

IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-14-L79-835-SAF12125-(L45)-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

[ISSUE DATE] 08-22-2023

[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] MCTG-14-L79-835-SAF12125-(L45)-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 | 4555 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 117 |
| Total Luminaire Watts | 38.93 |
| 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) | 3.98 ft |
| Luminous Width (90-270) | 0.98 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 4416 | 4392 | 4273 |
| 55 | 3651 | 3579 | 3378 |
| 65 | 2647 | 2616 | 2427 |
| 75 | 1576 | 1622 | 1608 |
| 85 | 344 | 475 | 489 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : MCTG-14-L79-835-SAF12125-(L45)-DIM-UNV_.IES****CANDELA TABULATION**

| | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
|-----------|------------|-------------|-------------|-------------|-------------|
| 0 | 1984.335 | 1984.335 | 1984.335 | 1984.335 | 1984.335 |
| 5 | 1994.180 | 1981.709 | 1970.114 | 1965.519 | 1965.957 |
| 10 | 1964.426 | 1950.861 | 1943.204 | 1938.172 | 1939.047 |
| 15 | 1916.075 | 1903.605 | 1900.104 | 1889.384 | 1894.854 |
| 20 | 1846.066 | 1836.002 | 1836.439 | 1821.343 | 1827.688 |
| 25 | 1750.459 | 1744.552 | 1741.489 | 1726.393 | 1734.707 |
| 30 | 1635.818 | 1632.755 | 1622.472 | 1603.220 | 1612.627 |
| 35 | 1492.955 | 1496.018 | 1476.984 | 1446.355 | 1463.857 |
| 40 | 1322.744 | 1337.402 | 1306.773 | 1272.643 | 1293.646 |
| 45 | 1138.969 | 1155.596 | 1132.843 | 1091.493 | 1101.995 |
| 50 | 952.568 | 944.036 | 946.880 | 900.936 | 899.623 |
| 55 | 763.761 | 745.383 | 748.665 | 706.222 | 706.659 |
| 60 | 576.704 | 563.796 | 560.296 | 521.790 | 528.572 |
| 65 | 408.025 | 399.930 | 403.212 | 373.895 | 374.114 |
| 70 | 266.912 | 259.036 | 268.443 | 256.629 | 250.722 |
| 75 | 148.770 | 147.239 | 153.146 | 158.615 | 151.833 |
| 80 | 63.009 | 60.821 | 68.916 | 78.761 | 70.447 |
| 85 | 10.939 | 12.252 | 15.096 | 22.316 | 15.533 |
| 90 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : MCTG-14-L79-835-SAF12125-(L45)-DIM-UNV_.IES****ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 723.28 | N.A. | 15.90 |
| 0-30 | 1523.00 | N.A. | 33.40 |
| 0-40 | 2442.71 | N.A. | 53.60 |
| 0-60 | 3966.4 | N.A. | 87.10 |
| 0-80 | 4527.74 | N.A. | 99.40 |
| 0-90 | 4555.01 | N.A. | 100.00 |
| 10-90 | 4367.45 | N.A. | 95.90 |
| 20-40 | 1719.43 | N.A. | 37.70 |
| 20-50 | 2584.77 | N.A. | 56.70 |
| 40-70 | 1917.89 | N.A. | 42.10 |
| 60-80 | 561.34 | N.A. | 12.30 |
| 70-80 | 167.14 | N.A. | 3.70 |
| 80-90 | 27.27 | 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 | 4555.01 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 187.57 |
| 10-20 | 535.71 |
| 20-30 | 799.71 |
| 30-40 | 919.71 |
| 40-50 | 865.35 |
| 50-60 | 658.35 |
| 60-70 | 394.20 |
| 70-80 | 167.14 |
| 80-90 | 27.27 |
| 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

| | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| X=2H | Y=2H | 16.1 | 17.6 | 16.4 | 17.9 | 18.2 | 15.6 | 17.1 | 16.0 | 17.4 | 17.7 |
| | 3H | 17.1 | 18.5 | 17.5 | 18.8 | 19.2 | 16.7 | 18.1 | 17.1 | 18.4 | 18.8 |
| | 4H | 17.4 | 18.7 | 17.8 | 19.0 | 19.4 | 17.0 | 18.3 | 17.4 | 18.7 | 19.0 |
| | 6H | 17.5 | 18.7 | 17.9 | 19.1 | 19.5 | 17.2 | 18.4 | 17.6 | 18.8 | 19.1 |
| | 8H | 17.5 | 18.7 | 18.0 | 19.0 | 19.4 | 17.2 | 18.4 | 17.7 | 18.7 | 19.1 |
| | 12H | 17.5 | 18.6 | 17.9 | 19.0 | 19.4 | 17.2 | 18.3 | 17.7 | 18.7 | 19.1 |

UGR Viewed Endwise

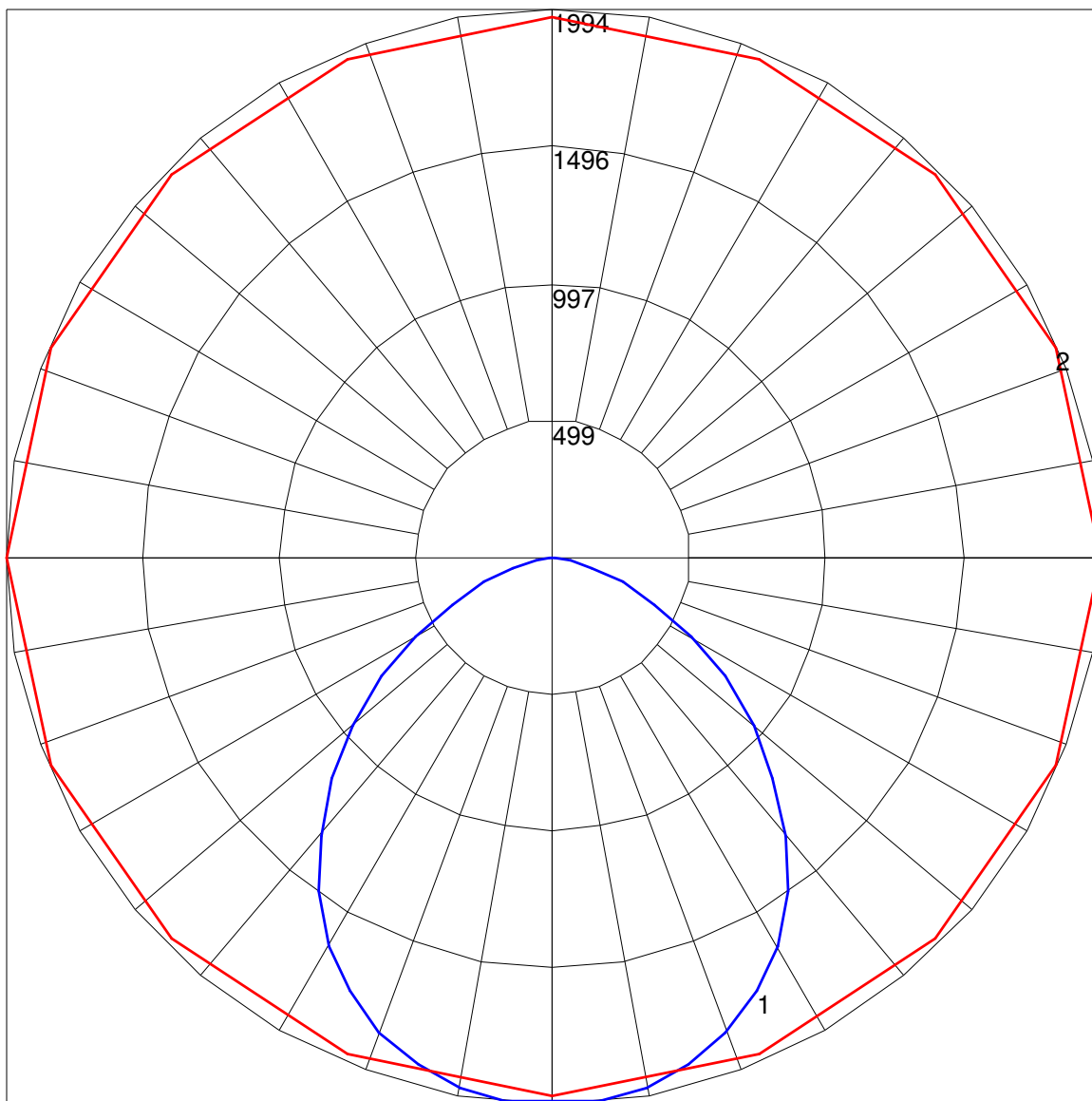
| | | | | | | | | | | | |
|----|-----|------|------|------|------|------|------|------|------|------|------|
| 4H | 2H | 16.5 | 17.7 | 16.9 | 18.1 | 18.5 | 16.1 | 17.3 | 16.5 | 17.7 | 18.1 |
| | 3H | 17.7 | 18.8 | 18.1 | 19.2 | 19.6 | 17.4 | 18.4 | 17.8 | 18.8 | 19.2 |
| | 4H | 18.1 | 19.0 | 18.5 | 19.4 | 19.9 | 17.8 | 18.7 | 18.2 | 19.2 | 19.6 |
| | 6H | 18.2 | 19.1 | 18.7 | 19.5 | 20.0 | 18.1 | 18.9 | 18.5 | 19.3 | 19.8 |
| | 8H | 18.2 | 19.0 | 18.7 | 19.4 | 19.9 | 18.1 | 18.9 | 18.5 | 19.3 | 19.8 |
| | 12H | 18.2 | 18.9 | 18.7 | 19.4 | 19.9 | 18.1 | 18.8 | 18.6 | 19.3 | 19.7 |

| | | | | | | | | | | | |
|----|-----|------|------|------|------|------|------|------|------|------|------|
| 8H | 4H | 18.2 | 18.9 | 18.6 | 19.4 | 19.8 | 17.9 | 18.7 | 18.4 | 19.1 | 19.6 |
| | 6H | 18.4 | 19.0 | 18.9 | 19.5 | 20.0 | 18.2 | 18.9 | 18.7 | 19.4 | 19.8 |
| | 8H | 18.4 | 19.0 | 18.9 | 19.5 | 20.0 | 18.3 | 18.9 | 18.8 | 19.4 | 19.9 |
| | 12H | 18.4 | 18.9 | 18.9 | 19.4 | 20.0 | 18.3 | 18.8 | 18.9 | 19.3 | 19.9 |

| | | | | | | | | | | | |
|-----|----|------|------|------|------|------|------|------|------|------|------|
| 12H | 4H | 18.2 | 18.8 | 18.6 | 19.3 | 19.8 | 17.9 | 18.6 | 18.4 | 19.1 | 19.5 |
| | 6H | 18.4 | 18.9 | 18.9 | 19.4 | 19.9 | 18.2 | 18.8 | 18.8 | 19.3 | 19.8 |
| | 8H | 18.4 | 18.9 | 18.9 | 19.4 | 20.0 | 18.3 | 18.8 | 18.8 | 19.3 | 19.9 |

Maximum UGR = 20.0

POLAR GRAPH



Maximum Candela = 1994.18 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.)