



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : AW-4-L74-827-RA-DIM-UNV\_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 20990.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 2023-08-09  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 48 INCH LINEAR LED SURFACE LUMINAIRE  
 [MORE] WHITE REFLECTOR w/RADIAL RIBBED FROST ACRYLIC LENS  
 [MORE] 0-10V DIMMING DRIVER  
 [LUMCAT] AW-4-L74-827-RA-DIM-UNV  
 [LAMPCAT] 22 INCH HLM LED ARRAYS

**CHARACTERISTICS**

|                                 |                     |
|---------------------------------|---------------------|
| Lumens Per Lamp                 | N.A. (absolute)     |
| Total Lamp Lumens               | N.A. (absolute)     |
| Luminaire Lumens                | 7185                |
| Total Luminaire Efficiency      | N.A.                |
| Luminaire Efficacy Rating (LER) | 129                 |
| Total Luminaire Watts           | 55.6                |
| Ballast Factor                  | 1.00                |
| CIE Type                        | Direct              |
| Spacing Criterion (0-180)       | 1.20                |
| Spacing Criterion (90-270)      | 1.28                |
| Spacing Criterion (Diagonal)    | 1.36                |
| Basic Luminous Shape            | Rectangular w/Sides |
| Luminous Length (0-180)         | 3.98 ft             |
| Luminous Width (90-270)         | 0.38 ft             |
| Luminous Height                 | 0.15 ft             |

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

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 12571            | 11521             | 11823             |
| 55                  | 10719            | 9985              | 10513             |
| 65                  | 8623             | 8271              | 9102              |
| 75                  | 6688             | 7012              | 7865              |
| 85                  | 3138             | 6322              | 7322              |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : AW-4-L74-827-RA-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   | 2320.112   | 2320.112    | 2320.112    | 2320.112    | 2320.112    |
| 5   | 2339.565   | 2308.889    | 2302.904    | 2302.904    | 2296.170    |
| 10  | 2296.918   | 2270.732    | 2272.228    | 2278.214    | 2270.732    |
| 15  | 2219.855   | 2199.655    | 2216.115    | 2234.071    | 2231.826    |
| 20  | 2120.347   | 2112.117    | 2139.052    | 2171.972    | 2173.468    |
| 25  | 1982.682   | 1991.660    | 2040.292    | 2083.686    | 2094.909    |
| 30  | 1837.535   | 1853.246    | 1922.827    | 1978.941    | 2000.638    |
| 35  | 1656.475   | 1693.135    | 1785.162    | 1858.484    | 1883.922    |
| 40  | 1483.645   | 1523.298    | 1634.029    | 1736.530    | 1760.472    |
| 45  | 1278.643   | 1336.253    | 1470.925    | 1581.656    | 1611.584    |
| 50  | 1087.108   | 1158.185    | 1305.577    | 1427.531    | 1460.451    |
| 55  | 897.818    | 967.399     | 1136.488    | 1262.931    | 1301.836    |
| 60  | 718.255    | 796.814     | 970.392     | 1087.108    | 1131.251    |
| 65  | 545.425    | 628.473     | 798.310     | 947.198     | 979.370     |
| 70  | 402.522    | 475.844     | 653.911     | 798.310     | 836.467     |
| 75  | 273.086    | 354.638     | 534.950     | 664.385     | 692.816     |
| 80  | 151.881    | 251.389     | 427.960     | 545.425     | 585.826     |
| 85  | 53.869     | 169.837     | 339.675     | 448.909     | 482.577     |
| 90  | 0.000      | 112.227     | 264.856     | 371.846     | 393.544     |
| 95  | 0.000      | 71.825      | 208.743     | 304.510     | 337.430     |
| 100 | 0.000      | 47.884      | 160.111     | 252.137     | 278.324     |
| 105 | 0.000      | 32.172      | 126.443     | 203.505     | 232.685     |
| 110 | 0.000      | 14.964      | 100.256     | 166.845     | 194.527     |
| 115 | 0.000      | 9.726       | 80.055      | 140.658     | 160.111     |
| 120 | 0.000      | 0.000       | 63.595      | 115.220     | 135.421     |
| 125 | 0.000      | 0.000       | 49.380      | 92.026      | 107.738     |
| 130 | 0.000      | 0.000       | 38.905      | 72.574      | 86.041      |
| 135 | 0.000      | 0.000       | 31.424      | 56.114      | 68.833      |
| 140 | 0.000      | 0.000       | 16.460      | 42.646      | 52.373      |
| 145 | 0.000      | 0.000       | 5.985       | 32.920      | 38.157      |
| 150 | 0.000      | 0.000       | 0.000       | 28.431      | 32.172      |
| 155 | 0.000      | 0.000       | 0.000       | 26.935      | 28.431      |
| 160 | 0.000      | 0.000       | 0.000       | 15.712      | 26.186      |
| 165 | 0.000      | 0.000       | 0.000       | 5.237       | 8.978       |
| 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       |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : AW-4-L74-827-RA-DIM-UNV\_.IES**

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 845.42  | N.A.  | 11.80  |
| 0-30    | 1784.72 | N.A.  | 24.80  |
| 0-40    | 2897.1  | N.A.  | 40.30  |
| 0-60    | 5024.45 | N.A.  | 69.90  |
| 0-80    | 6346.98 | N.A.  | 88.30  |
| 0-90    | 6687.26 | N.A.  | 93.10  |
| 10-90   | 6467.94 | N.A.  | 90.00  |
| 20-40   | 2051.67 | N.A.  | 28.60  |
| 20-50   | 3178.97 | N.A.  | 44.20  |
| 40-70   | 2907.45 | N.A.  | 40.50  |
| 60-80   | 1322.53 | N.A.  | 18.40  |
| 70-80   | 542.44  | N.A.  | 7.60   |
| 80-90   | 340.29  | N.A.  | 4.70   |
| 90-110  | 336.40  | N.A.  | 4.70   |
| 90-120  | 413.92  | N.A.  | 5.80   |
| 90-130  | 458.46  | N.A.  | 6.40   |
| 90-150  | 491.77  | N.A.  | 6.80   |
| 90-180  | 497.25  | N.A.  | 6.90   |
| 110-180 | 160.85  | N.A.  | 2.20   |
| 0-180   | 7184.52 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  |
|---------|---------|
| 0-10    | 219.33  |
| 10-20   | 626.09  |
| 20-30   | 939.30  |
| 30-40   | 1112.37 |
| 40-50   | 1127.3  |
| 50-60   | 1000.06 |
| 60-70   | 780.09  |
| 70-80   | 542.44  |
| 80-90   | 340.29  |
| 90-100  | 208.25  |
| 100-110 | 128.15  |
| 110-120 | 77.52   |
| 120-130 | 44.54   |
| 130-140 | 23.56   |
| 140-150 | 9.75    |
| 150-160 | 4.54    |
| 160-170 | 0.94    |
| 170-180 | 0.00    |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : AW-4-L74-827-RA-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 | 96 | 96 | 96 | 93 |
| 1  | 106 | 101 | 96  | 92  | 102 | 98  | 93  | 90  | 92  | 89  | 85  | 87  | 84  | 82  | 82 | 80 | 78 | 75 |
| 2  | 96  | 87  | 80  | 74  | 93  | 85  | 78  | 73  | 80  | 75  | 70  | 76  | 71  | 67  | 72 | 68 | 65 | 62 |
| 3  | 87  | 77  | 68  | 61  | 84  | 74  | 67  | 60  | 70  | 64  | 58  | 67  | 61  | 57  | 63 | 59 | 55 | 52 |
| 4  | 80  | 68  | 59  | 52  | 77  | 66  | 58  | 51  | 63  | 55  | 50  | 59  | 53  | 48  | 57 | 51 | 47 | 45 |
| 5  | 74  | 61  | 51  | 45  | 71  | 59  | 51  | 44  | 56  | 49  | 43  | 53  | 47  | 42  | 51 | 45 | 41 | 39 |
| 6  | 68  | 55  | 46  | 39  | 66  | 53  | 45  | 39  | 51  | 43  | 38  | 48  | 42  | 37  | 46 | 40 | 36 | 34 |
| 7  | 63  | 49  | 41  | 34  | 61  | 48  | 40  | 34  | 46  | 39  | 33  | 44  | 38  | 33  | 42 | 36 | 32 | 30 |
| 8  | 59  | 45  | 37  | 31  | 57  | 44  | 36  | 30  | 42  | 35  | 30  | 40  | 34  | 29  | 39 | 33 | 29 | 27 |
| 9  | 55  | 41  | 33  | 28  | 53  | 41  | 33  | 27  | 39  | 32  | 27  | 37  | 31  | 26  | 36 | 30 | 26 | 24 |
| 10 | 51  | 38  | 30  | 25  | 50  | 37  | 30  | 25  | 36  | 29  | 24  | 35  | 28  | 24  | 33 | 28 | 24 | 22 |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : AW-4-L74-827-RA-DIM-UNV\_.IES**

**UGR TABLE - CORRECTED**

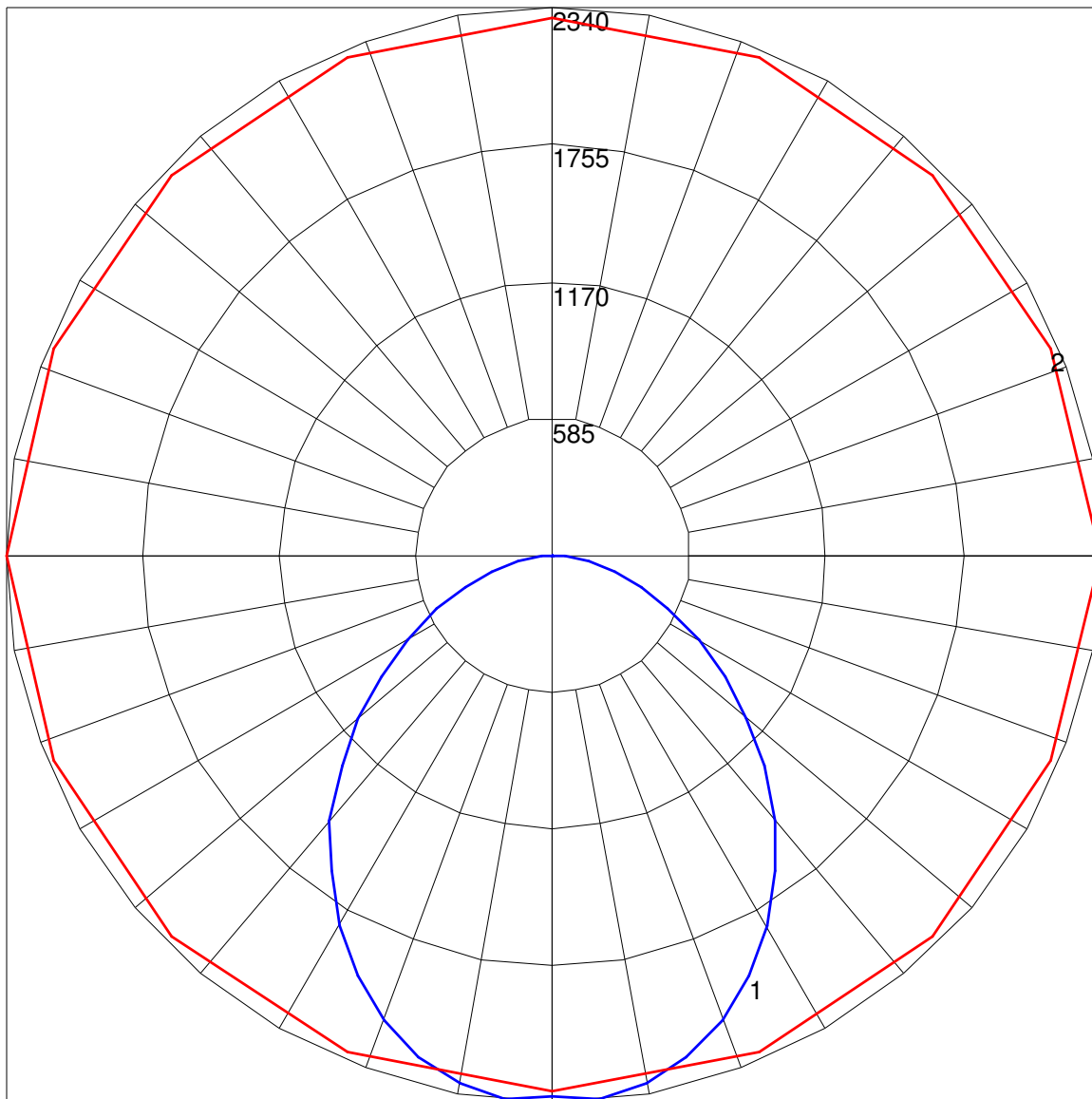
Reflectances

|                |    |    |    |    |    |    |    |    |    |    |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 | 17.8                 | 19.3 | 18.2 | 19.7 | 20.2 | 20.8               | 22.3 | 21.3 | 22.7 | 23.2 |
|           | 3H   | 19.0                 | 20.3 | 19.5 | 20.8 | 21.3 | 23.0               | 24.4 | 23.5 | 24.9 | 25.4 |
|           | 4H   | 19.4                 | 20.7 | 19.9 | 21.1 | 21.7 | 24.1               | 25.4 | 24.6 | 25.9 | 26.4 |
|           | 6H   | 19.6                 | 20.8 | 20.1 | 21.3 | 21.8 | 25.2               | 26.4 | 25.7 | 26.9 | 27.4 |
|           | 8H   | 19.6                 | 20.8 | 20.2 | 21.3 | 21.9 | 25.8               | 26.9 | 26.3 | 27.4 | 28.0 |
|           | 12H  | 19.6                 | 20.7 | 20.2 | 21.3 | 21.9 | 26.4               | 27.5 | 26.9 | 28.0 | 28.6 |
| 4H        | 2H   | 18.7                 | 20.0 | 19.2 | 20.5 | 21.0 | 21.1               | 22.4 | 21.6 | 22.9 | 23.4 |
|           | 3H   | 20.2                 | 21.3 | 20.7 | 21.8 | 22.4 | 23.6               | 24.7 | 24.1 | 25.2 | 25.8 |
|           | 4H   | 20.7                 | 21.7 | 21.2 | 22.2 | 22.8 | 24.8               | 25.8 | 25.3 | 26.4 | 27.0 |
|           | 6H   | 21.0                 | 21.9 | 21.5 | 22.4 | 23.1 | 26.1               | 27.0 | 26.7 | 27.6 | 28.2 |
|           | 8H   | 21.1                 | 21.9 | 21.6 | 22.5 | 23.1 | 26.8               | 27.6 | 27.3 | 28.2 | 28.8 |
|           | 12H  | 21.1                 | 21.9 | 21.7 | 22.5 | 23.1 | 27.5               | 28.3 | 28.1 | 28.9 | 29.5 |
| 8H        | 4H   | 21.4                 | 22.2 | 22.0 | 22.8 | 23.4 | 25.0               | 25.8 | 25.5 | 26.4 | 27.0 |
|           | 6H   | 21.9                 | 22.6 | 22.5 | 23.2 | 23.9 | 26.4               | 27.1 | 27.0 | 27.7 | 28.4 |
|           | 8H   | 22.1                 | 22.7 | 22.7 | 23.3 | 24.0 | 27.2               | 27.9 | 27.8 | 28.5 | 29.1 |
|           | 12H  | 22.2                 | 22.8 | 22.8 | 23.4 | 24.1 | 28.2               | 28.7 | 28.8 | 29.3 | 30.0 |
| 12H       | 4H   | 21.6                 | 22.4 | 22.2 | 23.0 | 23.6 | 25.0               | 25.7 | 25.6 | 26.3 | 27.0 |
|           | 6H   | 22.2                 | 22.9 | 22.9 | 23.5 | 24.1 | 26.5               | 27.1 | 27.1 | 27.7 | 28.4 |
|           | 8H   | 22.5                 | 23.1 | 23.1 | 23.7 | 24.4 | 27.3               | 27.9 | 27.9 | 28.5 | 29.2 |

Maximum UGR = 30.0

POLAR GRAPH



Maximum Candela = 2339.565 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.)