H.E. WILLIAMS, INC.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : GL-8-L400-850-SCHA118-DIM-UNV_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19725.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-07-20
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 96 INCH LOW PROFILE LED HIGHBAY LUMINAIRE
[MORE] WHITE REFLECTOR w/.118"THK CLEAR ACRYLIC LENS
[MORE] 0-10V UNIVERSAL VOLTAGE 122-277V DRIVERS
[LUMCAT] GL-8-L400-850-SCHA118-DIM-UNV_
[LAMPCAT] 22 INCH HLM LINEAR LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Commercial, Industrial, Manufacturing, High Bay
[_SEARCH_MOUNTING] Cable, Pendant, Suspended

**CHARACTERISTICS**

| | |
|---|---|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 38291 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 144 |
| Total Luminaire Watts | 266 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.34 |
| Spacing Criterion (90-270) | 1.32 |
| Spacing Criterion (Diagonal) | 1.42 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 8.00 ft |
| Luminous Width (90-270) | 1.00 ft |
| Luminous Height | 0.00 ft |

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

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---|---|---|---|
| 45 | 19678 | 19275 | 14713 |
| 55 | 18670 | 13687 | 13866 |
| 65 | 15653 | 12139 | 11869 |
| 75 | 10163 | 6839 | 5049 |
| 85 | 2025 | 2067 | 1729 |

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**CANDELA TABULATION**

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| **0** | 14349.391 | 14349.391 | 14349.391 | 14349.391 | 14349.391 |
| **5** | 14509.376 | 14343.921 | 14240.000 | 14186.672 | 14200.346 |
| **10** | 14382.208 | 14216.754 | 14129.241 | 14070.443 | 14089.587 |
| **15** | 14134.711 | 14015.748 | 13926.868 | 13829.783 | 13865.335 |
| **20** | 13822.946 | 13652.022 | 13580.918 | 13494.772 | 13548.100 |
| **25** | 13405.892 | 13187.110 | 13169.333 | 13129.679 | 13137.883 |
| **30** | 12839.792 | 12638.786 | 12649.725 | 12589.560 | 12625.112 |
| **35** | 12115.076 | 11877.150 | 11996.113 | 11967.398 | 11975.602 |
| **40** | 11304.213 | 11037.572 | 11093.635 | 11238.579 | 11216.700 |
| **45** | 10351.143 | 10102.278 | 10139.197 | 9370.724 | 7739.428 |
| **50** | 9210.739 | 9065.796 | 9084.939 | 6693.374 | 6757.642 |
| **55** | 7966.414 | 7888.473 | 5840.123 | 5920.799 | 5916.697 |
| **60** | 6582.616 | 6515.614 | 4881.582 | 4975.932 | 4975.932 |
| **65** | 4921.237 | 5000.545 | 3816.386 | 3947.655 | 3731.607 |
| **70** | 3355.575 | 2658.206 | 2722.474 | 2505.059 | 1979.981 |
| **75** | 1956.735 | 1536.946 | 1316.797 | 1207.405 | 972.214 |
| **80** | 778.045 | 676.858 | 494.995 | 404.747 | 376.032 |
| **85** | 131.269 | 117.596 | 134.004 | 135.372 | 112.126 |
| **90** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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## ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 5297.27 | N.A. | 13.80 |
| 0-30 | 11377.69 | N.A. | 29.70 |
| 0-40 | 18862.67 | N.A. | 49.30 |
| 0-60 | 32375.86 | N.A. | 84.60 |
| 0-80 | 38075.24 | N.A. | 99.40 |
| 0-90 | 38290.91 | N.A. | 100.00 |
| 10-90 | 36931.09 | N.A. | 96.40 |
| 20-40 | 13565.4 | N.A. | 35.40 |
| 20-50 | 21031.94 | N.A. | 54.90 |
| 40-70 | 17648.17 | N.A. | 46.10 |
| 60-80 | 5699.38 | N.A. | 14.90 |
| 70-80 | 1564.4 | N.A. | 4.10 |
| 80-90 | 215.67 | N.A. | 0.60 |
| 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 | 38290.91 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

## ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---|---|
| 0-10 | 1359.82 |
| 10-20 | 3937.45 |
| 20-30 | 6080.42 |
| 30-40 | 7484.99 |
| 40-50 | 7466.54 |
| 50-60 | 6046.65 |
| 60-70 | 4134.98 |
| 70-80 | 1564.4 |
| 80-90 | 215.67 |
| 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 | 110 | 106 | 102 | 98 | 107 | 103 | 100 | 97 | 99 | 96 | 94 | 95 | 93 | 91 | 92 | 90 | 88 | 86 |
| 2 | 101 | 93 | 87 | 81 | 98 | 91 | 85 | 80 | 88 | 83 | 78 | 84 | 80 | 77 | 81 | 78 | 75 | 73 |
| 3 | 92 | 82 | 74 | 68 | 90 | 81 | 73 | 68 | 78 | 72 | 67 | 75 | 70 | 65 | 72 | 68 | 64 | 62 |
| 4 | 84 | 73 | 65 | 58 | 82 | 72 | 64 | 58 | 69 | 62 | 57 | 67 | 61 | 56 | 65 | 60 | 56 | 53 |
| 5 | 78 | 65 | 57 | 50 | 76 | 64 | 56 | 50 | 62 | 55 | 50 | 60 | 54 | 49 | 58 | 53 | 49 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 50 | 44 | 56 | 49 | 44 | 55 | 48 | 43 | 53 | 47 | 43 | 41 |
| 7 | 67 | 54 | 45 | 39 | 65 | 53 | 45 | 39 | 51 | 44 | 39 | 50 | 43 | 38 | 48 | 43 | 38 | 36 |
| 8 | 62 | 49 | 41 | 35 | 61 | 48 | 40 | 35 | 47 | 40 | 35 | 46 | 39 | 34 | 44 | 39 | 34 | 32 |
| 9 | 58 | 45 | 37 | 31 | 57 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 |
| 10 | 54 | 41 | 34 | 28 | 53 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |

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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 | 22.8 | 24.4 | 23.2 | 24.7 | 25.0 | 20.9 | 22.4 | 21.2 | 22.7 | 23.1 |
| | 3H | 24.0 | 25.4 | 24.4 | 25.8 | 26.1 | 22.1 | 23.5 | 22.5 | 23.8 | 24.2 |
| | 4H | 24.4 | 25.7 | 24.8 | 26.0 | 26.4 | 22.3 | 23.6 | 22.7 | 24.0 | 24.3 |
| | 6H | 24.5 | 25.7 | 24.9 | 26.1 | 26.5 | 22.3 | 23.6 | 22.8 | 23.9 | 24.3 |
| | 8H | 24.5 | 25.7 | 24.9 | 26.1 | 26.5 | 22.3 | 23.5 | 22.7 | 23.9 | 24.3 |
| | 12H | 24.5 | 25.6 | 24.9 | 26.0 | 26.4 | 22.3 | 23.4 | 22.7 | 23.8 | 24.2 |
| 4H | 2H | 23.1 | 24.4 | 23.5 | 24.7 | 25.1 | 21.4 | 22.7 | 21.8 | 23.1 | 23.5 |
| | 3H | 24.4 | 25.5 | 24.8 | 25.9 | 26.3 | 22.8 | 23.9 | 23.2 | 24.3 | 24.7 |
| | 4H | 24.8 | 25.8 | 25.3 | 26.2 | 26.7 | 23.1 | 24.1 | 23.5 | 24.5 | 24.9 |
| | 6H | 25.0 | 25.9 | 25.5 | 26.3 | 26.8 | 23.2 | 24.0 | 23.7 | 24.5 | 24.9 |
| | 8H | 25.1 | 25.9 | 25.5 | 26.3 | 26.8 | 23.2 | 24.0 | 23.7 | 24.4 | 24.9 |
| | 12H | 25.1 | 25.8 | 25.5 | 26.2 | 26.7 | 23.2 | 23.9 | 23.7 | 24.4 | 24.8 |
| 8H | 4H | 24.9 | 25.7 | 25.3 | 26.1 | 26.6 | 23.2 | 24.0 | 23.7 | 24.5 | 24.9 |
| | 6H | 25.1 | 25.8 | 25.6 | 26.3 | 26.7 | 23.3 | 24.0 | 23.8 | 24.5 | 25.0 |
| | 8H | 25.2 | 25.7 | 25.7 | 26.2 | 26.7 | 23.4 | 23.9 | 23.9 | 24.4 | 24.9 |
| | 12H | 25.2 | 25.7 | 25.7 | 26.2 | 26.7 | 23.4 | 23.9 | 23.9 | 24.4 | 24.9 |
| 12H | 4H | 24.9 | 25.6 | 25.3 | 26.0 | 26.5 | 23.2 | 23.9 | 23.7 | 24.4 | 24.9 |
| | 6H | 25.1 | 25.7 | 25.6 | 26.1 | 26.7 | 23.3 | 23.9 | 23.9 | 24.4 | 24.9 |
| | 8H | 25.1 | 25.7 | 25.6 | 26.1 | 26.7 | 23.4 | 23.9 | 23.9 | 24.4 | 24.9 |

Maximum UGR = 26.8

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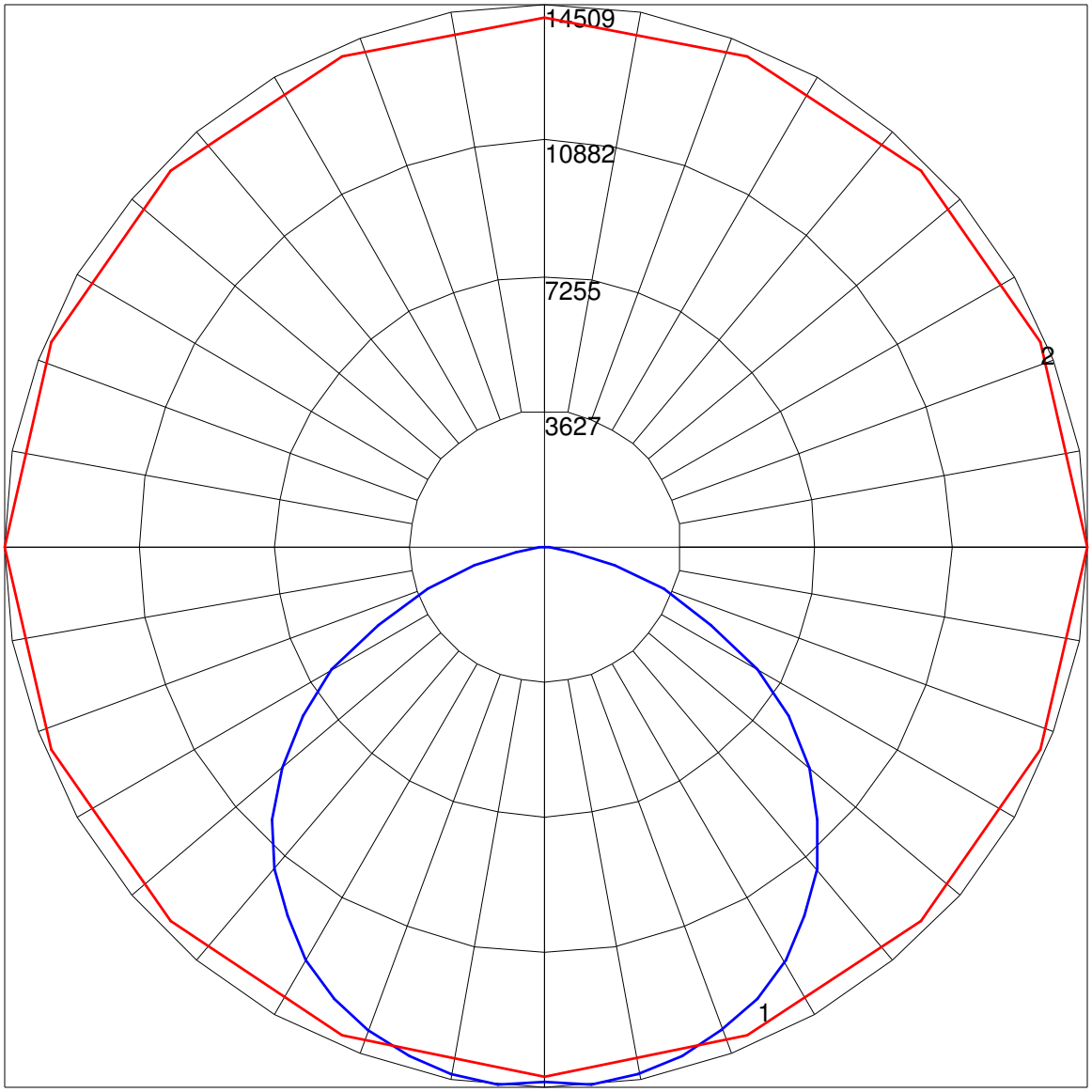
**POLAR GRAPH**




Maximum Candela = 14509.376  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.)

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