

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-24-L40-835-D-(L20)-DIM-EM10W-UNV (EMER MODE)\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19260.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 03-06-2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 2x4' RECESSED LUMINAIRE

[MORE] WITH FROSTED ACRYLIC LENS

[LUMCAT] AT3-24-L40-835-D-(L20)-DIM-EM10W-UNV (EMER MODE)

[LAMPCAT] HLM 80 CRI, 3500K CCT

[\_SEARCH\_SOURCE TYPE] LED

[\_SEARCH\_APPLICATION] INDOOR, COMMERCIAL, DIRECT, OFFICE, ARCHITECTURAL

[\_SEARCH\_MOUNTING] RECESSED

### CHARACTERISTICS

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 1264            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 126             |
| Total Luminaire Watts           | 10              |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 1.12            |
| Spacing Criterion (90-270)      | 1.22            |
| Spacing Criterion (Diagonal)    | 1.30            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 3.76 ft         |
| Luminous Width (90-270)         | 1.88 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                  | 576              | 644               | 687               |
| 55                  | 491              | 569               | 605               |
| 65                  | 446              | 544               | 585               |
| 75                  | 379              | 518               | 518               |
| 85                  | 336              | 239               | 224               |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : AT3-24-L40-835-D-(L20)-DIM-EM10W-UNV (EMER MODE)\_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>  | 503.674    | 503.674     | 503.674     | 503.674     | 503.674     |
| <b>5</b>  | 501.010    | 501.187     | 501.187     | 501.365     | 501.542     |
| <b>10</b> | 490.886    | 491.419     | 492.662     | 494.261     | 495.326     |
| <b>15</b> | 472.771    | 474.014     | 476.856     | 481.118     | 483.072     |
| <b>20</b> | 445.598    | 448.262     | 455.011     | 463.181     | 466.555     |
| <b>25</b> | 409.013    | 412.387     | 422.333     | 433.344     | 438.317     |
| <b>30</b> | 370.474    | 406.704     | 384.149     | 382.906     | 410.789     |
| <b>35</b> | 331.402    | 337.440     | 354.667     | 371.539     | 377.933     |
| <b>40</b> | 293.928    | 300.854     | 321.456     | 337.973     | 343.301     |
| <b>45</b> | 266.933    | 275.458     | 298.368     | 313.464     | 318.259     |
| <b>50</b> | 224.664    | 234.432     | 255.744     | 268.176     | 271.373     |
| <b>55</b> | 184.526    | 194.650     | 213.830     | 223.954     | 227.506     |
| <b>60</b> | 150.072    | 160.550     | 176.890     | 186.125     | 189.144     |
| <b>65</b> | 123.432    | 134.976     | 150.782     | 159.485     | 161.971     |
| <b>70</b> | 93.418     | 105.672     | 120.058     | 126.984     | 128.227     |
| <b>75</b> | 64.291     | 76.546      | 87.912      | 88.978      | 87.912      |
| <b>80</b> | 41.558     | 53.990      | 52.925      | 36.763      | 33.389      |
| <b>85</b> | 19.181     | 22.022      | 13.675      | 12.965      | 12.787      |
| <b>90</b> | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : AT3-24-L40-835-D-(L20)-DIM-EM10W-UNV (EMER MODE)\_IES****ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 182.04  | N.A.  | 14.40  |
| 0-30    | 377.20  | N.A.  | 29.80  |
| 0-40    | 599.51  | N.A.  | 47.40  |
| 0-60    | 1012.55 | N.A.  | 80.10  |
| 0-80    | 1242.96 | N.A.  | 98.30  |
| 0-90    | 1264.08 | N.A.  | 100.00 |
| 10-90   | 1216.51 | N.A.  | 96.20  |
| 20-40   | 417.47  | N.A.  | 33.00  |
| 20-50   | 641.73  | N.A.  | 50.80  |
| 40-70   | 557.47  | N.A.  | 44.10  |
| 60-80   | 230.41  | N.A.  | 18.20  |
| 70-80   | 85.99   | N.A.  | 6.80   |
| 80-90   | 21.12   | N.A.  | 1.70   |
| 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   | 1264.08 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 47.58  |
| 10-20   | 134.46 |
| 20-30   | 195.16 |
| 30-40   | 222.31 |
| 40-50   | 224.26 |
| 50-60   | 188.79 |
| 60-70   | 144.42 |
| 70-80   | 85.99  |
| 80-90   | 21.12  |
| 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 : AT3-24-L40-835-D-(L20)-DIM-EM10W-UNV (EMER MODE)\_IES****COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

| RC<br>RW | 80 |    |    |    | 70 |    |    |    | 50 |    |    | 30 |    |    | 10 |    |    | 0  |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|          | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0  |
| 0        | 76 | 76 | 76 | 76 | 74 | 74 | 74 | 74 | 71 | 71 | 71 | 68 | 68 | 68 | 65 | 65 | 65 | 64 |
| 1        | 69 | 66 | 64 | 61 | 68 | 65 | 62 | 60 | 62 | 60 | 58 | 60 | 58 | 57 | 57 | 56 | 55 | 54 |
| 2        | 63 | 58 | 54 | 50 | 61 | 57 | 53 | 50 | 55 | 51 | 48 | 52 | 50 | 47 | 51 | 48 | 46 | 45 |
| 3        | 58 | 51 | 46 | 42 | 56 | 50 | 45 | 42 | 48 | 44 | 41 | 46 | 43 | 40 | 45 | 42 | 39 | 38 |
| 4        | 53 | 45 | 40 | 36 | 51 | 45 | 39 | 36 | 43 | 39 | 35 | 42 | 38 | 35 | 40 | 37 | 34 | 33 |
| 5        | 49 | 41 | 35 | 31 | 47 | 40 | 35 | 31 | 39 | 34 | 30 | 37 | 33 | 30 | 36 | 33 | 30 | 28 |
| 6        | 45 | 37 | 31 | 27 | 44 | 36 | 31 | 27 | 35 | 30 | 27 | 34 | 30 | 27 | 33 | 29 | 26 | 25 |
| 7        | 42 | 33 | 28 | 24 | 41 | 33 | 28 | 24 | 32 | 27 | 24 | 31 | 27 | 24 | 30 | 26 | 23 | 22 |
| 8        | 39 | 31 | 25 | 22 | 38 | 30 | 25 | 22 | 29 | 25 | 21 | 29 | 24 | 21 | 28 | 24 | 21 | 20 |
| 9        | 37 | 28 | 23 | 19 | 36 | 28 | 23 | 19 | 27 | 23 | 19 | 26 | 22 | 19 | 26 | 22 | 19 | 18 |
| 10       | 34 | 26 | 21 | 18 | 34 | 26 | 21 | 18 | 25 | 21 | 18 | 24 | 20 | 18 | 24 | 20 | 17 | 16 |

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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

|      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|
| X=2H | Y=2H | 10.8 | 12.4 | 11.1 | 12.7 | 13.0 | 11.9 | 13.5 | 12.2 | 13.8 | 14.1 |
|      | 3H   | 12.6 | 14.0 | 12.9 | 14.3 | 14.7 | 13.9 | 15.4 | 14.3 | 15.7 | 16.0 |
|      | 4H   | 13.2 | 14.6 | 13.6 | 14.9 | 15.3 | 14.6 | 16.0 | 15.0 | 16.4 | 16.7 |
|      | 6H   | 13.7 | 15.0 | 14.1 | 15.4 | 15.8 | 15.0 | 16.2 | 15.4 | 16.6 | 17.0 |
|      | 8H   | 13.9 | 15.1 | 14.3 | 15.5 | 15.9 | 15.0 | 16.2 | 15.4 | 16.6 | 17.0 |
|      | 12H  | 14.1 | 15.2 | 14.5 | 15.6 | 16.0 | 15.1 | 16.2 | 15.5 | 16.6 | 17.0 |

### UGR Viewed Endwise

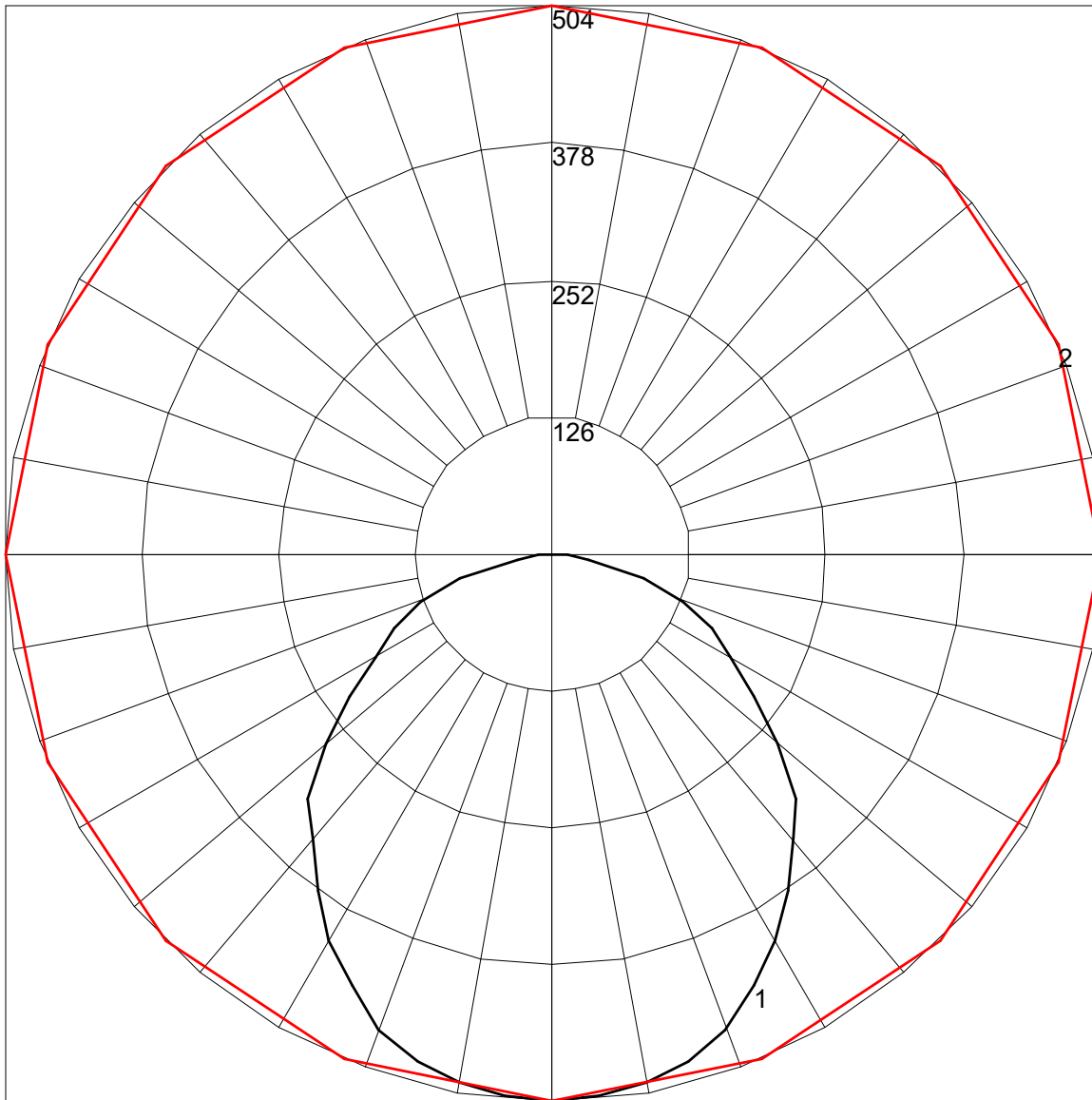
|     |     |      |      |      |      |      |      |      |      |      |      |
|-----|-----|------|------|------|------|------|------|------|------|------|------|
| 4H  | 2H  | 11.6 | 13.0 | 12.0 | 13.4 | 13.7 | 12.5 | 13.8 | 12.9 | 14.2 | 14.6 |
|     | 3H  | 13.7 | 14.8 | 14.1 | 15.2 | 15.6 | 14.7 | 15.9 | 15.2 | 16.3 | 16.7 |
|     | 4H  | 14.5 | 15.5 | 14.9 | 15.9 | 16.3 | 15.6 | 16.7 | 16.0 | 17.1 | 17.5 |
|     | 6H  | 15.1 | 16.0 | 15.6 | 16.5 | 16.9 | 16.0 | 16.9 | 16.5 | 17.4 | 17.8 |
|     | 8H  | 15.4 | 16.2 | 15.8 | 16.7 | 17.1 | 16.1 | 17.0 | 16.6 | 17.4 | 17.9 |
|     | 12H | 15.5 | 16.3 | 16.0 | 16.8 | 17.3 | 16.1 | 16.9 | 16.6 | 17.4 | 17.9 |
| 8H  | 4H  | 14.9 | 15.8 | 15.4 | 16.2 | 16.7 | 15.9 | 16.8 | 16.4 | 17.2 | 17.7 |
|     | 6H  | 15.8 | 16.5 | 16.3 | 17.0 | 17.5 | 16.4 | 17.1 | 16.9 | 17.6 | 18.1 |
|     | 8H  | 16.1 | 16.7 | 16.6 | 17.2 | 17.7 | 16.5 | 17.2 | 17.0 | 17.7 | 18.2 |
|     | 12H | 16.4 | 16.9 | 16.9 | 17.4 | 18.0 | 16.6 | 17.2 | 17.1 | 17.7 | 18.2 |
| 12H | 4H  | 15.0 | 15.7 | 15.4 | 16.2 | 16.7 | 15.9 | 16.7 | 16.4 | 17.2 | 17.7 |
|     | 6H  | 15.9 | 16.5 | 16.4 | 17.0 | 17.5 | 16.5 | 17.1 | 17.0 | 17.6 | 18.1 |
|     | 8H  | 16.2 | 16.8 | 16.7 | 17.3 | 17.8 | 16.6 | 17.2 | 17.2 | 17.7 | 18.3 |

Maximum UGR = 18.3

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## POLAR GRAPH



Maximum Candela = 503.674 Located At Horizontal Angle = 0, Vertical Angle = 0

# 1 - Vertical Plane Through Horizontal Angles (90 - 270)

# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)