



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AE-RC-MBCA24LBN35-40-50010WH-45W-4000K.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] LCZP20040207  
 [TESTLAB] LCTECH 200604111002  
 [TESTDATE] 2020/7/27  
 [ISSUEDATE] 2020/7/27  
 [MANUFAC] ERALUX  
 [LUMCAT] AE-RC-MBCA24LBN35/40/50010WH 45W 4000K  
 [LUMINAIRE] LED  
 [LAMPCAT]  
 [LAMP]  
 [LumELE] 120.02 0.371 44.41 0.997

### CHARACTERISTICS

|                                 |                  |
|---------------------------------|------------------|
| Lumens Per Lamp                 | 5852.11 (1 lamp) |
| Total Lamp Lumens               | 5852.11          |
| Luminaire Lumens                | 5852             |
| Total Luminaire Efficiency      | 100 %            |
| Luminaire Efficacy Rating (LER) | 132              |
| Total Luminaire Watts           | 44.41            |
| Ballast Factor                  | 1.00             |
| CIE Type                        | Direct           |
| Spacing Criterion (0-180)       | 1.24             |
| Spacing Criterion (90-270)      | 1.24             |
| Spacing Criterion (Diagonal)    | 1.36             |
| Basic Luminous Shape            | Rectangular      |
| Luminous Length (0-180)         | 1.20 m           |
| Luminous Width (90-270)         | 0.56 m           |
| Luminous Height                 | 0.00 m           |

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

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 2784             | 2840              | 2835              |
| 55                  | 2641             | 2676              | 2722              |
| 65                  | 2406             | 2504              | 2647              |
| 75                  | 1994             | 2375              | 2783              |
| 85                  | 1215             | 1953              | 1248              |

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**CANDELA TABULATION**

|            | <u>0</u> | <u>15</u> | <u>30</u> | <u>45</u> | <u>60</u> | <u>75</u> | <u>90</u> |
|------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>0</b>   | 2076.366 | 2076.366  | 2076.366  | 2076.366  | 2076.366  | 2076.366  | 2076.366  |
| <b>5</b>   | 2065.934 | 2066.850  | 2067.134  | 2065.991  | 2066.694  | 2068.282  | 2066.618  |
| <b>10</b>  | 2034.185 | 2034.675  | 2035.799  | 2035.518  | 2036.285  | 2037.918  | 2032.499  |
| <b>15</b>  | 1980.212 | 1980.523  | 1981.484  | 1983.386  | 1984.508  | 1988.225  | 1986.860  |
| <b>20</b>  | 1908.098 | 1908.698  | 1910.037  | 1912.968  | 1914.931  | 1918.059  | 1918.179  |
| <b>25</b>  | 1819.655 | 1818.746  | 1819.659  | 1825.629  | 1825.986  | 1829.246  | 1831.332  |
| <b>30</b>  | 1713.977 | 1713.843  | 1713.734  | 1721.139  | 1736.283  | 1727.820  | 1730.305  |
| <b>35</b>  | 1591.064 | 1593.983  | 1594.060  | 1603.331  | 1606.027  | 1611.353  | 1611.997  |
| <b>40</b>  | 1462.708 | 1463.478  | 1464.018  | 1474.473  | 1476.997  | 1484.521  | 1486.157  |
| <b>45</b>  | 1323.468 | 1323.222  | 1324.950  | 1350.026  | 1339.216  | 1343.763  | 1347.467  |
| <b>50</b>  | 1172.888 | 1175.038  | 1174.400  | 1185.797  | 1191.057  | 1198.957  | 1200.358  |
| <b>55</b>  | 1018.227 | 1017.797  | 1019.545  | 1031.871  | 1039.542  | 1051.003  | 1049.703  |
| <b>60</b>  | 851.773  | 855.792   | 875.898   | 871.649   | 883.306   | 895.622   | 898.606   |
| <b>65</b>  | 683.504  | 686.992   | 692.931   | 711.415   | 729.077   | 745.403   | 751.940   |
| <b>70</b>  | 512.515  | 516.830   | 529.965   | 557.054   | 582.268   | 603.968   | 614.136   |
| <b>75</b>  | 346.968  | 370.267   | 373.993   | 413.287   | 445.153   | 473.312   | 484.308   |
| <b>80</b>  | 191.853  | 203.474   | 239.893   | 281.485   | 316.126   | 340.187   | 354.037   |
| <b>85</b>  | 71.208   | 87.240    | 116.791   | 114.417   | 91.218    | 81.211    | 73.111    |
| <b>90</b>  | 15.874   | 6.118     | 5.637     | 5.193     | 4.954     | 4.720     | 4.874     |
| <b>95</b>  | 3.175    | 3.172     | 3.156     | 3.611     | 3.603     | 3.598     | 3.545     |
| <b>100</b> | 3.175    | 3.172     | 3.156     | 2.932     | 3.148     | 3.371     | 3.545     |
| <b>105</b> | 2.721    | 2.945     | 2.705     | 2.709     | 3.375     | 3.148     | 2.659     |
| <b>110</b> | 2.721    | 2.492     | 2.705     | 2.936     | 2.929     | 2.699     | 2.659     |
| <b>115</b> | 2.268    | 2.719     | 2.705     | 2.709     | 2.925     | 2.921     | 2.659     |
| <b>120</b> | 3.175    | 3.172     | 2.928     | 2.932     | 2.925     | 2.921     | 3.102     |
| <b>125</b> | 3.628    | 3.398     | 3.156     | 3.160     | 3.152     | 3.148     | 3.102     |
| <b>130</b> | 3.628    | 3.172     | 3.379     | 3.384     | 3.148     | 3.148     | 3.102     |
| <b>135</b> | 3.175    | 3.399     | 3.607     | 3.160     | 2.925     | 2.921     | 3.102     |
| <b>140</b> | 3.628    | 4.078     | 3.830     | 3.835     | 3.826     | 3.821     | 3.545     |
| <b>145</b> | 4.536    | 4.305     | 4.281     | 4.063     | 4.053     | 4.048     | 3.988     |
| <b>150</b> | 5.443    | 4.985     | 4.959     | 4.966     | 4.954     | 4.947     | 4.874     |
| <b>155</b> | 5.896    | 6.117     | 5.861     | 5.645     | 5.631     | 5.847     | 5.760     |
| <b>160</b> | 6.803    | 6.797     | 6.763     | 6.548     | 6.309     | 6.297     | 6.646     |
| <b>165</b> | 6.803    | 7.251     | 7.437     | 7.446     | 7.206     | 6.973     | 7.533     |
| <b>170</b> | 7.710    | 7.704     | 7.664     | 7.902     | 7.883     | 7.873     | 7.090     |
| <b>175</b> | 8.164    | 8.157     | 8.115     | 8.126     | 8.329     | 8.096     | 7.533     |
| <b>180</b> | 4.053    | 4.053     | 4.053     | 4.053     | 4.053     | 4.053     | 4.053     |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : AE-RC-MBCA24LBN35-40-50010WH-45W-4000K.IES****ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp  | %Fixt  |
|---------|---------|--------|--------|
| 0-20    | 755.84  | 12.90  | 12.90  |
| 0-30    | 1596.62 | 27.30  | 27.30  |
| 0-40    | 2599.12 | 44.40  | 44.40  |
| 0-60    | 4552.07 | 77.80  | 77.80  |
| 0-80    | 5700.45 | 97.40  | 97.40  |
| 0-90    | 5828.24 | 99.60  | 99.60  |
| 10-90   | 5631.95 | 96.20  | 96.20  |
| 20-40   | 1843.28 | 31.50  | 31.50  |
| 20-50   | 2872.9  | 49.10  | 49.10  |
| 40-70   | 2661.81 | 45.50  | 45.50  |
| 60-80   | 1148.38 | 19.60  | 19.60  |
| 70-80   | 439.52  | 7.50   | 7.50   |
| 80-90   | 127.79  | 2.20   | 2.20   |
| 90-110  | 7.54    | 0.10   | 0.10   |
| 90-120  | 10.32   | 0.20   | 0.20   |
| 90-130  | 13.18   | 0.20   | 0.20   |
| 90-150  | 18.46   | 0.30   | 0.30   |
| 90-180  | 23.87   | 0.40   | 0.40   |
| 110-180 | 16.34   | 0.30   | 0.30   |
| 0-180   | 5852.11 | 100.00 | 100.00 |

Total Luminaire Efficiency = 100.00%

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  |
|---------|---------|
| 0-10    | 196.29  |
| 10-20   | 559.55  |
| 20-30   | 840.78  |
| 30-40   | 1002.5  |
| 40-50   | 1029.62 |
| 50-60   | 923.33  |
| 60-70   | 708.86  |
| 70-80   | 439.52  |
| 80-90   | 127.79  |
| 90-100  | 4.42    |
| 100-110 | 3.12    |
| 110-120 | 2.78    |
| 120-130 | 2.85    |
| 130-140 | 2.60    |
| 140-150 | 2.68    |
| 150-160 | 2.67    |
| 160-170 | 2.03    |
| 170-180 | 0.71    |

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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  | 108 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 90  | 88  | 89  | 87  | 85  | 83  |
| 2  | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 85  | 79  | 75  | 81  | 77  | 73  | 78  | 74  | 71  | 69  |
| 3  | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 64  | 74  | 68  | 62  | 72  | 66  | 61  | 69  | 64  | 60  | 58  |
| 4  | 82  | 70  | 61  | 54  | 80  | 69  | 60  | 54  | 66  | 59  | 53  | 64  | 57  | 52  | 61  | 56  | 52  | 49  |
| 5  | 76  | 63  | 53  | 47  | 73  | 61  | 53  | 46  | 59  | 52  | 46  | 57  | 51  | 45  | 55  | 49  | 45  | 43  |
| 6  | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 41  | 53  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 39  | 37  |
| 7  | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 49  | 41  | 36  | 47  | 40  | 35  | 46  | 40  | 35  | 33  |
| 8  | 60  | 47  | 38  | 32  | 59  | 46  | 38  | 32  | 45  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 31  | 29  |
| 9  | 56  | 43  | 35  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 33  | 29  | 39  | 33  | 28  | 26  |
| 10 | 53  | 39  | 32  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 26  | 24  |

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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

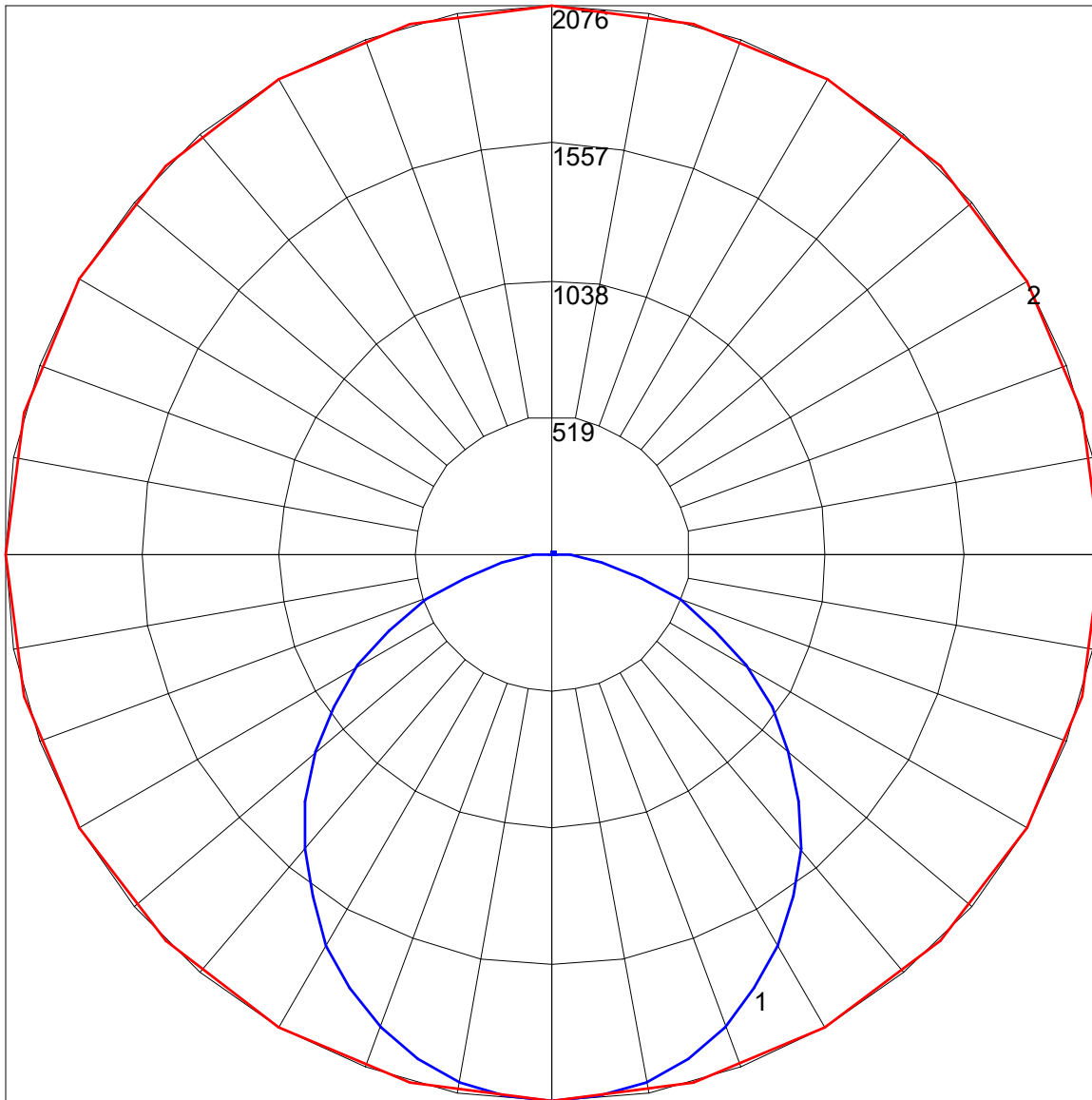
|      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|
| X=2H | Y=2H | 15.3 | 17.0 | 15.7 | 17.3 | 17.6 | 15.6 | 17.2 | 15.9 | 17.5 | 17.8 |
|      | 3H   | 17.1 | 18.6 | 17.4 | 18.9 | 19.2 | 17.6 | 19.1 | 18.0 | 19.4 | 19.8 |
|      | 4H   | 17.7 | 19.1 | 18.1 | 19.5 | 19.8 | 18.5 | 19.9 | 18.9 | 20.3 | 20.6 |
|      | 6H   | 18.1 | 19.4 | 18.5 | 19.8 | 20.2 | 19.3 | 20.7 | 19.8 | 21.0 | 21.4 |
|      | 8H   | 18.2 | 19.5 | 18.7 | 19.9 | 20.3 | 19.6 | 20.9 | 20.0 | 21.2 | 21.6 |
|      | 12H  | 18.3 | 19.5 | 18.7 | 19.9 | 20.3 | 19.7 | 20.9 | 20.1 | 21.3 | 21.7 |

### UGR Viewed Endwise

|     |     |      |      |      |      |      |      |      |      |      |      |
|-----|-----|------|------|------|------|------|------|------|------|------|------|
| 4H  | 2H  | 16.0 | 17.4 | 16.4 | 17.8 | 18.1 | 16.2 | 17.6 | 16.6 | 17.9 | 18.3 |
|     | 3H  | 17.9 | 19.1 | 18.4 | 19.5 | 19.9 | 18.5 | 19.6 | 18.9 | 20.0 | 20.4 |
|     | 4H  | 18.7 | 19.8 | 19.1 | 20.2 | 20.6 | 19.5 | 20.6 | 19.9 | 21.0 | 21.4 |
|     | 6H  | 19.3 | 20.2 | 19.7 | 20.6 | 21.1 | 20.5 | 21.5 | 21.0 | 21.9 | 22.4 |
|     | 8H  | 19.4 | 20.3 | 19.9 | 20.7 | 21.2 | 20.8 | 21.7 | 21.3 | 22.2 | 22.6 |
|     | 12H | 19.5 | 20.3 | 20.0 | 20.8 | 21.3 | 21.0 | 21.8 | 21.4 | 22.2 | 22.7 |
| 8H  | 4H  | 19.1 | 20.0 | 19.6 | 20.5 | 20.9 | 19.8 | 20.7 | 20.3 | 21.2 | 21.6 |
|     | 6H  | 19.8 | 20.6 | 20.3 | 21.1 | 21.5 | 21.0 | 21.7 | 21.5 | 22.2 | 22.7 |
|     | 8H  | 20.1 | 20.7 | 20.6 | 21.2 | 21.7 | 21.4 | 22.1 | 21.9 | 22.6 | 23.1 |
|     | 12H | 20.3 | 20.8 | 20.8 | 21.3 | 21.9 | 21.6 | 22.2 | 22.1 | 22.6 | 23.2 |
| 12H | 4H  | 19.2 | 20.0 | 19.7 | 20.5 | 21.0 | 19.9 | 20.7 | 20.4 | 21.1 | 21.6 |
|     | 6H  | 20.0 | 20.6 | 20.5 | 21.1 | 21.6 | 21.1 | 21.7 | 21.6 | 22.2 | 22.7 |
|     | 8H  | 20.3 | 20.9 | 20.8 | 21.3 | 21.9 | 21.5 | 22.1 | 22.0 | 22.6 | 23.2 |

Maximum UGR = 23.2

POLAR GRAPH



Maximum Candela = 2076.366 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)