



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 39-4-L30-840-A-(L10)-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] 25 MAY 2022
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 4' LINEAR LED LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENS
 [LUMCAT] 39-4-L30-840-A-(L10)-DIM-UNV
 [LAMPCAT] HLM 80 CRI 4000K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Commercial, Direct, Linear
 [_SEARCH_MOUNTING] Pendant, Surface

CHARACTERISTICS

| | |
|---------------------------------|---------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 1009 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 126 |
| Total Luminaire Watts | 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 | 1000 | 905 | 894 |
| 55 | 835 | 744 | 748 |
| 65 | 690 | 609 | 649 |
| 75 | 503 | 483 | 560 |
| 85 | 297 | 402 | 522 |

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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 | 385.651 | 385.651 | 385.651 | 385.651 | 385.651 |
| 5 | 387.792 | 387.598 | 387.403 | 387.403 | 387.598 |
| 10 | 379.227 | 379.032 | 379.032 | 379.227 | 379.616 |
| 15 | 365.794 | 366.183 | 366.768 | 367.157 | 367.546 |
| 20 | 354.698 | 354.892 | 356.060 | 356.255 | 356.255 |
| 25 | 324.912 | 325.691 | 326.664 | 327.248 | 327.248 |
| 30 | 300.189 | 301.162 | 302.525 | 303.303 | 303.498 |
| 35 | 279.358 | 280.916 | 283.057 | 284.031 | 284.615 |
| 40 | 245.096 | 247.042 | 249.963 | 251.715 | 252.493 |
| 45 | 217.841 | 220.567 | 224.460 | 227.186 | 228.159 |
| 50 | 182.021 | 184.746 | 190.003 | 194.091 | 195.648 |
| 55 | 150.094 | 153.404 | 159.828 | 164.695 | 166.836 |
| 60 | 119.725 | 123.229 | 130.043 | 137.246 | 140.166 |
| 65 | 94.223 | 97.921 | 106.682 | 116.610 | 119.725 |
| 70 | 68.526 | 73.003 | 84.489 | 95.196 | 99.479 |
| 75 | 44.775 | 50.226 | 62.880 | 74.366 | 78.454 |
| 80 | 26.281 | 33.289 | 47.111 | 58.792 | 62.880 |
| 85 | 11.486 | 19.078 | 32.705 | 43.802 | 47.695 |
| 90 | 0.000 | 8.371 | 19.467 | 28.423 | 31.927 |
| 95 | 0.000 | 3.504 | 12.459 | 20.441 | 23.556 |
| 100 | 0.000 | 0.000 | 7.592 | 13.822 | 15.963 |
| 105 | 0.000 | 0.000 | 4.867 | 9.150 | 11.096 |
| 110 | 0.000 | 0.000 | 0.000 | 6.230 | 7.592 |
| 115 | 0.000 | 0.000 | 0.000 | 4.672 | 5.646 |
| 120 | 0.000 | 0.000 | 0.000 | 3.893 | 4.283 |
| 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 | 140.45 | N.A. | 13.90 |
| 0-30 | 291.54 | N.A. | 28.90 |
| 0-40 | 466.38 | N.A. | 46.20 |
| 0-60 | 780.12 | N.A. | 77.30 |
| 0-80 | 953.43 | N.A. | 94.50 |
| 0-90 | 987.93 | N.A. | 97.90 |
| 10-90 | 951.26 | N.A. | 94.30 |
| 20-40 | 325.93 | N.A. | 32.30 |
| 20-50 | 497.04 | N.A. | 49.30 |
| 40-70 | 419.81 | N.A. | 41.60 |
| 60-80 | 173.31 | N.A. | 17.20 |
| 70-80 | 67.23 | N.A. | 6.70 |
| 80-90 | 34.50 | N.A. | 3.40 |
| 90-110 | 18.72 | N.A. | 1.90 |
| 90-120 | 20.65 | N.A. | 2.00 |
| 90-130 | 21.00 | N.A. | 2.10 |
| 90-150 | 21.00 | N.A. | 2.10 |
| 90-180 | 21.00 | N.A. | 2.10 |
| 110-180 | 2.28 | N.A. | 0.20 |
| 0-180 | 1008.93 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 36.67 |
| 10-20 | 103.78 |
| 20-30 | 151.09 |
| 30-40 | 174.84 |
| 40-50 | 171.11 |
| 50-60 | 142.63 |
| 60-70 | 106.07 |
| 70-80 | 67.23 |
| 80-90 | 34.50 |
| 90-100 | 13.51 |
| 100-110 | 5.21 |
| 110-120 | 1.93 |
| 120-130 | 0.35 |
| 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 | 97 | 93 | 96 | 93 | 90 | 92 | 89 | 86 | 88 | 86 | 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 | 64 | 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

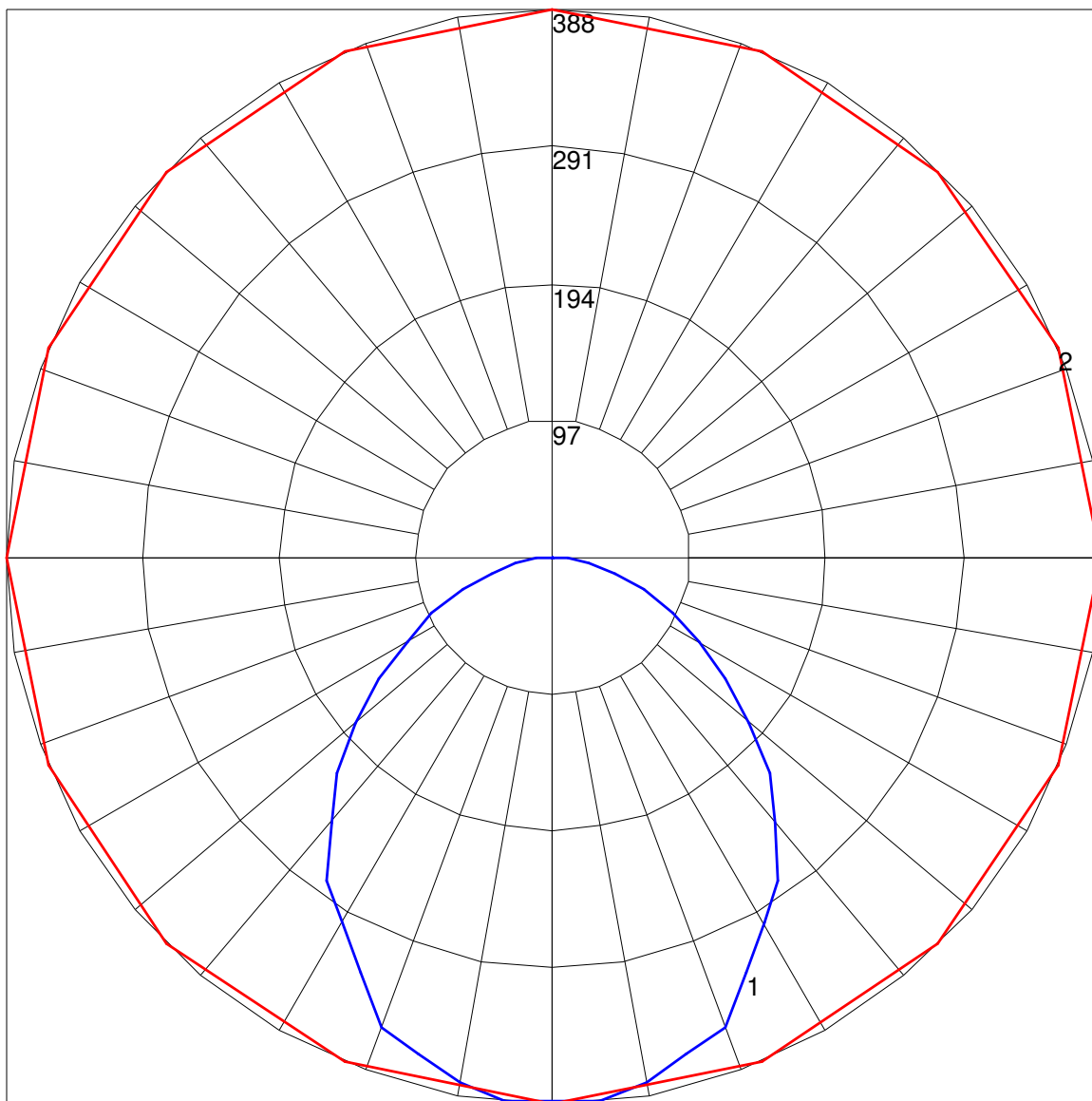
Reflectances

| | | | | | | | | | | |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 | 9.9 | 11.4 | 10.3 | 11.8 | 12.2 | 11.0 | 12.6 | 11.4 | 13.0 | 13.3 |
| | 3H | 11.2 | 12.7 | 11.6 | 13.0 | 13.4 | 13.1 | 14.5 | 13.5 | 14.9 | 15.3 |
| | 4H | 11.6 | 13.0 | 12.1 | 13.4 | 13.8 | 14.0 | 15.3 | 14.4 | 15.7 | 16.1 |
| | 6H | 11.9 | 13.2 | 12.3 | 13.6 | 14.0 | 14.9 | 16.1 | 15.3 | 16.5 | 16.9 |
| | 8H | 12.0 | 13.2 | 12.4 | 13.6 | 14.0 | 15.3 | 16.5 | 15.8 | 16.9 | 17.4 |
| | 12H | 12.0 | 13.1 | 12.5 | 13.6 | 14.0 | 15.7 | 16.9 | 16.2 | 17.3 | 17.8 |
| 4H | 2H | 10.5 | 11.9 | 11.0 | 12.3 | 12.7 | 11.5 | 12.8 | 11.9 | 13.2 | 13.6 |
| | 3H | 12.1 | 13.2 | 12.6 | 13.7 | 14.1 | 13.7 | 14.9 | 14.2 | 15.3 | 15.7 |
| | 4H | 12.6 | 13.7 | 13.1 | 14.1 | 14.6 | 14.8 | 15.8 | 15.2 | 16.3 | 16.7 |
| | 6H | 13.0 | 13.9 | 13.5 | 14.4 | 14.9 | 15.9 | 16.7 | 16.3 | 17.2 | 17.7 |
| | 8H | 13.1 | 13.9 | 13.6 | 14.4 | 14.9 | 16.4 | 17.2 | 16.9 | 17.7 | 18.2 |
| | 12H | 13.2 | 13.9 | 13.7 | 14.4 | 15.0 | 16.9 | 17.7 | 17.5 | 18.2 | 18.7 |
| 8H | 4H | 13.1 | 13.9 | 13.6 | 14.4 | 14.9 | 15.0 | 15.8 | 15.5 | 16.3 | 16.8 |
| | 6H | 13.6 | 14.3 | 14.1 | 14.8 | 15.3 | 16.2 | 16.9 | 16.7 | 17.4 | 18.0 |
| | 8H | 13.7 | 14.4 | 14.3 | 14.9 | 15.5 | 16.8 | 17.5 | 17.4 | 18.0 | 18.6 |
| | 12H | 13.9 | 14.4 | 14.4 | 15.0 | 15.6 | 17.6 | 18.1 | 18.1 | 18.7 | 19.3 |
| 12H | 4H | 13.2 | 13.9 | 13.7 | 14.5 | 15.0 | 15.0 | 15.7 | 15.5 | 16.3 | 16.8 |
| | 6H | 13.7 | 14.4 | 14.3 | 14.9 | 15.5 | 16.2 | 16.9 | 16.8 | 17.4 | 18.0 |
| | 8H | 14.0 | 14.6 | 14.5 | 15.1 | 15.7 | 16.9 | 17.5 | 17.5 | 18.0 | 18.6 |

Maximum UGR = 19.3

POLAR GRAPH



Maximum Candela = 387.792 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.)