

Light Measurement Report

Print date: 28-1-2025

Measurement date and time: 28-1-2025 16:25:07 – Measurement no. VFR-250128-3198-MS

Measurement tracking No. and Link: [VT250128-005576](#)

Operator:



Laboratory and Equipment

Laboratory Owner and Location
Goniospectrometer System and Type
Sensor Name, Calibr. Date and Serial No.
Spectrometer Manufacturer and Model

Viso Systems, Copenhagen V, Denmark
LabSpion – Type C, horizontal
LabSensor Model2 – 11-1-2024 – 3130191315
Ibsen Photonics, Denmark – Freedom VIS (Custom Viso)

Measurement Conditions

Number of C-planes and Resolution
 γ (gamma)-Resolution
Test Distance
Input Power, Power and Displ. Factors
Input RMS Voltage and Current
Frequency of Input Power
Warm-up Time and Variation

12 planes – 30°
5°
7,76 m
41,7 W – PF 0,99 – DPF 0,99
230 V – 0,184 A
50 Hz
Lamp stabilized in 15 min 1 sec – 2,0%

Tested Light Source

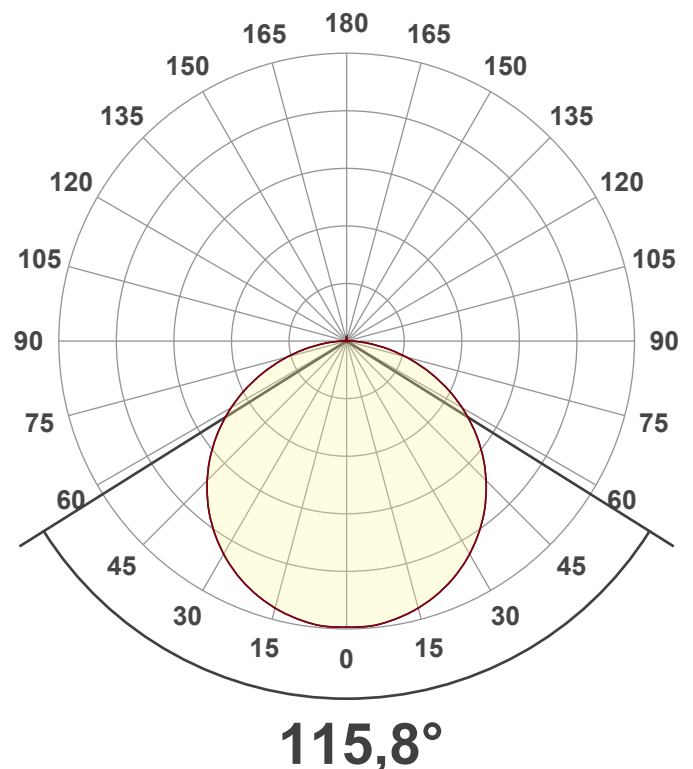
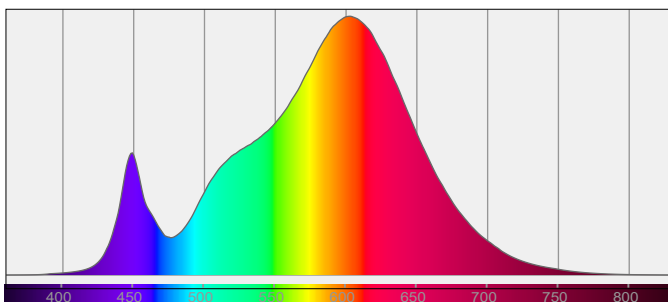
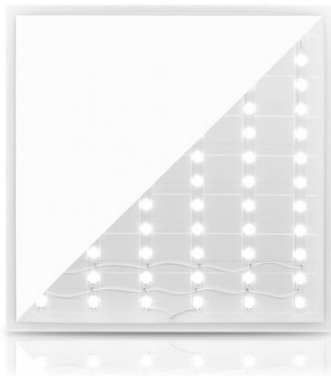
Product Name
Item No. and Manufacturer
Product Description (line 1)

8048117-3000K
8048117-3000K – Dutchfulfillment
BACK-LIT LED PANEEL | BARNET | 60x60CM | 40W | SMALLE RAND

Main Light Measurement Results

Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity and Beam Angle
Correlated Color Temperature, Target/Measured
Color Rendering Index
Color Rendering TM30-18
Color Shift, CIE duv and MacAdam Steps
Flicker

4127 lm – 0,67% / 99,33%
99 lm/W
1371 cd – 115,8°
CCT = 3000 K / 2962 K
CRI 81,6
 R_f 84,6 – R_g 95,8
Duv 0,0016 – SDCM 2,3
SVM 0,02 – PstLM 0,04



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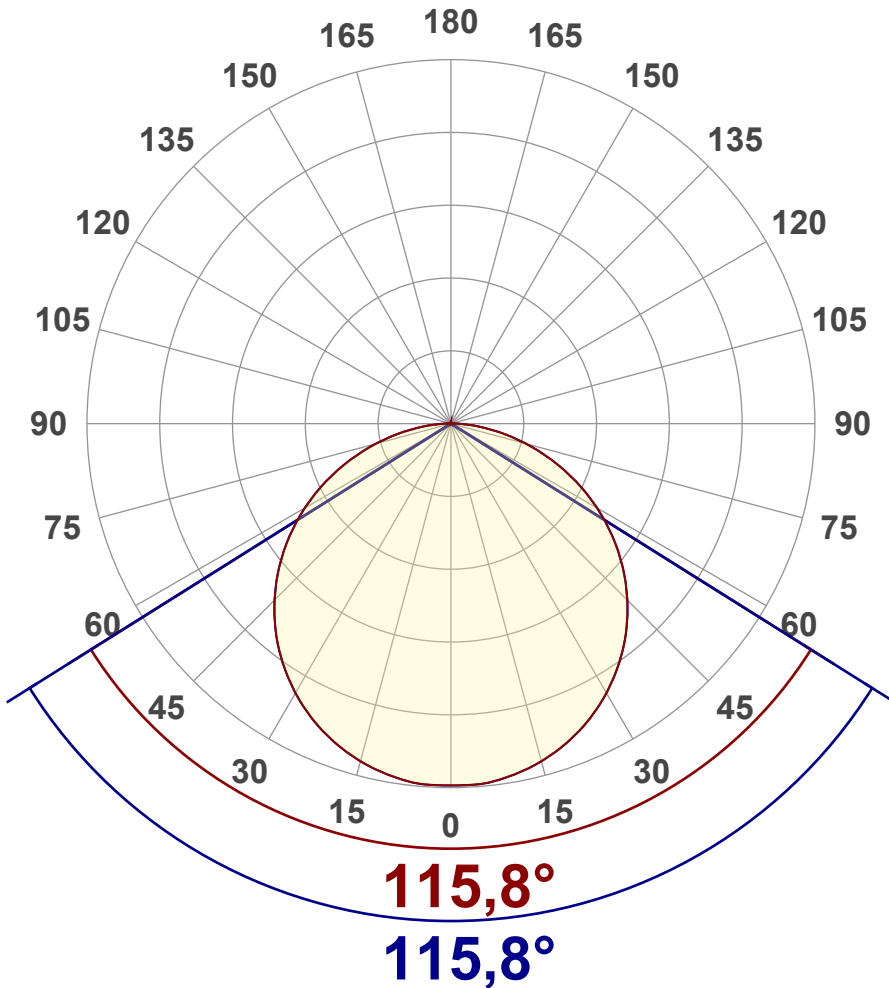
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Operator:



Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

| | |
|----------------------|----------------|
| Output (total Lumen) | 4127 lm |
| Lumen Up% / Down% | 0,67% / 99,33% |
| Peak Intensity | 1371 cd |
| Beam Angle (50%) | 115,8° |
| Beam Angle (90%) | 115,8° |
| Beam Angle (10%) | 115,8° |

Cut-off Angle

| | |
|--------------|--------|
| Average 2,5% | 177,7° |
|--------------|--------|

Field Angle

| | |
|-------------|--------|
| Average 10% | 164,9° |
|-------------|--------|

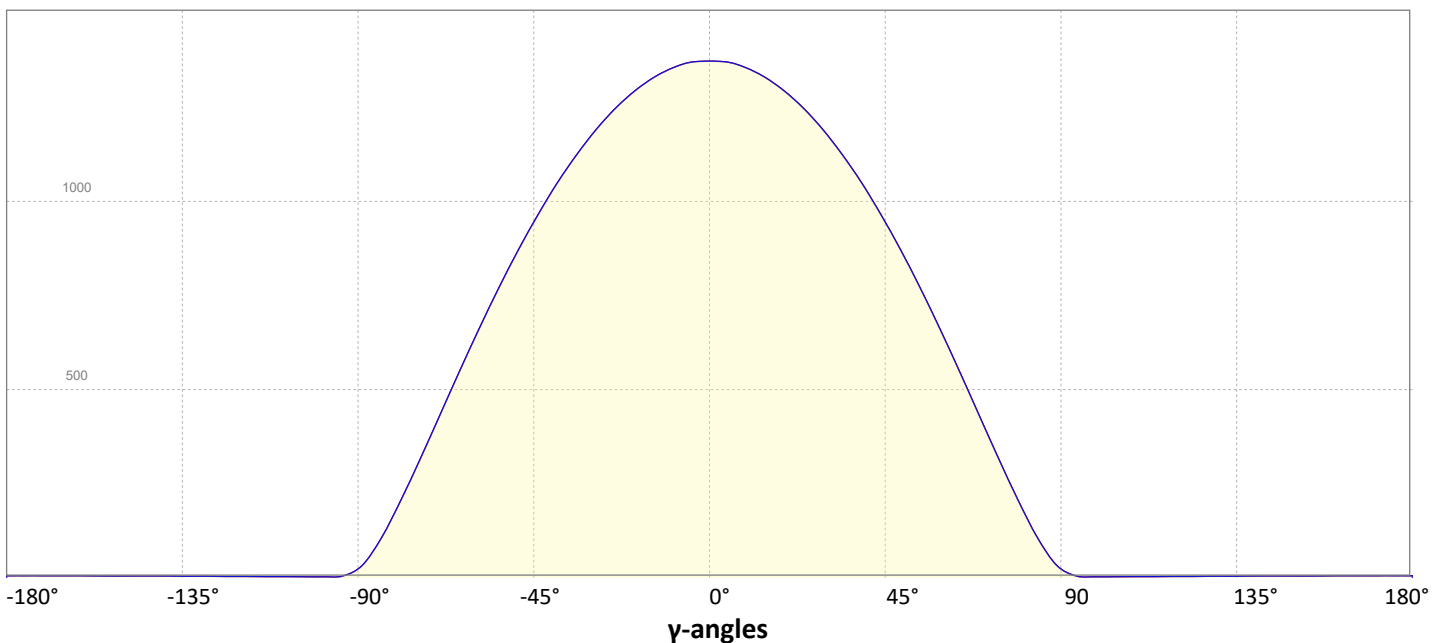
Intensity Ratio

| | |
|--------------|-------|
| In 120° cone | 76,7% |
| In 90° cone | 51,7% |

C000-C180

C090-C270

Linear distribution diagram - Intensity (candela) vs γ -angle



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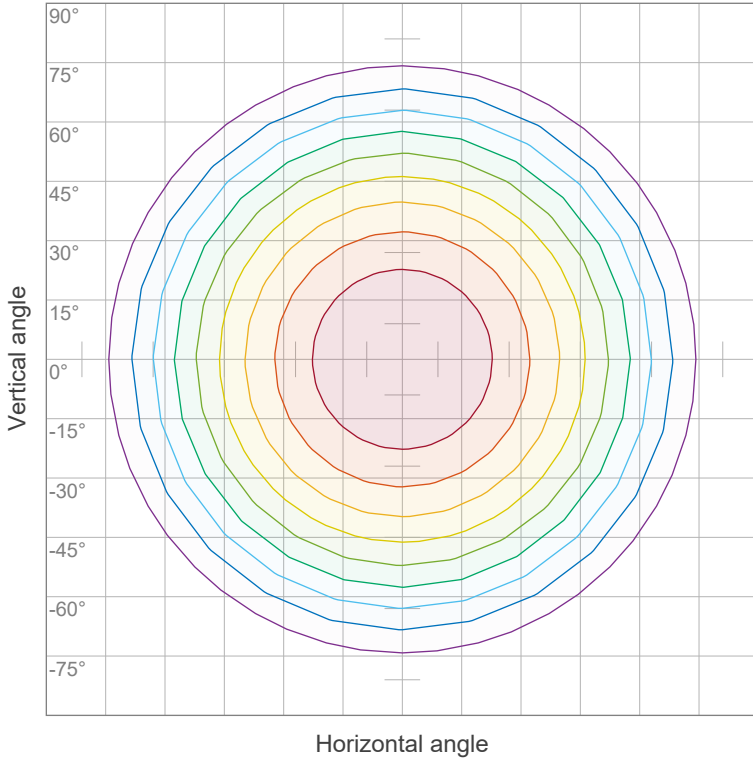
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Operator:



Iso-intensity Diagram (Iso-candela)

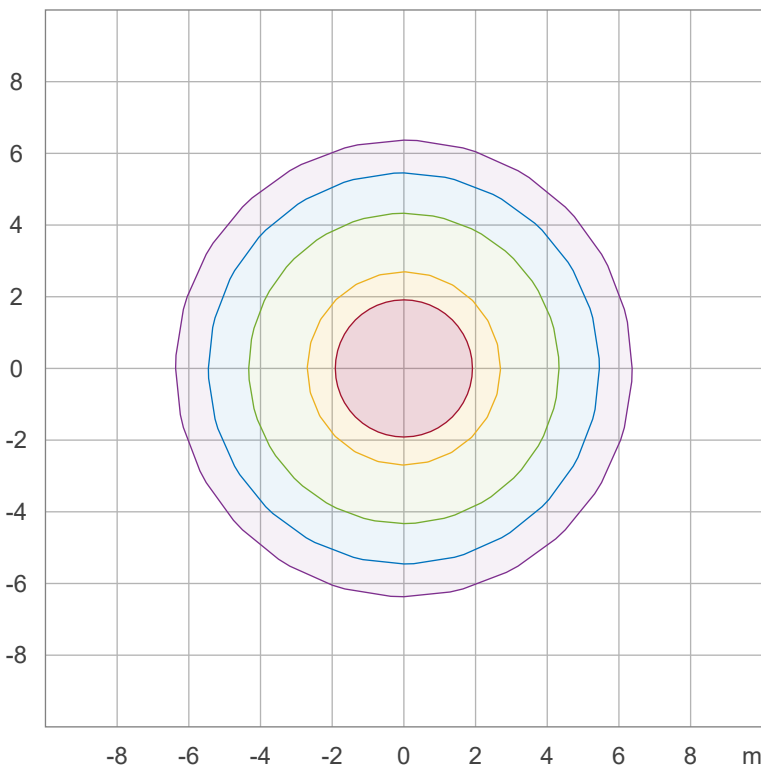


| | |
|------|-----------|
| 90 % | 1233,8 cd |
| 80 % | 1096,7 cd |
| 70 % | 959,6 cd |
| 60 % | 822,5 cd |
| 50 % | 685,4 cd |
| 40 % | 548,4 cd |
| 30 % | 411,3 cd |
| 20 % | 274,2 cd |
| 10 % | 137,1 cd |

Peak intensity: 1370,9 cd

Number of c-planes: 12

Iso-illuminance Diagram (Iso-lux)



| | |
|--------|---------|
| 50,0 % | 76,2 lx |
| 30,0 % | 45,7 lx |
| 10,0 % | 15,2 lx |
| 5,0 % | 7,6 lx |
| 3,0 % | 4,6 lx |

Peak illuminance: 152,3 lx

Mounting height: 3,0 m

Number of c-planes: 12

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Operator:



Color details

Correlated Color Temperature, Target CCT = 3000 K
 Correlated Color Temperature, Measured CCT = 2962 K
 Color Rendering Index CRI 81,6
 Color Rendering Index, R9 (red component) R9 = -0,8
 Color Rendering TM30-18 R_f 84,6 – R_g 95,8
 Color Quality Scale CQS = 81,5

MacAdam Steps SDCM = 2,3
 Color coordinates CIE 1931 (x;y) = (0,437;0,404)
 Color coordinate CIEs 1960 (u;v) = (0,251;0,348)
 Color deviation from BBL Duv = 0,0016
 Color coordinate CIEs 1976 (CIELUV) (u';v') = (0,251;0,521)

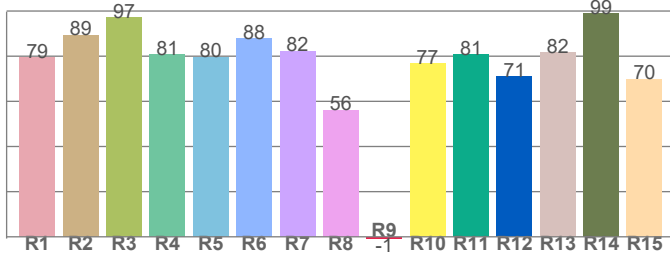
CIE 1931



CIE 1931 – zoomed on Planckian locus



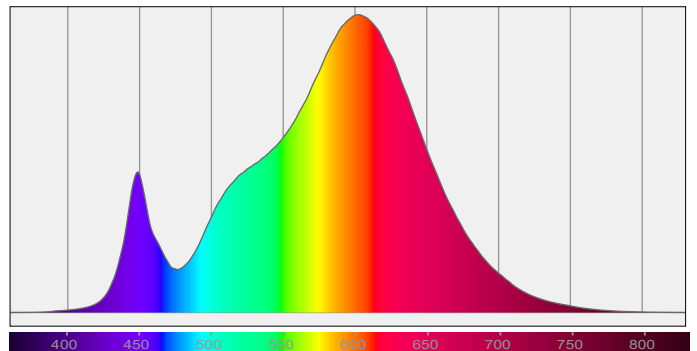
Color Rendering Index per reference color (CIE 1995)



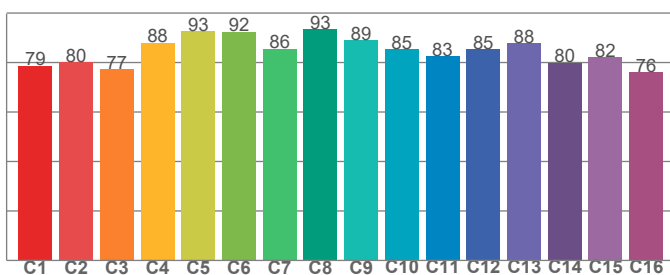
CRI R values, only R1-R8 are used to calculate final CRI value

| | | | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
| 79,4 | 89,4 | 97,0 | 80,7 | 79,7 | 87,8 | 82,3 | 56,2 | -0,8 | 76,7 | 80,8 | 71,0 | 81,6 | 98,8 | 70,0 |

Spectral power distribution (SPD) / W/nm – 0-100%



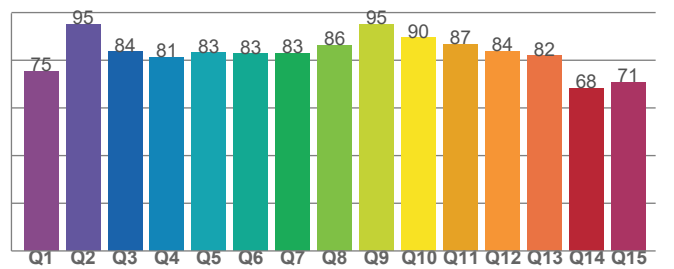
TM30-18 R_f-values per hue bin



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 |
| 78,7 | 80,2 | 77,2 | 87,9 | 92,7 | 92,4 | 85,6 | 93,4 | 89,1 | 85,5 | 82,5 | 85,4 | 87,7 | 79,9 | 82,2 | 76,0 |

Color Quality Scale by reference color



CQS Q values

| | | | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
| 75,3 | 95,1 | 83,6 | 81,4 | 83,1 | 82,8 | 83,1 | 86,4 | 95,1 | 89,5 | 86,8 | 83,7 | 81,8 | 68,3 | 70,7 |

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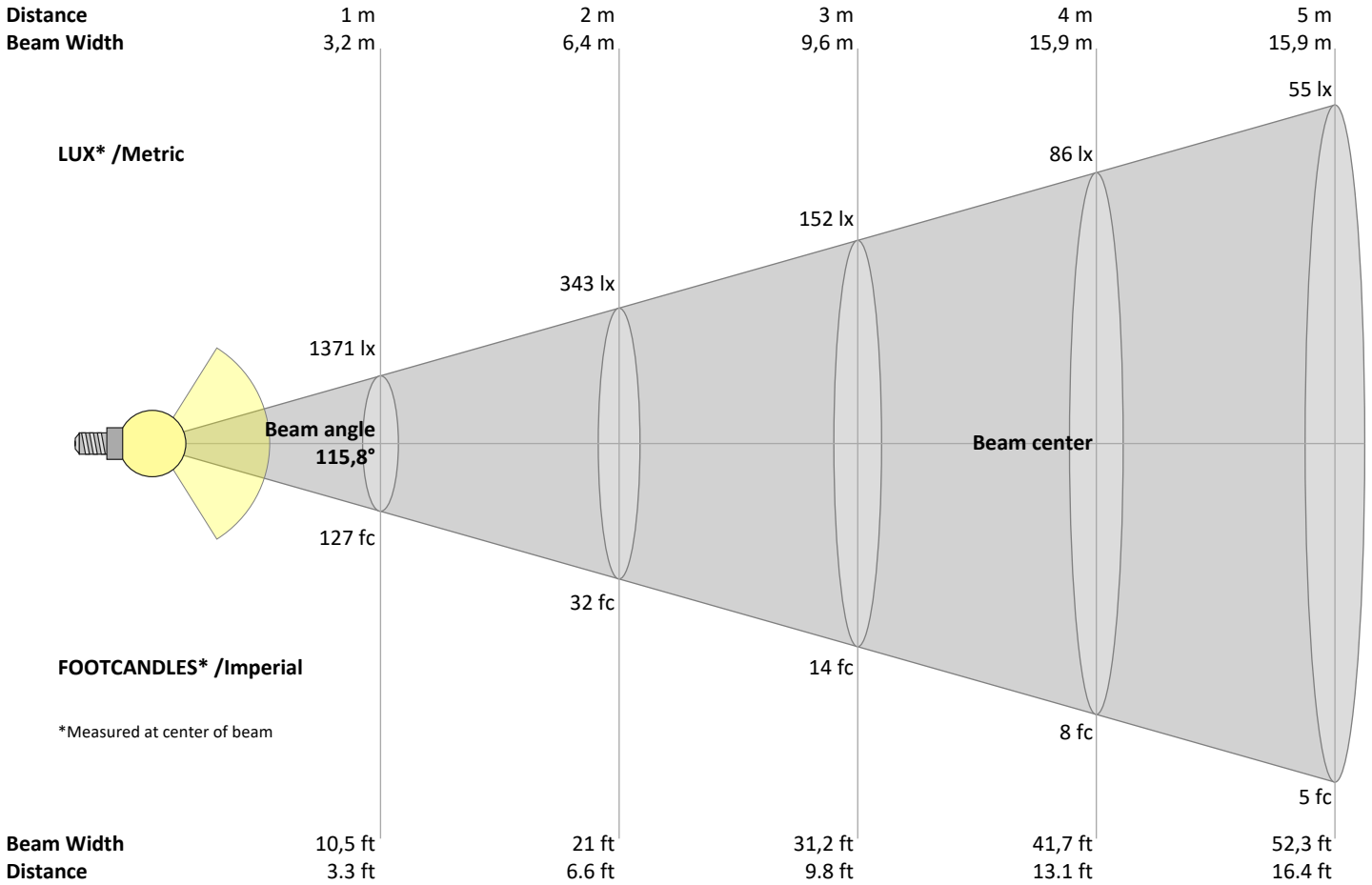
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Operator:



Beam Details



Beam intensities from 1 – 20 m

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | m |
|-------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 3,3 | 6,6 | 9,8 | 13,1 | 16,4 | 19,7 | 23 | 26,2 | 29,5 | 32,8 | 36,1 | 39,4 | 42,7 | 45,9 | 49,2 | 52,5 | 55,8 | 59,1 | 62,3 | 65,6 | ft |
| 1371 | 343 | 152 | 86 | 55 | 38 | 28 | 21 | 17 | 14 | 11 | 10 | 8 | 7 | 6 | 5 | 5 | 4 | 4 | 3 | lux |
| 127,4 | 31,8 | 14,2 | 8 | 5,1 | 3,5 | 2,6 | 2 | 1,6 | 1,3 | 1,1 | 0,9 | 0,8 | 0,6 | 0,6 | 0,5 | 0,4 | 0,4 | 0,4 | 0,3 | fc |

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° | γ |
|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
| 1371 | 1368 | 1351 | 1324 | 1285 | 1237 | 1178 | 1109 | 1031 | 944 | 850 | 748 | 639 | 526 | 410 | 295 | 186 | 91 | 27 | 4 | cd |
| 100% | 100% | 99% | 97% | 94% | 90% | 86% | 81% | 75% | 69% | 62% | 55% | 47% | 38% | 30% | 22% | 14% | 7% | 2% | 0% | of 0°val |

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° | γ |
|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
| 1371 | 1368 | 1351 | 1324 | 1285 | 1237 | 1178 | 1109 | 1031 | 944 | 850 | 748 | 639 | 526 | 410 | 295 | 186 | 91 | 27 | 4 | cd |
| 100% | 100% | 99% | 97% | 94% | 90% | 86% | 81% | 75% | 69% | 62% | 55% | 47% | 38% | 30% | 22% | 14% | 7% | 2% | 0% | of 0°val |

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° | γ |
|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
| 1371 | 1368 | 1351 | 1324 | 1285 | 1237 | 1178 | 1109 | 1031 | 944 | 850 | 748 | 639 | 526 | 410 | 295 | 186 | 91 | 27 | 4 | cd |
| 100% | 100% | 99% | 97% | 94% | 90% | 86% | 81% | 75% | 69% | 62% | 55% | 47% | 38% | 30% | 22% | 14% | 7% | 2% | 0% | of 0°val |

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° | γ |
|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
| 1371 | 1368 | 1351 | 1324 | 1285 | 1237 | 1178 | 1109 | 1031 | 944 | 850 | 748 | 639 | 526 | 410 | 295 | 186 | 91 | 27 | 4 | cd |
| 100% | 100% | 99% | 97% | 94% | 90% | 86% | 81% | 75% | 69% | 62% | 55% | 47% | 38% | 30% | 22% | 14% | 7% | 2% | 0% | of 0°val |

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Operator:



Light Planning – UGR table

Uncorrected, comprehensive UGR table according to 117-1995

| Reflectances | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
|-------------------------------------|-----------|--|------|------|------|------|--|------|------|------|------|
| | ρ Ceiling | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| | ρ Walls | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| | ρ Floor | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room size | | Viewed Crosswise | | | | | Viewed Endwise | | | | |
| H = mounting height above eye level | | (Viewing direction orthogonal to lamp length axis) | | | | | (Viewing direction parallel to lamp length axis) | | | | |
| X | Y | | | | | | | | | | |
| 2H | 2H | 17,6 | 18,8 | 17,8 | 19,1 | 19,4 | 17,6 | 18,8 | 17,8 | 19,1 | 19,4 |
| | 3H | 19,1 | 20,4 | 19,5 | 20,7 | 20,9 | 19,1 | 20,4 | 19,5 | 20,7 | 20,9 |
| | 4H | 19,8 | 21,0 | 20,2 | 21,3 | 21,6 | 19,8 | 21,0 | 20,2 | 21,3 | 21,6 |
| | 6H | 20,4 | 21,4 | 20,7 | 21,7 | 22,1 | 20,4 | 21,4 | 20,7 | 21,7 | 22,1 |
| | 8H | 20,5 | 21,6 | 20,9 | 21,9 | 22,3 | 20,5 | 21,6 | 20,9 | 21,9 | 22,3 |
| | 12H | 20,6 | 21,7 | 21,0 | 22,0 | 22,5 | 20,6 | 21,7 | 21,0 | 22,0 | 22,5 |
| 4H | 2H | 18,2 | 19,4 | 18,6 | 19,7 | 20,0 | 18,2 | 19,4 | 18,6 | 19,7 | 20,0 |
| | 3H | 20,0 | 21,1 | 20,4 | 21,4 | 21,9 | 20,0 | 21,1 | 20,4 | 21,4 | 21,9 |
| | 4H | 20,8 | 21,7 | 21,2 | 22,1 | 22,7 | 20,8 | 21,7 | 21,2 | 22,1 | 22,7 |
| | 6H | 21,4 | 22,3 | 21,9 | 22,7 | 23,1 | 21,4 | 22,3 | 21,9 | 22,7 | 23,1 |
| | 8H | 21,6 | 22,5 | 22,2 | 22,8 | 23,2 | 21,6 | 22,5 | 22,2 | 22,8 | 23,2 |
| | 12H | 21,8 | 22,5 | 22,3 | 22,9 | 23,4 | 21,8 | 22,5 | 22,3 | 22,9 | 23,4 |
| 8H | 4H | 21,1 | 21,9 | 21,6 | 22,3 | 22,7 | 21,1 | 21,9 | 21,6 | 22,3 | 22,7 |
| | 6H | 21,9 | 22,5 | 22,4 | 23,0 | 23,5 | 21,9 | 22,5 | 22,4 | 23,0 | 23,5 |
| | 8H | 22,2 | 22,8 | 22,8 | 23,3 | 24,0 | 22,2 | 22,8 | 22,8 | 23,3 | 24,0 |
| | 12H | 22,5 | 23,0 | 23,1 | 23,5 | 24,1 | 22,5 | 23,0 | 23,1 | 23,5 | 24,1 |
| 12H | 4H | 21,1 | 21,8 | 21,6 | 22,2 | 22,7 | 21,1 | 21,8 | 21,6 | 22,2 | 22,7 |
| | 6H | 22,0 | 22,5 | 22,5 | 23,1 | 23,7 | 22,0 | 22,5 | 22,5 | 23,1 | 23,7 |
| | 8H | 22,3 | 22,8 | 22,9 | 23,3 | 23,9 | 22,3 | 22,8 | 22,9 | 23,3 | 23,9 |

Variations with the observer position for the luminaire spacings, S:

| | | |
|----------|------------|------------|
| S = 1.0H | 0,1 / -0,1 | 0,1 / -0,1 |
| S = 1.5H | 0,1 / -0,2 | 0,1 / -0,2 |
| S = 2.0H | 0,4 / -0,4 | 0,4 / -0,4 |

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 Lumen delivered to the task surface | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 101 | 101 | 101 | 99 |
| 1 | 108 | 103 | 99 | 95 | 105 | 101 | 97 | 93 | 96 | 93 | 90 | 92 | 90 | 87 | 89 | 86 | 84 | 82 |
| 2 | 98 | 90 | 83 | 77 | 95 | 88 | 81 | 76 | 84 | 78 | 74 | 80 | 76 | 72 | 77 | 74 | 70 | 68 |
| 3 | 89 | 78 | 70 | 63 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 65 | 60 | 68 | 63 | 59 | 57 |
| 4 | 82 | 69 | 60 | 53 | 79 | 68 | 60 | 53 | 65 | 58 | 52 | 63 | 57 | 51 | 61 | 55 | 51 | 48 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 52 | 46 | 58 | 51 | 45 | 56 | 50 | 44 | 54 | 49 | 44 | 42 |
| 6 | 69 | 56 | 46 | 40 | 67 | 55 | 46 | 40 | 53 | 45 | 39 | 51 | 44 | 39 | 49 | 43 | 38 | 36 |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 41 | 35 | 48 | 40 | 35 | 46 | 39 | 34 | 45 | 39 | 34 | 32 |
| 8 | 60 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 44 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 30 | 29 |
| 9 | 56 | 42 | 34 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 27 | 26 |
| 10 | 52 | 39 | 31 | 25 | 51 | 38 | 31 | 25 | 37 | 30 | 25 | 36 | 30 | 25 | 35 | 29 | 25 | 23 |

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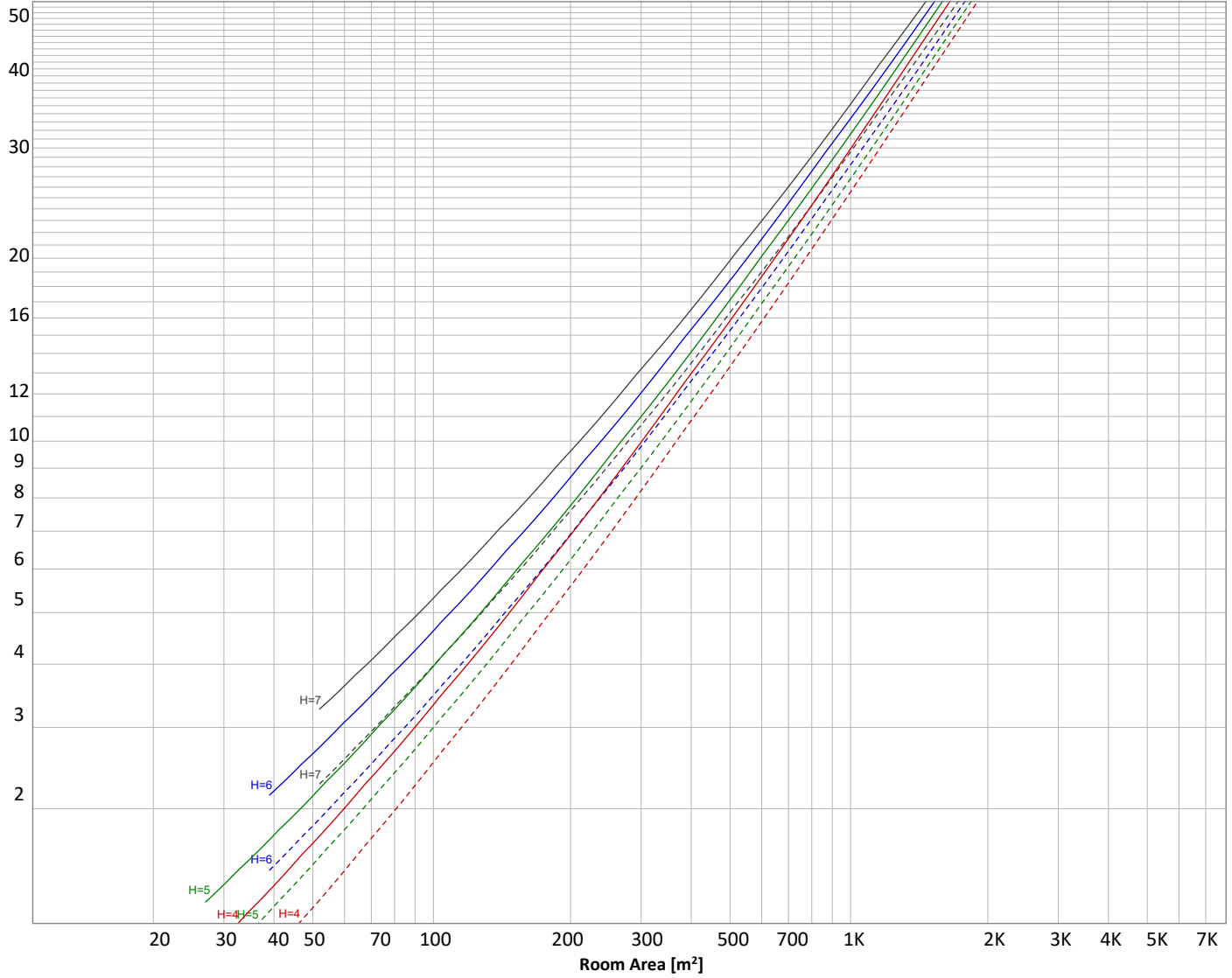
Operator:



Luminaire budgetary diagram

Uncorrected, comprehensive UGR table according to 117-1995

LAMPS (number of lamps)



Conditions

| | | | | | |
|---|----------------|-----------|---------------------|--------------------------|-------------------|
| H = Room height | Flux = 4127 lm | | | | |
| H _{down} = Lamp distance from ceiling = | 0.00 m | Line type | Ceiling reflectance | ρ(%) Wall reflectance | Floor reflectance |
| H _{work} = Work area height from floor = | 0.00 m | ----- | 70 | 50 | 30 |
| E _{work} = Average lux on work area = | 100 lx | ————— | 50 | 30 | 20 |

Zonal Lumen Summary

| | | | | | | | | |
|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0°-10° | 10°-20° | 20°-30° | 30°-40° | 40°-50° | 50°-60° | 60°-70° | 70°-80° | 80°-90° |
| 130 lm | 374 lm | 570 lm | 694 lm | 728 lm | 668 lm | 520 lm | 312 lm | 104 lm |
| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
| 8,60 lm | 2,79 lm | 3,07 lm | 3,26 lm | 3,14 lm | 2,79 lm | 2,09 lm | 1,42 lm | 0,485 lm |

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Operator:



Outdoor Light Planning

Lumen per Zone

| Zone (γ) | Lumen | % Total |
|--------------|----------------|---------------|
| 0-10° | 130 lm | 3,2% |
| 10-20° | 374 lm | 9,1% |
| 20-30° | 570 lm | 13,8% |
| 30-40° | 694 lm | 16,8% |
| 40-50° | 728 lm | 17,6% |
| 50-60° | 668 lm | 16,2% |
| 60-70° | 520 lm | 12,6% |
| 70-80° | 312 lm | 7,6% |
| 80-90° | 104 lm | 2,5% |
| 90-100° | 9 lm | 0,2% |
| 100-110° | 3 lm | 0,1% |
| 110-120° | 3 lm | 0,1% |
| 120-130° | 3 lm | 0,1% |
| 130-140° | 3 lm | 0,1% |
| 140-150° | 3 lm | 0,1% |
| 150-160° | 2 lm | 0,1% |
| 160-170° | 1 lm | 0,0% |
| 170-180° | 0 lm | 0,0% |
| Total | 4127 lm | 100,0% |

Intensity peaks

| | |
|----------------|---------|
| Max intensity | 1371 cd |
| Intensity, 90° | 27 cd |
| Intensity, 0° | 1371 cd |

Zonal Lumen summary

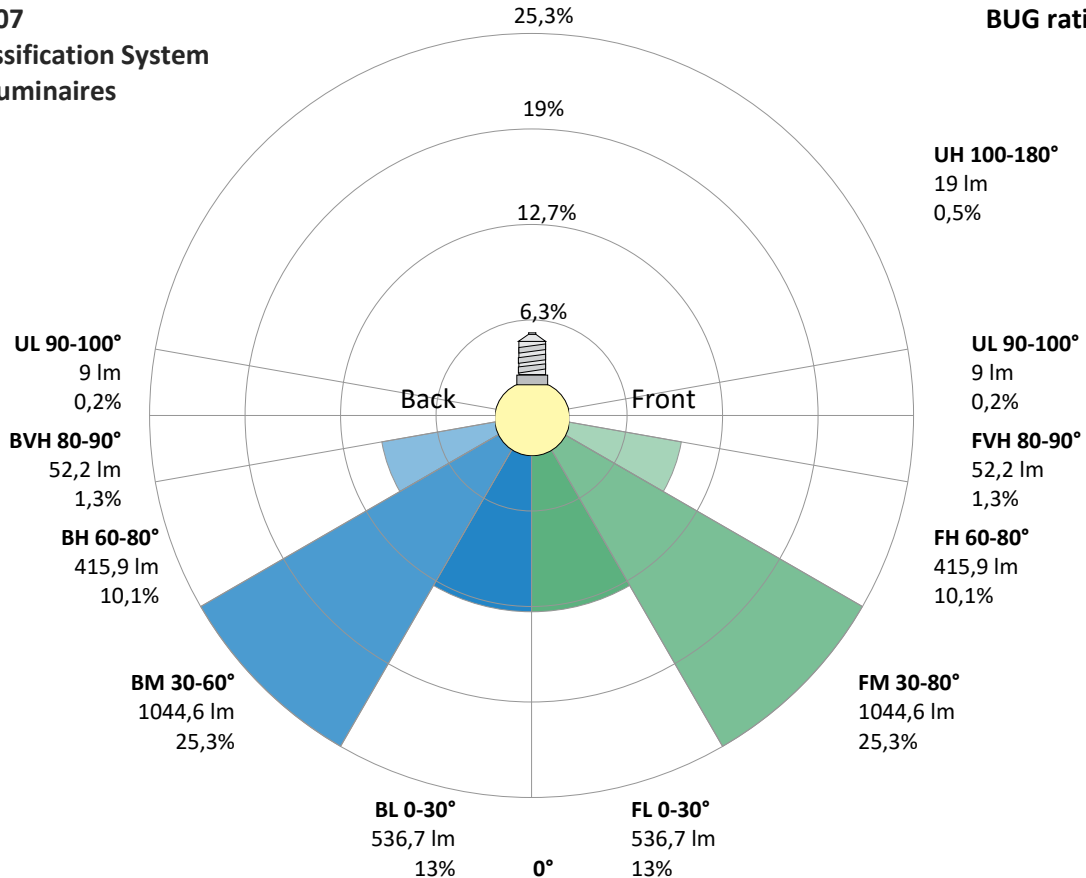
| Zone (γ) | Lumen | % Total |
|----------|---------|---------|
| 0-30° | 1074 lm | 26,0% |
| 0-40° | 1768 lm | 42,8% |
| 0-60° | 3164 lm | 76,7% |
| 60-90° | 935 lm | 22,7% |
| 70-100° | 424 lm | 10,3% |
| 90-120° | 14 lm | 0,4% |
| 0-90° | 4099 lm | 99,3% |
| 90-180° | 28 lm | 0,7% |
| 0-180° | 4127 lm | 100,0% |

BUG rating

| | Lumen | % Total |
|----------------------|---------|---------|
| Forward light | | |
| Low(0-30°) | 537 lm | 13,0% |
| Medium(30-60°) | 1045 lm | 25,3% |
| High(60-80°) | 416 lm | 10,1% |
| Very high(80-90°) | 52 lm | 1,3% |
| Back light | | |
| Low(0-30°) | 537 lm | 13,0% |
| Medium(30-60°) | 1045 lm | 25,3% |
| High(60-80°) | 416 lm | 10,1% |
| Very high(80-90°) | 52 lm | 1,3% |
| Uplight | | |
| Low(90-100°) | 9 lm | 0,2% |
| High(100-180°) | 19 lm | 0,5% |

IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B2 U2 G1



Light Measurement Report

Print date: 28-1-2025

Measurement date and time: 28-1-2025 16:25:07 – Measurement no. VFR-250128-3198-MS

Measurement tracking No. and Link: [VT250128-005576](#)

Operator:

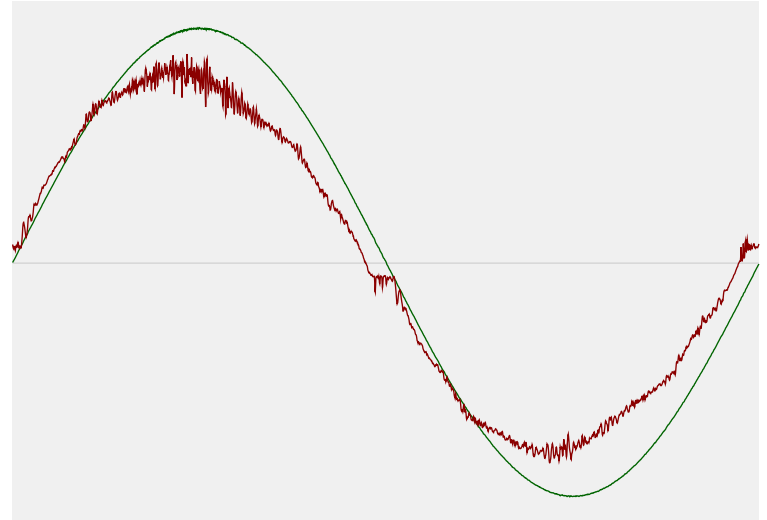


Power Details

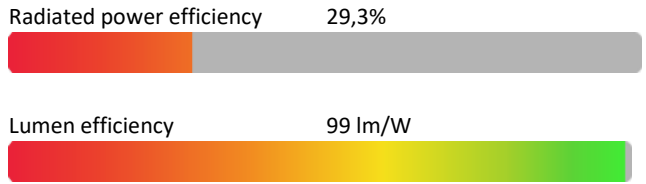
Input Power

| | |
|---|----------|
| Power feed to light source | 41,7 W |
| Frequency of input power | 50 Hz |
| RMS Input voltage feed, V_{RMS} | 230 V |
| RMS Input current feed, I_{RMS} | 0,184 A |
| Volt-Ampere or apparent power = $V_{RMS} * I_{RMS}$ | 42,24 VA |
| Displacement factor of AC power feed | 0,99 |
| Power factor of AC current feed | 0,99 |
| Total harmonic distortion of the current | 4,64% |
| Total harmonic distortion of the voltage | 0,13% |

Input Power Curve



Efficiency



Stabilization Details

Warmup Conditions

| | |
|-------------------|--------|
| Stable period | 15 min |
| Stable change max | 2,0% |
| Minimum time | 15 min |

Color Temperature Change

| | |
|-----------|--------|
| CCT start | 2997 K |
| CCT shift | +3 K |
| CCT end | 3000 K |

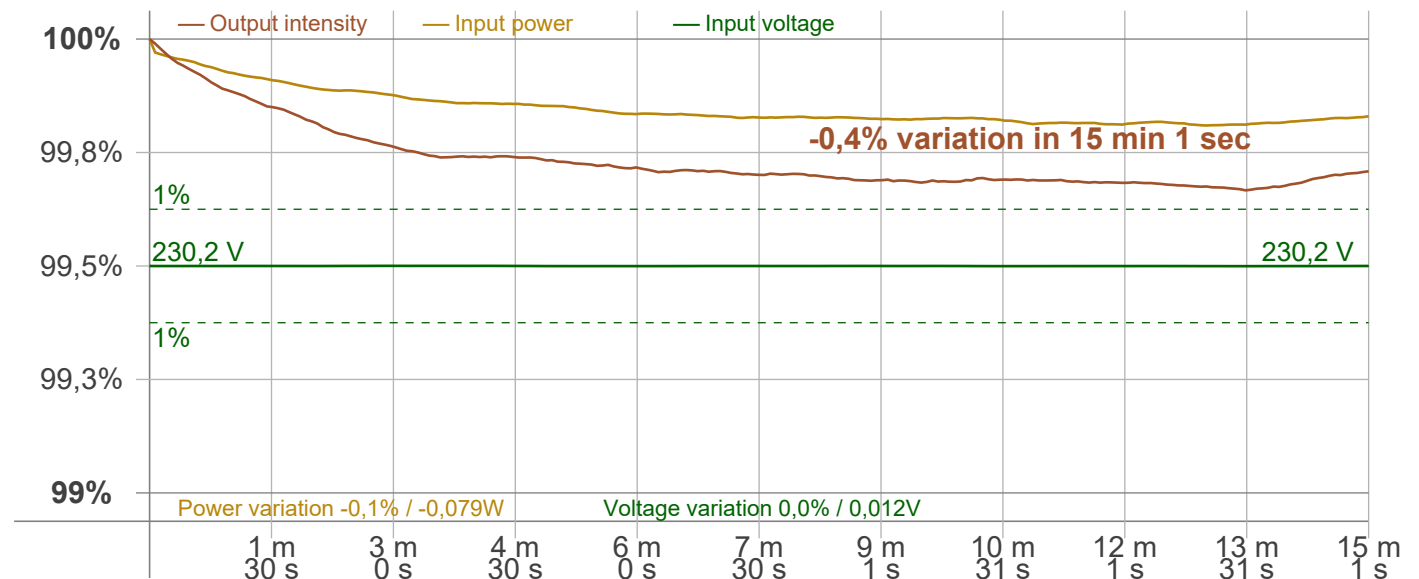
Warmup Result

| | |
|-------------------|---------------------------------|
| Total warmup time | Lamp stabilized in 15 min 1 sec |
| Warmup variation | -0,4% |

Output Change

| | |
|---------------|---------|
| Output start | 4141 lm |
| Output change | -14 lm |
| Output end | 4127 lm |

Stabilization Curve



Light Measurement Report

Print date: 28-1-2025

Measurement date and time: 28-1-2025 16:25:07 – Measurement no. VFR-250128-3198-MS

Measurement tracking No. and Link: [VT250128-005576](https://www.viso-systems.com/VT250128-005576)

Operator:



Flicker /TLA details

Flicker Meter Type: Viso Systems LabFlicker
 Frequency of input power: 50 Hz
 Flicker/TLA sample rate: 20000 samples/s

Measurement time
 PstLM: 180 sec
 All other indices: 1,2 sec

Flicker indices according to Illuminating Engineering Society (IES)

Flicker frequency: 100 Hz
 Percent Flicker: 0,58 %
 Flicker index: 0

Flicker indices according to California Energy Commission (CEC) 2016b

JA8/10 40 Hz: 0,03 %
 JA8/10 90 Hz: 0,03 %
 JA8/10 200 Hz: 0,57 %
 JA8/10 400 Hz: 0,57 %
 JA8/10 1000 Hz: 0,57 %

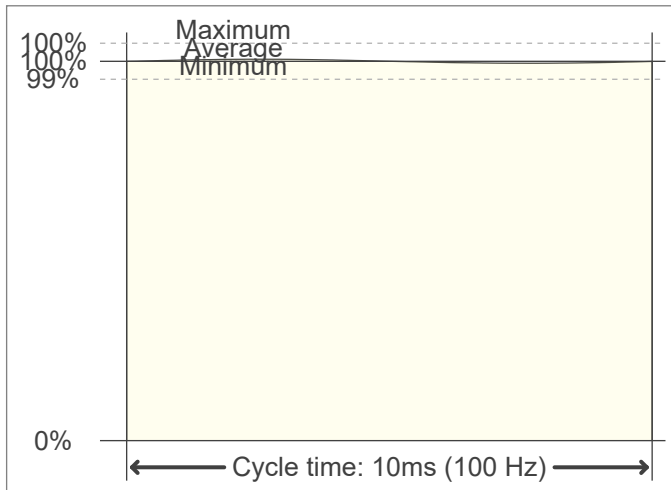
TLA indices (re IEC TR 61547-1, IEC 61000-3-3 and IEC 61000-4-15)

PstLM value (F < 80 Hz): 0,04
 SVM value (80 < F < 2000 Hz): 0,02

Flicker indices according to Lighting Research Center (2015)

Perception metric, Assist Mp: 0,02

Flicker frame (frame of one flicker period in time domain)



Flicker FFT (flicker curve in frequency domain)



IEEE 1789 Frequency/modulation plot

