



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 75R-4-L50-930-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19750.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 12-01-2022

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 4' SURFACE MOUNT LED STRIP LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC ROUND LENS

[LUMCAT] 75R-4-L50-930-DIM-UNV

[LAMPCAT] HLM 90 CRI 3000K CCT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Commercial, Industrial, Manufacturing, Utility, Warehouse, Linear

[_SEARCH_MOUNTING] Surface, Suspended

CHARACTERISTICS

| | |
|---------------------------------|---------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 3991 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 121 |
| Total Luminaire Watts | 33 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.22 |
| Spacing Criterion (90-270) | 1.28 |
| Spacing Criterion (Diagonal) | 1.36 |
| Basic Luminous Shape | Rectangular w/Sides |
| Luminous Length (0-180) | 3.72 ft |
| Luminous Width (90-270) | 0.21 ft |
| Luminous Height | 0.10 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 13956 | 11801 | 11780 |
| 55 | 11518 | 10099 | 10370 |
| 65 | 9486 | 8482 | 8736 |
| 75 | 6410 | 6970 | 7158 |
| 85 | 3761 | 5987 | 5870 |

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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 | 1278.248 | 1278.248 | 1278.248 | 1278.248 | 1278.248 |
| 5 | 1292.281 | 1273.367 | 1273.977 | 1270.926 | 1258.113 |
| 10 | 1270.926 | 1255.062 | 1258.113 | 1256.283 | 1244.690 |
| 15 | 1233.707 | 1222.115 | 1230.657 | 1234.318 | 1222.115 |
| 20 | 1177.574 | 1174.524 | 1189.167 | 1195.269 | 1187.947 |
| 25 | 1111.679 | 1115.950 | 1136.695 | 1150.728 | 1145.237 |
| 30 | 1036.021 | 1042.123 | 1077.511 | 1098.866 | 1097.646 |
| 35 | 943.890 | 954.872 | 1006.124 | 1036.021 | 1040.292 |
| 40 | 845.657 | 853.589 | 918.264 | 963.414 | 973.787 |
| 45 | 729.730 | 749.865 | 824.302 | 884.096 | 898.739 |
| 50 | 609.532 | 641.870 | 732.781 | 798.066 | 816.370 |
| 55 | 494.215 | 536.315 | 638.819 | 707.155 | 733.391 |
| 60 | 397.813 | 436.862 | 548.518 | 616.854 | 644.310 |
| 65 | 305.681 | 348.391 | 464.318 | 526.553 | 550.348 |
| 70 | 214.160 | 271.513 | 384.390 | 438.692 | 461.878 |
| 75 | 131.791 | 205.008 | 310.562 | 361.814 | 381.949 |
| 80 | 73.217 | 141.553 | 247.718 | 295.309 | 308.122 |
| 85 | 31.117 | 97.623 | 197.686 | 238.566 | 247.108 |
| 90 | 4.271 | 67.116 | 153.146 | 189.144 | 200.737 |
| 95 | 0.610 | 45.761 | 122.639 | 150.095 | 162.298 |
| 100 | 0.000 | 29.897 | 95.182 | 122.639 | 132.401 |
| 105 | 0.000 | 21.355 | 73.827 | 100.063 | 107.995 |
| 110 | 0.000 | 14.643 | 56.743 | 81.759 | 88.471 |
| 115 | 0.000 | 12.203 | 46.371 | 68.336 | 73.217 |
| 120 | 0.000 | 9.152 | 35.388 | 56.133 | 61.014 |
| 125 | 0.000 | 5.491 | 26.236 | 44.540 | 50.032 |
| 130 | 0.000 | 3.661 | 18.914 | 34.778 | 39.659 |
| 135 | 0.000 | 1.830 | 14.033 | 27.456 | 31.117 |
| 140 | 0.000 | 1.830 | 9.762 | 21.355 | 24.406 |
| 145 | 0.000 | 0.000 | 6.101 | 13.423 | 17.084 |
| 150 | 0.000 | 0.000 | 4.271 | 9.762 | 12.203 |
| 155 | 0.000 | 0.000 | 3.051 | 4.881 | 7.932 |
| 160 | 0.000 | 0.000 | 1.220 | 3.661 | 4.271 |
| 165 | 0.000 | 0.000 | 0.000 | 1.220 | 1.830 |
| 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 | 467.42 | N.A. | 11.70 |
| 0-30 | 989.53 | N.A. | 24.80 |
| 0-40 | 1612.57 | N.A. | 40.40 |
| 0-60 | 2803.35 | N.A. | 70.20 |
| 0-80 | 3544.52 | N.A. | 88.80 |
| 0-90 | 3730.8 | N.A. | 93.50 |
| 10-90 | 3609.78 | N.A. | 90.50 |
| 20-40 | 1145.15 | N.A. | 28.70 |
| 20-50 | 1776.45 | N.A. | 44.50 |
| 40-70 | 1629.79 | N.A. | 40.80 |
| 60-80 | 741.17 | N.A. | 18.60 |
| 70-80 | 302.16 | N.A. | 7.60 |
| 80-90 | 186.28 | N.A. | 4.70 |
| 90-110 | 177.77 | N.A. | 4.50 |
| 90-120 | 218.52 | N.A. | 5.50 |
| 90-130 | 241.66 | N.A. | 6.10 |
| 90-150 | 258.18 | N.A. | 6.50 |
| 90-180 | 259.91 | N.A. | 6.50 |
| 110-180 | 82.14 | N.A. | 2.10 |
| 0-180 | 3990.7 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 121.02 |
| 10-20 | 346.40 |
| 20-30 | 522.11 |
| 30-40 | 623.04 |
| 40-50 | 631.29 |
| 50-60 | 559.48 |
| 60-70 | 439.01 |
| 70-80 | 302.16 |
| 80-90 | 186.28 |
| 90-100 | 110.91 |
| 100-110 | 66.86 |
| 110-120 | 40.76 |
| 120-130 | 23.13 |
| 130-140 | 11.69 |
| 140-150 | 4.83 |
| 150-160 | 1.51 |
| 160-170 | 0.22 |
| 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 | 117 | 117 | 117 | 117 | 114 | 114 | 114 | 114 | 107 | 107 | 107 | 102 | 102 | 102 | 96 | 96 | 96 | 93 |
| 1 | 106 | 101 | 96 | 92 | 103 | 98 | 94 | 90 | 92 | 89 | 86 | 87 | 84 | 82 | 83 | 80 | 78 | 76 |
| 2 | 96 | 87 | 80 | 74 | 93 | 85 | 78 | 73 | 80 | 75 | 70 | 76 | 72 | 68 | 72 | 68 | 65 | 62 |
| 3 | 88 | 77 | 68 | 61 | 84 | 75 | 67 | 60 | 71 | 64 | 59 | 67 | 61 | 57 | 64 | 59 | 55 | 52 |
| 4 | 80 | 68 | 59 | 52 | 77 | 66 | 58 | 51 | 63 | 56 | 50 | 60 | 53 | 48 | 57 | 51 | 47 | 45 |
| 5 | 74 | 61 | 51 | 45 | 71 | 59 | 51 | 44 | 56 | 49 | 43 | 54 | 47 | 42 | 51 | 45 | 41 | 39 |
| 6 | 68 | 55 | 46 | 39 | 66 | 53 | 45 | 39 | 51 | 43 | 38 | 48 | 42 | 37 | 46 | 41 | 36 | 34 |
| 7 | 63 | 49 | 41 | 34 | 61 | 48 | 40 | 34 | 46 | 39 | 33 | 44 | 38 | 33 | 42 | 36 | 32 | 30 |
| 8 | 59 | 45 | 37 | 31 | 57 | 44 | 36 | 30 | 42 | 35 | 30 | 41 | 34 | 29 | 39 | 33 | 29 | 27 |
| 9 | 55 | 41 | 33 | 28 | 53 | 41 | 33 | 27 | 39 | 32 | 27 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |
| 10 | 51 | 38 | 30 | 25 | 50 | 37 | 30 | 25 | 36 | 29 | 24 | 35 | 28 | 24 | 33 | 28 | 24 | 22 |

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UGR TABLE - CORRECTED

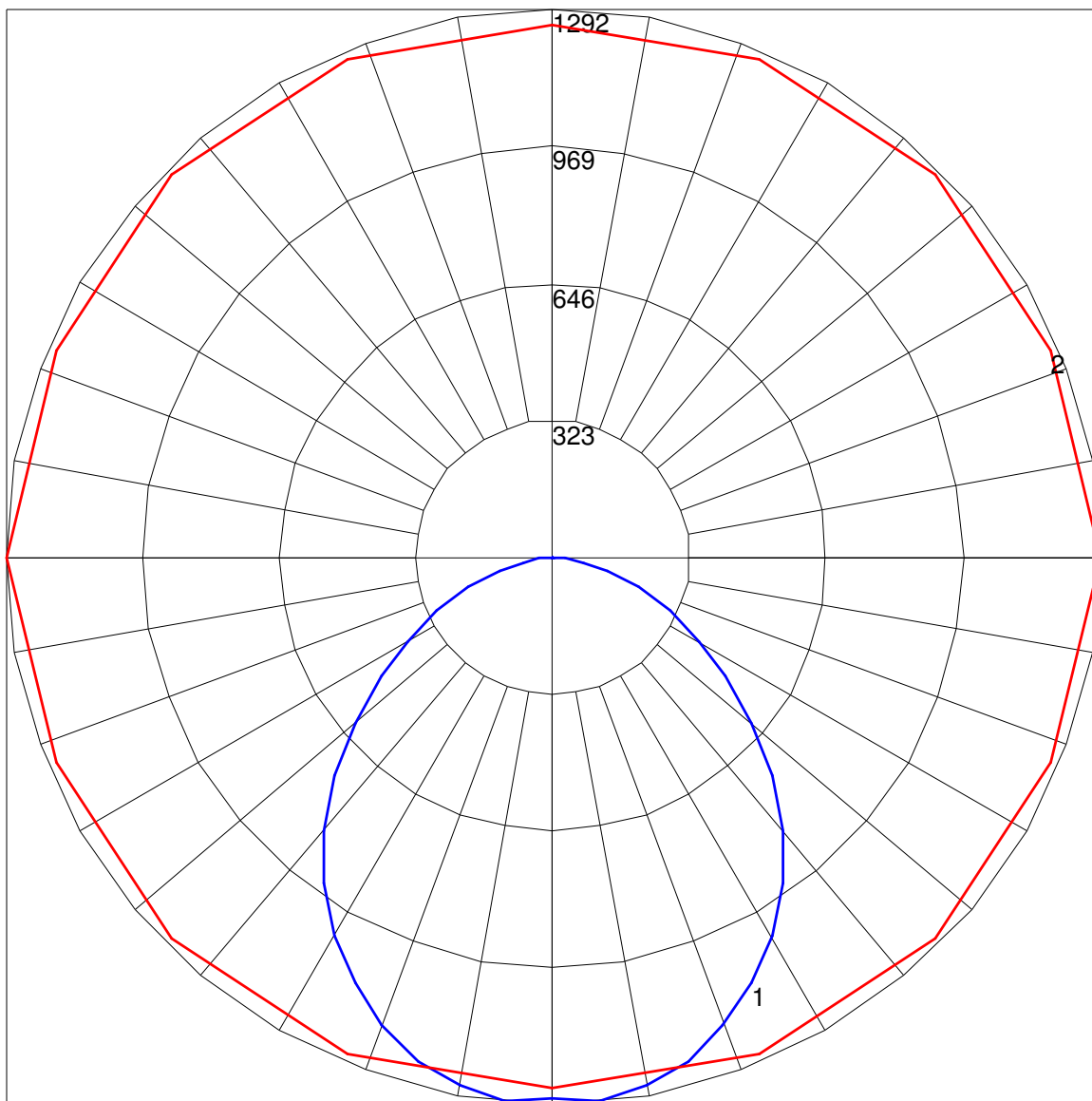
Reflectances

| | | | | | | | | | | |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 | 17.6 | 19.1 | 18.0 | 19.5 | 20.0 | 21.0 | 22.5 | 21.4 | 22.9 | 23.4 |
| | 3H | 18.8 | 20.1 | 19.2 | 20.6 | 21.1 | 23.2 | 24.5 | 23.6 | 25.0 | 25.5 |
| | 4H | 19.1 | 20.4 | 19.6 | 20.9 | 21.4 | 24.2 | 25.5 | 24.7 | 26.0 | 26.5 |
| | 6H | 19.3 | 20.5 | 19.8 | 21.0 | 21.5 | 25.2 | 26.4 | 25.8 | 26.9 | 27.5 |
| | 8H | 19.3 | 20.4 | 19.8 | 21.0 | 21.5 | 25.8 | 26.9 | 26.3 | 27.4 | 28.0 |
| | 12H | 19.3 | 20.4 | 19.8 | 20.9 | 21.5 | 26.3 | 27.4 | 26.9 | 27.9 | 28.5 |
| 4H | 2H | 18.6 | 19.9 | 19.1 | 20.4 | 20.9 | 21.3 | 22.6 | 21.8 | 23.1 | 23.6 |
| | 3H | 20.1 | 21.2 | 20.6 | 21.7 | 22.2 | 23.7 | 24.8 | 24.2 | 25.3 | 25.9 |
| | 4H | 20.5 | 21.5 | 21.1 | 22.1 | 22.7 | 24.9 | 25.9 | 25.4 | 26.4 | 27.0 |
| | 6H | 20.8 | 21.7 | 21.4 | 22.2 | 22.9 | 26.1 | 27.0 | 26.7 | 27.6 | 28.2 |
| | 8H | 20.9 | 21.7 | 21.4 | 22.3 | 22.9 | 26.7 | 27.6 | 27.3 | 28.1 | 28.7 |
| | 12H | 20.9 | 21.6 | 21.5 | 22.2 | 22.9 | 27.4 | 28.2 | 28.0 | 28.8 | 29.4 |
| 8H | 4H | 21.3 | 22.1 | 21.9 | 22.7 | 23.3 | 25.1 | 25.9 | 25.6 | 26.4 | 27.1 |
| | 6H | 21.8 | 22.5 | 22.4 | 23.1 | 23.7 | 26.4 | 27.1 | 27.0 | 27.7 | 28.3 |
| | 8H | 21.9 | 22.5 | 22.5 | 23.2 | 23.8 | 27.2 | 27.8 | 27.8 | 28.4 | 29.1 |
| | 12H | 22.0 | 22.6 | 22.6 | 23.2 | 23.9 | 28.0 | 28.6 | 28.6 | 29.2 | 29.9 |
| 12H | 4H | 21.5 | 22.2 | 22.1 | 22.8 | 23.5 | 25.0 | 25.8 | 25.6 | 26.4 | 27.0 |
| | 6H | 22.1 | 22.7 | 22.7 | 23.3 | 24.0 | 26.5 | 27.1 | 27.1 | 27.7 | 28.4 |
| | 8H | 22.3 | 22.9 | 22.9 | 23.5 | 24.2 | 27.2 | 27.8 | 27.9 | 28.4 | 29.1 |

Maximum UGR = 29.9

POLAR GRAPH



Maximum Candela = 1292.281 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.)