



IES INDOOR REPORT

PHOTOMETRIC FILENAME : GLN-4-L105-835-(L70)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 20912.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 11-04-2020
 [MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] LED 22" ARRAYS 1X4' NARROW INDUSTRIAL LUMINAIRE
 [MORE] WHITE HOUSING w/WHITE REFLECTOR & NO LENS
 [LUMCAT] GLN-4-L105-835-(L70)-DIM-UNV

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 6821 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 144 |
| Total Luminaire Watts | 47.5 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.32 |
| Spacing Criterion (90-270) | 1.32 |
| Spacing Criterion (Diagonal) | 1.44 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 4.01 ft |
| Luminous Width (90-270) | 0.65 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 10442 | 10512 | 10623 |
| 55 | 9973 | 10438 | 5941 |
| 65 | 8860 | 5581 | 5845 |
| 75 | 6587 | 1663 | 1926 |
| 85 | 1044 | 2279 | 2184 |

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CANDELA TABULATION

| | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
|-----------|------------|-------------|-------------|-------------|-------------|
| 0 | 2486.299 | 2486.299 | 2486.299 | 2486.299 | 2486.299 |
| 5 | 2525.669 | 2479.820 | 2467.859 | 2465.368 | 2463.873 |
| 10 | 2499.256 | 2458.391 | 2449.420 | 2449.420 | 2445.433 |
| 15 | 2451.414 | 2417.525 | 2411.047 | 2406.063 | 2403.073 |
| 20 | 2385.132 | 2353.238 | 2351.244 | 2347.756 | 2345.264 |
| 25 | 2293.435 | 2273.999 | 2267.520 | 2275.494 | 2272.005 |
| 30 | 2189.777 | 2170.839 | 2172.334 | 2180.806 | 2184.295 |
| 35 | 2077.647 | 2055.719 | 2052.230 | 2068.178 | 2077.647 |
| 40 | 1932.127 | 1921.661 | 1945.084 | 1940.599 | 1949.569 |
| 45 | 1778.633 | 1764.181 | 1790.593 | 1804.547 | 1809.531 |
| 50 | 1593.244 | 1596.733 | 1625.638 | 1656.536 | 1662.018 |
| 55 | 1377.955 | 1400.381 | 1442.243 | 1256.356 | 820.793 |
| 60 | 1143.229 | 1171.635 | 1258.349 | 705.672 | 713.148 |
| 65 | 902.025 | 931.926 | 568.126 | 592.545 | 595.037 |
| 70 | 631.417 | 738.065 | 452.507 | 182.897 | 137.048 |
| 75 | 410.645 | 275.093 | 103.658 | 114.622 | 120.104 |
| 80 | 177.913 | 145.520 | 82.727 | 97.179 | 97.678 |
| 85 | 21.928 | 35.383 | 47.842 | 44.354 | 45.849 |
| 90 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 918.01 | N.A. | 13.50 |
| 0-30 | 1967.03 | N.A. | 28.80 |
| 0-40 | 3259.02 | N.A. | 47.80 |
| 0-60 | 5810.35 | N.A. | 85.20 |
| 0-80 | 6767.3 | N.A. | 99.20 |
| 0-90 | 6820.79 | N.A. | 100.00 |
| 10-90 | 6584.94 | N.A. | 96.50 |
| 20-40 | 2341.02 | N.A. | 34.30 |
| 20-50 | 3720.85 | N.A. | 54.60 |
| 40-70 | 3262.09 | N.A. | 47.80 |
| 60-80 | 956.95 | N.A. | 14.00 |
| 70-80 | 246.18 | N.A. | 3.60 |
| 80-90 | 53.49 | N.A. | 0.80 |
| 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 | 6820.79 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|---------|
| 0-10 | 235.85 |
| 10-20 | 682.16 |
| 20-30 | 1049.02 |
| 30-40 | 1292.00 |
| 40-50 | 1379.84 |
| 50-60 | 1171.49 |
| 60-70 | 710.77 |
| 70-80 | 246.18 |
| 80-90 | 53.49 |
| 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 | 110 | 106 | 102 | 98 | 107 | 103 | 100 | 97 | 99 | 96 | 94 | 95 | 93 | 91 | 92 | 90 | 88 | 86 |
| 2 | 100 | 93 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 83 | 78 | 84 | 80 | 77 | 81 | 78 | 75 | 73 |
| 3 | 92 | 82 | 74 | 68 | 90 | 80 | 73 | 67 | 77 | 71 | 66 | 75 | 70 | 65 | 72 | 68 | 64 | 62 |
| 4 | 84 | 73 | 64 | 58 | 82 | 71 | 64 | 58 | 69 | 62 | 57 | 67 | 61 | 56 | 65 | 59 | 55 | 53 |
| 5 | 78 | 65 | 56 | 50 | 75 | 64 | 56 | 50 | 62 | 55 | 49 | 60 | 54 | 49 | 58 | 53 | 48 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 49 | 43 | 56 | 49 | 43 | 54 | 48 | 43 | 53 | 47 | 42 | 40 |
| 7 | 66 | 53 | 45 | 39 | 65 | 52 | 44 | 38 | 51 | 43 | 38 | 49 | 43 | 38 | 48 | 42 | 38 | 36 |
| 8 | 62 | 48 | 40 | 34 | 60 | 48 | 40 | 34 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 |
| 9 | 58 | 44 | 36 | 31 | 56 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 35 | 30 | 41 | 35 | 30 | 28 |
| 10 | 54 | 41 | 33 | 28 | 53 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 38 | 32 | 27 | 26 |

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UGR TABLE - CORRECTED

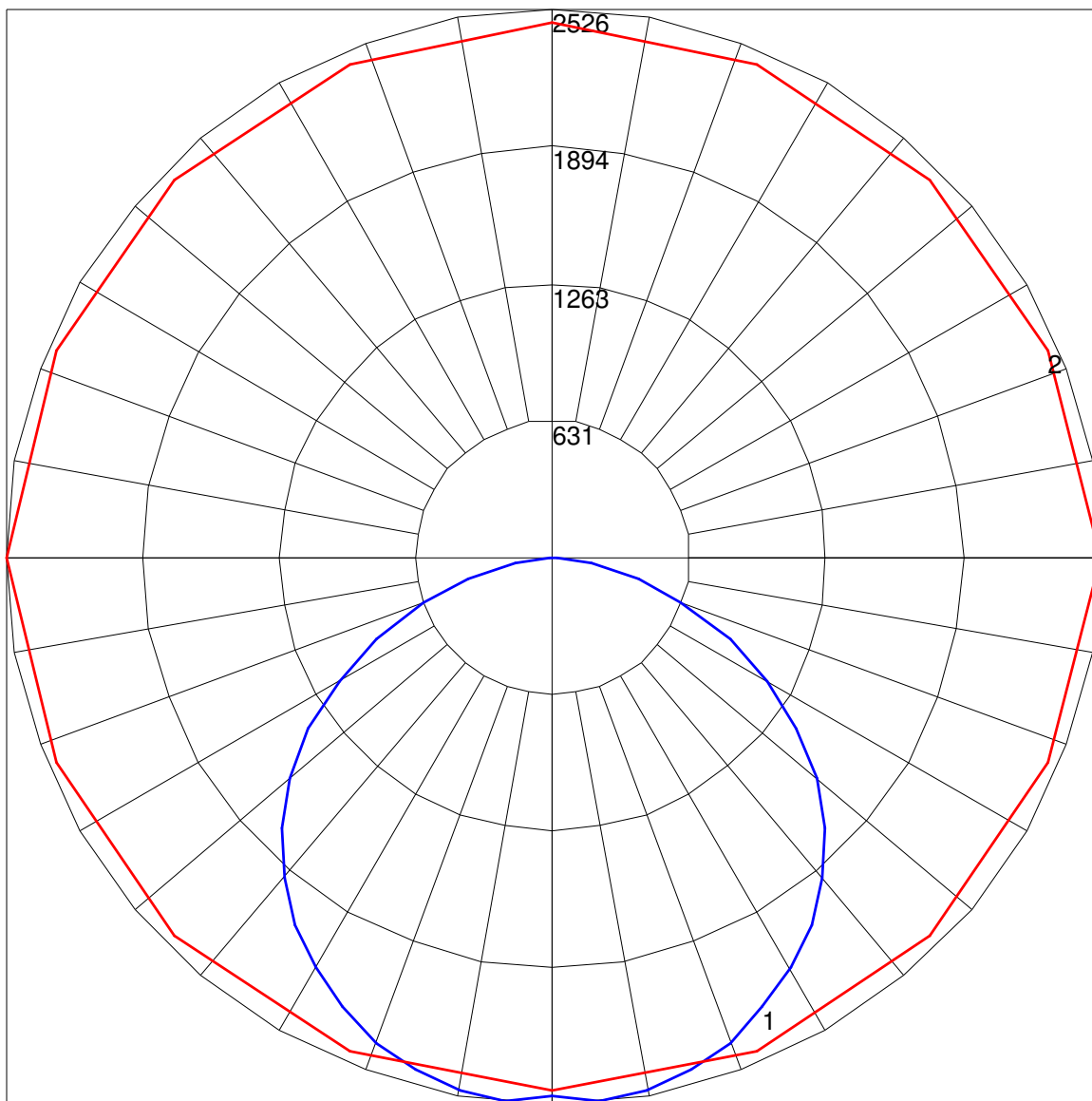
Reflectances

| | | | | | | | | | | |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 | 20.7 | 22.3 | 21.0 | 22.6 | 22.9 | 18.5 | 20.0 | 18.8 | 20.4 | 20.7 |
| | 3H | 22.3 | 23.8 | 22.7 | 24.1 | 24.5 | 18.9 | 20.3 | 19.3 | 20.7 | 21.0 |
| | 4H | 22.7 | 24.1 | 23.1 | 24.4 | 24.8 | 19.0 | 20.3 | 19.4 | 20.6 | 21.0 |
| | 6H | 22.9 | 24.2 | 23.3 | 24.5 | 24.9 | 19.1 | 20.3 | 19.5 | 20.7 | 21.1 |
| | 8H | 23.0 | 24.1 | 23.4 | 24.5 | 24.9 | 19.1 | 20.3 | 19.5 | 20.7 | 21.1 |
| | 12H | 23.0 | 24.1 | 23.4 | 24.5 | 24.9 | 19.2 | 20.3 | 19.6 | 20.6 | 21.1 |
| 4H | 2H | 20.8 | 22.2 | 21.2 | 22.5 | 22.9 | 18.9 | 20.2 | 19.3 | 20.6 | 21.0 |
| | 3H | 22.8 | 23.9 | 23.2 | 24.3 | 24.7 | 19.5 | 20.6 | 19.9 | 21.0 | 21.4 |
| | 4H | 23.2 | 24.2 | 23.6 | 24.6 | 25.0 | 19.6 | 20.6 | 20.0 | 21.0 | 21.4 |
| | 6H | 23.5 | 24.3 | 23.9 | 24.8 | 25.2 | 19.7 | 20.6 | 20.2 | 21.0 | 21.5 |
| | 8H | 23.5 | 24.3 | 24.0 | 24.8 | 25.2 | 19.8 | 20.6 | 20.3 | 21.1 | 21.5 |
| | 12H | 23.5 | 24.2 | 24.0 | 24.7 | 25.2 | 19.9 | 20.6 | 20.3 | 21.1 | 21.5 |
| 8H | 4H | 23.1 | 24.0 | 23.6 | 24.4 | 24.9 | 19.7 | 20.5 | 20.2 | 21.0 | 21.5 |
| | 6H | 23.5 | 24.1 | 24.0 | 24.6 | 25.1 | 20.0 | 20.6 | 20.5 | 21.1 | 21.6 |
| | 8H | 23.5 | 24.1 | 24.0 | 24.6 | 25.1 | 20.1 | 20.7 | 20.6 | 21.2 | 21.7 |
| | 12H | 23.6 | 24.1 | 24.1 | 24.6 | 25.1 | 20.2 | 20.7 | 20.7 | 21.2 | 21.8 |
| 12H | 4H | 23.1 | 23.9 | 23.6 | 24.3 | 24.8 | 19.7 | 20.5 | 20.2 | 20.9 | 21.4 |
| | 6H | 23.4 | 24.0 | 24.0 | 24.5 | 25.0 | 20.0 | 20.6 | 20.5 | 21.0 | 21.6 |
| | 8H | 23.5 | 24.0 | 24.0 | 24.5 | 25.1 | 20.1 | 20.6 | 20.6 | 21.1 | 21.7 |

Maximum UGR = 25.2

POLAR GRAPH



Maximum Candela = 2525.669 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.)