



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-22-L30-835-D-EM10W-DIM-UNV(EMERGENCY MODE).IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 19255.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE]07-06-2020
 [MANUFAC]WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 2x2' RECESSED LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC LENS
 [LUMCAT] AT3-22-L30-835-D-EM10W-DIM-UNV(EMERGENCY MODE)
 [LAMPCAT] HLM 80 CRI, 3500K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Commercial, Office, Direct
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 990 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 99 |
| Total Luminaire Watts | 10 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.14 |
| Spacing Criterion (90-270) | 1.28 |
| Spacing Criterion (Diagonal) | 1.32 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 1.76 ft |
| Luminous Width (90-270) | 1.76 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 1017 | 1131 | 1231 |
| 55 | 887 | 1045 | 1136 |
| 65 | 745 | 944 | 1060 |
| 75 | 605 | 885 | 937 |
| 85 | 406 | 348 | 251 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : AT3-22-L30-835-D-EM10W-DIM-UNV(EMERGENCY 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 | 385.620 | 385.620 | 385.620 | 385.620 | 385.620 |
| 5 | 385.620 | 384.165 | 383.680 | 383.680 | 383.194 |
| 10 | 375.919 | 375.919 | 375.919 | 377.859 | 378.344 |
| 15 | 361.852 | 363.307 | 365.247 | 369.613 | 371.068 |
| 20 | 343.420 | 346.330 | 351.181 | 357.972 | 360.882 |
| 25 | 318.682 | 324.018 | 334.689 | 343.905 | 348.270 |
| 30 | 291.519 | 298.795 | 312.861 | 326.443 | 329.838 |
| 35 | 263.871 | 272.117 | 286.183 | 306.071 | 307.526 |
| 40 | 235.252 | 241.073 | 258.050 | 277.937 | 279.877 |
| 45 | 207.119 | 209.544 | 230.402 | 244.468 | 250.774 |
| 50 | 177.531 | 179.471 | 202.268 | 211.970 | 220.701 |
| 55 | 146.487 | 151.823 | 172.680 | 180.926 | 187.717 |
| 60 | 117.869 | 126.115 | 143.577 | 151.823 | 156.673 |
| 65 | 90.706 | 102.832 | 114.958 | 123.689 | 129.025 |
| 70 | 65.968 | 79.549 | 89.250 | 97.011 | 100.407 |
| 75 | 45.110 | 56.752 | 65.968 | 68.878 | 69.848 |
| 80 | 26.678 | 34.439 | 39.290 | 28.133 | 25.708 |
| 85 | 10.186 | 11.156 | 8.731 | 7.276 | 6.306 |
| 90 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : AT3-22-L30-835-D-EM10W-DIM-UNV(EMERGENCY MODE).IES****ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---------|--------|-------|--------|
| 0-20 | 139.66 | N.A. | 14.10 |
| 0-30 | 293.38 | N.A. | 29.60 |
| 0-40 | 472.81 | N.A. | 47.80 |
| 0-60 | 799.98 | N.A. | 80.80 |
| 0-80 | 976.35 | N.A. | 98.60 |
| 0-90 | 989.88 | N.A. | 100.00 |
| 10-90 | 953.46 | N.A. | 96.30 |
| 20-40 | 333.16 | N.A. | 33.70 |
| 20-50 | 509.52 | N.A. | 51.50 |
| 40-70 | 439.22 | N.A. | 44.40 |
| 60-80 | 176.36 | N.A. | 17.80 |
| 70-80 | 64.31 | N.A. | 6.50 |
| 80-90 | 13.53 | N.A. | 1.40 |
| 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 | 989.88 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 36.41 |
| 10-20 | 103.24 |
| 20-30 | 153.72 |
| 30-40 | 179.44 |
| 40-50 | 176.36 |
| 50-60 | 150.81 |
| 60-70 | 112.05 |
| 70-80 | 64.31 |
| 80-90 | 13.53 |
| 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 | 100 | 97 | 106 | 102 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 89 | 91 | 89 | 87 | 85 |
| 2 | 100 | 91 | 85 | 79 | 97 | 90 | 83 | 78 | 86 | 81 | 76 | 83 | 79 | 75 | 80 | 76 | 73 | 71 |
| 3 | 91 | 81 | 73 | 66 | 88 | 79 | 72 | 66 | 76 | 70 | 65 | 73 | 68 | 63 | 71 | 66 | 62 | 60 |
| 4 | 83 | 72 | 63 | 56 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | 66 | 59 | 55 | 63 | 58 | 54 | 52 |
| 5 | 77 | 64 | 55 | 49 | 75 | 63 | 55 | 49 | 61 | 54 | 48 | 59 | 53 | 48 | 57 | 52 | 47 | 45 |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 49 | 43 | 55 | 48 | 42 | 54 | 47 | 42 | 52 | 46 | 42 | 39 |
| 7 | 66 | 53 | 44 | 38 | 64 | 52 | 44 | 38 | 50 | 43 | 38 | 49 | 42 | 37 | 48 | 42 | 37 | 35 |
| 8 | 61 | 48 | 40 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 34 | 45 | 38 | 33 | 44 | 38 | 33 | 31 |
| 9 | 57 | 44 | 36 | 31 | 56 | 44 | 36 | 31 | 43 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 |
| 10 | 54 | 41 | 33 | 28 | 53 | 40 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 28 | 38 | 32 | 27 | 26 |

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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 | 11.2 | 12.8 | 11.6 | 13.2 | 13.5 | 12.6 | 14.2 | 13.0 | 14.5 | 14.8 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| | 3H | 12.8 | 14.3 | 13.2 | 14.6 | 15.0 | 14.5 | 15.9 | 14.9 | 16.3 | 16.6 |
| | 4H | 13.4 | 14.8 | 13.8 | 15.1 | 15.5 | 15.2 | 16.6 | 15.6 | 16.9 | 17.3 |
| | 6H | 13.8 | 15.1 | 14.3 | 15.5 | 15.9 | 15.5 | 16.8 | 15.9 | 17.1 | 17.5 |
| | 8H | 14.0 | 15.2 | 14.4 | 15.6 | 15.9 | 15.6 | 16.8 | 16.0 | 17.2 | 17.6 |
| | 12H | 14.0 | 15.2 | 14.5 | 15.6 | 16.0 | 15.6 | 16.7 | 16.0 | 17.1 | 17.5 |

UGR Viewed Endwise

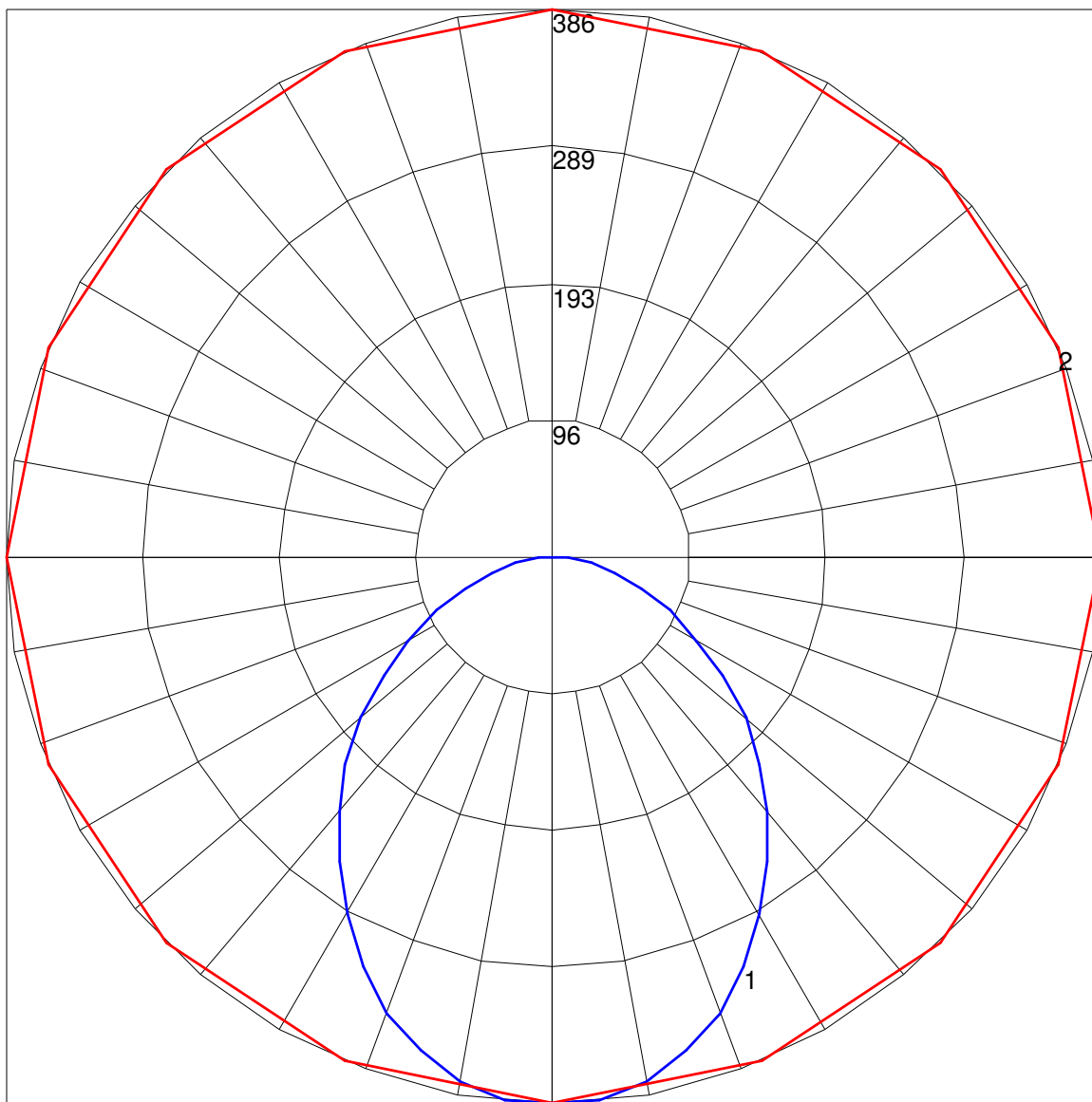
| | | | | | | | | | | | |
|----|-----|------|------|------|------|------|------|------|------|------|------|
| 4H | 2H | 12.1 | 13.4 | 12.5 | 13.8 | 14.2 | 13.1 | 14.5 | 13.5 | 14.8 | 15.2 |
| | 3H | 14.0 | 15.1 | 14.4 | 15.5 | 15.9 | 15.3 | 16.4 | 15.7 | 16.8 | 17.2 |
| | 4H | 14.7 | 15.7 | 15.1 | 16.1 | 16.5 | 16.1 | 17.1 | 16.5 | 17.6 | 18.0 |
| | 6H | 15.2 | 16.1 | 15.7 | 16.5 | 17.0 | 16.5 | 17.4 | 17.0 | 17.9 | 18.3 |
| | 8H | 15.4 | 16.2 | 15.8 | 16.6 | 17.1 | 16.6 | 17.4 | 17.0 | 17.9 | 18.3 |
| | 12H | 15.5 | 16.2 | 15.9 | 16.7 | 17.1 | 16.6 | 17.3 | 17.1 | 17.8 | 18.3 |

| | | | | | | | | | | | |
|----|-----|------|------|------|------|------|------|------|------|------|------|
| 8H | 4H | 15.1 | 16.0 | 15.6 | 16.4 | 16.9 | 16.4 | 17.2 | 16.9 | 17.7 | 18.1 |
| | 6H | 15.8 | 16.5 | 16.3 | 17.0 | 17.5 | 16.9 | 17.6 | 17.4 | 18.1 | 18.5 |
| | 8H | 16.0 | 16.7 | 16.5 | 17.2 | 17.6 | 17.0 | 17.6 | 17.5 | 18.1 | 18.6 |
| | 12H | 16.2 | 16.7 | 16.7 | 17.2 | 17.8 | 17.0 | 17.6 | 17.5 | 18.0 | 18.6 |

| | | | | | | | | | | | |
|-----|----|------|------|------|------|------|------|------|------|------|------|
| 12H | 4H | 15.2 | 15.9 | 15.6 | 16.4 | 16.9 | 16.4 | 17.2 | 16.9 | 17.6 | 18.1 |
| | 6H | 15.9 | 16.5 | 16.4 | 17.0 | 17.5 | 16.9 | 17.5 | 17.4 | 18.0 | 18.5 |
| | 8H | 16.1 | 16.7 | 16.6 | 17.2 | 17.7 | 17.0 | 17.6 | 17.5 | 18.1 | 18.6 |

Maximum UGR = 18.6

POLAR GRAPH



Maximum Candela = 385.62 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.)