

## IES ROAD REPORT

PHOTOMETRIC FILENAME : W4CR-XX-L15-827-XXX-DIM-UNV-M-XXX\_.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] W4CR\_BARBARA-MEDIUM DIST  
[TESTLAB] LEDIL Inc  
[TESTDATE] 07/03/2025  
[ISSUEDATE] 2025-07-15  
[MANUFAC] H.E. WILLIAMS, INC. - CARTHAGE, MO  
[LUMCAT] W4CR-xx-L15-827-xxx-DIM-UNV-M-xxx  
[LUMINAIRE] 4 INCH ROUND OUTDOOR LED CYLINDER  
[MORE] MEDIUM DISTRIBUTION WITH MICROPRISM LENS  
[MORE] 0-10V LED DRIVER

### CHARACTERISTICS

|   |                               |
|---|-------------------------------|
| IES Classification                              | Type VS                       |
| Longitudinal Classification                     | Very Short                    |
| Lumens Per Lamp                                 | N.A. (absolute)               |
| Total Lamp Lumens                               | N.A. (absolute)               |
| Luminaire Lumens                                | 1507                          |
| Downward Total Efficiency                       | N.A. (absolute)               |
| Total Luminaire Efficiency                      | N.A. (absolute)               |
| Luminaire Efficacy Rating (LER)                 | 111                           |
| Total Luminaire Watts                           | 13.6                          |
| Ballast Factor                                  | 1.00                          |
| Upward Waste Light Ratio                        | 0.00                          |
| Maximum Candela                                 | 2868.012                      |
| Maximum Candela Angle                           | 90H 0V                        |
| Maximum Candela (<90 Degrees Vertical)          | 2868.012                      |
| Maximum Candela Angle (<90 Degrees Vertical)    | 90H 0V                        |
| Maximum Candela At 90 Degrees Vertical          | .214 (0.0% Luminaire Lumens)  |
| Maximum Candela from 80 to <90 Degrees Vertical | 1.002 (0.1% Luminaire Lumens) |
| Cutoff Classification (deprecated)              | N.A. (absolute)               |

**IES ROAD REPORT****PHOTOMETRIC FILENAME : W4CR-XX-L15-827-XXX-DIM-UNV-M-XXX\_.IES****LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

|                               | Lumens   | % Lamp | % Luminaire |
|-------------------------------|----------|--------|-------------|
| FL - Front-Low (0-30)         | 626.9    | N.A.   | 41.6        |
| FM - Front-Medium (30-60)     | 119.5    | N.A.   | 7.9         |
| FH - Front-High (60-80)       | 6.7      | N.A.   | 0.4         |
| FVH - Front-Very High (80-90) | 0.3      | N.A.   | 0.0         |
| BL - Back-Low (0-30)          | 626.9    | N.A.   | 41.6        |
| BM - Back-Medium (30-60)      | 119.5    | N.A.   | 7.9         |
| BH - Back-High (60-80)        | 6.7      | N.A.   | 0.4         |
| BVH - Back-Very High (80-90)  | 0.3      | N.A.   | 0.0         |
| UL - Uplight-Low (90-100)     | 0.2      | N.A.   | 0.0         |
| UH - Uplight-High (100-180)   | < 0.05   | N.A.   | 0.0         |
| Total                         | 1507.0   | N.A.   | 100.0       |
| BUG Rating                    | B2-U1-G0 |        |             |

# IES ROAD REPORT

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## CANDELA TABULATION

| Vert.<br>Angles | Horizontal Angles |             |             |             |             |
|-----------------|-------------------|-------------|-------------|-------------|-------------|
|                 | <u>0.0</u>        | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
| 0               | 2868.012          | 2868.012    | 2868.012    | 2868.012    | 2868.012    |
| 1               | 2863.587          | 2864.266    | 2862.360    | 2861.708    | 2861.965    |
| 2               | 2851.543          | 2855.557    | 2852.529    | 2851.488    | 2847.928    |
| 3               | 2830.599          | 2832.812    | 2829.657    | 2830.468    | 2829.301    |
| 4               | 2801.490          | 2807.498    | 2802.048    | 2802.349    | 2801.227    |
| 5               | 2771.997          | 2769.472    | 2765.222    | 2764.247    | 2762.511    |
| 6               | 2726.062          | 2727.382    | 2721.801    | 2718.728    | 2718.307    |
| 7               | 2675.603          | 2673.900    | 2671.255    | 2665.641    | 2661.057    |
| 8               | 2611.518          | 2614.361    | 2607.608    | 2601.912    | 2600.455    |
| 9               | 2538.550          | 2541.053    | 2537.065    | 2532.826    | 2530.871    |
| 10              | 2456.528          | 2457.667    | 2455.810    | 2454.249    | 2450.284    |
| 11              | 2367.851          | 2367.556    | 2366.422    | 2363.766    | 2360.611    |
| 12              | 2270.023          | 2272.340    | 2266.009    | 2267.383    | 2267.953    |
| 13              | 2167.961          | 2168.126    | 2161.865    | 2168.449    | 2170.212    |
| 14              | 2058.834          | 2061.463    | 2059.152    | 2064.826    | 2066.891    |
| 15              | 1946.908          | 1950.025    | 1949.258    | 1957.024    | 1959.018    |
| 16              | 1837.387          | 1838.910    | 1838.921    | 1847.623    | 1853.653    |
| 17              | 1729.958          | 1731.700    | 1732.444    | 1739.586    | 1746.969    |
| 18              | 1619.998          | 1625.081    | 1626.165    | 1633.373    | 1643.089    |
| 19              | 1519.717          | 1521.360    | 1526.081    | 1533.124    | 1540.337    |
| 20              | 1420.048          | 1425.673    | 1429.227    | 1436.123    | 1445.346    |
| 21              | 1327.795          | 1331.788    | 1337.139    | 1343.509    | 1351.970    |
| 22              | 1240.631          | 1245.357    | 1248.983    | 1257.116    | 1264.729    |
| 23              | 1158.143          | 1160.893    | 1165.055    | 1173.802    | 1181.940    |
| 24              | 1080.689          | 1081.954    | 1087.174    | 1095.389    | 1100.362    |
| 25              | 1005.656          | 1007.315    | 1013.186    | 1020.870    | 1024.507    |
| 26              | 932.347           | 936.422     | 941.680     | 948.554     | 951.467     |
| 27              | 860.370           | 863.087     | 871.921     | 878.641     | 878.296     |
| 28              | 788.157           | 791.164     | 801.285     | 805.508     | 805.333     |
| 29              | 715.244           | 722.374     | 727.594     | 731.975     | 732.074     |
| 30              | 640.834           | 646.355     | 652.665     | 656.832     | 655.732     |
| 31              | 565.872           | 569.662     | 574.674     | 578.228     | 577.483     |
| 32              | 491.299           | 494.766     | 498.567     | 501.420     | 500.840     |
| 33              | 416.797           | 420.006     | 423.254     | 425.538     | 426.787     |
| 34              | 345.197           | 349.376     | 351.282     | 353.873     | 355.450     |
| 35              | 279.907           | 283.736     | 284.853     | 286.518     | 289.169     |
| 36              | 228.255           | 225.878     | 227.236     | 227.893     | 231.415     |
| 37              | 178.585           | 175.923     | 177.079     | 176.055     | 181.219     |
| 38              | 133.746           | 135.860     | 134.567     | 135.630     | 139.825     |
| 39              | 102.746           | 104.767     | 103.283     | 106.805     | 112.638     |
| 40              | 78.840            | 80.023      | 81.195      | 82.093      | 85.544      |
| 41              | 63.674            | 62.667      | 63.921      | 66.117      | 69.173      |
| 42              | 50.124            | 50.946      | 53.197      | 55.300      | 57.425      |
| 43              | 42.134            | 42.999      | 44.659      | 46.718      | 48.865      |
| 44              | 36.865            | 37.555      | 39.017      | 40.918      | 42.588      |
| 45              | 33.146            | 33.716      | 35.063      | 36.564      | 37.873      |
| 46              | 30.534            | 31.032      | 32.193      | 33.360      | 34.346      |
| 47              | 28.633            | 29.082      | 30.035      | 30.950      | 31.766      |
| 48              | 27.187            | 27.593      | 28.381      | 29.126      | 29.816      |
| 49              | 26.070            | 26.404      | 27.056      | 27.647      | 28.283      |
| 50              | 25.101            | 25.358      | 25.933      | 26.426      | 26.985      |
| 51              | 24.180            | 24.394      | 24.914      | 25.331      | 25.834      |
| 52              | 23.217            | 23.403      | 23.830      | 24.170      | 24.580      |

**IES ROAD REPORT****PHOTOMETRIC FILENAME : W4CR-XX-L15-827-XXX-DIM-UNV-M-XXX\_.IES****CANDELA TABULATION - (Cont.)**

|     |        |        |        |        |        |
|-----|--------|--------|--------|--------|--------|
| 53  | 22.192 | 22.362 | 22.713 | 22.970 | 23.310 |
| 54  | 21.130 | 21.272 | 21.568 | 21.776 | 22.044 |
| 55  | 20.029 | 20.160 | 20.412 | 20.566 | 20.785 |
| 56  | 18.873 | 18.994 | 19.197 | 19.350 | 19.509 |
| 57  | 17.696 | 17.783 | 17.942 | 18.096 | 18.222 |
| 58  | 16.502 | 16.579 | 16.705 | 16.852 | 16.978 |
| 59  | 15.313 | 15.374 | 15.472 | 15.615 | 15.730 |
| 60  | 14.141 | 14.202 | 14.284 | 14.404 | 14.519 |
| 61  | 13.040 | 13.101 | 13.139 | 13.260 | 13.358 |
| 62  | 12.016 | 12.060 | 12.093 | 12.186 | 12.285 |
| 63  | 11.069 | 11.107 | 11.124 | 11.200 | 11.288 |
| 64  | 10.209 | 10.236 | 10.247 | 10.302 | 10.395 |
| 65  | 9.442  | 9.464  | 9.453  | 9.502  | 9.601  |
| 66  | 8.714  | 8.747  | 8.719  | 8.774  | 8.862  |
| 67  | 8.078  | 8.100  | 8.073  | 8.117  | 8.193  |
| 68  | 7.492  | 7.498  | 7.470  | 7.503  | 7.580  |
| 69  | 6.945  | 6.934  | 6.912  | 6.923  | 6.999  |
| 70  | 6.424  | 6.397  | 6.370  | 6.375  | 6.435  |
| 71  | 5.915  | 5.882  | 5.844  | 5.833  | 5.893  |
| 72  | 5.411  | 5.384  | 5.329  | 5.307  | 5.373  |
| 73  | 4.907  | 4.874  | 4.814  | 4.781  | 4.858  |
| 74  | 4.387  | 4.354  | 4.283  | 4.250  | 4.321  |
| 75  | 3.823  | 3.806  | 3.724  | 3.697  | 3.757  |
| 76  | 3.182  | 3.171  | 3.089  | 3.083  | 3.127  |
| 77  | 2.470  | 2.459  | 2.366  | 2.361  | 2.399  |
| 78  | 1.649  | 1.649  | 1.566  | 1.523  | 1.550  |
| 79  | 1.106  | 1.123  | 1.090  | 1.084  | 1.079  |
| 80  | 1.002  | 0.997  | 0.991  | 0.980  | 0.980  |
| 81  | 0.937  | 0.937  | 0.931  | 0.926  | 0.926  |
| 82  | 0.882  | 0.876  | 0.882  | 0.876  | 0.876  |
| 83  | 0.822  | 0.816  | 0.822  | 0.816  | 0.822  |
| 84  | 0.756  | 0.750  | 0.756  | 0.750  | 0.756  |
| 85  | 0.679  | 0.679  | 0.679  | 0.679  | 0.679  |
| 86  | 0.592  | 0.592  | 0.597  | 0.592  | 0.597  |
| 87  | 0.504  | 0.498  | 0.504  | 0.493  | 0.493  |
| 88  | 0.394  | 0.394  | 0.394  | 0.389  | 0.394  |
| 89  | 0.285  | 0.279  | 0.285  | 0.274  | 0.274  |
| 90  | 0.214  | 0.208  | 0.208  | 0.192  | 0.181  |
| 91  | 0.197  | 0.197  | 0.197  | 0.181  | 0.181  |
| 92  | 0.197  | 0.197  | 0.197  | 0.181  | 0.181  |
| 93  | 0.203  | 0.197  | 0.197  | 0.186  | 0.181  |
| 94  | 0.203  | 0.197  | 0.203  | 0.186  | 0.186  |
| 95  | 0.203  | 0.197  | 0.203  | 0.186  | 0.192  |
| 96  | 0.203  | 0.197  | 0.203  | 0.192  | 0.192  |
| 97  | 0.208  | 0.197  | 0.203  | 0.192  | 0.192  |
| 98  | 0.208  | 0.203  | 0.203  | 0.192  | 0.197  |
| 99  | 0.214  | 0.208  | 0.208  | 0.197  | 0.203  |
| 100 | 0.214  | 0.214  | 0.208  | 0.203  | 0.203  |
| 101 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 102 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 103 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 104 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 105 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 106 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 107 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 108 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |

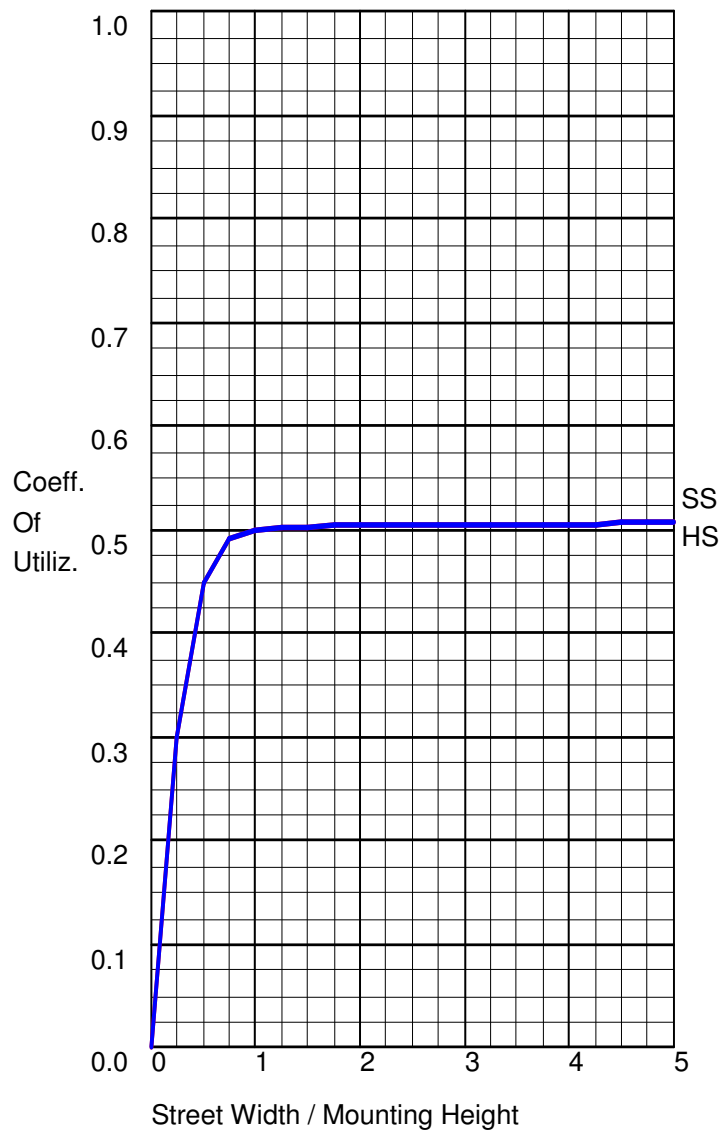
**IES ROAD REPORT****PHOTOMETRIC FILENAME : W4CR-XX-L15-827-XXX-DIM-UNV-M-XXX\_.IES****CANDELA TABULATION - (Cont.)**

|     |       |       |       |       |       |
|-----|-------|-------|-------|-------|-------|
| 109 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 110 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 111 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 112 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 113 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 114 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 115 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 116 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 117 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 118 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 119 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 120 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 121 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 122 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 123 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 124 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 125 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 126 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 127 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 128 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 129 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 130 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 131 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 132 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 133 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 134 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 135 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 136 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 137 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 138 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 139 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 140 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 141 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 142 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 143 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 144 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 145 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 146 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 147 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 148 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 149 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 150 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 151 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 152 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 153 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 154 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 155 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 156 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 157 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 158 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 159 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 160 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 161 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 162 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 163 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 164 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

**IES ROAD REPORT****PHOTOMETRIC FILENAME : W4CR-XX-L15-827-XXX-DIM-UNV-M-XXX\_.IES****CANDELA TABULATION - (Cont.)**

|     |       |       |       |       |       |
|-----|-------|-------|-------|-------|-------|
| 165 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 166 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 167 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 168 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 169 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 170 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 171 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 172 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 173 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 174 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 175 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 176 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 177 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 178 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 179 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 180 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

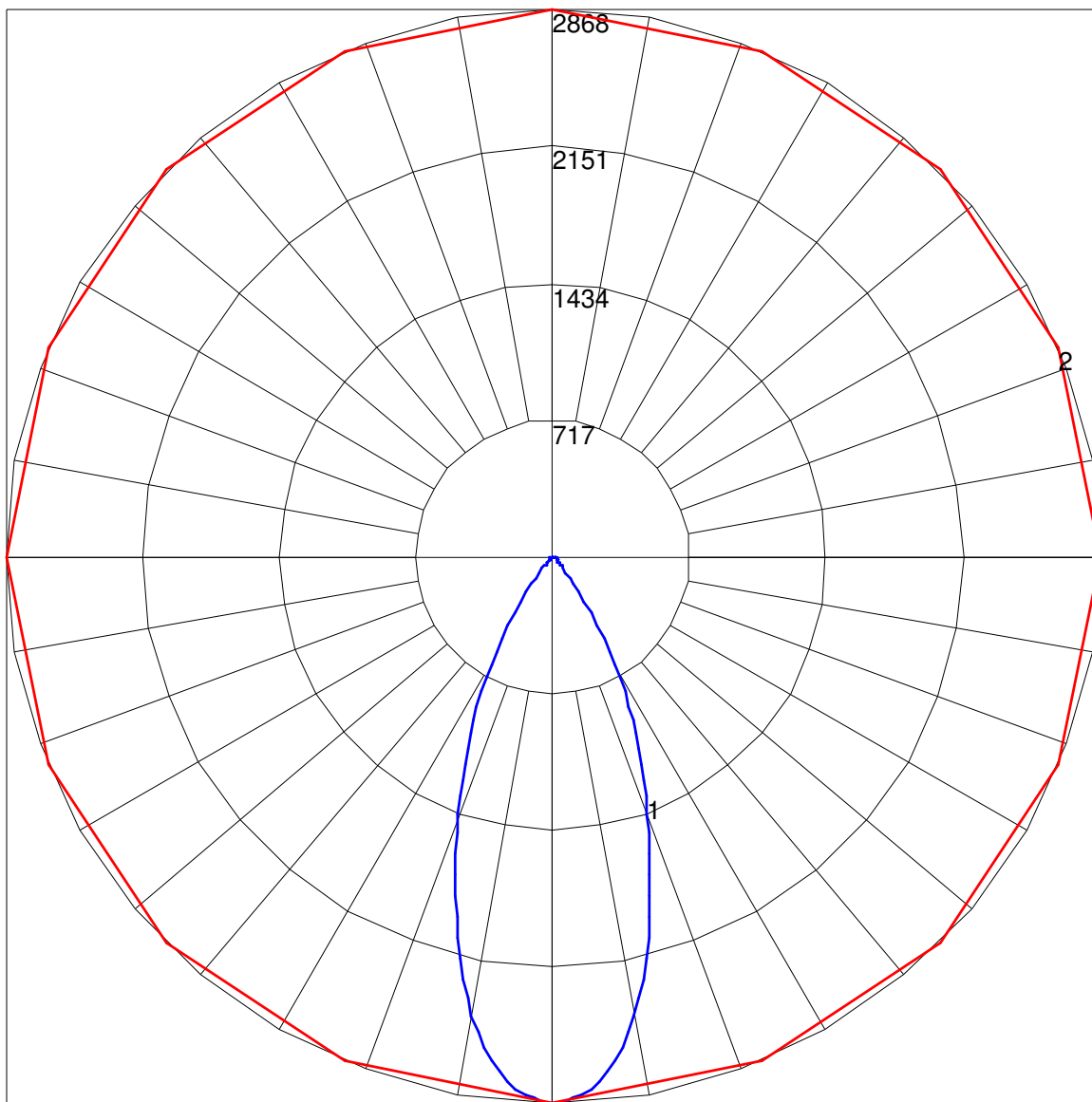
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

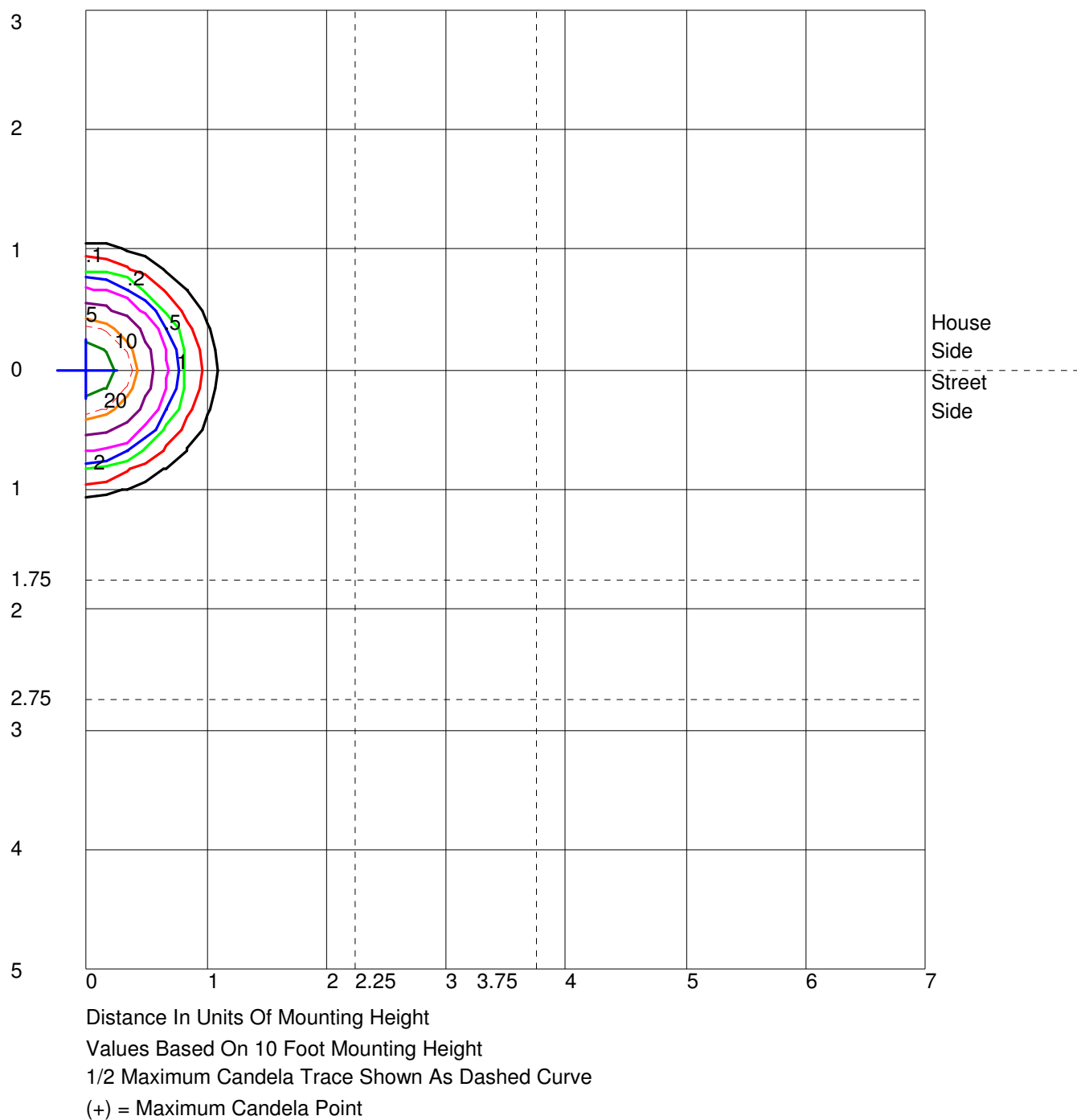
|                      | Lumens | Percent<br>Of Luminaire |
|----------------------|--------|-------------------------|
| Downward Street Side | 753.5  | 50.0                    |
| Downward House Side  | 753.5  | 50.0                    |
| Downward Total       | 1507.0 | 100.0                   |
| Upward Street Side   | 0.1    | 0.0                     |
| Upward House Side    | 0.1    | 0.0                     |
| Upward Total         | 0.2    | 0.0                     |
| Total Flux           | 1507.2 | 100.0                   |

POLAR GRAPH

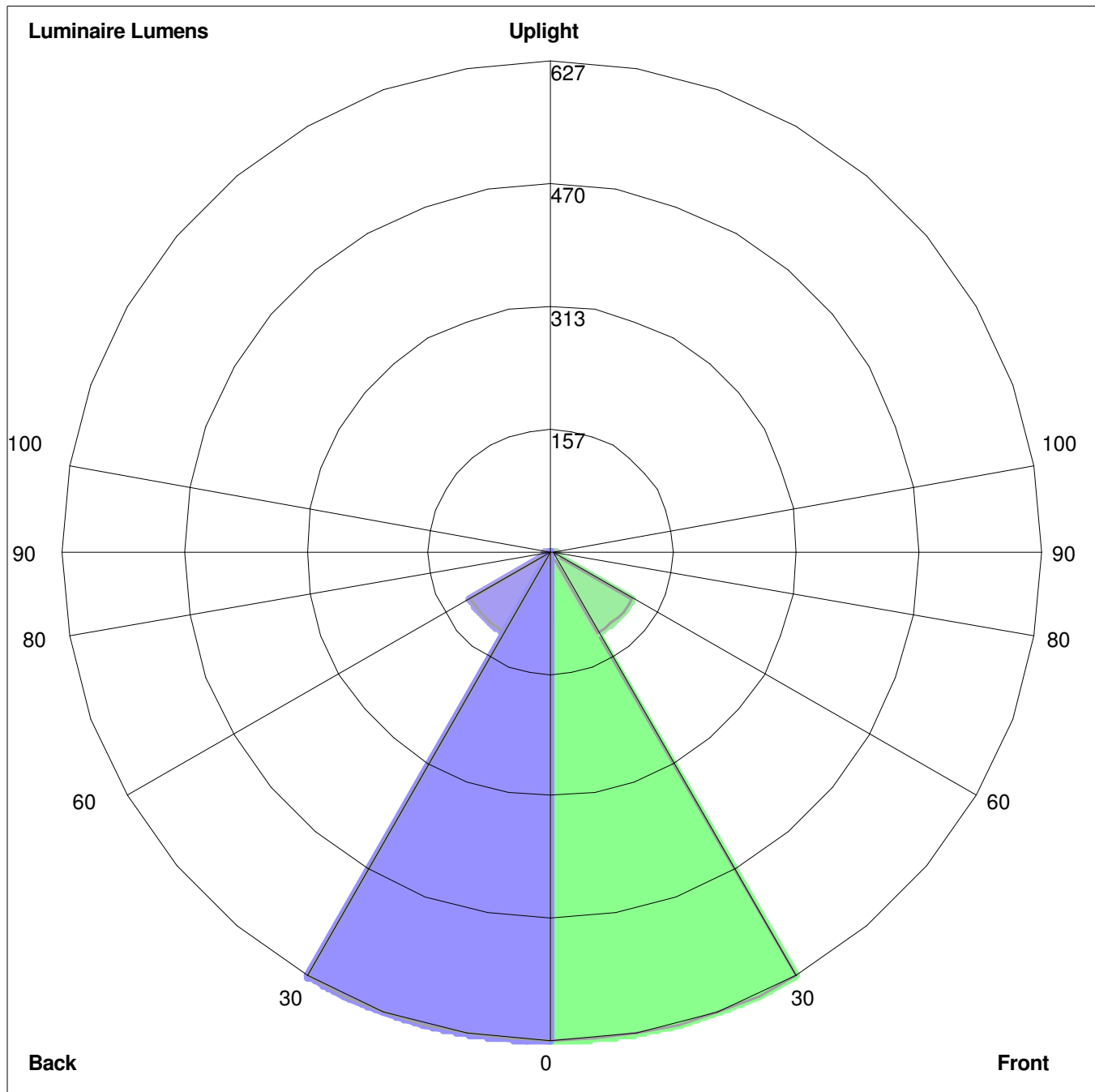


Maximum Candela = 2868.012 Located At Horizontal Angle = 90, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=626.9, Medium=119.5, High=6.7, Very High=0.3  
Back: Low=626.9, Medium=119.5, High=6.7, Very High=0.3  
Uplight: Low=0.2, High=0.0

BUG Rating : B2-U1-G0