



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6DR-TL-L20-840-DIM-UNV-OW-OF-CS-TD_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20686.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIE, INC
 [ISSUEDATE] 03-26-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 6"RND RECESSED CAST HOUSING DOWNLIGHT
 [MORE] OPEN SEMI-SPEC SPUN ALUM REFL w/DOMED DIFF TOP LENS(WIDE)
 [LUMCAT] 6DR-TL-L20-840-DIM-UNV-OW-OF-CS-TD
 [LAMPCAT] V13 BXRE-35E2000
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Healthcare, Office, Downlight
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

| | |
|---------------------------------|--------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 1504 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 79 |
| Total Luminaire Watts | 19 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.26 |
| Spacing Criterion (90-270) | 1.26 |
| Spacing Criterion (Diagonal) | 1.08 |
| Basic Luminous Shape | Circular |
| Luminous Length (0-180) | 0.48 ft (Diameter) |
| Luminous Width (90-270) | 0.48 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 | 18402 | 18402 | 18402 |
| 55 | 2014 | 2014 | 2014 |
| 65 | 432 | 432 | 432 |
| 75 | 0 | 0 | 0 |
| 85 | 0 | 0 | 0 |

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CANDELA TABULATION

| | |
|----|----------|
| | <u>0</u> |
| 0 | 988.333 |
| 5 | 1021.957 |
| 10 | 1095.318 |
| 15 | 1128.941 |
| 20 | 1139.130 |
| 25 | 1109.582 |
| 30 | 946.558 |
| 35 | 576.697 |
| 40 | 350.502 |
| 45 | 218.045 |
| 50 | 115.136 |
| 55 | 19.359 |
| 60 | 6.113 |
| 65 | 3.057 |
| 70 | 0.000 |
| 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 | 418.64 | N.A. | 27.80 |
| 0-30 | 914.69 | N.A. | 60.80 |
| 0-40 | 1293.7 | N.A. | 86.00 |
| 0-60 | 1501.42 | N.A. | 99.80 |
| 0-80 | 1504.43 | N.A. | 100.00 |
| 0-90 | 1504.43 | N.A. | 100.00 |
| 10-90 | 1404.65 | N.A. | 93.40 |
| 20-40 | 875.06 | N.A. | 58.20 |
| 20-50 | 1047.66 | N.A. | 69.60 |
| 40-70 | 210.73 | N.A. | 14.00 |
| 60-80 | 3.00 | N.A. | 0.20 |
| 70-80 | 0.00 | 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 | 1504.43 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 99.77 |
| 10-20 | 318.86 |
| 20-30 | 496.05 |
| 30-40 | 379.01 |
| 40-50 | 172.60 |
| 50-60 | 35.13 |
| 60-70 | 3.00 |
| 70-80 | 0.00 |
| 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 | 113 | 110 | 108 | 105 | 111 | 108 | 106 | 103 | 104 | 102 | 100 | 100 | 99 | 97 | 97 | 96 | 94 | 93 |
| 2 | 107 | 102 | 97 | 94 | 105 | 100 | 96 | 93 | 97 | 93 | 91 | 94 | 91 | 89 | 91 | 89 | 87 | 85 |
| 3 | 101 | 94 | 89 | 84 | 99 | 92 | 88 | 84 | 90 | 86 | 82 | 87 | 84 | 81 | 85 | 82 | 80 | 78 |
| 4 | 95 | 87 | 81 | 76 | 93 | 86 | 80 | 76 | 83 | 79 | 75 | 81 | 77 | 74 | 80 | 76 | 73 | 72 |
| 5 | 90 | 81 | 74 | 69 | 88 | 80 | 74 | 69 | 78 | 72 | 68 | 76 | 71 | 68 | 74 | 70 | 67 | 66 |
| 6 | 84 | 75 | 68 | 64 | 83 | 74 | 68 | 63 | 72 | 67 | 63 | 71 | 66 | 62 | 70 | 65 | 62 | 60 |
| 7 | 80 | 70 | 63 | 58 | 78 | 69 | 63 | 58 | 68 | 62 | 58 | 66 | 61 | 58 | 65 | 61 | 57 | 56 |
| 8 | 75 | 65 | 58 | 54 | 74 | 64 | 58 | 54 | 63 | 58 | 54 | 62 | 57 | 53 | 61 | 56 | 53 | 52 |
| 9 | 71 | 61 | 54 | 50 | 70 | 60 | 54 | 50 | 59 | 54 | 50 | 58 | 53 | 49 | 57 | 53 | 49 | 48 |
| 10 | 67 | 57 | 51 | 46 | 66 | 56 | 50 | 46 | 56 | 50 | 46 | 55 | 50 | 46 | 54 | 49 | 46 | 44 |

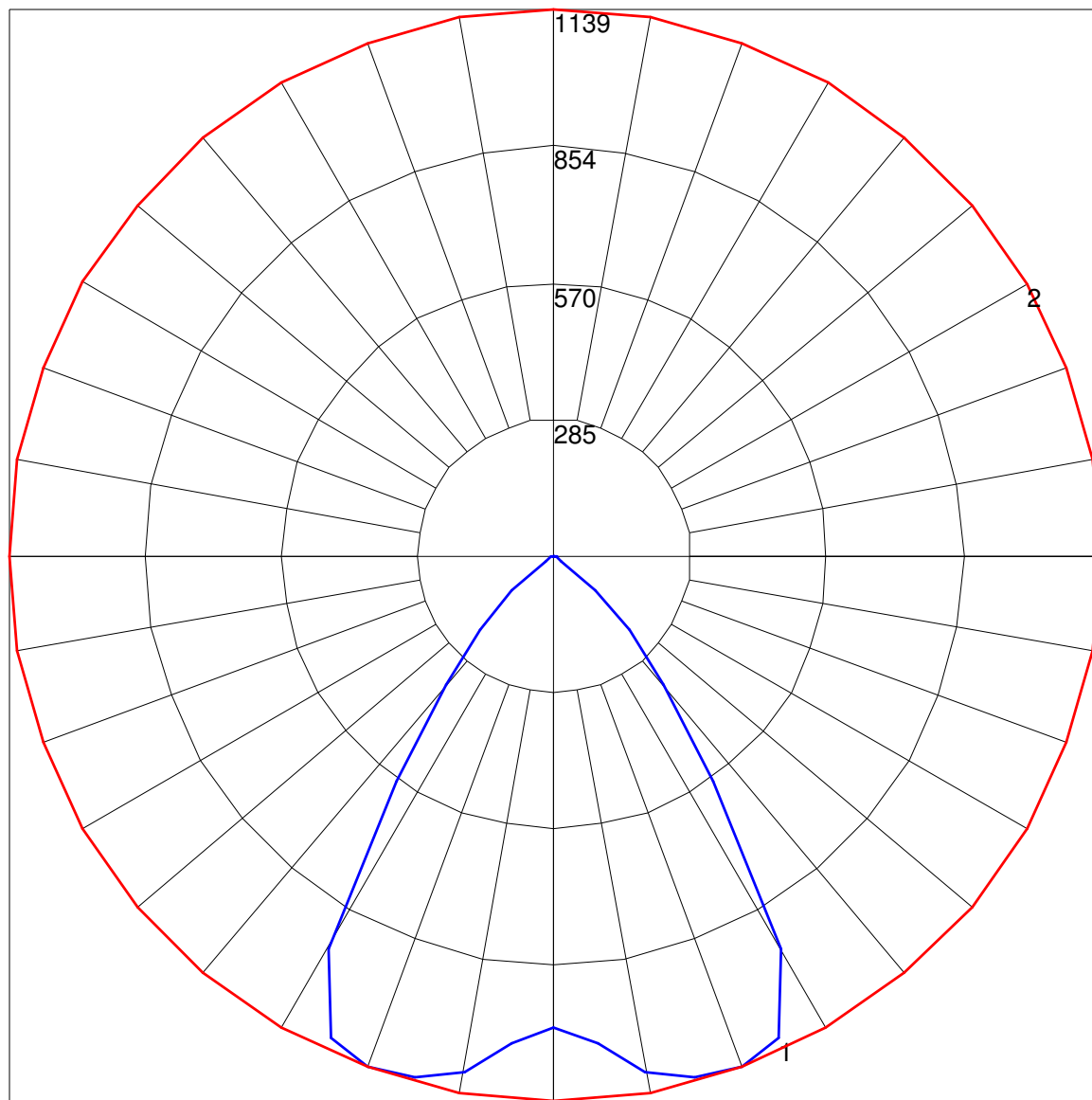
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UGR TABLE - CORRECTED

| | | | | | | | | | | | |
|----------------|------|----------------------|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|
| 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 | 2.7 | 3.8 | 3.1 | 4.1 | 4.4 | 2.7 | 3.8 | 3.1 | 4.1 | 4.4 |
| | 3H | 2.5 | 3.5 | 2.9 | 3.8 | 4.2 | 2.5 | 3.5 | 2.9 | 3.8 | 4.2 |
| | 4H | 2.4 | 3.3 | 2.8 | 3.7 | 4.0 | 2.4 | 3.3 | 2.8 | 3.7 | 4.0 |
| | 6H | 2.3 | 3.1 | 2.8 | 3.5 | 3.9 | 2.3 | 3.1 | 2.8 | 3.5 | 3.9 |
| | 8H | 2.3 | 3.0 | 2.7 | 3.4 | 3.8 | 2.3 | 3.0 | 2.7 | 3.4 | 3.8 |
| | 12H | 2.2 | 2.9 | 2.7 | 3.3 | 3.8 | 2.2 | 2.9 | 2.7 | 3.3 | 3.8 |
| 4H | 2H | 2.5 | 3.4 | 2.9 | 3.7 | 4.1 | 2.5 | 3.4 | 2.9 | 3.7 | 4.1 |
| | 3H | 2.4 | 3.1 | 2.8 | 3.5 | 3.9 | 2.4 | 3.1 | 2.8 | 3.5 | 3.9 |
| | 4H | 2.3 | 2.9 | 2.7 | 3.3 | 3.7 | 2.3 | 2.9 | 2.7 | 3.3 | 3.7 |
| | 6H | 2.1 | 2.7 | 2.6 | 3.1 | 3.6 | 2.1 | 2.7 | 2.6 | 3.1 | 3.6 |
| | 8H | 2.1 | 2.6 | 2.5 | 3.0 | 3.5 | 2.1 | 2.6 | 2.5 | 3.0 | 3.5 |
| | 12H | 2.0 | 2.4 | 2.5 | 2.9 | 3.4 | 2.0 | 2.4 | 2.5 | 2.9 | 3.4 |
| 8H | 4H | 2.1 | 2.6 | 2.5 | 3.0 | 3.5 | 2.1 | 2.6 | 2.5 | 3.0 | 3.5 |
| | 6H | 2.0 | 2.3 | 2.5 | 2.8 | 3.3 | 2.0 | 2.3 | 2.5 | 2.8 | 3.3 |
| | 8H | 1.9 | 2.2 | 2.4 | 2.8 | 3.2 | 1.9 | 2.2 | 2.4 | 2.8 | 3.2 |
| | 12H | 1.8 | 2.1 | 2.3 | 2.6 | 3.2 | 1.8 | 2.1 | 2.3 | 2.6 | 3.2 |
| 12H | 4H | 2.0 | 2.4 | 2.5 | 2.9 | 3.4 | 2.0 | 2.4 | 2.5 | 2.9 | 3.4 |
| | 6H | 1.9 | 2.2 | 2.4 | 2.7 | 3.3 | 1.9 | 2.2 | 2.4 | 2.7 | 3.3 |
| | 8H | 1.8 | 2.1 | 2.3 | 2.6 | 3.2 | 1.8 | 2.1 | 2.3 | 2.6 | 3.2 |

Maximum UGR = 4.4

POLAR GRAPH



Maximum Candela = 1139.13 Located At Horizontal Angle = 0, Vertical Angle = 20
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)