**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : MCTVG-24-L200-840-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-L200-840-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 | 20657 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 111 |
| 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 | 13977 | 13901 | 13523 |
| 55 | 11554 | 11326 | 10690 |
| 65 | 8377 | 8279 | 7681 |
| 75 | 4988 | 5134 | 5090 |
| 85 | 1089 | 1503 | 1546 |

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : MCTVG-24-L200-840-CS-SAF12125-PC250-DIM-UNV_.IES**

**CANDELA TABULATION**

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| **0** | 8998.838 | 8998.838 | 8998.838 | 8998.838 | 8998.838 |
| **5** | 9043.485 | 8986.933 | 8934.348 | 8913.513 | 8915.497 |
| **10** | 8908.552 | 8847.039 | 8812.313 | 8789.494 | 8793.463 |
| **15** | 8689.286 | 8632.734 | 8616.859 | 8568.244 | 8593.047 |
| **20** | 8371.797 | 8326.158 | 8328.142 | 8259.684 | 8288.456 |
| **25** | 7938.226 | 7911.437 | 7897.547 | 7829.089 | 7866.791 |
| **30** | 7418.337 | 7404.447 | 7357.815 | 7270.506 | 7313.168 |
| **35** | 6770.460 | 6784.350 | 6698.033 | 6559.131 | 6638.504 |
| **40** | 5998.564 | 6065.039 | 5926.137 | 5771.361 | 5866.608 |
| **45** | 5165.155 | 5240.558 | 5137.374 | 4949.857 | 4997.481 |
| **50** | 4319.839 | 4281.145 | 4294.043 | 4085.691 | 4079.738 |
| **55** | 3463.610 | 3380.269 | 3395.152 | 3202.674 | 3204.658 |
| **60** | 2615.318 | 2556.781 | 2540.907 | 2366.288 | 2397.045 |
| **65** | 1850.368 | 1813.658 | 1828.540 | 1695.591 | 1696.584 |
| **70** | 1210.428 | 1174.711 | 1217.373 | 1163.797 | 1137.009 |
| **75** | 674.665 | 667.720 | 694.508 | 719.312 | 688.555 |
| **80** | 285.740 | 275.819 | 312.529 | 357.176 | 319.474 |
| **85** | 49.608 | 55.561 | 68.459 | 101.200 | 70.443 |
| **90** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : MCTVG-24-L200-840-CS-SAF12125-PC250-DIM-UNV_.IES**

**ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 3280.04 | N.A. | 15.90 |
| 0-30 | 6906.7 | N.A. | 33.40 |
| 0-40 | 11077.55 | N.A. | 53.60 |
| 0-60 | 17987.4 | N.A. | 87.10 |
| 0-80 | 20533.02 | N.A. | 99.40 |
| 0-90 | 20656.71 | N.A. | 100.00 |
| 10-90 | 19806.1 | N.A. | 95.90 |
| 20-40 | 7797.5 | N.A. | 37.70 |
| 20-50 | 11721.79 | N.A. | 56.70 |
| 40-70 | 8697.53 | N.A. | 42.10 |
| 60-80 | 2545.63 | N.A. | 12.30 |
| 70-80 | 757.95 | N.A. | 3.70 |
| 80-90 | 123.69 | 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 | 20656.71 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

| Zone | Lumens |
|---|---|
| 0-10 | 850.61 |
| 10-20 | 2429.43 |
| 20-30 | 3626.65 |
| 30-40 | 4170.85 |
| 40-50 | 3924.29 |
| 50-60 | 2985.56 |
| 60-70 | 1787.68 |
| 70-80 | 757.95 |
| 80-90 | 123.69 |
| 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 |

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : MCTVG-24-L200-840-CS-SAF12125-PC250-DIM-UNV_.IES**

**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 |

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : MCTVG-24-L200-840-CS-SAF12125-PC250-DIM-UNV_.IES**

**UGR TABLE - CORRECTED**

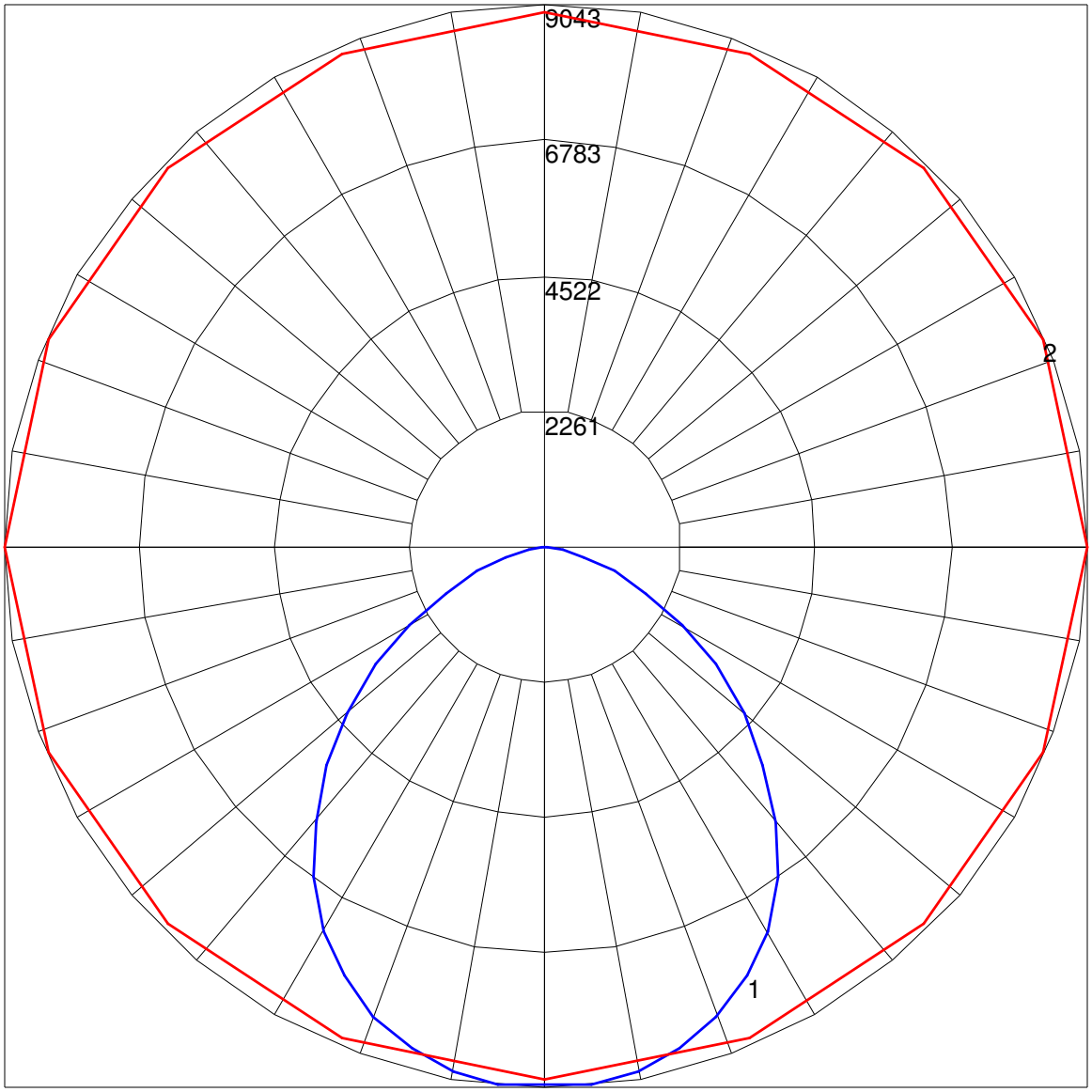
| Reflectances | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling Cavity | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Walls | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Floor Cavity | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room Size | | UGR Viewed Crosswise | | | | | UGR Viewed Endwise | | | | |
| X=2H | Y=2H | 20.0 | 21.5 | 20.4 | 21.8 | 22.2 | 19.5 | 21.1 | 19.9 | 21.4 | 21.7 |
| | 3H | 21.1 | 22.5 | 21.5 | 22.8 | 23.1 | 20.7 | 22.0 | 21.0 | 22.3 | 22.7 |
| | 4H | 21.4 | 22.6 | 21.8 | 23.0 | 23.4 | 21.0 | 22.3 | 21.4 | 22.6 | 23.0 |
| | 6H | 21.5 | 22.7 | 21.9 | 23.0 | 23.4 | 21.2 | 22.3 | 21.6 | 22.7 | 23.1 |
| | 8H | 21.5 | 22.6 | 21.9 | 23.0 | 23.4 | 21.2 | 22.3 | 21.6 | 22.7 | 23.1 |
| | 12H | 21.5 | 22.5 | 21.9 | 22.9 | 23.3 | 21.2 | 22.2 | 21.6 | 22.6 | 23.1 |
| 4H | 2H | 20.4 | 21.7 | 20.8 | 22.0 | 22.4 | 20.0 | 21.3 | 20.4 | 21.6 | 22.0 |
| | 3H | 21.7 | 22.7 | 22.1 | 23.1 | 23.5 | 21.3 | 22.4 | 21.7 | 22.8 | 23.2 |
| | 4H | 22.0 | 23.0 | 22.5 | 23.4 | 23.8 | 21.8 | 22.7 | 22.2 | 23.1 | 23.5 |
| | 6H | 22.2 | 23.0 | 22.7 | 23.4 | 23.9 | 22.0 | 22.8 | 22.5 | 23.3 | 23.7 |
| | 8H | 22.2 | 23.0 | 22.7 | 23.4 | 23.9 | 22.0 | 22.8 | 22.5 | 23.2 | 23.7 |
| | 12H | 22.2 | 22.9 | 22.7 | 23.3 | 23.8 | 22.0 | 22.7 | 22.5 | 23.2 | 23.7 |
| 8H | 4H | 22.1 | 22.9 | 22.6 | 23.3 | 23.8 | 21.9 | 22.6 | 22.3 | 23.1 | 23.5 |
| | 6H | 22.3 | 23.0 | 22.8 | 23.4 | 23.9 | 22.2 | 22.8 | 22.7 | 23.3 | 23.8 |
| | 8H | 22.4 | 22.9 | 22.9 | 23.4 | 23.9 | 22.3 | 22.8 | 22.8 | 23.3 | 23.8 |
| | 12H | 22.4 | 22.8 | 22.9 | 23.3 | 23.9 | 22.3 | 22.8 | 22.8 | 23.3 | 23.8 |
| 12H | 4H | 22.1 | 22.8 | 22.6 | 23.3 | 23.7 | 21.9 | 22.5 | 22.3 | 23.0 | 23.5 |
| | 6H | 22.3 | 22.9 | 22.9 | 23.4 | 23.9 | 22.2 | 22.7 | 22.7 | 23.2 | 23.7 |
| | 8H | 22.4 | 22.9 | 22.9 | 23.4 | 23.9 | 22.3 | 22.8 | 22.8 | 23.3 | 23.8 |

Maximum UGR = 23.9

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : MCTVG-24-L200-840-CS-SAF12125-PC250-DIM-UNV_.IES**

**POLAR GRAPH**




Maximum Candela = 9043.485 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.)

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.