



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4U-4-00-L8-835-A-(L5)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20657.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 16-APR-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 4' INDIRECT SUSPENDED LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC LENS
 [LUMCAT] MX4U-4-00-L8-835-A-(L5)-DIM-UNV
 [LAMPCAT] HLM 80 CRI, 3500K CCT
 [SEARCH_SOURCETYPE] LED
 [SEARCH_APPLICATION] Indoor, Architectural, Classroom, Indirect
 [SEARCH_MOUNTING] Suspended

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 2203 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 133 |
| Total Luminaire Watts | 16.6 |
| Ballast Factor | 1.00 |
| CIE Type | Indirect |
| Spacing Criterion (0-180) | N.A. |
| Spacing Criterion (90-270) | N.A. |
| Spacing Criterion (Diagonal) | N.A. |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 4.00 ft |
| Luminous Width (90-270) | 0.32 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|------------------|---------------|----------------|----------------|
| 45 | 0 | 0 | 0 |
| 55 | 0 | 0 | 0 |
| 65 | 0 | 0 | 0 |
| 75 | 0 | 0 | 0 |
| 85 | 0 | 0 | 0 |

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CANDELA TABULATION

| | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
|------------|------------|-------------|-------------|-------------|-------------|
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 10 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 15 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 20 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 30 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 35 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 40 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 45 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 50 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 55 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 65 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 70 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 75 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 80 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 85 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 90 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 95 | 39.565 | 38.774 | 40.357 | 39.565 | 41.939 |
| 100 | 83.879 | 84.670 | 79.922 | 83.879 | 83.087 |
| 105 | 141.644 | 140.853 | 140.853 | 138.479 | 136.105 |
| 110 | 202.575 | 199.409 | 197.036 | 195.453 | 191.496 |
| 115 | 268.253 | 264.297 | 259.549 | 251.636 | 251.636 |
| 120 | 333.140 | 326.019 | 318.897 | 314.940 | 310.984 |
| 125 | 392.488 | 390.906 | 382.993 | 375.080 | 371.123 |
| 130 | 454.210 | 453.419 | 445.506 | 438.384 | 436.010 |
| 135 | 512.767 | 514.350 | 505.645 | 496.150 | 492.985 |
| 140 | 575.280 | 572.115 | 566.576 | 553.124 | 553.124 |
| 145 | 631.463 | 627.507 | 618.802 | 615.637 | 608.515 |
| 150 | 678.150 | 682.898 | 674.194 | 667.072 | 663.907 |
| 155 | 724.046 | 728.003 | 721.672 | 712.968 | 712.177 |
| 160 | 764.403 | 767.568 | 761.238 | 757.281 | 753.325 |
| 165 | 794.473 | 798.429 | 792.890 | 788.933 | 786.560 |
| 170 | 815.838 | 819.794 | 815.047 | 812.673 | 812.673 |
| 175 | 826.916 | 831.664 | 827.708 | 825.334 | 822.168 |
| 180 | 830.081 | 830.081 | 830.081 | 830.081 | 830.081 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : MX4U-4-00-L8-835-A-(L5)-DIM-UNV_.IES****ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 0.00 | N.A. | 0.00 |
| 0-30 | 0.00 | N.A. | 0.00 |
| 0-40 | 0.00 | N.A. | 0.00 |
| 0-60 | 0.00 | N.A. | 0.00 |
| 0-80 | 0.00 | N.A. | 0.00 |
| 0-90 | 0.00 | N.A. | 0.00 |
| 10-90 | 0.00 | N.A. | 0.00 |
| 20-40 | 0.00 | N.A. | 0.00 |
| 20-50 | 0.00 | N.A. | 0.00 |
| 40-70 | 0.00 | N.A. | 0.00 |
| 60-80 | 0.00 | N.A. | 0.00 |
| 70-80 | 0.00 | N.A. | 0.00 |
| 80-90 | 0.00 | N.A. | 0.00 |
| 90-110 | 191.98 | N.A. | 8.70 |
| 90-120 | 448.31 | N.A. | 20.40 |
| 90-130 | 790.94 | N.A. | 35.90 |
| 90-150 | 1569.08 | N.A. | 71.20 |
| 90-180 | 2202.91 | N.A. | 100.00 |
| 110-180 | 2010.92 | N.A. | 91.30 |
| 0-180 | 2202.91 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 0.00 |
| 10-20 | 0.00 |
| 20-30 | 0.00 |
| 30-40 | 0.00 |
| 40-50 | 0.00 |
| 50-60 | 0.00 |
| 60-70 | 0.00 |
| 70-80 | 0.00 |
| 80-90 | 0.00 |
| 90-100 | 44.30 |
| 100-110 | 147.69 |
| 110-120 | 256.32 |
| 120-130 | 342.64 |
| 130-140 | 389.92 |
| 140-150 | 388.21 |
| 150-160 | 331.78 |
| 160-170 | 223.46 |
| 170-180 | 78.58 |

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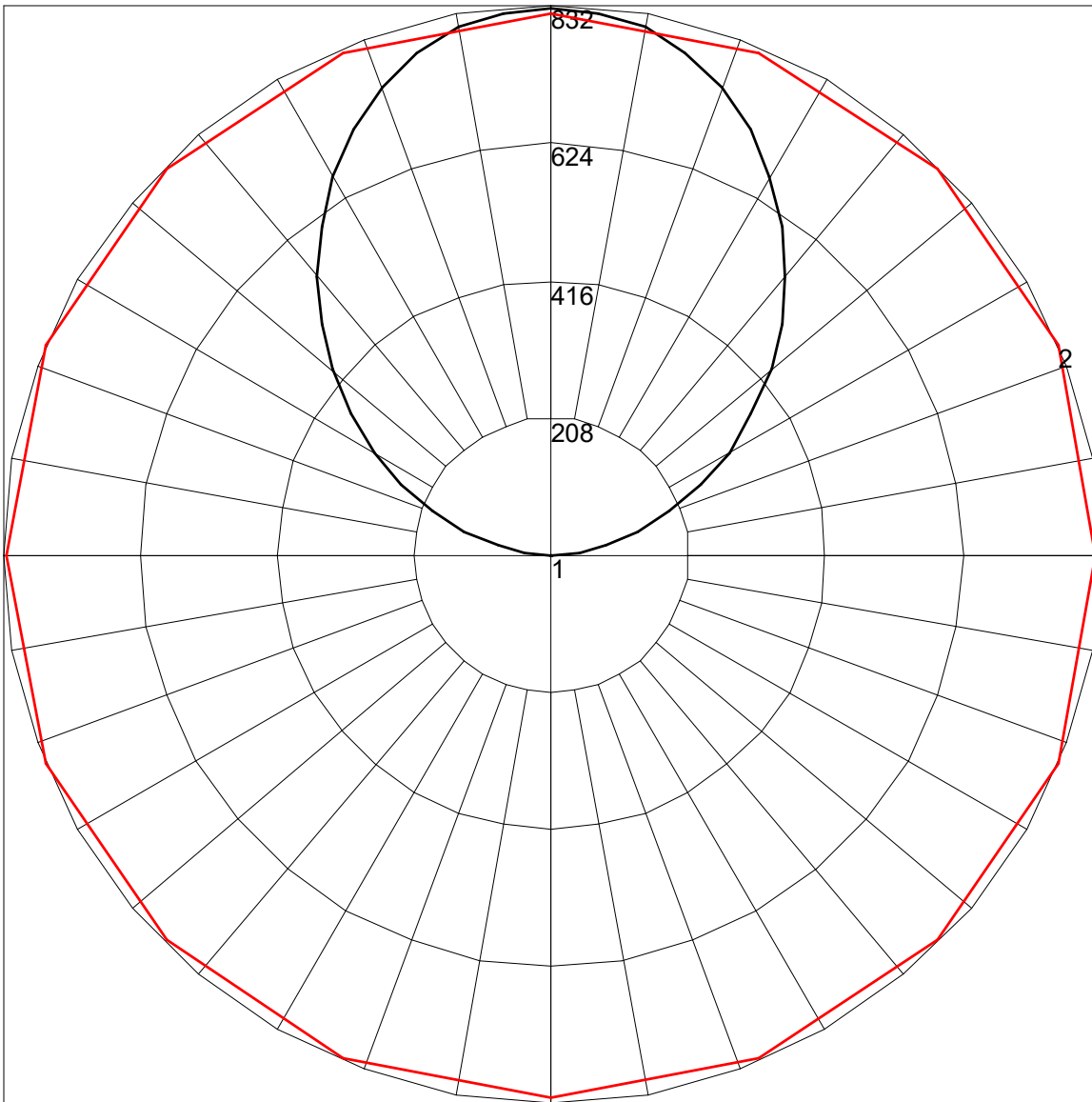
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 | 60 | 60 | 60 | 60 | 51 | 51 | 51 | 51 | 35 | 35 | 35 | 20 | 20 | 20 | 6 | 6 | 6 | 0 |
| 1 | 54 | 52 | 50 | 48 | 46 | 44 | 43 | 41 | 30 | 29 | 28 | 18 | 17 | 17 | 6 | 5 | 5 | 0 |
| 2 | 50 | 45 | 42 | 39 | 42 | 39 | 36 | 34 | 27 | 25 | 23 | 15 | 14 | 14 | 5 | 5 | 4 | 0 |
| 3 | 45 | 40 | 36 | 32 | 38 | 34 | 31 | 28 | 23 | 21 | 20 | 13 | 12 | 12 | 4 | 4 | 4 | 0 |
| 4 | 41 | 35 | 30 | 27 | 35 | 30 | 26 | 23 | 21 | 18 | 17 | 12 | 11 | 10 | 4 | 3 | 3 | 0 |
| 5 | 38 | 31 | 26 | 23 | 32 | 27 | 23 | 20 | 18 | 16 | 14 | 11 | 9 | 8 | 3 | 3 | 3 | 0 |
| 6 | 34 | 28 | 23 | 20 | 29 | 24 | 20 | 17 | 16 | 14 | 12 | 9 | 8 | 7 | 3 | 3 | 2 | 0 |
| 7 | 32 | 25 | 20 | 17 | 27 | 21 | 17 | 15 | 15 | 12 | 10 | 9 | 7 | 6 | 3 | 2 | 2 | 0 |
| 8 | 29 | 22 | 18 | 15 | 25 | 19 | 15 | 13 | 13 | 11 | 9 | 8 | 6 | 5 | 2 | 2 | 2 | 0 |
| 9 | 27 | 20 | 16 | 13 | 23 | 17 | 14 | 11 | 12 | 10 | 8 | 7 | 6 | 5 | 2 | 2 | 2 | 0 |
| 10 | 25 | 18 | 14 | 11 | 21 | 16 | 12 | 10 | 11 | 9 | 7 | 6 | 5 | 4 | 2 | 2 | 1 | 0 |

POLAR GRAPH



Maximum Candela = 831.664 Located At Horizontal Angle = 22.5, Vertical Angle = 175
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (175) (Through Max. Cd.)