**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : MCTVG-24-L120-835-CS-SAF125-PC250-DIM-UNV_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] GEN from BALLABS TEST NO. 19834.0
[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 2'x4' RECESSED WHITE REFL LUMINAIRE
[MORE] FROSTED ACRYLIC LENS w/CLEAR ACRYLIC LENS IN DOOR
[LUMCAT] MCTVG-24-L120-835-CS-SAF125-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 | 12048 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 118 |
| Total Luminaire Watts | 101.8 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.20 |
| Spacing Criterion (90-270) | 1.20 |
| 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 | 7896 | 7920 | 7927 |
| 55 | 6913 | 6728 | 6857 |
| 65 | 5358 | 5224 | 5393 |
| 75 | 3428 | 3552 | 3285 |
| 85 | 678 | 1285 | 1045 |

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**CANDELA TABULATION**

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| **0** | 5128.423 | 5128.423 | 5128.423 | 5128.423 | 5128.423 |
| **5** | 5149.004 | 5116.203 | 5089.835 | 5077.615 | 5078.901 |
| **10** | 5060.250 | 5032.595 | 5010.085 | 4999.795 | 4986.289 |
| **15** | 4911.041 | 4885.315 | 4876.954 | 4858.303 | 4849.942 |
| **20** | 4699.447 | 4687.870 | 4686.584 | 4636.419 | 4644.136 |
| **25** | 4430.613 | 4424.825 | 4414.534 | 4385.593 | 4397.169 |
| **30** | 4120.618 | 4107.755 | 4080.100 | 4080.100 | 4091.033 |
| **35** | 3746.309 | 3735.375 | 3723.799 | 3711.579 | 3715.438 |
| **40** | 3339.199 | 3339.199 | 3343.701 | 3324.407 | 3324.407 |
| **45** | 2917.940 | 2925.658 | 2926.944 | 2900.575 | 2929.517 |
| **50** | 2494.752 | 2473.528 | 2480.603 | 2434.297 | 2496.682 |
| **55** | 2072.207 | 2029.760 | 2016.897 | 2020.113 | 2055.485 |
| **60** | 1617.505 | 1600.783 | 1568.626 | 1614.289 | 1626.509 |
| **65** | 1183.383 | 1200.105 | 1153.799 | 1188.528 | 1191.101 |
| **70** | 807.145 | 803.929 | 794.925 | 787.207 | 774.344 |
| **75** | 463.706 | 445.698 | 480.428 | 455.345 | 444.412 |
| **80** | 185.225 | 183.296 | 220.598 | 225.743 | 207.735 |
| **85** | 30.871 | 39.875 | 58.526 | 63.028 | 47.593 |
| **90** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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**ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 1857.63 | N.A. | 15.40 |
| 0-30 | 3886.08 | N.A. | 32.30 |
| 0-40 | 6215.4 | N.A. | 51.60 |
| 0-60 | 10281.82 | N.A. | 85.30 |
| 0-80 | 11964.65 | N.A. | 99.30 |
| 0-90 | 12048.14 | N.A. | 100.00 |
| 10-90 | 11563.99 | N.A. | 96.00 |
| 20-40 | 4357.76 | N.A. | 36.20 |
| 20-50 | 6604.93 | N.A. | 54.80 |
| 40-70 | 5243.67 | N.A. | 43.50 |
| 60-80 | 1682.83 | N.A. | 14.00 |
| 70-80 | 505.58 | N.A. | 4.20 |
| 80-90 | 83.49 | N.A. | 0.70 |
| 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 | 12048.14 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

| Zone | Lumens |
|---|---|
| 0-10 | 484.15 |
| 10-20 | 1373.49 |
| 20-30 | 2028.45 |
| 30-40 | 2329.32 |
| 40-50 | 2247.16 |
| 50-60 | 1819.26 |
| 60-70 | 1177.25 |
| 70-80 | 505.58 |
| 80-90 | 83.49 |
| 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 | 107 | 104 | 100 | 97 | 99 | 97 | 94 | 95 | 93 | 91 | 92 | 90 | 88 | 86 |
| 2 | 101 | 93 | 87 | 82 | 98 | 92 | 86 | 81 | 88 | 83 | 79 | 85 | 81 | 77 | 82 | 79 | 76 | 74 |
| 3 | 93 | 83 | 75 | 69 | 90 | 81 | 74 | 69 | 78 | 72 | 67 | 76 | 71 | 66 | 73 | 69 | 65 | 63 |
| 4 | 85 | 74 | 66 | 59 | 83 | 73 | 65 | 59 | 70 | 64 | 58 | 68 | 62 | 57 | 66 | 61 | 57 | 55 |
| 5 | 79 | 66 | 58 | 52 | 77 | 65 | 57 | 51 | 63 | 56 | 51 | 61 | 55 | 50 | 60 | 54 | 50 | 48 |
| 6 | 73 | 60 | 52 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 45 | 56 | 49 | 45 | 54 | 49 | 44 | 42 |
| 7 | 68 | 55 | 46 | 40 | 66 | 54 | 46 | 40 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 39 | 38 |
| 8 | 63 | 50 | 42 | 36 | 62 | 49 | 42 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 34 |
| 9 | 59 | 46 | 38 | 33 | 58 | 46 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 32 | 42 | 37 | 32 | 30 |
| 10 | 55 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 39 | 34 | 29 | 28 |

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**UGR TABLE - CORRECTED**

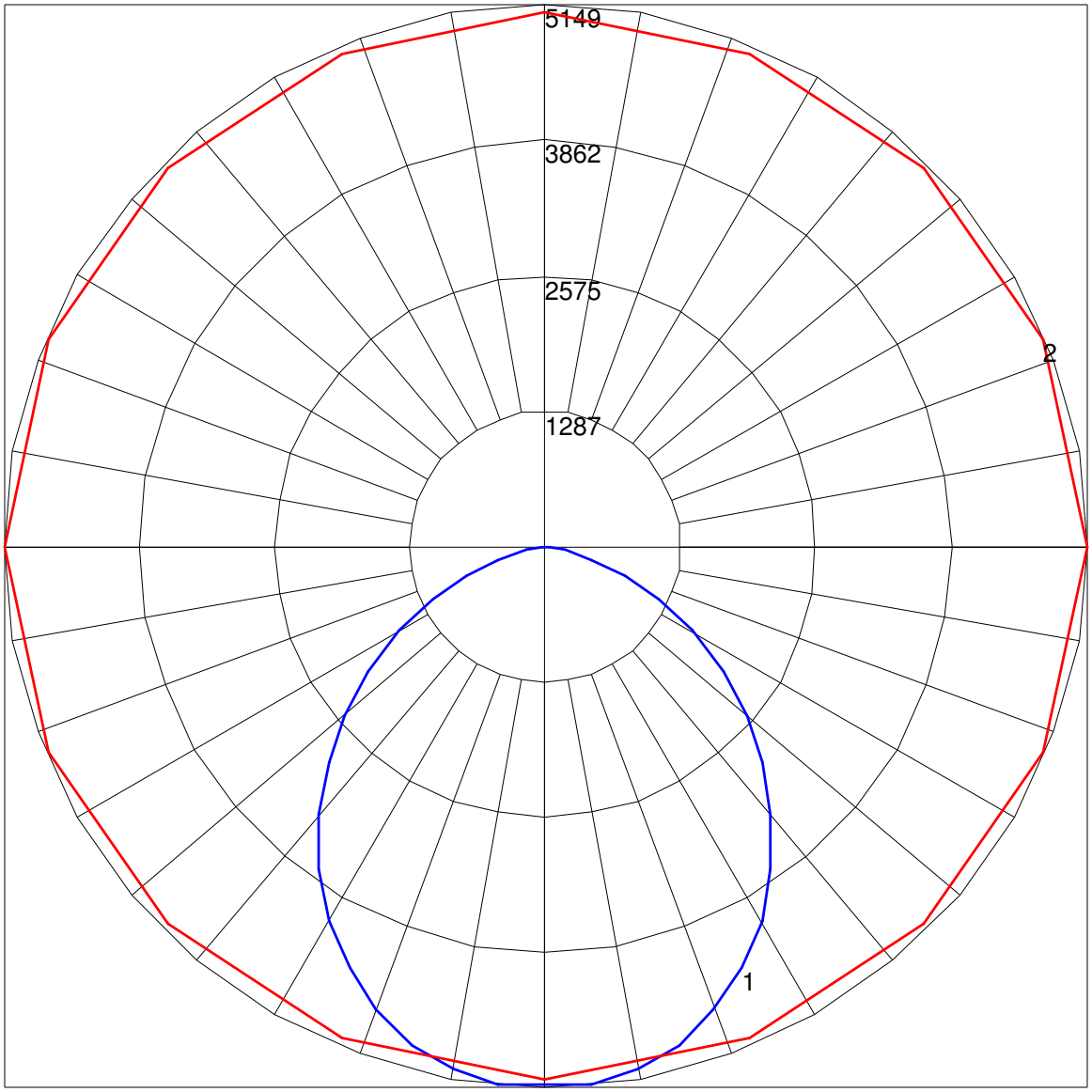
| Reflectances | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling Cavity | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Walls | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Floor Cavity | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room Size | | UGR Viewed Crosswise | | | | | UGR Viewed Endwise | | | | |
| X=2H | Y=2H | 18.4 | 20.0 | 18.8 | 20.3 | 20.6 | 18.4 | 20.0 | 18.8 | 20.3 | 20.6 |
| | 3H | 19.7 | 21.1 | 20.1 | 21.4 | 21.8 | 19.6 | 21.0 | 20.0 | 21.4 | 21.7 |
| | 4H | 20.0 | 21.3 | 20.4 | 21.7 | 22.0 | 20.0 | 21.3 | 20.4 | 21.6 | 22.0 |
| | 6H | 20.1 | 21.3 | 20.6 | 21.7 | 22.1 | 20.1 | 21.3 | 20.5 | 21.7 | 22.1 |
| | 8H | 20.1 | 21.3 | 20.6 | 21.7 | 22.1 | 20.1 | 21.3 | 20.6 | 21.7 | 22.1 |
| | 12H | 20.1 | 21.2 | 20.6 | 21.6 | 22.0 | 20.1 | 21.2 | 20.6 | 21.6 | 22.0 |
| 4H | 2H | 18.8 | 20.1 | 19.2 | 20.5 | 20.9 | 18.9 | 20.2 | 19.3 | 20.5 | 20.9 |
| | 3H | 20.3 | 21.4 | 20.7 | 21.8 | 22.2 | 20.3 | 21.3 | 20.7 | 21.7 | 22.1 |
| | 4H | 20.7 | 21.7 | 21.1 | 22.1 | 22.5 | 20.7 | 21.6 | 21.1 | 22.0 | 22.5 |
| | 6H | 20.9 | 21.7 | 21.3 | 22.2 | 22.6 | 20.9 | 21.7 | 21.4 | 22.2 | 22.6 |
| | 8H | 20.9 | 21.7 | 21.4 | 22.1 | 22.6 | 20.9 | 21.7 | 21.4 | 22.2 | 22.6 |
| | 12H | 20.9 | 21.6 | 21.4 | 22.1 | 22.6 | 20.9 | 21.6 | 21.4 | 22.1 | 22.6 |
| 8H | 4H | 20.8 | 21.6 | 21.3 | 22.1 | 22.5 | 20.8 | 21.6 | 21.3 | 22.0 | 22.5 |
| | 6H | 21.1 | 21.7 | 21.6 | 22.2 | 22.7 | 21.1 | 21.8 | 21.6 | 22.2 | 22.7 |
| | 8H | 21.1 | 21.7 | 21.6 | 22.2 | 22.7 | 21.2 | 21.8 | 21.7 | 22.3 | 22.8 |
| | 12H | 21.1 | 21.6 | 21.6 | 22.1 | 22.7 | 21.2 | 21.7 | 21.7 | 22.2 | 22.8 |
| 12H | 4H | 20.8 | 21.5 | 21.3 | 22.0 | 22.5 | 20.8 | 21.5 | 21.3 | 22.0 | 22.4 |
| | 6H | 21.1 | 21.7 | 21.6 | 22.1 | 22.7 | 21.1 | 21.7 | 21.6 | 22.1 | 22.7 |
| | 8H | 21.1 | 21.6 | 21.6 | 22.1 | 22.7 | 21.2 | 21.7 | 21.7 | 22.2 | 22.8 |

Maximum UGR = 22.8

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**POLAR GRAPH**




Maximum Candela = 5149.004 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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