H.E. WILLIAMS, INC.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : PT-14-P65-835-SA-POE N.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST]GEN FROM BALLABS TEST NO. 20790.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 16-MAY-2019
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2-84 LED 22"ARRAYS w/WHITE REFLECTOR
[MORE] FROST SQUARED RIBBED LENS - 1x4 LUMINAIRE
[LUMCAT] PT-14-P65-835-SA-POE N
[LAMPCAT] HLM 80 CRI 3500K CCT

**CHARACTERISTICS**

| | |
|---|---|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 6746 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 135 |
| Total Luminaire Watts | 50 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.20 |
| Spacing Criterion (90-270) | 1.16 |
| Spacing Criterion (Diagonal) | 1.28 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 3.92 ft |
| Luminous Width (90-270) | 0.98 ft |
| Luminous Height | 0.00 ft |

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

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---|---|---|---|
| 45 | 6022 | 5835 | 5792 |
| 55 | 5419 | 5451 | 5571 |
| 65 | 4735 | 5239 | 5739 |
| 75 | 3822 | 5290 | 6601 |
| 85 | 1771 | 5711 | 6899 |

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**CANDELA TABULATION**

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| **0** | 2627.191 | 2627.191 | 2627.191 | 2627.191 | 2627.191 |
| **5** | 2640.244 | 2611.238 | 2596.735 | 2560.478 | 2593.834 |
| **10** | 2589.484 | 2558.302 | 2539.449 | 2535.823 | 2540.899 |
| **15** | 2503.917 | 2473.461 | 2456.783 | 2450.981 | 2446.631 |
| **20** | 2390.069 | 2360.339 | 2332.783 | 2319.005 | 2321.181 |
| **25** | 2247.941 | 2223.287 | 2211.684 | 2175.427 | 2161.650 |
| **30** | 2081.884 | 2056.504 | 2030.399 | 2010.820 | 1999.943 |
| **35** | 1909.300 | 1886.095 | 1854.914 | 1828.084 | 1812.856 |
| **40** | 1711.336 | 1692.482 | 1659.851 | 1638.822 | 1626.494 |
| **45** | 1519.899 | 1498.144 | 1472.764 | 1461.162 | 1461.887 |
| **50** | 1317.584 | 1311.057 | 1283.502 | 1288.578 | 1295.104 |
| **55** | 1109.468 | 1109.468 | 1115.994 | 1133.398 | 1140.649 |
| **60** | 915.855 | 920.206 | 949.937 | 979.667 | 997.796 |
| **65** | 714.265 | 740.370 | 790.405 | 841.890 | 865.820 |
| **70** | 520.652 | 564.161 | 635.950 | 704.838 | 733.119 |
| **75** | 353.144 | 398.103 | 488.746 | 577.939 | 609.845 |
| **80** | 184.911 | 261.776 | 356.045 | 450.313 | 480.044 |
| **85** | 55.111 | 123.999 | 177.660 | 201.590 | 214.642 |
| **90** | 0.000 | 2.175 | 2.901 | 5.076 | 2.901 |

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## ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 940.04 | N.A. | 13.90 |
| 0-30 | 1953.18 | N.A. | 29.00 |
| 0-40 | 3114.05 | N.A. | 46.20 |
| 0-60 | 5262.79 | N.A. | 78.00 |
| 0-80 | 6563.34 | N.A. | 97.30 |
| 0-90 | 6746.3 | N.A. | 100.00 |
| 10-90 | 6499.77 | N.A. | 96.30 |
| 20-40 | 2174.01 | N.A. | 32.20 |
| 20-50 | 3317.83 | N.A. | 49.20 |
| 40-70 | 2932.77 | N.A. | 43.50 |
| 60-80 | 1300.55 | N.A. | 19.30 |
| 70-80 | 516.51 | N.A. | 7.70 |
| 80-90 | 182.97 | N.A. | 2.70 |
| 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 | 6746.3 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

## ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---|---|
| 0-10 | 246.54 |
| 10-20 | 693.50 |
| 20-30 | 1013.14 |
| 30-40 | 1160.87 |
| 40-50 | 1143.82 |
| 50-60 | 1004.91 |
| 60-70 | 784.04 |
| 70-80 | 516.51 |
| 80-90 | 182.97 |
| 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 | 108 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 99 | 90 | 83 | 77 | 96 | 88 | 82 | 77 | 85 | 79 | 75 | 81 | 77 | 73 | 78 | 75 | 71 | 69 |
| 3 | 90 | 79 | 71 | 65 | 87 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 66 | 62 | 69 | 65 | 61 | 58 |
| 4 | 83 | 70 | 62 | 55 | 80 | 69 | 61 | 55 | 67 | 59 | 54 | 64 | 58 | 53 | 62 | 57 | 52 | 50 |
| 5 | 76 | 63 | 54 | 47 | 74 | 62 | 54 | 47 | 60 | 52 | 47 | 58 | 51 | 46 | 56 | 50 | 46 | 44 |
| 6 | 70 | 57 | 48 | 42 | 68 | 56 | 48 | 41 | 54 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 40 | 38 |
| 7 | 65 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 49 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 32 | 30 |
| 9 | 57 | 44 | 35 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 29 | 40 | 34 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 27 | 25 |

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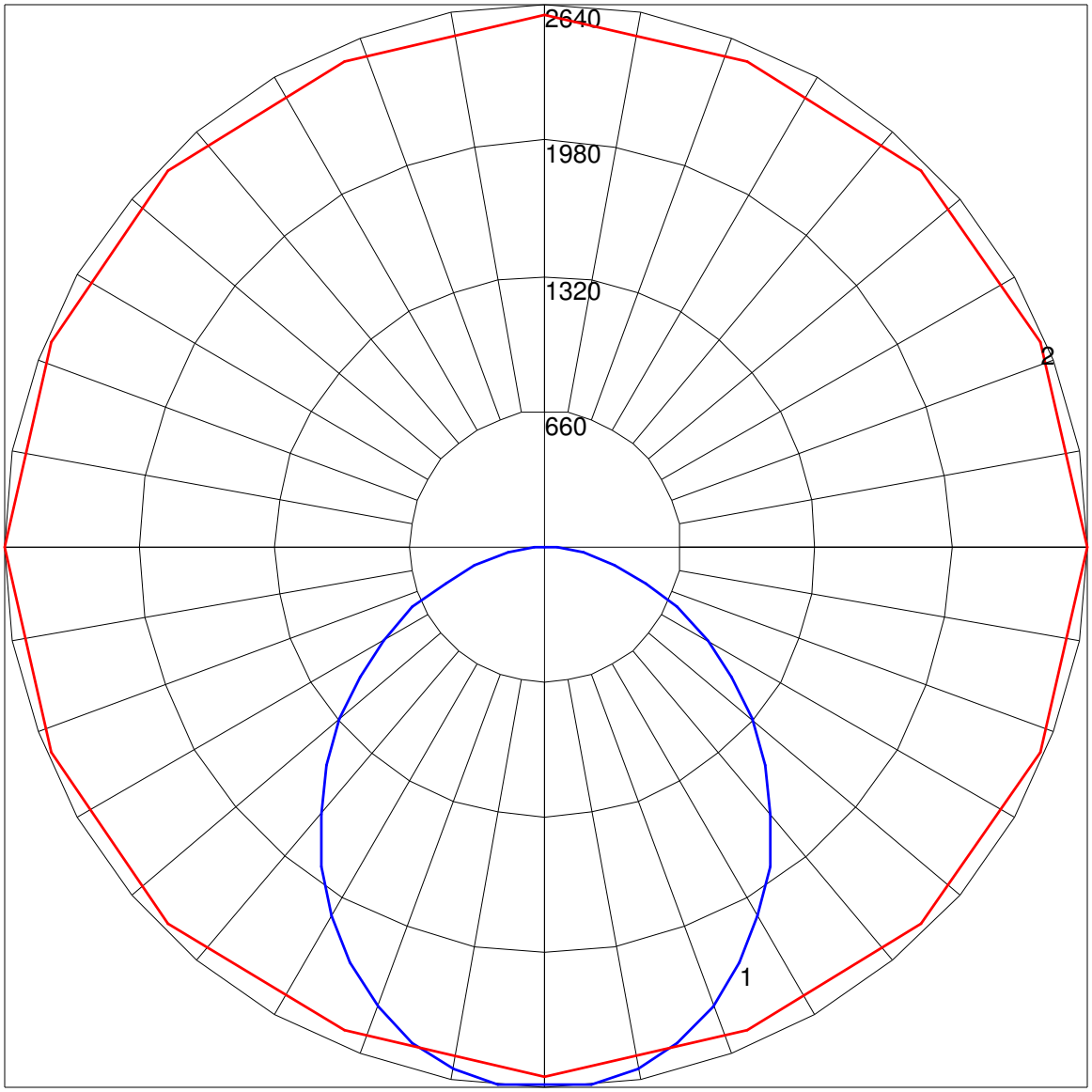
**POLAR GRAPH**




Maximum Candela = 2640.244  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.)