



IES INDOOR REPORT

PHOTOMETRIC FILENAME : IHB4-LED-24L-DA-50.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LED-11002
[TESTLAB] LSI INDUSTRIES INC.
[ISSUE DATE] 04/19/21
[TEST DATE] 04/18/19
[MANUFAC] LSI INDUSTRIES, INC
[LUMCAT] IHB4-LED-24L-DA-50
[ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.
[OTHER] TEST PROCEDURE:IESNA LM-79-08
[OTHER] SCALED FROM ORIGINAL TEST DATA
[SEARCH_SOURCETYPE] LED
[SEARCH_APPLICATION] Indoor
[SEARCH_COLORTEMP] 5000

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 23520 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 142 |
| Total Luminaire Watts | 165.7 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.34 |
| Spacing Criterion (90-270) | 1.28 |
| Spacing Criterion (Diagonal) | 1.40 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 4.00 ft |
| Luminous Width (90-270) | 0.60 ft |
| Luminous Height | 0.00 ft |



LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 34434 | 33667 | 33287 |
| 55 | 31248 | 31264 | 31248 |
| 65 | 26623 | 28457 | 29082 |
| 75 | 21623 | 26297 | 27492 |
| 85 | 16040 | 31926 | 37993 |

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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> |
|--------------|-------------------|--------------------|--------------------|--------------------|--------------------|
| 0.0 | 7830 | 7830 | 7830 | 7830 | 7830 |
| 2.5 | 7944 | 7883 | 7840 | 7797 | 7775 |
| 5.0 | 7948 | 7886 | 7840 | 7794 | 7771 |
| 7.5 | 7937 | 7876 | 7825 | 7776 | 7752 |
| 10.0 | 7912 | 7850 | 7794 | 7741 | 7717 |
| 12.5 | 7872 | 7810 | 7748 | 7691 | 7666 |
| 15.0 | 7817 | 7750 | 7685 | 7624 | 7597 |
| 17.5 | 7744 | 7676 | 7605 | 7537 | 7509 |
| 20.0 | 7655 | 7586 | 7502 | 7429 | 7403 |
| 22.5 | 7544 | 7476 | 7383 | 7304 | 7270 |
| 25.0 | 7410 | 7344 | 7243 | 7155 | 7115 |
| 27.5 | 7252 | 7189 | 7077 | 6989 | 6947 |
| 30.0 | 7071 | 7008 | 6891 | 6801 | 6758 |
| 32.5 | 6865 | 6801 | 6681 | 6589 | 6550 |
| 35.0 | 6633 | 6563 | 6449 | 6361 | 6322 |
| 37.5 | 6376 | 6306 | 6189 | 6116 | 6077 |
| 40.0 | 6096 | 6020 | 5918 | 5854 | 5816 |
| 42.5 | 5761 | 5713 | 5630 | 5578 | 5540 |
| 45.0 | 5434 | 5394 | 5313 | 5288 | 5253 |
| 47.5 | 5092 | 5051 | 4997 | 4974 | 4958 |
| 50.0 | 4738 | 4704 | 4673 | 4665 | 4640 |
| 52.5 | 4372 | 4350 | 4343 | 4341 | 4314 |
| 55.0 | 4000 | 3993 | 4002 | 4021 | 4000 |
| 57.5 | 3628 | 3634 | 3669 | 3691 | 3682 |
| 60.0 | 3261 | 3271 | 3341 | 3371 | 3366 |
| 62.5 | 2900 | 2916 | 3001 | 3056 | 3051 |
| 65.0 | 2511 | 2562 | 2684 | 2745 | 2743 |
| 67.5 | 2172 | 2236 | 2369 | 2436 | 2442 |
| 70.0 | 1849 | 1923 | 2072 | 2137 | 2150 |
| 72.5 | 1540 | 1627 | 1787 | 1852 | 1859 |
| 75.0 | 1249 | 1349 | 1519 | 1590 | 1588 |
| 77.5 | 981 | 1089 | 1261 | 1339 | 1347 |
| 80.0 | 738 | 837 | 1031 | 1114 | 1125 |
| 82.5 | 498 | 626 | 811 | 908 | 923 |
| 85.0 | 312 | 439 | 621 | 722 | 739 |
| 87.5 | 151 | 280 | 455 | 548 | 572 |
| 90.0 | 12 | 161 | 340 | 439 | 459 |
| 92.5 | 2 | 104 | 252 | 342 | 366 |
| 95.0 | 2 | 87 | 214 | 288 | 305 |
| 97.5 | 3 | 75 | 193 | 263 | 281 |
| 100.0 | 4 | 68 | 176 | 243 | 260 |
| 102.5 | 4 | 63 | 162 | 226 | 244 |
| 105.0 | 4 | 59 | 150 | 210 | 228 |
| 107.5 | 4 | 56 | 141 | 198 | 215 |
| 110.0 | 4 | 53 | 134 | 187 | 204 |
| 112.5 | 5 | 51 | 126 | 177 | 194 |
| 115.0 | 6 | 49 | 120 | 169 | 184 |
| 117.5 | 6 | 48 | 115 | 160 | 175 |
| 120.0 | 7 | 47 | 109 | 152 | 166 |
| 122.5 | 8 | 47 | 102 | 145 | 158 |
| 125.0 | 9 | 46 | 97 | 138 | 151 |
| 127.5 | 10 | 44 | 93 | 130 | 143 |
| 130.0 | 11 | 42 | 90 | 122 | 135 |
| 132.5 | 11 | 40 | 86 | 116 | 127 |

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CANDELA TABULATION - (Cont.)

| | | | | | |
|--------------|----|----|----|-----|-----|
| 135.0 | 12 | 39 | 83 | 111 | 121 |
| 137.5 | 13 | 38 | 79 | 106 | 115 |
| 140.0 | 14 | 36 | 75 | 101 | 110 |
| 142.5 | 14 | 35 | 71 | 95 | 103 |
| 145.0 | 15 | 33 | 65 | 89 | 97 |
| 147.5 | 16 | 32 | 60 | 84 | 91 |
| 150.0 | 16 | 31 | 56 | 78 | 85 |
| 152.5 | 17 | 30 | 53 | 69 | 78 |
| 155.0 | 17 | 28 | 48 | 63 | 67 |
| 157.5 | 18 | 27 | 44 | 58 | 62 |
| 160.0 | 18 | 26 | 40 | 53 | 57 |
| 162.5 | 18 | 24 | 35 | 48 | 51 |
| 165.0 | 19 | 23 | 33 | 42 | 45 |
| 167.5 | 19 | 22 | 29 | 36 | 39 |
| 170.0 | 19 | 21 | 26 | 32 | 34 |
| 172.5 | 20 | 21 | 24 | 29 | 30 |
| 175.0 | 21 | 21 | 22 | 24 | 25 |
| 177.5 | 21 | 21 | 21 | 22 | 21 |
| 180.0 | 20 | 20 | 20 | 20 | 20 |

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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|----------|-------|--------|
| 0-20 | 2919.7 | N.A. | 12.40 |
| 0-30 | 6260.28 | N.A. | 26.60 |
| 0-40 | 10298.27 | N.A. | 43.80 |
| 0-60 | 17988.85 | N.A. | 76.50 |
| 0-80 | 22189.38 | N.A. | 94.30 |
| 0-90 | 22839.82 | N.A. | 97.10 |
| 10-90 | 22092.49 | N.A. | 93.90 |
| 20-40 | 7378.57 | N.A. | 31.40 |
| 20-50 | 11489.04 | N.A. | 48.80 |
| 40-70 | 10327.01 | N.A. | 43.90 |
| 60-80 | 4200.53 | N.A. | 17.90 |
| 70-80 | 1564.1 | N.A. | 6.70 |
| 80-90 | 650.45 | N.A. | 2.80 |
| 90-110 | 361.16 | N.A. | 1.50 |
| 90-120 | 469.00 | N.A. | 2.00 |
| 90-130 | 550.02 | N.A. | 2.30 |
| 90-150 | 646.67 | N.A. | 2.70 |
| 90-180 | 679.81 | N.A. | 2.90 |
| 110-180 | 318.65 | N.A. | 1.40 |
| 0-180 | 23519.63 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|---------|
| 0-10 | 747.34 |
| 10-20 | 2172.37 |
| 20-30 | 3340.58 |
| 30-40 | 4037.99 |
| 40-50 | 4110.47 |
| 50-60 | 3580.11 |
| 60-70 | 2636.43 |
| 70-80 | 1564.1 |
| 80-90 | 650.45 |
| 90-100 | 218.01 |
| 100-110 | 143.15 |
| 110-120 | 107.84 |
| 120-130 | 81.01 |
| 130-140 | 58.12 |
| 140-150 | 38.53 |
| 150-160 | 21.48 |
| 160-170 | 9.37 |
| 170-180 | 2.29 |

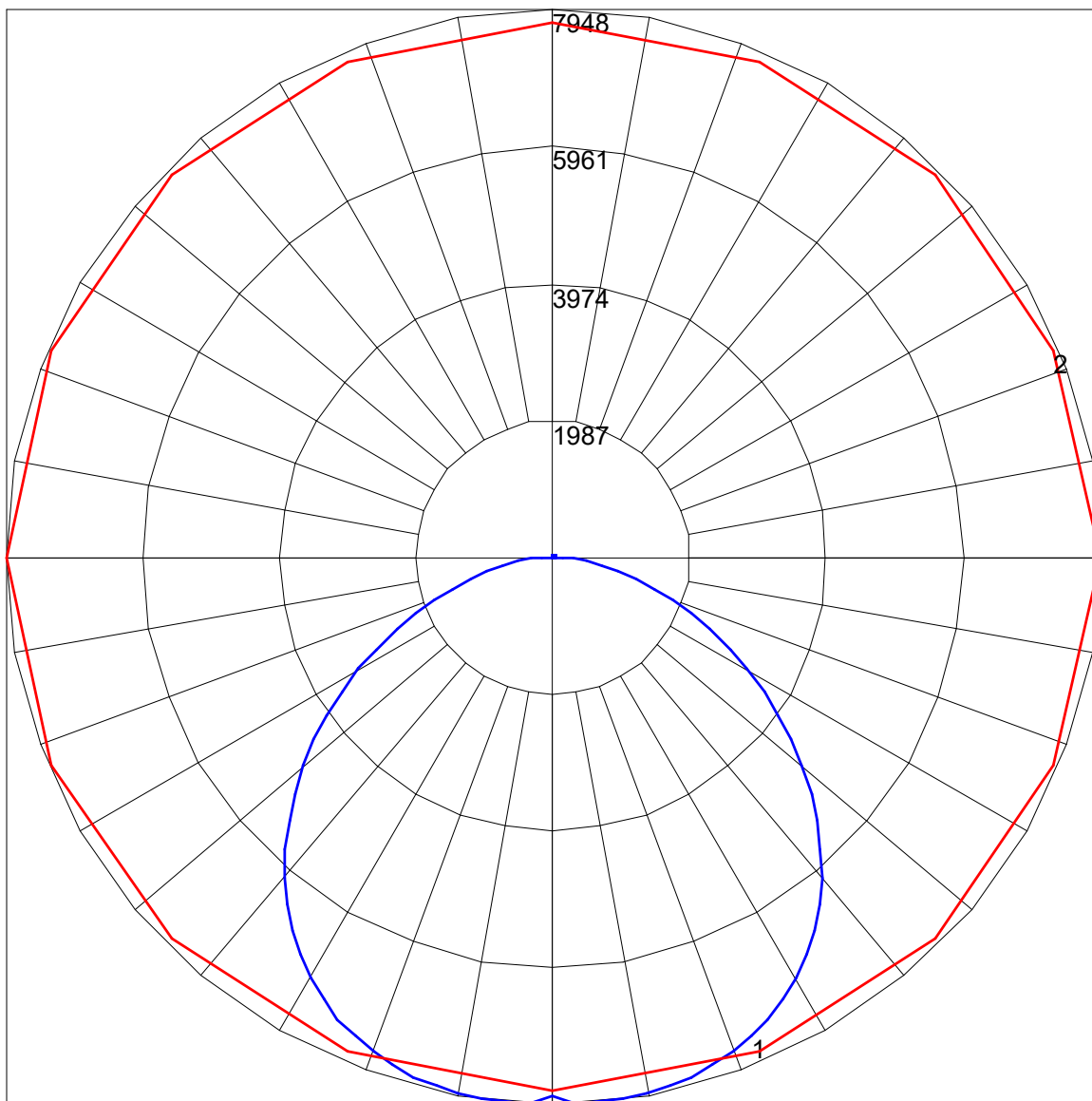
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 110 | 110 | 110 | 104 | 104 | 104 | 99 | 99 | 99 | 97 |
| 1 | 108 | 103 | 99 | 95 | 105 | 100 | 96 | 93 | 96 | 92 | 89 | 91 | 89 | 86 | 87 | 85 | 83 | 81 |
| 2 | 98 | 90 | 83 | 77 | 95 | 88 | 81 | 76 | 84 | 78 | 74 | 80 | 75 | 72 | 76 | 73 | 70 | 67 |
| 3 | 89 | 79 | 71 | 64 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 70 | 65 | 60 | 68 | 63 | 59 | 57 |
| 4 | 82 | 70 | 61 | 54 | 79 | 68 | 60 | 54 | 65 | 58 | 53 | 63 | 57 | 52 | 60 | 55 | 51 | 48 |
| 5 | 75 | 62 | 53 | 47 | 73 | 61 | 53 | 46 | 59 | 51 | 46 | 56 | 50 | 45 | 54 | 49 | 44 | 42 |
| 6 | 69 | 56 | 47 | 41 | 67 | 55 | 47 | 41 | 53 | 45 | 40 | 51 | 44 | 39 | 49 | 43 | 39 | 37 |
| 7 | 64 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 46 | 40 | 35 | 45 | 39 | 34 | 32 |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 38 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 41 | 35 | 31 | 29 |
| 9 | 56 | 43 | 34 | 29 | 54 | 42 | 34 | 29 | 41 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |
| 10 | 52 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 35 | 29 | 25 | 23 |

POLAR GRAPH



Maximum Candela = 7948 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)