**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : 4DR-TL-L60-8TW-DIM-UNV-OW-OF-CS_3500K_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] GEN from BALLABS TEST NO. 20685.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2026-10-14
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4" RND RECESSED LED DOWNLIGHT
[MORE] OPEN SEMI-SPEC SPUN ALUMINUM REFLECTOR (WIDE)
[LUMCAT] 4DR-TL-L60-8TW-DIM-UNV-OW-OF-CS_3500K_
[LAMPCAT] BRIDGELUX V13 BXRE
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight
[_SEARCH_MOUNTING] Recessed

**CHARACTERISTICS**

| | |
|---|---|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 6048 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 118 |
| Total Luminaire Watts | 51.1 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.22 |
| Spacing Criterion (90-270) | 1.22 |
| Spacing Criterion (Diagonal) | 0.94 |
| Basic Luminous Shape | Circular |
| Luminous Length (0-180) | 0.37 ft (Diameter) |
| Luminous Width (90-270) | 0.37 ft (Diameter) |
| Luminous Height | 0.00 ft |

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

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---|---|---|---|
| 45 | 18339 | 18339 | 18339 |
| 55 | 5652 | 5652 | 5652 |
| 65 | 697 | 697 | 697 |
| 75 | 0 | 0 | 0 |
| 85 | 0 | 0 | 0 |

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**CANDELA TABULATION**

| | **0** |
|---|---|
| **0** | 5190.477 |
| **5** | 5345.331 |
| **10** | 5505.921 |
| **15** | 5620.627 |
| **20** | 5870.114 |
| **25** | 6397.765 |
| **30** | 5012.682 |
| **35** | 880.374 |
| **40** | 229.413 |
| **45** | 126.177 |
| **50** | 65.956 |
| **55** | 31.544 |
| **60** | 14.338 |
| **65** | 2.868 |
| **70** | 2.868 |
| **75** | 0.000 |
| **80** | 0.000 |
| **85** | 0.000 |
| **90** | 0.000 |

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**ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 2121.15 | N.A. | 35.10 |
| 0-30 | 4851.83 | N.A. | 80.20 |
| 0-40 | 5904.78 | N.A. | 97.60 |
| 0-60 | 6041.25 | N.A. | 99.90 |
| 0-80 | 6047.64 | N.A. | 100.00 |
| 0-90 | 6047.64 | N.A. | 100.00 |
| 10-90 | 5533.5 | N.A. | 91.50 |
| 20-40 | 3783.63 | N.A. | 62.60 |
| 20-50 | 3888.29 | N.A. | 64.30 |
| 40-70 | 142.10 | N.A. | 2.30 |
| 60-80 | 6.38 | N.A. | 0.10 |
| 70-80 | 0.75 | N.A. | 0.00 |
| 80-90 | 0.00 | N.A. | 0.00 |
| 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 | 6047.64 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

| Zone | Lumens |
|---|---|
| 0-10 | 514.14 |
| 10-20 | 1607.02 |
| 20-30 | 2730.68 |
| 30-40 | 1052.95 |
| 40-50 | 104.66 |
| 50-60 | 31.81 |
| 60-70 | 5.64 |
| 70-80 | 0.75 |
| 80-90 | 0.00 |
| 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 | 114 | 111 | 109 | 106 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 98 | 98 | 97 | 96 | 94 |
| 2 | 108 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 99 | 96 | 93 | 96 | 93 | 91 | 93 | 91 | 89 | 88 |
| 3 | 103 | 97 | 92 | 88 | 101 | 95 | 91 | 87 | 93 | 89 | 86 | 90 | 87 | 85 | 88 | 86 | 83 | 82 |
| 4 | 98 | 91 | 85 | 81 | 96 | 90 | 85 | 81 | 87 | 83 | 80 | 85 | 82 | 79 | 84 | 81 | 78 | 77 |
| 5 | 93 | 85 | 79 | 75 | 92 | 84 | 79 | 75 | 82 | 78 | 74 | 81 | 77 | 74 | 79 | 76 | 73 | 72 |
| 6 | 89 | 80 | 74 | 70 | 87 | 79 | 74 | 70 | 78 | 73 | 69 | 76 | 72 | 69 | 75 | 71 | 68 | 67 |
| 7 | 84 | 75 | 69 | 65 | 83 | 75 | 69 | 65 | 73 | 68 | 65 | 72 | 68 | 64 | 71 | 67 | 64 | 63 |
| 8 | 80 | 71 | 65 | 61 | 79 | 70 | 65 | 61 | 69 | 64 | 61 | 68 | 64 | 60 | 67 | 63 | 60 | 59 |
| 9 | 76 | 67 | 61 | 57 | 75 | 66 | 61 | 57 | 66 | 60 | 57 | 65 | 60 | 57 | 64 | 60 | 57 | 55 |
| 10 | 73 | 63 | 58 | 54 | 72 | 63 | 57 | 54 | 62 | 57 | 54 | 61 | 57 | 53 | 61 | 56 | 53 | 52 |

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**UGR TABLE - CORRECTED**

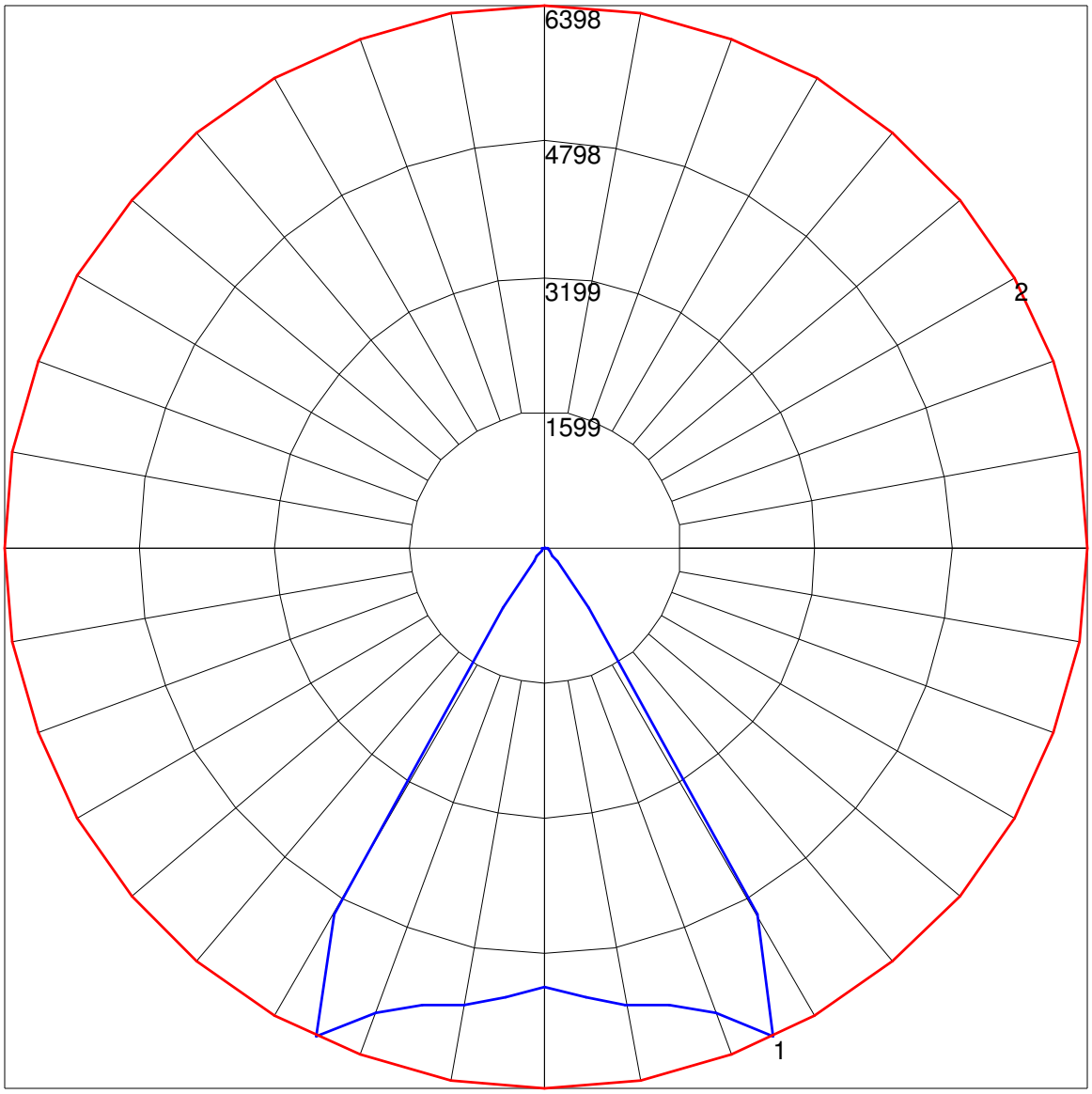
| Reflectances | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling Cavity | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Walls | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Floor Cavity | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room Size | | UGR Viewed Crosswise | | | | | UGR Viewed Endwise | | | | |
| X=2H | Y=2H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 3H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 4H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 6H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 8H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 12H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| 4H | 2H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 3H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 4H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 6H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 8H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 12H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| 8H | 4H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 6H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 8H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 12H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| 12H | 4H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 6H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |
| | 8H | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 |

Maximum UGR = 6.3

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**POLAR GRAPH**




Maximum Candela = 6397.765  Located At Horizontal Angle = 0, Vertical Angle = 25
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
# 2 - Horizontal Cone Through Vertical Angle (25) (Through Max. Cd.)

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