



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : LHBXD14-LED-36L-AL-50.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]LED-8609R\_Scaled  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUEDATE]05/02/17  
[TESTDATE]02/23/17  
[MANUFAC]LSI INDUSTRIES, INC  
[LUMCAT]LHBXD\_LHB14-LED-36L-AL-50  
[OTHER]TEST PROCEDURE: IESNA LM-79-08  
[\_SEARCH\_SOURCETYPE] LED  
[\_SEARCH\_APPLICATION] Outdoor

**CHARACTERISTICS**

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 38479           |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 138             |
| Total Luminaire Watts           | 278             |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 1.38            |
| Spacing Criterion (90-270)      | 1.42            |
| Spacing Criterion (Diagonal)    | 1.52            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 4.00 ft         |
| Luminous Width (90-270)         | 0.92 ft         |
| Luminous Height                 | 0.00 ft         |

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

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 40465            | 43023             | 37843             |
| 55                  | 39387            | 37583             | 28560             |
| 65                  | 36227            | 24449             | 13332             |
| 75                  | 27577            | 9563              | 5182              |
| 85                  | 13735            | 3924              | 2685              |

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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  | 12398.276  | 12398.276   | 12398.276   | 12398.276   | 12398.276   |
| 2.5  | 12376.793  | 12493.411   | 12471.929   | 12432.033   | 12398.276   |
| 5.0  | 12419.758  | 12570.133   | 12603.890   | 12616.166   | 12603.890   |
| 7.5  | 12490.342  | 12683.681   | 12824.850   | 12901.572   | 12904.641   |
| 10.0 | 12573.202  | 12849.401   | 13088.774   | 13199.253   | 13223.804   |
| 12.5 | 12656.061  | 13024.327   | 13377.248   | 13515.348   | 13564.450   |
| 15.0 | 12714.370  | 13217.667   | 13681.067   | 13840.649   | 13880.545   |
| 17.5 | 12686.750  | 13340.422   | 13975.680   | 14129.124   | 14169.019   |
| 20.0 | 12588.546  | 13411.006   | 14224.259   | 14365.428   | 14300.981   |
| 22.5 | 12422.827  | 13401.799   | 14405.323   | 14436.012   | 14285.637   |
| 25.0 | 12189.592  | 13331.215   | 14451.356   | 14347.014   | 14037.057   |
| 27.5 | 11891.910  | 13199.253   | 14340.877   | 14055.471   | 13582.863   |
| 30.0 | 11563.540  | 13002.845   | 14101.504   | 13564.450   | 12987.501   |
| 32.5 | 11247.445  | 12775.748   | 13699.481   | 12926.123   | 12275.520   |
| 35.0 | 10971.246  | 12579.339   | 13174.702   | 12152.765   | 11514.438   |
| 37.5 | 10688.909  | 12361.449   | 12530.237   | 11354.856   | 10808.596   |
| 40.0 | 10388.159  | 12097.525   | 11870.428   | 10627.532   | 10222.440   |
| 42.5 | 10111.960  | 11769.155   | 11127.759   | 9989.205    | 9673.110    |
| 45.0 | 9755.970   | 11382.476   | 10372.815   | 9369.291    | 9123.780    |
| 47.5 | 9335.533   | 10873.042   | 9614.801    | 8743.239    | 8540.693    |
| 50.0 | 8838.375   | 10259.266   | 8869.063    | 8111.050    | 7822.575    |
| 52.5 | 8292.114   | 9547.286    | 8126.394    | 7270.177    | 6748.467    |
| 55.0 | 7702.889   | 8734.033    | 7349.968    | 6202.207    | 5585.362    |
| 57.5 | 7129.008   | 7779.611    | 6573.541    | 5048.308    | 4446.807    |
| 60.0 | 6548.990   | 6862.016    | 5643.670    | 3971.131    | 3489.317    |
| 62.5 | 5889.181   | 5984.316    | 4572.631    | 3059.673    | 2676.063    |
| 65.0 | 5220.165   | 5131.167    | 3523.074    | 2292.453    | 1921.119    |
| 67.5 | 4523.529   | 4308.708    | 2626.961    | 1614.231    | 1298.136    |
| 70.0 | 3857.582   | 3483.179    | 1862.810    | 1089.452    | 883.837     |
| 72.5 | 3154.809   | 2682.201    | 1267.447    | 742.669     | 619.914     |
| 75.0 | 2433.622   | 1905.775    | 843.942     | 530.916     | 457.263     |
| 77.5 | 1773.813   | 1239.828    | 567.743     | 377.472     | 328.370     |
| 80.0 | 1215.277   | 761.082     | 383.610     | 254.717     | 224.028     |
| 82.5 | 730.393    | 454.194     | 227.097     | 156.513     | 141.168     |
| 85.0 | 408.161    | 245.510     | 116.617     | 88.998      | 79.791      |
| 87.5 | 184.133    | 101.273     | 52.171      | 42.964      | 46.033      |
| 90.0 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       |

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**ZONAL LUMEN SUMMARY**

| Zone    | Lumens   | %Lamp | %Fixt  |
|---------|----------|-------|--------|
| 0-20    | 5048.38  | N.A.  | 13.10  |
| 0-30    | 11386.02 | N.A.  | 29.60  |
| 0-40    | 19065.53 | N.A.  | 49.50  |
| 0-60    | 33294.42 | N.A.  | 86.50  |
| 0-80    | 38252.44 | N.A.  | 99.40  |
| 0-90    | 38479.49 | N.A.  | 100.00 |
| 10-90   | 37264.92 | N.A.  | 96.80  |
| 20-40   | 14017.15 | N.A.  | 36.40  |
| 20-50   | 21821.69 | N.A.  | 56.70  |
| 40-70   | 17870.73 | N.A.  | 46.40  |
| 60-80   | 4958.02  | N.A.  | 12.90  |
| 70-80   | 1316.18  | N.A.  | 3.40   |
| 80-90   | 227.05   | N.A.  | 0.60   |
| 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   | 38479.49 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  |
|---------|---------|
| 0-10    | 1214.57 |
| 10-20   | 3833.81 |
| 20-30   | 6337.64 |
| 30-40   | 7679.52 |
| 40-50   | 7804.53 |
| 50-60   | 6424.35 |
| 60-70   | 3641.85 |
| 70-80   | 1316.18 |
| 80-90   | 227.05  |
| 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    |

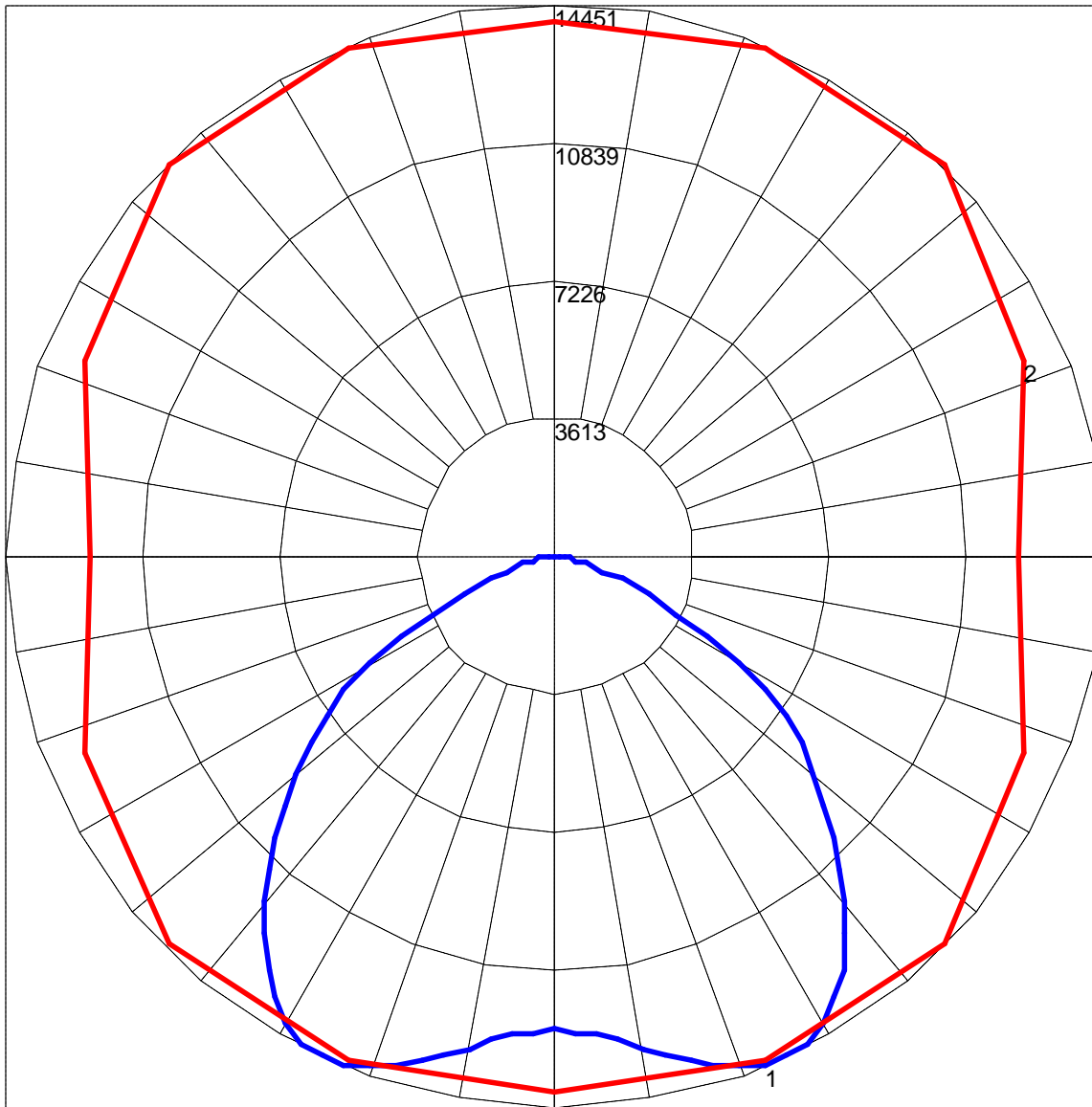
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 99  | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 88  | 86  |
| 2  | 101 | 93  | 87  | 82  | 98  | 91  | 86  | 81  | 88  | 83  | 79  | 85  | 81  | 77  | 82  | 78  | 76  | 73  |
| 3  | 92  | 83  | 75  | 69  | 90  | 81  | 74  | 68  | 78  | 72  | 67  | 75  | 70  | 66  | 73  | 69  | 65  | 63  |
| 4  | 85  | 73  | 65  | 59  | 83  | 72  | 64  | 58  | 70  | 63  | 58  | 67  | 62  | 57  | 65  | 60  | 56  | 54  |
| 5  | 78  | 66  | 57  | 51  | 76  | 65  | 57  | 50  | 63  | 55  | 50  | 61  | 54  | 49  | 59  | 53  | 49  | 47  |
| 6  | 72  | 59  | 51  | 44  | 70  | 58  | 50  | 44  | 56  | 49  | 44  | 55  | 48  | 43  | 53  | 48  | 43  | 41  |
| 7  | 67  | 54  | 45  | 39  | 65  | 53  | 45  | 39  | 51  | 44  | 39  | 50  | 43  | 38  | 49  | 43  | 38  | 36  |
| 8  | 62  | 49  | 41  | 35  | 61  | 48  | 40  | 35  | 47  | 40  | 35  | 46  | 39  | 34  | 45  | 39  | 34  | 32  |
| 9  | 58  | 45  | 37  | 31  | 57  | 44  | 37  | 31  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 29  |
| 10 | 54  | 41  | 34  | 28  | 53  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |

POLAR GRAPH



Maximum Candela = 14451.356 Located At Horizontal Angle = 45, Vertical Angle = 25  
# 1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (25) (Through Max. Cd.)