



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SLF-2-L13-840-HIA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM BALLABS TEST NO. 17259.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 06-20-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 2' LED DIRECT/INDIRECT STAIRWELL LIGHT
 [MORE] WITH FROSTED POLYCARBONATE LENS
 [LUMCAT] SLF-2-L13-840-HIA-DIM-UNV
 [LAMPCAT] HLM 80 CRI 4000K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Industrial, Manufacturing, Office, Direct
 [_SEARCH_MOUNTING] Pendant, Surface, Suspended

CHARACTERISTICS

| | |
|---------------------------------|---------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 1378 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 138 |
| Total Luminaire Watts | 10 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.18 |
| Spacing Criterion (90-270) | 1.30 |
| Spacing Criterion (Diagonal) | 1.36 |
| 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 | 3158 | 2855 | 3095 |
| 55 | 2636 | 2404 | 2772 |
| 65 | 2042 | 1980 | 2406 |
| 75 | 1452 | 1637 | 2048 |
| 85 | 619 | 1375 | 1807 |

IES INDOOR REPORT
 PHOTOMETRIC FILENAME : SLF-2-L13-840-HIA-DIM-UNV_.IES

CANDELA TABULATION

| | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
|-----|------------|-------------|-------------|-------------|-------------|
| 0 | 434.319 | 434.319 | 434.319 | 434.319 | 434.319 |
| 5 | 435.485 | 432.764 | 430.819 | 431.208 | 428.875 |
| 10 | 427.709 | 426.542 | 425.376 | 427.709 | 426.542 |
| 15 | 414.100 | 413.711 | 415.266 | 418.766 | 419.155 |
| 20 | 396.992 | 398.547 | 401.657 | 408.268 | 410.600 |
| 25 | 370.551 | 374.051 | 382.216 | 391.159 | 395.436 |
| 30 | 341.778 | 348.388 | 362.386 | 374.440 | 379.106 |
| 35 | 311.061 | 318.060 | 337.112 | 354.221 | 360.831 |
| 40 | 275.289 | 284.621 | 307.173 | 330.113 | 337.112 |
| 45 | 239.128 | 250.404 | 275.289 | 302.507 | 310.672 |
| 50 | 201.023 | 216.965 | 241.850 | 273.345 | 282.288 |
| 55 | 169.139 | 184.692 | 211.910 | 246.905 | 257.014 |
| 60 | 134.534 | 151.642 | 181.582 | 215.799 | 227.852 |
| 65 | 103.428 | 120.147 | 152.809 | 185.470 | 197.913 |
| 70 | 76.599 | 93.318 | 128.701 | 159.419 | 169.528 |
| 75 | 51.714 | 67.656 | 104.594 | 134.534 | 141.922 |
| 80 | 30.328 | 48.992 | 84.764 | 111.593 | 118.981 |
| 85 | 12.054 | 33.828 | 66.878 | 93.318 | 97.984 |
| 90 | 0.000 | 20.608 | 52.103 | 75.432 | 79.321 |
| 95 | 0.000 | 14.387 | 41.604 | 62.212 | 65.712 |
| 100 | 0.000 | 9.332 | 30.717 | 49.770 | 52.492 |
| 105 | 0.000 | 8.165 | 26.440 | 40.438 | 44.715 |
| 110 | 0.000 | 5.055 | 19.052 | 31.884 | 35.383 |
| 115 | 0.000 | 4.666 | 16.720 | 26.829 | 30.328 |
| 120 | 0.000 | 4.277 | 13.220 | 22.163 | 25.663 |
| 125 | 0.000 | 3.111 | 10.109 | 17.886 | 20.608 |
| 130 | 0.000 | 0.000 | 9.721 | 15.942 | 17.497 |
| 135 | 0.000 | 0.000 | 6.610 | 11.665 | 14.387 |
| 140 | 0.000 | 0.000 | 5.832 | 10.109 | 11.276 |
| 145 | 0.000 | 0.000 | 0.000 | 7.777 | 9.332 |
| 150 | 0.000 | 0.000 | 0.000 | 6.610 | 7.777 |
| 155 | 0.000 | 0.000 | 0.000 | 5.444 | 5.444 |
| 160 | 0.000 | 0.000 | 0.000 | 4.666 | 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 | 3.111 | 0.000 |
| 180 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : SLF-2-L13-840-HIA-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 158.57 | N.A. | 11.50 |
| 0-30 | 335.12 | N.A. | 24.30 |
| 0-40 | 545.21 | N.A. | 39.60 |
| 0-60 | 949.23 | N.A. | 68.90 |
| 0-80 | 1208.87 | N.A. | 87.70 |
| 0-90 | 1277.43 | N.A. | 92.70 |
| 10-90 | 1236.37 | N.A. | 89.70 |
| 20-40 | 386.65 | N.A. | 28.10 |
| 20-50 | 599.48 | N.A. | 43.50 |
| 40-70 | 555.91 | N.A. | 40.30 |
| 60-80 | 259.64 | N.A. | 18.80 |
| 70-80 | 107.75 | N.A. | 7.80 |
| 80-90 | 68.56 | N.A. | 5.00 |
| 90-110 | 66.80 | N.A. | 4.80 |
| 90-120 | 82.52 | N.A. | 6.00 |
| 90-130 | 92.07 | N.A. | 6.70 |
| 90-150 | 99.53 | N.A. | 7.20 |
| 90-180 | 100.59 | N.A. | 7.30 |
| 110-180 | 33.79 | N.A. | 2.50 |
| 0-180 | 1378.02 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 41.06 |
| 10-20 | 117.50 |
| 20-30 | 176.56 |
| 30-40 | 210.09 |
| 40-50 | 212.83 |
| 50-60 | 191.19 |
| 60-70 | 151.89 |
| 70-80 | 107.75 |
| 80-90 | 68.56 |
| 90-100 | 41.34 |
| 100-110 | 25.46 |
| 110-120 | 15.72 |
| 120-130 | 9.55 |
| 130-140 | 5.20 |
| 140-150 | 2.26 |
| 150-160 | 0.93 |
| 160-170 | 0.10 |
| 170-180 | 0.04 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : SLF-2-L13-840-HIA-DIM-UNV_.IES

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 | 100 | 96 | 91 | 102 | 97 | 93 | 89 | 92 | 88 | 85 | 86 | 84 | 81 | 82 | 79 | 77 | 75 |
| 2 | 96 | 87 | 80 | 74 | 92 | 84 | 78 | 72 | 80 | 74 | 69 | 75 | 71 | 67 | 71 | 67 | 64 | 61 |
| 3 | 87 | 76 | 68 | 61 | 84 | 74 | 66 | 60 | 70 | 63 | 58 | 66 | 61 | 56 | 63 | 58 | 54 | 52 |
| 4 | 80 | 67 | 58 | 51 | 77 | 66 | 57 | 51 | 62 | 55 | 49 | 59 | 53 | 48 | 56 | 51 | 46 | 44 |
| 5 | 73 | 60 | 51 | 44 | 71 | 59 | 50 | 44 | 56 | 48 | 43 | 53 | 46 | 41 | 50 | 45 | 40 | 38 |
| 6 | 68 | 54 | 45 | 39 | 65 | 53 | 44 | 38 | 50 | 43 | 37 | 48 | 41 | 36 | 46 | 40 | 35 | 33 |
| 7 | 63 | 49 | 40 | 34 | 61 | 48 | 40 | 34 | 46 | 38 | 33 | 44 | 37 | 32 | 42 | 36 | 31 | 29 |
| 8 | 58 | 45 | 36 | 30 | 56 | 44 | 36 | 30 | 42 | 35 | 29 | 40 | 34 | 29 | 38 | 33 | 28 | 26 |
| 9 | 55 | 41 | 33 | 27 | 53 | 40 | 32 | 27 | 39 | 31 | 26 | 37 | 31 | 26 | 35 | 30 | 25 | 24 |
| 10 | 51 | 38 | 30 | 25 | 50 | 37 | 30 | 24 | 36 | 29 | 24 | 34 | 28 | 24 | 33 | 27 | 23 | 21 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : SLF-2-L13-840-HIA-DIM-UNV_.IES

UGR TABLE - CORRECTED

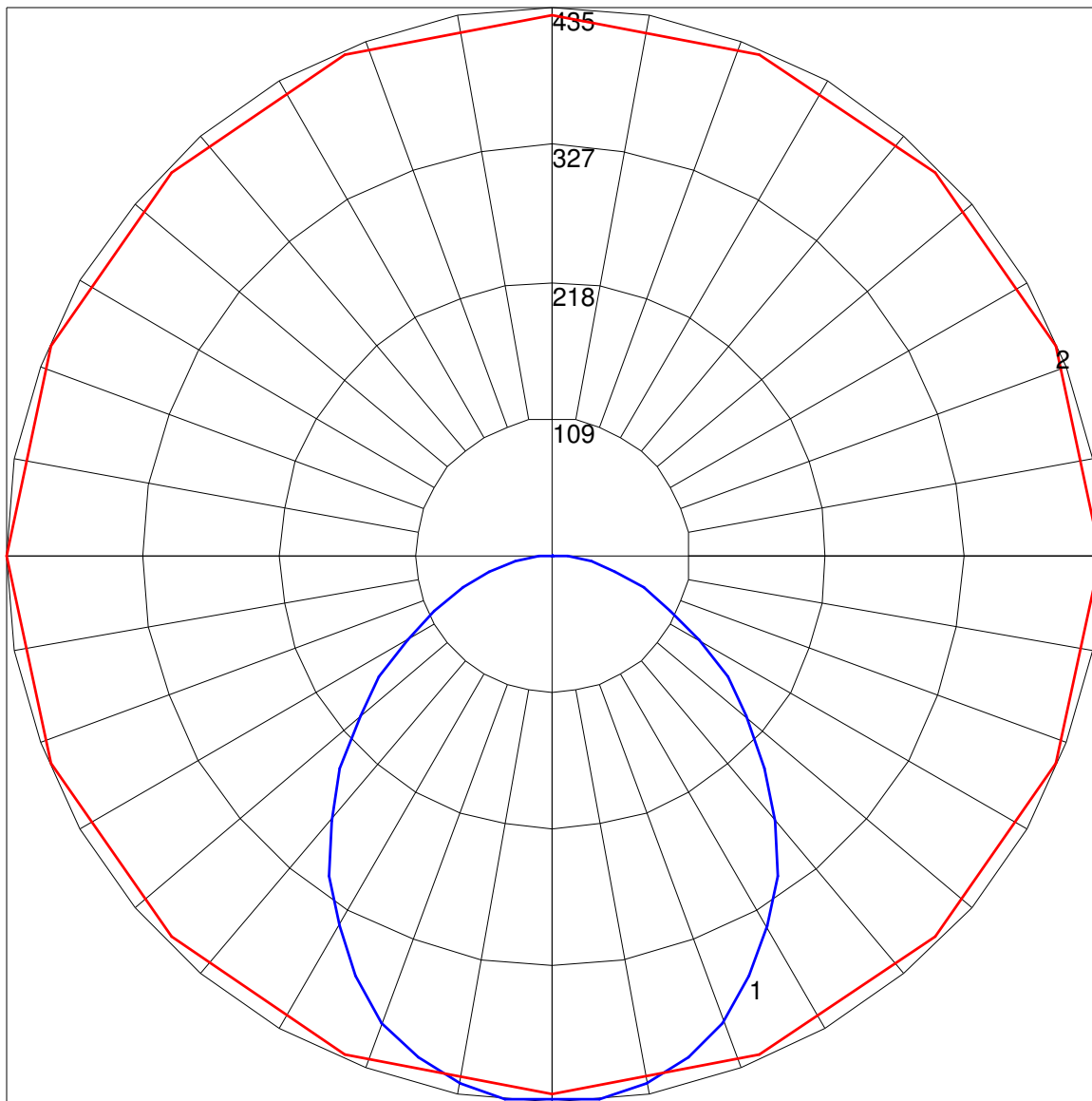
Reflectances

| | | | | | | | | | | |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 | 12.8 | 14.3 | 13.3 | 14.8 | 15.3 | 16.0 | 17.5 | 16.5 | 18.0 | 18.5 |
| | 3H | 14.0 | 15.4 | 14.5 | 15.9 | 16.4 | 18.2 | 19.6 | 18.7 | 20.1 | 20.6 |
| | 4H | 14.4 | 15.7 | 14.9 | 16.2 | 16.7 | 19.3 | 20.6 | 19.8 | 21.1 | 21.6 |
| | 6H | 14.6 | 15.9 | 15.2 | 16.3 | 16.9 | 20.3 | 21.5 | 20.8 | 22.0 | 22.6 |
| | 8H | 14.7 | 15.8 | 15.2 | 16.4 | 16.9 | 20.8 | 22.0 | 21.3 | 22.5 | 23.0 |
| | 12H | 14.7 | 15.8 | 15.2 | 16.3 | 16.9 | 21.3 | 22.4 | 21.9 | 22.9 | 23.5 |
| 4H | 2H | 13.7 | 15.0 | 14.2 | 15.5 | 16.1 | 16.3 | 17.6 | 16.8 | 18.1 | 18.6 |
| | 3H | 15.2 | 16.3 | 15.7 | 16.8 | 17.4 | 18.8 | 19.9 | 19.3 | 20.4 | 21.0 |
| | 4H | 15.7 | 16.7 | 16.2 | 17.2 | 17.8 | 20.0 | 21.0 | 20.5 | 21.5 | 22.1 |
| | 6H | 16.0 | 16.9 | 16.6 | 17.5 | 18.1 | 21.2 | 22.1 | 21.8 | 22.7 | 23.3 |
| | 8H | 16.1 | 16.9 | 16.7 | 17.5 | 18.1 | 21.8 | 22.7 | 22.4 | 23.2 | 23.8 |
| | 12H | 16.1 | 16.9 | 16.7 | 17.5 | 18.1 | 22.5 | 23.2 | 23.0 | 23.8 | 24.4 |
| 8H | 4H | 16.4 | 17.3 | 17.0 | 17.8 | 18.5 | 20.1 | 21.0 | 20.7 | 21.5 | 22.2 |
| | 6H | 16.9 | 17.6 | 17.5 | 18.2 | 18.9 | 21.5 | 22.2 | 22.1 | 22.8 | 23.5 |
| | 8H | 17.1 | 17.7 | 17.7 | 18.4 | 19.0 | 22.3 | 22.9 | 22.9 | 23.5 | 24.2 |
| | 12H | 17.2 | 17.8 | 17.8 | 18.4 | 19.1 | 23.1 | 23.7 | 23.7 | 24.3 | 25.0 |
| 12H | 4H | 16.6 | 17.4 | 17.2 | 18.0 | 18.6 | 20.1 | 20.9 | 20.7 | 21.5 | 22.1 |
| | 6H | 17.3 | 17.9 | 17.9 | 18.5 | 19.2 | 21.6 | 22.2 | 22.2 | 22.8 | 23.5 |
| | 8H | 17.5 | 18.1 | 18.1 | 18.7 | 19.4 | 22.3 | 22.9 | 22.9 | 23.5 | 24.2 |

Maximum UGR = 25.0

POLAR GRAPH



Maximum Candela = 435.485 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.)