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## Indoor Distribution Test Report

Relevant Standards  
IES LM-79-2008  
ANSI C82.77-2002

Prepared For  
**Mercury Lighting**  
Stephen Bambush  
20 Audrey Pl  
Fairfield, NJ 07004-3416

Catalog Number  
**LR10-24G-6200-35K-U55-UNI-XXXX**  
Order Number  
10761618  
Test Number  
1105065

Test Date

2015-06-11

Prepared By

Derek Smarr, Technician

Approved By

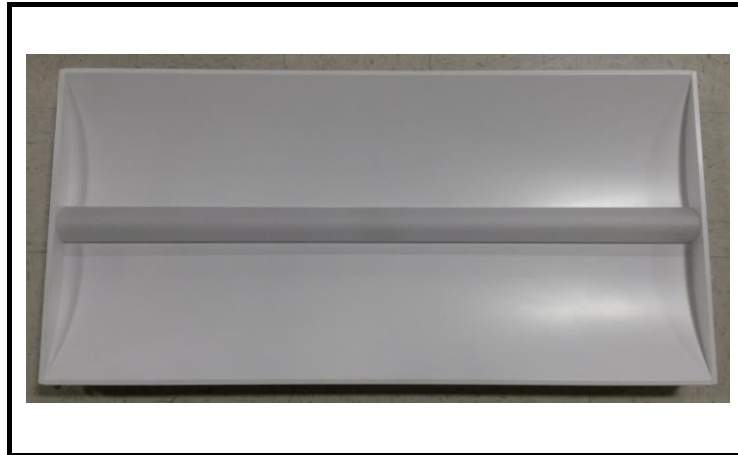
Kyle Spaziani, Project Handler

The results contained in this report pertain only to the tested sample.  
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**Luminaire Description:** White steel housing / reflector, frosted plastic lens enclosure  
**Lamp:** 112 white LEDs  
**Mounting:** Recessed  
**Ballast/Driver:** One Universal Everline D10CC55UNVTZ-C (@1500mA)

#### Luminaire



#### Luminaire Characteristics

Luminous Length: 47.00 in.  
Luminous Width: 22.75 in.

#### Summary of Results

Total Luminaire Output: 5741 Lumens  
Luminaire Efficacy: 90.6 lm/w  
Maximum Candela: 1934 Candela

#### Electrical Data

Test Temperature: 24.9 °C  
Voltage: 120.0 VAC  
Current: 0.5290 A  
Power: 63.40 W  
Power Factor: 0.999  
Frequency: 60 Hz  
Current THD: 4.13 %

Laboratory results may not be representative of field performance  
Ballast factors have not been applied



## Distribution - Goniophotometer

### Distribution Test Conditions

| Temperature | Voltage   | Current  | Power   | Power Factor | Frequency | Current THD |
|-------------|-----------|----------|---------|--------------|-----------|-------------|
| 24.9 °C     | 120.0 VAC | 0.5290 A | 63.40 W | 0.999        | 60 Hz     | 4.13 %      |

### Summary of Results

#### Spacing Criteria

0-180: 1.16

90-270: 1.16

#### Total Lumen Output:

5741 Lumens

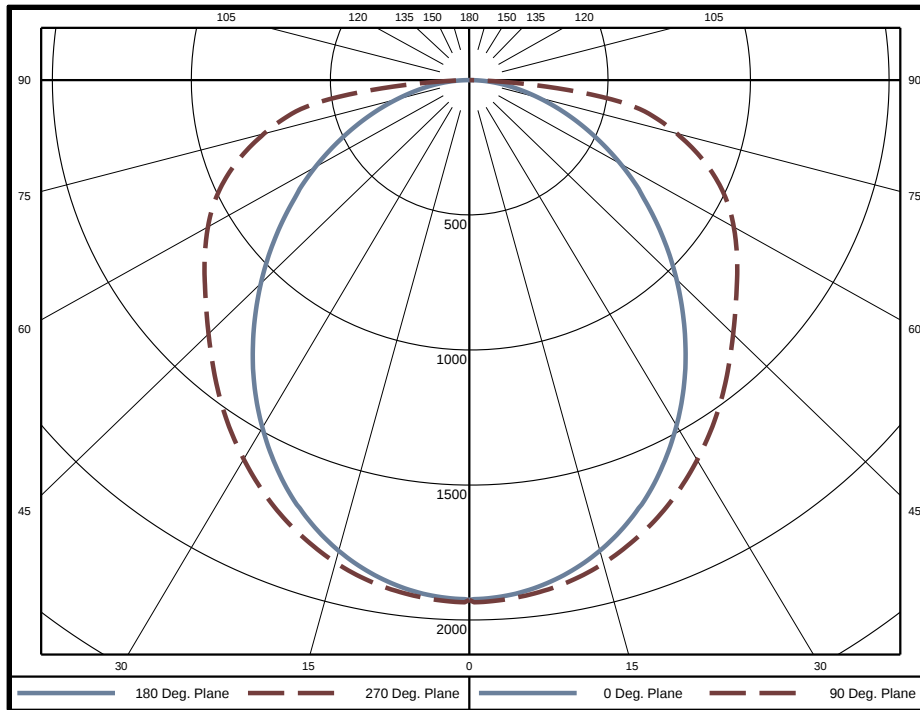
#### Luminaire Efficacy:

90.6 lm/w

#### Maximum Candela:

1934 Candela

### Polar Plot



### Zonal Lumen Summary

| Zone  | Lumens | % of Luminaire | Zone    | Lumens | % of Luminaire | Zone    | Lumens | % of Luminaire |
|-------|--------|----------------|---------|--------|----------------|---------|--------|----------------|
| 0-5   | 45.9   | 0.8%           | 60-65   | 397.0  | 6.9%           | 120-125 | 0      | 0.0%           |
| 5-10  | 135.8  | 2.4%           | 65-70   | 364.7  | 6.4%           | 125-130 | 0      | 0.0%           |
| 10-15 | 220.0  | 3.8%           | 70-75   | 322.5  | 5.6%           | 130-135 | 0      | 0.0%           |
| 15-20 | 295.0  | 5.1%           | 75-80   | 268.5  | 4.7%           | 135-140 | 0      | 0.0%           |
| 20-25 | 358.0  | 6.2%           | 80-85   | 187.0  | 3.3%           | 140-145 | 0      | 0.0%           |
| 25-30 | 406.8  | 7.1%           | 85-90   | 53.2   | 0.9%           | 145-150 | 0      | 0.0%           |
| 30-35 | 440.6  | 7.7%           | 90-95   | 0      | 0.0%           | 150-155 | 0      | 0.0%           |
| 35-40 | 459.3  | 8.0%           | 95-100  | 0      | 0.0%           | 155-160 | 0      | 0.0%           |
| 40-45 | 464.1  | 8.1%           | 100-105 | 0      | 0.0%           | 160-165 | 0      | 0.0%           |
| 45-50 | 457.5  | 8.0%           | 105-110 | 0      | 0.0%           | 165-170 | 0      | 0.0%           |
| 50-55 | 442.7  | 7.7%           | 110-115 | 0      | 0.0%           | 170-175 | 0      | 0.0%           |
| 55-60 | 422.4  | 7.4%           | 115-120 | 0      | 0.0%           | 175-180 | 0      | 0.0%           |

| Zone   | Lumens | % of Luminaire |
|--------|--------|----------------|
| 0-40   | 2361   | 41.1%          |
| 0-60   | 4148   | 72.3%          |
| 0-90   | 5741   | 100.0%         |
| 90-180 | 0      | 0.0%           |



**Candela Tabulation**  
Horizontal Angle (Degrees)

| Vertical Angle (Degrees) | 0   | 22.5 | 45   | 67.5 | 90   | 112.5 | 135  | 157.5 | 180  | 202.5 | 225  | 247.5 | 270  | 292.5 | 315  | 337.5 |
|--------------------------|-----|------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
|                          | 0   | 1926 | 1926 | 1926 | 1926 | 1926  | 1926 | 1926  | 1926 | 1926  | 1926 | 1926  | 1926 | 1926  | 1926 | 1926  |
|                          | 5   | 1910 | 1914 | 1912 | 1913 | 1924  | 1913 | 1912  | 1914 | 1910  | 1914 | 1912  | 1913 | 1924  | 1913 | 1912  |
|                          | 10  | 1870 | 1876 | 1879 | 1885 | 1898  | 1885 | 1879  | 1876 | 1870  | 1876 | 1879  | 1885 | 1898  | 1885 | 1879  |
|                          | 15  | 1807 | 1815 | 1825 | 1838 | 1852  | 1838 | 1825  | 1815 | 1807  | 1815 | 1825  | 1838 | 1852  | 1838 | 1825  |
|                          | 20  | 1719 | 1731 | 1752 | 1773 | 1789  | 1773 | 1752  | 1731 | 1719  | 1731 | 1752  | 1773 | 1789  | 1773 | 1752  |
|                          | 25  | 1611 | 1628 | 1661 | 1694 | 1713  | 1694 | 1661  | 1628 | 1611  | 1628 | 1661  | 1694 | 1713  | 1694 | 1661  |
|                          | 30  | 1486 | 1508 | 1555 | 1601 | 1624  | 1601 | 1555  | 1508 | 1486  | 1508 | 1555  | 1601 | 1624  | 1601 | 1555  |
|                          | 35  | 1350 | 1376 | 1439 | 1499 | 1529  | 1499 | 1439  | 1376 | 1350  | 1376 | 1439  | 1499 | 1529  | 1499 | 1439  |
|                          | 40  | 1204 | 1237 | 1318 | 1393 | 1428  | 1393 | 1318  | 1237 | 1204  | 1237 | 1318  | 1393 | 1428  | 1393 | 1318  |
|                          | 45  | 1057 | 1096 | 1194 | 1288 | 1330  | 1288 | 1194  | 1096 | 1057  | 1096 | 1194  | 1288 | 1330  | 1288 | 1194  |
|                          | 50  | 910  | 957  | 1074 | 1191 | 1242  | 1191 | 1074  | 957  | 910   | 957  | 1074  | 1191 | 1242  | 1191 | 1074  |
|                          | 55  | 767  | 822  | 962  | 1108 | 1165  | 1108 | 962   | 822  | 767   | 822  | 962   | 1108 | 1165  | 1108 | 962   |
|                          | 60  | 634  | 700  | 867  | 1032 | 1088  | 1032 | 867   | 700  | 634   | 700  | 867   | 1032 | 1088  | 1032 | 867   |
|                          | 65  | 501  | 583  | 790  | 952  | 1002  | 952  | 790   | 583  | 501   | 583  | 790   | 952  | 1002  | 952  | 790   |
|                          | 70  | 378  | 482  | 715  | 849  | 894   | 849  | 715   | 482  | 378   | 482  | 715   | 849  | 894   | 849  | 715   |
|                          | 75  | 264  | 399  | 609  | 726  | 766   | 726  | 609   | 399  | 264   | 399  | 609   | 726  | 766   | 726  | 609   |
|                          | 80  | 165  | 312  | 470  | 578  | 616   | 578  | 470   | 312  | 165   | 312  | 470   | 578  | 616   | 578  | 470   |
|                          | 85  | 81   | 185  | 268  | 277  | 275   | 277  | 268   | 185  | 81    | 185  | 268   | 277  | 275   | 277  | 268   |
|                          | 90  | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 95  | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 100 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 105 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 110 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 115 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 120 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 125 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 130 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 135 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 140 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 145 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 150 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 155 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 160 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 165 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 170 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 175 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |
|                          | 180 | 0    | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     |

**Average Luminance (cd/m<sup>2</sup>)**  
Horizontal Angle (Degrees)

| Vertical Angle (Degrees) | 0  | 45   | 90   |
|--------------------------|----|------|------|
|                          | 0  | 2791 | 2791 |
|                          | 45 | 2167 | 2726 |
|                          | 55 | 1938 | 2944 |
|                          | 65 | 1719 | 3435 |
|                          | 75 | 1480 | 4292 |
|                          | 85 | 1340 | 4569 |



### Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%

| Ceiling Cavity Reflectance | 80                                                                 |      |      |      | 70   |      |      |      | 50   |      |      | 30   |      |      | 10   |      |      | 0    |
|----------------------------|--------------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Wall Reflectance           | 70                                                                 | 50   | 30   | 10   | 70   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 0    |
| Room Cavity Ratio (RCR)    | ** Values are expressed as Lumens delivered to the task surface ** |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0                          | 6835                                                               | 6835 | 6835 | 6835 | 6676 | 6676 | 6676 | 6676 | 6379 | 6379 | 6379 | 6107 | 6107 | 6107 | 5858 | 5858 | 5858 | 5741 |
| 1                          | 6152                                                               | 5839 | 5558 | 5305 | 5990 | 5706 | 5450 | 5218 | 5458 | 5245 | 5051 | 5229 | 5055 | 4894 | 5019 | 4878 | 4747 | 4620 |
| 2                          | 5554                                                               | 5033 | 4601 | 4239 | 5396 | 4921 | 4524 | 4187 | 4712 | 4377 | 4087 | 4520 | 4239 | 3991 | 4342 | 4108 | 3900 | 3768 |
| 3                          | 5042                                                               | 4390 | 3885 | 3483 | 4893 | 4296 | 3828 | 3450 | 4121 | 3718 | 3387 | 3958 | 3614 | 3326 | 3807 | 3516 | 3267 | 3134 |
| 4                          | 4606                                                               | 3875 | 3340 | 2931 | 4469 | 3797 | 3297 | 2910 | 3649 | 3213 | 2868 | 3511 | 3133 | 2826 | 3384 | 3057 | 2787 | 2655 |
| 5                          | 4231                                                               | 3456 | 2914 | 2515 | 4106 | 3390 | 2881 | 2500 | 3265 | 2815 | 2471 | 3149 | 2753 | 2442 | 3040 | 2693 | 2414 | 2287 |
| 6                          | 3906                                                               | 3109 | 2575 | 2191 | 3793 | 3054 | 2548 | 2180 | 2947 | 2496 | 2159 | 2848 | 2446 | 2139 | 2756 | 2398 | 2119 | 1996 |
| 7                          | 3622                                                               | 2819 | 2298 | 1933 | 3520 | 2771 | 2277 | 1925 | 2681 | 2235 | 1910 | 2596 | 2194 | 1895 | 2516 | 2156 | 1880 | 1762 |
| 8                          | 3373                                                               | 2573 | 2070 | 1724 | 3281 | 2532 | 2052 | 1718 | 2455 | 2018 | 1707 | 2382 | 1985 | 1695 | 2313 | 1953 | 1684 | 1571 |
| 9                          | 3153                                                               | 2363 | 1879 | 1552 | 3069 | 2328 | 1864 | 1547 | 2261 | 1836 | 1538 | 2197 | 1809 | 1530 | 2138 | 1782 | 1521 | 1413 |
| 10                         | 2958                                                               | 2181 | 1717 | 1408 | 2882 | 2151 | 1705 | 1404 | 2093 | 1681 | 1397 | 2038 | 1658 | 1390 | 1986 | 1636 | 1383 | 1281 |

### Cone of Light Tabulation

| Mounting Height | Footcandles at Nadir | Diameter (Feet) |
|-----------------|----------------------|-----------------|
| 4.00            | 120                  | 4.82            |
| 6.00            | 53.5                 | 7.22            |
| 8.00            | 30.1                 | 9.63            |
| 10.0            | 19.3                 | 12.0            |
| 12.0            | 13.4                 | 14.4            |
| 14.0            | 9.82                 | 16.9            |
| 16.0            | 7.52                 | 19.3            |

### Cone of Light Plot

