H.E. WILLIAMS, INC.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : GL-8-L600-840-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-L600-840-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 | 57263 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 147 |
| Total Luminaire Watts | 390 |
| 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 | 70518 | 7526 | 5563 |
| 55 | 48325 | 5586 | 4176 |
| 65 | 29244 | 4235 | 4297 |
| 75 | 14320 | 4678 | 3902 |
| 85 | 5490 | 1729 | 1729 |

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**CANDELA TABULATION**

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| **0** | 57753.761 | 57753.761 | 57753.761 | 57753.761 | 57753.761 |
| **5** | 56462.739 | 56013.955 | 55114.338 | 54370.464 | 53940.123 |
| **10** | 56013.955 | 54175.786 | 50108.043 | 46609.988 | 45964.477 |
| **15** | 55251.638 | 51204.387 | 43462.354 | 37556.441 | 35601.465 |
| **20** | 56190.190 | 46903.030 | 32787.857 | 23931.037 | 21115.380 |
| **25** | 53647.082 | 40431.526 | 24008.908 | 16227.940 | 13920.495 |
| **30** | 52435.980 | 32414.895 | 14584.449 | 8955.183 | 7723.590 |
| **35** | 47821.090 | 23246.591 | 8621.157 | 5649.758 | 5123.103 |
| **40** | 44712.391 | 15934.899 | 5592.379 | 4241.929 | 3969.380 |
| **45** | 38652.785 | 9932.671 | 4125.122 | 3225.505 | 3049.271 |
| **50** | 29814.408 | 6666.181 | 3245.998 | 2639.422 | 2483.680 |
| **55** | 21486.293 | 4946.868 | 2483.680 | 2032.847 | 1856.612 |
| **60** | 14781.176 | 3518.547 | 1936.533 | 1700.870 | 1584.063 |
| **65** | 9580.202 | 2170.146 | 1387.336 | 1467.257 | 1407.829 |
| **70** | 5670.250 | 1563.571 | 1192.658 | 1231.594 | 1094.295 |
| **75** | 2873.036 | 1172.166 | 938.552 | 840.189 | 782.810 |
| **80** | 1387.336 | 860.681 | 586.083 | 370.913 | 313.534 |
| **85** | 370.913 | 274.598 | 116.807 | 116.807 | 116.807 |
| **90** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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**ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 17349.29 | N.A. | 30.30 |
| 0-30 | 30423.7 | N.A. | 53.10 |
| 0-40 | 40705.88 | N.A. | 71.10 |
| 0-60 | 52983.58 | N.A. | 92.50 |
| 0-80 | 56979.5 | N.A. | 99.50 |
| 0-90 | 57263.31 | N.A. | 100.00 |
| 10-90 | 52134.00 | N.A. | 91.00 |
| 20-40 | 23356.6 | N.A. | 40.80 |
| 20-50 | 30817.64 | N.A. | 53.80 |
| 40-70 | 14981.58 | N.A. | 26.20 |
| 60-80 | 3995.92 | N.A. | 7.00 |
| 70-80 | 1292.03 | N.A. | 2.30 |
| 80-90 | 283.82 | 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 | 57263.31 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

| Zone | Lumens |
|---|---|
| 0-10 | 5129.31 |
| 10-20 | 12219.97 |
| 20-30 | 13074.41 |
| 30-40 | 10282.19 |
| 40-50 | 7461.04 |
| 50-60 | 4816.66 |
| 60-70 | 2703.88 |
| 70-80 | 1292.03 |
| 80-90 | 283.82 |
| 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 | 21.0 | 22.3 | 21.4 | 22.7 | 23.0 | 14.1 | 14.1 | 14.1 | 14.1 | 14.1 |
| | 3H | 22.9 | 24.1 | 23.3 | 24.4 | 24.7 | 14.1 | 15.3 | 14.5 | 15.6 | 16.0 |
| | 4H | 23.4 | 24.5 | 23.8 | 24.8 | 25.2 | 14.9 | 15.9 | 15.3 | 16.3 | 16.7 |
| | 6H | 23.7 | 24.7 | 24.2 | 25.1 | 25.5 | 15.2 | 16.2 | 15.6 | 16.5 | 16.9 |
| | 8H | 23.8 | 24.7 | 24.2 | 25.1 | 25.5 | 15.2 | 16.2 | 15.7 | 16.6 | 17.0 |
| | 12H | 23.8 | 24.7 | 24.3 | 25.1 | 25.5 | 15.2 | 16.1 | 15.7 | 16.5 | 16.9 |
| 4H | 2H | 20.9 | 22.0 | 21.3 | 22.3 | 22.7 | 14.1 | 14.1 | 14.1 | 14.1 | 14.5 |
| | 3H | 22.8 | 23.7 | 23.2 | 24.1 | 24.5 | 15.0 | 15.9 | 15.5 | 16.3 | 16.7 |
| | 4H | 23.4 | 24.1 | 23.8 | 24.6 | 25.0 | 15.9 | 16.7 | 16.3 | 17.1 | 17.5 |
| | 6H | 23.8 | 24.5 | 24.3 | 24.9 | 25.4 | 16.3 | 17.0 | 16.8 | 17.4 | 17.9 |
| | 8H | 23.9 | 24.5 | 24.4 | 25.0 | 25.5 | 16.4 | 17.0 | 16.8 | 17.5 | 17.9 |
| | 12H | 24.0 | 24.5 | 24.4 | 25.0 | 25.5 | 16.4 | 17.0 | 16.9 | 17.4 | 17.9 |
| 8H | 4H | 23.3 | 23.9 | 23.7 | 24.4 | 24.8 | 16.3 | 17.0 | 16.8 | 17.4 | 17.9 |
| | 6H | 23.8 | 24.3 | 24.3 | 24.8 | 25.3 | 16.8 | 17.4 | 17.3 | 17.9 | 18.3 |
| | 8H | 23.9 | 24.4 | 24.4 | 24.9 | 25.4 | 17.0 | 17.4 | 17.5 | 17.9 | 18.4 |
| | 12H | 24.0 | 24.4 | 24.5 | 24.9 | 25.5 | 17.0 | 17.4 | 17.5 | 17.9 | 18.5 |
| 12H | 4H | 23.3 | 23.8 | 23.7 | 24.3 | 24.8 | 16.4 | 17.0 | 16.9 | 17.5 | 18.0 |
| | 6H | 23.7 | 24.2 | 24.3 | 24.7 | 25.2 | 17.0 | 17.4 | 17.5 | 17.9 | 18.5 |
| | 8H | 23.9 | 24.3 | 24.4 | 24.8 | 25.4 | 17.1 | 17.5 | 17.6 | 18.0 | 18.6 |

Maximum UGR = 25.5

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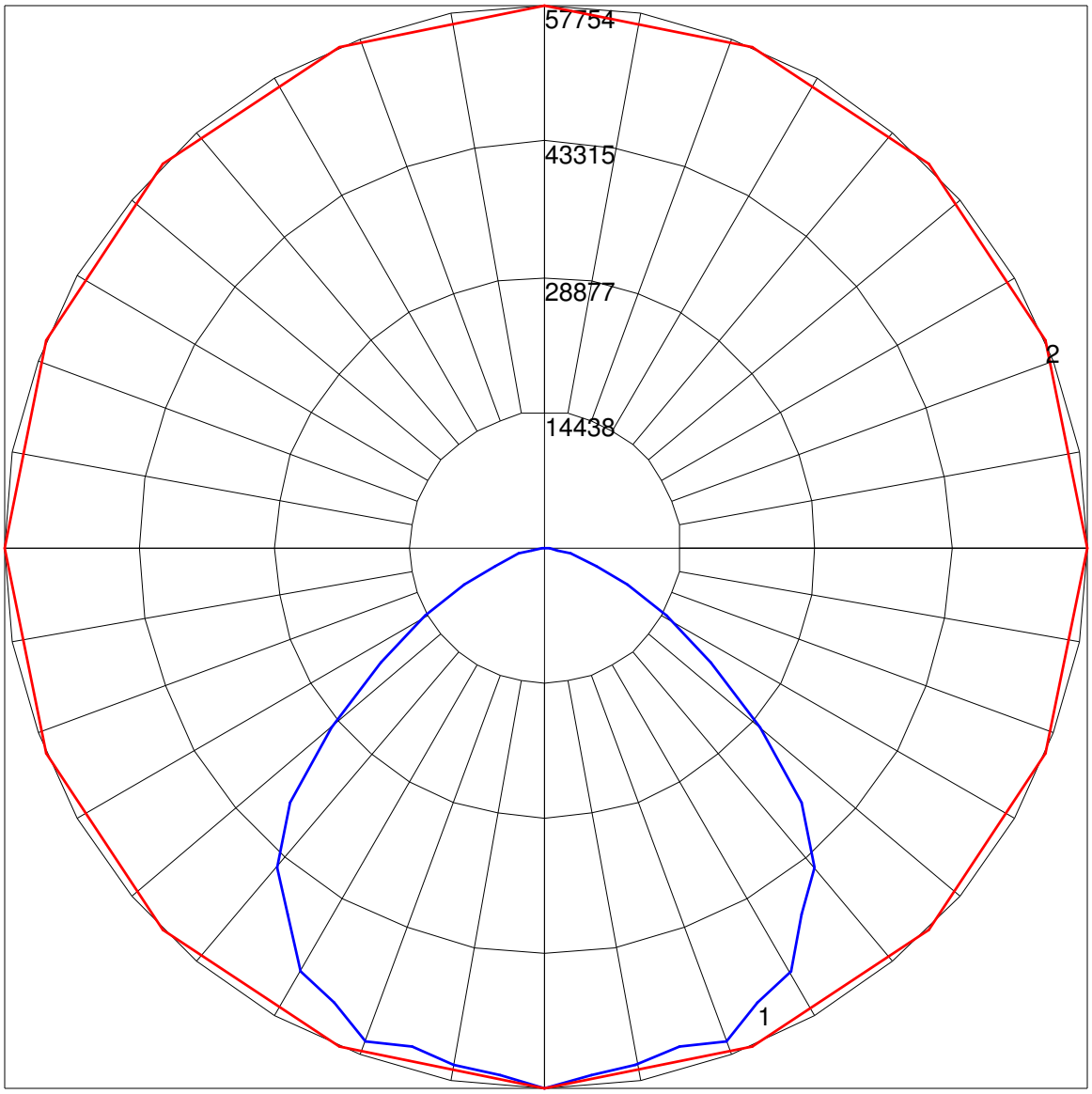
**POLAR GRAPH**




Maximum Candela = 57753.761  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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