



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 80-4-L115-830-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 18635.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2024-01-08
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4'SUSPENDED INDUSTRIAL LED LUMINAIRE
[MORE] WHITE REFLECTOR w/OPEN BOTTOM
[MORE] 0-10V DIMMING DRIVER
[LUMCAT] 80-4-L115-830-DIM-UNV
[LAMPCAT] HLM 80 CRI 3000K CCT
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR
[_SEARCH_MOUNTING] SUSPENDED

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 11052 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 151 |
| Total Luminaire Watts | 73.1 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.26 |
| Spacing Criterion (90-270) | 1.22 |
| Spacing Criterion (Diagonal) | 1.36 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 4.00 ft |
| Luminous Width (90-270) | 0.88 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 11990 | 11699 | 11668 |
| 55 | 11553 | 11298 | 11251 |
| 65 | 11004 | 10761 | 5752 |
| 75 | 8848 | 4916 | 941 |
| 85 | 3976 | 1739 | 1304 |

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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 | 4153.131 | 4153.131 | 4153.131 | 4153.131 | 4153.131 |
| 5 | 4103.793 | 4089.697 | 4077.363 | 4093.221 | 4110.842 |
| 10 | 4020.977 | 4006.881 | 4070.315 | 4080.887 | 4040.360 |
| 15 | 3927.589 | 3968.116 | 3924.065 | 3892.349 | 3892.349 |
| 20 | 3809.533 | 3897.635 | 3772.530 | 3753.147 | 3753.147 |
| 25 | 3656.235 | 3675.617 | 3613.946 | 3603.374 | 3603.374 |
| 30 | 3460.648 | 3430.694 | 3407.787 | 3395.453 | 3391.929 |
| 35 | 3252.728 | 3222.773 | 3196.342 | 3192.818 | 3185.770 |
| 40 | 3023.662 | 2974.325 | 2960.229 | 2954.943 | 2951.419 |
| 45 | 2759.356 | 2702.971 | 2692.399 | 2688.875 | 2685.350 |
| 50 | 2450.999 | 2410.472 | 2398.138 | 2394.614 | 2394.614 |
| 55 | 2156.738 | 2112.687 | 2109.163 | 2100.353 | 2100.353 |
| 60 | 1821.950 | 1788.472 | 1784.948 | 1777.899 | 1772.613 |
| 65 | 1513.593 | 1483.638 | 1480.114 | 1140.041 | 791.156 |
| 70 | 1155.899 | 1129.468 | 903.927 | 613.190 | 625.525 |
| 75 | 745.343 | 745.343 | 414.080 | 357.694 | 79.292 |
| 80 | 394.697 | 255.496 | 72.244 | 59.909 | 59.909 |
| 85 | 112.771 | 59.909 | 49.337 | 37.003 | 37.003 |
| 90 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|----------|-------|--------|
| 0-20 | 1499.18 | N.A. | 13.60 |
| 0-30 | 3170.29 | N.A. | 28.70 |
| 0-40 | 5176.15 | N.A. | 46.80 |
| 0-60 | 9142.4 | N.A. | 82.70 |
| 0-80 | 10980.38 | N.A. | 99.30 |
| 0-90 | 11052.31 | N.A. | 100.00 |
| 10-90 | 10662.58 | N.A. | 96.50 |
| 20-40 | 3676.96 | N.A. | 33.30 |
| 20-50 | 5759.16 | N.A. | 52.10 |
| 40-70 | 5276.8 | N.A. | 47.70 |
| 60-80 | 1837.98 | N.A. | 16.60 |
| 70-80 | 527.43 | N.A. | 4.80 |
| 80-90 | 71.93 | N.A. | 0.70 |
| 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 | 11052.31 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|---------|
| 0-10 | 389.73 |
| 10-20 | 1109.45 |
| 20-30 | 1671.11 |
| 30-40 | 2005.86 |
| 40-50 | 2082.19 |
| 50-60 | 1884.06 |
| 60-70 | 1310.55 |
| 70-80 | 527.43 |
| 80-90 | 71.93 |
| 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 | 105 | 101 | 98 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 88 | 85 |
| 2 | 100 | 92 | 86 | 80 | 97 | 90 | 84 | 79 | 87 | 82 | 77 | 84 | 79 | 76 | 81 | 77 | 74 | 72 |
| 3 | 91 | 81 | 73 | 67 | 89 | 80 | 72 | 66 | 77 | 70 | 65 | 74 | 69 | 64 | 71 | 67 | 63 | 61 |
| 4 | 84 | 72 | 63 | 57 | 81 | 71 | 63 | 56 | 68 | 61 | 56 | 66 | 60 | 55 | 64 | 59 | 54 | 52 |
| 5 | 77 | 64 | 56 | 49 | 75 | 63 | 55 | 49 | 61 | 54 | 48 | 59 | 53 | 48 | 57 | 52 | 47 | 45 |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 49 | 43 | 55 | 48 | 42 | 54 | 47 | 42 | 52 | 46 | 41 | 39 |
| 7 | 66 | 53 | 44 | 38 | 64 | 52 | 43 | 38 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 | 35 |
| 8 | 61 | 48 | 40 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 33 | 45 | 38 | 33 | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 |
| 10 | 54 | 41 | 33 | 28 | 52 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |

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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

| | | | | | | | | | | |
|------|------|------|------|------|------|------|--------------------|------|------|------|
| X=2H | Y=2H | 20.8 | 22.4 | 21.2 | 22.7 | 23.0 | UGR Viewed Endwise | | | |
| | 3H | 22.7 | 24.1 | 23.1 | 24.5 | 24.8 | 20.7 | 22.3 | 21.1 | 22.7 |
| | 4H | 23.3 | 24.7 | 23.7 | 25.0 | 25.4 | 21.4 | 22.9 | 21.8 | 23.2 |
| | 6H | 23.7 | 24.9 | 24.1 | 25.3 | 25.7 | 21.5 | 22.8 | 21.9 | 23.2 |
| | 8H | 23.7 | 24.9 | 24.2 | 25.3 | 25.7 | 21.4 | 22.7 | 21.8 | 23.1 |
| | 12H | 23.8 | 24.9 | 24.2 | 25.3 | 25.7 | 21.4 | 22.6 | 21.8 | 23.0 |

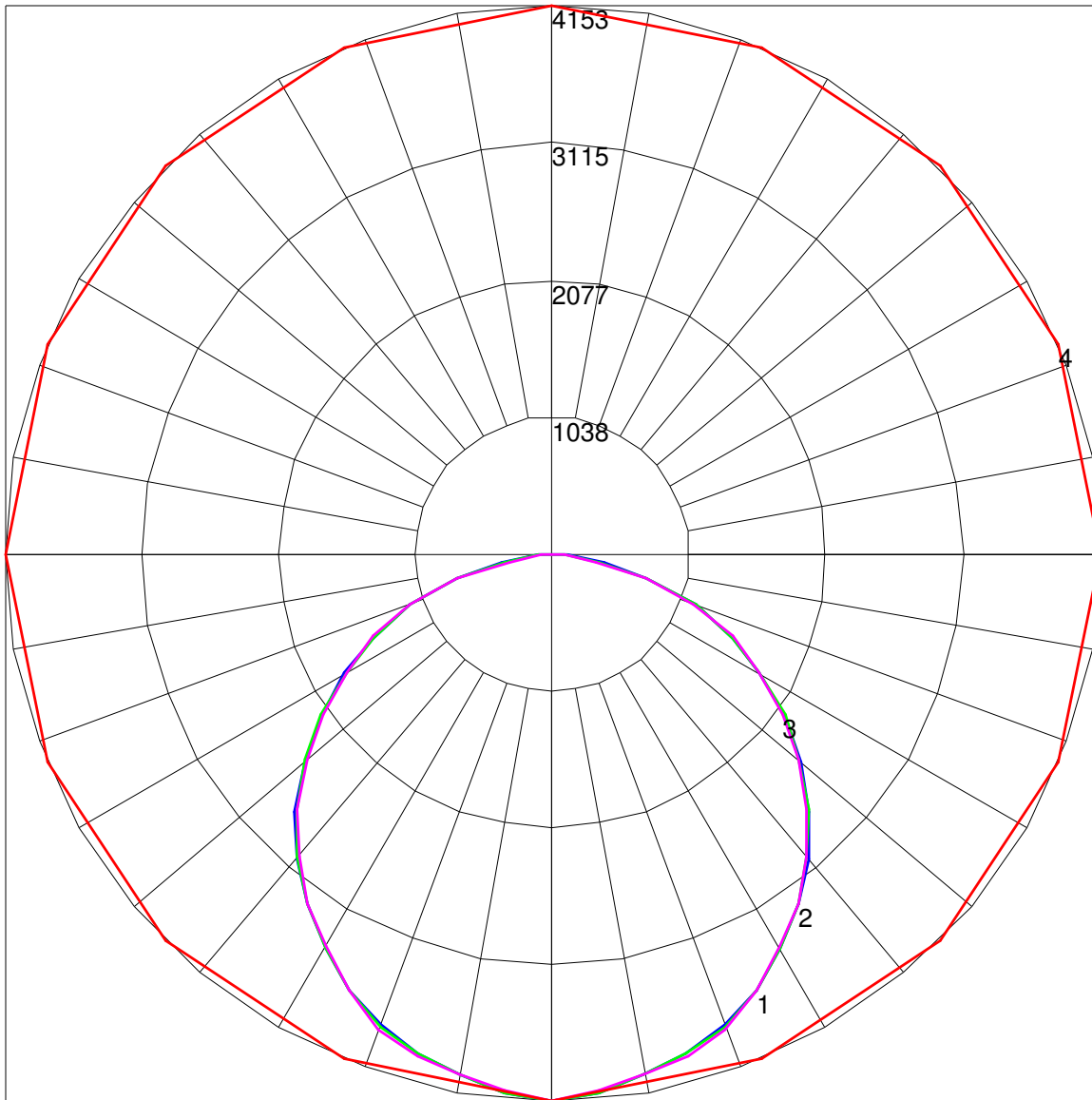
| | | | | | | | | | | |
|----|-----|------|------|------|------|------|------|------|------|------|
| 4H | 2H | 21.5 | 22.8 | 21.9 | 23.2 | 23.6 | 21.4 | 22.8 | 21.8 | 23.1 |
| | 3H | 23.5 | 24.6 | 23.9 | 25.0 | 25.4 | 22.2 | 23.4 | 22.7 | 23.8 |
| | 4H | 24.2 | 25.2 | 24.6 | 25.6 | 26.1 | 22.4 | 23.4 | 22.8 | 23.8 |
| | 6H | 24.6 | 25.5 | 25.1 | 25.9 | 26.4 | 22.3 | 23.2 | 22.8 | 23.7 |
| | 8H | 24.7 | 25.5 | 25.2 | 26.0 | 26.4 | 22.3 | 23.2 | 22.8 | 23.6 |
| | 12H | 24.8 | 25.5 | 25.2 | 26.0 | 26.4 | 22.3 | 23.0 | 22.8 | 23.5 |

| | | | | | | | | | | |
|----|-----|------|------|------|------|------|------|------|------|------|
| 8H | 4H | 24.3 | 25.1 | 24.7 | 25.5 | 26.0 | 22.5 | 23.4 | 23.0 | 23.8 |
| | 6H | 24.7 | 25.3 | 25.2 | 25.8 | 26.3 | 22.5 | 23.2 | 23.0 | 23.7 |
| | 8H | 24.8 | 25.4 | 25.3 | 25.9 | 26.4 | 22.5 | 23.1 | 23.0 | 23.6 |
| | 12H | 24.8 | 25.4 | 25.3 | 25.9 | 26.4 | 22.5 | 23.0 | 23.0 | 23.5 |

| | | | | | | | | | | |
|-----|----|------|------|------|------|------|------|------|------|------|
| 12H | 4H | 24.2 | 25.0 | 24.7 | 25.4 | 25.9 | 22.5 | 23.3 | 23.0 | 23.7 |
| | 6H | 24.7 | 25.3 | 25.2 | 25.7 | 26.3 | 22.5 | 23.1 | 23.1 | 23.6 |
| | 8H | 24.8 | 25.3 | 25.3 | 25.8 | 26.4 | 22.5 | 23.0 | 23.0 | 23.5 |

Maximum UGR = 26.4

POLAR GRAPH



Maximum Candela = 4153.131 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (5 - 185)
3 - Vertical Plane Through Horizontal Angles (10 - 190)
4 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)