



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : LP-24-L50-840-DIM-UNV.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]BALLABS TEST NO. 20528  
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
[ISSUE DATE] 29-JUN-2018  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
[LUMINAIRE] 2-96 LED ARRAYS 2x4'ULTRA THIN SEAMLESS FLAT PANEL LIGHT  
[MORE] .39" ALUMINUM FRAME w/PS 1mm DIFFUSE LENS PMMA 2mm LIGHT  
[MORE] GUIDE PANEL, LED DRIVER #MG-PA50D01  
[LUMCAT] LP-24-L50-840-DIM-UNV  
[LAMPCAT] 4014

**CHARACTERISTICS**

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 4968            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 103             |
| Total Luminaire Watts           | 48              |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 1.24            |
| Spacing Criterion (90-270)      | 1.26            |
| Spacing Criterion (Diagonal)    | 1.40            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 3.80 ft         |
| Luminous Width (90-270)         | 1.80 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                  | 2592             | 2629              | 2669              |
| 55                  | 2437             | 2469              | 2503              |
| 65                  | 2312             | 2328              | 2351              |
| 75                  | 1933             | 1922              | 1922              |
| 85                  | 1599             | 1551              | 1519              |

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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>  | 1753.673   | 1753.673    | 1753.673    | 1753.673    | 1753.673    |
| <b>5</b>  | 1748.345   | 1745.681    | 1745.681    | 1745.681    | 1745.681    |
| <b>10</b> | 1727.923   | 1727.035    | 1727.923    | 1730.586    | 1730.586    |
| <b>15</b> | 1665.767   | 1665.767    | 1669.319    | 1672.871    | 1673.759    |
| <b>20</b> | 1616.931   | 1616.931    | 1622.258    | 1626.698    | 1628.474    |
| <b>25</b> | 1549.448   | 1551.223    | 1558.327    | 1565.430    | 1567.206    |
| <b>30</b> | 1451.775   | 1454.438    | 1461.542    | 1472.197    | 1476.637    |
| <b>35</b> | 1340.783   | 1343.447    | 1354.990    | 1367.421    | 1371.860    |
| <b>40</b> | 1251.101   | 1256.429    | 1267.972    | 1281.291    | 1284.843    |
| <b>45</b> | 1167.635   | 1171.187    | 1184.506    | 1196.049    | 1202.265    |
| <b>50</b> | 1030.893   | 1034.445    | 1047.764    | 1056.643    | 1062.859    |
| <b>55</b> | 890.599    | 891.487     | 902.143     | 910.134     | 914.574     |
| <b>60</b> | 736.099    | 737.874     | 744.978     | 752.081     | 754.745     |
| <b>65</b> | 622.443    | 622.443     | 626.883     | 631.322     | 633.098     |
| <b>70</b> | 470.606    | 471.494     | 473.270     | 475.046     | 475.933     |
| <b>75</b> | 318.769    | 316.993     | 316.993     | 316.105     | 316.993     |
| <b>80</b> | 191.794    | 191.794     | 188.242     | 170.484     | 170.484     |
| <b>85</b> | 88.794     | 87.906      | 86.130      | 86.130      | 84.354      |
| <b>90</b> | 7.103      | 7.103       | 5.328       | 5.328       | 5.328       |

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**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 638.99  | N.A.  | 12.90  |
| 0-30    | 1354.92 | N.A.  | 27.30  |
| 0-40    | 2207.78 | N.A.  | 44.40  |
| 0-60    | 3916.81 | N.A.  | 78.80  |
| 0-80    | 4869.34 | N.A.  | 98.00  |
| 0-90    | 4967.97 | N.A.  | 100.00 |
| 10-90   | 4801.83 | N.A.  | 96.70  |
| 20-40   | 1568.79 | N.A.  | 31.60  |
| 20-50   | 2473.63 | N.A.  | 49.80  |
| 40-70   | 2321.24 | N.A.  | 46.70  |
| 60-80   | 952.53  | N.A.  | 19.20  |
| 70-80   | 340.32  | N.A.  | 6.90   |
| 80-90   | 98.63   | N.A.  | 2.00   |
| 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   | 4967.97 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 166.14 |
| 10-20   | 472.85 |
| 20-30   | 715.94 |
| 30-40   | 852.85 |
| 40-50   | 904.84 |
| 50-60   | 804.19 |
| 60-70   | 612.20 |
| 70-80   | 340.32 |
| 80-90   | 98.63  |
| 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   |

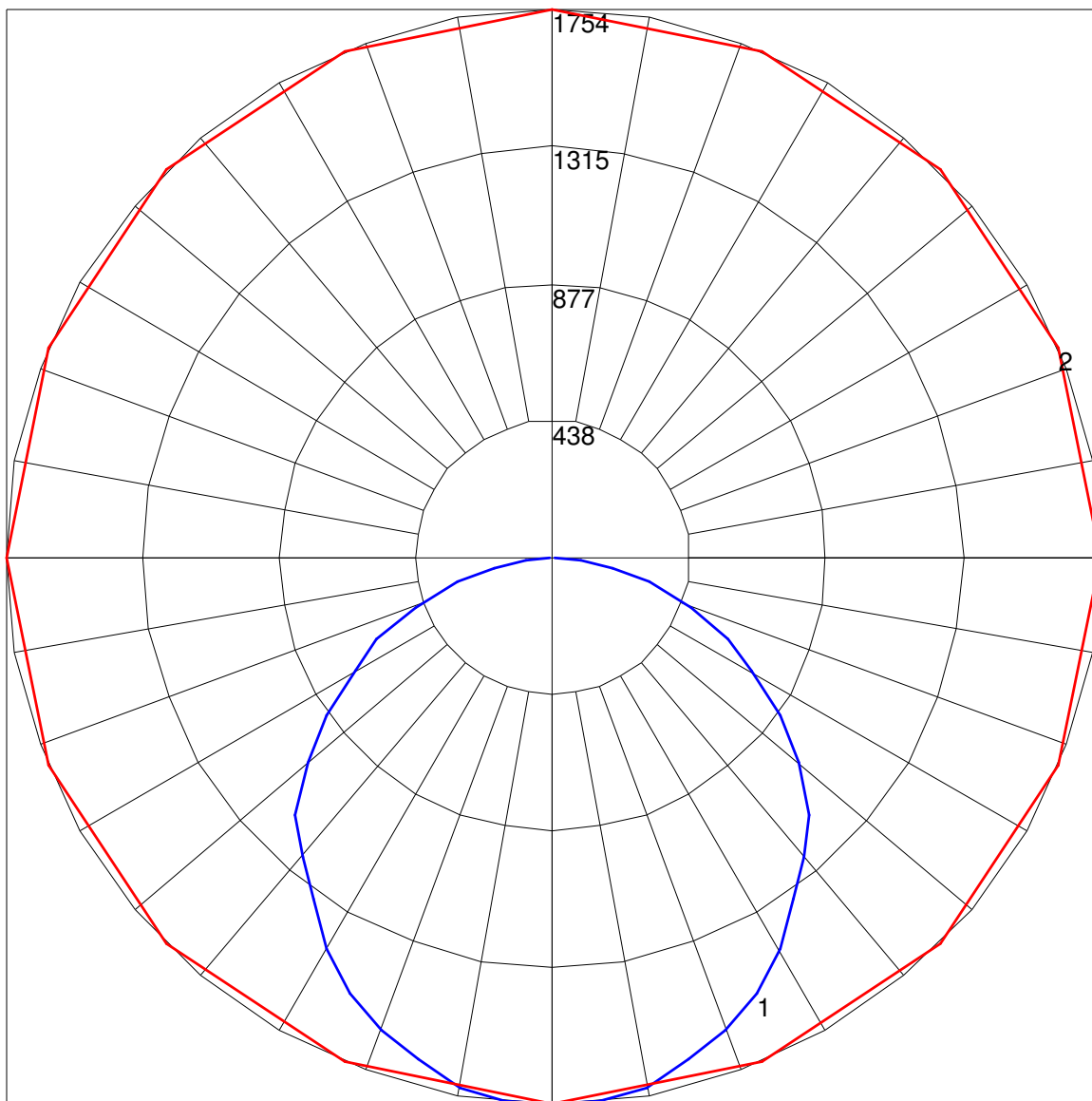
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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  | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 94  | 97  | 94  | 91  | 93  | 91  | 88  | 90  | 88  | 86  | 84  |
| 2  | 99  | 90  | 84  | 78  | 96  | 89  | 82  | 77  | 85  | 80  | 75  | 82  | 77  | 73  | 79  | 75  | 72  | 70  |
| 3  | 90  | 79  | 71  | 65  | 87  | 78  | 70  | 64  | 75  | 68  | 63  | 72  | 66  | 62  | 69  | 65  | 61  | 58  |
| 4  | 82  | 70  | 61  | 55  | 80  | 69  | 61  | 54  | 66  | 59  | 54  | 64  | 58  | 53  | 62  | 57  | 52  | 50  |
| 5  | 76  | 63  | 54  | 47  | 74  | 62  | 53  | 47  | 59  | 52  | 46  | 57  | 51  | 46  | 56  | 50  | 45  | 43  |
| 6  | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 41  | 54  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 40  | 38  |
| 7  | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 49  | 41  | 36  | 47  | 41  | 35  | 46  | 40  | 35  | 33  |
| 8  | 60  | 47  | 38  | 32  | 59  | 46  | 38  | 32  | 45  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  | 30  |
| 9  | 56  | 43  | 35  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 33  | 29  | 39  | 33  | 28  | 27  |
| 10 | 53  | 40  | 32  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 31  | 26  | 36  | 30  | 26  | 24  |

POLAR GRAPH



Maximum Candela = 1753.673 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.)