



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AXA-8-L14-8TW-S-LVRS-DIM-UNV 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18718.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 14-JUL-2020

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

[LUMINAIRE] 2-56 LED 22" ARRAYS 8' SUSPEND BIDIRECT WHITE REFL LUMINAIRE

[MORE] 46 PER SIDE .125"x2" SLOTS w/WHT ACRYLIC OVERLAY & 24 CELL

[MORE] 2" OC 1.25" DP WHT BLADE LVRS w/OVERLAY

[LUMCAT] AXA-8-L148TW-S-LVRS-DIM-UNV 4000k

CHARACTERISTICS

| | |
|---------------------------------|---------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 10627 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 95 |
| Total Luminaire Watts | 111.5 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.04 |
| Spacing Criterion (90-270) | 1.04 |
| Spacing Criterion (Diagonal) | 1.10 |
| Basic Luminous Shape | Rectangular w/Sides |
| Luminous Length (0-180) | 8.00 ft |
| Luminous Width (90-270) | 0.31 ft |
| Luminous Height | 0.26 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 16339 | 8596 | 5804 |
| 55 | 12630 | 4989 | 3535 |
| 65 | 9266 | 3183 | 2614 |
| 75 | 6133 | 1890 | 1432 |
| 85 | 4354 | 676 | 523 |

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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 | 5905.288 | 5905.288 | 5905.288 | 5905.288 | 5905.288 |
| 5 | 5733.270 | 5733.270 | 5743.044 | 5764.546 | 5772.365 |
| 10 | 5586.664 | 5594.483 | 5623.804 | 5674.628 | 5711.768 |
| 15 | 5248.493 | 5252.403 | 5285.633 | 5344.276 | 5393.144 |
| 20 | 5017.833 | 5021.742 | 5031.516 | 5072.566 | 5137.073 |
| 25 | 4470.504 | 4464.640 | 4431.409 | 4419.681 | 4484.187 |
| 30 | 3977.908 | 3950.542 | 3852.804 | 3751.158 | 3790.253 |
| 35 | 3545.909 | 3487.267 | 3305.475 | 3100.227 | 3057.223 |
| 40 | 3092.408 | 3004.445 | 2734.690 | 2414.111 | 2296.827 |
| 45 | 2777.694 | 2646.726 | 2279.234 | 1868.737 | 1749.498 |
| 50 | 2240.139 | 2083.759 | 1702.584 | 1366.367 | 1292.087 |
| 55 | 1765.136 | 1604.846 | 1247.128 | 1059.472 | 1032.106 |
| 60 | 1315.544 | 1165.029 | 922.640 | 858.133 | 854.224 |
| 65 | 975.418 | 848.360 | 723.256 | 701.754 | 715.437 |
| 70 | 656.795 | 588.379 | 547.329 | 537.555 | 525.827 |
| 75 | 414.406 | 396.813 | 373.356 | 357.719 | 353.809 |
| 80 | 259.981 | 250.207 | 228.705 | 222.841 | 220.886 |
| 85 | 121.194 | 111.421 | 109.466 | 107.511 | 111.421 |
| 90 | 11.728 | 19.547 | 23.457 | 27.366 | 29.321 |
| 95 | 1.955 | 9.774 | 19.547 | 23.457 | 27.366 |
| 100 | 3.909 | 13.683 | 19.547 | 23.457 | 29.321 |
| 105 | 3.909 | 13.683 | 21.502 | 27.366 | 29.321 |
| 110 | 9.774 | 21.502 | 27.366 | 31.276 | 31.276 |
| 115 | 11.728 | 19.547 | 29.321 | 33.231 | 33.231 |
| 120 | 13.683 | 27.366 | 33.231 | 39.095 | 39.095 |
| 125 | 23.457 | 33.231 | 41.050 | 46.914 | 44.959 |
| 130 | 29.321 | 41.050 | 46.914 | 48.869 | 48.869 |
| 135 | 27.366 | 37.140 | 44.959 | 46.914 | 46.914 |
| 140 | 37.140 | 46.914 | 50.823 | 54.733 | 50.823 |
| 145 | 44.959 | 50.823 | 54.733 | 58.642 | 54.733 |
| 150 | 50.823 | 56.688 | 58.642 | 64.507 | 58.642 |
| 155 | 54.733 | 58.642 | 64.507 | 66.461 | 60.597 |
| 160 | 54.733 | 56.688 | 60.597 | 66.461 | 60.597 |
| 165 | 58.642 | 62.552 | 68.416 | 76.235 | 68.416 |
| 170 | 58.642 | 58.642 | 60.597 | 66.461 | 62.552 |
| 175 | 60.597 | 60.597 | 60.597 | 66.461 | 58.642 |
| 180 | 58.642 | 58.642 | 58.642 | 58.642 | 58.642 |

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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|----------|-------|--------|
| 0-20 | 2048.41 | N.A. | 19.30 |
| 0-30 | 4096.06 | N.A. | 38.50 |
| 0-40 | 6152.99 | N.A. | 57.90 |
| 0-60 | 9086.05 | N.A. | 85.50 |
| 0-80 | 10272.3 | N.A. | 96.70 |
| 0-90 | 10403.17 | N.A. | 97.90 |
| 10-90 | 9856.62 | N.A. | 92.80 |
| 20-40 | 4104.58 | N.A. | 38.60 |
| 20-50 | 5833.13 | N.A. | 54.90 |
| 40-70 | 3708.35 | N.A. | 34.90 |
| 60-80 | 1186.24 | N.A. | 11.20 |
| 70-80 | 410.95 | N.A. | 3.90 |
| 80-90 | 130.88 | N.A. | 1.20 |
| 90-110 | 42.35 | N.A. | 0.40 |
| 90-120 | 69.36 | N.A. | 0.70 |
| 90-130 | 103.64 | N.A. | 1.00 |
| 90-150 | 171.34 | N.A. | 1.60 |
| 90-180 | 223.47 | N.A. | 2.10 |
| 110-180 | 181.12 | N.A. | 1.70 |
| 0-180 | 10626.64 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|---------|
| 0-10 | 546.56 |
| 10-20 | 1501.85 |
| 20-30 | 2047.65 |
| 30-40 | 2056.93 |
| 40-50 | 1728.55 |
| 50-60 | 1204.51 |
| 60-70 | 775.29 |
| 70-80 | 410.95 |
| 80-90 | 130.88 |
| 90-100 | 20.40 |
| 100-110 | 21.95 |
| 110-120 | 27.01 |
| 120-130 | 34.28 |
| 130-140 | 34.07 |
| 140-150 | 33.64 |
| 150-160 | 28.06 |
| 160-170 | 18.22 |
| 170-180 | 5.85 |

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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 | 204 | 204 | 204 | 204 | 199 | 199 | 199 | 199 | 189 | 189 | 189 | 180 | 180 | 180 | 172 | 172 | 172 | 168 |
| 1 | 189 | 182 | 176 | 170 | 184 | 178 | 172 | 167 | 170 | 165 | 161 | 163 | 159 | 155 | 156 | 153 | 150 | 147 |
| 2 | 174 | 162 | 152 | 143 | 170 | 159 | 149 | 142 | 152 | 144 | 138 | 146 | 140 | 134 | 141 | 135 | 131 | 127 |
| 3 | 161 | 145 | 133 | 123 | 157 | 142 | 131 | 122 | 137 | 127 | 119 | 132 | 124 | 117 | 127 | 120 | 115 | 111 |
| 4 | 149 | 131 | 118 | 108 | 145 | 129 | 116 | 107 | 124 | 113 | 105 | 120 | 111 | 103 | 116 | 108 | 101 | 98 |
| 5 | 138 | 119 | 105 | 95 | 135 | 117 | 104 | 94 | 113 | 102 | 93 | 109 | 99 | 92 | 106 | 97 | 90 | 87 |
| 6 | 129 | 108 | 95 | 85 | 126 | 107 | 94 | 84 | 103 | 92 | 83 | 100 | 90 | 82 | 97 | 88 | 81 | 78 |
| 7 | 120 | 99 | 86 | 76 | 117 | 98 | 85 | 76 | 95 | 84 | 75 | 92 | 82 | 74 | 90 | 81 | 74 | 70 |
| 8 | 113 | 92 | 78 | 69 | 110 | 90 | 78 | 69 | 88 | 76 | 68 | 86 | 75 | 68 | 83 | 74 | 67 | 64 |
| 9 | 106 | 85 | 72 | 63 | 104 | 84 | 71 | 63 | 82 | 70 | 62 | 80 | 69 | 62 | 78 | 68 | 62 | 59 |
| 10 | 100 | 79 | 66 | 58 | 98 | 78 | 66 | 58 | 76 | 65 | 57 | 74 | 64 | 57 | 73 | 63 | 57 | 54 |

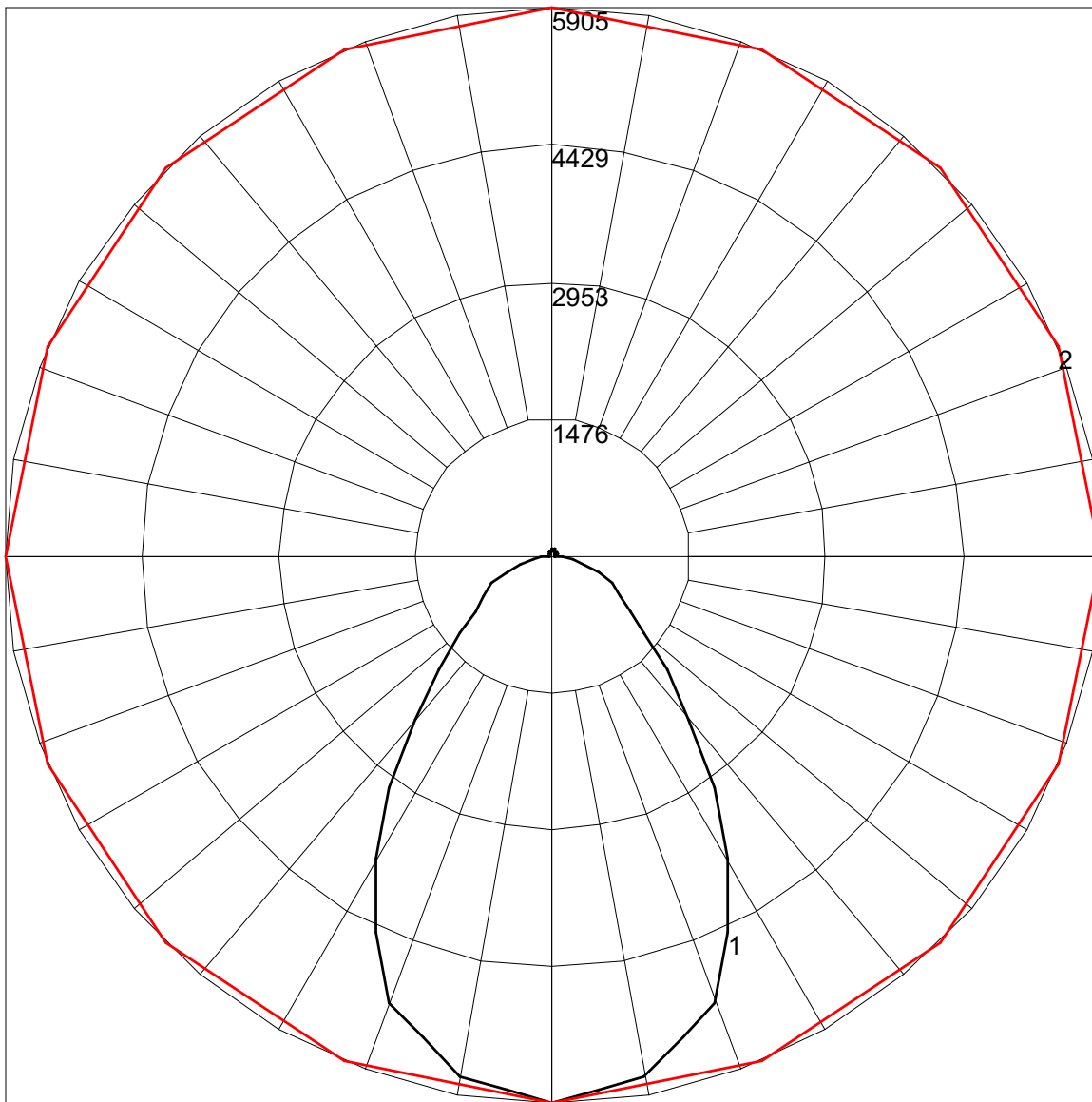
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UGR TABLE - CORRECTED

| | | | | | | | | | | | |
|----------------|------|----------------------|------|------|------|------|--------------------|------|------|------|------|
| 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 | 15.2 | 16.6 | 15.6 | 17.0 | 17.3 | 14.0 | 15.4 | 14.4 | 15.8 | 16.2 |
| | 3H | 16.1 | 17.4 | 16.5 | 17.8 | 18.2 | 15.8 | 17.0 | 16.2 | 17.4 | 17.8 |
| | 4H | 16.4 | 17.6 | 16.8 | 18.0 | 18.4 | 16.3 | 17.5 | 16.8 | 17.9 | 18.3 |
| | 6H | 16.5 | 17.6 | 17.0 | 18.0 | 18.5 | 16.7 | 17.8 | 17.2 | 18.3 | 18.7 |
| | 8H | 16.5 | 17.6 | 17.0 | 18.0 | 18.5 | 16.9 | 17.9 | 17.4 | 18.4 | 18.8 |
| | 12H | 16.5 | 17.5 | 17.0 | 18.0 | 18.4 | 17.0 | 18.0 | 17.5 | 18.4 | 18.9 |
| 4H | 2H | 15.4 | 16.6 | 15.9 | 17.0 | 17.4 | 14.4 | 15.6 | 14.8 | 16.0 | 16.4 |
| | 3H | 16.5 | 17.5 | 17.0 | 17.9 | 18.4 | 16.3 | 17.2 | 16.7 | 17.7 | 18.1 |
| | 4H | 16.8 | 17.7 | 17.3 | 18.2 | 18.7 | 16.9 | 17.8 | 17.4 | 18.2 | 18.7 |
| | 6H | 17.1 | 17.8 | 17.6 | 18.3 | 18.8 | 17.4 | 18.2 | 17.9 | 18.7 | 19.2 |
| | 8H | 17.1 | 17.8 | 17.6 | 18.3 | 18.8 | 17.6 | 18.3 | 18.1 | 18.8 | 19.3 |
| | 12H | 17.1 | 17.8 | 17.7 | 18.3 | 18.8 | 17.7 | 18.4 | 18.3 | 18.9 | 19.4 |
| 8H | 4H | 16.9 | 17.7 | 17.4 | 18.1 | 18.7 | 17.0 | 17.7 | 17.5 | 18.2 | 18.7 |
| | 6H | 17.2 | 17.8 | 17.8 | 18.3 | 18.9 | 17.6 | 18.2 | 18.1 | 18.7 | 19.2 |
| | 8H | 17.3 | 17.8 | 17.8 | 18.4 | 18.9 | 17.8 | 18.3 | 18.3 | 18.9 | 19.4 |
| | 12H | 17.4 | 17.8 | 17.9 | 18.4 | 19.0 | 18.0 | 18.4 | 18.5 | 19.0 | 19.6 |
| 12H | 4H | 16.9 | 17.6 | 17.5 | 18.1 | 18.6 | 17.0 | 17.6 | 17.5 | 18.1 | 18.7 |
| | 6H | 17.2 | 17.8 | 17.8 | 18.3 | 18.8 | 17.5 | 18.1 | 18.1 | 18.6 | 19.2 |
| | 8H | 17.3 | 17.8 | 17.9 | 18.3 | 18.9 | 17.8 | 18.3 | 18.4 | 18.8 | 19.4 |

Maximum UGR = 19.6

POLAR GRAPH



Maximum Candela = 5905.288 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)