



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-2-L26-840-HIA-(L19)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 17258.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 02 APRIL 2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] DIRECT/INDIRECT LED STAIRWELL LIGHT
 [MORE] WHITE REFLECTOR w/FROSTED POLYCARBONATE LENS
 [LUMCAT] SLF-2-L26-840-HIA-(L19)-DIM-UNV
 [LAMPCAT] HLM 80 CRI 4000K CCT
 [_SEARCH_SOURCE TYPE] LED
 [_SEARCH_APPLICATION] INDOOR, COMMERCIAL, DIRECT, LINEAR
 [_SEARCH_MOUNTING] CEILING, SURFACE, WALL

CHARACTERISTICS

| | |
|---------------------------------|---------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 2041 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 128 |
| Total Luminaire Watts | 16 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.18 |
| Spacing Criterion (90-270) | 1.28 |
| Spacing Criterion (Diagonal) | 1.34 |
| Basic Luminous Shape | Rectangular w/Sides |
| Luminous Length (0-180) | 2.06 ft |
| Luminous Width (90-270) | 0.50 ft |
| Luminous Height | 0.24 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 4720 | 4241 | 4550 |
| 55 | 3932 | 3642 | 4060 |
| 65 | 3132 | 3045 | 3647 |
| 75 | 2362 | 2423 | 3116 |
| 85 | 785 | 2003 | 2714 |

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CANDELA TABULATION

| | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
|-----|------------|-------------|-------------|-------------|-------------|
| 0 | 661.223 | 661.223 | 661.223 | 661.223 | 661.223 |
| 5 | 663.134 | 653.579 | 653.579 | 653.579 | 651.668 |
| 10 | 644.024 | 644.024 | 638.290 | 640.201 | 642.112 |
| 15 | 617.269 | 619.180 | 619.180 | 626.824 | 626.824 |
| 20 | 590.514 | 596.247 | 600.069 | 611.536 | 613.447 |
| 25 | 556.115 | 556.115 | 571.404 | 586.692 | 588.603 |
| 30 | 517.894 | 521.716 | 537.005 | 558.026 | 565.671 |
| 35 | 466.296 | 473.940 | 494.962 | 525.538 | 527.450 |
| 40 | 410.876 | 424.253 | 460.563 | 491.140 | 502.606 |
| 45 | 357.366 | 368.832 | 408.964 | 447.185 | 456.741 |
| 50 | 298.124 | 317.234 | 365.010 | 408.964 | 418.520 |
| 55 | 252.258 | 267.547 | 321.056 | 366.921 | 376.477 |
| 60 | 198.749 | 215.949 | 271.369 | 322.967 | 338.256 |
| 65 | 158.617 | 173.905 | 235.059 | 279.013 | 300.035 |
| 70 | 112.752 | 133.773 | 189.194 | 231.237 | 248.436 |
| 75 | 84.086 | 99.375 | 154.795 | 202.571 | 215.949 |
| 80 | 45.865 | 64.976 | 118.485 | 160.528 | 173.905 |
| 85 | 15.288 | 38.221 | 97.463 | 133.773 | 147.151 |
| 90 | 0.000 | 22.933 | 74.531 | 108.930 | 118.485 |
| 95 | 0.000 | 15.288 | 57.331 | 91.730 | 101.286 |
| 100 | 0.000 | 17.199 | 51.598 | 76.442 | 87.908 |
| 105 | 0.000 | 11.466 | 42.043 | 59.243 | 66.887 |
| 110 | 0.000 | 11.466 | 34.399 | 49.687 | 55.420 |
| 115 | 0.000 | 11.466 | 28.666 | 45.865 | 45.865 |
| 120 | 0.000 | 0.000 | 19.110 | 34.399 | 34.399 |
| 125 | 0.000 | 0.000 | 19.110 | 22.933 | 32.488 |
| 130 | 0.000 | 0.000 | 17.199 | 15.288 | 19.110 |
| 135 | 0.000 | 0.000 | 15.288 | 17.199 | 19.110 |
| 140 | 0.000 | 0.000 | 0.000 | 7.644 | 9.555 |
| 145 | 0.000 | 0.000 | 0.000 | 0.000 | 9.555 |
| 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 | 237.92 | N.A. | 11.70 |
| 0-30 | 501.69 | N.A. | 24.60 |
| 0-40 | 813.97 | N.A. | 39.90 |
| 0-60 | 1413.56 | N.A. | 69.20 |
| 0-80 | 1798.07 | N.A. | 88.10 |
| 0-90 | 1894.91 | N.A. | 92.80 |
| 10-90 | 1832.82 | N.A. | 89.80 |
| 20-40 | 576.05 | N.A. | 28.20 |
| 20-50 | 892.10 | N.A. | 43.70 |
| 40-70 | 825.49 | N.A. | 40.40 |
| 60-80 | 384.51 | N.A. | 18.80 |
| 70-80 | 158.61 | N.A. | 7.80 |
| 80-90 | 96.84 | N.A. | 4.70 |
| 90-110 | 100.40 | N.A. | 4.90 |
| 90-120 | 126.02 | N.A. | 6.20 |
| 90-130 | 138.92 | N.A. | 6.80 |
| 90-150 | 146.59 | N.A. | 7.20 |
| 90-180 | 146.59 | N.A. | 7.20 |
| 110-180 | 46.19 | N.A. | 2.30 |
| 0-180 | 2041.5 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 62.09 |
| 10-20 | 175.83 |
| 20-30 | 263.77 |
| 30-40 | 312.28 |
| 40-50 | 316.05 |
| 50-60 | 283.55 |
| 60-70 | 225.89 |
| 70-80 | 158.61 |
| 80-90 | 96.84 |
| 90-100 | 60.36 |
| 100-110 | 40.04 |
| 110-120 | 25.62 |
| 120-130 | 12.91 |
| 130-140 | 6.77 |
| 140-150 | 0.89 |
| 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 | 117 | 117 | 117 | 117 | 114 | 114 | 114 | 114 | 107 | 107 | 107 | 101 | 101 | 101 | 95 | 95 | 95 | 93 |
| 1 | 106 | 101 | 96 | 92 | 102 | 98 | 93 | 89 | 92 | 88 | 85 | 87 | 84 | 81 | 82 | 80 | 78 | 75 |
| 2 | 96 | 87 | 80 | 74 | 93 | 85 | 78 | 72 | 80 | 74 | 70 | 75 | 71 | 67 | 71 | 68 | 64 | 62 |
| 3 | 87 | 76 | 68 | 61 | 84 | 74 | 66 | 60 | 70 | 64 | 58 | 66 | 61 | 56 | 63 | 58 | 54 | 52 |
| 4 | 80 | 68 | 59 | 52 | 77 | 66 | 57 | 51 | 62 | 55 | 49 | 59 | 53 | 48 | 56 | 51 | 47 | 44 |
| 5 | 73 | 60 | 51 | 44 | 71 | 59 | 50 | 44 | 56 | 48 | 43 | 53 | 47 | 42 | 51 | 45 | 41 | 38 |
| 6 | 68 | 54 | 45 | 39 | 65 | 53 | 45 | 38 | 50 | 43 | 37 | 48 | 42 | 37 | 46 | 40 | 36 | 33 |
| 7 | 63 | 49 | 40 | 34 | 61 | 48 | 40 | 34 | 46 | 39 | 33 | 44 | 37 | 32 | 42 | 36 | 32 | 30 |
| 8 | 59 | 45 | 36 | 31 | 57 | 44 | 36 | 30 | 42 | 35 | 30 | 40 | 34 | 29 | 39 | 33 | 28 | 26 |
| 9 | 55 | 41 | 33 | 27 | 53 | 40 | 33 | 27 | 39 | 32 | 27 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |
| 10 | 51 | 38 | 30 | 25 | 50 | 37 | 30 | 25 | 36 | 29 | 24 | 34 | 28 | 24 | 33 | 27 | 23 | 22 |

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UGR TABLE - CORRECTED

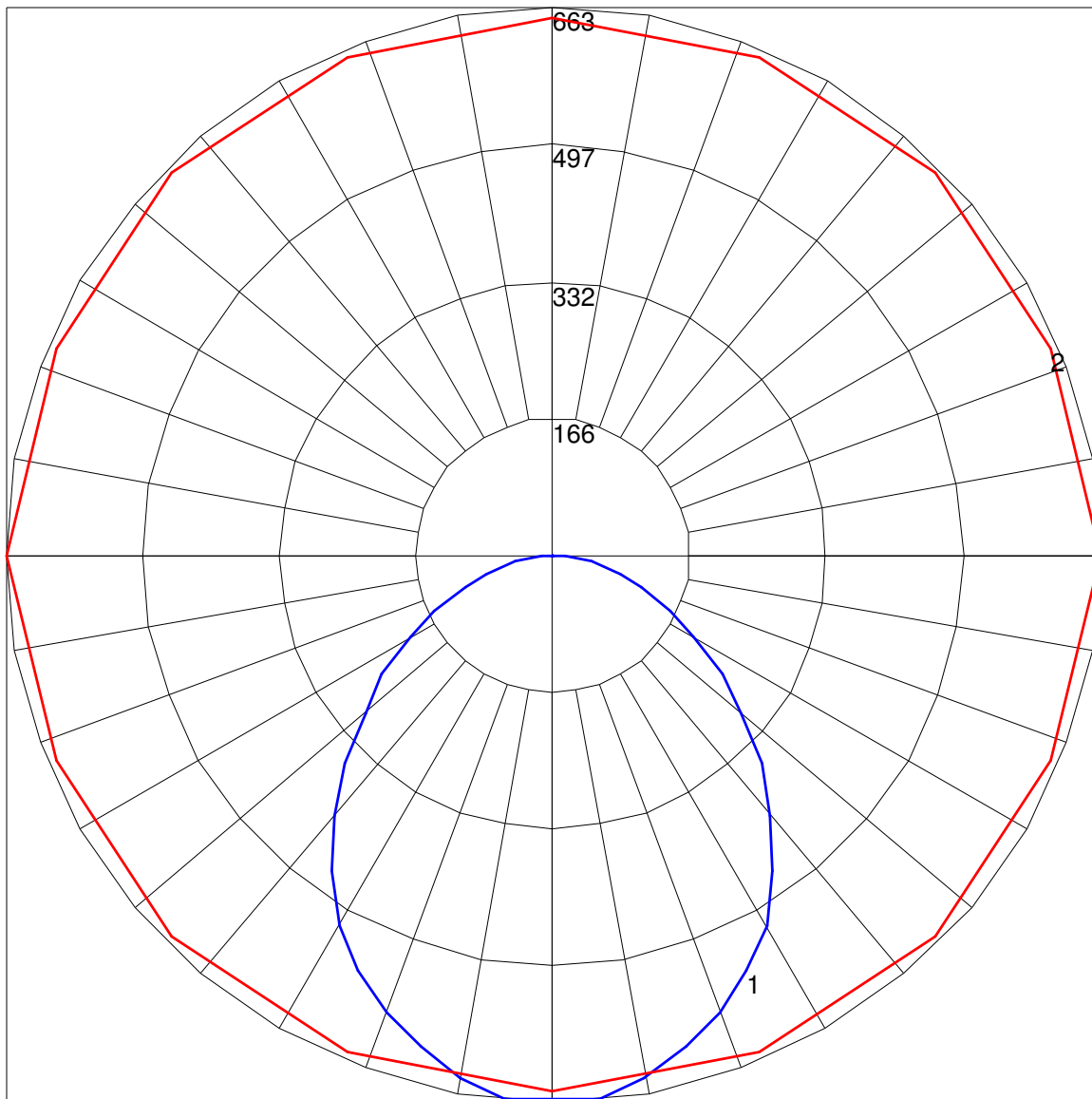
Reflectances

| | | | | | | | | | | |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 | 14.0 | 15.5 | 14.5 | 16.0 | 16.5 | 17.4 | 19.0 | 17.9 | 19.4 | 19.9 |
| | 3H | 15.3 | 16.7 | 15.8 | 17.1 | 17.6 | 19.6 | 21.0 | 20.1 | 21.5 | 22.0 |
| | 4H | 15.7 | 17.0 | 16.2 | 17.5 | 18.0 | 20.7 | 22.0 | 21.2 | 22.5 | 23.0 |
| | 6H | 16.0 | 17.2 | 16.5 | 17.7 | 18.2 | 21.7 | 22.9 | 22.2 | 23.4 | 24.0 |
| | 8H | 16.0 | 17.2 | 16.5 | 17.7 | 18.2 | 22.2 | 23.4 | 22.7 | 23.9 | 24.4 |
| | 12H | 16.0 | 17.1 | 16.5 | 17.6 | 18.2 | 22.7 | 23.8 | 23.3 | 24.3 | 24.9 |
| 4H | 2H | 15.1 | 16.4 | 15.6 | 16.9 | 17.4 | 17.8 | 19.1 | 18.3 | 19.5 | 20.1 |
| | 3H | 16.5 | 17.6 | 17.0 | 18.2 | 18.7 | 20.2 | 21.3 | 20.7 | 21.8 | 22.4 |
| | 4H | 17.0 | 18.0 | 17.6 | 18.6 | 19.2 | 21.4 | 22.4 | 22.0 | 23.0 | 23.6 |
| | 6H | 17.4 | 18.2 | 17.9 | 18.8 | 19.4 | 22.6 | 23.5 | 23.2 | 24.1 | 24.7 |
| | 8H | 17.4 | 18.3 | 18.0 | 18.8 | 19.4 | 23.2 | 24.0 | 23.8 | 24.6 | 25.2 |
| | 12H | 17.5 | 18.2 | 18.0 | 18.8 | 19.4 | 23.8 | 24.6 | 24.4 | 25.2 | 25.8 |
| 8H | 4H | 17.8 | 18.6 | 18.3 | 19.2 | 19.8 | 21.6 | 22.4 | 22.1 | 23.0 | 23.6 |
| | 6H | 18.2 | 18.9 | 18.8 | 19.5 | 20.2 | 22.9 | 23.6 | 23.5 | 24.2 | 24.8 |
| | 8H | 18.4 | 19.0 | 19.0 | 19.6 | 20.3 | 23.6 | 24.3 | 24.2 | 24.9 | 25.5 |
| | 12H | 18.4 | 19.0 | 19.0 | 19.6 | 20.3 | 24.5 | 25.0 | 25.1 | 25.6 | 26.3 |
| 12H | 4H | 18.0 | 18.7 | 18.5 | 19.3 | 19.9 | 21.6 | 22.3 | 22.1 | 22.9 | 23.5 |
| | 6H | 18.5 | 19.2 | 19.2 | 19.8 | 20.4 | 22.9 | 23.6 | 23.6 | 24.2 | 24.8 |
| | 8H | 18.7 | 19.3 | 19.4 | 19.9 | 20.6 | 23.7 | 24.3 | 24.3 | 24.9 | 25.6 |

Maximum UGR = 26.3

POLAR GRAPH



Maximum Candela = 663.134 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.)