



**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : XMR-3-LED-35-50.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]LED-7769  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUE DATE]11/21/16  
[TEST DATE]05/02/16  
[MANUFACTURER]LSI INDUSTRIES, INC  
[LUMCAT]XMR-3-LED-35-50  
[ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.  
[OTHER]TEST PROCEDURE: IESNA LM-79-08  
[SEARCH\_SOURCETYPE] LED  
[SEARCH\_APPLICATION] Outdoor

**CHARACTERISTICS**

|   |                              |
|---|------------------------------|
| IES Classification                              | Type III                     |
| Longitudinal Classification                     | Medium                       |
| Lumens Per Lamp                                 | N.A. (absolute)              |
| Total Lamp Lumens                               | N.A. (absolute)              |
| Luminaire Lumens                                | 35282                        |
| Downward Total Efficiency                       | N.A. (absolute)              |
| Total Luminaire Efficiency                      | N.A. (absolute)              |
| Luminaire Efficacy Rating (LER)                 | 113                          |
| Total Luminaire Watts                           | 313.6                        |
| Ballast Factor                                  | 1.00                         |
| Upward Waste Light Ratio                        | 0.00                         |
| Maximum Candela                                 | 31525                        |
| Maximum Candela Angle                           | 57.5H 70V                    |
| Maximum Candela (<90 Degrees Vertical)          | 31525                        |
| Maximum Candela Angle (<90 Degrees Vertical)    | 57.5H 70V                    |
| Maximum Candela At 90 Degrees Vertical          | 0 (0.0% Luminaire Lumens)    |
| Maximum Candela from 80 to <90 Degrees Vertical | 2878 (8.2% Luminaire Lumens) |
| Cutoff Classification (deprecated)              | N.A. (absolute)              |

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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

|                               | Lumens   | % Lamp | % Luminaire |
|-------------------------------|----------|--------|-------------|
| FL - Front-Low (0-30)         | 1593.6   | N.A.   | 4.5         |
| FM - Front-Medium (30-60)     | 13245.2  | N.A.   | 37.5        |
| FH - Front-High (60-80)       | 11664.2  | N.A.   | 33.1        |
| FVH - Front-Very High (80-90) | 360.9    | N.A.   | 1.0         |
| BL - Back-Low (0-30)          | 1702.3   | N.A.   | 4.8         |
| BM - Back-Medium (30-60)      | 4675.9   | N.A.   | 13.3        |
| BH - Back-High (60-80)        | 1903.6   | N.A.   | 5.4         |
| BVH - Back-Very High (80-90)  | 136.7    | 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                         | 35282.4  | N.A.   | 100.0       |
| BUG Rating                    | B3-U0-G4 |        |             |

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

| <b>Vert.<br/>Angles</b> | <b>Horizontal Angles</b> |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|-------------------------|--------------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                         | <u><b>0.0</b></u>        | <u><b>5.0</b></u> | <u><b>15.0</b></u> | <u><b>25.0</b></u> | <u><b>35.0</b></u> | <u><b>45.0</b></u> | <u><b>55.0</b></u> | <u><b>57.5</b></u> | <u><b>65.0</b></u> | <u><b>75.0</b></u> |
| <b>0.0</b>              | 3377                     | 3377              | 3377               | 3377               | 3377               | 3377               | 3377               | 3377               | 3377               | 3377               |
| <b>2.5</b>              | 3318                     | 3313              | 3306               | 3319               | 3334               | 3348               | 3361               | 3351               | 3371               | 3379               |
| <b>5.0</b>              | 3133                     | 3132              | 3129               | 3154               | 3188               | 3228               | 3275               | 3275               | 3326               | 3370               |
| <b>7.5</b>              | 2963                     | 2962              | 2966               | 3004               | 3058               | 3121               | 3194               | 3202               | 3275               | 3354               |
| <b>10.0</b>             | 2823                     | 2823              | 2832               | 2880               | 2946               | 3026               | 3121               | 3134               | 3216               | 3324               |
| <b>12.5</b>             | 2744                     | 2736              | 2756               | 2808               | 2874               | 2961               | 3066               | 3085               | 3185               | 3309               |
| <b>15.0</b>             | 2731                     | 2729              | 2752               | 2808               | 2873               | 2966               | 3071               | 3088               | 3193               | 3331               |
| <b>17.5</b>             | 2792                     | 2797              | 2826               | 2894               | 2972               | 3078               | 3177               | 3209               | 3301               | 3448               |
| <b>20.0</b>             | 2970                     | 2981              | 3013               | 3097               | 3213               | 3327               | 3444               | 3493               | 3570               | 3700               |
| <b>22.5</b>             | 3295                     | 3316              | 3350               | 3449               | 3594               | 3739               | 3871               | 3932               | 4004               | 4012               |
| <b>25.0</b>             | 3871                     | 3837              | 3887               | 3974               | 4132               | 4313               | 4430               | 4487               | 4480               | 4376               |
| <b>27.5</b>             | 4518                     | 4482              | 4565               | 4702               | 4829               | 5032               | 5094               | 5132               | 5025               | 4778               |
| <b>30.0</b>             | 5247                     | 5206              | 5318               | 5487               | 5664               | 5860               | 5925               | 5863               | 5636               | 5221               |
| <b>32.5</b>             | 6029                     | 5981              | 6118               | 6324               | 6585               | 6785               | 6776               | 6678               | 6304               | 5695               |
| <b>35.0</b>             | 6794                     | 6759              | 6941               | 7255               | 7570               | 7777               | 7702               | 7569               | 7042               | 6194               |
| <b>37.5</b>             | 7534                     | 7507              | 7808               | 8186               | 8602               | 8852               | 8712               | 8530               | 7824               | 6708               |
| <b>40.0</b>             | 8306                     | 8285              | 8684               | 9196               | 9713               | 10003              | 9783               | 9542               | 8663               | 7212               |
| <b>42.5</b>             | 9241                     | 9234              | 9743               | 10382              | 10986              | 11301              | 10891              | 10578              | 9448               | 7705               |
| <b>45.0</b>             | 10489                    | 10560             | 11136              | 11872              | 12566              | 12607              | 12003              | 11617              | 10202              | 8146               |
| <b>47.5</b>             | 11843                    | 11997             | 12602              | 13437              | 14242              | 13969              | 13061              | 12650              | 10920              | 8614               |
| <b>50.0</b>             | 13189                    | 13338             | 13922              | 14967              | 15962              | 15586              | 14035              | 13597              | 11613              | 9139               |
| <b>52.5</b>             | 14654                    | 14654             | 15278              | 16490              | 17628              | 17059              | 15169              | 14525              | 12374              | 9809               |
| <b>55.0</b>             | 17052                    | 17018             | 17501              | 18284              | 19248              | 18298              | 16036              | 15314              | 13140              | 10671              |
| <b>57.5</b>             | 19178                    | 19191             | 19672              | 20681              | 21257              | 19363              | 16800              | 16103              | 14193              | 11766              |
| <b>60.0</b>             | 19818                    | 19919             | 20731              | 22072              | 23339              | 21140              | 17737              | 17048              | 15224              | 13380              |
| <b>62.5</b>             | 16262                    | 16321             | 18429              | 21360              | 24726              | 23690              | 19697              | 18840              | 16872              | 15506              |
| <b>65.0</b>             | 7925                     | 8120              | 10735              | 16707              | 23589              | 25990              | 23217              | 22102              | 19329              | 17435              |
| <b>67.5</b>             | 4400                     | 4298              | 5049               | 8238               | 16873              | 26375              | 27794              | 27614              | 22823              | 19066              |
| <b>70.0</b>             | 2412                     | 2364              | 2866               | 4187               | 7754               | 20740              | 31233              | 31525              | 25908              | 17547              |
| <b>72.5</b>             | 1382                     | 1452              | 1841               | 2841               | 4378               | 10966              | 27290              | 28819              | 23168              | 9944               |
| <b>75.0</b>             | 983                      | 1033              | 1319               | 2175               | 3330               | 5664               | 16195              | 17817              | 11246              | 2996               |
| <b>77.5</b>             | 747                      | 787               | 1021               | 1801               | 2657               | 3744               | 6322               | 6015               | 3618               | 1583               |
| <b>80.0</b>             | 516                      | 551               | 768                | 1471               | 2253               | 2659               | 2878               | 2727               | 2113               | 918                |
| <b>82.5</b>             | 322                      | 346               | 545                | 1175               | 1759               | 1803               | 1478               | 1441               | 1137               | 529                |
| <b>85.0</b>             | 199                      | 206               | 354                | 857                | 1194               | 964                | 642                | 676                | 552                | 301                |
| <b>87.5</b>             | 149                      | 154               | 231                | 614                | 659                | 204                | 175                | 191                | 208                | 155                |
| <b>90.0</b>             | 0                        | 0                 | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  |

| <b>Vert.<br/>Angles</b> | <b>Horizontal Angles</b> |                    |                    |                     |                     |                     |                     |                     |                     |                     |
|-------------------------|--------------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                         | <u><b>85.0</b></u>       | <u><b>90.0</b></u> | <u><b>95.0</b></u> | <u><b>105.0</b></u> | <u><b>115.0</b></u> | <u><b>125.0</b></u> | <u><b>135.0</b></u> | <u><b>145.0</b></u> | <u><b>155.0</b></u> | <u><b>165.0</b></u> |
| <b>0.0</b>              | 3377                     | 3377               | 3377               | 3377                | 3377                | 3377                | 3377                | 3377                | 3377                | 3377                |
| <b>2.5</b>              | 3399                     | 3416               | 3407               | 3400                | 3417                | 3415                | 3431                | 3430                | 3424                | 3418                |
| <b>5.0</b>              | 3421                     | 3446               | 3443               | 3453                | 3480                | 3494                | 3521                | 3536                | 3544                | 3547                |
| <b>7.5</b>              | 3436                     | 3473               | 3478               | 3505                | 3555                | 3601                | 3663                | 3705                | 3727                | 3735                |
| <b>10.0</b>             | 3441                     | 3492               | 3505               | 3550                | 3627                | 3709                | 3821                | 3885                | 3913                | 3909                |
| <b>12.5</b>             | 3451                     | 3515               | 3534               | 3597                | 3702                | 3829                | 3956                | 4013                | 4026                | 4008                |
| <b>15.0</b>             | 3487                     | 3557               | 3583               | 3654                | 3793                | 3950                | 4060                | 4089                | 4101                | 4094                |
| <b>17.5</b>             | 3589                     | 3653               | 3671               | 3749                | 3903                | 4059                | 4134                | 4154                | 4175                | 4171                |
| <b>20.0</b>             | 3781                     | 3820               | 3826               | 3851                | 4018                | 4164                | 4207                | 4221                | 4222                | 4221                |
| <b>22.5</b>             | 3990                     | 3995               | 3968               | 3942                | 4100                | 4237                | 4300                | 4272                | 4251                | 4234                |
| <b>25.0</b>             | 4216                     | 4159               | 4082               | 4014                | 4155                | 4285                | 4374                | 4312                | 4253                | 4222                |
| <b>27.5</b>             | 4451                     | 4326               | 4164               | 4039                | 4167                | 4313                | 4408                | 4329                | 4241                | 4201                |

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**CANDELA TABULATION - (Cont.)**

|      |       |      |      |      |      |      |      |      |      |      |
|------|-------|------|------|------|------|------|------|------|------|------|
| 30.0 | 4693  | 4466 | 4214 | 4014 | 4153 | 4317 | 4405 | 4334 | 4251 | 4233 |
| 32.5 | 4951  | 4600 | 4239 | 3939 | 4091 | 4289 | 4378 | 4350 | 4331 | 4398 |
| 35.0 | 5230  | 4727 | 4247 | 3820 | 3980 | 4226 | 4337 | 4395 | 4488 | 4700 |
| 37.5 | 5499  | 4849 | 4243 | 3657 | 3839 | 4126 | 4293 | 4402 | 4627 | 5016 |
| 40.0 | 5762  | 4966 | 4228 | 3489 | 3675 | 4001 | 4176 | 4298 | 4883 | 5410 |
| 42.5 | 6003  | 5074 | 4207 | 3311 | 3471 | 3820 | 3972 | 4259 | 5421 | 5498 |
| 45.0 | 6243  | 5198 | 4202 | 3135 | 3256 | 3569 | 3783 | 4367 | 6077 | 5087 |
| 47.5 | 6527  | 5375 | 4245 | 3000 | 3042 | 3358 | 3652 | 4534 | 6502 | 4761 |
| 50.0 | 6907  | 5639 | 4374 | 2912 | 2859 | 3195 | 3544 | 4640 | 6578 | 4556 |
| 52.5 | 7404  | 6043 | 4592 | 2873 | 2713 | 3061 | 3433 | 4537 | 6291 | 4398 |
| 55.0 | 7977  | 6418 | 4869 | 2873 | 2579 | 2935 | 3300 | 4171 | 5744 | 4239 |
| 57.5 | 8329  | 6662 | 5125 | 2892 | 2460 | 2792 | 3132 | 3612 | 5063 | 4049 |
| 60.0 | 8965  | 7544 | 5393 | 2886 | 2341 | 2616 | 2916 | 3098 | 4250 | 3808 |
| 62.5 | 10976 | 8819 | 5080 | 2658 | 2150 | 2380 | 2646 | 2665 | 3402 | 3582 |
| 65.0 | 13438 | 9460 | 4151 | 2237 | 1882 | 2099 | 2328 | 2271 | 2583 | 3293 |
| 67.5 | 14296 | 8276 | 3019 | 1650 | 1529 | 1757 | 1947 | 1925 | 1935 | 2891 |
| 70.0 | 10254 | 4959 | 1761 | 1153 | 1204 | 1339 | 1492 | 1613 | 1578 | 2502 |
| 72.5 | 3707  | 1768 | 888  | 860  | 949  | 960  | 1080 | 1321 | 1336 | 2077 |
| 75.0 | 1499  | 810  | 556  | 648  | 739  | 766  | 870  | 1106 | 1063 | 1560 |
| 77.5 | 863   | 493  | 419  | 513  | 617  | 654  | 740  | 770  | 656  | 949  |
| 80.0 | 506   | 320  | 304  | 407  | 508  | 562  | 551  | 561  | 485  | 648  |
| 82.5 | 326   | 212  | 227  | 331  | 398  | 346  | 379  | 403  | 341  | 417  |
| 85.0 | 187   | 124  | 166  | 288  | 234  | 234  | 280  | 237  | 186  | 234  |
| 87.5 | 94    | 62   | 134  | 201  | 139  | 127  | 123  | 101  | 76   | 94   |
| 90.0 | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

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

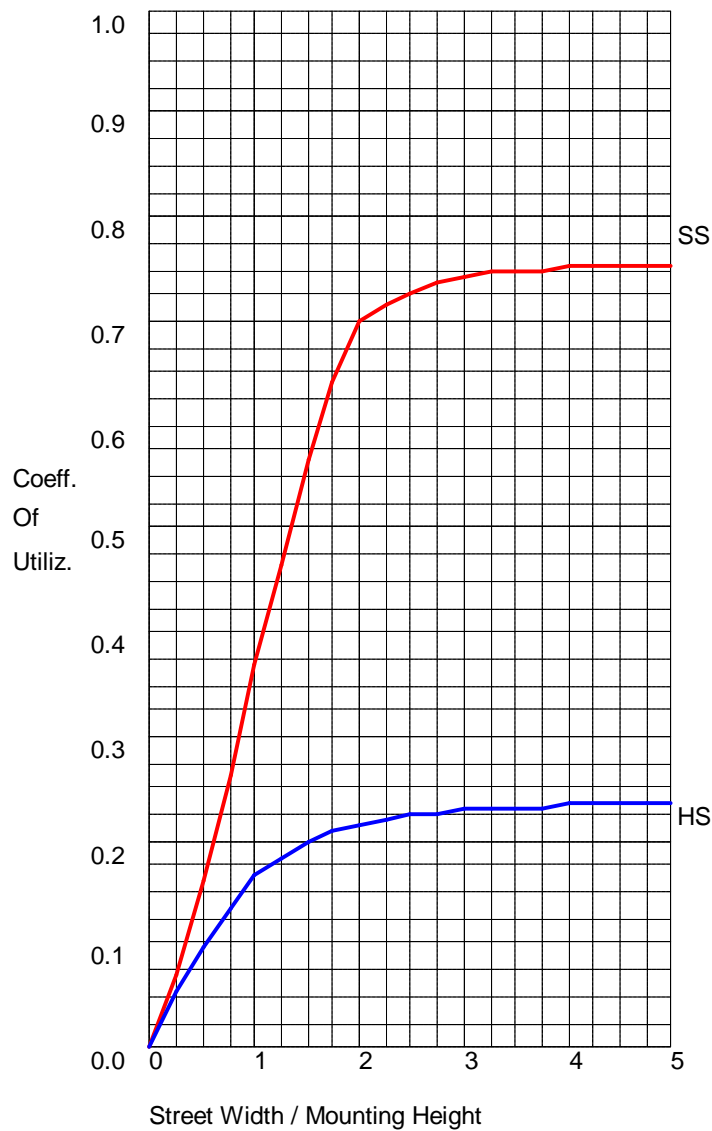
|      | <b><u>175.0</u></b> | <b><u>180.0</u></b> |
|------|---------------------|---------------------|
| 0.0  | 3377                | 3377                |
| 2.5  | 3412                | 3388                |
| 5.0  | 3545                | 3518                |
| 7.5  | 3736                | 3710                |
| 10.0 | 3899                | 3872                |
| 12.5 | 3983                | 3964                |
| 15.0 | 4064                | 4042                |
| 17.5 | 4133                | 4102                |
| 20.0 | 4175                | 4137                |
| 22.5 | 4179                | 4132                |
| 25.0 | 4164                | 4113                |
| 27.5 | 4155                | 4106                |
| 30.0 | 4214                | 4164                |
| 32.5 | 4435                | 4402                |
| 35.0 | 4798                | 4758                |
| 37.5 | 5110                | 5021                |
| 40.0 | 4895                | 4706                |
| 42.5 | 4233                | 4056                |
| 45.0 | 3934                | 3795                |
| 47.5 | 3777                | 3650                |
| 50.0 | 3643                | 3500                |
| 52.5 | 3480                | 3308                |
| 55.0 | 3299                | 3090                |
| 57.5 | 3071                | 2807                |
| 60.0 | 2797                | 2494                |
| 62.5 | 2636                | 2343                |
| 65.0 | 2527                | 2292                |

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**PHOTOMETRIC FILENAME : XMR-3-LED-35-50.IES**

**CANDELA TABULATION - (Cont.)**

|             |      |      |
|-------------|------|------|
| <b>67.5</b> | 2499 | 2378 |
| <b>70.0</b> | 2602 | 2582 |
| <b>72.5</b> | 2619 | 2682 |
| <b>75.0</b> | 2116 | 2409 |
| <b>77.5</b> | 1711 | 2028 |
| <b>80.0</b> | 1035 | 1176 |
| <b>82.5</b> | 491  | 477  |
| <b>85.0</b> | 230  | 230  |
| <b>87.5</b> | 103  | 150  |
| <b>90.0</b> | 0    | 0    |

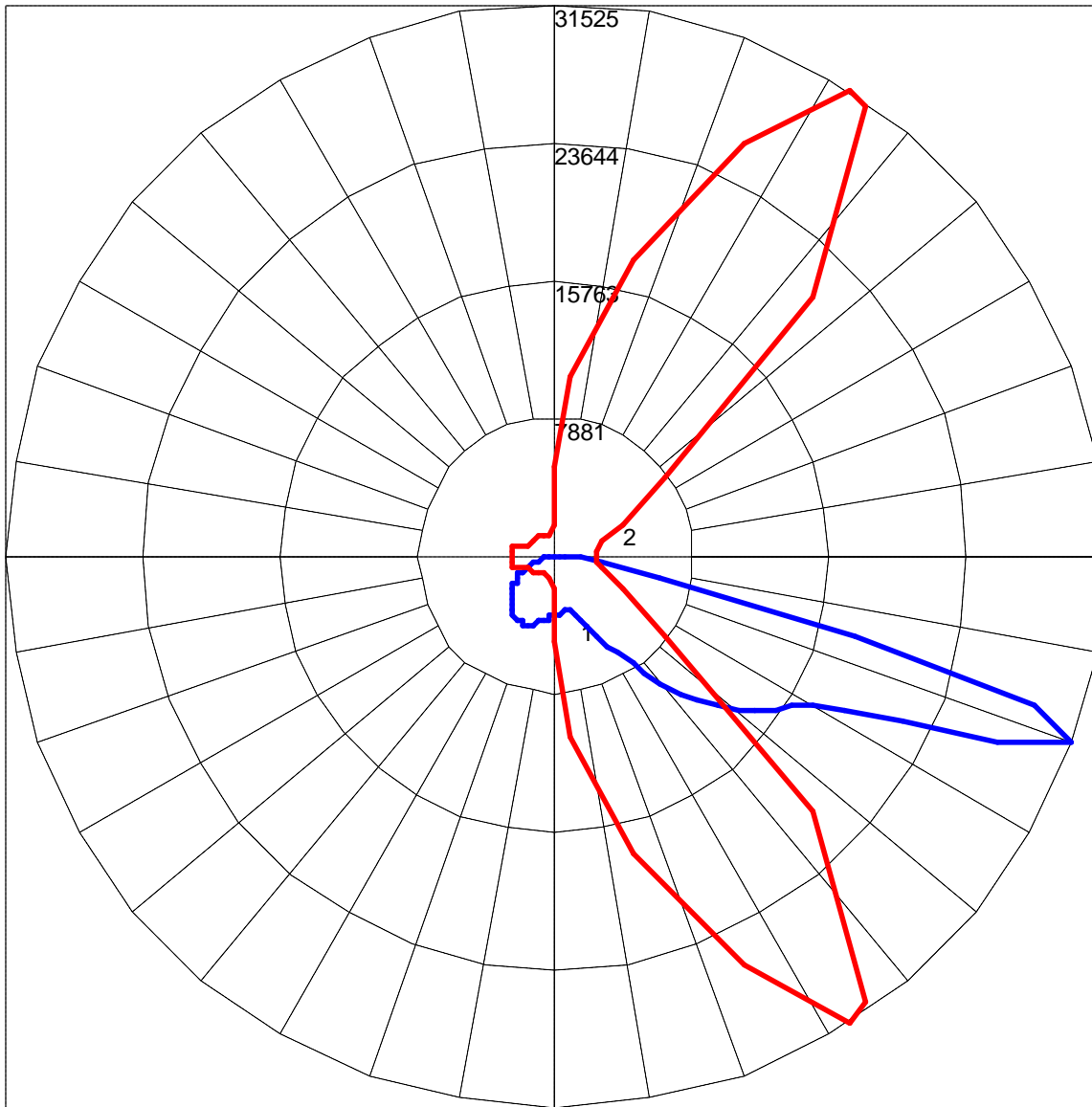
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

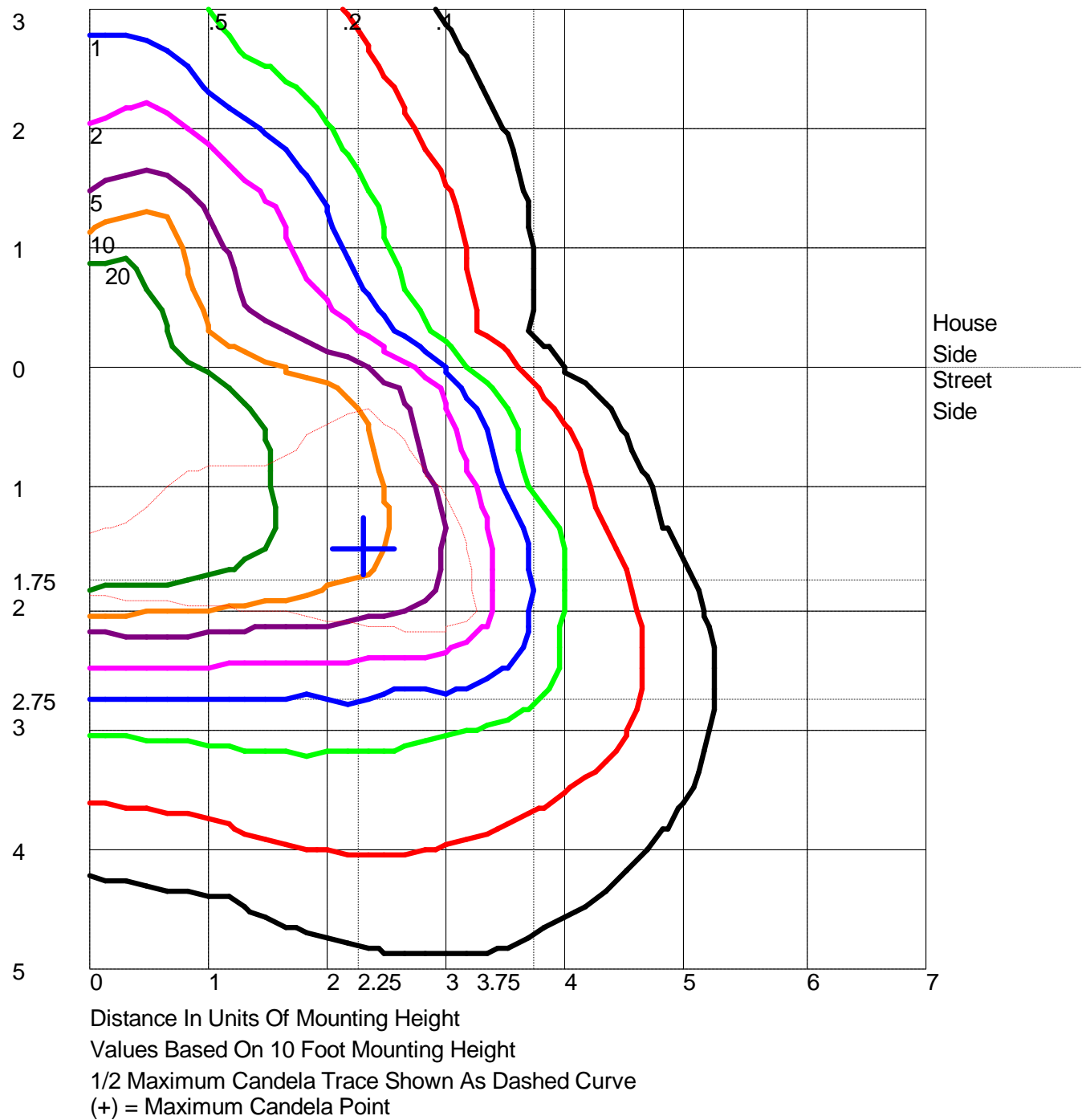
|                      | Lumens  | Percent<br>Of Luminaire |
|----------------------|---------|-------------------------|
| Downward Street Side | 26863.9 | 76.1                    |
| Downward House Side  | 8418.5  | 23.9                    |
| Downward Total       | 35282.4 | 100.0                   |
| Upward Street Side   | 0.0     | 0.0                     |
| Upward House Side    | 0.0     | 0.0                     |
| Upward Total         | 0.0     | 0.0                     |
| Total Flux           | 35282.4 | 100.0                   |

POLAR GRAPH



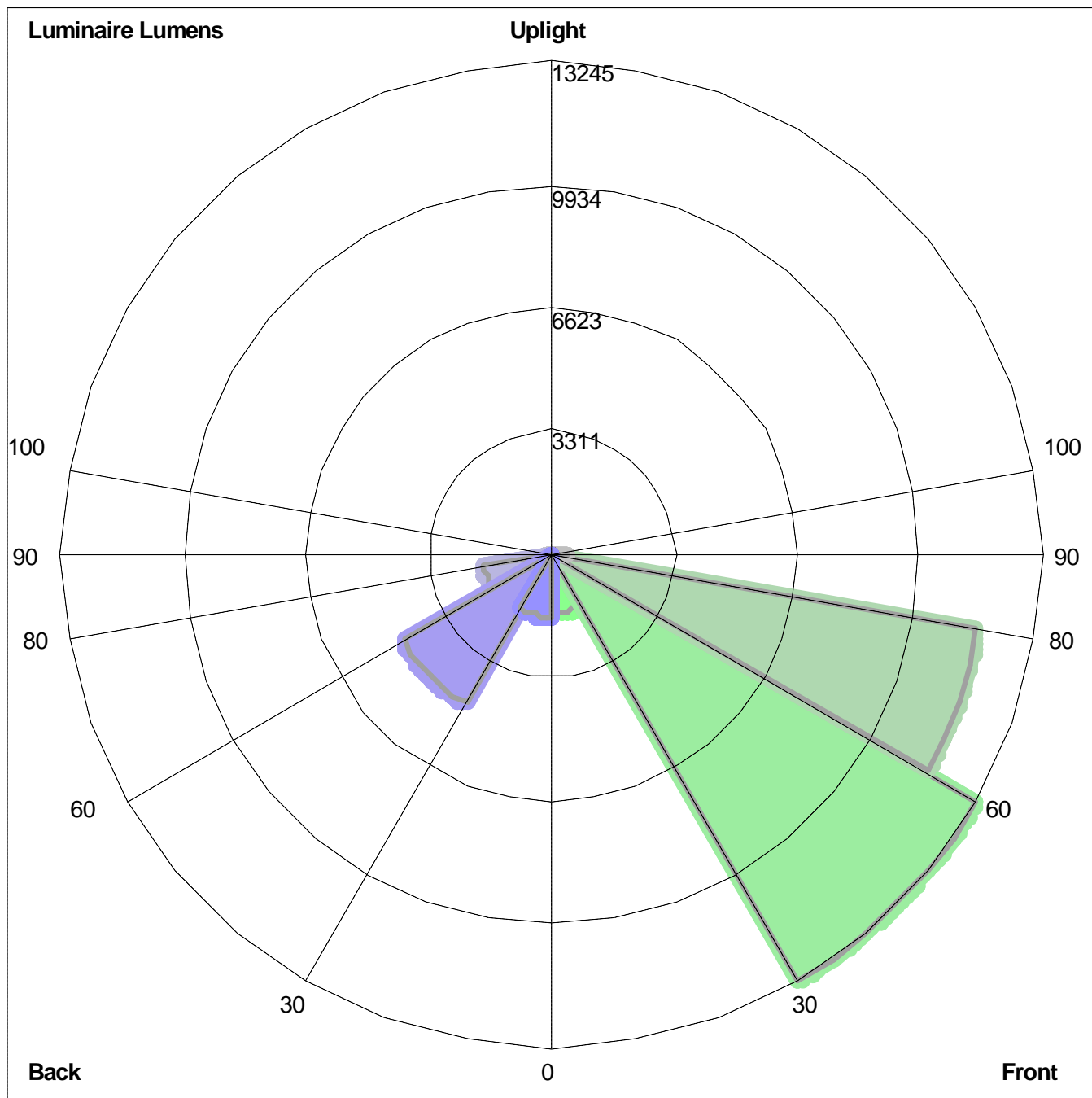
Maximum Candela = 31525 Located At Horizontal Angle = 57.5, Vertical Angle = 70  
# 1 - Vertical Plane Through Horizontal Angles (57.5 - 237.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (70) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=1593.6, Medium=13245.2, High=11664.2, Very High=360.9  
Back: Low=1702.3, Medium=4675.9, High=1903.6, Very High=136.7  
Uplight: Low=0.0, High=0.0

BUG Rating : B3-U0-G4