

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

994 Jefferson Street  
Fall River, MA 02721  
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### Spectrum Lighting Photometric Lab

Luminaire

C1320PC120L35HKXWDO10XTSGHMMW

13" round x 20" high PC series Stage Pro luminaire for auditorium and area lighting.

Test Number

SP-R996

Test Date

7/9/2025

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

## Summary of Results

### Power

|             |         |
|-------------|---------|
| Input Watts | 82.91 W |
|-------------|---------|

### Lumen Output

|               |             |
|---------------|-------------|
| Output Lumens | 8679        |
| Efficacy      | 104.68 lm/W |

### Luminous Dimensions

|                 |    |
|-----------------|----|
| 0° - 180° Size  | -1 |
| 90° - 270° Size | -1 |
| Height          | 0  |

### Spacing Criterion

|                           |      |
|---------------------------|------|
| Two luminaires, plane 0°  | 0.94 |
| Two luminaires, plane 90° | 1.01 |
| Four luminaires           | 0.89 |

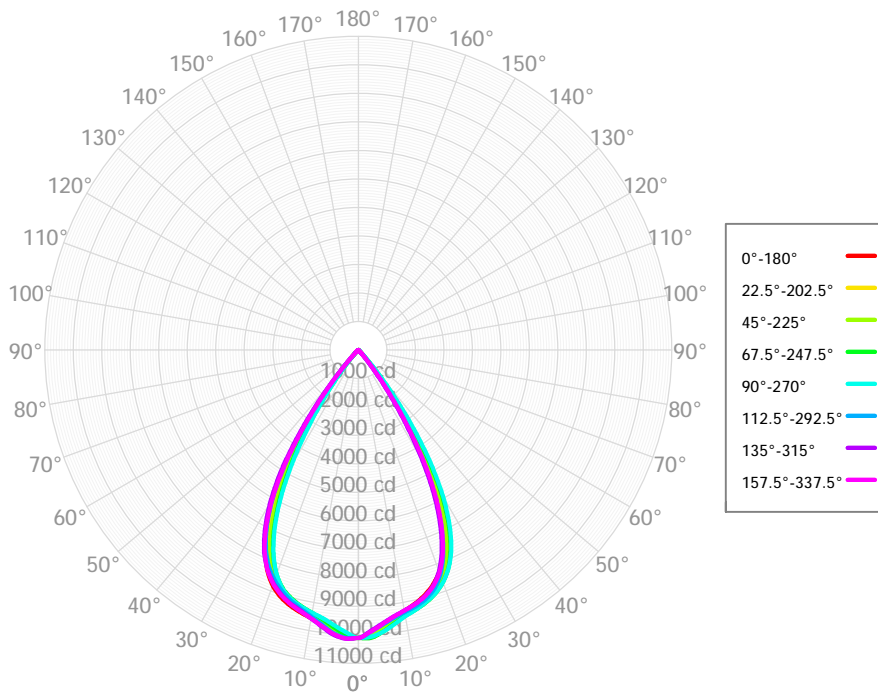
### Full Beam Angle

|            |     |
|------------|-----|
| 0° - 180°  | 61° |
| 90° - 270° | 61° |

## IES File Header Contents

| Keyword      | Value  |
|--------------|--|
| TEST         | SP-R996  |
| TESTLAB      | Spectrum Lighting Photometric Lab. VLS-245-981                                       |
| MANUFAC      | Spectrum Lighting  |
| TESTDATE     | 7/9/2025   |
| ISSUEDATE    | 7/9/2025   |
| LUMCAT       | C1320PC120L35HKXWDO10XTSGHMMW  |
| LUMINAIRE    | 13" round x 20" high PC series Stage Pro luminaire for auditorium and area lighting. |
| DISTRIBUTION | Beam Angle 61.3  |
| OTHER        | CCT 3468 CRI 93.7 R9 71.4  |
| OTHER        | Total Luminaire wattage is approximate   |
| OTHER        | This report is prepared by Spectrum Lighting   |

### Candela Polar Plot



### Zonal Lumen Summary

| Zone            | Lumens  | % Fixture | Zone              | Lumens  | % Fixture |
|-----------------|---------|-----------|-------------------|---------|-----------|
| 0.00° - 10.00°  | 938.57  | 10.81%    | 90.00° - 100.00°  | 0.00    | 0.00%     |
| 10.00° - 20.00° | 2550.49 | 29.39%    | 100.00° - 110.00° | 0.00    | 0.00%     |
| 20.00° - 30.00° | 3276.73 | 37.75%    | 100.00° - 120.00° | 0.00    | 0.00%     |
| 30.00° - 40.00° | 1747.75 | 20.14%    | 120.00° - 130.00° | 0.00    | 0.00%     |
| 40.00° - 50.00° | 139.33  | 1.61%     | 130.00° - 140.00° | 0.00    | 0.00%     |
| 50.00° - 60.00° | 9.00    | 0.10%     | 140.00° - 150.00° | 0.00    | 0.00%     |
| 60.00° - 70.00° | 6.67    | 0.08%     | 150.00° - 160.00° | 0.00    | 0.00%     |
| 70.00° - 80.00° | 5.51    | 0.06%     | 160.00° - 170.00° | 0.00    | 0.00%     |
| 80.00° - 90.00° | 4.94    | 0.06%     | 170.00° - 180.00° | 0.00    | 0.00%     |
| 0.00° - 90.00°  | 8679.00 | 100.00%   | 0.00° - 180.00°   | 8679.00 | 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°  | 10107.77 | 10107.77 | 10107.77 | 10107.77 | 10107.77 | 10107.77 | 10107.77 | 10107.77 | 10107.77 | 10107.77 | 10107.77 | 10107.77 | 10107.77 | 10107.77 | 10107.77 | 10107.77 | 10107.77 |
| 2.50°  | 9947.33  | 10027.34 | 10060.53 | 10114.69 | 10076.58 | 10114.69 | 10143.26 | 10135.22 | 10115.76 | 10084.14 | 10066.47 | 10004.17 | 9917.08  | 9905.34  | 9868.53  | 9898.56  | 9947.33  |
| 5.00°  | 9710.51  | 9802.52  | 9854.89  | 9927.04  | 9929.12  | 9974.61  | 10031.43 | 10003.65 | 9960.18  | 9899.58  | 9867.73  | 9773.17  | 9698.37  | 9686.60  | 9638.71  | 9661.83  | 9710.51  |
| 7.50°  | 9482.77  | 9569.22  | 9620.24  | 9684.46  | 9705.67  | 9723.05  | 9795.31  | 9776.58  | 9747.14  | 9684.61  | 9636.59  | 9541.08  | 9498.72  | 9494.24  | 9439.10  | 9448.18  | 9482.77  |
| 10.00° | 9298.83  | 9363.82  | 9427.56  | 9476.96  | 9491.16  | 9494.95  | 9564.72  | 9563.02  | 9561.04  | 9507.63  | 9446.52  | 9363.84  | 9363.47  | 9344.37  | 9291.24  | 9288.21  | 9298.83  |
| 12.50° | 9128.25  | 9190.45  | 9275.57  | 9330.78  | 9335.16  | 9304.63  | 9367.95  | 9395.95  | 9428.05  | 9365.46  | 9291.64  | 9217.30  | 9228.88  | 9227.42  | 9145.67  | 9144.53  | 9128.25  |
| 15.00° | 8924.21  | 8995.33  | 9097.34  | 9174.25  | 9166.36  | 9112.88  | 9205.87  | 9228.06  | 9283.73  | 9194.11  | 9111.51  | 9034.75  | 9059.29  | 9064.82  | 8961.87  | 8968.03  | 8924.21  |
| 17.50° | 8659.32  | 8749.08  | 8857.32  | 8968.07  | 8963.73  | 8882.29  | 8994.26  | 9016.71  | 9084.00  | 8971.44  | 8885.81  | 8786.18  | 8801.63  | 8811.50  | 8692.55  | 8708.27  | 8659.32  |
| 20.00° | 8297.64  | 8405.04  | 8520.25  | 8675.35  | 8680.28  | 8594.57  | 8706.80  | 8736.28  | 8792.35  | 8638.01  | 8542.48  | 8388.59  | 8383.82  | 8408.78  | 8272.27  | 8322.01  | 8297.64  |
| 22.50° | 7773.72  | 7926.93  | 8041.23  | 8267.92  | 8278.70  | 8210.47  | 8329.03  | 8340.99  | 8356.72  | 8136.60  | 8019.33  | 7802.21  | 7774.97  | 7790.35  | 7646.41  | 7746.32  | 7773.72  |
| 25.00° | 7053.23  | 7251.85  | 7372.28  | 7659.23  | 7722.21  | 7675.65  | 7825.48  | 7773.59  | 7721.82  | 7426.26  | 7292.11  | 7022.12  | 6958.40  | 6938.20  | 6809.02  | 6940.20  | 7053.23  |
| 27.50° | 6144.68  | 6404.64  | 6527.91  | 6854.88  | 6938.77  | 6939.44  | 7101.01  | 7002.39  | 6850.56  | 6506.81  | 6364.09  | 6041.38  | 5939.40  | 5917.89  | 5777.74  | 5954.52  | 6144.68  |
| 30.00° | 4994.84  | 5336.65  | 5465.76  | 5833.60  | 5956.13  | 5997.76  | 6187.14  | 6031.26  | 5804.26  | 5416.01  | 5251.61  | 4884.92  | 4725.30  | 4670.64  | 4523.10  | 4761.97  | 4994.84  |
| 32.50° | 3659.21  | 4007.77  | 4190.53  | 4586.87  | 4757.77  | 4836.87  | 5071.80  | 4832.76  | 4578.43  | 4159.96  | 4013.00  | 3616.43  | 3423.42  | 3314.40  | 3163.06  | 3386.97  | 3659.21  |
| 35.00° | 2355.73  | 2681.77  | 2862.37  | 3229.59  | 3427.44  | 3506.86  | 3714.73  | 3471.52  | 3208.56  | 2845.24  | 2723.04  | 2368.00  | 2192.65  | 2067.35  | 1920.04  | 2104.76  | 2355.73  |
| 37.50° | 1250.21  | 1504.80  | 1640.48  | 1951.21  | 2150.33  | 2205.06  | 2354.47  | 2165.61  | 1953.61  | 1671.53  | 1593.34  | 1307.14  | 1177.68  | 1048.32  | 931.03   | 1054.12  | 1250.21  |
| 40.00° | 511.71   | 660.22   | 695.50   | 943.04   | 1122.99  | 1139.99  | 1172.17  | 1090.58  | 958.07   | 785.30   | 744.14   | 571.65   | 511.26   | 406.22   | 345.81   | 389.10   | 511.71   |
| 42.50° | 175.81   | 224.77   | 215.52   | 324.26   | 463.36   | 448.23   | 404.00   | 398.55   | 346.14   | 282.11   | 266.18   | 196.49   | 174.71   | 134.28   | 109.08   | 123.95   | 175.81   |
| 45.00° | 59.43    | 66.77    | 64.78    | 94.33    | 156.99   | 151.65   | 126.60   | 115.92   | 104.91   | 96.77    | 88.85    | 60.78    | 50.92    | 39.61    | 31.35    | 38.97    | 59.43    |
| 47.50° | 17.94    | 19.31    | 22.77    | 28.08    | 53.69    | 47.72    | 46.59    | 33.04    | 34.12    | 29.57    | 28.76    | 22.12    | 17.87    | 13.95    | 12.99    | 14.54    | 17.94    |
| 50.00° | 11.66    | 10.02    | 12.48    | 13.04    | 18.79    | 18.57    | 16.01    | 15.98    | 14.70    | 13.26    | 14.44    | 13.24    | 12.01    | 9.09     | 11.48    | 12.07    | 11.66    |
| 52.50° | 10.38    | 8.63     | 9.45     | 10.94    | 11.48    | 13.24    | 11.61    | 13.13    | 12.78    | 11.10    | 12.20    | 10.64    | 10.93    | 8.38     | 10.10    | 9.55     | 10.38    |
| 55.00° | 8.88     | 9.06     | 8.16     | 9.00     | 11.60    | 12.39    | 10.10    | 11.88    | 10.13    | 11.38    | 10.65    | 10.83    | 9.54     | 8.60     | 8.94     | 8.39     | 8.88     |
| 57.50° | 7.27     | 7.95     | 6.83     | 8.64     | 9.96     | 9.62     | 9.53     | 12.30    | 9.98     | 10.32    | 10.61    | 9.70     | 7.80     | 7.73     | 8.29     | 6.01     | 7.27     |
| 60.00° | 7.60     | 6.43     | 6.30     | 7.82     | 7.46     | 7.61     | 8.25     | 9.92     | 7.58     | 8.33     | 8.74     | 8.77     | 5.79     | 7.24     | 7.72     | 6.63     | 7.60     |
| 62.50° | 7.75     | 6.68     | 6.89     | 7.29     | 7.64     | 8.76     | 7.58     | 9.27     | 7.60     | 6.31     | 7.28     | 6.42     | 7.29     | 6.60     | 6.05     | 6.14     | 7.75     |
| 65.00° | 6.24     | 6.49     | 7.32     | 6.03     | 7.23     | 7.21     | 6.51     | 5.17     | 8.42     | 6.55     | 7.41     | 5.68     | 6.56     | 6.34     | 5.71     | 5.78     | 6.24     |
| 67.50° | 6.05     | 6.29     | 6.55     | 4.68     | 6.40     | 7.91     | 5.80     | 6.08     | 8.06     | 6.92     | 6.64     | 6.76     | 6.86     | 5.85     | 3.93     | 6.15     | 6.05     |
| 70.00° | 5.41     | 6.72     | 5.80     | 4.91     | 6.34     | 8.41     | 6.19     | 4.68     | 5.52     | 7.54     | 5.17     | 8.07     | 6.71     | 5.15     | 4.62     | 6.46     | 5.41     |
| 72.50° | 4.48     | 5.86     | 5.23     | 5.42     | 5.65     | 4.23     | 4.55     | 5.38     | 4.57     | 7.25     | 5.93     | 6.51     | 6.13     | 4.88     | 7.74     | 5.33     | 4.48     |
| 75.00° | 5.57     | 3.80     | 5.87     | 4.11     | 4.70     | 5.75     | 4.50     | 5.94     | 5.79     | 6.40     | 3.91     | 4.53     | 6.22     | 4.02     | 4.02     | 4.17     | 5.57     |
| 77.50° | 4.01     | 3.98     | 5.71     | 5.46     | 5.53     | 5.46     | 4.13     | 3.77     | 5.56     | 5.14     | 4.99     | 4.63     | 5.52     | 4.81     | 4.67     | 5.14     | 4.01     |
| 80.00° | 3.66     | 4.51     | 4.18     | 3.79     | 5.99     | 5.76     | 4.06     | 4.41     | 5.29     | 4.23     | 4.91     | 4.89     | 4.82     | 4.73     | 4.52     | 5.78     | 3.66     |
| 82.50° | 4.39     | 4.09     | 4.30     | 4.31     | 5.87     | 3.60     | 4.84     | 4.32     | 5.59     | 2.85     | 4.66     | 3.67     | 5.03     | 4.49     | 5.32     | 5.27     | 4.39     |
| 85.00° | 6.20     | 5.30     | 5.36     | 4.85     | 4.63     | 3.58     | 5.50     | 4.09     | 4.73     | 5.29     | 6.40     | 4.36     | 3.59     | 4.04     | 4.81     | 4.91     | 6.20     |
| 87.50° | 5.22     | 3.71     | 4.23     | 4.05     | 5.17     | 3.68     | 5.15     | 4.29     | 3.64     | 3.78     | 4.90     | 5.59     | 4.61     | 5.45     | 3.86     | 4.88     | 5.22     |
| 90.00° | 4.40     | 1.97     | 4.90     | 2.68     | 3.99     | 4.75     | 2.15     | 4.75     | 2.26     | 4.86     | 2.54     | 5.57     | 4.30     | 2.65     | 5.57     | 2.53     | 4.40     |

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

|     |     |       |       |       |       |       |       |       |       |      |      |      |      |      |      |      |      |      |      |
|-----|-----|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| RCR | pfc | 20%   | 20%   | 20%   | 20%   | 20%   | 20%   | 20%   | 20%   | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 20%  | 0%   |
|     | pcc | 80%   | 80%   | 80%   | 80%   | 70%   | 70%   | 70%   | 70%   | 50%  | 50%  | 50%  | 30%  | 30%  | 30%  | 10%  | 10%  | 10%  | 0%   |
|     | pw  | 70%   | 50%   | 30%   | 10%   | 70%   | 50%   | 30%   | 10%   | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 30%  |
|     | 0   | 10332 | 10332 | 10332 | 10332 | 10092 | 10092 | 10092 | 10092 | 9643 | 9643 | 9643 | 9233 | 9233 | 9233 | 8856 | 8856 | 8856 | 8679 |
|     | 1   | 9874  | 9643  | 9436  | 9250  | 9661  | 9456  | 9271  | 9103  | 9106 | 8958 | 8823 | 8784 | 8668 | 8561 | 8488 | 8398 | 8314 | 8231 |
|     | 2   | 9416  | 9013  | 8679  | 8400  | 9226  | 8864  | 8562  | 8305  | 8585 | 8338 | 8124 | 8328 | 8127 | 7950 | 8091 | 7929 | 7785 | 7774 |
|     | 3   | 8971  | 8441  | 8031  | 7704  | 8801  | 8322  | 7945  | 7642  | 8096 | 7780 | 7520 | 7888 | 7625 | 7403 | 7695 | 7477 | 7290 | 7334 |
|     | 4   | 8544  | 7921  | 7465  | 7117  | 8392  | 7824  | 7401  | 7074  | 7639 | 7278 | 6991 | 7468 | 7160 | 6910 | 7309 | 7048 | 6832 | 6917 |
|     | 5   | 8137  | 7447  | 6965  | 6609  | 7999  | 7366  | 6916  | 6580  | 7214 | 6822 | 6521 | 7072 | 6731 | 6465 | 6939 | 6645 | 6409 | 6526 |
|     | 6   | 7751  | 7013  | 6518  | 6163  | 7626  | 6946  | 6480  | 6142  | 6818 | 6407 | 6100 | 6698 | 6336 | 6060 | 6586 | 6268 | 6020 | 6160 |
|     | 7   | 7385  | 6615  | 6116  | 5766  | 7273  | 6558  | 6086  | 5751  | 6450 | 6028 | 5721 | 6349 | 5972 | 5691 | 6253 | 5918 | 5661 | 5820 |
|     | 8   | 7042  | 6250  | 5752  | 5410  | 6939  | 6202  | 5728  | 5399  | 6109 | 5682 | 5377 | 6022 | 5636 | 5354 | 5940 | 5593 | 5332 | 5503 |
|     | 9   | 6719  | 5915  | 5422  | 5089  | 6626  | 5873  | 5402  | 5081  | 5793 | 5364 | 5064 | 5718 | 5327 | 5047 | 5647 | 5291 | 5030 | 5211 |
|     | 10  | 6416  | 5606  | 5121  | 4798  | 6331  | 5570  | 5105  | 4792  | 5500 | 5073 | 4778 | 5435 | 5042 | 4765 | 5373 | 5013 | 4753 | 4940 |

### Cone of Light

| Mtg Height | Light Level | Beam Diameter |
|------------|-------------|---------------|
| 5.5 ft     | 334.1 fc    | 6.5 ft        |
| 6.5 ft     | 239.2 fc    | 7.7 ft        |
| 7.5 ft     | 179.7 fc    | 8.9 ft        |
| 8.0 ft     | 157.9 fc    | 9.5 ft        |
| 10.0 ft    | 101.1 fc    | 11.9 ft       |
| 12.0 ft    | 70.2 fc     | 14.2 ft       |
| 14.0 ft    | 51.6 fc     | 16.6 ft       |
| 16.0 ft    | 39.5 fc     | 19.0 ft       |
| 20.0 ft    | 25.3 fc     | 23.7 ft       |
| 24.0 ft    | 17.5 fc     | 28.5 ft       |
| 28.0 ft    | 12.9 fc     | 33.2 ft       |

### Average Luminaire Luminance [cd/m<sup>2</sup>]

|        | 0.00°  | 45.00° | 90.00° |
|--------|--------|--------|--------|
| 0.00°  | 138527 | 138527 | 138527 |
| 45.00° | 1152   | 1256   | 3043   |
| 55.00° | 212    | 195    | 277    |
| 65.00° | 202    | 237    | 234    |
| 75.00° | 295    | 311    | 249    |
| 85.00° | 976    | 843    | 728    |

### UGR CIE 190:2010

| 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  |
| Plane reflectance   |     | 0.2            | 0.2   | 0.2   | 0.2   | 0.2  | 0.2             | 0.2  | 0.2  | 0.2  | 0.2  |
| Room dimensions     |     | Viewing C0-180 |       |       |       |      | Viewing C90-270 |      |      |      |      |
| 2H                  | 2H  | -11.3          | -10.4 | -10.9 | -10.1 | -9.8 | -9.3            | -8.4 | -8.9 | -8.1 | -7.8 |
|                     | 3H  | -8.4           | -7.6  | -8.0  | -7.3  | -6.9 | -6.9            | -6.1 | -6.5 | -5.8 | -5.4 |
|                     | 4H  | -7.2           | -6.5  | -6.8  | -6.1  | -5.7 | -5.9            | -5.2 | -5.5 | -4.9 | -4.5 |
|                     | 6H  | -6.1           | -5.4  | -5.7  | -5.0  | -4.6 | -4.6            | -3.9 | -4.2 | -3.5 | -3.1 |
|                     | 8H  | -5.2           | -4.6  | -4.8  | -4.2  | -3.8 | -3.8            | -3.2 | -3.4 | -2.8 | -2.4 |
|                     | 12H | -3.6           | -3.0  | -3.2  | -2.6  | -2.2 | -3.0            | -2.4 | -2.6 | -2.1 | -1.6 |
| 4H                  | 2H  | -10.4          | -9.7  | -10.0 | -9.3  | -8.9 | -8.8            | -8.1 | -8.4 | -7.7 | -7.3 |
|                     | 3H  | -7.3           | -6.7  | -6.9  | -6.3  | -5.9 | -6.1            | -5.5 | -5.7 | -5.1 | -4.7 |
|                     | 4H  | -6.1           | -5.6  | -5.7  | -5.2  | -4.7 | -5.0            | -4.5 | -4.5 | -4.0 | -3.6 |
|                     | 6H  | -4.6           | -4.2  | -4.2  | -3.7  | -3.3 | -3.4            | -2.9 | -2.9 | -2.5 | -2.0 |
|                     | 8H  | -3.7           | -3.3  | -3.2  | -2.8  | -2.3 | -2.5            | -2.1 | -2.1 | -1.7 | -1.2 |
|                     | 12H | -1.9           | -1.6  | -1.5  | -1.1  | -0.6 | -1.7            | -1.3 | -1.2 | -0.8 | -0.3 |
| 8H                  | 4H  | -5.5           | -5.1  | -5.1  | -4.7  | -4.2 | -4.6            | -4.2 | -4.2 | -3.8 | -3.3 |
|                     | 6H  | -3.7           | -3.3  | -3.2  | -2.8  | -2.3 | -2.8            | -2.4 | -2.2 | -1.9 | -1.4 |
|                     | 8H  | -2.5           | -2.2  | -1.9  | -1.6  | -1.1 | -1.8            | -1.5 | -1.3 | -1.0 | -0.5 |
|                     | 12H | -0.5           | -0.3  | 0.0   | 0.2   | 0.8  | -0.7            | -0.4 | -0.2 | 0.1  | 0.6  |
| 12H                 | 4H  | -5.4           | -5.1  | -4.9  | -4.6  | -4.1 | -4.6            | -4.2 | -4.1 | -3.7 | -3.2 |
|                     | 6H  | -3.4           | -3.1  | -2.9  | -2.6  | -2.1 | -2.6            | -2.3 | -2.0 | -1.8 | -1.3 |
|                     | 8H  | -2.0           | -1.8  | -1.5  | -1.3  | -0.7 | -1.5            | -1.2 | -0.9 | -0.7 | -0.1 |

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0