H.E. WILLIAMS, INC.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : GL-8-L400-840-ND-DIM-UNV_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19459.0
[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 REFL w/CLEAR ACRYLIC ROD DIFFUSERS OVER LED
[MORE] 0-10V UNIVERSAL VOLTAGE 120-277 DRIVERS
[LUMCAT] GL-8-L400-840-ND-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Commercial, Industrial, Manufacturing, Warehouse, High Bay
[_SEARCH_MOUNTING] Pendant, Suspended

**CHARACTERISTICS**

| | |
|---|---|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 38181 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 146 |
| Total Luminaire Watts | 262 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.32 |
| Spacing Criterion (90-270) | 0.58 |
| Spacing Criterion (Diagonal) | 0.72 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 8.00 ft |
| Luminous Width (90-270) | 1.04 ft |
| Luminous Height | 0.00 ft |

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

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---|---|---|---|
| 45 | 47018 | 5018 | 3709 |
| 55 | 32221 | 3725 | 2784 |
| 65 | 19498 | 2824 | 2865 |
| 75 | 9548 | 3119 | 2602 |
| 85 | 3661 | 1153 | 1153 |

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**CANDELA TABULATION**

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| **0** | 38507.561 | 38507.561 | 38507.561 | 38507.561 | 38507.561 |
| **5** | 37646.767 | 37347.539 | 36747.715 | 36251.734 | 35964.803 |
| **10** | 37347.539 | 36121.932 | 33409.747 | 31077.404 | 30647.007 |
| **15** | 36839.260 | 34140.739 | 28978.706 | 25040.914 | 23737.426 |
| **20** | 37465.044 | 31272.791 | 21861.441 | 15956.119 | 14078.768 |
| **25** | 35769.416 | 26957.889 | 16008.040 | 10820.047 | 9281.548 |
| **30** | 34961.909 | 21612.767 | 9724.242 | 5970.906 | 5149.736 |
| **35** | 31884.911 | 15499.761 | 5748.193 | 3766.999 | 3415.850 |
| **40** | 29812.173 | 10624.660 | 3728.742 | 2828.324 | 2646.601 |
| **45** | 25771.906 | 6622.650 | 2750.443 | 2150.619 | 2033.114 |
| **50** | 19878.881 | 4444.704 | 2164.283 | 1759.846 | 1656.004 |
| **55** | 14326.075 | 3298.345 | 1656.004 | 1355.409 | 1237.904 |
| **60** | 9855.411 | 2346.006 | 1291.191 | 1134.062 | 1056.181 |
| **65** | 6387.640 | 1446.954 | 925.012 | 978.299 | 938.676 |
| **70** | 3780.663 | 1042.517 | 795.210 | 821.170 | 729.626 |
| **75** | 1915.609 | 781.547 | 625.784 | 560.199 | 521.942 |
| **80** | 925.012 | 573.863 | 390.773 | 247.308 | 209.050 |
| **85** | 247.308 | 183.090 | 77.881 | 77.881 | 77.881 |
| **90** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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## ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 11567.71 | N.A. | 30.30 |
| 0-30 | 20285.13 | N.A. | 53.10 |
| 0-40 | 27140.82 | N.A. | 71.10 |
| 0-60 | 35327.02 | N.A. | 92.50 |
| 0-80 | 37991.32 | N.A. | 99.50 |
| 0-90 | 38180.55 | N.A. | 100.00 |
| 10-90 | 34760.56 | N.A. | 91.00 |
| 20-40 | 15573.11 | N.A. | 40.80 |
| 20-50 | 20547.79 | N.A. | 53.80 |
| 40-70 | 9989.03 | N.A. | 26.20 |
| 60-80 | 2664.29 | N.A. | 7.00 |
| 70-80 | 861.47 | N.A. | 2.30 |
| 80-90 | 189.24 | N.A. | 0.50 |
| 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 | 38180.55 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

## ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---|---|
| 0-10 | 3419.99 |
| 10-20 | 8147.72 |
| 20-30 | 8717.42 |
| 30-40 | 6855.69 |
| 40-50 | 4974.68 |
| 50-60 | 3211.53 |
| 60-70 | 1802.83 |
| 70-80 | 861.47 |
| 80-90 | 189.24 |
| 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 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 |
| 2 | 105 | 98 | 93 | 89 | 102 | 97 | 92 | 88 | 93 | 89 | 86 | 90 | 87 | 84 | 87 | 85 | 82 | 81 |
| 3 | 98 | 90 | 84 | 79 | 96 | 88 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 75 | 81 | 77 | 74 | 72 |
| 4 | 92 | 82 | 76 | 70 | 90 | 81 | 75 | 70 | 79 | 73 | 69 | 77 | 72 | 68 | 75 | 71 | 67 | 66 |
| 5 | 86 | 76 | 69 | 64 | 84 | 75 | 68 | 63 | 73 | 67 | 63 | 71 | 66 | 62 | 69 | 65 | 62 | 60 |
| 6 | 81 | 70 | 63 | 58 | 79 | 69 | 63 | 58 | 68 | 62 | 57 | 66 | 61 | 57 | 65 | 60 | 56 | 55 |
| 7 | 76 | 65 | 58 | 53 | 75 | 65 | 58 | 53 | 63 | 57 | 53 | 62 | 56 | 52 | 61 | 56 | 52 | 51 |
| 8 | 72 | 61 | 54 | 49 | 71 | 60 | 54 | 49 | 59 | 53 | 49 | 58 | 53 | 49 | 57 | 52 | 48 | 47 |
| 9 | 68 | 57 | 50 | 46 | 67 | 57 | 50 | 46 | 56 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 45 | 44 |
| 10 | 65 | 54 | 47 | 43 | 64 | 53 | 47 | 43 | 52 | 46 | 42 | 51 | 46 | 42 | 51 | 46 | 42 | 41 |

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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 | 19.7 | 20.9 | 20.0 | 21.3 | 21.6 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 |
| | 3H | 21.5 | 22.7 | 21.9 | 23.0 | 23.3 | 12.7 | 13.9 | 13.1 | 14.2 | 14.6 |
| | 4H | 22.0 | 23.1 | 22.4 | 23.4 | 23.8 | 13.5 | 14.5 | 13.9 | 14.9 | 15.3 |
| | 6H | 22.3 | 23.3 | 22.8 | 23.7 | 24.1 | 13.8 | 14.8 | 14.2 | 15.1 | 15.5 |
| | 8H | 22.4 | 23.3 | 22.8 | 23.7 | 24.1 | 13.8 | 14.8 | 14.3 | 15.2 | 15.6 |
| | 12H | 22.4 | 23.3 | 22.9 | 23.7 | 24.1 | 13.8 | 14.7 | 14.3 | 15.1 | 15.5 |
| 4H | 2H | 19.5 | 20.6 | 19.9 | 20.9 | 21.3 | 12.7 | 12.7 | 12.7 | 12.7 | 13.1 |
| | 3H | 21.4 | 22.3 | 21.8 | 22.7 | 23.1 | 13.6 | 14.5 | 14.1 | 14.9 | 15.3 |
| | 4H | 22.0 | 22.7 | 22.4 | 23.2 | 23.6 | 14.5 | 15.3 | 14.9 | 15.7 | 16.1 |
| | 6H | 22.4 | 23.1 | 22.9 | 23.5 | 24.0 | 14.9 | 15.6 | 15.4 | 16.0 | 16.5 |
| | 8H | 22.5 | 23.1 | 23.0 | 23.6 | 24.1 | 15.0 | 15.6 | 15.4 | 16.1 | 16.5 |
| | 12H | 22.6 | 23.1 | 23.0 | 23.6 | 24.1 | 15.0 | 15.6 | 15.5 | 16.0 | 16.5 |
| 8H | 4H | 21.9 | 22.5 | 22.3 | 23.0 | 23.4 | 14.9 | 15.6 | 15.4 | 16.0 | 16.5 |
| | 6H | 22.4 | 22.9 | 22.9 | 23.4 | 23.9 | 15.4 | 16.0 | 15.9 | 16.5 | 16.9 |
| | 8H | 22.5 | 23.0 | 23.0 | 23.5 | 24.0 | 15.6 | 16.0 | 16.1 | 16.5 | 17.0 |
| | 12H | 22.6 | 23.0 | 23.1 | 23.5 | 24.1 | 15.6 | 16.0 | 16.1 | 16.5 | 17.1 |
| 12H | 4H | 21.9 | 22.4 | 22.3 | 22.9 | 23.4 | 15.0 | 15.6 | 15.5 | 16.1 | 16.6 |
| | 6H | 22.3 | 22.8 | 22.9 | 23.3 | 23.8 | 15.6 | 16.0 | 16.1 | 16.5 | 17.1 |
| | 8H | 22.5 | 22.9 | 23.0 | 23.4 | 24.0 | 15.7 | 16.1 | 16.2 | 16.6 | 17.2 |

Maximum UGR = 24.1

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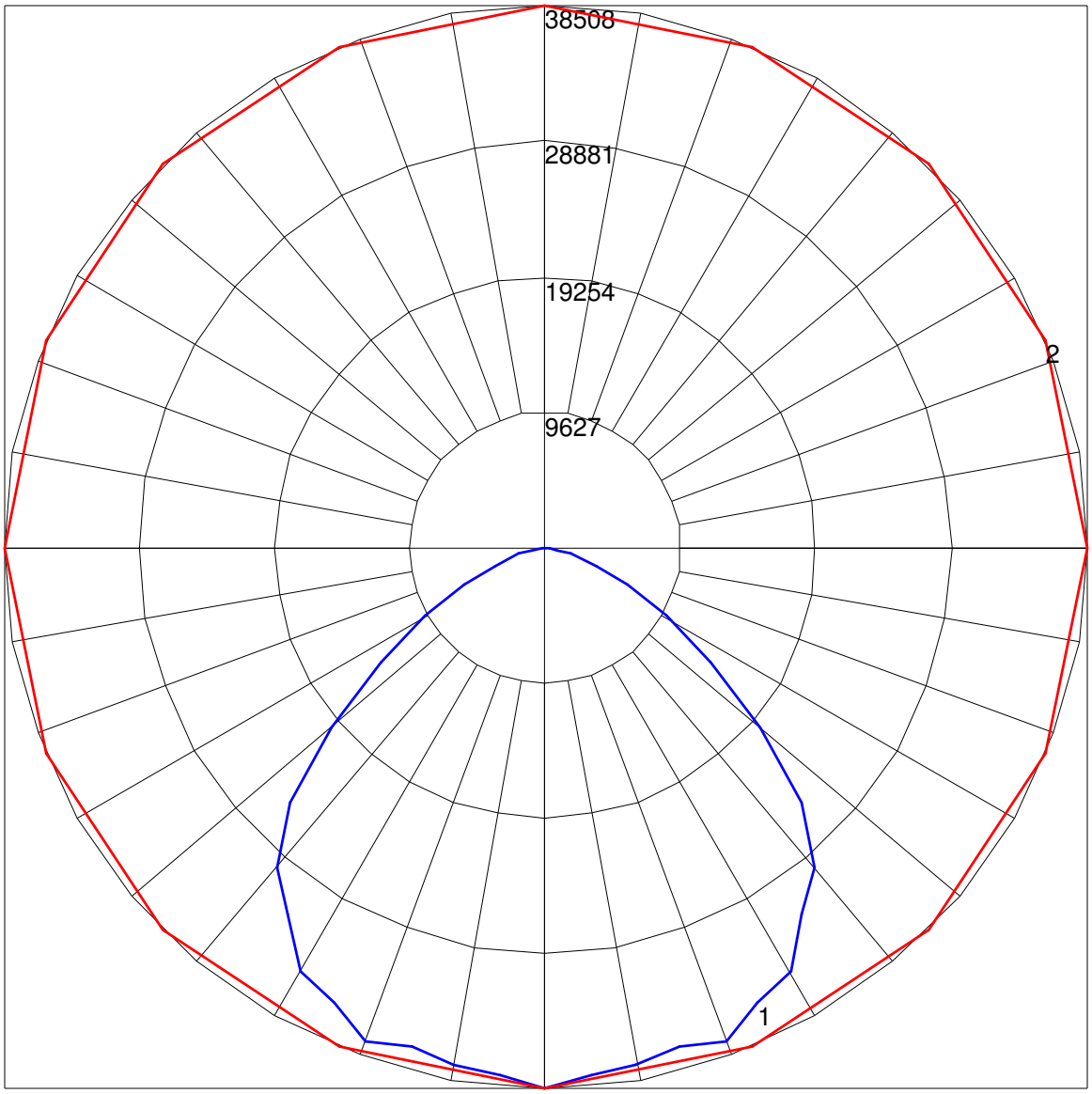
**POLAR GRAPH**




Maximum Candela = 38507.561  Located At Horizontal Angle = 0, Vertical Angle = 0
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

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