



## Report of Test

LLIA001198-002A

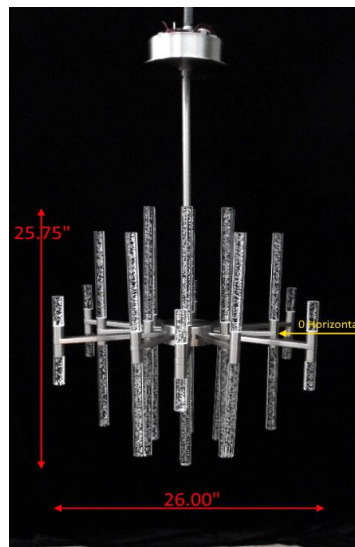
Indoor Distribution Photometry Test Report

Catalog Number: 3-605-24 Miro

Ceiling mounted, formed steel canopy, tubular aluminum housing, clear plastic enclosures.

37 White LEDs

Three Ever Shining Optotech Co., Ltd. LD028D-CA07242-M28F LED drivers



Prepared For:  
Oxygen Lighting  
201 Railhead Road  
Fort Worth, TX 76106, USA

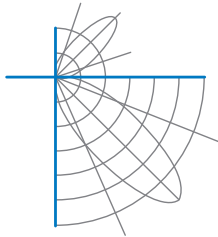
| Performance Summary |          |                |                 |
|---------------------|----------|----------------|-----------------|
| Input Voltage       | 120.0 V  | Luminous Flux  | 2428.2 Lumens   |
| Input Current       | 0.7888 A | Total Efficacy | 25.8 Lm/W       |
| Input Power         | 93.96 W  | Downward Flux  | 1257.2 Lumens   |
| Frequency           | 60.00 Hz | Downward Flux  | 51.8 % of Total |
| Power Factor        | 0.993    |                |                 |
| Current THD         | 4.9 %    |                |                 |

This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

Test date: 12/18/2019

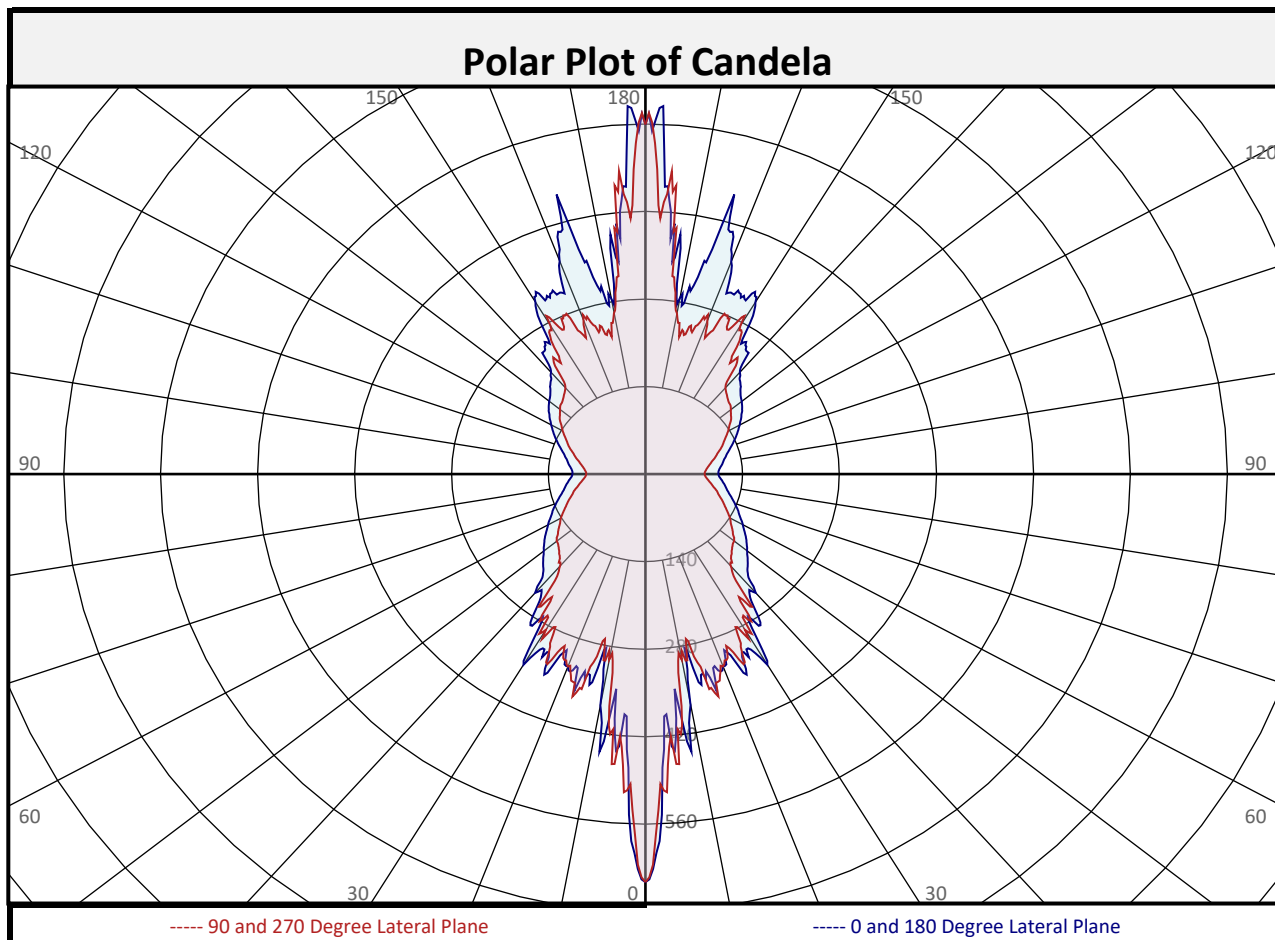
Report date: 12/19/2019

Signed: \_\_\_\_\_



## Report of Test

### LLIA001198-002A



| Zonal Flux Summary |               |                  |                 |               |                  |                 |               |                  |                 |               |                  |         |       |      |       |       |       |
|--------------------|---------------|------------------|-----------------|---------------|------------------|-----------------|---------------|------------------|-----------------|---------------|------------------|---------|-------|------|-------|-------|-------|
| Zone (Deg Vert)    | Flux (Lumens) | Percent of Total | Zone (Deg Vert) | Flux (Lumens) | Percent of Total | Zone (Deg Vert) | Flux (Lumens) | Percent of Total | Zone (Deg Vert) | Flux (Lumens) | Percent of Total |         |       |      |       |       |       |
| 0-10               | 38.5          | 1.6%             | 90-100          | 137.1         | 5.6%             | 0-20            | 130.3         | 5.4%             | 10-20           | 91.8          | 3.8%             | 100-110 | 144.3 | 5.9% | 0-30  | 282.7 | 11.6% |
| 20-30              | 152.4         | 6.3%             | 110-120         | 155.3         | 6.4%             | 0-40            | 456.9         | 18.8%            | 30-40           | 174.2         | 7.2%             | 120-130 | 160.8 | 6.6% | 0-60  | 795.0 | 32.7% |
| 40-50              | 166.8         | 6.9%             | 130-140         | 155.6         | 6.4%             | 0-80            | 1114          | 45.9%            | 50-60           | 171.4         | 7.1%             | 140-150 | 161.3 | 6.6% | 0-80  | 1114  | 45.9% |
| 60-70              | 165.3         | 6.8%             | 150-160         | 136.6         | 5.6%             | 10-90           | 1219          | 50.2%            | 70-80           | 153.8         | 6.3%             | 160-170 | 85.2  | 3.5% | 20-50 | 493.4 | 20.3% |
| 80-90              | 143.1         | 5.9%             | 170-180         | 34.8          | 1.4%             | 40-90           | 800.3         | 33.0%            | 0-90            | 1257          | 51.8%            | 180-190 | 34.8  | 1.4% | 60-90 | 462.2 | 19.0% |
|                    |               |                  | 90-180          | 1171          | 48.2%            | 0-180           | 2428          | 100.0%           |                 |               |                  |         |       |      |       |       |       |

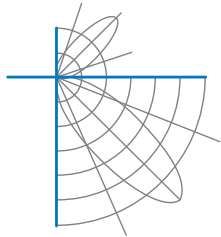


## Report of Test

### LLIA001198-002A

Luminous Intensity (Candela) Table

|                         |      | Lateral (C-Plane) Angles |      |     |      |     |       |     |       |     |
|-------------------------|------|--------------------------|------|-----|------|-----|-------|-----|-------|-----|
|                         |      | 0                        | 22.5 | 45  | 67.5 | 90  | 112.5 | 135 | 157.5 | 180 |
| Vertical (Gamma) Angles | 0    | 653                      | 653  | 653 | 653  | 653 | 653   | 653 | 653   | 653 |
|                         | 2.5  | 545                      | 548  | 548 | 505  | 496 | 505   | 548 | 548   | 545 |
|                         | 5    | 437                      | 421  | 423 | 445  | 421 | 445   | 423 | 421   | 437 |
|                         | 7.5  | 385                      | 376  | 389 | 425  | 405 | 425   | 389 | 376   | 385 |
|                         | 10   | 375                      | 297  | 316 | 317  | 301 | 317   | 316 | 297   | 375 |
|                         | 12.5 | 317                      | 299  | 322 | 290  | 270 | 290   | 322 | 299   | 317 |
|                         | 15   | 338                      | 336  | 338 | 317  | 356 | 317   | 338 | 336   | 338 |
|                         | 17.5 | 325                      | 324  | 341 | 310  | 348 | 310   | 341 | 324   | 325 |
|                         | 20   | 327                      | 329  | 323 | 314  | 327 | 314   | 323 | 329   | 327 |
|                         | 22.5 | 309                      | 311  | 369 | 320  | 309 | 320   | 369 | 311   | 309 |
|                         | 25   | 343                      | 319  | 356 | 355  | 335 | 355   | 356 | 319   | 343 |
|                         | 27.5 | 316                      | 329  | 341 | 347  | 288 | 347   | 341 | 329   | 316 |
|                         | 30   | 352                      | 316  | 315 | 333  | 288 | 333   | 315 | 316   | 352 |
|                         | 32.5 | 278                      | 276  | 308 | 299  | 276 | 299   | 308 | 276   | 278 |
|                         | 35   | 289                      | 295  | 309 | 287  | 245 | 287   | 309 | 295   | 289 |
|                         | 37.5 | 248                      | 240  | 273 | 266  | 215 | 266   | 273 | 240   | 248 |
|                         | 40   | 248                      | 227  | 253 | 243  | 192 | 243   | 253 | 227   | 248 |
|                         | 42.5 | 219                      | 212  | 240 | 233  | 183 | 233   | 240 | 212   | 219 |
|                         | 45   | 209                      | 206  | 233 | 225  | 176 | 225   | 233 | 206   | 209 |
|                         | 47.5 | 200                      | 201  | 228 | 220  | 171 | 220   | 228 | 201   | 200 |
| 50                      | 192  | 196                      | 225  | 214 | 167  | 214 | 225   | 196 | 192   |     |
| 52.5                    | 184  | 191                      | 219  | 208 | 160  | 208 | 219   | 191 | 184   |     |
| 55                      | 177  | 186                      | 213  | 202 | 153  | 202 | 213   | 186 | 177   |     |
| 57.5                    | 169  | 180                      | 206  | 196 | 146  | 196 | 206   | 180 | 169   |     |
| 60                      | 162  | 175                      | 200  | 190 | 141  | 190 | 200   | 175 | 162   |     |
| 62.5                    | 155  | 169                      | 193  | 184 | 134  | 184 | 193   | 169 | 155   |     |
| 65                      | 149  | 162                      | 187  | 178 | 128  | 178 | 187   | 162 | 149   |     |
| 67.5                    | 144  | 157                      | 182  | 172 | 122  | 172 | 182   | 157 | 144   |     |
| 70                      | 137  | 151                      | 176  | 166 | 117  | 166 | 176   | 151 | 137   |     |
| 72.5                    | 132  | 146                      | 171  | 161 | 111  | 161 | 171   | 146 | 132   |     |
| 75                      | 126  | 142                      | 166  | 156 | 107  | 156 | 166   | 142 | 126   |     |
| 77.5                    | 121  | 138                      | 162  | 152 | 102  | 152 | 162   | 138 | 121   |     |
| 80                      | 118  | 135                      | 158  | 149 | 98   | 149 | 158   | 135 | 118   |     |
| 82.5                    | 114  | 132                      | 154  | 147 | 93   | 147 | 154   | 132 | 114   |     |
| 85                      | 111  | 130                      | 151  | 144 | 90   | 144 | 151   | 130 | 111   |     |
| 87.5                    | 107  | 126                      | 147  | 141 | 87   | 141 | 147   | 126 | 107   |     |
| 90                      | 106  | 124                      | 144  | 138 | 86   | 138 | 144   | 124 | 106   |     |



## Report of Test

### LLIA001198-002A

Luminous Intensity (Candela) Table

|                         |       | Lateral (C-Plane) Angles |      |     |      |     |       |     |       |     |
|-------------------------|-------|--------------------------|------|-----|------|-----|-------|-----|-------|-----|
|                         |       | 0                        | 22.5 | 45  | 67.5 | 90  | 112.5 | 135 | 157.5 | 180 |
| Vertical (Gamma) Angles | 90    | 106                      | 124  | 144 | 138  | 86  | 138   | 144 | 124   | 106 |
|                         | 92.5  | 106                      | 123  | 142 | 137  | 86  | 137   | 142 | 123   | 106 |
|                         | 95    | 108                      | 122  | 142 | 136  | 88  | 136   | 142 | 122   | 108 |
|                         | 97.5  | 111                      | 124  | 144 | 137  | 91  | 137   | 144 | 124   | 111 |
|                         | 100   | 114                      | 126  | 147 | 139  | 95  | 139   | 147 | 126   | 114 |
|                         | 102.5 | 117                      | 129  | 150 | 141  | 99  | 141   | 150 | 129   | 117 |
|                         | 105   | 121                      | 133  | 153 | 145  | 104 | 145   | 153 | 133   | 121 |
|                         | 107.5 | 126                      | 137  | 158 | 149  | 109 | 149   | 158 | 137   | 126 |
|                         | 110   | 132                      | 142  | 163 | 154  | 115 | 154   | 163 | 142   | 132 |
|                         | 112.5 | 138                      | 147  | 168 | 159  | 120 | 159   | 168 | 147   | 138 |
|                         | 115   | 145                      | 152  | 173 | 165  | 125 | 165   | 173 | 152   | 145 |
|                         | 117.5 | 151                      | 158  | 178 | 170  | 131 | 170   | 178 | 158   | 151 |
|                         | 120   | 157                      | 164  | 185 | 177  | 138 | 177   | 185 | 164   | 157 |
|                         | 122.5 | 164                      | 169  | 191 | 182  | 144 | 182   | 191 | 169   | 164 |
|                         | 125   | 170                      | 174  | 197 | 188  | 151 | 188   | 197 | 174   | 170 |
|                         | 127.5 | 176                      | 179  | 202 | 194  | 156 | 194   | 202 | 179   | 176 |
|                         | 130   | 182                      | 183  | 207 | 200  | 161 | 200   | 207 | 183   | 182 |
|                         | 132.5 | 186                      | 187  | 212 | 205  | 166 | 205   | 212 | 187   | 186 |
|                         | 135   | 194                      | 192  | 218 | 211  | 169 | 211   | 218 | 192   | 194 |
|                         | 137.5 | 202                      | 199  | 223 | 219  | 174 | 219   | 223 | 199   | 202 |
|                         | 140   | 212                      | 208  | 232 | 228  | 180 | 228   | 232 | 208   | 212 |
|                         | 142.5 | 245                      | 242  | 264 | 259  | 206 | 259   | 264 | 242   | 245 |
|                         | 145   | 252                      | 254  | 269 | 269  | 221 | 269   | 269 | 254   | 252 |
|                         | 147.5 | 270                      | 261  | 292 | 294  | 253 | 294   | 292 | 261   | 270 |
| 150                     | 318   | 266                      | 289  | 302 | 274  | 302 | 289   | 266 | 318   |     |
| 152.5                   | 313   | 300                      | 273  | 296 | 260  | 296 | 273   | 300 | 313   |     |
| 155                     | 320   | 302                      | 298  | 325 | 280  | 325 | 298   | 302 | 320   |     |
| 157.5                   | 314   | 297                      | 306  | 288 | 246  | 288 | 306   | 297 | 314   |     |
| 160                     | 362   | 306                      | 306  | 274 | 261  | 274 | 306   | 306 | 362   |     |
| 162.5                   | 406   | 342                      | 334  | 270 | 250  | 270 | 334   | 342 | 406   |     |
| 165                     | 373   | 318                      | 331  | 286 | 244  | 286 | 331   | 318 | 373   |     |
| 167.5                   | 300   | 274                      | 270  | 273 | 225  | 273 | 270   | 274 | 300   |     |
| 170                     | 286   | 284                      | 254  | 244 | 262  | 244 | 254   | 284 | 286   |     |
| 172.5                   | 387   | 363                      | 357  | 310 | 318  | 310 | 357   | 363 | 387   |     |
| 175                     | 422   | 375                      | 417  | 413 | 453  | 413 | 417   | 375 | 422   |     |
| 177.5                   | 589   | 496                      | 481  | 453 | 430  | 453 | 481   | 496 | 589   |     |
| 180                     | 559   | 559                      | 559  | 559 | 559  | 559 | 559   | 559 | 559   |     |



## Report of Test

### LLIA001198-002A

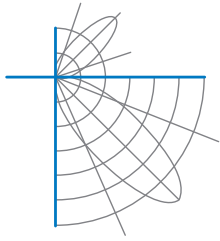
| Coefficients of Utilization/Room Utilization - Zonal Cavity Method |     |     |     |     |  |    |    |    |    |  |    |    |    |  |    |    |    |  |    |    |    |    |
|--|-----|-----|-----|-----|--|----|----|----|----|--|----|----|----|--|----|----|----|--|----|----|----|----|
| Effective Floor Cavity Reflectance 0.20                            |     |     |     |     |  |    |    |    |    |  |    |    |    |  |    |    |    |  |    |    |    |    |
| RC   | 80  |     |     |     |  | 70 |    |    |    |  | 50 |    |    |  | 30 |    |    |  | 10 |    |    | 0  |
| RW   | 70  | 50  | 30  | 10  |  | 70 | 50 | 30 | 10 |  | 50 | 30 | 10 |  | 50 | 30 | 10 |  | 50 | 30 | 10 | 0  |
| RCR  |     |     |     |     |  |    |    |    |    |  |    |    |    |  |    |    |    |  |    |    |    |    |
| 0  | 108 | 108 | 108 | 108 |  | 99 | 99 | 99 | 99 |  | 84 | 84 | 84 |  | 70 | 70 | 70 |  | 58 | 58 | 58 | 52 |
| 1  | 96  | 90  | 85  | 81  |  | 88 | 83 | 79 | 75 |  | 70 | 67 | 64 |  | 58 | 56 | 54 |  | 47 | 45 | 44 | 38 |
| 2  | 86  | 78  | 71  | 65  |  | 79 | 72 | 65 | 60 |  | 60 | 56 | 51 |  | 50 | 46 | 43 |  | 40 | 38 | 35 | 31 |
| 3  | 78  | 68  | 59  | 53  |  | 72 | 62 | 55 | 49 |  | 53 | 47 | 42 |  | 44 | 39 | 36 |  | 35 | 32 | 29 | 25 |
| 4  | 71  | 60  | 51  | 44  |  | 65 | 55 | 47 | 41 |  | 47 | 41 | 36 |  | 39 | 34 | 30 |  | 31 | 28 | 25 | 21 |
| 5  | 65  | 53  | 44  | 38  |  | 60 | 49 | 41 | 35 |  | 41 | 35 | 31 |  | 35 | 30 | 26 |  | 28 | 24 | 21 | 18 |
| 6  | 60  | 47  | 39  | 33  |  | 55 | 44 | 36 | 31 |  | 37 | 31 | 27 |  | 31 | 26 | 23 |  | 25 | 22 | 19 | 16 |
| 7  | 56  | 43  | 34  | 28  |  | 51 | 40 | 32 | 27 |  | 34 | 28 | 23 |  | 28 | 24 | 20 |  | 23 | 19 | 17 | 14 |
| 8  | 52  | 39  | 31  | 25  |  | 47 | 36 | 29 | 24 |  | 31 | 25 | 21 |  | 26 | 21 | 18 |  | 21 | 18 | 15 | 12 |
| 9  | 48  | 35  | 28  | 22  |  | 44 | 33 | 26 | 21 |  | 28 | 22 | 18 |  | 24 | 19 | 16 |  | 20 | 16 | 13 | 11 |
| 10   | 45  | 32  | 25  | 20  |  | 41 | 30 | 23 | 19 |  | 26 | 20 | 17 |  | 22 | 18 | 14 |  | 18 | 15 | 12 | 10 |

For absolute test reports, RUs are expressed as a percentage of total lumen output. For relative test reports, CUs are expressed as a percentage of total lamp output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are lambertian reflectors. 2) Incident flux on each surface is uniformly distributed. 3) The room is spectrally neutral. When luminaires are not evenly distributed throughout the room, or do not exhibit lateral symmetry, CU values may differ from actual performance.

| Circle of Light Plot |                           |   |            |  |
|----------------------|---------------------------|---|------------|--|
| Height(ft)           | Illuminance at Nadir (fc) | Ground-level distance to half-of-nadir illuminance (ft) |            |  |
|                      |                           | 0-180 deg   | 90-270 deg |  |
| 6.0                  | 18.1                      | 2.20  | 1.76       |  |
| 8.0                  | 10.2                      | 2.94  | 2.35       |  |
| 10.0                 | 6.5                       | 3.67  | 2.94       |  |
| 12.0                 | 4.5                       | 4.40  | 3.52       |  |
| 14.0                 | 3.3                       | 5.14  | 4.11       |  |
| 16.0                 | 2.5                       | 5.87  | 4.70       |  |

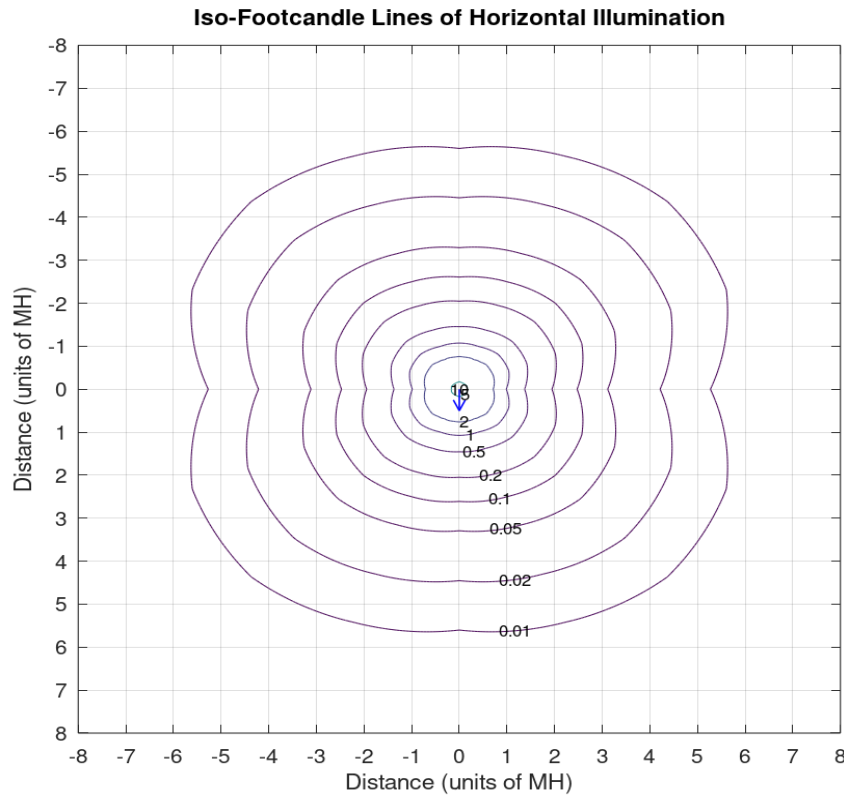
| Average Luminance (cd/m <sup>2</sup> ) |             |              |              |
|--|-------------|--------------|--------------|
|  | 0 deg Plane | 45 deg Plane | 90 deg Plane |
| 0                                      | 1905        | 1905         | 1905         |
| 45                                     | 381         | 426          | 321          |
| 55                                     | 322         | 387          | 278          |
| 65                                     | 278         | 349          | 239          |
| 75                                     | 249         | 328          | 212          |
| 85                                     | 241         | 328          | 195          |

| Spacing Criterion |     |
|-------------------|-----|
| 0 degree plane:   | 0.4 |
| 90 degree plane:  | 0.3 |
| 180 degree plane: | 0.4 |
| 270 degree plane: | 0.3 |

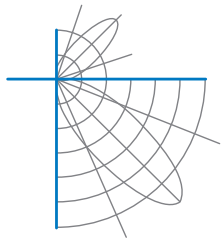


Report of Test  
LLIA001198-002A

**Iso-Illuminance Plot**



The isofootcandle values shown in the plot above are based on a mounting height of  $h = 8.0$  feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution of room reflections.



## Report of Test

### LLIA001198-002A

Test Distance                    9.5 m  
Ambient Temperature        24.8 °C

#### Notes

The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Tested in accordance with the applicable sections of publications: IES LM-79-19 and ANSI C82.77-10:2014. Format of reports and angular increments based on IES LM-41-14 and LM-46-04.

The luminous intensity values, and other derived quantities, contained in this report are based on the absolute data, as measured.

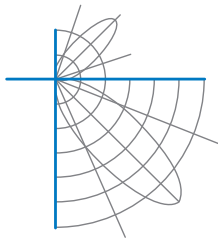
Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections.

Photometric intensity values are reported using the CIE C-Gamma coordinate system as defined in CIE publication number 121.

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered.

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.



## Report of Test

**LLIA001198-002B**

Integrating Sphere Report

Catalog Number: 3-605-24 Miro

Ceiling mounted, formed steel canopy, tubular aluminum housing, clear plastic enclosures.

37 White LEDs

Three Ever Shining Optotech Co., Ltd. LD028D-CA07242-M28F LED drivers



### Performance Summary

|              |           |
|--------------|-----------|
| Voltage      | 120.0 Vac |
| Current      | 0.7850 A  |
| Power        | 93.72 W   |
| Frequency    | 59.99 Hz  |
| Power Factor | 0.995     |
| Current THD  | 3.9 %     |

|                     |                  |
|---------------------|------------------|
| Total Luminous Flux | 2456.0 lm        |
| Efficacy            | 26.2 lm/W        |
| Chromaticity (x,y)  | (0.4311, 0.3996) |
| (u',v')             | (0.2487, 0.5187) |
| Duv                 | -0.0010          |
| CCT                 | 3064 K           |
| CRI (Ra)            | 93               |
| R9                  | 60               |
| TM-30: Rf           | 91               |
| TM-30: Rg           | 99               |

Prepared For:  
Oxygen Lighting  
201 Railhead Road  
Fort Worth, TX 76106, USA

Test date: 12/18/2019  
Report date: 12/19/2019





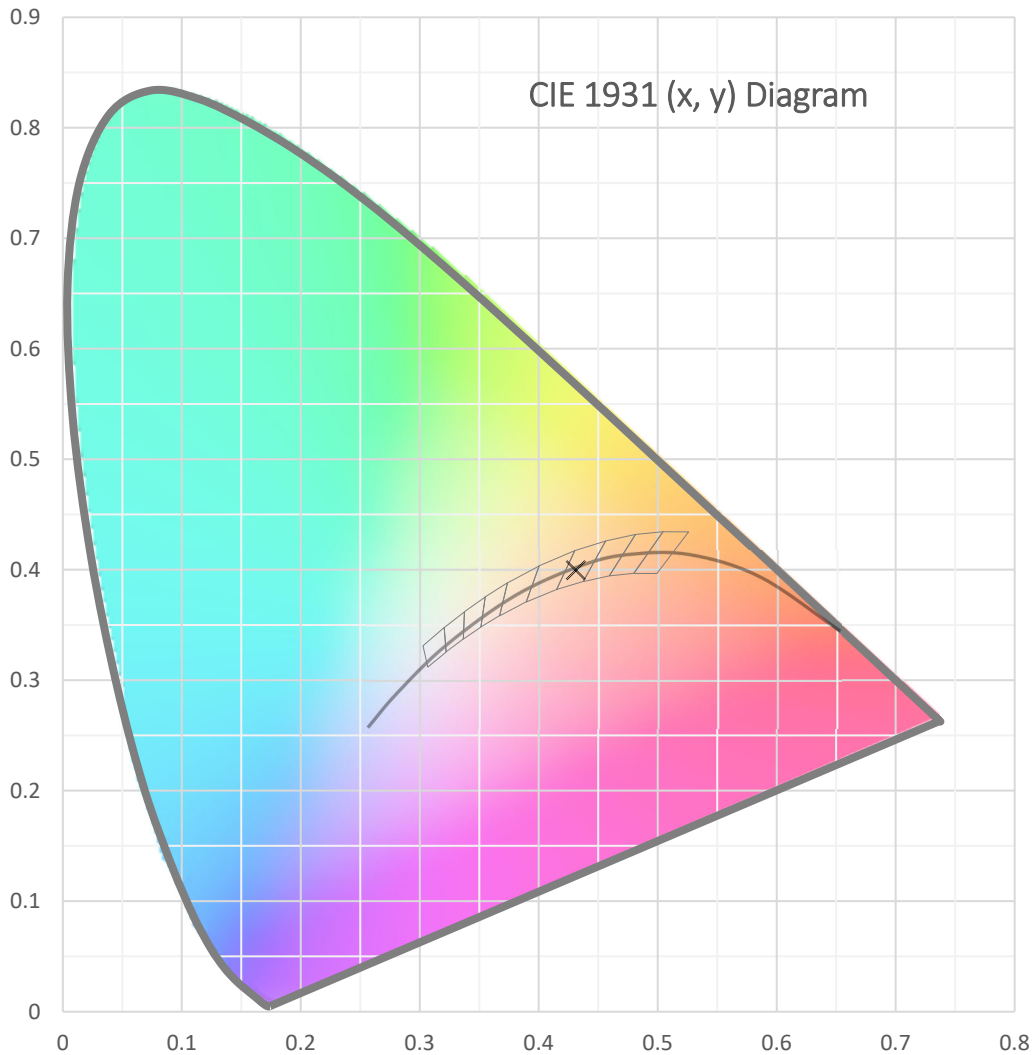
**Test Report Number: LLIA001198-002B**

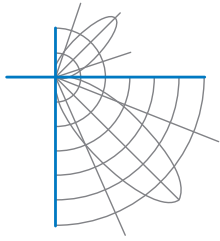
Catalog Number: 3-605-24 Miro

Ceiling mounted, formed steel canopy, tubular aluminum housing, clear plastic enclosures.

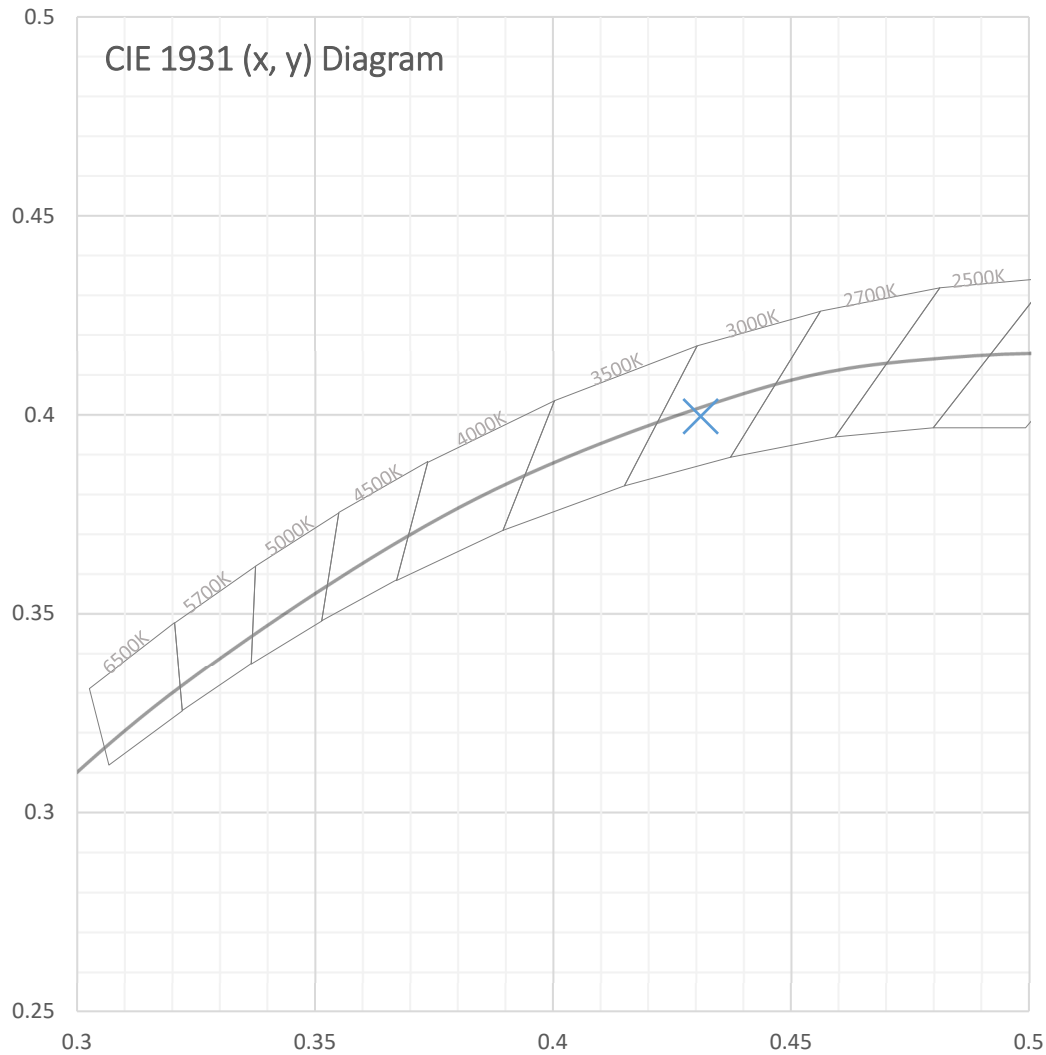
37 White LEDs

Three Ever Shining Optotech Co., Ltd. LD028D-CA07242-M28F LED drivers





**Test Report Number: LLIA001198-002B**  
Catalog Number: 3-605-24 Miro  
Ceiling mounted, formed steel canopy, tubular aluminum  
housing, clear plastic enclosures.  
37 White LEDs  
Three Ever Shining Optotech Co., Ltd. LD028D-CA07242-M28F LED drivers





**Test Report Number: LLIA001198-002B**

Catalog Number: 3-605-24 Miro

Ceiling mounted, formed steel canopy, tubular aluminum housing, clear plastic enclosures.  
37 White LEDs

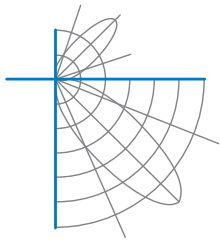
Three Ever Shining Optotech Co., Ltd. LD028D-CA07242-M28F LED drivers

**Spectral Data**

|                                     |                  |
|-------------------------------------|------------------|
| Total Radiant Flux                  | 8.641 W          |
| Total Luminous Flux                 | 2456.0 Lm        |
| Chromaticity CIE 1931 (x, y)        | (0.4311, 0.3996) |
| Chromaticity CIE 1976 (u', v')      | (0.2487, 0.5187) |
| Correlated Color Temperature (CCT)  | 3064 K           |
| Color Rendering Index (Ra)          | 93               |
| R1                                  | 93               |
| R2                                  | 97               |
| R3                                  | 98               |
| R4                                  | 92               |
| R5                                  | 93               |
| R6                                  | 96               |
| R7                                  | 92               |
| R8                                  | 82               |
| R9                                  | 60               |
| R10                                 | 92               |
| R11                                 | 92               |
| R12                                 | 83               |
| R13                                 | 94               |
| R14                                 | 99               |
| TM-30: Rf                           | 91               |
| TM-30: Rg                           | 99               |
| Distance from Planckian Locus (Duv) | -0.0010          |
| Scotopic/Photopic Ratio *           | 1.454            |

**Electrical Data**

|              |           |
|--------------|-----------|
| Voltage      | 120.0 Vac |
| Current      | 0.7850 A  |
| Power        | 93.72 W   |
| Frequency    | 59.99 Hz  |
| Power Factor | 0.995     |
| Current THD  | 3.9 %     |



**Test Report Number: LLIA001198-002B**

Catalog Number: 3-605-24 Miro

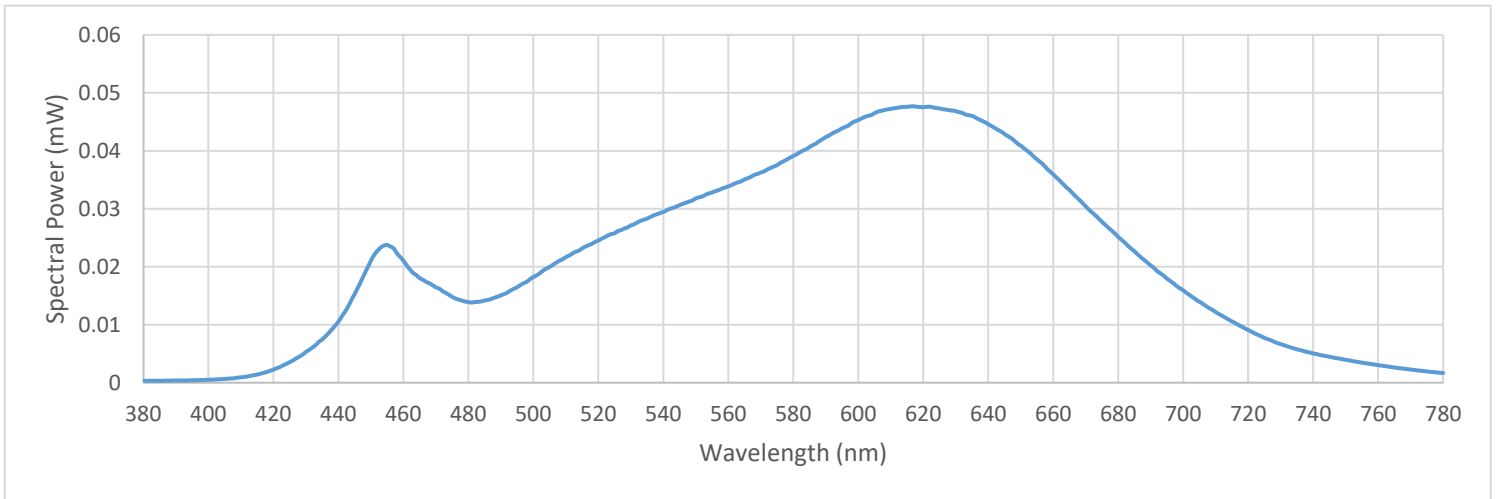
Ceiling mounted, formed steel canopy, tubular aluminum housing, clear plastic enclosures.

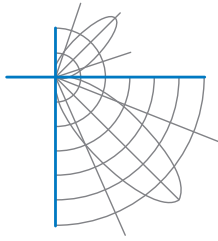
37 White LEDs

Three Ever Shining Optotech Co., Ltd. LD028D-CA07242-M28F LED drivers

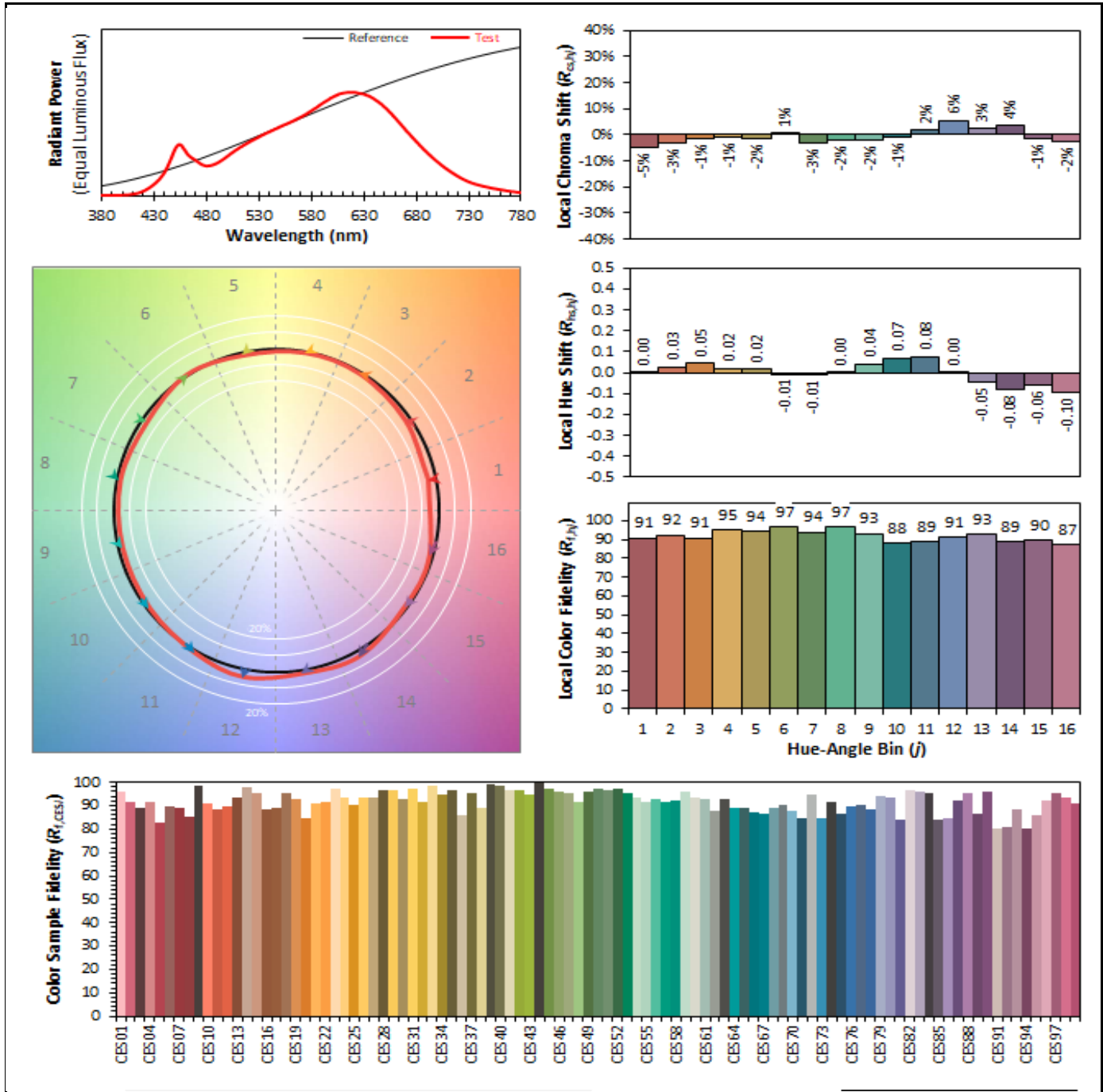
Summary Spectral Power Distribution (wavelength - nm, spectral power - mW)

|     |          |     |          |     |          |     |          |
|-----|----------|-----|----------|-----|----------|-----|----------|
| 380 | 0.000332 | 480 | 0.013931 | 580 | 0.039103 | 680 | 0.025145 |
| 385 | 0.000346 | 485 | 0.014186 | 585 | 0.040669 | 685 | 0.022665 |
| 390 | 0.000390 | 490 | 0.015083 | 590 | 0.042394 | 690 | 0.020238 |
| 395 | 0.000426 | 495 | 0.016484 | 595 | 0.043884 | 695 | 0.017960 |
| 400 | 0.000513 | 500 | 0.018239 | 600 | 0.045314 | 700 | 0.015933 |
| 405 | 0.000661 | 505 | 0.019989 | 605 | 0.046501 | 705 | 0.013981 |
| 410 | 0.000939 | 510 | 0.021676 | 610 | 0.047242 | 710 | 0.012191 |
| 415 | 0.001421 | 515 | 0.023161 | 615 | 0.047602 | 715 | 0.010592 |
| 420 | 0.002292 | 520 | 0.024558 | 620 | 0.047545 | 720 | 0.009080 |
| 425 | 0.003558 | 525 | 0.025794 | 625 | 0.047309 | 725 | 0.007744 |
| 430 | 0.005307 | 530 | 0.027141 | 630 | 0.046851 | 730 | 0.006666 |
| 435 | 0.007465 | 535 | 0.028340 | 635 | 0.046032 | 735 | 0.005780 |
| 440 | 0.010522 | 540 | 0.029467 | 640 | 0.044613 | 740 | 0.005068 |
| 445 | 0.015325 | 545 | 0.030652 | 645 | 0.042894 | 745 | 0.004491 |
| 450 | 0.021072 | 550 | 0.031800 | 650 | 0.040877 | 750 | 0.003962 |
| 455 | 0.023764 | 555 | 0.032821 | 655 | 0.038513 | 755 | 0.003465 |
| 460 | 0.021072 | 560 | 0.033879 | 660 | 0.035953 | 760 | 0.003044 |
| 465 | 0.018053 | 565 | 0.035079 | 665 | 0.033226 | 765 | 0.002640 |
| 470 | 0.016469 | 570 | 0.036269 | 670 | 0.030410 | 770 | 0.002274 |
| 475 | 0.014832 | 575 | 0.037532 | 675 | 0.027754 | 775 | 0.001960 |
|     |          |     |          |     |          | 780 | 0.001679 |





IES TM-30 Details





**Test Report Number: LLIA001198-002B**

Catalog Number: 3-605-24 Miro

Ceiling mounted, formed steel canopy, tubular aluminum housing, clear plastic enclosures.  
37 White LEDs

Three Ever Shining Optotech Co., Ltd. LD028D-CA07242-M28F LED drivers

**Test Equipment Configuration:** LightLab International Allentown 2m Integrating Sphere  
Measurements acquired using a Labsphere CDS 2600 spectroradiometer  
Testing was performed using 4 $\pi$  geometry

**Test Temperature:** 25.5 °C

**Test Procedure:** Tested in accordance with the applicable sections of:  
LM-79-19, LM-78-07, LM-58-13, ANSI\_ANSLG C78.377-2017,  
ANSI C82-77-10:2014, TM-30-15

**Significance:** The laboratory has not participated in the selection of samples to be tested.  
All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

**Notes:** The measurements and other derived quantities contained in this report are based on the absolute data as measured.

Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with \* are not covered.