

**LUMINAIRE:** CWW4-930VWG-1WW-EDU  
 CWW Contemporary Wallwash, Recessed Architectural  
 3" x 48" led with frosted acrylic prisms lens  
**BALLAST:** XI040C110V054BPT1  
**BALLAST FACTOR:** 1.00  
**LAMP:** Led  
**FIXTURE LUMENS:** 2523  
**WATTS:** 26.10  
**MOUNTING:** Recessed  
**SHIELDING ANGLE:** 0° = 90 90° = 90  
**SPACING CRITERION:** 0° = N/A 90° = N/A  
**LUMINOUS OPENING IN FEET**  
 LENGTH: 0.25  
 WIDTH: 3.92  
 HEIGHT: 0.00

TEST #16.01028  
 DATE: 11/6/2017  
**TOTAL LUMINAIRE EFFICIENCY = 100.0**  
**TOTAL LUMENS PER WATT = 97**

**COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$2.47**  
**BASED ON 3000 HRS. AND \$.08 PER KWH**

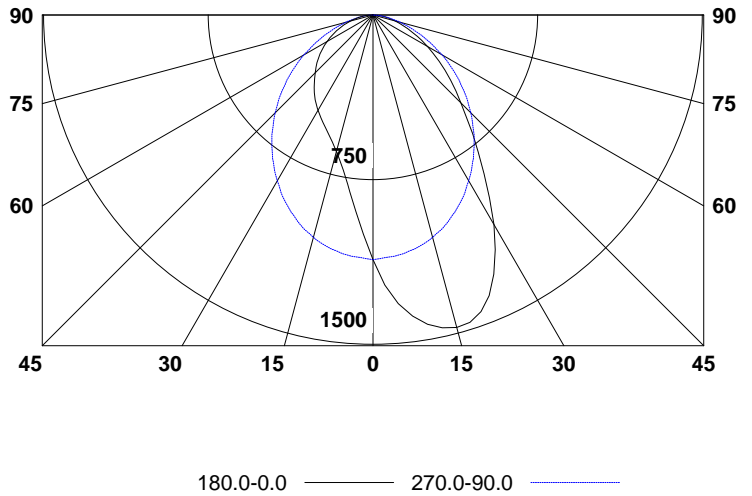
**ZONAL LUMENS**

| ZONE  | LUMENS | % LAMP | % FIXTURE |
|-------|--------|--------|-----------|
| 0-30  | 842    | 33.4   | 33.4      |
| 0-40  | 1329   | 52.7   | 52.7      |
| 0-60  | 2126   | 84.3   | 84.3      |
| 0-90  | 2523   | 100.0  | 100.0     |
| 0-180 | 2523   | 100.0  | 100.0     |

**CANDELA SUMMARY**

| ANGLE | 0.0  | 25.0 | 55.0 | 80.0 | 180.0 |
|-------|------|------|------|------|-------|
| 0.0   | 1114 | 1114 | 1114 | 1114 | 1114  |
| 7.5   | 1383 | 1353 | 1277 | 1145 | 812   |
| 15.0  | 1473 | 1443 | 1367 | 1153 | 643   |
| 22.5  | 1383 | 1389 | 1388 | 1132 | 560   |
| 30.0  | 1101 | 1149 | 1319 | 1078 | 501   |
| 37.5  | 788  | 837  | 1122 | 990  | 439   |
| 45.0  | 566  | 595  | 840  | 854  | 372   |
| 52.5  | 413  | 429  | 575  | 669  | 311   |
| 60.0  | 286  | 301  | 378  | 465  | 241   |
| 67.5  | 182  | 192  | 236  | 283  | 171   |
| 75.0  | 104  | 109  | 129  | 148  | 108   |
| 82.5  | 48   | 49   | 51   | 54   | 54    |
| 90.0  | 0    | 0    | 0    | 0    | 0     |

**INDOOR CANDELA PLOT**



**AVERAGE LUMINANCE**

| ANGLE | 0.0   | 22.5  | 45.0  | 67.5  | 90.0  | 180.0 |
|-------|-------|-------|-------|-------|-------|-------|
| 0     | 12236 | 12236 | 12236 | 12236 | 12236 | 12236 |
| 30    | 13964 | 14420 | 16272 | 16183 | 11059 | 6354  |
| 40    | 10123 | 10581 | 13134 | 16016 | 10266 | 5965  |
| 45    | 8792  | 9165  | 11262 | 15067 | 9786  | 5778  |
| 50    | 7877  | 8134  | 9569  | 13619 | 9261  | 5656  |
| 55    | 7047  | 7296  | 8330  | 11892 | 8675  | 5515  |
| 60    | 6283  | 6524  | 7337  | 10215 | 7996  | 5294  |
| 65    | 5562  | 5770  | 6497  | 8758  | 7147  | 5042  |
| 70    | 4913  | 5170  | 5716  | 7354  | 6294  | 4785  |
| 75    | 4414  | 4626  | 5135  | 6153  | 5432  | 4583  |
| 80    | 4111  | 4238  | 4428  | 5060  | 4554  | 4491  |
| 85    | 3781  | 4033  | 4159  | 4033  | 3655  | 4411  |

**CANDELA/SQ M**

THE DATA IN THIS REPORT ARE BASED ON ABSOLUTE MEASUREMENTS.

THIS TEST RUN IN ACCORDANCE WITH CURRENT I.E.S.N.A. PUBLISHED PROCEDURES.

APPROVED BY: \_\_\_\_\_

**LUMINAIRE:** CWW4-930VWG-1WW-EDU  
CWW Contemporary Wallwash, Recessed Architectural  
3" x 48" led with frosted acylic prisms lens

TEST #16.01028  
DATE: 11/6/2017

**CANDELA VALUES**

| ANGLE | 0.0   | 5.0  | 10.0 | 15.0 | 20.0 | 22.5 | 25.0 | 30.0 | 35.0 | 40.0 | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 67.5 | 70.0 |
|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0.0   | 1114  | 1114 | 1114 | 1114 | 1114 | 1114 | 1114 | 1114 | 1114 | 1114 | 1114 | 1114 | 1114 | 1114 | 1114 | 1114 | 1114 |
| 2.5   | 1231  | 1229 | 1227 | 1223 | 1220 | 1214 | 1210 | 1205 | 1207 | 1200 | 1191 | 1187 | 1177 | 1168 | 1156 | 1150 | 1144 |
| 5.0   | 1319  | 1316 | 1315 | 1310 | 1302 | 1295 | 1291 | 1282 | 1283 | 1270 | 1257 | 1246 | 1230 | 1215 | 1196 | 1186 | 1175 |
| 7.5   | 1383  | 1384 | 1380 | 1373 | 1365 | 1359 | 1353 | 1344 | 1341 | 1328 | 1311 | 1295 | 1277 | 1256 | 1228 | 1215 | 1202 |
| 10.0  | 1430  | 1428 | 1425 | 1418 | 1409 | 1402 | 1397 | 1388 | 1388 | 1371 | 1354 | 1336 | 1314 | 1289 | 1258 | 1242 | 1224 |
| 12.5  | 1459  | 1458 | 1455 | 1448 | 1438 | 1434 | 1427 | 1419 | 1419 | 1403 | 1387 | 1367 | 1344 | 1316 | 1282 | 1263 | 1243 |
| 15.0  | 1473* | 1470 | 1468 | 1461 | 1453 | 1448 | 1443 | 1436 | 1438 | 1425 | 1408 | 1390 | 1367 | 1338 | 1300 | 1278 | 1257 |
| 17.5  | 1467  | 1465 | 1463 | 1458 | 1452 | 1449 | 1445 | 1441 | 1445 | 1436 | 1421 | 1403 | 1381 | 1353 | 1313 | 1291 | 1267 |
| 20.0  | 1437  | 1434 | 1433 | 1432 | 1430 | 1428 | 1427 | 1427 | 1437 | 1435 | 1423 | 1408 | 1389 | 1361 | 1322 | 1298 | 1272 |
| 22.5  | 1383  | 1380 | 1381 | 1383 | 1387 | 1386 | 1389 | 1395 | 1411 | 1417 | 1412 | 1404 | 1388 | 1363 | 1326 | 1302 | 1274 |
| 25.0  | 1302  | 1302 | 1302 | 1308 | 1318 | 1322 | 1326 | 1343 | 1364 | 1384 | 1386 | 1386 | 1377 | 1359 | 1324 | 1299 | 1272 |
| 27.5  | 1205  | 1206 | 1211 | 1216 | 1230 | 1241 | 1247 | 1269 | 1298 | 1330 | 1344 | 1354 | 1354 | 1344 | 1313 | 1291 | 1263 |
| 30.0  | 1101  | 1098 | 1104 | 1115 | 1133 | 1137 | 1149 | 1176 | 1216 | 1259 | 1283 | 1307 | 1319 | 1318 | 1296 | 1276 | 1249 |
| 32.5  | 987   | 993  | 996  | 1011 | 1022 | 1036 | 1046 | 1080 | 1119 | 1165 | 1209 | 1240 | 1268 | 1279 | 1268 | 1251 | 1228 |
| 35.0  | 882   | 889  | 891  | 906  | 917  | 931  | 941  | 976  | 1016 | 1066 | 1120 | 1160 | 1204 | 1227 | 1229 | 1217 | 1198 |
| 37.5  | 788   | 789  | 792  | 802  | 820  | 828  | 837  | 870  | 909  | 964  | 1014 | 1069 | 1122 | 1163 | 1180 | 1174 | 1158 |
| 40.0  | 706   | 704  | 710  | 718  | 726  | 738  | 748  | 774  | 812  | 855  | 916  | 966  | 1033 | 1082 | 1112 | 1117 | 1107 |
| 42.5  | 629   | 633  | 637  | 644  | 650  | 659  | 669  | 689  | 719  | 761  | 818  | 869  | 938  | 995  | 1040 | 1048 | 1048 |
| 45.0  | 566   | 569  | 573  | 578  | 583  | 590  | 595  | 614  | 638  | 673  | 725  | 772  | 840  | 903  | 955  | 970  | 977  |
| 47.5  | 513   | 511  | 514  | 518  | 525  | 527  | 532  | 545  | 566  | 596  | 635  | 685  | 741  | 804  | 869  | 889  | 897  |
| 50.0  | 461   | 463  | 463  | 469  | 471  | 476  | 478  | 490  | 504  | 527  | 560  | 600  | 656  | 715  | 774  | 797  | 813  |
| 52.5  | 413   | 416  | 416  | 417  | 423  | 428  | 429  | 439  | 447  | 468  | 494  | 528  | 575  | 629  | 684  | 707  | 726  |
| 55.0  | 368   | 371  | 371  | 373  | 378  | 381  | 383  | 390  | 398  | 413  | 435  | 462  | 502  | 549  | 599  | 621  | 639  |
| 57.5  | 325   | 327  | 329  | 333  | 335  | 338  | 341  | 347  | 354  | 365  | 383  | 404  | 437  | 476  | 519  | 538  | 556  |
| 60.0  | 286   | 289  | 287  | 290  | 295  | 297  | 301  | 306  | 311  | 322  | 334  | 353  | 378  | 413  | 449  | 465  | 481  |
| 62.5  | 250   | 249  | 251  | 254  | 259  | 259  | 261  | 266  | 273  | 280  | 290  | 306  | 325  | 355  | 386  | 399  | 409  |
| 65.0  | 214   | 214  | 216  | 218  | 222  | 222  | 225  | 229  | 236  | 242  | 250  | 263  | 277  | 302  | 327  | 337  | 345  |
| 67.5  | 182   | 183  | 184  | 186  | 190  | 191  | 192  | 196  | 201  | 207  | 212  | 222  | 236  | 254  | 273  | 281  | 287  |
| 70.0  | 153   | 153  | 154  | 156  | 159  | 161  | 162  | 165  | 170  | 175  | 178  | 186  | 195  | 209  | 223  | 229  | 236  |
| 72.5  | 126   | 127  | 129  | 130  | 131  | 133  | 135  | 138  | 141  | 144  | 149  | 152  | 160  | 168  | 179  | 183  | 189  |
| 75.0  | 104   | 105  | 105  | 106  | 107  | 109  | 109  | 112  | 114  | 117  | 121  | 123  | 129  | 134  | 141  | 145  | 149  |
| 77.5  | 84    | 84   | 83   | 84   | 86   | 86   | 87   | 89   | 90   | 93   | 93   | 97   | 99   | 104  | 108  | 110  | 112  |
| 80.0  | 65    | 65   | 65   | 65   | 66   | 67   | 66   | 68   | 68   | 70   | 70   | 72   | 74   | 76   | 78   | 80   | 80   |
| 82.5  | 48    | 47   | 48   | 48   | 49   | 48   | 49   | 49   | 50   | 50   | 51   | 51   | 51   | 51   | 53   | 55   | 55   |
| 85.0  | 30    | 31   | 31   | 31   | 31   | 32   | 32   | 32   | 32   | 32   | 33   | 32   | 33   | 32   | 32   | 32   | 33   |
| 87.5  | 13    | 14   | 14   | 14   | 14   | 14   | 14   | 15   | 15   | 15   | 16   | 15   | 16   | 15   | 15   | 15   | 15   |
| 90.0  | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

\*MAXIMUM CANDELA VALUE

**LUMINAIRE:** CWW4-930VWG-1WW-EDU  
CWW Contemporary Wallwash, Recessed Architectural  
3" x 48" led with frosted acrylic prisms lens

TEST #16.01028  
DATE: 11/6/2017

**CANDELA VALUES**

| ANGLE | 75.0 | 80.0 | 85.0 | 90.0 | 112.5 | 135.0 | 157.5 | 180.0 |
|-------|------|------|------|------|-------|-------|-------|-------|
| 0.0   | 1114 | 1114 | 1114 | 1114 | 1114  | 1114  | 1114  | 1114  |
| 2.5   | 1132 | 1121 | 1116 | 1107 | 1057  | 1025  | 998   | 999   |
| 5.0   | 1154 | 1135 | 1121 | 1103 | 1012  | 949   | 905   | 898   |
| 7.5   | 1173 | 1145 | 1121 | 1094 | 963   | 874   | 818   | 812   |
| 10.0  | 1188 | 1151 | 1119 | 1082 | 916   | 809   | 750   | 739   |
| 12.5  | 1199 | 1154 | 1113 | 1067 | 867   | 752   | 695   | 685   |
| 15.0  | 1207 | 1153 | 1104 | 1048 | 819   | 699   | 648   | 643   |
| 17.5  | 1211 | 1150 | 1091 | 1027 | 773   | 657   | 613   | 611   |
| 20.0  | 1212 | 1142 | 1074 | 1001 | 731   | 623   | 586   | 583   |
| 22.5  | 1208 | 1132 | 1055 | 972  | 687   | 590   | 560   | 560   |
| 25.0  | 1202 | 1119 | 1032 | 942  | 651   | 564   | 540   | 539   |
| 27.5  | 1191 | 1101 | 1005 | 908  | 614   | 539   | 519   | 519   |
| 30.0  | 1176 | 1078 | 977  | 872  | 579   | 517   | 500   | 501   |
| 32.5  | 1154 | 1054 | 943  | 835  | 548   | 494   | 480   | 481   |
| 35.0  | 1128 | 1025 | 910  | 797  | 518   | 472   | 461   | 461   |
| 37.5  | 1094 | 990  | 870  | 756  | 490   | 451   | 440   | 439   |
| 40.0  | 1050 | 949  | 831  | 716  | 460   | 429   | 417   | 416   |
| 42.5  | 1000 | 904  | 788  | 672  | 435   | 407   | 395   | 394   |
| 45.0  | 942  | 854  | 742  | 630  | 407   | 384   | 373   | 372   |
| 47.5  | 874  | 794  | 690  | 586  | 380   | 359   | 351   | 352   |
| 50.0  | 800  | 734  | 638  | 542  | 354   | 336   | 331   | 331   |
| 52.5  | 722  | 669  | 581  | 498  | 328   | 312   | 310   | 311   |
| 55.0  | 642  | 600  | 525  | 453  | 302   | 289   | 289   | 288   |
| 57.5  | 561  | 530  | 473  | 409  | 275   | 265   | 266   | 267   |
| 60.0  | 488  | 465  | 413  | 364  | 250   | 243   | 243   | 241   |
| 62.5  | 415  | 396  | 360  | 318  | 222   | 218   | 217   | 217   |
| 65.0  | 351  | 336  | 309  | 275  | 196   | 195   | 193   | 194   |
| 67.5  | 294  | 283  | 261  | 235  | 173   | 174   | 172   | 171   |
| 70.0  | 241  | 232  | 215  | 196  | 150   | 151   | 149   | 149   |
| 72.5  | 191  | 187  | 176  | 160  | 126   | 128   | 127   | 129   |
| 75.0  | 151  | 148  | 138  | 128  | 105   | 106   | 107   | 108   |
| 77.5  | 115  | 112  | 106  | 98   | 84    | 86    | 88    | 89    |
| 80.0  | 82   | 81   | 76   | 72   | 64    | 67    | 70    | 71    |
| 82.5  | 55   | 54   | 52   | 49   | 45    | 48    | 52    | 54    |
| 85.0  | 32   | 32   | 31   | 29   | 29    | 33    | 36    | 35    |
| 87.5  | 14   | 14   | 14   | 14   | 14    | 17    | 18    | 18    |
| 90.0  | 0    | 0    | 0    | 0    | 0     | 0     | 0     | 0     |