



IES FLOOD REPORT

PHOTOMETRIC FILENAME : TSFL-LED-01L-W-50.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] 3525

[TESTLAB] TUV SUD America

[TESTDATE] 9/18/2018 11:33:10 AM

[ISSUEDATE] 01/07/2019

[MANUFAC] LSI INDUSTRIES, INC

[LUMCAT] TSFL-LED-01L-W-50

[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 | 7 H x 7 V |
| Maximum Candela | 709.182 |
| Maximum Candela Angle | 0H 0V |
| Horizontal Beam Angle (50%) | 105.6 |
| Vertical Beam Angle (50%) | 99.0 |
| Horizontal Field Angle (10%) | 141.2 |
| Vertical Field Angle (10%) | 132.7 |
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Beam Lumens | 1352 |
| Beam Efficiency | N.A. |
| Field Lumens | 1660 |
| Field Efficiency | N.A. |
| Spill Lumens | 26 |
| Luminaire Lumens | 1687 |
| Total Efficiency | N.A. |
| Total Luminaire Watts | 13.91 |
| Ballast Factor | 1.00 |

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AXIAL CANDELA

| DEG. | HOR. | DEG. | VERT. |
|-------|---------|-------|---------|
| 90 | 0 | 90 | 0 |
| 85 | 0 | 85 | 0 |
| 75 | 13.89 | 75 | 0 |
| 65 | 143.288 | 65 | 5.276 |
| 55 | 318.245 | 55 | 145.957 |
| 47.5 | 441.71 | 47.5 | 314.053 |
| 42.5 | 509.407 | 42.5 | 424.024 |
| 37.5 | 556.155 | 37.5 | 486.57 |
| 33 | 590.132 | 33 | 588.184 |
| 29 | 617.299 | 29 | 616.387 |
| 25.5 | 638.438 | 25.5 | 637.768 |
| 22.5 | 654.092 | 22.5 | 653.404 |
| 19.5 | 667.94 | 19.5 | 666.144 |
| 17 | 677.686 | 17 | 675.598 |
| 15 | 684.135 | 15 | 682.08 |
| 13 | 689.966 | 13 | 688.387 |
| 11 | 695.053 | 11 | 693.83 |
| 9 | 699.165 | 9 | 697.88 |
| 7 | 702.333 | 7 | 700.802 |
| 5 | 704.844 | 5 | 703.655 |
| 3 | 707.497 | 3 | 705.491 |
| 1 | 708.773 | 1 | 707.889 |
| 0 | 709.182 | 0 | 709.182 |
| -1 | 708.773 | -1 | 708.306 |
| -3 | 707.497 | -3 | 706.54 |
| -5 | 704.844 | -5 | 704.73 |
| -7 | 702.333 | -7 | 702.294 |
| -9 | 699.165 | -9 | 699.126 |
| -11 | 695.053 | -11 | 694.926 |
| -13 | 689.966 | -13 | 689.743 |
| -15 | 684.135 | -15 | 683.978 |
| -17 | 677.686 | -17 | 676.912 |
| -19.5 | 667.94 | -19.5 | 666.253 |
| -22.5 | 654.092 | -22.5 | 651.975 |
| -25.5 | 638.438 | -25.5 | 635.879 |
| -29 | 617.299 | -29 | 614.919 |
| -33 | 590.132 | -33 | 589.784 |
| -37.5 | 556.155 | -37.5 | 556.791 |
| -42.5 | 509.407 | -42.5 | 512.754 |
| -47.5 | 441.71 | -47.5 | 462.419 |
| -55 | 318.245 | -55 | 323.261 |
| -65 | 143.288 | -65 | 170.108 |
| -75 | 13.89 | -75 | 35.976 |
| -85 | 0 | -85 | 2.033 |
| -90 | 0 | -90 | .337 |

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CANDELA TABULATION

Maximum Candela = 709.182

Beam Edge = 354.591 Cd (50% of Max.)

Field Edge = 70.9182 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 | 0.002 | 0.004 | 0.000 | 0.000 | 0.002 | 0.016 |
| 65.0 | 0.000 | 0.000 | 0.000 | 0.076 | 1.064 | 2.745 | 4.113 | 7.042 | 10.759 | 12.264 |
| 55.0 | 0.000 | 0.000 | 0.152 | 2.388 | 19.338 | 49.309 | 72.894 * | 88.919 * | 111.517 * | 129.342 * |
| 47.5 | 0.000 | 0.000 | 0.465 | 10.549 | 65.136 | 121.156 * | 166.805 * | 200.542 * | 241.763 * | 263.326 * |
| 42.5 | 0.000 | 0.000 | 1.279 | 21.744 | 106.381 * | 184.355 * | 232.135 * | 286.405 * | 323.353 * | 356.145 * |
| 37.5 | 0.000 | 0.000 | 2.115 | 37.441 | 146.872 * | 242.814 * | 301.713 * | 357.654 * | 410.497 * | 446.611 * |
| 33.0 | 0.000 | 0.000 | 2.945 | 54.736 | 184.905 * | 290.443 * | 353.953 * | 417.579 * | 472.101 * | 510.526 * |
| 29.0 | 0.000 | 0.000 | 4.662 | 70.554 | 215.659 * | 329.058 * | 397.024 * | 459.805 * | 509.736 * | 539.214 * |
| 25.5 | 0.000 | 0.000 | 6.130 | 84.403 * | 238.777 * | 358.835 * | 426.982 * | 488.400 * | 530.957 * | 557.499 * |
| 22.5 | 0.000 | 0.000 | 7.349 | 94.516 * | 256.360 * | 377.598 * | 448.249 * | 508.036 * | 545.786 * | 571.742 * |
| 19.5 | 0.000 | 0.000 | 8.517 | 104.845 * | 271.444 * | 394.314 * | 464.028 * | 522.153 * | 558.473 * | 584.039 * |
| 17.0 | 0.000 | 0.000 | 9.443 | 112.588 * | 281.896 * | 406.197 * | 475.615 * | 531.585 * | 567.095 * | 592.699 * |
| 15.0 | 0.000 | 0.000 | 10.146 | 118.203 * | 289.341 * | 414.075 * | 483.495 * | 538.147 * | 572.874 * | 598.814 * |
| 13.0 | 0.000 | 0.000 | 10.811 | 123.295 * | 295.957 * | 420.985 * | 490.252 * | 543.029 * | 577.702 * | 604.036 * |
| 11.0 | 0.000 | 0.000 | 11.434 | 127.857 * | 301.733 * | 426.913 * | 496.000 * | 547.178 * | 581.649 * | 608.323 * |
| 9.0 | 0.000 | 0.000 | 12.009 | 131.885 * | 306.661 * | 431.848 * | 500.729 * | 550.573 * | 584.826 * | 611.867 * |
| 7.0 | 0.000 | 0.000 | 12.533 | 135.372 * | 310.734 * | 435.784 * | 504.433 * | 553.195 * | 587.305 * | 614.446 * |
| 5.0 | 0.000 | 0.000 | 13.217 | 138.317 * | 313.951 * | 438.719 * | 507.114 * | 555.032 * | 589.058 * | 616.167 * |
| 3.0 | 0.000 | 0.000 | 13.486 | 141.332 * | 317.267 * | 441.757 * | 509.883 * | 556.076 * | 590.062 * | 617.188 * |
| 1.0 | 0.000 | 0.000 | 13.755 | 142.636 * | 317.919 * | 441.726 * | 509.566 * | 556.425 * | 590.302 * | 617.459 * |
| 0.0 | 0.000 | 0.000 | 13.890 | 143.288 * | 318.245 * | 441.710 * | 509.407 * | 556.155 * | 590.132 * | 617.299 * |
| -1.0 | 0.000 | 0.000 | 14.167 | 144.079 * | 319.107 * | 442.300 * | 509.464 * | 556.097 * | 590.031 * | 617.193 * |
| -3.0 | 0.000 | 0.002 | 14.720 | 145.659 * | 320.828 * | 443.479 * | 509.578 * | 555.102 * | 589.245 * | 616.378 * |
| -5.0 | 0.000 | 0.003 | 15.273 | 145.539 * | 319.921 * | 441.730 * | 506.833 * | 553.436 * | 587.677 * | 614.777 * |
| -7.0 | 0.000 | 0.004 | 15.337 | 145.490 * | 319.132 * | 440.182 * | 504.341 * | 551.017 * | 585.334 * | 612.418 * |
| -9.0 | 0.000 | 0.005 | 15.549 | 144.905 * | 317.526 * | 437.812 * | 501.119 * | 547.867 * | 582.227 * | 609.210 * |
| -11.0 | 0.000 | 0.007 | 15.660 | 143.789 * | 315.114 * | 434.668 * | 497.239 * | 544.013 * | 578.376 * | 605.125 * |
| -13.0 | 0.000 | 0.007 | 15.666 | 142.147 * | 311.913 * | 430.799 * | 492.770 * | 539.484 * | 573.693 * | 600.323 * |
| -15.0 | 0.000 | 0.008 | 15.560 | 139.987 * | 307.939 * | 426.251 * | 487.781 * | 534.312 * | 568.038 * | 594.583 * |
| -17.0 | 0.000 | 0.009 | 15.339 | 137.317 * | 303.212 * | 421.072 * | 482.024 * | 527.912 * | 561.648 * | 587.782 * |
| -19.5 | 0.000 | 0.010 | 14.893 | 133.274 * | 296.274 * | 412.661 * | 473.113 * | 519.019 * | 552.700 * | 578.384 * |
| -22.5 | 0.000 | 0.011 | 14.099 | 127.413 * | 286.630 * | 400.365 * | 461.367 * | 506.898 * | 540.200 * | 565.563 * |
| -25.5 | 0.000 | 0.012 | 13.014 | 121.734 * | 275.694 * | 386.594 * | 446.904 * | 492.988 * | 525.925 * | 551.237 * |
| -29.0 | 0.000 | 0.013 | 11.367 | 112.101 * | 261.380 * | 367.225 * | 428.426 * | 473.804 * | 507.164 * | 532.777 * |
| -33.0 | 0.000 | 0.013 | 8.972 | 100.764 * | 242.123 * | 342.935 * | 402.565 * | 448.898 * | 482.434 * | 507.015 * |
| -37.5 | 0.000 | 0.012 | 7.561 | 86.372 * | 216.558 * | 313.782 * | 370.853 * | 417.708 * | 450.487 * | 474.383 * |
| -42.5 | 0.000 | 0.011 | 5.625 | 68.589 | 181.997 * | 269.516 * | 330.243 * | 379.214 * | 411.254 * | 433.294 * |
| -47.5 | 0.000 | 0.009 | 3.186 | 51.237 | 147.629 * | 217.604 * | 274.164 * | 333.528 * | 357.407 * | 375.451 * |
| -55.0 | 0.000 | 0.004 | 1.686 | 27.830 | 91.791 * | 149.796 * | 183.500 * | 215.474 * | 248.702 * | 272.753 * |
| -65.0 | 0.000 | 0.000 | 0.386 | 6.537 | 30.223 | 58.608 | 78.612 * | 93.542 * | 110.643 * | 126.588 * |
| -75.0 | 0.000 | 0.000 | 0.054 | 0.695 | 3.408 | 6.792 | 11.513 | 14.602 | 16.562 | 20.110 |
| -85.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.062 | 0.207 | 0.385 | 0.629 | 0.849 | 1.043 |
| -90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.024 | 0.073 | 0.118 | 0.157 |

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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 | 0.014 | 0.004 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 65.0 | 11.429 | 10.385 | 9.621 | 10.372 | 10.606 | 10.547 | 10.227 | 9.677 | 8.931 | 8.023 |
| 55.0 | 141.348 * | 150.857 * | 158.707 * | 162.110 * | 163.681 * | 164.303 * | 163.981 * | 162.725 * | 160.550 * | 157.470 * |
| 47.5 | 276.922 * | 289.730 * | 298.504 * | 302.334 * | 305.700 * | 309.074 * | 312.261 * | 314.995 * | 316.997 * | 317.979 * |
| 42.5 | 374.942 * | 387.358 * | 397.754 * | 404.277 * | 405.170 * | 406.948 * | 410.006 * | 413.808 * | 417.781 * | 421.314 * |
| 37.5 | 465.145 * | 472.253 * | 480.537 * | 490.318 * | 499.184 * | 507.157 * | 511.515 * | 512.725 * | 511.025 * | 506.698 * |
| 33.0 | 522.434 * | 535.426 * | 553.914 * | 565.057 * | 571.869 * | 578.201 * | 582.062 * | 584.792 * | 586.885 * | 588.270 * |
| 29.0 | 557.270 * | 571.486 * | 584.479 * | 593.586 * | 600.092 * | 605.505 * | 610.148 * | 613.209 * | 615.361 * | 616.640 * |
| 25.5 | 577.080 * | 591.893 * | 604.539 * | 613.668 * | 620.129 * | 625.910 * | 631.101 * | 634.657 * | 636.820 * | 638.158 * |
| 22.5 | 591.517 * | 606.380 * | 619.130 * | 628.545 * | 635.279 * | 641.330 * | 646.753 * | 651.076 * | 653.109 * | 654.293 * |
| 19.5 | 603.899 * | 618.775 * | 631.884 * | 641.580 * | 648.355 * | 654.264 * | 659.698 * | 664.124 * | 666.962 * | 667.869 * |
| 17.0 | 612.884 * | 627.614 * | 640.987 * | 650.429 * | 657.267 * | 663.315 * | 668.854 * | 673.292 * | 676.917 * | 677.814 * |
| 15.0 | 618.930 * | 633.771 * | 647.201 * | 656.746 * | 663.467 * | 669.903 * | 675.302 * | 679.954 * | 683.233 * | 684.671 * |
| 13.0 | 624.066 * | 639.173 * | 652.467 * | 662.172 * | 669.342 * | 675.658 * | 681.006 * | 685.161 * | 688.662 * | 690.736 * |
| 11.0 | 628.473 * | 643.851 * | 657.176 * | 667.109 * | 674.168 * | 680.453 * | 685.459 * | 689.655 * | 693.036 * | 695.417 * |
| 9.0 | 631.969 * | 647.425 * | 660.976 * | 670.971 * | 678.281 * | 684.092 * | 689.150 * | 693.571 * | 696.576 * | 698.892 * |
| 7.0 | 634.751 * | 650.291 * | 664.004 * | 674.032 * | 681.027 * | 687.093 * | 692.080 * | 696.155 * | 699.506 * | 701.413 * |
| 5.0 | 636.798 * | 652.403 * | 666.273 * | 676.299 * | 683.039 * | 688.985 * | 694.064 * | 698.155 * | 700.957 * | 703.271 * |
| 3.0 | 638.066 * | 653.711 * | 667.569 * | 677.521 * | 684.147 * | 689.976 * | 695.015 * | 699.098 * | 701.911 * | 704.434 * |
| 1.0 | 638.522 * | 654.287 * | 668.017 * | 677.822 * | 684.465 * | 690.182 * | 695.241 * | 699.295 * | 702.382 * | 705.132 * |
| 0.0 | 638.438 * | 654.092 * | 667.940 * | 677.686 * | 684.135 * | 689.966 * | 695.053 * | 699.165 * | 702.333 * | 704.844 * |
| -1.0 | 638.393 * | 654.109 * | 667.720 * | 677.414 * | 684.152 * | 689.892 * | 694.912 * | 698.966 * | 702.155 * | 704.980 * |
| -3.0 | 637.657 * | 653.194 * | 666.705 * | 676.263 * | 683.155 * | 689.085 * | 694.053 * | 698.033 * | 701.169 * | 703.859 * |
| -5.0 | 636.041 * | 651.593 * | 664.922 * | 674.206 * | 681.239 * | 687.442 * | 692.621 * | 696.684 * | 699.815 * | 702.290 * |
| -7.0 | 633.538 * | 649.258 * | 662.257 * | 671.374 * | 678.341 * | 685.026 * | 690.344 * | 694.575 * | 698.075 * | 699.734 * |
| -9.0 | 630.157 * | 646.260 * | 658.891 * | 668.093 * | 674.811 * | 681.264 * | 686.815 * | 691.673 * | 694.463 * | 696.573 * |
| -11.0 | 625.909 * | 642.240 * | 654.544 * | 663.966 * | 670.491 * | 676.680 * | 682.256 * | 686.607 * | 689.952 * | 692.111 * |
| -13.0 | 620.558 * | 636.259 * | 649.128 * | 658.415 * | 665.407 * | 671.311 * | 676.451 * | 680.773 * | 684.303 * | 686.605 * |
| -15.0 | 614.574 * | 629.612 * | 642.971 * | 652.159 * | 658.769 * | 665.001 * | 669.823 * | 674.021 * | 677.285 * | 680.223 * |
| -17.0 | 607.860 * | 622.452 * | 635.640 * | 644.741 * | 651.538 * | 657.406 * | 662.608 * | 666.509 * | 669.622 * | 672.840 * |
| -19.5 | 598.045 * | 612.876 * | 625.232 * | 634.736 * | 641.414 * | 647.167 * | 652.264 * | 656.237 * | 659.618 * | 662.590 * |
| -22.5 | 584.778 * | 599.367 * | 612.202 * | 621.156 * | 627.630 * | 633.346 * | 638.284 * | 642.221 * | 645.847 * | 648.671 * |
| -25.5 | 570.051 * | 584.090 * | 596.747 * | 606.223 * | 612.506 * | 617.928 * | 622.756 * | 626.735 * | 630.080 * | 632.719 * |
| -29.0 | 550.820 * | 564.410 * | 576.377 * | 585.184 * | 591.552 * | 597.070 * | 602.006 * | 606.453 * | 609.793 * | 612.201 * |
| -33.0 | 525.007 * | 538.654 * | 550.629 * | 558.857 * | 564.603 * | 569.708 * | 574.902 * | 579.406 * | 583.103 * | 585.993 * |
| -37.5 | 492.276 * | 505.515 * | 516.837 * | 525.117 * | 531.030 * | 536.367 * | 541.438 * | 545.849 * | 549.569 * | 552.571 * |
| -42.5 | 450.329 * | 463.432 * | 474.495 * | 482.589 * | 488.244 * | 493.695 * | 498.506 * | 502.656 * | 506.127 * | 508.905 * |
| -47.5 | 396.121 * | 409.450 * | 422.829 * | 432.460 * | 438.304 * | 443.625 * | 448.376 * | 452.512 * | 455.993 * | 458.775 * |
| -55.0 | 285.050 * | 291.311 * | 293.891 * | 298.963 * | 304.004 * | 308.457 * | 312.321 * | 315.600 * | 318.296 * | 320.418 * |
| -65.0 | 140.419 * | 144.707 * | 149.263 * | 153.424 * | 156.522 * | 159.382 * | 161.974 * | 164.267 * | 166.233 * | 167.842 * |
| -75.0 | 22.876 | 24.969 | 27.320 | 29.204 | 30.566 | 31.791 | 32.873 | 33.804 | 34.580 | 35.748 |
| -85.0 | 1.211 | 1.353 | 1.457 | 1.541 | 1.606 | 1.669 | 1.762 | 1.811 | 1.861 | 1.910 |
| -90.0 | 0.191 | 0.221 | 0.236 | 0.249 | 0.259 | 0.270 | 0.280 | 0.291 | 0.301 | 0.311 |

| 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 | 7.051 | 5.868 | 5.276 | 5.868 | 7.051 | 8.023 | 8.931 | 9.677 | 10.227 | 10.547 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | | | | | |
|-------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---|
| 55.0 | 154.443 | * 148.787 | * 145.957 | * 148.787 | * 154.443 | * 157.470 | * 160.550 | * 162.725 | * 163.981 | * 164.303 | * |
| 47.5 | 319.778 | * 315.963 | * 314.053 | * 315.963 | * 319.778 | * 317.979 | * 316.997 | * 314.995 | * 312.261 | * 309.074 | * |
| 42.5 | 426.446 | * 424.832 | * 424.024 | * 424.832 | * 426.446 | * 421.314 | * 417.781 | * 413.808 | * 410.006 | * 406.948 | * |
| 37.5 | 500.064 | * 491.657 | * 486.570 | * 491.657 | * 500.064 | * 506.698 | * 511.025 | * 512.725 | * 511.515 | * 507.157 | * |
| 33.0 | 588.876 | * 588.639 | * 588.184 | * 588.639 | * 588.876 | * 588.270 | * 586.885 | * 584.792 | * 582.062 | * 578.201 | * |
| 29.0 | 617.143 | * 616.843 | * 616.387 | * 616.843 | * 617.143 | * 616.640 | * 615.361 | * 613.209 | * 610.148 | * 605.505 | * |
| 25.5 | 638.646 | * 638.275 | * 637.768 | * 638.275 | * 638.646 | * 638.158 | * 636.820 | * 634.657 | * 631.101 | * 625.910 | * |
| 22.5 | 654.599 | * 654.129 | * 653.404 | * 654.129 | * 654.599 | * 654.293 | * 653.109 | * 651.081 | * 646.753 | * 641.330 | * |
| 19.5 | 667.794 | * 666.890 | * 666.144 | * 666.890 | * 667.794 | * 667.869 | * 666.962 | * 664.124 | * 659.698 | * 654.264 | * |
| 17.0 | 677.583 | * 676.451 | * 675.598 | * 676.451 | * 677.583 | * 677.814 | * 676.917 | * 673.292 | * 668.854 | * 663.315 | * |
| 15.0 | 684.302 | * 683.146 | * 682.080 | * 683.146 | * 684.302 | * 684.671 | * 683.233 | * 679.954 | * 675.302 | * 669.903 | * |
| 13.0 | 690.344 | * 689.252 | * 688.387 | * 689.252 | * 690.344 | * 690.736 | * 688.662 | * 685.161 | * 681.006 | * 675.658 | * |
| 11.0 | 695.514 | * 694.585 | * 693.830 | * 694.585 | * 695.514 | * 695.417 | * 693.036 | * 689.655 | * 685.459 | * 680.453 | * |
| 9.0 | 699.724 | * 698.679 | * 697.880 | * 698.679 | * 699.724 | * 698.892 | * 696.576 | * 693.571 | * 689.150 | * 684.092 | * |
| 7.0 | 703.035 | * 701.824 | * 700.802 | * 701.824 | * 703.035 | * 701.413 | * 699.506 | * 696.155 | * 692.080 | * 687.093 | * |
| 5.0 | 705.171 | * 705.141 | * 703.655 | * 705.141 | * 705.171 | * 703.271 | * 700.957 | * 698.155 | * 694.064 | * 688.985 | * |
| 3.0 | 706.262 | * 708.019 | * 705.491 | * 708.019 | * 706.261 | * 704.434 | * 701.911 | * 699.098 | * 695.015 | * 689.976 | * |
| 1.0 | 706.998 | * 708.409 | * 707.889 | * 708.409 | * 706.998 | * 705.132 | * 702.382 | * 699.295 | * 695.241 | * 690.182 | * |
| 0.0 | 707.497 | * 708.773 | * 709.182 | * 708.773 | * 707.497 | * 704.844 | * 702.333 | * 699.165 | * 695.053 | * 689.966 | * |
| -1.0 | 707.466 | * 708.404 | * 708.306 | * 708.404 | * 707.466 | * 704.980 | * 702.155 | * 698.966 | * 694.912 | * 689.892 | * |
| -3.0 | 705.772 | * 706.741 | * 706.540 | * 706.741 | * 705.772 | * 703.859 | * 701.169 | * 698.033 | * 694.053 | * 689.085 | * |
| -5.0 | 703.595 | * 704.677 | * 704.730 | * 704.677 | * 703.595 | * 702.290 | * 699.815 | * 696.684 | * 692.621 | * 687.442 | * |
| -7.0 | 700.898 | * 702.014 | * 702.294 | * 702.014 | * 700.898 | * 699.734 | * 698.075 | * 694.575 | * 690.344 | * 685.026 | * |
| -9.0 | 697.896 | * 698.885 | * 699.126 | * 698.885 | * 697.896 | * 696.573 | * 694.463 | * 691.673 | * 686.815 | * 681.264 | * |
| -11.0 | 693.710 | * 694.729 | * 694.926 | * 694.729 | * 693.710 | * 692.111 | * 689.952 | * 686.607 | * 682.256 | * 676.680 | * |
| -13.0 | 688.535 | * 689.566 | * 689.743 | * 689.566 | * 688.535 | * 686.605 | * 684.303 | * 680.773 | * 676.451 | * 671.311 | * |
| -15.0 | 682.490 | * 683.846 | * 683.978 | * 683.846 | * 682.490 | * 680.223 | * 677.285 | * 674.021 | * 669.823 | * 665.001 | * |
| -17.0 | 675.179 | * 676.548 | * 676.912 | * 676.548 | * 675.179 | * 672.840 | * 669.622 | * 666.509 | * 662.608 | * 657.406 | * |
| -19.5 | 664.679 | * 665.939 | * 666.253 | * 665.939 | * 664.679 | * 662.590 | * 659.618 | * 656.237 | * 652.264 | * 647.167 | * |
| -22.5 | 650.651 | * 651.866 | * 651.975 | * 651.866 | * 650.651 | * 648.671 | * 645.847 | * 642.222 | * 638.284 | * 633.346 | * |
| -25.5 | 634.596 | * 635.662 | * 635.879 | * 635.662 | * 634.596 | * 632.719 | * 630.080 | * 626.735 | * 622.756 | * 617.928 | * |
| -29.0 | 613.862 | * 614.759 | * 614.919 | * 614.759 | * 613.862 | * 612.201 | * 609.793 | * 606.453 | * 602.006 | * 597.070 | * |
| -33.0 | 588.088 | * 589.407 | * 589.784 | * 589.407 | * 588.088 | * 585.993 | * 583.103 | * 579.406 | * 574.902 | * 569.708 | * |
| -37.5 | 554.831 | * 556.428 | * 556.791 | * 556.428 | * 554.831 | * 552.571 | * 549.569 | * 545.849 | * 541.438 | * 536.367 | * |
| -42.5 | 511.786 | * 512.431 | * 512.754 | * 512.431 | * 511.786 | * 508.905 | * 506.127 | * 502.656 | * 498.506 | * 493.695 | * |
| -47.5 | 461.731 | * 462.190 | * 462.419 | * 462.190 | * 461.731 | * 458.775 | * 455.993 | * 452.512 | * 448.376 | * 443.625 | * |
| -55.0 | 322.586 | * 323.036 | * 323.261 | * 323.036 | * 322.586 | * 320.418 | * 318.296 | * 315.600 | * 312.321 | * 308.457 | * |
| -65.0 | 169.562 | * 169.926 | * 170.108 | * 169.926 | * 169.562 | * 167.842 | * 166.233 | * 164.267 | * 161.974 | * 159.382 | * |
| -75.0 | 35.839 | 35.930 | 35.976 | 35.930 | 35.839 | 35.748 | 34.580 | 33.804 | 32.873 | 31.791 | |
| -85.0 | 1.959 | 2.008 | 2.033 | 2.008 | 1.959 | 1.910 | 1.861 | 1.811 | 1.762 | 1.669 | |
| -90.0 | 0.322 | 0.332 | 0.337 | 0.332 | 0.322 | 0.311 | 0.301 | 0.291 | 0.280 | 0.270 | |

**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 | 0.004 | 0.014 | 0.016 | 0.002 | 0.000 | 0.000 | 0.004 |
| 65.0 | 10.606 | 10.372 | 9.621 | 10.385 | 11.429 | 12.264 | 10.759 | 7.042 | 4.113 | 2.745 |
| 55.0 | 163.681 | * 162.110 | * 158.707 | * 150.857 | * 141.348 | * 129.342 | * 111.517 | * 88.919 | * 72.894 | * 49.309 |
| 47.5 | 305.700 | * 302.408 | * 298.504 | * 289.730 | * 276.922 | * 263.326 | * 241.763 | * 200.542 | * 166.805 | * 121.156 |
| 42.5 | 405.170 | * 404.277 | * 397.754 | * 387.358 | * 374.942 | * 356.145 | * 323.353 | * 286.405 | * 232.135 | * 184.355 |
| 37.5 | 499.184 | * 490.318 | * 480.537 | * 472.253 | * 465.145 | * 446.611 | * 410.497 | * 357.654 | * 301.713 | * 242.814 |
| 33.0 | 571.869 | * 565.057 | * 553.914 | * 535.426 | * 522.434 | * 510.526 | * 472.101 | * 417.579 | * 353.953 | * 290.443 |
| 29.0 | 600.092 | * 593.586 | * 584.479 | * 571.486 | * 557.270 | * 539.214 | * 509.736 | * 459.805 | * 397.024 | * 329.058 |
| 25.5 | 620.129 | * 613.668 | * 604.539 | * 591.893 | * 577.080 | * 557.499 | * 530.957 | * 488.400 | * 426.982 | * 358.835 |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-01L-W-50.IES

CANDELA TABULATION - (Cont.)

| | | | | | | | | | | |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 22.5 | 635.279 * | 628.545 * | 619.130 * | 606.380 * | 591.517 * | 571.742 * | 545.786 * | 508.036 * | 448.249 * | 377.598 * |
| 19.5 | 648.355 * | 641.580 * | 631.884 * | 618.775 * | 603.899 * | 584.039 * | 558.473 * | 522.153 * | 464.028 * | 394.314 * |
| 17.0 | 657.267 * | 650.429 * | 640.987 * | 627.614 * | 612.884 * | 592.699 * | 567.095 * | 531.585 * | 475.615 * | 406.197 * |
| 15.0 | 663.467 * | 656.746 * | 647.201 * | 633.771 * | 618.930 * | 598.814 * | 572.874 * | 538.147 * | 483.495 * | 414.075 * |
| 13.0 | 669.342 * | 662.172 * | 652.467 * | 639.173 * | 624.066 * | 604.036 * | 577.702 * | 543.029 * | 490.252 * | 420.985 * |
| 11.0 | 674.168 * | 667.109 * | 657.176 * | 643.851 * | 628.473 * | 608.323 * | 581.649 * | 547.178 * | 496.000 * | 426.913 * |
| 9.0 | 678.281 * | 670.971 * | 660.976 * | 647.425 * | 631.969 * | 611.867 * | 584.826 * | 550.573 * | 500.729 * | 431.848 * |
| 7.0 | 681.027 * | 674.032 * | 664.004 * | 650.291 * | 634.751 * | 614.446 * | 587.305 * | 553.195 * | 504.433 * | 435.784 * |
| 5.0 | 683.039 * | 676.299 * | 666.273 * | 652.403 * | 636.798 * | 616.167 * | 589.058 * | 555.032 * | 507.114 * | 438.719 * |
| 3.0 | 684.147 * | 677.521 * | 667.569 * | 653.711 * | 638.066 * | 617.188 * | 590.062 * | 556.076 * | 509.883 * | 441.757 * |
| 1.0 | 684.465 * | 677.822 * | 668.017 * | 654.287 * | 638.522 * | 617.459 * | 590.302 * | 556.425 * | 509.566 * | 441.726 * |
| 0.0 | 684.135 * | 677.686 * | 667.940 * | 654.092 * | 638.438 * | 617.299 * | 590.132 * | 556.155 * | 509.407 * | 441.710 * |
| -1.0 | 684.152 * | 677.414 * | 667.720 * | 654.109 * | 638.393 * | 617.193 * | 590.031 * | 556.097 * | 509.464 * | 442.300 * |
| -3.0 | 683.155 * | 676.263 * | 666.705 * | 653.194 * | 637.657 * | 616.378 * | 589.245 * | 555.102 * | 509.578 * | 443.479 * |
| -5.0 | 681.239 * | 674.206 * | 664.922 * | 651.593 * | 636.041 * | 614.777 * | 587.677 * | 553.436 * | 506.833 * | 441.730 * |
| -7.0 | 678.341 * | 671.374 * | 662.257 * | 649.258 * | 633.538 * | 612.418 * | 585.334 * | 551.017 * | 504.341 * | 440.182 * |
| -9.0 | 674.811 * | 668.093 * | 658.891 * | 646.260 * | 630.157 * | 609.210 * | 582.227 * | 547.867 * | 501.119 * | 437.812 * |
| -11.0 | 670.491 * | 663.966 * | 654.544 * | 642.240 * | 625.909 * | 605.125 * | 578.376 * | 544.013 * | 497.239 * | 434.668 * |
| -13.0 | 665.407 * | 658.415 * | 649.128 * | 636.259 * | 620.558 * | 600.323 * | 573.693 * | 539.484 * | 492.770 * | 430.799 * |
| -15.0 | 658.769 * | 652.159 * | 642.971 * | 629.612 * | 614.574 * | 594.583 * | 568.038 * | 534.312 * | 487.781 * | 426.251 * |
| -17.0 | 651.538 * | 644.741 * | 635.640 * | 622.452 * | 607.860 * | 587.782 * | 561.648 * | 527.912 * | 482.024 * | 421.072 * |
| -19.5 | 641.414 * | 634.736 * | 625.232 * | 612.876 * | 598.045 * | 578.384 * | 552.700 * | 519.019 * | 473.113 * | 412.661 * |
| -22.5 | 627.630 * | 621.156 * | 612.202 * | 599.367 * | 584.778 * | 565.563 * | 540.200 * | 506.898 * | 461.367 * | 400.365 * |
| -25.5 | 612.506 * | 606.223 * | 596.747 * | 584.090 * | 570.051 * | 551.237 * | 525.925 * | 492.988 * | 446.904 * | 386.594 * |
| -29.0 | 591.552 * | 585.184 * | 576.377 * | 564.410 * | 550.820 * | 532.777 * | 507.164 * | 473.804 * | 428.426 * | 367.225 * |
| -33.0 | 564.603 * | 558.857 * | 550.629 * | 538.654 * | 525.007 * | 507.015 * | 482.434 * | 448.898 * | 402.565 * | 342.935 * |
| -37.5 | 531.030 * | 525.117 * | 516.837 * | 505.515 * | 492.276 * | 474.383 * | 450.487 * | 417.708 * | 370.853 * | 313.782 * |
| -42.5 | 488.244 * | 482.589 * | 474.495 * | 463.432 * | 450.329 * | 433.294 * | 411.254 * | 379.214 * | 330.243 * | 269.516 * |
| -47.5 | 438.304 * | 432.457 * | 422.829 * | 409.450 * | 396.121 * | 375.451 * | 357.407 * | 333.528 * | 274.164 * | 217.604 * |
| -55.0 | 304.004 * | 298.963 * | 293.891 * | 291.311 * | 285.050 * | 272.753 * | 248.702 * | 215.474 * | 183.500 * | 149.796 * |
| -65.0 | 156.522 * | 153.424 * | 149.263 * | 144.707 * | 140.419 * | 126.588 * | 110.643 * | 93.542 * | 78.612 * | 58.608 |
| -75.0 | 30.566 | 29.204 | 27.320 | 24.969 | 22.876 | 20.110 | 16.562 | 14.602 | 11.513 | 6.792 |
| -85.0 | 1.606 | 1.541 | 1.457 | 1.355 | 1.211 | 1.043 | 0.849 | 0.629 | 0.385 | 0.207 |
| -90.0 | 0.259 | 0.249 | 0.236 | 0.221 | 0.191 | 0.157 | 0.118 | 0.073 | 0.024 | 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 | 0.002 | 0.000 | 0.000 | 0.000 | 0.000 |
| 65.0 | 1.064 | 0.076 | 0.000 | 0.000 | 0.000 |
| 55.0 | 19.338 | 2.388 | 0.152 | 0.000 | 0.000 |
| 47.5 | 65.136 | 10.549 | 0.465 | 0.000 | 0.000 |
| 42.5 | 106.381 * | 21.744 | 1.279 | 0.000 | 0.000 |
| 37.5 | 146.872 * | 37.441 | 2.115 | 0.000 | 0.000 |
| 33.0 | 184.905 * | 54.736 | 2.945 | 0.000 | 0.000 |
| 29.0 | 215.659 * | 70.554 | 4.662 | 0.000 | 0.000 |
| 25.5 | 238.777 * | 84.403 * | 6.130 | 0.000 | 0.000 |
| 22.5 | 256.360 * | 94.516 * | 7.349 | 0.000 | 0.000 |
| 19.5 | 271.444 * | 104.845 * | 8.517 | 0.000 | 0.000 |
| 17.0 | 281.896 * | 112.588 * | 9.443 | 0.000 | 0.000 |
| 15.0 | 289.341 * | 118.203 * | 10.146 | 0.000 | 0.000 |
| 13.0 | 295.957 * | 123.295 * | 10.811 | 0.000 | 0.000 |
| 11.0 | 301.733 * | 127.857 * | 11.434 | 0.000 | 0.000 |
| 9.0 | 306.661 * | 131.885 * | 12.009 | 0.000 | 0.000 |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-01L-W-50.IES

CANDELA TABULATION - (Cont.)

| | | | | | |
|--------------|-----------|-----------|--------|-------|-------|
| 7.0 | 310.734 * | 135.372 * | 12.533 | 0.000 | 0.000 |
| 5.0 | 313.951 * | 138.317 * | 13.217 | 0.000 | 0.000 |
| 3.0 | 317.267 * | 141.332 * | 13.486 | 0.000 | 0.000 |
| 1.0 | 317.919 * | 142.636 * | 13.755 | 0.000 | 0.000 |
| 0.0 | 318.245 * | 143.288 * | 13.890 | 0.000 | 0.000 |
| -1.0 | 319.107 * | 144.079 * | 14.167 | 0.001 | 0.000 |
| -3.0 | 320.828 * | 145.659 * | 14.720 | 0.002 | 0.000 |
| -5.0 | 319.921 * | 145.539 * | 15.273 | 0.003 | 0.000 |
| -7.0 | 319.132 * | 145.490 * | 15.337 | 0.004 | 0.000 |
| -9.0 | 317.526 * | 144.905 * | 15.549 | 0.005 | 0.000 |
| -11.0 | 315.114 * | 143.789 * | 15.660 | 0.007 | 0.000 |
| -13.0 | 311.913 * | 142.147 * | 15.666 | 0.007 | 0.000 |
| -15.0 | 307.939 * | 139.987 * | 15.560 | 0.008 | 0.000 |
| -17.0 | 303.212 * | 137.317 * | 15.339 | 0.009 | 0.000 |
| -19.5 | 296.274 * | 133.274 * | 14.893 | 0.010 | 0.000 |
| -22.5 | 286.630 * | 127.413 * | 14.099 | 0.011 | 0.000 |
| -25.5 | 275.694 * | 121.734 * | 13.014 | 0.012 | 0.000 |
| -29.0 | 261.380 * | 112.101 * | 11.367 | 0.013 | 0.000 |
| -33.0 | 242.123 * | 100.764 * | 8.972 | 0.013 | 0.000 |
| -37.5 | 216.558 * | 86.372 * | 7.561 | 0.012 | 0.000 |
| -42.5 | 181.997 * | 68.589 | 5.625 | 0.011 | 0.000 |
| -47.5 | 147.629 * | 51.237 | 3.186 | 0.009 | 0.000 |
| -55.0 | 91.791 * | 27.830 | 1.686 | 0.004 | 0.000 |
| -65.0 | 30.223 | 6.537 | 0.386 | 0.000 | 0.000 |
| -75.0 | 3.408 | 0.695 | 0.054 | 0.000 | 0.000 |
| -85.0 | 0.062 | 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-01L-W-50.IES

LUMEN TABULATION

Average Of Right And Left Sides

Total Luminaire Lumens (one side of beam only) = 843.28

Total Field Lumens (one side of beam only) = 830.18

* 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 | 0.01 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 |
| 55 | 0.23 * | 0.48 * | 0.50 * | 0.51 * | 0.52 * | 0.52 * | 0.52 * | 0.52 * | 0.51 * | 0.62 * |
| 47.5 | 0.53 * | 1.07 * | 1.08 * | 1.08 * | 1.08 * | 1.07 * | 1.06 * | 1.04 * | 1.03 * | 1.25 * |
| 42.5 | 0.56 * | 1.13 * | 1.13 * | 1.12 * | 1.10 * | 1.09 * | 1.07 * | 1.05 * | 1.04 * | 1.27 * |
| 37.5 | 0.70 * | 1.40 * | 1.41 * | 1.41 * | 1.40 * | 1.39 * | 1.37 * | 1.34 * | 1.32 * | 1.60 * |
| 33 | 0.74 * | 1.49 * | 1.49 * | 1.49 * | 1.49 * | 1.48 * | 1.46 * | 1.43 * | 1.40 * | 1.70 * |
| 29 | 0.73 * | 1.47 * | 1.47 * | 1.46 * | 1.45 * | 1.43 * | 1.42 * | 1.39 * | 1.36 * | 1.66 * |
| 25.5 | 0.67 * | 1.34 * | 1.34 * | 1.33 * | 1.32 * | 1.31 * | 1.29 * | 1.27 * | 1.24 * | 1.52 * |
| 22.5 | 0.59 * | 1.18 * | 1.18 * | 1.17 * | 1.17 * | 1.15 * | 1.14 * | 1.12 * | 1.10 * | 1.34 * |
| 19.5 | 0.60 * | 1.21 * | 1.21 * | 1.20 * | 1.19 * | 1.18 * | 1.16 * | 1.14 * | 1.12 * | 1.37 * |
| 17 | 0.51 * | 1.02 * | 1.02 * | 1.02 * | 1.01 * | 1.00 * | 0.99 * | 0.97 * | 0.95 * | 1.16 * |
| 15 | 0.41 * | 0.83 * | 0.83 * | 0.82 * | 0.82 * | 0.81 * | 0.80 * | 0.78 * | 0.77 * | 0.94 * |
| 13 | 0.42 * | 0.84 * | 0.84 * | 0.83 * | 0.83 * | 0.82 * | 0.81 * | 0.79 * | 0.78 * | 0.95 * |
| 11 | 0.42 * | 0.84 * | 0.84 * | 0.84 * | 0.83 * | 0.82 * | 0.81 * | 0.80 * | 0.78 * | 0.95 * |
| 9 | 0.42 * | 0.85 * | 0.85 * | 0.84 * | 0.84 * | 0.83 * | 0.82 * | 0.80 * | 0.79 * | 0.96 * |
| 7 | 0.43 * | 0.85 * | 0.85 * | 0.85 * | 0.84 * | 0.83 * | 0.82 * | 0.81 * | 0.79 * | 0.97 * |
| 5 | 0.43 * | 0.86 * | 0.85 * | 0.85 * | 0.84 * | 0.83 * | 0.82 * | 0.81 * | 0.79 * | 0.97 * |
| 3 | 0.43 * | 0.86 * | 0.86 * | 0.85 * | 0.84 * | 0.84 * | 0.82 * | 0.81 * | 0.80 * | 0.97 * |
| 1 | 0.43 * | 0.86 * | 0.86 * | 0.85 * | 0.85 * | 0.84 * | 0.83 * | 0.81 * | 0.80 * | 0.97 * |
| 0 | 0.22 * | 0.43 * | 0.43 * | 0.43 * | 0.42 * | 0.42 * | 0.41 * | 0.41 * | 0.40 * | 0.49 * |
| -1 | 0.22 * | 0.43 * | 0.43 * | 0.43 * | 0.42 * | 0.42 * | 0.41 * | 0.41 * | 0.40 * | 0.49 * |
| | 0.43 * | 0.86 * | 0.86 * | 0.85 * | 0.84 * | 0.84 * | 0.82 * | 0.81 * | 0.80 * | 0.97 * |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-01L-W-50.IES

LUMENS TABULATION - (Cont.)

| | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| -3 | 0.43 * | 0.86 * | 0.86 * | 0.85 * | 0.84 * | 0.83 * | 0.82 * | 0.81 * | 0.79 * | 0.97 * |
| -5 | 0.43 * | 0.86 * | 0.85 * | 0.85 * | 0.84 * | 0.83 * | 0.82 * | 0.81 * | 0.79 * | 0.97 * |
| -7 | 0.43 * | 0.85 * | 0.85 * | 0.84 * | 0.84 * | 0.83 * | 0.82 * | 0.80 * | 0.79 * | 0.96 * |
| -9 | 0.42 * | 0.85 * | 0.84 * | 0.84 * | 0.83 * | 0.82 * | 0.81 * | 0.80 * | 0.78 * | 0.96 * |
| -11 | 0.42 * | 0.84 * | 0.84 * | 0.83 * | 0.83 * | 0.82 * | 0.81 * | 0.79 * | 0.78 * | 0.95 * |
| -13 | 0.42 * | 0.84 * | 0.83 * | 0.83 * | 0.82 * | 0.81 * | 0.80 * | 0.79 * | 0.77 * | 0.94 * |
| -15 | 0.41 * | 0.83 * | 0.82 * | 0.82 * | 0.81 * | 0.80 * | 0.79 * | 0.78 * | 0.76 * | 0.93 * |
| -17 | 0.51 * | 1.02 * | 1.02 * | 1.01 * | 1.00 * | 0.99 * | 0.98 * | 0.96 * | 0.94 * | 1.15 * |
| -19.5 | 0.60 * | 1.20 * | 1.20 * | 1.19 * | 1.18 * | 1.16 * | 1.15 * | 1.13 * | 1.11 * | 1.35 * |
| -22.5 | 0.59 * | 1.17 * | 1.17 * | 1.16 * | 1.15 * | 1.14 * | 1.12 * | 1.10 * | 1.08 * | 1.32 * |
| -25.5 | 0.67 * | 1.33 * | 1.33 * | 1.32 * | 1.31 * | 1.29 * | 1.27 * | 1.25 * | 1.23 * | 1.50 * |
| -29 | 0.73 * | 1.46 * | 1.46 * | 1.45 * | 1.44 * | 1.42 * | 1.40 * | 1.37 * | 1.35 * | 1.64 * |
| -33 | 0.79 * | 1.57 * | 1.56 * | 1.55 * | 1.53 * | 1.51 * | 1.49 * | 1.46 * | 1.44 * | 1.75 * |
| -37.5 | 0.81 * | 1.63 * | 1.62 * | 1.60 * | 1.59 * | 1.57 * | 1.54 * | 1.51 * | 1.48 * | 1.81 * |
| -42.5 | 0.74 * | 1.48 * | 1.47 * | 1.46 * | 1.45 * | 1.43 * | 1.40 * | 1.38 * | 1.35 * | 1.64 * |
| -47.5 | 0.90 * | 1.79 * | 1.78 * | 1.76 * | 1.74 * | 1.72 * | 1.69 * | 1.66 * | 1.62 * | 1.96 * |
| -55 | 0.75 * | 1.50 * | 1.49 * | 1.47 * | 1.45 * | 1.43 * | 1.40 * | 1.37 * | 1.34 * | 1.62 * |
| -65 | 0.31 * | 0.63 * | 0.62 * | 0.61 * | 0.60 * | 0.59 * | 0.58 * | 0.56 * | 0.54 * | 0.65 * |
| -75 | 0.06 | 0.12 | 0.11 | 0.11 | 0.11 | 0.11 | 0.10 | 0.10 | 0.09 | 0.11 |
| -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 | 20.56 | 41.15 | 41.05 | 40.82 | 40.49 | 40.04 | 39.47 | 38.80 | 38.03 | 46.32 |

Vert. Horizontal Angles

| | <u>19.5</u> | <u>22.5</u> | <u>25.5</u> | <u>29</u> | <u>33</u> | <u>37.5</u> | <u>42.5</u> | <u>47.5</u> | <u>55</u> | <u>65</u> |
|-----------|-------------|-------------|-------------|-----------|-----------|-------------|-------------|-------------|-----------|-----------|
| 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 | 0.04 | 0.05 | 0.06 | 0.06 | 0.05 | 0.03 | 0.02 | 0.01 | 0.00 | 0.00 |
| 65 | 0.70 * | 0.66 * | 0.70 * | 0.69 | 0.61 | 0.50 | 0.35 | 0.26 | 0.09 | 0.01 |
| 55 | 1.44 * | 1.34 * | 1.44 * | 1.46 * | 1.35 * | 1.16 * | 0.83 * | 0.68 | 0.28 | 0.03 |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-01L-W-50.IES

LUMENS TABULATION - (Cont.)

| | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 47.5 | 1.46 * | 1.39 * | 1.51 * | 1.55 * | 1.47 * | 1.29 * | 0.95 * | 0.85 * | 0.39 | 0.04 |
| 42.5 | 1.85 * | 1.77 * | 1.95 * | 2.01 * | 1.93 * | 1.72 * | 1.29 * | 1.22 * | 0.59 * | 0.08 |
| 37.5 | 1.96 * | 1.87 * | 2.07 * | 2.16 * | 2.09 * | 1.88 * | 1.44 * | 1.39 * | 0.73 * | 0.11 |
| 33 | 1.92 * | 1.83 * | 2.02 * | 2.12 * | 2.08 * | 1.90 * | 1.48 * | 1.46 * | 0.80 * | 0.14 |
| 29 | 1.76 * | 1.68 * | 1.85 * | 1.95 * | 1.95 * | 1.81 * | 1.42 * | 1.43 * | 0.81 * | 0.15 |
| 25.5 | 1.55 * | 1.48 * | 1.63 * | 1.73 * | 1.74 * | 1.64 * | 1.30 * | 1.32 * | 0.77 * | 0.15 |
| 22.5 | 1.58 * | 1.52 * | 1.67 * | 1.77 * | 1.79 * | 1.70 * | 1.36 * | 1.39 * | 0.83 * | 0.17 |
| 19.5 | 1.34 * | 1.29 * | 1.42 * | 1.50 * | 1.52 * | 1.45 * | 1.17 * | 1.21 * | 0.73 * | 0.15 |
| 17 | 1.09 * | 1.04 * | 1.15 * | 1.22 * | 1.24 * | 1.18 * | 0.96 * | 0.99 * | 0.61 * | 0.13 |
| 15 | 1.10 * | 1.05 * | 1.16 * | 1.23 * | 1.25 * | 1.20 * | 0.97 * | 1.01 * | 0.63 * | 0.14 |
| 13 | 1.11 * | 1.06 * | 1.17 * | 1.24 * | 1.26 * | 1.21 * | 0.99 * | 1.03 * | 0.65 * | 0.14 |
| 11 | 1.11 * | 1.07 * | 1.18 * | 1.25 * | 1.27 * | 1.22 * | 1.00 * | 1.05 * | 0.66 * | 0.15 |
| 9 | 1.12 * | 1.07 * | 1.18 * | 1.25 * | 1.27 * | 1.23 * | 1.01 * | 1.06 * | 0.67 * | 0.15 * |
| 7 | 1.12 * | 1.07 * | 1.19 * | 1.26 * | 1.28 * | 1.24 * | 1.02 * | 1.07 * | 0.68 * | 0.16 * |
| 5 | 1.13 * | 1.08 * | 1.19 * | 1.26 * | 1.28 * | 1.24 * | 1.02 * | 1.08 * | 0.69 * | 0.16 * |
| 3 | 1.13 * | 1.08 * | 1.19 * | 1.26 * | 1.28 * | 1.24 * | 1.02 * | 1.09 * | 0.70 * | 0.16 * |
| 1 | 0.56 * | 0.54 * | 0.60 * | 0.63 * | 0.64 * | 0.62 * | 0.51 * | 0.54 * | 0.35 * | 0.08 * |
| 0 | 0.56 * | 0.54 * | 0.59 * | 0.63 * | 0.64 * | 0.62 * | 0.51 * | 0.54 * | 0.35 * | 0.08 * |
| -1 | 1.13 * | 1.08 * | 1.19 * | 1.26 * | 1.28 * | 1.24 * | 1.03 * | 1.09 * | 0.71 * | 0.17 * |
| -3 | 1.12 * | 1.08 * | 1.19 * | 1.26 * | 1.28 * | 1.24 * | 1.02 * | 1.09 * | 0.71 * | 0.17 * |
| -5 | 1.12 * | 1.07 * | 1.18 * | 1.25 * | 1.27 * | 1.23 * | 1.02 * | 1.09 * | 0.71 * | 0.17 * |
| -7 | 1.12 * | 1.07 * | 1.18 * | 1.25 * | 1.27 * | 1.23 * | 1.01 * | 1.08 * | 0.71 * | 0.17 * |
| -9 | 1.11 * | 1.06 * | 1.17 * | 1.24 * | 1.26 * | 1.22 * | 1.01 * | 1.08 * | 0.70 * | 0.17 * |
| -11 | 1.10 * | 1.05 * | 1.16 * | 1.23 * | 1.25 * | 1.21 * | 1.00 * | 1.07 * | 0.69 * | 0.17 * |
| -13 | 1.09 * | 1.04 * | 1.15 * | 1.22 * | 1.24 * | 1.20 * | 0.99 * | 1.06 * | 0.69 * | 0.16 * |
| -15 | 1.08 * | 1.03 * | 1.14 * | 1.21 * | 1.23 * | 1.19 * | 0.98 * | 1.04 * | 0.68 * | 0.16 * |
| -17 | 1.33 * | 1.27 * | 1.40 * | 1.49 * | 1.51 * | 1.46 * | 1.20 * | 1.28 * | 0.83 * | 0.20 * |
| -19.5 | 1.57 * | 1.50 * | 1.65 * | 1.75 * | 1.78 * | 1.71 * | 1.41 * | 1.50 * | 0.96 * | 0.23 * |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-01L-W-50.IES

LUMENS TABULATION - (Cont.)

| | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|
| -22.5 | 1.53 * | 1.46 * | 1.61 * | 1.71 * | 1.73 * | 1.67 * | 1.37 * | 1.45 * | 0.93 * | 0.22 |
| -25.5 | 1.73 * | 1.66 * | 1.83 * | 1.93 * | 1.96 * | 1.88 * | 1.53 * | 1.61 * | 1.03 * | 0.24 |
| -29 | 1.90 * | 1.82 * | 2.00 * | 2.12 * | 2.14 * | 2.05 * | 1.66 * | 1.73 * | 1.09 * | 0.24 |
| -33 | 2.03 * | 1.94 * | 2.13 * | 2.25 * | 2.27 * | 2.15 * | 1.73 * | 1.79 * | 1.11 * | 0.24 |
| -37.5 | 2.09 * | 1.99 * | 2.19 * | 2.31 * | 2.32 * | 2.18 * | 1.73 * | 1.75 * | 1.05 * | 0.22 |
| -42.5 | 1.89 * | 1.79 * | 1.96 * | 2.06 * | 2.07 * | 1.92 * | 1.47 * | 1.46 * | 0.85 * | 0.17 |
| -47.5 | 2.27 * | 2.16 * | 2.36 * | 2.46 * | 2.42 * | 2.20 * | 1.67 * | 1.63 * | 0.91 * | 0.16 |
| -55 | 1.87 * | 1.80 * | 1.95 * | 1.98 * | 1.87 * | 1.67 * | 1.27 * | 1.18 * | 0.59 | 0.09 |
| -65 | 0.74 * | 0.69 * | 0.73 * | 0.72 | 0.66 | 0.58 | 0.42 | 0.35 | 0.16 | 0.02 |
| -75 | 0.12 | 0.11 | 0.11 | 0.10 | 0.09 | 0.08 | 0.05 | 0.04 | 0.02 | 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 | 53.57 | 51.15 | 56.21 | 59.01 | 58.90 | 55.39 | 44.18 | 45.06 | 27.12 | 5.72 |

| 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 | | 0.59 |
| 65 | | | | |
| | 0.00 | 0.00 | | 9.47 |
| 55 | | | | |
| | 0.00 | 0.00 | | 20.30 |
| 47.5 | | | | |
| | 0.00 | 0.00 | | 21.46 |
| 42.5 | | | | |
| | 0.00 | 0.00 | | 27.74 |
| 37.5 | | | | |
| | 0.00 | 0.00 | | 29.88 |
| 33 | | | | |
| | 0.00 | 0.00 | | 29.58 |
| 29 | | | | |
| | 0.00 | 0.00 | | 27.43 |
| 25.5 | | | | |
| | 0.01 | 0.00 | | 24.45 |
| 22.5 | | | | |
| | 0.01 | 0.00 | | 25.17 |
| 19.5 | | | | |
| | 0.01 | 0.00 | | 21.45 |
| 17 | | | | |
| | 0.01 | 0.00 | | 17.42 |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-01L-W-50.IES

LUMENS TABULATION - (Cont.)

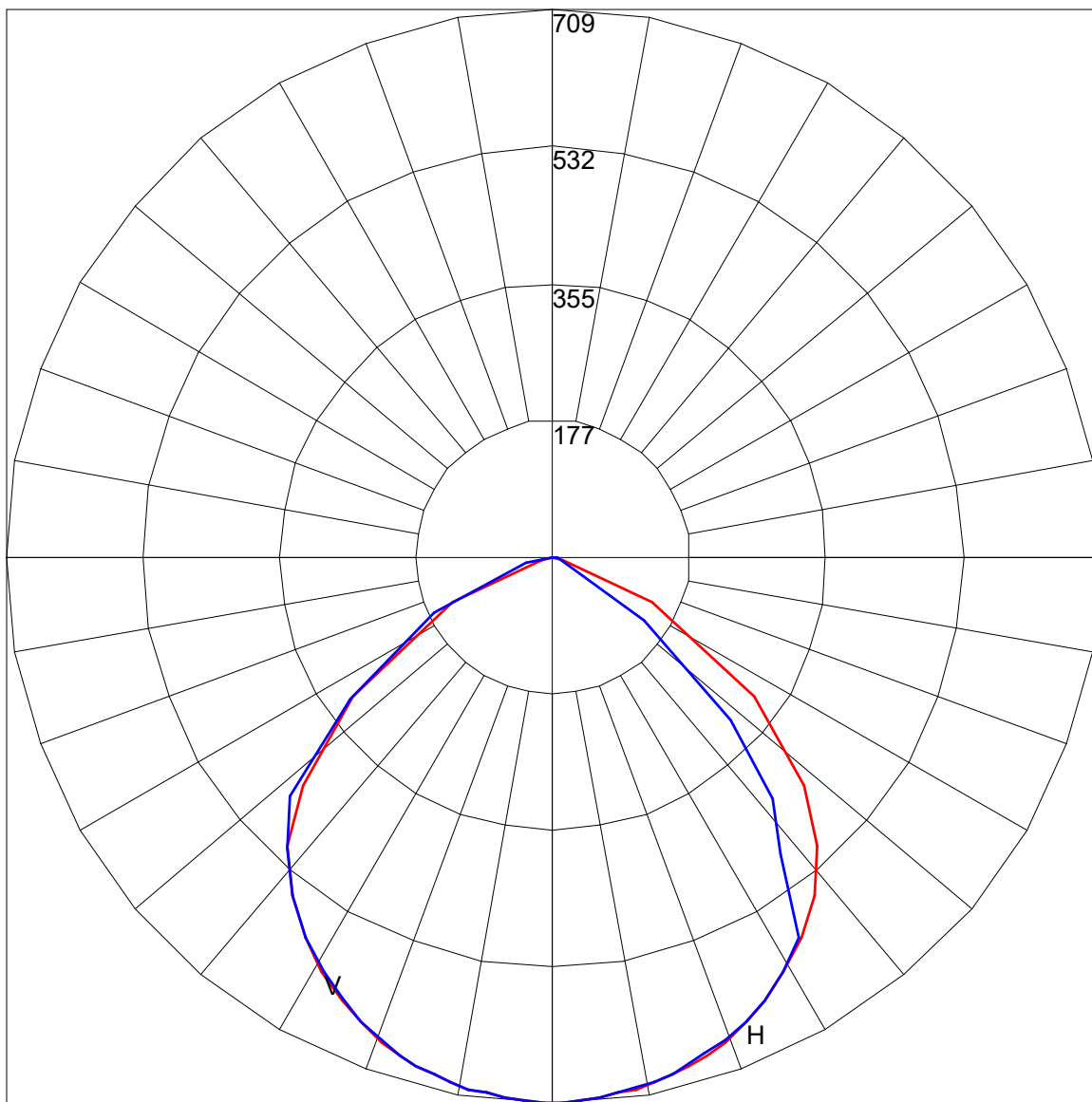
| | | | |
|--------------|------|------|-------|
| 15 | | | |
| | 0.01 | 0.00 | 17.63 |
| 13 | | | |
| | 0.01 | 0.00 | 17.80 |
| 11 | | | |
| | 0.01 | 0.00 | 17.94 |
| 9 | | | |
| | 0.01 | 0.00 | 18.06 |
| 7 | | | |
| | 0.01 | 0.00 | 18.15 |
| 5 | | | |
| | 0.01 | 0.00 | 18.22 |
| 3 | | | |
| | 0.01 | 0.00 | 18.25 |
| 1 | | | |
| | 0.00 | 0.00 | 9.13 |
| 0 | | | |
| | 0.00 | 0.00 | 9.13 |
| -1 | | | |
| | 0.01 | 0.00 | 18.26 |
| -3 | | | |
| | 0.01 | 0.00 | 18.23 |
| -5 | | | |
| | 0.01 | 0.00 | 18.17 |
| -7 | | | |
| | 0.01 | 0.00 | 18.09 |
| -9 | | | |
| | 0.01 | 0.00 | 17.99 |
| -11 | | | |
| | 0.01 | 0.00 | 17.85 |
| -13 | | | |
| | 0.01 | 0.00 | 17.69 |
| -15 | | | |
| | 0.01 | 0.00 | 17.49 |
| -17 | | | |
| | 0.01 | 0.00 | 21.56 |
| -19.5 | | | |
| | 0.01 | 0.00 | 25.35 |
| -22.5 | | | |
| | 0.01 | 0.00 | 24.71 |
| -25.5 | | | |
| | 0.01 | 0.00 | 27.90 |
| -29 | | | |
| | 0.01 | 0.00 | 30.49 |
| -33 | | | |
| | 0.01 | 0.00 | 32.29 |
| -37.5 | | | |
| | 0.01 | 0.00 | 33.01 |
| -42.5 | | | |
| | 0.01 | 0.00 | 29.45 |
| -47.5 | | | |
| | 0.00 | 0.00 | 34.87 |
| -55 | | | |
| | 0.00 | 0.00 | 28.11 |
| -65 | | | |
| | 0.00 | 0.00 | 10.76 |

IES FLOOD REPORT
PHOTOMETRIC FILENAME : TSFL-LED-01L-W-50.IES

LUMENS TABULATION - (Cont.)

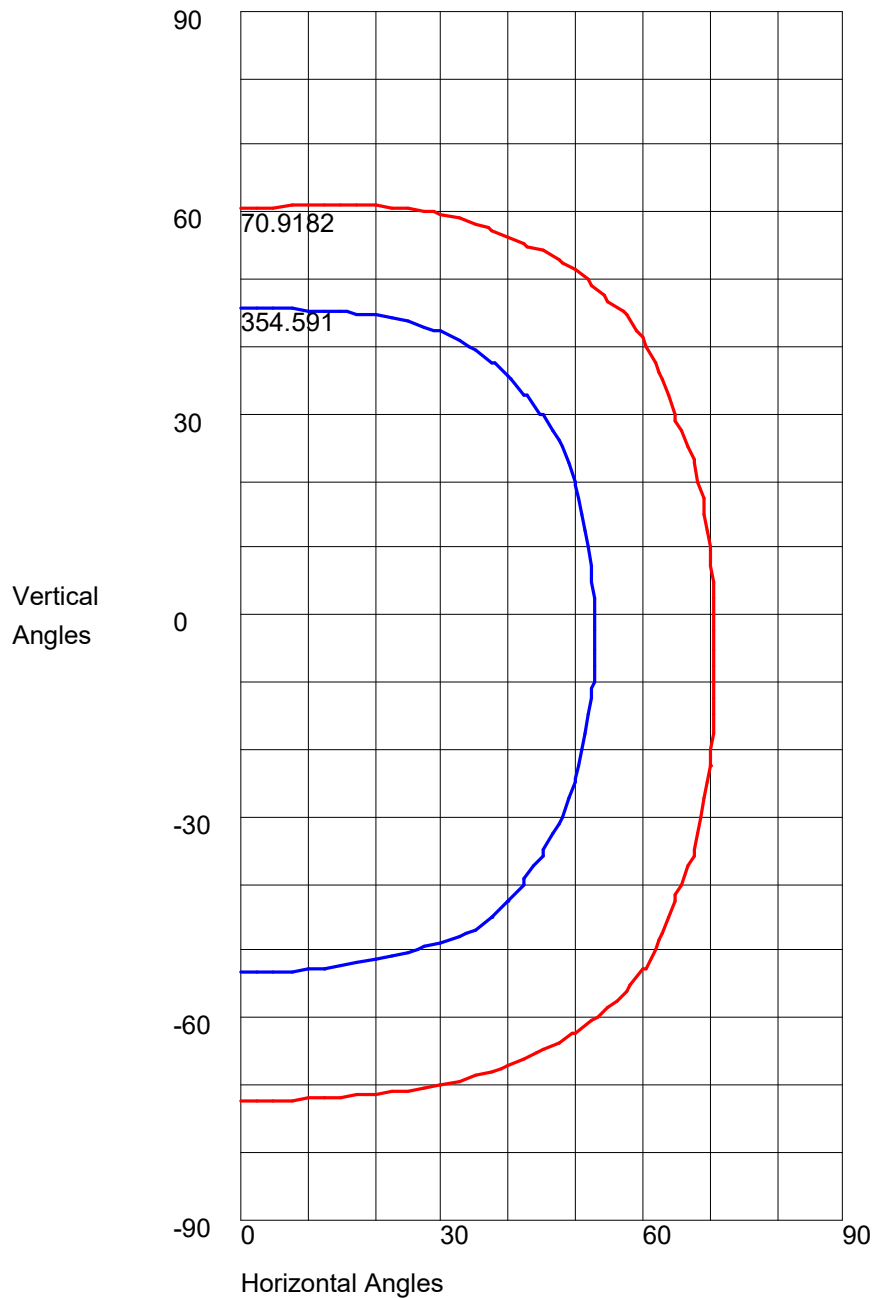
| | | | |
|--------------|------|------|--------|
| -75 | 0.00 | 0.00 | 1.72 |
| -85 | 0.00 | 0.00 | 0.05 |
| -90 | | | |
| Total | 0.24 | 0.00 | 843.28 |

AXIAL CANDELA DISPLAY



Maximum Candela = 709.182 Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 709.182 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 354.591
10% Maximum Candela = 70.9182