Prudential Lighting

Light measurement results

Print date 10/2/2026

Laboratory and Equipment

Test lab	Viso LabSpion - serial: 2435469709 sensor serial: 0895736217 - Test lab
Spectrometer Manufacturer and Model	LabSpion – Type C, horizontal
Measurement date	10/1/2026

Measurement Conditions

Tested c-planes	72 planes – 5.00°
Tested gamma resolution	1.00°
Input Power	51.31 W

Tested Light Source

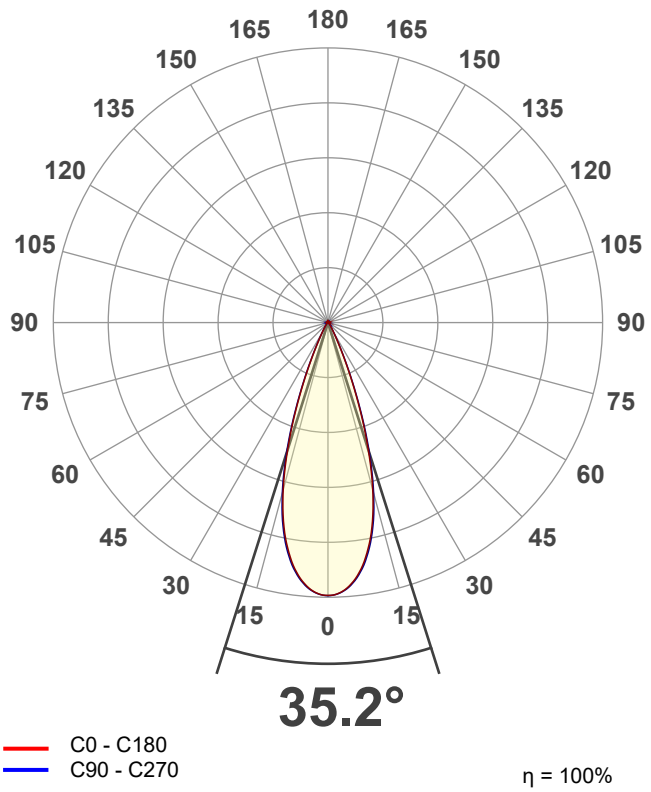
Luminaire	PRU1-CHANDELIER-4-35-90-BLACK-WHITE-NA
Basic Luminous Shape	NONE
Item No.	
Manufacturer	Prudential Lighting
Description	

Main Light Measurement Results

Output – Total Lumen (Up% / Down%)	4480 lm – 3.506% / 96.49%
Efficiency	87.33 lm/W
Peak Intensity	12270 cd
Correlated Color Temperature, CCT	3502 K
Color Rendering Index	CRI 94.6

Polar light distribution diagram

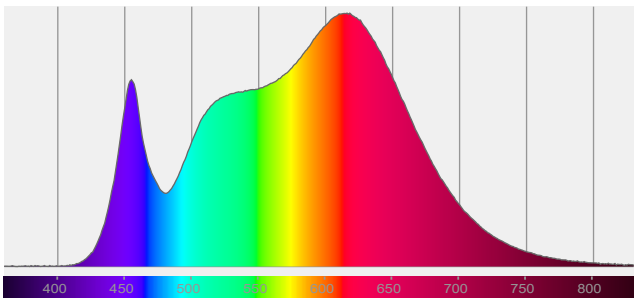
Unit: 0-100% of peak intensity



Zonal Lumen Summary:

VA/HA	0°	22.5°	45°	67.5°	90°
0°	12.26 kcd	12.26 kcd	12.26 kcd	12.26 kcd	12.26 kcd
5°	11.8 kcd	11.82 kcd	11.83 kcd	11.83 kcd	11.84 kcd
15°	7769 cd	7803 cd	7874 cd	7895 cd	7913 cd
25°	1569 cd	1577 cd	1609 cd	1604 cd	1617 cd
35°	242.9 cd	245.8 cd	247.3 cd	245.4 cd	246.1 cd
45°	72.78 cd	74.34 cd	75.22 cd	73.9 cd	76.11 cd
55°	40.43 cd	41.03 cd	42.37 cd	41.64 cd	44.07 cd
65°	28.37 cd	28.77 cd	30.46 cd	30.03 cd	31.28 cd
75°	16.25 cd	16.46 cd	18.4 cd	16.07 cd	17.77 cd
85°	2.61 cd	3.376 cd	4.665 cd	3.182 cd	2.767 cd
90°	0 cd	98.86 mcd	0.3133 cd	10.23 mcd	0.2119 cd

Spectral power distribution



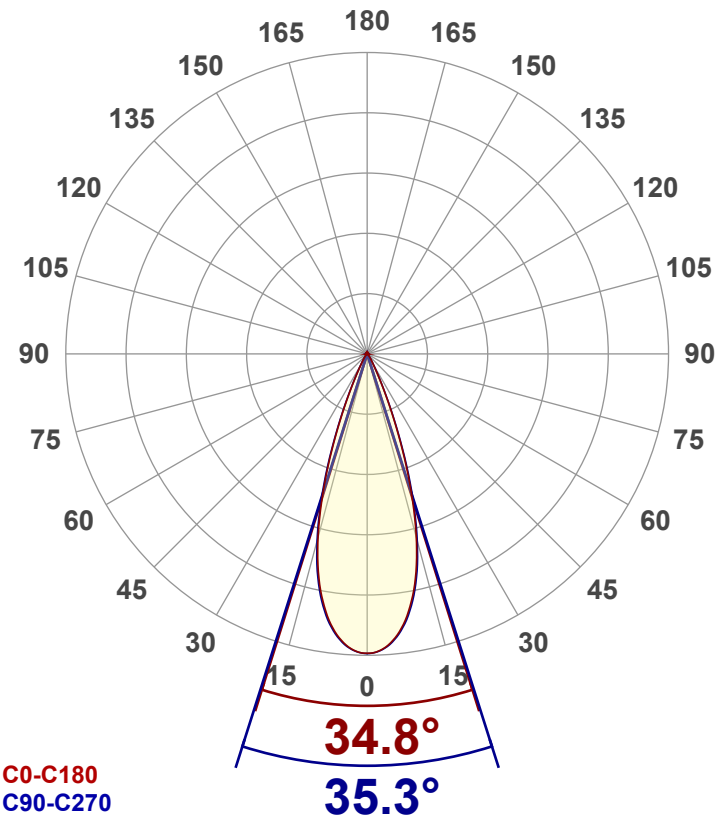
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Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Output (total Lumen)	4480 lm
Lumen Up% / Down%	3.506% / 96.49%
Peak Intensity	12.27 cd
Beam Angle (50%-FWHM)	35.2°

EU Ecodesign parameters

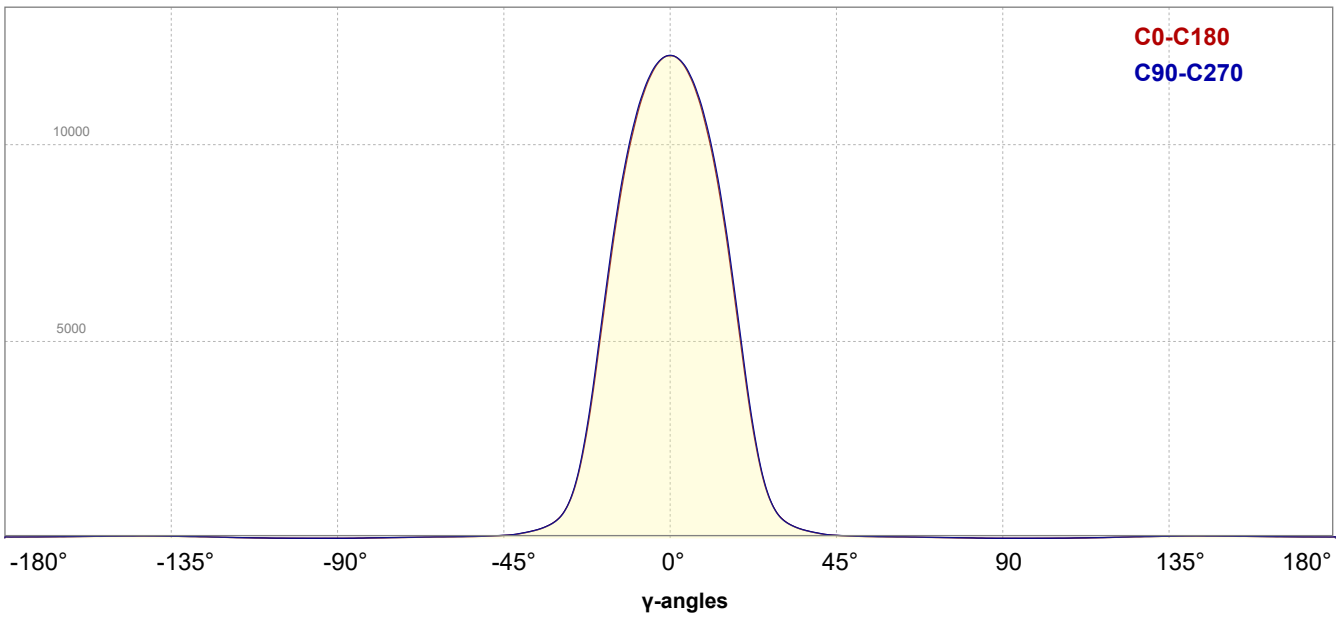
Directionality (DLS or NDLS)	DLS
Ecodesign Useful Luminous Flux	4209 lm
Ecodesign Energy Class	F

Intensity Ratio

In 120° cone	95.35%
In 90° cone	93.93%

Linear distribution diagram

Intensity [cd]

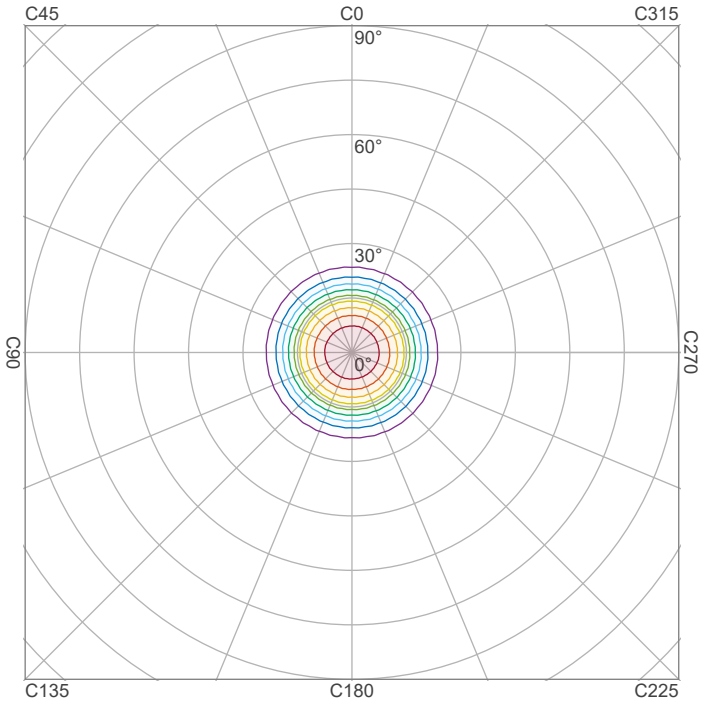


Prudential Lighting

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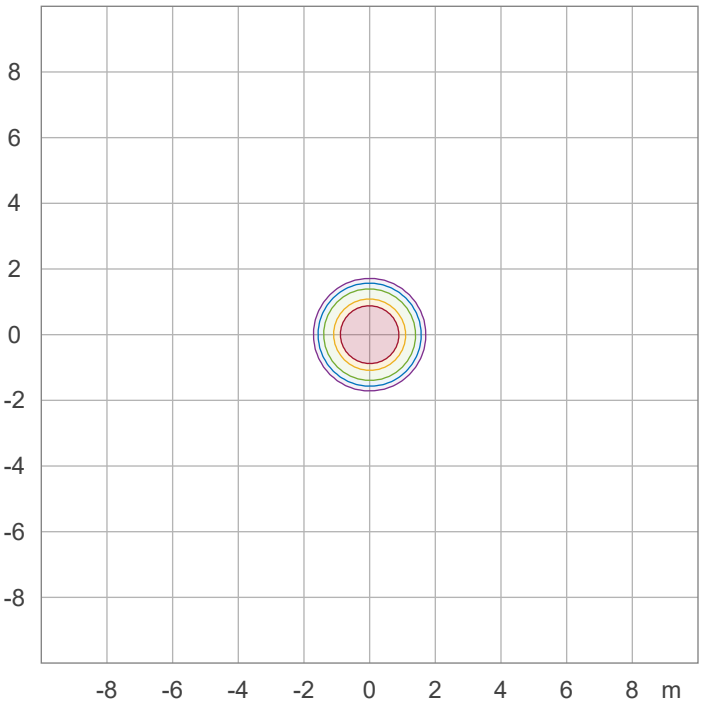
Iso-intensity Diagram (Iso-candela)



90 %	11031.9 cd
80 %	9806.2 cd
70 %	8580.4 cd
60 %	7354.6 cd
50 %	6128.9 cd
40 %	4903.1 cd
30 %	3677.3 cd
20 %	2451.5 cd
10 %	1225.8 cd

Peak intensity: 12257.7 cd
Number of c-planes: 72

Iso-illuminance Diagram (Iso-lux)



50.0 %	681 lx
30.0 %	409 lx
10.0 %	136 lx
5.0 %	68.1 lx
3.0 %	40.9 lx

Peak illuminance: 1362 lx
Mounting height: 3 m
Number of c-planes: 72

Prudential Lighting

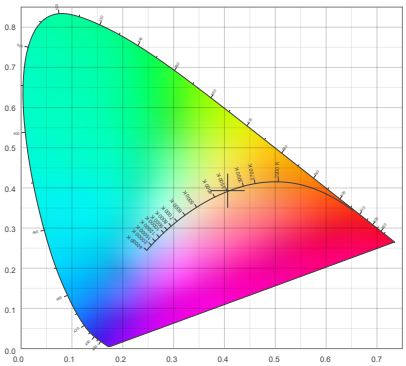
Light measurement results

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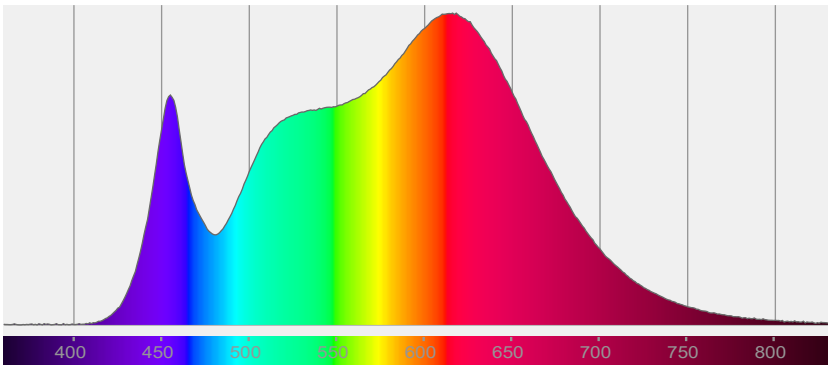
Color details

Correlated Color Temperature, Target	CCT = 3502 K	MacAdam Steps	SDCM = NaN
Correlated Color Temperature, Measured	CCT = 3502 K	Color deviation from BBL	Duv = 0.0009
Color Rendering Index	CRI 94.6	Color coordinates CIE 1931	(x;y) = (0.4063;0.3932)
Color Rendering Index, R9 (red)	R9 = 61.7	Color coordinate CIEs 1960	(u;v) = (0.2354;0.3416)
Color Rendering TM30-18	Rf 92.2	Color coordinate CIEs 1976	(u';v') = (0.2354;0.5124)
	Rg 98.5	Color Quality Scale	CQS = 93.7

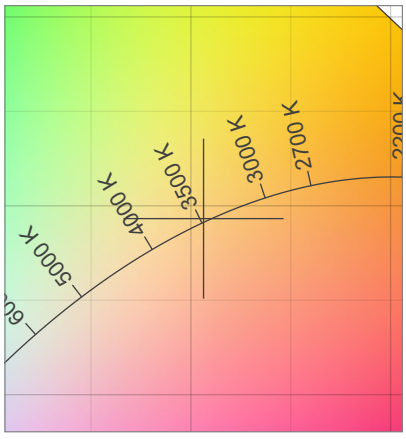
CIE 1931 Chromaticity diagram



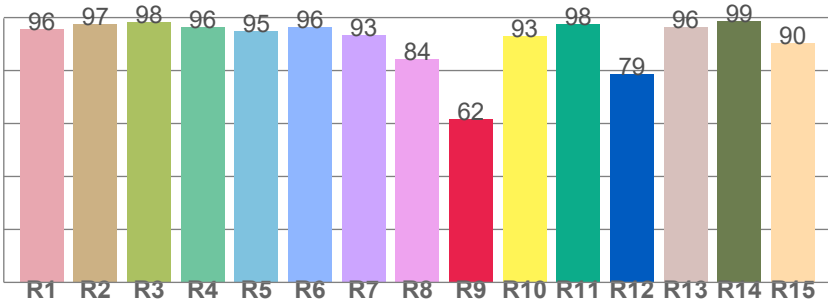
Spectral power distribution



CIE 1931 Chromaticity - zoomed



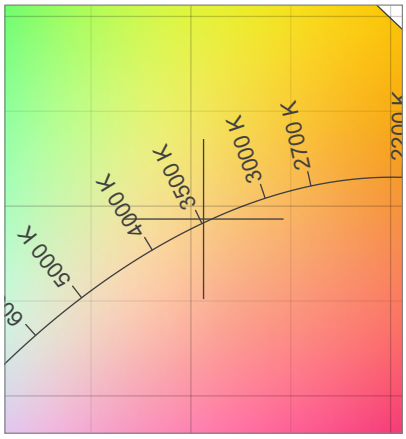
Color Rendering Index per reference color (CIE 1995)



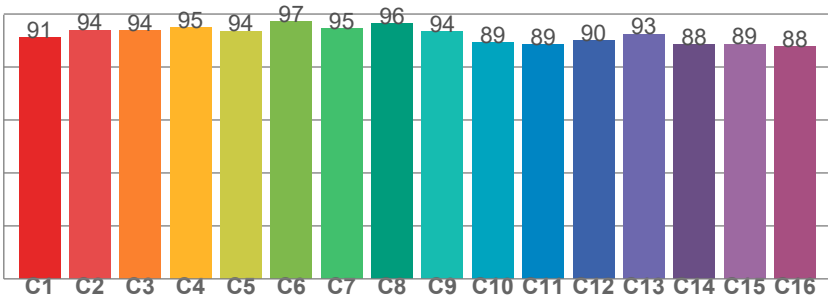
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
95.5	97.4	98.4	96.3	95.0	96.3	93.4	84.3	61.7	93.1	97.7	78.6	96.4	98.6	90.4

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
91.0	94.0	93.7	95.0	93.6	97.1	94.6	96.5	93.5	89.4	88.6	90.2	92.5	88.4	88.7	87.7

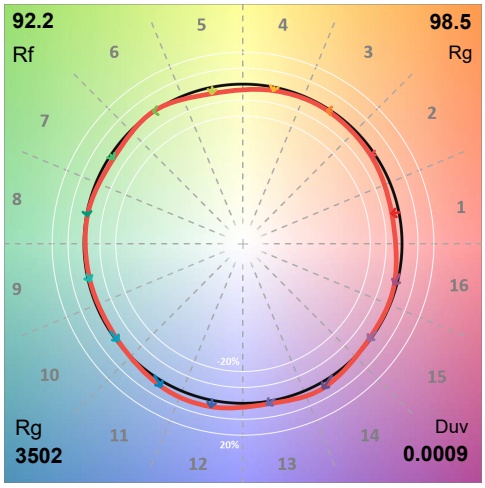
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Color details - ANSI/IES TM-30-18 Color Rendition Report

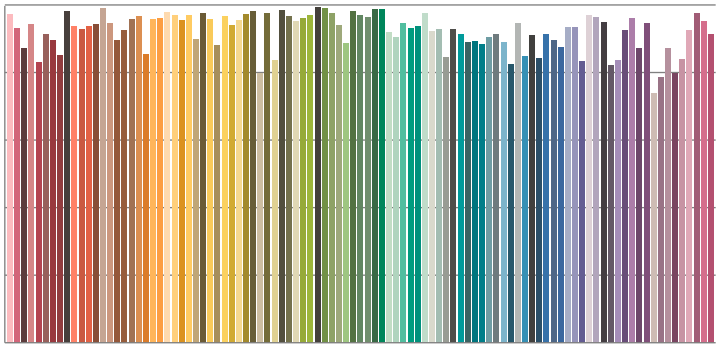
Color Vector Graphic



Color Distortion Graphic

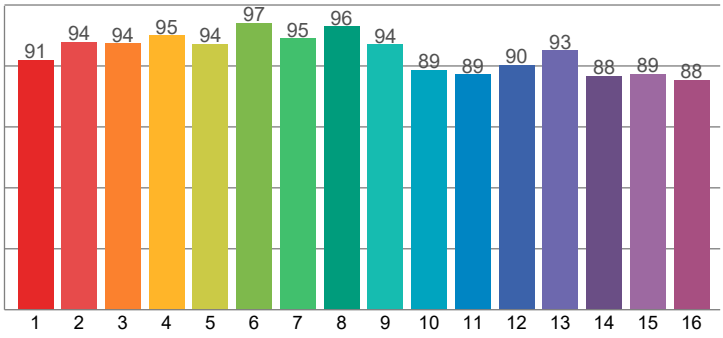


Color Rendition by Color Evaluation Sample (CES)



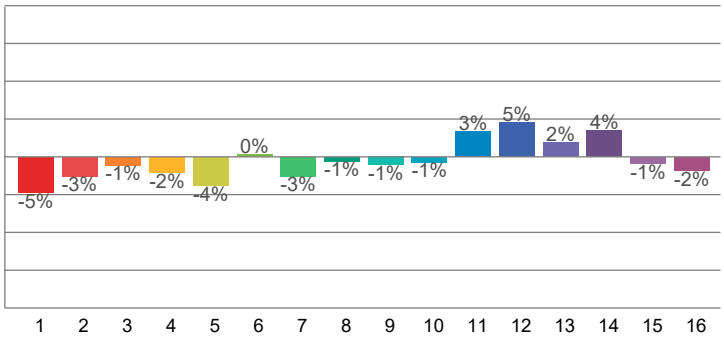
Color evaluation sample CES01 through CES99

Local Color Fidelity (per hue bin)



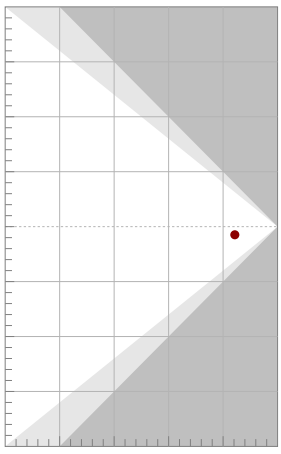
Hue angle bin (j)

Local Chroma Shift (per hue bin)



Hue angle bin (j)

Gamut Index vs. Fidelity Index



Gamut index (Rg)

Fidelity index (Rf)

CIE x	0.4063
CIE y	0.4063
CIE u'	0.2354
CIE v'	0.5124

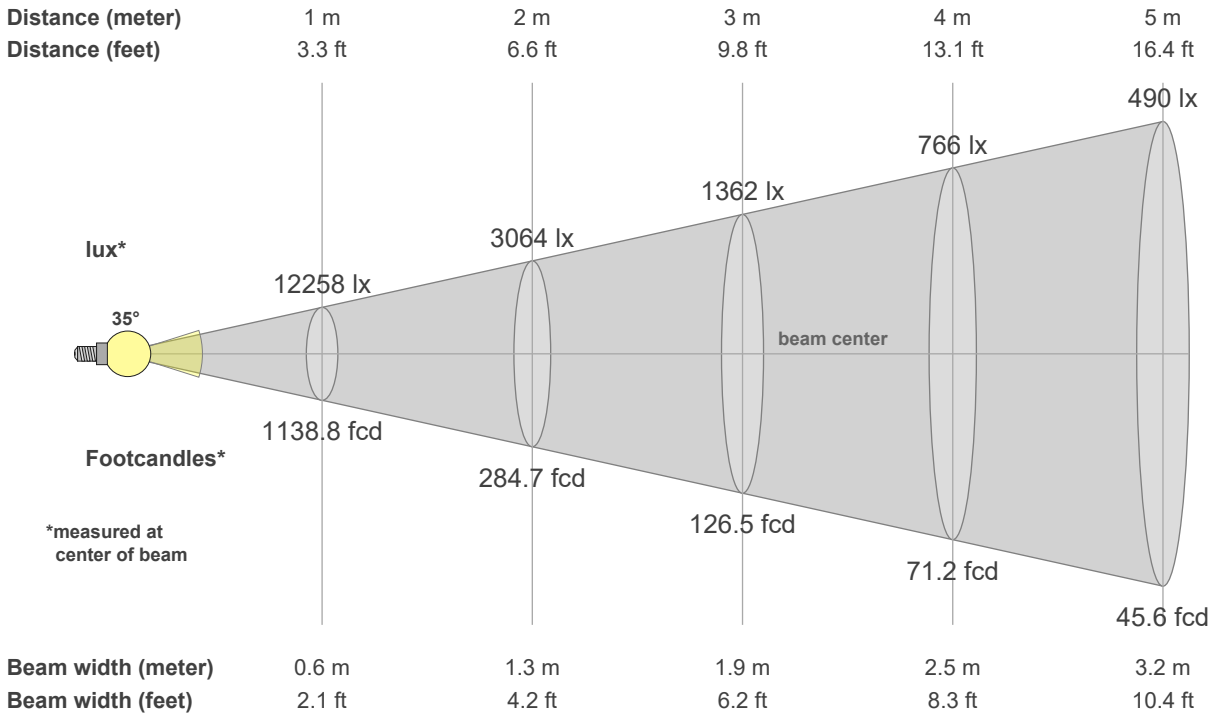
CIE	13.3-1995
Ra	94.6
R9	61.7

Prudential Lighting

Light measurement results

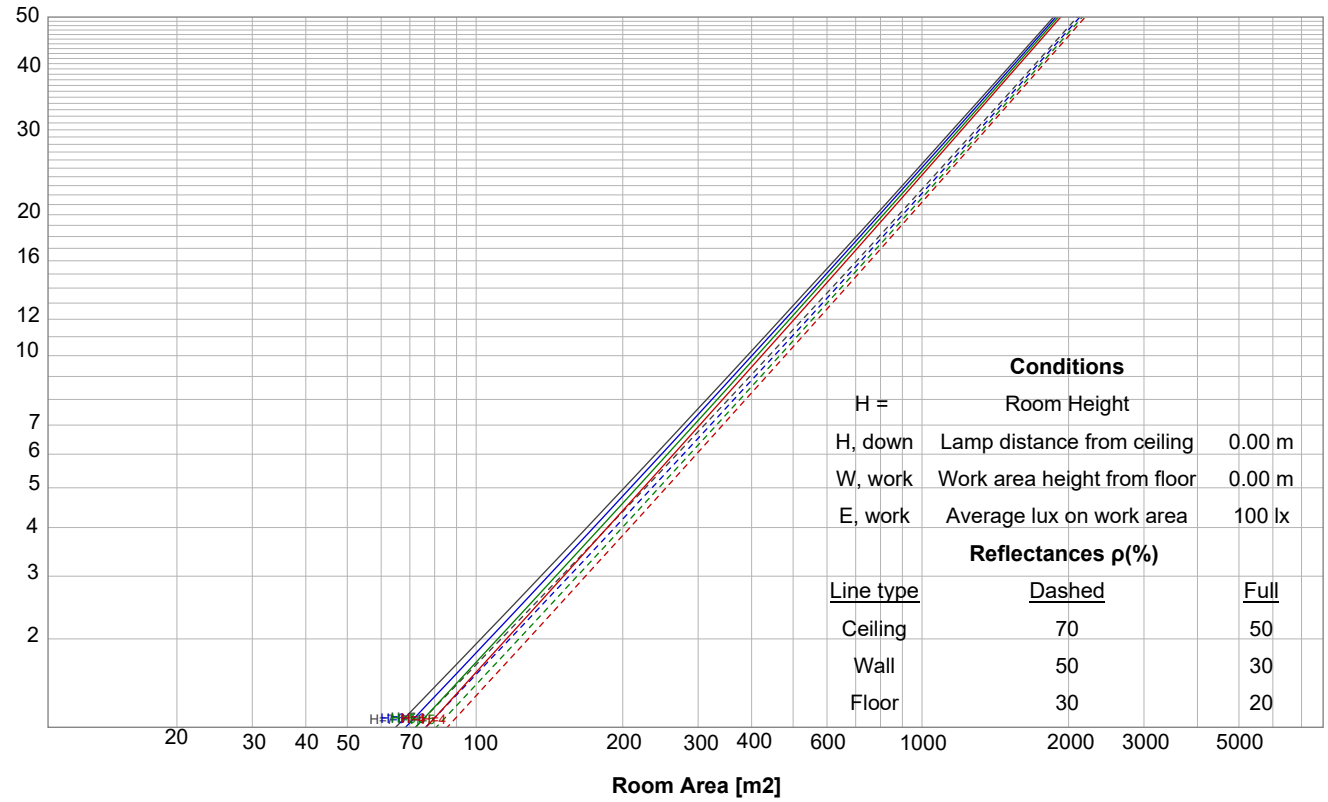
Print date 10/2/2026

Beam details



Luminaire budgetary diagram

LAMPS (number of lamps)



Prudential Lighting

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
12258	3064	1362	766	490	340	250	192	151	123	101	85	73	63	54	48	42	38	34	31	lux
1138.8	284.7	126.5	71.2	45.6	31.6	23.2	17.8	14.1	11.4	9.4	7.9	6.7	5.8	5.1	4.4	3.9	3.5	3.2	2.8	fc

Intensities in 0° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	γ
12.3k	12.2k	12.0k	11.6k	11.1k	10.3k	9.5k	8.4k	7.1k	5.7k	4.3k	3.0k	2.0k	1.2k	0.8k	0.5k	0.4k	0.3k	0.2k	0.2k	cd
100%	99%	98%	95%	90%	84%	77%	68%	58%	47%	35%	25%	16%	10%	6%	4%	3%	2%	2%	1%	of 0°val

Intensities in 90° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	γ
12.3k	12.2k	12.0k	11.6k	11.1k	10.4k	9.6k	8.5k	7.3k	5.9k	4.4k	3.1k	2.0k	1.3k	0.8k	0.5k	0.4k	0.3k	0.2k	0.2k	cd
100%	100%	98%	95%	91%	85%	78%	69%	59%	48%	36%	25%	17%	10%	6%	4%	3%	2%	2%	1%	of 0°val

Intensities in 180° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	γ
12.3k	12.2k	12.0k	11.6k	11.1k	10.3k	9.5k	8.4k	7.1k	5.7k	4.3k	3.0k	2.0k	1.2k	0.8k	0.5k	0.4k	0.3k	0.2k	0.2k	cd
100%	99%	98%	95%	90%	84%	77%	68%	58%	47%	35%	25%	16%	10%	6%	4%	3%	2%	2%	1%	of 0°val

Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	γ
12.3k	12.2k	12.0k	11.6k	11.1k	10.4k	9.6k	8.5k	7.3k	5.9k	4.4k	3.1k	2.0k	1.3k	0.8k	0.5k	0.4k	0.3k	0.2k	0.2k	cd
100%	100%	98%	95%	91%	85%	78%	69%	59%	48%	36%	25%	17%	10%	6%	4%	3%	2%	2%	1%	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**										
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
Variations with the observer position for the luminaire spacings, S:										
n/a	n/a					n/a				
n/a	n/a					n/a				
n/a	n/a					n/a				

UGR data could not be calculated due to missing light source dimensions. Go to Edit -> Photometric -> Dimensions and set the source dimensions.

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	118.2	118.2	118.2	118.2	115.1	115.1	115.1	115.1	109.2	109.2	109.2	103.8	103.8	103.8	98.8	98.8	98.8	96.5
1	113.6	111.2	109.0	107.1	110.8	108.7	106.8	105.1	104.0	102.6	101.2	99.8	98.6	97.6	95.8	95.0	94.2	92.2
2	109.1	105.1	101.7	98.8	106.7	103.1	100.0	97.5	99.4	96.9	94.8	95.9	94.0	92.3	92.8	91.3	89.9	88.2
3	105.0	99.8	95.7	92.4	102.9	98.2	94.5	91.5	95.1	92.1	89.6	92.4	89.9	87.8	89.8	87.8	86.1	84.5
4	101.2	95.1	90.6	87.2	99.3	93.8	89.7	86.5	91.3	87.9	85.2	89.0	86.2	83.9	86.9	84.5	82.6	81.2
5	97.6	90.9	86.3	82.8	95.9	89.8	85.5	82.3	87.8	84.1	81.3	85.9	82.8	80.3	84.1	81.5	79.4	78.0
6	94.2	87.2	82.4	79.1	92.7	86.3	81.9	78.7	84.5	80.7	77.9	82.9	79.6	77.1	81.4	78.6	76.4	75.1
7	91.0	83.8	79.0	75.7	89.7	83.0	78.6	75.4	81.5	77.6	74.8	80.1	76.8	74.2	78.9	75.9	73.6	72.5
8	88.1	80.6	76.0	72.8	86.8	80.0	75.6	72.5	78.7	74.8	72.0	77.5	74.1	71.5	76.4	73.4	71.1	69.9
9	85.3	77.8	73.2	70.1	84.2	77.2	72.8	69.9	76.1	72.2	69.5	75.1	71.6	69.1	74.1	71.0	68.7	67.6
10	82.6	75.1	70.6	67.6	81.6	74.6	70.3	67.4	73.6	69.8	67.1	72.7	69.3	66.8	71.9	68.7	66.5	65.4

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Power details

Input power	
Frequency of input power	60.0 Hz
Power feed to light source	51.31 W
RMS Input voltage feed V,RMS	120 V
RMS Input current feed I,RMS	0.44 A
Volt-Amp or apparent power = V,RMS*I,RMS	52.3 VA
Displacement factor of AC power feed	0.99
Power factor of AC current feed	0.98
Total harmonic distortion of the current	13.27%
Total harmonic distortion of the voltage	0.1404%

Input power curve



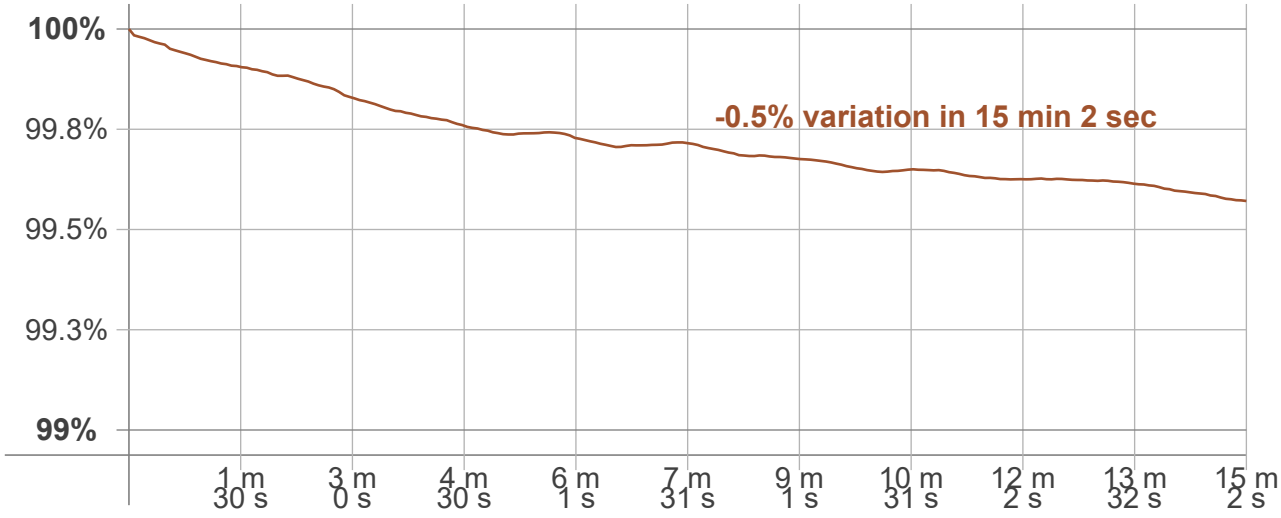
Efficiency

Radiated power efficiency	28.96
Lumen efficiency	87.33 lm/W

Stabilization details

Warmup Conditions		Color Temperature Change	
Stable period	15 min	CCT start	3503 K
Stable change max	1%	CCT shift	-1 K
Minimum time	15 min	CCT end	3502 K
Warmup Result		**Output Change**	
Total warmup time	Lamp stabilized in	Output start	4500 lm
Warmup variation	-0.544%	Output change	-19.785 lm
		Output end	4480 lm

Stabilization Curve



Prudential Lighting

Flicker TLA details

Flicker Meter Type	Viso Systems LabFlicker
Frequency of input power	60.0 Hz
Flicker/TLA sample rate	NaN samples/s

Measurement time

PstLM	180 sec.
All other indices	1,5 sec,

Flicker indices according to Illuminating Engineering Society (IES)

Flicker frequency	NaN Hz
Percent Flicker	NaN %
Flicker index	NaN

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

PstLM value (F < 80 Hz)	NaN
SVM value (80 < F < 2000 Hz)	NaN

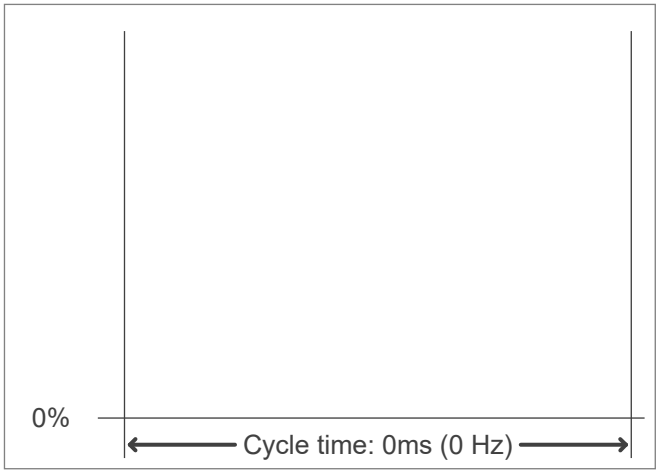
Flicker indices according to California Energy Commission (CEC) 2016b

JA8/10 40 Hz	NaN %
JA8/10 90 Hz	NaN %
JA8/10 200 Hz	NaN %
JA8/10 400 Hz	NaN %
JA8/10 1000 Hz	NaN %

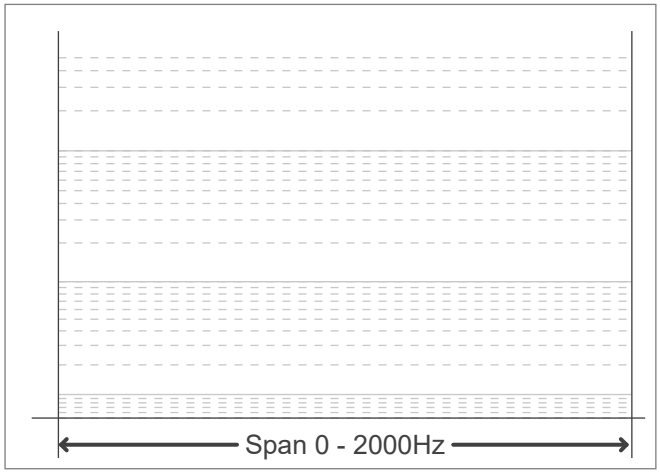
Flicker indices according to Lighting Research Center (2015)

Perception metric, Assist Mp	NaN

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



Flicker FFT (flicker curve in frequency domain)



IEEE 1789 Frequency/modulation plot

