



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-22-L40-835-D-(L37)-EM10W-DIM-UNV_(EMER MODE).IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 18882.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 04-16-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 2x2' RECESSED LUMINAIRE
 [MORE] WITH FROST CONCAVE ACRYLIC LENS w/DEEP ACRYLIC CENTER
 [MORE] DIFFUSER
 [LUMCAT] AT2-22-L40-835-D-(L37)-EM10W-DIM-UNV(EMER MODE)
 [LAMPCAT] HLM 80 CRI, 3500K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Office, Direct
 [_SEARCH_MOUNTING] Ceiling, Recessed
 [_SEARCH_CERTIFICATION] DLC

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 1100 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 110 |
| Total Luminaire Watts | 10 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.16 |
| Spacing Criterion (90-270) | 1.24 |
| Spacing Criterion (Diagonal) | 1.28 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 1.76 ft |
| Luminous Width (90-270) | 1.77 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 1158 | 1242 | 1329 |
| 55 | 1014 | 1095 | 1186 |
| 65 | 864 | 969 | 1057 |
| 75 | 687 | 823 | 931 |
| 85 | 340 | 510 | 446 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : AT2-22-L40-835-D-(L37)-EM10W-DIM-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> |
|-----------|------------|-------------|-------------|-------------|-------------|
| 0 | 449.854 | 449.854 | 449.854 | 449.854 | 449.854 |
| 5 | 448.783 | 446.641 | 447.176 | 446.641 | 446.641 |
| 10 | 438.072 | 438.072 | 439.143 | 439.679 | 440.214 |
| 15 | 420.935 | 422.541 | 425.755 | 427.897 | 430.039 |
| 20 | 400.584 | 402.726 | 408.082 | 412.902 | 416.650 |
| 25 | 373.272 | 377.556 | 385.054 | 390.944 | 396.300 |
| 30 | 341.675 | 345.959 | 358.277 | 365.774 | 370.058 |
| 35 | 309.007 | 311.685 | 326.680 | 335.784 | 341.675 |
| 40 | 273.126 | 276.339 | 290.798 | 300.974 | 306.865 |
| 45 | 236.709 | 240.993 | 253.846 | 265.092 | 271.519 |
| 50 | 201.363 | 206.183 | 217.965 | 227.069 | 234.567 |
| 55 | 168.160 | 171.908 | 181.548 | 189.046 | 196.543 |
| 60 | 136.027 | 141.383 | 149.416 | 157.449 | 162.269 |
| 65 | 105.501 | 112.463 | 118.354 | 123.710 | 129.065 |
| 70 | 77.118 | 86.222 | 89.435 | 94.255 | 99.611 |
| 75 | 51.412 | 56.232 | 61.587 | 68.549 | 69.620 |
| 80 | 27.848 | 32.668 | 36.417 | 39.630 | 38.559 |
| 85 | 8.569 | 11.246 | 12.853 | 13.924 | 11.246 |
| 90 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : AT2-22-L40-835-D-(L37)-EM10W-DIM-UNV_(EMER MODE).IES****ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 162.39 | N.A. | 14.80 |
| 0-30 | 339.31 | N.A. | 30.80 |
| 0-40 | 542.15 | N.A. | 49.30 |
| 0-60 | 900.88 | N.A. | 81.90 |
| 0-80 | 1083.97 | N.A. | 98.50 |
| 0-90 | 1100.14 | N.A. | 100.00 |
| 10-90 | 1057.72 | N.A. | 96.10 |
| 20-40 | 379.76 | N.A. | 34.50 |
| 20-50 | 575.44 | N.A. | 52.30 |
| 40-70 | 476.27 | N.A. | 43.30 |
| 60-80 | 183.08 | N.A. | 16.60 |
| 70-80 | 65.55 | N.A. | 6.00 |
| 80-90 | 16.18 | N.A. | 1.50 |
| 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 | 1100.14 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 42.42 |
| 10-20 | 119.97 |
| 20-30 | 176.92 |
| 30-40 | 202.84 |
| 40-50 | 195.68 |
| 50-60 | 163.06 |
| 60-70 | 117.53 |
| 70-80 | 65.55 |
| 80-90 | 16.18 |
| 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 |

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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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 109 | 105 | 101 | 97 | 107 | 103 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 87 | 82 | 77 | 83 | 79 | 75 | 80 | 77 | 74 | 72 |
| 3 | 91 | 81 | 73 | 67 | 89 | 80 | 72 | 67 | 77 | 71 | 65 | 74 | 69 | 64 | 71 | 67 | 63 | 61 |
| 4 | 84 | 72 | 64 | 57 | 82 | 71 | 63 | 57 | 69 | 62 | 56 | 66 | 60 | 55 | 64 | 59 | 55 | 53 |
| 5 | 77 | 65 | 56 | 50 | 75 | 64 | 56 | 50 | 62 | 55 | 49 | 60 | 53 | 48 | 58 | 52 | 48 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 50 | 44 | 56 | 49 | 43 | 54 | 48 | 43 | 53 | 47 | 42 | 40 |
| 7 | 67 | 53 | 45 | 39 | 65 | 53 | 45 | 39 | 51 | 44 | 38 | 50 | 43 | 38 | 48 | 42 | 38 | 36 |
| 8 | 62 | 49 | 41 | 35 | 61 | 48 | 40 | 35 | 47 | 40 | 35 | 46 | 39 | 34 | 44 | 39 | 34 | 32 |
| 9 | 58 | 45 | 37 | 32 | 57 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 |
| 10 | 55 | 42 | 34 | 29 | 53 | 41 | 34 | 29 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 27 |

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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 | 11.7 | 13.3 | 12.0 | 13.6 | 13.9 | 12.5 | 14.1 | 12.8 | 14.4 | 14.7 |
| | 3H | 13.3 | 14.7 | 13.7 | 15.0 | 15.4 | 14.2 | 15.6 | 14.6 | 16.0 | 16.3 |
| | 4H | 13.8 | 15.2 | 14.2 | 15.5 | 15.9 | 14.9 | 16.2 | 15.3 | 16.6 | 16.9 |
| | 6H | 14.2 | 15.4 | 14.6 | 15.8 | 16.2 | 15.3 | 16.6 | 15.8 | 16.9 | 17.3 |
| | 8H | 14.2 | 15.4 | 14.7 | 15.8 | 16.2 | 15.5 | 16.6 | 15.9 | 17.0 | 17.4 |
| | 12H | 14.3 | 15.4 | 14.7 | 15.8 | 16.2 | 15.5 | 16.6 | 15.9 | 17.0 | 17.5 |

UGR Viewed Endwise

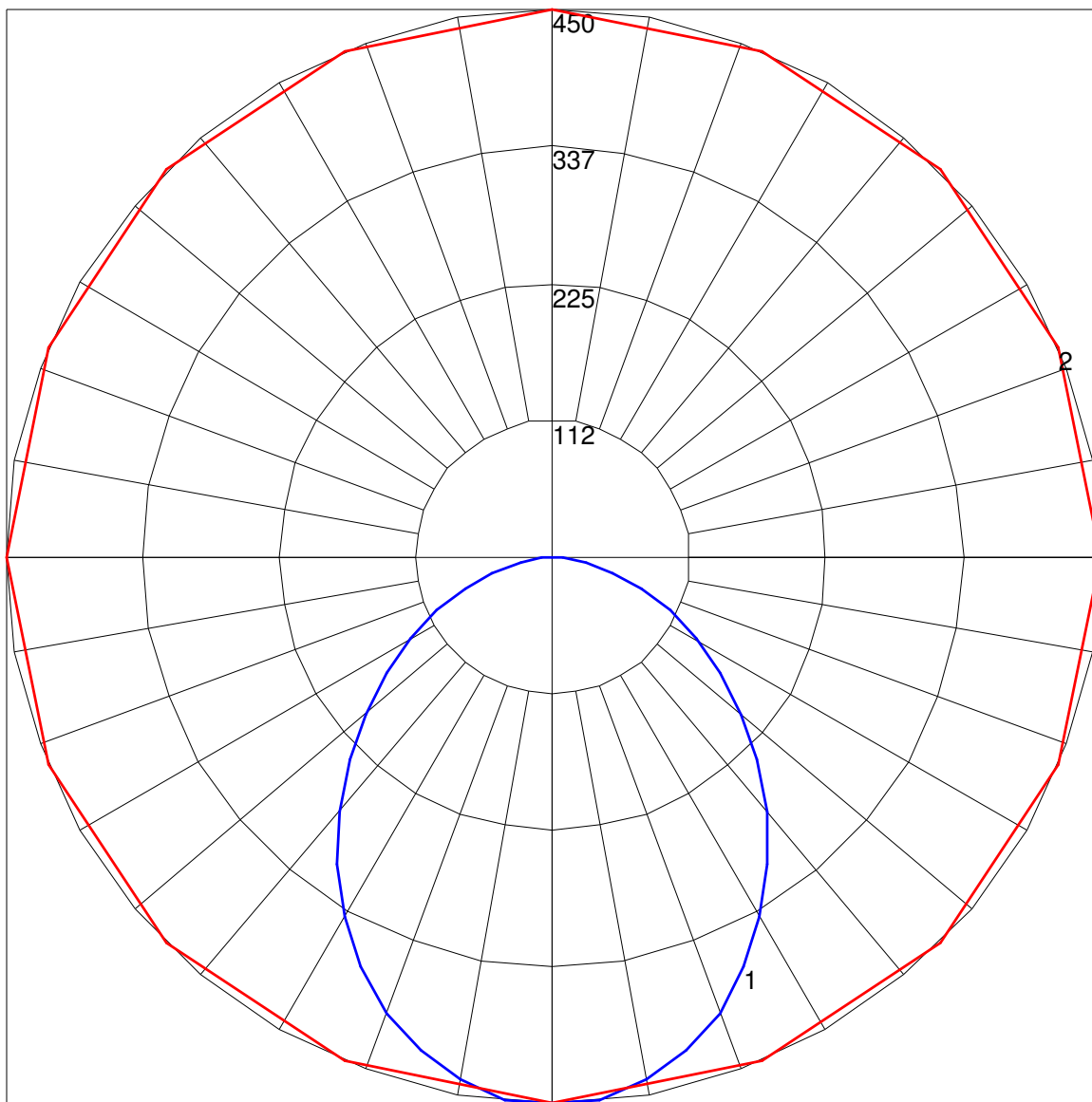
| | | | | | | | | | | | |
|-----|-----|------|------|------|------|------|------|------|------|------|------|
| 4H | 2H | 12.4 | 13.7 | 12.8 | 14.0 | 14.4 | 13.0 | 14.3 | 13.4 | 14.7 | 15.0 |
| | 3H | 14.2 | 15.3 | 14.6 | 15.7 | 16.1 | 14.9 | 16.1 | 15.4 | 16.5 | 16.9 |
| | 4H | 14.8 | 15.8 | 15.3 | 16.3 | 16.7 | 15.8 | 16.8 | 16.2 | 17.2 | 17.6 |
| | 6H | 15.3 | 16.2 | 15.7 | 16.6 | 17.1 | 16.4 | 17.2 | 16.8 | 17.7 | 18.1 |
| | 8H | 15.4 | 16.2 | 15.9 | 16.7 | 17.2 | 16.5 | 17.3 | 17.0 | 17.8 | 18.3 |
| | 12H | 15.5 | 16.2 | 16.0 | 16.7 | 17.2 | 16.6 | 17.3 | 17.1 | 17.8 | 18.3 |
| 8H | 4H | 15.2 | 16.0 | 15.6 | 16.4 | 16.9 | 16.0 | 16.8 | 16.5 | 17.3 | 17.7 |
| | 6H | 15.8 | 16.4 | 16.3 | 16.9 | 17.4 | 16.7 | 17.4 | 17.2 | 17.9 | 18.4 |
| | 8H | 15.9 | 16.6 | 16.4 | 17.1 | 17.5 | 16.9 | 17.6 | 17.5 | 18.1 | 18.6 |
| | 12H | 16.1 | 16.6 | 16.6 | 17.1 | 17.6 | 17.1 | 17.6 | 17.6 | 18.1 | 18.7 |
| 12H | 4H | 15.2 | 16.0 | 15.7 | 16.4 | 16.9 | 16.0 | 16.8 | 16.5 | 17.2 | 17.7 |
| | 6H | 15.8 | 16.4 | 16.3 | 16.9 | 17.4 | 16.8 | 17.4 | 17.3 | 17.8 | 18.4 |
| | 8H | 16.1 | 16.6 | 16.6 | 17.1 | 17.7 | 17.0 | 17.6 | 17.5 | 18.1 | 18.6 |

Maximum UGR = 18.7

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POLAR GRAPH



Maximum Candela = 449.854 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.)