



UL Verification Services Inc.  
7036 Snowdrift Road  
Allentown, PA 18106  
610-774-1300



## Indoor Distribution Test Report

Relevant Standards  
IES LM-79-2008, ANSI C82.77-10-2014, CIE 190:2010

**Prepared For**  
**Mercury Lighting**

20 Audrey Pl  
Fairfield, NJ 07004-3416  
United States

**Catalog Number**  
**MLS2G3-DI-4-1460-365 LMFT-1700-425 LMFT-35K-HTABW-1%-U**

Order Number

**12805361**

Test Number

**12805361.01A**

Revision of Test Number 12805361.01 on:

2019-04-30

Test Date

2019-04-25

Prepared By

Josh Mitchell, Technician

Approved By

Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.  
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.  
This report must not be used by the client to claim product certification, approval, or endorsement by  
NVLAP, NIST, or any agency of the Federal Government.



**Luminaire Description:** White formed aluminum housing, frosted lenses top and bottom.  
**Lamp:** 192 White LEDs  
**Mounting:** Pendant  
**Ballast/Driver:** Two (2) Philips XI020C056V054BST2 Drivers

#### Luminaire



#### Luminaire Characteristics

Luminous Length: 1.38 in.  
Luminous Width: 48.00 in.  
Luminous Height: 4.13 in.

#### Summary of Results

Total Luminaire Output: 3176 Lumens  
Luminaire Efficacy: 103.8 lm/w  
Maximum Candela: 703 Candela

#### Test Conditions

Test Temperature: 24.3 °C  
Voltage: 120.0 VAC  
Current: 0.2568 A  
Power: 30.59 W  
Power Factor: 0.992  
Frequency: 60 Hz  
Current THD: 10.4 %

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



## Distribution - Goniophotometer

### Distribution Test Conditions

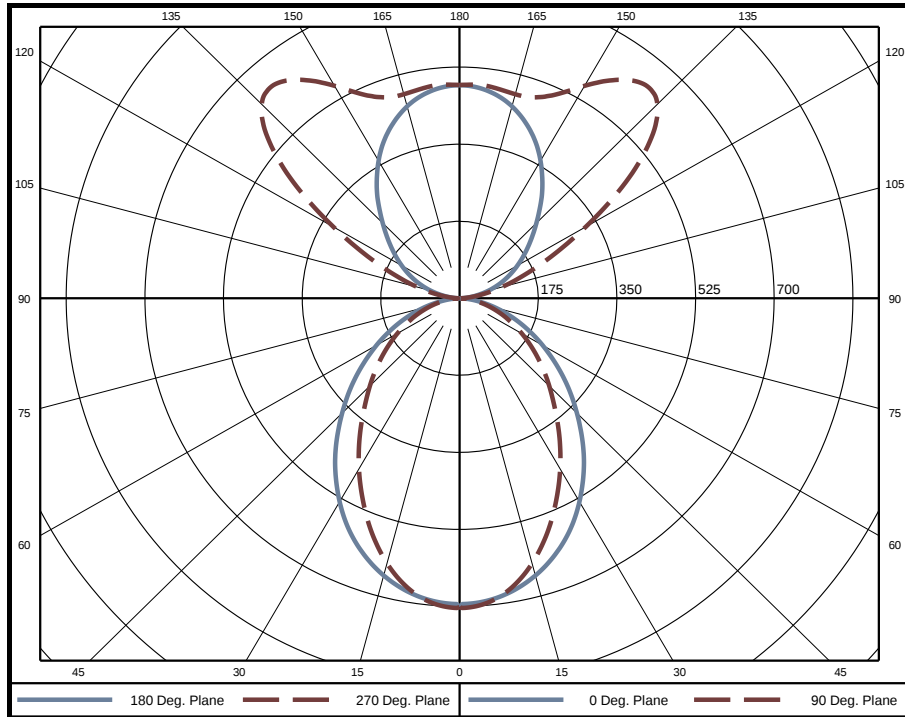
| Temperature | Voltage   | Current  | Power   | Power Factor | Frequency | Current THD |
|-------------|-----------|----------|---------|--------------|-----------|-------------|
| 24.3 °C     | 120.0 VAC | 0.2568 A | 30.59 W | 0.992        | 60 Hz     | 10.4 %      |

### Summary of Results

Spacing Criteria  
0-180: 1.14  
90-270: 1.00

Total Lumen Output: 3176 Lumens  
Luminaire Efficacy: 103.8 lm/w  
Maximum Candela: 703 Candela

### Polar Plot



### Zonal Lumen Summary

| Zone  | Lumens | % of Luminaire | Zone    | Lumens | % of Luminaire | Zone    | Lumens | % of Luminaire |
|-------|--------|----------------|---------|--------|----------------|---------|--------|----------------|
| 0-5   | 16.7   | 0.5%           | 60-65   | 80.3   | 2.5%           | 120-125 | 153.0  | 4.8%           |
| 5-10  | 48.9   | 1.5%           | 65-70   | 64.1   | 2.0%           | 125-130 | 170.3  | 5.4%           |
| 10-15 | 77.9   | 2.5%           | 70-75   | 47.5   | 1.5%           | 130-135 | 174.8  | 5.5%           |
| 15-20 | 101.9  | 3.2%           | 75-80   | 31.1   | 1.0%           | 135-140 | 167.0  | 5.3%           |
| 20-25 | 119.8  | 3.8%           | 80-85   | 16.1   | 0.5%           | 140-145 | 151.1  | 4.8%           |
| 25-30 | 131.1  | 4.1%           | 85-90   | 4.9    | 0.2%           | 145-150 | 132.0  | 4.2%           |
| 30-35 | 136.0  | 4.3%           | 90-95   | 6.4    | 0.2%           | 150-155 | 112.7  | 3.5%           |
| 35-40 | 135.0  | 4.3%           | 95-100  | 25.5   | 0.8%           | 155-160 | 94.1   | 3.0%           |
| 40-45 | 129.4  | 4.1%           | 100-105 | 47.1   | 1.5%           | 160-165 | 75.7   | 2.4%           |
| 45-50 | 120.6  | 3.8%           | 105-110 | 72.0   | 2.3%           | 165-170 | 55.9   | 1.8%           |
| 50-55 | 109.2  | 3.4%           | 110-115 | 99.3   | 3.1%           | 170-175 | 34.4   | 1.1%           |
| 55-60 | 95.6   | 3.0%           | 115-120 | 127.4  | 4.0%           | 175-180 | 11.6   | 0.4%           |

| Zone   | Lumens | % of Luminaire |
|--------|--------|----------------|
| 0-40   | 767    | 24.2%          |
| 0-60   | 1222   | 38.5%          |
| 0-90   | 1466   | 46.2%          |
| 90-180 | 1710   | 53.9%          |



**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   | 701.0 | 701.0 | 701.0 | 701.0 | 701.0 | 701.0 | 701.0 | 701.0 | 701.0 | 701.0 | 701.0 | 701.0 | 701.0 | 701.0 | 701.0 |
|                          | 5   | 689.9 | 697.7 | 693.0 | 694.8 | 694.3 | 694.8 | 693.0 | 697.7 | 689.9 | 697.7 | 693.0 | 694.8 | 694.3 | 694.8 | 693.0 |
|                          | 10  | 675.4 | 681.2 | 672.6 | 669.6 | 666.8 | 669.6 | 672.6 | 681.2 | 675.4 | 681.2 | 672.6 | 669.6 | 666.8 | 669.6 | 672.6 |
|                          | 15  | 651.9 | 655.1 | 639.3 | 629.6 | 623.0 | 629.6 | 639.3 | 655.1 | 651.9 | 655.1 | 639.3 | 629.6 | 623.0 | 629.6 | 639.3 |
|                          | 20  | 620.2 | 619.7 | 595.5 | 577.1 | 568.4 | 577.1 | 595.5 | 619.7 | 620.2 | 619.7 | 595.5 | 577.1 | 568.4 | 577.1 | 595.5 |
|                          | 25  | 581.0 | 576.2 | 544.2 | 519.4 | 507.9 | 519.4 | 544.2 | 576.2 | 581.0 | 576.2 | 544.2 | 519.4 | 507.9 | 519.4 | 544.2 |
|                          | 30  | 533.4 | 526.0 | 488.5 | 459.3 | 447.5 | 459.3 | 488.5 | 526.0 | 533.4 | 526.0 | 488.5 | 459.3 | 447.5 | 459.3 | 488.5 |
|                          | 35  | 481.4 | 471.0 | 430.5 | 399.0 | 387.7 | 399.0 | 430.5 | 471.0 | 481.4 | 471.0 | 430.5 | 399.0 | 387.7 | 399.0 | 430.5 |
|                          | 40  | 426.1 | 413.2 | 373.0 | 342.3 | 331.0 | 342.3 | 373.0 | 413.2 | 426.1 | 413.2 | 373.0 | 342.3 | 331.0 | 342.3 | 373.0 |
|                          | 45  | 369.4 | 357.0 | 319.5 | 292.0 | 282.4 | 292.0 | 319.5 | 357.0 | 369.4 | 357.0 | 319.5 | 292.0 | 282.4 | 292.0 | 319.5 |
|                          | 50  | 315.7 | 303.6 | 270.8 | 247.2 | 238.4 | 247.2 | 270.8 | 303.6 | 315.7 | 303.6 | 270.8 | 247.2 | 238.4 | 247.2 | 270.8 |
|                          | 55  | 262.8 | 253.2 | 226.1 | 205.5 | 197.7 | 205.5 | 226.1 | 253.2 | 262.8 | 253.2 | 226.1 | 205.5 | 197.7 | 205.5 | 226.1 |
|                          | 60  | 213.3 | 205.9 | 183.9 | 166.5 | 159.9 | 166.5 | 183.9 | 205.9 | 213.3 | 205.9 | 183.9 | 166.5 | 159.9 | 166.5 | 183.9 |
|                          | 65  | 166.5 | 161.9 | 144.2 | 129.3 | 124.5 | 129.3 | 144.2 | 161.9 | 166.5 | 161.9 | 144.2 | 129.3 | 124.5 | 129.3 | 144.2 |
|                          | 70  | 123.1 | 120.9 | 106.7 | 97.2  | 93.4  | 97.2  | 106.7 | 120.9 | 123.1 | 120.9 | 106.7 | 97.2  | 93.4  | 97.2  | 106.7 |
|                          | 75  | 82.9  | 82.0  | 73.1  | 67.1  | 64.4  | 67.1  | 73.1  | 82.0  | 82.9  | 82.0  | 73.1  | 67.1  | 64.4  | 67.1  | 73.1  |
|                          | 80  | 46.5  | 46.7  | 42.7  | 39.5  | 38.2  | 39.5  | 42.7  | 46.7  | 46.5  | 46.7  | 42.7  | 39.5  | 38.2  | 39.5  | 42.7  |
|                          | 85  | 18.4  | 19.0  | 17.9  | 17.0  | 16.4  | 17.0  | 17.9  | 19.0  | 18.4  | 19.0  | 17.9  | 17.0  | 16.4  | 17.0  | 17.9  |
|                          | 90  | 2.3   | 3.2   | 3.3   | 3.8   | 3.6   | 3.8   | 3.3   | 3.2   | 2.3   | 3.2   | 3.3   | 3.8   | 3.6   | 3.8   | 3.3   |
|                          | 95  | 17.3  | 36.0  | 36.8  | 21.8  | 18.3  | 21.8  | 36.8  | 36.0  | 17.3  | 36.0  | 36.8  | 21.8  | 18.3  | 21.8  | 36.8  |
|                          | 100 | 39.7  | 70.4  | 88.1  | 61.1  | 51.3  | 61.1  | 88.1  | 70.4  | 39.7  | 70.4  | 88.1  | 61.1  | 51.3  | 61.1  | 88.1  |
|                          | 105 | 66.3  | 106.7 | 148.0 | 109.5 | 95.7  | 109.5 | 148.0 | 106.7 | 66.3  | 106.7 | 148.0 | 109.5 | 95.7  | 109.5 | 148.0 |
|                          | 110 | 93.8  | 145.2 | 223.7 | 171.4 | 151.4 | 171.4 | 223.7 | 145.2 | 93.8  | 145.2 | 223.7 | 171.4 | 151.4 | 171.4 | 223.7 |
|                          | 115 | 121.2 | 180.3 | 305.9 | 253.4 | 225.7 | 253.4 | 305.9 | 180.3 | 121.2 | 180.3 | 305.9 | 253.4 | 225.7 | 253.4 | 305.9 |
|                          | 120 | 148.5 | 210.9 | 382.8 | 358.0 | 323.6 | 358.0 | 382.8 | 210.9 | 148.5 | 210.9 | 382.8 | 358.0 | 323.6 | 358.0 | 382.8 |
|                          | 125 | 177.1 | 237.7 | 437.0 | 472.0 | 442.2 | 472.0 | 437.0 | 237.7 | 177.1 | 237.7 | 437.0 | 472.0 | 442.2 | 472.0 | 437.0 |
|                          | 130 | 207.7 | 263.6 | 461.0 | 559.8 | 551.7 | 559.8 | 461.0 | 263.6 | 207.7 | 263.6 | 461.0 | 559.8 | 551.7 | 559.8 | 461.0 |
|                          | 135 | 241.9 | 288.4 | 459.9 | 601.0 | 622.2 | 601.0 | 459.9 | 288.4 | 241.9 | 288.4 | 459.9 | 601.0 | 622.2 | 601.0 | 459.9 |
|                          | 140 | 280.9 | 314.9 | 448.8 | 593.0 | 635.4 | 593.0 | 448.8 | 314.9 | 280.9 | 314.9 | 448.8 | 593.0 | 635.4 | 593.0 | 448.8 |
|                          | 145 | 321.3 | 343.7 | 437.9 | 558.2 | 605.0 | 558.2 | 437.9 | 343.7 | 321.3 | 343.7 | 437.9 | 558.2 | 605.0 | 558.2 | 437.9 |
|                          | 150 | 360.2 | 374.9 | 432.7 | 517.2 | 557.1 | 517.2 | 432.7 | 374.9 | 360.2 | 374.9 | 432.7 | 517.2 | 557.1 | 517.2 | 432.7 |
|                          | 155 | 396.2 | 407.0 | 436.2 | 486.0 | 510.9 | 486.0 | 436.2 | 407.0 | 396.2 | 407.0 | 436.2 | 486.0 | 510.9 | 486.0 | 436.2 |
|                          | 160 | 426.3 | 435.8 | 448.7 | 472.8 | 485.4 | 472.8 | 448.7 | 435.8 | 426.3 | 435.8 | 448.7 | 472.8 | 485.4 | 472.8 | 448.7 |
|                          | 165 | 451.2 | 458.7 | 464.4 | 474.8 | 479.4 | 474.8 | 464.4 | 458.7 | 451.2 | 458.7 | 464.4 | 474.8 | 479.4 | 474.8 | 464.4 |
|                          | 170 | 469.1 | 474.4 | 476.6 | 481.8 | 483.3 | 481.8 | 476.6 | 474.4 | 469.1 | 474.4 | 476.6 | 481.8 | 483.3 | 481.8 | 476.6 |
|                          | 175 | 480.0 | 482.5 | 481.6 | 485.0 | 486.4 | 485.0 | 481.6 | 482.5 | 480.0 | 482.5 | 481.6 | 485.0 | 486.4 | 485.0 | 481.6 |
|                          | 180 | 483.9 | 483.9 | 483.9 | 483.9 | 483.9 | 483.9 | 483.9 | 483.9 | 483.9 | 483.9 | 483.9 | 483.9 | 483.9 | 483.9 | 483.9 |

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

| Vertical Angle (Degrees) | 0  | 45    | 90    |
|--------------------------|----|-------|-------|
|                          | 0  | 16460 | 16460 |
|                          | 45 | 3067  | 8638  |
|                          | 55 | 2036  | 7211  |
|                          | 65 | 1245  | 5843  |
|                          | 75 | 617   | 4424  |
|                          | 85 | 140   | 2226  |



### Coefficients of Utilization - 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 percent of total lumen output delivered to the task surface ** |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0                                      | 106                                                                                       | 106 | 106 | 106 | 97 | 97 | 97 | 97 | 81 | 81 | 81 | 66 | 66 | 66 | 53 | 53 | 53 | 46 |
| 1                                      | 97                                                                                        | 93  | 89  | 86  | 89 | 86 | 82 | 79 | 72 | 69 | 67 | 59 | 57 | 56 | 47 | 46 | 45 | 39 |
| 2                                      | 89                                                                                        | 82  | 76  | 71  | 81 | 75 | 70 | 66 | 63 | 59 | 56 | 52 | 49 | 47 | 42 | 40 | 38 | 34 |
| 3                                      | 81                                                                                        | 72  | 65  | 59  | 74 | 66 | 60 | 55 | 56 | 51 | 48 | 46 | 43 | 40 | 37 | 35 | 33 | 29 |
| 4                                      | 74                                                                                        | 64  | 56  | 50  | 68 | 59 | 52 | 47 | 50 | 45 | 41 | 41 | 38 | 35 | 34 | 31 | 29 | 25 |
| 5                                      | 68                                                                                        | 57  | 49  | 43  | 63 | 53 | 46 | 41 | 45 | 40 | 35 | 37 | 33 | 30 | 30 | 28 | 25 | 22 |
| 6                                      | 63                                                                                        | 51  | 44  | 38  | 58 | 48 | 41 | 36 | 41 | 35 | 31 | 34 | 30 | 27 | 28 | 25 | 22 | 20 |
| 7                                      | 58                                                                                        | 47  | 39  | 33  | 54 | 43 | 36 | 31 | 37 | 31 | 28 | 31 | 27 | 24 | 25 | 22 | 20 | 18 |
| 8                                      | 54                                                                                        | 42  | 35  | 30  | 50 | 39 | 33 | 28 | 34 | 28 | 25 | 28 | 24 | 21 | 23 | 20 | 18 | 16 |
| 9                                      | 51                                                                                        | 39  | 31  | 26  | 47 | 36 | 29 | 25 | 31 | 26 | 22 | 26 | 22 | 19 | 22 | 19 | 17 | 14 |
| 10                                     | 47                                                                                        | 36  | 28  | 24  | 44 | 33 | 27 | 23 | 29 | 24 | 20 | 24 | 20 | 18 | 20 | 17 | 15 | 13 |

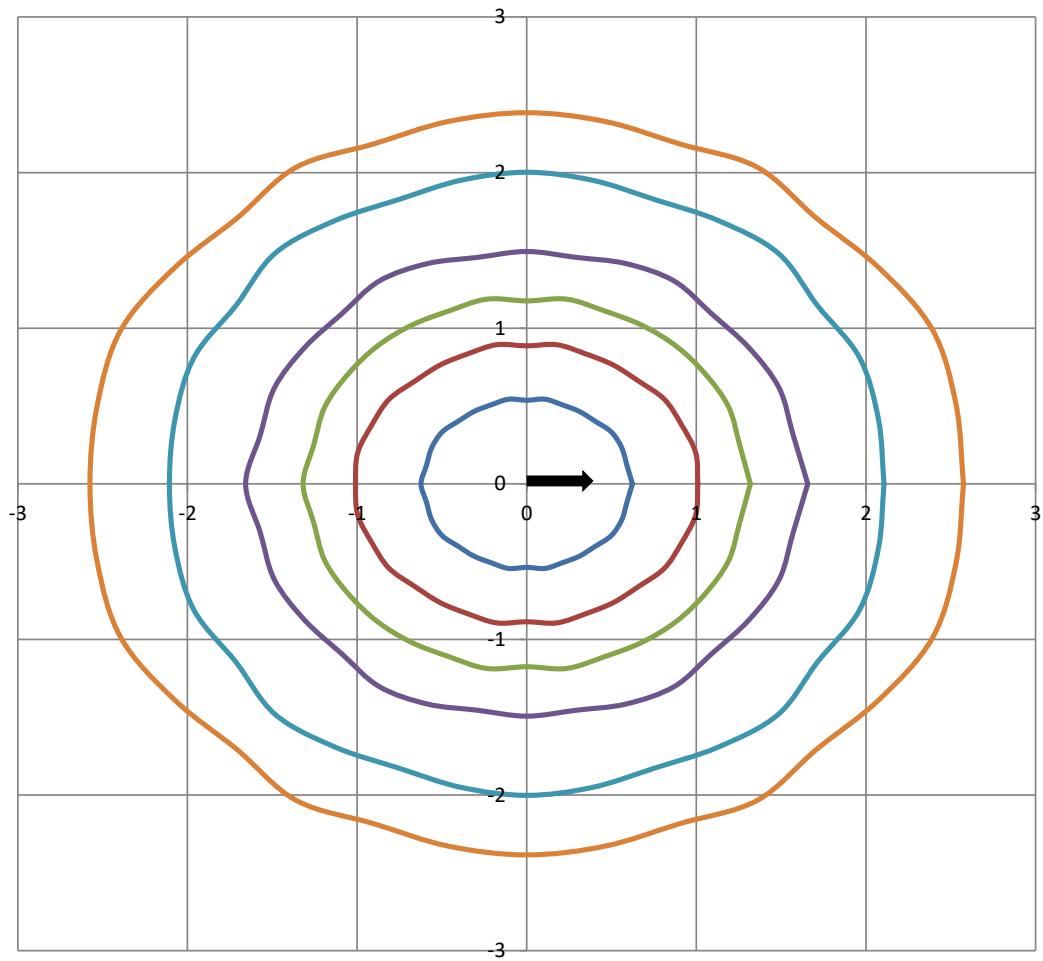
| Beam and Field Information |                 |
|----------------------------|-----------------|
| CIE Type:                  | Direct/Indirect |
| Center Beam Intensity:     | 701.0 Candela   |
| Central Cone Intensity:    | 699 Candela     |
| Beam Flux:                 | 1977.8 Lumens   |
| Beam Angle (0-180):        | 93.5 Degrees    |
| Beam Angle (90-270):       | 76.5 Degrees    |
| Field Angle (0-180):       | 153.4 Degrees   |
| Field Angle (90-270):      | 147.9 Degrees   |

| Cone of Light Tabulation |  |                      |                 |
|--------------------------|--|----------------------|-----------------|
| Mounting Height (Feet)   |  | Footcandles at Nadir | Diameter (Feet) |
| 4.00                     |  | 43.8                 | 4.28            |
| 6.00                     |  | 19.5                 | 6.43            |
| 8.00                     |  | 11.0                 | 8.57            |
| 10.0                     |  | 7.01                 | 10.7            |
| 12.0                     |  | 4.87                 | 12.9            |
| 14.0                     |  | 3.58                 | 15.0            |
| 16.0                     |  | 2.74                 | 17.1            |



## ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

5 fc    2 fc    1 fc    0.5 fc    0.2 fc    0.1 fc



## Unified Glare Rating

Flux Correction Term: 4 Normalization Flux: 1000 lm  
Luminaire Flux: 3176 lm Spacing Height Ratio: 1 H  
Bare Lamp Flux: -1 lm

| Absolute UGR Table  |     |                  |      |      |      |      |                |      |      |      |      |
|---------------------|-----|------------------|------|------|------|------|----------------|------|------|------|------|
| Ceiling Reflectance | 0.7 | 0.7              | 0.5  | 0.5  | 0.3  | 0.7  | 0.7            | 0.5  | 0.5  | 0.3  |      |
| Wall Reflectance    | 0.5 | 0.3              | 0.5  | 0.3  | 0.3  | 0.5  | 0.3            | 0.5  | 0.3  | 0.3  |      |
| Floor Reflectance   | 0.2 | 0.2              | 0.2  | 0.2  | 0.2  | 0.2  | 0.2            | 0.2  | 0.2  | 0.2  |      |
| Room Dimensions     |     | Viewed Crosswise |      |      |      |      | Viewed Endwise |      |      |      |      |
| x                   | y   |                  |      |      |      |      |                |      |      |      |      |
| 2H                  | 2H  | 12.5             | 13.3 | 13.5 | 14.3 | 15.6 | 8.3            | 9.1  | 9.3  | 10.1 | 11.5 |
| 2H                  | 3H  | 14.0             | 14.7 | 15.0 | 15.7 | 17.1 | 9.3            | 10.1 | 10.3 | 11.1 | 12.4 |
| 2H                  | 4H  | 14.5             | 15.2 | 15.5 | 16.2 | 17.6 | 9.6            | 10.3 | 10.6 | 11.3 | 12.7 |
| 2H                  | 6H  | 14.8             | 15.5 | 15.9 | 16.5 | 17.9 | 9.7            | 10.4 | 10.8 | 11.4 | 12.7 |
| 2H                  | 8H  | 14.9             | 15.5 | 16.0 | 16.6 | 17.9 | 9.7            | 10.3 | 10.8 | 11.4 | 12.7 |
| 2H                  | 12H | 14.9             | 15.5 | 16.0 | 16.5 | 17.9 | 9.7            | 10.3 | 10.7 | 11.3 | 12.7 |
| 4H                  | 2H  | 12.5             | 13.2 | 13.5 | 14.2 | 15.6 | 9.0            | 9.6  | 10.0 | 10.7 | 12.0 |
| 4H                  | 3H  | 14.1             | 14.7 | 15.2 | 15.8 | 17.1 | 10.1           | 10.7 | 11.1 | 11.7 | 13.1 |
| 4H                  | 4H  | 14.7             | 15.2 | 15.8 | 16.3 | 17.7 | 10.4           | 11.0 | 11.5 | 12.0 | 13.4 |
| 4H                  | 6H  | 15.1             | 15.6 | 16.2 | 16.6 | 18.0 | 10.6           | 11.1 | 11.7 | 12.1 | 13.5 |
| 4H                  | 8H  | 15.2             | 15.6 | 16.3 | 16.7 | 18.1 | 10.6           | 11.0 | 11.7 | 12.1 | 13.5 |
| 4H                  | 12H | 15.3             | 15.6 | 16.3 | 16.7 | 18.1 | 10.6           | 11.0 | 11.7 | 12.1 | 13.5 |
| 8H                  | 4H  | 14.7             | 15.1 | 15.7 | 16.1 | 17.6 | 10.7           | 11.1 | 11.7 | 12.1 | 13.5 |
| 8H                  | 6H  | 15.1             | 15.4 | 16.2 | 16.5 | 17.9 | 10.9           | 11.2 | 12.0 | 12.3 | 13.7 |
| 8H                  | 8H  | 15.2             | 15.5 | 16.3 | 16.6 | 18.0 | 11.0           | 11.3 | 12.0 | 12.3 | 13.8 |
| 8H                  | 12H | 15.3             | 15.6 | 16.4 | 16.6 | 18.1 | 11.0           | 11.2 | 12.0 | 12.3 | 13.8 |
| 12H                 | 4H  | 14.6             | 15.0 | 15.7 | 16.1 | 17.5 | 10.6           | 11.0 | 11.7 | 12.1 | 13.5 |
| 12H                 | 6H  | 15.1             | 15.4 | 16.1 | 16.4 | 17.9 | 10.9           | 11.2 | 12.0 | 12.3 | 13.7 |
| 12H                 | 8H  | 15.2             | 15.5 | 16.3 | 16.5 | 18.0 | 11.0           | 11.2 | 12.1 | 12.3 | 13.8 |