H.E. WILLIAMS, INC.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : 75-2-L42-930-DIM-UNV_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] GEN from BALLABS TEST NO. 17875.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 11-30-2021
[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2' STRIP w/WHITE REFLECTOR
[LUMCAT] 75-2-L42-930-DIM-UNV

**CHARACTERISTICS**

| | |
|---|---|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 3544 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 113 |
| Total Luminaire Watts | 31.4 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.32 |
| Spacing Criterion (90-270) | 1.28 |
| Spacing Criterion (Diagonal) | 1.42 |
| Basic Luminous Shape | Rectangular w/Sides |
| Luminous Length (0-180) | 1.62 ft |
| Luminous Width (90-270) | 0.22 ft |
| Luminous Height | 0.01 ft |

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

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---|---|---|---|
| 45 | 35970 | 34424 | 34002 |
| 55 | 35039 | 33171 | 32551 |
| 65 | 32619 | 30086 | 29228 |
| 75 | 27429 | 24289 | 23393 |
| 85 | 14205 | 13623 | 11377 |

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**CANDELA TABULATION**

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| **0** | 1203.257 | 1203.257 | 1203.257 | 1203.257 | 1203.257 |
| **5** | 1212.049 | 1204.513 | 1199.489 | 1196.140 | 1194.884 |
| **10** | 1198.652 | 1191.116 | 1185.254 | 1181.905 | 1180.230 |
| **15** | 1178.555 | 1168.926 | 1163.065 | 1158.041 | 1159.715 |
| **20** | 1146.737 | 1138.782 | 1132.083 | 1127.059 | 1129.990 |
| **25** | 1106.544 | 1099.846 | 1090.216 | 1086.029 | 1084.355 |
| **30** | 1061.328 | 1051.699 | 1040.813 | 1037.464 | 1028.672 |
| **35** | 1003.551 | 995.597 | 983.037 | 980.525 | 971.314 |
| **40** | 936.564 | 919.818 | 913.119 | 908.513 | 906.001 |
| **45** | 858.273 | 837.758 | 833.572 | 829.804 | 826.873 |
| **50** | 771.608 | 752.768 | 749.419 | 747.744 | 738.115 |
| **55** | 679.082 | 659.405 | 656.474 | 656.474 | 648.101 |
| **60** | 578.602 | 561.018 | 552.644 | 556.412 | 543.852 |
| **65** | 466.817 | 453.838 | 444.209 | 452.163 | 435.417 |
| **70** | 353.776 | 337.448 | 332.424 | 340.797 | 327.818 |
| **75** | 241.572 | 225.663 | 225.663 | 225.663 | 220.639 |
| **80** | 128.532 | 126.020 | 126.020 | 123.926 | 118.902 |
| **85** | 43.123 | 45.216 | 48.147 | 46.054 | 41.867 |
| **90** | 3.768 | 3.768 | 5.861 | 3.768 | 3.768 |
| **95** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **100** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **105** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **110** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **115** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **120** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **125** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **130** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **135** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **140** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **145** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **150** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **155** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **160** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **165** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **170** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **175** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **180** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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## ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 443.12 | N.A. | 12.50 |
| 0-30 | 947.08 | N.A. | 26.70 |
| 0-40 | 1563.46 | N.A. | 44.10 |
| 0-60 | 2796.37 | N.A. | 78.90 |
| 0-80 | 3482.86 | N.A. | 98.30 |
| 0-90 | 3542.78 | N.A. | 100.00 |
| 10-90 | 3428.62 | N.A. | 96.70 |
| 20-40 | 1120.34 | N.A. | 31.60 |
| 20-50 | 1765.36 | N.A. | 49.80 |
| 40-70 | 1677.57 | N.A. | 47.30 |
| 60-80 | 686.49 | N.A. | 19.40 |
| 70-80 | 241.82 | N.A. | 6.80 |
| 80-90 | 59.93 | N.A. | 1.70 |
| 90-110 | 1.17 | N.A. | 0.00 |
| 90-120 | 1.17 | N.A. | 0.00 |
| 90-130 | 1.17 | N.A. | 0.00 |
| 90-150 | 1.17 | N.A. | 0.00 |
| 90-180 | 1.17 | N.A. | 0.00 |
| 110-180 | 0.00 | N.A. | 0.00 |
| 0-180 | 3543.96 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

## ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---|---|
| 0-10 | 114.16 |
| 10-20 | 328.96 |
| 20-30 | 503.96 |
| 30-40 | 616.38 |
| 40-50 | 645.03 |
| 50-60 | 587.88 |
| 60-70 | 444.66 |
| 70-80 | 241.82 |
| 80-90 | 59.93 |
| 90-100 | 1.17 |
| 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 | 104 | 100 | 96 | 106 | 102 | 98 | 94 | 97 | 94 | 91 | 93 | 91 | 88 | 90 | 88 | 86 | 84 |
| 2 | 99 | 90 | 84 | 78 | 96 | 89 | 82 | 77 | 85 | 80 | 75 | 82 | 77 | 73 | 79 | 75 | 72 | 70 |
| 3 | 90 | 79 | 71 | 65 | 87 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 66 | 62 | 69 | 65 | 61 | 58 |
| 4 | 82 | 70 | 61 | 55 | 80 | 69 | 61 | 54 | 66 | 59 | 53 | 64 | 58 | 53 | 62 | 56 | 52 | 50 |
| 5 | 76 | 63 | 54 | 47 | 73 | 61 | 53 | 47 | 59 | 52 | 46 | 57 | 51 | 46 | 55 | 50 | 45 | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 41 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 36 | 47 | 40 | 35 | 46 | 40 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 59 | 46 | 38 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 |

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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 | | | | | UGR Viewed Endwise | | | | |
| X=2H | Y=2H | 24.5 | 26.1 | 24.8 | 26.4 | 26.7 | 24.4 | 26.1 | 24.8 | 26.4 | 26.7 |
| | 3H | 26.2 | 27.7 | 26.6 | 28.0 | 28.4 | 26.2 | 27.6 | 26.5 | 28.0 | 28.3 |
| | 4H | 26.8 | 28.2 | 27.2 | 28.6 | 29.0 | 26.7 | 28.2 | 27.1 | 28.5 | 28.9 |
| | 6H | 27.2 | 28.5 | 27.6 | 28.9 | 29.3 | 27.1 | 28.4 | 27.5 | 28.8 | 29.2 |
| | 8H | 27.3 | 28.6 | 27.8 | 29.0 | 29.4 | 27.2 | 28.5 | 27.7 | 28.9 | 29.3 |
| | 12H | 27.4 | 28.6 | 27.8 | 28.9 | 29.4 | 27.3 | 28.5 | 27.7 | 28.9 | 29.3 |
| 4H | 2H | 25.1 | 26.5 | 25.4 | 26.8 | 27.2 | 25.0 | 26.4 | 25.4 | 26.8 | 27.1 |
| | 3H | 27.0 | 28.2 | 27.4 | 28.6 | 29.0 | 27.0 | 28.2 | 27.4 | 28.6 | 29.0 |
| | 4H | 27.7 | 28.8 | 28.2 | 29.2 | 29.7 | 27.7 | 28.8 | 28.1 | 29.2 | 29.6 |
| | 6H | 28.2 | 29.2 | 28.7 | 29.6 | 30.1 | 28.2 | 29.1 | 28.6 | 29.6 | 30.0 |
| | 8H | 28.4 | 29.2 | 28.8 | 29.7 | 30.1 | 28.3 | 29.2 | 28.8 | 29.6 | 30.1 |
| | 12H | 28.4 | 29.2 | 28.9 | 29.7 | 30.2 | 28.4 | 29.2 | 28.9 | 29.7 | 30.1 |
| 8H | 4H | 28.0 | 28.9 | 28.5 | 29.3 | 29.8 | 28.0 | 28.8 | 28.4 | 29.3 | 29.7 |
| | 6H | 28.6 | 29.3 | 29.1 | 29.8 | 30.3 | 28.5 | 29.3 | 29.0 | 29.8 | 30.2 |
| | 8H | 28.8 | 29.4 | 29.3 | 29.9 | 30.4 | 28.8 | 29.4 | 29.3 | 29.9 | 30.4 |
| | 12H | 28.9 | 29.5 | 29.4 | 30.0 | 30.5 | 28.9 | 29.4 | 29.4 | 29.9 | 30.5 |
| 12H | 4H | 28.0 | 28.8 | 28.5 | 29.3 | 29.7 | 28.0 | 28.8 | 28.5 | 29.2 | 29.7 |
| | 6H | 28.7 | 29.3 | 29.2 | 29.8 | 30.3 | 28.6 | 29.3 | 29.1 | 29.7 | 30.2 |
| | 8H | 28.9 | 29.4 | 29.4 | 29.9 | 30.5 | 28.8 | 29.4 | 29.3 | 29.9 | 30.4 |

Maximum UGR = 30.5

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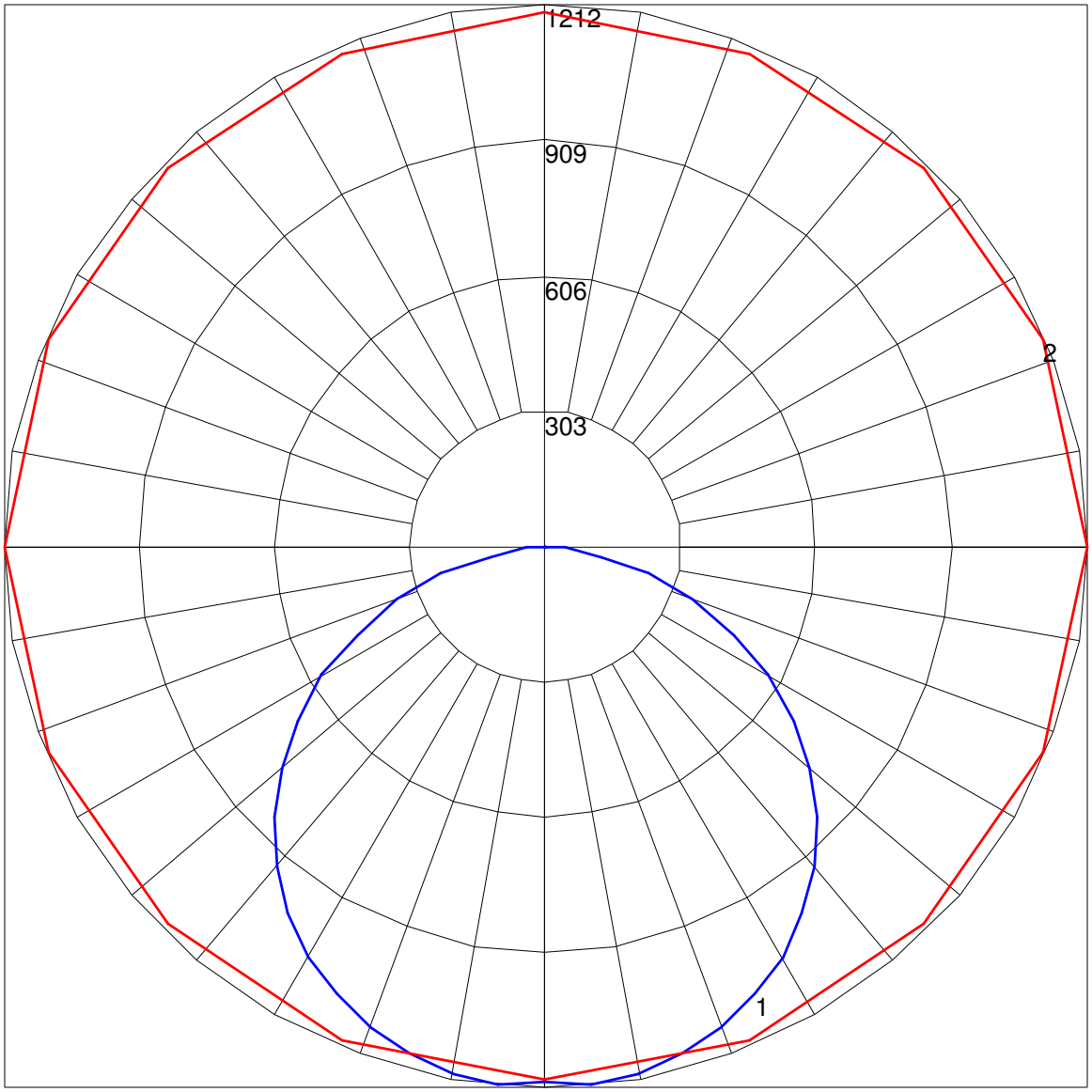
**POLAR GRAPH**




Maximum Candela = 1212.049  Located At Horizontal Angle = 0, Vertical Angle = 5
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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