

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 39-4-L30-840-A-EM10WLP-DIM-UNV (EMER MODE ONLY).IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 19011.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 07-05-2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 4' SURFACE MOUNT LED LUMINAIRE

[MORE] WITH FROSTED ACRYLIC RIBBED LENS

[LUMCAT] 39-4-L30-840-A-EM10WLP-DIM-UNV (EMER MODE ONLY)

[LAMPCAT] HLM 80 CRI, 4000K CCT

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] INDOOR, ARCHITECTURAL, COMMERCIAL, DIRECT, LINEAR

[\_SEARCH\_MOUNTING] SURFACE, SUSPENDED

### CHARACTERISTICS

|                                 |                     |
|---------------------------------|---------------------|
| Lumens Per Lamp                 | N.A. (absolute)     |
| Total Lamp Lumens               | N.A. (absolute)     |
| Luminaire Lumens                | 1330                |
| Total Luminaire Efficiency      | N.A.                |
| Luminaire Efficacy Rating (LER) | 133                 |
| Total Luminaire Watts           | 10                  |
| Ballast Factor                  | 1.00                |
| CIE Type                        | Direct              |
| Spacing Criterion (0-180)       | 1.18                |
| Spacing Criterion (90-270)      | 1.18                |
| Spacing Criterion (Diagonal)    | 1.30                |
| Basic Luminous Shape            | Rectangular w/Sides |
| Luminous Length (0-180)         | 4.01 ft             |
| Luminous Width (90-270)         | 0.79 ft             |
| Luminous Height                 | 0.18 ft             |

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

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 1318             | 1193              | 1179              |
| 55                  | 1100             | 980               | 985               |
| 65                  | 910              | 802               | 856               |
| 75                  | 664              | 636               | 739               |
| 85                  | 391              | 530               | 688               |

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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   | 508.341    | 508.341     | 508.341     | 508.341     | 508.341     |
| 5   | 511.163    | 510.907     | 510.650     | 510.650     | 510.907     |
| 10  | 499.873    | 499.616     | 499.616     | 499.873     | 500.386     |
| 15  | 482.167    | 482.680     | 483.450     | 483.963     | 484.476     |
| 20  | 467.540    | 467.797     | 469.336     | 469.593     | 469.593     |
| 25  | 428.279    | 429.305     | 430.588     | 431.358     | 431.358     |
| 30  | 395.690    | 396.973     | 398.769     | 399.795     | 400.052     |
| 35  | 368.233    | 370.285     | 373.108     | 374.391     | 375.161     |
| 40  | 323.070    | 325.636     | 329.485     | 331.794     | 332.821     |
| 45  | 287.144    | 290.737     | 295.869     | 299.462     | 300.745     |
| 50  | 239.929    | 243.521     | 250.450     | 255.838     | 257.891     |
| 55  | 197.845    | 202.207     | 210.675     | 217.090     | 219.913     |
| 60  | 157.814    | 162.433     | 171.414     | 180.909     | 184.758     |
| 65  | 124.198    | 129.074     | 140.621     | 153.708     | 157.814     |
| 70  | 90.326     | 96.228      | 111.368     | 125.481     | 131.127     |
| 75  | 59.020     | 66.205      | 82.884      | 98.024      | 103.413     |
| 80  | 34.642     | 43.880      | 62.099      | 77.496      | 82.884      |
| 85  | 15.140     | 25.148      | 43.110      | 57.737      | 62.869      |
| 90  | 0.000      | 11.034      | 25.661      | 37.465      | 42.084      |
| 95  | 0.000      | 4.619       | 16.423      | 26.944      | 31.050      |
| 100 | 0.000      | 0.000       | 10.008      | 18.219      | 21.042      |
| 105 | 0.000      | 0.000       | 6.415       | 12.061      | 14.627      |
| 110 | 0.000      | 0.000       | 0.000       | 8.211       | 10.008      |
| 115 | 0.000      | 0.000       | 0.000       | 6.159       | 7.442       |
| 120 | 0.000      | 0.000       | 0.000       | 5.132       | 5.645       |
| 125 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 130 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 135 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 140 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 145 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 150 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 155 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 160 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 165 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 170 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 175 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |
| 180 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 39-4-L30-840-A-EM10WLP-DIM-UNV (EMER MODE ONLY).IES****ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 185.13  | N.A.  | 13.90  |
| 0-30    | 384.29  | N.A.  | 28.90  |
| 0-40    | 614.76  | N.A.  | 46.20  |
| 0-60    | 1028.31 | N.A.  | 77.30  |
| 0-80    | 1256.75 | N.A.  | 94.50  |
| 0-90    | 1302.23 | N.A.  | 97.90  |
| 10-90   | 1253.89 | N.A.  | 94.30  |
| 20-40   | 429.63  | N.A.  | 32.30  |
| 20-50   | 655.17  | N.A.  | 49.30  |
| 40-70   | 553.37  | N.A.  | 41.60  |
| 60-80   | 228.44  | N.A.  | 17.20  |
| 70-80   | 88.62   | N.A.  | 6.70   |
| 80-90   | 45.48   | N.A.  | 3.40   |
| 90-110  | 24.68   | N.A.  | 1.90   |
| 90-120  | 27.22   | N.A.  | 2.00   |
| 90-130  | 27.68   | N.A.  | 2.10   |
| 90-150  | 27.68   | N.A.  | 2.10   |
| 90-180  | 27.68   | N.A.  | 2.10   |
| 110-180 | 3.01    | N.A.  | 0.20   |
| 0-180   | 1329.91 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 48.34  |
| 10-20   | 136.79 |
| 20-30   | 199.16 |
| 30-40   | 230.47 |
| 40-50   | 225.55 |
| 50-60   | 188.01 |
| 60-70   | 139.82 |
| 70-80   | 88.62  |
| 80-90   | 45.48  |
| 90-100  | 17.81  |
| 100-110 | 6.87   |
| 110-120 | 2.55   |
| 120-130 | 0.46   |
| 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 | 110 | 110 | 110 | 105 | 105 | 105 | 100 | 100 | 100 | 98 |
| 1  | 108 | 103 | 99  | 95  | 105 | 101 | 97  | 93  | 96  | 93  | 90  | 92  | 89  | 86  | 88  | 86  | 83  | 81 |
| 2  | 98  | 90  | 83  | 77  | 95  | 88  | 82  | 76  | 84  | 79  | 74  | 80  | 76  | 72  | 77  | 74  | 70  | 68 |
| 3  | 90  | 79  | 71  | 65  | 87  | 78  | 70  | 64  | 74  | 68  | 63  | 71  | 66  | 61  | 69  | 64  | 60  | 58 |
| 4  | 82  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 66  | 59  | 54  | 64  | 58  | 53  | 61  | 56  | 52  | 50 |
| 5  | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 48  | 60  | 52  | 47  | 58  | 51  | 46  | 55  | 50  | 45  | 43 |
| 6  | 70  | 57  | 48  | 42  | 68  | 56  | 48  | 42  | 54  | 47  | 41  | 52  | 46  | 41  | 50  | 45  | 40  | 38 |
| 7  | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 37  | 48  | 41  | 36  | 46  | 40  | 36  | 34 |
| 8  | 61  | 48  | 39  | 33  | 59  | 47  | 39  | 33  | 45  | 38  | 33  | 44  | 37  | 33  | 43  | 37  | 32  | 30 |
| 9  | 57  | 44  | 36  | 30  | 55  | 43  | 35  | 30  | 42  | 35  | 30  | 41  | 34  | 30  | 39  | 34  | 29  | 27 |
| 10 | 53  | 40  | 33  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 27  | 25 |

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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 |

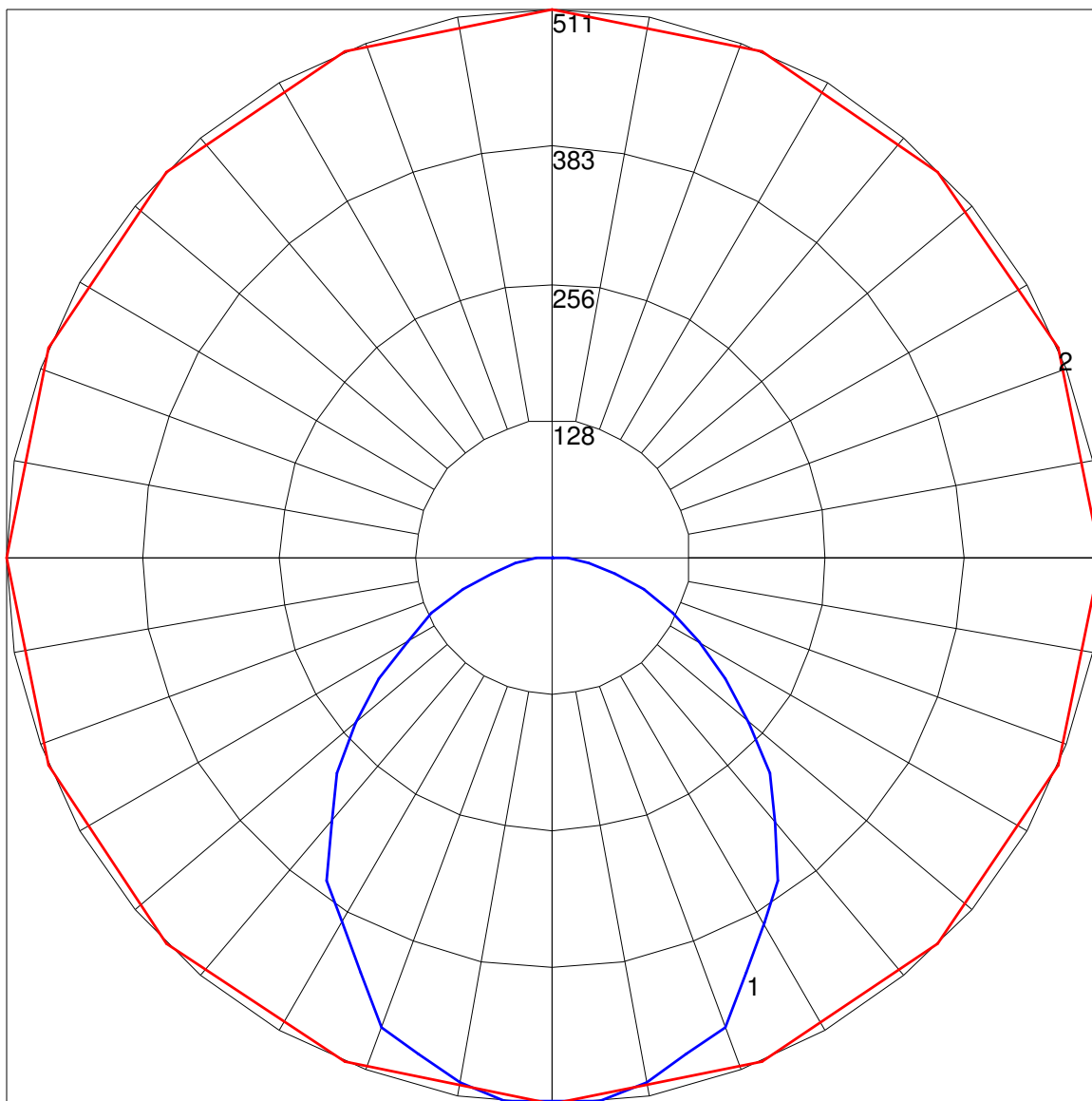
| Room Size |      | UGR Viewed Crosswise |      |      |      |      | UGR Viewed Endwise |      |      |      |      |
|-----------|------|----------------------|------|------|------|------|--------------------|------|------|------|------|
| X=2H      | Y=2H | 10.9                 | 12.4 | 11.3 | 12.8 | 13.2 | 12.0               | 13.6 | 12.4 | 14.0 | 14.3 |
|           | 3H   | 12.2                 | 13.7 | 12.6 | 14.0 | 14.4 | 14.1               | 15.5 | 14.5 | 15.9 | 16.3 |
|           | 4H   | 12.6                 | 14.0 | 13.1 | 14.4 | 14.8 | 15.0               | 16.3 | 15.4 | 16.7 | 17.1 |
|           | 6H   | 12.9                 | 14.2 | 13.3 | 14.6 | 15.0 | 15.9               | 17.1 | 16.3 | 17.5 | 17.9 |
|           | 8H   | 13.0                 | 14.2 | 13.4 | 14.6 | 15.0 | 16.3               | 17.5 | 16.8 | 17.9 | 18.4 |
|           | 12H  | 13.0                 | 14.1 | 13.5 | 14.6 | 15.0 | 16.7               | 17.9 | 17.2 | 18.3 | 18.8 |
| 4H        | 2H   | 11.5                 | 12.9 | 12.0 | 13.3 | 13.7 | 12.5               | 13.8 | 12.9 | 14.2 | 14.6 |
|           | 3H   | 13.1                 | 14.2 | 13.6 | 14.7 | 15.1 | 14.7               | 15.9 | 15.2 | 16.3 | 16.7 |
|           | 4H   | 13.6                 | 14.7 | 14.1 | 15.1 | 15.6 | 15.8               | 16.8 | 16.2 | 17.3 | 17.7 |
|           | 6H   | 14.0                 | 14.9 | 14.5 | 15.4 | 15.9 | 16.9               | 17.7 | 17.3 | 18.2 | 18.7 |
|           | 8H   | 14.1                 | 14.9 | 14.6 | 15.4 | 15.9 | 17.4               | 18.2 | 17.9 | 18.7 | 19.2 |
|           | 12H  | 14.2                 | 14.9 | 14.7 | 15.4 | 16.0 | 17.9               | 18.7 | 18.5 | 19.2 | 19.7 |
| 8H        | 4H   | 14.1                 | 14.9 | 14.6 | 15.4 | 15.9 | 16.0               | 16.8 | 16.5 | 17.3 | 17.8 |
|           | 6H   | 14.6                 | 15.3 | 15.1 | 15.8 | 16.3 | 17.2               | 17.9 | 17.7 | 18.4 | 19.0 |
|           | 8H   | 14.7                 | 15.4 | 15.3 | 15.9 | 16.5 | 17.8               | 18.5 | 18.4 | 19.0 | 19.6 |
|           | 12H  | 14.9                 | 15.4 | 15.4 | 16.0 | 16.6 | 18.6               | 19.1 | 19.1 | 19.7 | 20.3 |
| 12H       | 4H   | 14.2                 | 14.9 | 14.7 | 15.5 | 16.0 | 16.0               | 16.7 | 16.5 | 17.3 | 17.8 |
|           | 6H   | 14.7                 | 15.4 | 15.3 | 15.9 | 16.5 | 17.2               | 17.9 | 17.8 | 18.4 | 19.0 |
|           | 8H   | 15.0                 | 15.6 | 15.5 | 16.1 | 16.7 | 17.9               | 18.5 | 18.5 | 19.0 | 19.6 |

Maximum UGR = 20.3

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## POLAR GRAPH



Maximum Candela = 511.163 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.)