



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6AR-L23-9DW-DIM-UNV-OM-OF-CS\_25 DEGREE TILT.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]GEN from BALLABS TEST NO. 20393.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 16-MAY-2018

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] GEN7 V13 LED 6"SHORT HEATSINK 6"RND ADJ DOWNLIGHT @ 25 TILT

[MORE] ACRYLIC MED TIR OPTIC & 6"OPEN ASYM SEMI-SPEC TRIM

[MORE] ADVANCE # XI025C070V054DSM5 @ 530mA

[LUMCAT] 6AR-L23-9DW-DIM-UNV-OM-OF-CS\_25 DEG TILT

[LAMPCAT] BXRE-35E2000

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor, Classroom, Industrial, Office, Direct, Downlight

[\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

|                                 |                    |
|---------------------------------|--------------------|
| Lumens Per Lamp                 | N.A. (absolute)    |
| Total Lamp Lumens               | N.A. (absolute)    |
| Luminaire Lumens                | 2170               |
| Total Luminaire Efficiency      | N.A.               |
| Luminaire Efficacy Rating (LER) | 58                 |
| Total Luminaire Watts           | 37.7               |
| Ballast Factor                  | 1.00               |
| CIE Type                        | Direct             |
| Spacing Criterion (0-180)       | 2.00               |
| Spacing Criterion (90-270)      | 0.44               |
| Spacing Criterion (Diagonal)    | 0.96               |
| Basic Luminous Shape            | Circular           |
| Luminous Length (0-180)         | 0.50 ft (Diameter) |
| Luminous Width (90-270)         | 0.50 ft (Diameter) |
| 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                  | 105337           | 12489             | 431               |
| 55                  | 3823             | 0                 | 0                 |
| 65                  | 0                | 0                 | 0                 |
| 75                  | 0                | 0                 | 0                 |
| 85                  | 0                | 0                 | 0                 |

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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> | <u>112.5</u> | <u>135.0</u> | <u>157.5</u> | <u>180.0</u> |
|-----------|------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| <b>0</b>  | 974.112    | 974.112     | 974.112     | 974.112     | 974.112     | 974.112      | 974.112      | 974.112      | 974.112      |
| <b>5</b>  | 2363.000   | 2173.960    | 1621.296    | 1146.472    | 823.992     | 611.600      | 484.832      | 455.920      | 394.760      |
| <b>10</b> | 5200.824   | 4222.264    | 2267.368    | 1064.184    | 591.584     | 380.304      | 284.672      | 233.520      | 230.184      |
| <b>15</b> | 6873.272   | 5823.544    | 2659.904    | 878.480     | 411.440     | 239.080      | 174.584      | 150.120      | 147.896      |
| <b>20</b> | 7065.648   | 6397.336    | 2569.832    | 683.880     | 273.552     | 155.680      | 117.872      | 102.304      | 94.520       |
| <b>25</b> | 6972.240   | 6387.328    | 1970.464    | 457.032     | 172.360     | 103.416      | 73.392       | 60.048       | 58.936       |
| <b>30</b> | 6834.352   | 5780.176    | 1308.824    | 293.568     | 107.864     | 60.048       | 42.256       | 34.472       | 33.360       |
| <b>35</b> | 6395.112   | 4475.800    | 719.464     | 174.584     | 65.608      | 34.472       | 14.456       | 11.120       | 8.896        |
| <b>40</b> | 4695.976   | 1954.896    | 374.744     | 96.744      | 31.136      | 7.784        | 2.224        | 0.000        | 0.000        |
| <b>45</b> | 1359.976   | 648.296     | 161.240     | 33.360      | 5.560       | 0.000        | 0.000        | 0.000        | 0.000        |
| <b>50</b> | 380.304    | 149.008     | 23.352      | 3.336       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        |
| <b>55</b> | 40.032     | 18.904      | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        |
| <b>60</b> | 5.560      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        |
| <b>65</b> | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        |
| <b>70</b> | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        |
| <b>75</b> | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        |
| <b>80</b> | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        |
| <b>85</b> | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        |
| <b>90</b> | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 6AR-L23-9DW-DIM-UNV-OM-OF-CS\_25 DEGREE TILT.IES****ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 591.64  | N.A.  | 27.30  |
| 0-30    | 1317.13 | N.A.  | 60.70  |
| 0-40    | 1962.65 | N.A.  | 90.50  |
| 0-60    | 2169.53 | N.A.  | 100.00 |
| 0-80    | 2169.62 | N.A.  | 100.00 |
| 0-90    | 2169.62 | N.A.  | 100.00 |
| 10-90   | 2053.5  | N.A.  | 94.60  |
| 20-40   | 1371.01 | N.A.  | 63.20  |
| 20-50   | 1565.69 | N.A.  | 72.20  |
| 40-70   | 206.97  | N.A.  | 9.50   |
| 60-80   | 0.08    | N.A.  | 0.00   |
| 70-80   | 0.00    | N.A.  | 0.00   |
| 80-90   | 0.00    | N.A.  | 0.00   |
| 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   | 2169.62 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 116.11 |
| 10-20   | 475.52 |
| 20-30   | 725.50 |
| 30-40   | 645.52 |
| 40-50   | 194.68 |
| 50-60   | 12.21  |
| 60-70   | 0.08   |
| 70-80   | 0.00   |
| 80-90   | 0.00   |
| 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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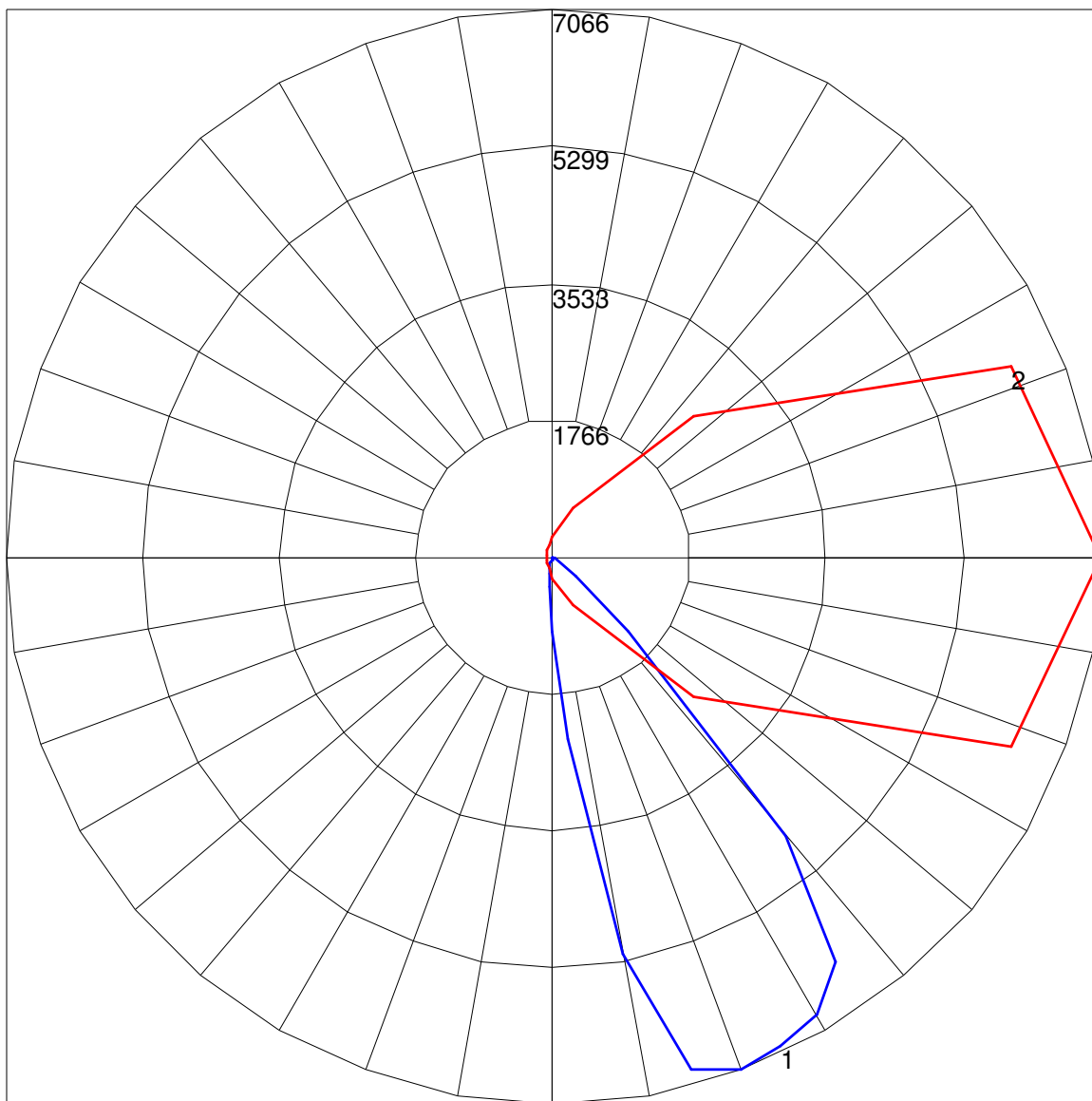
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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  | 132 | 132 | 132 | 132 | 129 | 129 | 129 | 129 | 124 | 124 | 124 | 118 | 118 | 118 | 113 | 113 | 113 | 111 |
| 1  | 126 | 123 | 120 | 117 | 123 | 120 | 118 | 115 | 116 | 114 | 112 | 112 | 110 | 108 | 108 | 106 | 105 | 103 |
| 2  | 119 | 113 | 109 | 105 | 117 | 111 | 107 | 103 | 108 | 104 | 101 | 104 | 102 | 99  | 101 | 99  | 97  | 95  |
| 3  | 112 | 105 | 99  | 94  | 110 | 103 | 98  | 93  | 100 | 96  | 92  | 98  | 94  | 90  | 95  | 92  | 89  | 87  |
| 4  | 106 | 97  | 91  | 85  | 104 | 96  | 90  | 85  | 93  | 88  | 84  | 91  | 87  | 83  | 89  | 85  | 82  | 80  |
| 5  | 100 | 90  | 83  | 78  | 98  | 89  | 82  | 78  | 87  | 81  | 77  | 85  | 80  | 76  | 83  | 79  | 75  | 74  |
| 6  | 94  | 84  | 76  | 71  | 93  | 83  | 76  | 71  | 81  | 75  | 71  | 79  | 74  | 70  | 78  | 73  | 70  | 68  |
| 7  | 89  | 78  | 71  | 66  | 87  | 77  | 70  | 65  | 76  | 69  | 65  | 74  | 69  | 65  | 73  | 68  | 64  | 63  |
| 8  | 84  | 73  | 65  | 60  | 83  | 72  | 65  | 60  | 71  | 64  | 60  | 69  | 64  | 60  | 68  | 63  | 59  | 58  |
| 9  | 79  | 68  | 61  | 56  | 78  | 67  | 60  | 56  | 66  | 60  | 56  | 65  | 59  | 55  | 64  | 59  | 55  | 54  |
| 10 | 75  | 63  | 56  | 52  | 74  | 63  | 56  | 52  | 62  | 56  | 52  | 61  | 55  | 51  | 60  | 55  | 51  | 50  |

POLAR GRAPH



Maximum Candela = 7065.648 Located At Horizontal Angle = 0, Vertical Angle = 20  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)