



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : ABP22-FS1-UNV-25W-4000K.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] LED-14549  
[TESTLAB] LSI INDUSTRIES, INC.  
[TESTDATE] 12/14/23  
[ISSUEDATE] 12/19/23  
[MANUFAC] LSI INDUSTRIES, INC.  
[LUMCAT] ABP22-FS1-UNV-25W-4000K  
[TEST PROCEDURE] IESNA LM-79-19  
[ ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.  
[ FACTORED] SCALED FROM ORIGINAL TEST DATA  
[ SEARCH\_SOURCETYPE] LED  
[ SEARCH\_APPLICATION] INDOOR  
[ SEARCH\_COLORTEMP] 4000

### CHARACTERISTICS

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 3223            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 129             |
| Total Luminaire Watts           | 25              |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 1.36            |
| Spacing Criterion (90-270)      | 1.36            |
| Spacing Criterion (Diagonal)    | 1.46            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 2.00 ft         |
| Luminous Width (90-270)         | 2.00 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                  | 2836             | 2836              | 2840              |
| 55                  | 2817             | 2817              | 2812              |
| 65                  | 2729             | 2723              | 2704              |
| 75                  | 2628             | 2535              | 2431              |
| 85                  | 2499             | 2252              | 2067              |

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**CANDELA TABULATION**

|             | <u><b>0.0</b></u> | <u><b>22.5</b></u> | <u><b>45.0</b></u> | <u><b>67.5</b></u> | <u><b>90.0</b></u> |
|-------------|-------------------|--------------------|--------------------|--------------------|--------------------|
| <b>0.0</b>  | 995               | 995                | 995                | 995                | 995                |
| <b>2.5</b>  | 996               | 997                | 997                | 998                | 998                |
| <b>5.0</b>  | 996               | 997                | 997                | 998                | 998                |
| <b>7.5</b>  | 995               | 996                | 997                | 997                | 997                |
| <b>10.0</b> | 993               | 993                | 994                | 995                | 995                |
| <b>12.5</b> | 989               | 989                | 989                | 990                | 991                |
| <b>15.0</b> | 983               | 983                | 983                | 984                | 985                |
| <b>17.5</b> | 975               | 976                | 977                | 977                | 977                |
| <b>20.0</b> | 965               | 965                | 966                | 966                | 966                |
| <b>22.5</b> | 954               | 954                | 955                | 955                | 955                |
| <b>25.0</b> | 940               | 940                | 940                | 941                | 941                |
| <b>27.5</b> | 925               | 925                | 925                | 925                | 925                |
| <b>30.0</b> | 906               | 906                | 905                | 906                | 906                |
| <b>32.5</b> | 886               | 885                | 886                | 886                | 886                |
| <b>35.0</b> | 862               | 862                | 863                | 864                | 864                |
| <b>37.5</b> | 834               | 836                | 837                | 837                | 837                |
| <b>40.0</b> | 807               | 807                | 809                | 811                | 810                |
| <b>42.5</b> | 777               | 778                | 778                | 779                | 781                |
| <b>45.0</b> | 746               | 746                | 746                | 747                | 747                |
| <b>47.5</b> | 713               | 714                | 714                | 713                | 712                |
| <b>50.0</b> | 677               | 678                | 677                | 677                | 676                |
| <b>52.5</b> | 641               | 641                | 641                | 640                | 638                |
| <b>55.0</b> | 601               | 601                | 601                | 600                | 600                |
| <b>57.5</b> | 562               | 561                | 560                | 559                | 558                |
| <b>60.0</b> | 520               | 518                | 518                | 517                | 515                |
| <b>62.5</b> | 474               | 475                | 474                | 473                | 470                |
| <b>65.0</b> | 429               | 430                | 428                | 426                | 425                |
| <b>67.5</b> | 386               | 386                | 383                | 378                | 376                |
| <b>70.0</b> | 341               | 341                | 338                | 330                | 326                |
| <b>72.5</b> | 296               | 295                | 291                | 284                | 280                |
| <b>75.0</b> | 253               | 252                | 244                | 237                | 234                |
| <b>77.5</b> | 209               | 208                | 201                | 192                | 188                |
| <b>80.0</b> | 166               | 164                | 156                | 150                | 146                |
| <b>82.5</b> | 120               | 119                | 114                | 108                | 106                |
| <b>85.0</b> | 81                | 79                 | 73                 | 68                 | 67                 |
| <b>87.5</b> | 45                | 42                 | 37                 | 33                 | 31                 |
| <b>90.0</b> | 0                 | 0                  | 0                  | 0                  | 0                  |

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**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 373.15  | N.A.  | 11.60  |
| 0-30    | 806.94  | N.A.  | 25.00  |
| 0-40    | 1346.38 | N.A.  | 41.80  |
| 0-60    | 2458.76 | N.A.  | 76.30  |
| 0-80    | 3140.3  | N.A.  | 97.40  |
| 0-90    | 3222.68 | N.A.  | 100.00 |
| 10-90   | 3127.59 | N.A.  | 97.00  |
| 20-40   | 973.23  | N.A.  | 30.20  |
| 20-50   | 1549.05 | N.A.  | 48.10  |
| 40-70   | 1535.54 | N.A.  | 47.60  |
| 60-80   | 681.54  | N.A.  | 21.10  |
| 70-80   | 258.38  | N.A.  | 8.00   |
| 80-90   | 82.38   | N.A.  | 2.60   |
| 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   | 3222.68 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 95.09  |
| 10-20   | 278.06 |
| 20-30   | 433.79 |
| 30-40   | 539.44 |
| 40-50   | 575.82 |
| 50-60   | 536.56 |
| 60-70   | 423.16 |
| 70-80   | 258.38 |
| 80-90   | 82.38  |
| 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  | 108 | 103 | 99  | 94  | 105 | 101 | 97  | 93  | 96  | 93  | 90  | 93  | 90  | 87  | 89  | 87  | 85  | 82  |
| 2  | 98  | 89  | 82  | 76  | 95  | 87  | 81  | 75  | 84  | 78  | 73  | 80  | 76  | 72  | 77  | 73  | 70  | 68  |
| 3  | 89  | 78  | 69  | 63  | 86  | 76  | 68  | 62  | 73  | 67  | 61  | 71  | 65  | 60  | 68  | 63  | 59  | 57  |
| 4  | 81  | 69  | 60  | 53  | 79  | 67  | 59  | 52  | 65  | 57  | 52  | 62  | 56  | 51  | 60  | 55  | 50  | 48  |
| 5  | 74  | 61  | 52  | 45  | 72  | 60  | 51  | 45  | 58  | 50  | 44  | 56  | 49  | 44  | 54  | 48  | 43  | 41  |
| 6  | 69  | 55  | 46  | 39  | 67  | 54  | 45  | 39  | 52  | 44  | 39  | 50  | 43  | 38  | 49  | 43  | 38  | 36  |
| 7  | 64  | 50  | 41  | 34  | 62  | 49  | 40  | 34  | 47  | 40  | 34  | 46  | 39  | 34  | 44  | 38  | 33  | 31  |
| 8  | 59  | 45  | 37  | 31  | 57  | 45  | 36  | 30  | 43  | 36  | 30  | 42  | 35  | 30  | 41  | 34  | 30  | 28  |
| 9  | 55  | 41  | 33  | 27  | 54  | 41  | 33  | 27  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 25  |
| 10 | 52  | 38  | 30  | 25  | 50  | 38  | 30  | 25  | 37  | 29  | 25  | 36  | 29  | 24  | 35  | 29  | 24  | 23  |

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**UGR TABLE - CORRECTED**

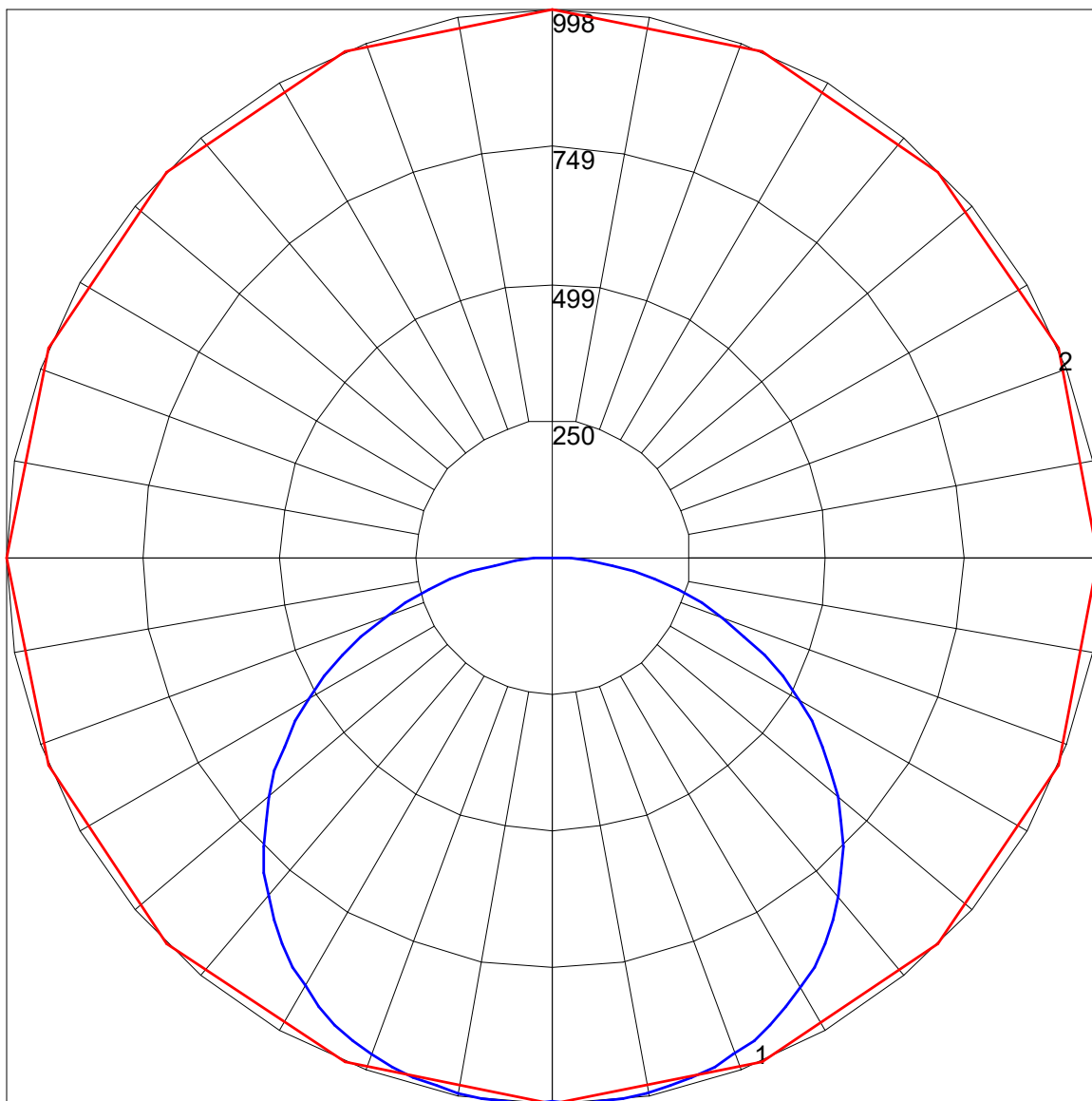
Reflectances

|                |    |    |    |    |    |    |    |    |    |    |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 | 15.9                 | 17.6 | 16.3 | 17.9 | 18.2 | 15.9               | 17.6 | 16.3 | 17.9 | 18.2 |
|           | 3H   | 17.9                 | 19.4 | 18.3 | 19.8 | 20.1 | 17.8               | 19.3 | 18.2 | 19.6 | 20.0 |
|           | 4H   | 18.7                 | 20.1 | 19.1 | 20.5 | 20.9 | 18.5               | 20.0 | 18.9 | 20.3 | 20.7 |
|           | 6H   | 19.3                 | 20.7 | 19.7 | 21.0 | 21.4 | 19.1               | 20.4 | 19.5 | 20.8 | 21.2 |
|           | 8H   | 19.6                 | 20.9 | 20.0 | 21.2 | 21.6 | 19.3               | 20.5 | 19.7 | 20.9 | 21.3 |
|           | 12H  | 19.8                 | 21.0 | 20.2 | 21.4 | 21.8 | 19.4               | 20.6 | 19.8 | 21.0 | 21.4 |
| 4H        | 2H   | 16.6                 | 18.0 | 17.0 | 18.4 | 18.8 | 16.6               | 18.0 | 17.0 | 18.4 | 18.7 |
|           | 3H   | 18.8                 | 20.0 | 19.2 | 20.4 | 20.8 | 18.7               | 19.9 | 19.1 | 20.3 | 20.7 |
|           | 4H   | 19.8                 | 20.8 | 20.2 | 21.3 | 21.7 | 19.6               | 20.7 | 20.0 | 21.1 | 21.5 |
|           | 6H   | 20.5                 | 21.5 | 21.0 | 22.0 | 22.4 | 20.3               | 21.2 | 20.7 | 21.7 | 22.1 |
|           | 8H   | 20.8                 | 21.7 | 21.3 | 22.2 | 22.6 | 20.5               | 21.4 | 21.0 | 21.9 | 22.3 |
|           | 12H  | 21.1                 | 21.9 | 21.6 | 22.4 | 22.8 | 20.7               | 21.5 | 21.2 | 22.0 | 22.5 |
| 8H        | 4H   | 20.1                 | 21.0 | 20.5 | 21.4 | 21.9 | 19.9               | 20.8 | 20.4 | 21.3 | 21.7 |
|           | 6H   | 21.0                 | 21.8 | 21.5 | 22.3 | 22.8 | 20.8               | 21.5 | 21.3 | 22.0 | 22.5 |
|           | 8H   | 21.4                 | 22.1 | 21.9 | 22.6 | 23.1 | 21.1               | 21.8 | 21.6 | 22.3 | 22.8 |
|           | 12H  | 21.8                 | 22.4 | 22.3 | 22.9 | 23.4 | 21.4               | 22.0 | 21.9 | 22.5 | 23.0 |
| 12H       | 4H   | 20.2                 | 21.0 | 20.6 | 21.4 | 21.9 | 20.0               | 20.8 | 20.5 | 21.3 | 21.8 |
|           | 6H   | 21.1                 | 21.8 | 21.6 | 22.3 | 22.8 | 20.9               | 21.6 | 21.4 | 22.0 | 22.6 |
|           | 8H   | 21.6                 | 22.2 | 22.1 | 22.7 | 23.2 | 21.3               | 21.9 | 21.8 | 22.4 | 22.9 |

Maximum UGR = 23.4

POLAR GRAPH



Maximum Candela = 998 Located At Horizontal Angle = 67.5, Vertical Angle = 2.5  
# 1 - Vertical Plane Through Horizontal Angles (67.5 - 247.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)