



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L61-830-AF-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 20203.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 2023-07-21  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 2x2 RECESSED LED LUMINAIRE  
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CENTER LENS  
 [MORE] 0-10V DIMMING DRIVER  
 [LUMCAT] LT-22-L61-830-AF-DIM-UNV  
 [LAMPCAT] 22 INCH LED ARRAY  
 [\_SEARCH\_SOURCETYPE] LED  
 [\_SEARCH\_APPLICATION] Indoor, Classroom, Office, Direct  
 [\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 6074            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 119             |
| Total Luminaire Watts           | 50.9            |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 1.22            |
| Spacing Criterion (90-270)      | 1.30            |
| Spacing Criterion (Diagonal)    | 1.40            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 1.92 ft         |
| Luminous Width (90-270)         | 1.92 ft         |
| Luminous Height                 | 0.00 ft         |

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

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 5253             | 5642              | 6074              |
| 55                  | 4761             | 5552              | 6262              |
| 65                  | 4195             | 5497              | 6787              |
| 75                  | 3228             | 5827              | 7933              |
| 85                  | 1403             | 4735              | 4618              |

IES INDOOR REPORT  
 PHOTOMETRIC FILENAME : LT-22-L61-830-AF-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> |
|-----------|------------|-------------|-------------|-------------|-------------|
| <b>0</b>  | 2021.397   | 2021.397    | 2021.397    | 2021.397    | 2021.397    |
| <b>5</b>  | 2019.656   | 2010.951    | 2009.210    | 2002.245    | 2007.469    |
| <b>10</b> | 1984.835   | 1976.129    | 1983.094    | 1976.129    | 1981.352    |
| <b>15</b> | 1932.602   | 1929.120    | 1939.566    | 1943.049    | 1948.272    |
| <b>20</b> | 1849.030   | 1861.218    | 1876.888    | 1894.298    | 1897.780    |
| <b>25</b> | 1753.271   | 1777.646    | 1800.280    | 1828.137    | 1835.102    |
| <b>30</b> | 1650.547   | 1678.404    | 1711.485    | 1753.271    | 1767.199    |
| <b>35</b> | 1537.376   | 1561.751    | 1601.796    | 1664.475    | 1678.404    |
| <b>40</b> | 1408.536   | 1432.911    | 1488.626    | 1554.787    | 1577.421    |
| <b>45</b> | 1269.250   | 1291.884    | 1363.268    | 1432.911    | 1467.733    |
| <b>50</b> | 1105.588   | 1135.186    | 1225.722    | 1297.107    | 1347.598    |
| <b>55</b> | 933.221    | 975.006     | 1088.177    | 1166.526    | 1227.464    |
| <b>60</b> | 769.559    | 816.568     | 947.149     | 1046.391    | 1105.588    |
| <b>65</b> | 605.897    | 656.388     | 793.934     | 927.997     | 980.230     |
| <b>70</b> | 445.717    | 499.691     | 652.906     | 799.157     | 853.131     |
| <b>75</b> | 285.538    | 351.699     | 515.361     | 659.870     | 701.656     |
| <b>80</b> | 141.028    | 221.118     | 355.181     | 485.762     | 471.834     |
| <b>85</b> | 41.786     | 85.313      | 141.028     | 238.528     | 137.546     |
| <b>90</b> | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : LT-22-L61-830-AF-DIM-UNV\_.IES**

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 737.63  | N.A.  | 12.10  |
| 0-30    | 1567.81 | N.A.  | 25.80  |
| 0-40    | 2574.42 | N.A.  | 42.40  |
| 0-60    | 4591.15 | N.A.  | 75.60  |
| 0-80    | 5905.79 | N.A.  | 97.20  |
| 0-90    | 6074.38 | N.A.  | 100.00 |
| 10-90   | 5883.51 | N.A.  | 96.90  |
| 20-40   | 1836.8  | N.A.  | 30.20  |
| 20-50   | 2888.09 | N.A.  | 47.50  |
| 40-70   | 2802.65 | N.A.  | 46.10  |
| 60-80   | 1314.63 | N.A.  | 21.60  |
| 70-80   | 528.71  | N.A.  | 8.70   |
| 80-90   | 168.59  | N.A.  | 2.80   |
| 90-110  | 0.00    | N.A.  | 0.00   |
| 90-120  | 0.00    | N.A.  | 0.00   |
| 90-130  | 0.00    | N.A.  | 0.00   |
| 90-150  | 0.00    | N.A.  | 0.00   |
| 90-180  | 0.00    | N.A.  | 0.00   |
| 110-180 | 0.00    | N.A.  | 0.00   |
| 0-180   | 6074.38 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  |
|---------|---------|
| 0-10    | 190.87  |
| 10-20   | 546.76  |
| 20-30   | 830.18  |
| 30-40   | 1006.61 |
| 40-50   | 1051.29 |
| 50-60   | 965.44  |
| 60-70   | 785.92  |
| 70-80   | 528.71  |
| 80-90   | 168.59  |
| 90-100  | 0.00    |
| 100-110 | 0.00    |
| 110-120 | 0.00    |
| 120-130 | 0.00    |
| 130-140 | 0.00    |
| 140-150 | 0.00    |
| 150-160 | 0.00    |
| 160-170 | 0.00    |
| 170-180 | 0.00    |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : LT-22-L61-830-AF-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  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1  | 108 | 103 | 98  | 94  | 105 | 101 | 96  | 93  | 96  | 93  | 90  | 92  | 90  | 87  | 89  | 86  | 84  | 82  |
| 2  | 98  | 89  | 82  | 76  | 95  | 87  | 81  | 75  | 84  | 78  | 73  | 80  | 76  | 71  | 77  | 73  | 70  | 68  |
| 3  | 89  | 78  | 69  | 63  | 86  | 76  | 68  | 62  | 73  | 66  | 61  | 70  | 65  | 60  | 68  | 63  | 59  | 56  |
| 4  | 81  | 69  | 60  | 53  | 79  | 67  | 59  | 52  | 65  | 57  | 52  | 62  | 56  | 51  | 60  | 55  | 50  | 48  |
| 5  | 75  | 61  | 52  | 45  | 72  | 60  | 51  | 45  | 58  | 50  | 44  | 56  | 49  | 44  | 54  | 48  | 43  | 41  |
| 6  | 69  | 55  | 46  | 39  | 67  | 54  | 45  | 39  | 52  | 45  | 39  | 51  | 44  | 38  | 49  | 43  | 38  | 36  |
| 7  | 64  | 50  | 41  | 35  | 62  | 49  | 41  | 35  | 48  | 40  | 34  | 46  | 39  | 34  | 45  | 38  | 34  | 32  |
| 8  | 59  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 43  | 36  | 31  | 42  | 35  | 30  | 41  | 35  | 30  | 28  |
| 9  | 55  | 42  | 33  | 28  | 54  | 41  | 33  | 28  | 40  | 33  | 27  | 39  | 32  | 27  | 38  | 32  | 27  | 25  |
| 10 | 52  | 39  | 30  | 25  | 51  | 38  | 30  | 25  | 37  | 30  | 25  | 36  | 29  | 25  | 35  | 29  | 25  | 23  |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : LT-22-L61-830-AF-DIM-UNV\_.IES**

**UGR TABLE - CORRECTED**

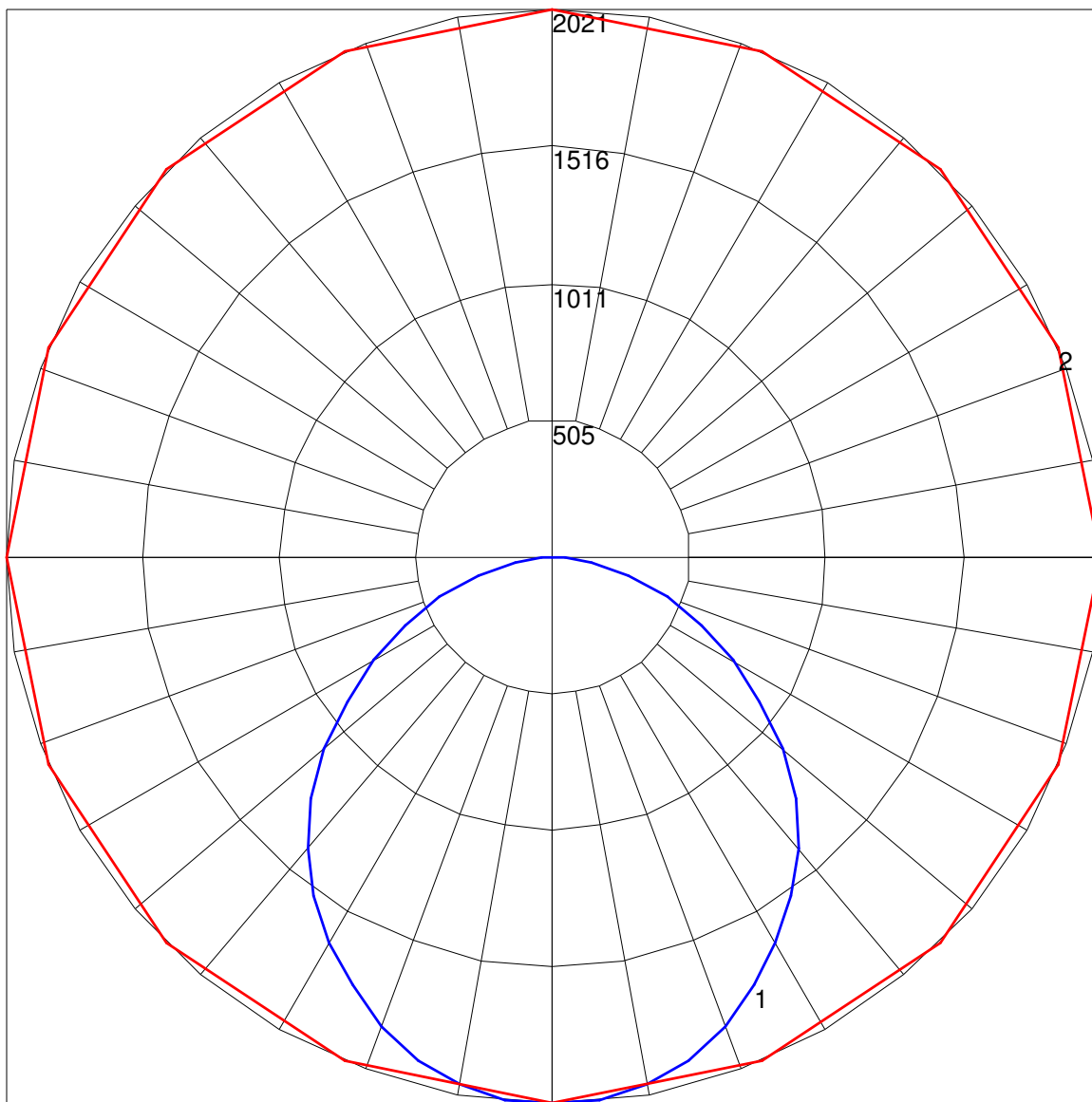
Reflectances

|                |    |    |    |    |    |    |    |    |    |    |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 | 17.2                 | 18.9 | 17.6 | 19.2 | 19.5 | 18.8               | 20.5 | 19.2 | 20.8 | 21.1 |
|           | 3H   | 18.8                 | 20.4 | 19.2 | 20.7 | 21.0 | 21.4               | 22.9 | 21.7 | 23.2 | 23.6 |
|           | 4H   | 19.4                 | 20.8 | 19.8 | 21.2 | 21.6 | 22.5               | 24.0 | 22.9 | 24.3 | 24.7 |
|           | 6H   | 19.7                 | 21.1 | 20.1 | 21.4 | 21.8 | 23.5               | 24.8 | 23.9 | 25.2 | 25.6 |
|           | 8H   | 19.8                 | 21.1 | 20.2 | 21.5 | 21.9 | 23.8               | 25.1 | 24.2 | 25.5 | 25.9 |
|           | 12H  | 19.8                 | 21.1 | 20.3 | 21.4 | 21.9 | 23.9               | 25.2 | 24.4 | 25.6 | 26.0 |
| 4H        | 2H   | 18.1                 | 19.6 | 18.5 | 19.9 | 20.3 | 19.4               | 20.8 | 19.8 | 21.2 | 21.5 |
|           | 3H   | 20.0                 | 21.2 | 20.4 | 21.6 | 22.0 | 22.2               | 23.4 | 22.6 | 23.8 | 24.2 |
|           | 4H   | 20.7                 | 21.8 | 21.1 | 22.2 | 22.7 | 23.5               | 24.7 | 24.0 | 25.1 | 25.5 |
|           | 6H   | 21.2                 | 22.1 | 21.6 | 22.6 | 23.0 | 24.7               | 25.7 | 25.2 | 26.2 | 26.6 |
|           | 8H   | 21.3                 | 22.2 | 21.7 | 22.6 | 23.1 | 25.1               | 26.0 | 25.6 | 26.5 | 26.9 |
|           | 12H  | 21.3                 | 22.2 | 21.8 | 22.6 | 23.1 | 25.3               | 26.2 | 25.8 | 26.6 | 27.1 |
| 8H        | 4H   | 21.4                 | 22.3 | 21.9 | 22.8 | 23.3 | 23.8               | 24.8 | 24.3 | 25.2 | 25.7 |
|           | 6H   | 22.1                 | 22.8 | 22.6 | 23.3 | 23.8 | 25.2               | 26.0 | 25.7 | 26.5 | 27.0 |
|           | 8H   | 22.3                 | 23.0 | 22.8 | 23.5 | 23.9 | 25.8               | 26.5 | 26.3 | 27.0 | 27.4 |
|           | 12H  | 22.4                 | 23.0 | 22.9 | 23.5 | 24.0 | 26.1               | 26.7 | 26.6 | 27.2 | 27.8 |
| 12H       | 4H   | 21.6                 | 22.4 | 22.1 | 22.9 | 23.4 | 23.9               | 24.7 | 24.3 | 25.2 | 25.6 |
|           | 6H   | 22.3                 | 23.0 | 22.9 | 23.5 | 24.0 | 25.3               | 26.0 | 25.8 | 26.4 | 27.0 |
|           | 8H   | 22.6                 | 23.2 | 23.1 | 23.7 | 24.3 | 25.9               | 26.5 | 26.4 | 27.0 | 27.5 |

Maximum UGR = 27.8

POLAR GRAPH



Maximum Candela = 2021.397 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)