



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX2WUD-4-00-P8-8TWU-P8-8TWD-F-F-POE X_4000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 13012869.08
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 12/05/2019
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] MX2WUD-4-00-P8-8TWU-P8-8TWD-F-F-POE x
 [LUMINAIRE] Formed White aluminum housing, lens enclosures
 [LAMP] 144 White Downlight LEDs/144 White Uplight LEDs
 [OTHER] This test was performed using the calibrated photodetector met
 [MORE] hod of absolute photometry.

CHARACTERISTICS

| | |
|---------------------------------|---------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 6572 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 130 |
| Total Luminaire Watts | 50.4 |
| 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 w/Sides |
| Luminous Length (0-180) | 3.96 ft |
| Luminous Width (90-270) | 0.17 ft |
| Luminous Height | 0.33 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 16142 | 6491 | 4901 |
| 55 | 13716 | 4513 | 3294 |
| 65 | 11350 | 2912 | 2072 |
| 75 | 8309 | 1557 | 1107 |
| 85 | 3915 | 481 | 364 |

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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 | 1403.188 | 1403.188 | 1403.188 | 1403.188 | 1403.188 |
| 0.5 | 1398.990 | 1411.584 | 1400.040 | 1401.089 | 1401.089 |
| 1.0 | 1398.990 | 1410.535 | 1400.040 | 1401.089 | 1401.089 |
| 1.5 | 1398.990 | 1410.535 | 1400.040 | 1401.089 | 1402.139 |
| 2.0 | 1397.941 | 1410.535 | 1398.990 | 1401.089 | 1402.139 |
| 2.5 | 1397.941 | 1409.485 | 1398.990 | 1402.139 | 1402.139 |
| 3.0 | 1396.891 | 1408.436 | 1397.941 | 1401.089 | 1401.089 |
| 3.5 | 1395.842 | 1407.386 | 1396.891 | 1401.089 | 1401.089 |
| 4.0 | 1393.743 | 1406.337 | 1395.842 | 1400.040 | 1400.040 |
| 4.5 | 1392.693 | 1405.287 | 1394.792 | 1398.990 | 1398.990 |
| 5.0 | 1391.644 | 1403.188 | 1392.693 | 1397.941 | 1396.891 |
| 5.5 | 1389.545 | 1402.139 | 1391.644 | 1395.842 | 1394.792 |
| 6.0 | 1387.446 | 1400.040 | 1389.545 | 1393.743 | 1392.693 |
| 6.5 | 1385.347 | 1397.941 | 1387.446 | 1390.594 | 1390.594 |
| 7.0 | 1383.248 | 1395.842 | 1385.347 | 1387.446 | 1387.446 |
| 7.5 | 1380.099 | 1393.743 | 1382.198 | 1384.297 | 1383.248 |
| 8.0 | 1378.000 | 1390.594 | 1380.099 | 1380.099 | 1379.050 |
| 8.5 | 1374.852 | 1387.446 | 1376.951 | 1375.901 | 1374.852 |
| 9.0 | 1371.703 | 1385.347 | 1373.802 | 1371.703 | 1370.654 |
| 9.5 | 1368.555 | 1382.198 | 1370.654 | 1367.505 | 1365.406 |
| 10.0 | 1365.406 | 1379.050 | 1366.456 | 1362.257 | 1359.109 |
| 10.5 | 1362.257 | 1375.901 | 1363.307 | 1358.059 | 1352.812 |
| 11.0 | 1359.109 | 1371.703 | 1358.059 | 1352.812 | 1347.564 |
| 11.5 | 1354.911 | 1367.505 | 1353.861 | 1346.515 | 1341.267 |
| 12.0 | 1350.713 | 1364.356 | 1348.614 | 1341.267 | 1333.921 |
| 12.5 | 1346.515 | 1360.158 | 1343.366 | 1334.970 | 1327.624 |
| 13.0 | 1342.317 | 1355.960 | 1338.119 | 1328.673 | 1320.277 |
| 13.5 | 1338.119 | 1350.713 | 1332.871 | 1322.376 | 1312.931 |
| 14.0 | 1332.871 | 1346.515 | 1326.574 | 1316.079 | 1306.634 |
| 14.5 | 1328.673 | 1341.267 | 1320.277 | 1308.733 | 1299.287 |
| 15.0 | 1323.426 | 1336.020 | 1313.980 | 1301.386 | 1290.891 |
| 15.5 | 1317.129 | 1330.772 | 1307.683 | 1294.040 | 1283.545 |
| 16.0 | 1311.881 | 1325.525 | 1301.386 | 1286.693 | 1275.149 |
| 16.5 | 1306.634 | 1319.228 | 1294.040 | 1278.297 | 1266.753 |
| 17.0 | 1301.386 | 1312.931 | 1286.693 | 1270.951 | 1259.406 |
| 17.5 | 1295.089 | 1307.683 | 1279.347 | 1262.555 | 1251.010 |
| 18.0 | 1288.792 | 1300.337 | 1272.000 | 1254.158 | 1242.614 |
| 18.5 | 1283.545 | 1294.040 | 1264.654 | 1246.812 | 1234.218 |
| 19.0 | 1277.248 | 1287.743 | 1256.257 | 1237.366 | 1224.772 |
| 19.5 | 1270.951 | 1280.396 | 1247.861 | 1228.970 | 1216.376 |
| 20.0 | 1263.604 | 1273.050 | 1239.465 | 1220.574 | 1206.931 |
| 20.5 | 1257.307 | 1266.753 | 1231.069 | 1211.129 | 1196.436 |
| 21.0 | 1251.010 | 1258.356 | 1222.673 | 1200.634 | 1188.040 |
| 21.5 | 1243.663 | 1251.010 | 1214.277 | 1191.188 | 1176.495 |
| 22.0 | 1236.317 | 1243.663 | 1205.881 | 1181.743 | 1167.050 |
| 22.5 | 1228.970 | 1235.267 | 1196.436 | 1171.248 | 1157.604 |
| 23.0 | 1221.624 | 1227.921 | 1188.040 | 1160.753 | 1146.059 |
| 23.5 | 1214.277 | 1219.525 | 1178.594 | 1150.257 | 1135.564 |
| 24.0 | 1205.881 | 1211.129 | 1169.149 | 1139.762 | 1124.020 |
| 24.5 | 1198.535 | 1202.733 | 1160.753 | 1129.267 | 1113.525 |
| 25.0 | 1189.089 | 1194.337 | 1150.257 | 1117.723 | 1101.980 |
| 25.5 | 1180.693 | 1185.941 | 1140.812 | 1107.228 | 1091.485 |
| 26.0 | 1172.297 | 1176.495 | 1131.366 | 1096.733 | 1080.990 |
| 26.5 | 1162.852 | 1167.050 | 1120.871 | 1086.238 | 1069.446 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : MX2WUD-4-00-P8-8TWU-P8-8TWD-F-F-POE X_4000K.IES****CANDELA TABULATION - (Cont.)**

| | | | | | |
|------|----------|----------|----------|----------|----------|
| 27.0 | 1154.455 | 1157.604 | 1111.426 | 1074.693 | 1057.901 |
| 27.5 | 1145.010 | 1148.158 | 1100.931 | 1064.198 | 1047.196 |
| 28.0 | 1134.515 | 1138.713 | 1091.485 | 1052.654 | 1036.071 |
| 28.5 | 1125.069 | 1129.267 | 1079.941 | 1042.054 | 1025.366 |
| 29.0 | 1114.574 | 1118.772 | 1069.446 | 1031.139 | 1014.766 |
| 29.5 | 1105.129 | 1109.327 | 1058.951 | 1020.224 | 1003.432 |
| 30.0 | 1094.634 | 1098.832 | 1047.826 | 1009.624 | 991.992 |
| 30.5 | 1085.188 | 1087.287 | 1036.806 | 998.499 | 981.497 |
| 31.0 | 1074.693 | 1077.842 | 1025.576 | 987.269 | 969.638 |
| 31.5 | 1063.149 | 1066.297 | 1014.032 | 975.935 | 958.303 |
| 32.0 | 1053.703 | 1054.753 | 1002.592 | 964.285 | 946.863 |
| 32.5 | 1042.263 | 1043.733 | 990.943 | 952.006 | 935.529 |
| 33.0 | 1032.083 | 1031.978 | 978.978 | 940.147 | 923.250 |
| 33.5 | 1021.063 | 1020.854 | 967.224 | 928.287 | 911.285 |
| 34.0 | 1009.939 | 1009.099 | 955.259 | 916.218 | 900.055 |
| 34.5 | 999.129 | 997.030 | 943.190 | 903.834 | 888.196 |
| 35.0 | 988.319 | 985.275 | 931.436 | 891.450 | 875.497 |
| 35.5 | 977.509 | 972.891 | 919.471 | 878.960 | 862.588 |
| 36.0 | 966.594 | 961.242 | 906.982 | 866.786 | 850.204 |
| 36.5 | 955.469 | 949.172 | 895.018 | 854.087 | 837.505 |
| 37.0 | 944.240 | 937.418 | 882.739 | 841.598 | 823.756 |
| 37.5 | 932.275 | 925.454 | 870.774 | 828.899 | 810.323 |
| 38.0 | 921.046 | 913.489 | 858.390 | 815.990 | 796.994 |
| 38.5 | 909.186 | 901.315 | 846.426 | 802.976 | 784.085 |
| 39.0 | 897.327 | 889.455 | 833.832 | 790.487 | 773.170 |
| 39.5 | 885.257 | 877.806 | 821.657 | 779.782 | 761.311 |
| 40.0 | 873.398 | 866.366 | 809.273 | 767.608 | 748.507 |
| 40.5 | 861.224 | 854.297 | 797.099 | 755.958 | 735.913 |
| 41.0 | 849.574 | 842.438 | 786.079 | 743.364 | 723.844 |
| 41.5 | 837.820 | 830.893 | 776.109 | 730.980 | 712.089 |
| 42.0 | 825.751 | 818.929 | 764.250 | 719.121 | 700.650 |
| 42.5 | 813.786 | 807.279 | 753.125 | 707.576 | 689.630 |
| 43.0 | 802.137 | 795.630 | 741.370 | 696.347 | 678.820 |
| 43.5 | 791.012 | 785.030 | 729.931 | 685.432 | 668.325 |
| 44.0 | 780.307 | 775.479 | 718.701 | 674.832 | 658.040 |
| 44.5 | 772.121 | 764.040 | 707.576 | 664.442 | 647.964 |
| 45.0 | 760.576 | 752.810 | 696.661 | 654.261 | 637.784 |
| 45.5 | 749.242 | 741.685 | 685.956 | 644.186 | 627.814 |
| 46.0 | 738.117 | 730.246 | 675.461 | 634.321 | 617.844 |
| 46.5 | 726.887 | 718.806 | 664.966 | 624.351 | 607.978 |
| 47.0 | 715.867 | 707.471 | 654.681 | 614.485 | 598.008 |
| 47.5 | 704.638 | 696.137 | 644.291 | 604.620 | 588.143 |
| 48.0 | 693.618 | 685.012 | 634.006 | 594.650 | 578.277 |
| 48.5 | 682.598 | 673.887 | 623.616 | 584.784 | 568.517 |
| 49.0 | 671.578 | 662.867 | 613.331 | 574.709 | 558.861 |
| 49.5 | 660.663 | 651.848 | 602.941 | 564.949 | 549.206 |
| 50.0 | 649.853 | 640.933 | 592.655 | 555.188 | 539.655 |
| 50.5 | 638.939 | 630.018 | 582.265 | 545.428 | 530.315 |
| 51.0 | 628.024 | 619.208 | 571.875 | 535.772 | 520.974 |
| 51.5 | 617.214 | 608.398 | 561.590 | 526.117 | 511.634 |
| 52.0 | 606.299 | 597.588 | 551.515 | 516.566 | 502.293 |
| 52.5 | 595.384 | 586.988 | 541.440 | 507.121 | 493.057 |
| 53.0 | 584.469 | 576.283 | 531.574 | 497.675 | 483.927 |
| 53.5 | 573.659 | 565.683 | 521.814 | 488.230 | 474.481 |
| 54.0 | 562.954 | 555.293 | 512.158 | 478.994 | 465.246 |
| 54.5 | 552.250 | 544.798 | 502.608 | 469.549 | 456.010 |

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| | | | | | |
|------|---------|---------|---------|---------|---------|
| 55.0 | 541.650 | 534.513 | 493.057 | 460.208 | 446.774 |
| 55.5 | 531.050 | 524.333 | 483.612 | 451.077 | 437.644 |
| 56.0 | 520.554 | 514.152 | 474.166 | 441.842 | 428.408 |
| 56.5 | 510.164 | 504.182 | 464.721 | 432.921 | 419.487 |
| 57.0 | 499.879 | 494.107 | 455.275 | 423.895 | 410.671 |
| 57.5 | 489.699 | 484.032 | 445.830 | 415.079 | 402.065 |
| 58.0 | 479.729 | 473.956 | 436.489 | 406.263 | 393.459 |
| 58.5 | 469.758 | 463.986 | 427.149 | 397.657 | 385.168 |
| 59.0 | 460.208 | 454.226 | 418.018 | 389.052 | 376.772 |
| 59.5 | 450.762 | 444.570 | 408.782 | 380.551 | 368.586 |
| 60.0 | 441.317 | 434.915 | 399.756 | 372.154 | 360.505 |
| 60.5 | 431.976 | 425.364 | 390.836 | 363.863 | 352.424 |
| 61.0 | 422.531 | 415.814 | 382.020 | 355.677 | 344.448 |
| 61.5 | 413.085 | 406.473 | 373.204 | 347.596 | 336.576 |
| 62.0 | 403.535 | 397.133 | 364.493 | 339.515 | 328.915 |
| 62.5 | 394.089 | 387.897 | 355.887 | 331.539 | 321.253 |
| 63.0 | 384.749 | 378.766 | 347.491 | 323.772 | 313.697 |
| 63.5 | 375.513 | 369.636 | 338.990 | 316.006 | 306.141 |
| 64.0 | 366.277 | 360.400 | 330.594 | 308.240 | 298.689 |
| 64.5 | 357.042 | 351.269 | 322.303 | 300.578 | 291.238 |
| 65.0 | 348.016 | 342.244 | 314.012 | 293.022 | 283.996 |
| 65.5 | 338.885 | 333.218 | 305.826 | 285.465 | 276.754 |
| 66.0 | 329.859 | 324.297 | 297.745 | 278.014 | 269.513 |
| 66.5 | 320.729 | 315.376 | 289.558 | 270.457 | 262.271 |
| 67.0 | 311.598 | 306.665 | 281.477 | 262.796 | 254.925 |
| 67.5 | 302.572 | 297.850 | 273.501 | 255.345 | 247.683 |
| 68.0 | 293.651 | 289.034 | 265.525 | 247.893 | 240.547 |
| 68.5 | 284.731 | 280.323 | 257.444 | 240.547 | 233.410 |
| 69.0 | 275.915 | 271.507 | 249.572 | 233.200 | 226.273 |
| 69.5 | 267.099 | 262.901 | 241.596 | 225.853 | 219.347 |
| 70.0 | 258.178 | 254.295 | 233.830 | 218.612 | 212.315 |
| 70.5 | 249.362 | 245.794 | 226.063 | 211.475 | 205.493 |
| 71.0 | 240.651 | 237.188 | 218.297 | 204.444 | 198.776 |
| 71.5 | 231.941 | 228.687 | 210.741 | 197.412 | 192.269 |
| 72.0 | 223.440 | 220.186 | 203.499 | 190.590 | 185.867 |
| 72.5 | 214.939 | 211.895 | 196.152 | 183.978 | 179.465 |
| 73.0 | 206.543 | 203.709 | 188.806 | 177.366 | 173.168 |
| 73.5 | 198.147 | 195.628 | 181.564 | 170.859 | 166.976 |
| 74.0 | 189.960 | 187.547 | 174.428 | 164.457 | 160.784 |
| 74.5 | 181.774 | 179.675 | 167.501 | 158.160 | 154.697 |
| 75.0 | 173.693 | 171.909 | 160.574 | 151.968 | 148.610 |
| 75.5 | 165.822 | 164.143 | 153.752 | 145.881 | 142.733 |
| 76.0 | 157.951 | 156.586 | 147.036 | 139.899 | 136.960 |
| 76.5 | 150.289 | 149.135 | 140.424 | 133.917 | 131.293 |
| 77.0 | 142.733 | 141.788 | 133.917 | 128.040 | 125.521 |
| 77.5 | 135.176 | 134.547 | 127.515 | 122.372 | 119.958 |
| 78.0 | 127.830 | 127.410 | 121.323 | 116.600 | 114.291 |
| 78.5 | 120.588 | 120.483 | 115.131 | 111.038 | 108.834 |
| 79.0 | 113.556 | 113.661 | 109.253 | 105.475 | 103.586 |
| 79.5 | 106.630 | 106.945 | 103.376 | 100.123 | 98.339 |
| 80.0 | 99.808 | 100.438 | 97.709 | 94.770 | 93.196 |
| 80.5 | 93.091 | 94.141 | 92.042 | 89.523 | 88.158 |
| 81.0 | 86.689 | 87.949 | 86.479 | 84.485 | 83.226 |
| 81.5 | 80.497 | 81.966 | 81.022 | 79.448 | 78.398 |
| 82.0 | 74.305 | 76.089 | 75.669 | 74.410 | 73.570 |
| 82.5 | 68.323 | 70.212 | 70.527 | 69.582 | 68.952 |

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| | | | | | |
|-------|---------|---------|---------|---------|---------|
| 83.0 | 62.550 | 64.650 | 65.279 | 64.859 | 64.230 |
| 83.5 | 56.883 | 59.192 | 60.242 | 60.137 | 59.717 |
| 84.0 | 51.426 | 54.050 | 55.414 | 55.519 | 55.309 |
| 84.5 | 46.178 | 49.012 | 50.586 | 51.006 | 50.796 |
| 85.0 | 41.141 | 44.079 | 45.863 | 46.598 | 46.388 |
| 85.5 | 36.313 | 39.356 | 41.350 | 42.295 | 42.190 |
| 86.0 | 31.590 | 34.634 | 36.943 | 37.992 | 37.992 |
| 86.5 | 27.077 | 30.226 | 32.640 | 33.899 | 33.899 |
| 87.0 | 22.669 | 25.818 | 28.442 | 29.911 | 29.911 |
| 87.5 | 18.366 | 21.620 | 24.244 | 25.923 | 25.923 |
| 88.0 | 14.168 | 17.527 | 20.255 | 22.040 | 22.145 |
| 88.5 | 9.970 | 13.539 | 16.267 | 18.471 | 18.576 |
| 89.0 | 5.772 | 9.131 | 12.069 | 14.273 | 13.749 |
| 89.5 | 2.834 | 5.457 | 7.661 | 9.026 | 8.501 |
| 90.0 | 2.519 | 3.988 | 4.933 | 5.248 | 4.303 |
| 90.5 | 2.834 | 5.877 | 7.976 | 8.501 | 8.396 |
| 91.0 | 5.772 | 7.242 | 9.236 | 11.020 | 11.125 |
| 91.5 | 10.075 | 9.655 | 10.600 | 11.859 | 11.964 |
| 92.0 | 15.008 | 13.014 | 12.594 | 13.539 | 13.539 |
| 92.5 | 20.046 | 16.687 | 14.693 | 15.428 | 15.428 |
| 93.0 | 25.083 | 20.780 | 17.107 | 17.422 | 17.317 |
| 93.5 | 30.226 | 24.873 | 20.150 | 19.521 | 19.416 |
| 94.0 | 35.368 | 28.966 | 23.614 | 21.725 | 21.515 |
| 94.5 | 40.511 | 33.269 | 27.392 | 24.139 | 23.719 |
| 95.0 | 45.653 | 37.782 | 31.485 | 26.972 | 26.028 |
| 95.5 | 50.691 | 42.505 | 35.683 | 30.121 | 28.756 |
| 96.0 | 55.834 | 47.438 | 39.776 | 33.584 | 31.800 |
| 96.5 | 60.871 | 52.475 | 43.764 | 37.362 | 35.053 |
| 97.0 | 66.014 | 57.618 | 47.543 | 41.350 | 38.832 |
| 97.5 | 71.156 | 62.655 | 51.321 | 45.444 | 42.715 |
| 98.0 | 76.299 | 67.798 | 55.204 | 49.432 | 46.703 |
| 98.5 | 81.442 | 72.836 | 58.982 | 53.315 | 50.691 |
| 99.0 | 86.584 | 77.978 | 62.760 | 57.093 | 54.574 |
| 99.5 | 91.727 | 83.121 | 66.749 | 60.871 | 58.457 |
| 100.0 | 96.869 | 88.263 | 70.737 | 64.545 | 62.131 |
| 100.5 | 102.117 | 93.511 | 74.830 | 68.323 | 65.909 |
| 101.0 | 107.259 | 98.758 | 79.028 | 72.101 | 69.687 |
| 101.5 | 112.612 | 104.006 | 83.226 | 75.984 | 73.465 |
| 102.0 | 117.964 | 109.358 | 87.739 | 79.762 | 77.349 |
| 102.5 | 123.527 | 114.816 | 92.251 | 83.646 | 81.232 |
| 103.0 | 129.089 | 120.378 | 96.764 | 87.634 | 85.010 |
| 103.5 | 134.861 | 126.046 | 101.487 | 91.727 | 88.998 |
| 104.0 | 140.739 | 131.818 | 106.420 | 95.820 | 93.091 |
| 104.5 | 146.511 | 137.695 | 111.352 | 100.123 | 97.289 |
| 105.0 | 152.388 | 143.677 | 116.495 | 104.426 | 101.592 |
| 105.5 | 158.370 | 149.764 | 121.743 | 108.834 | 105.895 |
| 106.0 | 164.562 | 155.956 | 127.200 | 113.347 | 110.408 |
| 106.5 | 170.964 | 162.358 | 132.867 | 118.069 | 114.921 |
| 107.0 | 177.576 | 168.970 | 138.745 | 122.792 | 119.644 |
| 107.5 | 184.293 | 175.687 | 144.832 | 127.725 | 124.366 |
| 108.0 | 191.325 | 182.614 | 151.024 | 132.867 | 129.299 |
| 108.5 | 198.566 | 189.751 | 157.531 | 138.220 | 134.337 |
| 109.0 | 206.018 | 197.097 | 164.143 | 143.677 | 139.584 |
| 109.5 | 213.574 | 204.549 | 171.069 | 149.345 | 145.042 |
| 110.0 | 221.551 | 212.315 | 178.206 | 155.222 | 150.604 |
| 110.5 | 229.632 | 220.396 | 185.657 | 161.414 | 156.376 |

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| | | | | | |
|-------|----------|----------|---------|---------|---------|
| 111.0 | 238.133 | 228.582 | 193.424 | 167.816 | 162.358 |
| 111.5 | 246.739 | 237.083 | 201.505 | 174.638 | 168.655 |
| 112.0 | 255.869 | 246.004 | 209.901 | 181.669 | 175.372 |
| 112.5 | 265.210 | 255.135 | 218.612 | 189.121 | 182.194 |
| 113.0 | 274.865 | 264.685 | 227.743 | 196.782 | 189.436 |
| 113.5 | 284.836 | 274.446 | 237.188 | 204.758 | 196.782 |
| 114.0 | 295.226 | 284.521 | 246.949 | 213.154 | 204.758 |
| 114.5 | 305.826 | 294.911 | 257.129 | 221.970 | 212.945 |
| 115.0 | 316.846 | 305.721 | 267.624 | 231.101 | 221.655 |
| 115.5 | 328.180 | 316.846 | 278.644 | 240.651 | 230.576 |
| 116.0 | 339.725 | 328.285 | 289.978 | 250.727 | 240.022 |
| 116.5 | 351.689 | 340.145 | 301.733 | 261.327 | 249.782 |
| 117.0 | 364.178 | 352.109 | 313.907 | 272.242 | 260.172 |
| 117.5 | 376.982 | 364.598 | 326.396 | 283.681 | 270.982 |
| 118.0 | 390.206 | 377.297 | 339.305 | 295.541 | 282.107 |
| 118.5 | 403.745 | 390.521 | 352.634 | 307.715 | 293.651 |
| 119.0 | 417.598 | 404.059 | 366.172 | 320.309 | 305.721 |
| 119.5 | 431.661 | 417.913 | 380.236 | 333.533 | 318.210 |
| 120.0 | 445.830 | 432.186 | 394.719 | 347.071 | 331.119 |
| 120.5 | 460.418 | 446.774 | 409.517 | 361.135 | 344.448 |
| 121.0 | 475.321 | 461.782 | 424.735 | 375.723 | 358.301 |
| 121.5 | 490.644 | 477.105 | 440.267 | 390.836 | 372.784 |
| 122.0 | 506.281 | 492.848 | 456.220 | 406.263 | 387.687 |
| 122.5 | 522.339 | 508.695 | 472.487 | 422.321 | 403.220 |
| 123.0 | 538.711 | 524.857 | 488.964 | 438.693 | 419.067 |
| 123.5 | 555.293 | 541.230 | 505.756 | 455.380 | 435.335 |
| 124.0 | 571.980 | 557.917 | 522.758 | 472.487 | 452.022 |
| 124.5 | 588.982 | 574.604 | 539.970 | 490.119 | 469.234 |
| 125.0 | 605.984 | 591.606 | 557.497 | 508.065 | 487.075 |
| 125.5 | 622.881 | 608.713 | 575.129 | 526.432 | 505.127 |
| 126.0 | 639.673 | 625.925 | 592.865 | 545.008 | 523.388 |
| 126.5 | 656.570 | 643.137 | 610.602 | 563.899 | 542.069 |
| 127.0 | 673.782 | 660.558 | 628.653 | 583.000 | 561.275 |
| 127.5 | 691.099 | 677.980 | 646.600 | 602.311 | 580.586 |
| 128.0 | 708.311 | 695.612 | 664.547 | 621.622 | 600.107 |
| 128.5 | 725.418 | 713.034 | 682.388 | 640.933 | 619.628 |
| 129.0 | 742.105 | 730.351 | 700.020 | 660.349 | 639.253 |
| 129.5 | 759.002 | 747.562 | 717.652 | 679.659 | 659.194 |
| 130.0 | 773.695 | 764.145 | 735.073 | 699.075 | 679.345 |
| 130.5 | 787.549 | 778.418 | 752.285 | 718.281 | 699.285 |
| 131.0 | 803.501 | 794.370 | 767.608 | 737.277 | 719.331 |
| 131.5 | 819.558 | 810.113 | 783.455 | 755.224 | 739.271 |
| 132.0 | 835.301 | 826.275 | 798.044 | 772.751 | 757.008 |
| 132.5 | 851.044 | 842.123 | 814.311 | 790.592 | 776.529 |
| 133.0 | 866.576 | 857.551 | 830.473 | 806.230 | 795.735 |
| 133.5 | 881.584 | 873.188 | 846.321 | 823.337 | 812.212 |
| 134.0 | 896.172 | 888.091 | 862.063 | 840.234 | 830.788 |
| 134.5 | 910.655 | 902.994 | 877.281 | 856.816 | 848.840 |
| 135.0 | 924.194 | 917.162 | 892.499 | 873.083 | 866.261 |
| 135.5 | 937.943 | 931.226 | 907.402 | 888.721 | 882.949 |
| 136.0 | 951.271 | 944.974 | 921.885 | 904.358 | 899.426 |
| 136.5 | 963.760 | 958.513 | 936.158 | 919.261 | 915.588 |
| 137.0 | 976.145 | 971.317 | 950.537 | 934.374 | 931.121 |
| 137.5 | 988.214 | 984.331 | 963.551 | 948.857 | 946.339 |
| 138.0 | 1000.283 | 996.715 | 977.089 | 962.921 | 960.822 |
| 138.5 | 1012.143 | 1009.099 | 989.788 | 976.459 | 974.570 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : MX2WUD-4-00-P8-8TWU-P8-8TWD-F-F-POE X_4000K.IES****CANDELA TABULATION - (Cont.)**

| | | | | | |
|-------|----------|----------|----------|----------|----------|
| 139.0 | 1022.953 | 1021.063 | 1002.067 | 989.893 | 988.529 |
| 139.5 | 1033.867 | 1032.818 | 1014.347 | 1002.592 | 1001.543 |
| 140.0 | 1044.677 | 1043.628 | 1025.891 | 1015.606 | 1014.452 |
| 140.5 | 1054.753 | 1054.753 | 1037.331 | 1027.675 | 1026.626 |
| 141.0 | 1065.248 | 1065.248 | 1048.980 | 1039.640 | 1038.485 |
| 141.5 | 1074.693 | 1075.743 | 1060.000 | 1051.604 | 1050.555 |
| 142.0 | 1084.139 | 1086.238 | 1071.545 | 1062.099 | 1062.099 |
| 142.5 | 1093.584 | 1095.683 | 1080.990 | 1073.644 | 1072.594 |
| 143.0 | 1103.030 | 1105.129 | 1091.485 | 1084.139 | 1084.139 |
| 143.5 | 1111.426 | 1114.574 | 1101.980 | 1094.634 | 1094.634 |
| 144.0 | 1119.822 | 1122.970 | 1111.426 | 1105.129 | 1105.129 |
| 144.5 | 1128.218 | 1132.416 | 1119.822 | 1115.624 | 1115.624 |
| 145.0 | 1136.614 | 1140.812 | 1129.267 | 1125.069 | 1126.119 |
| 145.5 | 1145.010 | 1149.208 | 1137.663 | 1134.515 | 1136.614 |
| 146.0 | 1152.356 | 1157.604 | 1146.059 | 1143.960 | 1146.059 |
| 146.5 | 1160.753 | 1164.951 | 1154.455 | 1153.406 | 1156.555 |
| 147.0 | 1168.099 | 1172.297 | 1162.852 | 1161.802 | 1164.951 |
| 147.5 | 1174.396 | 1180.693 | 1170.198 | 1170.198 | 1174.396 |
| 148.0 | 1182.792 | 1188.040 | 1178.594 | 1178.594 | 1182.792 |
| 148.5 | 1190.139 | 1195.386 | 1185.941 | 1185.941 | 1191.188 |
| 149.0 | 1197.485 | 1202.733 | 1193.287 | 1193.287 | 1198.535 |
| 149.5 | 1203.782 | 1210.079 | 1200.634 | 1200.634 | 1205.881 |
| 150.0 | 1211.129 | 1216.376 | 1207.980 | 1206.931 | 1212.178 |
| 150.5 | 1217.426 | 1223.723 | 1215.327 | 1213.228 | 1218.475 |
| 151.0 | 1223.723 | 1230.020 | 1222.673 | 1220.574 | 1224.772 |
| 151.5 | 1231.069 | 1237.366 | 1228.970 | 1226.871 | 1230.020 |
| 152.0 | 1237.366 | 1243.663 | 1236.317 | 1233.168 | 1235.267 |
| 152.5 | 1243.663 | 1249.960 | 1243.663 | 1239.465 | 1241.564 |
| 153.0 | 1249.960 | 1256.257 | 1249.960 | 1245.762 | 1246.812 |
| 153.5 | 1256.257 | 1261.505 | 1256.257 | 1252.059 | 1252.059 |
| 154.0 | 1261.505 | 1267.802 | 1262.555 | 1258.356 | 1257.307 |
| 154.5 | 1267.802 | 1274.099 | 1268.852 | 1264.654 | 1263.604 |
| 155.0 | 1273.050 | 1279.347 | 1275.149 | 1270.951 | 1268.852 |
| 155.5 | 1278.297 | 1284.594 | 1281.446 | 1277.248 | 1275.149 |
| 156.0 | 1283.545 | 1289.842 | 1286.693 | 1283.545 | 1281.446 |
| 156.5 | 1288.792 | 1295.089 | 1292.990 | 1289.842 | 1287.743 |
| 157.0 | 1292.990 | 1300.337 | 1298.238 | 1296.139 | 1292.990 |
| 157.5 | 1298.238 | 1305.584 | 1303.485 | 1302.436 | 1299.287 |
| 158.0 | 1303.485 | 1310.832 | 1308.733 | 1307.683 | 1305.584 |
| 158.5 | 1308.733 | 1315.030 | 1313.980 | 1313.980 | 1310.832 |
| 159.0 | 1312.931 | 1320.277 | 1318.178 | 1319.228 | 1316.079 |
| 159.5 | 1317.129 | 1324.475 | 1323.426 | 1325.525 | 1322.376 |
| 160.0 | 1321.327 | 1328.673 | 1328.673 | 1330.772 | 1327.624 |
| 160.5 | 1325.525 | 1332.871 | 1332.871 | 1334.970 | 1332.871 |
| 161.0 | 1329.723 | 1337.069 | 1337.069 | 1340.218 | 1338.119 |
| 161.5 | 1333.921 | 1341.267 | 1341.267 | 1344.416 | 1342.317 |
| 162.0 | 1338.119 | 1345.465 | 1345.465 | 1348.614 | 1347.564 |
| 162.5 | 1342.317 | 1349.663 | 1349.663 | 1352.812 | 1351.762 |
| 163.0 | 1346.515 | 1352.812 | 1353.861 | 1357.010 | 1355.960 |
| 163.5 | 1350.713 | 1357.010 | 1357.010 | 1360.158 | 1359.109 |
| 164.0 | 1354.911 | 1361.208 | 1361.208 | 1363.307 | 1363.307 |
| 164.5 | 1358.059 | 1365.406 | 1364.356 | 1366.456 | 1366.456 |
| 165.0 | 1362.257 | 1368.555 | 1367.505 | 1369.604 | 1369.604 |
| 165.5 | 1365.406 | 1371.703 | 1369.604 | 1372.753 | 1372.753 |
| 166.0 | 1369.604 | 1375.901 | 1372.753 | 1374.852 | 1375.901 |
| 166.5 | 1372.753 | 1379.050 | 1374.852 | 1378.000 | 1378.000 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : MX2WUD-4-00-P8-8TWU-P8-8TWD-F-F-POE X_4000K.IES****CANDELA TABULATION - (Cont.)**

| | | | | | |
|-------|----------|----------|----------|----------|----------|
| 167.0 | 1375.901 | 1382.198 | 1378.000 | 1381.149 | 1382.198 |
| 167.5 | 1379.050 | 1385.347 | 1380.099 | 1383.248 | 1384.297 |
| 168.0 | 1382.198 | 1387.446 | 1383.248 | 1386.396 | 1386.396 |
| 168.5 | 1385.347 | 1390.594 | 1385.347 | 1388.495 | 1389.545 |
| 169.0 | 1387.446 | 1392.693 | 1387.446 | 1391.644 | 1392.693 |
| 169.5 | 1390.594 | 1395.842 | 1389.545 | 1393.743 | 1394.792 |
| 170.0 | 1392.693 | 1397.941 | 1391.644 | 1395.842 | 1397.941 |
| 170.5 | 1395.842 | 1400.040 | 1393.743 | 1397.941 | 1400.040 |
| 171.0 | 1397.941 | 1402.139 | 1394.792 | 1400.040 | 1402.139 |
| 171.5 | 1398.990 | 1403.188 | 1396.891 | 1402.139 | 1405.287 |
| 172.0 | 1402.139 | 1405.287 | 1398.990 | 1404.238 | 1407.386 |
| 172.5 | 1403.188 | 1407.386 | 1400.040 | 1406.337 | 1409.485 |
| 173.0 | 1405.287 | 1408.436 | 1402.139 | 1407.386 | 1411.584 |
| 173.5 | 1407.386 | 1410.535 | 1403.188 | 1408.436 | 1413.683 |
| 174.0 | 1408.436 | 1411.584 | 1404.238 | 1410.535 | 1414.733 |
| 174.5 | 1410.535 | 1412.634 | 1406.337 | 1411.584 | 1415.782 |
| 175.0 | 1411.584 | 1413.683 | 1407.386 | 1412.634 | 1416.832 |
| 175.5 | 1412.634 | 1414.733 | 1407.386 | 1413.683 | 1417.881 |
| 176.0 | 1414.733 | 1415.782 | 1409.485 | 1414.733 | 1418.931 |
| 176.5 | 1415.782 | 1416.832 | 1409.485 | 1414.733 | 1418.931 |
| 177.0 | 1415.782 | 1416.832 | 1410.535 | 1415.782 | 1418.931 |
| 177.5 | 1416.832 | 1417.881 | 1411.584 | 1415.782 | 1418.931 |
| 178.0 | 1417.881 | 1418.931 | 1411.584 | 1415.782 | 1419.980 |
| 178.5 | 1418.931 | 1418.931 | 1412.634 | 1416.832 | 1418.931 |
| 179.0 | 1418.931 | 1418.931 | 1412.634 | 1416.832 | 1418.931 |
| 179.5 | 1418.931 | 1418.931 | 1413.683 | 1416.832 | 1418.931 |
| 180.0 | 1416.832 | 1416.832 | 1416.832 | 1416.832 | 1416.832 |

IES INDOOR REPORT**PHOTOMETRIC FILENAME : MX2WUD-4-00-P8-8TWU-P8-8TWD-F-F-POE X_4000K.IES****ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 502.24 | N.A. | 7.60 |
| 0-30 | 1031.84 | N.A. | 15.70 |
| 0-40 | 1615.34 | N.A. | 24.60 |
| 0-60 | 2600.25 | N.A. | 39.60 |
| 0-80 | 3085.83 | N.A. | 47.00 |
| 0-90 | 3136.98 | N.A. | 47.70 |
| 10-90 | 3004.55 | N.A. | 45.70 |
| 20-40 | 1113.1 | N.A. | 16.90 |
| 20-50 | 1654.23 | N.A. | 25.20 |
| 40-70 | 1298.54 | N.A. | 19.80 |
| 60-80 | 485.57 | N.A. | 7.40 |
| 70-80 | 171.94 | N.A. | 2.60 |
| 80-90 | 51.15 | N.A. | 0.80 |
| 90-110 | 170.62 | N.A. | 2.60 |
| 90-120 | 441.85 | N.A. | 6.70 |
| 90-130 | 936.09 | N.A. | 14.20 |
| 90-150 | 2327.59 | N.A. | 35.40 |
| 90-180 | 3435.32 | N.A. | 52.30 |
| 110-180 | 3264.7 | N.A. | 49.70 |
| 0-180 | 6572.3 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 132.42 |
| 10-20 | 369.82 |
| 20-30 | 529.60 |
| 30-40 | 583.50 |
| 40-50 | 541.13 |
| 50-60 | 443.78 |
| 60-70 | 313.64 |
| 70-80 | 171.94 |
| 80-90 | 51.15 |
| 90-100 | 38.79 |
| 100-110 | 131.83 |
| 110-120 | 271.24 |
| 120-130 | 494.24 |
| 130-140 | 685.43 |
| 140-150 | 706.07 |
| 150-160 | 587.38 |
| 160-170 | 386.10 |
| 170-180 | 134.24 |

IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX2WUD-4-00-P8-8TWU-P8-8TWD-F-F-POE X_4000K.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 | 107 | 107 | 107 | 107 | 98 | 98 | 98 | 98 | 82 | 82 | 82 | 67 | 67 | 67 | 54 | 54 | 54 | 48 |
| 1 | 98 | 93 | 90 | 86 | 90 | 86 | 83 | 80 | 72 | 70 | 68 | 60 | 58 | 57 | 48 | 47 | 46 | 41 |
| 2 | 89 | 82 | 76 | 71 | 82 | 76 | 70 | 66 | 64 | 60 | 57 | 53 | 50 | 48 | 43 | 41 | 39 | 35 |
| 3 | 81 | 72 | 65 | 59 | 75 | 67 | 60 | 55 | 56 | 52 | 48 | 47 | 44 | 41 | 38 | 36 | 34 | 30 |
| 4 | 75 | 64 | 56 | 50 | 68 | 59 | 53 | 47 | 50 | 45 | 41 | 42 | 38 | 35 | 34 | 32 | 29 | 26 |
| 5 | 69 | 57 | 49 | 43 | 63 | 53 | 46 | 41 | 45 | 40 | 36 | 38 | 34 | 31 | 31 | 28 | 26 | 23 |
| 6 | 63 | 51 | 44 | 38 | 58 | 48 | 41 | 36 | 41 | 35 | 31 | 34 | 30 | 27 | 28 | 25 | 23 | 20 |
| 7 | 59 | 47 | 39 | 33 | 54 | 43 | 36 | 31 | 37 | 32 | 28 | 31 | 27 | 24 | 26 | 23 | 20 | 18 |
| 8 | 54 | 42 | 35 | 29 | 50 | 39 | 33 | 28 | 34 | 29 | 25 | 29 | 25 | 22 | 24 | 21 | 18 | 16 |
| 9 | 51 | 39 | 31 | 26 | 47 | 36 | 29 | 25 | 31 | 26 | 22 | 26 | 22 | 19 | 22 | 19 | 17 | 15 |
| 10 | 47 | 36 | 28 | 24 | 44 | 33 | 27 | 22 | 29 | 24 | 20 | 25 | 20 | 18 | 21 | 17 | 15 | 13 |

IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX2WUD-4-00-P8-8TWU-P8-8TWD-F-F-POE X_4000K.IES

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 | 14.6 | 15.5 | 15.6 | 16.4 | 17.7 | 13.5 | 14.3 | 14.5 | 15.3 | 16.6 |
| | 3H | 16.2 | 16.9 | 17.1 | 17.9 | 19.2 | 15.0 | 15.7 | 16.0 | 16.7 | 18.1 |
| | 4H | 16.7 | 17.4 | 17.7 | 18.4 | 19.7 | 15.5 | 16.2 | 16.5 | 17.2 | 18.5 |
| | 6H | 17.0 | 17.6 | 18.0 | 18.6 | 20.0 | 15.9 | 16.5 | 16.9 | 17.5 | 18.9 |
| | 8H | 17.1 | 17.7 | 18.1 | 18.7 | 20.0 | 16.0 | 16.6 | 17.0 | 17.6 | 19.0 |
| | 12H | 17.1 | 17.7 | 18.1 | 18.7 | 20.1 | 16.1 | 16.7 | 17.1 | 17.7 | 19.0 |

UGR Viewed Endwise

| | | | | | | | | | | | |
|----|-----|------|------|------|------|------|------|------|------|------|------|
| 4H | 2H | 14.7 | 15.4 | 15.7 | 16.4 | 17.7 | 13.7 | 14.4 | 14.7 | 15.4 | 16.7 |
| | 3H | 16.3 | 16.9 | 17.4 | 18.0 | 19.3 | 15.3 | 15.9 | 16.3 | 16.9 | 18.3 |
| | 4H | 16.9 | 17.5 | 18.0 | 18.5 | 19.9 | 15.9 | 16.4 | 16.9 | 17.5 | 18.8 |
| | 6H | 17.3 | 17.8 | 18.4 | 18.8 | 20.2 | 16.4 | 16.8 | 17.4 | 17.9 | 19.2 |
| | 8H | 17.4 | 17.9 | 18.5 | 18.9 | 20.3 | 16.5 | 16.9 | 17.5 | 18.0 | 19.3 |
| | 12H | 17.5 | 17.9 | 18.5 | 18.9 | 20.3 | 16.6 | 17.0 | 17.7 | 18.0 | 19.4 |

| | | | | | | | | | | | |
|----|-----|------|------|------|------|------|------|------|------|------|------|
| 8H | 4H | 16.9 | 17.3 | 17.9 | 18.4 | 19.7 | 15.9 | 16.3 | 16.9 | 17.4 | 18.8 |
| | 6H | 17.3 | 17.7 | 18.4 | 18.8 | 20.2 | 16.4 | 16.8 | 17.5 | 17.9 | 19.2 |
| | 8H | 17.5 | 17.8 | 18.6 | 18.9 | 20.3 | 16.6 | 16.9 | 17.7 | 18.0 | 19.4 |
| | 12H | 17.6 | 17.8 | 18.6 | 18.9 | 20.3 | 16.7 | 17.0 | 17.8 | 18.1 | 19.5 |

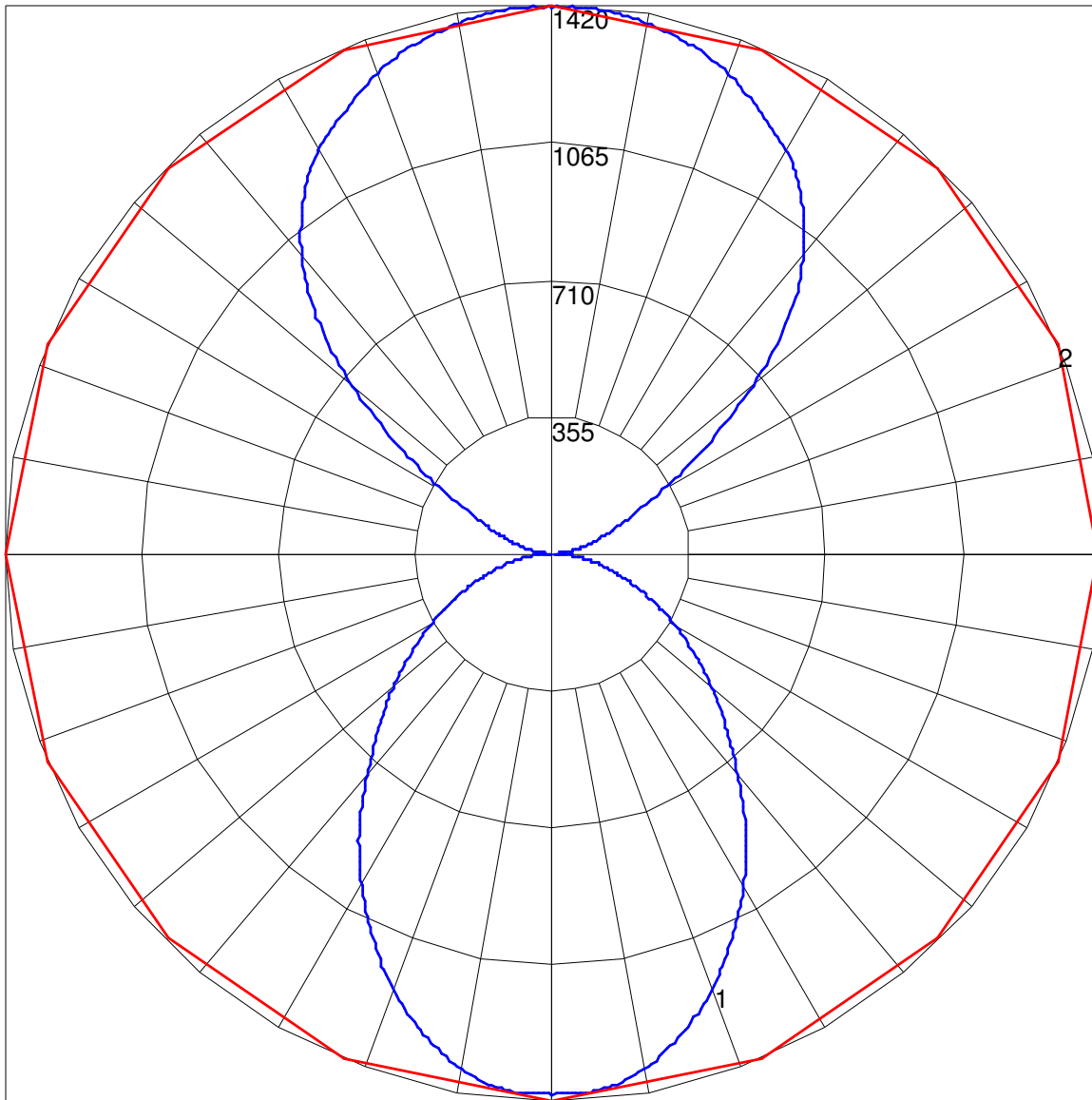
| | | | | | | | | | | | |
|-----|----|------|------|------|------|------|------|------|------|------|------|
| 12H | 4H | 16.8 | 17.2 | 17.9 | 18.3 | 19.7 | 15.9 | 16.3 | 16.9 | 17.3 | 18.7 |
| | 6H | 17.3 | 17.6 | 18.4 | 18.7 | 20.1 | 16.4 | 16.7 | 17.5 | 17.8 | 19.2 |
| | 8H | 17.5 | 17.7 | 18.5 | 18.8 | 20.2 | 16.6 | 16.9 | 17.7 | 17.9 | 19.4 |

Maximum UGR = 20.3

IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX2WUD-4-00-P8-8TWU-P8-8TWD-F-F-POE X_4000K.IES

POLAR GRAPH



Maximum Candela = 1419.98 Located At Horizontal Angle = 90, Vertical Angle = 178

1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)

2 - Horizontal Cone Through Vertical Angle (178) (Through Max. Cd.)