

IES INDOOR REPORT

PHOTOMETRIC FILENAME : GA-8-L180-835-N-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19576.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 09-06-2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 8' LED AISLE LUMINAIRE

[MORE] WHITE FLAT REFLECTOR w/CLEAR ACRYLIC ROD OPTIC

[LUMCAT] GA-8-L180-835-N-DIM-UNV

[LAMPCAT] HLM 80 CRI LED

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 17329 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 135 |
| Total Luminaire Watts | 128.4 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.46 |
| Spacing Criterion (90-270) | 0.58 |
| Spacing Criterion (Diagonal) | 0.68 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 8.00 ft |
| Luminous Width (90-270) | 0.39 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 72510 | 4985 | 3431 |
| 55 | 52302 | 2936 | 2328 |
| 65 | 31136 | 2230 | 2230 |
| 75 | 14969 | 3169 | 3945 |
| 85 | 5406 | 9011 | 12615 |

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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 | 17421.51817421.51817421.51817421.51817421.518 | | | | |
| 5 | 17566.46917444.01117209.09116906.69516884.203 | | | | |
| 10 | 17746.40717129.11915952.02314774.92714492.524 | | | | |
| 15 | 17813.88416434.35713775.27011700.98311026.214 | | | | |
| 20 | 17623.94914347.5748964.422 6125.397 5138.236 | | | | |
| 25 | 17533.98012295.7785980.447 3646.248 2916.499 | | | | |
| 30 | 17881.3619446.757 3488.802 2006.811 1704.415 | | | | |
| 35 | 16546.8196215.366 2064.291 1312.050 1199.588 | | | | |
| 40 | 15852.0573723.721 1334.542 942.177 887.195 | | | | |
| 45 | 14684.9582266.722 1009.653 752.242 694.761 | | | | |
| 50 | 11813.4441626.941 752.242 582.300 549.811 | | | | |
| 55 | 8592.050 1189.592 482.334 382.369 382.369 | | | | |
| 60 | 5922.966 752.242 314.892 292.400 314.892 | | | | |
| 65 | 3768.706 382.369 269.907 269.907 269.907 | | | | |
| 70 | 2131.768 292.400 257.412 269.907 279.904 | | | | |
| 75 | 1109.619 279.904 234.919 292.400 292.400 | | | | |
| 80 | 514.823 269.907 257.412 314.892 314.892 | | | | |
| 85 | 134.954 234.919 224.923 292.400 314.892 | | | | |
| 90 | 9.997 134.954 134.954 189.935 212.427 | | | | |
| 95 | 0.000 0.000 54.981 112.461 112.461 | | | | |
| 100 | 0.000 0.000 9.997 32.489 32.489 | | | | |
| 105 | 0.000 0.000 0.000 9.997 9.997 | | | | |
| 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 | 5386.9 | N.A. | 31.10 |
| 0-30 | 9099.75 | N.A. | 52.50 |
| 0-40 | 12059.69 | N.A. | 69.60 |
| 0-60 | 15810.57 | N.A. | 91.20 |
| 0-80 | 16991.84 | N.A. | 98.10 |
| 0-90 | 17249.59 | N.A. | 99.50 |
| 10-90 | 15648.43 | N.A. | 90.30 |
| 20-40 | 6672.8 | N.A. | 38.50 |
| 20-50 | 8934.27 | N.A. | 51.60 |
| 40-70 | 4516.24 | N.A. | 26.10 |
| 60-80 | 1181.27 | N.A. | 6.80 |
| 70-80 | 415.90 | N.A. | 2.40 |
| 80-90 | 257.75 | N.A. | 1.50 |
| 90-110 | 79.50 | N.A. | 0.50 |
| 90-120 | 79.50 | N.A. | 0.50 |
| 90-130 | 79.50 | N.A. | 0.50 |
| 90-150 | 79.50 | N.A. | 0.50 |
| 90-180 | 79.50 | N.A. | 0.50 |
| 110-180 | 0.00 | N.A. | 0.00 |
| 0-180 | 17329.09 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|---------|
| 0-10 | 1601.16 |
| 10-20 | 3785.73 |
| 20-30 | 3712.85 |
| 30-40 | 2959.95 |
| 40-50 | 2261.47 |
| 50-60 | 1489.4 |
| 60-70 | 765.37 |
| 70-80 | 415.90 |
| 80-90 | 257.75 |
| 90-100 | 73.58 |
| 100-110 | 5.91 |
| 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 | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 97 | 97 | 95 | 94 | 94 | 92 | 91 | 89 |
| 2 | 104 | 98 | 93 | 88 | 102 | 96 | 91 | 87 | 92 | 89 | 85 | 89 | 86 | 83 | 86 | 84 | 81 | 79 |
| 3 | 97 | 89 | 83 | 78 | 95 | 88 | 82 | 77 | 85 | 80 | 76 | 82 | 78 | 75 | 80 | 76 | 73 | 71 |
| 4 | 91 | 82 | 75 | 70 | 89 | 81 | 74 | 69 | 78 | 73 | 68 | 76 | 71 | 67 | 74 | 70 | 67 | 65 |
| 5 | 86 | 75 | 68 | 63 | 84 | 74 | 68 | 63 | 72 | 67 | 62 | 71 | 65 | 61 | 69 | 64 | 61 | 59 |
| 6 | 81 | 70 | 63 | 58 | 79 | 69 | 62 | 57 | 67 | 61 | 57 | 66 | 60 | 56 | 64 | 60 | 56 | 54 |
| 7 | 76 | 65 | 58 | 53 | 74 | 64 | 57 | 53 | 63 | 57 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 50 |
| 8 | 72 | 61 | 54 | 49 | 70 | 60 | 53 | 49 | 59 | 53 | 49 | 58 | 52 | 48 | 57 | 52 | 48 | 46 |
| 9 | 68 | 57 | 50 | 45 | 67 | 56 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 45 | 53 | 48 | 45 | 43 |
| 10 | 65 | 54 | 47 | 43 | 63 | 53 | 47 | 42 | 52 | 46 | 42 | 51 | 46 | 42 | 50 | 46 | 42 | 40 |

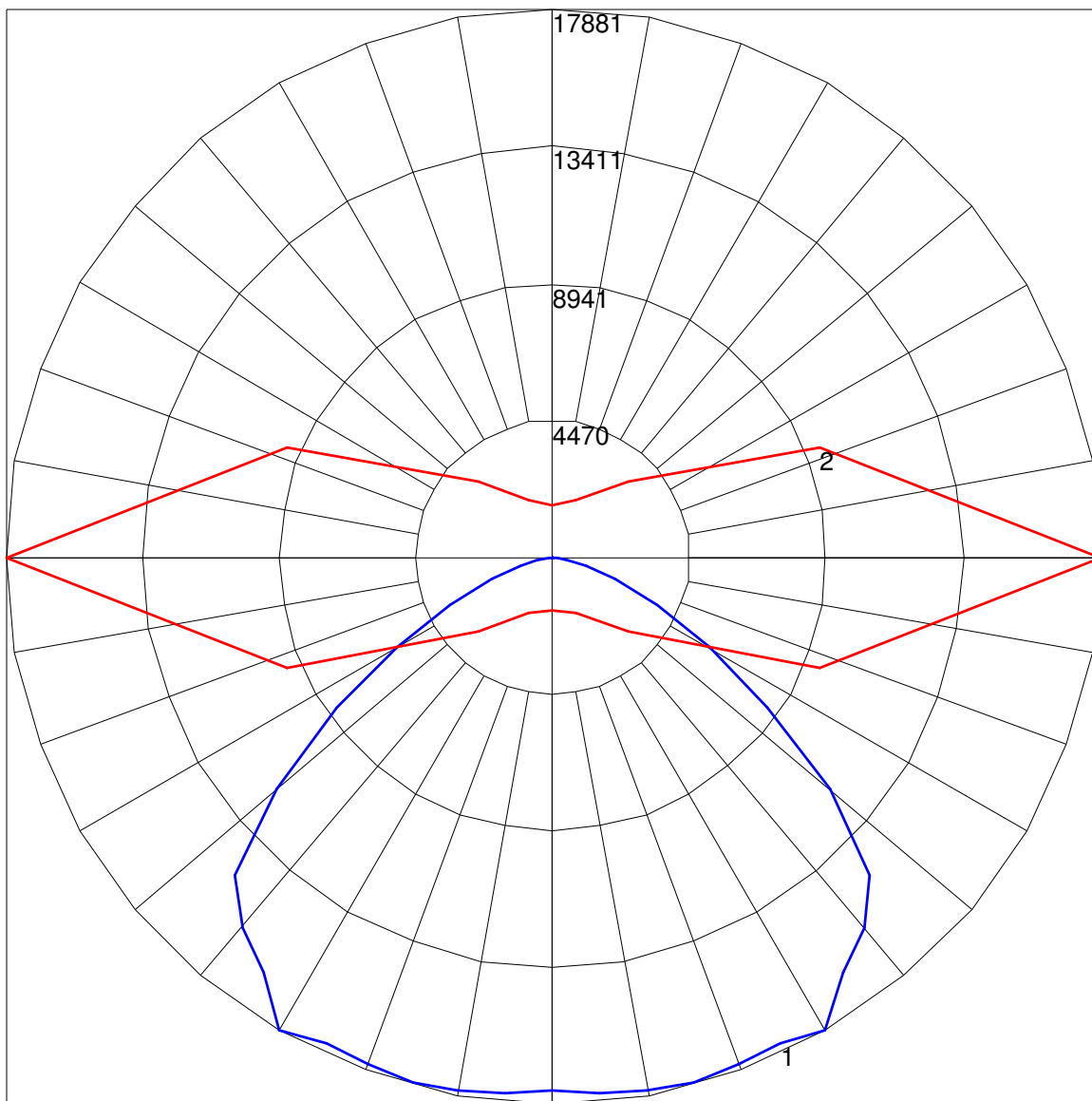
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UGR TABLE - CORRECTED

| 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 | 20.6 | 21.9 | 21.0 | 22.2 | 22.5 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| | 3H | 22.7 | 23.9 | 23.1 | 24.2 | 24.6 | 10.6 | 11.8 | 11.0 | 12.1 | 12.5 |
| | 4H | 23.4 | 24.4 | 23.8 | 24.8 | 25.2 | 12.5 | 13.6 | 12.9 | 13.9 | 14.3 |
| | 6H | 23.7 | 24.8 | 24.2 | 25.1 | 25.5 | 14.7 | 15.8 | 15.2 | 16.1 | 16.5 |
| | 8H | 23.8 | 24.8 | 24.3 | 25.2 | 25.6 | 16.0 | 16.9 | 16.4 | 17.3 | 17.7 |
| | 12H | 23.9 | 24.8 | 24.3 | 25.2 | 25.6 | 17.4 | 18.3 | 17.8 | 18.7 | 19.1 |
| 4H | 2H | 20.4 | 21.5 | 20.8 | 21.8 | 22.2 | 10.0 | 10.0 | 10.0 | 10.1 | 10.5 |
| | 3H | 22.5 | 23.4 | 23.0 | 23.8 | 24.2 | 11.7 | 12.6 | 12.1 | 13.0 | 13.4 |
| | 4H | 23.2 | 24.0 | 23.6 | 24.4 | 24.9 | 13.8 | 14.6 | 14.2 | 15.0 | 15.5 |
| | 6H | 23.7 | 24.4 | 24.2 | 24.8 | 25.3 | 16.3 | 17.0 | 16.8 | 17.5 | 18.0 |
| | 8H | 23.9 | 24.5 | 24.3 | 25.0 | 25.4 | 17.7 | 18.3 | 18.1 | 18.8 | 19.2 |
| | 12H | 24.0 | 24.6 | 24.5 | 25.0 | 25.5 | 19.2 | 19.7 | 19.7 | 20.2 | 20.7 |
| 8H | 4H | 23.1 | 23.8 | 23.6 | 24.2 | 24.7 | 14.4 | 15.1 | 14.9 | 15.6 | 16.0 |
| | 6H | 23.7 | 24.2 | 24.2 | 24.7 | 25.2 | 17.3 | 17.8 | 17.8 | 18.3 | 18.8 |
| | 8H | 23.9 | 24.4 | 24.4 | 24.9 | 25.4 | 18.8 | 19.3 | 19.3 | 19.8 | 20.3 |
| | 12H | 24.1 | 24.6 | 24.6 | 25.0 | 25.6 | 20.5 | 21.0 | 21.1 | 21.5 | 22.0 |
| 12H | 4H | 23.1 | 23.7 | 23.6 | 24.1 | 24.6 | 14.7 | 15.3 | 15.2 | 15.8 | 16.2 |
| | 6H | 23.7 | 24.2 | 24.2 | 24.6 | 25.2 | 17.5 | 18.0 | 18.1 | 18.5 | 19.0 |
| | 8H | 24.0 | 24.4 | 24.5 | 24.9 | 25.5 | 19.2 | 19.6 | 19.7 | 20.1 | 20.7 |

Maximum UGR = 25.6

POLAR GRAPH



Maximum Candela = 17881.361 Located At Horizontal Angle = 0, Vertical Angle = 30
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (30) (Through Max. Cd.)