**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : MCTVG-24-L200-835-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-L200-835-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 | 20055 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 108 |
| 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 | 13569 | 13496 | 13129 |
| 55 | 11218 | 10996 | 10379 |
| 65 | 8133 | 8037 | 7457 |
| 75 | 4842 | 4985 | 4942 |
| 85 | 1057 | 1459 | 1501 |

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**CANDELA TABULATION**

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| **0** | 8736.736 | 8736.736 | 8736.736 | 8736.736 | 8736.736 |
| **5** | 8780.083 | 8725.177 | 8674.125 | 8653.896 | 8655.823 |
| **10** | 8649.080 | 8589.358 | 8555.644 | 8533.489 | 8537.342 |
| **15** | 8436.200 | 8381.295 | 8365.883 | 8318.683 | 8342.764 |
| **20** | 8127.958 | 8083.648 | 8085.575 | 8019.110 | 8047.045 |
| **25** | 7707.015 | 7681.007 | 7667.522 | 7601.057 | 7637.661 |
| **30** | 7202.269 | 7188.783 | 7143.510 | 7058.743 | 7100.164 |
| **35** | 6573.262 | 6586.748 | 6502.944 | 6368.089 | 6445.149 |
| **40** | 5823.849 | 5888.387 | 5753.531 | 5603.263 | 5695.736 |
| **45** | 5014.713 | 5087.921 | 4987.742 | 4805.687 | 4851.923 |
| **50** | 4194.019 | 4156.452 | 4168.974 | 3966.690 | 3960.911 |
| **55** | 3362.728 | 3281.815 | 3296.264 | 3109.392 | 3111.318 |
| **60** | 2539.144 | 2482.312 | 2466.900 | 2297.367 | 2327.228 |
| **65** | 1796.473 | 1760.833 | 1775.282 | 1646.205 | 1647.169 |
| **70** | 1175.173 | 1140.496 | 1181.916 | 1129.900 | 1103.892 |
| **75** | 655.014 | 648.272 | 674.280 | 698.361 | 668.500 |
| **80** | 277.418 | 267.785 | 303.426 | 346.772 | 310.169 |
| **85** | 48.163 | 53.942 | 66.465 | 98.252 | 68.391 |
| **90** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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**ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 3184.51 | N.A. | 15.90 |
| 0-30 | 6705.53 | N.A. | 33.40 |
| 0-40 | 10754.9 | N.A. | 53.60 |
| 0-60 | 17463.49 | N.A. | 87.10 |
| 0-80 | 19934.97 | N.A. | 99.40 |
| 0-90 | 20055.06 | N.A. | 100.00 |
| 10-90 | 19229.23 | N.A. | 95.90 |
| 20-40 | 7570.39 | N.A. | 37.70 |
| 20-50 | 11380.38 | N.A. | 56.70 |
| 40-70 | 8444.2 | N.A. | 42.10 |
| 60-80 | 2471.48 | N.A. | 12.30 |
| 70-80 | 735.87 | N.A. | 3.70 |
| 80-90 | 120.09 | 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 | 20055.06 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

| Zone | Lumens |
|---|---|
| 0-10 | 825.83 |
| 10-20 | 2358.67 |
| 20-30 | 3521.02 |
| 30-40 | 4049.37 |
| 40-50 | 3809.99 |
| 50-60 | 2898.6 |
| 60-70 | 1735.61 |
| 70-80 | 735.87 |
| 80-90 | 120.09 |
| 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**

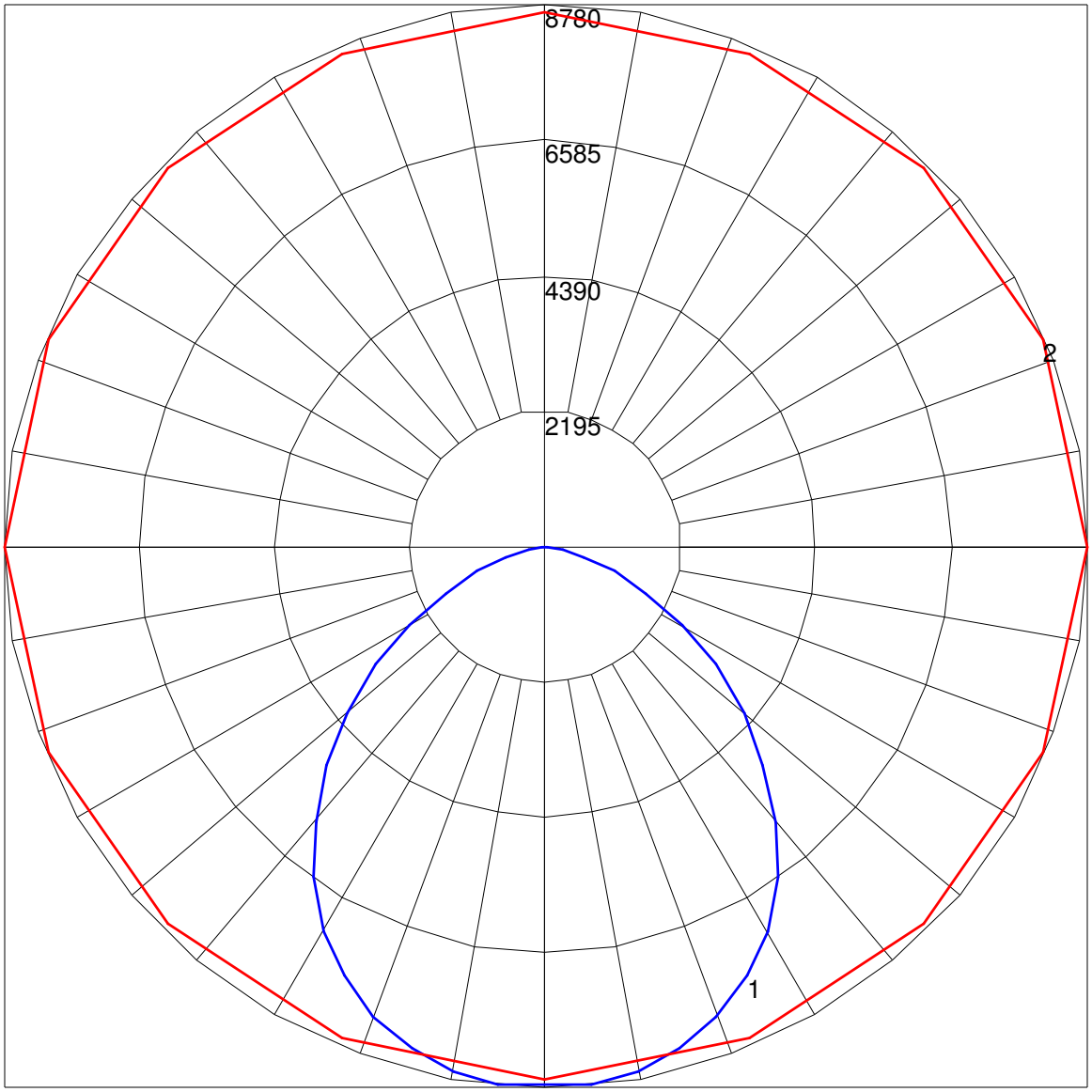
| Reflectances | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling Cavity | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Walls | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Floor Cavity | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room Size | | UGR Viewed Crosswise | | | | | UGR Viewed Endwise | | | | |
| X=2H | Y=2H | 19.9 | 21.4 | 20.3 | 21.7 | 22.1 | 19.4 | 21.0 | 19.8 | 21.3 | 21.6 |
| | 3H | 21.0 | 22.4 | 21.4 | 22.7 | 23.0 | 20.6 | 21.9 | 20.9 | 22.2 | 22.6 |
| | 4H | 21.3 | 22.5 | 21.7 | 22.9 | 23.3 | 20.9 | 22.2 | 21.3 | 22.5 | 22.9 |
| | 6H | 21.4 | 22.6 | 21.8 | 22.9 | 23.3 | 21.1 | 22.2 | 21.5 | 22.6 | 23.0 |
| | 8H | 21.4 | 22.5 | 21.8 | 22.9 | 23.3 | 21.1 | 22.2 | 21.5 | 22.6 | 23.0 |
| | 12H | 21.4 | 22.4 | 21.8 | 22.8 | 23.2 | 21.1 | 22.1 | 21.5 | 22.5 | 23.0 |
| 4H | 2H | 20.3 | 21.6 | 20.7 | 21.9 | 22.3 | 19.9 | 21.2 | 20.3 | 21.5 | 21.9 |
| | 3H | 21.6 | 22.6 | 22.0 | 23.0 | 23.4 | 21.2 | 22.3 | 21.6 | 22.7 | 23.1 |
| | 4H | 21.9 | 22.9 | 22.4 | 23.3 | 23.7 | 21.7 | 22.6 | 22.1 | 23.0 | 23.4 |
| | 6H | 22.1 | 22.9 | 22.6 | 23.3 | 23.8 | 21.9 | 22.7 | 22.4 | 23.2 | 23.6 |
| | 8H | 22.1 | 22.9 | 22.6 | 23.3 | 23.8 | 21.9 | 22.7 | 22.4 | 23.1 | 23.6 |
| | 12H | 22.1 | 22.8 | 22.6 | 23.2 | 23.7 | 21.9 | 22.6 | 22.4 | 23.1 | 23.6 |
| 8H | 4H | 22.0 | 22.8 | 22.5 | 23.2 | 23.7 | 21.8 | 22.5 | 22.2 | 23.0 | 23.4 |
| | 6H | 22.2 | 22.9 | 22.7 | 23.3 | 23.8 | 22.1 | 22.7 | 22.6 | 23.2 | 23.7 |
| | 8H | 22.3 | 22.8 | 22.8 | 23.3 | 23.8 | 22.2 | 22.7 | 22.7 | 23.2 | 23.7 |
| | 12H | 22.3 | 22.7 | 22.8 | 23.2 | 23.8 | 22.2 | 22.7 | 22.7 | 23.2 | 23.7 |
| 12H | 4H | 22.0 | 22.7 | 22.5 | 23.2 | 23.6 | 21.8 | 22.4 | 22.2 | 22.9 | 23.4 |
| | 6H | 22.2 | 22.8 | 22.8 | 23.3 | 23.8 | 22.1 | 22.6 | 22.6 | 23.1 | 23.6 |
| | 8H | 22.3 | 22.8 | 22.8 | 23.3 | 23.8 | 22.2 | 22.7 | 22.7 | 23.2 | 23.7 |

Maximum UGR = 23.8

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**POLAR GRAPH**




Maximum Candela = 8780.083 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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