



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-16_42_52-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.04 & BALLABS #20687.0

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 19-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-L20-8TWU-L20-8TWD-xxx-DALI-UNV-LW-CSU-OW-CSD-WM 4000k

[LUMINAIRE] White formed aluminum housing, wide distribution reflector

[MORE] trims, flush upright frosted lens enclosure, no downlight enclosure

[LAMP] Two white LEDs (one up/one down)

[SEARCH_SOURCETYPE] LED

[SEARCH_APPLICATION] INDOOR, DIRECT, INDIRECT

[SEARCH_MOUNTING] WALL

CHARACTERISTICS

| | |
|---------------------------------|--------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 4311 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 90 |
| Total Luminaire Watts | 48 |
| Ballast Factor | 1.00 |
| CIE Type | General Diffuse |
| Spacing Criterion (0-180) | N.A. |
| Spacing Criterion (90-270) | N.A. |
| Spacing Criterion (Diagonal) | N.A. |
| Basic Luminous Shape | Circular w/ Sides |
| Luminous Length (0-180) | 0.65 ft (Diameter) |
| Luminous Width (90-270) | 0.65 ft (Diameter) |
| Luminous Height | 2.17 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|------------------|---------------|----------------|----------------|
| 45 | 455 | 455 | 455 |
| 55 | 118 | 118 | 118 |
| 65 | 17 | 17 | 17 |
| 75 | 0 | 0 | 0 |
| 85 | 0 | 0 | 0 |

IES INDOOR REPORT
 PHOTOMETRIC FILENAME : 192_168_37_234-16_42_52-MERGED.IES

CANDELA TABULATION

| | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
|-----|------------|-------------|-------------|-------------|-------------|
| 0 | 1880.202 | 1880.202 | 1880.202 | 1880.202 | 1880.202 |
| 5 | 1775.622 | 1775.622 | 1775.622 | 1775.622 | 1775.622 |
| 10 | 1954.421 | 1954.421 | 1954.421 | 1954.421 | 1954.421 |
| 15 | 1951.047 | 1951.047 | 1951.047 | 1951.047 | 1951.047 |
| 20 | 2037.636 | 2037.636 | 2037.636 | 2037.636 | 2037.636 |
| 25 | 2228.805 | 2228.805 | 2228.805 | 2228.805 | 2228.805 |
| 30 | 2189.446 | 2189.446 | 2189.446 | 2189.446 | 2189.446 |
| 35 | 679.212 | 679.212 | 679.212 | 679.212 | 679.212 |
| 40 | 93.335 | 93.335 | 93.335 | 93.335 | 93.335 |
| 45 | 51.728 | 51.728 | 51.728 | 51.728 | 51.728 |
| 50 | 30.362 | 30.362 | 30.362 | 30.362 | 30.362 |
| 55 | 14.619 | 14.619 | 14.619 | 14.619 | 14.619 |
| 60 | 7.872 | 7.872 | 7.872 | 7.872 | 7.872 |
| 65 | 2.249 | 2.249 | 2.249 | 2.249 | 2.249 |
| 70 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 75 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 80 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 85 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 90 | 4.622 | 4.622 | 4.622 | 4.622 | 4.622 |
| 95 | 12.438 | 12.438 | 12.438 | 12.438 | 12.438 |
| 100 | 31.405 | 31.405 | 31.405 | 31.405 | 31.405 |
| 105 | 53.896 | 53.896 | 53.896 | 53.896 | 53.896 |
| 110 | 82.403 | 82.403 | 82.403 | 82.403 | 82.403 |
| 115 | 119.165 | 119.165 | 119.165 | 119.165 | 119.165 |
| 120 | 165.503 | 165.503 | 165.503 | 165.503 | 165.503 |
| 125 | 222.811 | 222.811 | 222.811 | 222.811 | 222.811 |
| 130 | 288.300 | 288.300 | 288.300 | 288.300 | 288.300 |
| 135 | 355.405 | 355.405 | 355.405 | 355.405 | 355.405 |
| 140 | 430.726 | 430.726 | 430.726 | 430.726 | 430.726 |
| 145 | 552.166 | 552.166 | 552.166 | 552.166 | 552.166 |
| 150 | 754.322 | 754.322 | 754.322 | 754.322 | 754.322 |
| 155 | 989.497 | 989.497 | 989.497 | 989.497 | 989.497 |
| 160 | 1177.710 | 1177.710 | 1177.710 | 1177.710 | 1177.710 |
| 165 | 1264.663 | 1264.663 | 1264.663 | 1264.663 | 1264.663 |
| 170 | 1291.078 | 1291.078 | 1291.078 | 1291.078 | 1291.078 |
| 175 | 1304.286 | 1304.286 | 1304.286 | 1304.286 | 1304.286 |
| 180 | 1306.570 | 1306.570 | 1306.570 | 1306.570 | 1306.570 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-16_42_52-MERGED.IES

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 737.53 | N.A. | 17.10 |
| 0-30 | 1744.14 | N.A. | 40.50 |
| 0-40 | 2295.46 | N.A. | 53.20 |
| 0-60 | 2353.89 | N.A. | 54.60 |
| 0-80 | 2356.92 | N.A. | 54.70 |
| 0-90 | 2358.18 | N.A. | 54.70 |
| 10-90 | 2181.04 | N.A. | 50.60 |
| 20-40 | 1557.93 | N.A. | 36.10 |
| 20-50 | 1601.38 | N.A. | 37.10 |
| 40-70 | 61.46 | N.A. | 1.40 |
| 60-80 | 3.03 | N.A. | 0.10 |
| 70-80 | 0.00 | N.A. | 0.00 |
| 80-90 | 1.27 | N.A. | 0.00 |
| 90-110 | 75.03 | N.A. | 1.70 |
| 90-120 | 195.28 | N.A. | 4.50 |
| 90-130 | 396.17 | N.A. | 9.20 |
| 90-150 | 1028.17 | N.A. | 23.80 |
| 90-180 | 1953.1 | N.A. | 45.30 |
| 110-180 | 1878.07 | N.A. | 43.60 |
| 0-180 | 4311.28 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 177.14 |
| 10-20 | 560.39 |
| 20-30 | 1006.6 |
| 30-40 | 551.32 |
| 40-50 | 43.45 |
| 50-60 | 14.98 |
| 60-70 | 3.03 |
| 70-80 | 0.00 |
| 80-90 | 1.27 |
| 90-100 | 16.58 |
| 100-110 | 58.45 |
| 110-120 | 120.24 |
| 120-130 | 200.89 |
| 130-140 | 275.63 |
| 140-150 | 356.38 |
| 150-160 | 447.98 |
| 160-170 | 352.89 |
| 170-180 | 124.06 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-16_42_52-MERGED.IES

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 | 108 | 108 | 108 | 108 | 100 | 100 | 100 | 100 | 86 | 86 | 86 | 73 | 73 | 73 | 60 | 60 | 60 | 55 |
| 1 | 101 | 98 | 95 | 92 | 94 | 91 | 89 | 87 | 79 | 77 | 76 | 68 | 67 | 66 | 57 | 57 | 56 | 51 |
| 2 | 95 | 89 | 84 | 80 | 88 | 83 | 79 | 76 | 73 | 70 | 67 | 63 | 61 | 59 | 54 | 53 | 52 | 48 |
| 3 | 89 | 81 | 75 | 71 | 83 | 76 | 71 | 67 | 67 | 64 | 61 | 59 | 56 | 54 | 51 | 49 | 48 | 44 |
| 4 | 83 | 74 | 68 | 63 | 77 | 70 | 65 | 60 | 62 | 58 | 55 | 55 | 52 | 49 | 48 | 46 | 44 | 41 |
| 5 | 78 | 68 | 62 | 57 | 73 | 64 | 59 | 54 | 58 | 53 | 50 | 51 | 48 | 45 | 45 | 43 | 41 | 38 |
| 6 | 73 | 63 | 56 | 51 | 68 | 60 | 54 | 49 | 53 | 49 | 46 | 48 | 44 | 42 | 42 | 40 | 38 | 36 |
| 7 | 68 | 58 | 51 | 47 | 64 | 55 | 49 | 45 | 50 | 45 | 42 | 45 | 41 | 39 | 40 | 37 | 35 | 33 |
| 8 | 64 | 54 | 47 | 43 | 60 | 51 | 45 | 41 | 46 | 42 | 39 | 42 | 38 | 36 | 38 | 35 | 33 | 31 |
| 9 | 60 | 50 | 44 | 39 | 57 | 48 | 42 | 38 | 43 | 39 | 36 | 39 | 36 | 33 | 35 | 33 | 31 | 29 |
| 10 | 57 | 47 | 40 | 36 | 54 | 45 | 39 | 35 | 41 | 36 | 33 | 37 | 33 | 31 | 33 | 31 | 29 | 27 |

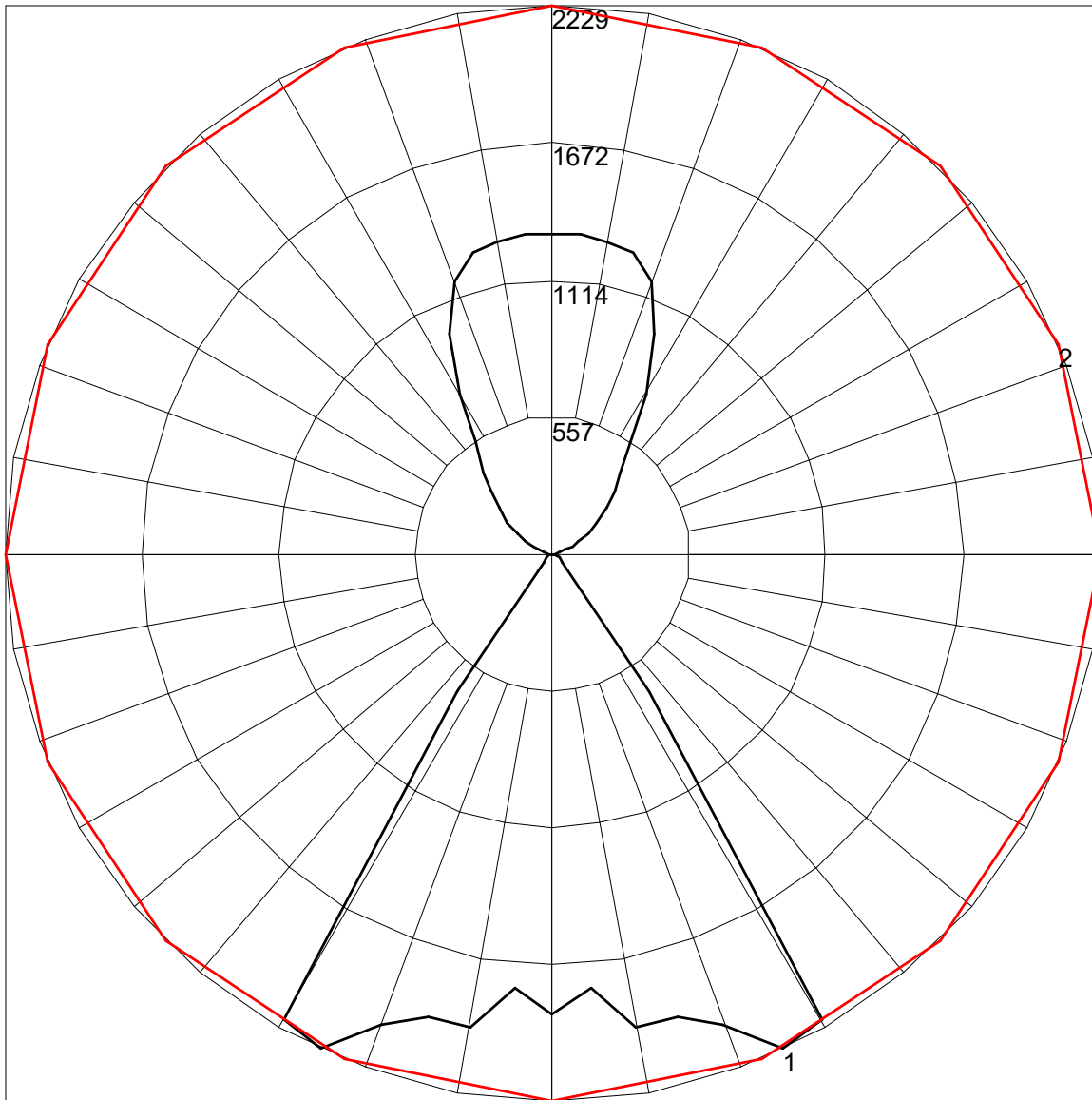
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-16_42_52-MERGED.IES

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 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 3H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 4H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 6H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 8H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 12H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| 4H | 2H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 3H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 4H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 6H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 8H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 12H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| 8H | 4H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 6H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 8H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 12H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| 12H | 4H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 6H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |
| | 8H | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 |

Maximum UGR = 5.1

POLAR GRAPH



Maximum Candela = 2228.805 Located At Horizontal Angle = 0, Vertical Angle = 25
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (25) (Through Max. Cd.)