



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : KEL-LED-225-920-1025-35-4-E70-HE.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST]20200422-5  
 [TESTLAB]Intense Lighting Lab  
 [TESTDATE]2020/04/22  
 [ISSUE DATE] 2020/06/29  
 [MANUFAC]Birchwood  
 [LUMCAT]KEL-LED-225-HLO-35-4-E70-HE  
 [LUMINAIRE]KEL-LED-225-HLO-35-4-HE  
 [LAMPCAT]59637  
 [LAMP]3500K 80CRI  
 [BALLASTCAT]Power Supply  
 [OPTICS]DF90C

### CHARACTERISTICS

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 7794            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 112             |
| Total Luminaire Watts           | 69.5            |
| 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            | Rectangular     |
| Luminous Length (0-180)         | 1.19 m          |
| Luminous Width (90-270)         | 0.05 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                  | 25552            | 21685             | 19915             |
| 55                  | 20072            | 17028             | 17315             |
| 65                  | 14069            | 13796             | 16407             |
| 75                  | 8718             | 9418              | 12727             |
| 85                  | 5102             | 5197              | 5669              |

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**CANDELA TABULATION**

|            | <u>0</u> | <u>10</u> | <u>20</u> | <u>30</u> | <u>40</u> | <u>50</u> | <u>60</u> | <u>70</u> | <u>80</u> | <u>90</u> |
|------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>0</b>   | 1930     | 1930      | 1930      | 1930      | 1930      | 1930      | 1930      | 1930      | 1930      | 1930      |
| <b>5</b>   | 1928     | 1926      | 1925      | 1924      | 1924      | 1923      | 1923      | 1922      | 1921      | 1921      |
| <b>10</b>  | 1899     | 1897      | 1896      | 1895      | 1893      | 1892      | 1890      | 1888      | 1887      | 1885      |
| <b>15</b>  | 1849     | 1847      | 1845      | 1843      | 1840      | 1837      | 1833      | 1830      | 1827      | 1824      |
| <b>20</b>  | 1778     | 1777      | 1773      | 1769      | 1763      | 1757      | 1751      | 1745      | 1739      | 1735      |
| <b>25</b>  | 1687     | 1685      | 1680      | 1671      | 1661      | 1649      | 1638      | 1628      | 1619      | 1613      |
| <b>30</b>  | 1575     | 1572      | 1563      | 1547      | 1528      | 1508      | 1489      | 1472      | 1460      | 1451      |
| <b>35</b>  | 1439     | 1436      | 1419      | 1391      | 1360      | 1328      | 1301      | 1280      | 1264      | 1254      |
| <b>40</b>  | 1280     | 1275      | 1247      | 1205      | 1160      | 1121      | 1090      | 1068      | 1053      | 1043      |
| <b>45</b>  | 1097     | 1090      | 1052      | 999       | 950       | 912       | 887       | 871       | 862       | 855       |
| <b>50</b>  | 897      | 890       | 850       | 799       | 757       | 732       | 720       | 715       | 713       | 710       |
| <b>55</b>  | 699      | 693       | 659       | 621       | 597       | 589       | 592       | 598       | 603       | 603       |
| <b>60</b>  | 518      | 514       | 492       | 471       | 464       | 471       | 486       | 501       | 510       | 513       |
| <b>65</b>  | 361      | 359       | 348       | 341       | 346       | 362       | 384       | 404       | 417       | 421       |
| <b>70</b>  | 232      | 232       | 228       | 227       | 236       | 254       | 277       | 298       | 312       | 317       |
| <b>75</b>  | 137      | 136       | 135       | 136       | 142       | 154       | 171       | 186       | 196       | 200       |
| <b>80</b>  | 70       | 70        | 69        | 70        | 73        | 78        | 85        | 92        | 96        | 95        |
| <b>85</b>  | 27       | 27        | 27        | 27        | 27        | 28        | 29        | 30        | 31        | 30        |
| <b>90</b>  | 5        | 5         | 5         | 5         | 5         | 5         | 5         | 5         | 5         | 5         |
| <b>95</b>  | 29       | 29        | 29        | 28        | 28        | 28        | 28        | 28        | 27        | 26        |
| <b>100</b> | 75       | 75        | 76        | 77        | 79        | 81        | 83        | 85        | 84        | 82        |
| <b>105</b> | 147      | 148       | 150       | 154       | 159       | 165       | 172       | 176       | 178       | 177       |
| <b>110</b> | 248      | 250       | 254       | 262       | 272       | 282       | 292       | 299       | 302       | 301       |
| <b>115</b> | 376      | 379       | 385       | 395       | 406       | 418       | 426       | 433       | 435       | 433       |
| <b>120</b> | 516      | 518       | 525       | 535       | 546       | 555       | 562       | 566       | 566       | 563       |
| <b>125</b> | 652      | 654       | 661       | 670       | 678       | 685       | 691       | 693       | 692       | 688       |
| <b>130</b> | 781      | 783       | 788       | 795       | 802       | 808       | 811       | 812       | 811       | 808       |
| <b>135</b> | 899      | 901       | 905       | 911       | 916       | 920       | 923       | 924       | 922       | 919       |
| <b>140</b> | 1005     | 1006      | 1010      | 1015      | 1020      | 1023      | 1026      | 1026      | 1025      | 1022      |
| <b>145</b> | 1101     | 1102      | 1106      | 1110      | 1114      | 1118      | 1120      | 1120      | 1119      | 1117      |
| <b>150</b> | 1187     | 1189      | 1192      | 1196      | 1199      | 1202      | 1204      | 1204      | 1203      | 1201      |
| <b>155</b> | 1264     | 1265      | 1267      | 1270      | 1273      | 1275      | 1277      | 1277      | 1276      | 1274      |
| <b>160</b> | 1328     | 1329      | 1331      | 1333      | 1336      | 1337      | 1338      | 1337      | 1337      | 1335      |
| <b>165</b> | 1380     | 1380      | 1382      | 1383      | 1385      | 1385      | 1386      | 1385      | 1385      | 1383      |
| <b>170</b> | 1417     | 1417      | 1418      | 1419      | 1420      | 1420      | 1420      | 1420      | 1420      | 1419      |
| <b>175</b> | 1439     | 1439      | 1440      | 1440      | 1441      | 1441      | 1441      | 1440      | 1440      | 1440      |
| <b>180</b> | 1446     | 1446      | 1446      | 1446      | 1446      | 1446      | 1446      | 1446      | 1446      | 1446      |

**Vert. Angles**      **Horizontal Angles**

|           | <u>100</u> | <u>110</u> | <u>120</u> | <u>130</u> | <u>140</u> | <u>150</u> | <u>160</u> | <u>170</u> | <u>180</u> | <u>190</u> |
|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>0</b>  | 1930       | 1930       | 1930       | 1930       | 1930       | 1930       | 1930       | 1930       | 1930       | 1930       |
| <b>5</b>  | 1920       | 1918       | 1917       | 1916       | 1916       | 1915       | 1914       | 1913       | 1912       | 1912       |
| <b>10</b> | 1884       | 1881       | 1880       | 1880       | 1879       | 1878       | 1878       | 1877       | 1876       | 1875       |
| <b>15</b> | 1822       | 1820       | 1819       | 1819       | 1819       | 1819       | 1820       | 1820       | 1819       | 1819       |
| <b>20</b> | 1732       | 1730       | 1730       | 1732       | 1735       | 1738       | 1740       | 1742       | 1742       | 1741       |
| <b>25</b> | 1609       | 1608       | 1610       | 1616       | 1622       | 1630       | 1637       | 1642       | 1644       | 1643       |
| <b>30</b> | 1447       | 1447       | 1452       | 1463       | 1477       | 1493       | 1508       | 1520       | 1525       | 1523       |
| <b>35</b> | 1249       | 1249       | 1258       | 1274       | 1296       | 1323       | 1350       | 1372       | 1382       | 1378       |
| <b>40</b> | 1038       | 1038       | 1046       | 1062       | 1088       | 1124       | 1165       | 1201       | 1218       | 1211       |
| <b>45</b> | 850        | 848        | 851        | 860        | 882        | 919        | 966        | 1011       | 1035       | 1026       |
| <b>50</b> | 706        | 700        | 695        | 695        | 705        | 731        | 772        | 816        | 842        | 832        |
| <b>55</b> | 599        | 589        | 577        | 567        | 563        | 573        | 598        | 631        | 652        | 645        |
| <b>60</b> | 508        | 495        | 478        | 459        | 444        | 439        | 449        | 468        | 482        | 477        |

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**CANDELA TABULATION - (Cont.)**

|            |      |      |      |      |      |      |      |      |      |      |
|------------|------|------|------|------|------|------|------|------|------|------|
| <b>65</b>  | 415  | 400  | 379  | 355  | 334  | 321  | 321  | 329  | 337  | 334  |
| <b>70</b>  | 310  | 294  | 273  | 251  | 230  | 217  | 213  | 215  | 218  | 217  |
| <b>75</b>  | 194  | 182  | 168  | 153  | 139  | 130  | 126  | 126  | 128  | 127  |
| <b>80</b>  | 93   | 89   | 83   | 77   | 70   | 66   | 64   | 64   | 65   | 64   |
| <b>85</b>  | 29   | 29   | 28   | 27   | 25   | 25   | 24   | 24   | 24   | 24   |
| <b>90</b>  | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    |
| <b>95</b>  | 26   | 27   | 27   | 27   | 27   | 27   | 27   | 27   | 27   | 27   |
| <b>100</b> | 82   | 80   | 79   | 77   | 75   | 73   | 72   | 71   | 72   | 73   |
| <b>105</b> | 173  | 168  | 162  | 155  | 150  | 146  | 143  | 141  | 141  | 144  |
| <b>110</b> | 295  | 286  | 276  | 265  | 255  | 247  | 242  | 239  | 239  | 242  |
| <b>115</b> | 426  | 418  | 407  | 395  | 383  | 372  | 365  | 361  | 361  | 364  |
| <b>120</b> | 557  | 550  | 540  | 530  | 519  | 508  | 500  | 496  | 495  | 498  |
| <b>125</b> | 683  | 676  | 668  | 660  | 651  | 642  | 635  | 631  | 630  | 633  |
| <b>130</b> | 802  | 796  | 789  | 781  | 774  | 767  | 762  | 759  | 759  | 760  |
| <b>135</b> | 914  | 908  | 901  | 894  | 887  | 882  | 878  | 876  | 876  | 876  |
| <b>140</b> | 1018 | 1012 | 1006 | 999  | 993  | 987  | 984  | 982  | 983  | 982  |
| <b>145</b> | 1112 | 1107 | 1102 | 1096 | 1090 | 1085 | 1081 | 1080 | 1081 | 1080 |
| <b>150</b> | 1197 | 1192 | 1187 | 1182 | 1177 | 1173 | 1171 | 1170 | 1171 | 1169 |
| <b>155</b> | 1271 | 1267 | 1263 | 1258 | 1254 | 1251 | 1249 | 1249 | 1250 | 1248 |
| <b>160</b> | 1333 | 1329 | 1326 | 1323 | 1320 | 1317 | 1316 | 1316 | 1318 | 1315 |
| <b>165</b> | 1382 | 1380 | 1377 | 1375 | 1372 | 1371 | 1371 | 1371 | 1373 | 1369 |
| <b>170</b> | 1418 | 1416 | 1415 | 1413 | 1412 | 1412 | 1412 | 1413 | 1414 | 1409 |
| <b>175</b> | 1439 | 1439 | 1438 | 1438 | 1438 | 1438 | 1438 | 1440 | 1442 | 1435 |
| <b>180</b> | 1446 | 1446 | 1446 | 1446 | 1446 | 1446 | 1446 | 1446 | 1446 | 1446 |

**Vert. Horizontal Angles**  
**Angles**

|            | <b>200</b> | <b>210</b> | <b>220</b> | <b>230</b> | <b>240</b> | <b>250</b> | <b>260</b> | <b>270</b> | <b>280</b> | <b>290</b> |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>0</b>   | 1930       | 1930       | 1930       | 1930       | 1930       | 1930       | 1930       | 1930       | 1930       | 1930       |
| <b>5</b>   | 1912       | 1913       | 1913       | 1914       | 1914       | 1915       | 1916       | 1916       | 1917       | 1918       |
| <b>10</b>  | 1876       | 1876       | 1876       | 1876       | 1877       | 1878       | 1879       | 1880       | 1881       | 1883       |
| <b>15</b>  | 1818       | 1817       | 1816       | 1816       | 1816       | 1816       | 1817       | 1818       | 1820       | 1823       |
| <b>20</b>  | 1739       | 1737       | 1733       | 1730       | 1728       | 1727       | 1727       | 1729       | 1732       | 1736       |
| <b>25</b>  | 1639       | 1632       | 1623       | 1615       | 1609       | 1604       | 1603       | 1604       | 1609       | 1616       |
| <b>30</b>  | 1513       | 1499       | 1482       | 1465       | 1451       | 1442       | 1438       | 1439       | 1445       | 1455       |
| <b>35</b>  | 1361       | 1334       | 1304       | 1277       | 1256       | 1242       | 1236       | 1237       | 1243       | 1256       |
| <b>40</b>  | 1182       | 1141       | 1099       | 1065       | 1042       | 1029       | 1024       | 1025       | 1031       | 1042       |
| <b>45</b>  | 988        | 938        | 893        | 863        | 846        | 839        | 838        | 841        | 846        | 853        |
| <b>50</b>  | 794        | 748        | 713        | 694        | 689        | 693        | 698        | 703        | 706        | 708        |
| <b>55</b>  | 615        | 584        | 565        | 562        | 570        | 582        | 593        | 600        | 602        | 599        |
| <b>60</b>  | 459        | 443        | 441        | 450        | 468        | 487        | 503        | 512        | 513        | 507        |
| <b>65</b>  | 325        | 321        | 327        | 345        | 368        | 391        | 410        | 420        | 421        | 412        |
| <b>70</b>  | 214        | 214        | 223        | 241        | 263        | 285        | 304        | 315        | 315        | 304        |
| <b>75</b>  | 127        | 128        | 135        | 147        | 161        | 176        | 189        | 197        | 197        | 189        |
| <b>80</b>  | 64         | 65         | 69         | 74         | 81         | 87         | 91         | 94         | 95         | 93         |
| <b>85</b>  | 24         | 25         | 25         | 27         | 28         | 29         | 29         | 30         | 31         | 31         |
| <b>90</b>  | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          |
| <b>95</b>  | 27         | 27         | 27         | 27         | 27         | 27         | 26         | 27         | 28         | 28         |
| <b>100</b> | 73         | 75         | 76         | 78         | 80         | 81         | 83         | 84         | 85         | 85         |
| <b>105</b> | 146        | 149        | 153        | 159        | 165        | 170        | 176        | 179        | 178        | 175        |
| <b>110</b> | 246        | 252        | 260        | 270        | 279        | 288        | 296        | 301        | 300        | 295        |
| <b>115</b> | 369        | 377        | 387        | 399        | 409        | 419        | 426        | 431        | 431        | 427        |
| <b>120</b> | 503        | 512        | 522        | 532        | 541        | 549        | 556        | 560        | 561        | 559        |
| <b>125</b> | 638        | 645        | 653        | 661        | 668        | 675        | 681        | 685        | 686        | 685        |
| <b>130</b> | 764        | 769        | 775        | 781        | 788        | 794        | 800        | 803        | 805        | 804        |
| <b>135</b> | 879        | 883        | 888        | 894        | 901        | 906        | 911        | 915        | 916        | 916        |

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PHOTOMETRIC FILENAME : KEL-LED-225-920-1025-35-4-E70-HE.IES

## CANDELA TABULATION - (Cont.)

|     |      |      |      |      |      |      |      |      |      |      |
|-----|------|------|------|------|------|------|------|------|------|------|
| 140 | 985  | 989  | 994  | 1000 | 1005 | 1010 | 1015 | 1018 | 1019 | 1019 |
| 145 | 1082 | 1087 | 1091 | 1096 | 1101 | 1105 | 1109 | 1112 | 1113 | 1113 |
| 150 | 1171 | 1175 | 1179 | 1183 | 1187 | 1191 | 1194 | 1196 | 1197 | 1197 |
| 155 | 1250 | 1252 | 1255 | 1259 | 1262 | 1265 | 1268 | 1270 | 1271 | 1271 |
| 160 | 1316 | 1318 | 1321 | 1323 | 1325 | 1328 | 1330 | 1332 | 1332 | 1332 |
| 165 | 1370 | 1371 | 1373 | 1375 | 1376 | 1378 | 1380 | 1381 | 1381 | 1381 |
| 170 | 1410 | 1411 | 1412 | 1413 | 1414 | 1415 | 1416 | 1417 | 1417 | 1417 |
| 175 | 1435 | 1436 | 1436 | 1437 | 1437 | 1438 | 1438 | 1438 | 1439 | 1439 |
| 180 | 1446 | 1446 | 1446 | 1446 | 1446 | 1446 | 1446 | 1446 | 1446 | 1446 |

## Vert. Angles

## Horizontal Angles

|     | <u>300</u> | <u>310</u> | <u>320</u> | <u>330</u> | <u>340</u> | <u>350</u> | <u>360</u> |
|-----|------------|------------|------------|------------|------------|------------|------------|
| 0   | 1930       | 1930       | 1930       | 1930       | 1930       | 1930       | 1930       |
| 5   | 1918       | 1918       | 1919       | 1919       | 1919       | 1919       | 1918       |
| 10  | 1884       | 1886       | 1888       | 1889       | 1890       | 1890       | 1889       |
| 15  | 1826       | 1830       | 1833       | 1836       | 1839       | 1840       | 1840       |
| 20  | 1742       | 1748       | 1755       | 1761       | 1766       | 1769       | 1770       |
| 25  | 1625       | 1637       | 1649       | 1660       | 1670       | 1677       | 1679       |
| 30  | 1470       | 1489       | 1509       | 1530       | 1548       | 1561       | 1567       |
| 35  | 1275       | 1300       | 1331       | 1364       | 1396       | 1421       | 1432       |
| 40  | 1061       | 1087       | 1122       | 1166       | 1213       | 1253       | 1273       |
| 45  | 864        | 883        | 912        | 956        | 1011       | 1062       | 1091       |
| 50  | 709        | 715        | 731        | 762        | 810        | 861        | 893        |
| 55  | 592        | 585        | 584        | 598        | 629        | 669        | 696        |
| 60  | 493        | 476        | 462        | 460        | 474        | 499        | 516        |
| 65  | 393        | 371        | 350        | 338        | 340        | 350        | 359        |
| 70  | 285        | 263        | 242        | 228        | 224        | 228        | 232        |
| 75  | 176        | 160        | 146        | 137        | 134        | 134        | 136        |
| 80  | 87         | 80         | 74         | 70         | 69         | 69         | 70         |
| 85  | 30         | 29         | 28         | 27         | 26         | 27         | 27         |
| 90  | 5          | 5          | 5          | 5          | 5          | 5          | 5          |
| 95  | 28         | 29         | 29         | 29         | 29         | 29         | 29         |
| 100 | 82         | 80         | 78         | 77         | 76         | 75         | 75         |
| 105 | 170        | 163        | 156        | 152        | 149        | 147        | 147        |
| 110 | 287        | 277        | 267        | 258        | 252        | 249        | 248        |
| 115 | 420        | 410        | 399        | 389        | 381        | 377        | 376        |
| 120 | 553        | 546        | 537        | 528        | 520        | 516        | 516        |
| 125 | 682        | 676        | 669        | 662        | 656        | 652        | 652        |
| 130 | 802        | 798        | 793        | 788        | 783        | 781        | 781        |
| 135 | 914        | 910        | 906        | 903        | 900        | 898        | 899        |
| 140 | 1017       | 1014       | 1011       | 1007       | 1005       | 1004       | 1005       |
| 145 | 1111       | 1108       | 1106       | 1103       | 1101       | 1100       | 1101       |
| 150 | 1196       | 1193       | 1191       | 1189       | 1187       | 1187       | 1187       |
| 155 | 1269       | 1268       | 1266       | 1264       | 1263       | 1263       | 1264       |
| 160 | 1332       | 1330       | 1329       | 1328       | 1327       | 1327       | 1328       |
| 165 | 1381       | 1380       | 1380       | 1379       | 1378       | 1379       | 1380       |
| 170 | 1417       | 1417       | 1416       | 1416       | 1416       | 1416       | 1417       |
| 175 | 1439       | 1438       | 1438       | 1438       | 1438       | 1438       | 1439       |
| 180 | 1446       | 1446       | 1446       | 1446       | 1446       | 1446       | 1446       |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : KEL-LED-225-920-1025-35-4-E70-HE.IES**

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 696.36  | N.A.  | 8.90   |
| 0-30    | 1446.68 | N.A.  | 18.60  |
| 0-40    | 2267.23 | N.A.  | 29.10  |
| 0-60    | 3529.28 | N.A.  | 45.30  |
| 0-80    | 4061.81 | N.A.  | 52.10  |
| 0-90    | 4099.24 | N.A.  | 52.60  |
| 10-90   | 3917.25 | N.A.  | 50.30  |
| 20-40   | 1570.86 | N.A.  | 20.20  |
| 20-50   | 2287.47 | N.A.  | 29.30  |
| 40-70   | 1624.76 | N.A.  | 20.80  |
| 60-80   | 532.53  | N.A.  | 6.80   |
| 70-80   | 169.82  | N.A.  | 2.20   |
| 80-90   | 37.44   | N.A.  | 0.50   |
| 90-110  | 213.54  | N.A.  | 2.70   |
| 90-120  | 610.23  | N.A.  | 7.80   |
| 90-130  | 1203.55 | N.A.  | 15.40  |
| 90-150  | 2587.59 | N.A.  | 33.20  |
| 90-180  | 3694.95 | N.A.  | 47.40  |
| 110-180 | 3481.42 | N.A.  | 44.70  |
| 0-180   | 7794.2  | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 182.00 |
| 10-20   | 514.37 |
| 20-30   | 750.32 |
| 30-40   | 820.54 |
| 40-50   | 716.61 |
| 50-60   | 545.45 |
| 60-70   | 362.70 |
| 70-80   | 169.82 |
| 80-90   | 37.44  |
| 90-100  | 37.69  |
| 100-110 | 175.84 |
| 110-120 | 396.70 |
| 120-130 | 593.31 |
| 130-140 | 694.92 |
| 140-150 | 689.12 |
| 150-160 | 582.06 |
| 160-170 | 388.72 |
| 170-180 | 136.59 |

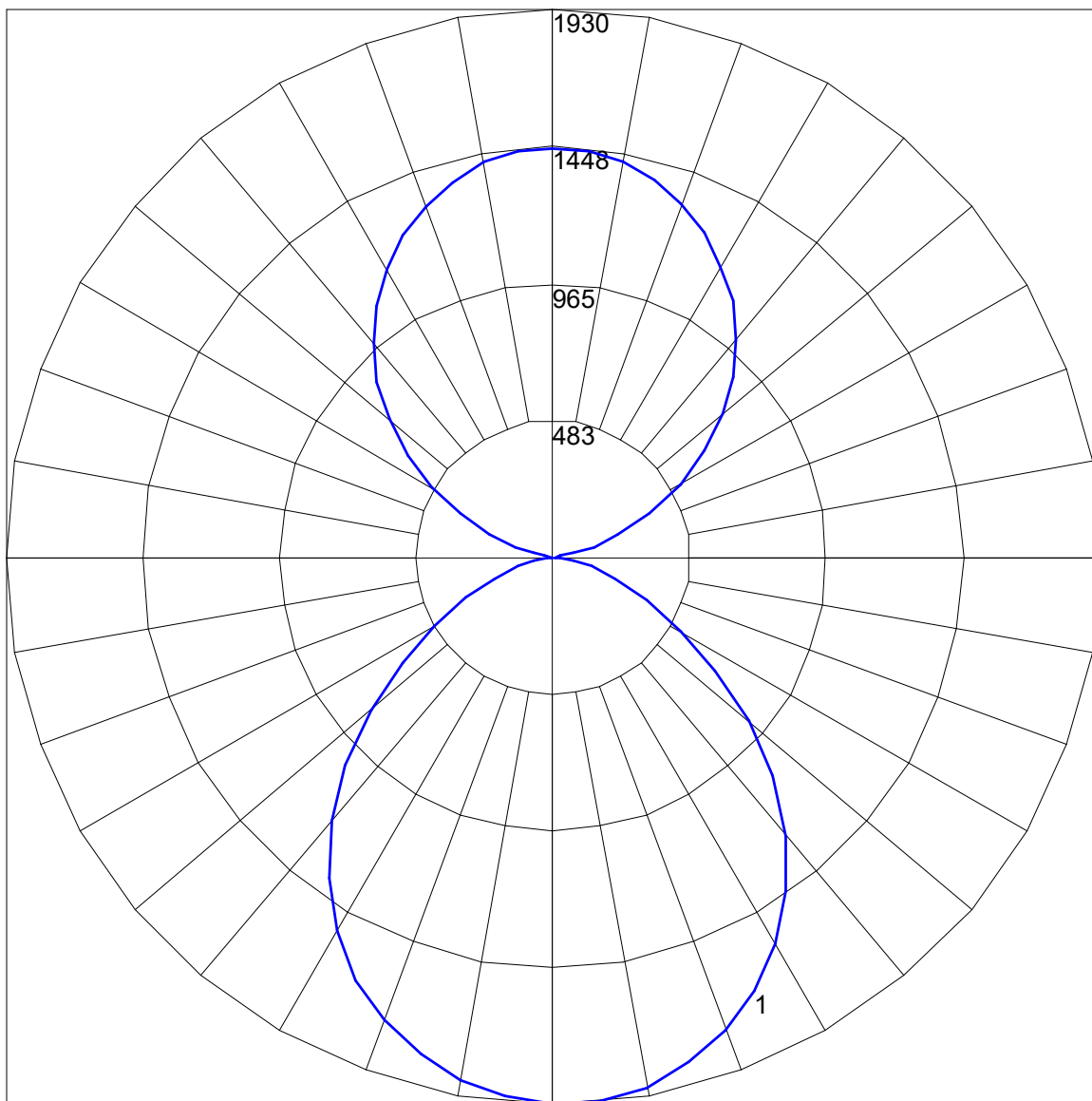
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : KEL-LED-225-920-1025-35-4-E70-HE.IES**

**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 | 85 | 85 | 85 | 71 | 71 | 71 | 59 | 59 | 59 | 53 |
| 1  | 99  | 95  | 91  | 88  | 92  | 88  | 85  | 82  | 75 | 73 | 71 | 64 | 62 | 60 | 53 | 52 | 51 | 46 |
| 2  | 91  | 84  | 78  | 73  | 84  | 78  | 73  | 68  | 67 | 63 | 60 | 57 | 54 | 51 | 47 | 45 | 44 | 39 |
| 3  | 83  | 74  | 67  | 61  | 77  | 69  | 63  | 58  | 59 | 55 | 51 | 50 | 47 | 44 | 42 | 40 | 38 | 34 |
| 4  | 76  | 66  | 58  | 52  | 70  | 61  | 55  | 50  | 53 | 48 | 44 | 45 | 42 | 38 | 38 | 35 | 33 | 30 |
| 5  | 70  | 59  | 51  | 45  | 65  | 55  | 48  | 43  | 48 | 42 | 38 | 41 | 37 | 34 | 35 | 32 | 29 | 26 |
| 6  | 65  | 53  | 45  | 40  | 60  | 50  | 43  | 38  | 43 | 38 | 34 | 37 | 33 | 30 | 32 | 28 | 26 | 23 |
| 7  | 60  | 48  | 40  | 35  | 56  | 45  | 38  | 33  | 39 | 34 | 30 | 34 | 30 | 27 | 29 | 26 | 23 | 21 |
| 8  | 56  | 44  | 36  | 31  | 52  | 41  | 34  | 30  | 36 | 31 | 27 | 31 | 27 | 24 | 27 | 23 | 21 | 19 |
| 9  | 52  | 40  | 33  | 28  | 48  | 38  | 31  | 27  | 33 | 28 | 24 | 29 | 25 | 22 | 25 | 22 | 19 | 17 |
| 10 | 49  | 37  | 30  | 25  | 45  | 35  | 28  | 24  | 31 | 25 | 22 | 27 | 23 | 20 | 23 | 20 | 17 | 16 |

POLAR GRAPH



Maximum Candela = 1930 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)