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	7/28/2026

Measurement Conditions

Tested c-planes	72 planes – 5.00°
Tested gamma resolution	0.45°
Input Power	42.92 W

Tested Light Source

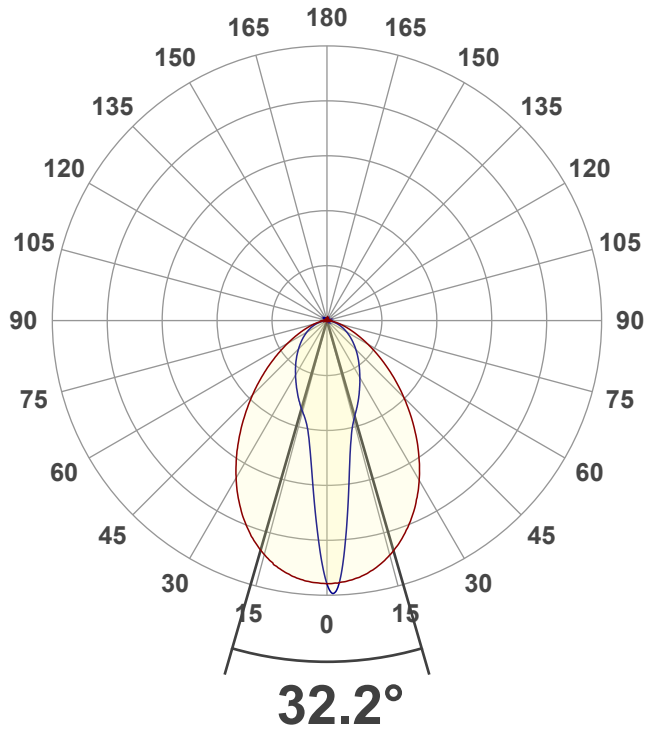
Luminaire	BPRO2-LIN-FLSH-LED35-HO-04-NGZ-NU-SC-DM01
Basic Luminous Shape	NONE
Item No.	
Manufacturer	Prudential Lighting
Description	

Main Light Measurement Results

Output – Total Lumen (Up% / Down%)	4989 lm – 1.763% / 98.24%
Efficiency	116.2 lm/W
Peak Intensity	5084 cd
Correlated Color Temperature, CCT	3463 K
Color Rendering Index	CRI 84.1

Polar light distribution diagram

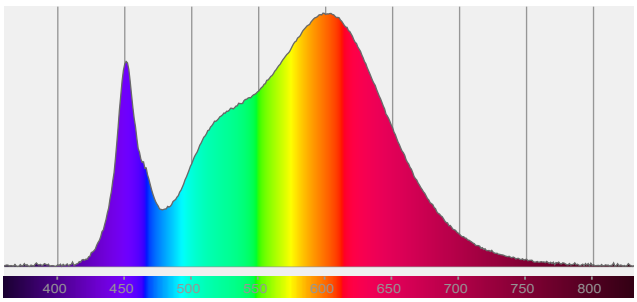
Unit: 0-100% of peak intensity



Zonal Lumen Summary:

VA/HA	0°	22.5°	45°	67.5°	90°
0°	4601 cd	4601 cd	4601 cd	4601 cd	4601 cd
5°	4559 cd	4980 cd	4690 cd	4404 cd	3787 cd
15°	4244 cd	3840 cd	2406 cd	2028 cd	1808 cd
25°	3626 cd	2538 cd	1666 cd	1486 cd	1344 cd
35°	2788 cd	1816 cd	1233 cd	1081 cd	985.2 cd
45°	1901 cd	1304 cd	878.3 cd	779.5 cd	712.5 cd
55°	1136 cd	875.3 cd	600.8 cd	536.6 cd	492.8 cd
65°	575.3 cd	518.2 cd	373 cd	334.9 cd	309.3 cd
75°	243 cd	244.7 cd	186.6 cd	166.1 cd	152.9 cd
85°	61.52 cd	61.46 cd	47.23 cd	39.46 cd	36.39 cd
90°	3.632 cd	2.5 cd	2.135 cd	1.795 cd	5.292 cd

Spectral power distribution



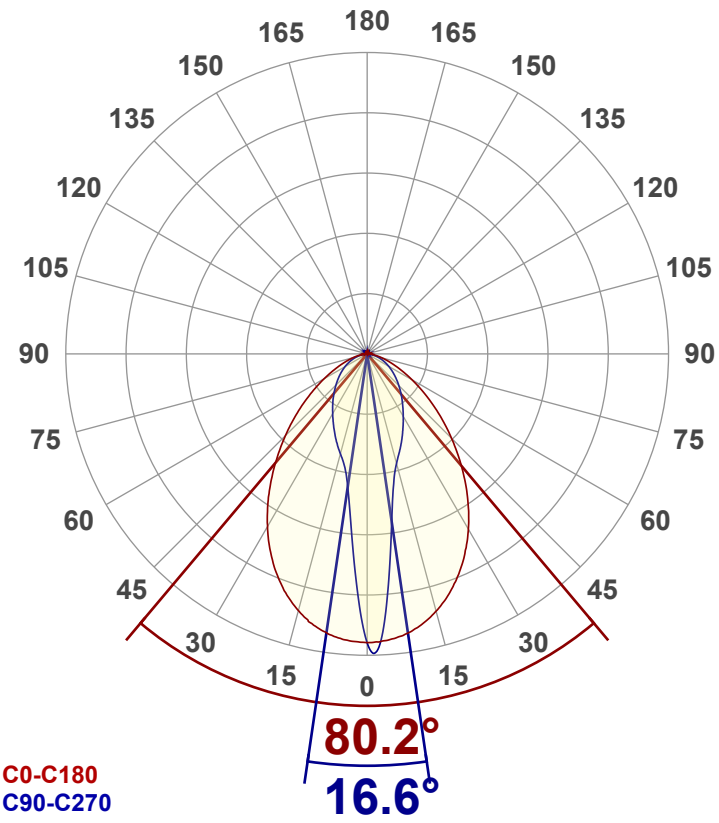
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Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Output (total Lumen)	4989 lm
Lumen Up% / Down%	1.763% / 98.24%
Peak Intensity	5084 cd
Beam Angle (50%-FWHM)	32.2°

EU Ecodesign parameters

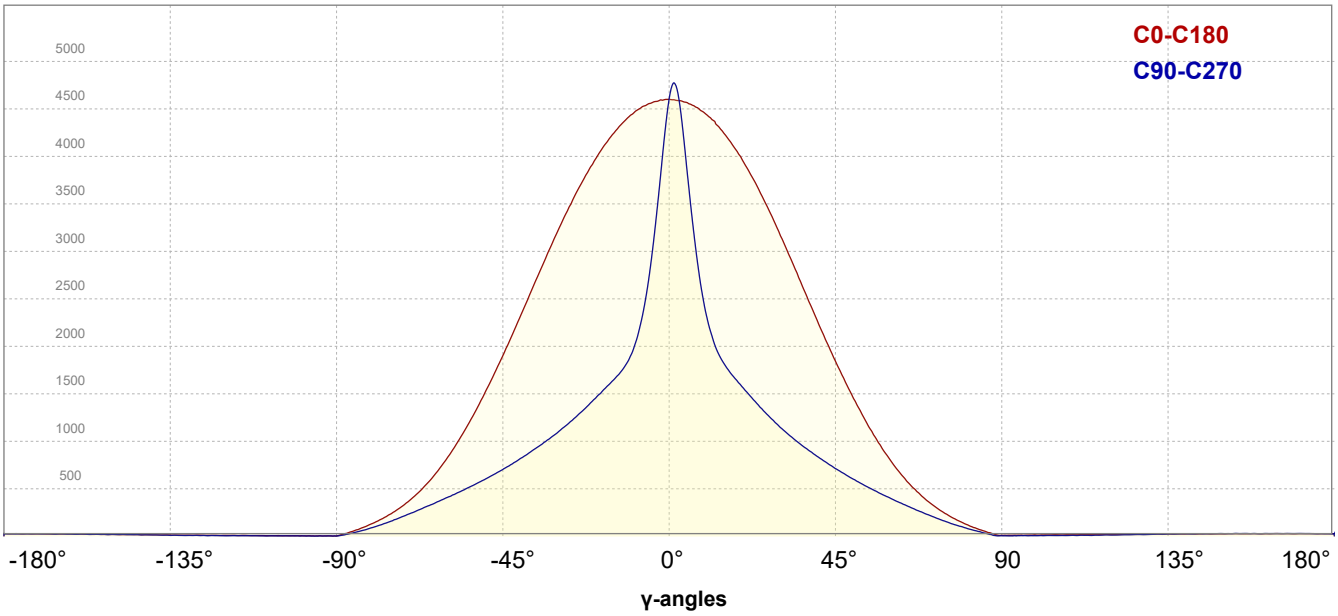
Directionality (DLS or NDLS)	DLS
Ecodesign Useful Luminous Flux	3244 lm
Ecodesign Energy Class	F

Intensity Ratio

In 120° cone	84.81%
In 90° cone	65.03%

Linear distribution diagram

Intensity [cd]

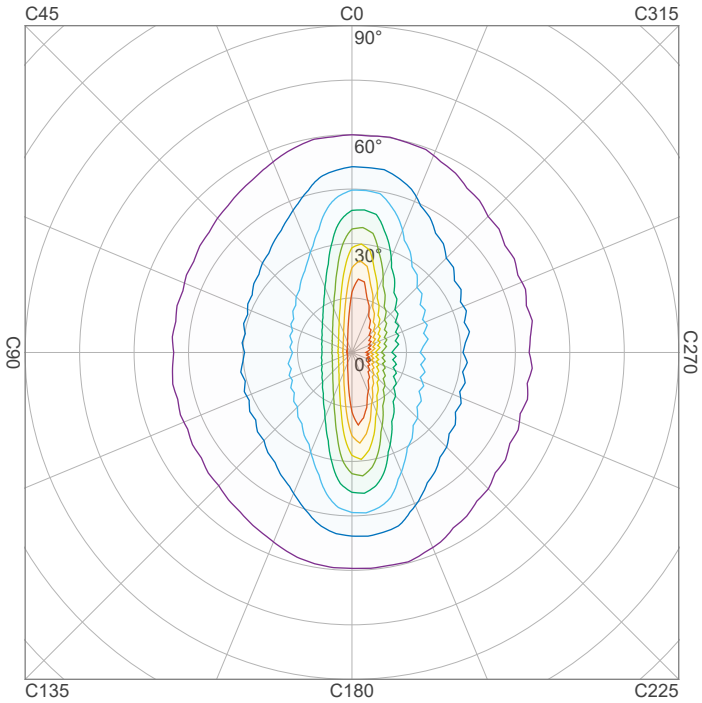


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Light measurement results

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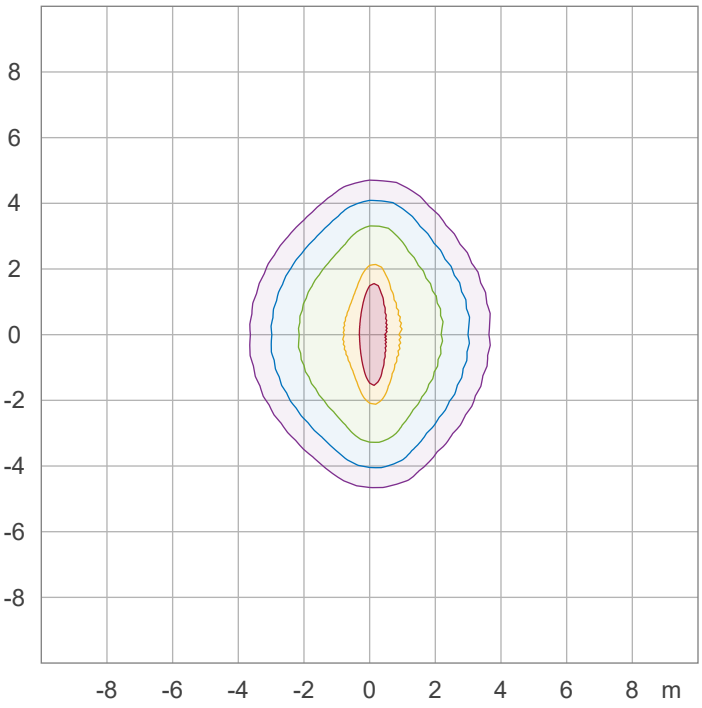
Iso-intensity Diagram (Iso-candela)



90 %	4572.0 cd
80 %	4064.0 cd
70 %	3556.0 cd
60 %	3048.0 cd
50 %	2540.0 cd
40 %	2032.0 cd
30 %	1524.0 cd
20 %	1016.0 cd
10 %	508.0 cd

Peak intensity: 5080.0 cd
Number of c-planes: 72

Iso-illuminance Diagram (Iso-lux)



50.0 %	281 lx
30.0 %	169 lx
10.0 %	56.2 lx
5.0 %	28.1 lx
3.0 %	16.9 lx

Peak illuminance: 562 lx
Mounting height: 3 m
Number of c-planes: 72

Prudential Lighting

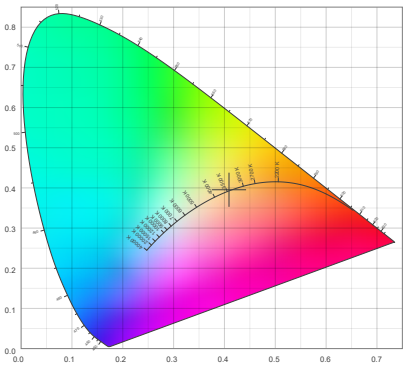
Light measurement results

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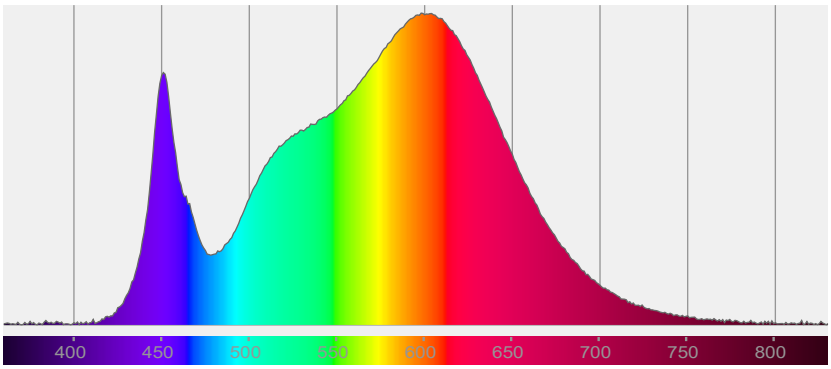
Color details

Correlated Color Temperature, Target	CCT = 3463 K	MacAdam Steps	SDCM = NaN
Correlated Color Temperature, Measured	CCT = 3463 K	Color deviation from BBL	Duv = 0.0012
Color Rendering Index	CRI 84.1	Color coordinates CIE 1931	(x;y) = (0.4090;0.3954)
Color Rendering Index, R9 (red)	R9 = 10.5	Color coordinate CIEs 1960	(u;v) = (0.2362;0.3425)
Color Rendering TM30-18	Rf 85.5	Color coordinate CIEs 1976	(u';v') = (0.2362;0.5137)
	Rg 95.7	Color Quality Scale	CQS = 84.0

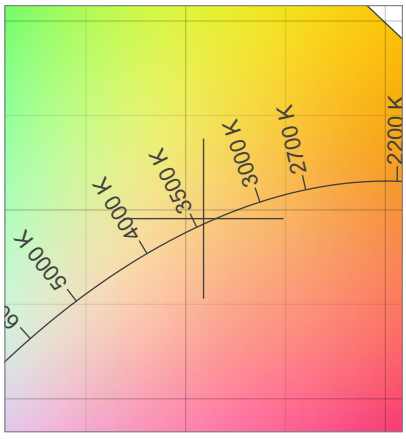
CIE 1931 Chromaticity diagram



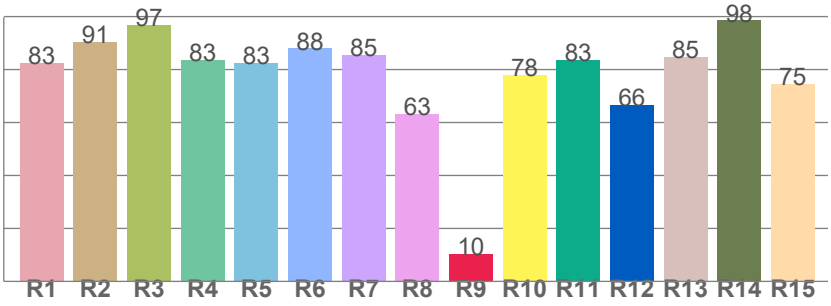
Spectral power distribution



CIE 1931 Chromaticity - zoomed



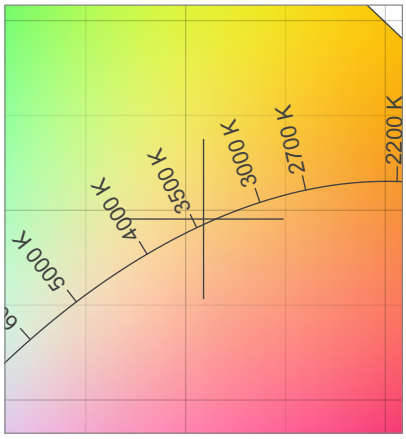
Color Rendering Index per reference color (CIE 1995)



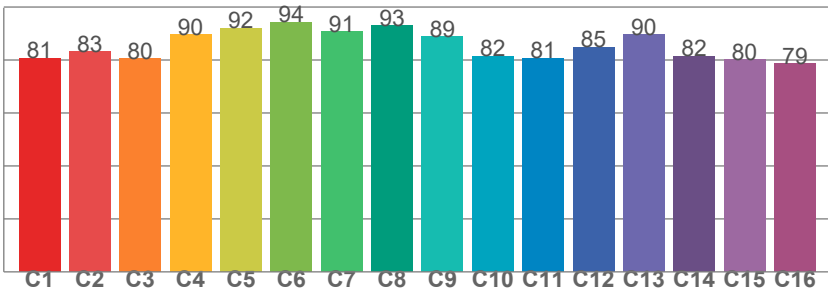
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.5	90.5	96.8	83.5	82.5	87.9	85.4	63.3	10.5	78.0	83.5	66.5	84.5	98.5	74.5

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
80.8	83.1	80.5	89.8	92.1	94.4	90.9	93.1	88.9	81.6	80.8	85.0	89.6	81.6	80.3	78.8

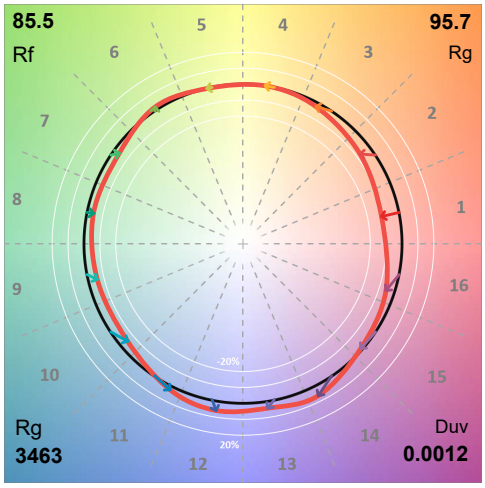
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Color details - ANSI/IES TM-30-18 Color Rendition Report

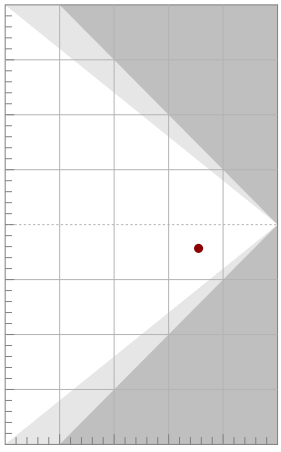
Color Vector Graphic



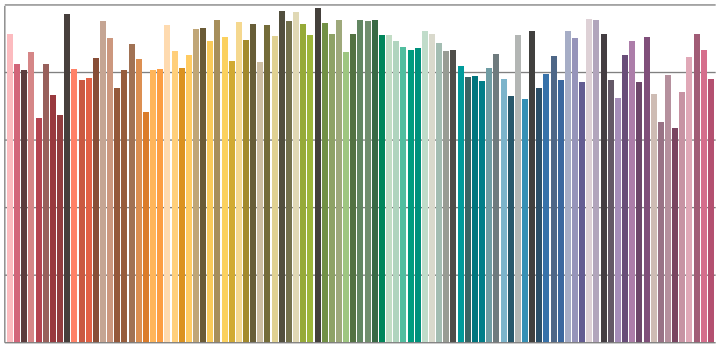
Color Distortion Graphic



Gamut Index vs. Fidelity Index

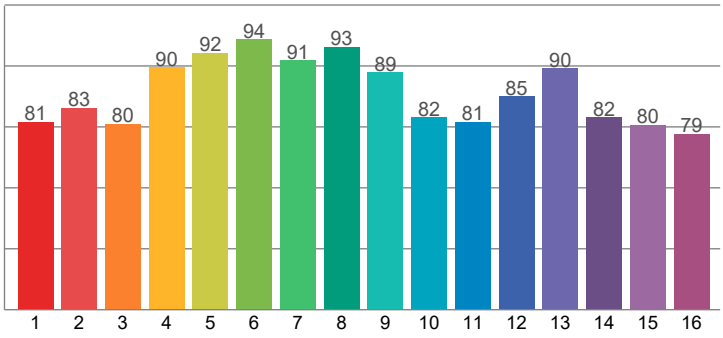


Color Rendition by Color Evaluation Sample (CES)

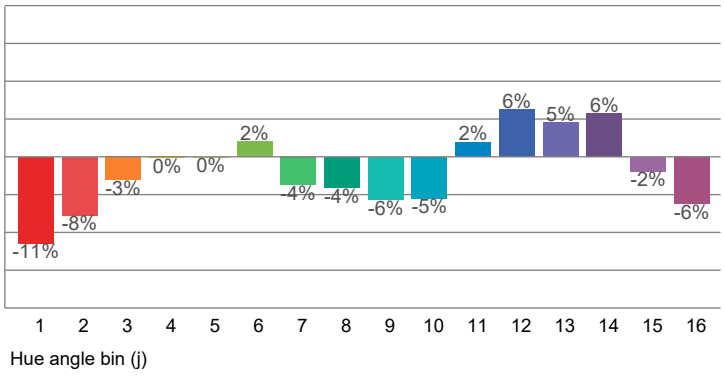


Color evaluation sample CES01 through CES99

Local Color Fidelity (per hue bin)



Local Chroma Shift (per hue bin)



CIE x	0.4090
CIE y	0.4090
CIE u'	0.2362
CIE v'	0.5137

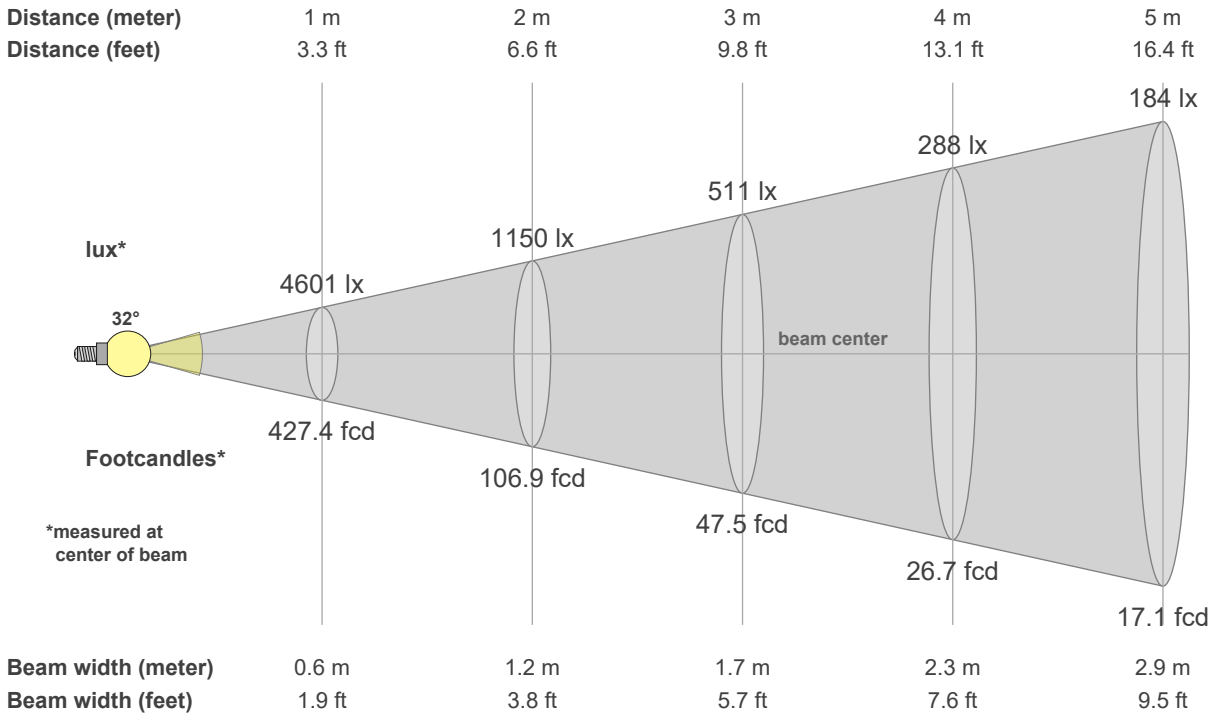
CIE	13.3-1995
Ra	84.1
R9	10.5

Prudential Lighting

Light measurement results

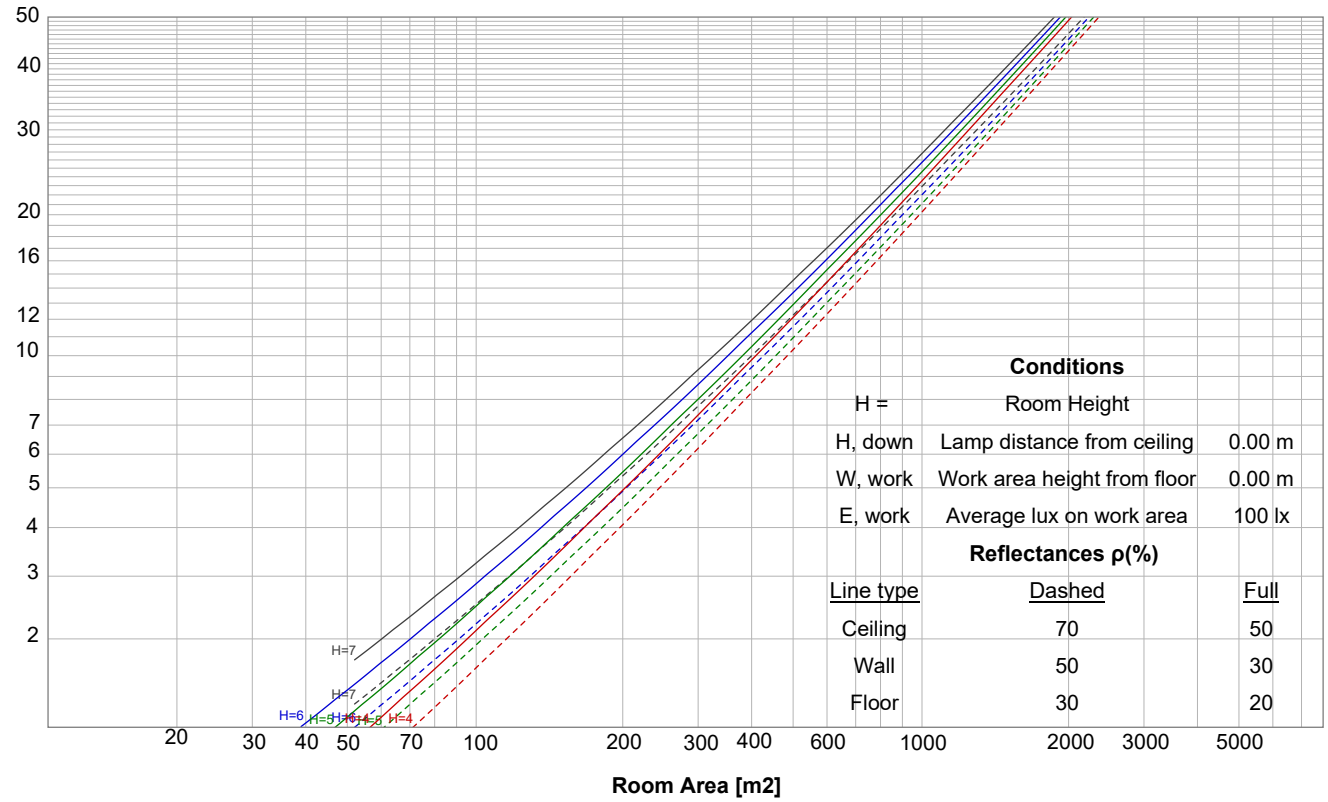
Print date 8/13/2026

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
4601	1150	511	288	184	128	94	72	57	46	38	32	27	23	20	18	16	14	13	12	lux
427.4	106.9	47.5	26.7	17.1	11.9	8.7	6.7	5.3	4.3	3.5	3	2.5	2.2	1.9	1.7	1.5	1.3	1.2	1.1	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
4601	4559	4444	4244	3967	3626	3225	2788	2340	1901	1499	1136	827	575	385	243	139	62	4	4	cd
100%	99%	97%	92%	86%	79%	70%	61%	51%	41%	33%	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
4601	3787	2339	1808	1563	1345	1148	985	842	713	598	493	397	310	228	153	90	36	5	6	cd
100%	82%	51%	39%	34%	29%	25%	21%	18%	15%	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
4601	4563	4443	4234	3948	3590	3175	2728	2277	1843	1443	1092	793	552	368	234	131	57	10	12	cd
100%	99%	97%	92%	86%	78%	69%	59%	50%	40%	31%	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
4601	2857	1936	1647	1451	1265	1099	954	824	704	596	499	409	322	241	162	95	41	2	2	cd
100%	62%	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	118.6	118.6	118.6	118.6	115.7	115.7	115.7	115.7	110.1	110.1	110.1	105.1	105.1	105.1	100.4	100.4	100.4	98.2
1	109.9	105.8	102.1	98.8	107.1	103.4	100.1	97.1	98.9	96.2	93.7	94.8	92.6	90.6	91.0	89.2	87.6	85.5
2	101.4	94.3	88.3	83.4	98.8	92.3	86.9	82.3	88.5	84.0	80.1	85.1	81.4	78.1	81.9	78.9	76.1	74.0
3	93.7	84.5	77.3	71.6	91.2	82.8	76.2	70.9	79.7	74.1	69.4	76.8	72.0	68.1	74.1	70.1	66.7	64.7
4	86.8	76.2	68.4	62.5	84.5	74.8	67.6	62.0	72.2	65.9	61.0	69.7	64.4	60.0	67.5	62.9	59.1	57.1
5	80.7	69.2	61.2	55.3	78.6	68.0	60.5	54.9	65.8	59.2	54.2	63.8	58.0	53.5	61.8	56.8	52.8	50.8
6	75.2	63.3	55.2	49.5	73.3	62.3	54.7	49.2	60.4	53.7	48.7	58.6	52.7	48.1	57.0	51.7	47.6	45.7
7	70.4	58.2	50.3	44.7	68.6	57.3	49.8	44.5	55.7	49.0	44.1	54.2	48.2	43.7	52.7	47.4	43.3	41.5
8	66.0	53.8	46.0	40.7	64.5	53.0	45.7	40.6	51.6	45.0	40.2	50.3	44.3	39.9	49.1	43.7	39.6	37.9
9	62.2	49.9	42.4	37.4	60.7	49.3	42.1	37.2	48.1	41.6	37.0	46.9	41.0	36.7	45.8	40.4	36.5	34.8
10	58.7	46.6	39.3	34.5	57.4	46.0	39.1	34.4	45.0	38.6	34.2	44.0	38.1	34.0	43.0	37.7	33.8	32.2

Prudential Lighting

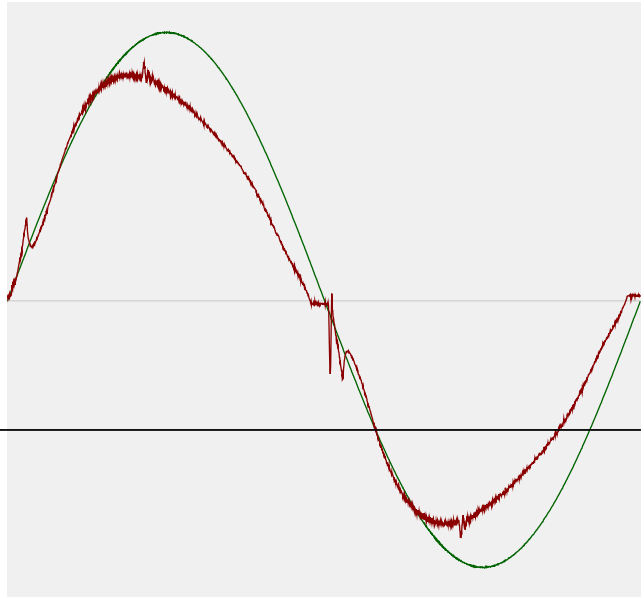
Light measurement results

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Power details

Input power	
Frequency of input power	60.0 Hz
Power feed to light source	42.92 W
RMS Input voltage feed V,RMS	120 V
RMS Input current feed I,RMS	0.36 A
Volt-Amp or apparent power = V,RMS*I,RMS	43.6 VA
Displacement factor of AC power feed	0.99
Power factor of AC current feed	0.99
Total harmonic distortion of the current	8.844%
Total harmonic distortion of the voltage	0.0786%

Input power curve



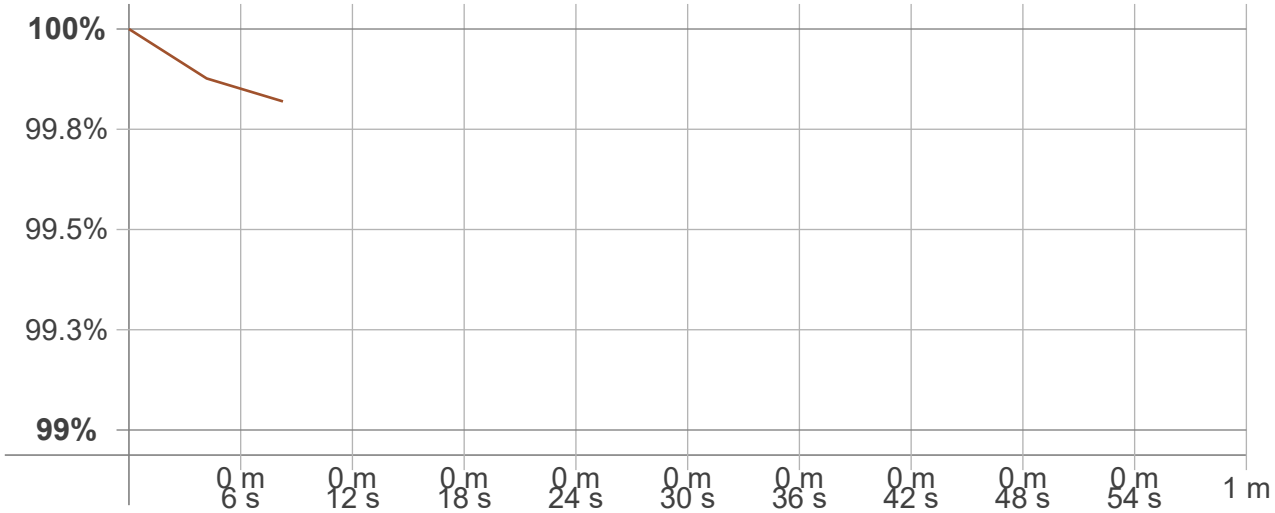
Efficiency

Radiated power efficiency	34.79
Lumen efficiency	116.2 lm/W

Stabilization details

Warmup Conditions		Color Temperature Change	
Stable period	15 min	CCT start	3462 K
Stable change max	1%	CCT shift	1 K
Minimum time	15 min	CCT end	3463 K
Warmup Result		**Output Change**	
Total warmup time	Not completed	Output start	4998 lm
Warmup variation	-0.1806%	Output change	-9.0251 lm
		Output end	4989 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

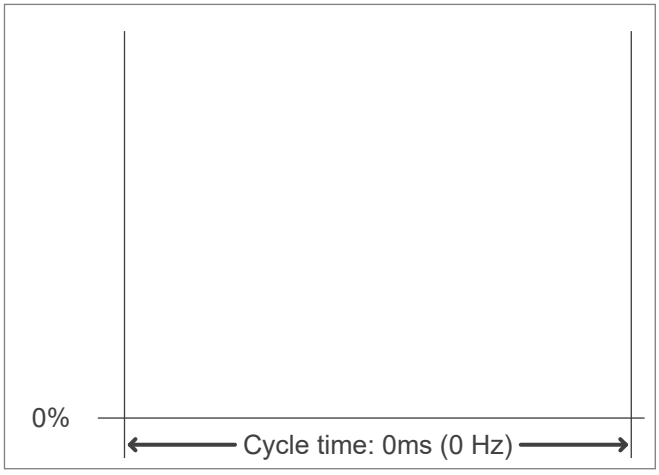
Flicker indices according to California Energy Commission (CEC) 2016b

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 %

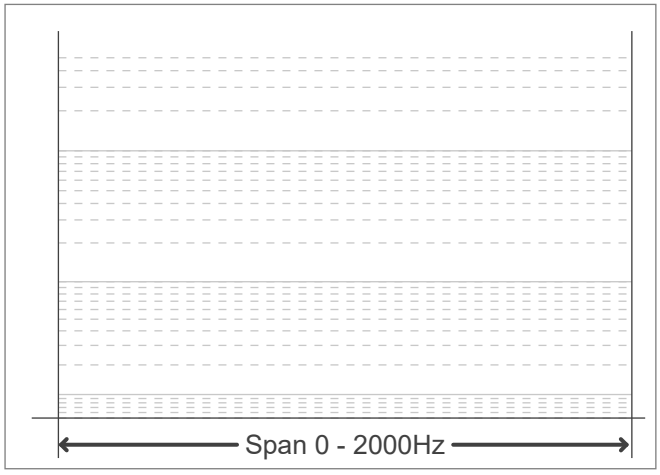
Flicker indices according to Lighting Research Center (2015)

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

