**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : MCTVG-24-L200-930-CS-SAF12125-PC250-DIM-UNV_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] GEN from BALLABS TEST NO. 19835.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2026-05-06
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 6-42 LED 22" ARRAYS 2x4' RECESSED WHITE REFLECTOR LUMINAIRE
[MORE] PAT12 ACRYLIC LENS w/CLEAR ACRYLIC LENS IN DOOR
[LUMCAT] MCTVG-24-L200-930-CS-SAF12125-PC250-DIM-UNV_
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Healthcare, Institutional, Office, Direct, Clean Room
[_SEARCH_MOUNTING] Recessed

**CHARACTERISTICS**

| | |
|---|---|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 16646 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 89 |
| Total Luminaire Watts | 186.5 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.24 |
| Spacing Criterion (90-270) | 1.22 |
| Spacing Criterion (Diagonal) | 1.30 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 3.57 ft |
| Luminous Width (90-270) | 1.57 ft |
| Luminous Height | 0.00 ft |

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

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---|---|---|---|
| 45 | 11263 | 11202 | 10897 |
| 55 | 9311 | 9127 | 8615 |
| 65 | 6751 | 6671 | 6190 |
| 75 | 4019 | 4137 | 4102 |
| 85 | 878 | 1211 | 1246 |

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**CANDELA TABULATION**

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| **0** | 7251.491 | 7251.491 | 7251.491 | 7251.491 | 7251.491 |
| **5** | 7287.469 | 7241.897 | 7199.524 | 7182.734 | 7184.333 |
| **10** | 7178.737 | 7129.167 | 7101.185 | 7082.796 | 7085.994 |
| **15** | 7002.046 | 6956.475 | 6943.683 | 6904.507 | 6924.495 |
| **20** | 6746.206 | 6709.428 | 6711.027 | 6655.862 | 6679.047 |
| **25** | 6396.823 | 6375.236 | 6364.043 | 6308.877 | 6339.259 |
| **30** | 5977.883 | 5966.690 | 5929.114 | 5858.757 | 5893.136 |
| **35** | 5455.808 | 5467.001 | 5397.444 | 5285.514 | 5349.474 |
| **40** | 4833.795 | 4887.361 | 4775.431 | 4650.708 | 4727.461 |
| **45** | 4162.212 | 4222.974 | 4139.826 | 3988.720 | 4027.096 |
| **50** | 3481.036 | 3449.855 | 3460.249 | 3292.353 | 3287.556 |
| **55** | 2791.065 | 2723.906 | 2735.899 | 2580.795 | 2582.394 |
| **60** | 2107.490 | 2060.319 | 2047.527 | 1906.814 | 1931.599 |
| **65** | 1491.073 | 1461.491 | 1473.484 | 1366.350 | 1367.150 |
| **70** | 975.394 | 946.611 | 980.990 | 937.817 | 916.230 |
| **75** | 543.662 | 538.065 | 559.652 | 579.640 | 554.855 |
| **80** | 230.257 | 222.262 | 251.843 | 287.821 | 257.440 |
| **85** | 39.975 | 44.772 | 55.166 | 81.549 | 56.765 |
| **90** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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**ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 2643.14 | N.A. | 15.90 |
| 0-30 | 5565.59 | N.A. | 33.40 |
| 0-40 | 8926.57 | N.A. | 53.60 |
| 0-60 | 14494.7 | N.A. | 87.10 |
| 0-80 | 16546.03 | N.A. | 99.40 |
| 0-90 | 16645.7 | N.A. | 100.00 |
| 10-90 | 15960.26 | N.A. | 95.90 |
| 20-40 | 6283.42 | N.A. | 37.70 |
| 20-50 | 9445.72 | N.A. | 56.70 |
| 40-70 | 7008.69 | N.A. | 42.10 |
| 60-80 | 2051.33 | N.A. | 12.30 |
| 70-80 | 610.77 | N.A. | 3.70 |
| 80-90 | 99.67 | N.A. | 0.60 |
| 90-110 | 0.00 | N.A. | 0.00 |
| 90-120 | 0.00 | N.A. | 0.00 |
| 90-130 | 0.00 | N.A. | 0.00 |
| 90-150 | 0.00 | N.A. | 0.00 |
| 90-180 | 0.00 | N.A. | 0.00 |
| 110-180 | 0.00 | N.A. | 0.00 |
| 0-180 | 16645.7 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

| Zone | Lumens |
|---|---|
| 0-10 | 685.44 |
| 10-20 | 1957.7 |
| 20-30 | 2922.45 |
| 30-40 | 3360.98 |
| 40-50 | 3162.29 |
| 50-60 | 2405.84 |
| 60-70 | 1440.56 |
| 70-80 | 610.77 |
| 80-90 | 99.67 |
| 90-100 | 0.00 |
| 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 | 110 | 106 | 102 | 99 | 108 | 104 | 101 | 98 | 100 | 97 | 94 | 96 | 94 | 92 | 92 | 91 | 89 | 87 |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 89 | 84 | 80 | 86 | 82 | 78 | 83 | 79 | 77 | 75 |
| 3 | 93 | 84 | 76 | 70 | 91 | 82 | 75 | 70 | 79 | 73 | 69 | 77 | 72 | 67 | 74 | 70 | 66 | 64 |
| 4 | 86 | 75 | 67 | 61 | 84 | 74 | 66 | 60 | 71 | 65 | 59 | 69 | 63 | 59 | 67 | 62 | 58 | 56 |
| 5 | 79 | 67 | 59 | 53 | 77 | 66 | 58 | 53 | 64 | 57 | 52 | 62 | 56 | 52 | 61 | 55 | 51 | 49 |
| 6 | 74 | 61 | 53 | 47 | 72 | 60 | 52 | 46 | 58 | 51 | 46 | 57 | 50 | 46 | 55 | 50 | 45 | 43 |
| 7 | 68 | 56 | 47 | 42 | 67 | 55 | 47 | 41 | 53 | 46 | 41 | 52 | 46 | 41 | 51 | 45 | 41 | 39 |
| 8 | 64 | 51 | 43 | 37 | 62 | 50 | 43 | 37 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 37 | 35 |
| 9 | 60 | 47 | 39 | 34 | 58 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 33 | 43 | 37 | 33 | 31 |
| 10 | 56 | 43 | 36 | 31 | 55 | 43 | 36 | 31 | 42 | 35 | 31 | 41 | 35 | 30 | 40 | 34 | 30 | 29 |

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**UGR TABLE - CORRECTED**

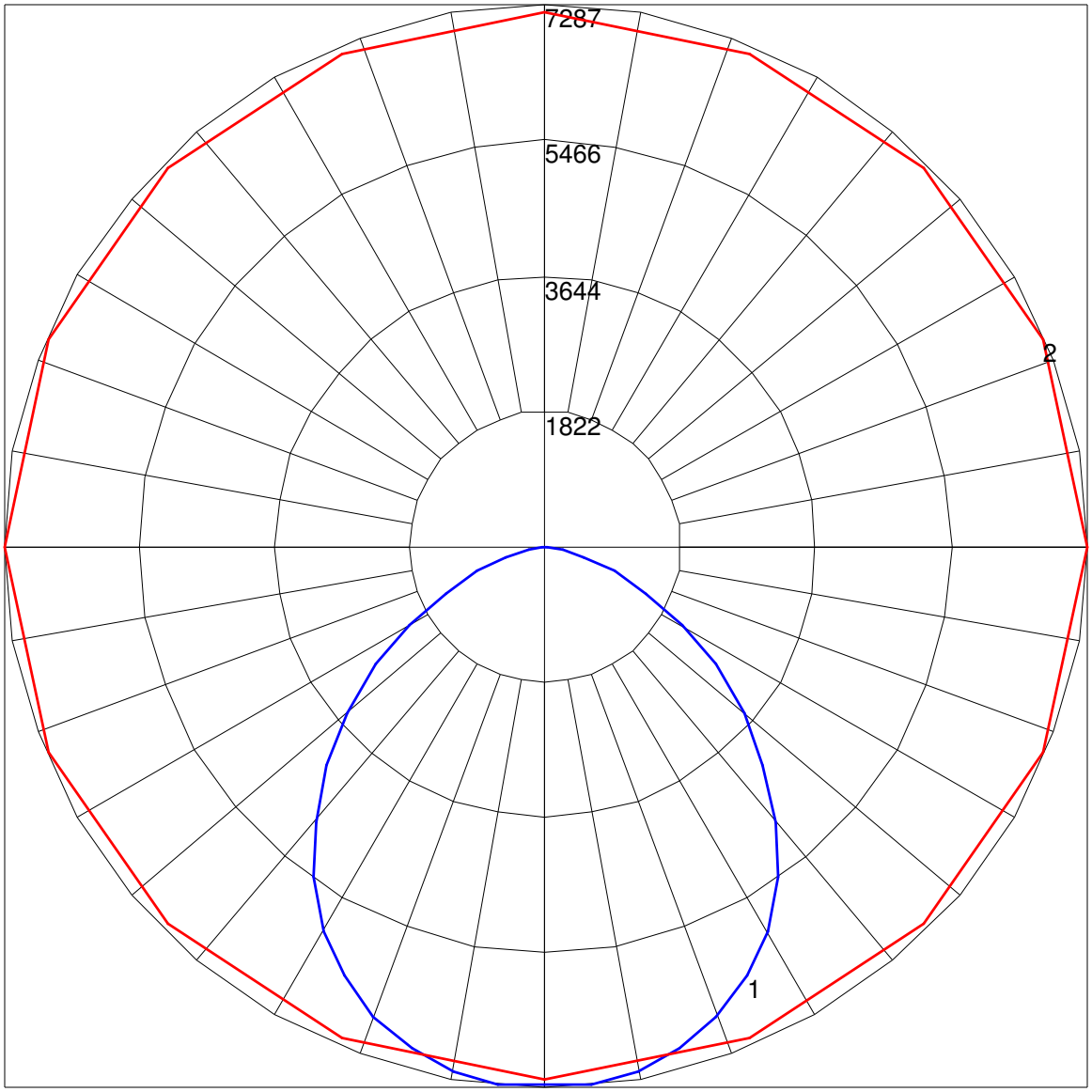
| Reflectances | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling Cavity | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Walls | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Floor Cavity | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room Size | | UGR Viewed Crosswise | | | | | UGR Viewed Endwise | | | | |
| X=2H | Y=2H | 19.3 | 20.8 | 19.7 | 21.1 | 21.5 | 18.8 | 20.4 | 19.2 | 20.7 | 21.0 |
| | 3H | 20.4 | 21.8 | 20.8 | 22.1 | 22.4 | 20.0 | 21.3 | 20.3 | 21.6 | 22.0 |
| | 4H | 20.7 | 21.9 | 21.1 | 22.3 | 22.7 | 20.3 | 21.6 | 20.7 | 21.9 | 22.3 |
| | 6H | 20.8 | 22.0 | 21.2 | 22.3 | 22.7 | 20.5 | 21.6 | 20.9 | 22.0 | 22.4 |
| | 8H | 20.8 | 21.9 | 21.2 | 22.3 | 22.7 | 20.5 | 21.6 | 20.9 | 22.0 | 22.4 |
| | 12H | 20.8 | 21.8 | 21.2 | 22.2 | 22.6 | 20.5 | 21.5 | 20.9 | 21.9 | 22.4 |
| 4H | 2H | 19.7 | 21.0 | 20.1 | 21.3 | 21.7 | 19.3 | 20.6 | 19.7 | 20.9 | 21.3 |
| | 3H | 21.0 | 22.0 | 21.4 | 22.4 | 22.8 | 20.6 | 21.7 | 21.0 | 22.1 | 22.5 |
| | 4H | 21.3 | 22.3 | 21.8 | 22.7 | 23.1 | 21.1 | 22.0 | 21.5 | 22.4 | 22.8 |
| | 6H | 21.5 | 22.3 | 22.0 | 22.7 | 23.2 | 21.3 | 22.1 | 21.8 | 22.6 | 23.0 |
| | 8H | 21.5 | 22.3 | 21.9 | 22.7 | 23.2 | 21.3 | 22.1 | 21.8 | 22.5 | 23.0 |
| | 12H | 21.5 | 22.2 | 22.0 | 22.6 | 23.1 | 21.3 | 22.0 | 21.8 | 22.5 | 23.0 |
| 8H | 4H | 21.4 | 22.2 | 21.9 | 22.6 | 23.1 | 21.2 | 21.9 | 21.6 | 22.4 | 22.8 |
| | 6H | 21.6 | 22.3 | 22.1 | 22.7 | 23.2 | 21.5 | 22.1 | 22.0 | 22.6 | 23.1 |
| | 8H | 21.7 | 22.2 | 22.2 | 22.7 | 23.2 | 21.6 | 22.1 | 22.1 | 22.6 | 23.1 |
| | 12H | 21.7 | 22.1 | 22.2 | 22.6 | 23.2 | 21.6 | 22.1 | 22.1 | 22.6 | 23.1 |
| 12H | 4H | 21.4 | 22.1 | 21.9 | 22.6 | 23.0 | 21.2 | 21.8 | 21.6 | 22.3 | 22.8 |
| | 6H | 21.6 | 22.2 | 22.2 | 22.7 | 23.2 | 21.5 | 22.0 | 22.0 | 22.5 | 23.0 |
| | 8H | 21.7 | 22.2 | 22.2 | 22.7 | 23.2 | 21.6 | 22.1 | 22.1 | 22.6 | 23.1 |

Maximum UGR = 23.2

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**POLAR GRAPH**




Maximum Candela = 7287.469  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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