



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 39-4-L30-840-A-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 19011.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 03-05-2024
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 4' SURFACE MOUNT LED LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC RIBBED LENS
 [LUMCAT] 39-4-L30-840-A-DIM-UNV
 [LAMPCAT]HLM 80 CRI, 4000K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] INDOOR, ARCHITECTURAL, COMMERCIAL, DIRECT, LINEAR
 [_SEARCH_MOUNTING] SURFACE, SUSPENDED

CHARACTERISTICS

| | |
|---------------------------------|---------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 3118 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 137 |
| Total Luminaire Watts | 22.8 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.18 |
| Spacing Criterion (90-270) | 1.18 |
| Spacing Criterion (Diagonal) | 1.30 |
| Basic Luminous Shape | Rectangular w/Sides |
| Luminous Length (0-180) | 4.01 ft |
| Luminous Width (90-270) | 0.79 ft |
| Luminous Height | 0.18 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 3091 | 2796 | 2763 |
| 55 | 2579 | 2298 | 2310 |
| 65 | 2133 | 1881 | 2006 |
| 75 | 1556 | 1492 | 1731 |
| 85 | 917 | 1243 | 1613 |

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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 | 1191.662 | 1191.662 | 1191.662 | 1191.662 | 1191.662 |
| 5 | 1198.279 | 1197.677 | 1197.076 | 1197.076 | 1197.677 |
| 10 | 1171.811 | 1171.209 | 1171.209 | 1171.811 | 1173.014 |
| 15 | 1130.304 | 1131.507 | 1133.312 | 1134.515 | 1135.718 |
| 20 | 1096.016 | 1096.617 | 1100.227 | 1100.828 | 1100.828 |
| 25 | 1003.979 | 1006.386 | 1009.393 | 1011.198 | 1011.198 |
| 30 | 927.583 | 930.591 | 934.802 | 937.208 | 937.809 |
| 35 | 863.218 | 868.030 | 874.647 | 877.655 | 879.460 |
| 40 | 757.346 | 763.361 | 772.384 | 777.798 | 780.205 |
| 45 | 673.129 | 681.551 | 693.582 | 702.004 | 705.011 |
| 50 | 562.445 | 570.867 | 587.108 | 599.741 | 604.553 |
| 55 | 463.792 | 474.018 | 493.869 | 508.908 | 515.525 |
| 60 | 369.950 | 380.778 | 401.832 | 424.090 | 433.113 |
| 65 | 291.148 | 302.577 | 329.647 | 360.326 | 369.950 |
| 70 | 211.744 | 225.580 | 261.071 | 294.156 | 307.390 |
| 75 | 138.355 | 155.199 | 194.299 | 229.790 | 242.423 |
| 80 | 81.209 | 102.864 | 145.574 | 181.667 | 194.299 |
| 85 | 35.491 | 58.951 | 101.060 | 135.348 | 147.379 |
| 90 | 0.000 | 25.866 | 60.155 | 87.826 | 98.653 |
| 95 | 0.000 | 10.828 | 38.499 | 63.162 | 72.787 |
| 100 | 0.000 | 0.000 | 23.460 | 42.710 | 49.327 |
| 105 | 0.000 | 0.000 | 15.039 | 28.273 | 34.288 |
| 110 | 0.000 | 0.000 | 0.000 | 19.249 | 23.460 |
| 115 | 0.000 | 0.000 | 0.000 | 14.437 | 17.445 |
| 120 | 0.000 | 0.000 | 0.000 | 12.031 | 13.234 |
| 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 | 433.98 | N.A. | 13.90 |
| 0-30 | 900.86 | N.A. | 28.90 |
| 0-40 | 1441.12 | N.A. | 46.20 |
| 0-60 | 2410.58 | N.A. | 77.30 |
| 0-80 | 2946.1 | N.A. | 94.50 |
| 0-90 | 3052.7 | N.A. | 97.90 |
| 10-90 | 2939.39 | N.A. | 94.30 |
| 20-40 | 1007.14 | N.A. | 32.30 |
| 20-50 | 1535.87 | N.A. | 49.30 |
| 40-70 | 1297.22 | N.A. | 41.60 |
| 60-80 | 535.52 | N.A. | 17.20 |
| 70-80 | 207.75 | N.A. | 6.70 |
| 80-90 | 106.60 | N.A. | 3.40 |
| 90-110 | 57.85 | N.A. | 1.90 |
| 90-120 | 63.82 | N.A. | 2.00 |
| 90-130 | 64.89 | N.A. | 2.10 |
| 90-150 | 64.89 | N.A. | 2.10 |
| 90-180 | 64.89 | N.A. | 2.10 |
| 110-180 | 7.05 | N.A. | 0.20 |
| 0-180 | 3117.59 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 113.31 |
| 10-20 | 320.67 |
| 20-30 | 466.88 |
| 30-40 | 540.26 |
| 40-50 | 528.73 |
| 50-60 | 440.73 |
| 60-70 | 327.76 |
| 70-80 | 207.75 |
| 80-90 | 106.60 |
| 90-100 | 41.75 |
| 100-110 | 16.10 |
| 110-120 | 5.97 |
| 120-130 | 1.08 |
| 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 | 110 | 110 | 110 | 105 | 105 | 105 | 100 | 100 | 100 | 98 |
| 1 | 108 | 103 | 99 | 95 | 105 | 101 | 96 | 93 | 96 | 93 | 90 | 92 | 89 | 86 | 88 | 85 | 83 | 81 |
| 2 | 98 | 90 | 83 | 77 | 95 | 88 | 82 | 76 | 84 | 79 | 74 | 80 | 76 | 72 | 77 | 74 | 70 | 68 |
| 3 | 90 | 79 | 71 | 65 | 87 | 78 | 70 | 64 | 74 | 68 | 63 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 71 | 62 | 55 | 80 | 69 | 61 | 55 | 66 | 59 | 54 | 64 | 58 | 53 | 61 | 56 | 52 | 50 |
| 5 | 76 | 63 | 54 | 48 | 74 | 62 | 54 | 48 | 60 | 52 | 47 | 58 | 51 | 46 | 55 | 50 | 45 | 43 |
| 6 | 70 | 57 | 48 | 42 | 68 | 56 | 48 | 42 | 54 | 47 | 41 | 52 | 46 | 41 | 50 | 45 | 40 | 38 |
| 7 | 65 | 52 | 43 | 37 | 63 | 51 | 43 | 37 | 49 | 42 | 37 | 48 | 41 | 36 | 46 | 40 | 36 | 34 |
| 8 | 61 | 48 | 39 | 33 | 59 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 32 | 30 |
| 9 | 57 | 44 | 36 | 30 | 55 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 30 | 39 | 34 | 29 | 27 |
| 10 | 53 | 40 | 33 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 27 | 25 |

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UGR TABLE - CORRECTED

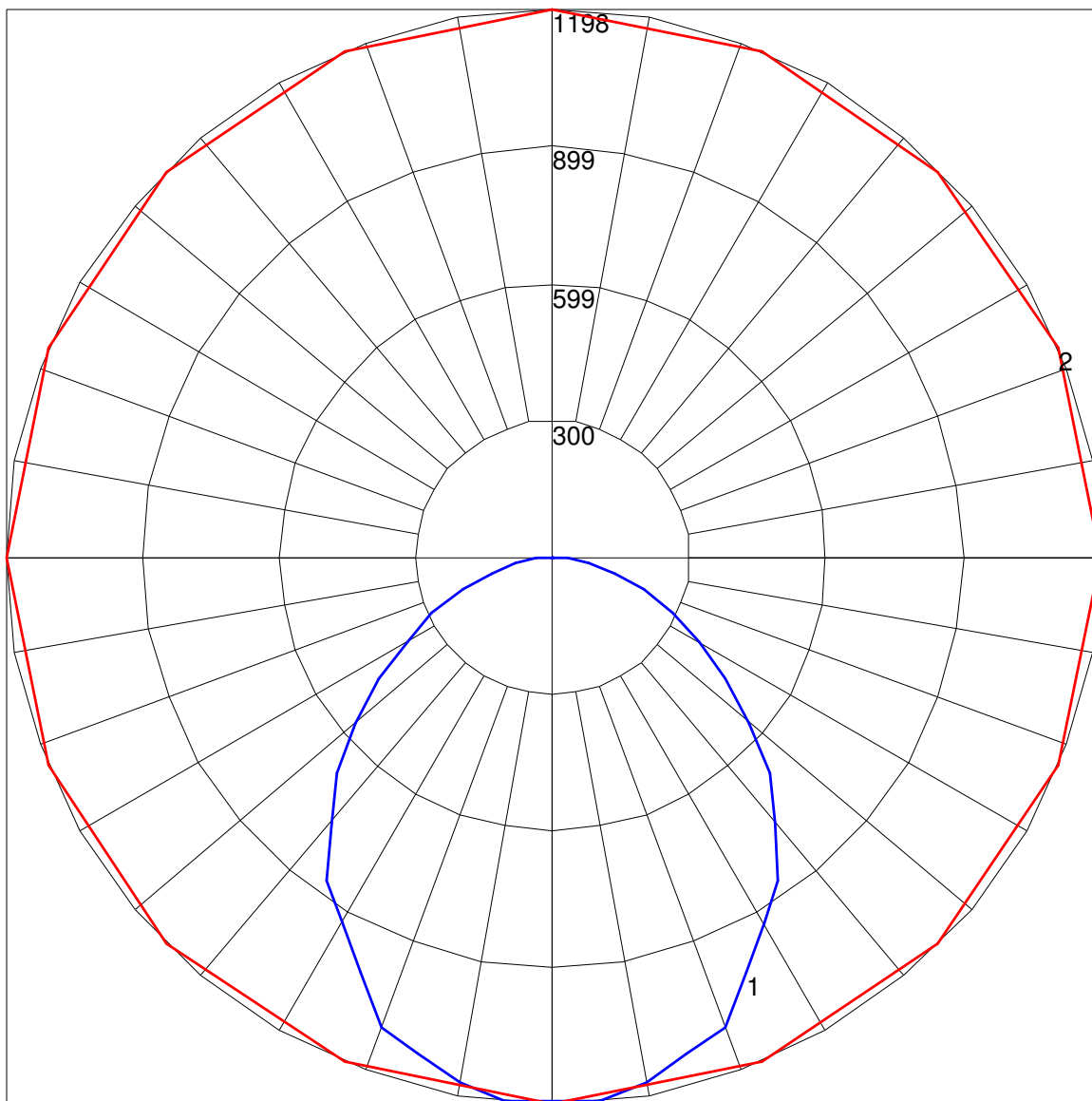
Reflectances

| | | | | | | | | | | |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 | 13.8 | 15.3 | 14.2 | 15.7 | 16.1 | 14.9 | 16.5 | 15.3 | 16.9 | 17.2 |
| | 3H | 15.1 | 16.6 | 15.5 | 16.9 | 17.3 | 17.0 | 18.4 | 17.4 | 18.8 | 19.2 |
| | 4H | 15.5 | 16.9 | 16.0 | 17.3 | 17.7 | 17.9 | 19.2 | 18.3 | 19.6 | 20.0 |
| | 6H | 15.8 | 17.1 | 16.2 | 17.5 | 17.9 | 18.8 | 20.0 | 19.2 | 20.4 | 20.9 |
| | 8H | 15.9 | 17.1 | 16.3 | 17.5 | 17.9 | 19.2 | 20.4 | 19.7 | 20.8 | 21.3 |
| | 12H | 15.9 | 17.0 | 16.4 | 17.5 | 17.9 | 19.6 | 20.8 | 20.1 | 21.2 | 21.7 |
| 4H | 2H | 14.4 | 15.8 | 14.9 | 16.2 | 16.6 | 15.4 | 16.7 | 15.8 | 17.1 | 17.5 |
| | 3H | 16.0 | 17.1 | 16.5 | 17.6 | 18.0 | 17.6 | 18.8 | 18.1 | 19.2 | 19.7 |
| | 4H | 16.5 | 17.6 | 17.0 | 18.0 | 18.5 | 18.7 | 19.7 | 19.2 | 20.2 | 20.6 |
| | 6H | 16.9 | 17.8 | 17.4 | 18.3 | 18.8 | 19.8 | 20.7 | 20.2 | 21.1 | 21.6 |
| | 8H | 17.0 | 17.9 | 17.5 | 18.3 | 18.8 | 20.3 | 21.1 | 20.8 | 21.6 | 22.1 |
| | 12H | 17.1 | 17.8 | 17.6 | 18.3 | 18.9 | 20.8 | 21.6 | 21.4 | 22.1 | 22.6 |
| 8H | 4H | 17.0 | 17.8 | 17.5 | 18.3 | 18.8 | 18.9 | 19.7 | 19.4 | 20.2 | 20.7 |
| | 6H | 17.5 | 18.2 | 18.0 | 18.7 | 19.2 | 20.1 | 20.8 | 20.6 | 21.3 | 21.9 |
| | 8H | 17.6 | 18.3 | 18.2 | 18.8 | 19.4 | 20.7 | 21.4 | 21.3 | 21.9 | 22.5 |
| | 12H | 17.8 | 18.3 | 18.3 | 18.9 | 19.5 | 21.5 | 22.0 | 22.0 | 22.6 | 23.2 |
| 12H | 4H | 17.1 | 17.8 | 17.6 | 18.4 | 18.9 | 18.9 | 19.6 | 19.4 | 20.2 | 20.7 |
| | 6H | 17.6 | 18.3 | 18.2 | 18.8 | 19.4 | 20.1 | 20.8 | 20.7 | 21.3 | 21.9 |
| | 8H | 17.9 | 18.5 | 18.4 | 19.0 | 19.6 | 20.8 | 21.4 | 21.4 | 21.9 | 22.5 |

Maximum UGR = 23.2

POLAR GRAPH



Maximum Candela = 1198.279 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.)