56 | 905.98 | 942.34 | 1023.66 | 1185.08 | 1343.36 | 1451.59 | 1511.02 | 1546.95 | 1557.18 |
| 17.50° | 1558.23 | 1545.49 | 1505.97 | 1429.44 | 1310.42 | 1118.20 | 962.76 | 862.67 | 833.25 | 869.47 | 949.60 | 1128.79 | 1319.09 | 1442.19 | 1510.38 | 1548.93 | 1558.23 |
| 20.00° | 1554.42 | 1536.83 | 1496.52 | 1410.51 | 1275.70 | 1057.00 | 894.35 | 803.43 | 779.61 | 809.35 | 889.11 | 1070.07 | 1279.52 | 1428.16 | 1501.00 | 1542.53 | 1554.42 |
| 22.50° | 1543.82 | 1526.57 | 1482.34 | 1391.09 | 1236.94 | 995.47 | 830.95 | 746.98 | 727.27 | 754.28 | 828.95 | 1007.74 | 1239.37 | 1409.67 | 1490.36 | 1533.04 | 1543.82 |
| 25.00° | 1528.08 | 1508.76 | 1463.66 | 1363.94 | 1193.35 | 933.00 | 775.27 | 702.10 | 685.77 | 706.77 | 773.37 | 942.17 | 1194.97 | 1381.17 | 1474.01 | 1518.47 | 1528.08 |
| 27.50° | 1493.10 | 1484.86 | 1438.79 | 1335.77 | 1146.34 | 872.04 | 722.67 | 658.82 | 644.90 | 663.35 | 718.88 | 882.32 | 1149.51 | 1352.22 | 1453.28 | 1492.71 | 1493.10 |
| 30.00° | 1447.08 | 1441.68 | 1409.43 | 1299.71 | 1096.20 | 814.09 | 673.72 | 620.05 | 612.37 | 624.64 | 671.94 | 826.40 | 1099.33 | 1322.51 | 1419.13 | 1453.01 | 1447.08 |
| 32.50° | 1372.82 | 1387.44 | 1374.16 | 1262.23 | 1043.21 | 758.12 | 629.41 | 583.90 | 580.94 | 590.64 | 626.55 | 769.71 | 1046.51 | 1285.79 | 1382.49 | 1396.98 | 1372.82 |
| 35.00° | 1286.14 | 1307.66 | 1335.53 | 1218.12 | 988.16 | 705.25 | 589.42 | 553.31 | 556.69 | 560.91 | 587.66 | 712.61 | 985.61 | 1239.88 | 1340.23 | 1324.89 | 1286.14 |
| 37.50° | 1179.48 | 1219.75 | 1282.34 | 1172.05 | 928.48 | 654.13 | 551.71 | 524.85 | 533.62 | 533.18 | 549.62 | 663.08 | 924.77 | 1192.21 | 1290.49 | 1237.64 | 1179.48 |
| 40.00° | 1066.54 | 1117.69 | 1223.01 | 1119.73 | 866.28 | 605.12 | 515.61 | 499.79 | 515.37 | 506.82 | 514.12 | 616.52 | 864.05 | 1142.76 | 1228.14 | 1138.95 | 1066.54 |
| 42.50° | 952.36 | 1012.97 | 1151.86 | 1066.01 | 805.53 | 559.00 | 481.94 | 476.63 | 497.58 | 483.55 | 480.01 | 570.90 | 803.36 | 1088.69 | 1158.72 | 1033.01 | 952.36 |
| 45.00° | 837.92 | 904.73 | 1077.18 | 1009.09 | 745.37 | 515.53 | 449.57 | 455.75 | 481.09 | 461.88 | 448.90 | 525.53 | 742.71 | 1031.06 | 1080.21 | 922.93 | 837.92 |
| 47.50° | 739.09 | 802.35 | 994.06 | 949.79 | 685.27 | 474.90 | 419.24 | 434.73 | 464.22 | 441.03 | 418.44 | 484.53 | 682.27 | 971.03 | 998.16 | 819.99 | 739.09 |
| 50.00° | 642.28 | 705.90 | 909.21 | 886.42 | 625.19 | 436.31 | 389.75 | 413.58 | 446.60 | 420.50 | 389.01 | 444.32 | 622.10 | 909.56 | 912.51 | 720.18 | 642.28 |
| 52.50° | 571.98 | 621.81 | 824.02 | 821.00 | 568.17 | 399.42 | 361.49 | 392.23 | 427.28 | 398.45 | 360.51 | 405.69 | 564.01 | 843.06 | 826.46 | 636.52 | 571.98 |
| 55.00° | 503.28 | 547.60 | 738.80 | 752.82 | 511.74 | 363.46 | 333.59 | 370.73 | 405.29 | 375.97 | 333.18 | 367.22 | 507.98 | 774.32 | 740.09 | 557.93 | 503.28 |
| 57.50° | 448.15 | 482.23 | 657.17 | 684.49 | 460.06 | 329.07 | 306.14 | 346.49 | 380.46 | 351.23 | 305.95 | 333.43 | 454.55 | 704.10 | 656.90 | 493.04 | 448.15 |
| 60.00° | 393.70 | 422.24 | 575.85 | 615.99 | 408.88 | 295.32 | 278.76 | 320.73 | 352.18 | 326.09 | 278.83 | 299.81 | 403.12 | 633.40 | 575.57 | 431.01 | 393.70 |
| 62.50° | 347.31 | 369.50 | 502.90 | 547.93 | 360.45 | 262.74 | 251.38 | 292.72 | 320.25 | 298.50 | 250.81 | 267.29 | 354.23 | 563.02 | 501.21 | 378.01 | 347.31 |
| 65.00° | 301.54 | 320.04 | 430.92 | 480.22 | 312.27 | 230.49 | 223.98 | 263.75 | 284.93 | 270.65 | 222.12 | 234.91 | 306.82 | 492.72 | 429.96 | 326.18 | 301.54 |
| 67.50° | 259.52 | 273.96 | 369.14 | 413.44 | 268.88 | 198.84 | 195.27 | 231.24 | 247.20 | 237.00 | 192.80 | 203.74 | 262.50 | 425.52 | 365.65 | 280.53 | 259.52 |
| 70.00° | 218.16 | 229.04 | 308.27 | 347.23 | 225.95 | 167.32 | 166.49 | 197.66 | 207.72 | 203.13 | 163.13 | 172.78 | 219.58 | 358.74 | 303.61 | 235.26 | 218.16 |
| 72.50° | 179.28 | 187.42 | 252.52 | 286.52 | 187.44 | 137.82 | 137.22 | 161.63 | 168.05 | 167.94 | 134.10 | 142.88 | 180.89 | 296.26 | 247.45 | 193.15 | 179.28 |
| 75.00° | 141.63 | 146.56 | 198.59 | 228.34 | 149.27 | 108.54 | 108.10 | 125.11 | 128.28 | 132.57 | 105.33 | 113.17 | 143.56 | 234.07 | 192.58 | 151.40 | 141.63 |
| 77.50° | 107.34 | 110.57 | 151.47 | 174.21 | 112.94 | 81.10 | 80.40 | 90.08 | 90.39 | 95.56 | 77.56 | 84.14 | 108.85 | 179.08 | 143.76 | 113.94 | 107.34 |
| 80.00° | 74.96 | 75.25 | 106.28 | 121.42 | 78.49 | 53.92 | 53.54 | 55.22 | 53.26 | 60.10 | 50.08 | 56.90 | 74.71 | 124.86 | 95.75 | 77.74 | 74.96 |
| 82.50° | 46.39 | 47.42 | 66.12 | 78.71 | 50.64 | 33.43 | 31.13 | 30.29 | 28.85 | 32.51 | 29.26 | 34.02 | 46.90 | 80.37 | 60.34 | 49.09 | 46.39 |
| 85.00° | 23.79 | 20.15 | 33.18 | 38.35 | 26.62 | 14.22 | 12.34 | 6.34 | 8.26 | 10.16 | 9.83 | 16.09 | 19.93 | 39.23 | 25.90 | 23.79 | 23.79 |
| 87.50° | 10.13 | 10.53 | 14.03 | 19.13 | 12.11 | 7.17 | 6.10 | 3.58 | 3.34 | 5.25 | 4.81 | 7.05 | 10.21 | 18.76 | 13.13 | 11.14 | 10.13 |
| 90.00° | 2.41 | 1.58 | 2.36 | 2.86 | 2.41 | 1.26 | 1.53 | 1.06 | 1.50 | 1.79 | 1.54 | 1.74 | 1.56 | 2.22 | 1.35 | 1.78 | 2.41 |

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 | 3739 | 3739 | 3739 | 3739 | 3652 | 3652 | 3652 | 3652 | 3490 | 3490 | 3490 | 3342 | 3342 | 3342 | 3205 | 3205 | 3205 | 3141 |
| | 1 | 3447 | 3310 | 3188 | 3077 | 3363 | 3240 | 3128 | 3027 | 3107 | 3016 | 2932 | 2986 | 2911 | 2842 | 2874 | 2814 | 2758 | 2755 |
| | 2 | 3157 | 2917 | 2718 | 2551 | 3076 | 2858 | 2676 | 2521 | 2748 | 2595 | 2463 | 2647 | 2519 | 2407 | 2553 | 2448 | 2354 | 2395 |
| | 3 | 2895 | 2585 | 2345 | 2153 | 2819 | 2536 | 2313 | 2134 | 2444 | 2253 | 2097 | 2359 | 2197 | 2061 | 2280 | 2143 | 2026 | 2097 |
| | 4 | 2664 | 2308 | 2047 | 1848 | 2594 | 2267 | 2023 | 1835 | 2189 | 1978 | 1810 | 2117 | 1934 | 1786 | 2051 | 1893 | 1763 | 1852 |
| | 5 | 2459 | 2075 | 1807 | 1609 | 2395 | 2041 | 1788 | 1600 | 1975 | 1753 | 1583 | 1914 | 1719 | 1566 | 1858 | 1687 | 1550 | 1652 |
| | 6 | 2279 | 1879 | 1610 | 1417 | 2221 | 1850 | 1596 | 1411 | 1794 | 1568 | 1399 | 1742 | 1541 | 1387 | 1694 | 1515 | 1376 | 1484 |
| | 7 | 2120 | 1712 | 1447 | 1262 | 2067 | 1687 | 1436 | 1258 | 1639 | 1413 | 1249 | 1595 | 1392 | 1240 | 1553 | 1371 | 1231 | 1344 |
| | 8 | 1978 | 1569 | 1311 | 1134 | 1930 | 1547 | 1302 | 1131 | 1507 | 1283 | 1124 | 1468 | 1266 | 1117 | 1432 | 1249 | 1111 | 1225 |
| | 9 | 1852 | 1445 | 1195 | 1027 | 1809 | 1427 | 1188 | 1024 | 1391 | 1173 | 1019 | 1358 | 1158 | 1014 | 1327 | 1144 | 1009 | 1123 |
| | 10 | 1740 | 1337 | 1097 | 936 | 1700 | 1321 | 1090 | 934 | 1291 | 1078 | 930 | 1262 | 1065 | 926 | 1235 | 1054 | 923 | 1035 |

Cone of Light

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 5.5 ft | 46.6 fc | 7.8 ft |
| 6.5 ft | 33.4 fc | 9.2 ft |
| 7.5 ft | 25.1 fc | 10.6 ft |
| 8.0 ft | 22.0 fc | 11.3 ft |
| 10.0 ft | 14.1 fc | 14.2 ft |
| 12.0 ft | 9.8 fc | 17.0 ft |
| 14.0 ft | 7.2 fc | 19.8 ft |
| 16.0 ft | 5.5 fc | 22.7 ft |
| 20.0 ft | 3.5 fc | 28.4 ft |
| 24.0 ft | 2.4 fc | 34.0 ft |
| 28.0 ft | 1.8 fc | 39.7 ft |

Average Luminaire Luminance [cd/m²]

| | 0.00° | 45.00° | 90.00° |
|---------------|-------|--------|--------|
| 0.00° | 50597 | 50597 | 50597 |
| 45.00° | 42517 | 54658 | 37821 |
| 55.00° | 31482 | 46215 | 32011 |
| 65.00° | 25600 | 36584 | 26512 |
| 75.00° | 19634 | 27531 | 20693 |
| 85.00° | 9795 | 13659 | 10960 |

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 | 24.0 | 25.6 | 24.4 | 25.9 | 26.2 | 21.9 | 23.5 | 22.3 | 23.8 | 24.1 |
| | 3H | 25.4 | 26.8 | 25.8 | 27.1 | 27.5 | 23.7 | 25.1 | 24.1 | 25.4 | 25.8 |
| | 4H | 25.8 | 27.1 | 26.2 | 27.5 | 27.9 | 24.3 | 25.6 | 24.7 | 26.0 | 26.4 |
| | 6H | 26.1 | 27.3 | 26.5 | 27.7 | 28.1 | 24.7 | 25.9 | 25.1 | 26.3 | 26.7 |
| | 8H | 26.2 | 27.3 | 26.6 | 27.7 | 28.1 | 24.8 | 26.0 | 25.3 | 26.4 | 26.8 |
| | 12H | 26.2 | 27.3 | 26.6 | 27.7 | 28.1 | 24.9 | 26.0 | 25.3 | 26.4 | 26.8 |
| 4H | 2H | 25.0 | 26.3 | 25.4 | 26.7 | 27.0 | 22.3 | 23.7 | 22.7 | 24.0 | 24.4 |
| | 3H | 26.5 | 27.6 | 26.9 | 28.0 | 28.4 | 24.3 | 25.4 | 24.7 | 25.8 | 26.2 |
| | 4H | 27.0 | 28.0 | 27.4 | 28.4 | 28.8 | 25.0 | 26.0 | 25.4 | 26.4 | 26.8 |
| | 6H | 27.3 | 28.2 | 27.8 | 28.6 | 29.1 | 25.5 | 26.3 | 25.9 | 26.8 | 27.2 |
| | 8H | 27.4 | 28.2 | 27.9 | 28.6 | 29.1 | 25.6 | 26.4 | 26.1 | 26.8 | 27.3 |
| | 12H | 27.4 | 28.2 | 27.9 | 28.6 | 29.1 | 25.7 | 26.4 | 26.1 | 26.8 | 27.3 |
| 8H | 4H | 27.4 | 28.2 | 27.9 | 28.6 | 29.1 | 25.2 | 26.0 | 25.6 | 26.4 | 26.9 |
| | 6H | 27.8 | 28.5 | 28.3 | 28.9 | 29.4 | 25.7 | 26.4 | 26.2 | 26.8 | 27.3 |
| | 8H | 27.9 | 28.5 | 28.4 | 29.0 | 29.5 | 25.8 | 26.4 | 26.4 | 26.9 | 27.4 |
| | 12H | 28.0 | 28.5 | 28.5 | 29.0 | 29.5 | 25.9 | 26.5 | 26.4 | 27.0 | 27.5 |
| 12H | 4H | 27.4 | 28.1 | 27.9 | 28.6 | 29.1 | 25.2 | 25.9 | 25.6 | 26.4 | 26.8 |
| | 6H | 27.9 | 28.5 | 28.4 | 28.9 | 29.5 | 25.7 | 26.3 | 26.2 | 26.8 | 27.3 |
| | 8H | 28.0 | 28.5 | 28.5 | 29.0 | 29.6 | 25.9 | 26.4 | 26.4 | 26.9 | 27.5 |

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0