



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-14-L90-927-AF-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20224.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 2023-07-21
 [MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 1x4'RECESSED LED LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CENTER LENS
 [MORE] 0-10V DIMMING DRIVER
 [LUMCAT] LT-14-L90-927-AF-DIM-UNV
 [LAMPCAT] 22 INCH LED ARRAYS
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] INDOOR
 [_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 7248 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 109 |
| Total Luminaire Watts | 66.8 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.26 |
| Spacing Criterion (90-270) | 1.28 |
| Spacing Criterion (Diagonal) | 1.38 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 3.92 ft |
| Luminous Width (90-270) | 0.92 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 6882 | 7098 | 7497 |
| 55 | 6326 | 6932 | 7500 |
| 65 | 5511 | 6776 | 7177 |
| 75 | 4164 | 6044 | 6346 |
| 85 | 1795 | 2941 | 2493 |

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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 | 2520.981 | 2520.981 | 2520.981 | 2520.981 | 2520.981 |
| 5 | 2560.167 | 2512.273 | 2499.211 | 2491.954 | 2486.149 |
| 10 | 2516.627 | 2473.087 | 2465.830 | 2461.476 | 2454.219 |
| 15 | 2457.122 | 2420.838 | 2413.582 | 2420.838 | 2410.679 |
| 20 | 2359.882 | 2329.404 | 2329.404 | 2342.466 | 2342.466 |
| 25 | 2248.129 | 2224.907 | 2236.518 | 2258.288 | 2259.739 |
| 30 | 2121.862 | 2098.641 | 2123.313 | 2158.146 | 2158.146 |
| 35 | 1979.630 | 1962.214 | 1988.339 | 2040.587 | 2044.941 |
| 40 | 1812.726 | 1809.823 | 1838.850 | 1902.709 | 1917.223 |
| 45 | 1625.503 | 1628.406 | 1676.300 | 1753.221 | 1770.637 |
| 50 | 1423.766 | 1439.731 | 1506.493 | 1583.414 | 1610.990 |
| 55 | 1211.871 | 1252.508 | 1327.978 | 1400.545 | 1436.829 |
| 60 | 1001.426 | 1063.834 | 1149.463 | 1208.968 | 1242.349 |
| 65 | 777.919 | 849.035 | 956.434 | 997.072 | 1013.037 |
| 70 | 574.731 | 660.361 | 750.344 | 772.114 | 793.884 |
| 75 | 359.933 | 470.235 | 522.483 | 518.129 | 548.607 |
| 80 | 187.223 | 269.950 | 297.525 | 277.206 | 297.525 |
| 85 | 52.248 | 92.886 | 85.629 | 72.567 | 72.567 |
| 90 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 920.80 | N.A. | 12.70 |
| 0-30 | 1954.78 | N.A. | 27.00 |
| 0-40 | 3206.25 | N.A. | 44.20 |
| 0-60 | 5695.31 | N.A. | 78.60 |
| 0-80 | 7131.76 | N.A. | 98.40 |
| 0-90 | 7248.36 | N.A. | 100.00 |
| 10-90 | 7010.17 | N.A. | 96.70 |
| 20-40 | 2285.45 | N.A. | 31.50 |
| 20-50 | 3588.24 | N.A. | 49.50 |
| 40-70 | 3405.57 | N.A. | 47.00 |
| 60-80 | 1436.44 | N.A. | 19.80 |
| 70-80 | 519.94 | N.A. | 7.20 |
| 80-90 | 116.60 | N.A. | 1.60 |
| 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 | 7248.36 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|---------|
| 0-10 | 238.19 |
| 10-20 | 682.62 |
| 20-30 | 1033.98 |
| 30-40 | 1251.47 |
| 40-50 | 1302.79 |
| 50-60 | 1186.27 |
| 60-70 | 916.51 |
| 70-80 | 519.94 |
| 80-90 | 116.60 |
| 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 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 94 | 97 | 94 | 91 | 93 | 91 | 88 | 90 | 88 | 86 | 84 |
| 2 | 99 | 90 | 84 | 78 | 96 | 89 | 82 | 77 | 85 | 80 | 75 | 82 | 77 | 73 | 79 | 75 | 72 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 66 | 62 | 69 | 65 | 61 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 69 | 60 | 54 | 66 | 59 | 53 | 64 | 58 | 53 | 62 | 56 | 52 | 50 |
| 5 | 76 | 63 | 54 | 47 | 73 | 61 | 53 | 47 | 59 | 52 | 46 | 57 | 51 | 46 | 55 | 50 | 45 | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 41 | 54 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 36 | 47 | 40 | 35 | 46 | 40 | 35 | 33 |
| 8 | 60 | 47 | 38 | 32 | 59 | 46 | 38 | 32 | 44 | 37 | 32 | 43 | 36 | 32 | 42 | 36 | 31 | 29 |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 28 | 39 | 33 | 28 | 26 |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 |

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UGR TABLE - CORRECTED

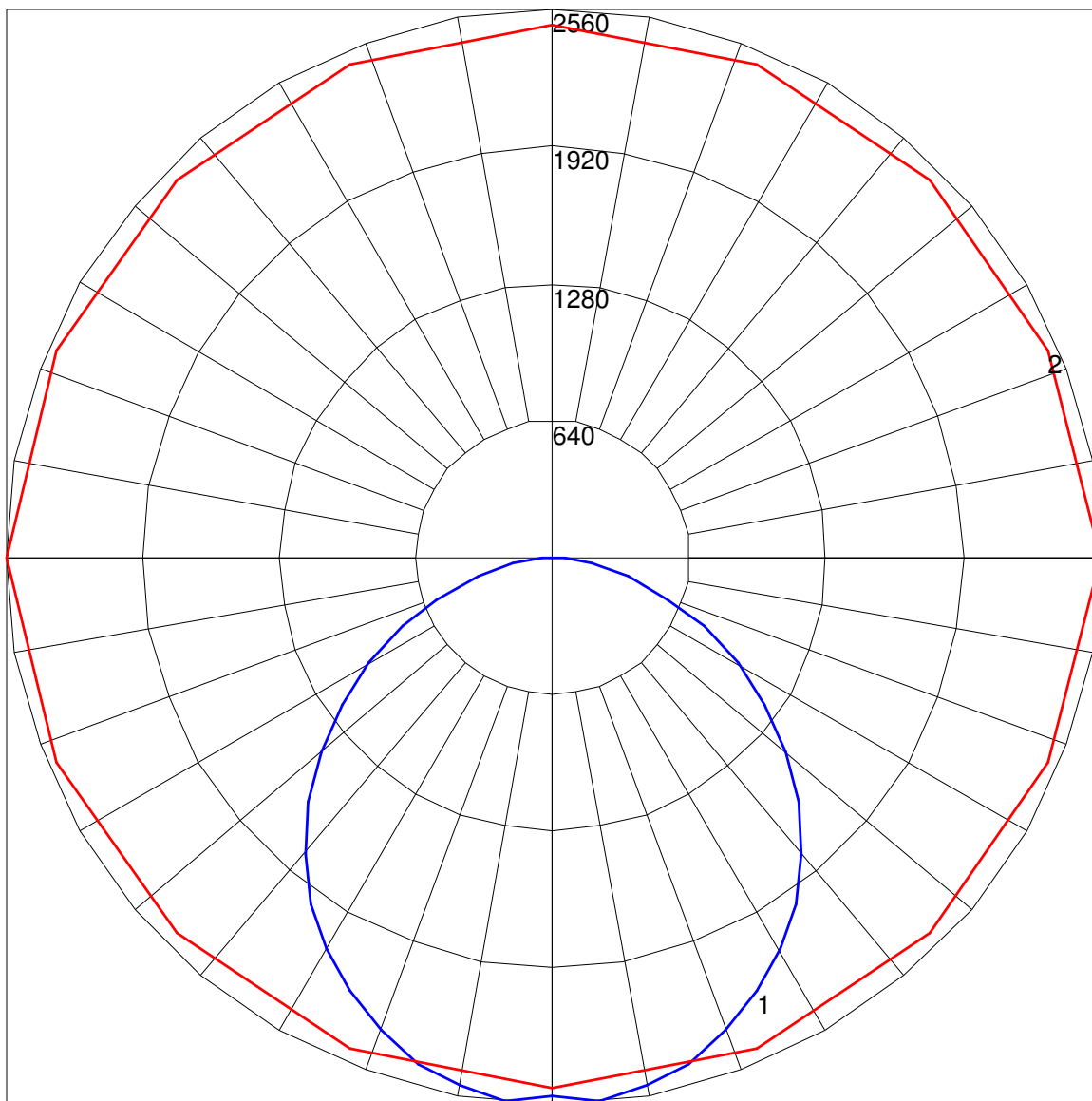
Reflectances

| | | | | | | | | | | |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 | 18.5 | 20.1 | 18.8 | 20.4 | 20.8 | 19.4 | 21.1 | 19.8 | 21.4 | 21.7 |
| | 3H | 20.1 | 21.6 | 20.5 | 22.0 | 22.3 | 21.3 | 22.8 | 21.7 | 23.2 | 23.5 |
| | 4H | 20.7 | 22.1 | 21.1 | 22.4 | 22.8 | 22.0 | 23.4 | 22.4 | 23.8 | 24.2 |
| | 6H | 21.0 | 22.3 | 21.4 | 22.7 | 23.1 | 22.5 | 23.8 | 22.9 | 24.2 | 24.5 |
| | 8H | 21.1 | 22.3 | 21.5 | 22.7 | 23.1 | 22.6 | 23.8 | 23.0 | 24.2 | 24.6 |
| | 12H | 21.1 | 22.3 | 21.6 | 22.7 | 23.1 | 22.6 | 23.8 | 23.1 | 24.2 | 24.6 |
| 4H | 2H | 19.3 | 20.7 | 19.7 | 21.1 | 21.4 | 20.0 | 21.4 | 20.4 | 21.8 | 22.1 |
| | 3H | 21.2 | 22.4 | 21.6 | 22.8 | 23.2 | 22.2 | 23.3 | 22.6 | 23.7 | 24.1 |
| | 4H | 21.9 | 23.0 | 22.4 | 23.4 | 23.8 | 23.0 | 24.0 | 23.4 | 24.5 | 24.9 |
| | 6H | 22.4 | 23.3 | 22.8 | 23.7 | 24.2 | 23.5 | 24.5 | 24.0 | 24.9 | 25.4 |
| | 8H | 22.5 | 23.4 | 22.9 | 23.8 | 24.3 | 23.7 | 24.5 | 24.1 | 25.0 | 25.5 |
| | 12H | 22.5 | 23.3 | 23.0 | 23.8 | 24.3 | 23.7 | 24.5 | 24.2 | 25.0 | 25.5 |
| 8H | 4H | 22.3 | 23.2 | 22.8 | 23.6 | 24.1 | 23.3 | 24.1 | 23.7 | 24.6 | 25.0 |
| | 6H | 22.9 | 23.7 | 23.4 | 24.1 | 24.6 | 23.9 | 24.6 | 24.4 | 25.1 | 25.6 |
| | 8H | 23.1 | 23.8 | 23.6 | 24.3 | 24.8 | 24.1 | 24.8 | 24.6 | 25.3 | 25.7 |
| | 12H | 23.2 | 23.8 | 23.7 | 24.3 | 24.8 | 24.2 | 24.8 | 24.7 | 25.3 | 25.8 |
| 12H | 4H | 22.4 | 23.2 | 22.8 | 23.6 | 24.1 | 23.3 | 24.1 | 23.8 | 24.5 | 25.0 |
| | 6H | 23.0 | 23.7 | 23.5 | 24.1 | 24.7 | 24.0 | 24.6 | 24.5 | 25.1 | 25.6 |
| | 8H | 23.2 | 23.8 | 23.7 | 24.3 | 24.9 | 24.2 | 24.8 | 24.7 | 25.2 | 25.8 |

Maximum UGR = 25.8

POLAR GRAPH



Maximum Candela = 2560.167 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.)