



OUTDOOR LIGHTING SPECIALISTS SINCE 1972

## IES ROAD REPORT

PHOTOMETRIC FILENAME : NILAND FR T2 D SHORT CUTOFF AP LED25.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TESTLAB] Photopia 3.1.5 see: [www.ltioptics.com/ies](http://www.ltioptics.com/ies)

[ISSUE DATE]

[TEST] 1

[TEST DATE] Tue Aug 03 23:04:48 2010

[MANUFAC]

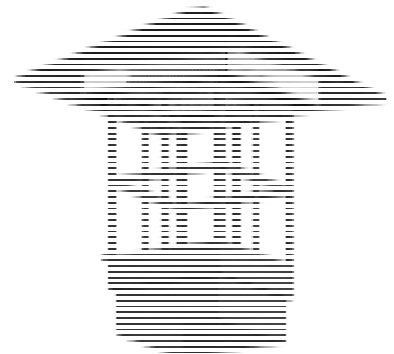
[LUMINAIRE] Niland Fr T2 D Short Cutoff AP

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

[LAMPCAT] 3535 XPG, FRNRDLT, FRNRDRT

### CHARACTERISTICS

|   |                           |
|---|---------------------------|
| IES Classification                              | Type II                   |
| Longitudinal Classification                     | Short                     |
| Cutoff Classification (deprecated)              | Cutoff                    |
| Lumens Per Lamp                                 | 47.7 (54 lamps)           |
| Total Lamp Lumens                               | 2575.8                    |
| Luminaire Lumens                                | 1153                      |
| Total Luminaire Efficiency                      | 45 %                      |
| Downward Total Efficiency                       | 45 %                      |
| Upward Waste Light Ratio                        | 0.00                      |
| Maximum Candela                                 | 764.783                   |
| Maximum Candela Angle                           | 80H 55V                   |
| Maximum Candela At 90 Degrees Vertical          | .484 (0.0% Lamp Lumens)   |
| Maximum Candela from 80 to <90 Degrees Vertical | 25.139 (1.0% Lamp Lumens) |
| Total Luminaire Watts                           | 21.4                      |
| Ballast Factor                                  | 1.00                      |



**IES ROAD REPORT****PHOTOMETRIC FILENAME : NILAND FR T2 D SHORT CUTOFF AP LED25.IES****LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

|                               | Lumens   | % Lamp | % Luminaire |
|-------------------------------|----------|--------|-------------|
| FL - Front-Low (0-30)         | 89.7     | 3.5    | 7.8         |
| FM - Front-Medium (30-60)     | 372.1    | 14.4   | 32.3        |
| FH - Front-High (60-80)       | 232.9    | 9.0    | 20.2        |
| FVH - Front-Very High (80-90) | 2.6      | 0.1    | 0.2         |
| BL - Back-Low (0-30)          | 74.7     | 2.9    | 6.5         |
| BM - Back-Medium (30-60)      | 231.8    | 9.0    | 20.1        |
| BH - Back-High (60-80)        | 145.1    | 5.6    | 12.6        |
| BVH - Back-Very High (80-90)  | 2.5      | 0.1    | 0.2         |
| UL - Uplight-Low (90-100)     | 0.1      | 0.0    | 0.0         |
| UH - Uplight-High (100-180)   | 1.9      | 0.1    | 0.2         |
| Total                         | 1153.4   | 44.7   | 100.0       |
| BUG Rating                    | B1-U1-G1 |        |             |

**IES ROAD REPORT**  
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**CANDELA TABULATION**

| Vert.<br>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> |
| <b>0</b>        | 337.267           | 337.267   | 337.267   | 337.267   | 337.267   | 337.267   | 337.267   | 337.267   | 337.267   | 337.267   |
| <b>5</b>        | 328.777           | 344.523   | 347.639   | 340.481   | 339.633   | 339.600   | 342.227   | 353.742   | 348.509   | 333.503   |
| <b>10</b>       | 323.474           | 327.074   | 330.425   | 331.861   | 328.749   | 326.416   | 306.651   | 297.921   | 291.568   | 281.017   |
| <b>15</b>       | 307.320           | 321.216   | 320.058   | 322.990   | 301.750   | 240.676   | 196.631   | 176.735   | 167.532   | 162.931   |
| <b>20</b>       | 178.274           | 196.870   | 226.388   | 240.600   | 182.261   | 131.754   | 129.590   | 150.878   | 158.944   | 160.956   |
| <b>25</b>       | 92.392            | 94.737    | 87.905    | 97.516    | 123.041   | 157.579   | 175.332   | 202.287   | 228.171   | 225.806   |
| <b>30</b>       | 168.158           | 188.429   | 156.437   | 123.922   | 194.450   | 241.225   | 206.100   | 241.644   | 265.586   | 268.420   |
| <b>35</b>       | 252.848           | 286.287   | 275.654   | 202.342   | 245.712   | 253.387   | 241.622   | 285.776   | 308.136   | 309.153   |
| <b>40</b>       | 225.822           | 256.601   | 267.664   | 213.198   | 221.155   | 258.820   | 279.129   | 326.427   | 351.746   | 351.501   |
| <b>45</b>       | 186.612           | 222.341   | 237.663   | 181.385   | 222.036   | 268.687   | 331.632   | 411.917   | 424.253   | 416.448   |
| <b>50</b>       | 226.556           | 255.296   | 234.274   | 180.205   | 231.652   | 298.938   | 384.793   | 569.871   | 614.939   | 615.548   |
| <b>55</b>       | 228.737           | 266.854   | 265.532   | 190.311   | 231.631   | 292.014   | 457.654   | 721.201   | 764.783   | 761.177   |
| <b>60</b>       | 217.016           | 251.238   | 244.663   | 178.590   | 213.551   | 266.935   | 436.616   | 711.503   | 736.881   | 738.361   |
| <b>65</b>       | 189.517           | 215.700   | 206.747   | 152.123   | 179.139   | 194.526   | 338.741   | 618.050   | 708.887   | 730.518   |
| <b>70</b>       | 132.151           | 144.150   | 150.252   | 113.980   | 113.381   | 116.563   | 240.763   | 486.905   | 549.459   | 553.190   |
| <b>75</b>       | 54.994            | 61.684    | 70.636    | 54.885    | 43.322    | 46.906    | 133.011   | 279.075   | 308.848   | 298.025   |
| <b>80</b>       | 2.796             | 3.378     | 6.347     | 6.728     | 5.406     | 8.284     | 20.630    | 25.139    | 19.880    | 17.269    |
| <b>85</b>       | 0.881             | 0.827     | 0.848     | 0.903     | 1.387     | 2.290     | 3.584     | 6.521     | 9.687     | 9.045     |
| <b>90</b>       | 0.098             | 0.103     | 0.109     | 0.076     | 0.082     | 0.141     | 0.272     | 0.468     | 0.484     | 0.310     |
| <b>95</b>       | 0.065             | 0.060     | 0.054     | 0.033     | 0.022     | 0.027     | 0.044     | 0.087     | 0.076     | 0.027     |
| <b>100</b>      | 0.044             | 0.054     | 0.049     | 0.038     | 0.022     | 0.033     | 0.044     | 0.049     | 0.049     | 0.038     |
| <b>105</b>      | 0.054             | 0.054     | 0.049     | 0.049     | 0.033     | 0.049     | 0.054     | 0.054     | 0.049     | 0.038     |
| <b>110</b>      | 0.060             | 0.060     | 0.076     | 0.054     | 0.060     | 0.092     | 0.092     | 0.087     | 0.076     | 0.065     |
| <b>115</b>      | 0.125             | 0.141     | 0.147     | 0.158     | 0.169     | 0.185     | 0.196     | 0.152     | 0.131     | 0.109     |
| <b>120</b>      | 0.239             | 0.277     | 0.305     | 0.354     | 0.381     | 0.386     | 0.381     | 0.310     | 0.272     | 0.228     |
| <b>125</b>      | 0.468             | 0.533     | 0.593     | 0.631     | 0.691     | 0.707     | 0.702     | 0.604     | 0.544     | 0.413     |
| <b>130</b>      | 0.615             | 0.669     | 0.745     | 0.832     | 0.952     | 1.028     | 0.957     | 0.865     | 0.745     | 0.620     |
| <b>135</b>      | 0.680             | 0.680     | 0.745     | 0.897     | 1.120     | 1.169     | 1.110     | 1.028     | 0.897     | 0.751     |
| <b>140</b>      | 0.647             | 0.713     | 0.827     | 0.914     | 1.099     | 1.191     | 1.207     | 1.093     | 0.984     | 0.881     |
| <b>145</b>      | 0.691             | 0.745     | 0.843     | 1.012     | 1.142     | 1.197     | 1.186     | 1.061     | 0.995     | 0.816     |
| <b>150</b>      | 0.647             | 0.702     | 0.816     | 1.001     | 1.115     | 1.148     | 1.033     | 0.919     | 0.865     | 0.772     |
| <b>155</b>      | 0.577             | 0.609     | 0.713     | 0.827     | 0.952     | 0.957     | 0.919     | 0.843     | 0.794     | 0.702     |
| <b>160</b>      | 0.457             | 0.490     | 0.517     | 0.544     | 0.609     | 0.642     | 0.702     | 0.685     | 0.685     | 0.631     |
| <b>165</b>      | 0.250             | 0.256     | 0.228     | 0.234     | 0.299     | 0.375     | 0.359     | 0.408     | 0.408     | 0.370     |
| <b>170</b>      | 0.087             | 0.098     | 0.092     | 0.054     | 0.016     | 0.016     | 0.076     | 0.120     | 0.158     | 0.163     |
| <b>175</b>      | 0.000             | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     |
| <b>180</b>      | 0.000             | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000     |

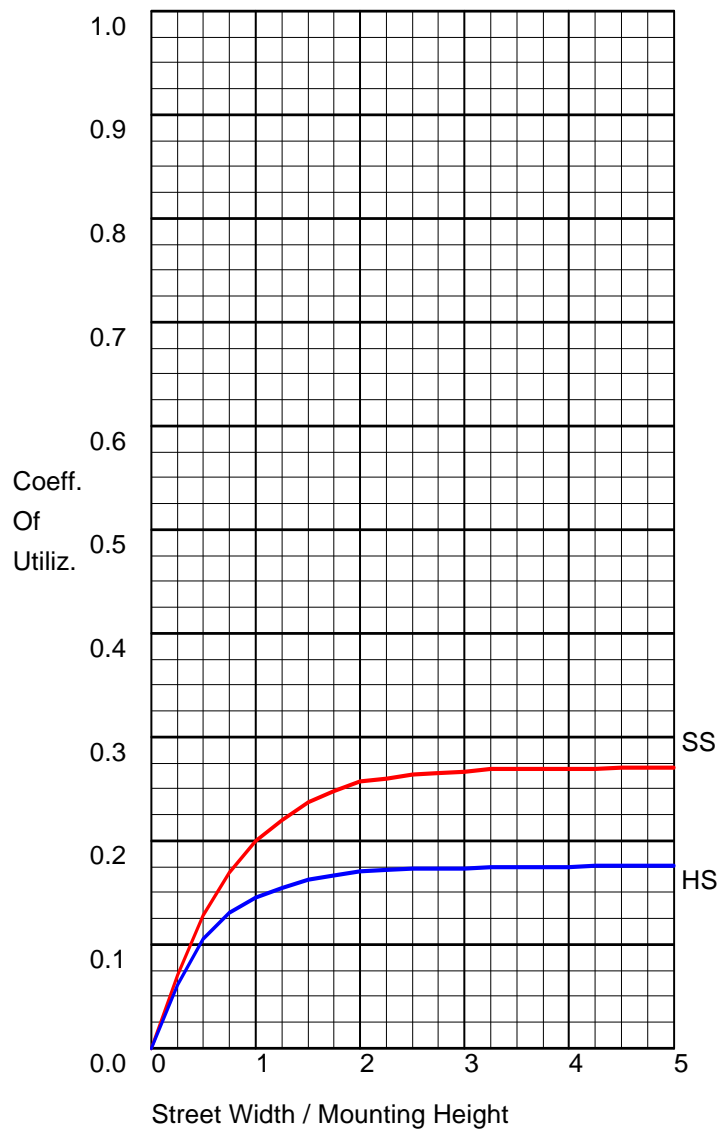
| Vert.<br>Angles | Horizontal Angles |            |            |            |            |            |            |            |            |
|-----------------|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                 | <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> |
| <b>0</b>        | 337.267           | 337.267    | 337.267    | 337.267    | 337.267    | 337.267    | 337.267    | 337.267    | 337.267    |
| <b>5</b>        | 326.906           | 320.259    | 312.052    | 291.090    | 273.631    | 255.296    | 237.418    | 224.359    | 212.415    |
| <b>10</b>       | 282.757           | 262.345    | 198.605    | 160.124    | 159.733    | 176.327    | 187.700    | 186.324    | 183.017    |
| <b>15</b>       | 156.725           | 138.890    | 137.993    | 179.117    | 180.830    | 184.464    | 188.663    | 188.929    | 175.419    |
| <b>20</b>       | 149.774           | 118.206    | 147.370    | 172.879    | 168.315    | 166.216    | 183.196    | 191.730    | 183.474    |
| <b>25</b>       | 198.355           | 137.580    | 119.500    | 151.351    | 166.281    | 164.160    | 155.653    | 153.619    | 144.563    |
| <b>30</b>       | 237.010           | 159.461    | 149.785    | 172.650    | 151.851    | 143.116    | 138.423    | 143.932    | 137.726    |
| <b>35</b>       | 269.736           | 195.418    | 185.008    | 177.377    | 152.830    | 132.684    | 131.782    | 143.138    | 141.039    |
| <b>40</b>       | 312.443           | 214.645    | 178.546    | 160.657    | 140.174    | 118.608    | 112.642    | 118.733    | 120.566    |
| <b>45</b>       | 369.031           | 252.565    | 176.740    | 132.706    | 105.935    | 98.838     | 100.545    | 110.178    | 112.288    |
| <b>50</b>       | 540.729           | 340.378    | 183.583    | 109.128    | 84.685     | 87.329     | 97.538     | 104.717    | 109.498    |
| <b>55</b>       | 672.391           | 417.960    | 194.510    | 97.494     | 78.496     | 78.833     | 96.455     | 110.825    | 112.582    |

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : NILAND FR T2 D SHORT CUTOFF AP LED25.IES**

**CANDELA TABULATION - (Cont.)**

|            |         |         |         |        |        |        |        |        |        |
|------------|---------|---------|---------|--------|--------|--------|--------|--------|--------|
| <b>60</b>  | 647.578 | 412.510 | 180.928 | 89.809 | 71.751 | 72.420 | 84.642 | 99.523 | 97.445 |
| <b>65</b>  | 626.023 | 362.553 | 141.490 | 73.579 | 59.769 | 59.704 | 67.775 | 78.936 | 79.110 |
| <b>70</b>  | 490.571 | 278.466 | 103.999 | 50.898 | 43.093 | 44.991 | 48.456 | 55.353 | 55.750 |
| <b>75</b>  | 276.622 | 155.534 | 55.663  | 27.331 | 24.345 | 26.836 | 28.854 | 30.540 | 30.817 |
| <b>80</b>  | 19.493  | 17.601  | 11.721  | 8.360  | 7.549  | 9.154  | 9.709  | 9.616  | 8.409  |
| <b>85</b>  | 5.205   | 3.068   | 2.752   | 3.149  | 2.562  | 2.475  | 2.573  | 2.415  | 1.996  |
| <b>90</b>  | 0.386   | 0.277   | 0.141   | 0.114  | 0.109  | 0.131  | 0.196  | 0.283  | 0.196  |
| <b>95</b>  | 0.044   | 0.033   | 0.016   | 0.022  | 0.027  | 0.038  | 0.065  | 0.092  | 0.071  |
| <b>100</b> | 0.022   | 0.016   | 0.016   | 0.016  | 0.022  | 0.033  | 0.054  | 0.071  | 0.065  |
| <b>105</b> | 0.027   | 0.022   | 0.022   | 0.027  | 0.033  | 0.038  | 0.049  | 0.054  | 0.071  |
| <b>110</b> | 0.044   | 0.027   | 0.033   | 0.044  | 0.044  | 0.044  | 0.049  | 0.054  | 0.065  |
| <b>115</b> | 0.076   | 0.054   | 0.054   | 0.076  | 0.082  | 0.087  | 0.071  | 0.071  | 0.076  |
| <b>120</b> | 0.158   | 0.103   | 0.103   | 0.125  | 0.152  | 0.152  | 0.120  | 0.114  | 0.103  |
| <b>125</b> | 0.272   | 0.190   | 0.163   | 0.169  | 0.201  | 0.201  | 0.179  | 0.163  | 0.158  |
| <b>130</b> | 0.430   | 0.288   | 0.218   | 0.218  | 0.256  | 0.267  | 0.239  | 0.196  | 0.185  |
| <b>135</b> | 0.544   | 0.354   | 0.272   | 0.261  | 0.272  | 0.294  | 0.277  | 0.228  | 0.245  |
| <b>140</b> | 0.620   | 0.495   | 0.375   | 0.326  | 0.332  | 0.321  | 0.294  | 0.272  | 0.212  |
| <b>145</b> | 0.680   | 0.549   | 0.506   | 0.435  | 0.402  | 0.354  | 0.283  | 0.256  | 0.245  |
| <b>150</b> | 0.674   | 0.577   | 0.560   | 0.582  | 0.490  | 0.408  | 0.315  | 0.261  | 0.250  |
| <b>155</b> | 0.625   | 0.582   | 0.549   | 0.604  | 0.604  | 0.468  | 0.392  | 0.354  | 0.288  |
| <b>160</b> | 0.544   | 0.495   | 0.500   | 0.506  | 0.506  | 0.549  | 0.479  | 0.446  | 0.419  |
| <b>165</b> | 0.326   | 0.277   | 0.239   | 0.348  | 0.419  | 0.326  | 0.332  | 0.364  | 0.364  |
| <b>170</b> | 0.141   | 0.092   | 0.071   | 0.011  | 0.022  | 0.087  | 0.163  | 0.212  | 0.190  |
| <b>175</b> | 0.000   | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| <b>180</b> | 0.000   | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |

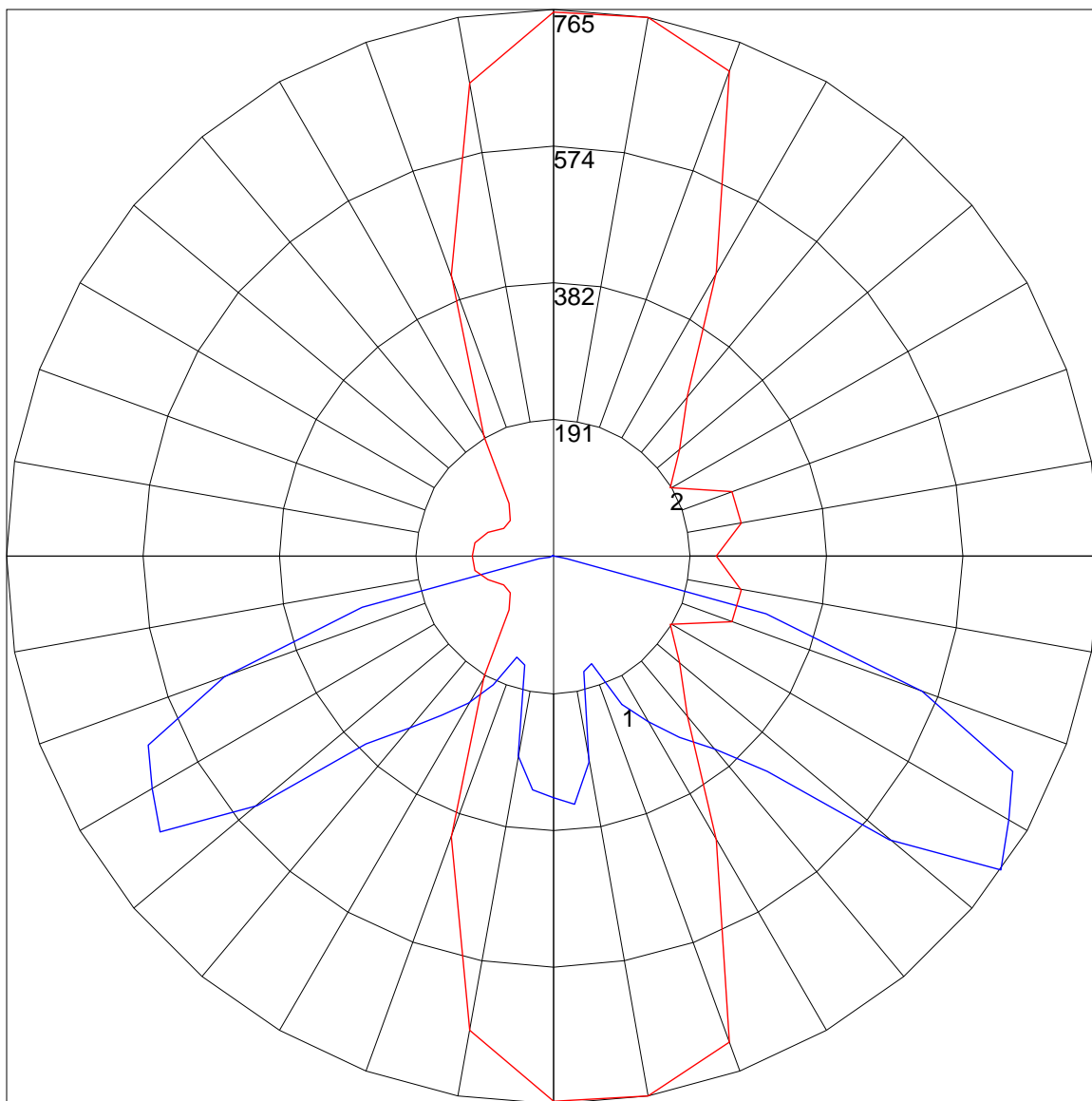
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

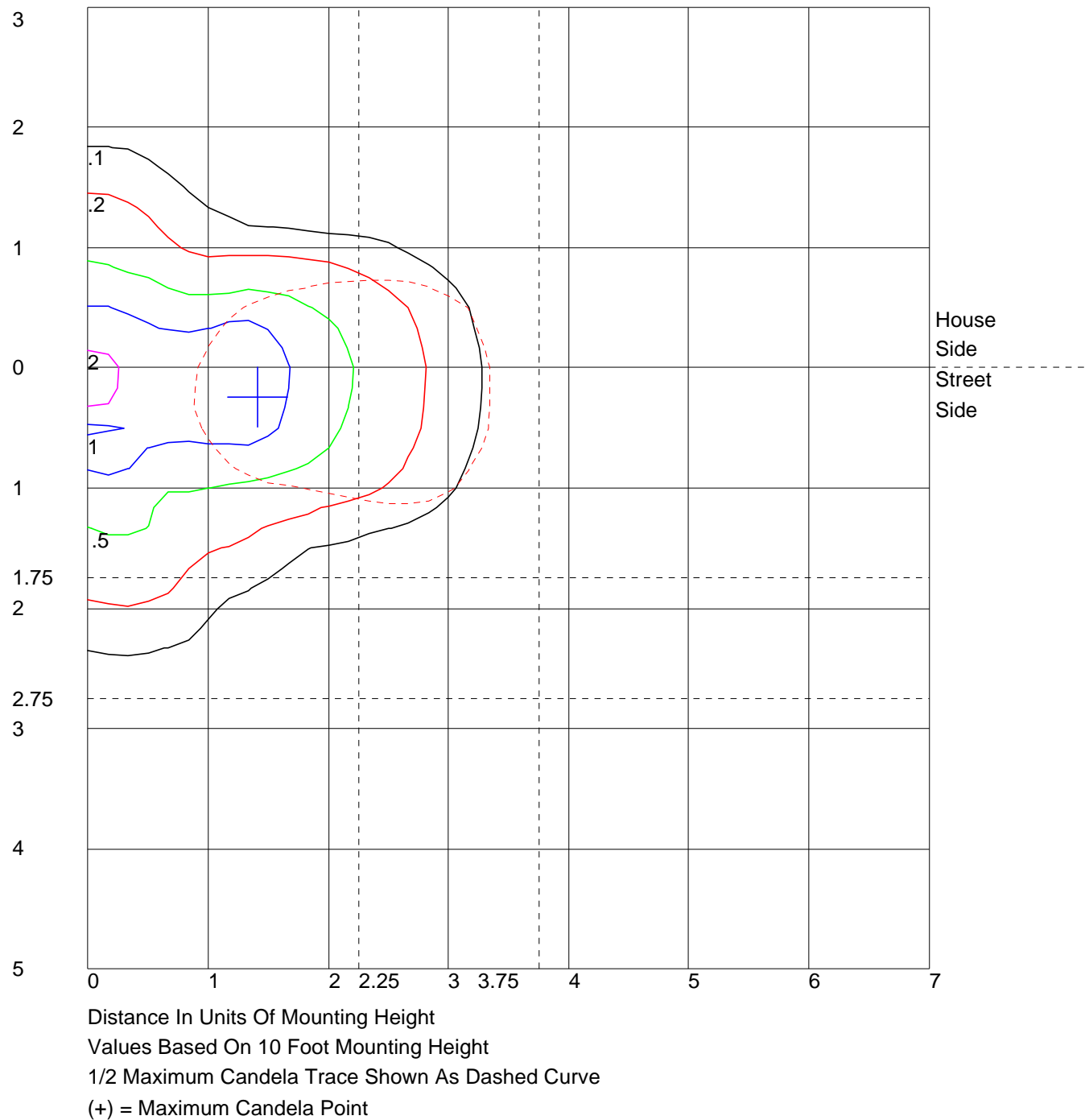
|                      | Lumens | Percent<br>Of Lamp |
|----------------------|--------|--------------------|
| Downward Street Side | 697.2  | 27.1               |
| Downward House Side  | 454.2  | 17.6               |
| Downward Total       | 1151.4 | 44.7               |
| Upward Street Side   | 1.3    | 0.1                |
| Upward House Side    | 0.6    | 0.0                |
| Upward Total         | 1.9    | 0.1                |
| Total Flux           | 1153.3 | 44.8               |

POLAR GRAPH

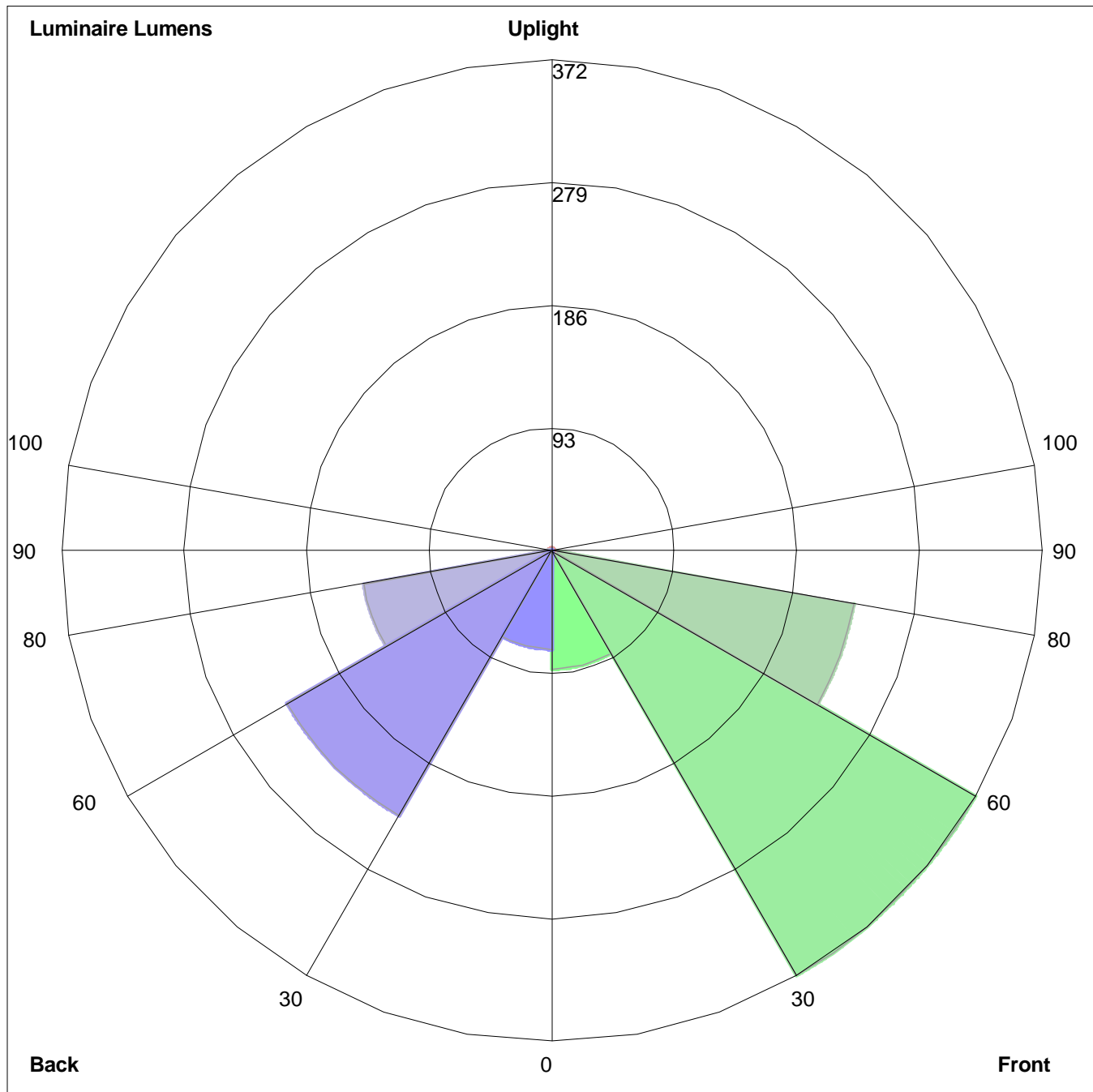


Maximum Candela = 764.783 Located At Horizontal Angle = 80, Vertical Angle = 55  
# 1 - Vertical Plane Through Horizontal Angles (80 - 260) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (55) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=89.7, Medium=372.1, High=232.9, Very High=2.6  
Back: Low=74.7, Medium=231.8, High=145.1, Very High=2.5  
Uplight: Low=0.1, High=1.9

BUG Rating : B1-U1-G1