



## IES ROAD REPORT

PHOTOMETRIC FILENAME : TXWP-07L-40.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] 3758

[TESTLAB] TUV SUD America

[ISSUE DATE] 8/10/2020

[TEST DATE] 8/22/2019 1:05:36 PM

[MANUFAC] LSI INDUSTRIES, INC.

[OTHER] TEST PROCEDURE: IESNA

[ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED

[OTHER] SCALED FROM ORIGINAL TEST DATA

[SEARCH\_SOURCETYPE] LED

[SEARCH\_APPLICATION] Outdoor

[LUMCAT] TXWP-07L-40

### CHARACTERISTICS

|   |                               |
|---|-------------------------------|
| IES Classification                              | Type IV                       |
| Longitudinal Classification                     | Very Short                    |
| Lumens Per Lamp                                 | N.A. (absolute)               |
| Total Lamp Lumens                               | N.A. (absolute)               |
| Luminaire Lumens                                | 6178                          |
| Downward Total Efficiency                       | N.A. (absolute)               |
| Total Luminaire Efficiency                      | N.A. (absolute)               |
| Luminaire Efficacy Rating (LER)                 | 112                           |
| Total Luminaire Watts                           | 55                            |
| Ballast Factor                                  | 1.00                          |
| Upward Waste Light Ratio                        | 0.20                          |
| Maximum Candela                                 | 2129                          |
| Maximum Candela Angle                           | 360H 60V                      |
| Maximum Candela (<90 Degrees Vertical)          | 2129                          |
| Maximum Candela Angle (<90 Degrees Vertical)    | 360H 60V                      |
| Maximum Candela At 90 Degrees Vertical          | 1562 (25.3% Luminaire Lumens) |
| Maximum Candela from 80 to <90 Degrees Vertical | 1853 (30.0% Luminaire Lumens) |
| Cutoff Classification (deprecated)              | N.A. (absolute)               |



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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

|                               | Lumens   | % Lamp | % Luminaire |
|-------------------------------|----------|--------|-------------|
| FL - Front-Low (0-30)         | 532.5    | N.A.   | 8.6         |
| FM - Front-Medium (30-60)     | 1650.7   | N.A.   | 26.7        |
| FH - Front-High (60-80)       | 1344.0   | N.A.   | 21.8        |
| FVH - Front-Very High (80-90) | 574.0    | N.A.   | 9.3         |
| BL - Back-Low (0-30)          | 286.8    | N.A.   | 4.6         |
| BM - Back-Medium (30-60)      | 409.9    | N.A.   | 6.6         |
| BH - Back-High (60-80)        | 116.9    | N.A.   | 1.9         |
| BVH - Back-Very High (80-90)  | 17.0     | N.A.   | 0.3         |
| UL - Uplight-Low (90-100)     | 463.6    | N.A.   | 7.5         |
| UH - Uplight-High (100-180)   | 783.1    | N.A.   | 12.7        |
| Total                         | 6178.5   | N.A.   | 100.0       |
| BUG Rating                    | B1-U4-G4 |        |             |

**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> | <u>112.5</u> | <u>135.0</u> | <u>157.5</u> | <u>180.0</u> | <u>202.5</u> |
| 0.0             | 961               | 961         | 961         | 961         | 961         | 961          | 961          | 961          | 961          | 961          |
| 2.5             | 1046              | 1016        | 1000        | 979         | 959         | 935          | 916          | 905          | 919          | 905          |
| 5.0             | 1115              | 1080        | 1047        | 1003        | 956         | 911          | 877          | 856          | 865          | 856          |
| 7.5             | 1188              | 1144        | 1094        | 1026        | 951         | 888          | 839          | 811          | 814          | 811          |
| 10.0            | 1263              | 1210        | 1142        | 1047        | 946         | 863          | 802          | 765          | 764          | 765          |
| 12.5            | 1338              | 1277        | 1188        | 1066        | 937         | 836          | 764          | 718          | 714          | 718          |
| 15.0            | 1410              | 1343        | 1235        | 1083        | 927         | 809          | 725          | 668          | 661          | 668          |
| 17.5            | 1479              | 1407        | 1281        | 1099        | 914         | 779          | 683          | 618          | 604          | 618          |
| 20.0            | 1541              | 1466        | 1327        | 1114        | 899         | 750          | 641          | 575          | 566          | 575          |
| 22.5            | 1594              | 1519        | 1368        | 1127        | 882         | 717          | 597          | 543          | 532          | 543          |
| 25.0            | 1638              | 1564        | 1404        | 1138        | 862         | 684          | 561          | 512          | 501          | 512          |
| 27.5            | 1669              | 1597        | 1436        | 1147        | 841         | 649          | 529          | 481          | 470          | 481          |
| 30.0            | 1704              | 1621        | 1461        | 1152        | 819         | 612          | 500          | 452          | 439          | 452          |
| 32.5            | 1748              | 1647        | 1478        | 1156        | 794         | 575          | 471          | 422          | 407          | 422          |
| 35.0            | 1798              | 1679        | 1486        | 1157        | 770         | 536          | 443          | 392          | 373          | 392          |
| 37.5            | 1851              | 1717        | 1490        | 1155        | 744         | 504          | 414          | 360          | 337          | 360          |
| 40.0            | 1908              | 1758        | 1496        | 1149        | 718         | 471          | 386          | 326          | 303          | 326          |
| 42.5            | 1959              | 1798        | 1503        | 1141        | 690         | 438          | 358          | 293          | 277          | 293          |
| 45.0            | 2005              | 1835        | 1511        | 1127        | 661         | 408          | 329          | 265          | 254          | 265          |
| 47.5            | 2040              | 1867        | 1518        | 1109        | 633         | 380          | 300          | 241          | 234          | 241          |
| 50.0            | 2071              | 1892        | 1523        | 1087        | 603         | 352          | 271          | 219          | 216          | 219          |
| 52.5            | 2093              | 1910        | 1524        | 1060        | 572         | 325          | 241          | 199          | 198          | 199          |
| 55.0            | 2110              | 1921        | 1522        | 1031        | 540         | 297          | 214          | 179          | 173          | 179          |
| 57.5            | 2121              | 1928        | 1515        | 1000        | 506         | 271          | 189          | 156          | 147          | 156          |
| 60.0            | 2129              | 1931        | 1506        | 969         | 472         | 245          | 165          | 132          | 122          | 132          |
| 62.5            | 2128              | 1928        | 1493        | 938         | 436         | 219          | 143          | 106          | 96           | 106          |
| 65.0            | 2115              | 1917        | 1476        | 905         | 398         | 195          | 123          | 84           | 81           | 84           |
| 67.5            | 2091              | 1895        | 1452        | 872         | 360         | 170          | 104          | 64           | 61           | 64           |
| 70.0            | 2054              | 1864        | 1422        | 837         | 321         | 147          | 83           | 43           | 37           | 43           |
| 72.5            | 2011              | 1822        | 1385        | 800         | 280         | 124          | 62           | 17           | 4            | 17           |
| 75.0            | 1960              | 1776        | 1344        | 759         | 241         | 104          | 41           | 1            | 0            | 1            |
| 77.5            | 1907              | 1726        | 1298        | 718         | 203         | 86           | 26           | 0            | 0            | 0            |
| 80.0            | 1853              | 1675        | 1251        | 676         | 170         | 69           | 19           | 0            | 0            | 0            |
| 82.5            | 1795              | 1621        | 1202        | 634         | 141         | 57           | 16           | 0            | 0            | 0            |
| 85.0            | 1726              | 1559        | 1149        | 592         | 115         | 49           | 14           | 0            | 0            | 0            |
| 87.5            | 1647              | 1490        | 1091        | 548         | 95          | 44           | 12           | 0            | 0            | 0            |
| 90.0            | 1562              | 1414        | 1031        | 504         | 82          | 40           | 10           | 0            | 0            | 0            |
| 92.5            | 1479              | 1338        | 970         | 462         | 74          | 36           | 9            | 0            | 0            | 0            |
| 95.0            | 1395              | 1261        | 908         | 421         | 66          | 33           | 8            | 0            | 0            | 0            |
| 97.5            | 1311              | 1186        | 847         | 383         | 60          | 30           | 6            | 0            | 0            | 0            |
| 100.0           | 1227              | 1108        | 786         | 347         | 54          | 27           | 5            | 0            | 0            | 0            |
| 102.5           | 1141              | 1031        | 726         | 313         | 50          | 24           | 5            | 0            | 0            | 0            |
| 105.0           | 1055              | 956         | 669         | 282         | 46          | 22           | 4            | 0            | 0            | 0            |
| 107.5           | 975               | 882         | 614         | 253         | 43          | 20           | 4            | 0            | 0            | 0            |
| 110.0           | 897               | 815         | 562         | 227         | 39          | 18           | 3            | 0            | 0            | 0            |
| 112.5           | 824               | 748         | 514         | 204         | 36          | 17           | 3            | 0            | 0            | 0            |
| 115.0           | 751               | 684         | 469         | 182         | 33          | 15           | 2            | 0            | 0            | 0            |
| 117.5           | 682               | 621         | 428         | 161         | 30          | 13           | 2            | 0            | 0            | 0            |
| 120.0           | 618               | 562         | 386         | 140         | 27          | 12           | 2            | 0            | 0            | 0            |
| 122.5           | 558               | 507         | 346         | 117         | 24          | 11           | 1            | 0            | 1            | 0            |
| 125.0           | 502               | 457         | 306         | 96          | 21          | 9            | 1            | 0            | 0            | 0            |
| 127.5           | 451               | 410         | 271         | 75          | 18          | 8            | 1            | 0            | 1            | 0            |
| 130.0           | 403               | 366         | 238         | 58          | 14          | 7            | 1            | 0            | 1            | 0            |

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**CANDELA TABULATION - (Cont.)**

|       |     |     |     |    |    |   |   |   |   |   |
|-------|-----|-----|-----|----|----|---|---|---|---|---|
| 132.5 | 359 | 325 | 207 | 44 | 10 | 6 | 1 | 1 | 1 | 1 |
| 135.0 | 317 | 287 | 180 | 31 | 7  | 5 | 1 | 1 | 1 | 1 |
| 137.5 | 279 | 251 | 153 | 20 | 5  | 4 | 1 | 1 | 2 | 1 |
| 140.0 | 243 | 219 | 127 | 14 | 4  | 3 | 1 | 1 | 2 | 1 |
| 142.5 | 209 | 188 | 103 | 11 | 3  | 3 | 1 | 2 | 1 | 2 |
| 145.0 | 182 | 162 | 80  | 9  | 2  | 2 | 1 | 2 | 2 | 2 |
| 147.5 | 160 | 140 | 54  | 6  | 2  | 2 | 1 | 2 | 2 | 2 |
| 150.0 | 137 | 116 | 29  | 5  | 1  | 1 | 1 | 2 | 2 | 2 |
| 152.5 | 111 | 90  | 9   | 3  | 1  | 1 | 1 | 2 | 2 | 2 |
| 155.0 | 78  | 51  | 2   | 2  | 1  | 1 | 1 | 2 | 2 | 2 |
| 157.5 | 19  | 12  | 1   | 1  | 1  | 1 | 1 | 2 | 2 | 2 |
| 160.0 | 0   | 0   | 1   | 1  | 1  | 1 | 2 | 2 | 2 | 2 |
| 162.5 | 0   | 0   | 1   | 1  | 1  | 1 | 2 | 2 | 2 | 2 |
| 165.0 | 1   | 1   | 1   | 1  | 1  | 1 | 2 | 2 | 2 | 2 |
| 167.5 | 0   | 1   | 1   | 1  | 1  | 1 | 2 | 2 | 2 | 2 |
| 170.0 | 1   | 1   | 1   | 1  | 2  | 1 | 2 | 2 | 2 | 2 |
| 172.5 | 1   | 1   | 1   | 1  | 2  | 2 | 2 | 2 | 2 | 2 |
| 175.0 | 1   | 1   | 1   | 2  | 1  | 2 | 2 | 2 | 2 | 2 |
| 177.5 | 1   | 1   | 2   | 2  | 2  | 2 | 2 | 1 | 2 | 1 |
| 180.0 | 1   | 1   | 1   | 1  | 1  | 1 | 1 | 1 | 1 | 1 |

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

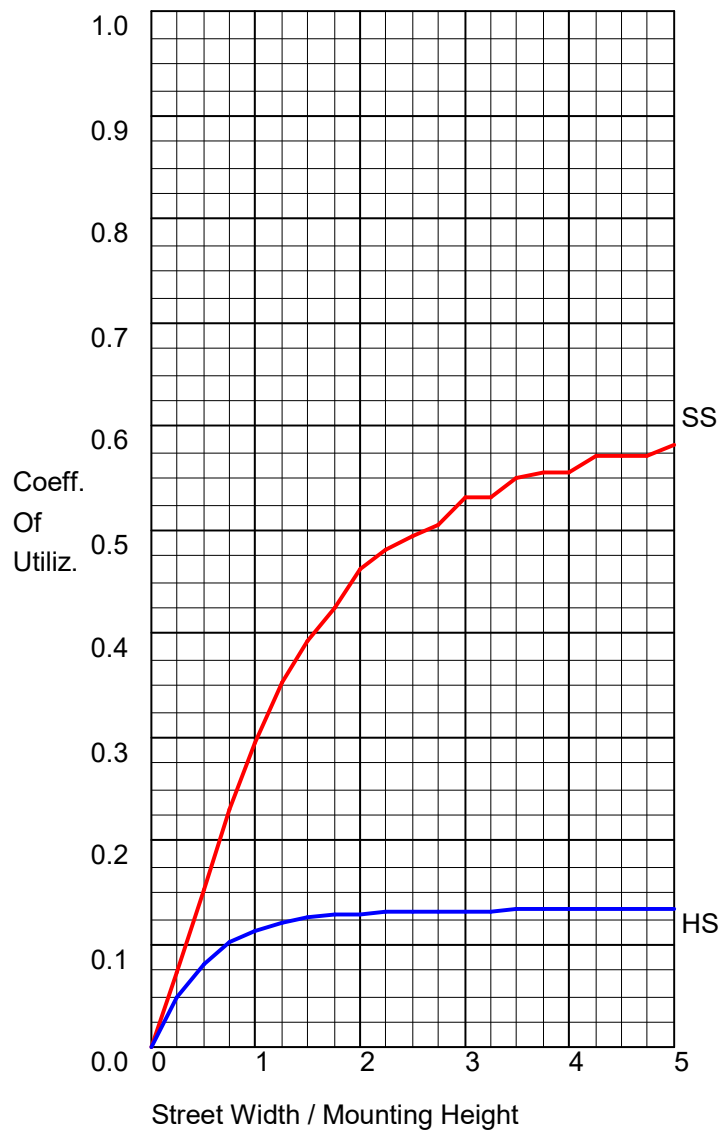
|      | <u>225.0</u> | <u>247.5</u> | <u>270.0</u> | <u>292.5</u> | <u>315.0</u> | <u>337.5</u> | <u>360.0</u> |
|------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 0.0  | 961          | 961          | 961          | 961          | 961          | 961          | 961          |
| 2.5  | 916          | 935          | 959          | 979          | 1000         | 1016         | 1046         |
| 5.0  | 877          | 911          | 956          | 1003         | 1047         | 1080         | 1115         |
| 7.5  | 839          | 888          | 951          | 1026         | 1094         | 1144         | 1188         |
| 10.0 | 802          | 863          | 946          | 1047         | 1142         | 1210         | 1263         |
| 12.5 | 764          | 836          | 937          | 1066         | 1188         | 1277         | 1338         |
| 15.0 | 725          | 809          | 927          | 1083         | 1235         | 1343         | 1410         |
| 17.5 | 683          | 779          | 914          | 1099         | 1281         | 1407         | 1479         |
| 20.0 | 641          | 750          | 899          | 1114         | 1327         | 1466         | 1541         |
| 22.5 | 597          | 717          | 882          | 1127         | 1368         | 1519         | 1594         |
| 25.0 | 561          | 684          | 862          | 1138         | 1404         | 1564         | 1638         |
| 27.5 | 529          | 649          | 841          | 1147         | 1436         | 1597         | 1669         |
| 30.0 | 500          | 612          | 819          | 1152         | 1461         | 1621         | 1704         |
| 32.5 | 471          | 575          | 794          | 1156         | 1478         | 1647         | 1748         |
| 35.0 | 443          | 536          | 770          | 1157         | 1486         | 1679         | 1798         |
| 37.5 | 414          | 504          | 744          | 1155         | 1490         | 1717         | 1851         |
| 40.0 | 386          | 471          | 718          | 1149         | 1496         | 1758         | 1908         |
| 42.5 | 358          | 438          | 690          | 1141         | 1503         | 1798         | 1959         |
| 45.0 | 329          | 408          | 661          | 1127         | 1511         | 1835         | 2005         |
| 47.5 | 300          | 380          | 633          | 1109         | 1518         | 1867         | 2040         |
| 50.0 | 271          | 352          | 603          | 1087         | 1523         | 1892         | 2071         |
| 52.5 | 241          | 325          | 572          | 1060         | 1524         | 1910         | 2093         |
| 55.0 | 214          | 297          | 540          | 1031         | 1522         | 1921         | 2110         |
| 57.5 | 189          | 271          | 506          | 1000         | 1515         | 1928         | 2121         |
| 60.0 | 165          | 245          | 472          | 969          | 1506         | 1931         | 2129         |
| 62.5 | 143          | 219          | 436          | 938          | 1493         | 1928         | 2128         |
| 65.0 | 123          | 195          | 398          | 905          | 1476         | 1917         | 2115         |
| 67.5 | 104          | 170          | 360          | 872          | 1452         | 1895         | 2091         |
| 70.0 | 83           | 147          | 321          | 837          | 1422         | 1864         | 2054         |
| 72.5 | 62           | 124          | 280          | 800          | 1385         | 1822         | 2011         |
| 75.0 | 41           | 104          | 241          | 759          | 1344         | 1776         | 1960         |
| 77.5 | 26           | 86           | 203          | 718          | 1298         | 1726         | 1907         |

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**CANDELA TABULATION - (Cont.)**

|       |    |    |     |     |      |      |      |
|-------|----|----|-----|-----|------|------|------|
| 80.0  | 19 | 69 | 170 | 676 | 1251 | 1675 | 1853 |
| 82.5  | 16 | 57 | 141 | 634 | 1202 | 1621 | 1795 |
| 85.0  | 14 | 49 | 115 | 592 | 1149 | 1559 | 1726 |
| 87.5  | 12 | 44 | 95  | 548 | 1091 | 1490 | 1647 |
| 90.0  | 10 | 40 | 82  | 504 | 1031 | 1414 | 1562 |
| 92.5  | 9  | 36 | 74  | 462 | 970  | 1338 | 1479 |
| 95.0  | 8  | 33 | 66  | 421 | 908  | 1261 | 1395 |
| 97.5  | 6  | 30 | 60  | 383 | 847  | 1186 | 1311 |
| 100.0 | 5  | 27 | 54  | 347 | 786  | 1108 | 1227 |
| 102.5 | 5  | 24 | 50  | 313 | 726  | 1031 | 1141 |
| 105.0 | 4  | 22 | 46  | 282 | 669  | 956  | 1055 |
| 107.5 | 4  | 20 | 43  | 253 | 614  | 882  | 975  |
| 110.0 | 3  | 18 | 39  | 227 | 562  | 815  | 897  |
| 112.5 | 3  | 17 | 36  | 204 | 514  | 748  | 824  |
| 115.0 | 2  | 15 | 33  | 182 | 469  | 684  | 751  |
| 117.5 | 2  | 13 | 30  | 161 | 428  | 621  | 682  |
| 120.0 | 2  | 12 | 27  | 140 | 386  | 562  | 618  |
| 122.5 | 1  | 11 | 24  | 117 | 346  | 507  | 558  |
| 125.0 | 1  | 9  | 21  | 96  | 306  | 457  | 502  |
| 127.5 | 1  | 8  | 18  | 75  | 271  | 410  | 451  |
| 130.0 | 1  | 7  | 14  | 58  | 238  | 366  | 403  |
| 132.5 | 1  | 6  | 10  | 44  | 207  | 325  | 359  |
| 135.0 | 1  | 5  | 7   | 31  | 180  | 287  | 317  |
| 137.5 | 1  | 4  | 5   | 20  | 153  | 251  | 279  |
| 140.0 | 1  | 3  | 4   | 14  | 127  | 219  | 243  |
| 142.5 | 1  | 3  | 3   | 11  | 103  | 188  | 209  |
| 145.0 | 1  | 2  | 2   | 9   | 80   | 162  | 182  |
| 147.5 | 1  | 2  | 2   | 6   | 54   | 140  | 160  |
| 150.0 | 1  | 1  | 1   | 5   | 29   | 116  | 137  |
| 152.5 | 1  | 1  | 1   | 3   | 9    | 90   | 111  |
| 155.0 | 1  | 1  | 1   | 2   | 2    | 51   | 78   |
| 157.5 | 1  | 1  | 1   | 1   | 1    | 12   | 19   |
| 160.0 | 2  | 1  | 1   | 1   | 1    | 0    | 0    |
| 162.5 | 2  | 1  | 1   | 1   | 1    | 0    | 0    |
| 165.0 | 2  | 1  | 1   | 1   | 1    | 1    | 1    |
| 167.5 | 2  | 1  | 1   | 1   | 1    | 1    | 0    |
| 170.0 | 2  | 1  | 2   | 1   | 1    | 1    | 1    |
| 172.5 | 2  | 2  | 2   | 1   | 1    | 1    | 1    |
| 175.0 | 2  | 2  | 1   | 2   | 1    | 1    | 1    |
| 177.5 | 2  | 2  | 2   | 2   | 2    | 1    | 1    |
| 180.0 | 1  | 1  | 1   | 1   | 1    | 1    | 1    |

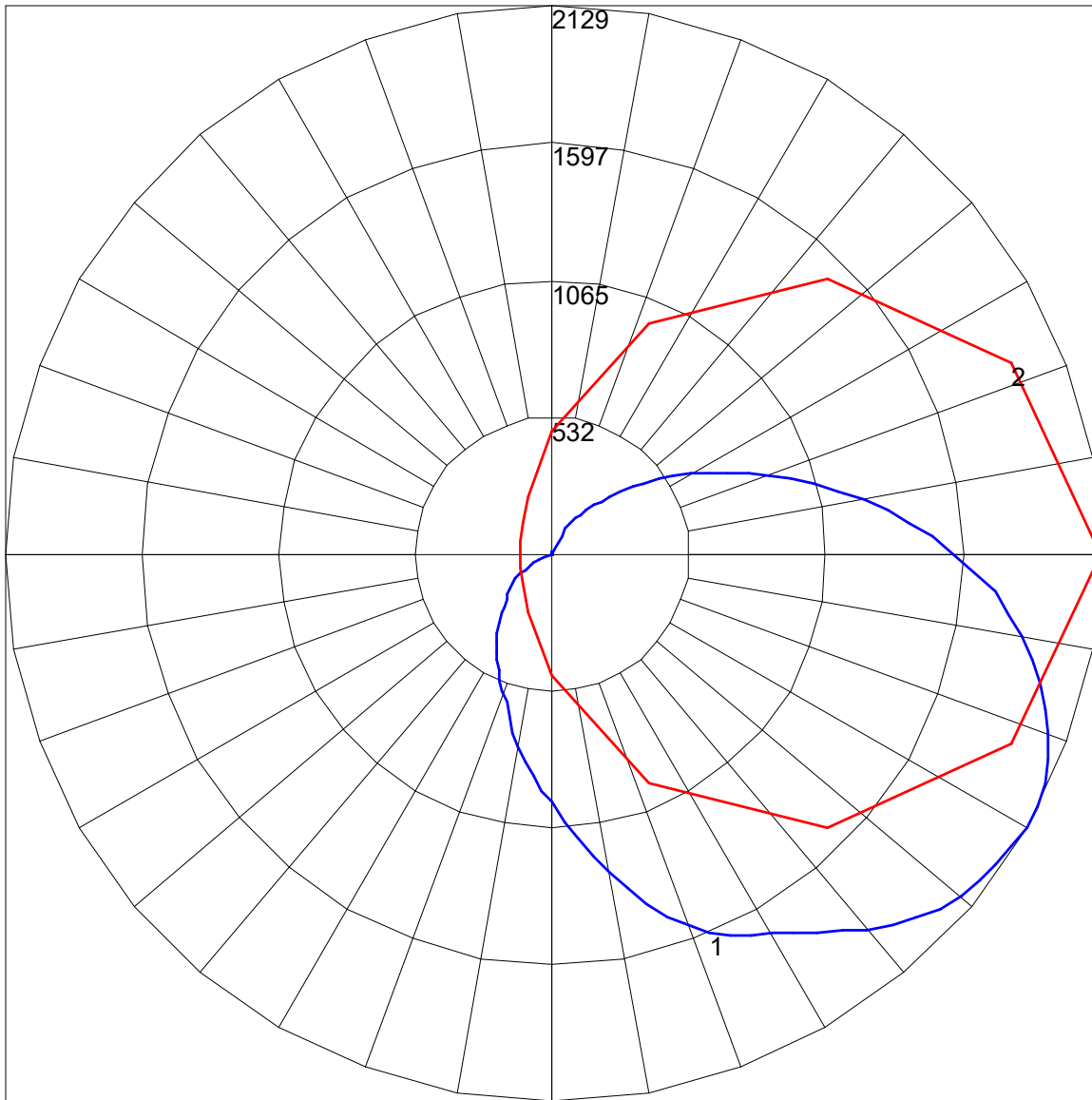
### COEFFICIENTS OF UTILIZATION



### FLUX DISTRIBUTION

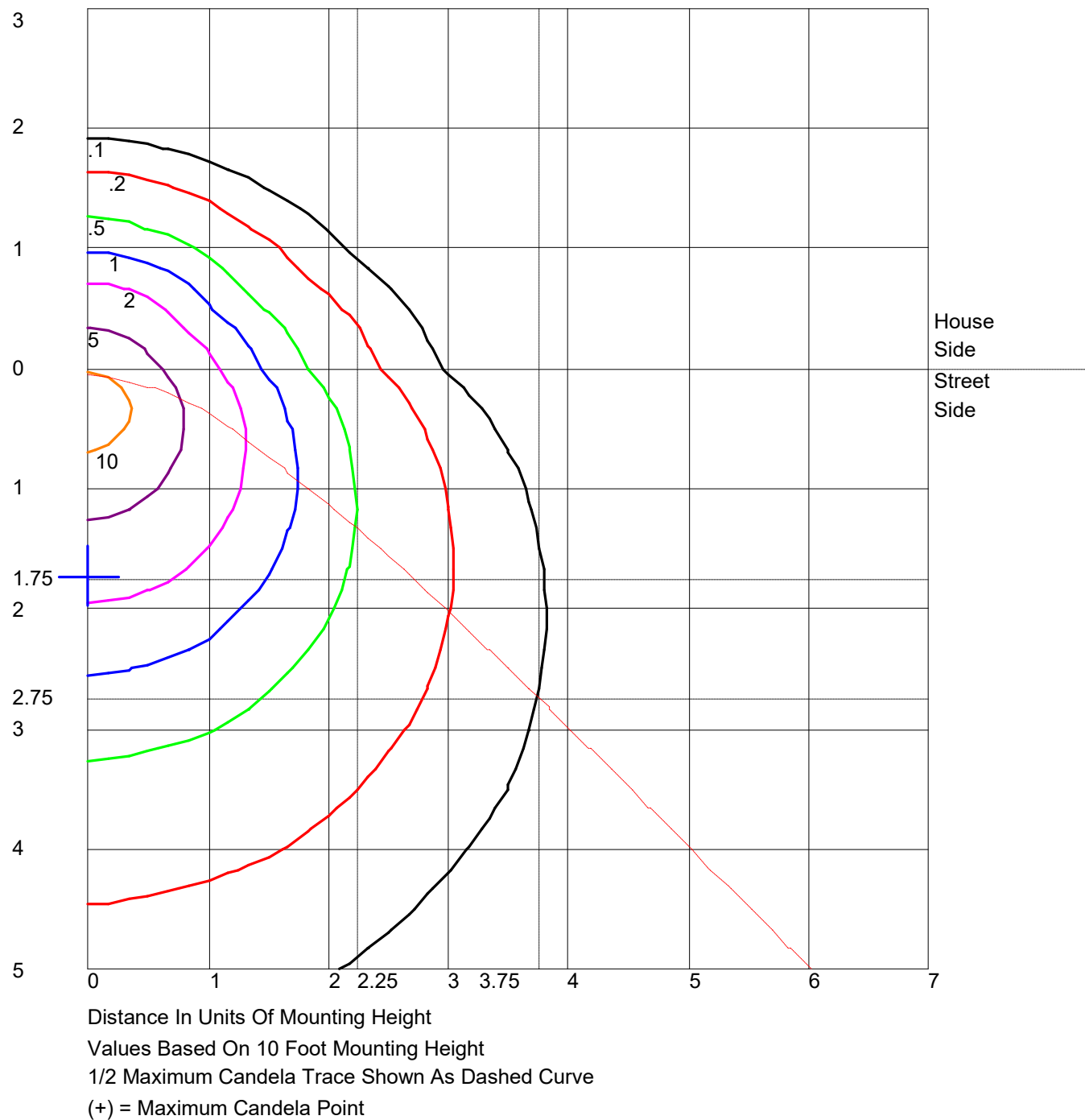
|                      | Lumens | Percent<br>Of Luminaire |
|----------------------|--------|-------------------------|
| Downward Street Side | 4101.2 | 66.4                    |
| Downward House Side  | 830.6  | 13.4                    |
| Downward Total       | 4931.8 | 79.8                    |
| Upward Street Side   | 1221.0 | 19.8                    |
| Upward House Side    | 25.6   | 0.4                     |
| Upward Total         | 1246.6 | 20.2                    |
| Total Flux           | 6178.4 | 100.0                   |

POLAR GRAPH



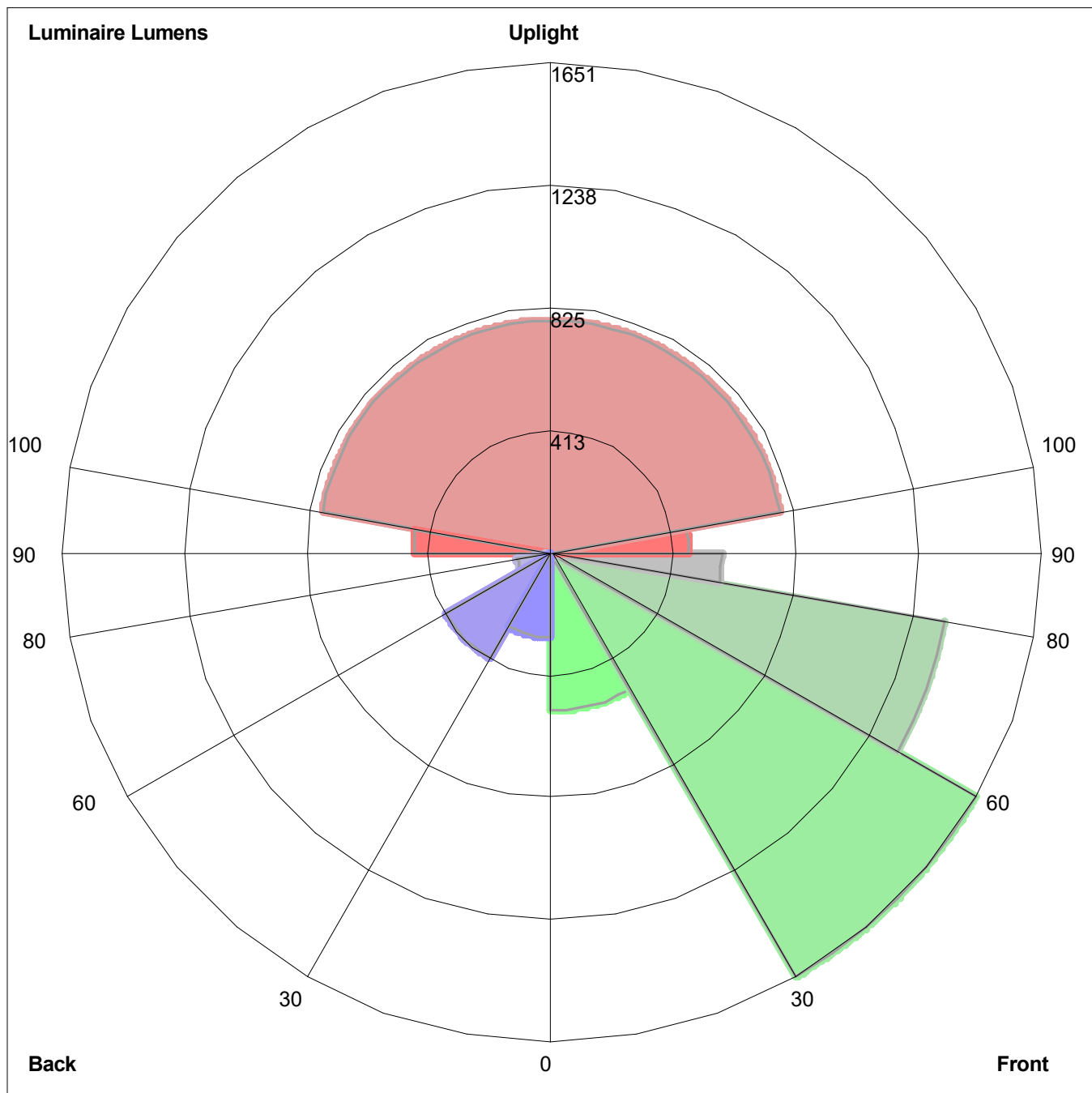
Maximum Candela = 2129 Located At Horizontal Angle = 360, Vertical Angle = 60  
# 1 - Vertical Plane Through Horizontal Angles (360 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (60) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=532.5, Medium=1650.7, High= 1344.0, Very High=574.0  
Back: Low=286.8, Medium=409.9, High=116.9, Very High=17.0  
Uplight: Low=463.6, High=783.1

BUG Rating : B1-U4-G4