

Indoor Distribution Test Report

Spectrum Lighting Inc.

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

Luminaire

SS16LX-100L-35K-EX
16" dia. Schoolhouse Shade Pendant, White Glass

Test Number

SP-00372_5_M-LX-100L-35K (SP-00372_11)

Test Date

Tue Jun 17 2014

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

Summary of Results

Power

| | |
|-------------|------|
| Input Watts | 81 W |
|-------------|------|

Lumen Output

| | |
|---------------|------------|
| Output Lumens | 4821 |
| Efficacy | 59.52 lm/W |

Luminous Dimensions

| | |
|-----------------|-------|
| 0° - 180° Size | -1.33 |
| 90° - 270° Size | -1.33 |
| Height | 0.75 |

Spacing Criterion

| | |
|---------------------------|------|
| Two luminaires, plane 0° | 1.31 |
| Two luminaires, plane 90° | 1.32 |
| Four luminaires | 1.49 |

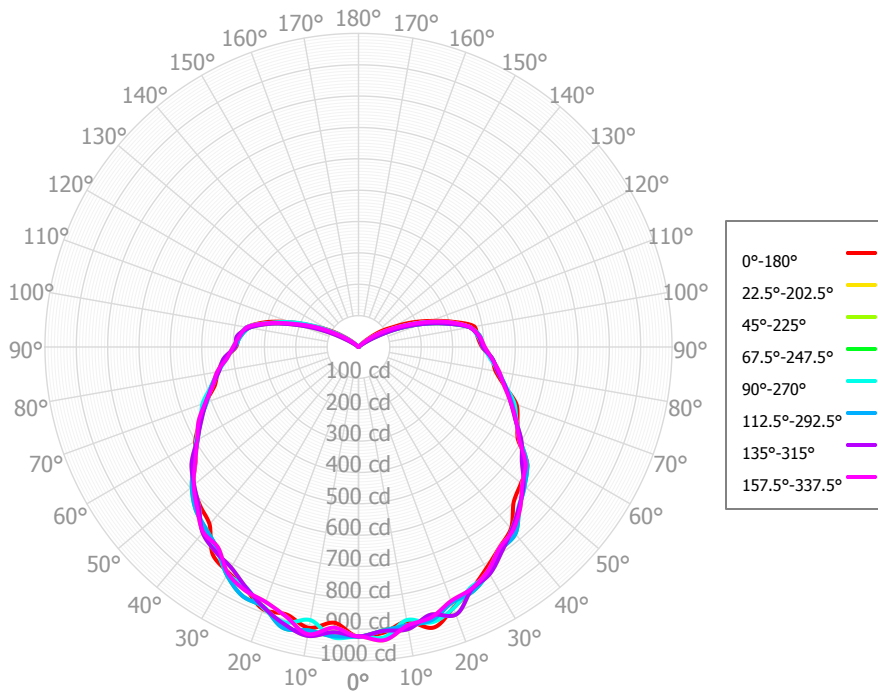
Full Beam Angle

| | |
|------------|------|
| 0° - 180° | 153° |
| 90° - 270° | 155° |

IES File Header Contents

| Keyword | Value |
|-----------|---|
| TESTLAB | Photopia 3.2.11 see: www.lti-optics.com/ies |
| ISSUEDATE | |
| TEST | SP-00372_5_M-LX-100L-35K (SP-00372_11) |
| TESTDATE | Tue Jun 17 2014 |
| UPDATE | Tue Jul 25 2017 |
| MANUFAC | Spectrum lighting |
| LUMCAT | SS16LX-100L-35K-EX |
| LUMINAIRE | 16" dia. Schoolhouse Shade Pendant, White Glass |
| OTHER | Remote driver compartment |
| LAMP | N/A |
| LAMPCAT | N/A |
| OTHER | Total Luminaire Wattage is approximate |
| OTHER | CCT Output Multipliers: 50K x 1.06, 40K x 1.03, 30K x 0.979, 27K x 0.959 |
| OTHER | This report prepared by Spectrum Lighting, scaled from LEDGV-14W-40K-Gen1 |
| _CRI | 85+ |
| _CCTMULT | 27K x 0.96, 30K x 0.98, 40K x 1.03, 50K x 1.06 |
| _LAMPMULT | 65L x 0.67 |

Candela Polar Plot



Zonal Lumen Summary

| Zone | Lumens | % Fixture | Zone | Lumens | % Fixture |
|-----------------|----------|-----------|-------------------|----------|-----------|
| 0.00° - 10.00° | 92.59 | 1.92% | 90.00° - 100.00° | 416.10 | 8.63% |
| 10.00° - 20.00° | 254.05 | 5.27% | 100.00° - 110.00° | 310.10 | 6.43% |
| 20.00° - 30.00° | 394.38 | 8.18% | 100.00° - 120.00° | 459.91 | 9.54% |
| 30.00° - 40.00° | 496.88 | 10.31% | 120.00° - 130.00° | 41.35 | 0.86% |
| 40.00° - 50.00° | 559.57 | 11.61% | 130.00° - 140.00° | 3.46 | 0.07% |
| 50.00° - 60.00° | 574.99 | 11.93% | 140.00° - 150.00° | 0.00 | 0.00% |
| 60.00° - 70.00° | 551.49 | 11.44% | 150.00° - 160.00° | 0.00 | 0.00% |
| 70.00° - 80.00° | 512.29 | 10.63% | 160.00° - 170.00° | 0.00 | 0.00% |
| 80.00° - 90.00° | 464.16 | 9.63% | 170.00° - 180.00° | 0.00 | 0.00% |
| 0.00° - 90.00° | 3,900.40 | 80.90% | 0.00° - 180.00° | 4,821.22 | 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° | 923.17 | 923.17 | 923.17 | 923.17 | 923.17 | 923.17 | 923.17 | 923.17 | 923.17 | 923.17 | 923.17 | 923.17 | 923.17 | 923.17 | 923.17 | 923.17 | 923.17 |
| 5.00° | 914.67 | 938.78 | 909.36 | 908.10 | 929.81 | 926.23 | 913.41 | 898.80 | 883.07 | 898.80 | 913.41 | 926.23 | 929.81 | 908.10 | 909.36 | 938.78 | 914.67 |
| 10.00° | 889.11 | 901.99 | 913.61 | 900.93 | 884.59 | 917.93 | 935.52 | 930.15 | 909.76 | 930.15 | 935.52 | 917.93 | 884.59 | 900.93 | 913.61 | 901.99 | 889.11 |
| 15.00° | 926.43 | 893.49 | 884.46 | 901.99 | 908.90 | 927.89 | 915.14 | 890.37 | 883.73 | 890.37 | 915.14 | 927.89 | 908.90 | 901.99 | 884.46 | 893.49 | 926.43 |
| 20.00° | 884.93 | 862.48 | 908.37 | 868.33 | 886.45 | 882.80 | 883.73 | 865.47 | 889.97 | 865.47 | 883.73 | 882.80 | 886.45 | 868.33 | 908.37 | 862.48 | 884.93 |
| 25.00° | 852.46 | 851.26 | 853.85 | 860.89 | 846.61 | 876.03 | 847.14 | 856.44 | 851.00 | 856.44 | 847.14 | 876.03 | 846.61 | 860.89 | 853.85 | 851.26 | 852.46 |
| 30.00° | 815.47 | 825.10 | 836.52 | 830.81 | 834.86 | 839.71 | 812.42 | 833.13 | 830.15 | 833.13 | 812.42 | 839.71 | 834.86 | 830.81 | 836.52 | 825.10 | 815.47 |
| 35.00° | 782.20 | 783.53 | 796.95 | 791.17 | 791.04 | 785.19 | 796.08 | 781.01 | 809.63 | 781.01 | 796.08 | 785.19 | 791.04 | 791.17 | 796.95 | 783.53 | 782.20 |
| 40.00° | 756.51 | 765.40 | 760.29 | 778.42 | 769.26 | 757.10 | 773.51 | 770.45 | 738.78 | 770.45 | 773.51 | 757.10 | 769.26 | 778.42 | 760.29 | 765.40 | 756.51 |
| 45.00° | 700.00 | 729.02 | 723.64 | 725.43 | 721.45 | 734.26 | 719.65 | 727.82 | 714.81 | 727.82 | 719.65 | 734.26 | 721.45 | 725.43 | 723.64 | 729.02 | 700.00 |
| 50.00° | 676.56 | 681.47 | 687.05 | 690.97 | 692.23 | 694.09 | 684.53 | 686.59 | 686.45 | 686.59 | 684.53 | 694.09 | 692.23 | 690.97 | 687.05 | 681.47 | 676.56 |
| 55.00° | 657.77 | 650.93 | 636.12 | 656.91 | 642.10 | 639.97 | 650.07 | 635.33 | 634.26 | 635.33 | 650.07 | 639.97 | 642.10 | 656.91 | 636.12 | 650.93 | 657.77 |
| 60.00° | 586.72 | 591.90 | 600.13 | 596.08 | 598.07 | 592.16 | 593.96 | 593.76 | 601.33 | 593.76 | 593.96 | 592.16 | 598.07 | 596.08 | 600.13 | 591.90 | 586.72 |
| 65.00° | 559.69 | 554.38 | 552.79 | 553.98 | 555.98 | 556.31 | 552.86 | 563.01 | 557.10 | 563.01 | 552.86 | 555.98 | 553.98 | 552.79 | 554.38 | 559.69 | |
| 70.00° | 536.39 | 517.33 | 516.60 | 521.12 | 529.55 | 515.07 | 517.93 | 519.85 | 518.26 | 519.85 | 517.93 | 515.07 | 529.55 | 521.12 | 516.60 | 517.33 | 536.39 |
| 75.00° | 482.34 | 481.47 | 484.40 | 484.93 | 486.39 | 486.12 | 482.07 | 482.27 | 474.63 | 482.27 | 482.07 | 486.12 | 486.39 | 484.93 | 484.40 | 481.47 | 482.34 |
| 80.00° | 444.02 | 455.91 | 450.27 | 452.46 | 454.18 | 453.52 | 452.46 | 457.84 | 455.25 | 457.84 | 452.46 | 453.52 | 454.18 | 452.46 | 450.27 | 455.91 | 444.02 |
| 85.00° | 426.49 | 426.76 | 428.82 | 428.42 | 421.51 | 427.36 | 432.14 | 421.31 | 429.35 | 421.31 | 432.14 | 427.36 | 421.51 | 428.42 | 428.82 | 426.76 | 426.49 |
| 90.00° | 393.89 | 402.86 | 396.28 | 396.61 | 399.73 | 393.96 | 393.43 | 400.00 | 390.64 | 400.00 | 393.43 | 393.96 | 399.73 | 396.61 | 396.28 | 402.86 | 393.89 |
| 95.00° | 380.94 | 387.85 | 385.06 | 389.58 | 382.74 | 378.42 | 389.38 | 381.47 | 383.20 | 381.47 | 389.38 | 378.42 | 382.74 | 389.58 | 385.06 | 387.85 | 380.94 |
| 100.00° | 375.23 | 361.75 | 360.89 | 360.62 | 362.62 | 354.65 | 353.65 | 362.22 | 361.82 | 362.22 | 353.65 | 354.65 | 362.62 | 360.62 | 360.89 | 361.75 | 375.23 |
| 105.00° | 310.89 | 304.51 | 288.58 | 289.77 | 295.55 | 291.90 | 287.72 | 294.22 | 305.98 | 294.22 | 287.72 | 291.90 | 295.55 | 289.77 | 288.58 | 304.51 | 310.89 |
| 110.00° | 242.70 | 233.27 | 213.55 | 213.75 | 231.87 | 209.30 | 203.45 | 214.41 | 229.95 | 214.41 | 203.45 | 209.30 | 231.87 | 213.75 | 213.55 | 233.27 | 242.70 |
| 115.00° | 183.86 | 161.95 | 137.18 | 138.38 | 161.09 | 138.98 | 123.11 | 149.34 | 155.98 | 149.34 | 123.11 | 138.98 | 161.09 | 138.38 | 137.18 | 161.95 | 183.86 |
| 120.00° | 126.10 | 107.30 | 63.28 | 72.18 | 97.88 | 80.28 | 51.06 | 86.92 | 105.05 | 86.92 | 51.06 | 80.28 | 97.88 | 72.18 | 63.28 | 107.30 | 126.10 |
| 125.00° | 87.78 | 65.21 | 18.33 | 30.01 | 51.66 | 34.99 | 10.43 | 45.22 | 59.16 | 45.22 | 10.43 | 34.99 | 51.66 | 30.01 | 18.33 | 65.21 | 87.78 |
| 130.00° | 43.29 | 26.43 | 3.65 | 5.64 | 15.21 | 8.04 | 0.47 | 14.34 | 26.49 | 14.34 | 0.47 | 8.04 | 15.21 | 5.64 | 3.65 | 26.43 | 43.29 |
| 135.00° | 12.09 | 4.98 | 0.00 | 0.07 | 0.20 | 0.07 | 0.00 | 0.20 | 1.79 | 0.20 | 0.00 | 0.07 | 0.20 | 0.07 | 0.00 | 4.98 | 12.09 |
| 140.00° | 0.20 | 0.07 | 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 | 0.07 | 0.20 |
| 145.00° | 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 |
| 150.00° | 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 |
| 155.00° | 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 |
| 160.00° | 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 |
| 165.00° | 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 |
| 170.00° | 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 |
| 175.00° | 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 |
| 180.00° | 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.

| | | | | | | | | | | | | | | | | | | |
|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 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% |
| RCR | 0 | 5,520 | 5,520 | 5,520 | 5,520 | 5,285 | 5,285 | 5,285 | 5,285 | 4,845 | 4,845 | 4,845 | 4,443 | 4,443 | 4,443 | 4,074 | 4,074 | 3,900 |
| | 1 | 4,835 | 4,525 | 4,247 | 3,997 | 4,600 | 4,322 | 4,071 | 3,844 | 3,941 | 3,738 | 3,552 | 3,591 | 3,429 | 3,278 | 3,268 | 3,140 | 2,990 |
| | 2 | 4,325 | 3,845 | 3,447 | 3,113 | 4,102 | 3,670 | 3,310 | 3,004 | 3,343 | 3,047 | 2,792 | 3,042 | 2,801 | 2,589 | 2,763 | 2,569 | 2,439 |
| | 3 | 3,905 | 3,322 | 2,871 | 2,512 | 3,698 | 3,173 | 2,761 | 2,429 | 2,892 | 2,549 | 2,267 | 2,632 | 2,349 | 2,111 | 2,390 | 2,159 | 2,047 |
| | 4 | 3,552 | 2,910 | 2,441 | 2,082 | 3,362 | 2,782 | 2,351 | 2,017 | 2,540 | 2,176 | 1,889 | 2,315 | 2,011 | 1,764 | 2,106 | 1,852 | 1,757 |
| | 5 | 3,251 | 2,578 | 2,108 | 1,762 | 3,078 | 2,467 | 2,033 | 1,709 | 2,258 | 1,888 | 1,605 | 2,063 | 1,749 | 1,503 | 1,880 | 1,616 | 1,533 |
| | 6 | 2,991 | 2,305 | 1,845 | 1,515 | 2,834 | 2,209 | 1,782 | 1,471 | 2,027 | 1,659 | 1,385 | 1,856 | 1,541 | 1,301 | 1,697 | 1,428 | 1,356 |
| | 7 | 2,765 | 2,078 | 1,632 | 1,320 | 2,622 | 1,994 | 1,579 | 1,284 | 1,834 | 1,474 | 1,211 | 1,685 | 1,373 | 1,140 | 1,545 | 1,276 | 1,213 |
| | 8 | 2,567 | 1,886 | 1,458 | 1,164 | 2,437 | 1,813 | 1,412 | 1,133 | 1,672 | 1,321 | 1,071 | 1,540 | 1,234 | 1,010 | 1,416 | 1,150 | 1,095 |
| | 9 | 2,393 | 1,723 | 1,313 | 1,036 | 2,275 | 1,658 | 1,273 | 1,009 | 1,534 | 1,194 | 956 | 1,417 | 1,118 | 904 | 1,306 | 1,045 | 997 |
| | 10 | 2,239 | 1,584 | 1,191 | 930 | 2,131 | 1,526 | 1,156 | 907 | 1,415 | 1,087 | 861 | 1,310 | 1,020 | 815 | 1,212 | 956 | 771 |

Cone of Light

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 5.5 ft | 30.5 fc | 48.3 ft |
| 6.5 ft | 21.9 fc | 57.1 ft |
| 7.5 ft | 16.4 fc | 65.9 ft |
| 8.0 ft | 14.4 fc | 70.3 ft |
| 10.0 ft | 9.2 fc | 87.9 ft |
| 12.0 ft | 6.4 fc | 105.5 ft |
| 14.0 ft | 4.7 fc | 123.1 ft |
| 16.0 ft | 3.6 fc | 140.6 ft |
| 20.0 ft | 2.3 fc | 175.8 ft |
| 24.0 ft | 1.6 fc | 211.0 ft |
| 28.0 ft | 1.2 fc | 246.1 ft |

Average Luminaire Luminance [cd/m²]

| | 0.00° | 45.00° | 90.00° |
|---------------|-------|--------|--------|
| 0.00° | 7,153 | 7,153 | 7,153 |
| 45.00° | 4,464 | 4,615 | 4,601 |
| 55.00° | 4,387 | 4,242 | 4,282 |
| 65.00° | 4,040 | 3,990 | 4,013 |
| 75.00° | 3,924 | 3,941 | 3,957 |
| 85.00° | 4,118 | 4,140 | 4,070 |

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 | - | - | - | - | - | - | - | - | - | - |
| | 3H | - | - | - | - | - | - | - | - | - | - |
| | 4H | - | - | - | - | - | - | - | - | - | - |
| | 6H | - | - | - | - | - | - | - | - | - | - |
| | 8H | - | - | - | - | - | - | - | - | - | - |
| | 12H | - | - | - | - | - | - | - | - | - | - |
| 4H | 2H | - | - | - | - | - | - | - | - | - | - |
| | 3H | - | - | - | - | - | - | - | - | - | - |
| | 4H | - | - | - | - | - | - | - | - | - | - |
| | 6H | - | - | - | - | - | - | - | - | - | - |
| | 8H | - | - | - | - | - | - | - | - | - | - |
| | 12H | - | - | - | - | - | - | - | - | - | - |
| 8H | 4H | - | - | - | - | - | - | - | - | - | - |
| | 6H | - | - | - | - | - | - | - | - | - | - |
| | 8H | - | - | - | - | - | - | - | - | - | - |
| | 12H | - | - | - | - | - | - | - | - | - | - |
| 12H | 4H | - | - | - | - | - | - | - | - | - | - |
| | 6H | - | - | - | - | - | - | - | - | - | - |
| | 8H | - | - | - | - | - | - | - | - | - | - |

Corrected UGR values based on total output lumens

SHR = 1.0