



OUTDOOR LIGHTING SPECIALISTS SINCE 1972

IES ROAD REPORT

PHOTOMETRIC FILENAME : NILAND FR T3 G SHORT CUTOFF AP LED175.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TESTLAB] Photopia 3.1.5 see: www.ltiophics.com/ies

[ISSUEDATE]

[TEST] 1

[TESTDATE] Wed Aug 04 20:06:53 2010

[MANUFAC]

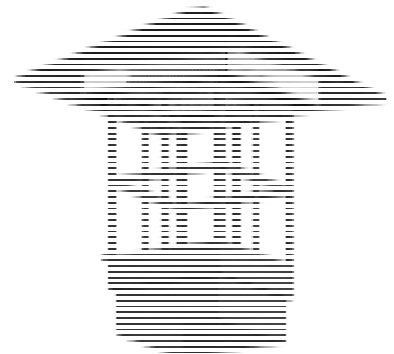
[LUMINAIRE] Niland Fr T3 G Short Cutoff AP

[LAMP] LED Cree XPG, Fr F1G Left & Right

[LAMPCAT] 3535 XPG, FRNRDLT, FRNRDRT

CHARACTERISTICS

| | |
|---|----------------------------|
| IES Classification | Type III |
| Longitudinal Classification | Short |
| Cutoff Classification (deprecated) | Cutoff |
| Lumens Per Lamp | 270 (54 lamps) |
| Total Lamp Lumens | 14580 |
| Luminaire Lumens | 6687 |
| Total Luminaire Efficiency | 46 % |
| Downward Total Efficiency | 46 % |
| Upward Waste Light Ratio | 0.00 |
| Maximum Candela | 4459.004 |
| Maximum Candela Angle | 70H 60V |
| Maximum Candela At 90 Degrees Vertical | 2.74 (0.0% Lamp Lumens) |
| Maximum Candela from 80 to <90 Degrees Vertical | 478.738 (3.3% Lamp Lumens) |
| Total Luminaire Watts | 173.23 |
| Ballast Factor | 1.00 |



IES ROAD REPORT**PHOTOMETRIC FILENAME : NILAND FR T3 G SHORT CUTOFF AP LED175.IES****LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

| | Lumens | % Lamp | % Luminaire |
|-------------------------------|----------|--------|-------------|
| FL - Front-Low (0-30) | 495.9 | 3.4 | 7.4 |
| FM - Front-Medium (30-60) | 2282.1 | 15.7 | 34.1 |
| FH - Front-High (60-80) | 1887.1 | 12.9 | 28.2 |
| FVH - Front-Very High (80-90) | 46.2 | 0.3 | 0.7 |
| BL - Back-Low (0-30) | 392.0 | 2.7 | 5.9 |
| BM - Back-Medium (30-60) | 984.3 | 6.8 | 14.7 |
| BH - Back-High (60-80) | 566.2 | 3.9 | 8.5 |
| BVH - Back-Very High (80-90) | 22.0 | 0.2 | 0.3 |
| UL - Uplight-Low (90-100) | 0.5 | 0.0 | 0.0 |
| UH - Uplight-High (100-180) | 10.5 | 0.1 | 0.2 |
| Total | 6686.8 | 46.0 | 100.0 |
| BUG Rating | B2-U2-G2 | | |

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CANDELA TABULATION

| Vert. Angles | Horizontal Angles | | | | | | | | | |
|-----------------|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | <u>0</u> | <u>10</u> | <u>20</u> | <u>30</u> | <u>40</u> | <u>50</u> | <u>60</u> | <u>70</u> | <u>80</u> | <u>90</u> |
| 0 | 1789.371 | 1789.371 | 1789.371 | 1789.371 | 1789.371 | 1789.371 | 1789.371 | 1789.371 | 1789.371 | 1789.371 |
| 5 | 1811.353 | 1824.407 | 1866.000 | 1884.318 | 1908.086 | 1876.160 | 1832.565 | 1853.347 | 1846.450 | 1808.644 |
| 10 | 1756.491 | 1833.551 | 1872.188 | 1894.016 | 1809.013 | 1759.508 | 1764.957 | 1713.974 | 1693.932 | 1617.210 |
| 15 | 1740.266 | 1800.732 | 1802.825 | 1741.436 | 1723.764 | 1429.133 | 1122.309 | 943.375 | 854.062 | 789.286 |
| 20 | 1246.874 | 1331.723 | 1477.253 | 1505.330 | 1069.941 | 668.786 | 596.775 | 718.199 | 805.234 | 808.220 |
| 25 | 487.943 | 505.861 | 538.988 | 622.606 | 581.566 | 764.103 | 901.136 | 1141.582 | 1294.870 | 1257.156 |
| 30 | 781.189 | 908.370 | 752.311 | 581.690 | 1037.768 | 1380.489 | 1171.445 | 1367.836 | 1384.645 | 1329.013 |
| 35 | 1321.994 | 1684.634 | 1483.933 | 1059.812 | 1621.736 | 1574.262 | 1279.539 | 1532.361 | 1596.860 | 1512.904 |
| 40 | 1263.683 | 1585.438 | 1695.686 | 1324.795 | 1611.792 | 1673.335 | 1606.620 | 1825.638 | 1894.940 | 1711.419 |
| 45 | 1060.212 | 1340.558 | 1399.916 | 1119.785 | 1683.833 | 2101.829 | 2072.796 | 2286.704 | 2272.635 | 2015.748 |
| 50 | 994.451 | 1274.643 | 1259.096 | 1078.653 | 1959.623 | 2610.214 | 2717.507 | 3001.240 | 3046.466 | 2600.670 |
| 55 | 1252.908 | 1548.155 | 1523.526 | 1204.541 | 2118.084 | 3188.733 | 3807.121 | 3994.275 | 3966.659 | 3302.768 |
| 60 | 1110.087 | 1422.667 | 1381.782 | 1147.278 | 2067.809 | 3343.561 | 4243.988 | 4459.004 | 4413.501 | 3532.039 |
| 65 | 1048.759 | 1330.491 | 1279.108 | 978.072 | 1742.390 | 3034.059 | 4131.338 | 4237.615 | 4198.824 | 3210.715 |
| 70 | 844.426 | 1067.724 | 1035.767 | 762.378 | 1345.269 | 2472.720 | 3643.888 | 3635.729 | 3687.328 | 2744.569 |
| 75 | 515.436 | 632.704 | 667.585 | 487.635 | 771.368 | 1456.225 | 2007.743 | 1851.222 | 1982.344 | 1571.461 |
| 80 | 121.024 | 163.633 | 205.011 | 158.707 | 206.889 | 394.720 | 478.738 | 404.326 | 438.838 | 365.811 |
| 85 | 4.987 | 4.680 | 4.803 | 5.111 | 7.851 | 12.961 | 20.289 | 36.914 | 54.832 | 51.199 |
| 90 | 0.554 | 0.585 | 0.616 | 0.431 | 0.462 | 0.800 | 1.539 | 2.648 | 2.740 | 1.755 |
| 95 | 0.369 | 0.339 | 0.308 | 0.185 | 0.123 | 0.154 | 0.246 | 0.493 | 0.431 | 0.154 |
| 100 | 0.246 | 0.308 | 0.277 | 0.216 | 0.123 | 0.185 | 0.246 | 0.277 | 0.277 | 0.216 |
| 105 | 0.308 | 0.308 | 0.277 | 0.277 | 0.185 | 0.277 | 0.308 | 0.308 | 0.277 | 0.216 |
| 110 | 0.339 | 0.339 | 0.431 | 0.308 | 0.339 | 0.523 | 0.523 | 0.493 | 0.431 | 0.369 |
| 115 | 0.708 | 0.800 | 0.831 | 0.893 | 0.954 | 1.047 | 1.108 | 0.862 | 0.739 | 0.616 |
| 120 | 1.355 | 1.570 | 1.724 | 2.001 | 2.155 | 2.186 | 2.155 | 1.755 | 1.539 | 1.293 |
| 125 | 2.648 | 3.017 | 3.356 | 3.571 | 3.910 | 4.002 | 3.972 | 3.417 | 3.079 | 2.340 |
| 130 | 3.479 | 3.787 | 4.218 | 4.710 | 5.388 | 5.819 | 5.419 | 4.895 | 4.218 | 3.510 |
| 135 | 3.848 | 3.848 | 4.218 | 5.080 | 6.342 | 6.619 | 6.281 | 5.819 | 5.080 | 4.249 |
| 140 | 3.664 | 4.033 | 4.680 | 5.172 | 6.219 | 6.742 | 6.835 | 6.188 | 5.572 | 4.987 |
| 145 | 3.910 | 4.218 | 4.772 | 5.726 | 6.465 | 6.773 | 6.712 | 6.003 | 5.634 | 4.618 |
| 150 | 3.664 | 3.972 | 4.618 | 5.665 | 6.311 | 6.496 | 5.850 | 5.203 | 4.895 | 4.372 |
| 155 | 3.263 | 3.448 | 4.033 | 4.680 | 5.388 | 5.419 | 5.203 | 4.772 | 4.495 | 3.972 |
| 160 | 2.586 | 2.771 | 2.925 | 3.079 | 3.448 | 3.633 | 3.972 | 3.879 | 3.879 | 3.571 |
| 165 | 1.416 | 1.447 | 1.293 | 1.324 | 1.693 | 2.124 | 2.032 | 2.309 | 2.309 | 2.094 |
| 170 | 0.493 | 0.554 | 0.523 | 0.308 | 0.092 | 0.092 | 0.431 | 0.677 | 0.893 | 0.924 |
| 175 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 180 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

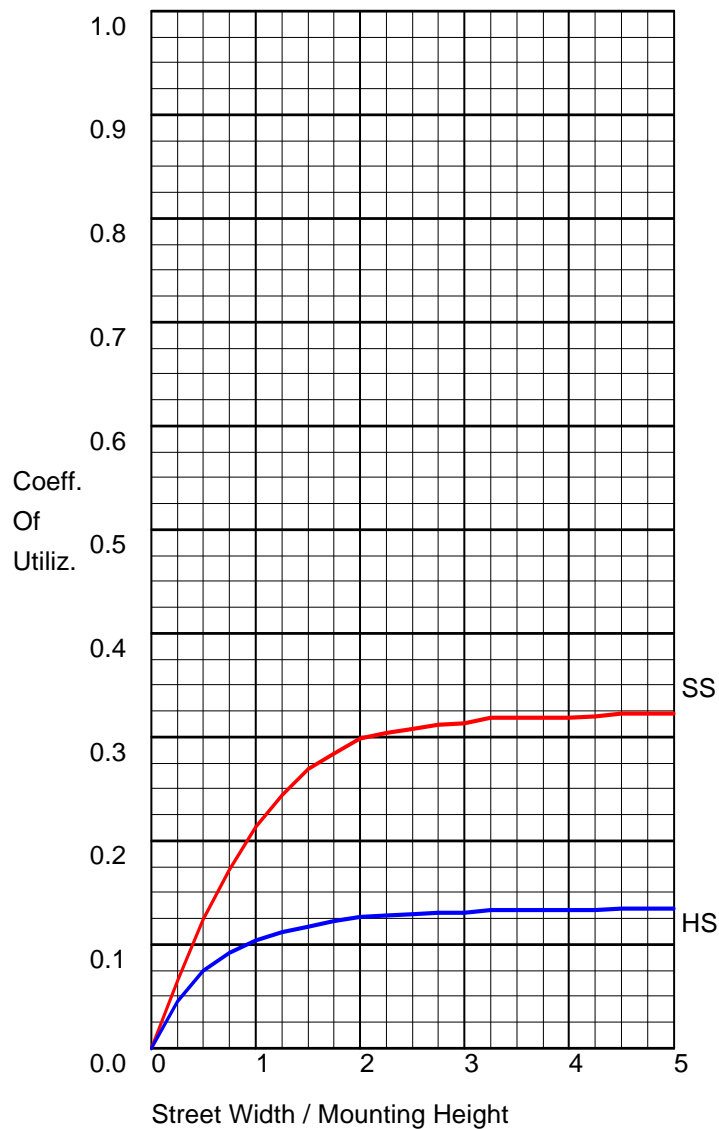
| Vert. Angles | Horizontal Angles | | | | | | | | |
|-----------------|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | <u>100</u> | <u>110</u> | <u>120</u> | <u>130</u> | <u>140</u> | <u>150</u> | <u>160</u> | <u>170</u> | <u>180</u> |
| 0 | 1789.371 | 1789.371 | 1789.371 | 1789.371 | 1789.371 | 1789.371 | 1789.371 | 1789.371 | 1789.371 |
| 5 | 1771.053 | 1742.360 | 1673.643 | 1494.617 | 1351.765 | 1199.000 | 1116.121 | 1055.471 | 1060.766 |
| 10 | 1569.768 | 1381.074 | 969.267 | 784.730 | 844.087 | 877.491 | 941.159 | 909.079 | 949.071 |
| 15 | 765.981 | 654.747 | 751.911 | 903.968 | 969.975 | 994.851 | 1037.460 | 1018.188 | 984.753 |
| 20 | 724.603 | 615.771 | 810.098 | 967.297 | 967.789 | 937.156 | 982.444 | 980.720 | 977.395 |
| 25 | 1077.237 | 682.886 | 707.301 | 869.579 | 911.388 | 879.523 | 840.085 | 761.917 | 752.250 |
| 30 | 1047.836 | 694.801 | 792.858 | 898.826 | 830.972 | 749.756 | 730.452 | 696.771 | 724.049 |
| 35 | 1164.611 | 822.659 | 866.623 | 875.921 | 806.650 | 727.528 | 709.456 | 762.255 | 797.106 |
| 40 | 1240.470 | 815.917 | 838.977 | 826.138 | 717.214 | 686.365 | 712.196 | 750.218 | 760.932 |
| 45 | 1316.822 | 824.537 | 753.050 | 690.183 | 598.961 | 583.444 | 612.292 | 686.335 | 690.830 |
| 50 | 1543.814 | 829.894 | 678.299 | 577.533 | 506.754 | 511.126 | 529.690 | 634.397 | 646.989 |
| 55 | 1773.454 | 882.817 | 628.824 | 514.543 | 477.260 | 501.274 | 530.460 | 645.111 | 730.976 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | | | |
|------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| 60 | 1766.589 | 841.932 | 588.032 | 499.581 | 472.673 | 494.624 | 515.713 | 583.814 | 663.460 |
| 65 | 1487.997 | 727.651 | 536.186 | 464.545 | 426.923 | 427.108 | 446.442 | 490.037 | 523.133 |
| 70 | 1173.785 | 538.311 | 407.127 | 376.094 | 347.739 | 334.655 | 357.868 | 391.795 | 396.598 |
| 75 | 683.533 | 299.404 | 241.801 | 243.340 | 222.128 | 214.555 | 236.660 | 246.696 | 244.079 |
| 80 | 191.156 | 106.800 | 90.606 | 100.858 | 93.439 | 97.010 | 101.351 | 99.411 | 89.313 |
| 85 | 29.463 | 17.364 | 15.578 | 17.826 | 14.501 | 14.008 | 14.562 | 13.669 | 11.299 |
| 90 | 2.186 | 1.570 | 0.800 | 0.647 | 0.616 | 0.739 | 1.108 | 1.601 | 1.108 |
| 95 | 0.246 | 0.185 | 0.092 | 0.123 | 0.154 | 0.216 | 0.369 | 0.523 | 0.400 |
| 100 | 0.123 | 0.092 | 0.092 | 0.092 | 0.123 | 0.185 | 0.308 | 0.400 | 0.369 |
| 105 | 0.154 | 0.123 | 0.123 | 0.154 | 0.185 | 0.216 | 0.277 | 0.308 | 0.400 |
| 110 | 0.246 | 0.154 | 0.185 | 0.246 | 0.246 | 0.246 | 0.277 | 0.308 | 0.369 |
| 115 | 0.431 | 0.308 | 0.308 | 0.431 | 0.462 | 0.493 | 0.400 | 0.400 | 0.431 |
| 120 | 0.893 | 0.585 | 0.585 | 0.708 | 0.862 | 0.862 | 0.677 | 0.647 | 0.585 |
| 125 | 1.539 | 1.078 | 0.924 | 0.954 | 1.139 | 1.139 | 1.016 | 0.924 | 0.893 |
| 130 | 2.432 | 1.632 | 1.231 | 1.231 | 1.447 | 1.509 | 1.355 | 1.108 | 1.047 |
| 135 | 3.079 | 2.001 | 1.539 | 1.478 | 1.539 | 1.662 | 1.570 | 1.293 | 1.385 |
| 140 | 3.510 | 2.802 | 2.124 | 1.847 | 1.878 | 1.816 | 1.662 | 1.539 | 1.201 |
| 145 | 3.848 | 3.109 | 2.863 | 2.463 | 2.278 | 2.001 | 1.601 | 1.447 | 1.385 |
| 150 | 3.818 | 3.263 | 3.171 | 3.294 | 2.771 | 2.309 | 1.786 | 1.478 | 1.416 |
| 155 | 3.541 | 3.294 | 3.109 | 3.417 | 3.417 | 2.648 | 2.217 | 2.001 | 1.632 |
| 160 | 3.079 | 2.802 | 2.832 | 2.863 | 2.863 | 3.109 | 2.709 | 2.525 | 2.371 |
| 165 | 1.847 | 1.570 | 1.355 | 1.970 | 2.371 | 1.847 | 1.878 | 2.063 | 2.063 |
| 170 | 0.800 | 0.523 | 0.400 | 0.062 | 0.123 | 0.493 | 0.924 | 1.201 | 1.078 |
| 175 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 180 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

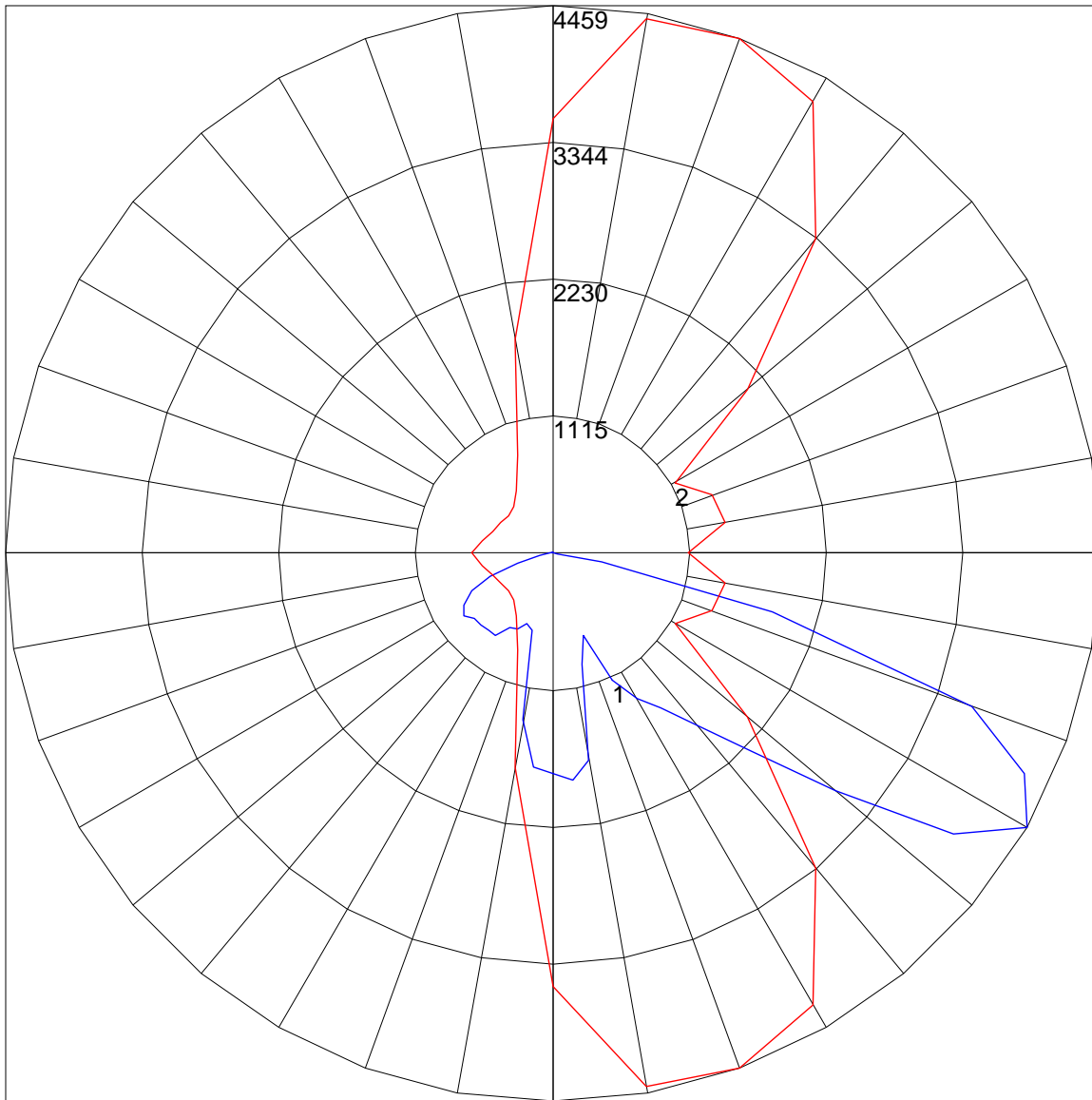
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

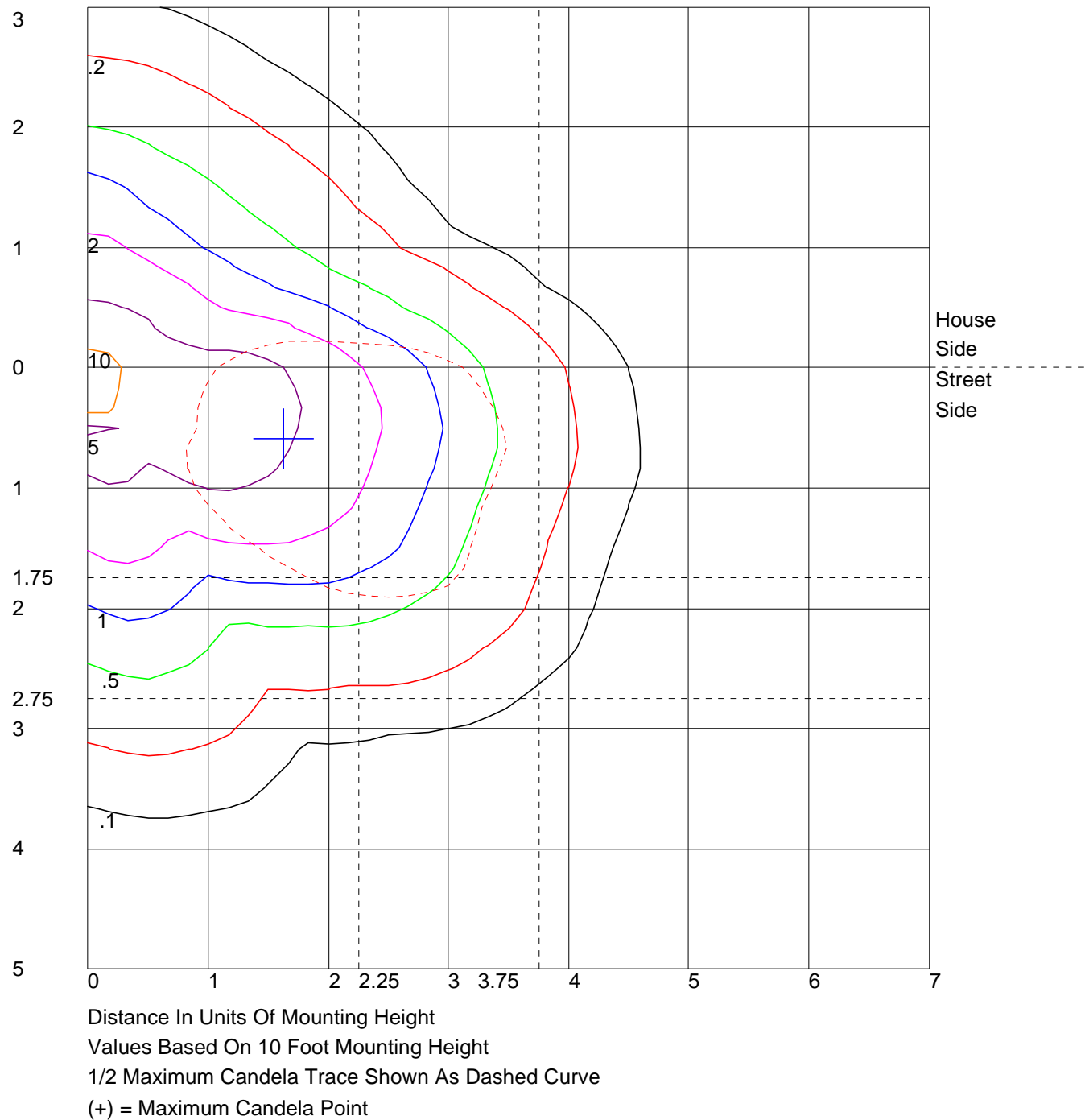
| | Lumens | Percent Of Lamp |
|----------------------|--------|--------------------|
| Downward Street Side | 4711.3 | 32.3 |
| Downward House Side | 1964.5 | 13.5 |
| Downward Total | 6675.8 | 45.8 |
| Upward Street Side | 7.5 | 0.1 |
| Upward House Side | 3.6 | 0.0 |
| Upward Total | 11.1 | 0.1 |
| Total Flux | 6686.9 | 45.9 |

POLAR GRAPH

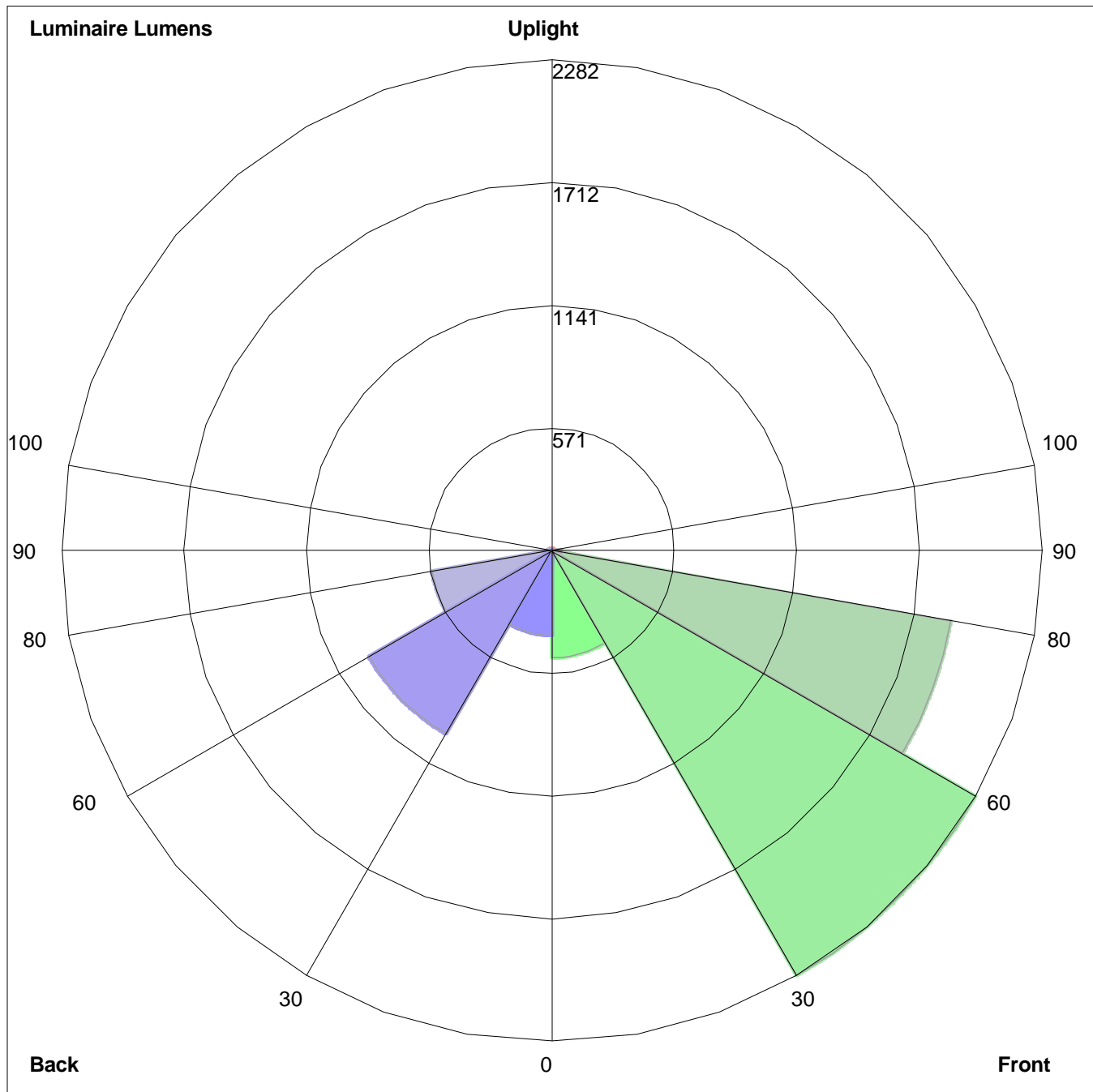


Maximum Candela = 4459.004 Located At Horizontal Angle = 70, Vertical Angle = 60
1 - Vertical Plane Through Horizontal Angles (70 - 250) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (60) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
 Front: Low=495.9, Medium=2282.1, High=1887.1, Very High=46.2
 Back: Low=392.0, Medium=984.3, High=566.2, Very High=22.0
 Uplight: Low=0.5, High=10.5

BUG Rating : B2-U2-G2