



IES ROAD REPORT

PHOTOMETRIC FILENAME : VA2-L280-750-T4-F-S-XXX-DIM-UNV_.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM ATAL011773
[TESTLAB] ATAL-LABS
[ISSUE DATE] 2023-01-18
[MANUFAC] WILLIAMS OUTDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
[LUMCAT] VA2-L280-750-T4-F-S-xxx-DIM-UNV_
[LUMINAIRE] VA2 ARCHITECTURAL LED AREA LIGHT FIXTURE
[MORE] WITH TYPE IV OPTICS, CLEAR LENS, (2) LED MODULES
[MORE] AND (2) ELECTRONIC DRIVERS
[LAMP] LED
[SEARCH_SOURCETYPE] LED
[SEARCH_APPLICATION] Outdoor, Area, Parking
[SEARCH_MOUNTING] Pole

CHARACTERISTICS

| | |
|---|----------------------------------|
| IES Classification | Type IV |
| Longitudinal Classification | Short |
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 29387 |
| Downward Total Efficiency | N.A. (absolute) |
| Total Luminaire Efficiency | N.A. (absolute) |
| Luminaire Efficacy Rating (LER) | 128 |
| Total Luminaire Watts | 229 |
| Ballast Factor | 1.00 |
| Upward Waste Light Ratio | 0.00 |
| Maximum Candela | 27995.367 |
| Maximum Candela Angle | 42.5H 72V |
| Maximum Candela (<90 Degrees Vertical) | 27995.367 |
| Maximum Candela Angle (<90 Degrees Vertical) | 42.5H 72V |
| Maximum Candela At 90 Degrees Vertical | 0 (0.0% Luminaire Lumens) |
| Maximum Candela from 80 to <90 Degrees Vertical | 1981.709 (6.7% Luminaire Lumens) |
| Cutoff Classification (deprecated) | N.A. (absolute) |

IES ROAD REPORT**PHOTOMETRIC FILENAME : VA2-L280-750-T4-F-S-XXX-DIM-UNV_.IES****LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

| | Lumens | % Lamp | % Luminaire |
|-------------------------------|----------|--------|-------------|
| FL - Front-Low (0-30) | 2244.9 | N.A. | 7.6 |
| FM - Front-Medium (30-60) | 9047.6 | N.A. | 30.8 |
| FH - Front-High (60-80) | 10530.8 | N.A. | 35.8 |
| FVH - Front-Very High (80-90) | 185.2 | N.A. | 0.6 |
| BL - Back-Low (0-30) | 1489.5 | N.A. | 5.1 |
| BM - Back-Medium (30-60) | 3550.2 | N.A. | 12.1 |
| BH - Back-High (60-80) | 2200.3 | N.A. | 7.5 |
| BVH - Back-Very High (80-90) | 138.7 | N.A. | 0.5 |
| UL - Uplight-Low (90-100) | 0.0 | N.A. | 0.0 |
| UH - Uplight-High (100-180) | 0.0 | N.A. | 0.0 |
| Total | 29387.2 | N.A. | 100.0 |
| BUG Rating | B3-U0-G4 | | |

IES ROAD REPORT
PHOTOMETRIC FILENAME : VA2-L280-750-T4-F-S-XXX-DIM-UNV_.IES

CANDELA TABULATION

| Vert. Angles | Horizontal Angles | | | | | | | | | |
|-----------------|-------------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | <u>0.0</u> | <u>5.0</u> | <u>15.0</u> | <u>25.0</u> | <u>35.0</u> | <u>42.5</u> | <u>45.0</u> | <u>55.0</u> | <u>65.0</u> | <u>75.0</u> |
| 0.0 | 4616.715 | 4616.715 | 4616.715 | 4616.715 | 4616.715 | 4616.715 | 4616.715 | 4616.715 | 4616.715 | 4616.715 |
| 2.5 | 4961.161 | 4950.827 | 4964.605 | 4942.790 | 4895.716 | 4887.679 | 4865.864 | 4834.864 | 4774.012 | 4724.642 |
| 5.0 | 5368.754 | 5373.347 | 5381.384 | 5344.643 | 5282.643 | 5201.124 | 5180.457 | 5073.679 | 4930.161 | 4785.494 |
| 7.5 | 5597.236 | 5605.273 | 5611.014 | 5602.977 | 5539.829 | 5462.903 | 5435.347 | 5275.754 | 5072.531 | 4853.234 |
| 10.0 | 5647.755 | 5659.236 | 5664.977 | 5678.755 | 5661.533 | 5592.644 | 5570.829 | 5403.199 | 5196.532 | 4923.272 |
| 12.5 | 5635.125 | 5644.311 | 5642.014 | 5666.125 | 5676.459 | 5617.903 | 5598.384 | 5465.199 | 5290.680 | 4992.161 |
| 15.0 | 5602.977 | 5606.422 | 5594.940 | 5619.051 | 5646.607 | 5597.236 | 5576.570 | 5496.199 | 5363.014 | 5073.679 |
| 17.5 | 5563.940 | 5560.495 | 5547.866 | 5569.681 | 5585.755 | 5559.347 | 5549.014 | 5524.903 | 5431.903 | 5144.865 |
| 20.0 | 5481.273 | 5475.532 | 5487.014 | 5523.755 | 5526.051 | 5507.681 | 5506.532 | 5547.866 | 5433.051 | 5182.754 |
| 22.5 | 5367.606 | 5364.162 | 5442.236 | 5482.421 | 5460.606 | 5456.014 | 5469.792 | 5497.347 | 5419.273 | 5235.569 |
| 25.0 | 5284.939 | 5292.976 | 5434.199 | 5422.717 | 5402.051 | 5430.754 | 5454.866 | 5447.977 | 5438.791 | 5301.013 |
| 27.5 | 5279.198 | 5309.050 | 5420.421 | 5397.458 | 5390.569 | 5446.829 | 5475.532 | 5462.903 | 5485.866 | 5394.014 |
| 30.0 | 5376.791 | 5385.977 | 5426.162 | 5421.569 | 5457.162 | 5513.421 | 5536.384 | 5554.755 | 5580.014 | 5524.903 |
| 32.5 | 5522.607 | 5485.866 | 5505.384 | 5561.644 | 5609.866 | 5642.014 | 5663.829 | 5708.607 | 5725.829 | 5686.792 |
| 35.0 | 5716.644 | 5658.088 | 5659.236 | 5793.570 | 5814.237 | 5833.755 | 5837.200 | 5901.496 | 5901.496 | 5885.422 |
| 37.5 | 6035.830 | 5992.200 | 5957.756 | 6078.312 | 6110.460 | 6093.238 | 6072.571 | 6095.534 | 6088.645 | 6094.386 |
| 40.0 | 6448.016 | 6407.831 | 6359.609 | 6449.164 | 6504.276 | 6420.461 | 6391.757 | 6278.090 | 6287.275 | 6333.201 |
| 42.5 | 6878.573 | 6837.239 | 6817.721 | 6913.017 | 6994.536 | 6833.795 | 6761.461 | 6492.794 | 6518.053 | 6593.831 |
| 45.0 | 7389.500 | 7372.278 | 7363.093 | 7459.537 | 7547.945 | 7343.574 | 7234.500 | 6902.684 | 6808.536 | 6911.869 |
| 47.5 | 8000.316 | 7954.390 | 7978.502 | 8131.206 | 8076.094 | 7939.464 | 7834.983 | 7466.426 | 7212.685 | 7299.944 |
| 50.0 | 8637.540 | 8569.799 | 8580.133 | 8820.096 | 8681.170 | 8591.614 | 8512.392 | 8189.761 | 7768.390 | 7760.353 |
| 52.5 | 9488.320 | 9469.950 | 9243.764 | 9429.764 | 9337.912 | 9294.283 | 9279.357 | 9097.949 | 8459.577 | 8265.539 |
| 55.0 | 10928.102 | 10745.546 | 10266.767 | 10140.470 | 10072.729 | 10148.507 | 10252.989 | 10097.988 | 9256.394 | 8878.652 |
| 57.5 | 12391.994 | 12378.216 | 11762.807 | 11145.102 | 10872.990 | 11232.362 | 11491.844 | 11080.806 | 10101.433 | 9489.468 |
| 60.0 | 13115.329 | 13117.626 | 13156.663 | 12476.957 | 11832.845 | 12599.810 | 13054.477 | 12195.660 | 10868.398 | 9901.655 |
| 62.5 | 13721.553 | 13859.331 | 14238.221 | 14078.628 | 13172.737 | 14531.000 | 15254.335 | 13393.182 | 11296.658 | 9987.766 |
| 65.0 | 14542.481 | 14777.852 | 15997.188 | 15986.855 | 15093.594 | 17698.748 | 18555.269 | 14764.074 | 10974.028 | 9657.098 |
| 67.5 | 13819.146 | 14096.998 | 17045.450 | 18745.862 | 17874.415 | 22289.056 | 23027.317 | 15564.335 | 9744.358 | 8807.467 |
| 70.0 | 11192.176 | 11248.436 | 15470.187 | 20594.385 | 20619.645 | 26753.067 | 26953.994 | 13860.479 | 7554.834 | 6710.943 |
| 72.0 | 8155.317 | 8294.243 | 12545.846 | 19410.641 | 20613.904 | 27995.367 | 27524.625 | 9684.654 | 5342.347 | 3908.306 |
| 72.5 | 7169.055 | 7307.981 | 11566.474 | 18758.492 | 20261.421 | 27733.588 | 27244.476 | 8442.355 | 4799.271 | 3250.416 |
| 75.0 | 2812.970 | 2770.488 | 5069.087 | 11653.733 | 15108.520 | 21317.720 | 16954.746 | 3393.934 | 2858.896 | 1504.078 |
| 77.5 | 1826.708 | 1778.486 | 1625.782 | 3334.231 | 5676.459 | 6706.350 | 3413.453 | 1353.670 | 1569.522 | 964.447 |
| 80.0 | 1187.188 | 1330.707 | 987.410 | 1513.263 | 1981.709 | 1645.300 | 1167.670 | 771.557 | 909.336 | 634.928 |
| 82.5 | 603.927 | 726.780 | 580.964 | 758.928 | 830.113 | 649.853 | 628.039 | 442.038 | 476.483 | 357.075 |
| 85.0 | 254.890 | 339.853 | 237.667 | 288.186 | 318.038 | 234.223 | 234.223 | 183.704 | 197.482 | 146.963 |
| 87.5 | 63.148 | 91.852 | 36.741 | 36.741 | 55.111 | 34.445 | 28.704 | 31.000 | 31.000 | 22.963 |
| 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>85.0</u> | <u>90.0</u> | <u>95.0</u> | <u>105.0</u> | <u>115.0</u> | <u>125.0</u> | <u>135.0</u> | <u>145.0</u> | <u>155.0</u> | <u>165.0</u> |
| 0.0 | 4616.715 | 4616.715 | 4616.715 | 4616.715 | 4616.715 | 4616.715 | 4616.715 | 4616.715 | 4616.715 | 4616.715 |
| 2.5 | 4664.938 | 4622.456 | 4591.456 | 4532.900 | 4462.863 | 4403.159 | 4338.863 | 4302.122 | 4248.159 | 4230.937 |
| 5.0 | 4632.789 | 4547.826 | 4473.196 | 4334.270 | 4197.640 | 4086.270 | 3981.788 | 3923.232 | 3862.380 | 3840.565 |
| 7.5 | 4617.863 | 4496.159 | 4379.048 | 4168.936 | 3982.936 | 3842.862 | 3740.676 | 3689.009 | 3654.565 | 3649.972 |
| 10.0 | 4607.530 | 4446.789 | 4289.492 | 4013.936 | 3800.380 | 3670.639 | 3596.009 | 3589.120 | 3605.194 | 3638.491 |
| 12.5 | 4602.938 | 4399.715 | 4199.937 | 3863.528 | 3645.380 | 3548.935 | 3530.564 | 3576.490 | 3659.157 | 3752.158 |
| 15.0 | 4613.271 | 4362.974 | 4119.566 | 3725.750 | 3513.342 | 3455.935 | 3496.120 | 3599.454 | 3739.528 | 3876.158 |
| 17.5 | 4620.160 | 4328.529 | 4044.936 | 3601.750 | 3403.120 | 3382.453 | 3451.342 | 3589.120 | 3730.343 | 3866.973 |
| 20.0 | 4625.901 | 4295.233 | 3978.343 | 3492.675 | 3312.416 | 3317.008 | 3384.749 | 3493.824 | 3610.935 | 3751.009 |
| 22.5 | 4643.123 | 4271.122 | 3915.195 | 3391.638 | 3237.786 | 3256.156 | 3287.156 | 3351.453 | 3453.638 | 3589.120 |
| 25.0 | 4676.419 | 4263.085 | 3861.232 | 3308.971 | 3179.230 | 3193.008 | 3165.452 | 3205.638 | 3279.119 | 3413.453 |

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PHOTOMETRIC FILENAME : VA2-L280-750-T4-F-S-XXX-DIM-UNV_.IES

CANDELA TABULATION - (Cont.)

| | | | | | | | | | | |
|------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 27.5 | 4738.419 | 4274.566 | 3824.491 | 3248.119 | 3135.600 | 3113.786 | 3051.785 | 3064.415 | 3129.860 | 3244.675 |
| 30.0 | 4831.420 | 4313.603 | 3811.861 | 3204.490 | 3102.304 | 3026.526 | 2950.748 | 2945.007 | 2990.933 | 3097.712 |
| 32.5 | 4960.012 | 4380.196 | 3817.602 | 3173.489 | 3078.193 | 2946.156 | 2858.896 | 2832.489 | 2873.822 | 3012.748 |
| 35.0 | 5123.050 | 4472.048 | 3842.862 | 3155.119 | 3054.082 | 2878.415 | 2773.933 | 2724.562 | 2809.526 | 2967.970 |
| 37.5 | 5327.421 | 4592.604 | 3893.380 | 3159.712 | 3012.748 | 2815.266 | 2677.488 | 2657.970 | 2768.192 | 2941.563 |
| 40.0 | 5596.088 | 4771.716 | 3982.936 | 3194.156 | 2964.526 | 2760.155 | 2591.377 | 2620.081 | 2728.007 | 2935.822 |
| 42.5 | 5929.052 | 5025.457 | 4123.010 | 3236.638 | 2931.230 | 2721.118 | 2544.303 | 2578.747 | 2699.303 | 2932.378 |
| 45.0 | 6325.164 | 5342.347 | 4330.826 | 3273.379 | 2917.452 | 2684.377 | 2529.377 | 2536.266 | 2674.044 | 2908.267 |
| 47.5 | 6794.758 | 5755.681 | 4600.641 | 3306.675 | 2912.859 | 2648.784 | 2502.969 | 2494.932 | 2637.303 | 2768.192 |
| 50.0 | 7333.241 | 6258.571 | 4919.827 | 3364.083 | 2917.452 | 2608.599 | 2461.636 | 2450.154 | 2486.895 | 2703.896 |
| 52.5 | 7913.057 | 6772.943 | 5276.902 | 3482.342 | 2941.563 | 2590.229 | 2416.858 | 2396.191 | 2352.561 | 2671.747 |
| 55.0 | 8591.614 | 7578.945 | 5929.052 | 3612.083 | 2970.267 | 2628.118 | 2422.599 | 2298.598 | 2297.450 | 2604.007 |
| 57.5 | 9644.469 | 8781.059 | 6539.868 | 3728.046 | 3088.526 | 2778.526 | 2558.081 | 2343.376 | 2349.117 | 2532.821 |
| 60.0 | 10798.361 | 9426.320 | 6966.981 | 3950.788 | 3225.156 | 2870.378 | 2674.044 | 2460.488 | 2533.969 | 2574.155 |
| 62.5 | 10793.768 | 9450.431 | 7410.167 | 4113.825 | 3224.008 | 2845.118 | 2630.414 | 2423.747 | 2677.488 | 2546.599 |
| 65.0 | 10050.914 | 9057.764 | 7192.018 | 3999.010 | 3204.490 | 2843.970 | 2525.932 | 2196.413 | 2525.932 | 2345.673 |
| 67.5 | 7473.315 | 6530.683 | 4891.123 | 3008.156 | 2933.526 | 2816.415 | 2421.451 | 1977.116 | 2246.932 | 2142.450 |
| 70.0 | 3597.157 | 2862.341 | 2078.153 | 1649.893 | 2087.339 | 2583.340 | 2366.339 | 1778.486 | 1986.301 | 2042.561 |
| 72.0 | 1822.116 | 1435.189 | 1204.410 | 1080.410 | 1333.003 | 2176.894 | 2335.339 | 1595.930 | 1713.041 | 1870.338 |
| 72.5 | 1696.967 | 1292.818 | 1105.669 | 1010.373 | 1194.077 | 2118.339 | 2313.524 | 1547.708 | 1637.263 | 1814.079 |
| 75.0 | 1011.521 | 850.780 | 760.076 | 733.669 | 801.409 | 1396.152 | 1990.894 | 1311.188 | 1272.151 | 1484.559 |
| 77.5 | 676.261 | 575.224 | 536.187 | 522.409 | 575.224 | 819.780 | 1505.226 | 1122.892 | 1002.336 | 1141.262 |
| 80.0 | 450.075 | 378.890 | 358.223 | 359.371 | 398.408 | 523.557 | 961.002 | 868.002 | 773.854 | 873.743 |
| 82.5 | 254.890 | 205.519 | 199.778 | 213.556 | 242.260 | 307.704 | 517.816 | 633.779 | 566.038 | 653.298 |
| 85.0 | 104.482 | 79.222 | 76.926 | 86.111 | 106.778 | 138.926 | 244.556 | 304.260 | 274.408 | 301.964 |
| 87.5 | 16.074 | 11.482 | 10.333 | 13.778 | 21.815 | 31.000 | 64.296 | 70.037 | 64.296 | 59.704 |
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

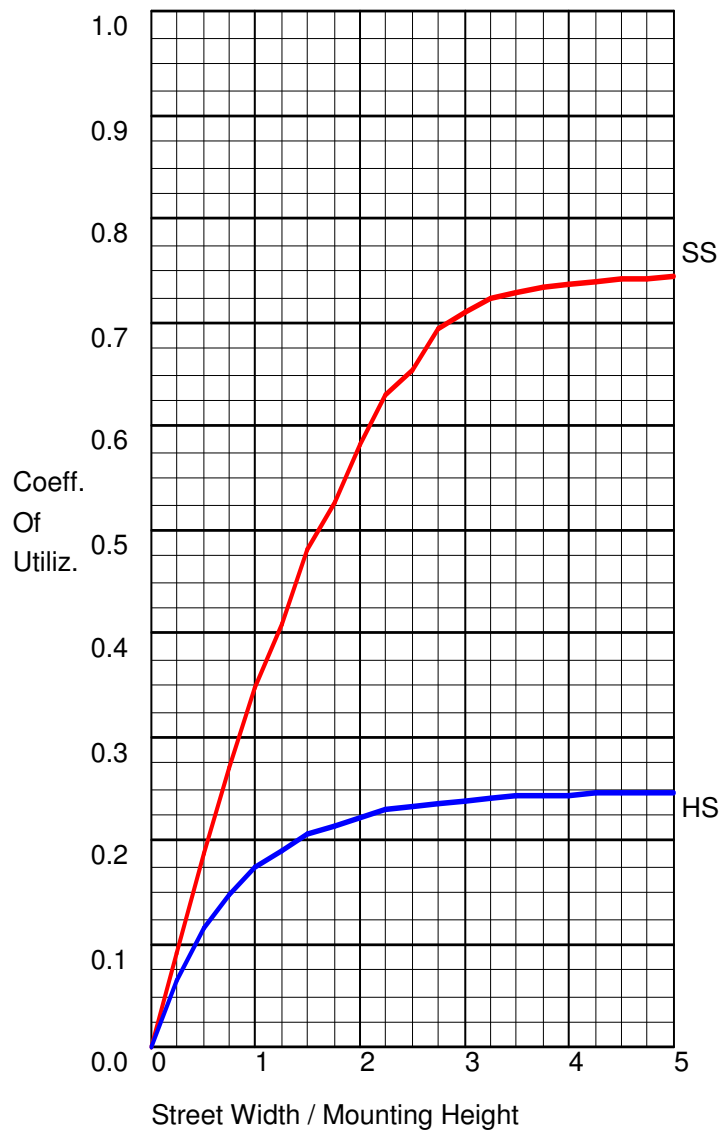
Vert. Horizontal Angles

| | <u>175.0</u> | <u>180.0</u> |
|------|--------------|--------------|
| 0.0 | 4616.715 | 4616.715 |
| 2.5 | 4219.455 | 4233.233 |
| 5.0 | 3827.936 | 3837.121 |
| 7.5 | 3646.528 | 3648.824 |
| 10.0 | 3658.009 | 3655.713 |
| 12.5 | 3802.676 | 3800.380 |
| 15.0 | 3947.343 | 3948.491 |
| 17.5 | 3941.603 | 3950.788 |
| 20.0 | 3837.121 | 3852.047 |
| 22.5 | 3680.972 | 3701.639 |
| 25.0 | 3513.342 | 3530.564 |
| 27.5 | 3345.712 | 3362.934 |
| 30.0 | 3211.378 | 3226.304 |
| 32.5 | 3144.786 | 3164.304 |
| 35.0 | 3105.749 | 3126.415 |
| 37.5 | 3105.749 | 3119.526 |
| 40.0 | 3124.119 | 3127.563 |
| 42.5 | 3120.675 | 3125.267 |
| 45.0 | 3044.897 | 3042.600 |
| 47.5 | 2956.489 | 2970.267 |
| 50.0 | 2981.748 | 2996.674 |
| 52.5 | 2990.933 | 2998.971 |
| 55.0 | 2932.378 | 2943.859 |
| 57.5 | 2852.007 | 2868.081 |
| 60.0 | 2765.896 | 2780.822 |

IES ROAD REPORT**PHOTOMETRIC FILENAME : VA2-L280-750-T4-F-S-XXX-DIM-UNV_.IES****CANDELA TABULATION - (Cont.)**

| | | |
|-------------|----------|----------|
| 62.5 | 2615.488 | 2635.007 |
| 65.0 | 2403.080 | 2450.154 |
| 67.5 | 2179.191 | 2256.117 |
| 70.0 | 1941.523 | 2046.005 |
| 72.0 | 1760.116 | 1868.042 |
| 72.5 | 1711.893 | 1816.375 |
| 75.0 | 1426.004 | 1513.263 |
| 77.5 | 1187.188 | 1303.151 |
| 80.0 | 1098.781 | 1196.373 |
| 82.5 | 610.816 | 659.039 |
| 85.0 | 215.852 | 206.667 |
| 87.5 | 28.704 | 6.889 |
| 90.0 | 0.000 | 0.000 |

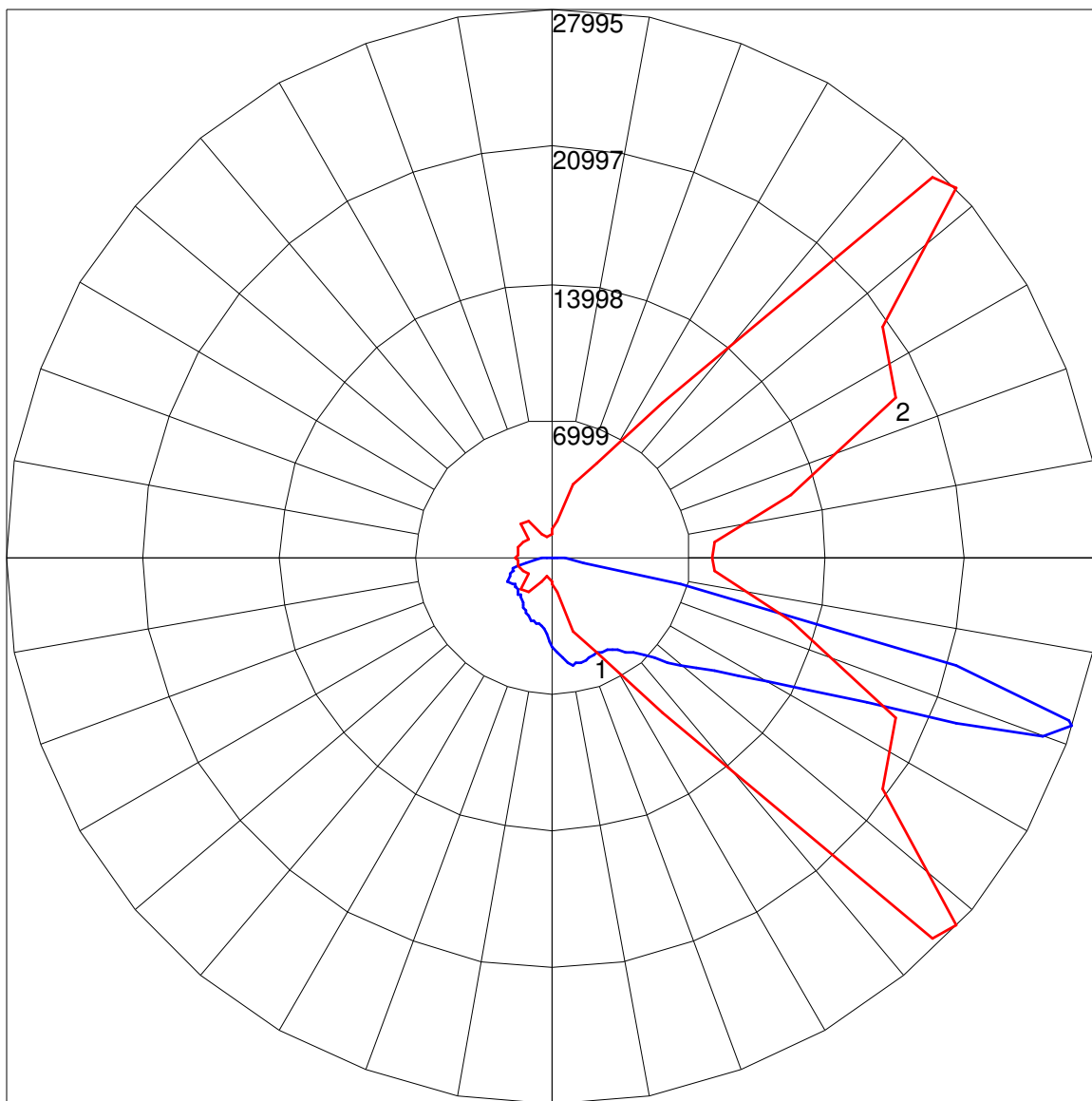
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

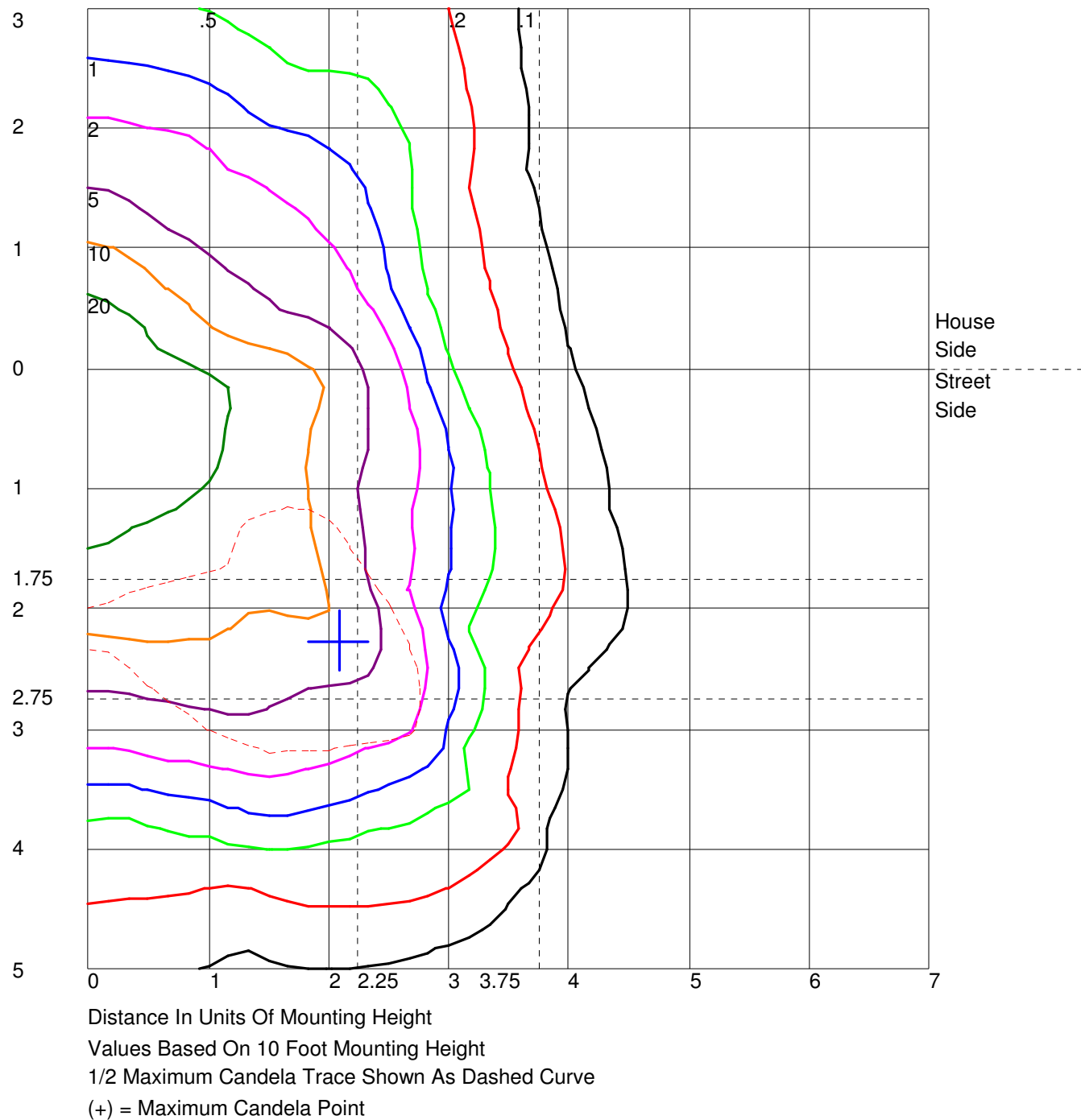
| | Lumens | Percent Of Luminaire |
|----------------------|---------|----------------------|
| Downward Street Side | 22008.6 | 74.9 |
| Downward House Side | 7378.7 | 25.1 |
| Downward Total | 29387.3 | 100.0 |
| Upward Street Side | 0.0 | 0.0 |
| Upward House Side | 0.0 | 0.0 |
| Upward Total | 0.0 | 0.0 |
| Total Flux | 29387.3 | 100.0 |

POLAR GRAPH

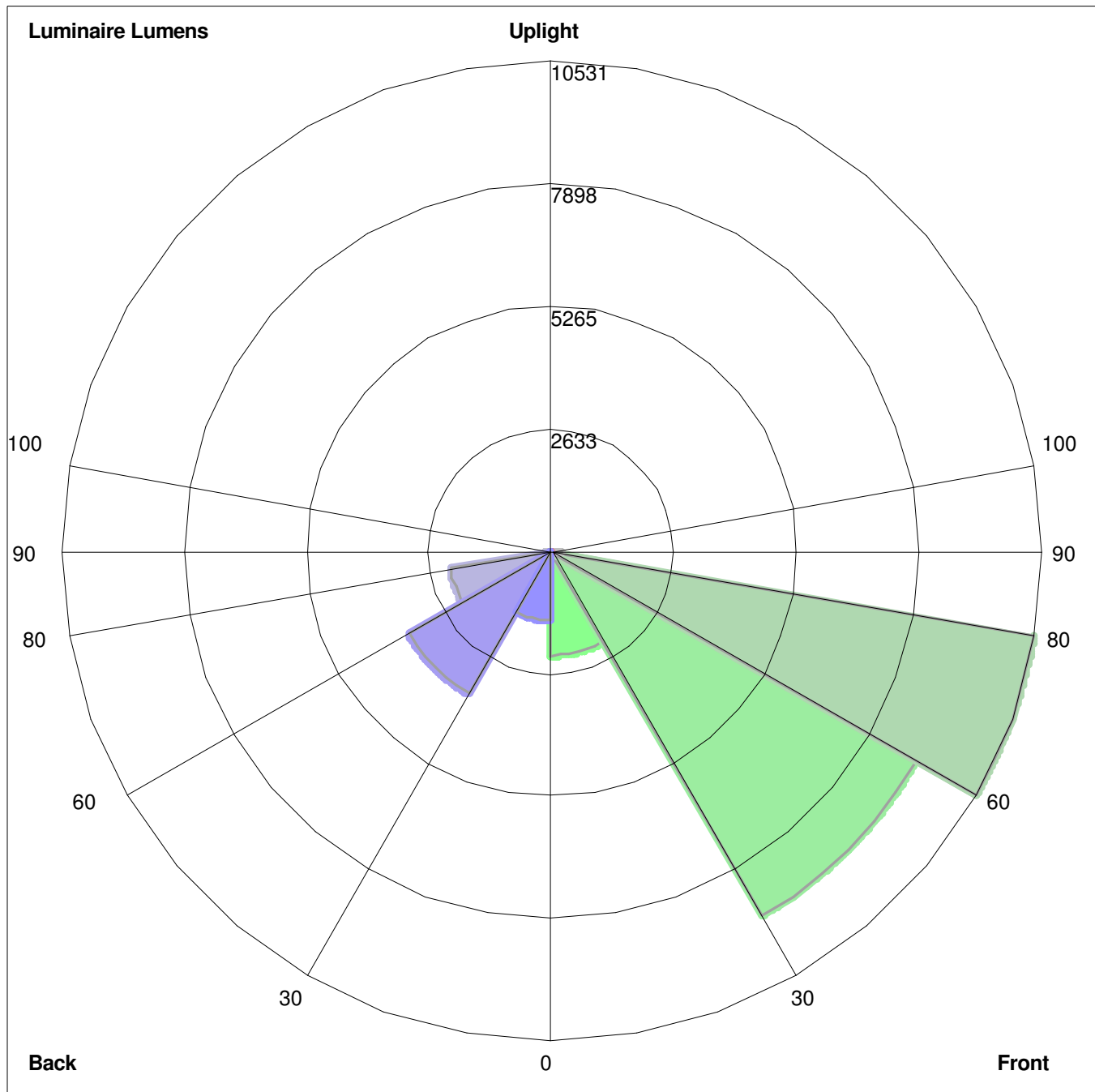


Maximum Candela = 27995.367 Located At Horizontal Angle = 42.5, Vertical Angle = 72
1 - Vertical Plane Through Horizontal Angles (42.5 - 222.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (72) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=2244.9, Medium=9047.6, High=10530.8, Very High=185.2
Back: Low=1489.5, Medium=3550.2, High=2200.3, Very High=138.7
Uplight: Low=0.0, High=0.0

BUG Rating : B3-U0-G4