H.E. WILLIAMS, INC.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : GL-8-L300-940-SAF118-DIM-UNV_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19726.0
[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 FROSTED ACRYLIC LENS
[MORE] 0-10V LED DRIVERS
[LUMCAT] GL-8-L300-940-SAF118-DIM-UNV
[LAMPCAT] 22 INCH HLM 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 | 22558 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 117 |
| Total Luminaire Watts | 192 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.32 |
| Spacing Criterion (90-270) | 1.26 |
| Spacing Criterion (Diagonal) | 1.38 |
| 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 | 11483 | 10942 | 9525 |
| 55 | 10382 | 8876 | 8209 |
| 65 | 8175 | 6788 | 6507 |
| 75 | 5636 | 4615 | 4603 |
| 85 | 2013 | 1847 | 2000 |

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**CANDELA TABULATION**

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| **0** | 8710.583 | 8710.583 | 8710.583 | 8710.583 | 8710.583 |
| **5** | 8843.550 | 8716.364 | 8659.378 | 8613.954 | 8600.740 |
| **10** | 8768.394 | 8623.865 | 8586.700 | 8534.670 | 8523.107 |
| **15** | 8627.169 | 8485.117 | 8455.385 | 8388.488 | 8380.230 |
| **20** | 8392.618 | 8291.034 | 8247.263 | 8146.505 | 8165.500 |
| **25** | 8090.345 | 8016.841 | 7955.726 | 7838.451 | 7866.531 |
| **30** | 7718.698 | 7655.931 | 7609.681 | 7461.848 | 7442.027 |
| **35** | 7259.507 | 7166.182 | 7154.620 | 6958.060 | 6813.531 |
| **40** | 6702.862 | 6610.363 | 6547.596 | 6242.020 | 5938.921 |
| **45** | 6040.505 | 5969.479 | 5755.575 | 5322.813 | 5010.629 |
| **50** | 5279.867 | 5212.970 | 4801.681 | 4415.168 | 4241.732 |
| **55** | 4430.034 | 4337.535 | 3787.497 | 3595.892 | 3502.568 |
| **60** | 3493.483 | 3408.417 | 2898.022 | 2729.542 | 2753.492 |
| **65** | 2570.146 | 2476.822 | 2134.080 | 2020.109 | 2045.711 |
| **70** | 1778.125 | 1607.993 | 1484.937 | 1399.045 | 1416.388 |
| **75** | 1085.210 | 942.332 | 888.650 | 841.574 | 886.172 |
| **80** | 516.177 | 445.151 | 419.548 | 410.464 | 436.066 |
| **85** | 130.489 | 121.405 | 119.753 | 124.708 | 129.664 |
| **90** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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## ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 3213.87 | N.A. | 14.20 |
| 0-30 | 6876.34 | N.A. | 30.50 |
| 0-40 | 11288.4 | N.A. | 50.00 |
| 0-60 | 19138.75 | N.A. | 84.80 |
| 0-80 | 22371.14 | N.A. | 99.20 |
| 0-90 | 22557.75 | N.A. | 100.00 |
| 10-90 | 21731.87 | N.A. | 96.30 |
| 20-40 | 8074.53 | N.A. | 35.80 |
| 20-50 | 12419.81 | N.A. | 55.10 |
| 40-70 | 10083.93 | N.A. | 44.70 |
| 60-80 | 3232.39 | N.A. | 14.30 |
| 70-80 | 998.82 | N.A. | 4.40 |
| 80-90 | 186.60 | N.A. | 0.80 |
| 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 | 22557.75 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

## ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---|---|
| 0-10 | 825.88 |
| 10-20 | 2387.99 |
| 20-30 | 3662.47 |
| 30-40 | 4412.05 |
| 40-50 | 4345.28 |
| 50-60 | 3505.07 |
| 60-70 | 2233.57 |
| 70-80 | 998.82 |
| 80-90 | 186.60 |
| 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 | 79 | 84 | 80 | 77 | 81 | 78 | 75 | 73 |
| 3 | 92 | 82 | 75 | 68 | 90 | 81 | 74 | 68 | 78 | 72 | 67 | 75 | 70 | 66 | 73 | 68 | 64 | 62 |
| 4 | 85 | 73 | 65 | 59 | 82 | 72 | 64 | 58 | 69 | 63 | 57 | 67 | 61 | 57 | 65 | 60 | 56 | 54 |
| 5 | 78 | 66 | 57 | 51 | 76 | 65 | 57 | 50 | 63 | 55 | 50 | 61 | 54 | 49 | 59 | 53 | 49 | 47 |
| 6 | 72 | 59 | 51 | 45 | 70 | 58 | 50 | 44 | 57 | 49 | 44 | 55 | 48 | 44 | 53 | 48 | 43 | 41 |
| 7 | 67 | 54 | 45 | 39 | 65 | 53 | 45 | 39 | 52 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 38 | 37 |
| 8 | 62 | 49 | 41 | 35 | 61 | 49 | 41 | 35 | 47 | 40 | 35 | 46 | 40 | 35 | 45 | 39 | 35 | 33 |
| 9 | 58 | 45 | 37 | 32 | 57 | 45 | 37 | 32 | 44 | 36 | 32 | 42 | 36 | 31 | 41 | 36 | 31 | 29 |
| 10 | 55 | 42 | 34 | 29 | 53 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 29 | 38 | 33 | 28 | 27 |

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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 | 20.3 | 21.8 | 20.6 | 22.2 | 22.5 | 18.8 | 20.4 | 19.2 | 20.7 | 21.0 |
| | 3H | 21.5 | 22.9 | 21.9 | 23.2 | 23.6 | 20.1 | 21.5 | 20.5 | 21.8 | 22.2 |
| | 4H | 21.9 | 23.2 | 22.3 | 23.6 | 23.9 | 20.5 | 21.8 | 20.9 | 22.1 | 22.5 |
| | 6H | 22.1 | 23.3 | 22.5 | 23.7 | 24.1 | 20.7 | 21.9 | 21.1 | 22.3 | 22.7 |
| | 8H | 22.1 | 23.3 | 22.6 | 23.7 | 24.1 | 20.8 | 21.9 | 21.2 | 22.3 | 22.7 |
| | 12H | 22.1 | 23.2 | 22.5 | 23.6 | 24.0 | 20.8 | 21.9 | 21.2 | 22.2 | 22.7 |
| 4H | 2H | 20.6 | 21.9 | 21.0 | 22.2 | 22.6 | 19.3 | 20.7 | 19.7 | 21.0 | 21.4 |
| | 3H | 22.0 | 23.1 | 22.4 | 23.5 | 23.9 | 20.8 | 21.9 | 21.2 | 22.3 | 22.7 |
| | 4H | 22.5 | 23.4 | 22.9 | 23.8 | 24.3 | 21.3 | 22.2 | 21.7 | 22.7 | 23.1 |
| | 6H | 22.7 | 23.6 | 23.2 | 24.0 | 24.5 | 21.6 | 22.4 | 22.0 | 22.9 | 23.3 |
| | 8H | 22.8 | 23.6 | 23.3 | 24.0 | 24.5 | 21.6 | 22.4 | 22.1 | 22.9 | 23.3 |
| | 12H | 22.8 | 23.5 | 23.3 | 24.0 | 24.5 | 21.7 | 22.4 | 22.1 | 22.8 | 23.3 |
| 8H | 4H | 22.5 | 23.3 | 23.0 | 23.8 | 24.3 | 21.5 | 22.2 | 21.9 | 22.7 | 23.2 |
| | 6H | 22.9 | 23.5 | 23.4 | 24.0 | 24.5 | 21.8 | 22.5 | 22.3 | 22.9 | 23.4 |
| | 8H | 22.9 | 23.5 | 23.5 | 24.0 | 24.5 | 21.9 | 22.5 | 22.4 | 23.0 | 23.5 |
| | 12H | 23.0 | 23.5 | 23.5 | 24.0 | 24.6 | 22.0 | 22.5 | 22.5 | 23.0 | 23.5 |
| 12H | 4H | 22.5 | 23.2 | 23.0 | 23.7 | 24.2 | 21.5 | 22.2 | 21.9 | 22.6 | 23.1 |
| | 6H | 22.9 | 23.5 | 23.4 | 23.9 | 24.5 | 21.8 | 22.4 | 22.3 | 22.9 | 23.4 |
| | 8H | 23.0 | 23.5 | 23.5 | 24.0 | 24.5 | 21.9 | 22.4 | 22.4 | 22.9 | 23.5 |

Maximum UGR = 24.6

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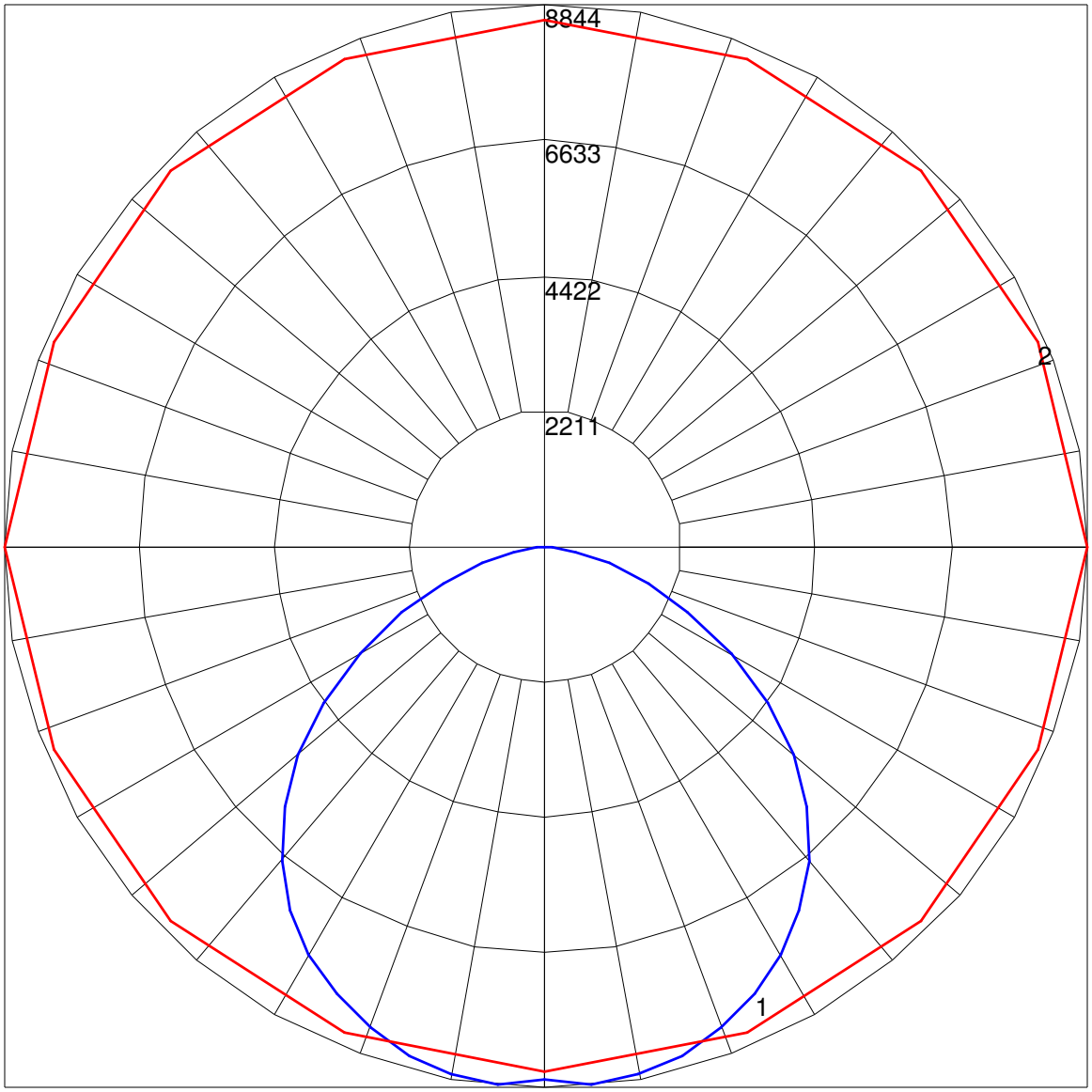
**POLAR GRAPH**




Maximum Candela = 8843.55  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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