

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 75R-4-L85-840-(L68)-DRV-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19750.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 6-12-2023

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-56 LED 22"ARRAYS 4'SURFACE MOUNT STRIP LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC ROUND LENS

[LUMCAT] 75R-4-L85-840-(L68)-DRV-UNV

[LAMPCAT] HLM 80 CRI 4000K CCT

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor, Commercial, Industrial, Manufacturing, Utility, Warehouse, Linear

[\_SEARCH\_MOUNTING] Surface, Suspended

### CHARACTERISTICS

|                                 |                     |
|---------------------------------|---------------------|
| Lumens Per Lamp                 | N.A. (absolute)     |
| Total Lamp Lumens               | N.A. (absolute)     |
| Luminaire Lumens                | 7029                |
| Total Luminaire Efficiency      | N.A.                |
| Luminaire Efficacy Rating (LER) | 154                 |
| Total Luminaire Watts           | 45.69               |
| Ballast Factor                  | 1.00                |
| CIE Type                        | Direct              |
| Spacing Criterion (0-180)       | 1.22                |
| Spacing Criterion (90-270)      | 1.28                |
| Spacing Criterion (Diagonal)    | 1.36                |
| Basic Luminous Shape            | Rectangular w/Sides |
| Luminous Length (0-180)         | 3.72 ft             |
| Luminous Width (90-270)         | 0.21 ft             |
| Luminous Height                 | 0.10 ft             |

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

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 24581            | 20784             | 20747             |
| 55                  | 20287            | 17786             | 18264             |
| 65                  | 16708            | 14940             | 15386             |
| 75                  | 11289            | 12276             | 12607             |
| 85                  | 6624             | 10544             | 10338             |

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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   | 2251.299   | 2251.299    | 2251.299    | 2251.299    | 2251.299    |
| 5   | 2276.015   | 2242.703    | 2243.777    | 2238.404    | 2215.837    |
| 10  | 2238.404   | 2210.464    | 2215.837    | 2212.614    | 2192.196    |
| 15  | 2172.853   | 2152.436    | 2167.480    | 2173.928    | 2152.436    |
| 20  | 2073.989   | 2068.616    | 2094.407    | 2105.153    | 2092.258    |
| 25  | 1957.932   | 1965.454    | 2001.991    | 2026.707    | 2017.035    |
| 30  | 1824.681   | 1835.427    | 1897.754    | 1935.365    | 1933.216    |
| 35  | 1662.415   | 1681.758    | 1772.025    | 1824.681    | 1832.203    |
| 40  | 1489.404   | 1503.374    | 1617.282    | 1696.803    | 1715.071    |
| 45  | 1285.229   | 1320.691    | 1451.793    | 1557.104    | 1582.895    |
| 50  | 1073.531   | 1130.485    | 1290.602    | 1405.585    | 1437.823    |
| 55  | 870.431    | 944.579     | 1125.112    | 1245.468    | 1291.676    |
| 60  | 700.643    | 769.418     | 966.071     | 1086.427    | 1134.784    |
| 65  | 538.378    | 613.600     | 817.775     | 927.385     | 969.295     |
| 70  | 377.187    | 478.200     | 677.002     | 772.642     | 813.477     |
| 75  | 232.115    | 361.068     | 546.974     | 637.241     | 672.703     |
| 80  | 128.953    | 249.309     | 436.290     | 520.109     | 542.676     |
| 85  | 54.805     | 171.937     | 348.172     | 420.171     | 435.215     |
| 90  | 7.522      | 118.207     | 269.726     | 333.128     | 353.545     |
| 95  | 1.075      | 80.595      | 215.996     | 264.353     | 285.845     |
| 100 | 0.000      | 52.656      | 167.639     | 215.996     | 233.189     |
| 105 | 0.000      | 37.611      | 130.027     | 176.235     | 190.205     |
| 110 | 0.000      | 25.791      | 99.938      | 143.997     | 155.818     |
| 115 | 0.000      | 21.492      | 81.670      | 120.356     | 128.953     |
| 120 | 0.000      | 16.119      | 62.327      | 98.864      | 107.461     |
| 125 | 0.000      | 9.671       | 46.208      | 78.446      | 88.118      |
| 130 | 0.000      | 6.448       | 33.313      | 61.253      | 69.849      |
| 135 | 0.000      | 3.224       | 24.716      | 48.357      | 54.805      |
| 140 | 0.000      | 3.224       | 17.194      | 37.611      | 42.984      |
| 145 | 0.000      | 0.000       | 10.746      | 23.641      | 30.089      |
| 150 | 0.000      | 0.000       | 7.522       | 17.194      | 21.492      |
| 155 | 0.000      | 0.000       | 5.373       | 8.597       | 13.970      |
| 160 | 0.000      | 0.000       | 2.149       | 6.448       | 7.522       |
| 165 | 0.000      | 0.000       | 0.000       | 2.149       | 3.224       |
| 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       |

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**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 823.24  | N.A.  | 11.70  |
| 0-30    | 1742.8  | N.A.  | 24.80  |
| 0-40    | 2840.12 | N.A.  | 40.40  |
| 0-60    | 4937.37 | N.A.  | 70.20  |
| 0-80    | 6242.74 | N.A.  | 88.80  |
| 0-90    | 6570.82 | N.A.  | 93.50  |
| 10-90   | 6357.69 | N.A.  | 90.50  |
| 20-40   | 2016.88 | N.A.  | 28.70  |
| 20-50   | 3128.74 | N.A.  | 44.50  |
| 40-70   | 2870.44 | N.A.  | 40.80  |
| 60-80   | 1305.37 | N.A.  | 18.60  |
| 70-80   | 532.17  | N.A.  | 7.60   |
| 80-90   | 328.09  | N.A.  | 4.70   |
| 90-110  | 313.09  | N.A.  | 4.50   |
| 90-120  | 384.87  | N.A.  | 5.50   |
| 90-130  | 425.62  | N.A.  | 6.10   |
| 90-150  | 454.71  | N.A.  | 6.50   |
| 90-180  | 457.76  | N.A.  | 6.50   |
| 110-180 | 144.66  | N.A.  | 2.10   |
| 0-180   | 7028.58 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  |
|---------|---------|
| 0-10    | 213.14  |
| 10-20   | 610.10  |
| 20-30   | 919.56  |
| 30-40   | 1097.32 |
| 40-50   | 1111.86 |
| 50-60   | 985.38  |
| 60-70   | 773.20  |
| 70-80   | 532.17  |
| 80-90   | 328.09  |
| 90-100  | 195.34  |
| 100-110 | 117.75  |
| 110-120 | 71.78   |
| 120-130 | 40.75   |
| 130-140 | 20.59   |
| 140-150 | 8.50    |
| 150-160 | 2.66    |
| 160-170 | 0.39    |
| 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  | 117 | 117 | 117 | 117 | 114 | 114 | 114 | 114 | 107 | 107 | 107 | 102 | 102 | 102 | 96 | 96 | 96 | 93 |
| 1  | 106 | 101 | 96  | 92  | 103 | 98  | 94  | 90  | 92  | 89  | 86  | 87  | 84  | 82  | 83 | 80 | 78 | 76 |
| 2  | 96  | 87  | 80  | 74  | 93  | 85  | 78  | 73  | 80  | 75  | 70  | 76  | 72  | 68  | 72 | 68 | 65 | 62 |
| 3  | 88  | 77  | 68  | 61  | 84  | 75  | 67  | 60  | 71  | 64  | 59  | 67  | 61  | 57  | 64 | 59 | 55 | 52 |
| 4  | 80  | 68  | 59  | 52  | 77  | 66  | 58  | 51  | 63  | 56  | 50  | 60  | 53  | 48  | 57 | 51 | 47 | 45 |
| 5  | 74  | 61  | 51  | 45  | 71  | 59  | 51  | 44  | 56  | 49  | 43  | 54  | 47  | 42  | 51 | 45 | 41 | 39 |
| 6  | 68  | 55  | 46  | 39  | 66  | 53  | 45  | 39  | 51  | 43  | 38  | 48  | 42  | 37  | 46 | 41 | 36 | 34 |
| 7  | 63  | 49  | 41  | 34  | 61  | 48  | 40  | 34  | 46  | 39  | 33  | 44  | 38  | 33  | 42 | 36 | 32 | 30 |
| 8  | 59  | 45  | 37  | 31  | 57  | 44  | 36  | 30  | 42  | 35  | 30  | 41  | 34  | 29  | 39 | 33 | 29 | 27 |
| 9  | 55  | 41  | 33  | 28  | 53  | 41  | 33  | 27  | 39  | 32  | 27  | 37  | 31  | 26  | 36 | 30 | 26 | 24 |
| 10 | 51  | 38  | 30  | 25  | 50  | 37  | 30  | 25  | 36  | 29  | 24  | 35  | 28  | 24  | 33 | 28 | 24 | 22 |

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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

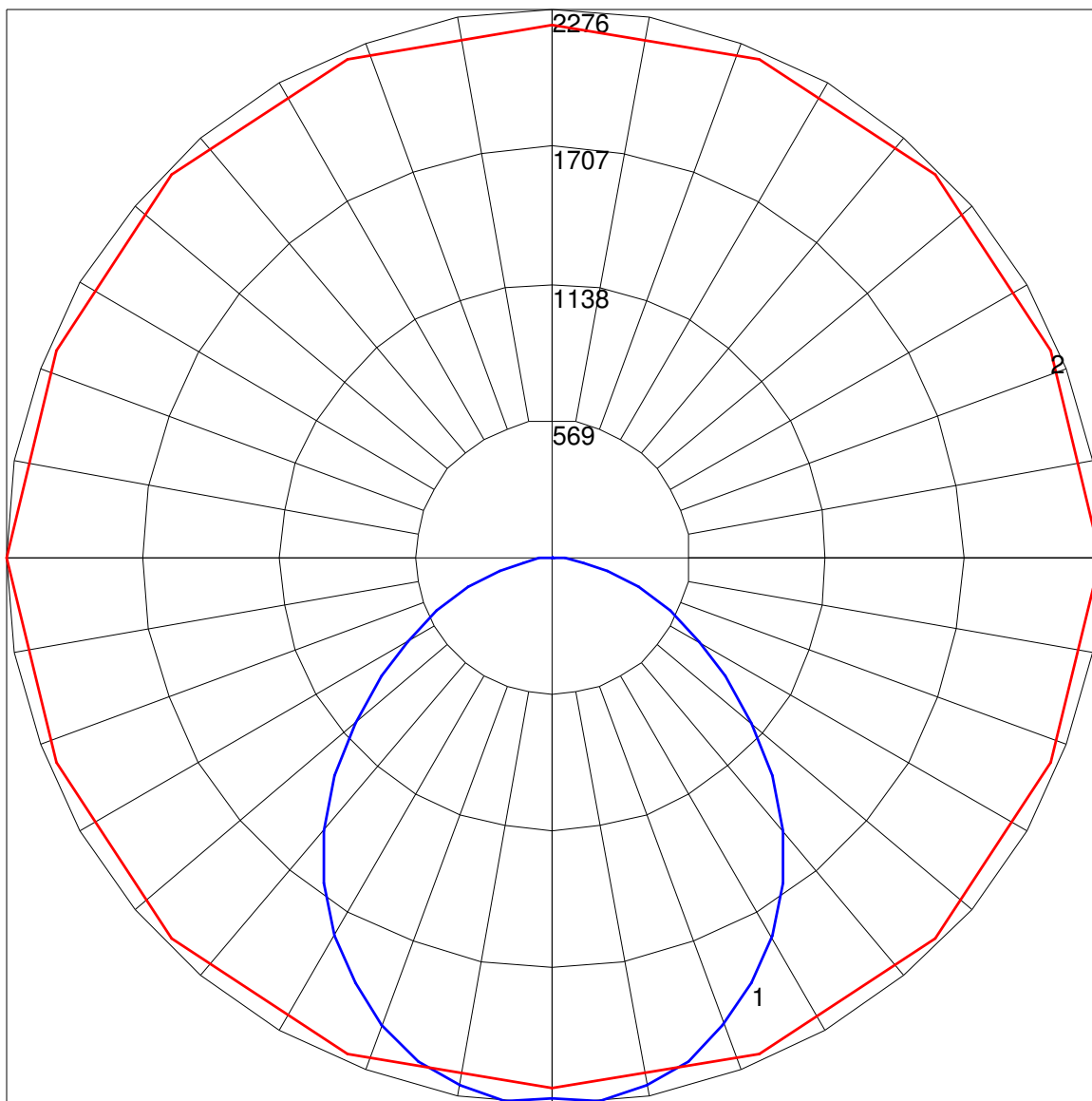
|      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|
| X=2H | Y=2H | 19.6 | 21.1 | 20.0 | 21.5 | 22.0 | 23.0 | 24.5 | 23.4 | 24.9 | 25.4 |
|      | 3H   | 20.8 | 22.1 | 21.2 | 22.6 | 23.1 | 25.2 | 26.5 | 25.6 | 27.0 | 27.5 |
|      | 4H   | 21.1 | 22.4 | 21.6 | 22.9 | 23.4 | 26.2 | 27.5 | 26.7 | 28.0 | 28.5 |
|      | 6H   | 21.3 | 22.5 | 21.8 | 23.0 | 23.5 | 27.2 | 28.4 | 27.8 | 28.9 | 29.5 |
|      | 8H   | 21.3 | 22.4 | 21.8 | 23.0 | 23.5 | 27.8 | 28.9 | 28.3 | 29.4 | 30.0 |
|      | 12H  | 21.3 | 22.4 | 21.8 | 22.9 | 23.5 | 28.3 | 29.4 | 28.9 | 29.9 | 30.5 |

UGR Viewed Endwise

|     |     |      |      |      |      |      |      |      |      |      |      |
|-----|-----|------|------|------|------|------|------|------|------|------|------|
| 4H  | 2H  | 20.6 | 21.9 | 21.1 | 22.4 | 22.9 | 23.3 | 24.6 | 23.8 | 25.1 | 25.6 |
|     | 3H  | 22.1 | 23.2 | 22.6 | 23.7 | 24.2 | 25.7 | 26.8 | 26.2 | 27.3 | 27.9 |
|     | 4H  | 22.5 | 23.5 | 23.1 | 24.1 | 24.7 | 26.9 | 27.9 | 27.4 | 28.4 | 29.0 |
|     | 6H  | 22.8 | 23.7 | 23.4 | 24.2 | 24.9 | 28.1 | 29.0 | 28.7 | 29.6 | 30.2 |
|     | 8H  | 22.9 | 23.7 | 23.4 | 24.3 | 24.9 | 28.7 | 29.6 | 29.3 | 30.1 | 30.7 |
|     | 12H | 22.9 | 23.6 | 23.5 | 24.2 | 24.9 | 29.4 | 30.2 | 30.0 | 30.8 | 31.4 |
| 8H  | 4H  | 23.3 | 24.1 | 23.9 | 24.7 | 25.3 | 27.1 | 27.9 | 27.6 | 28.4 | 29.1 |
|     | 6H  | 23.8 | 24.5 | 24.4 | 25.1 | 25.7 | 28.4 | 29.1 | 29.0 | 29.7 | 30.3 |
|     | 8H  | 23.9 | 24.5 | 24.5 | 25.2 | 25.8 | 29.2 | 29.8 | 29.8 | 30.4 | 31.1 |
|     | 12H | 24.0 | 24.6 | 24.6 | 25.2 | 25.9 | 30.0 | 30.6 | 30.6 | 31.2 | 31.9 |
| 12H | 4H  | 23.5 | 24.2 | 24.1 | 24.8 | 25.5 | 27.0 | 27.8 | 27.6 | 28.4 | 29.0 |
|     | 6H  | 24.1 | 24.7 | 24.7 | 25.3 | 26.0 | 28.5 | 29.1 | 29.1 | 29.7 | 30.4 |
|     | 8H  | 24.3 | 24.9 | 24.9 | 25.5 | 26.2 | 29.2 | 29.8 | 29.9 | 30.4 | 31.1 |

Maximum UGR = 31.9

POLAR GRAPH



Maximum Candela = 2276.015 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.)