



IES FLOOD REPORT

PHOTOMETRIC FILENAME : TSFL-LED-02L-40.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] 3359

[TESTLAB] TUV SUD America

[TESTDATE] 2/26/2018 3:16:20 PM

[ISSUEDATE] 01/07/2019

[MANUFAC] LSI INDUSTRIES, INC

[LUMCAT] TSFL-LED-02L-40

[OTHER] TEST PROCEDURE: IESNA LM-79-08

[ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED

[OTHER] SCALED FROM ORIGINAL TEST DATA

[SEARCH_SOURCETYPE] LED

[SEARCH_APPLICATION] Outdoor

Note: Candela values converted from Type-C to Type-B

CHARACTERISTICS

| | |
|------------------------------|-----------------|
| NEMA Type | 5 H x 5 V |
| Maximum Candela | 2397.135 |
| Maximum Candela Angle | 0H 0V |
| Horizontal Beam Angle (50%) | 49.2 |
| Vertical Beam Angle (50%) | 48.2 |
| Horizontal Field Angle (10%) | 92.9 |
| Vertical Field Angle (10%) | 87.5 |
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Beam Lumens | 979 |
| Beam Efficiency | N.A. |
| Field Lumens | 1772 |
| Field Efficiency | N.A. |
| Spill Lumens | 211 |
| Luminaire Lumens | 1983 |
| Total Efficiency | N.A. |
| Total Luminaire Watts | 21.29 |
| Ballast Factor | 1.00 |

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AXIAL CANDELA

| DEG. | HOR. | DEG. | VERT. |
|-------|----------|-------|----------|
| 90 | 0 | 90 | 0 |
| 85 | 0 | 85 | 0 |
| 75 | 4.128 | 75 | 0 |
| 65 | 42.144 | 65 | 0 |
| 55 | 115.451 | 55 | 36.825 |
| 47.5 | 216.268 | 47.5 | 119.417 |
| 42.5 | 329.055 | 42.5 | 185.438 |
| 37.5 | 505.268 | 37.5 | 300.908 |
| 33 | 714.145 | 33 | 592.216 |
| 29 | 929.9 | 29 | 811.767 |
| 25.5 | 1139.249 | 25.5 | 1006.514 |
| 22.5 | 1342.215 | 22.5 | 1186.851 |
| 19.5 | 1565.648 | 19.5 | 1392.452 |
| 17 | 1756.905 | 17 | 1577.325 |
| 15 | 1907.055 | 15 | 1729.711 |
| 13 | 2037.644 | 13 | 1880.741 |
| 11 | 2153.27 | 11 | 2018.905 |
| 9 | 2248.69 | 9 | 2139.838 |
| 7 | 2320.713 | 7 | 2239.894 |
| 5 | 2368.202 | 5 | 2316.148 |
| 3 | 2390.896 | 3 | 2357.314 |
| 1 | 2396.909 | 1 | 2385.323 |
| 0 | 2397.135 | 0 | 2397.135 |
| -1 | 2396.909 | -1 | 2396.021 |
| -3 | 2390.896 | -3 | 2391.252 |
| -5 | 2368.202 | -5 | 2378.859 |
| -7 | 2320.713 | -7 | 2346.953 |
| -9 | 2248.69 | -9 | 2292.909 |
| -11 | 2153.27 | -11 | 2215.088 |
| -13 | 2037.644 | -13 | 2113.911 |
| -15 | 1907.055 | -15 | 1991.857 |
| -17 | 1756.905 | -17 | 1843.644 |
| -19.5 | 1565.648 | -19.5 | 1657.845 |
| -22.5 | 1342.215 | -22.5 | 1431.124 |
| -25.5 | 1139.249 | -25.5 | 1223.842 |
| -29 | 929.9 | -29 | 1003.567 |
| -33 | 714.145 | -33 | 781.478 |
| -37.5 | 505.268 | -37.5 | 567.091 |
| -42.5 | 329.055 | -42.5 | 370.926 |
| -47.5 | 216.268 | -47.5 | 236.946 |
| -55 | 115.451 | -55 | 133.798 |
| -65 | 42.144 | -65 | 54.405 |
| -75 | 4.128 | -75 | 16.349 |
| -85 | 0 | -85 | .616 |
| -90 | 0 | -90 | 0 |

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CANDELA TABULATION

Maximum Candela = 2397.135

Beam Edge = 1198.5675 Cd (50% of Max.)

Field Edge = 239.7135 Cd (10% of Max.)

* Indicates Values Inside Field Edge

| Vert. Angles | Horizontal Angles | | | | | | | | | |
|-----------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | <u>-90.0</u> | <u>-85.0</u> | <u>-75.0</u> | <u>-65.0</u> | <u>-55.0</u> | <u>-47.5</u> | <u>-42.5</u> | <u>-37.5</u> | <u>-33.0</u> | <u>-29.0</u> |
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 85.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 75.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 65.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.300 | 0.445 | 1.012 | 1.854 | 2.070 |
| 55.0 | 0.000 | 0.000 | 0.000 | 0.199 | 4.277 | 11.189 | 16.620 | 24.016 | 31.876 | 36.256 |
| 47.5 | 0.000 | 0.000 | 0.010 | 2.294 | 15.106 | 33.394 | 50.167 | 64.146 | 72.144 | 82.180 |
| 42.5 | 0.000 | 0.000 | 0.156 | 5.388 | 26.256 | 56.131 | 74.180 | 90.983 | 105.154 | 121.578 |
| 37.5 | 0.000 | 0.000 | 0.312 | 9.705 | 40.928 | 77.011 | 101.917 | 126.481 | 154.425 | 196.628 |
| 33.0 | 0.000 | 0.000 | 0.484 | 14.285 | 55.354 | 99.505 | 130.562 | 171.128 | 230.220 | 293.038 * |
| 29.0 | 0.000 | 0.000 | 1.015 | 18.546 | 67.023 | 119.568 | 163.171 | 222.545 | 298.746 * | 377.295 * |
| 25.5 | 0.000 | 0.000 | 1.482 | 22.403 | 75.708 | 135.776 | 193.133 | 268.098 * | 359.431 * | 455.385 * |
| 22.5 | 0.000 | 0.000 | 1.877 | 25.573 | 82.699 | 152.625 | 218.616 | 305.141 * | 413.866 * | 530.009 * |
| 19.5 | 0.000 | 0.000 | 2.264 | 28.840 | 89.697 | 167.423 | 240.115 * | 343.114 * | 469.060 * | 604.527 * |
| 17.0 | 0.000 | 0.000 | 2.574 | 31.334 | 95.649 | 178.292 | 256.153 * | 373.250 * | 516.316 * | 665.679 * |
| 15.0 | 0.000 | 0.000 | 2.813 | 33.172 | 99.831 | 186.188 | 269.934 * | 395.431 * | 552.182 * | 711.339 * |
| 13.0 | 0.000 | 0.000 | 3.041 | 34.868 | 103.502 | 193.211 | 283.145 * | 419.509 * | 584.928 * | 756.566 * |
| 11.0 | 0.000 | 0.000 | 3.256 | 36.416 | 106.665 | 199.338 | 294.853 * | 440.981 * | 616.113 * | 797.839 * |
| 9.0 | 0.000 | 0.000 | 3.457 | 37.813 | 109.330 | 204.547 | 304.980 * | 459.676 * | 644.213 * | 834.133 * |
| 7.0 | 0.000 | 0.000 | 3.642 | 39.056 | 111.504 | 208.823 | 313.448 * | 475.428 * | 668.062 * | 866.047 * |
| 5.0 | 0.000 | 0.000 | 3.883 | 40.141 | 113.202 | 212.150 | 320.186 * | 488.082 * | 687.374 * | 892.756 * |
| 3.0 | 0.000 | 0.000 | 3.981 | 41.252 | 114.920 | 215.607 | 327.271 * | 497.494 * | 701.883 * | 912.844 * |
| 1.0 | 0.000 | 0.000 | 4.079 | 41.847 | 115.274 | 216.047 | 328.459 * | 503.978 * | 711.358 * | 925.999 * |
| 0.0 | 0.000 | 0.000 | 4.128 | 42.144 | 115.451 | 216.268 | 329.055 * | 505.268 * | 714.145 * | 929.900 * |
| -1.0 | 0.000 | 0.000 | 4.225 | 42.399 | 115.836 | 216.477 | 329.286 * | 505.648 * | 713.844 * | 929.285 * |
| -3.0 | 0.000 | 0.000 | 4.419 | 42.910 | 116.606 | 216.895 | 329.748 * | 502.460 * | 709.278 * | 922.618 * |
| -5.0 | 0.000 | 0.000 | 4.612 | 42.887 | 116.066 | 214.285 | 324.204 * | 496.222 * | 699.488 * | 908.772 * |
| -7.0 | 0.000 | 0.000 | 4.640 | 42.878 | 115.584 | 211.793 | 318.917 * | 486.544 * | 684.591 * | 887.909 * |
| -9.0 | 0.000 | 0.000 | 4.720 | 42.687 | 114.692 | 208.335 | 311.748 * | 473.496 * | 664.743 * | 861.496 * |
| -11.0 | 0.000 | 0.000 | 4.769 | 42.313 | 113.398 | 203.919 | 302.731 * | 457.169 * | 640.139 * | 830.451 * |
| -13.0 | 0.000 | 0.000 | 4.785 | 41.752 | 111.706 | 198.559 | 291.908 * | 437.675 * | 612.001 * | 793.986 * |
| -15.0 | 0.000 | 0.000 | 4.766 | 41.003 | 109.627 | 192.270 | 279.330 * | 415.136 * | 582.083 * | 752.344 * |
| -17.0 | 0.000 | 0.000 | 4.713 | 40.065 | 107.169 | 185.073 | 266.019 * | 393.640 * | 548.196 * | 708.593 * |
| -19.5 | 0.000 | 0.000 | 4.595 | 38.623 | 103.576 | 176.262 | 250.661 * | 363.509 * | 502.278 * | 648.784 * |
| -22.5 | 0.000 | 0.000 | 4.378 | 36.498 | 98.692 | 165.496 | 229.904 | 325.341 * | 447.238 * | 574.907 * |
| -25.5 | 0.000 | 0.000 | 4.075 | 34.373 | 93.201 | 153.643 | 209.854 | 290.224 * | 391.471 * | 499.433 * |
| -29.0 | 0.000 | 0.000 | 3.612 | 31.375 | 86.005 | 140.354 | 186.174 | 251.616 * | 328.571 * | 419.306 * |
| -33.0 | 0.000 | 0.000 | 2.936 | 27.856 | 77.802 | 124.341 | 162.583 | 211.959 | 268.144 * | 330.116 * |
| -37.5 | 0.000 | 0.000 | 2.556 | 23.743 | 67.389 | 108.112 | 137.347 | 173.771 | 213.650 | 254.858 * |
| -42.5 | 0.000 | 0.000 | 1.983 | 19.526 | 55.337 | 88.811 | 112.667 | 138.363 | 164.773 | 189.807 |
| -47.5 | 0.000 | 0.000 | 1.212 | 15.392 | 42.324 | 71.057 | 90.335 | 110.249 | 126.712 | 142.979 |
| -55.0 | 0.000 | 0.000 | 0.581 | 9.539 | 26.579 | 44.669 | 59.824 | 72.953 | 82.905 | 92.249 |
| -65.0 | 0.000 | 0.000 | 0.053 | 2.838 | 11.396 | 19.625 | 25.513 | 30.021 | 34.520 | 38.226 |
| -75.0 | 0.000 | 0.000 | 0.000 | 0.150 | 2.040 | 4.531 | 6.658 | 8.462 | 9.957 | 11.350 |
| -85.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.005 | 0.019 | 0.041 | 0.082 | 0.128 | 0.174 |
| -90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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CANDELA TABULATION - (Cont.)

| Vert. Angles | Horizontal Angles | | | | | | | | | |
|-----------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|
| | <u>-25.5</u> | <u>-22.5</u> | <u>-19.5</u> | <u>-17.0</u> | <u>-15.0</u> | <u>-13.0</u> | <u>-11.0</u> | <u>-9.0</u> | <u>-7.0</u> | <u>-5.0</u> |
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 85.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 75.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 65.0 | 1.625 | 1.702 | 1.963 | 2.349 | 2.471 | 2.446 | 2.292 | 2.027 | 1.672 | 1.246 |
| 55.0 | 38.029 | 38.232 | 37.944 | 39.684 | 41.016 | 41.816 | 42.120 | 41.968 | 41.403 | 40.468 |
| 47.5 | 93.357 | 100.374 | 105.783 | 109.440 | 112.585 | 115.262 | 117.454 | 119.127 | 120.249 | 120.791 |
| 42.5 | 138.740 | 151.994 | 163.821 | 167.797 | 171.214 | 177.746 | 182.797 | 186.385 | 188.538 | 189.296 |
| 37.5 | 229.539 | 248.844 * | 264.593 * | 274.089 * | 279.055 * | 301.231 * | 318.771 * | 328.659 * | 331.636 * | 328.561 * |
| 33.0 | 334.272 * | 371.678 * | 419.824 * | 464.994 * | 501.385 * | 536.451 * | 555.931 * | 570.690 * | 583.176 * | 592.261 * |
| 29.0 | 447.469 * | 512.228 * | 582.277 * | 637.602 * | 678.155 * | 715.899 * | 748.021 * | 772.250 * | 792.027 * | 806.127 * |
| 25.5 | 548.760 * | 632.548 * | 716.383 * | 782.317 * | 833.379 * | 880.491 * | 921.480 * | 955.952 * | 981.604 * | 999.214 * |
| 22.5 | 640.586 * | 737.473 * | 834.046 * | 914.349 * | 975.225 * | 1031.520 * | 1081.374 * | 1127.184 * | 1158.873 * | 1180.162 * |
| 19.5 | 732.254 * | 844.281 * | 956.455 * | 1049.381 * | 1122.133 * | 1191.486 * | 1254.044 * | 1312.101 * | 1356.033 * | 1382.983 * |
| 17.0 | 806.793 * | 933.354 * | 1060.246 * | 1165.583 * | 1249.522 * | 1332.268 * | 1407.827 * | 1477.227 * | 1533.483 * | 1566.876 * |
| 15.0 | 865.439 * | 1002.655 * | 1142.439 * | 1260.820 * | 1354.104 * | 1446.120 * | 1536.106 * | 1613.124 * | 1678.082 * | 1720.847 * |
| 13.0 | 920.791 * | 1068.656 * | 1223.365 * | 1355.741 * | 1459.761 * | 1564.248 * | 1663.264 * | 1751.656 * | 1822.520 * | 1870.806 * |
| 11.0 | 970.940 * | 1129.442 * | 1299.395 * | 1445.727 * | 1565.046 * | 1679.389 * | 1787.642 * | 1879.050 * | 1953.791 * | 2008.290 * |
| 9.0 | 1018.274 * | 1188.402 * | 1372.184 * | 1531.914 * | 1660.415 * | 1784.915 * | 1896.396 * | 1992.550 * | 2066.852 * | 2125.508 * |
| 7.0 | 1059.153 * | 1239.656 * | 1435.887 * | 1607.415 * | 1743.553 * | 1874.494 * | 1989.445 * | 2084.582 * | 2164.582 * | 2214.721 * |
| 5.0 | 1092.448 * | 1281.878 * | 1488.701 * | 1670.024 * | 1812.099 * | 1944.030 * | 2062.804 * | 2160.709 * | 2231.635 * | 2284.499 * |
| 3.0 | 1117.628 * | 1314.153 * | 1530.118 * | 1717.286 * | 1864.087 * | 1996.363 * | 2113.034 * | 2210.658 * | 2284.668 * | 2328.473 * |
| 1.0 | 1134.251 * | 1337.129 * | 1557.539 * | 1747.949 * | 1900.022 * | 2028.918 * | 2144.756 * | 2240.311 * | 2312.577 * | 2361.578 * |
| 0.0 | 1139.249 * | 1342.215 * | 1565.648 * | 1756.905 * | 1907.055 * | 2037.644 * | 2153.270 * | 2248.690 * | 2320.713 * | 2368.202 * |
| -1.0 | 1138.894 * | 1343.615 * | 1566.343 * | 1758.456 * | 1911.173 * | 2040.511 * | 2156.264 * | 2251.370 * | 2323.000 * | 2371.142 * |
| -3.0 | 1131.374 * | 1333.295 * | 1556.229 * | 1748.769 * | 1897.514 * | 2031.218 * | 2148.123 * | 2244.726 * | 2316.951 * | 2357.513 * |
| -5.0 | 1114.767 * | 1312.830 * | 1531.128 * | 1721.791 * | 1867.593 * | 2002.360 * | 2122.185 * | 2217.399 * | 2285.088 * | 2334.786 * |
| -7.0 | 1089.197 * | 1281.075 * | 1492.455 * | 1677.097 * | 1819.050 * | 1952.458 * | 2069.933 * | 2165.011 * | 2243.425 * | 2287.294 * |
| -9.0 | 1054.932 * | 1238.557 * | 1439.554 * | 1613.046 * | 1751.593 * | 1879.889 * | 1995.929 * | 2098.176 * | 2168.382 * | 2223.775 * |
| -11.0 | 1013.060 * | 1185.726 * | 1373.527 * | 1535.697 * | 1666.256 * | 1790.316 * | 1904.644 * | 1999.675 * | 2076.919 * | 2132.303 * |
| -13.0 | 967.705 * | 1129.353 * | 1302.329 * | 1451.321 * | 1568.785 * | 1685.885 * | 1793.656 * | 1887.079 * | 1963.564 * | 2020.181 * |
| -15.0 | 916.125 * | 1066.327 * | 1224.216 * | 1360.536 * | 1467.424 * | 1572.042 * | 1673.106 * | 1761.534 * | 1833.027 * | 1895.611 * |
| -17.0 | 860.454 * | 999.196 * | 1143.314 * | 1265.888 * | 1363.631 * | 1458.177 * | 1546.742 * | 1627.694 * | 1695.558 * | 1757.563 * |
| -19.5 | 788.421 * | 912.421 * | 1039.149 * | 1146.849 * | 1231.262 * | 1313.168 * | 1388.411 * | 1458.775 * | 1522.159 * | 1578.210 * |
| -22.5 | 697.308 * | 805.893 * | 916.094 * | 1007.521 * | 1078.245 * | 1144.732 * | 1204.595 * | 1261.801 * | 1317.745 * | 1363.792 * |
| -25.5 | 604.327 * | 699.218 * | 795.583 * | 872.913 * | 932.659 * | 988.092 * | 1037.275 * | 1085.834 * | 1130.578 * | 1167.837 * |
| -29.0 | 500.652 * | 579.828 * | 658.284 * | 722.805 * | 770.782 * | 816.990 * | 858.689 * | 897.555 * | 931.836 * | 960.885 * |
| -33.0 | 395.981 * | 454.915 * | 513.766 * | 563.410 * | 600.607 * | 634.275 * | 668.972 * | 700.646 * | 727.535 * | 749.443 * |
| -37.5 | 295.846 * | 334.137 * | 375.834 * | 409.164 * | 433.521 * | 460.334 * | 485.350 * | 507.568 * | 526.763 * | 542.716 * |
| -42.5 | 214.415 | 235.818 | 259.016 * | 276.749 * | 292.674 * | 308.934 * | 323.622 * | 336.615 * | 347.790 * | 357.029 * |
| -47.5 | 156.837 | 170.015 | 181.833 | 191.364 | 199.984 | 207.847 | 214.895 | 221.079 | 226.348 | 230.657 |
| -55.0 | 99.886 | 105.858 | 111.409 | 116.091 | 119.573 | 122.710 | 125.487 | 127.892 | 129.913 | 131.537 |
| -65.0 | 41.169 | 43.177 | 45.471 | 47.565 | 49.038 | 50.329 | 51.441 | 52.375 | 53.130 | 53.710 |
| -75.0 | 12.359 | 13.078 | 13.749 | 14.266 | 14.642 | 14.983 | 15.289 | 15.561 | 15.798 | 16.110 |
| -85.0 | 0.217 | 0.256 | 0.304 | 0.346 | 0.379 | 0.412 | 0.462 | 0.490 | 0.518 | 0.546 |
| -90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| Vert. Angles | Horizontal Angles | | | | | | | | | |
|-----------------|-------------------|-------------|------------|------------|------------|------------|------------|------------|-------------|-------------|
| | <u>-3.0</u> | <u>-1.0</u> | <u>0.0</u> | <u>1.0</u> | <u>3.0</u> | <u>5.0</u> | <u>7.0</u> | <u>9.0</u> | <u>11.0</u> | <u>13.0</u> |
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 85.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 75.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 65.0 | 0.779 | 0.260 | 0.000 | 0.260 | 0.779 | 1.246 | 1.672 | 2.027 | 2.292 | 2.446 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | | | | |
|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 55.0 | 39.462 | 37.704 | 36.825 | 37.704 | 39.462 | 40.468 | 41.403 | 41.968 | 42.120 | 41.816 |
| 47.5 | 121.465 | 120.100 | 119.417 | 120.100 | 121.465 | 120.791 | 120.249 | 119.127 | 117.454 | 115.262 |
| 42.5 | 190.076 | 186.985 | 185.438 | 186.985 | 190.076 | 189.296 | 188.538 | 186.385 | 182.797 | 177.746 |
| 37.5 | 320.394 * | 308.503 * | 300.908 * | 308.503 * | 320.394 * | 328.561 * | 331.636 * | 328.659 * | 318.771 * | 301.231 * |
| 33.0 | 596.754 * | 595.434 * | 592.216 * | 595.434 * | 596.754 * | 592.261 * | 583.176 * | 570.690 * | 555.931 * | 536.451 * |
| 29.0 | 813.464 * | 814.017 * | 811.767 * | 814.017 * | 813.464 * | 806.127 * | 792.027 * | 772.250 * | 748.021 * | 715.899 * |
| 25.5 | 1008.498 * | 1009.301 * | 1006.514 * | 1009.301 * | 1008.498 * | 999.214 * | 981.604 * | 955.952 * | 921.480 * | 880.491 * |
| 22.5 | 1190.803 * | 1192.071 * | 1186.851 * | 1192.071 * | 1190.803 * | 1180.162 * | 1158.873 * | 1127.214 * | 1081.374 * | 1031.520 * |
| 19.5 | 1397.514 * | 1397.818 * | 1392.452 * | 1397.818 * | 1397.514 * | 1382.983 * | 1356.033 * | 1312.101 * | 1254.044 * | 1191.486 * |
| 17.0 | 1584.141 * | 1584.070 * | 1577.325 * | 1584.070 * | 1584.142 * | 1566.876 * | 1533.483 * | 1477.227 * | 1407.827 * | 1332.268 * |
| 15.0 | 1739.906 * | 1740.740 * | 1729.711 * | 1740.740 * | 1739.906 * | 1720.847 * | 1678.082 * | 1613.124 * | 1536.106 * | 1446.120 * |
| 13.0 | 1891.218 * | 1889.916 * | 1880.741 * | 1889.916 * | 1891.218 * | 1870.806 * | 1822.520 * | 1751.656 * | 1663.264 * | 1564.248 * |
| 11.0 | 2030.545 * | 2028.605 * | 2018.905 * | 2028.605 * | 2030.545 * | 2008.290 * | 1953.791 * | 1879.050 * | 1787.642 * | 1679.389 * |
| 9.0 | 2152.894 * | 2149.561 * | 2139.838 * | 2149.561 * | 2152.894 * | 2125.508 * | 2066.852 * | 1992.550 * | 1896.396 * | 1784.915 * |
| 7.0 | 2251.065 * | 2248.918 * | 2239.894 * | 2248.918 * | 2251.065 * | 2214.721 * | 2164.582 * | 2084.582 * | 1989.445 * | 1874.494 * |
| 5.0 | 2313.265 * | 2325.855 * | 2316.148 * | 2325.855 * | 2313.265 * | 2284.499 * | 2231.635 * | 2160.709 * | 2062.804 * | 1944.030 * |
| 3.0 | 2355.795 * | 2365.086 * | 2357.314 * | 2365.086 * | 2355.812 * | 2328.473 * | 2284.668 * | 2210.658 * | 2113.034 * | 1996.363 * |
| 1.0 | 2381.455 * | 2388.915 * | 2385.323 * | 2388.915 * | 2381.455 * | 2361.578 * | 2312.577 * | 2240.311 * | 2144.756 * | 2028.918 * |
| 0.0 | 2390.896 * | 2396.909 * | 2397.135 * | 2396.909 * | 2390.896 * | 2368.202 * | 2320.713 * | 2248.690 * | 2153.270 * | 2037.644 * |
| -1.0 | 2389.696 * | 2396.581 * | 2396.021 * | 2396.581 * | 2389.696 * | 2371.142 * | 2323.000 * | 2251.370 * | 2156.264 * | 2040.511 * |
| -3.0 | 2381.910 * | 2388.133 * | 2391.252 * | 2388.133 * | 2381.912 * | 2357.513 * | 2316.951 * | 2244.726 * | 2148.123 * | 2031.218 * |
| -5.0 | 2357.231 * | 2375.481 * | 2378.859 * | 2375.481 * | 2357.231 * | 2334.786 * | 2285.088 * | 2217.399 * | 2122.185 * | 2002.360 * |
| -7.0 | 2319.591 * | 2340.720 * | 2346.953 * | 2340.720 * | 2319.591 * | 2287.294 * | 2243.425 * | 2165.011 * | 2069.933 * | 1952.458 * |
| -9.0 | 2259.504 * | 2285.261 * | 2292.909 * | 2285.261 * | 2259.504 * | 2223.775 * | 2168.382 * | 2098.176 * | 1995.929 * | 1879.889 * |
| -11.0 | 2175.999 * | 2206.360 * | 2215.088 * | 2206.360 * | 2175.999 * | 2132.303 * | 2076.919 * | 1999.675 * | 1904.644 * | 1790.316 * |
| -13.0 | 2071.390 * | 2104.407 * | 2113.911 * | 2104.407 * | 2071.390 * | 2020.181 * | 1963.564 * | 1887.079 * | 1793.656 * | 1685.885 * |
| -15.0 | 1947.461 * | 1984.160 * | 1991.857 * | 1984.160 * | 1947.461 * | 1895.611 * | 1833.027 * | 1761.534 * | 1673.106 * | 1572.042 * |
| -17.0 | 1804.162 * | 1834.620 * | 1843.644 * | 1834.620 * | 1804.162 * | 1757.563 * | 1695.558 * | 1627.694 * | 1546.742 * | 1458.177 * |
| -19.5 | 1620.896 * | 1649.193 * | 1657.845 * | 1649.193 * | 1620.896 * | 1578.210 * | 1522.159 * | 1458.775 * | 1388.411 * | 1313.168 * |
| -22.5 | 1399.211 * | 1424.860 * | 1431.124 * | 1424.860 * | 1399.211 * | 1363.792 * | 1317.745 * | 1261.841 * | 1204.595 * | 1144.732 * |
| -25.5 | 1196.912 * | 1217.178 * | 1223.842 * | 1217.178 * | 1196.912 * | 1167.837 * | 1130.578 * | 1085.834 * | 1037.275 * | 988.092 * |
| -29.0 | 983.296 * | 998.649 * | 1003.567 * | 998.649 * | 983.296 * | 960.885 * | 931.836 * | 897.555 * | 858.689 * | 816.990 * |
| -33.0 | 766.210 * | 777.718 * | 781.478 * | 777.718 * | 766.210 * | 749.443 * | 727.535 * | 700.646 * | 668.972 * | 634.275 * |
| -37.5 | 555.218 * | 564.563 * | 567.091 * | 564.563 * | 555.218 * | 542.716 * | 526.763 * | 507.568 * | 485.350 * | 460.334 * |
| -42.5 | 366.754 * | 369.534 * | 370.926 * | 369.534 * | 366.754 * | 357.029 * | 347.790 * | 336.615 * | 323.622 * | 308.934 * |
| -47.5 | 235.181 | 236.357 | 236.946 | 236.357 | 235.181 | 230.657 | 226.348 | 221.079 | 214.895 | 207.847 |
| -55.0 | 133.231 | 133.609 | 133.798 | 133.609 | 133.231 | 131.537 | 129.913 | 127.892 | 125.487 | 122.710 |
| -65.0 | 54.306 | 54.372 | 54.405 | 54.372 | 54.306 | 53.710 | 53.130 | 52.375 | 51.441 | 50.329 |
| -75.0 | 16.205 | 16.301 | 16.349 | 16.301 | 16.205 | 16.110 | 15.798 | 15.561 | 15.289 | 14.983 |
| -85.0 | 0.574 | 0.602 | 0.616 | 0.602 | 0.574 | 0.546 | 0.518 | 0.490 | 0.462 | 0.412 |
| -90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

Vert. Angles **Horizontal Angles**

| | <u>15.0</u> | <u>17.0</u> | <u>19.5</u> | <u>22.5</u> | <u>25.5</u> | <u>29.0</u> | <u>33.0</u> | <u>37.5</u> | <u>42.5</u> | <u>47.5</u> |
|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 85.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 75.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 65.0 | 2.471 | 2.349 | 1.963 | 1.702 | 1.625 | 2.070 | 1.854 | 1.012 | 0.445 | 0.300 |
| 55.0 | 41.016 | 39.684 | 37.944 | 38.232 | 38.029 | 36.256 | 31.876 | 24.016 | 16.620 | 11.189 |
| 47.5 | 112.585 | 109.458 | 105.783 | 100.374 | 93.357 | 82.180 | 72.144 | 64.146 | 50.167 | 33.394 |
| 42.5 | 171.214 | 167.797 | 163.821 | 151.994 | 138.740 | 121.578 | 105.154 | 90.983 | 74.180 | 56.131 |
| 37.5 | 279.055 * | 274.089 * | 264.593 * | 248.844 * | 229.539 | 196.628 | 154.425 | 126.481 | 101.917 | 77.011 |
| 33.0 | 501.385 * | 464.994 * | 419.824 * | 371.678 * | 334.272 * | 293.038 * | 230.220 | 171.128 | 130.562 | 99.505 |
| 29.0 | 678.155 * | 637.602 * | 582.277 * | 512.228 * | 447.469 * | 377.295 * | 298.746 * | 222.545 | 163.171 | 119.568 |
| 25.5 | 833.379 * | 782.317 * | 716.383 * | 632.548 * | 548.760 * | 455.385 * | 359.431 * | 268.098 * | 193.133 | 135.776 |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-02L-40.IES

CANDELA TABULATION - (Cont.)

| | | | | | | | | | | |
|--------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 22.5 | 975.225 | * 914.349 | * 834.046 | * 737.473 | * 640.586 | * 530.009 | * 413.866 | * 305.141 | * 218.615 | 152.625 |
| 19.5 | 1122.133 | *1049.381 | *956.455 | * 844.281 | * 732.254 | * 604.527 | * 469.060 | * 343.114 | * 240.115 | * 167.423 |
| 17.0 | 1249.522 | *1165.583 | *1060.246 | *933.354 | * 806.793 | * 665.679 | * 516.316 | * 373.250 | * 256.153 | * 178.292 |
| 15.0 | 1354.104 | *1260.820 | *1142.439 | *1002.655 | *865.439 | * 711.339 | * 552.182 | * 395.431 | * 269.934 | * 186.188 |
| 13.0 | 1459.761 | *1355.741 | *1223.365 | *1068.656 | *920.791 | * 756.566 | * 584.928 | * 419.509 | * 283.145 | * 193.211 |
| 11.0 | 1565.046 | *1445.727 | *1299.395 | *1129.442 | *970.940 | * 797.839 | * 616.113 | * 440.981 | * 294.853 | * 199.338 |
| 9.0 | 1660.415 | *1531.914 | *1372.184 | *1188.402 | *1018.274 | *834.133 | * 644.213 | * 459.676 | * 304.980 | * 204.547 |
| 7.0 | 1743.553 | *1607.415 | *1435.887 | *1239.656 | *1059.153 | *866.047 | * 668.062 | * 475.428 | * 313.448 | * 208.823 |
| 5.0 | 1812.099 | *1670.024 | *1488.701 | *1281.878 | *1092.448 | *892.756 | * 687.374 | * 488.082 | * 320.186 | * 212.150 |
| 3.0 | 1864.088 | *1717.286 | *1530.118 | *1314.153 | *1117.628 | *912.844 | * 701.883 | * 497.494 | * 327.271 | * 215.607 |
| 1.0 | 1900.022 | *1747.949 | *1557.539 | *1337.129 | *1134.251 | *925.999 | * 711.358 | * 503.978 | * 328.459 | * 216.047 |
| 0.0 | 1907.055 | *1756.905 | *1565.648 | *1342.215 | *1139.249 | *929.900 | * 714.145 | * 505.268 | * 329.055 | * 216.268 |
| -1.0 | 1911.173 | *1758.456 | *1566.343 | *1343.615 | *1138.894 | *929.285 | * 713.844 | * 505.648 | * 329.286 | * 216.477 |
| -3.0 | 1897.514 | *1748.769 | *1556.229 | *1333.295 | *1131.374 | *922.618 | * 709.278 | * 502.460 | * 329.748 | * 216.895 |
| -5.0 | 1867.593 | *1721.791 | *1531.128 | *1312.830 | *1114.767 | *908.772 | * 699.488 | * 496.222 | * 324.204 | * 214.285 |
| -7.0 | 1819.050 | *1677.097 | *1492.455 | *1281.075 | *1089.197 | *887.909 | * 684.591 | * 486.544 | * 318.917 | * 211.793 |
| -9.0 | 1751.593 | *1613.046 | *1439.554 | *1238.557 | *1054.932 | *861.496 | * 664.743 | * 473.496 | * 311.748 | * 208.335 |
| -11.0 | 1666.256 | *1535.697 | *1373.527 | *1185.726 | *1013.060 | *830.451 | * 640.139 | * 457.169 | * 302.731 | * 203.919 |
| -13.0 | 1568.785 | *1451.321 | *1302.329 | *1129.353 | *967.705 | * 793.986 | * 612.001 | * 437.675 | * 291.908 | * 198.559 |
| -15.0 | 1467.424 | *1360.536 | *1224.216 | *1066.327 | *916.125 | * 752.344 | * 582.083 | * 415.136 | * 279.330 | * 192.270 |
| -17.0 | 1363.631 | *1265.888 | *1143.314 | *999.196 | * 860.454 | * 708.593 | * 548.196 | * 393.640 | * 266.019 | * 185.073 |
| -19.5 | 1231.262 | *1146.849 | *1039.149 | *912.421 | * 788.421 | * 648.784 | * 502.278 | * 363.509 | * 250.661 | * 176.262 |
| -22.5 | 1078.245 | *1007.521 | *916.094 | * 805.893 | * 697.308 | * 574.907 | * 447.238 | * 325.341 | * 229.904 | 165.496 |
| -25.5 | 932.659 | * 872.913 | * 795.583 | * 699.218 | * 604.327 | * 499.433 | * 391.471 | * 290.224 | * 209.854 | 153.643 |
| -29.0 | 770.782 | * 722.805 | * 658.284 | * 579.828 | * 500.652 | * 419.306 | * 328.571 | * 251.616 | * 186.174 | 140.354 |
| -33.0 | 600.607 | * 563.410 | * 513.766 | * 454.915 | * 395.981 | * 330.116 | * 268.144 | * 211.959 | 162.583 | 124.341 |
| -37.5 | 433.521 | * 409.164 | * 375.834 | * 334.137 | * 295.846 | * 254.858 | * 213.650 | 173.771 | 137.347 | 108.112 |
| -42.5 | 292.674 | * 276.749 | * 259.016 | * 235.818 | 214.415 | 189.807 | 164.773 | 138.363 | 112.667 | 88.811 |
| -47.5 | 199.984 | 191.364 | 181.833 | 170.015 | 156.837 | 142.979 | 126.712 | 110.249 | 90.335 | 71.057 |
| -55.0 | 119.573 | 116.091 | 111.409 | 105.858 | 99.886 | 92.249 | 82.905 | 72.953 | 59.824 | 44.669 |
| -65.0 | 49.038 | 47.565 | 45.471 | 43.177 | 41.169 | 38.226 | 34.520 | 30.021 | 25.513 | 19.625 |
| -75.0 | 14.642 | 14.266 | 13.749 | 13.078 | 12.359 | 11.350 | 9.957 | 8.462 | 6.658 | 4.531 |
| -85.0 | 0.379 | 0.346 | 0.304 | 0.257 | 0.217 | 0.174 | 0.128 | 0.082 | 0.041 | 0.019 |
| -90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| Vert. Angles | Horizontal Angles | | | | |
|-------------------------|--------------------------|-------------|-------------|-------------|-------------|
| | 55.0 | 65.0 | 75.0 | 85.0 | 90.0 |
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 85.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 75.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 65.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 55.0 | 4.277 | 0.199 | 0.000 | 0.000 | 0.000 |
| 47.5 | 15.106 | 2.294 | 0.010 | 0.000 | 0.000 |
| 42.5 | 26.256 | 5.388 | 0.156 | 0.000 | 0.000 |
| 37.5 | 40.928 | 9.705 | 0.312 | 0.000 | 0.000 |
| 33.0 | 55.354 | 14.285 | 0.484 | 0.000 | 0.000 |
| 29.0 | 67.023 | 18.546 | 1.015 | 0.000 | 0.000 |
| 25.5 | 75.708 | 22.403 | 1.482 | 0.000 | 0.000 |
| 22.5 | 82.699 | 25.573 | 1.877 | 0.000 | 0.000 |
| 19.5 | 89.697 | 28.840 | 2.264 | 0.000 | 0.000 |
| 17.0 | 95.649 | 31.334 | 2.574 | 0.000 | 0.000 |
| 15.0 | 99.831 | 33.172 | 2.813 | 0.000 | 0.000 |
| 13.0 | 103.502 | 34.868 | 3.041 | 0.000 | 0.000 |
| 11.0 | 106.665 | 36.416 | 3.256 | 0.000 | 0.000 |
| 9.0 | 109.330 | 37.813 | 3.457 | 0.000 | 0.000 |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-02L-40.IES

CANDELA TABULATION - (Cont.)

| | | | | | |
|--------------|---------|--------|-------|-------|-------|
| 7.0 | 111.504 | 39.056 | 3.642 | 0.000 | 0.000 |
| 5.0 | 113.202 | 40.141 | 3.883 | 0.000 | 0.000 |
| 3.0 | 114.920 | 41.252 | 3.981 | 0.000 | 0.000 |
| 1.0 | 115.274 | 41.847 | 4.079 | 0.000 | 0.000 |
| 0.0 | 115.451 | 42.144 | 4.128 | 0.000 | 0.000 |
| -1.0 | 115.836 | 42.399 | 4.225 | 0.000 | 0.000 |
| -3.0 | 116.606 | 42.910 | 4.419 | 0.000 | 0.000 |
| -5.0 | 116.066 | 42.887 | 4.612 | 0.000 | 0.000 |
| -7.0 | 115.584 | 42.878 | 4.640 | 0.000 | 0.000 |
| -9.0 | 114.692 | 42.687 | 4.720 | 0.000 | 0.000 |
| -11.0 | 113.398 | 42.313 | 4.769 | 0.000 | 0.000 |
| -13.0 | 111.707 | 41.752 | 4.785 | 0.000 | 0.000 |
| -15.0 | 109.627 | 41.003 | 4.766 | 0.000 | 0.000 |
| -17.0 | 107.169 | 40.065 | 4.713 | 0.000 | 0.000 |
| -19.5 | 103.576 | 38.623 | 4.595 | 0.000 | 0.000 |
| -22.5 | 98.692 | 36.498 | 4.378 | 0.000 | 0.000 |
| -25.5 | 93.201 | 34.373 | 4.075 | 0.000 | 0.000 |
| -29.0 | 86.005 | 31.375 | 3.612 | 0.000 | 0.000 |
| -33.0 | 77.802 | 27.856 | 2.936 | 0.000 | 0.000 |
| -37.5 | 67.389 | 23.743 | 2.556 | 0.000 | 0.000 |
| -42.5 | 55.337 | 19.526 | 1.983 | 0.000 | 0.000 |
| -47.5 | 42.324 | 15.392 | 1.212 | 0.000 | 0.000 |
| -55.0 | 26.579 | 9.539 | 0.581 | 0.000 | 0.000 |
| -65.0 | 11.396 | 2.838 | 0.053 | 0.000 | 0.000 |
| -75.0 | 2.040 | 0.150 | 0.000 | 0.000 | 0.000 |
| -85.0 | 0.005 | 0.000 | 0.000 | 0.000 | 0.000 |
| -90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-02L-40.IES

LUMEN TABULATION

Average Of Right And Left Sides

Total Luminaire Lumens (one side of beam only) = 991.48

Total Field Lumens (one side of beam only) = 885.88

* Indicates Values Inside Field Edge

| Vert. Angles | Horizontal Angles | | | | | | | | | |
|-----------------|-------------------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|
| | <u>0</u> | <u>1</u> | <u>3</u> | <u>5</u> | <u>7</u> | <u>9</u> | <u>11</u> | <u>13</u> | <u>15</u> | <u>17</u> |
| 90 | | | | | | | | | | |
| 85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 75 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 55 | 0.06 | 0.12 | 0.12 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.15 |
| 47.5 | 0.18 | 0.36 | 0.37 | 0.37 | 0.37 | 0.36 | 0.35 | 0.34 | 0.33 | 0.40 |
| 42.5 | 0.23 | 0.47 | 0.47 | 0.47 | 0.46 | 0.45 | 0.44 | 0.43 | 0.41 | 0.49 |
| 37.5 | 0.37 * | 0.77 * | 0.78 * | 0.79 * | 0.78 * | 0.76 * | 0.73 * | 0.69 | 0.65 | 0.79 |
| 33 | 0.62 * | 1.25 * | 1.26 * | 1.25 * | 1.23 * | 1.20 * | 1.15 * | 1.08 * | 1.00 * | 1.16 * |
| 29 | 0.86 * | 1.72 * | 1.71 * | 1.68 * | 1.64 * | 1.59 * | 1.52 * | 1.44 * | 1.34 * | 1.52 * |
| 25.5 | 0.97 * | 1.94 * | 1.93 * | 1.90 * | 1.85 * | 1.78 * | 1.70 * | 1.61 * | 1.50 * | 1.72 * |
| 22.5 | 1.00 * | 2.01 * | 2.00 * | 1.96 * | 1.91 * | 1.84 * | 1.75 * | 1.65 * | 1.54 * | 1.76 * |
| 19.5 | 1.18 * | 2.36 * | 2.35 * | 2.31 * | 2.24 * | 2.15 * | 2.04 * | 1.92 * | 1.78 * | 2.04 * |
| 17 | 1.13 * | 2.27 * | 2.25 * | 2.21 * | 2.14 * | 2.04 * | 1.93 * | 1.81 * | 1.68 * | 1.91 * |
| 15 | 1.01 * | 2.02 * | 2.01 * | 1.97 * | 1.90 * | 1.81 * | 1.70 * | 1.59 * | 1.47 * | 1.67 * |
| 13 | 1.10 * | 2.21 * | 2.19 * | 2.15 * | 2.07 * | 1.97 * | 1.85 * | 1.72 * | 1.59 * | 1.80 * |
| 11 | 1.19 * | 2.39 * | 2.37 * | 2.32 * | 2.23 * | 2.12 * | 1.99 * | 1.85 * | 1.71 * | 1.93 * |
| 9 | 1.27 * | 2.55 * | 2.53 * | 2.47 * | 2.38 * | 2.27 * | 2.13 * | 1.98 * | 1.82 * | 2.04 * |
| 7 | 1.34 * | 2.68 * | 2.66 * | 2.60 * | 2.51 * | 2.39 * | 2.25 * | 2.09 * | 1.92 * | 2.15 * |
| 5 | 1.39 * | 2.78 * | 2.75 * | 2.69 * | 2.61 * | 2.49 * | 2.35 * | 2.18 * | 2.00 * | 2.24 * |
| 3 | 1.43 * | 2.85 * | 2.82 * | 2.77 * | 2.68 * | 2.56 * | 2.42 * | 2.25 * | 2.07 * | 2.32 * |
| 1 | 1.45 * | 2.89 * | 2.86 * | 2.81 * | 2.73 * | 2.61 * | 2.47 * | 2.30 * | 2.12 * | 2.37 * |
| 0 | 0.73 * | 1.45 * | 1.44 * | 1.42 * | 1.38 * | 1.32 * | 1.25 * | 1.16 * | 1.07 * | 1.20 * |
| -1 | 0.73 * | 1.46 * | 1.45 * | 1.42 * | 1.38 * | 1.32 * | 1.25 * | 1.17 * | 1.07 * | 1.20 * |
| | 1.46 * | 2.91 * | 2.89 * | 2.84 * | 2.76 * | 2.64 * | 2.50 * | 2.33 * | 2.14 * | 2.40 * |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-02L-40.IES

LUMENS TABULATION - (Cont.)

| | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| -3 | 1.45 * | 2.89 * | 2.87 * | 2.82 * | 2.73 * | 2.62 * | 2.47 * | 2.30 * | 2.12 * | 2.37 * |
| -5 | 1.44 * | 2.86 * | 2.83 * | 2.77 * | 2.69 * | 2.57 * | 2.43 * | 2.26 * | 2.07 * | 2.32 * |
| -7 | 1.41 * | 2.80 * | 2.76 * | 2.70 * | 2.62 * | 2.50 * | 2.35 * | 2.19 * | 2.01 * | 2.25 * |
| -9 | 1.37 * | 2.72 * | 2.67 * | 2.61 * | 2.52 * | 2.40 * | 2.26 * | 2.09 * | 1.92 * | 2.16 * |
| -11 | 1.32 * | 2.61 * | 2.55 * | 2.48 * | 2.39 * | 2.28 * | 2.14 * | 1.98 * | 1.82 * | 2.05 * |
| -13 | 1.25 * | 2.47 * | 2.41 * | 2.34 * | 2.25 * | 2.13 * | 2.00 * | 1.86 * | 1.71 * | 1.93 * |
| -15 | 1.17 * | 2.30 * | 2.25 * | 2.18 * | 2.09 * | 1.98 * | 1.86 * | 1.73 * | 1.60 * | 1.81 * |
| -17 | 1.33 * | 2.63 * | 2.57 * | 2.48 * | 2.38 * | 2.26 * | 2.13 * | 1.98 * | 1.83 * | 2.08 * |
| -19.5 | 1.41 * | 2.78 * | 2.72 * | 2.63 * | 2.52 * | 2.39 * | 2.26 * | 2.11 * | 1.96 * | 2.23 * |
| -22.5 | 1.21 * | 2.39 * | 2.34 * | 2.26 * | 2.17 * | 2.07 * | 1.96 * | 1.84 * | 1.71 * | 1.95 * |
| -25.5 | 1.18 * | 2.34 * | 2.29 * | 2.22 * | 2.14 * | 2.04 * | 1.93 * | 1.81 * | 1.69 * | 1.93 * |
| -29 | 1.08 * | 2.15 * | 2.10 * | 2.04 * | 1.97 * | 1.88 * | 1.78 * | 1.67 * | 1.56 * | 1.78 * |
| -33 | 0.92 * | 1.82 * | 1.79 * | 1.74 * | 1.67 * | 1.59 * | 1.51 * | 1.42 * | 1.32 * | 1.52 * |
| -37.5 | 0.71 * | 1.41 * | 1.38 * | 1.34 * | 1.30 * | 1.24 * | 1.18 * | 1.10 * | 1.03 * | 1.19 * |
| -42.5 | 0.46 * | 0.92 * | 0.90 * | 0.88 * | 0.85 * | 0.82 * | 0.79 * | 0.75 * | 0.70 * | 0.82 |
| -47.5 | 0.42 | 0.84 | 0.83 | 0.82 | 0.80 | 0.78 | 0.75 | 0.72 | 0.69 | 0.81 |
| -55 | 0.29 | 0.57 | 0.57 | 0.56 | 0.55 | 0.54 | 0.52 | 0.50 | 0.49 | 0.58 |
| -65 | 0.11 | 0.21 | 0.21 | 0.21 | 0.21 | 0.20 | 0.20 | 0.19 | 0.18 | 0.22 |
| -75 | 0.03 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.04 | 0.04 | 0.05 |
| -85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 38.25 | 76.24 | 75.30 | 73.64 | 71.24 | 68.15 | 64.45 | 60.28 | 55.81 | 63.30 |

| Vert. Angles | Horizontal Angles | | | | | | | | | |
|---------------------|--------------------------|-------------|-------------|-----------|-----------|-------------|-------------|-------------|-----------|-----------|
| | 19.5 | 22.5 | 25.5 | 29 | 33 | 37.5 | 42.5 | 47.5 | 55 | 65 |
| 90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 75 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65 | 0.17 | 0.17 | 0.18 | 0.19 | 0.16 | 0.12 | 0.08 | 0.06 | 0.02 | 0.00 |
| 55 | 0.45 | 0.42 | 0.44 | 0.44 | 0.40 | 0.34 | 0.22 | 0.17 | 0.06 | 0.00 |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-02L-40.IES

LUMENS TABULATION - (Cont.)

| | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|--------|------|------|------|
| 47.5 | | | | | | | | | | |
| | 0.56 | 0.51 | 0.52 | 0.50 | 0.47 | 0.41 | 0.29 | 0.23 | 0.09 | 0.01 |
| 42.5 | 0.88 | 0.80 | 0.81 | 0.75 | 0.67 | 0.57 | 0.42 | 0.36 | 0.16 | 0.02 |
| 37.5 | 1.25 * | 1.11 * | 1.12 * | 1.03 | 0.86 | 0.70 | 0.50 | 0.44 | 0.21 | 0.03 |
| 33 | 1.61 * | 1.39 * | 1.38 * | 1.25 * | 1.03 | 0.80 | 0.55 | 0.49 | 0.24 | 0.04 |
| 29 | 1.82 * | 1.56 * | 1.52 * | 1.36 * | 1.12 * | 0.86 | 0.58 | 0.50 | 0.24 | 0.04 |
| 25.5 | 1.87 * | 1.60 * | 1.55 * | 1.38 * | 1.13 * | 0.86 * | 0.57 | 0.48 | 0.24 | 0.04 |
| 22.5 | 2.16 * | 1.85 * | 1.78 * | 1.58 * | 1.29 * | 0.97 * | 0.63 | 0.53 | 0.26 | 0.05 |
| 19.5 | 2.02 * | 1.73 * | 1.66 * | 1.47 * | 1.19 * | 0.88 * | 0.57 | 0.47 | 0.23 | 0.04 |
| 17 | 1.77 * | 1.51 * | 1.44 * | 1.28 * | 1.03 * | 0.76 * | 0.48 | 0.40 | 0.20 | 0.04 |
| 15 | 1.89 * | 1.61 * | 1.54 * | 1.36 * | 1.09 * | 0.80 * | 0.50 | 0.42 | 0.21 | 0.04 |
| 13 | 2.01 * | 1.71 * | 1.63 * | 1.44 * | 1.15 * | 0.84 * | 0.52 * | 0.43 | 0.21 | 0.04 |
| 11 | 2.13 * | 1.80 * | 1.72 * | 1.51 * | 1.21 * | 0.88 * | 0.54 * | 0.44 | 0.22 | 0.04 |
| 9 | 2.23 * | 1.88 * | 1.79 * | 1.57 * | 1.26 * | 0.91 * | 0.56 * | 0.45 | 0.23 | 0.04 |
| 7 | 2.32 * | 1.95 * | 1.85 * | 1.63 * | 1.30 * | 0.93 * | 0.57 * | 0.46 | 0.23 | 0.05 |
| 5 | 2.39 * | 2.01 * | 1.90 * | 1.67 * | 1.33 * | 0.95 * | 0.58 * | 0.47 | 0.24 | 0.05 |
| 3 | 2.45 * | 2.05 * | 1.94 * | 1.70 * | 1.35 * | 0.97 * | 0.59 * | 0.47 | 0.24 | 0.05 |
| 1 | 1.24 * | 1.03 * | 0.98 * | 0.86 * | 0.68 * | 0.49 * | 0.29 * | 0.24 | 0.12 | 0.02 |
| 0 | 1.24 * | 1.04 * | 0.98 * | 0.86 * | 0.68 * | 0.49 * | 0.29 * | 0.24 | 0.12 | 0.02 |
| -1 | 2.47 * | 2.06 * | 1.95 * | 1.71 * | 1.36 * | 0.97 * | 0.59 * | 0.48 | 0.24 | 0.05 |
| -3 | 2.45 * | 2.04 * | 1.93 * | 1.69 * | 1.35 * | 0.96 * | 0.58 * | 0.47 | 0.24 | 0.05 |
| -5 | 2.40 * | 2.00 * | 1.90 * | 1.66 * | 1.32 * | 0.95 * | 0.58 * | 0.47 | 0.24 | 0.05 |
| -7 | 2.33 * | 1.95 * | 1.84 * | 1.62 * | 1.29 * | 0.93 * | 0.57 * | 0.46 | 0.24 | 0.05 |
| -9 | 2.23 * | 1.87 * | 1.78 * | 1.56 * | 1.25 * | 0.90 * | 0.55 * | 0.46 | 0.24 | 0.05 |
| -11 | 2.13 * | 1.79 * | 1.71 * | 1.50 * | 1.20 * | 0.87 * | 0.54 * | 0.45 | 0.24 | 0.05 |
| -13 | 2.01 * | 1.70 * | 1.63 * | 1.43 * | 1.15 * | 0.83 * | 0.52 * | 0.44 | 0.23 | 0.05 |
| -15 | 1.89 * | 1.60 * | 1.53 * | 1.35 * | 1.09 * | 0.79 * | 0.50 | 0.42 | 0.23 | 0.05 |
| -17 | 2.18 * | 1.86 * | 1.78 * | 1.57 * | 1.26 * | 0.93 * | 0.59 | 0.51 | 0.28 | 0.06 |
| -19.5 | 2.35 * | 2.01 * | 1.93 * | 1.70 * | 1.38 * | 1.02 * | 0.66 | 0.58 | 0.32 | 0.07 |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-02L-40.IES

LUMENS TABULATION - (Cont.)

| | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|-------|-------|------|------|
| -22.5 | 2.06 * | 1.76 * | 1.69 * | 1.50 * | 1.22 * | 0.92 * | 0.61 | 0.55 | 0.30 | 0.06 |
| -25.5 | 2.04 * | 1.74 * | 1.68 * | 1.50 * | 1.24 * | 0.96 | 0.65 | 0.59 | 0.33 | 0.07 |
| -29 | 1.88 * | 1.61 * | 1.56 * | 1.41 * | 1.19 * | 0.95 | 0.66 | 0.61 | 0.34 | 0.07 |
| -33 | 1.61 * | 1.39 * | 1.36 * | 1.25 * | 1.09 | 0.90 | 0.64 | 0.61 | 0.34 | 0.07 |
| -37.5 | 1.28 * | 1.13 * | 1.13 | 1.07 | 0.97 | 0.82 | 0.60 | 0.57 | 0.32 | 0.06 |
| -42.5 | 0.90 | 0.81 | 0.83 | 0.81 | 0.76 | 0.66 | 0.49 | 0.46 | 0.25 | 0.05 |
| -47.5 | 0.91 | 0.83 | 0.87 | 0.87 | 0.82 | 0.73 | 0.54 | 0.49 | 0.27 | 0.05 |
| -55 | 0.65 | 0.61 | 0.64 | 0.65 | 0.62 | 0.55 | 0.40 | 0.37 | 0.19 | 0.03 |
| -65 | 0.25 | 0.23 | 0.24 | 0.25 | 0.23 | 0.21 | 0.15 | 0.13 | 0.06 | 0.01 |
| -75 | 0.06 | 0.05 | 0.06 | 0.06 | 0.05 | 0.04 | 0.03 | 0.02 | 0.01 | 0.00 |
| -85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 66.57 | 56.78 | 54.81 | 48.99 | 40.24 | 30.41 | 19.76 | 16.90 | 8.64 | 1.64 |

| Vert. Angles | Horizontal Angles | | | |
|-----------------|-------------------|-----------|-----------|--------------|
| | <u>75</u> | <u>85</u> | <u>90</u> | <u>Total</u> |
| 90 | 0.00 | 0.00 | 0.00 | |
| 85 | 0.00 | 0.00 | 0.00 | |
| 75 | 0.00 | 0.00 | 0.10 | |
| 65 | 0.00 | 0.00 | 2.38 | |
| 55 | 0.00 | 0.00 | 6.39 | |
| 47.5 | 0.00 | 0.00 | 7.91 | |
| 42.5 | 0.00 | 0.00 | 12.55 | |
| 37.5 | 0.00 | 0.00 | 18.42 | |
| 33 | 0.00 | 0.00 | 23.78 | |
| 29 | 0.00 | 0.00 | 26.52 | |
| 25.5 | 0.00 | 0.00 | 27.13 | |
| 22.5 | 0.00 | 0.00 | 31.45 | |
| 19.5 | 0.00 | 0.00 | 29.66 | |
| 17 | 0.00 | 0.00 | 26.06 | |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-02L-40.IES

LUMENS TABULATION - (Cont.)

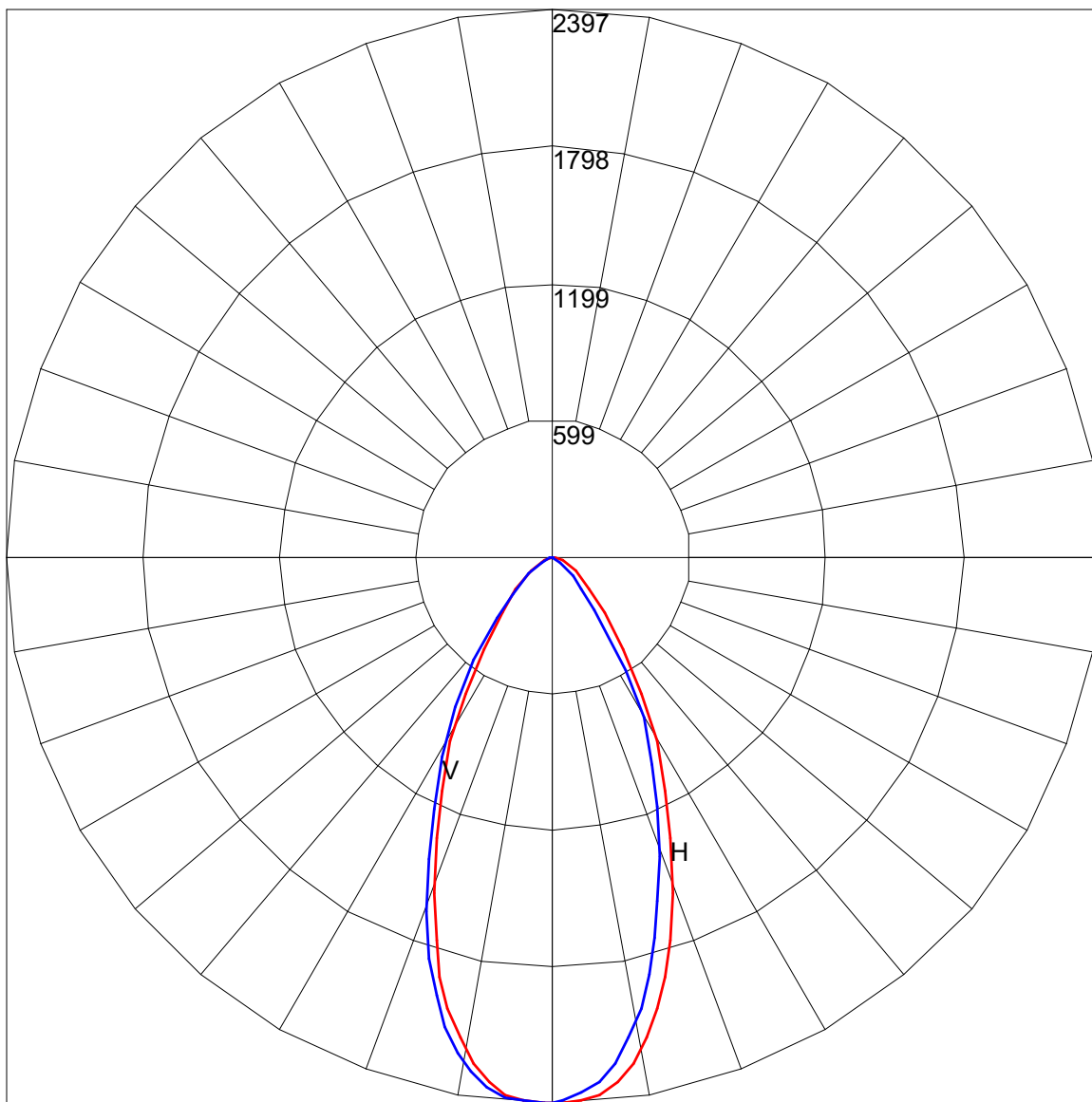
| | | | |
|--------------|------|------|-------|
| 15 | 0.00 | 0.00 | 28.12 |
| 13 | 0.00 | 0.00 | 30.10 |
| 11 | 0.00 | 0.00 | 31.91 |
| 9 | 0.00 | 0.00 | 33.49 |
| 7 | 0.00 | 0.00 | 34.77 |
| 5 | 0.00 | 0.00 | 35.74 |
| 3 | 0.00 | 0.00 | 36.41 |
| 1 | 0.00 | 0.00 | 18.37 |
| 0 | 0.00 | 0.00 | 18.41 |
| -1 | 0.00 | 0.00 | 36.74 |
| -3 | 0.00 | 0.00 | 36.42 |
| -5 | 0.00 | 0.00 | 35.80 |
| -7 | 0.00 | 0.00 | 34.87 |
| -9 | 0.00 | 0.00 | 33.62 |
| -11 | 0.00 | 0.00 | 32.09 |
| -13 | 0.00 | 0.00 | 30.34 |
| -15 | 0.00 | 0.00 | 28.42 |
| -17 | 0.00 | 0.00 | 32.68 |
| -19.5 | 0.00 | 0.00 | 35.02 |
| -22.5 | 0.00 | 0.00 | 30.56 |
| -25.5 | 0.00 | 0.00 | 30.36 |
| -29 | 0.00 | 0.00 | 28.27 |
| -33 | 0.00 | 0.00 | 24.56 |
| -37.5 | 0.00 | 0.00 | 19.85 |
| -42.5 | 0.00 | 0.00 | 13.93 |
| -47.5 | 0.00 | 0.00 | 13.86 |
| -55 | 0.00 | 0.00 | 9.87 |
| -65 | 0.00 | 0.00 | 3.70 |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-02L-40.IES

LUMENS TABULATION - (Cont.)

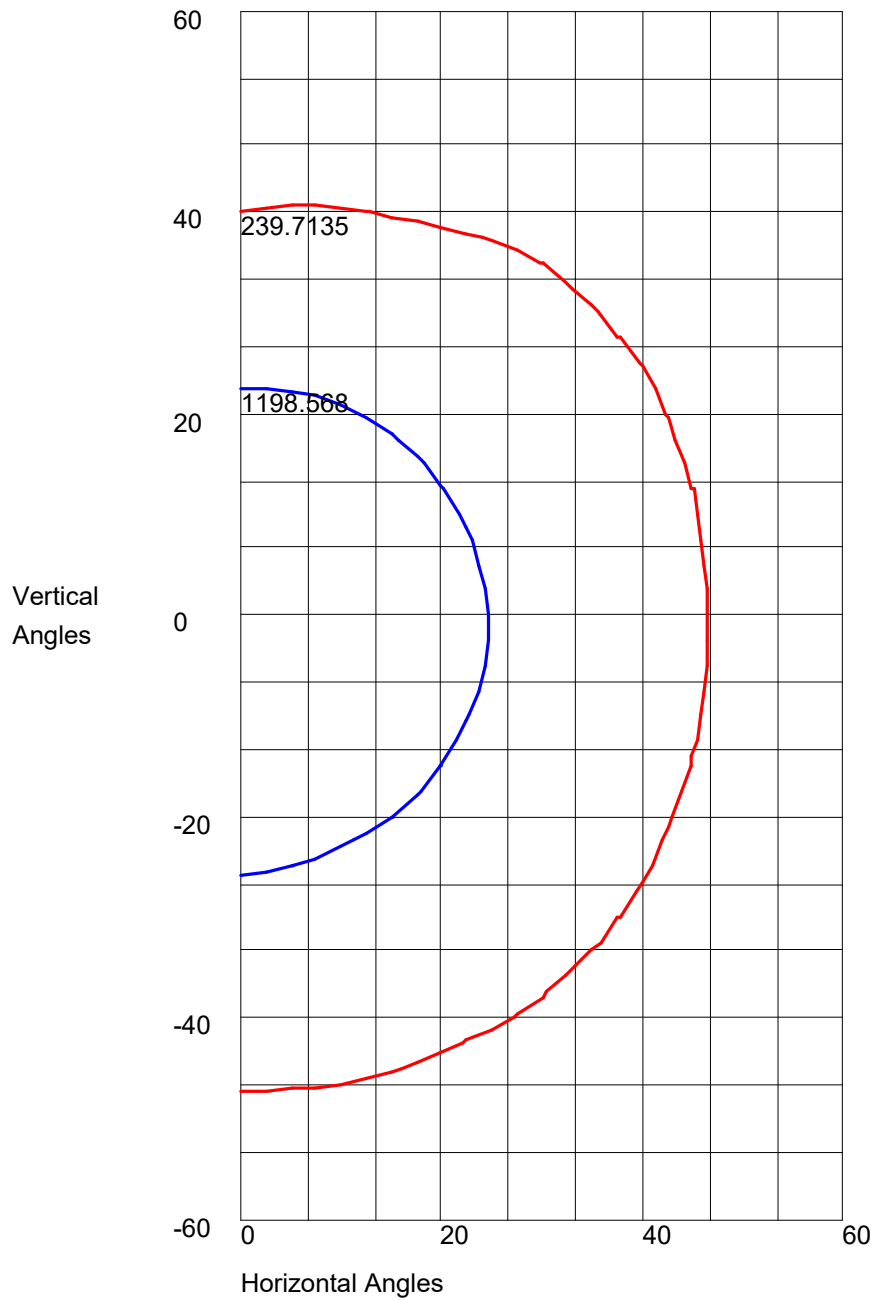
| | | | |
|--------------|------|------|--------|
| -75 | 0.00 | 0.00 | 0.85 |
| -85 | 0.00 | 0.00 | 0.01 |
| -90 | | | |
| Total | 0.07 | 0.00 | 991.48 |

AXIAL CANDELA DISPLAY



Maximum Candela = 2397.135 Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 2397.135 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 1198.5675
10% Maximum Candela = 239.7135