



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-14-L12-RED-SAF12125-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] 17-FEB-2020

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 6-42 LED 22" ARRAYS 1x4' RECESSED WHITE REFLECTOR LUMINAIRE

[MORE] PAT12 ACRYLIC LENS w/CLEAR ACRYLIC LENS IN DOOR

[LUMCAT] MCTG-14-L12-RED-SAF12125-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 | 1181 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 39 |
| Total Luminaire Watts | 30.3 |
| 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 | 1145 | 1139 | 1108 |
| 55 | 947 | 928 | 876 |
| 65 | 686 | 678 | 629 |
| 75 | 409 | 421 | 417 |
| 85 | 89 | 123 | 127 |

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CANDELA TABULATION

| | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
|-----------|------------|-------------|-------------|-------------|-------------|
| 0 | 514.489 | 514.489 | 514.489 | 514.489 | 514.489 |
| 5 | 517.042 | 513.809 | 510.802 | 509.611 | 509.725 |
| 10 | 509.327 | 505.811 | 503.825 | 502.521 | 502.747 |
| 15 | 496.791 | 493.558 | 492.651 | 489.871 | 491.289 |
| 20 | 478.640 | 476.030 | 476.144 | 472.230 | 473.875 |
| 25 | 453.851 | 452.320 | 451.525 | 447.611 | 449.767 |
| 30 | 424.128 | 423.333 | 420.667 | 415.676 | 418.115 |
| 35 | 387.087 | 387.881 | 382.946 | 375.004 | 379.542 |
| 40 | 342.955 | 346.756 | 338.814 | 329.965 | 335.411 |
| 45 | 295.307 | 299.618 | 293.718 | 282.998 | 285.720 |
| 50 | 246.978 | 244.765 | 245.503 | 233.591 | 233.250 |
| 55 | 198.025 | 193.260 | 194.111 | 183.106 | 183.219 |
| 60 | 149.525 | 146.179 | 145.271 | 135.287 | 137.046 |
| 65 | 105.791 | 103.692 | 104.543 | 96.942 | 96.999 |
| 70 | 69.204 | 67.162 | 69.601 | 66.538 | 65.006 |
| 75 | 38.573 | 38.175 | 39.707 | 41.125 | 39.367 |
| 80 | 16.337 | 15.769 | 17.868 | 20.421 | 18.265 |
| 85 | 2.836 | 3.177 | 3.914 | 5.786 | 4.027 |
| 90 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 187.53 | N.A. | 15.90 |
| 0-30 | 394.88 | N.A. | 33.40 |
| 0-40 | 633.34 | N.A. | 53.60 |
| 0-60 | 1028.39 | N.A. | 87.10 |
| 0-80 | 1173.93 | N.A. | 99.40 |
| 0-90 | 1181.00 | N.A. | 100.00 |
| 10-90 | 1132.37 | N.A. | 95.90 |
| 20-40 | 445.81 | N.A. | 37.70 |
| 20-50 | 670.17 | N.A. | 56.70 |
| 40-70 | 497.26 | N.A. | 42.10 |
| 60-80 | 145.54 | N.A. | 12.30 |
| 70-80 | 43.33 | N.A. | 3.70 |
| 80-90 | 7.07 | 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 | 1181.00 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 48.63 |
| 10-20 | 138.90 |
| 20-30 | 207.35 |
| 30-40 | 238.46 |
| 40-50 | 224.36 |
| 50-60 | 170.69 |
| 60-70 | 102.21 |
| 70-80 | 43.33 |
| 80-90 | 7.07 |
| 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 | 233 | 233 | 233 | 233 | 228 | 228 | 228 | 228 | 218 | 218 | 218 | 208 | 208 | 208 | 200 | 200 | 200 | 196 |
| 1 | 216 | 208 | 201 | 194 | 211 | 204 | 197 | 191 | 195 | 190 | 185 | 188 | 183 | 179 | 181 | 177 | 174 | 170 |
| 2 | 199 | 184 | 172 | 162 | 194 | 181 | 170 | 160 | 174 | 165 | 157 | 168 | 160 | 153 | 162 | 156 | 150 | 146 |
| 3 | 183 | 164 | 149 | 138 | 178 | 161 | 147 | 137 | 155 | 144 | 134 | 150 | 140 | 132 | 145 | 137 | 130 | 126 |
| 4 | 168 | 147 | 131 | 119 | 164 | 144 | 129 | 118 | 139 | 127 | 116 | 135 | 124 | 115 | 131 | 121 | 113 | 109 |
| 5 | 155 | 132 | 116 | 104 | 151 | 130 | 115 | 103 | 126 | 112 | 102 | 122 | 110 | 101 | 119 | 108 | 100 | 96 |
| 6 | 144 | 120 | 103 | 91 | 140 | 118 | 102 | 91 | 114 | 101 | 90 | 111 | 99 | 90 | 108 | 97 | 89 | 85 |
| 7 | 134 | 109 | 93 | 81 | 131 | 107 | 92 | 81 | 104 | 91 | 81 | 102 | 89 | 80 | 99 | 88 | 79 | 76 |
| 8 | 125 | 100 | 84 | 73 | 122 | 99 | 83 | 73 | 96 | 82 | 73 | 94 | 81 | 72 | 91 | 80 | 72 | 68 |
| 9 | 117 | 92 | 77 | 66 | 114 | 91 | 76 | 66 | 89 | 75 | 66 | 87 | 74 | 65 | 85 | 73 | 65 | 62 |
| 10 | 110 | 85 | 70 | 60 | 107 | 84 | 70 | 60 | 82 | 69 | 60 | 80 | 68 | 60 | 79 | 67 | 59 | 56 |

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UGR TABLE - CORRECTED

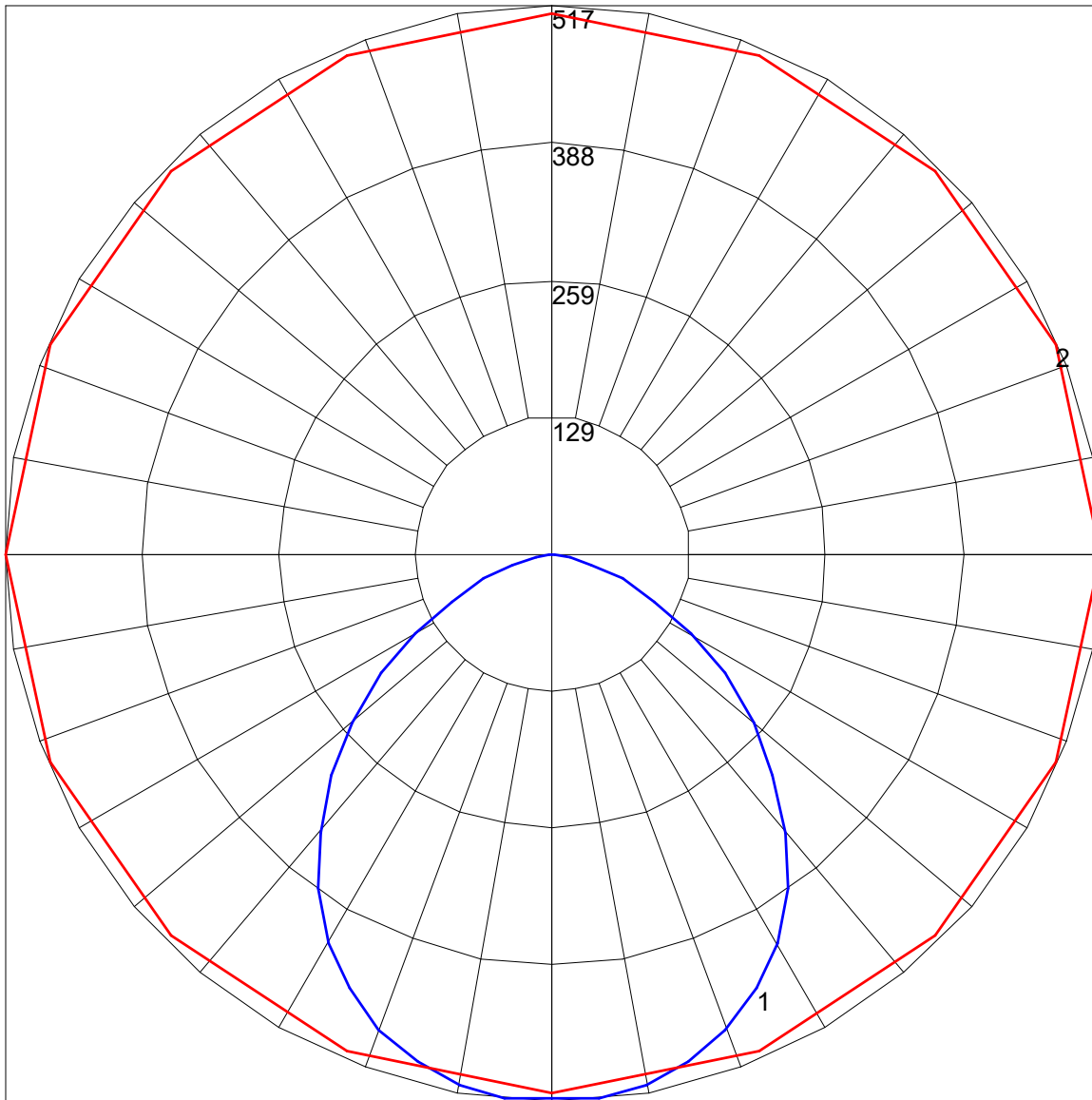
Reflectances

| | | | | | | | | | | |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 | 9.0 | 10.5 | 9.3 | 10.8 | 11.1 | 8.5 | 10.0 | 8.9 | 10.3 | 10.6 |
| | 3H | 10.0 | 11.4 | 10.4 | 11.7 | 12.1 | 9.6 | 11.0 | 10.0 | 11.3 | 11.7 |
| | 4H | 10.3 | 11.6 | 10.7 | 11.9 | 12.3 | 10.0 | 11.2 | 10.4 | 11.6 | 11.9 |
| | 6H | 10.4 | 11.6 | 10.8 | 12.0 | 12.4 | 10.1 | 11.3 | 10.5 | 11.7 | 12.1 |
| | 8H | 10.4 | 11.6 | 10.9 | 11.9 | 12.4 | 10.1 | 11.3 | 10.6 | 11.6 | 12.1 |
| | 12H | 10.4 | 11.5 | 10.8 | 11.9 | 12.3 | 10.1 | 11.2 | 10.6 | 11.6 | 12.0 |
| 4H | 2H | 9.4 | 10.6 | 9.8 | 11.0 | 11.4 | 9.0 | 10.2 | 9.4 | 10.6 | 11.0 |
| | 3H | 10.6 | 11.7 | 11.0 | 12.1 | 12.5 | 10.3 | 11.3 | 10.7 | 11.7 | 12.1 |
| | 4H | 11.0 | 11.9 | 11.4 | 12.3 | 12.8 | 10.7 | 11.6 | 11.1 | 12.1 | 12.5 |
| | 6H | 11.2 | 12.0 | 11.6 | 12.4 | 12.9 | 11.0 | 11.8 | 11.4 | 12.2 | 12.7 |
| | 8H | 11.1 | 11.9 | 11.6 | 12.4 | 12.8 | 11.0 | 11.8 | 11.4 | 12.2 | 12.7 |
| | 12H | 11.1 | 11.8 | 11.6 | 12.3 | 12.8 | 11.0 | 11.7 | 11.5 | 12.2 | 12.6 |
| 8H | 4H | 11.1 | 11.8 | 11.5 | 12.3 | 12.7 | 10.8 | 11.6 | 11.3 | 12.0 | 12.5 |
| | 6H | 11.3 | 11.9 | 11.8 | 12.4 | 12.9 | 11.2 | 11.8 | 11.6 | 12.3 | 12.7 |
| | 8H | 11.3 | 11.9 | 11.8 | 12.4 | 12.9 | 11.2 | 11.8 | 11.7 | 12.3 | 12.8 |
| | 12H | 11.3 | 11.8 | 11.8 | 12.3 | 12.9 | 11.2 | 11.7 | 11.8 | 12.2 | 12.8 |
| 12H | 4H | 11.1 | 11.7 | 11.5 | 12.2 | 12.7 | 10.8 | 11.5 | 11.3 | 12.0 | 12.4 |
| | 6H | 11.3 | 11.8 | 11.8 | 12.3 | 12.8 | 11.1 | 11.7 | 11.7 | 12.2 | 12.7 |
| | 8H | 11.3 | 11.8 | 11.8 | 12.3 | 12.9 | 11.2 | 11.7 | 11.7 | 12.2 | 12.8 |

Maximum UGR = 12.9

POLAR GRAPH



Maximum Candela = 517.042 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.)