

# OPTIQUE

Light efficiency:

n/a Lumen/Watt

Light quality:

CRI: 95.7

Color temperature:

2956 K

Output: 134 lm

Peak: 80.5 cd

Power: 0.00 W

PF: n/a

No photo

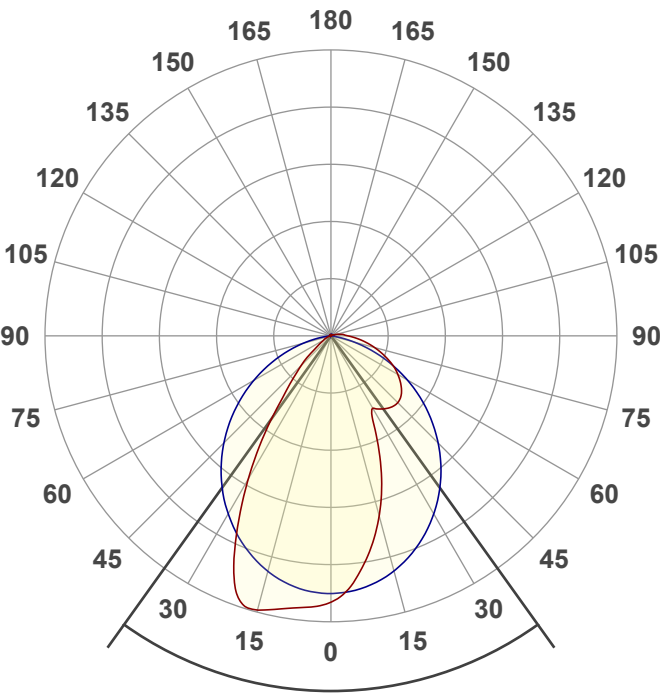
Tracking number: [n/a](#)

Product name:  
**OP-REC-PRFM2 COB3-3000K**

Item number:  
**OP-01-12MM-D-1500LM-24V-4000K-IN**

Date and time:  
**6/12/2026 9:13:42 AM**

Description:

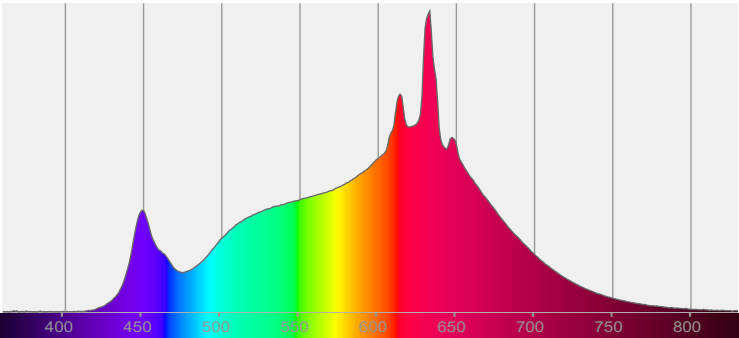


Beam angle **71.2°**

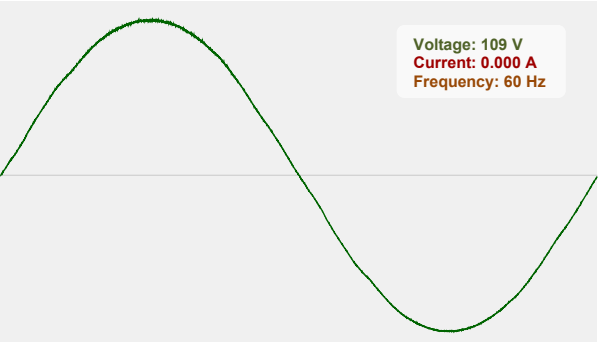


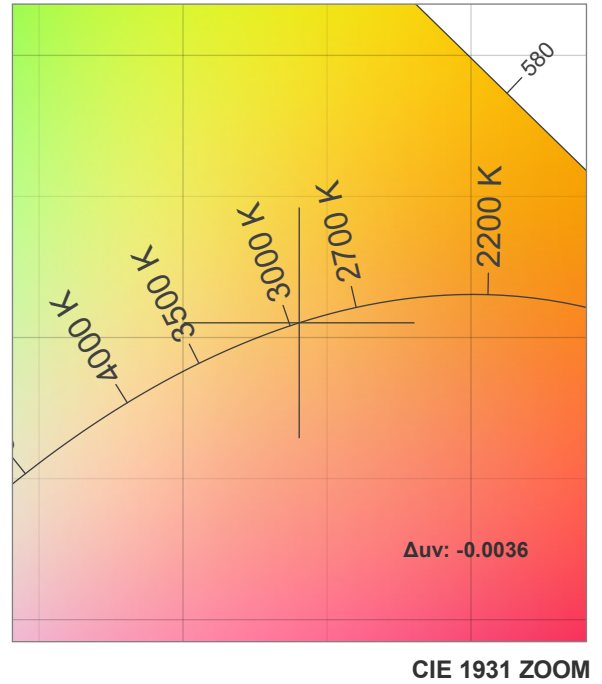
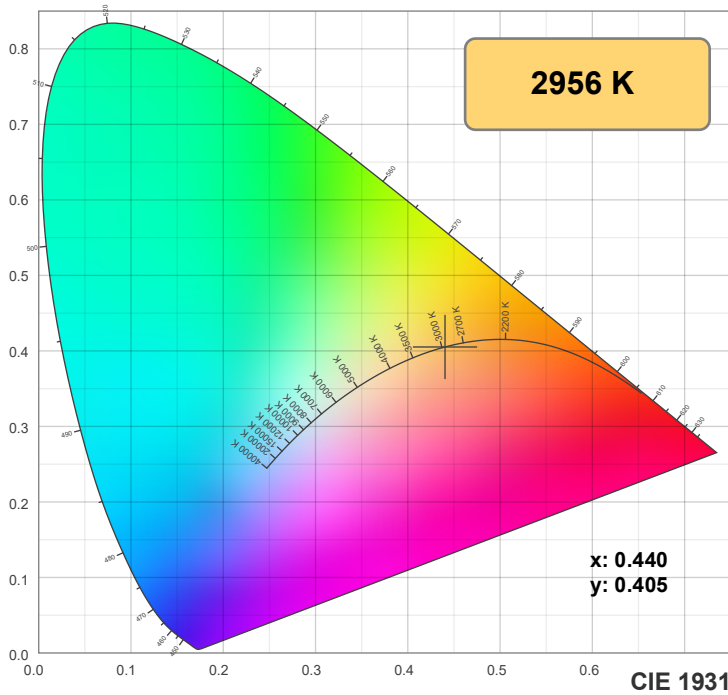
CIE 1931  
x: 0.440  
y: 0.405

Spectra

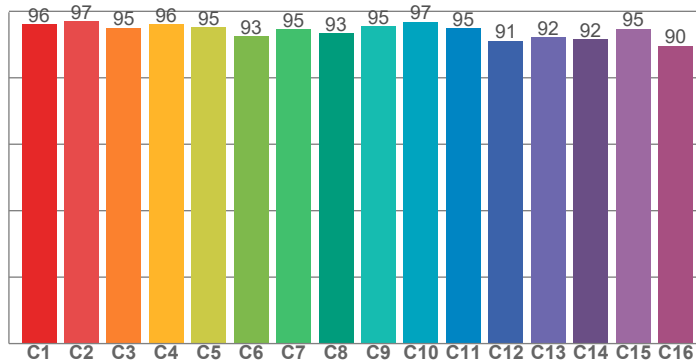


Power

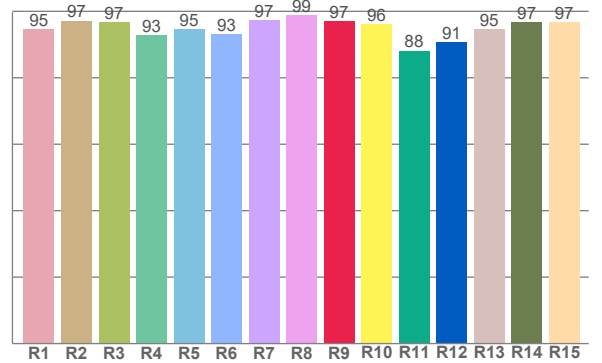




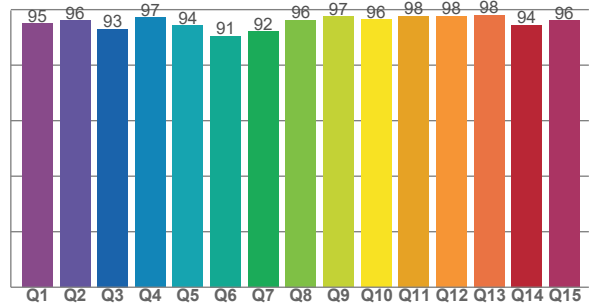
**TM-30: 94.5**



**CRI: 95.7 (R1-R8)**



**CQS: 94.8**



**CRI R values, only R1-R8 are used to calculate final CRI value**

| R1   | R2   | R3   | R4   | R5   | R6   | R7   | R8   | R9   | R10  | R11  | R12  | R13  | R14  | R15  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 94.5 | 97.2 | 96.8 | 92.8 | 94.5 | 93.2 | 97.4 | 98.9 | 97.0 | 96.1 | 88.2 | 90.7 | 94.7 | 96.8 | 96.7 |

**TM30 C values, 16 binned values out of total of 99 C values**

| C1   | C2   | C3   | C4   | C5   | C6   | C7   | C8   | C9   | C10  | C11  | C12  | C13  | C14  | C15  | C16  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96.1 | 97.0 | 95.1 | 96.1 | 95.2 | 92.5 | 94.7 | 93.4 | 95.4 | 96.8 | 94.9 | 91.1 | 92.2 | 91.6 | 94.8 | 89.6 |

**CQS Q values**

| Q1   | Q2   | Q3   | Q4   | Q5   | Q6   | Q7   | Q8   | Q9   | Q10  | Q11  | Q12  | Q13  | Q14  | Q15  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 95.1 | 96.1 | 93.1 | 97.2 | 94.3 | 90.6 | 92.1 | 96.3 | 97.5 | 96.5 | 97.8 | 97.7 | 98.0 | 94.5 | 96.2 |

### Color parameters

| Color temperature | Color rendering Index | Red component | Color fidelity | Color gamut | Color quality scale | Color coordinate cie 1931 | Color coordinate cie 1931 | Color coordinate | Color coordinate | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|------------------|------------------|---------------------------------|
| CCT               | CRI                   | CRI R9        | TM30 Rf        | TM30 Rg     | CQS                 | x                         | y                         | u                | v                | Δuv                             |
| 2956 K            | 95.7                  | 97.0          | 94.5           | 104.2       | 94.8                | 0.440                     | 0.405                     | 0.252            | 0.348            | -0.0036                         |

# OPTIQUE

## TM-30 details

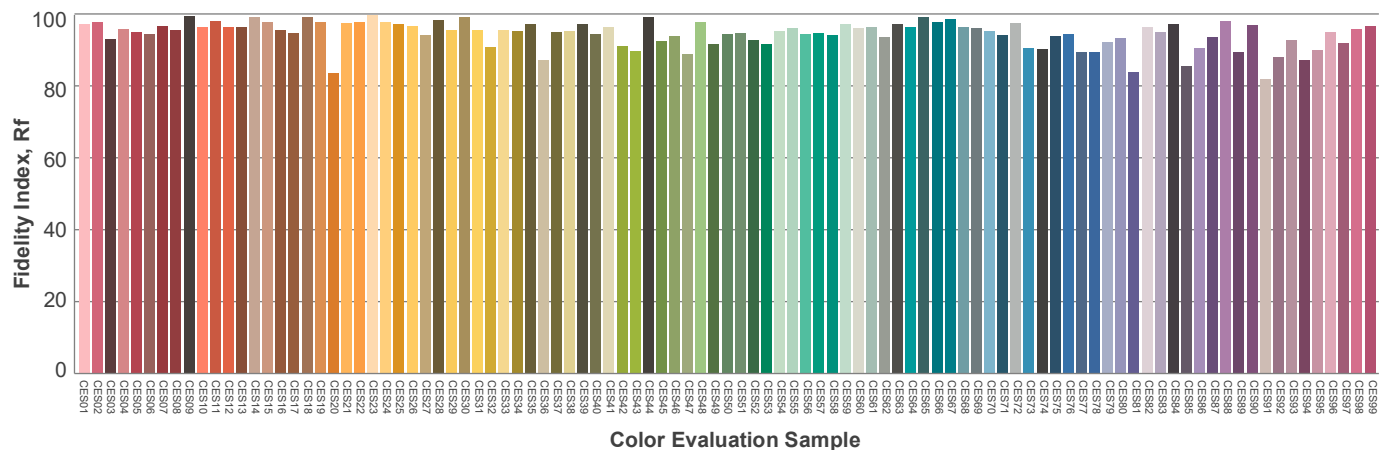
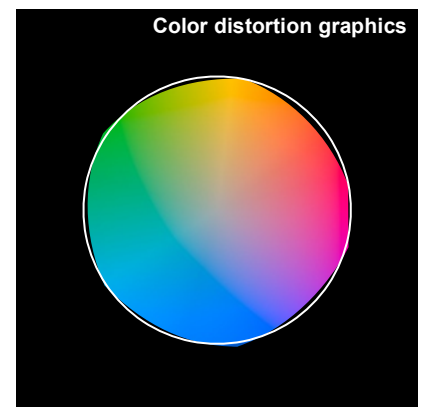
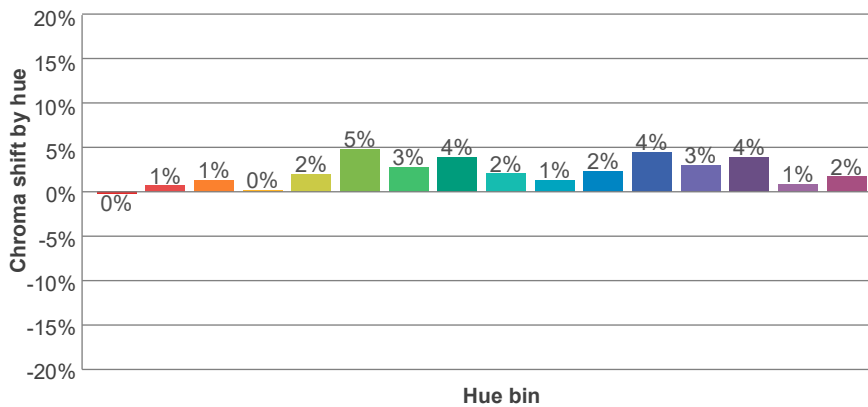
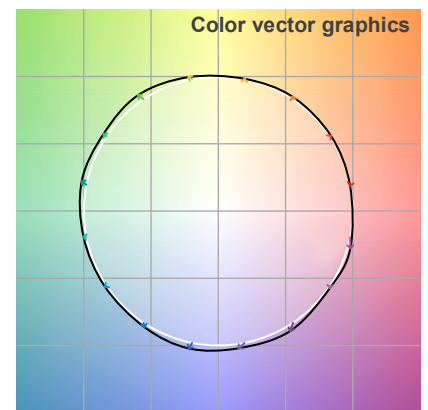
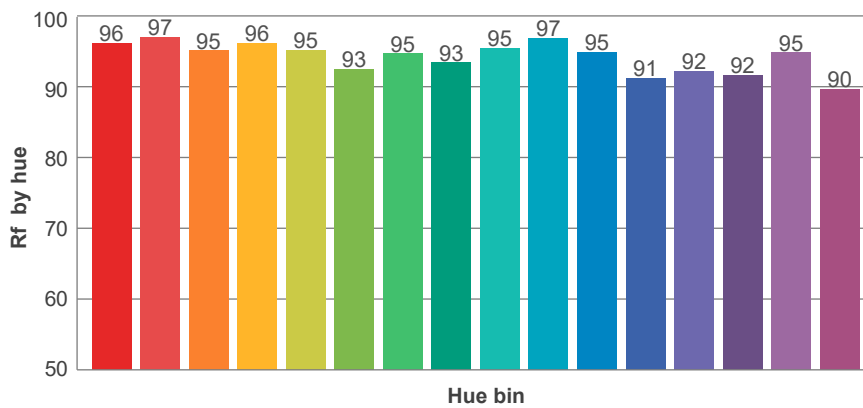
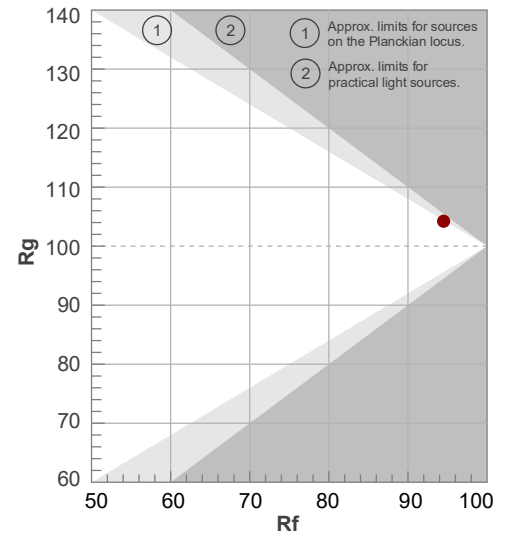
**Rf 94.5**

Fidelity index Rf

**Rg 104.2**

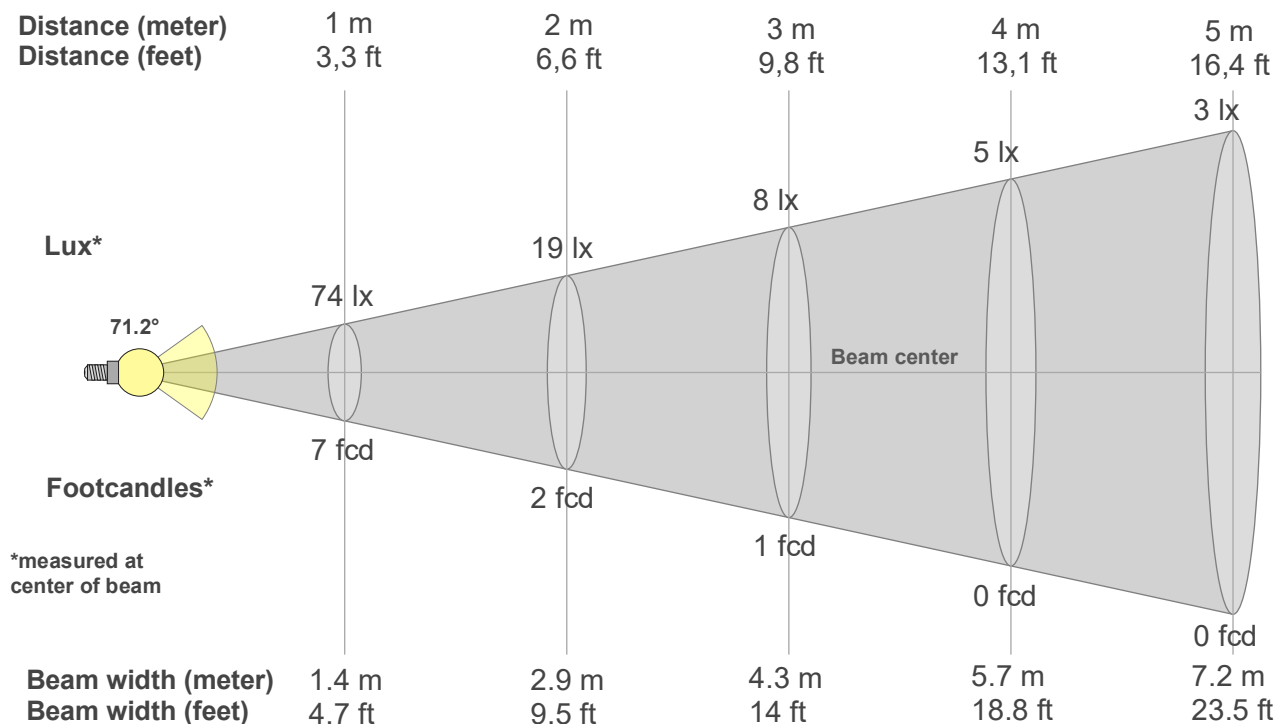
Gamut index Rg

| Hue Bin | R <sub>f</sub> | Shifts (%) |     |
|---------|----------------|------------|-----|
|         |                | Chroma     | Hue |
| 1       | 96             | 0%         | -1% |
| 2       | 97             | 1%         | 0%  |
| 3       | 95             | 1%         | 1%  |
| 4       | 96             | 0%         | 0%  |
| 5       | 95             | 2%         | 2%  |
| 6       | 93             | 5%         | 2%  |
| 7       | 95             | 3%         | 0%  |
| 8       | 93             | 4%         | -2% |
| 9       | 95             | 2%         | -1% |
| 10      | 97             | 1%         | 0%  |
| 11      | 95             | 2%         | 2%  |
| 12      | 91             | 4%         | -2% |
| 13      | 92             | 3%         | -5% |
| 14      | 92             | 4%         | -5% |
| 15      | 95             | 1%         | -1% |
| 16      | 90             | 2%         | -8% |



# OPTIQUE

## Beam details



### Beam intensities from 1-20m

| 1m     | 2m     | 3m     | 4m     | 5m     | 6m     | 7m     | 8m     | 9m     | 10m    | 11m    | 12m    | 13m    | 14m    | 15m    | 16m    | 17m    | 18m    | 19m    | 20m    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 3.3ft  | 6.6ft  | 9.8ft  | 13.1ft | 16.4ft | 19.7ft | 23ft   | 26.2ft | 29.5ft | 32.8ft | 36.1ft | 39.4ft | 42.7ft | 45.9ft | 49.2ft | 52.5ft | 55.8ft | 59.1ft | 62.3ft | 65.6ft |
| 74lx   | 19lx   | 8lx    | 5lx    | 3lx    | 2lx    | 2lx    | 1lx    | 1lx    | 1lx    | 1lx    | 1lx    | 0lx    | 0lx    | 0lx    | 0lx    | 0lx    | 0lx    | 0lx    | 0lx    |
| 6.9fcd | 1.7fcd | 0.8fcd | 0.4fcd | 0.3fcd | 0.2fcd | 0.1fcd | 0.1fcd | 0.1fcd | 0.1fcd | 0.1fcd | 0fcd   | 0fcd   | 0fcd   | 0fcd   | 0fcd   | 0fcd   | 0fcd   | 0fcd   | 0fcd   |

### Intensities in 0° c-plane

| 0°   | 5°   | 10°  | 15°  | 20°  | 25°  | 30°  | 35°  | 40°  | 45°  | 50°  | 55°  | 60°  | 65°  | 70°  | 75°  | 80° | 85° | 90° | 95° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|
| 74.5 | 69.6 | 61.6 | 52.1 | 41.3 | 29.6 | 23.6 | 25.0 | 26.1 | 26.4 | 25.7 | 23.9 | 21.6 | 18.9 | 15.8 | 12.6 | 9.7 | 7.0 | 4.8 | 3.6 |
| 100% | 94%  | 83%  | 70%  | 55%  | 40%  | 32%  | 34%  | 35%  | 35%  | 34%  | 32%  | 29%  | 25%  | 21%  | 17%  | 13% | 9%  | 6%  | 5%  |

### Intensities in 90° c-plane

| 0°   | 5°   | 10°  | 15°  | 20°  | 25°  | 30°  | 35°  | 40°  | 45°  | 50°  | 55°  | 60°  | 65°  | 70°  | 75° | 80° | 85° | 90° | 95° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|
| 74.5 | 71.6 | 70.3 | 68.1 | 65.2 | 61.7 | 57.5 | 52.9 | 47.9 | 42.4 | 36.7 | 30.8 | 24.7 | 18.5 | 12.4 | 6.7 | 2.0 | 0.2 | 0.1 | 0.1 |
| 100% | 96%  | 94%  | 91%  | 88%  | 83%  | 77%  | 71%  | 64%  | 57%  | 49%  | 41%  | 33%  | 25%  | 17%  | 9%  | 3%  | 0%  | 0%  | 0%  |

### Intensities in 180° c-plane

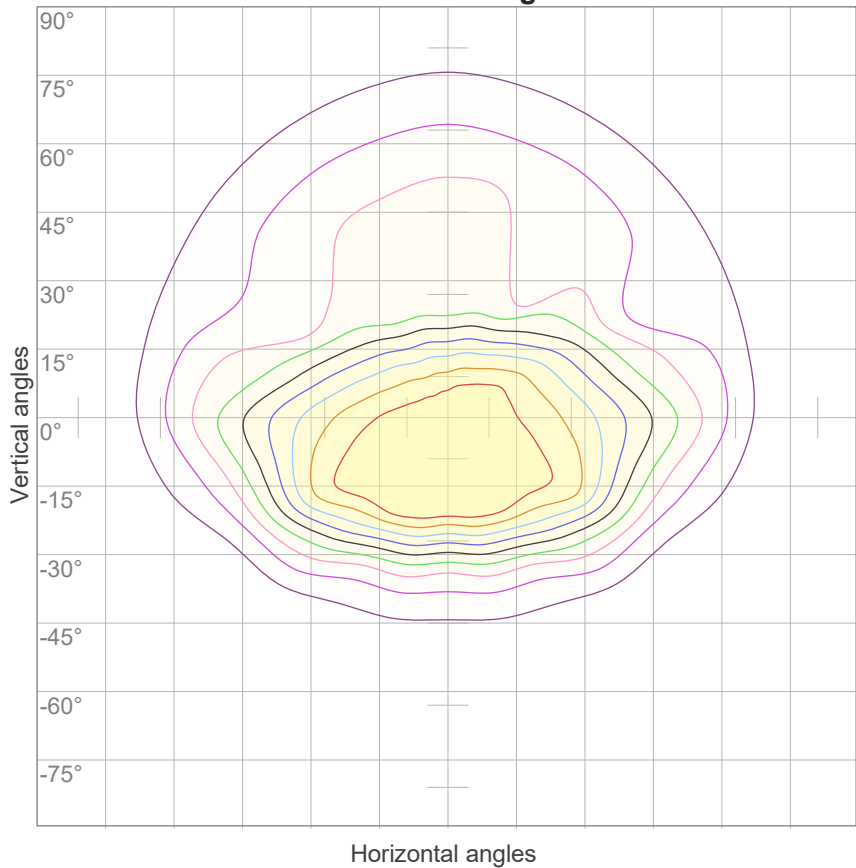
| 0°   | 5°   | 10°  | 15°  | 20°  | 25°  | 30°  | 35°  | 40°  | 45°  | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 74.5 | 76.3 | 77.6 | 79.4 | 76.8 | 63.0 | 46.3 | 30.5 | 18.5 | 11.9 | 6.5 | 3.7 | 2.3 | 1.6 | 1.1 | 0.5 | 0.1 | 0.1 | 0.1 | 0.1 |
| 100% | 102% | 104% | 107% | 103% | 85%  | 62%  | 41%  | 25%  | 16%  | 9%  | 5%  | 3%  | 2%  | 1%  | 1%  | 0%  | 0%  | 0%  | 0%  |

### Intensities in 270° c-plane

| 0°   | 5°   | 10°  | 15°  | 20°  | 25°  | 30°  | 35°  | 40°  | 45°  | 50°  | 55°  | 60°  | 65°  | 70°  | 75° | 80° | 85° | 90° | 95° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|
| 74.5 | 71.7 | 70.4 | 68.2 | 65.2 | 61.7 | 57.5 | 52.9 | 47.8 | 42.4 | 36.7 | 30.8 | 24.9 | 19.0 | 13.4 | 8.0 | 3.5 | 0.9 | 0.3 | 0.2 |
| 100% | 96%  | 95%  | 92%  | 88%  | 83%  | 77%  | 71%  | 64%  | 57%  | 49%  | 41%  | 33%  | 26%  | 18%  | 11% | 5%  | 1%  | 0%  | 0%  |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 71.2°          | 136.6°          | 162.6°            | 83.7%                        | 65.1%                       |

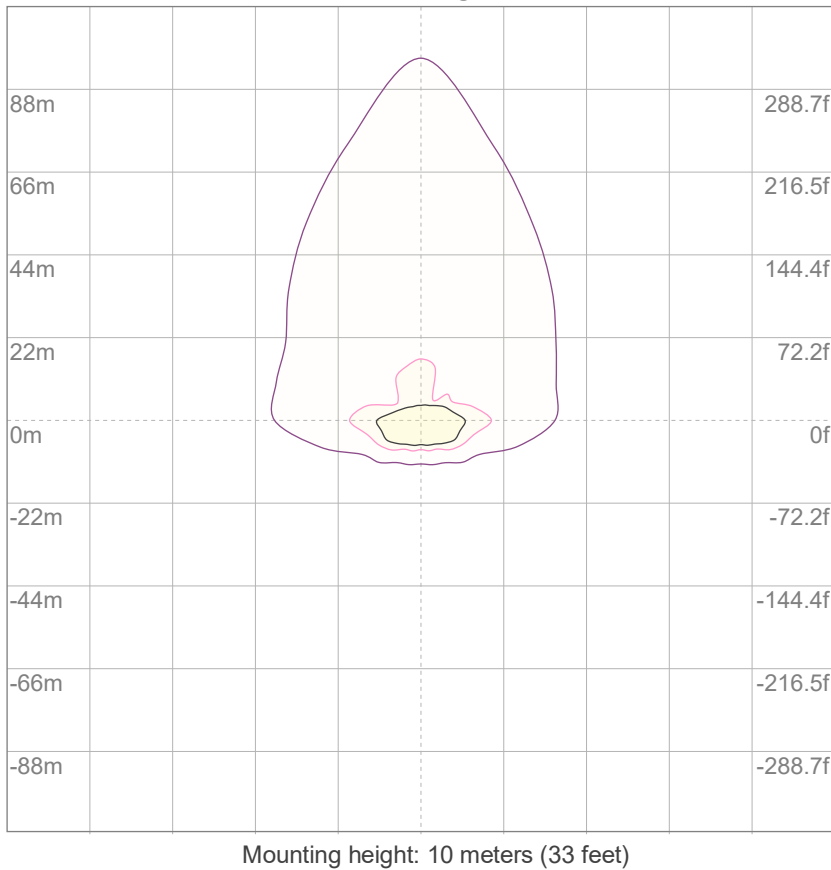
iso-candela diagram



|     |       |
|-----|-------|
| 10% | 7 cd  |
| 20% | 15 cd |
| 30% | 22 cd |
| 40% | 30 cd |
| 50% | 37 cd |
| 60% | 45 cd |
| 70% | 52 cd |
| 80% | 60 cd |
| 90% | 67 cd |

Conditions:  
Number of c-planes: 12  
Candela at center: 74 cd

iso-lux diagram



|     |          |
|-----|----------|
| 3%  | 22.3m lx |
| 5%  | 37.2m lx |
| 10% | 74.5m lx |
| 30% | 0.223 lx |
| 50% | 0.372 lx |

Conditions:  
Number of c-planes: 12  
Lux at center: 0.745 lx

*Lux distribution on a surface  
when lamp is mounted at 10  
meters from the surface.*

## Glare evaluation according to UGR

|   |  |     |     |     |     |   |     |     |     |     |
|---|--|-----|-----|-----|-----|---|-----|-----|-----|-----|
| p Ceiling   | 70   | 70  | 50  | 50  | 30  | 70                                      | 70  | 50  | 50  | 30  |
| p Walls   | 50   | 30  | 50  | 30  | 30  | 50                                      | 30  | 50  | 30  | 30  |
| p Floor   | 20   | 20  | 20  | 20  | 20  | 20                                      | 20  | 20  | 20  | 20  |
| Room size<br>X      Y   | Viewing direction at right angles to lamp axis |     |     |     |     | Viewing direction parallel to lamp axis |     |     |     |     |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| n/a   | n/a  | n/a | n/a | n/a | n/a | n/a                                     | n/a | n/a | n/a | n/a |
| Variation of the observer position for the luminaire distance S               |  |     |     |     |     |   |     |     |     |     |
| n/a   | n/a  |     |     |     |     | n/a                                     |     |     |     |     |
| n/a   | n/a  |     |     |     |     | n/a                                     |     |     |     |     |
| n/a   | n/a  |     |     |     |     | n/a                                     |     |     |     |     |
| CIE 117-1995. Corrected glare indices referring to 134 lm total luminous flux |  |     |     |     |     |   |     |     |     |     |

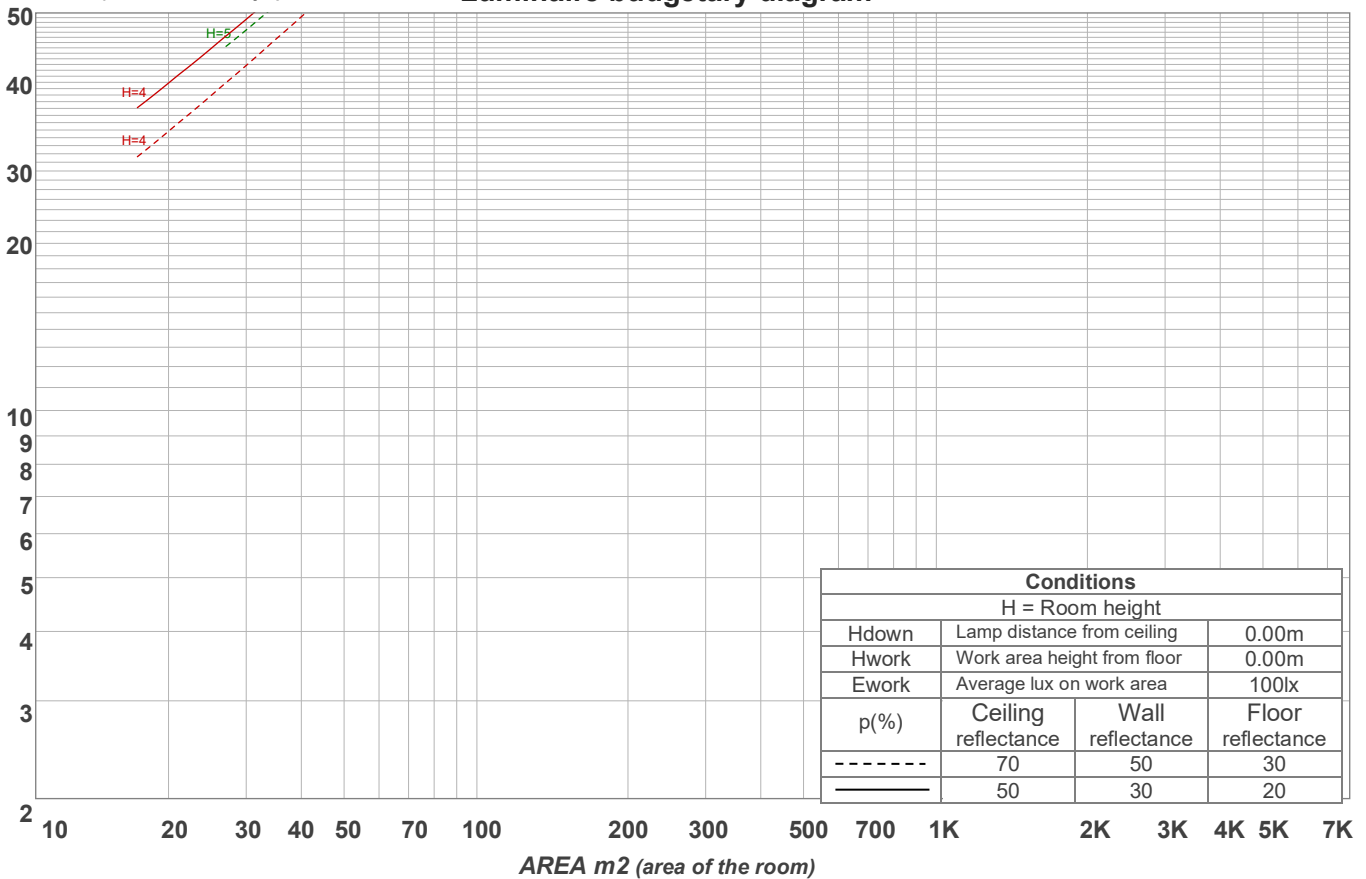
UGR data could not be calculated due to missing/wrong symmetry. Go to Edit -> Photometric -> Corrections and select Correct asymmetry (UGR not defined for asymmetrical distributions)..

### Coefficients of Utilization

| Ceiling 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  |
| Floor reflectance   | 20   | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 0  |
| RCR                 | (RCR: Room Cavity Ratio) Room Values are expressed as percentage of Lumens delivered to the task surface |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| 0                   | 119  | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 110 | 110 | 110 | 105 | 105 | 105 | 100 | 100 | 100 | 98 |
| 1                   | 109  | 105 | 101 | 98  | 107 | 103 | 99  | 96  | 98  | 95  | 93  | 94  | 92  | 90  | 90  | 88  | 87  | 85 |
| 2                   | 101  | 94  | 88  | 82  | 98  | 92  | 86  | 81  | 88  | 83  | 79  | 84  | 80  | 77  | 81  | 78  | 75  | 73 |
| 3                   | 93   | 84  | 76  | 71  | 91  | 82  | 75  | 70  | 79  | 73  | 68  | 76  | 71  | 67  | 73  | 69  | 66  | 64 |
| 4                   | 86   | 75  | 68  | 62  | 84  | 74  | 67  | 61  | 71  | 65  | 60  | 69  | 63  | 59  | 67  | 62  | 58  | 56 |
| 5                   | 80   | 68  | 60  | 54  | 78  | 67  | 60  | 54  | 65  | 58  | 53  | 63  | 57  | 53  | 61  | 56  | 52  | 50 |
| 6                   | 75   | 62  | 54  | 49  | 73  | 61  | 54  | 48  | 60  | 53  | 48  | 58  | 52  | 47  | 56  | 51  | 47  | 45 |
| 7                   | 70   | 57  | 49  | 44  | 68  | 56  | 49  | 43  | 55  | 48  | 43  | 53  | 47  | 43  | 52  | 46  | 42  | 40 |
| 8                   | 65   | 53  | 45  | 40  | 64  | 52  | 45  | 40  | 51  | 44  | 39  | 49  | 43  | 39  | 48  | 43  | 39  | 37 |
| 9                   | 61   | 49  | 41  | 36  | 60  | 48  | 41  | 36  | 47  | 40  | 36  | 46  | 40  | 36  | 45  | 39  | 35  | 34 |
| 10                  | 58   | 46  | 38  | 33  | 56  | 45  | 38  | 33  | 44  | 37  | 33  | 43  | 37  | 33  | 42  | 36  | 33  | 31 |

LAMPS (number of lamps)

### Luminaire budgetary diagram



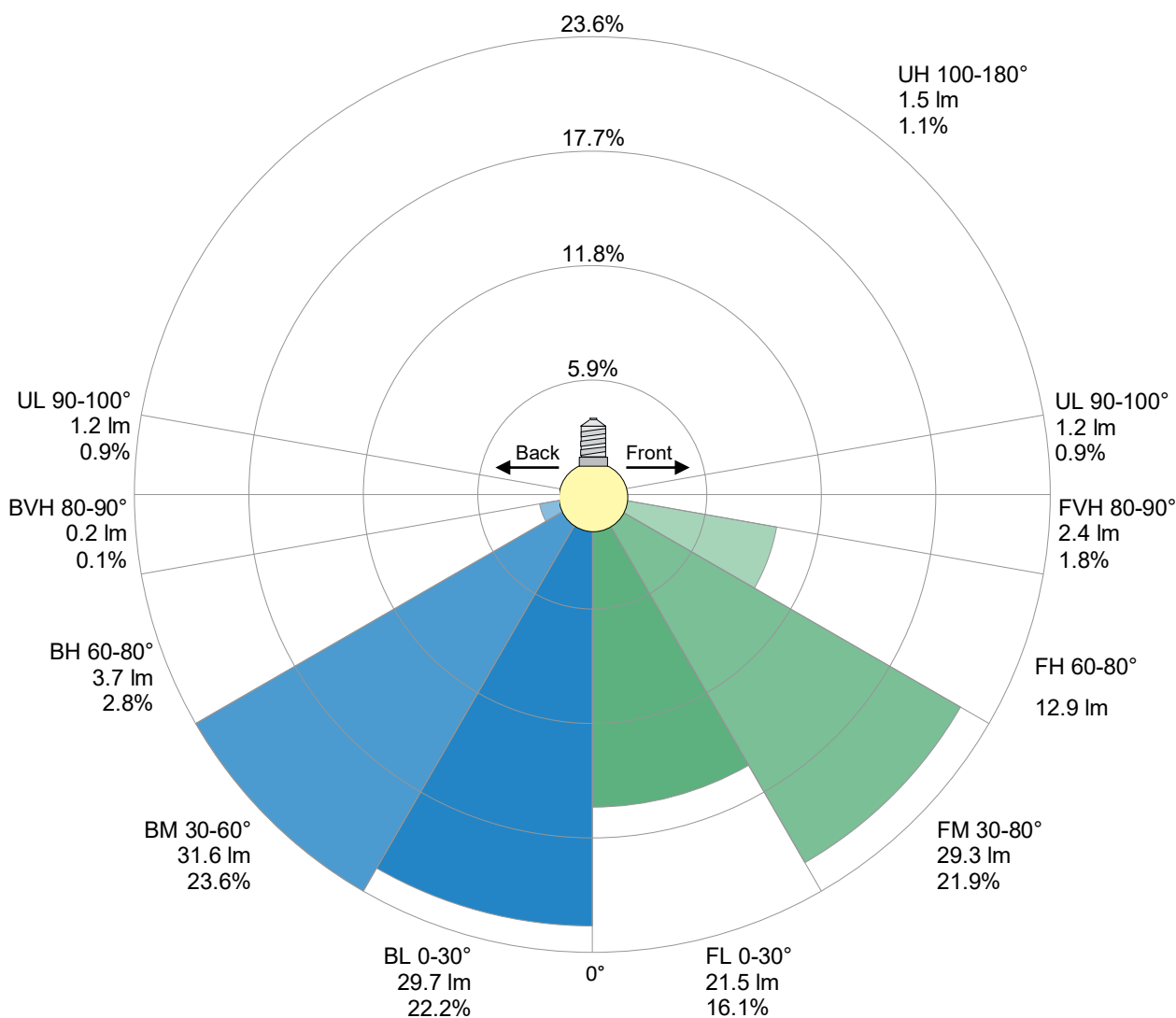
### Zonal Lumen Summary

| 0°-10°    | 10°-20°   | 20°-30°   | 30°-40°   | 40°-50°   | 50°-60°   | 60°-70°   | 70°-80°   | 80°-90°   |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| {LUM0-10} | 18.9 lm   | 25.4 lm   | 25.0 lm   | 20.6 lm   | 15.3 lm   | 10.5 lm   | 6.05 lm   | 2.58 lm   |
| 90°-100°  | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
| 1.22 lm   | 0.517 lm  | 0.229 lm  | 0.196 lm  | 0.184 lm  | 0.151 lm  | 0.109 lm  | 0.059 lm  | 0.019 lm  |

LCS table

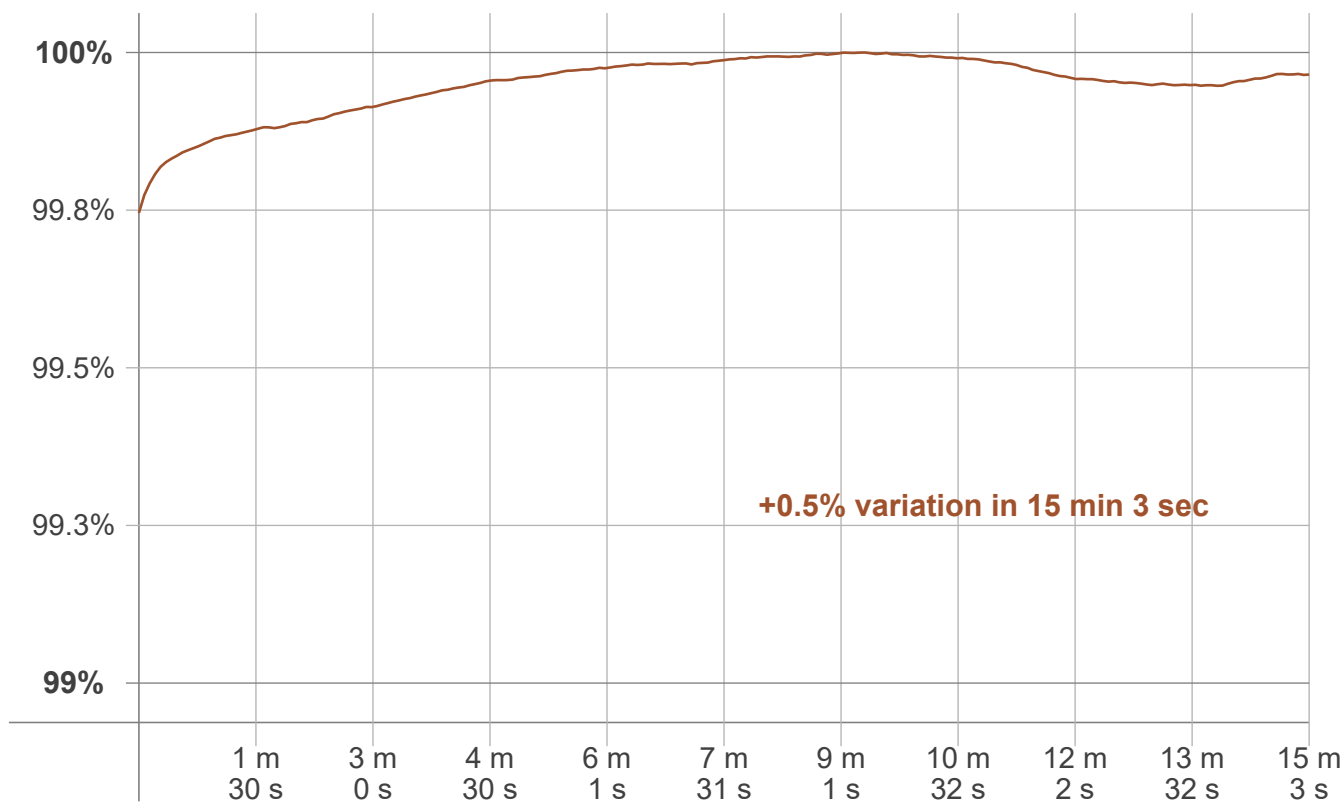
| BUG rating:       | B0 U1 G0 |          |
|-------------------|----------|----------|
| Forward light     | Lumens   | Lumens % |
| Low(0-30):        | 21.5     | 16.1%    |
| Medium(30-60):    | 29.3     | 21.9%    |
| High(60-80):      | 12.9     | 9.6%     |
| Very high(80-90): | 2.4      | 1.8%     |
| Back light        |          |          |
| Low(0-30):        | 29.7     | 22.2%    |
| Medium(30-60):    | 31.6     | 23.6%    |
| High(60-80):      | 3.7      | 2.8%     |
| Very high(80-90): | 0.2      | 0.1%     |
| Uplight           |          |          |
| Low(90-100):      | 1.2      | 0.9%     |
| High(100-180):    | 1.5      | 1.1%     |

LCS graph





### Warmup curve



### Warmup result

|                  |                                 |
|------------------|---------------------------------|
| Warmup time:     | Lamp stabilized in 15 min 3 sec |
| Warmup variation | +0.5%                           |

### Warmup conditions

|                    |        |
|--------------------|--------|
| Stable period:     | 15 min |
| Stable change max: | 2.0%   |
| Minimum time:      | 15 min |

### Color temperature change

| CCT start | CCT change | CCT end |
|-----------|------------|---------|
| 2973 K    | -17 K      | 2956 K  |

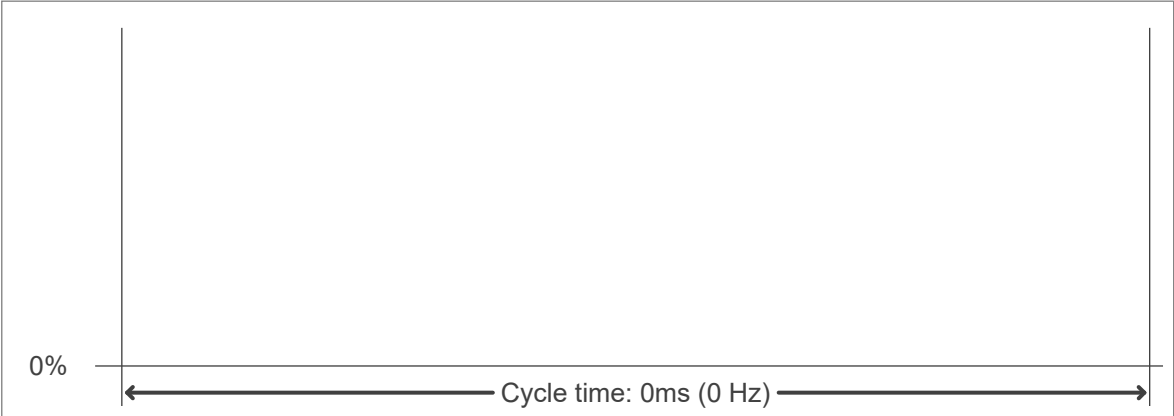
### Output change

| Output start | Output change | Output end |
|--------------|---------------|------------|
| 134 lm       | + 1m          | 134 lm     |

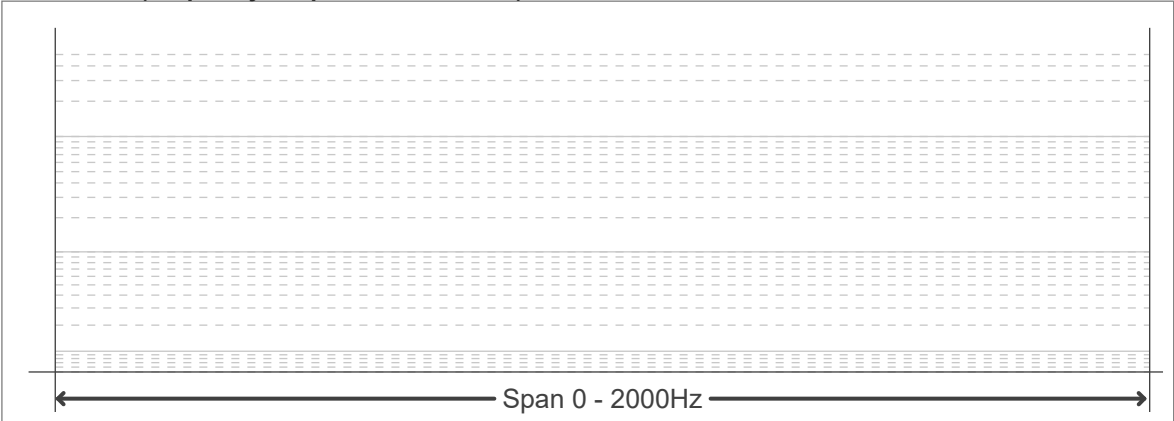
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

| Flicker frequency:    |       | n/a Hz        |       |
|-----------------------|-------|---------------|-------|
| Flicker index:        | n/a   | JA8/10 40Hz   | n/a % |
| Flicker percentage:   | n/a % | JA8/10 90Hz   | n/a % |
| SVM: (Visual flicker) | n/a   | JA8/10 200Hz  | n/a % |
| PstLM                 | n/a   | JA8/10 400Hz  | n/a % |
| Mp                    | n/a   | JA8/10 1000Hz | n/a % |

Flicker conditions:

|              |                    |
|--------------|--------------------|
| Sample rate: | n/a samples/second |
|--------------|--------------------|