

IES ROAD REPORT

PHOTOMETRIC FILENAME : W4CR-XX-L10-830-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-L10-830-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 | 1043 |
| Downward Total Efficiency | N.A. (absolute) |
| Total Luminaire Efficiency | N.A. (absolute) |
| Luminaire Efficacy Rating (LER) | 106 |
| Total Luminaire Watts | 9.8 |
| Ballast Factor | 1.00 |
| Upward Waste Light Ratio | 0.00 |
| Maximum Candela | 1984.645 |
| Maximum Candela Angle | 90H 0V |
| Maximum Candela (<90 Degrees Vertical) | 1984.645 |
| Maximum Candela Angle (<90 Degrees Vertical) | 90H 0V |
| Maximum Candela At 90 Degrees Vertical | .148 (0.0% Luminaire Lumens) |
| Maximum Candela from 80 to <90 Degrees Vertical | .694 (0.1% Luminaire Lumens) |
| Cutoff Classification (deprecated) | N.A. (absolute) |

IES ROAD REPORT**PHOTOMETRIC FILENAME : W4CR-XX-L10-830-XXX-DIM-UNV-M-XXX_.IES****LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

| | Lumens | % Lamp | % Luminaire |
|-------------------------------|----------|--------|-------------|
| FL - Front-Low (0-30) | 433.8 | N.A. | 41.6 |
| FM - Front-Medium (30-60) | 82.7 | N.A. | 7.9 |
| FH - Front-High (60-80) | 4.7 | N.A. | 0.4 |
| FVH - Front-Very High (80-90) | 0.2 | N.A. | 0.0 |
| BL - Back-Low (0-30) | 433.8 | N.A. | 41.6 |
| BM - Back-Medium (30-60) | 82.7 | N.A. | 7.9 |
| BH - Back-High (60-80) | 4.7 | N.A. | 0.4 |
| BVH - Back-Very High (80-90) | 0.2 | N.A. | 0.0 |
| UL - Uplight-Low (90-100) | 0.1 | N.A. | 0.0 |
| UH - Uplight-High (100-180) | < 0.05 | N.A. | 0.0 |
| Total | 1042.9 | N.A. | 100.0 |
| BUG Rating | B1-U1-G0 | | |

IES ROAD REPORT**PHOTOMETRIC FILENAME : W4CR-XX-L10-830-XXX-DIM-UNV-M-XXX_.IES****CANDELA TABULATION**

| Vert. Angles | Horizontal Angles | | | | |
|-----------------|-------------------|-------------|-------------|-------------|-------------|
| | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
| 0 | 1984.645 | 1984.645 | 1984.645 | 1984.645 | 1984.645 |
| 1 | 1981.582 | 1982.052 | 1980.734 | 1980.283 | 1980.461 |
| 2 | 1973.248 | 1976.026 | 1973.931 | 1973.210 | 1970.747 |
| 3 | 1958.755 | 1960.287 | 1958.104 | 1958.665 | 1957.857 |
| 4 | 1938.612 | 1942.769 | 1938.998 | 1939.207 | 1938.430 |
| 5 | 1918.203 | 1916.456 | 1913.515 | 1912.840 | 1911.639 |
| 6 | 1886.416 | 1887.330 | 1883.468 | 1881.342 | 1881.050 |
| 7 | 1851.499 | 1850.321 | 1848.490 | 1844.605 | 1841.433 |
| 8 | 1807.153 | 1809.120 | 1804.447 | 1800.505 | 1799.497 |
| 9 | 1756.659 | 1758.391 | 1755.632 | 1752.699 | 1751.346 |
| 10 | 1699.900 | 1700.689 | 1699.404 | 1698.324 | 1695.580 |
| 11 | 1638.537 | 1638.332 | 1637.548 | 1635.710 | 1633.527 |
| 12 | 1570.841 | 1572.444 | 1568.063 | 1569.014 | 1569.408 |
| 13 | 1500.214 | 1500.328 | 1495.996 | 1500.552 | 1501.772 |
| 14 | 1424.699 | 1426.519 | 1424.919 | 1428.846 | 1430.274 |
| 15 | 1347.247 | 1349.404 | 1348.873 | 1354.248 | 1355.627 |
| 16 | 1271.459 | 1272.513 | 1272.521 | 1278.543 | 1282.716 |
| 17 | 1197.119 | 1198.324 | 1198.840 | 1203.782 | 1208.891 |
| 18 | 1121.028 | 1124.545 | 1125.295 | 1130.283 | 1137.006 |
| 19 | 1051.634 | 1052.771 | 1056.037 | 1060.911 | 1065.903 |
| 20 | 982.664 | 986.556 | 989.016 | 993.787 | 1000.170 |
| 21 | 918.825 | 921.588 | 925.291 | 929.699 | 935.554 |
| 22 | 858.508 | 861.779 | 864.288 | 869.916 | 875.184 |
| 23 | 801.427 | 803.330 | 806.210 | 812.263 | 817.895 |
| 24 | 747.829 | 748.705 | 752.317 | 758.002 | 761.443 |
| 25 | 695.907 | 697.055 | 701.118 | 706.435 | 708.952 |
| 26 | 645.178 | 647.998 | 651.636 | 656.393 | 658.409 |
| 27 | 595.370 | 597.250 | 603.363 | 608.014 | 607.775 |
| 28 | 545.400 | 547.480 | 554.484 | 557.406 | 557.285 |
| 29 | 494.944 | 499.878 | 503.490 | 506.522 | 506.590 |
| 30 | 443.453 | 447.273 | 451.639 | 454.524 | 453.762 |
| 31 | 391.580 | 394.202 | 397.670 | 400.130 | 399.615 |
| 32 | 339.976 | 342.375 | 345.005 | 346.979 | 346.578 |
| 33 | 288.421 | 290.641 | 292.889 | 294.469 | 295.333 |
| 34 | 238.874 | 241.766 | 243.085 | 244.878 | 245.969 |
| 35 | 193.694 | 196.343 | 197.116 | 198.269 | 200.103 |
| 36 | 157.951 | 156.306 | 157.246 | 157.701 | 160.138 |
| 37 | 123.580 | 121.738 | 122.537 | 121.829 | 125.403 |
| 38 | 92.551 | 94.014 | 93.120 | 93.855 | 96.758 |
| 39 | 71.100 | 72.498 | 71.471 | 73.908 | 77.945 |
| 40 | 54.557 | 55.375 | 56.186 | 56.808 | 59.196 |
| 41 | 44.062 | 43.365 | 44.233 | 45.753 | 47.867 |
| 42 | 34.686 | 35.254 | 36.812 | 38.267 | 39.738 |
| 43 | 29.156 | 29.755 | 30.903 | 32.328 | 33.814 |
| 44 | 25.510 | 25.988 | 27.000 | 28.315 | 29.471 |
| 45 | 22.937 | 23.331 | 24.263 | 25.302 | 26.208 |
| 46 | 21.129 | 21.474 | 22.277 | 23.085 | 23.767 |
| 47 | 19.814 | 20.125 | 20.784 | 21.417 | 21.982 |
| 48 | 18.813 | 19.094 | 19.640 | 20.155 | 20.633 |
| 49 | 18.040 | 18.271 | 18.722 | 19.132 | 19.571 |
| 50 | 17.369 | 17.548 | 17.946 | 18.287 | 18.673 |
| 51 | 16.733 | 16.881 | 17.241 | 17.529 | 17.877 |
| 52 | 16.066 | 16.195 | 16.490 | 16.725 | 17.009 |

IES ROAD REPORT**PHOTOMETRIC FILENAME : W4CR-XX-L10-830-XXX-DIM-UNV-M-XXX_.IES****CANDELA TABULATION - (Cont.)**

| | | | | | |
|-----|--------|--------|--------|--------|--------|
| 53 | 15.357 | 15.474 | 15.717 | 15.895 | 16.130 |
| 54 | 14.622 | 14.720 | 14.925 | 15.069 | 15.255 |
| 55 | 13.860 | 13.951 | 14.125 | 14.231 | 14.383 |
| 56 | 13.060 | 13.144 | 13.284 | 13.390 | 13.500 |
| 57 | 12.245 | 12.306 | 12.416 | 12.522 | 12.609 |
| 58 | 11.419 | 11.472 | 11.559 | 11.662 | 11.749 |
| 59 | 10.597 | 10.638 | 10.707 | 10.805 | 10.885 |
| 60 | 9.786 | 9.827 | 9.884 | 9.968 | 10.047 |
| 61 | 9.024 | 9.066 | 9.092 | 9.176 | 9.244 |
| 62 | 8.315 | 8.346 | 8.368 | 8.433 | 8.501 |
| 63 | 7.660 | 7.686 | 7.697 | 7.750 | 7.811 |
| 64 | 7.065 | 7.083 | 7.091 | 7.129 | 7.193 |
| 65 | 6.534 | 6.549 | 6.541 | 6.576 | 6.644 |
| 66 | 6.030 | 6.053 | 6.034 | 6.072 | 6.132 |
| 67 | 5.590 | 5.605 | 5.586 | 5.617 | 5.670 |
| 68 | 5.185 | 5.188 | 5.170 | 5.192 | 5.245 |
| 69 | 4.806 | 4.798 | 4.783 | 4.791 | 4.844 |
| 70 | 4.446 | 4.427 | 4.408 | 4.412 | 4.453 |
| 71 | 4.093 | 4.070 | 4.044 | 4.036 | 4.078 |
| 72 | 3.744 | 3.726 | 3.688 | 3.672 | 3.718 |
| 73 | 3.396 | 3.373 | 3.331 | 3.309 | 3.362 |
| 74 | 3.036 | 3.013 | 2.964 | 2.941 | 2.990 |
| 75 | 2.645 | 2.634 | 2.577 | 2.558 | 2.600 |
| 76 | 2.202 | 2.194 | 2.138 | 2.134 | 2.164 |
| 77 | 1.709 | 1.702 | 1.637 | 1.633 | 1.660 |
| 78 | 1.141 | 1.141 | 1.084 | 1.054 | 1.073 |
| 79 | 0.766 | 0.777 | 0.754 | 0.750 | 0.747 |
| 80 | 0.694 | 0.690 | 0.686 | 0.678 | 0.678 |
| 81 | 0.648 | 0.648 | 0.644 | 0.641 | 0.641 |
| 82 | 0.610 | 0.606 | 0.610 | 0.606 | 0.606 |
| 83 | 0.568 | 0.565 | 0.568 | 0.565 | 0.568 |
| 84 | 0.523 | 0.519 | 0.523 | 0.519 | 0.523 |
| 85 | 0.470 | 0.470 | 0.470 | 0.470 | 0.470 |
| 86 | 0.409 | 0.409 | 0.413 | 0.409 | 0.413 |
| 87 | 0.349 | 0.345 | 0.349 | 0.341 | 0.341 |
| 88 | 0.273 | 0.273 | 0.273 | 0.269 | 0.273 |
| 89 | 0.197 | 0.193 | 0.197 | 0.189 | 0.189 |
| 90 | 0.148 | 0.144 | 0.144 | 0.133 | 0.125 |
| 91 | 0.136 | 0.136 | 0.136 | 0.125 | 0.125 |
| 92 | 0.136 | 0.136 | 0.136 | 0.125 | 0.125 |
| 93 | 0.140 | 0.136 | 0.136 | 0.129 | 0.125 |
| 94 | 0.140 | 0.136 | 0.140 | 0.129 | 0.129 |
| 95 | 0.140 | 0.136 | 0.140 | 0.129 | 0.133 |
| 96 | 0.140 | 0.136 | 0.140 | 0.133 | 0.133 |
| 97 | 0.144 | 0.136 | 0.140 | 0.133 | 0.133 |
| 98 | 0.144 | 0.140 | 0.140 | 0.133 | 0.136 |
| 99 | 0.148 | 0.144 | 0.144 | 0.136 | 0.140 |
| 100 | 0.148 | 0.148 | 0.144 | 0.140 | 0.140 |
| 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 |

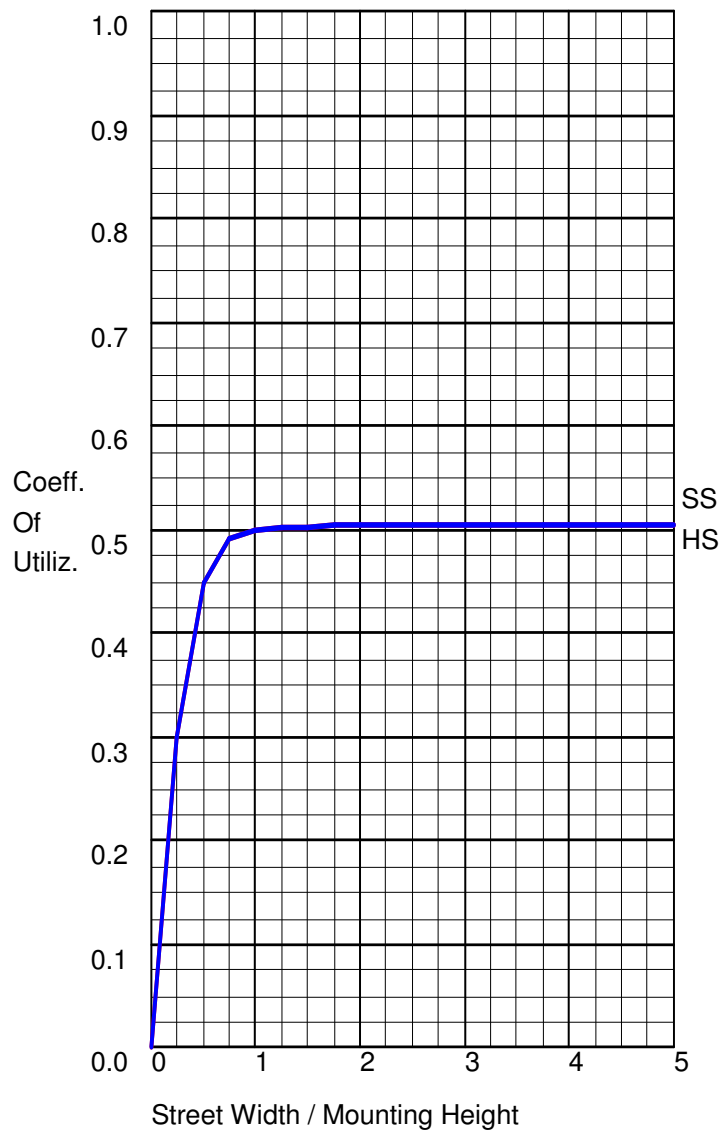
IES ROAD REPORT**PHOTOMETRIC FILENAME : W4CR-XX-L10-830-XXX-DIM-UNV-M-XXX_.IES****CANDELA TABULATION - (Cont.)**

| | | | | | |
|-----|-------|-------|-------|-------|-------|
| 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-L10-830-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 |

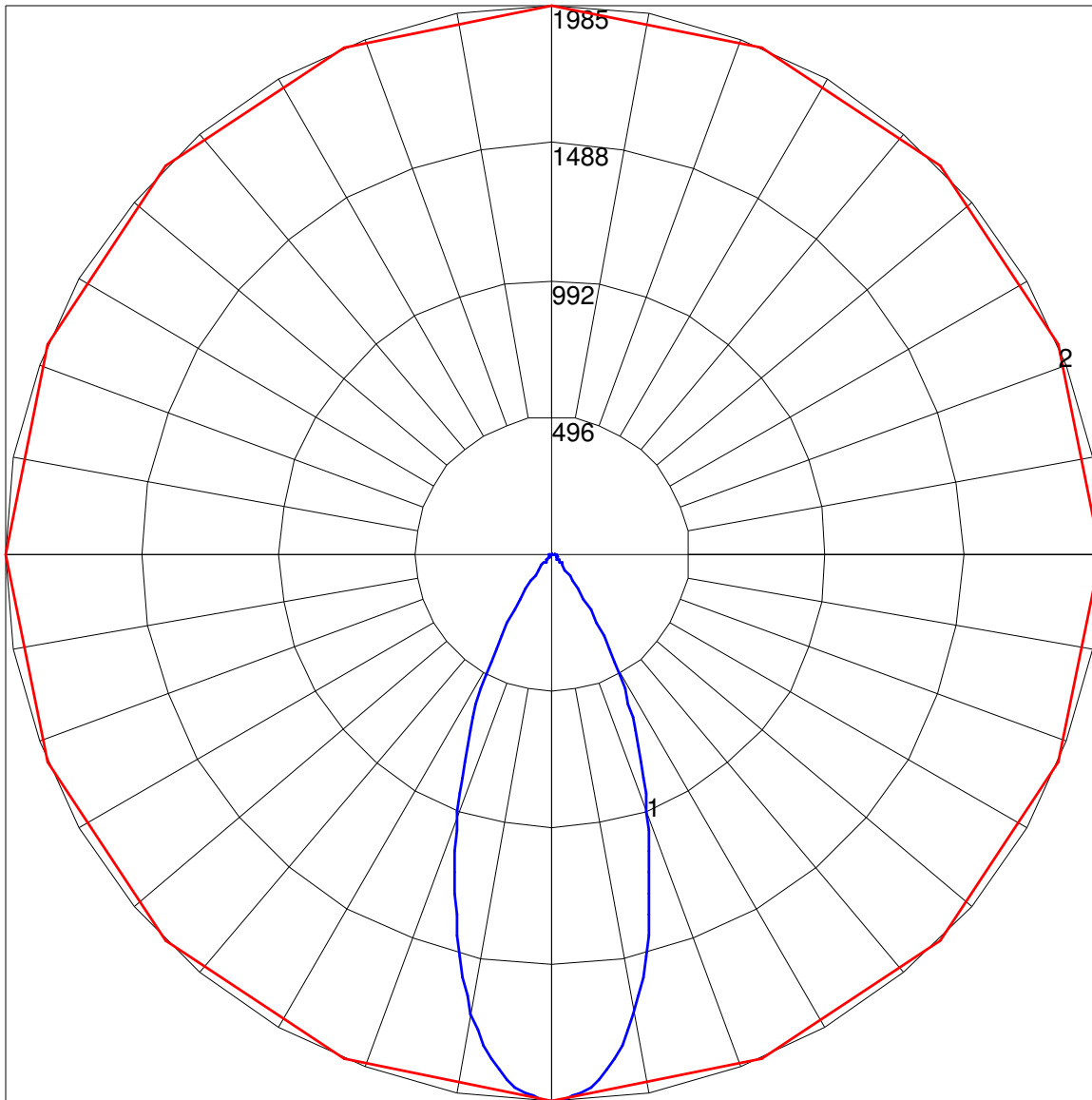
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

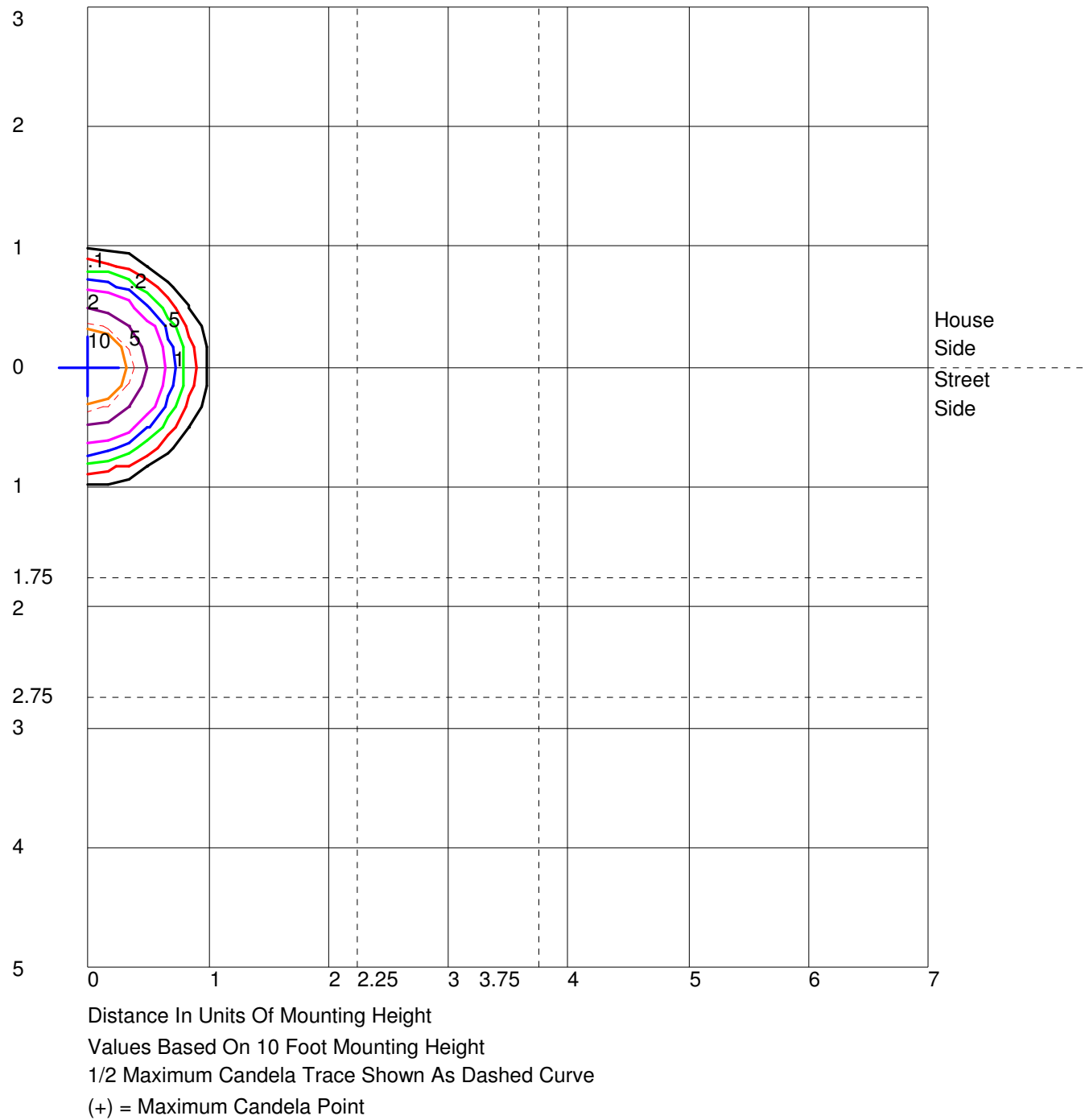
| | Lumens | Percent Of Luminaire |
|----------------------|--------|-------------------------|
| Downward Street Side | 521.4 | 50.0 |
| Downward House Side | 521.4 | 50.0 |
| Downward Total | 1042.8 | 100.0 |
| Upward Street Side | 0.1 | 0.0 |
| Upward House Side | 0.1 | 0.0 |
| Upward Total | 0.2 | 0.0 |
| Total Flux | 1043.0 | 100.0 |

POLAR GRAPH

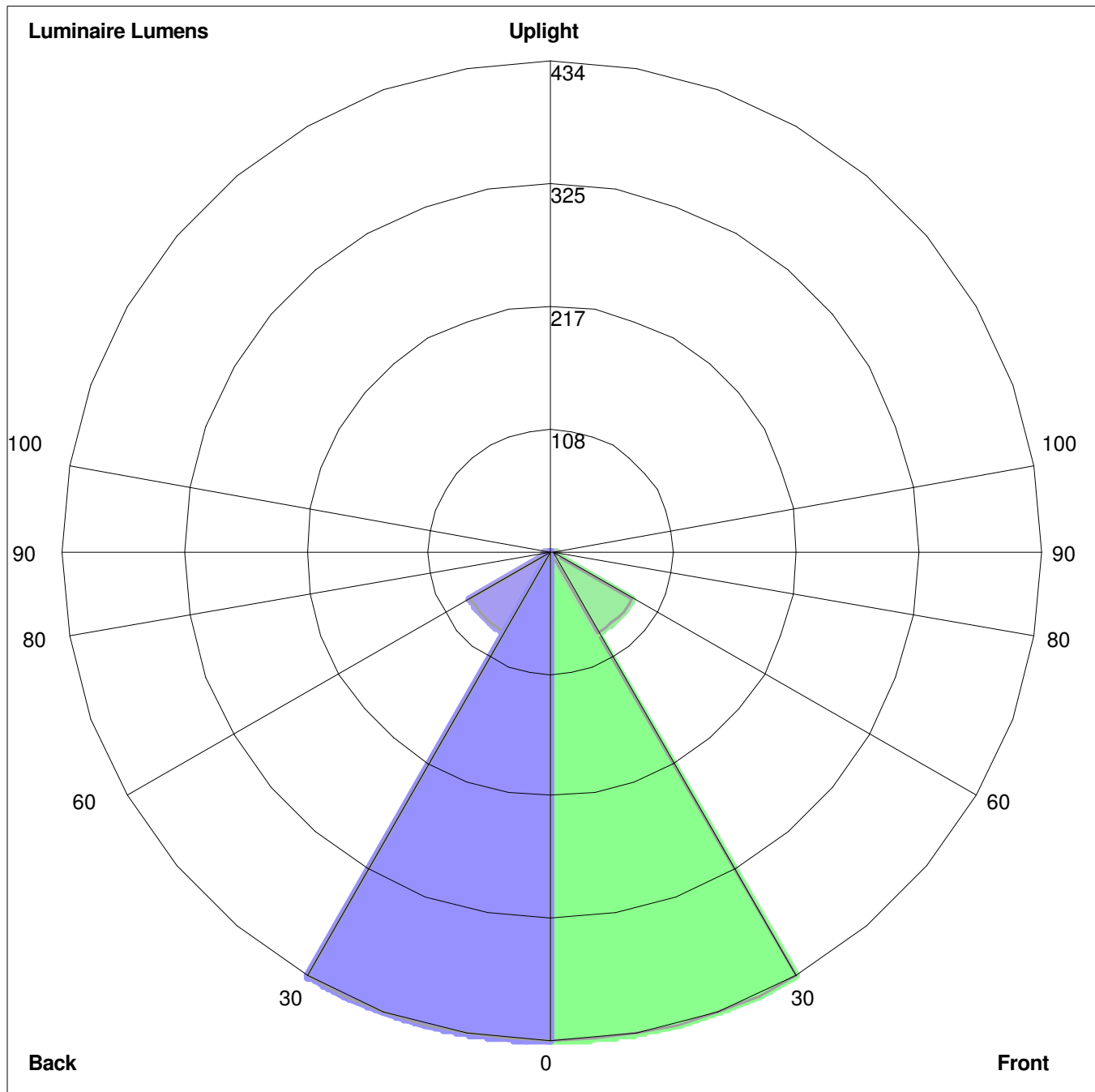


Maximum Candela = 1984.645 Located At Horizontal Angle = 90, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=433.8, Medium=82.7, High=4.7, Very High=0.2
Back: Low=433.8, Medium=82.7, High=4.7, Very High=0.2
Uplight: Low=0.1, High=0.0

BUG Rating : B1-U1-G0