H.E. WILLIAMS, INC.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : 75-8-L170-835-DIM-UNV_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] GEN from BALLABS TEST NO. 17875.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 18-AUG-2020
[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 8' STRIP w/WHITE REFLECTOR
[LUMCAT] 75-8-L170-835-DIM-UNV

**CHARACTERISTICS**

| | |
|---|---|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 17060 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 152 |
| Total Luminaire Watts | 112.4 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.32 |
| Spacing Criterion (90-270) | 1.28 |
| Spacing Criterion (Diagonal) | 1.42 |
| Basic Luminous Shape | Rectangular w/Sides |
| Luminous Length (0-180) | 7.62 ft |
| Luminous Width (90-270) | 0.22 ft |
| Luminous Height | 0.01 ft |

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

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---|---|---|---|
| 45 | 36811 | 35203 | 34713 |
| 55 | 35896 | 33946 | 33231 |
| 65 | 33474 | 30824 | 29838 |
| 75 | 28256 | 24947 | 23881 |
| 85 | 14904 | 14139 | 11615 |

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**CANDELA TABULATION**

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| **0** | 5792.136 | 5792.136 | 5792.136 | 5792.136 | 5792.136 |
| **5** | 5834.459 | 5798.182 | 5773.998 | 5757.875 | 5751.829 |
| **10** | 5769.967 | 5733.691 | 5705.476 | 5689.353 | 5681.291 |
| **15** | 5673.230 | 5626.877 | 5598.662 | 5574.478 | 5582.539 |
| **20** | 5520.063 | 5481.771 | 5449.525 | 5425.341 | 5439.449 |
| **25** | 5326.589 | 5294.343 | 5247.990 | 5227.836 | 5219.775 |
| **30** | 5108.930 | 5062.577 | 5010.178 | 4994.055 | 4951.732 |
| **35** | 4830.811 | 4792.519 | 4732.058 | 4719.966 | 4675.628 |
| **40** | 4508.354 | 4427.739 | 4395.494 | 4373.325 | 4361.233 |
| **45** | 4131.482 | 4032.729 | 4012.576 | 3994.438 | 3980.330 |
| **50** | 3714.303 | 3623.612 | 3607.489 | 3599.428 | 3553.074 |
| **55** | 3268.909 | 3174.187 | 3160.080 | 3160.080 | 3119.773 |
| **60** | 2785.223 | 2700.578 | 2660.271 | 2678.409 | 2617.949 |
| **65** | 2247.123 | 2184.647 | 2138.294 | 2176.586 | 2095.971 |
| **70** | 1702.977 | 1624.378 | 1600.193 | 1640.501 | 1578.025 |
| **75** | 1162.861 | 1086.277 | 1086.277 | 1086.277 | 1062.093 |
| **80** | 618.715 | 606.622 | 606.622 | 596.546 | 572.361 |
| **85** | 207.582 | 217.659 | 231.766 | 221.689 | 201.536 |
| **90** | 18.138 | 18.138 | 28.215 | 18.138 | 18.138 |
| **95** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **100** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **105** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **110** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **115** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **120** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **125** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **130** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **135** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **140** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **145** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **150** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **155** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **160** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **165** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **170** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **175** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **180** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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**ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 2133.06 | N.A. | 12.50 |
| 0-30 | 4558.98 | N.A. | 26.70 |
| 0-40 | 7526.05 | N.A. | 44.10 |
| 0-60 | 13460.93 | N.A. | 78.90 |
| 0-80 | 16765.47 | N.A. | 98.30 |
| 0-90 | 17053.95 | N.A. | 100.00 |
| 10-90 | 16504.41 | N.A. | 96.70 |
| 20-40 | 5392.99 | N.A. | 31.60 |
| 20-50 | 8497.96 | N.A. | 49.80 |
| 40-70 | 8075.35 | N.A. | 47.30 |
| 60-80 | 3304.55 | N.A. | 19.40 |
| 70-80 | 1164.07 | N.A. | 6.80 |
| 80-90 | 288.48 | N.A. | 1.70 |
| 90-110 | 5.66 | N.A. | 0.00 |
| 90-120 | 5.66 | N.A. | 0.00 |
| 90-130 | 5.66 | N.A. | 0.00 |
| 90-150 | 5.66 | N.A. | 0.00 |
| 90-180 | 5.66 | N.A. | 0.00 |
| 110-180 | 0.00 | N.A. | 0.00 |
| 0-180 | 17059.61 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

| Zone | Lumens |
|---|---|
| 0-10 | 549.54 |
| 10-20 | 1583.53 |
| 20-30 | 2425.91 |
| 30-40 | 2967.07 |
| 40-50 | 3104.97 |
| 50-60 | 2829.9 |
| 60-70 | 2140.47 |
| 70-80 | 1164.07 |
| 80-90 | 288.48 |
| 90-100 | 5.66 |
| 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 | 121 | 121 | 121 | 121 | 118 | 118 | 118 | 118 | 113 | 113 | 113 | 108 | 108 | 108 | 104 | 104 | 104 | 102 |
| 1 | 111 | 106 | 101 | 97 | 108 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 85 | 79 | 98 | 90 | 84 | 78 | 86 | 81 | 76 | 83 | 79 | 75 | 80 | 76 | 73 | 71 |
| 3 | 92 | 81 | 72 | 66 | 89 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 68 | 63 | 71 | 66 | 62 | 59 |
| 4 | 84 | 71 | 62 | 55 | 81 | 70 | 62 | 55 | 67 | 60 | 54 | 65 | 59 | 54 | 63 | 57 | 53 | 51 |
| 5 | 77 | 64 | 54 | 48 | 75 | 63 | 54 | 47 | 60 | 53 | 47 | 58 | 52 | 46 | 56 | 51 | 46 | 44 |
| 6 | 71 | 57 | 48 | 41 | 69 | 56 | 48 | 41 | 54 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 40 | 38 |
| 7 | 66 | 52 | 43 | 37 | 64 | 51 | 42 | 36 | 49 | 42 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 60 | 47 | 38 | 32 | 45 | 38 | 32 | 44 | 37 | 32 | 43 | 36 | 32 | 30 |
| 9 | 57 | 43 | 35 | 29 | 56 | 43 | 35 | 29 | 42 | 34 | 29 | 40 | 34 | 29 | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 26 | 52 | 39 | 32 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 37 | 30 | 26 | 24 |

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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 | 24.5 | 26.1 | 24.8 | 26.4 | 26.7 | 24.4 | 26.1 | 24.8 | 26.4 | 26.7 |
| | 3H | 26.2 | 27.7 | 26.6 | 28.1 | 28.4 | 26.2 | 27.7 | 26.6 | 28.0 | 28.4 |
| | 4H | 26.8 | 28.3 | 27.2 | 28.6 | 29.0 | 26.8 | 28.2 | 27.2 | 28.5 | 28.9 |
| | 6H | 27.2 | 28.5 | 27.6 | 28.9 | 29.3 | 27.2 | 28.5 | 27.6 | 28.8 | 29.2 |
| | 8H | 27.3 | 28.6 | 27.8 | 29.0 | 29.4 | 27.3 | 28.5 | 27.7 | 28.9 | 29.3 |
| | 12H | 27.4 | 28.6 | 27.8 | 29.0 | 29.4 | 27.3 | 28.5 | 27.8 | 28.9 | 29.3 |
| 4H | 2H | 25.1 | 26.5 | 25.5 | 26.8 | 27.2 | 25.0 | 26.5 | 25.4 | 26.8 | 27.2 |
| | 3H | 27.0 | 28.2 | 27.5 | 28.6 | 29.0 | 27.0 | 28.2 | 27.4 | 28.6 | 29.0 |
| | 4H | 27.8 | 28.8 | 28.2 | 29.2 | 29.7 | 27.7 | 28.8 | 28.2 | 29.2 | 29.6 |
| | 6H | 28.3 | 29.2 | 28.7 | 29.6 | 30.1 | 28.2 | 29.1 | 28.7 | 29.6 | 30.0 |
| | 8H | 28.4 | 29.3 | 28.8 | 29.7 | 30.2 | 28.4 | 29.2 | 28.8 | 29.7 | 30.1 |
| | 12H | 28.5 | 29.2 | 28.9 | 29.7 | 30.2 | 28.4 | 29.2 | 28.9 | 29.7 | 30.2 |
| 8H | 4H | 28.0 | 28.9 | 28.5 | 29.3 | 29.8 | 28.0 | 28.9 | 28.4 | 29.3 | 29.8 |
| | 6H | 28.6 | 29.3 | 29.1 | 29.8 | 30.3 | 28.6 | 29.3 | 29.1 | 29.8 | 30.3 |
| | 8H | 28.8 | 29.5 | 29.3 | 30.0 | 30.4 | 28.8 | 29.4 | 29.3 | 29.9 | 30.4 |
| | 12H | 28.9 | 29.5 | 29.4 | 30.0 | 30.5 | 28.9 | 29.5 | 29.4 | 30.0 | 30.5 |
| 12H | 4H | 28.0 | 28.8 | 28.5 | 29.3 | 29.8 | 28.0 | 28.8 | 28.5 | 29.3 | 29.7 |
| | 6H | 28.7 | 29.3 | 29.2 | 29.8 | 30.3 | 28.6 | 29.3 | 29.2 | 29.7 | 30.3 |
| | 8H | 28.9 | 29.5 | 29.4 | 29.9 | 30.5 | 28.9 | 29.4 | 29.4 | 29.9 | 30.5 |

Maximum UGR = 30.5

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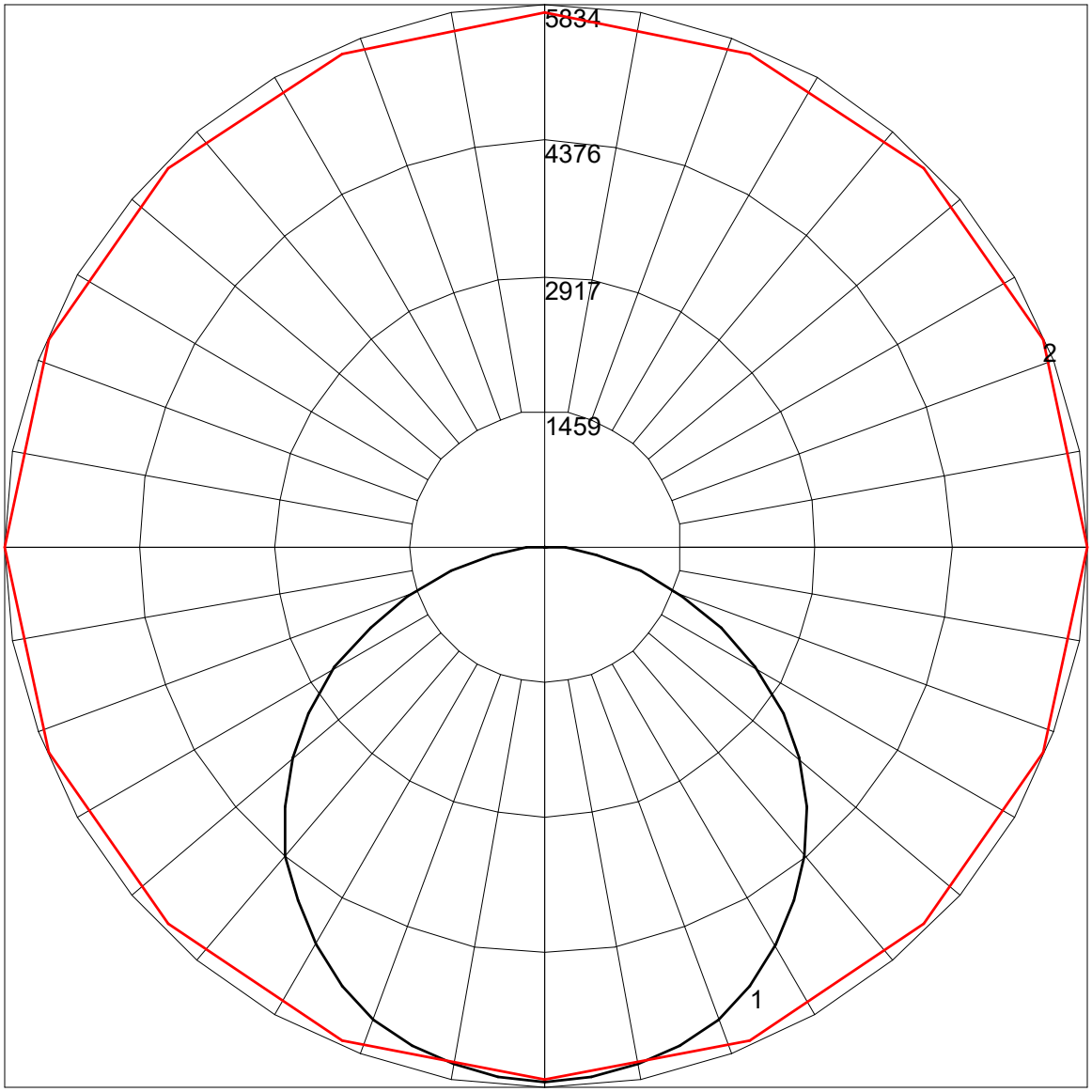
**POLAR GRAPH**




Maximum Candela = 5834.459  Located At Horizontal Angle = 0, Vertical Angle = 5
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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