Test report

Light measurement results

experts in led-stripes

Laboratory and Equipment

Test lab	Viso LightSpion - Seriennummer: 1435906163 Sensorseriennumn
Spectrometer Manufacturer and Model	LightSpion – Type C, horizontal
Measurement date	07.04.2026

Measurement Conditions

Tested c-planes	2 planes – 180.00°
Tested gamma resolution	7.50°
Input Power	18.55 W
Input RMS Voltage and Current	23.99 V – 1.06 A

Tested Light Source

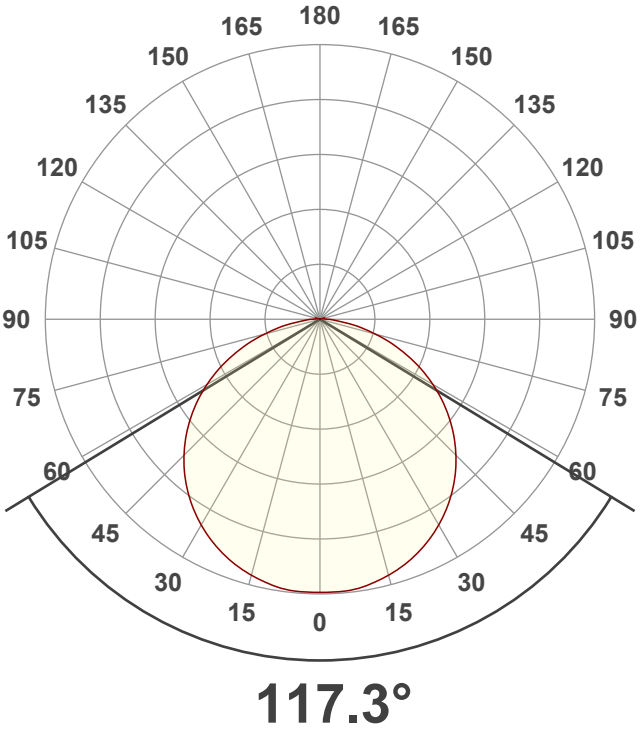
Luminaire	FLEX STRIP HPS-CCT-90 1200 2700-6500K 2x18W 1m 260127
Item No.	ASDW90240X18W
Manufacturer	awLed by audiowerk GmbH
Measured length	1000mm
Dimension (Lamp w x h) | (Light w x h)	10mm x 1000mm | 3.5mm x 2.8mm
Description	Charge: 261027

Main Light Measurement Results

Output – Total Lumen (Up% / Down%)	2262 lm – 1.692% / 98.31%
Efficiency	122 lm/W
Peak Intensity	732.3 cd
Correlated Color Temperature, CCT	4037 K
Color Rendering Index	CRI 95.9
Ecodesign Energy Class	E

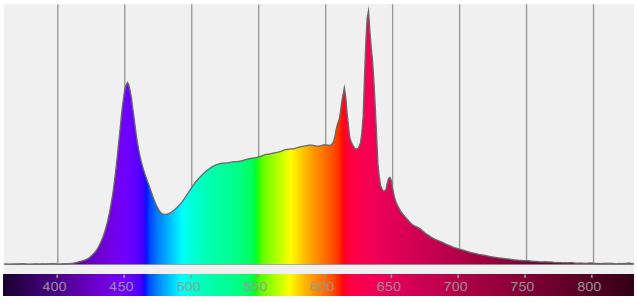
Polar light distribution diagram

Unit: 0-100% of peak intensity



Product photo

Spectral power distribution



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Light output 1 - LED CCT-Warmwhite:

Correlated Color Temperature, CCT	2790	°K
Output – Total Lumen	2267	lm
Efficiency	121	lm/W
Color Rendering Index	92	CRI
Input Power	18.75	W
Input RMS Votage	23.99	V
Input RMS Currant	0.78	A

Light output 2 - LED CCT-White:

Correlated Color Temperature, CCT	6950	°K
Output – Total Lumen	2284	lm
Efficiency	122	lm/W
Color Rendering Index	95	CRI
Input Power	18.76	W
Input RMS Votage	23.99	V
Input RMS Currant	0.78	A

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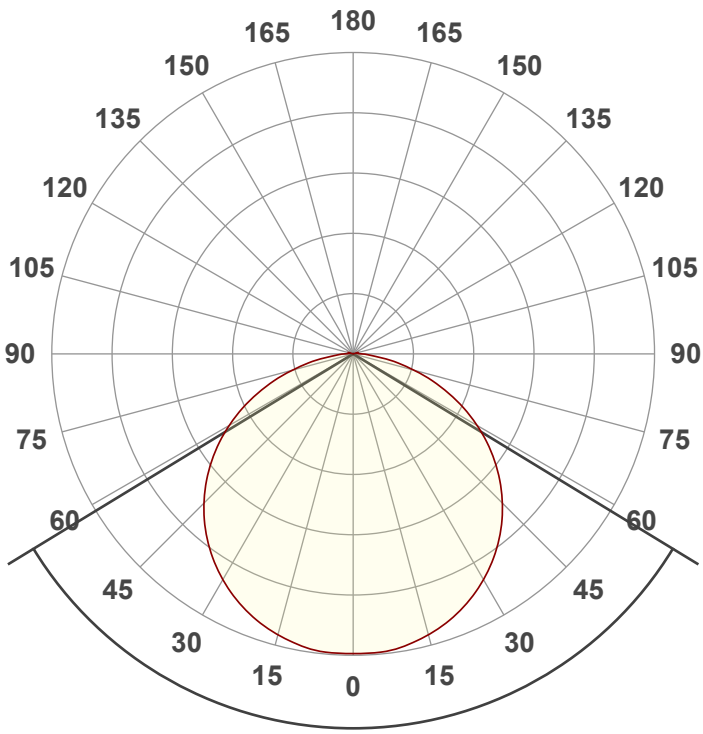
Luminous Intensity diagram

Unit: 0-100% of peak intensity



C0-C180
C90-C270

117.3°

Main Values

Output (total Lumen)	2262 lm
Lumen Up% / Down%	1.692% / 98.31%
Peak Intensity	732.3 cd
Beam Angle (50%-FWHM)	117.3°

EU Ecodesign parameters

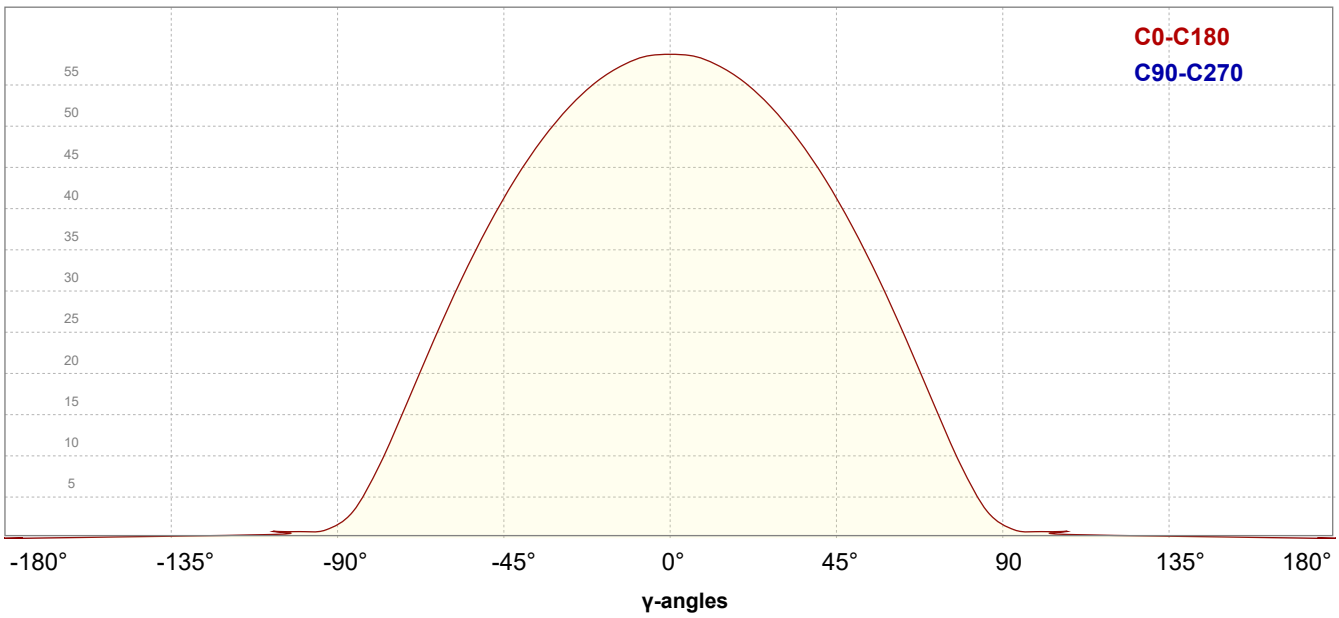
Directionality (DLS or NDLS)	NDLS
Ecodesign Useful Luminous Flux	2262 lm
Ecodesign Energy Class	E

Intensity Ratio

In 120° cone	76.1%
In 90° cone	51.08%

Linear distribution diagram

Intensity [cd]



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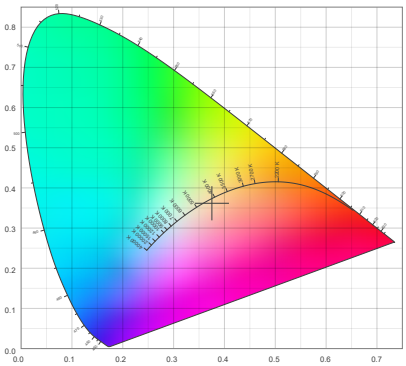
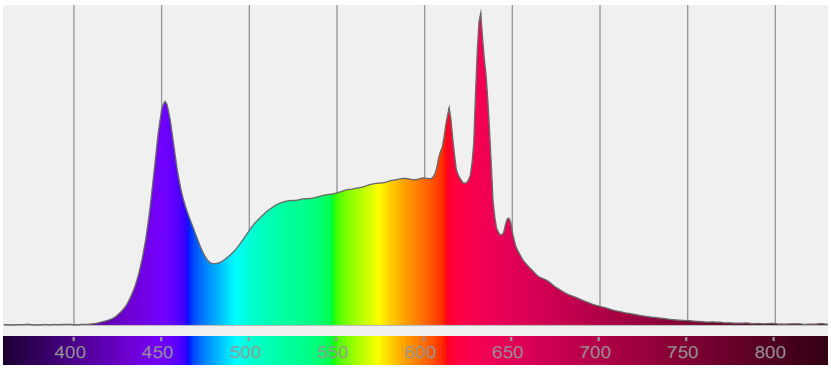
Color details

Correlated Color Temperature, Target	CCT = 4037 K	MacAdam Steps	SDCM = NaN
Correlated Color Temperature, Measured	CCT = 4037 K	Color deviation from BBL	Duv = -0.0057
Color Rendering Index	CRI 95.9	Color coordinates CIE 1931	(x;y) = (0.3753;0.3617)
Color Rendering Index, R9 (red)	R9 = 80.1	Color coordinate CIEs 1960	(u;v) = (0.2278;0.3293)
Color Rendering TM30-18	Rf 91.1	Color coordinate CIEs 1976	(u';v') = (0.2278;0.4940)
	Rg 101.3	Color Quality Scale	CQS = 92.5

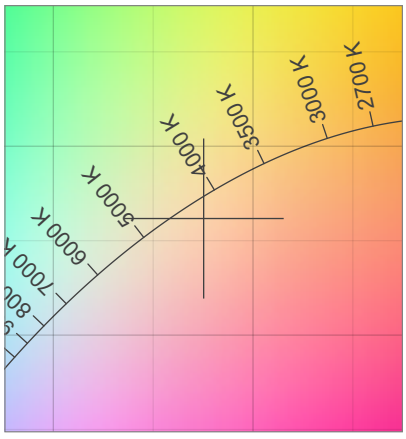
CIE 1931 Chromaticity diagram



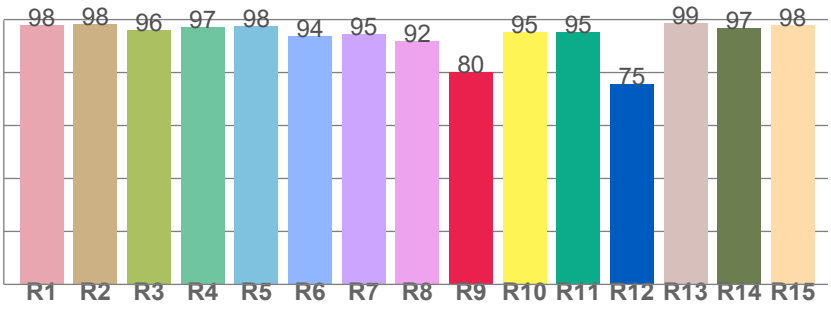
Spectral power distribution



CIE 1931 Chromaticity - zoomed



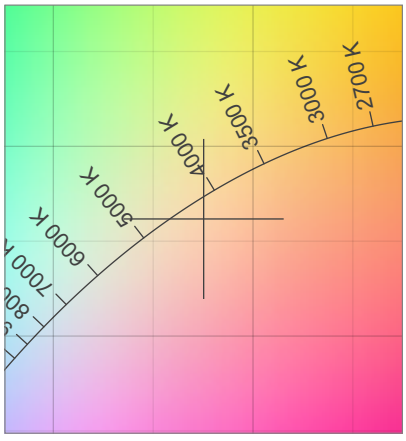
Color Rendering Index per reference color (CIE 1995)



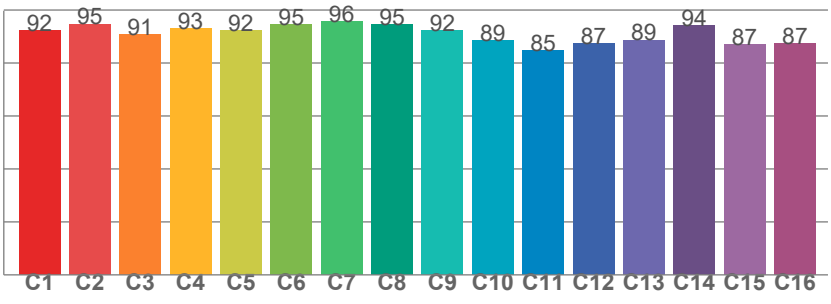
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
98.0	98.2	96.0	97.3	97.7	93.8	94.5	91.9	80.1	95.2	95.3	75.5	98.8	96.9	98.0

CIE 1931 Chromaticity - SDCM



TM30-18 Rf-values per hue bin



TM30-18 Rf-values per hue bin

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92.4	94.7	90.8	93.2	92.3	94.6	95.7	94.6	92.1	88.5	84.8	87.4	88.7	94.2	87.1	87.4

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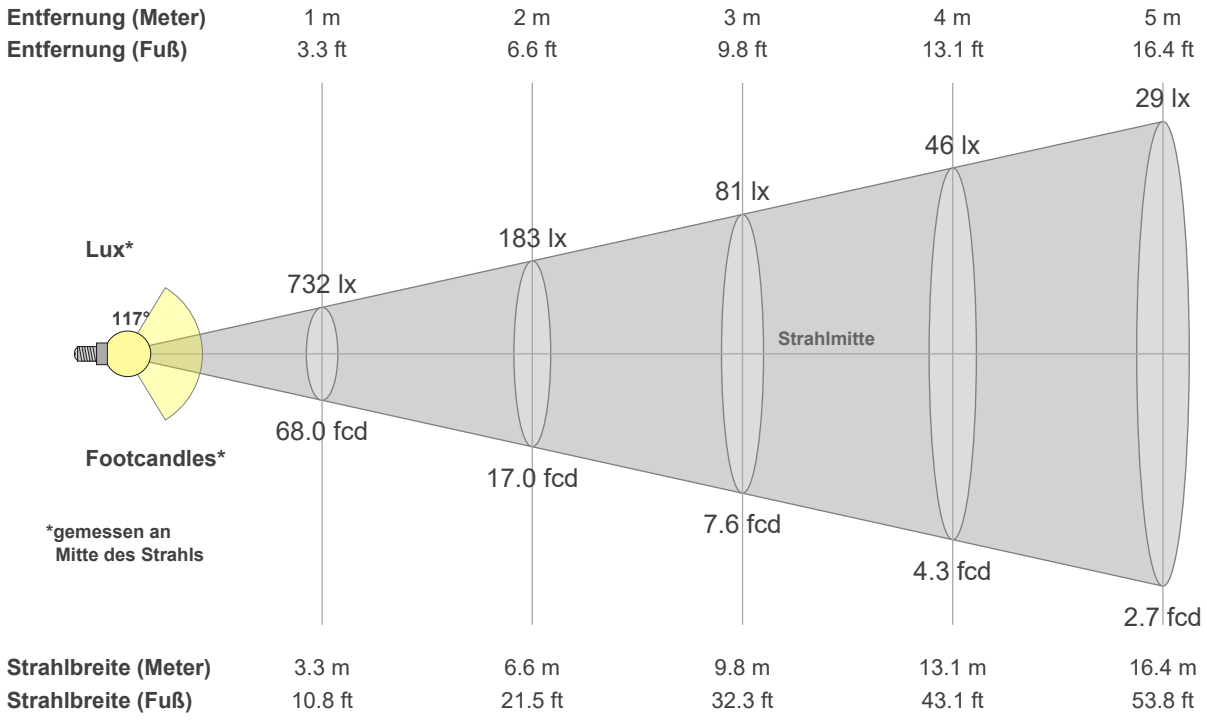
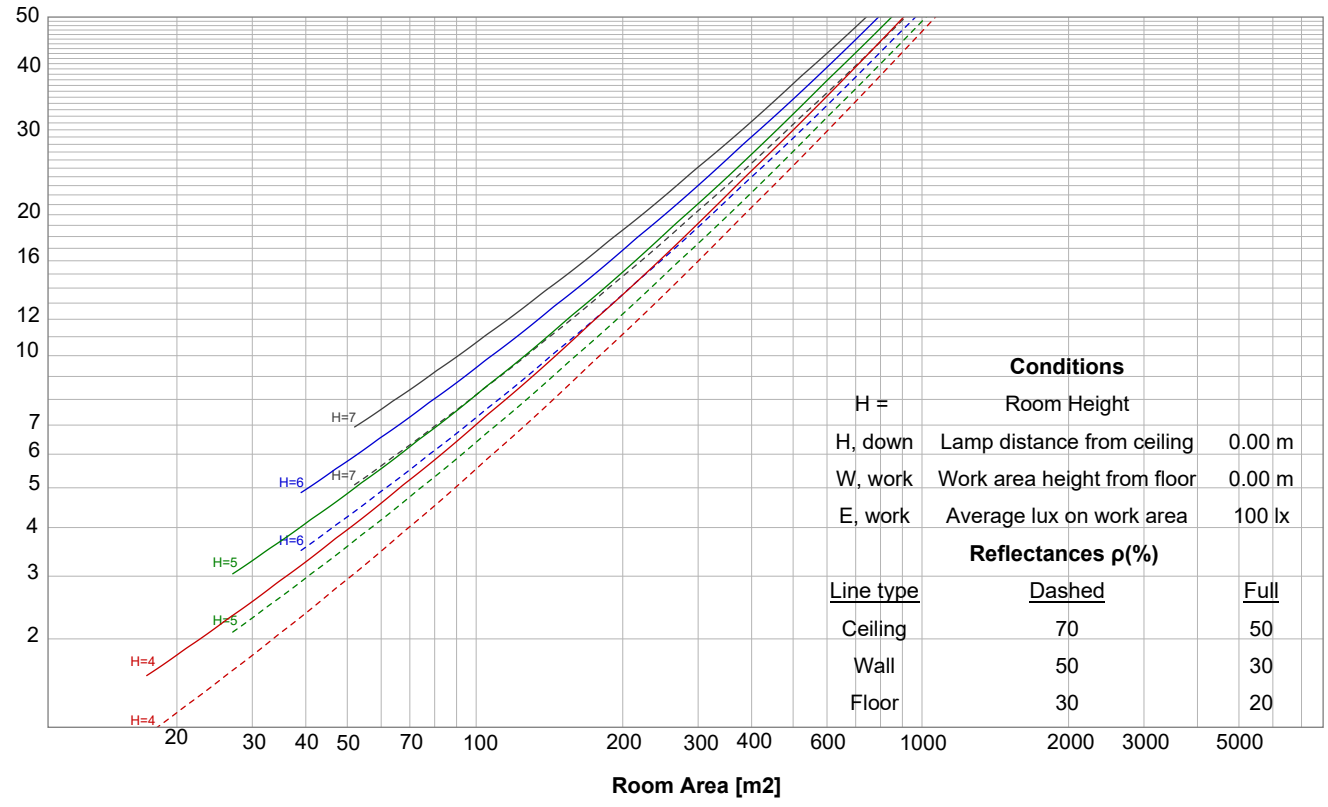
Beam details



Luminaire budgetary diagram

LAMPS (number of lamps)



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Intensity 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
732	183	81	46	29	20	15	11	9	7	6	5	4	4	3	3	3	2	2	2	lux
68	17	7.6	4.3	2.7	1.9	1.4	1.1	0.8	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	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
732	732	723	710	692	666	636	602	561	515	465	409	349	287	221	157	98	49	25	12	cd
100%	100%	99%	97%	94%	91%	87%	82%	77%	70%	63%	56%	48%	39%	30%	21%	13%	7%	3%	2%	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
732	732	723	710	692	666	636	602	561	515	465	409	349	287	221	157	98	49	25	12	cd
100%	100%	99%	97%	94%	91%	87%	82%	77%	70%	63%	56%	48%	39%	30%	21%	13%	7%	3%	2%	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
732	732	723	710	692	666	636	602	561	515	465	409	349	287	221	157	98	49	25	12	cd
100%	100%	99%	97%	94%	91%	87%	82%	77%	70%	63%	56%	48%	39%	30%	21%	13%	7%	3%	2%	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
732	732	723	710	692	666	636	602	561	515	465	409	349	287	221	157	98	49	25	12	cd
100%	100%	99%	97%	94%	91%	87%	82%	77%	70%	63%	56%	48%	39%	30%	21%	13%	7%	3%	2%	of 0°val

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UGR Table

Corrected, comprehensive UGR table according to 117-1995, S/H ratio=0.25

Reflectances											
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 = mouting height above eye level		(Viewing direction orthogonal to lamp length axis)					(Viewing direction parallel to lamp length axis)				
X	**Y**										
2H	2H	28.5	29.7	28.8	30.1	30.3	30.0	31.2	30.3	31.6	31.8
	3H	29.6	30.9	30.0	31.2	31.4	31.5	32.8	32.0	33.1	33.3
	4H	30.0	31.2	30.4	31.5	31.8	32.2	33.4	32.6	33.7	34.0
	6H	30.3	31.4	30.7	31.7	32.1	32.8	33.9	33.1	34.2	34.6
	8H	30.4	31.4	30.7	31.7	32.2	33.0	34.0	33.3	34.3	34.8
	12H	30.4	31.4	30.8	31.8	32.2	33.1	34.1	33.5	34.5	35.0
4H	2H	29.1	30.3	29.5	30.6	30.9	30.3	31.5	30.8	31.8	32.1
	3H	30.5	31.5	30.9	31.9	32.3	32.1	33.1	32.5	33.5	34.0
	4H	30.9	31.9	31.4	32.3	32.9	32.8	33.7	33.3	34.2	34.7
	6H	31.3	32.1	31.8	32.5	32.9	33.4	34.3	33.9	34.7	35.1
	8H	31.3	32.2	31.9	32.5	33.0	33.6	34.4	34.1	34.8	35.2
	12H	31.4	32.1	31.9	32.5	33.0	33.8	34.5	34.3	35.0	35.5
8H	4H	31.2	32.0	31.7	32.4	32.8	32.9	33.7	33.4	34.1	34.5
	6H	31.6	32.3	32.1	32.7	33.3	33.6	34.2	34.1	34.7	35.3
	8H	31.8	32.3	32.3	32.9	33.6	33.9	34.5	34.4	35.0	35.7
	12H	31.9	32.4	32.5	32.9	33.5	34.2	34.6	34.8	35.2	35.8
12H	4H	31.2	31.9	31.7	32.3	32.8	32.9	33.5	33.4	34.0	34.5
	6H	31.7	32.3	32.2	32.8	33.5	33.6	34.2	34.1	34.7	35.4
	8H	31.9	32.3	32.5	32.9	33.5	33.9	34.4	34.5	34.9	35.5

Variations with the observer position for the luminaire spacings, S:		
S = 1.0H	0.1 / -0.2	0.1 / -0.1
S = 1.5H	0.3 / -0.4	0.3 / -0.4
S = 2.0H	0.6 / -0.9	0.8 / -0.9

UGR-Daten konnten aufgrund fehlender/falscher Symmetrie nicht berechnet werden. Gehen Sie zu Bearbeiten -> Photometrisch -> Korrekturen und wählen Sie Asymmetrie korrigieren (UGR für asymmetrische Verteilungen nicht definiert)..

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	20
RCR	(Room Cavity Ratio)				Room values are expressed as percentage of Lumen delivered to the task surface													
0	118.6	118.6	118.6	118.6	115.7	115.7	115.7	115.7	110.2	110.2	110.2	105.1	105.1	105.1	100.5	100.5	100.5	98.3
1	107.9	102.9	98.4	94.4	105.0	100.4	96.4	92.7	95.9	92.5	89.5	91.6	88.9	86.4	87.8	85.6	83.5	81.3
2	97.8	89.3	82.3	76.4	95.0	87.3	80.8	75.3	83.4	78.0	73.3	79.9	75.3	71.4	76.6	72.9	69.5	67.2
3	89.0	78.2	69.8	63.2	86.3	76.5	68.7	62.5	73.2	66.6	61.1	70.2	64.6	59.8	67.4	62.7	58.6	56.3
4	81.4	69.1	60.1	53.3	78.9	67.6	59.3	52.8	64.9	57.6	51.9	62.3	56.1	51.0	60.0	54.6	50.1	47.8
5	74.7	61.6	52.4	45.7	72.5	60.4	51.8	45.3	58.0	50.5	44.7	55.9	49.2	44.0	53.8	48.0	43.4	41.2
6	68.9	55.4	46.3	39.7	66.9	54.3	45.7	39.5	52.3	44.7	39.0	50.4	43.7	38.5	48.7	42.7	38.0	35.9
7	63.8	50.1	41.2	35.0	62.0	49.2	40.8	34.8	47.5	39.9	34.4	45.9	39.1	34.0	44.4	38.3	33.6	31.6
8	59.4	45.6	37.0	31.1	57.7	44.9	36.7	30.9	43.4	36.0	30.6	42.0	35.3	30.4	40.7	34.6	30.1	28.1
9	55.4	41.8	33.5	27.9	53.9	41.2	33.2	27.8	39.9	32.6	27.5	38.7	32.1	27.3	37.5	31.5	27.1	25.2
10	51.9	38.6	30.6	25.2	50.6	38.0	30.3	25.1	36.9	29.8	24.9	35.8	29.3	24.8	34.8	28.9	24.6	22.8

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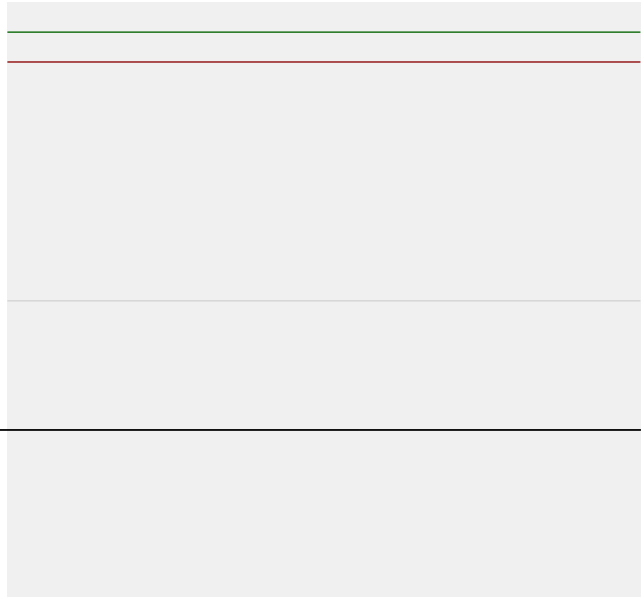
Power details

Input power	
Frequency of input power	0.0 Hz
Power feed to light source	18.55 W
RMS Input voltage feed V,RMS	23.99 V
RMS Input current feed I,RMS	1.06 A
Volt-Amp or apparent power = V,RMS*I,RMS	25.4 VA
Displacement factor of AC power feed	0.00
Power factor of AC current feed	0.73
Total harmonic distortion of the current	0%
Total harmonic distortion of the voltage	0%

Input power curve



Efficiency

Radiated power efficiency	38.94
Lumen efficiency	122 lm/W

Stabilization details

Warmup Conditions		Color Temperature Change	
Stable period	3 Min	CCT start	4040 K
Stable change max	3%	CCT shift	-3 K
Minimum time	3 Min	CCT end	4037 K
Warmup Result		**Output Change**	
Total warmup time	Lampe stabilisiert i	Output start	2273 lm
Warmup variation	-0.6242%	Output change	-11.084 lm
		Output end	2262 lm

Stabilization Curve