



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HZX-EX-Q2-200W-5000K-D120.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] HZX-EX-Q2-200W-5000K-D120
 [TESTLAB] EVERFINE
 [TESTDATE] 05 December 2023
 [ISSUEDATE] 2023-12-05 16:40:22
 [NEARFIELD]
 [LAMPPOSITION] 0,0
 [OTHER] EVERFINE GO-2000H_V1 SYSTEM
 [MANUFAC] BELUCE CANADA INC.
 [LUMCAT] HZX-EX-Q2-200W-5000K-D120
 [LUMINAIRE] HZX-EX-Q2-200W-5000K-D120
 [LAMP] 27797 LUMEN

CHARACTERISTICS

| | |
|---------------------------------|-------------------|
| Lumens Per Lamp | 27797 (1 lamp) |
| Total Lamp Lumens | 27797 |
| Luminaire Lumens | 27797 |
| Total Luminaire Efficiency | 100 % |
| Luminaire Efficacy Rating (LER) | 139 |
| Total Luminaire Watts | 199.34 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.24 |
| Spacing Criterion (90-270) | 1.22 |
| Spacing Criterion (Diagonal) | 1.34 |
| Basic Luminous Shape | Circular |
| Luminous Length (0-180) | 0.20 m (Diameter) |
| Luminous Width (90-270) | 0.20 m (Diameter) |
| Luminous Height | 0.00 m |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 314797 | 312520 | 309591 |
| 55 | 286491 | 283462 | 280250 |
| 65 | 234284 | 230994 | 225671 |
| 75 | 141140 | 137021 | 130899 |
| 85 | 39033 | 35688 | 31315 |

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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> | <u>112.5</u> | <u>135.0</u> | <u>157.5</u> | <u>180.0</u> | <u>202.5</u> |
|----|------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| 0 | 11065.000 | 11065.000 | 11065.000 | 11065.000 | 11065.000 | 11065.000 | 11065.000 | 11065.000 | 11065.000 | 11065.000 |
| 1 | 11068.000 | 11068.000 | 11068.000 | 11068.000 | 11066.000 | 11066.000 | 11064.000 | 11061.000 | 11060.000 | 11060.000 |
| 2 | 11067.000 | 11068.000 | 11068.000 | 11068.000 | 11064.000 | 11064.000 | 11061.000 | 11054.000 | 11052.000 | 11053.000 |
| 3 | 11062.000 | 11064.000 | 11065.000 | 11065.000 | 11060.000 | 11060.000 | 11056.000 | 11044.000 | 11043.000 | 11044.000 |
| 4 | 11048.000 | 11047.000 | 11052.000 | 11055.000 | 11045.000 | 11051.000 | 11045.000 | 11026.000 | 11027.000 | 11027.000 |
| 5 | 11022.000 | 11022.000 | 11026.000 | 11034.000 | 11021.000 | 11029.000 | 11022.000 | 10994.000 | 10997.000 | 10998.000 |
| 6 | 10987.000 | 10987.000 | 10993.000 | 11001.000 | 10989.000 | 10997.000 | 10990.000 | 10956.000 | 10958.000 | 10961.000 |
| 7 | 10940.000 | 10941.000 | 10950.000 | 10959.000 | 10945.000 | 10956.000 | 10947.000 | 10905.000 | 10908.000 | 10913.000 |
| 8 | 10873.000 | 10872.000 | 10887.000 | 10901.000 | 10883.000 | 10902.000 | 10890.000 | 10833.000 | 10838.000 | 10845.000 |
| 9 | 10791.000 | 10791.000 | 10807.000 | 10823.000 | 10805.000 | 10825.000 | 10814.000 | 10743.000 | 10752.000 | 10759.000 |
| 10 | 10711.000 | 10706.000 | 10723.000 | 10738.000 | 10719.000 | 10739.000 | 10730.000 | 10648.000 | 10661.000 | 10668.000 |
| 11 | 10631.000 | 10627.000 | 10641.000 | 10654.000 | 10636.000 | 10652.000 | 10644.000 | 10564.000 | 10573.000 | 10583.000 |
| 12 | 10556.000 | 10550.000 | 10560.000 | 10573.000 | 10553.000 | 10573.000 | 10557.000 | 10485.000 | 10486.000 | 10502.000 |
| 13 | 10487.000 | 10480.000 | 10485.000 | 10497.000 | 10476.000 | 10498.000 | 10476.000 | 10413.000 | 10409.000 | 10427.000 |
| 14 | 10421.000 | 10417.000 | 10418.000 | 10428.000 | 10404.000 | 10429.000 | 10402.000 | 10346.000 | 10336.000 | 10358.000 |
| 15 | 10357.000 | 10354.000 | 10351.000 | 10360.000 | 10335.000 | 10361.000 | 10328.000 | 10277.000 | 10266.000 | 10289.000 |
| 16 | 10294.000 | 10290.000 | 10286.000 | 10293.000 | 10265.000 | 10292.000 | 10259.000 | 10206.000 | 10196.000 | 10219.000 |
| 17 | 10228.000 | 10225.000 | 10219.000 | 10224.000 | 10196.000 | 10222.000 | 10189.000 | 10132.000 | 10127.000 | 10148.000 |
| 18 | 10163.000 | 10156.000 | 10150.000 | 10152.000 | 10127.000 | 10149.000 | 10119.000 | 10058.000 | 10057.000 | 10076.000 |
| 19 | 10095.000 | 10086.000 | 10081.000 | 10079.000 | 10059.000 | 10073.000 | 10049.000 | 9983.200 | 9987.400 | 10005.000 |
| 20 | 10027.000 | 10015.000 | 10012.000 | 10007.000 | 9990.600 | 9996.500 | 9979.900 | 9904.700 | 9913.700 | 9929.000 |
| 21 | 9954.000 | 9940.700 | 9938.600 | 9931.200 | 9917.400 | 9916.500 | 9906.000 | 9824.300 | 9837.800 | 9852.800 |
| 22 | 9880.200 | 9864.400 | 9863.000 | 9852.900 | 9842.700 | 9834.400 | 9831.000 | 9741.300 | 9759.800 | 9773.500 |
| 23 | 9805.000 | 9785.400 | 9784.700 | 9772.000 | 9766.000 | 9751.000 | 9754.600 | 9657.300 | 9678.800 | 9691.500 |
| 24 | 9724.900 | 9703.200 | 9702.600 | 9689.700 | 9687.300 | 9666.100 | 9673.100 | 9568.900 | 9593.600 | 9607.800 |
| 25 | 9642.300 | 9617.700 | 9618.000 | 9605.600 | 9604.700 | 9578.600 | 9590.700 | 9473.400 | 9501.600 | 9515.500 |
| 26 | 9551.000 | 9525.600 | 9525.800 | 9514.500 | 9511.200 | 9485.100 | 9497.600 | 9373.600 | 9401.600 | 9414.800 |
| 27 | 9450.700 | 9424.800 | 9424.200 | 9414.900 | 9412.600 | 9386.200 | 9397.200 | 9263.100 | 9292.500 | 9303.100 |
| 28 | 9338.600 | 9310.100 | 9311.400 | 9306.000 | 9301.000 | 9276.900 | 9284.800 | 9134.700 | 9162.300 | 9170.800 |
| 29 | 9213.800 | 9183.400 | 9182.500 | 9178.400 | 9173.400 | 9150.200 | 9151.900 | 8995.300 | 9022.000 | 9029.600 |
| 30 | 9080.500 | 9047.400 | 9049.600 | 9042.800 | 9039.800 | 9012.500 | 9014.400 | 8860.200 | 8888.600 | 8891.400 |
| 31 | 8947.400 | 8910.300 | 8917.100 | 8908.400 | 8905.700 | 8875.000 | 8877.900 | 8723.900 | 8755.600 | 8752.800 |
| 32 | 8822.000 | 8779.300 | 8789.300 | 8775.500 | 8774.200 | 8738.300 | 8743.000 | 8594.600 | 8628.000 | 8621.000 |
| 33 | 8700.200 | 8652.700 | 8665.800 | 8650.600 | 8642.300 | 8608.000 | 8614.500 | 8467.000 | 8502.900 | 8494.700 |
| 34 | 8576.900 | 8531.200 | 8544.500 | 8527.800 | 8514.400 | 8482.900 | 8487.100 | 8338.500 | 8373.100 | 8369.500 |
| 35 | 8454.400 | 8410.100 | 8419.000 | 8403.000 | 8384.000 | 8359.900 | 8358.600 | 8209.800 | 8241.500 | 8240.800 |
| 36 | 8326.100 | 8285.700 | 8291.900 | 8273.300 | 8253.600 | 8237.300 | 8228.600 | 8079.800 | 8110.200 | 8113.800 |
| 37 | 8195.200 | 8159.300 | 8161.600 | 8142.500 | 8121.300 | 8115.000 | 8098.000 | 7948.700 | 7974.900 | 7984.700 |
| 38 | 8061.500 | 8030.500 | 8026.900 | 8010.200 | 7987.200 | 7988.900 | 7963.300 | 7816.500 | 7839.300 | 7853.700 |
| 39 | 7928.400 | 7901.000 | 7890.800 | 7877.600 | 7852.000 | 7858.800 | 7826.400 | 7686.800 | 7704.100 | 7724.600 |
| 40 | 7795.300 | 7770.700 | 7753.600 | 7745.300 | 7714.300 | 7724.600 | 7688.400 | 7548.100 | 7563.700 | 7589.300 |
| 41 | 7659.400 | 7634.800 | 7614.100 | 7607.800 | 7569.500 | 7581.000 | 7543.600 | 7400.000 | 7416.100 | 7445.000 |
| 42 | 7516.300 | 7490.600 | 7465.400 | 7463.800 | 7416.200 | 7429.600 | 7392.000 | 7233.800 | 7255.500 | 7283.600 |
| 43 | 7358.900 | 7326.100 | 7301.300 | 7304.700 | 7250.100 | 7262.400 | 7222.300 | 7051.500 | 7071.200 | 7100.300 |
| 44 | 7178.200 | 7143.800 | 7121.600 | 7125.200 | 7063.300 | 7077.000 | 7036.600 | 6865.700 | 6885.400 | 6916.700 |
| 45 | 6996.000 | 6961.200 | 6945.400 | 6945.900 | 6880.300 | 6893.400 | 6850.400 | 6683.400 | 6701.300 | 6734.500 |
| 46 | 6814.000 | 6778.100 | 6771.100 | 6762.100 | 6702.100 | 6713.500 | 6670.900 | 6507.800 | 6525.800 | 6559.100 |
| 47 | 6639.800 | 6604.400 | 6599.000 | 6585.500 | 6527.400 | 6538.000 | 6494.800 | 6334.100 | 6350.800 | 6383.300 |
| 48 | 6464.900 | 6428.400 | 6425.200 | 6408.400 | 6356.700 | 6363.600 | 6322.000 | 6163.400 | 6178.000 | 6209.600 |
| 49 | 6294.200 | 6259.100 | 6254.500 | 6235.500 | 6187.200 | 6193.600 | 6152.100 | 5992.100 | 6004.200 | 6035.900 |
| 50 | 6121.200 | 6089.500 | 6077.000 | 6059.100 | 6015.600 | 6020.100 | 5979.800 | 5817.600 | 5827.200 | 5857.700 |
| 51 | 5946.400 | 5921.400 | 5899.300 | 5883.800 | 5843.100 | 5848.600 | 5806.100 | 5637.500 | 5646.500 | 5678.000 |
| 52 | 5770.000 | 5747.700 | 5719.200 | 5708.200 | 5666.300 | 5668.300 | 5632.300 | 5443.200 | 5455.900 | 5490.800 |
| 53 | 5585.500 | 5560.200 | 5527.000 | 5523.400 | 5475.800 | 5481.600 | 5439.800 | 5229.300 | 5244.400 | 5280.700 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | | | | |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 54 | 5380.800 | 5348.900 | 5315.500 | 5316.900 | 5262.400 | 5266.200 | 5221.200 | 5014.700 | 5035.600 | 5064.800 |
| 55 | 5164.600 | 5134.000 | 5110.000 | 5107.500 | 5052.100 | 5053.200 | 5006.300 | 4814.300 | 4844.300 | 4858.400 |
| 56 | 4954.100 | 4931.200 | 4909.100 | 4903.900 | 4860.900 | 4848.300 | 4814.700 | 4612.700 | 4652.900 | 4658.100 |
| 57 | 4756.200 | 4739.000 | 4714.300 | 4715.700 | 4669.700 | 4652.900 | 4623.000 | 4415.200 | 4450.100 | 4461.000 |
| 58 | 4560.100 | 4546.700 | 4517.700 | 4512.800 | 4471.100 | 4454.600 | 4427.500 | 4221.100 | 4255.400 | 4269.200 |
| 59 | 4368.000 | 4350.100 | 4321.800 | 4313.600 | 4273.100 | 4254.000 | 4228.000 | 4017.900 | 4061.100 | 4075.900 |
| 60 | 4172.900 | 4154.000 | 4120.000 | 4110.100 | 4071.000 | 4056.000 | 4023.400 | 3794.000 | 3841.300 | 3857.100 |
| 61 | 3966.700 | 3944.700 | 3903.800 | 3896.700 | 3849.300 | 3834.900 | 3799.300 | 3578.100 | 3618.100 | 3635.900 |
| 62 | 3737.800 | 3721.700 | 3687.500 | 3677.000 | 3626.900 | 3612.600 | 3579.100 | 3373.400 | 3411.000 | 3427.400 |
| 63 | 3521.600 | 3508.500 | 3475.600 | 3468.800 | 3416.400 | 3403.300 | 3368.400 | 3172.900 | 3206.200 | 3225.000 |
| 64 | 3316.400 | 3305.100 | 3271.700 | 3269.200 | 3207.700 | 3204.500 | 3162.700 | 2970.000 | 2994.900 | 3019.200 |
| 65 | 3111.900 | 3105.200 | 3068.200 | 3067.700 | 2997.500 | 3003.600 | 2958.400 | 2750.700 | 2782.200 | 2805.000 |
| 66 | 2904.600 | 2892.500 | 2851.200 | 2849.700 | 2782.200 | 2781.500 | 2743.600 | 2540.800 | 2561.400 | 2593.100 |
| 67 | 2686.200 | 2669.700 | 2629.700 | 2630.800 | 2574.100 | 2567.100 | 2524.200 | 2333.600 | 2356.400 | 2387.700 |
| 68 | 2479.400 | 2463.600 | 2425.500 | 2432.600 | 2369.600 | 2365.700 | 2322.600 | 2133.800 | 2165.700 | 2187.400 |
| 69 | 2279.000 | 2256.800 | 2228.100 | 2228.700 | 2169.400 | 2175.100 | 2122.600 | 1934.000 | 1957.700 | 1987.900 |
| 70 | 2075.500 | 2054.600 | 2029.900 | 2019.000 | 1970.200 | 1964.000 | 1923.500 | 1737.500 | 1768.700 | 1788.300 |
| 71 | 1872.000 | 1853.900 | 1831.800 | 1833.100 | 1777.500 | 1770.800 | 1731.600 | 1559.800 | 1587.200 | 1605.300 |
| 72 | 1691.900 | 1669.200 | 1639.100 | 1648.100 | 1586.300 | 1585.700 | 1548.700 | 1380.000 | 1401.000 | 1424.500 |
| 73 | 1500.900 | 1485.100 | 1458.000 | 1463.300 | 1401.700 | 1403.000 | 1368.200 | 1207.900 | 1236.600 | 1252.400 |
| 74 | 1320.100 | 1309.600 | 1286.000 | 1287.600 | 1230.400 | 1232.300 | 1198.600 | 1042.200 | 1065.900 | 1088.600 |
| 75 | 1148.100 | 1137.600 | 1114.600 | 1115.600 | 1064.800 | 1061.200 | 1029.900 | 883.160 | 916.390 | 933.410 |
| 76 | 979.390 | 978.420 | 955.330 | 957.300 | 908.000 | 903.270 | 874.520 | 741.360 | 772.020 | 786.360 |
| 77 | 828.780 | 824.190 | 806.210 | 807.480 | 764.880 | 757.030 | 733.020 | 606.350 | 636.550 | 648.730 |
| 78 | 688.380 | 678.940 | 665.580 | 670.520 | 630.420 | 622.340 | 603.490 | 486.620 | 519.160 | 526.670 |
| 79 | 561.330 | 554.880 | 539.750 | 544.310 | 511.990 | 496.150 | 495.210 | 389.560 | 421.710 | 418.330 |
| 80 | 454.970 | 450.000 | 429.800 | 439.240 | 405.260 | 390.940 | 386.990 | 302.750 | 324.440 | 321.480 |
| 81 | 359.560 | 345.190 | 334.970 | 334.190 | 310.910 | 302.190 | 299.260 | 226.830 | 244.550 | 241.880 |
| 82 | 276.060 | 260.900 | 255.080 | 251.090 | 234.520 | 225.450 | 221.400 | 170.420 | 173.420 | 186.580 |
| 83 | 213.250 | 194.210 | 196.280 | 183.300 | 169.060 | 168.750 | 157.630 | 119.940 | 123.100 | 131.680 |
| 84 | 150.590 | 140.800 | 137.520 | 133.880 | 119.230 | 122.930 | 111.870 | 85.782 | 85.265 | 92.479 |
| 85 | 106.920 | 102.870 | 97.757 | 97.496 | 85.780 | 88.488 | 80.516 | 67.149 | 65.523 | 69.522 |
| 86 | 79.467 | 78.542 | 75.534 | 76.842 | 68.153 | 70.267 | 63.904 | 51.839 | 51.796 | 54.160 |
| 87 | 63.704 | 62.158 | 60.954 | 60.790 | 53.957 | 54.427 | 50.274 | 39.960 | 40.554 | 42.189 |
| 88 | 50.809 | 49.204 | 48.905 | 47.606 | 41.548 | 41.841 | 37.787 | 19.417 | 22.162 | 26.193 |
| 89 | 36.857 | 31.911 | 30.368 | 28.035 | 19.928 | 20.871 | 16.463 | 11.680 | 11.623 | 11.686 |
| 90 | 16.437 | 13.985 | 14.047 | 13.616 | 12.050 | 12.051 | 12.094 | 12.210 | 12.183 | 11.927 |
| 91 | 14.028 | 13.940 | 14.147 | 14.080 | 12.543 | 12.415 | 12.581 | 12.828 | 12.790 | 12.588 |
| 92 | 14.604 | 14.572 | 14.713 | 14.659 | 12.824 | 12.702 | 12.914 | 13.518 | 13.448 | 13.280 |
| 93 | 15.205 | 15.219 | 15.338 | 15.280 | 13.417 | 13.361 | 13.569 | 14.259 | 14.147 | 13.990 |
| 94 | 15.860 | 15.908 | 16.000 | 15.992 | 14.088 | 14.072 | 14.277 | 15.047 | 14.904 | 14.772 |
| 95 | 16.581 | 16.665 | 16.737 | 16.757 | 14.844 | 14.852 | 15.025 | 15.861 | 15.684 | 15.583 |
| 96 | 17.342 | 17.457 | 17.502 | 17.546 | 15.633 | 15.653 | 15.827 | 16.696 | 16.520 | 16.405 |
| 97 | 18.128 | 18.246 | 18.296 | 18.334 | 16.467 | 16.491 | 16.692 | 17.580 | 17.395 | 17.274 |
| 98 | 18.994 | 19.103 | 19.163 | 19.195 | 17.328 | 17.348 | 17.557 | 18.454 | 18.297 | 18.141 |
| 99 | 19.864 | 19.983 | 20.048 | 20.076 | 18.217 | 18.213 | 18.438 | 19.387 | 19.229 | 19.066 |
| 100 | 20.767 | 20.873 | 20.956 | 20.983 | 19.144 | 19.132 | 19.366 | 20.328 | 20.191 | 20.021 |
| 101 | 21.692 | 21.791 | 21.890 | 21.922 | 20.095 | 20.082 | 20.319 | 21.312 | 21.161 | 20.989 |
| 102 | 22.638 | 22.741 | 22.850 | 22.876 | 21.066 | 21.065 | 21.320 | 22.296 | 22.151 | 21.972 |
| 103 | 23.601 | 23.719 | 23.824 | 23.858 | 22.038 | 22.053 | 22.293 | 23.310 | 23.138 | 22.969 |
| 104 | 24.588 | 24.714 | 24.812 | 24.849 | 23.043 | 23.045 | 23.304 | 24.352 | 24.167 | 23.997 |
| 105 | 25.588 | 25.704 | 25.804 | 25.843 | 24.074 | 24.061 | 24.333 | 25.392 | 25.234 | 25.029 |
| 106 | 26.595 | 26.726 | 26.828 | 26.879 | 25.101 | 25.106 | 25.366 | 26.440 | 26.269 | 26.072 |
| 107 | 27.646 | 27.774 | 27.885 | 27.933 | 26.135 | 26.117 | 26.405 | 27.512 | 27.349 | 27.138 |
| 108 | 28.702 | 28.843 | 28.942 | 29.006 | 27.211 | 27.202 | 27.499 | 28.607 | 28.439 | 28.233 |
| 109 | 29.764 | 29.904 | 30.019 | 30.076 | 28.317 | 28.295 | 28.587 | 29.716 | 29.535 | 29.334 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | | | | |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 110 | 30.849 | 31.011 | 31.115 | 31.153 | 29.406 | 29.368 | 29.672 | 30.826 | 30.661 | 30.445 |
| 111 | 31.965 | 32.121 | 32.212 | 32.250 | 30.514 | 30.491 | 30.770 | 31.969 | 31.817 | 31.575 |
| 112 | 33.087 | 33.223 | 33.323 | 33.372 | 31.630 | 31.626 | 31.911 | 33.124 | 32.970 | 32.728 |
| 113 | 34.174 | 34.321 | 34.431 | 34.484 | 32.764 | 32.742 | 33.037 | 34.242 | 34.102 | 33.851 |
| 114 | 35.315 | 35.456 | 35.557 | 35.623 | 33.879 | 33.862 | 34.192 | 35.380 | 35.261 | 35.012 |
| 115 | 36.432 | 36.594 | 36.674 | 36.748 | 35.040 | 35.025 | 35.345 | 36.554 | 36.431 | 36.182 |
| 116 | 37.561 | 37.717 | 37.810 | 37.883 | 36.222 | 36.166 | 36.483 | 37.688 | 37.573 | 37.314 |
| 117 | 38.717 | 38.860 | 38.953 | 39.018 | 37.353 | 37.322 | 37.586 | 38.849 | 38.750 | 38.479 |
| 118 | 39.865 | 39.985 | 40.083 | 40.156 | 38.518 | 38.464 | 38.752 | 40.014 | 39.903 | 39.623 |
| 119 | 41.002 | 41.115 | 41.196 | 41.259 | 39.676 | 39.609 | 39.908 | 41.140 | 41.063 | 40.783 |
| 120 | 42.129 | 42.222 | 42.311 | 42.390 | 40.807 | 40.764 | 41.059 | 42.308 | 42.200 | 41.919 |
| 121 | 43.264 | 43.367 | 43.456 | 43.517 | 41.949 | 41.872 | 42.204 | 43.428 | 43.354 | 43.074 |
| 122 | 44.398 | 44.489 | 44.583 | 44.642 | 43.106 | 42.988 | 43.318 | 44.551 | 44.499 | 44.201 |
| 123 | 45.504 | 45.604 | 45.711 | 45.745 | 44.243 | 44.127 | 44.433 | 45.692 | 45.639 | 45.314 |
| 124 | 46.631 | 46.724 | 46.835 | 46.860 | 45.371 | 45.257 | 45.564 | 46.844 | 46.801 | 46.460 |
| 125 | 47.756 | 47.846 | 47.943 | 47.979 | 46.483 | 46.372 | 46.697 | 47.986 | 47.924 | 47.616 |
| 126 | 48.858 | 48.952 | 49.038 | 49.087 | 47.583 | 47.461 | 47.856 | 49.089 | 49.039 | 48.773 |
| 127 | 49.991 | 50.091 | 50.148 | 50.212 | 48.707 | 48.584 | 48.972 | 50.210 | 50.195 | 49.879 |
| 128 | 51.112 | 51.219 | 51.267 | 51.336 | 49.828 | 49.677 | 50.068 | 51.312 | 51.315 | 50.998 |
| 129 | 52.243 | 52.344 | 52.379 | 52.449 | 50.957 | 50.825 | 51.163 | 52.431 | 52.429 | 52.104 |
| 130 | 53.387 | 53.473 | 53.516 | 53.577 | 52.084 | 51.958 | 52.260 | 53.524 | 53.543 | 53.202 |
| 131 | 54.532 | 54.604 | 54.636 | 54.694 | 53.213 | 53.059 | 53.369 | 54.648 | 54.655 | 54.348 |
| 132 | 55.684 | 55.732 | 55.727 | 55.809 | 54.315 | 54.153 | 54.485 | 55.744 | 55.757 | 55.466 |
| 133 | 56.787 | 56.833 | 56.835 | 56.933 | 55.397 | 55.251 | 55.577 | 56.833 | 56.846 | 56.570 |
| 134 | 57.921 | 57.961 | 57.959 | 58.064 | 56.497 | 56.341 | 56.635 | 57.913 | 57.958 | 57.650 |
| 135 | 59.044 | 59.086 | 59.073 | 59.170 | 57.557 | 57.416 | 57.680 | 58.991 | 59.001 | 58.707 |
| 136 | 60.154 | 60.186 | 60.189 | 60.300 | 58.658 | 58.533 | 58.780 | 60.081 | 60.091 | 59.802 |
| 137 | 61.255 | 61.281 | 61.294 | 61.410 | 59.733 | 59.620 | 59.864 | 61.137 | 61.156 | 60.844 |
| 138 | 62.358 | 62.377 | 62.379 | 62.534 | 60.795 | 60.658 | 60.920 | 62.202 | 62.187 | 61.915 |
| 139 | 63.433 | 63.470 | 63.472 | 63.627 | 61.857 | 61.736 | 61.997 | 63.265 | 63.251 | 63.005 |
| 140 | 64.485 | 64.534 | 64.555 | 64.716 | 62.956 | 62.825 | 63.065 | 64.312 | 64.336 | 64.107 |
| 141 | 65.570 | 65.623 | 65.627 | 65.802 | 64.042 | 63.908 | 64.141 | 65.386 | 65.400 | 65.175 |
| 142 | 66.637 | 66.681 | 66.701 | 66.866 | 65.131 | 65.007 | 65.189 | 66.456 | 66.463 | 66.246 |
| 143 | 67.692 | 67.734 | 67.743 | 67.907 | 66.191 | 66.051 | 66.255 | 67.496 | 67.500 | 67.253 |
| 144 | 68.723 | 68.748 | 68.765 | 68.928 | 67.155 | 66.982 | 67.198 | 68.440 | 68.452 | 68.218 |
| 145 | 69.736 | 69.777 | 69.784 | 69.948 | 68.081 | 67.956 | 68.159 | 69.366 | 69.391 | 69.209 |
| 146 | 70.705 | 70.780 | 70.760 | 70.956 | 69.002 | 68.889 | 69.101 | 70.320 | 70.331 | 70.164 |
| 147 | 71.675 | 71.745 | 71.753 | 71.924 | 69.898 | 69.824 | 69.992 | 71.160 | 71.224 | 71.042 |
| 148 | 72.607 | 72.688 | 72.700 | 72.861 | 70.862 | 70.840 | 70.973 | 72.065 | 72.046 | 71.894 |
| 149 | 73.532 | 73.628 | 73.658 | 73.807 | 71.794 | 71.771 | 71.904 | 72.983 | 72.992 | 72.791 |
| 150 | 74.454 | 74.555 | 74.587 | 74.729 | 72.558 | 72.557 | 72.705 | 73.772 | 73.793 | 73.618 |
| 151 | 75.361 | 75.467 | 75.498 | 75.660 | 73.430 | 73.472 | 73.603 | 74.642 | 74.652 | 74.550 |
| 152 | 76.240 | 76.352 | 76.368 | 76.558 | 74.375 | 74.399 | 74.497 | 75.463 | 75.502 | 75.363 |
| 153 | 77.114 | 77.214 | 77.237 | 77.439 | 75.081 | 75.128 | 75.169 | 76.101 | 76.158 | 76.036 |
| 154 | 77.961 | 78.048 | 78.089 | 78.282 | 75.927 | 75.990 | 76.005 | 76.903 | 76.972 | 76.845 |
| 155 | 78.787 | 78.864 | 78.932 | 79.108 | 76.701 | 76.756 | 76.796 | 77.678 | 77.776 | 77.631 |
| 156 | 79.603 | 79.665 | 79.756 | 79.921 | 77.476 | 77.519 | 77.576 | 78.407 | 78.496 | 78.342 |
| 157 | 80.403 | 80.446 | 80.529 | 80.721 | 78.198 | 78.241 | 78.313 | 79.096 | 79.177 | 79.048 |
| 158 | 81.178 | 81.216 | 81.304 | 81.481 | 78.868 | 78.924 | 79.029 | 79.716 | 79.820 | 79.747 |
| 159 | 81.916 | 81.961 | 82.078 | 82.236 | 79.514 | 79.582 | 79.698 | 80.323 | 80.450 | 80.369 |
| 160 | 82.640 | 82.685 | 82.810 | 82.932 | 80.149 | 80.243 | 80.363 | 80.939 | 81.094 | 81.003 |
| 161 | 83.345 | 83.353 | 83.511 | 83.597 | 80.785 | 80.873 | 81.007 | 81.491 | 81.659 | 81.564 |
| 162 | 84.025 | 83.998 | 84.190 | 84.243 | 81.429 | 81.499 | 81.671 | 82.100 | 82.260 | 82.182 |
| 163 | 84.677 | 84.598 | 84.843 | 84.888 | 82.069 | 82.128 | 82.315 | 82.674 | 82.840 | 82.790 |
| 164 | 85.304 | 85.180 | 85.453 | 85.532 | 82.665 | 82.744 | 82.922 | 83.241 | 83.435 | 83.394 |
| 165 | 85.880 | 85.771 | 86.036 | 86.163 | 83.257 | 83.394 | 83.548 | 83.783 | 84.007 | 83.982 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | | | | |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 166 | 86.393 | 86.326 | 86.602 | 86.763 | 83.937 | 84.137 | 84.230 | 84.420 | 84.624 | 84.668 |
| 167 | 86.883 | 86.849 | 87.132 | 87.333 | 84.697 | 84.905 | 84.962 | 85.133 | 85.306 | 85.401 |
| 168 | 87.335 | 87.349 | 87.584 | 87.825 | 85.366 | 85.601 | 85.612 | 85.777 | 85.934 | 86.060 |
| 169 | 87.782 | 87.817 | 88.007 | 88.311 | 86.034 | 86.275 | 86.239 | 86.447 | 86.535 | 86.712 |
| 170 | 88.220 | 88.287 | 88.408 | 88.733 | 86.585 | 86.815 | 86.790 | 86.959 | 87.034 | 87.234 |
| 171 | 88.604 | 88.667 | 88.798 | 89.094 | 87.206 | 87.452 | 87.463 | 87.600 | 87.635 | 87.876 |
| 172 | 88.920 | 89.023 | 89.154 | 89.383 | 87.707 | 87.940 | 88.049 | 88.102 | 88.161 | 88.379 |
| 173 | 89.217 | 89.338 | 89.488 | 89.655 | 88.228 | 88.465 | 88.639 | 88.658 | 88.677 | 88.896 |
| 174 | 89.482 | 89.594 | 89.787 | 89.898 | 88.672 | 88.911 | 89.155 | 89.086 | 89.104 | 89.291 |
| 175 | 89.716 | 89.837 | 90.044 | 90.118 | 89.174 | 89.335 | 89.634 | 89.488 | 89.518 | 89.653 |
| 176 | 89.929 | 90.049 | 90.234 | 90.306 | 89.625 | 89.738 | 90.018 | 89.870 | 89.886 | 89.977 |
| 177 | 90.103 | 90.199 | 90.385 | 90.404 | 90.032 | 90.079 | 90.379 | 90.175 | 90.202 | 90.251 |
| 178 | 90.224 | 90.320 | 90.492 | 90.464 | 90.294 | 90.300 | 90.627 | 90.387 | 90.406 | 90.410 |
| 179 | 90.307 | 90.419 | 90.560 | 90.479 | 90.474 | 90.443 | 90.763 | 90.508 | 90.489 | 90.471 |
| 180 | 90.377 | 90.377 | 90.377 | 90.377 | 90.377 | 90.377 | 90.377 | 90.377 | 90.377 | 90.377 |

Vert. Horizontal Angles

| | <u>225.0</u> | <u>247.5</u> | <u>270.0</u> | <u>292.5</u> | <u>315.0</u> | <u>337.5</u> | <u>360.0</u> |
|----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 0 | 11065.000 | 11065.000 | 11065.000 | 11065.000 | 11065.000 | 11065.000 | 11065.000 |
| 1 | 11060.000 | 11061.000 | 11062.000 | 11062.000 | 11064.000 | 11067.000 | 11068.000 |
| 2 | 11054.000 | 11056.000 | 11057.000 | 11057.000 | 11060.000 | 11067.000 | 11067.000 |
| 3 | 11046.000 | 11048.000 | 11047.000 | 11045.000 | 11047.000 | 11061.000 | 11062.000 |
| 4 | 11028.000 | 11027.000 | 11028.000 | 11025.000 | 11026.000 | 11047.000 | 11048.000 |
| 5 | 10998.000 | 10998.000 | 10999.000 | 10994.000 | 10997.000 | 11023.000 | 11022.000 |
| 6 | 10959.000 | 10960.000 | 10962.000 | 10952.000 | 10958.000 | 10991.000 | 10987.000 |
| 7 | 10909.000 | 10909.000 | 10912.000 | 10895.000 | 10900.000 | 10945.000 | 10940.000 |
| 8 | 10839.000 | 10837.000 | 10839.000 | 10820.000 | 10824.000 | 10877.000 | 10873.000 |
| 9 | 10757.000 | 10750.000 | 10751.000 | 10736.000 | 10741.000 | 10798.000 | 10791.000 |
| 10 | 10671.000 | 10662.000 | 10663.000 | 10650.000 | 10660.000 | 10719.000 | 10711.000 |
| 11 | 10585.000 | 10583.000 | 10580.000 | 10567.000 | 10581.000 | 10642.000 | 10631.000 |
| 12 | 10503.000 | 10505.000 | 10501.000 | 10490.000 | 10507.000 | 10567.000 | 10556.000 |
| 13 | 10429.000 | 10437.000 | 10429.000 | 10422.000 | 10438.000 | 10498.000 | 10487.000 |
| 14 | 10357.000 | 10369.000 | 10362.000 | 10357.000 | 10373.000 | 10433.000 | 10421.000 |
| 15 | 10286.000 | 10299.000 | 10295.000 | 10292.000 | 10309.000 | 10370.000 | 10357.000 |
| 16 | 10217.000 | 10229.000 | 10228.000 | 10226.000 | 10245.000 | 10306.000 | 10294.000 |
| 17 | 10149.000 | 10156.000 | 10159.000 | 10159.000 | 10178.000 | 10241.000 | 10228.000 |
| 18 | 10080.000 | 10081.000 | 10089.000 | 10088.000 | 10110.000 | 10174.000 | 10163.000 |
| 19 | 10011.000 | 10008.000 | 10018.000 | 10017.000 | 10040.000 | 10106.000 | 10095.000 |
| 20 | 9939.300 | 9931.800 | 9946.700 | 9941.700 | 9971.000 | 10036.000 | 10027.000 |
| 21 | 9865.400 | 9853.000 | 9872.400 | 9864.200 | 9895.000 | 9965.100 | 9954.000 |
| 22 | 9788.200 | 9771.700 | 9794.500 | 9784.200 | 9817.700 | 9888.800 | 9880.200 |
| 23 | 9710.100 | 9689.300 | 9717.200 | 9700.500 | 9738.500 | 9811.800 | 9805.000 |
| 24 | 9628.000 | 9603.400 | 9633.900 | 9613.400 | 9655.700 | 9730.400 | 9724.900 |
| 25 | 9535.000 | 9509.900 | 9541.900 | 9517.100 | 9564.600 | 9645.900 | 9642.300 |
| 26 | 9435.200 | 9409.400 | 9445.300 | 9415.100 | 9467.000 | 9553.500 | 9551.000 |
| 27 | 9321.300 | 9297.500 | 9336.200 | 9299.000 | 9355.400 | 9453.300 | 9450.700 |
| 28 | 9192.000 | 9169.300 | 9212.500 | 9172.400 | 9233.100 | 9339.300 | 9338.600 |
| 29 | 9054.000 | 9034.900 | 9079.700 | 9040.700 | 9103.700 | 9213.900 | 9213.800 |
| 30 | 8916.700 | 8901.200 | 8948.800 | 8909.200 | 8975.200 | 9082.400 | 9080.500 |
| 31 | 8780.000 | 8768.200 | 8822.300 | 8783.000 | 8850.300 | 8950.900 | 8947.400 |
| 32 | 8652.200 | 8640.900 | 8696.300 | 8658.300 | 8725.500 | 8824.600 | 8822.000 |
| 33 | 8527.200 | 8520.000 | 8574.100 | 8536.400 | 8599.900 | 8700.400 | 8700.200 |
| 34 | 8400.200 | 8395.300 | 8448.800 | 8417.300 | 8475.300 | 8578.000 | 8576.900 |
| 35 | 8271.600 | 8270.000 | 8322.400 | 8296.500 | 8346.600 | 8457.200 | 8454.400 |
| 36 | 8141.300 | 8144.700 | 8190.900 | 8171.100 | 8217.700 | 8331.900 | 8326.100 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | |
|----|----------|----------|----------|----------|----------|----------|----------|
| 37 | 8007.600 | 8014.300 | 8056.500 | 8046.000 | 8088.500 | 8202.900 | 8195.200 |
| 38 | 7872.900 | 7883.100 | 7922.400 | 7919.000 | 7957.100 | 8075.100 | 8061.500 |
| 39 | 7740.300 | 7753.400 | 7787.000 | 7790.600 | 7822.100 | 7945.400 | 7928.400 |
| 40 | 7601.500 | 7617.200 | 7647.900 | 7655.600 | 7683.900 | 7813.800 | 7795.300 |
| 41 | 7452.100 | 7467.300 | 7501.600 | 7508.300 | 7533.700 | 7678.100 | 7659.400 |
| 42 | 7289.200 | 7303.300 | 7344.800 | 7346.200 | 7375.400 | 7535.100 | 7516.300 |
| 43 | 7104.500 | 7116.800 | 7164.700 | 7165.100 | 7195.000 | 7374.200 | 7358.900 |
| 44 | 6921.200 | 6932.900 | 6983.100 | 6985.800 | 7017.100 | 7191.300 | 7178.200 |
| 45 | 6738.900 | 6750.300 | 6800.400 | 6807.100 | 6838.800 | 7008.000 | 6996.000 |
| 46 | 6564.400 | 6576.100 | 6626.400 | 6630.100 | 6669.200 | 6825.700 | 6814.000 |
| 47 | 6387.500 | 6401.400 | 6454.700 | 6455.800 | 6498.100 | 6650.700 | 6639.800 |
| 48 | 6213.500 | 6226.700 | 6287.300 | 6279.000 | 6326.500 | 6479.200 | 6464.900 |
| 49 | 6040.600 | 6053.800 | 6122.300 | 6103.000 | 6156.400 | 6311.600 | 6294.200 |
| 50 | 5866.100 | 5880.100 | 5949.200 | 5927.700 | 5977.400 | 6139.600 | 6121.200 |
| 51 | 5689.500 | 5703.800 | 5774.500 | 5750.500 | 5801.700 | 5966.200 | 5946.400 |
| 52 | 5505.400 | 5517.300 | 5588.200 | 5566.100 | 5620.000 | 5790.300 | 5770.000 |
| 53 | 5298.500 | 5305.500 | 5385.400 | 5361.700 | 5422.800 | 5605.000 | 5585.500 |
| 54 | 5089.800 | 5093.500 | 5168.300 | 5156.300 | 5215.300 | 5399.000 | 5380.800 |
| 55 | 4892.500 | 4887.400 | 4956.900 | 4953.800 | 5012.000 | 5184.800 | 5164.600 |
| 56 | 4711.800 | 4694.500 | 4755.300 | 4766.300 | 4812.900 | 4978.900 | 4954.100 |
| 57 | 4512.300 | 4496.400 | 4556.400 | 4578.900 | 4614.000 | 4789.600 | 4756.200 |
| 58 | 4315.900 | 4298.900 | 4359.500 | 4381.300 | 4418.700 | 4600.200 | 4560.100 |
| 59 | 4116.900 | 4103.200 | 4166.600 | 4180.300 | 4220.900 | 4404.200 | 4368.000 |
| 60 | 3898.700 | 3891.000 | 3961.900 | 3965.700 | 4012.800 | 4209.300 | 4172.900 |
| 61 | 3678.000 | 3671.500 | 3741.600 | 3742.900 | 3788.500 | 4004.600 | 3966.700 |
| 62 | 3466.100 | 3463.200 | 3525.400 | 3531.900 | 3571.800 | 3778.800 | 3737.800 |
| 63 | 3259.000 | 3259.800 | 3316.900 | 3330.300 | 3361.900 | 3563.800 | 3521.600 |
| 64 | 3053.200 | 3057.200 | 3106.200 | 3131.900 | 3154.800 | 3359.100 | 3316.400 |
| 65 | 2839.500 | 2845.400 | 2898.700 | 2919.800 | 2950.600 | 3153.600 | 3111.900 |
| 66 | 2623.700 | 2626.800 | 2680.000 | 2698.800 | 2732.800 | 2946.500 | 2904.600 |
| 67 | 2418.300 | 2421.900 | 2478.700 | 2492.600 | 2520.300 | 2726.200 | 2686.200 |
| 68 | 2221.800 | 2221.200 | 2278.900 | 2294.600 | 2323.200 | 2518.500 | 2479.400 |
| 69 | 2015.700 | 2022.600 | 2077.400 | 2088.900 | 2121.700 | 2311.100 | 2279.000 |
| 70 | 1819.200 | 1824.200 | 1875.900 | 1886.600 | 1920.100 | 2110.000 | 2075.500 |
| 71 | 1631.900 | 1637.200 | 1689.300 | 1697.100 | 1726.800 | 1913.000 | 1872.000 |
| 72 | 1449.400 | 1451.000 | 1505.600 | 1513.500 | 1543.100 | 1726.100 | 1691.900 |
| 73 | 1273.300 | 1279.300 | 1318.400 | 1338.400 | 1363.200 | 1541.700 | 1500.900 |
| 74 | 1106.600 | 1105.900 | 1148.900 | 1162.400 | 1192.200 | 1358.300 | 1320.100 |
| 75 | 949.010 | 948.720 | 988.410 | 999.000 | 1018.800 | 1183.300 | 1148.100 |
| 76 | 804.900 | 800.650 | 842.440 | 840.600 | 866.690 | 1021.100 | 979.390 |
| 77 | 666.910 | 661.010 | 702.140 | 703.370 | 726.400 | 868.930 | 828.780 |
| 78 | 545.280 | 536.300 | 576.070 | 578.970 | 598.630 | 725.660 | 688.380 |
| 79 | 443.990 | 424.000 | 463.790 | 471.600 | 484.120 | 592.990 | 561.330 |
| 80 | 342.900 | 330.380 | 363.490 | 364.530 | 382.720 | 483.700 | 454.970 |
| 81 | 259.490 | 248.190 | 278.500 | 278.660 | 297.380 | 374.710 | 359.560 |
| 82 | 188.250 | 191.710 | 215.140 | 205.150 | 230.650 | 286.430 | 276.060 |
| 83 | 132.320 | 135.280 | 151.890 | 149.470 | 164.010 | 211.730 | 213.250 |
| 84 | 91.939 | 95.763 | 106.420 | 107.740 | 115.740 | 154.050 | 150.590 |
| 85 | 67.748 | 71.057 | 77.068 | 78.815 | 82.888 | 110.750 | 106.920 |
| 86 | 53.566 | 55.659 | 61.400 | 63.040 | 65.893 | 81.620 | 79.467 |
| 87 | 42.018 | 43.590 | 49.093 | 49.563 | 52.722 | 65.958 | 63.704 |
| 88 | 27.775 | 29.227 | 37.681 | 36.936 | 41.826 | 51.690 | 50.809 |
| 89 | 12.044 | 12.482 | 18.292 | 17.438 | 21.846 | 38.660 | 36.857 |
| 90 | 11.948 | 11.844 | 14.629 | 14.543 | 14.503 | 17.894 | 16.437 |
| 91 | 12.566 | 12.461 | 15.009 | 14.970 | 14.892 | 13.848 | 14.028 |
| 92 | 13.221 | 13.098 | 15.339 | 15.336 | 15.219 | 14.465 | 14.604 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | |
|-----|--------|--------|--------|--------|--------|--------|--------|
| 93 | 13.924 | 13.841 | 15.997 | 15.991 | 15.867 | 15.075 | 15.205 |
| 94 | 14.652 | 14.599 | 16.725 | 16.739 | 16.574 | 15.750 | 15.860 |
| 95 | 15.432 | 15.408 | 17.488 | 17.533 | 17.325 | 16.507 | 16.581 |
| 96 | 16.247 | 16.243 | 18.283 | 18.324 | 18.099 | 17.297 | 17.342 |
| 97 | 17.112 | 17.098 | 19.130 | 19.181 | 18.936 | 18.072 | 18.128 |
| 98 | 17.998 | 17.972 | 20.001 | 20.051 | 19.820 | 18.903 | 18.994 |
| 99 | 18.919 | 18.885 | 20.917 | 20.945 | 20.721 | 19.772 | 19.864 |
| 100 | 19.882 | 19.839 | 21.846 | 21.868 | 21.641 | 20.663 | 20.767 |
| 101 | 20.859 | 20.801 | 22.789 | 22.830 | 22.589 | 21.587 | 21.692 |
| 102 | 21.829 | 21.777 | 23.780 | 23.796 | 23.531 | 22.520 | 22.638 |
| 103 | 22.811 | 22.780 | 24.764 | 24.793 | 24.541 | 23.480 | 23.601 |
| 104 | 23.834 | 23.784 | 25.763 | 25.788 | 25.522 | 24.471 | 24.588 |
| 105 | 24.885 | 24.844 | 26.790 | 26.819 | 26.546 | 25.479 | 25.588 |
| 106 | 25.915 | 25.862 | 27.825 | 27.852 | 27.567 | 26.477 | 26.595 |
| 107 | 26.998 | 26.962 | 28.879 | 28.915 | 28.620 | 27.514 | 27.646 |
| 108 | 28.079 | 28.047 | 29.958 | 29.997 | 29.690 | 28.577 | 28.702 |
| 109 | 29.204 | 29.148 | 31.041 | 31.074 | 30.785 | 29.633 | 29.764 |
| 110 | 30.300 | 30.240 | 32.141 | 32.179 | 31.874 | 30.721 | 30.849 |
| 111 | 31.427 | 31.370 | 33.245 | 33.277 | 32.989 | 31.814 | 31.965 |
| 112 | 32.573 | 32.519 | 34.373 | 34.409 | 34.091 | 32.919 | 33.087 |
| 113 | 33.708 | 33.637 | 35.494 | 35.519 | 35.209 | 34.010 | 34.174 |
| 114 | 34.855 | 34.813 | 36.625 | 36.648 | 36.340 | 35.137 | 35.315 |
| 115 | 36.021 | 35.989 | 37.765 | 37.792 | 37.452 | 36.275 | 36.432 |
| 116 | 37.154 | 37.123 | 38.914 | 38.921 | 38.604 | 37.384 | 37.561 |
| 117 | 38.294 | 38.242 | 40.067 | 40.066 | 39.741 | 38.516 | 38.717 |
| 118 | 39.462 | 39.390 | 41.183 | 41.186 | 40.880 | 39.653 | 39.865 |
| 119 | 40.623 | 40.576 | 42.325 | 42.324 | 41.989 | 40.782 | 41.002 |
| 120 | 41.752 | 41.686 | 43.464 | 43.454 | 43.128 | 41.890 | 42.129 |
| 121 | 42.905 | 42.841 | 44.620 | 44.586 | 44.261 | 43.033 | 43.264 |
| 122 | 44.032 | 43.976 | 45.761 | 45.698 | 45.385 | 44.158 | 44.398 |
| 123 | 45.186 | 45.131 | 46.883 | 46.816 | 46.497 | 45.278 | 45.504 |
| 124 | 46.333 | 46.233 | 47.992 | 47.944 | 47.615 | 46.405 | 46.631 |
| 125 | 47.473 | 47.324 | 49.085 | 49.042 | 48.723 | 47.521 | 47.756 |
| 126 | 48.603 | 48.446 | 50.210 | 50.173 | 49.838 | 48.644 | 48.858 |
| 127 | 49.707 | 49.582 | 51.319 | 51.290 | 50.959 | 49.759 | 49.991 |
| 128 | 50.811 | 50.716 | 52.455 | 52.409 | 52.075 | 50.890 | 51.112 |
| 129 | 51.919 | 51.827 | 53.584 | 53.527 | 53.183 | 52.025 | 52.243 |
| 130 | 53.017 | 52.935 | 54.733 | 54.663 | 54.298 | 53.164 | 53.387 |
| 131 | 54.120 | 54.081 | 55.874 | 55.788 | 55.423 | 54.284 | 54.532 |
| 132 | 55.243 | 55.164 | 56.970 | 56.886 | 56.510 | 55.409 | 55.684 |
| 133 | 56.339 | 56.244 | 58.102 | 57.994 | 57.632 | 56.532 | 56.787 |
| 134 | 57.386 | 57.315 | 59.246 | 59.128 | 58.759 | 57.667 | 57.921 |
| 135 | 58.457 | 58.417 | 60.366 | 60.221 | 59.859 | 58.793 | 59.044 |
| 136 | 59.503 | 59.483 | 61.478 | 61.338 | 60.953 | 59.906 | 60.154 |
| 137 | 60.546 | 60.586 | 62.601 | 62.442 | 62.058 | 60.998 | 61.255 |
| 138 | 61.660 | 61.684 | 63.705 | 63.539 | 63.156 | 62.114 | 62.358 |
| 139 | 62.759 | 62.731 | 64.787 | 64.623 | 64.214 | 63.190 | 63.433 |
| 140 | 63.870 | 63.814 | 65.900 | 65.719 | 65.290 | 64.278 | 64.485 |
| 141 | 64.915 | 64.861 | 66.990 | 66.791 | 66.367 | 65.374 | 65.570 |
| 142 | 65.961 | 65.915 | 68.044 | 67.842 | 67.417 | 66.434 | 66.637 |
| 143 | 66.998 | 67.010 | 69.089 | 68.860 | 68.448 | 67.497 | 67.692 |
| 144 | 67.991 | 67.946 | 70.125 | 69.869 | 69.474 | 68.517 | 68.723 |
| 145 | 68.937 | 68.870 | 71.122 | 70.851 | 70.473 | 69.538 | 69.736 |
| 146 | 69.875 | 69.739 | 72.076 | 71.821 | 71.459 | 70.550 | 70.705 |
| 147 | 70.740 | 70.622 | 73.020 | 72.763 | 72.425 | 71.528 | 71.675 |
| 148 | 71.649 | 71.496 | 73.954 | 73.700 | 73.366 | 72.462 | 72.607 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | |
|-----|--------|--------|--------|--------|--------|--------|--------|
| 149 | 72.509 | 72.369 | 74.868 | 74.615 | 74.301 | 73.406 | 73.532 |
| 150 | 73.427 | 73.318 | 75.759 | 75.521 | 75.219 | 74.332 | 74.454 |
| 151 | 74.309 | 74.229 | 76.635 | 76.401 | 76.105 | 75.238 | 75.361 |
| 152 | 75.156 | 75.041 | 77.526 | 77.275 | 76.982 | 76.121 | 76.240 |
| 153 | 75.878 | 75.770 | 78.405 | 78.125 | 77.816 | 77.002 | 77.114 |
| 154 | 76.705 | 76.653 | 79.256 | 78.971 | 78.652 | 77.875 | 77.961 |
| 155 | 77.496 | 77.432 | 80.032 | 79.767 | 79.482 | 78.713 | 78.787 |
| 156 | 78.217 | 78.115 | 80.842 | 80.554 | 80.271 | 79.542 | 79.603 |
| 157 | 78.943 | 78.828 | 81.616 | 81.326 | 81.061 | 80.336 | 80.403 |
| 158 | 79.661 | 79.521 | 82.368 | 82.086 | 81.812 | 81.134 | 81.178 |
| 159 | 80.304 | 80.169 | 83.088 | 82.835 | 82.560 | 81.911 | 81.916 |
| 160 | 80.929 | 80.785 | 83.765 | 83.536 | 83.279 | 82.652 | 82.640 |
| 161 | 81.512 | 81.415 | 84.446 | 84.211 | 83.942 | 83.364 | 83.345 |
| 162 | 82.110 | 81.986 | 85.120 | 84.870 | 84.604 | 84.019 | 84.025 |
| 163 | 82.722 | 82.603 | 85.761 | 85.465 | 85.230 | 84.662 | 84.677 |
| 164 | 83.316 | 83.181 | 86.369 | 86.050 | 85.829 | 85.281 | 85.304 |
| 165 | 83.914 | 83.755 | 86.916 | 86.608 | 86.404 | 85.884 | 85.880 |
| 166 | 84.568 | 84.412 | 87.416 | 87.153 | 86.946 | 86.477 | 86.393 |
| 167 | 85.278 | 85.112 | 87.898 | 87.608 | 87.431 | 87.044 | 86.883 |
| 168 | 85.938 | 85.745 | 88.317 | 88.068 | 87.902 | 87.559 | 87.335 |
| 169 | 86.565 | 86.370 | 88.706 | 88.490 | 88.339 | 88.064 | 87.782 |
| 170 | 87.113 | 86.892 | 89.078 | 88.868 | 88.737 | 88.533 | 88.220 |
| 171 | 87.740 | 87.555 | 89.381 | 89.202 | 89.086 | 88.928 | 88.604 |
| 172 | 88.322 | 88.022 | 89.644 | 89.511 | 89.442 | 89.297 | 88.920 |
| 173 | 88.900 | 88.538 | 89.847 | 89.744 | 89.764 | 89.625 | 89.217 |
| 174 | 89.370 | 88.987 | 90.037 | 89.999 | 90.030 | 89.898 | 89.482 |
| 175 | 89.819 | 89.422 | 90.233 | 90.248 | 90.271 | 90.087 | 89.716 |
| 176 | 90.162 | 89.790 | 90.398 | 90.428 | 90.452 | 90.267 | 89.929 |
| 177 | 90.455 | 90.100 | 90.497 | 90.534 | 90.559 | 90.402 | 90.103 |
| 178 | 90.636 | 90.297 | 90.504 | 90.571 | 90.649 | 90.478 | 90.224 |
| 179 | 90.696 | 90.396 | 90.504 | 90.594 | 90.702 | 90.531 | 90.307 |
| 180 | 90.377 | 90.377 | 90.377 | 90.377 | 90.377 | 90.377 | 90.377 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HZX-EX-Q2-200W-5000K-D120.IES

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|----------|--------|--------|
| 0-20 | 3956.61 | 14.20 | 14.20 |
| 0-30 | 8355.75 | 30.10 | 30.10 |
| 0-40 | 13575.39 | 48.80 | 48.80 |
| 0-60 | 23333.79 | 83.90 | 83.90 |
| 0-80 | 27379.56 | 98.50 | 98.50 |
| 0-90 | 27516.41 | 99.00 | 99.00 |
| 10-90 | 26475.32 | 95.20 | 95.20 |
| 20-40 | 9618.79 | 34.60 | 34.60 |
| 20-50 | 14901.84 | 53.60 | 53.60 |
| 40-70 | 12675.22 | 45.60 | 45.60 |
| 60-80 | 4045.77 | 14.60 | 14.60 |
| 70-80 | 1128.95 | 4.10 | 4.10 |
| 80-90 | 136.85 | 0.50 | 0.50 |
| 90-110 | 44.74 | 0.20 | 0.20 |
| 90-120 | 80.79 | 0.30 | 0.30 |
| 90-130 | 123.51 | 0.40 | 0.40 |
| 90-150 | 212.41 | 0.80 | 0.80 |
| 90-180 | 280.96 | 1.00 | 1.00 |
| 110-180 | 236.23 | 0.80 | 0.80 |
| 0-180 | 27797.38 | 100.00 | 100.00 |

Total Luminaire Efficiency = 100.00%

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|---------|
| 0-10 | 1041.1 |
| 10-20 | 2915.51 |
| 20-30 | 4399.14 |
| 30-40 | 5219.65 |
| 40-50 | 5283.05 |
| 50-60 | 4475.34 |
| 60-70 | 2916.83 |
| 70-80 | 1128.95 |
| 80-90 | 136.85 |
| 90-100 | 17.83 |
| 100-110 | 26.90 |
| 110-120 | 36.06 |
| 120-130 | 42.72 |
| 130-140 | 45.46 |
| 140-150 | 43.44 |
| 150-160 | 36.06 |
| 160-170 | 23.99 |
| 170-180 | 8.51 |

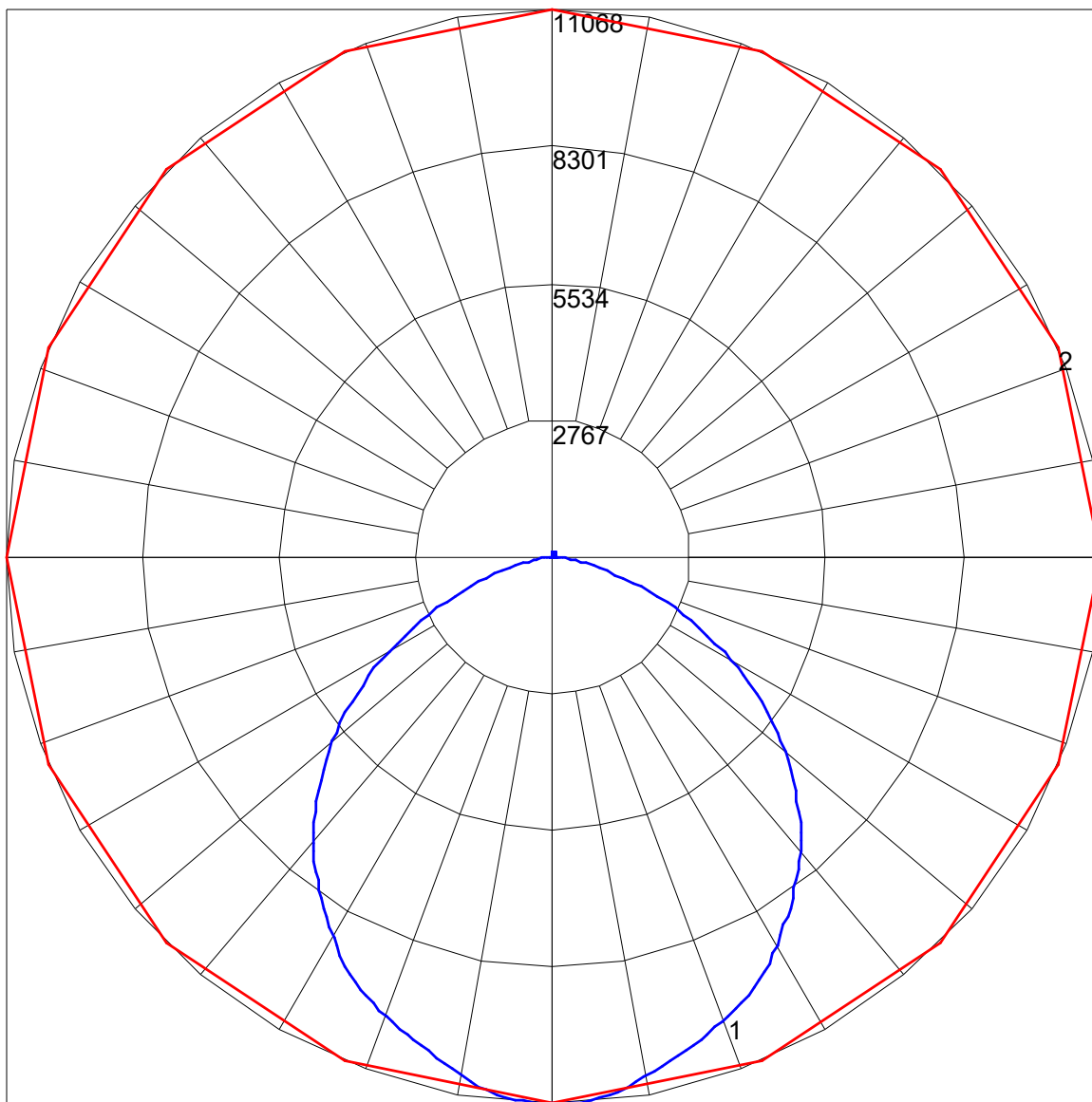
IES INDOOR REPORT
PHOTOMETRIC FILENAME : HZX-EX-Q2-200W-5000K-D120.IES

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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 101 | 101 | 101 | 99 |
| 1 | 110 | 105 | 102 | 98 | 107 | 103 | 100 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 93 | 87 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 77 | 74 | 72 |
| 3 | 92 | 82 | 74 | 68 | 89 | 80 | 73 | 68 | 77 | 71 | 66 | 75 | 69 | 65 | 72 | 68 | 64 | 62 |
| 4 | 84 | 73 | 65 | 58 | 82 | 72 | 64 | 58 | 69 | 62 | 57 | 67 | 61 | 56 | 64 | 59 | 55 | 53 |
| 5 | 78 | 65 | 57 | 50 | 76 | 64 | 56 | 50 | 62 | 55 | 50 | 60 | 54 | 49 | 58 | 53 | 48 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 43 | 53 | 47 | 43 | 41 |
| 7 | 67 | 54 | 45 | 39 | 65 | 53 | 45 | 39 | 51 | 44 | 39 | 50 | 43 | 38 | 48 | 42 | 38 | 36 |
| 8 | 62 | 49 | 41 | 35 | 61 | 48 | 40 | 35 | 47 | 40 | 35 | 46 | 39 | 34 | 44 | 38 | 34 | 32 |
| 9 | 58 | 45 | 37 | 32 | 57 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 |
| 10 | 54 | 42 | 34 | 29 | 53 | 41 | 34 | 29 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |

POLAR GRAPH



Maximum Candela = 11068 Located At Horizontal Angle = 0, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)