H.E. WILLIAMS, INC.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : GP6-L600-840-W-DRV-UNV_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST]GEN FROM BALLABS TEST NO. 19520.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 19-SEP-2016
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 6-192 LED 22"ARRAYS EACH ON ALUM HEATSINK 24x27"HIGHBAY
[MORE] LUMINAIRE WITH NO DIFFUSERS/OPEN BOTTOM & CENTER DRIVER
[MORE] HOUSING 6 ADVANCE #XI095C275V054DNF1 w/18K RESISTORS
[LUMCAT] GP6-L600-840-W-DRV-UNV
[LAMPCAT] D5638D192C2560A8N50
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Industrial, Manufacturing, Warehouse, High Bay
[_SEARCH_MOUNTING] Cable, Pendant, Suspended

**CHARACTERISTICS**

| | |
|---|---|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 63000 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 132 |
| Total Luminaire Watts | 479 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.30 |
| Spacing Criterion (90-270) | 1.34 |
| Spacing Criterion (Diagonal) | 1.44 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 1.88 ft |
| Luminous Width (90-270) | 2.26 ft |
| Luminous Height | 0.00 ft |

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

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---|---|---|---|
| 45 | 52883 | 54561 | 55132 |
| 55 | 51734 | 53784 | 54942 |
| 65 | 48570 | 50739 | 48743 |
| 75 | 38375 | 36724 | 38283 |
| 85 | 12797 | 14010 | 14480 |

Photometric Toolbox - Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : GP6-L600-840-W-DRV-UNV_.IES**

**CANDELA TABULATION**

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| **0** | 20713.529 | 20713.529 | 20713.529 | 20713.529 | 20713.529 |
| **5** | 20611.522 | 20697.378 | 20723.730 | 20684.627 | 20666.776 |
| **10** | 20421.957 | 20515.464 | 20568.168 | 20544.366 | 20514.614 |
| **15** | 20080.231 | 20194.140 | 20266.395 | 20273.196 | 20223.892 |
| **20** | 19554.041 | 19688.351 | 19842.213 | 19833.712 | 19790.359 |
| **25** | 18922.443 | 19031.251 | 19238.667 | 19262.469 | 19202.964 |
| **30** | 18126.782 | 18276.394 | 18454.057 | 18606.219 | 18505.061 |
| **35** | 17176.410 | 17377.025 | 17522.386 | 17740.003 | 17643.095 |
| **40** | 16039.873 | 16327.195 | 16438.553 | 16637.469 | 16600.066 |
| **45** | 14735.023 | 15080.150 | 15202.559 | 15284.165 | 15361.521 |
| **50** | 13284.813 | 13654.591 | 13739.598 | 13852.656 | 13972.515 |
| **55** | 11692.642 | 12036.918 | 12155.927 | 12276.636 | 12417.747 |
| **60** | 9978.911 | 10210.128 | 10467.698 | 10530.603 | 10695.515 |
| **65** | 8088.367 | 8177.624 | 8449.644 | 8198.875 | 8117.269 |
| **70** | 6040.561 | 6011.658 | 5952.154 | 6011.658 | 6178.271 |
| **75** | 3913.698 | 3845.693 | 3745.386 | 3832.942 | 3904.348 |
| **80** | 1890.544 | 1827.639 | 1774.935 | 1924.547 | 1903.295 |
| **85** | 439.484 | 572.094 | 481.137 | 573.794 | 497.288 |
| **90** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : GP6-L600-840-W-DRV-UNV_.IES**

## ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 7681.1 | N.A. | 12.20 |
| 0-30 | 16515.31 | N.A. | 26.20 |
| 0-40 | 27468.73 | N.A. | 43.60 |
| 0-60 | 49976.56 | N.A. | 79.30 |
| 0-80 | 62209.95 | N.A. | 98.70 |
| 0-90 | 63000.05 | N.A. | 100.00 |
| 10-90 | 61030.91 | N.A. | 96.90 |
| 20-40 | 19787.63 | N.A. | 31.40 |
| 20-50 | 31469.92 | N.A. | 50.00 |
| 40-70 | 30643.12 | N.A. | 48.60 |
| 60-80 | 12233.39 | N.A. | 19.40 |
| 70-80 | 4098.09 | N.A. | 6.50 |
| 80-90 | 790.10 | N.A. | 1.30 |
| 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 | 63000.05 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

## ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---|---|
| 0-10 | 1969.14 |
| 10-20 | 5711.96 |
| 20-30 | 8834.21 |
| 30-40 | 10953.42 |
| 40-50 | 11682.29 |
| 50-60 | 10825.54 |
| 60-70 | 8135.3 |
| 70-80 | 4098.09 |
| 80-90 | 790.10 |
| 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 |

Photometric Toolbox - Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : GP6-L600-840-W-DRV-UNV_.IES**

**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 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 94 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 78 | 96 | 89 | 82 | 77 | 85 | 80 | 75 | 82 | 77 | 74 | 79 | 75 | 72 | 70 |
| 3 | 90 | 79 | 71 | 65 | 88 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 66 | 62 | 69 | 65 | 61 | 59 |
| 4 | 82 | 70 | 61 | 54 | 80 | 69 | 61 | 54 | 66 | 59 | 53 | 64 | 58 | 53 | 62 | 56 | 52 | 50 |
| 5 | 76 | 62 | 53 | 47 | 73 | 61 | 53 | 46 | 59 | 52 | 46 | 57 | 51 | 45 | 55 | 50 | 45 | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 40 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 |
| 7 | 64 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 46 | 39 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 42 | 34 | 28 | 54 | 42 | 34 | 28 | 41 | 33 | 28 | 40 | 33 | 28 | 38 | 32 | 28 | 26 |
| 10 | 52 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 30 | 26 | 37 | 30 | 25 | 36 | 30 | 25 | 24 |

Photometric Toolbox - Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : GP6-L600-840-W-DRV-UNV_.IES**

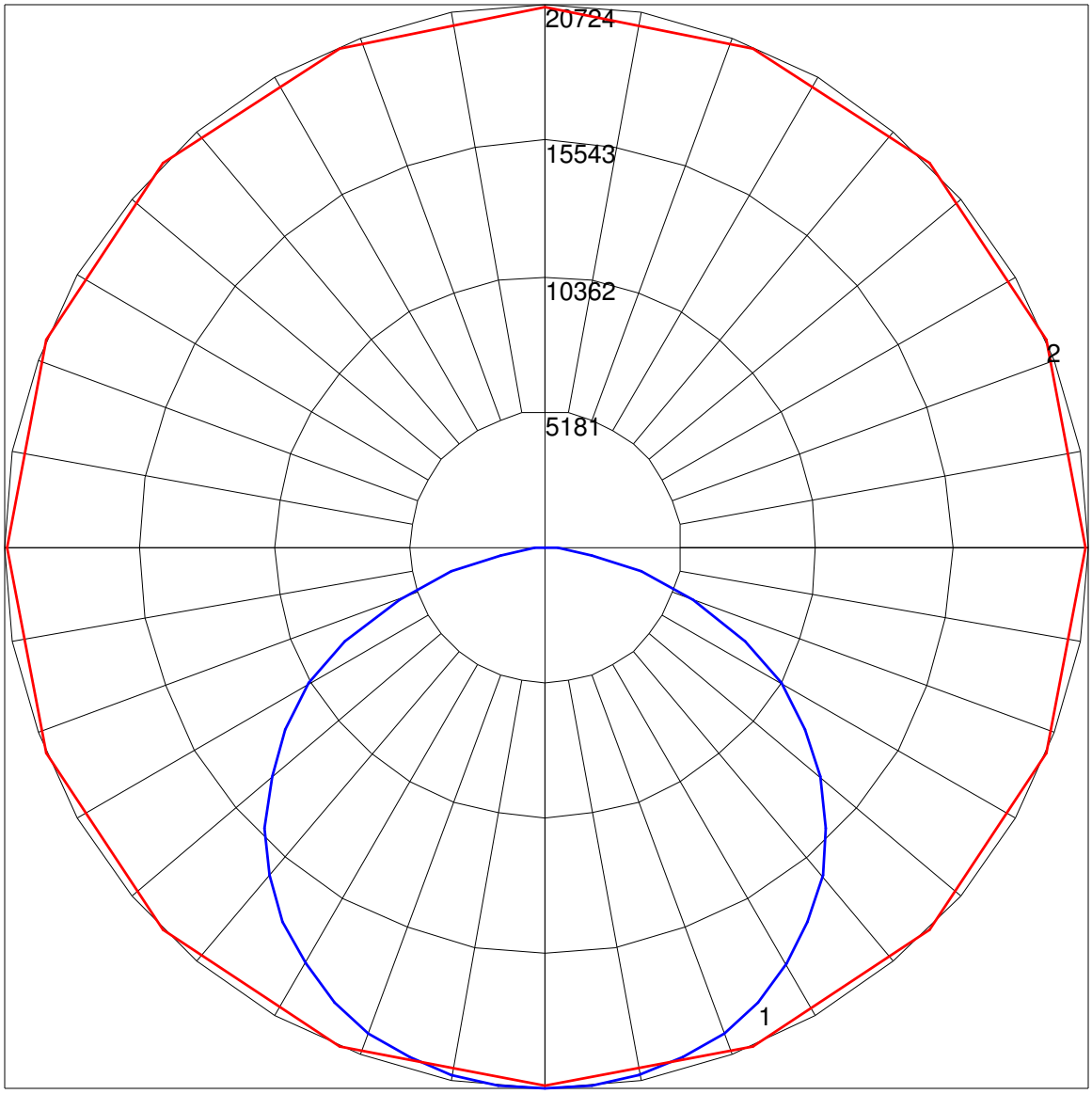
**UGR TABLE - CORRECTED**

| 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 | 26.1 | 27.8 | 26.5 | 28.1 | 28.4 | 26.4 | 28.0 | 26.7 | 28.3 | 28.6 |
| | 3H | 27.8 | 29.3 | 28.2 | 29.7 | 30.0 | 28.0 | 29.5 | 28.4 | 29.8 | 30.2 |
| | 4H | 28.4 | 29.8 | 28.8 | 30.1 | 30.5 | 28.5 | 29.9 | 28.9 | 30.3 | 30.7 |
| | 6H | 28.7 | 30.0 | 29.1 | 30.4 | 30.8 | 28.8 | 30.1 | 29.2 | 30.5 | 30.9 |
| | 8H | 28.8 | 30.0 | 29.2 | 30.4 | 30.8 | 28.9 | 30.1 | 29.3 | 30.5 | 30.9 |
| | 12H | 28.8 | 30.0 | 29.2 | 30.4 | 30.8 | 28.9 | 30.1 | 29.4 | 30.5 | 30.9 |
| 4H | 2H | 26.8 | 28.2 | 27.2 | 28.6 | 28.9 | 27.0 | 28.4 | 27.4 | 28.7 | 29.1 |
| | 3H | 28.7 | 29.9 | 29.1 | 30.3 | 30.7 | 28.8 | 30.0 | 29.2 | 30.4 | 30.8 |
| | 4H | 29.3 | 30.4 | 29.8 | 30.8 | 31.3 | 29.4 | 30.5 | 29.9 | 30.9 | 31.3 |
| | 6H | 29.7 | 30.7 | 30.2 | 31.1 | 31.6 | 29.8 | 30.8 | 30.3 | 31.2 | 31.7 |
| | 8H | 29.8 | 30.7 | 30.3 | 31.1 | 31.6 | 29.9 | 30.8 | 30.4 | 31.2 | 31.7 |
| | 12H | 29.9 | 30.6 | 30.4 | 31.1 | 31.6 | 30.0 | 30.7 | 30.5 | 31.2 | 31.7 |
| 8H | 4H | 29.6 | 30.4 | 30.0 | 30.9 | 31.3 | 29.7 | 30.5 | 30.1 | 31.0 | 31.4 |
| | 6H | 30.0 | 30.8 | 30.5 | 31.2 | 31.7 | 30.1 | 30.8 | 30.6 | 31.3 | 31.8 |
| | 8H | 30.2 | 30.8 | 30.7 | 31.3 | 31.8 | 30.3 | 30.9 | 30.8 | 31.4 | 31.9 |
| | 12H | 30.2 | 30.8 | 30.7 | 31.3 | 31.8 | 30.3 | 30.9 | 30.8 | 31.4 | 32.0 |
| 12H | 4H | 29.6 | 30.4 | 30.1 | 30.8 | 31.3 | 29.7 | 30.4 | 30.2 | 30.9 | 31.4 |
| | 6H | 30.1 | 30.7 | 30.6 | 31.2 | 31.7 | 30.2 | 30.8 | 30.7 | 31.3 | 31.8 |
| | 8H | 30.2 | 30.8 | 30.7 | 31.3 | 31.8 | 30.3 | 30.9 | 30.8 | 31.4 | 31.9 |

Maximum UGR = 32.0

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : GP6-L600-840-W-DRV-UNV_.IES**

**POLAR GRAPH**




Maximum Candela = 20723.73  Located At Horizontal Angle = 45, Vertical Angle = 5
# 1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)