Prudential Lighting

Light measurement results

Print date 8/13/2026

Laboratory and Equipment

Test lab	Viso LabSpion - serial: 2435469709 sensor serial: 0895736217 - T
Spectrometer Manufacturer and Model	LabSpion – Type C, horizontal
Measurement date	7/27/2026

Measurement Conditions

Tested c-planes	72 planes – 5.00°
Tested gamma resolution	0.45°
Input Power	15.66 W

Tested Light Source

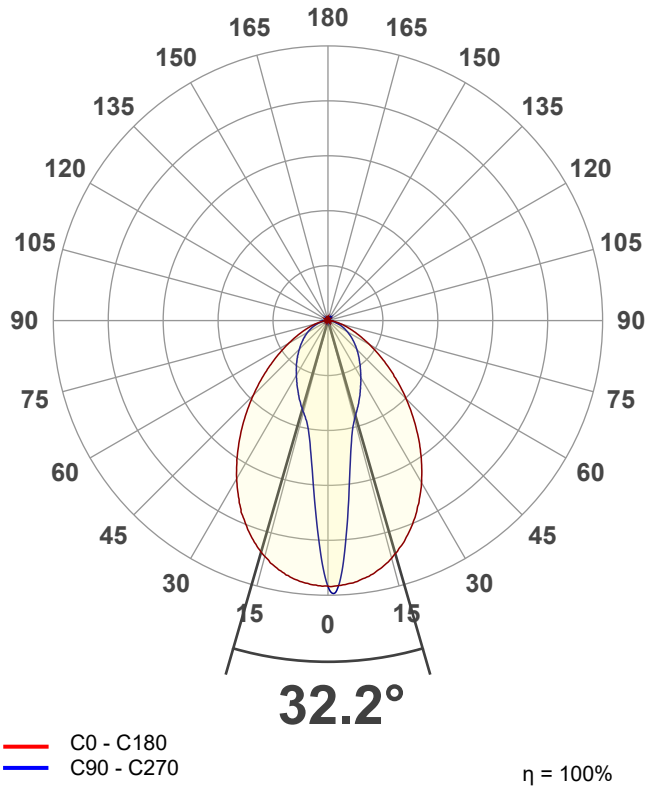
Luminaire	BPRO2-LIN-FLSH-LED35-LO-04-NGZ-NU-SC-DM01
Basic Luminous Shape	NONE
Item No.	
Manufacturer	Prudential Lighting
Description	

Main Light Measurement Results

Output – Total Lumen (Up% / Down%)	1901 lm – 1.643% / 98.36%
Efficiency	121.3 lm/W
Peak Intensity	1956 cd
Correlated Color Temperature, CCT	3435 K
Color Rendering Index	CRI 84.6

Polar light distribution diagram

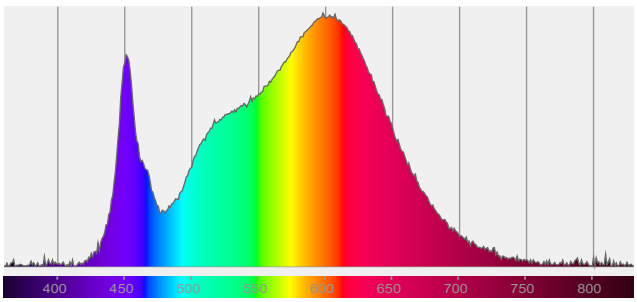
Unit: 0-100% of peak intensity



Zonal Lumen Summary:

VA/HA	0°	22.5°	45°	67.5°	90°
0°	1758 cd	1758 cd	1758 cd	1758 cd	1758 cd
5°	1745 cd	1911 cd	1815 cd	1717 cd	1406 cd
15°	1627 cd	1479 cd	934.7 cd	786.1 cd	678.1 cd
25°	1391 cd	976.6 cd	643.6 cd	574.2 cd	506.6 cd
35°	1070 cd	697.4 cd	476.2 cd	418.3 cd	372.8 cd
45°	730.2 cd	501.4 cd	339.4 cd	300.6 cd	270.3 cd
55°	435.8 cd	336 cd	231.8 cd	205.8 cd	186.3 cd
65°	221.7 cd	198.8 cd	142.7 cd	129.1 cd	114.9 cd
75°	95.22 cd	94.41 cd	72.52 cd	64.15 cd	55.44 cd
85°	24 cd	23.97 cd	19.32 cd	14.9 cd	12.25 cd
90°	2.55 cd	0.4649 cd	0.9413 cd	0.7814 cd	0.9329 cd

Spectral power distribution



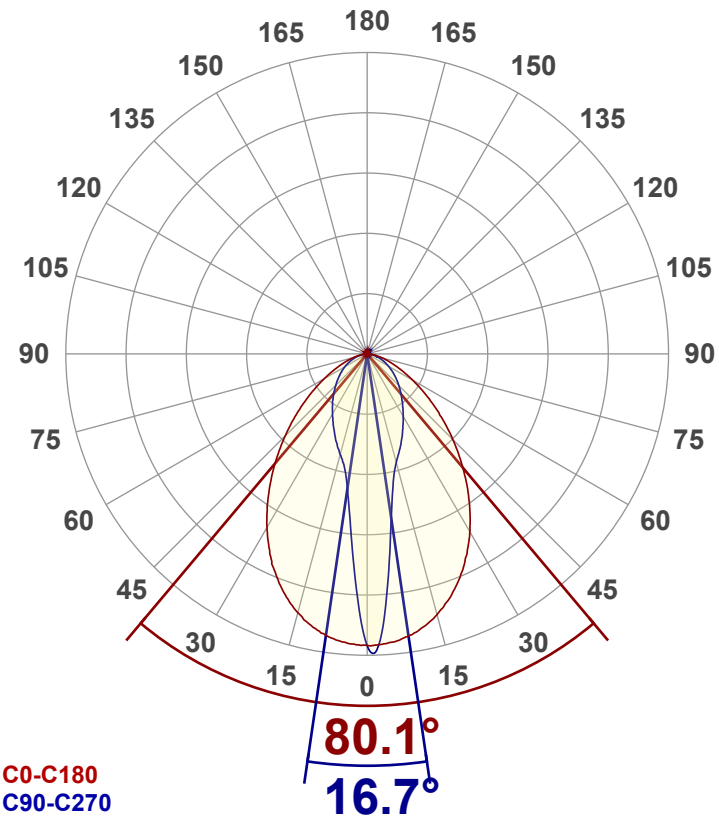
Prudential Lighting

Light measurement results

Print date 8/13/2026

Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Output (total Lumen)	1901 lm
Lumen Up% / Down%	1.643% / 98.36%
Peak Intensity	1956 cd
Beam Angle (50%-FWHM)	32.2°

EU Ecodesign parameters

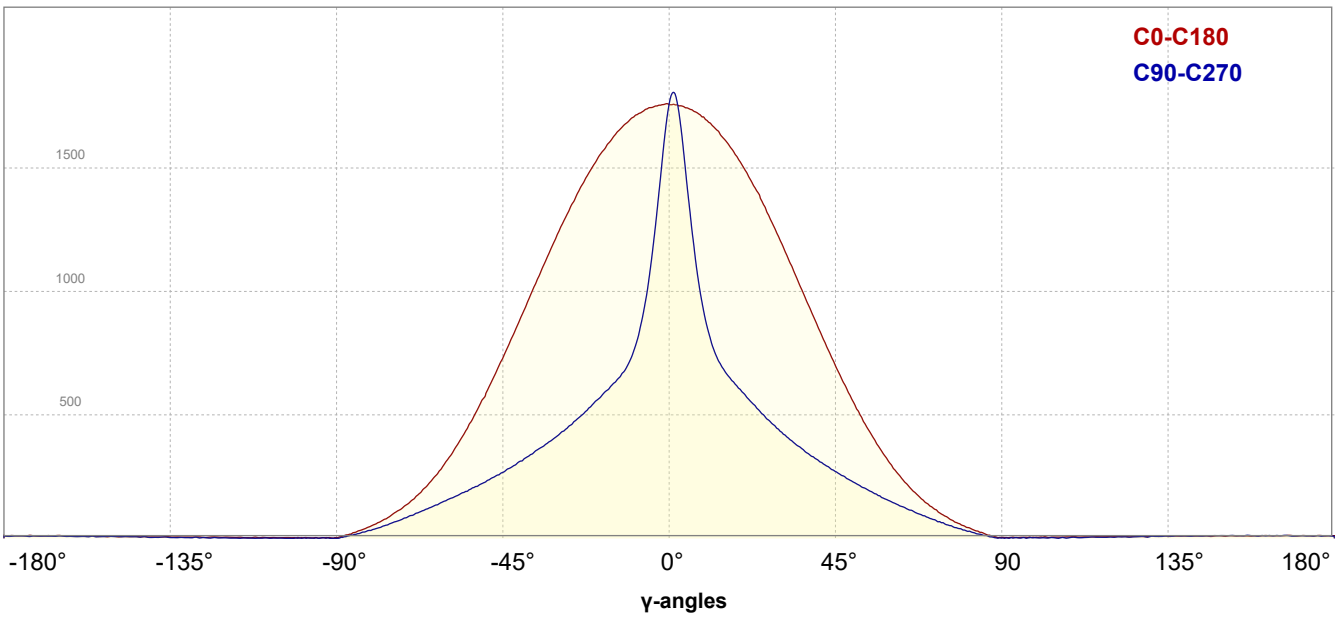
Directionality (DLS or NDLS)	DLS
Ecodesign Useful Luminous Flux	1239 lm
Ecodesign Energy Class	F

Intensity Ratio

In 120° cone	85.02%
In 90° cone	65.21%

Linear distribution diagram

Intensity [cd]

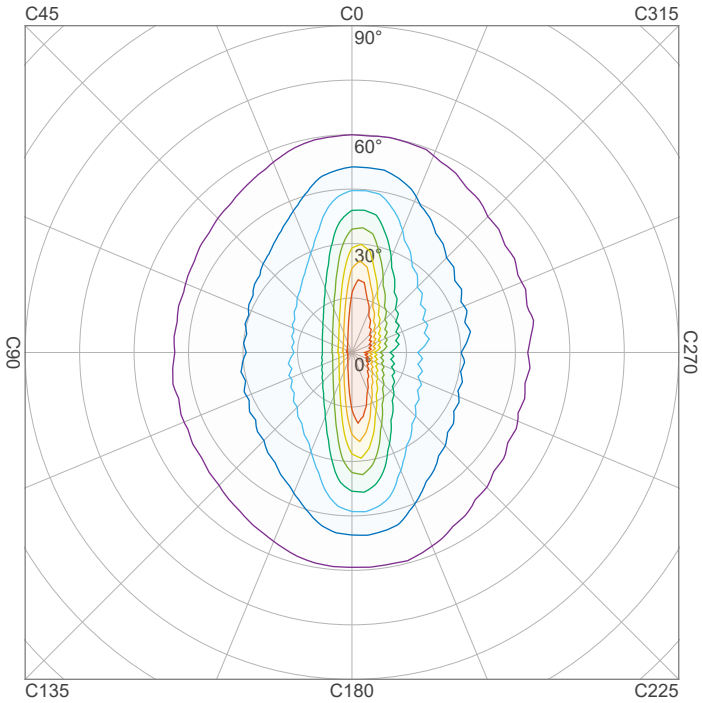


Prudential Lighting

Light measurement results

Print date 8/13/2026

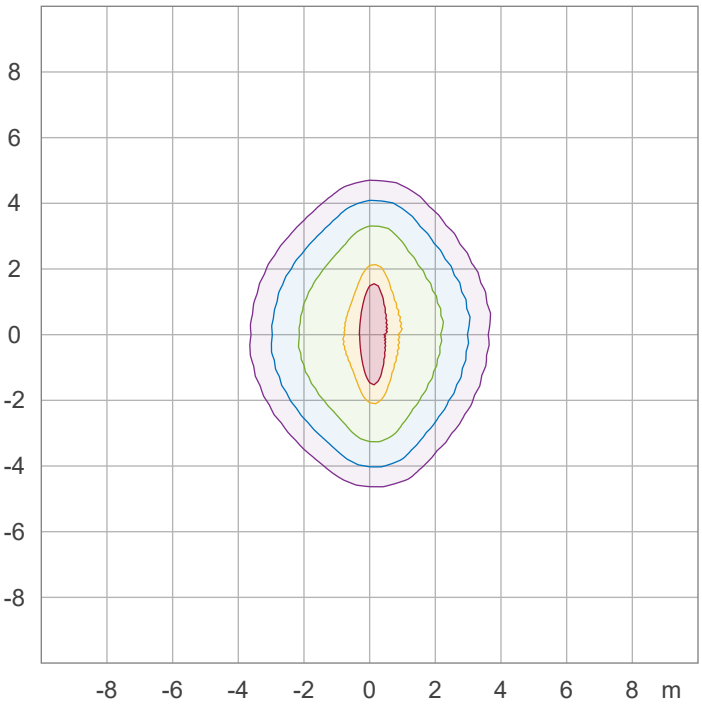
Iso-intensity Diagram (Iso-candela)



90 %	1760.1 cd
80 %	1564.5 cd
70 %	1368.9 cd
60 %	1173.4 cd
50 %	977.8 cd
40 %	782.2 cd
30 %	586.7 cd
20 %	391.1 cd
10 %	195.6 cd

Peak intensity: 1955.6 cd
Number of c-planes: 72

Iso-illuminance Diagram (Iso-lux)



50.0 %	108 lx
30.0 %	64.9 lx
10.0 %	21.6 lx
5.0 %	10.8 lx
3.0 %	6.49 lx

Peak illuminance: 216 lx
Mounting height: 3 m
Number of c-planes: 72

Prudential Lighting

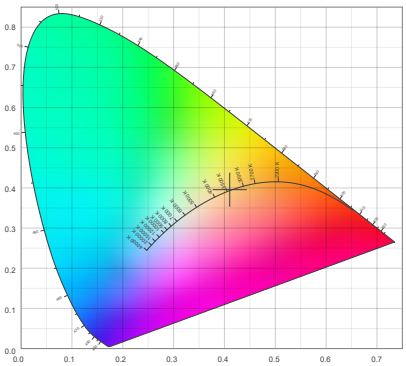
Light measurement results

Print date 8/13/2026

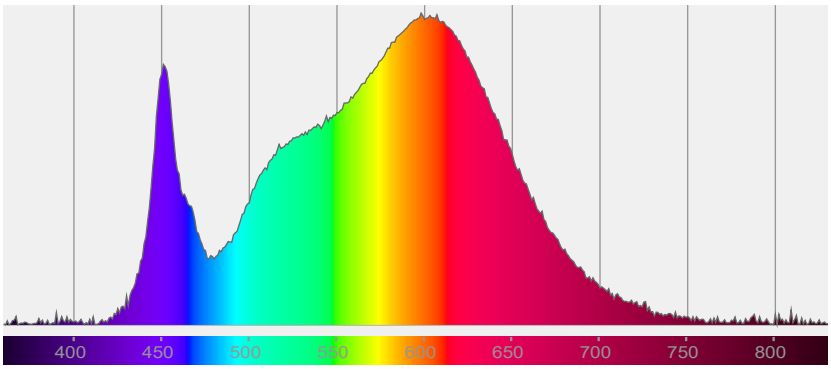
Color details

Correlated Color Temperature, Target	CCT = 3435 K	MacAdam Steps	SDCM = NaN
Correlated Color Temperature, Measured	CCT = 3435 K	Color deviation from BBL	Duv = 0.0011
Color Rendering Index	CRI 84.6	Color coordinates CIE 1931	(x;y) = (0.4104;0.3956)
Color Rendering Index, R9 (red)	R9 = 12.4	Color coordinate CIEs 1960	(u;v) = (0.2370;0.3427)
Color Rendering TM30-18	Rf 85.7	Color coordinate CIEs 1976	(u';v') = (0.2370;0.5140)
	Rg 96.0	Color Quality Scale	CQS = 84.2

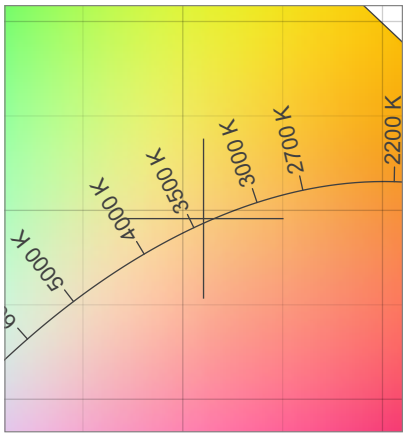
CIE 1931 Chromaticity diagram



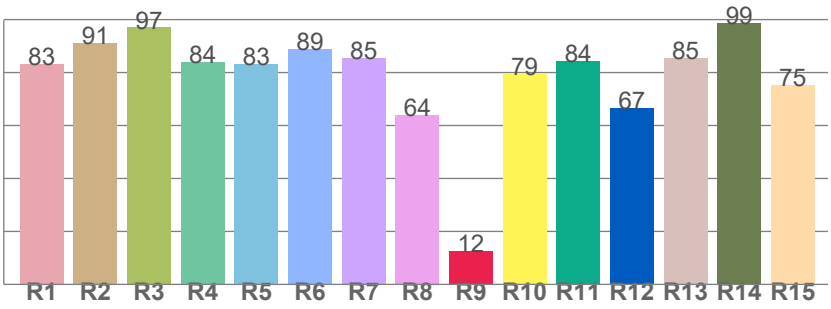
Spectral power distribution



CIE 1931 Chromaticity - zoomed



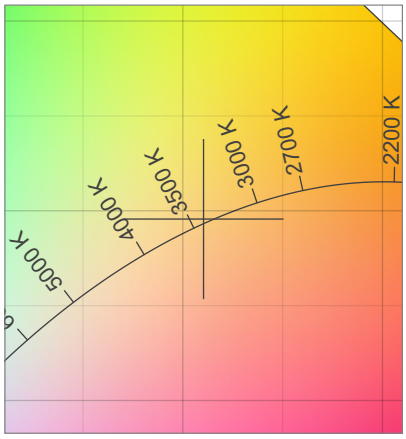
Color Rendering Index per reference color (CIE 1995)



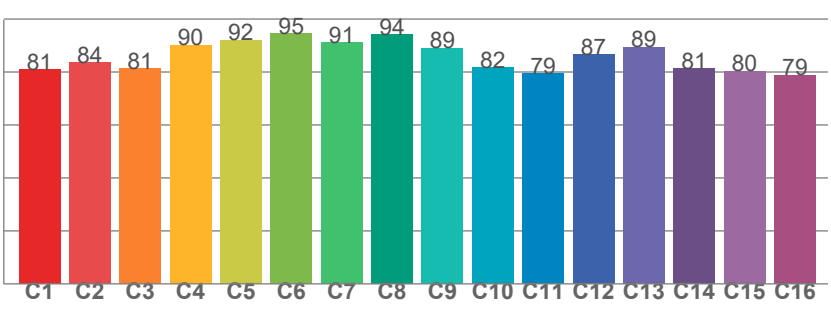
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
83.2	91.1	97.0	84.0	83.2	88.8	85.4	63.8	12.4	79.5	84.3	66.7	85.3	98.7	75.3

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
81.1	83.6	81.3	90.2	92.1	94.6	91.0	94.1	89.1	81.6	79.5	86.7	89.5	81.4	80.4	78.9

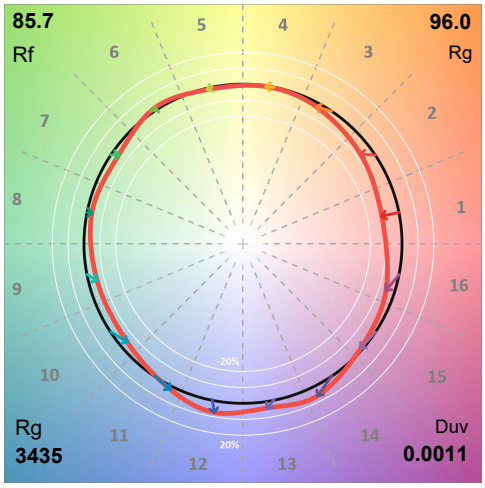
Prudential Lighting

Light measurement results

Print date 8/13/2026

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

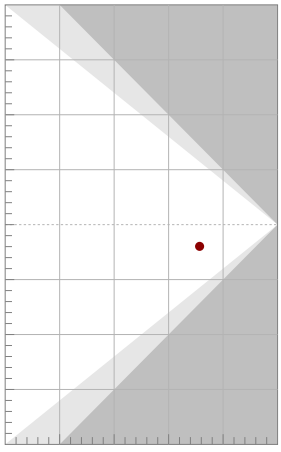
Color Vector Graphic



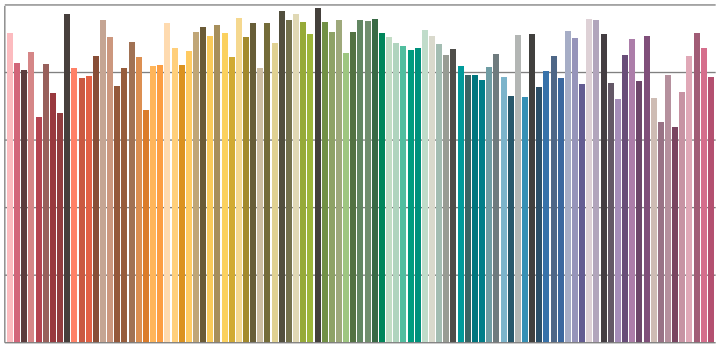
Color Distortion Graphic



Gamut Index vs. Fidelity Index

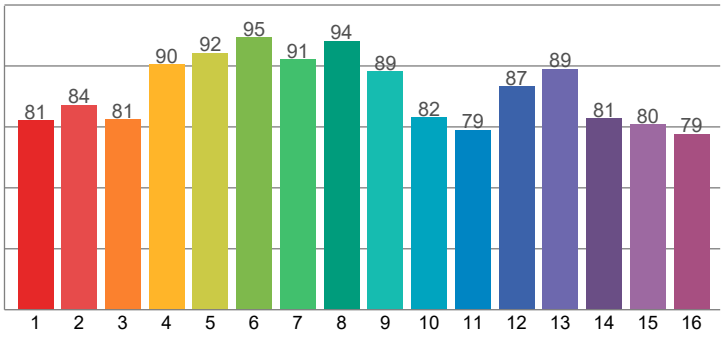


Color Rendition by Color Evaluation Sample (CES)

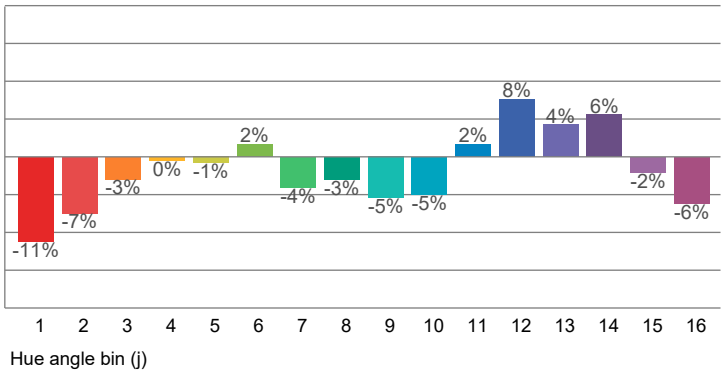


Color evaluation sample CES01 through CES99

Local Color Fidelity (per hue bin)



Local Chroma Shift (per hue bin)



CIE x	0.4104
CIE y	0.4104
CIE u'	0.2370
CIE v'	0.5140

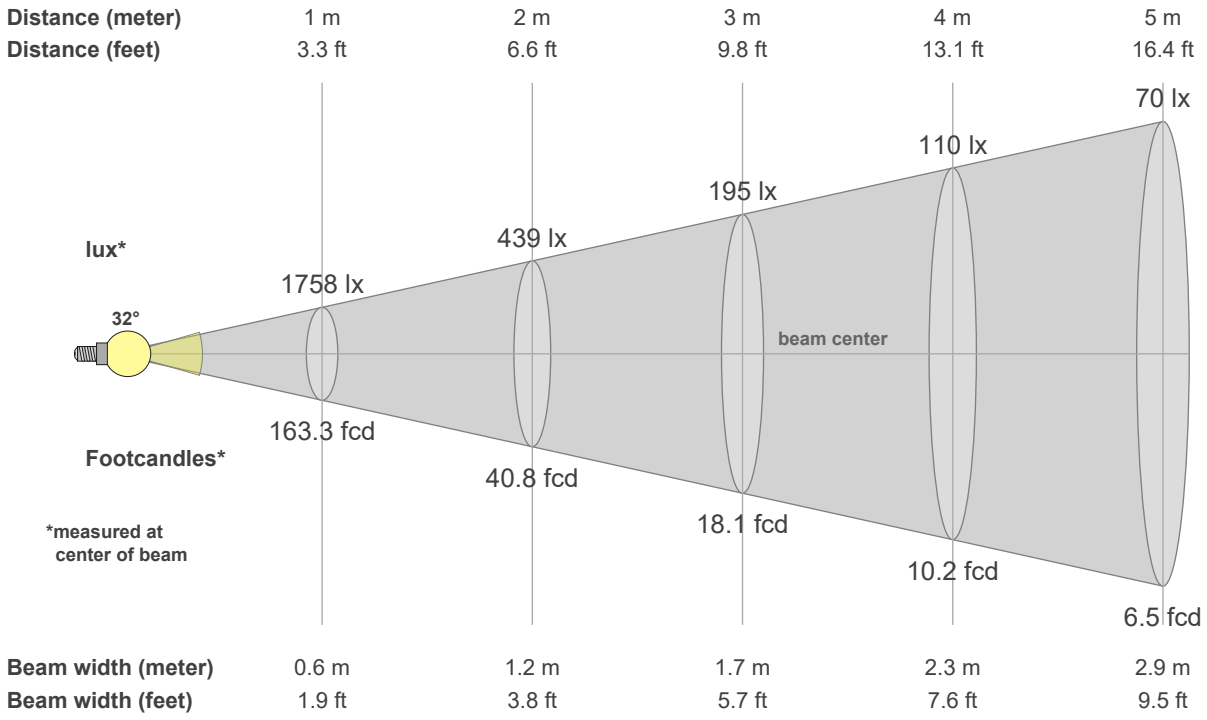
CIE	13.3-1995
Ra	84.6
R9	12.4

Prudential Lighting

Light measurement results

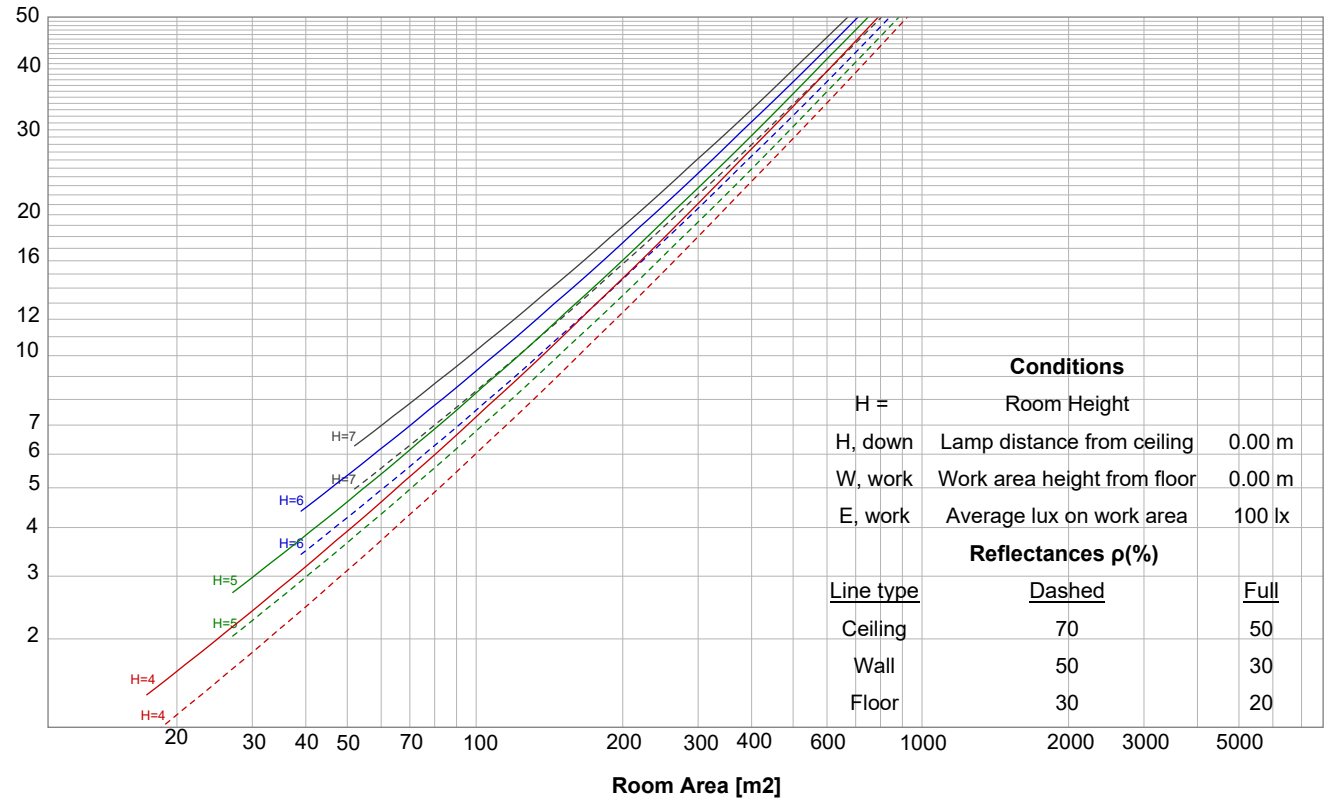
Print date 8/13/2026

Beam details



Luminaire budgetary diagram

LAMPS (number of lamps)



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
1758	439	195	110	70	49	36	27	22	18	15	12	10	9	8	7	6	5	5	4	lux
163.3	40.8	18.1	10.2	6.5	4.5	3.3	2.6	2	1.6	1.3	1.1	1	0.8	0.7	0.6	0.6	0.5	0.5	0.4	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
1758	1745	1704	1628	1521	1391	1238	1070	899	730	571	436	318	222	149	95	54	24	3	1	cd
100%	99%	97%	93%	87%	79%	70%	61%	51%	42%	32%	25%	18%	13%	8%	5%	3%	1%	0%	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
1758	1406	873	678	589	506	434	373	319	270	226	186	149	115	85	55	33	12	1	1	cd
100%	80%	50%	39%	34%	29%	25%	21%	18%	15%	13%	11%	8%	7%	5%	3%	2%	1%	0%	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
1758	1742	1695	1615	1505	1368	1208	1037	866	699	547	413	299	208	139	88	49	21	3	4	cd
100%	99%	96%	92%	86%	78%	69%	59%	49%	40%	31%	23%	17%	12%	8%	5%	3%	1%	0%	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
1758	1102	741	628	554	481	418	365	313	267	226	190	156	122	92	62	36	16	0	0	cd
100%	63%	42%	36%	32%	27%	24%	21%	18%	15%	13%	11%	9%	7%	5%	4%	2%	1%	0%	0%	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
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	118.7	118.7	118.7	118.7	115.7	115.7	115.7	115.7	110.2	110.2	110.2	105.2	105.2	105.2	100.5	100.5	100.5	98.4
1	110.0	105.9	102.2	98.9	107.2	103.5	100.2	97.2	99.0	96.3	93.8	94.9	92.7	90.7	91.1	89.4	87.7	85.6
2	101.5	94.3	88.4	83.5	98.8	92.4	87.0	82.4	88.6	84.1	80.2	85.2	81.5	78.2	82.1	79.0	76.3	74.2
3	93.8	84.5	77.4	71.7	91.3	82.9	76.3	71.0	79.8	74.2	69.6	76.9	72.2	68.2	74.2	70.3	66.9	64.8
4	86.9	76.3	68.5	62.6	84.6	74.9	67.7	62.1	72.3	66.0	61.1	69.9	64.5	60.1	67.6	63.0	59.2	57.2
5	80.7	69.3	61.3	55.4	78.7	68.1	60.6	55.0	65.9	59.4	54.3	63.9	58.1	53.6	62.0	57.0	52.9	51.0
6	75.3	63.3	55.3	49.6	73.4	62.4	54.8	49.3	60.5	53.8	48.8	58.7	52.8	48.3	57.1	51.8	47.7	45.8
7	70.4	58.2	50.3	44.8	68.7	57.4	49.9	44.6	55.8	49.1	44.2	54.3	48.3	43.8	52.9	47.5	43.4	41.6
8	66.1	53.8	46.1	40.8	64.5	53.1	45.8	40.7	51.7	45.1	40.3	50.4	44.4	40.0	49.2	43.8	39.7	38.0
9	62.2	50.0	42.5	37.5	60.8	49.4	42.2	37.3	48.2	41.6	37.1	47.0	41.1	36.8	45.9	40.5	36.6	34.9
10	58.7	46.6	39.4	34.6	57.5	46.1	39.2	34.5	45.0	38.7	34.3	44.0	38.2	34.1	43.1	37.7	33.9	32.3

Prudential Lighting

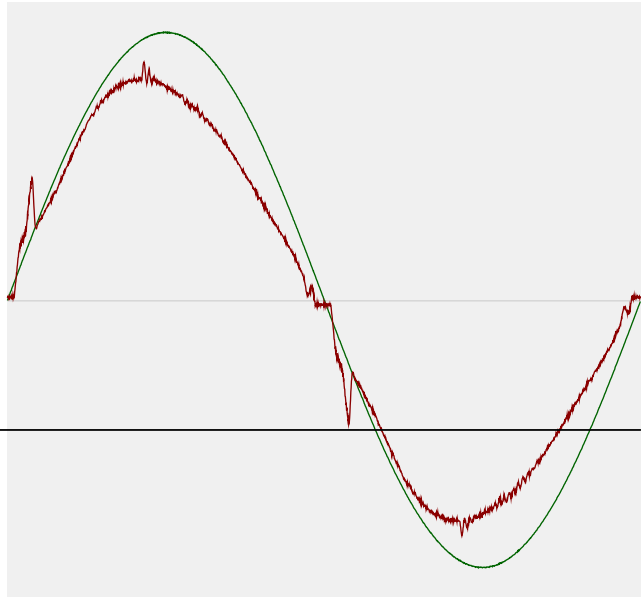
Light measurement results

Print date 8/13/2026

Power details

Input power	
Frequency of input power	60.0 Hz
Power feed to light source	15.66 W
RMS Input voltage feed V,RMS	120 V
RMS Input current feed I,RMS	0.13 A
Volt-Amp or apparent power = V,RMS*I,RMS	15.8 VA
Displacement factor of AC power feed	0.99
Power factor of AC current feed	0.99
Total harmonic distortion of the current	6.465%
Total harmonic distortion of the voltage	0.0978%

Input power curve



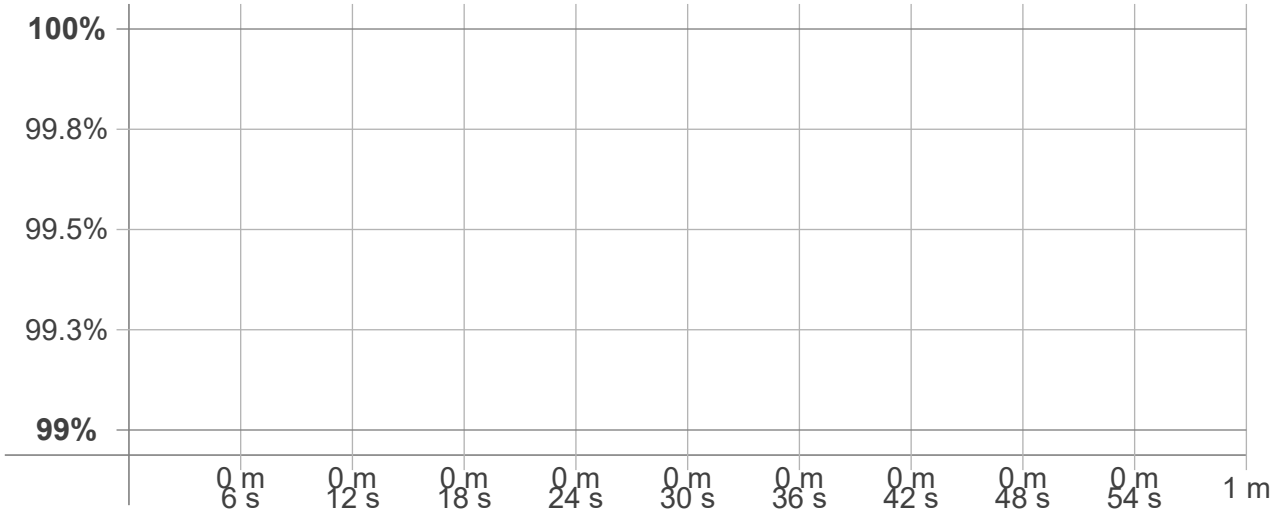
Efficiency

Radiated power efficiency	36.48
Lumen efficiency	121.3 lm/W

Stabilization details

Warmup Conditions		Color Temperature Change	
Stable period	n/a	CCT start	NaN K
Stable change max	n/a%	CCT shift	NaN K
Minimum time	n/a	CCT end	3435 K
Warmup Result		**Output Change**	
Total warmup time	n/a	Output start	NaN lm
Warmup variation	NaN%	Output change	NaN lm
		Output end	1901 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

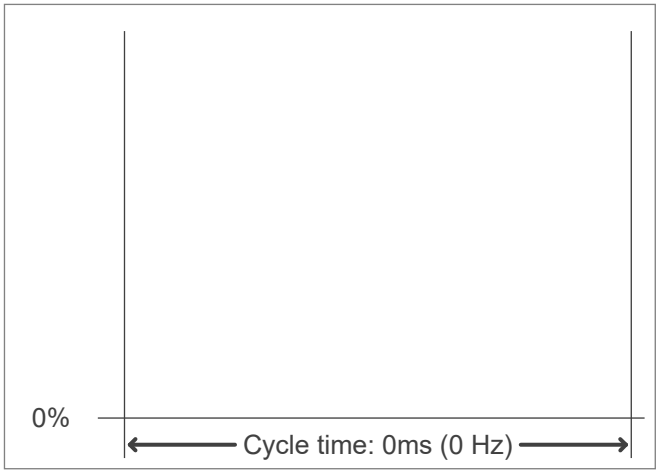
Flicker indices according to California Energy Commission (CEC) 2016b

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 %

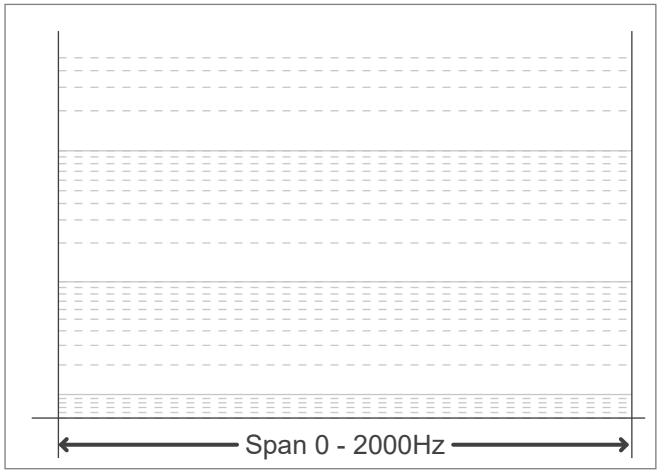
Flicker indices according to Lighting Research Center (2015)

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

