



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 50G-S22-L43-835-SAF12125-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18124.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 31-JAN-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 144 LEDS (2 BOARDS) 2x2' RECESSED TROFFER LUMINAIRE

[MORE] WHITE REFLECTOR w/PAT 12 LENS PRISMS DOWN

[LUMCAT] 50G-S22-L43-835-SAF12125-DIM-UNV

[\_SEARCH\_SOURCETYPE]LED

[\_SEARCH\_APPLICATION]INDOOR,DIRECT

[\_SEARCH\_MOUNTING]RECESSED

### CHARACTERISTICS

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 4363            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 129             |
| Total Luminaire Watts           | 33.7            |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 1.18            |
| Spacing Criterion (90-270)      | 1.22            |
| Spacing Criterion (Diagonal)    | 1.26            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 1.77 ft         |
| Luminous Width (90-270)         | 1.77 ft         |
| Luminous Height                 | 0.00 ft         |

### LUMINANCE DATA (cd/sq.m)

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 4840             | 4940              | 5144              |
| 55                  | 3987             | 4020              | 4140              |
| 65                  | 3173             | 3106              | 3240              |
| 75                  | 2778             | 2677              | 2668              |
| 85                  | 2741             | 2524              | 2578              |

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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> |
|-----------|------------|-------------|-------------|-------------|-------------|
| <b>0</b>  | 1903.854   | 1903.854    | 1903.854    | 1903.854    | 1903.854    |
| <b>5</b>  | 1901.095   | 1899.716    | 1895.577    | 1891.438    | 1890.058    |
| <b>10</b> | 1862.466   | 1863.846    | 1863.846    | 1860.397    | 1866.605    |
| <b>15</b> | 1828.666   | 1831.425    | 1841.082    | 1839.703    | 1849.360    |
| <b>20</b> | 1687.256   | 1703.812    | 1710.020    | 1717.608    | 1733.473    |
| <b>25</b> | 1607.239   | 1627.933    | 1637.591    | 1649.317    | 1671.391    |
| <b>30</b> | 1481.695   | 1495.491    | 1516.875    | 1527.912    | 1558.953    |
| <b>35</b> | 1326.490   | 1335.457    | 1362.360    | 1387.192    | 1416.164    |
| <b>40</b> | 1164.386   | 1169.215    | 1193.358    | 1218.191    | 1249.232    |
| <b>45</b> | 998.144    | 997.454     | 1018.838    | 1030.565    | 1060.916    |
| <b>50</b> | 829.832    | 830.522     | 846.387     | 842.938     | 874.669     |
| <b>55</b> | 667.039    | 668.418     | 672.557     | 669.798     | 692.561     |
| <b>60</b> | 515.282    | 513.903     | 513.903     | 507.005     | 528.389     |
| <b>65</b> | 391.118    | 384.910     | 382.840     | 380.771     | 399.396     |
| <b>70</b> | 291.786    | 285.578     | 281.439     | 282.129     | 287.648     |
| <b>75</b> | 209.700    | 205.561     | 202.112     | 200.043     | 201.422     |
| <b>80</b> | 137.271    | 136.581     | 134.511     | 129.683     | 130.373     |
| <b>85</b> | 69.670     | 72.429      | 64.152      | 64.152      | 65.531      |
| <b>90</b> | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |

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**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 691.85  | N.A.  | 15.90  |
| 0-30    | 1442.2  | N.A.  | 33.10  |
| 0-40    | 2293.46 | N.A.  | 52.60  |
| 0-60    | 3683.92 | N.A.  | 84.40  |
| 0-80    | 4290.29 | N.A.  | 98.30  |
| 0-90    | 4363.2  | N.A.  | 100.00 |
| 10-90   | 4183.31 | N.A.  | 95.90  |
| 20-40   | 1601.62 | N.A.  | 36.70  |
| 20-50   | 2388.19 | N.A.  | 54.70  |
| 40-70   | 1779.09 | N.A.  | 40.80  |
| 60-80   | 606.36  | N.A.  | 13.90  |
| 70-80   | 217.73  | N.A.  | 5.00   |
| 80-90   | 72.91   | N.A.  | 1.70   |
| 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   | 4363.2  | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 179.88 |
| 10-20   | 511.96 |
| 20-30   | 750.35 |
| 30-40   | 851.27 |
| 40-50   | 786.58 |
| 50-60   | 603.88 |
| 60-70   | 388.63 |
| 70-80   | 217.73 |
| 80-90   | 72.91  |
| 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  | 198 | 198 | 198 | 198 | 193 | 193 | 193 | 193 | 184 | 184 | 184 | 176 | 176 | 176 | 169 | 169 | 169 | 166 |
| 1  | 182 | 175 | 168 | 162 | 177 | 171 | 165 | 160 | 164 | 159 | 155 | 157 | 153 | 150 | 152 | 148 | 145 | 142 |
| 2  | 167 | 154 | 144 | 135 | 163 | 151 | 141 | 133 | 145 | 137 | 130 | 140 | 133 | 127 | 135 | 129 | 125 | 121 |
| 3  | 153 | 137 | 124 | 114 | 149 | 134 | 123 | 113 | 130 | 120 | 111 | 125 | 117 | 109 | 121 | 114 | 108 | 104 |
| 4  | 141 | 123 | 109 | 98  | 137 | 120 | 108 | 98  | 116 | 105 | 96  | 113 | 103 | 95  | 109 | 101 | 94  | 90  |
| 5  | 130 | 110 | 96  | 86  | 127 | 109 | 95  | 85  | 105 | 93  | 85  | 102 | 92  | 84  | 99  | 90  | 83  | 79  |
| 6  | 121 | 100 | 86  | 76  | 118 | 98  | 85  | 76  | 96  | 84  | 75  | 93  | 82  | 74  | 90  | 81  | 74  | 70  |
| 7  | 113 | 91  | 77  | 68  | 110 | 90  | 77  | 67  | 87  | 76  | 67  | 85  | 74  | 66  | 83  | 73  | 66  | 63  |
| 8  | 105 | 84  | 70  | 61  | 103 | 82  | 70  | 61  | 80  | 69  | 60  | 78  | 68  | 60  | 76  | 67  | 60  | 57  |
| 9  | 98  | 77  | 64  | 55  | 96  | 76  | 64  | 55  | 74  | 63  | 55  | 72  | 62  | 54  | 71  | 61  | 54  | 51  |
| 10 | 92  | 71  | 59  | 50  | 90  | 70  | 58  | 50  | 69  | 58  | 50  | 67  | 57  | 50  | 66  | 56  | 49  | 47  |

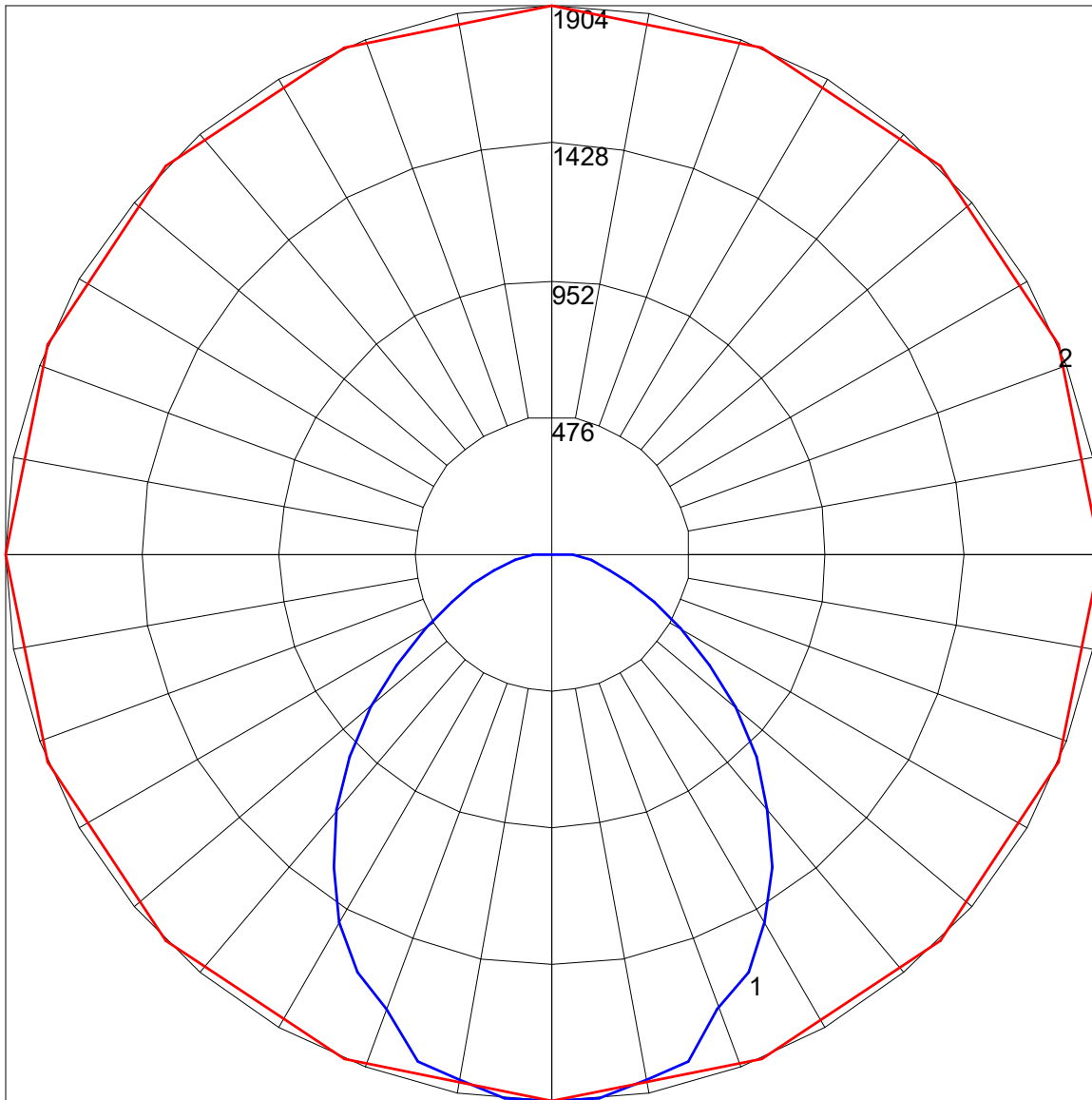
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**UGR TABLE - CORRECTED**

|                |      |                      |      |      |      |      |                    |      |      |      |      |
|----------------|------|----------------------|------|------|------|------|--------------------|------|------|------|------|
| 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 | 14.5                 | 16.0 | 14.9 | 16.3 | 16.6 | 14.5               | 16.0 | 14.9 | 16.3 | 16.7 |
|                | 3H   | 15.9                 | 17.3 | 16.3 | 17.6 | 18.0 | 15.9               | 17.3 | 16.3 | 17.6 | 18.0 |
|                | 4H   | 16.5                 | 17.8 | 16.9 | 18.1 | 18.5 | 16.4               | 17.7 | 16.8 | 18.1 | 18.5 |
|                | 6H   | 17.0                 | 18.2 | 17.4 | 18.5 | 18.9 | 16.9               | 18.1 | 17.3 | 18.5 | 18.8 |
|                | 8H   | 17.2                 | 18.3 | 17.6 | 18.7 | 19.1 | 17.1               | 18.2 | 17.5 | 18.6 | 19.0 |
|                | 12H  | 17.3                 | 18.4 | 17.7 | 18.8 | 19.2 | 17.2               | 18.3 | 17.6 | 18.7 | 19.1 |
| 4H             | 2H   | 14.9                 | 16.2 | 15.3 | 16.6 | 17.0 | 14.9               | 16.2 | 15.3 | 16.6 | 17.0 |
|                | 3H   | 16.6                 | 17.7 | 17.0 | 18.1 | 18.5 | 16.6               | 17.7 | 17.0 | 18.1 | 18.5 |
|                | 4H   | 17.3                 | 18.3 | 17.7 | 18.7 | 19.1 | 17.3               | 18.2 | 17.7 | 18.6 | 19.1 |
|                | 6H   | 18.0                 | 18.8 | 18.4 | 19.2 | 19.7 | 17.9               | 18.7 | 18.3 | 19.1 | 19.6 |
|                | 8H   | 18.2                 | 19.0 | 18.7 | 19.4 | 19.9 | 18.1               | 18.9 | 18.6 | 19.3 | 19.8 |
|                | 12H  | 18.4                 | 19.1 | 18.9 | 19.6 | 20.1 | 18.3               | 19.0 | 18.8 | 19.5 | 19.9 |
| 8H             | 4H   | 17.6                 | 18.4 | 18.0 | 18.8 | 19.3 | 17.5               | 18.3 | 18.0 | 18.8 | 19.2 |
|                | 6H   | 18.4                 | 19.0 | 18.9 | 19.5 | 20.0 | 18.3               | 18.9 | 18.8 | 19.4 | 19.9 |
|                | 8H   | 18.7                 | 19.3 | 19.2 | 19.8 | 20.3 | 18.6               | 19.2 | 19.1 | 19.7 | 20.2 |
|                | 12H  | 19.0                 | 19.6 | 19.6 | 20.1 | 20.6 | 18.9               | 19.4 | 19.4 | 19.9 | 20.4 |
| 12H            | 4H   | 17.6                 | 18.3 | 18.1 | 18.8 | 19.3 | 17.6               | 18.3 | 18.0 | 18.7 | 19.2 |
|                | 6H   | 18.4                 | 19.0 | 19.0 | 19.5 | 20.0 | 18.3               | 18.9 | 18.9 | 19.4 | 19.9 |
|                | 8H   | 18.9                 | 19.4 | 19.4 | 19.9 | 20.4 | 18.7               | 19.2 | 19.2 | 19.7 | 20.3 |

Maximum UGR = 20.6

POLAR GRAPH



Maximum Candela = 1903.854 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)