



**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : XMR-FT-LED-18-30.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]LED-7772  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUEDATE]11/21/16  
[TESTDATE]05/02/16  
[MANUFAC]LSI INDUSTRIES, INC  
[LUMCAT]XMR-FT-LED-18-30  
[ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.  
[OTHER]TEST PROCEDURE: IESNA LM-79-08  
[\_SEARCH\_SOURCE]LED  
[\_SEARCH\_APPLICATION] Outdoor

**CHARACTERISTICS**

|   |                               |
|---|-------------------------------|
| IES Classification                              | Type IV                       |
| Longitudinal Classification                     | Short                         |
| Lumens Per Lamp                                 | N.A. (absolute)               |
| Total Lamp Lumens                               | N.A. (absolute)               |
| Luminaire Lumens                                | 15926                         |
| Downward Total Efficiency                       | N.A. (absolute)               |
| Total Luminaire Efficiency                      | N.A. (absolute)               |
| Luminaire Efficacy Rating (LER)                 | 103                           |
| Total Luminaire Watts                           | 154.2                         |
| Ballast Factor                                  | 1.00                          |
| Upward Waste Light Ratio                        | 0.00                          |
| Maximum Candela                                 | 12048                         |
| Maximum Candela Angle                           | 42.5H 70V                     |
| Maximum Candela (<90 Degrees Vertical)          | 12048                         |
| Maximum Candela Angle (<90 Degrees Vertical)    | 42.5H 70V                     |
| Maximum Candela At 90 Degrees Vertical          | 0 (0.0% Luminaire Lumens)     |
| Maximum Candela from 80 to <90 Degrees Vertical | 2711 (17.0% Luminaire Lumens) |
| Cutoff Classification (deprecated)              | N.A. (absolute)               |

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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

|                               | Lumens   | % Lamp | % Luminaire |
|-------------------------------|----------|--------|-------------|
| FL - Front-Low (0-30)         | 1121.7   | N.A.   | 7.0         |
| FM - Front-Medium (30-60)     | 4493.9   | N.A.   | 28.2        |
| FH - Front-High (60-80)       | 6065.4   | N.A.   | 38.1        |
| FVH - Front-Very High (80-90) | 229.6    | N.A.   | 1.4         |
| BL - Back-Low (0-30)          | 940.4    | N.A.   | 5.9         |
| BM - Back-Medium (30-60)      | 2151.2   | N.A.   | 13.5        |
| BH - Back-High (60-80)        | 865.9    | N.A.   | 5.4         |
| BVH - Back-Very High (80-90)  | 58.4     | N.A.   | 0.4         |
| UL - Uplight-Low (90-100)     | 0.0      | N.A.   | 0.0         |
| UH - Uplight-High (100-180)   | 0.0      | N.A.   | 0.0         |
| Total                         | 15926.5  | N.A.   | 100.0       |
| BUG Rating                    | B2-U0-G3 |        |             |

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**CANDELA TABULATION**

| Vert.<br>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             | 2242              | 2242       | 2242        | 2242        | 2242        | 2242        | 2242        | 2242        | 2242        | 2242        |
| 2.5             | 2255              | 2266       | 2266        | 2266        | 2265        | 2272        | 2266        | 2269        | 2260        | 2260        |
| 5.0             | 2242              | 2255       | 2259        | 2268        | 2274        | 2290        | 2287        | 2301        | 2302        | 2304        |
| 7.5             | 2225              | 2240       | 2248        | 2262        | 2278        | 2309        | 2308        | 2340        | 2360        | 2377        |
| 10.0            | 2253              | 2268       | 2274        | 2292        | 2317        | 2347        | 2348        | 2393        | 2431        | 2462        |
| 12.5            | 2321              | 2337       | 2346        | 2359        | 2381        | 2409        | 2411        | 2460        | 2509        | 2554        |
| 15.0            | 2408              | 2427       | 2435        | 2451        | 2467        | 2488        | 2498        | 2538        | 2592        | 2650        |
| 17.5            | 2502              | 2519       | 2522        | 2538        | 2554        | 2575        | 2580        | 2618        | 2671        | 2736        |
| 20.0            | 2604              | 2610       | 2612        | 2619        | 2629        | 2649        | 2655        | 2696        | 2744        | 2810        |
| 22.5            | 2690              | 2696       | 2694        | 2698        | 2698        | 2711        | 2714        | 2756        | 2801        | 2868        |
| 25.0            | 2768              | 2773       | 2768        | 2766        | 2759        | 2763        | 2762        | 2796        | 2846        | 2913        |
| 27.5            | 2842              | 2845       | 2834        | 2822        | 2809        | 2804        | 2801        | 2824        | 2875        | 2947        |
| 30.0            | 2907              | 2909       | 2893        | 2871        | 2847        | 2836        | 2837        | 2844        | 2892        | 2969        |
| 32.5            | 2957              | 2958       | 2935        | 2908        | 2878        | 2862        | 2859        | 2861        | 2903        | 2978        |
| 35.0            | 2993              | 2995       | 2966        | 2932        | 2900        | 2887        | 2881        | 2880        | 2910        | 2985        |
| 37.5            | 3033              | 3032       | 2997        | 2954        | 2923        | 2916        | 2908        | 2907        | 2920        | 2990        |
| 40.0            | 3089              | 3085       | 3044        | 2996        | 2961        | 2957        | 2953        | 2953        | 2945        | 3002        |
| 42.5            | 3179              | 3175       | 3133        | 3083        | 3044        | 3032        | 3036        | 3037        | 2995        | 3029        |
| 45.0            | 3338              | 3345       | 3302        | 3242        | 3198        | 3175        | 3203        | 3181        | 3083        | 3083        |
| 47.5            | 3650              | 3628       | 3591        | 3518        | 3466        | 3434        | 3466        | 3426        | 3249        | 3191        |
| 50.0            | 4106              | 4077       | 4056        | 3978        | 3893        | 3837        | 3877        | 3841        | 3530        | 3397        |
| 52.5            | 4760              | 4732       | 4744        | 4667        | 4533        | 4480        | 4467        | 4458        | 3945        | 3675        |
| 55.0            | 5565              | 5547       | 5635        | 5607        | 5407        | 5306        | 5310        | 5257        | 4567        | 4095        |
| 57.5            | 6247              | 6278       | 6470        | 6680        | 6502        | 6385        | 6361        | 6258        | 5364        | 4642        |
| 60.0            | 6796              | 6829       | 7181        | 7675        | 7799        | 7699        | 7662        | 7477        | 6225        | 5172        |
| 62.5            | 7267              | 7314       | 7819        | 8628        | 9160        | 9180        | 9215        | 8703        | 7102        | 5596        |
| 65.0            | 7374              | 7458       | 8155        | 9446        | 10492       | 10594       | 10626       | 9850        | 7737        | 5756        |
| 67.5            | 6759              | 6854       | 7981        | 9968        | 11341       | 11712       | 11772       | 10556       | 7890        | 5314        |
| 70.0            | 5607              | 5817       | 6728        | 9373        | 11469       | 12048       | 11987       | 10379       | 6817        | 4032        |
| 72.5            | 3855              | 4132       | 5091        | 7244        | 10336       | 11027       | 11006       | 8323        | 4879        | 2351        |
| 75.0            | 1762              | 1995       | 2922        | 4727        | 7616        | 8667        | 8366        | 5849        | 2578        | 893         |
| 77.5            | 653               | 731        | 1256        | 2479        | 4167        | 5519        | 5433        | 3297        | 1074        | 506         |
| 80.0            | 398               | 448        | 772         | 1255        | 1948        | 2648        | 2711        | 1573        | 556         | 317         |
| 82.5            | 281               | 317        | 561         | 897         | 1101        | 1371        | 1327        | 678         | 309         | 180         |
| 85.0            | 198               | 230        | 438         | 682         | 795         | 590         | 511         | 226         | 175         | 95          |
| 87.5            | 132               | 165        | 331         | 362         | 466         | 147         | 65          | 69          | 54          | 40          |
| 90.0            | 0                 | 0          | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           |

| Vert.<br>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             | 2242              | 2242        | 2242        | 2242         | 2242         | 2242         | 2242         | 2242         | 2242         | 2242         |
| 2.5             | 2263              | 2269        | 2254        | 2238         | 2241         | 2230         | 2237         | 2233         | 2225         | 2222         |
| 5.0             | 2302              | 2303        | 2286        | 2259         | 2261         | 2251         | 2258         | 2245         | 2225         | 2213         |
| 7.5             | 2374              | 2378        | 2345        | 2307         | 2306         | 2263         | 2225         | 2165         | 2133         | 2116         |
| 10.0            | 2464              | 2462        | 2419        | 2368         | 2333         | 2228         | 2162         | 2127         | 2119         | 2121         |
| 12.5            | 2565              | 2559        | 2502        | 2429         | 2332         | 2187         | 2150         | 2146         | 2139         | 2132         |
| 15.0            | 2674              | 2663        | 2601        | 2487         | 2307         | 2171         | 2167         | 2141         | 2125         | 2126         |
| 17.5            | 2771              | 2758        | 2682        | 2530         | 2276         | 2172         | 2149         | 2127         | 2121         | 2119         |
| 20.0            | 2852              | 2840        | 2755        | 2553         | 2250         | 2175         | 2126         | 2117         | 2105         | 2101         |
| 22.5            | 2917              | 2907        | 2816        | 2558         | 2226         | 2143         | 2109         | 2093         | 2082         | 2079         |
| 25.0            | 2969              | 2963        | 2867        | 2553         | 2212         | 2114         | 2086         | 2066         | 2057         | 2056         |
| 27.5            | 3007              | 3006        | 2908        | 2538         | 2200         | 2091         | 2057         | 2035         | 2029         | 2026         |

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**CANDELA TABULATION - (Cont.)**

|      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|
| 30.0 | 3031 | 3033 | 2934 | 2519 | 2182 | 2067 | 2026 | 2001 | 1993 | 1988 |
| 32.5 | 3041 | 3043 | 2948 | 2491 | 2150 | 2038 | 1989 | 1960 | 1950 | 1945 |
| 35.0 | 3041 | 3041 | 2946 | 2456 | 2111 | 2001 | 1950 | 1915 | 1901 | 1894 |
| 37.5 | 3037 | 3029 | 2934 | 2414 | 2061 | 1958 | 1905 | 1864 | 1843 | 1839 |
| 40.0 | 3034 | 3018 | 2916 | 2367 | 2002 | 1906 | 1852 | 1799 | 1782 | 1789 |
| 42.5 | 3039 | 3012 | 2895 | 2314 | 1931 | 1846 | 1783 | 1732 | 1719 | 1922 |
| 45.0 | 3067 | 3025 | 2888 | 2258 | 1849 | 1775 | 1707 | 1653 | 1783 | 1822 |
| 47.5 | 3153 | 3086 | 2913 | 2214 | 1759 | 1689 | 1620 | 1573 | 1899 | 1587 |
| 50.0 | 3303 | 3195 | 2971 | 2184 | 1657 | 1596 | 1526 | 1532 | 1684 | 1444 |
| 52.5 | 3518 | 3366 | 3079 | 2169 | 1543 | 1492 | 1428 | 1584 | 1447 | 1332 |
| 55.0 | 3847 | 3632 | 3255 | 2189 | 1420 | 1384 | 1328 | 1585 | 1288 | 1231 |
| 57.5 | 4195 | 3888 | 3423 | 2202 | 1294 | 1273 | 1226 | 1485 | 1159 | 1118 |
| 60.0 | 4497 | 4124 | 3485 | 2193 | 1170 | 1168 | 1136 | 1318 | 1022 | 998  |
| 62.5 | 4661 | 4139 | 3257 | 2124 | 1060 | 1069 | 1046 | 1165 | 888  | 907  |
| 65.0 | 4509 | 3851 | 2622 | 1958 | 952  | 962  | 949  | 1079 | 771  | 823  |
| 67.5 | 3778 | 3092 | 1840 | 1568 | 832  | 842  | 851  | 957  | 658  | 770  |
| 70.0 | 2544 | 2102 | 1176 | 1116 | 691  | 717  | 751  | 814  | 561  | 744  |
| 72.5 | 1090 | 926  | 657  | 699  | 522  | 588  | 649  | 710  | 481  | 719  |
| 75.0 | 514  | 437  | 344  | 419  | 380  | 451  | 536  | 587  | 403  | 629  |
| 77.5 | 324  | 267  | 199  | 261  | 268  | 310  | 397  | 413  | 266  | 444  |
| 80.0 | 192  | 162  | 138  | 181  | 196  | 233  | 257  | 253  | 209  | 298  |
| 82.5 | 114  | 100  | 91   | 125  | 147  | 147  | 173  | 189  | 146  | 178  |
| 85.0 | 65   | 51   | 49   | 77   | 81   | 87   | 108  | 106  | 78   | 98   |
| 87.5 | 22   | 14   | 16   | 30   | 31   | 36   | 44   | 42   | 36   | 36   |
| 90.0 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

**Vert. Horizontal Angles**  
**Angles**

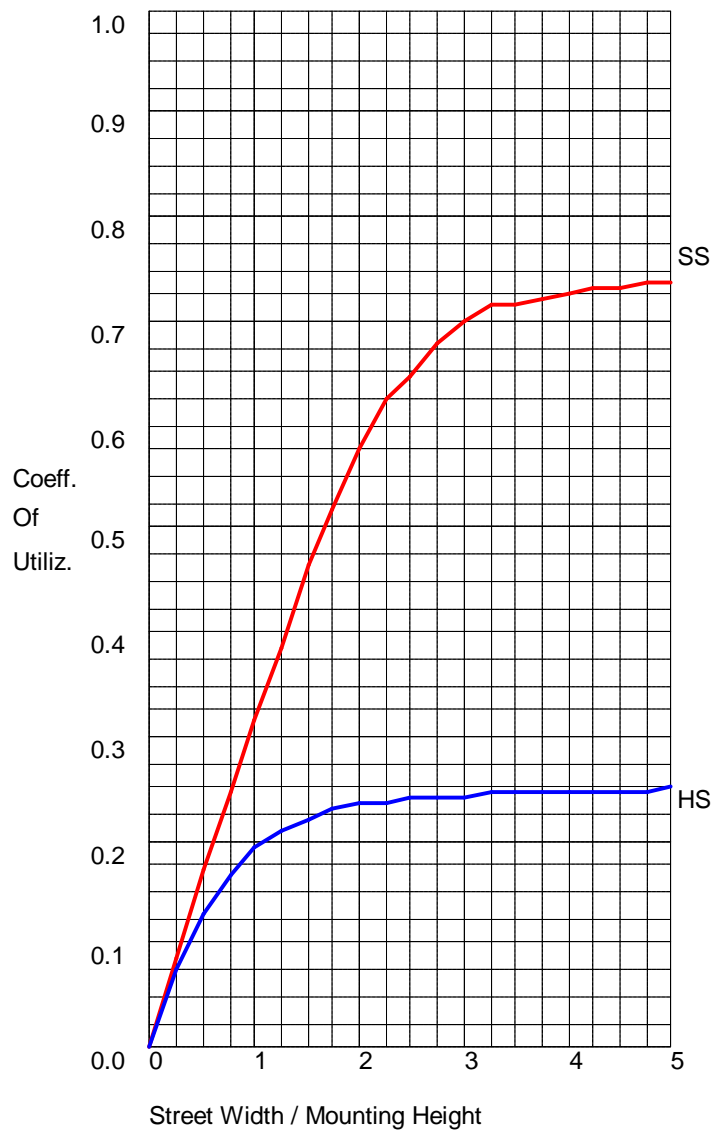
|      | <b>175.0</b> | <b>180.0</b> |
|------|--------------|--------------|
| 0.0  | 2242         | 2242         |
| 2.5  | 2216         | 2203         |
| 5.0  | 2202         | 2190         |
| 7.5  | 2105         | 2094         |
| 10.0 | 2118         | 2107         |
| 12.5 | 2125         | 2114         |
| 15.0 | 2123         | 2113         |
| 17.5 | 2116         | 2106         |
| 20.0 | 2099         | 2090         |
| 22.5 | 2079         | 2069         |
| 25.0 | 2058         | 2048         |
| 27.5 | 2028         | 2018         |
| 30.0 | 1992         | 1985         |
| 32.5 | 1952         | 1946         |
| 35.0 | 1908         | 1902         |
| 37.5 | 1852         | 1847         |
| 40.0 | 1870         | 1877         |
| 42.5 | 1859         | 1819         |
| 45.0 | 1632         | 1620         |
| 47.5 | 1505         | 1498         |
| 50.0 | 1401         | 1387         |
| 52.5 | 1307         | 1293         |
| 55.0 | 1203         | 1188         |
| 57.5 | 1075         | 1060         |
| 60.0 | 955          | 940          |
| 62.5 | 850          | 833          |
| 65.0 | 755          | 733          |

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**CANDELA TABULATION - (Cont.)**

|             |     |     |
|-------------|-----|-----|
| <b>67.5</b> | 687 | 659 |
| <b>70.0</b> | 666 | 624 |
| <b>72.5</b> | 678 | 626 |
| <b>75.0</b> | 664 | 601 |
| <b>77.5</b> | 648 | 585 |
| <b>80.0</b> | 524 | 485 |
| <b>82.5</b> | 305 | 298 |
| <b>85.0</b> | 195 | 182 |
| <b>87.5</b> | 77  | 58  |
| <b>90.0</b> | 0   | 0   |

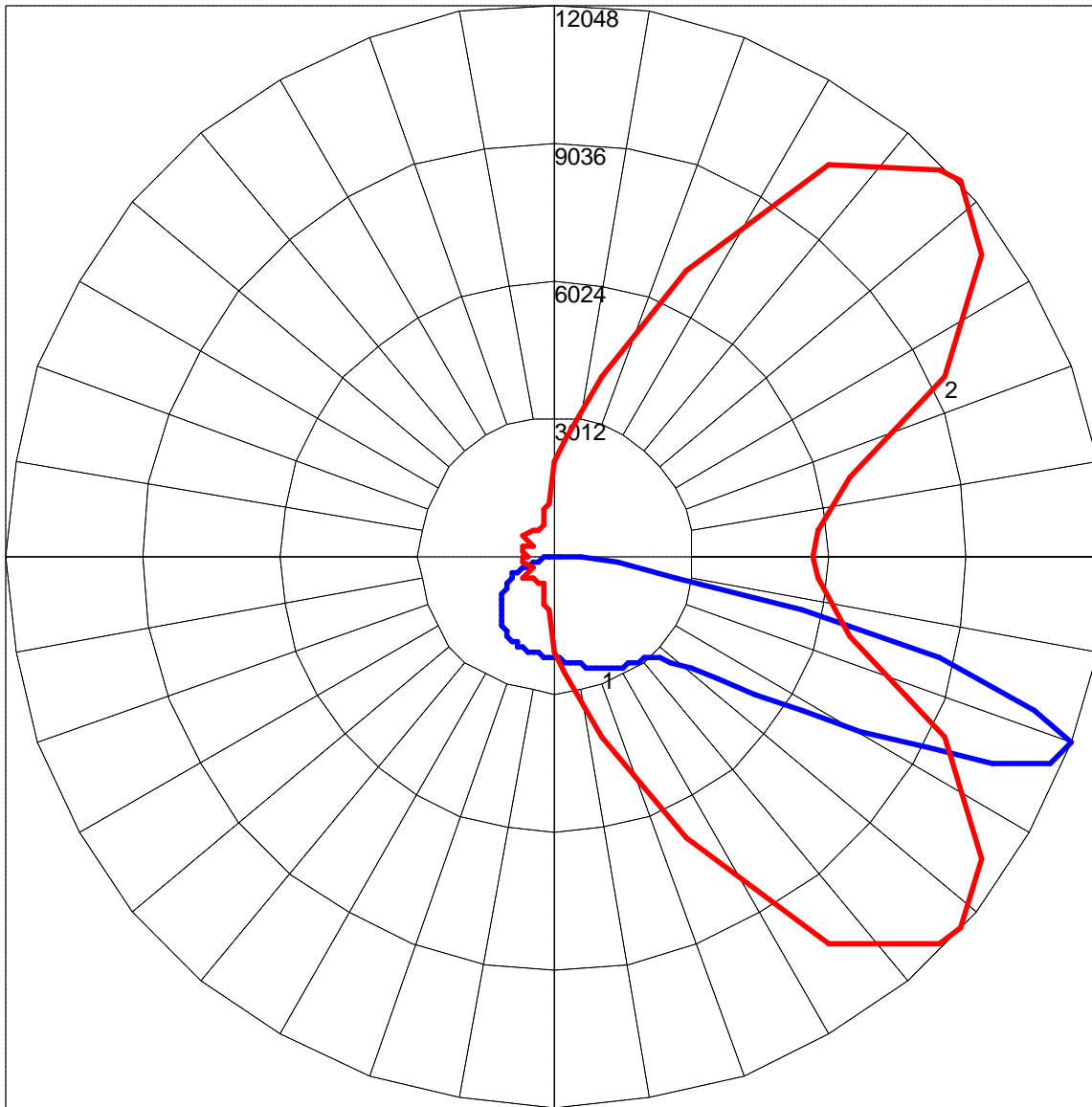
### COEFFICIENTS OF UTILIZATION



### FLUX DISTRIBUTION

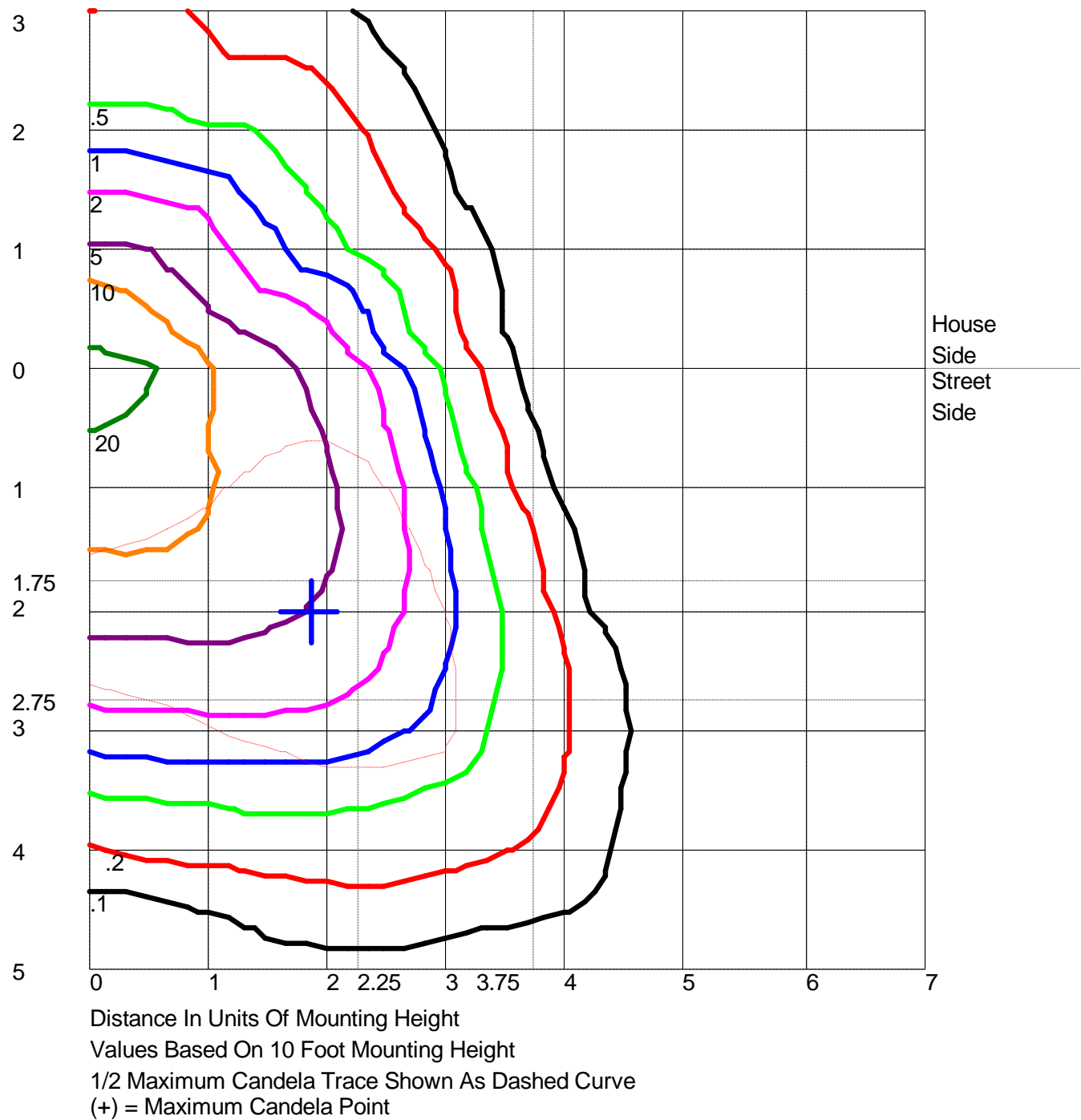
|                      | Lumens  | Percent<br>Of Luminaire |
|----------------------|---------|-------------------------|
| Downward Street Side | 11910.5 | 74.8                    |
| Downward House Side  | 4015.9  | 25.2                    |
| Downward Total       | 15926.4 | 100.0                   |
| Upward Street Side   | 0.0     | 0.0                     |
| Upward House Side    | 0.0     | 0.0                     |
| Upward Total         | 0.0     | 0.0                     |
| Total Flux           | 15926.4 | 100.0                   |

POLAR GRAPH



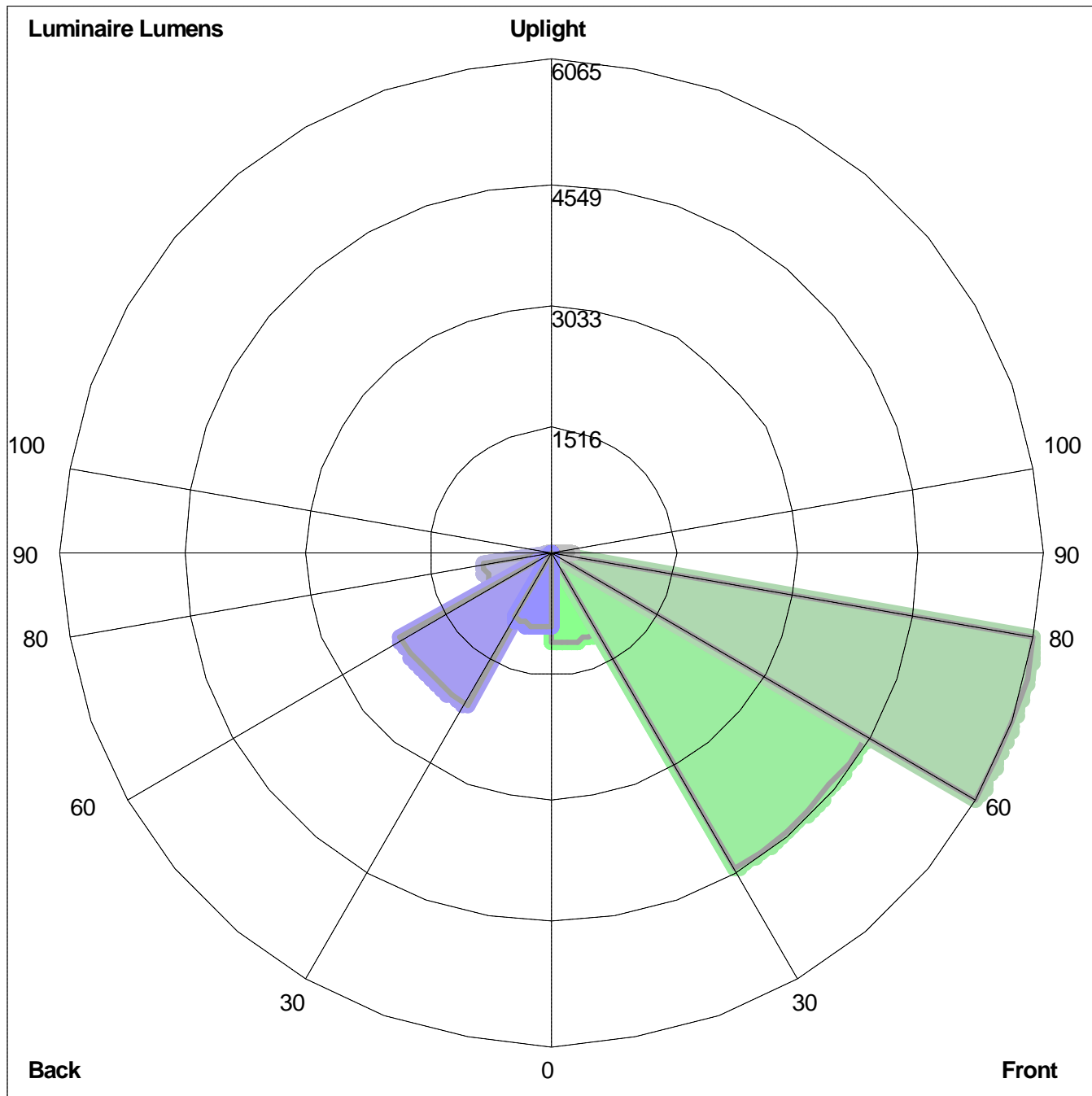
Maximum Candela = 12048 Located At Horizontal Angle = 42.5, Vertical Angle = 70  
# 1 - Vertical Plane Through Horizontal Angles (42.5 - 222.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (70) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=1121.7, Medium=4493.9, High=6065.4, Very High=229.6  
Back: Low=940.4, Medium=2151.2, High=865.9, Very High=58.4  
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G3