**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : SL-6-L5-950-RD-DIM-UNV_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] BALLABS TEST NO. 21002.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-04-25
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] SL LED SLIMLINE ARCHITECTURAL LUMINAIRE
[MORE] 1.375 WIDE ALUM CHANNEL w/1"WIDE WHITE RADIAL ACRYLIC LENS
[LUMCAT] SL-6-L5-950-RD-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR, COVE, CLASSROOM
[_SEARCH_MOUNTING] SURFACE, WALL

**CHARACTERISTICS**

| | |
|---|---|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 2659 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 100 |
| Total Luminaire Watts | 26.5 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.26 |
| Spacing Criterion (90-270) | 1.28 |
| Spacing Criterion (Diagonal) | 1.38 |
| Basic Luminous Shape | Rectangular w/Sides |
| Luminous Length (0-180) | 6.00 ft |
| Luminous Width (90-270) | 0.13 ft |
| Luminous Height | 0.05 ft |

**LUMINANCE DATA (cd/sq.m)**

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---|---|---|---|
| 45 | 10999 | 8850 | 8399 |
| 55 | 10398 | 7923 | 7576 |
| 65 | 9280 | 6817 | 6742 |
| 75 | 7817 | 5618 | 6001 |
| 85 | 4344 | 4670 | 5403 |

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**CANDELA TABULATION**

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| **0** | 837.117 | 837.117 | 837.117 | 837.117 | 837.117 |
| **5** | 839.857 | 835.747 | 830.267 | 828.897 | 830.267 |
| **10** | 827.527 | 823.416 | 817.936 | 817.936 | 820.676 |
| **15** | 809.716 | 805.605 | 800.125 | 801.495 | 801.495 |
| **20** | 782.314 | 778.204 | 771.353 | 776.834 | 778.204 |
| **25** | 748.062 | 743.952 | 742.582 | 746.692 | 749.432 |
| **30** | 705.590 | 705.590 | 705.590 | 711.070 | 709.700 |
| **35** | 660.377 | 660.377 | 660.377 | 665.857 | 669.968 |
| **40** | 605.574 | 606.944 | 608.314 | 617.905 | 623.385 |
| **45** | 546.661 | 550.771 | 554.881 | 565.842 | 569.952 |
| **50** | 482.267 | 486.377 | 495.968 | 512.409 | 520.629 |
| **55** | 420.614 | 421.984 | 439.795 | 453.495 | 465.826 |
| **60** | 349.370 | 356.220 | 380.881 | 406.913 | 415.133 |
| **65** | 278.126 | 289.086 | 317.858 | 346.629 | 358.960 |
| **70** | 212.362 | 223.323 | 258.945 | 294.567 | 305.527 |
| **75** | 145.228 | 164.409 | 204.141 | 243.874 | 260.315 |
| **80** | 84.945 | 105.496 | 158.929 | 198.661 | 216.472 |
| **85** | 28.772 | 67.134 | 116.457 | 156.189 | 174.000 |
| **90** | 0.000 | 36.992 | 86.315 | 121.937 | 135.638 |
| **95** | 0.000 | 19.181 | 58.913 | 94.535 | 106.866 |
| **100** | 0.000 | 9.591 | 41.102 | 69.874 | 82.205 |
| **105** | 0.000 | 5.480 | 28.772 | 50.693 | 61.653 |
| **110** | 0.000 | 4.110 | 19.181 | 36.992 | 43.842 |
| **115** | 0.000 | 2.740 | 12.331 | 26.031 | 32.882 |
| **120** | 0.000 | 0.000 | 6.850 | 16.441 | 20.551 |
| **125** | 0.000 | 0.000 | 5.480 | 10.961 | 13.701 |
| **130** | 0.000 | 0.000 | 0.000 | 6.850 | 8.220 |
| **135** | 0.000 | 0.000 | 0.000 | 0.000 | 5.480 |
| **140** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **145** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **150** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **155** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **160** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **165** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **170** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **175** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **180** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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## ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 305.65 | N.A. | 11.50 |
| 0-30 | 649.17 | N.A. | 24.40 |
| 0-40 | 1063.67 | N.A. | 40.00 |
| 0-60 | 1887.58 | N.A. | 71.00 |
| 0-80 | 2420.29 | N.A. | 91.00 |
| 0-90 | 2543.59 | N.A. | 95.70 |
| 10-90 | 2464.48 | N.A. | 92.70 |
| 20-40 | 758.02 | N.A. | 28.50 |
| 20-50 | 1188.02 | N.A. | 44.70 |
| 40-70 | 1140.08 | N.A. | 42.90 |
| 60-80 | 532.71 | N.A. | 20.00 |
| 70-80 | 216.54 | N.A. | 8.10 |
| 80-90 | 123.29 | N.A. | 4.60 |
| 90-110 | 94.74 | N.A. | 3.60 |
| 90-120 | 109.12 | N.A. | 4.10 |
| 90-130 | 114.27 | N.A. | 4.30 |
| 90-150 | 115.09 | N.A. | 4.30 |
| 90-180 | 115.09 | N.A. | 4.30 |
| 110-180 | 20.35 | N.A. | 0.80 |
| 0-180 | 2658.67 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

## ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---|---|
| 0-10 | 79.10 |
| 10-20 | 226.54 |
| 20-30 | 343.52 |
| 30-40 | 414.50 |
| 40-50 | 430.00 |
| 50-60 | 393.91 |
| 60-70 | 316.17 |
| 70-80 | 216.54 |
| 80-90 | 123.29 |
| 90-100 | 63.24 |
| 100-110 | 31.50 |
| 110-120 | 14.38 |
| 120-130 | 5.15 |
| 130-140 | 0.82 |
| 140-150 | 0.00 |
| 150-160 | 0.00 |
| 160-170 | 0.00 |
| 170-180 | 0.00 |

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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

| RC | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| 0 | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 109 | 109 | 109 | 103 | 103 | 103 | 98 | 98 | 98 | 96 |
| 1 | 106 | 101 | 96 | 92 | 103 | 98 | 94 | 90 | 93 | 90 | 86 | 89 | 86 | 83 | 84 | 82 | 80 | 77 |
| 2 | 96 | 87 | 80 | 74 | 93 | 85 | 78 | 73 | 81 | 75 | 70 | 77 | 72 | 68 | 73 | 69 | 66 | 63 |
| 3 | 88 | 76 | 68 | 61 | 85 | 75 | 67 | 60 | 71 | 64 | 59 | 68 | 62 | 57 | 64 | 60 | 55 | 53 |
| 4 | 80 | 68 | 58 | 51 | 77 | 66 | 57 | 51 | 63 | 55 | 50 | 60 | 54 | 49 | 57 | 52 | 47 | 45 |
| 5 | 74 | 60 | 51 | 44 | 71 | 59 | 50 | 44 | 56 | 49 | 43 | 54 | 47 | 42 | 51 | 46 | 41 | 39 |
| 6 | 68 | 54 | 45 | 38 | 66 | 53 | 44 | 38 | 51 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 36 | 34 |
| 7 | 63 | 49 | 40 | 34 | 61 | 48 | 40 | 34 | 46 | 39 | 33 | 44 | 38 | 32 | 43 | 37 | 32 | 30 |
| 8 | 58 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 42 | 35 | 29 | 41 | 34 | 29 | 39 | 33 | 29 | 27 |
| 9 | 55 | 41 | 33 | 27 | 53 | 40 | 32 | 27 | 39 | 32 | 27 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |
| 10 | 51 | 38 | 30 | 25 | 50 | 37 | 30 | 24 | 36 | 29 | 24 | 35 | 28 | 24 | 33 | 28 | 23 | 22 |

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**UGR TABLE - CORRECTED**

| Reflectances | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling Cavity | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Walls | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Floor Cavity | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room Size | | UGR Viewed Crosswise | | | | | UGR Viewed Endwise | | | | |
| X=2H | Y=2H | 18.1 | 19.7 | 18.5 | 20.1 | 20.5 | 19.8 | 21.4 | 20.2 | 21.8 | 22.2 |
| | 3H | 19.6 | 21.0 | 20.0 | 21.4 | 21.9 | 22.1 | 23.6 | 22.5 | 24.0 | 24.4 |
| | 4H | 20.0 | 21.4 | 20.5 | 21.8 | 22.3 | 23.2 | 24.6 | 23.7 | 25.0 | 25.5 |
| | 6H | 20.3 | 21.6 | 20.8 | 22.0 | 22.5 | 24.4 | 25.7 | 24.9 | 26.1 | 26.6 |
| | 8H | 20.4 | 21.6 | 20.9 | 22.1 | 22.6 | 25.0 | 26.2 | 25.5 | 26.7 | 27.2 |
| | 12H | 20.4 | 21.6 | 20.9 | 22.0 | 22.6 | 25.7 | 26.8 | 26.1 | 27.3 | 27.8 |
| 4H | 2H | 18.9 | 20.2 | 19.3 | 20.7 | 21.1 | 20.2 | 21.6 | 20.7 | 22.0 | 22.5 |
| | 3H | 20.6 | 21.7 | 21.0 | 22.2 | 22.7 | 22.7 | 23.9 | 23.2 | 24.4 | 24.9 |
| | 4H | 21.1 | 22.2 | 21.6 | 22.7 | 23.2 | 24.0 | 25.1 | 24.5 | 25.6 | 26.1 |
| | 6H | 21.5 | 22.5 | 22.0 | 23.0 | 23.5 | 25.4 | 26.3 | 25.9 | 26.8 | 27.4 |
| | 8H | 21.6 | 22.5 | 22.1 | 23.0 | 23.6 | 26.1 | 26.9 | 26.6 | 27.4 | 28.0 |
| | 12H | 21.7 | 22.5 | 22.2 | 23.0 | 23.6 | 26.8 | 27.6 | 27.4 | 28.2 | 28.7 |
| 8H | 4H | 21.7 | 22.6 | 22.2 | 23.1 | 23.6 | 24.2 | 25.1 | 24.7 | 25.6 | 26.2 |
| | 6H | 22.2 | 23.0 | 22.8 | 23.5 | 24.1 | 25.7 | 26.4 | 26.2 | 27.0 | 27.6 |
| | 8H | 22.4 | 23.1 | 22.9 | 23.6 | 24.2 | 26.5 | 27.2 | 27.1 | 27.8 | 28.3 |
| | 12H | 22.5 | 23.1 | 23.1 | 23.6 | 24.3 | 27.5 | 28.1 | 28.0 | 28.6 | 29.3 |
| 12H | 4H | 21.8 | 22.6 | 22.4 | 23.2 | 23.7 | 24.2 | 25.0 | 24.8 | 25.6 | 26.1 |
| | 6H | 22.4 | 23.1 | 23.0 | 23.7 | 24.3 | 25.7 | 26.4 | 26.3 | 26.9 | 27.6 |
| | 8H | 22.7 | 23.3 | 23.3 | 23.8 | 24.5 | 26.6 | 27.2 | 27.2 | 27.8 | 28.4 |

Maximum UGR = 29.3

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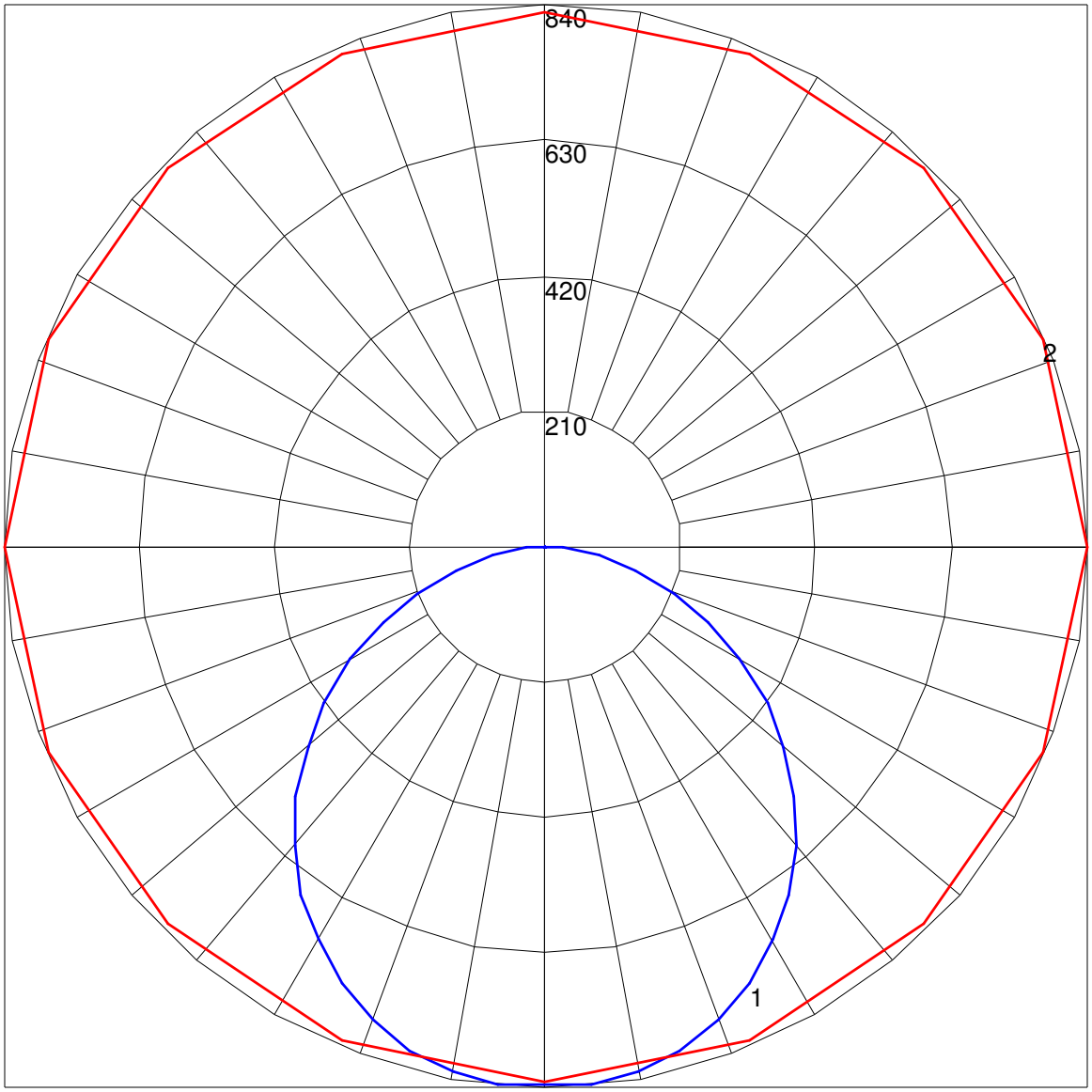
**POLAR GRAPH**




Maximum Candela = 839.857  Located At Horizontal Angle = 0, Vertical Angle = 5
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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