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	23.15 W

Tested Light Source

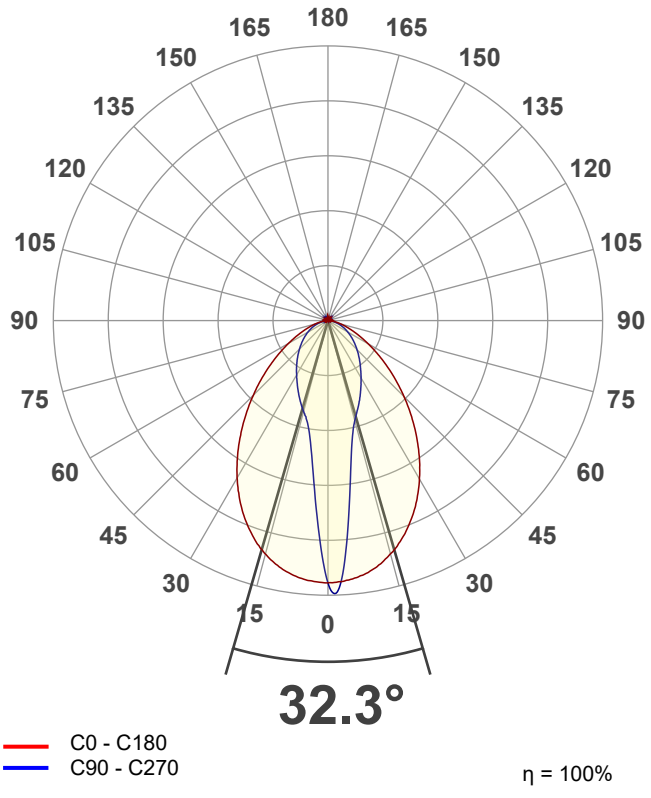
Luminaire	BPRO2-LIN-FLSH-LED35-MO-04-NGZ-NU-SC-DM01
Basic Luminous Shape	NONE
Item No.	
Manufacturer	Prudential Lighting
Description	

Main Light Measurement Results

Output – Total Lumen (Up% / Down%)	2819 lm – 1.944% / 98.06%
Efficiency	121.8 lm/W
Peak Intensity	2844 cd
Correlated Color Temperature, CCT	3447 K
Color Rendering Index	CRI 84.3

Polar light distribution diagram

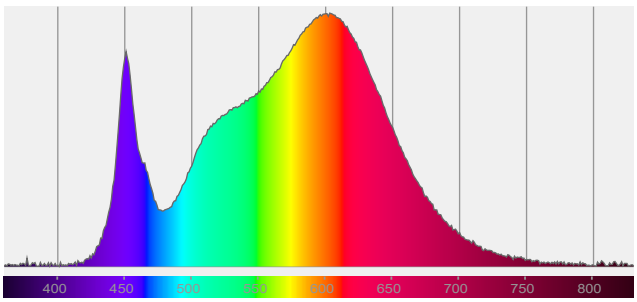
Unit: 0-100% of peak intensity



Zonal Lumen Summary:

VA/HA	0°	22.5°	45°	67.5°	90°
0°	2594 cd	2594 cd	2594 cd	2594 cd	2594 cd
5°	2570 cd	2797 cd	2609 cd	2437 cd	2168 cd
15°	2389 cd	2140 cd	1338 cd	1126 cd	1025 cd
25°	2040 cd	1414 cd	930.2 cd	828.6 cd	764.5 cd
35°	1564 cd	1013 cd	687.5 cd	602.9 cd	559.8 cd
45°	1064 cd	726.5 cd	490.7 cd	434.8 cd	405.6 cd
55°	632.3 cd	486.1 cd	336.4 cd	298 cd	280.1 cd
65°	321.2 cd	287.4 cd	207.3 cd	185.3 cd	178.3 cd
75°	136.6 cd	135.6 cd	103 cd	92.07 cd	87.85 cd
85°	33.78 cd	34.36 cd	25.96 cd	22.02 cd	22.61 cd
90°	4.175 cd	2.384 cd	3.142 cd	1.53 cd	3.672 cd

Spectral power distribution



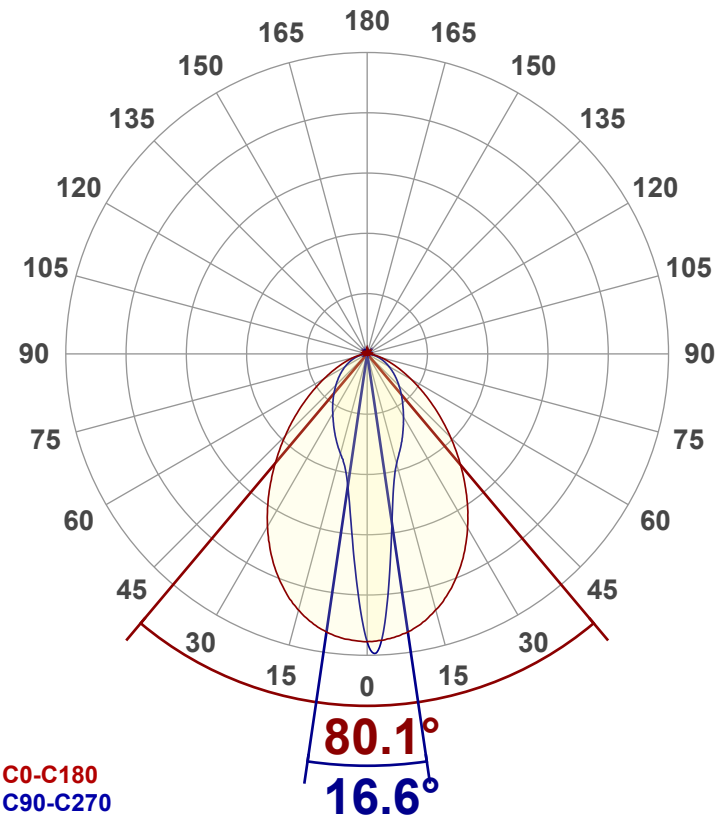
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Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Output (total Lumen)	2819 lm
Lumen Up% / Down%	1.944% / 98.06%
Peak Intensity	2844 cd
Beam Angle (50%-FWHM)	32.3°

EU Ecodesign parameters

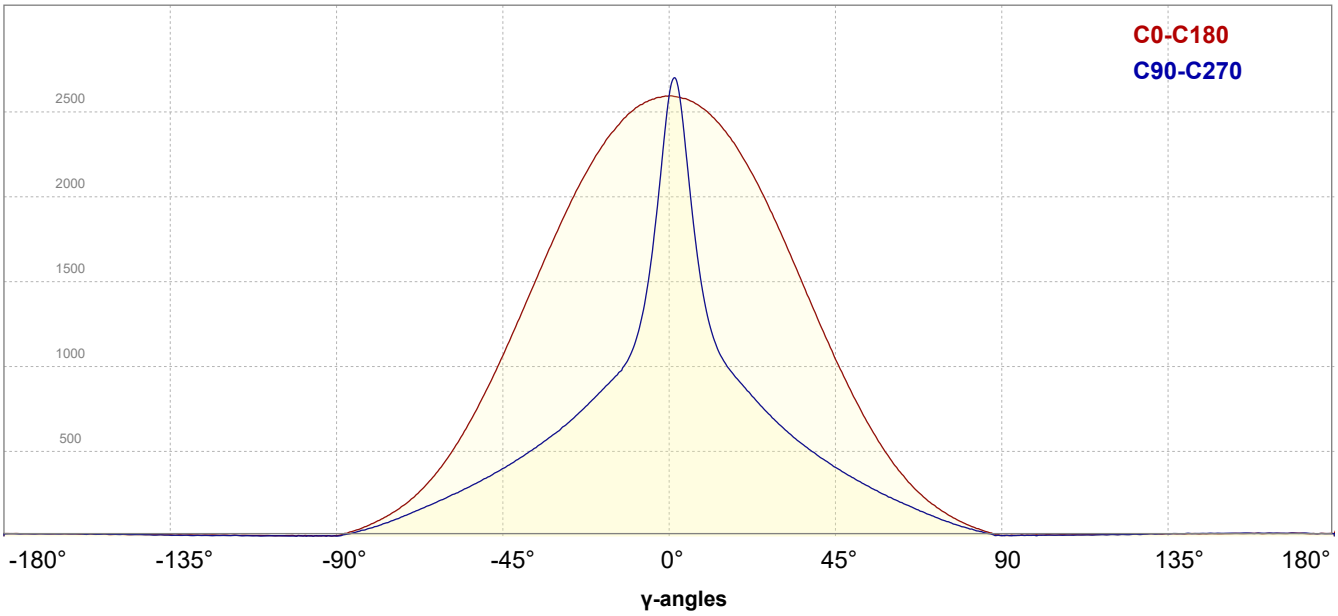
Directionality (DLS or NDLS)	DLS
Ecodesign Useful Luminous Flux	1829 lm
Ecodesign Energy Class	F

Intensity Ratio

In 120° cone	84.64%
In 90° cone	64.89%

Linear distribution diagram

Intensity [cd]

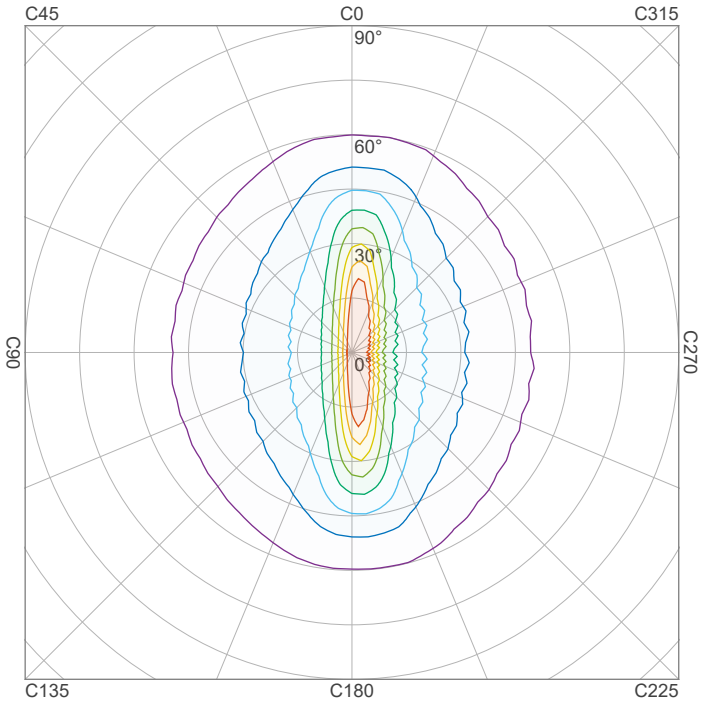


Prudential Lighting

Light measurement results

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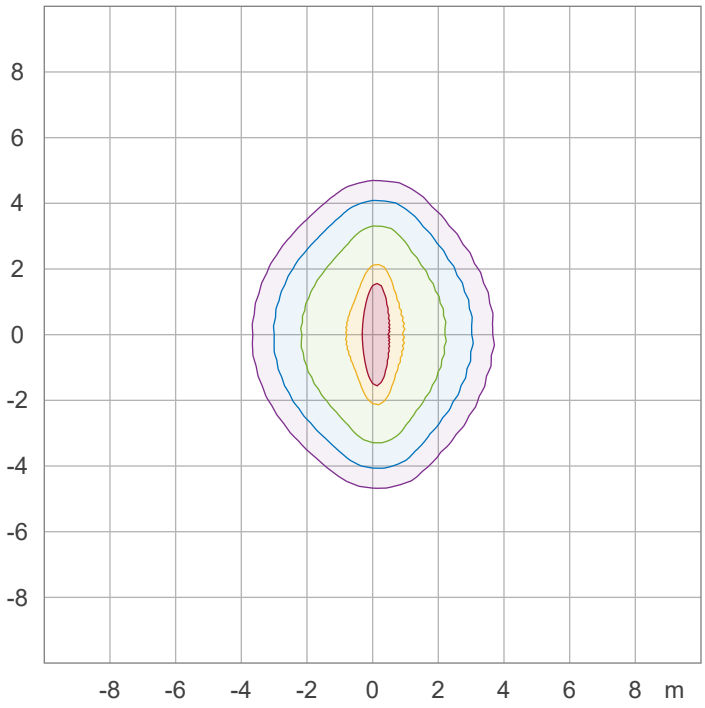
Iso-intensity Diagram (Iso-candela)



90 %	2557.7 cd
80 %	2273.5 cd
70 %	1989.3 cd
60 %	1705.1 cd
50 %	1420.9 cd
40 %	1136.8 cd
30 %	852.6 cd
20 %	568.4 cd
10 %	284.2 cd

Peak intensity: 2841.9 cd
Number of c-planes: 72

Iso-illuminance Diagram (Iso-lux)



50.0 %	157 lx
30.0 %	94.3 lx
10.0 %	31.4 lx
5.0 %	15.7 lx
3.0 %	9.43 lx

Peak illuminance: 314 lx
Mounting height: 3 m
Number of c-planes: 72

Prudential Lighting

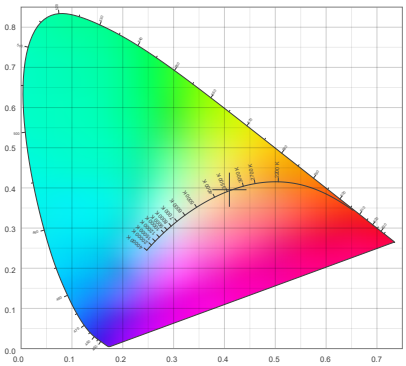
Light measurement results

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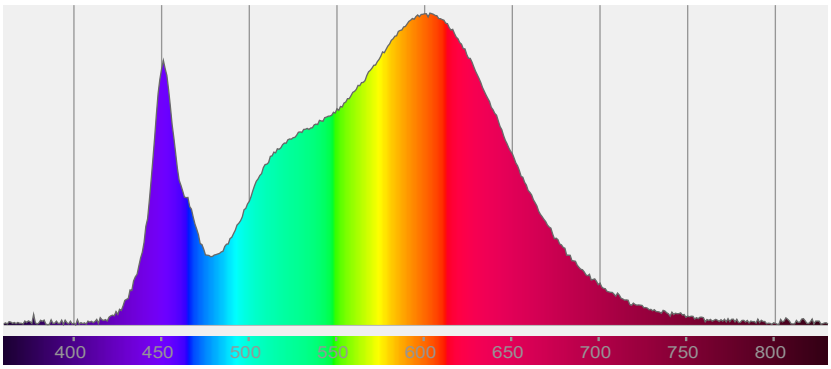
Color details

Correlated Color Temperature, Target	CCT = 3447 K	MacAdam Steps	SDCM = NaN
Correlated Color Temperature, Measured	CCT = 3447 K	Color deviation from BBL	Duv = 0.0011
Color Rendering Index	CRI 84.3	Color coordinates CIE 1931	(x;y) = (0.4097;0.3955)
Color Rendering Index, R9 (red)	R9 = 11.5	Color coordinate CIEs 1960	(u;v) = (0.2366;0.3426)
Color Rendering TM30-18	Rf 85.6	Color coordinate CIEs 1976	(u';v') = (0.2366;0.5139)
	Rg 95.7	Color Quality Scale	CQS = 84.1

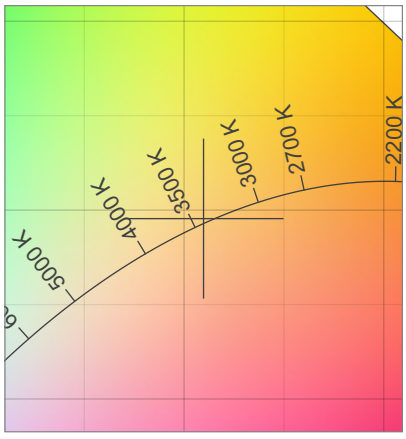
CIE 1931 Chromaticity diagram



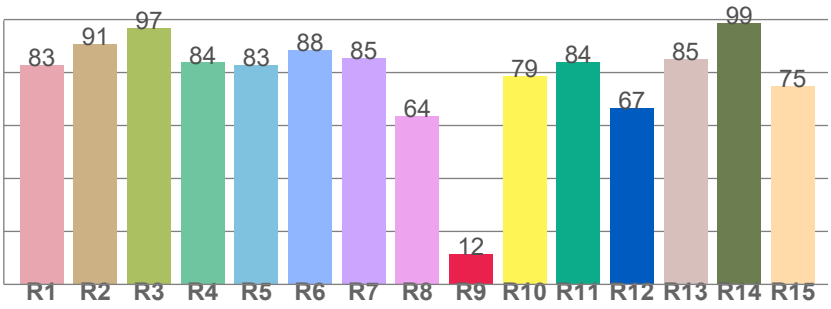
Spectral power distribution



CIE 1931 Chromaticity - zoomed



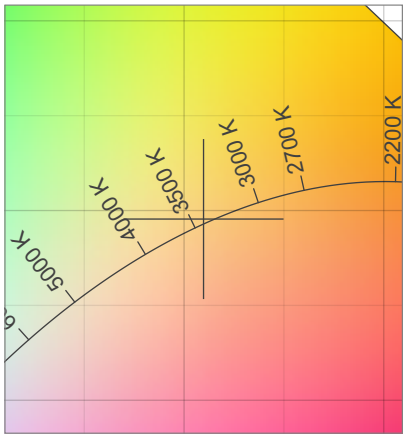
Color Rendering Index per reference color (CIE 1995)



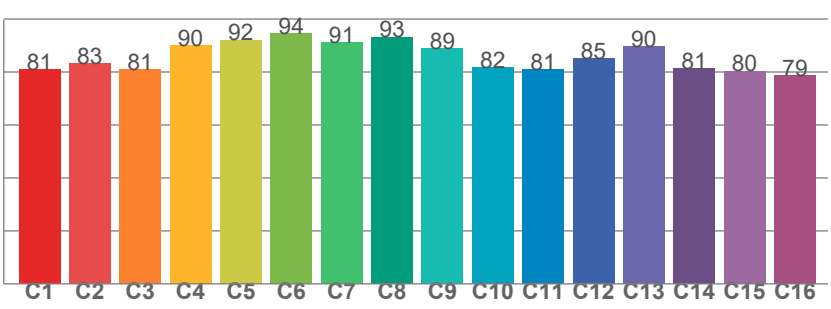
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.9	90.8	96.9	83.8	82.9	88.4	85.4	63.6	11.5	78.8	84.0	66.5	85.0	98.6	74.9

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
81.0	83.4	80.9	90.0	92.1	94.5	91.0	93.2	88.9	81.6	80.8	85.0	89.6	81.5	80.4	78.8

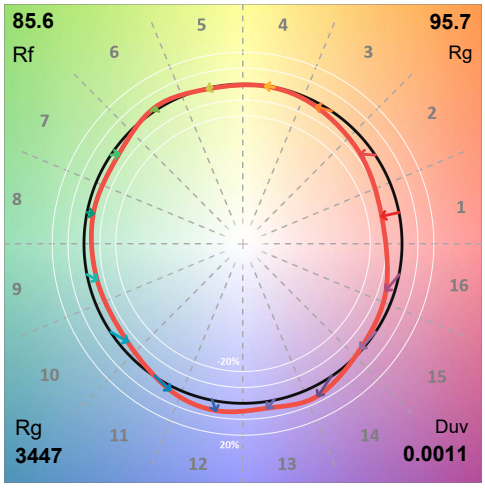
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Color details - ANSI/IES TM-30-18 Color Rendition Report

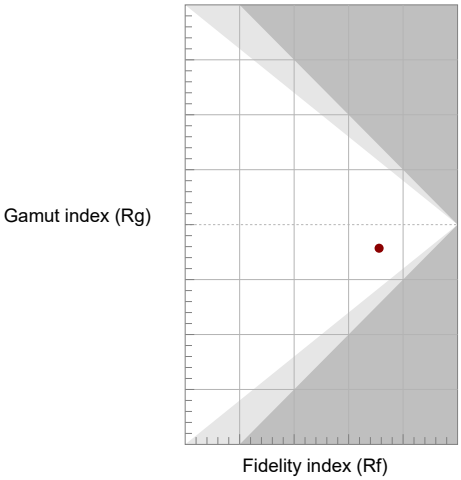
Color Vector Graphic



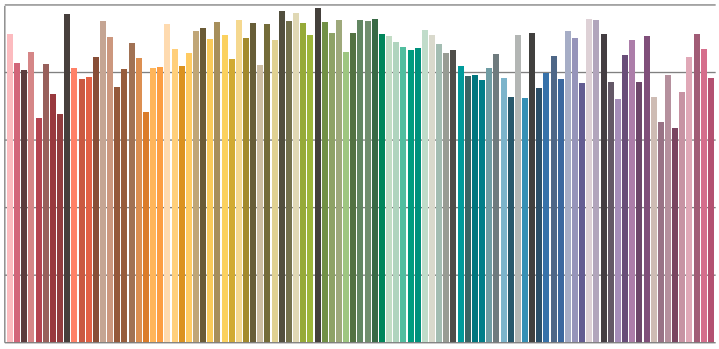
Color Distortion Graphic



Gamut Index vs. Fidelity Index

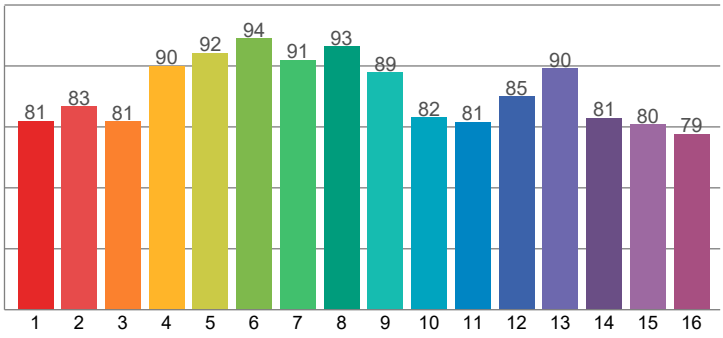


Color Rendition by Color Evaluation Sample (CES)

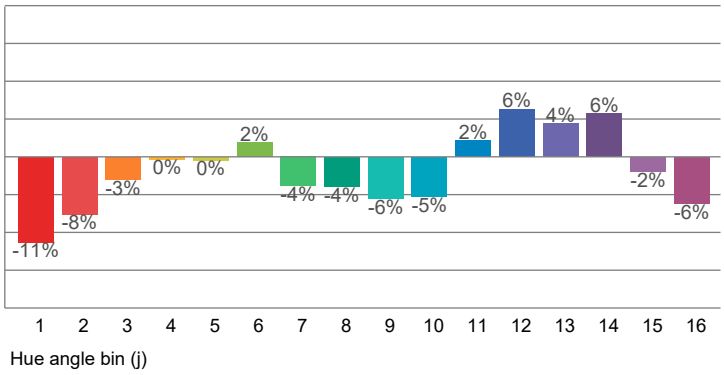


Color evaluation sample CES01 through CES99

Local Color Fidelity (per hue bin)



Local Chroma Shift (per hue bin)



CIE x	0.4097
CIE y	0.4097
CIE u'	0.2366
CIE v'	0.5139

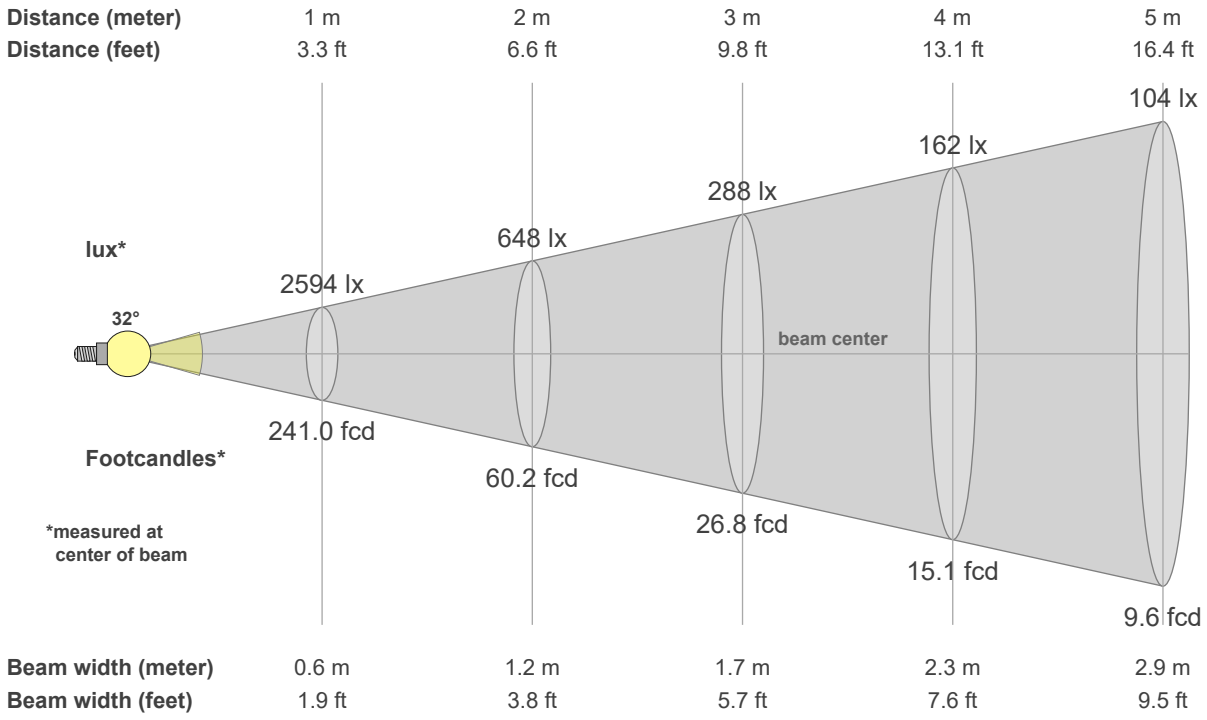
CIE	13.3-1995
Ra	84.3
R9	11.5

Prudential Lighting

Light measurement results

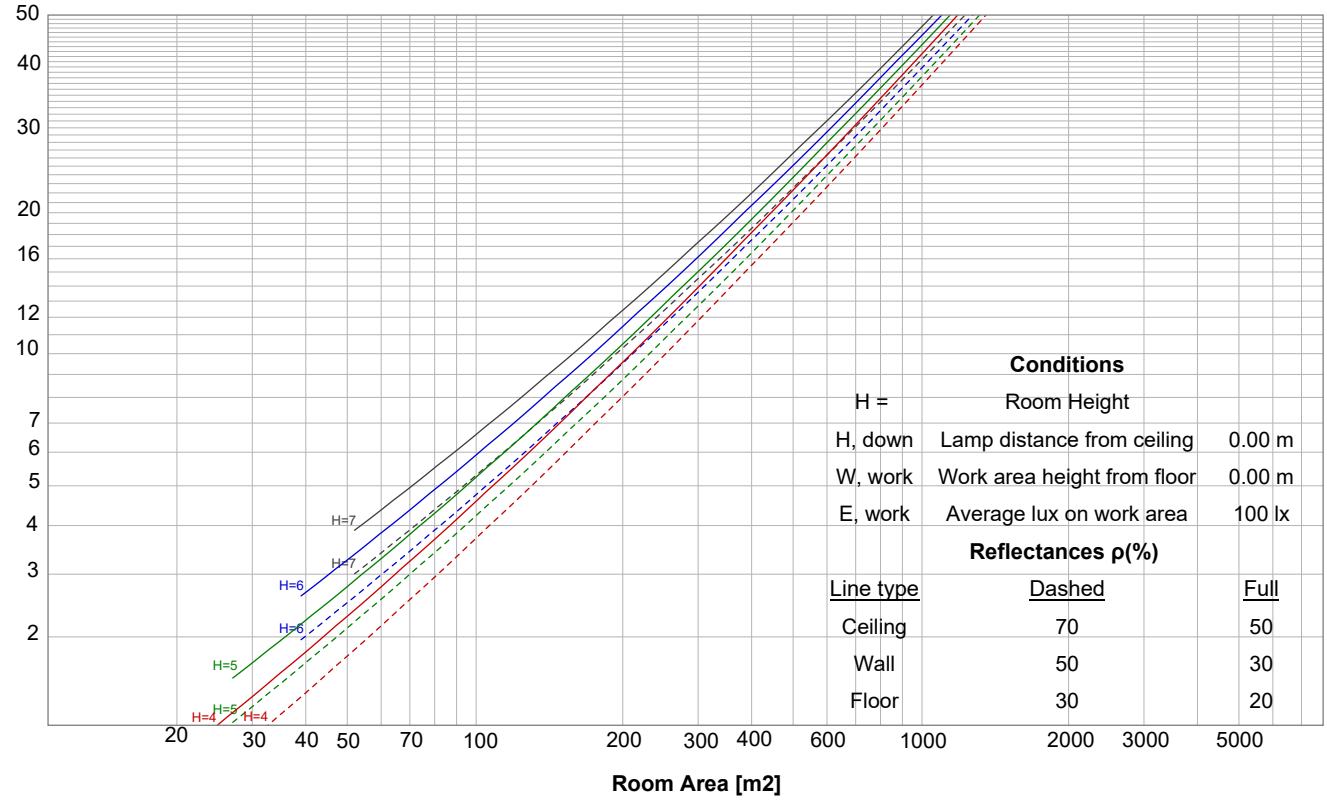
Print date 8/13/2026

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
2594	648	288	162	104	72	53	41	32	26	21	18	15	13	12	10	9	8	7	6	lux
241	60.2	26.8	15.1	9.6	6.7	4.9	3.8	3	2.4	2	1.7	1.4	1.2	1.1	0.9	0.8	0.7	0.7	0.6	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
2594	2570	2505	2388	2236	2040	1809	1564	1310	1064	836	632	459	321	214	137	77	34	4	2	cd
100%	99%	97%	92%	86%	79%	70%	60%	51%	41%	32%	24%	18%	12%	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
2594	2168	1335	1025	887	765	655	560	479	406	342	280	227	178	130	88	53	22	4	6	cd
100%	84%	51%	40%	34%	29%	25%	22%	18%	16%	13%	11%	9%	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
2594	2573	2507	2391	2228	2029	1797	1546	1290	1043	819	620	450	314	209	134	75	33	5	6	cd
100%	99%	97%	92%	86%	78%	69%	60%	50%	40%	32%	24%	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
2594	1602	1093	931	820	714	619	540	466	399	339	282	230	181	135	91	53	22	1	2	cd
100%	62%	42%	36%	32%	28%	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	118.6	118.6	118.6	118.6	115.6	115.6	115.6	115.6	110.0	110.0	110.0	104.9	104.9	104.9	100.3	100.3	100.3	98.1
1	109.9	105.8	102.1	98.8	107.0	103.4	100.0	97.0	98.8	96.1	93.6	94.6	92.5	90.4	90.8	89.1	87.4	85.3
2	101.4	94.2	88.3	83.3	98.7	92.2	86.8	82.2	88.4	83.9	80.0	85.0	81.2	78.0	81.8	78.7	76.0	73.9
3	93.6	84.4	77.3	71.6	91.1	82.7	76.1	70.8	79.6	74.0	69.4	76.7	71.9	67.9	74.0	70.0	66.6	64.5
4	86.7	76.1	68.4	62.5	84.4	74.7	67.5	61.9	72.1	65.9	60.9	69.6	64.3	59.9	67.4	62.8	59.0	56.9
5	80.6	69.2	61.2	55.3	78.5	68.0	60.5	54.9	65.7	59.2	54.1	63.7	57.9	53.4	61.7	56.7	52.7	50.7
6	75.2	63.2	55.2	49.4	73.3	62.2	54.7	49.2	60.3	53.6	48.6	58.5	52.6	48.1	56.9	51.6	47.5	45.6
7	70.3	58.1	50.2	44.7	68.6	57.3	49.8	44.5	55.6	48.9	44.0	54.1	48.1	43.6	52.6	47.3	43.2	41.4
8	66.0	53.7	46.0	40.7	64.4	53.0	45.6	40.5	51.6	44.9	40.2	50.2	44.2	39.9	49.0	43.6	39.5	37.8
9	62.1	49.9	42.4	37.3	60.7	49.2	42.1	37.2	48.0	41.5	36.9	46.9	40.9	36.7	45.8	40.4	36.4	34.7
10	58.6	46.5	39.3	34.5	57.3	46.0	39.0	34.4	44.9	38.5	34.1	43.9	38.0	33.9	42.9	37.6	33.7	32.1

Prudential Lighting

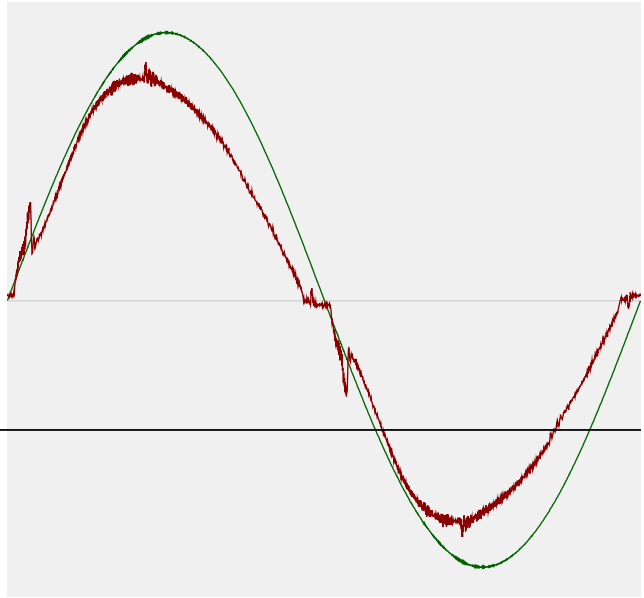
Light measurement results

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Power details

Input power	
Frequency of input power	60.0 Hz
Power feed to light source	23.15 W
RMS Input voltage feed V,RMS	120 V
RMS Input current feed I,RMS	0.20 A
Volt-Amp or apparent power = V,RMS*I,RMS	23.5 VA
Displacement factor of AC power feed	0.99
Power factor of AC current feed	0.99
Total harmonic distortion of the current	8.454%
Total harmonic distortion of the voltage	0.0528%

Input power curve



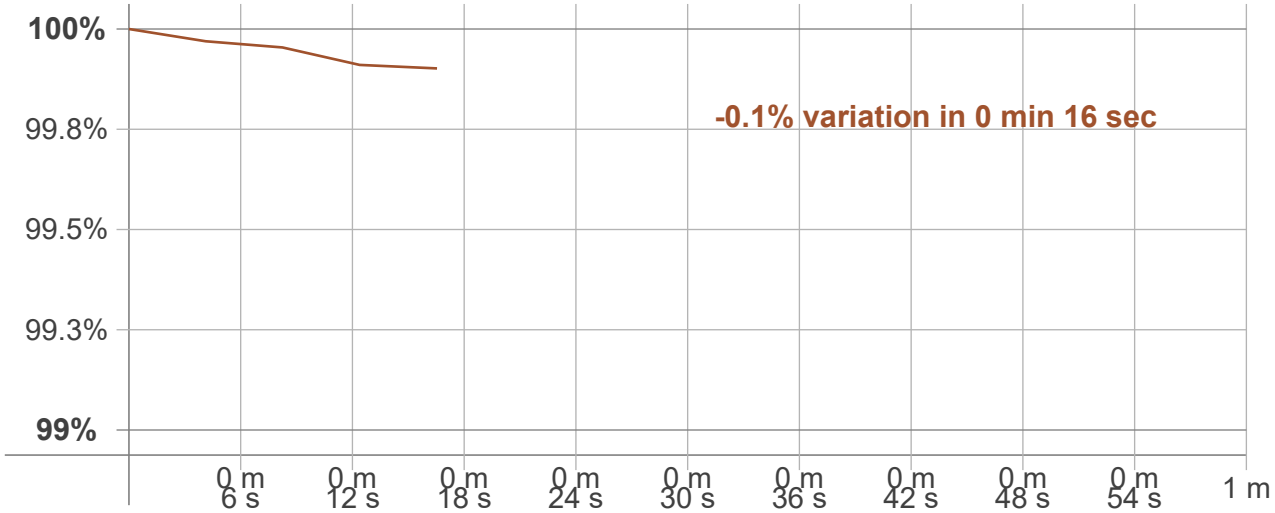
Efficiency

Radiated power efficiency	36.58
Lumen efficiency	121.8 lm/W

Stabilization details

Warmup Conditions		Color Temperature Change	
Stable period	15 min	CCT start	3447 K
Stable change max	1%	CCT shift	0 K
Minimum time	15 min	CCT end	3447 K
Warmup Result		**Output Change**	
Total warmup time	Not completed	Output start	2821 lm
Warmup variation	-0.0983%	Output change	-2.2184 lm
		Output end	2819 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

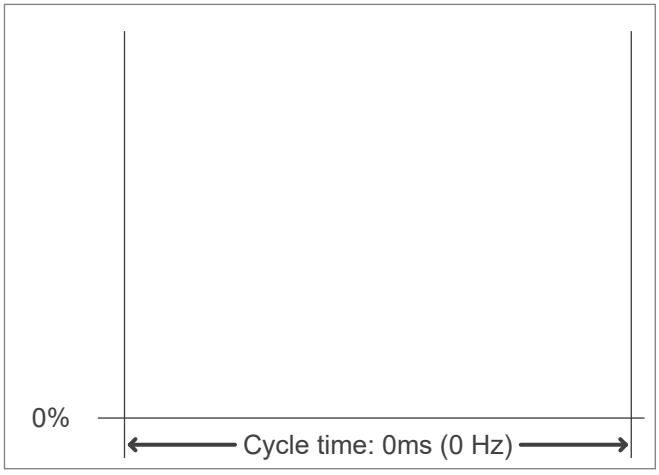
Flicker indices according to California Energy Commission (CEC) 2016b

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 %

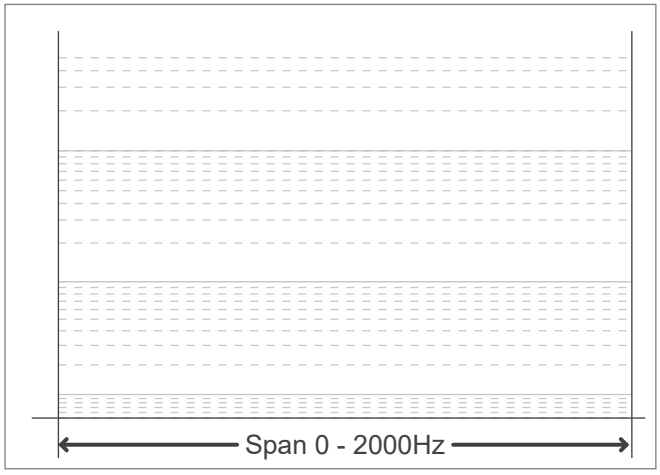
Flicker indices according to Lighting Research Center (2015)

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

