

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

AS01SQF NC 935 004 DL FL MW xx  
Nom 1" square recessed downlight

### **Test Number**

SP-01015\_M-4L

### **Test Date**

3/7/2019

The results contained in this report pertain only to this IES file.

### Summary of Results

#### Power

|             |       |
|-------------|-------|
| Input Watts | 6.3 W |
|-------------|-------|

#### Lumen Output

|               |            |
|---------------|------------|
| Output Lumens | 218        |
| Efficacy      | 34.63 lm/W |

#### Luminous Dimensions

|                 |      |
|-----------------|------|
| 0° - 180° Size  | 0.07 |
| 90° - 270° Size | 0.07 |
| Height          | 0    |

#### Spacing Criterion

|                           |      |
|---------------------------|------|
| Two luminaires, plane 0°  | 0.55 |
| Two luminaires, plane 90° | 0.56 |
| Four luminaires           | 0.6  |

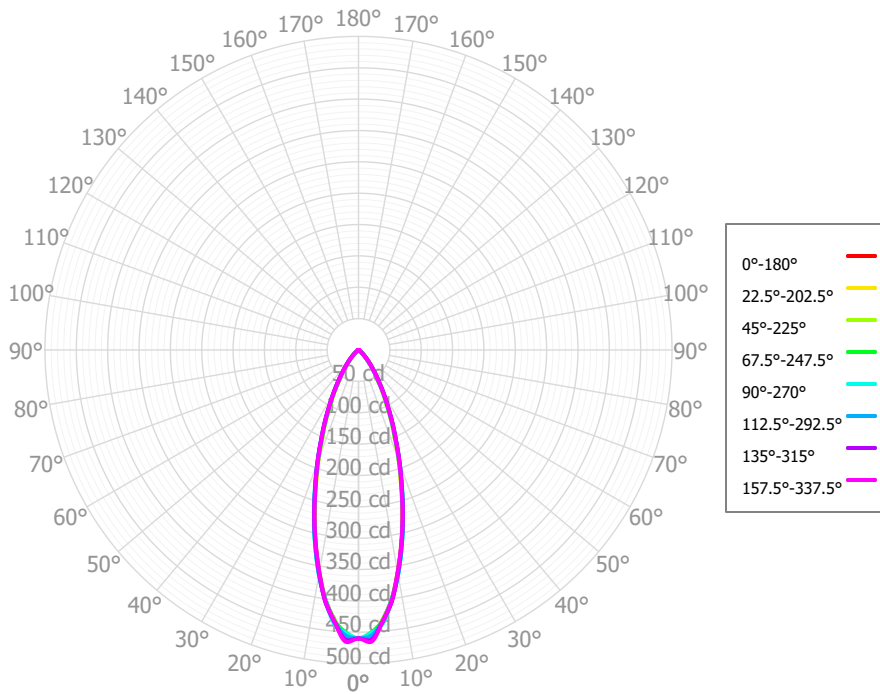
#### Full Beam Angle

|            |     |
|------------|-----|
| 0° - 180°  | 34° |
| 90° - 270° | 35° |

### IES File Header Contents

| Keyword   | Value   |
|-----------|---|
| TEST      | SP-01015_M-4L   |
| TESTLAB   | Spectrum Lighting Photometric Lab, VLS-245-981            |
| MANUFAC   | Spectrum Lighting   |
| TESTDATE  | 3/7/2019  |
| ISSUEDATE | 2/5/2020  |
| LUMCAT    | AS01SQF NC 935 004 DL FL MW xx                            |
| LUMINAIRE | Nom 1" square recessed downlight                          |
| OTHER     | Beam angle: 33.3 degrees                                  |
| LAMP      | N/A   |
| LAMPCAT   | N/A, CRI: 90 min  |
| OTHER     | CCT Multipliers: 927 x 0.96, 930 x 0.99, 940 x 1.02       |
| OTHER     | Total luminaire wattages is approximate                   |
| OTHER     | This report prepared by Spectrum Lighting, scaled from 7L |

### Candela Polar Plot



### Zonal Lumen Summary

| Zone            | Lumens | % Fixture | Zone              | Lumens | % Fixture |
|-----------------|--------|-----------|-------------------|--------|-----------|
| 0.00° - 10.00°  | 39.62  | 18.16%    | 90.00° - 100.00°  | 0.05   | 0.02%     |
| 10.00° - 20.00° | 74.49  | 34.14%    | 100.00° - 110.00° | 0.00   | 0.00%     |
| 20.00° - 30.00° | 57.47  | 26.34%    | 100.00° - 120.00° | 0.00   | 0.00%     |
| 30.00° - 40.00° | 29.89  | 13.70%    | 120.00° - 130.00° | 0.00   | 0.00%     |
| 40.00° - 50.00° | 11.09  | 5.08%     | 130.00° - 140.00° | 0.00   | 0.00%     |
| 50.00° - 60.00° | 2.86   | 1.31%     | 140.00° - 150.00° | 0.00   | 0.00%     |
| 60.00° - 70.00° | 1.19   | 0.55%     | 150.00° - 160.00° | 0.00   | 0.00%     |
| 70.00° - 80.00° | 0.80   | 0.37%     | 160.00° - 170.00° | 0.00   | 0.00%     |
| 80.00° - 90.00° | 0.71   | 0.33%     | 170.00° - 180.00° | 0.00   | 0.00%     |
| 0.00° - 90.00°  | 218.13 | 99.98%    | 0.00° - 180.00°   | 218.17 | 100.00%   |

### Candela Distribution

|         | 0.00°  | 22.50° | 45.00° | 67.50° | 90.00° | 112.50° | 135.00° | 157.50° | 180.00° | 202.50° | 225.00° | 247.50° | 270.00° | 292.50° | 315.00° | 337.50° | 360.00° |
|---------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.00°   | 459.95 | 459.95 | 459.95 | 459.95 | 459.95 | 459.95  | 459.95  | 459.95  | 459.95  | 459.95  | 459.95  | 459.95  | 459.95  | 459.95  | 459.95  | 459.95  | 459.95  |
| 2.50°   | 459.59 | 459.30 | 455.50 | 451.36 | 452.29 | 456.23  | 462.75  | 465.80  | 459.59  | 459.30  | 455.50  | 451.36  | 452.29  | 456.23  | 462.75  | 465.80  | 459.59  |
| 5.00°   | 433.49 | 434.04 | 434.06 | 434.58 | 439.12 | 436.42  | 435.76  | 435.58  | 433.49  | 434.04  | 434.06  | 434.58  | 439.12  | 436.42  | 435.76  | 435.58  | 433.49  |
| 7.50°   | 402.56 | 404.65 | 403.25 | 402.15 | 403.19 | 404.06  | 405.43  | 404.35  | 402.56  | 404.65  | 403.25  | 402.15  | 403.19  | 404.06  | 405.43  | 404.35  | 402.56  |
| 10.00°  | 359.61 | 361.34 | 361.88 | 362.89 | 364.21 | 363.26  | 361.46  | 360.25  | 359.61  | 361.34  | 361.88  | 362.89  | 364.21  | 363.26  | 361.46  | 360.25  | 359.61  |
| 12.50°  | 315.64 | 316.92 | 317.23 | 318.69 | 319.38 | 318.47  | 316.86  | 316.08  | 315.64  | 316.92  | 317.23  | 318.69  | 319.38  | 318.47  | 316.86  | 316.08  | 315.64  |
| 15.00°  | 269.76 | 270.95 | 271.94 | 273.87 | 274.28 | 274.32  | 272.63  | 271.53  | 269.76  | 270.95  | 271.94  | 273.87  | 274.28  | 274.32  | 272.63  | 271.53  | 269.76  |
| 17.50°  | 226.83 | 225.38 | 226.52 | 228.72 | 231.49 | 230.38  | 228.98  | 228.32  | 226.83  | 225.38  | 226.52  | 228.72  | 231.49  | 230.38  | 228.98  | 228.32  | 226.83  |
| 20.00°  | 188.15 | 187.40 | 188.22 | 189.56 | 189.43 | 192.31  | 191.97  | 190.58  | 188.15  | 187.40  | 188.22  | 189.56  | 189.43  | 192.31  | 191.97  | 190.58  | 188.15  |
| 22.50°  | 153.96 | 150.63 | 150.83 | 152.81 | 156.51 | 155.67  | 156.23  | 155.31  | 153.96  | 150.63  | 150.83  | 152.81  | 156.51  | 155.67  | 156.23  | 155.31  | 153.96  |
| 25.00°  | 124.69 | 122.93 | 122.77 | 123.79 | 124.81 | 127.35  | 127.89  | 126.95  | 124.69  | 122.93  | 122.77  | 123.79  | 124.81  | 127.35  | 127.89  | 126.95  | 124.69  |
| 27.50°  | 99.82  | 96.70  | 95.28  | 97.06  | 100.76 | 100.27  | 101.27  | 100.85  | 99.82   | 96.70   | 95.28   | 97.06   | 100.76  | 100.27  | 101.27  | 100.85  | 99.82   |
| 30.00°  | 78.76  | 77.08  | 76.49  | 77.24  | 78.17  | 80.59   | 81.13   | 79.34   | 78.76   | 77.08   | 76.49   | 77.24   | 78.17   | 80.59   | 81.13   | 79.34   | 78.76   |
| 32.50°  | 61.36  | 59.06  | 58.21  | 58.77  | 61.32  | 61.41   | 62.67   | 60.93   | 61.36   | 59.06   | 58.21   | 58.77   | 61.32   | 61.41   | 62.67   | 60.93   | 61.36   |
| 35.00°  | 46.38  | 46.05  | 45.94  | 46.05  | 46.07  | 48.55   | 48.73   | 47.38   | 46.38   | 46.05   | 45.94   | 46.05   | 46.07   | 48.55   | 48.73   | 47.38   | 46.38   |
| 37.50°  | 35.04  | 34.55  | 34.35  | 33.94  | 35.26  | 35.98   | 36.68   | 35.91   | 35.04   | 34.55   | 34.35   | 33.94   | 35.26   | 35.98   | 36.68   | 35.91   | 35.04   |
| 40.00°  | 25.50  | 26.47  | 26.82  | 25.94  | 25.71  | 27.51   | 28.33   | 26.93   | 25.50   | 26.47   | 26.82   | 25.94   | 25.71   | 27.51   | 28.33   | 26.93   | 25.50   |
| 42.50°  | 18.22  | 19.23  | 19.86  | 18.17  | 18.72  | 19.47   | 21.18   | 19.40   | 18.22   | 19.23   | 19.86   | 18.17   | 18.72   | 19.47   | 21.18   | 19.40   | 18.22   |
| 45.00°  | 11.79  | 13.41  | 15.12  | 13.40  | 12.53  | 14.42   | 15.78   | 13.21   | 11.79   | 13.41   | 15.12   | 13.40   | 12.53   | 14.42   | 15.78   | 13.21   | 11.79   |
| 47.50°  | 7.69   | 8.98   | 10.92  | 8.82   | 7.56   | 9.72    | 11.37   | 8.69    | 7.69    | 8.98    | 10.92   | 8.82    | 7.56    | 9.72    | 11.37   | 8.69    | 7.69    |
| 50.00°  | 4.19   | 6.37   | 8.21   | 6.10   | 4.31   | 6.52    | 8.10    | 5.37    | 4.19    | 6.37    | 8.21    | 6.10    | 4.31    | 6.52    | 8.10    | 5.37    | 4.19    |
| 52.50°  | 3.09   | 4.22   | 5.80   | 3.65   | 3.13   | 3.85    | 5.66    | 3.51    | 3.09    | 4.22    | 5.80    | 3.65    | 3.13    | 3.85    | 5.66    | 3.51    | 3.09    |
| 55.00°  | 2.38   | 2.53   | 3.97   | 2.72   | 2.31   | 2.75    | 3.95    | 2.45    | 2.38    | 2.53    | 3.97    | 2.72    | 2.31    | 2.75    | 3.95    | 2.45    | 2.38    |
| 57.50°  | 1.98   | 1.74   | 2.60   | 1.92   | 1.81   | 1.93    | 2.76    | 1.86    | 1.98    | 1.74    | 2.60    | 1.92    | 1.81    | 1.93    | 2.76    | 1.86    | 1.98    |
| 60.00°  | 1.60   | 1.65   | 1.93   | 1.59   | 1.45   | 1.70    | 1.92    | 1.45    | 1.60    | 1.65    | 1.93    | 1.59    | 1.45    | 1.70    | 1.92    | 1.45    | 1.60    |
| 62.50°  | 1.35   | 1.55   | 1.44   | 1.31   | 1.18   | 1.47    | 1.46    | 1.25    | 1.35    | 1.55    | 1.44    | 1.31    | 1.18    | 1.47    | 1.46    | 1.25    | 1.35    |
| 65.00°  | 1.10   | 1.44   | 1.17   | 1.16   | 1.03   | 1.23    | 1.21    | 1.11    | 1.10    | 1.44    | 1.17    | 1.16    | 1.03    | 1.23    | 1.21    | 1.11    | 1.10    |
| 67.50°  | 0.99   | 1.14   | 0.96   | 1.03   | 0.93   | 1.03    | 1.04    | 0.93    | 0.99    | 1.14    | 0.96    | 1.03    | 0.93    | 1.03    | 1.04    | 0.93    | 0.99    |
| 70.00°  | 0.89   | 0.77   | 0.81   | 0.92   | 0.91   | 0.84    | 0.90    | 0.78    | 0.89    | 0.77    | 0.81    | 0.92    | 0.91    | 0.84    | 0.90    | 0.78    | 0.89    |
| 72.50°  | 0.85   | 0.78   | 0.78   | 0.88   | 0.89   | 0.79    | 0.83    | 0.76    | 0.85    | 0.78    | 0.78    | 0.88    | 0.89    | 0.79    | 0.83    | 0.76    | 0.85    |
| 75.00°  | 0.79   | 0.74   | 0.74   | 0.86   | 0.76   | 0.75    | 0.78    | 0.74    | 0.79    | 0.74    | 0.74    | 0.86    | 0.76    | 0.75    | 0.78    | 0.74    | 0.79    |
| 77.50°  | 0.71   | 0.66   | 0.66   | 0.75   | 0.68   | 0.62    | 0.74    | 0.72    | 0.71    | 0.66    | 0.66    | 0.75    | 0.68    | 0.62    | 0.74    | 0.72    | 0.71    |
| 80.00°  | 0.68   | 0.70   | 0.65   | 0.75   | 0.66   | 0.68    | 0.57    | 0.67    | 0.68    | 0.70    | 0.65    | 0.75    | 0.66    | 0.68    | 0.57    | 0.67    | 0.68    |
| 82.50°  | 0.67   | 0.74   | 0.71   | 0.69   | 0.72   | 0.77    | 0.73    | 0.70    | 0.67    | 0.74    | 0.71    | 0.69    | 0.72    | 0.77    | 0.73    | 0.70    | 0.67    |
| 85.00°  | 0.68   | 0.74   | 0.84   | 0.67   | 0.72   | 0.61    | 0.72    | 0.67    | 0.68    | 0.74    | 0.84    | 0.67    | 0.72    | 0.61    | 0.72    | 0.67    | 0.68    |
| 87.50°  | 0.54   | 0.67   | 0.69   | 0.81   | 0.76   | 0.64    | 0.61    | 0.82    | 0.54    | 0.67    | 0.69    | 0.81    | 0.76    | 0.64    | 0.61    | 0.82    | 0.54    |
| 90.00°  | 0.31   | 0.32   | 0.34   | 0.33   | 0.40   | 0.36    | 0.24    | 0.42    | 0.31    | 0.32    | 0.34    | 0.33    | 0.40    | 0.36    | 0.24    | 0.42    | 0.31    |
| 92.50°  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
| 95.00°  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
| 97.50°  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
| 100.00° | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
| 102.50° | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
| 105.00° | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
| 107.50° | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
| 110.00° | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
| 112.50° | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

|            |            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>RCR</b> | <b>pfc</b> | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 0%  |
|            | <b>pcc</b> | 80% | 80% | 80% | 80% | 70% | 70% | 70% | 70% | 50% | 50% | 50% | 30% | 30% | 30% | 10% | 10% | 0%  |
|            | <b>pw</b>  | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 30% |
|            | <b>0</b>   | 260 | 260 | 260 | 260 | 254 | 254 | 254 | 254 | 242 | 242 | 242 | 232 | 232 | 232 | 223 | 223 | 218 |
|            | <b>1</b>   | 248 | 242 | 237 | 233 | 243 | 238 | 233 | 229 | 229 | 225 | 222 | 221 | 218 | 215 | 213 | 211 | 209 |
|            | <b>2</b>   | 237 | 227 | 219 | 212 | 232 | 223 | 216 | 209 | 216 | 210 | 205 | 210 | 205 | 201 | 204 | 200 | 196 |
|            | <b>3</b>   | 226 | 213 | 203 | 195 | 222 | 210 | 201 | 194 | 205 | 197 | 191 | 200 | 193 | 188 | 195 | 189 | 185 |
|            | <b>4</b>   | 216 | 201 | 190 | 182 | 213 | 199 | 188 | 180 | 194 | 185 | 178 | 190 | 182 | 176 | 186 | 180 | 174 |
|            | <b>5</b>   | 207 | 190 | 178 | 170 | 203 | 188 | 177 | 169 | 184 | 175 | 168 | 181 | 173 | 166 | 178 | 170 | 165 |
|            | <b>6</b>   | 198 | 180 | 168 | 160 | 195 | 179 | 167 | 159 | 175 | 165 | 158 | 172 | 164 | 157 | 170 | 162 | 156 |
|            | <b>7</b>   | 190 | 171 | 159 | 151 | 187 | 170 | 158 | 150 | 167 | 157 | 150 | 165 | 156 | 149 | 162 | 154 | 148 |
|            | <b>8</b>   | 182 | 163 | 151 | 143 | 179 | 162 | 151 | 143 | 160 | 149 | 142 | 157 | 148 | 142 | 155 | 147 | 141 |
|            | <b>9</b>   | 175 | 156 | 144 | 136 | 172 | 154 | 143 | 136 | 153 | 142 | 135 | 151 | 141 | 135 | 149 | 141 | 134 |
|            | <b>10</b>  | 168 | 149 | 137 | 130 | 166 | 148 | 137 | 129 | 146 | 136 | 129 | 145 | 135 | 129 | 143 | 135 | 128 |

### Cone of Light

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 5.5 ft     | 15.2 fc     | 3.4 ft        |
| 6.5 ft     | 10.9 fc     | 4.0 ft        |
| 7.5 ft     | 8.2 fc      | 4.6 ft        |
| 8.0 ft     | 7.2 fc      | 4.9 ft        |
| 10.0 ft    | 4.6 fc      | 6.2 ft        |
| 12.0 ft    | 3.2 fc      | 7.4 ft        |
| 14.0 ft    | 2.3 fc      | 8.6 ft        |
| 16.0 ft    | 1.8 fc      | 9.9 ft        |
| 20.0 ft    | 1.1 fc      | 12.3 ft       |
| 24.0 ft    | 0.8 fc      | 14.8 ft       |
| 28.0 ft    | 0.6 fc      | 17.3 ft       |

### Average Luminaire Luminance [cd/m²]

|               | 0.00°     | 45.00°    | 90.00°    |
|---------------|-----------|-----------|-----------|
| <b>0.00°</b>  | 1,010,386 | 1,010,386 | 1,010,386 |
| <b>45.00°</b> | 36,631    | 46,969    | 38,927    |
| <b>55.00°</b> | 9,122     | 15,221    | 8,850     |
| <b>65.00°</b> | 5,726     | 6,057     | 5,329     |
| <b>75.00°</b> | 6,728     | 6,291     | 6,457     |
| <b>85.00°</b> | 17,170    | 21,172    | 18,134    |

### UGR CIE 190:2010

|                            |            |                         |            |            |            |            |                       |            |            |            |            |
|----------------------------|------------|-------------------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|
| <b>Ceiling reflectance</b> |            | <b>0.7</b>              | <b>0.7</b> | <b>0.5</b> | <b>0.5</b> | <b>0.3</b> | <b>0.7</b>            | <b>0.7</b> | <b>0.5</b> | <b>0.5</b> | <b>0.3</b> |
| <b>Wall reflectance</b>    |            | <b>0.5</b>              | <b>0.3</b> | <b>0.5</b> | <b>0.3</b> | <b>0.3</b> | <b>0.5</b>            | <b>0.3</b> | <b>0.5</b> | <b>0.3</b> | <b>0.3</b> |
| <b>Plane reflectance</b>   |            | <b>0.2</b>              | <b>0.2</b> | <b>0.2</b> | <b>0.2</b> | <b>0.2</b> | <b>0.2</b>            | <b>0.2</b> | <b>0.2</b> | <b>0.2</b> | <b>0.2</b> |
| <b>Room dimensions</b>     |            | <b>Viewed crosswise</b> |            |            |            |            | <b>Viewed endwise</b> |            |            |            |            |
| <b>2H</b>                  | <b>2H</b>  | 9.6                     | 10.6       | 10.0       | 10.9       | 11.2       | 9.9                   | 10.8       | 10.2       | 11.2       | 11.5       |
|                            | <b>3H</b>  | 10.8                    | 11.7       | 11.2       | 12.0       | 12.4       | 11.0                  | 11.9       | 11.4       | 12.2       | 12.6       |
|                            | <b>4H</b>  | 11.6                    | 12.4       | 12.0       | 12.8       | 13.2       | 11.8                  | 12.6       | 12.2       | 12.9       | 13.3       |
|                            | <b>6H</b>  | 12.5                    | 13.3       | 12.9       | 13.6       | 14.0       | 12.6                  | 13.4       | 13.0       | 13.7       | 14.1       |
|                            | <b>8H</b>  | 13.2                    | 13.8       | 13.6       | 14.2       | 14.6       | 13.3                  | 14.0       | 13.7       | 14.4       | 14.8       |
|                            | <b>12H</b> | 14.0                    | 14.6       | 14.4       | 15.0       | 15.5       | 14.2                  | 14.8       | 14.6       | 15.2       | 15.6       |
| <b>4H</b>                  | <b>2H</b>  | 10.0                    | 10.8       | 10.4       | 11.1       | 11.5       | 10.2                  | 11.0       | 10.6       | 11.3       | 11.7       |
|                            | <b>3H</b>  | 11.4                    | 12.1       | 11.8       | 12.5       | 12.9       | 11.6                  | 12.3       | 12.0       | 12.7       | 13.1       |
|                            | <b>4H</b>  | 12.4                    | 12.9       | 12.8       | 13.4       | 13.8       | 12.6                  | 13.2       | 13.0       | 13.6       | 14.0       |
|                            | <b>6H</b>  | 13.5                    | 14.0       | 14.0       | 14.5       | 15.0       | 13.7                  | 14.2       | 14.2       | 14.6       | 15.1       |
|                            | <b>8H</b>  | 14.3                    | 14.8       | 14.8       | 15.3       | 15.7       | 14.5                  | 15.0       | 15.0       | 15.4       | 15.9       |
|                            | <b>12H</b> | 15.4                    | 15.8       | 15.9       | 16.3       | 16.7       | 15.6                  | 16.0       | 16.1       | 16.4       | 16.9       |
| <b>8H</b>                  | <b>4H</b>  | 12.7                    | 13.2       | 13.2       | 13.6       | 14.1       | 12.9                  | 13.4       | 13.4       | 13.8       | 14.3       |
|                            | <b>6H</b>  | 14.2                    | 14.6       | 14.7       | 15.1       | 15.5       | 14.3                  | 14.7       | 14.8       | 15.2       | 15.7       |
|                            | <b>8H</b>  | 15.2                    | 15.6       | 15.8       | 16.1       | 16.6       | 15.4                  | 15.7       | 15.9       | 16.2       | 16.7       |
|                            | <b>12H</b> | 16.6                    | 16.9       | 17.1       | 17.4       | 17.9       | 16.7                  | 17.0       | 17.2       | 17.5       | 18.1       |
| <b>12H</b>                 | <b>4H</b>  | 12.8                    | 13.2       | 13.3       | 13.7       | 14.2       | 13.0                  | 13.4       | 13.5       | 13.9       | 14.3       |
|                            | <b>6H</b>  | 14.4                    | 14.7       | 14.9       | 15.2       | 15.8       | 14.5                  | 14.8       | 15.0       | 15.3       | 15.9       |
|                            | <b>8H</b>  | 15.6                    | 15.9       | 16.1       | 16.4       | 17.0       | 15.7                  | 16.0       | 16.3       | 16.5       | 17.1       |

Corrected UGR values based on total output lumens

SHR = 1.0