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	7/31/2026

Measurement Conditions

Tested c-planes	72 planes – 5.00°
Tested gamma resolution	1.00°
Input Power	23.15 W

Tested Light Source

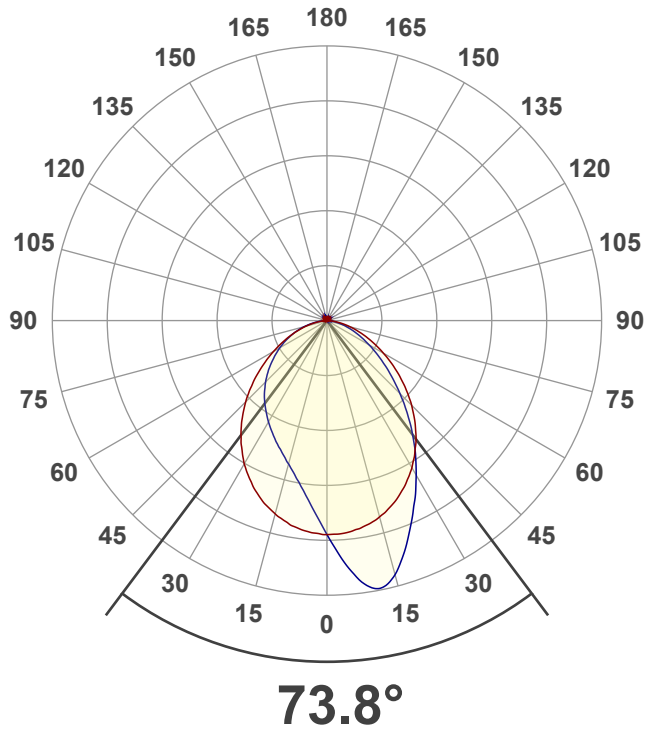
Luminaire	BPRO2-LIN-FLSH-LED35-MO-04-WWF-NU-SC-DM01
Basic Luminous Shape	NONE
Item No.	
Manufacturer	Prudential Lighting
Description	

Main Light Measurement Results

Output – Total Lumen (Up% / Down%)	2753 lm – 1.72% / 98.28%
Efficiency	118.9 lm/W
Peak Intensity	1571 cd
Correlated Color Temperature, CCT	3436 K
Color Rendering Index	CRI 84.2

Polar light distribution diagram

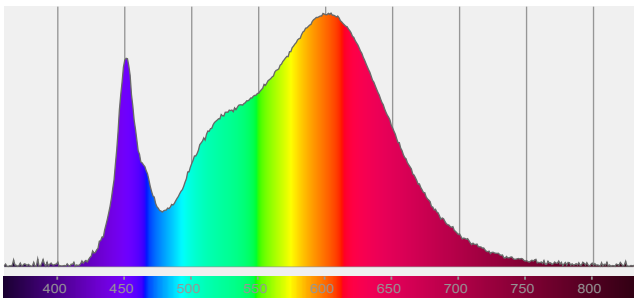
Unit: 0-100% of peak intensity



Zonal Lumen Summary:

VA/HA	0°	22.5°	45°	67.5°	90°
0°	1198 cd	1198 cd	1198 cd	1198 cd	1198 cd
5°	1193 cd	1264 cd	1330 cd	1374 cd	1390 cd
15°	1137 cd	1348 cd	1500 cd	1535 cd	1472 cd
25°	1025 cd	1305 cd	1326 cd	1240 cd	1149 cd
35°	863.1 cd	1116 cd	1026 cd	932.5 cd	853.4 cd
45°	670.1 cd	850 cd	750.6 cd	651.1 cd	577.9 cd
55°	462.5 cd	577.1 cd	503.4 cd	412.9 cd	358.5 cd
65°	277.6 cd	340.5 cd	296.8 cd	232.6 cd	202.5 cd
75°	133.3 cd	156.4 cd	135.6 cd	105 cd	92.54 cd
85°	29.81 cd	34.06 cd	27.95 cd	22.64 cd	21.34 cd
90°	3.2 cd	2.931 cd	1.137 cd	0.412 cd	4.013 cd

Spectral power distribution



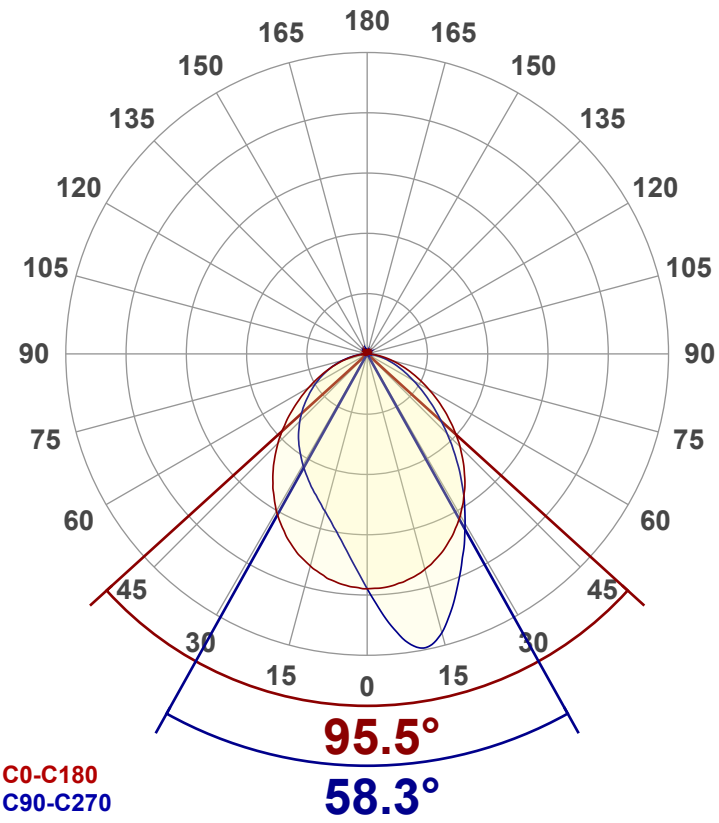
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Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Output (total Lumen)	2753 lm
Lumen Up% / Down%	1.72% / 98.28%
Peak Intensity	1571 cd
Beam Angle (50%-FWHM)	73.8°

EU Ecodesign parameters

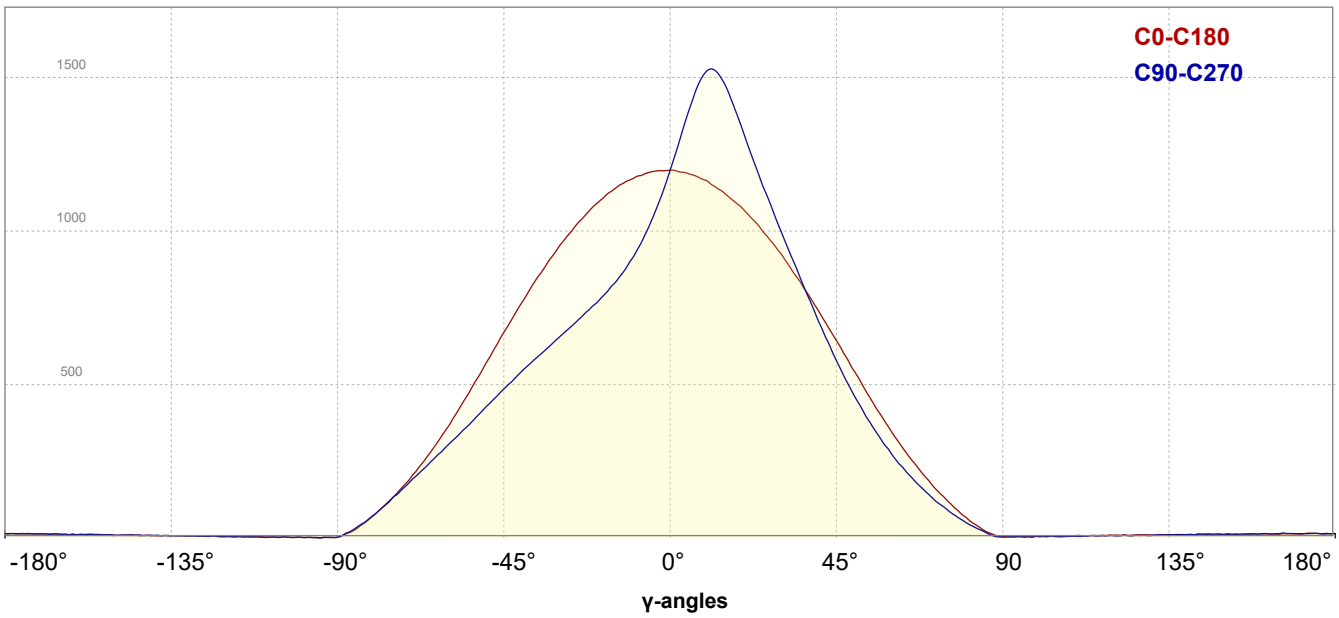
Directionality (DLS or NDLS)	DLS
Ecodesign Useful Luminous Flux	2278 lm
Ecodesign Energy Class	E

Intensity Ratio

In 120° cone	82.75%
In 90° cone	60.55%

Linear distribution diagram

Intensity [cd]

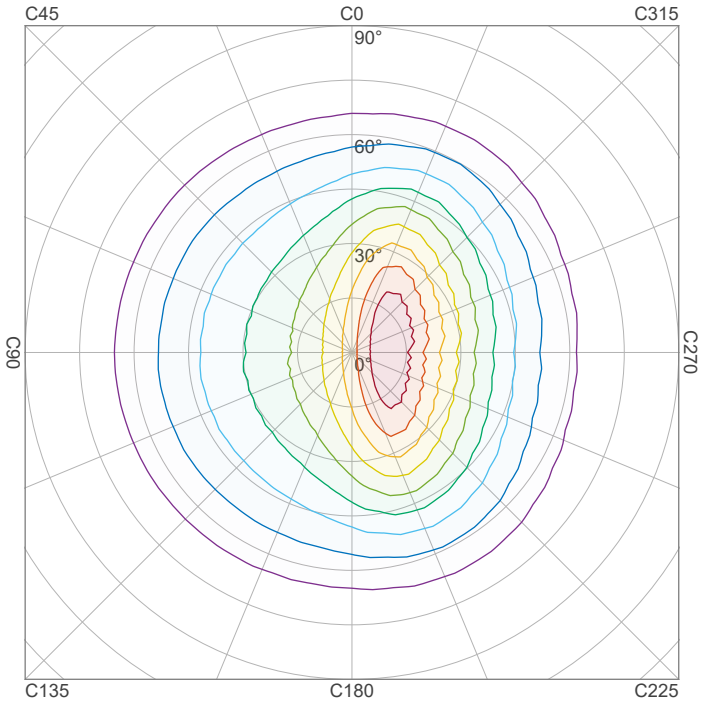


Prudential Lighting

Light measurement results

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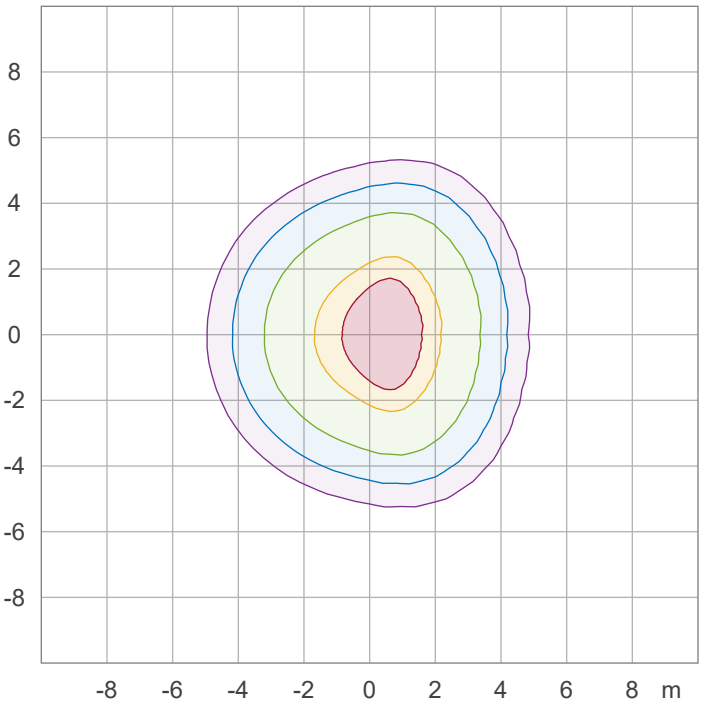
Iso-intensity Diagram (Iso-candela)



90 %	1412.4 cd
80 %	1255.5 cd
70 %	1098.6 cd
60 %	941.6 cd
50 %	784.7 cd
40 %	627.8 cd
30 %	470.8 cd
20 %	313.9 cd
10 %	156.9 cd

Peak intensity: 1569.4 cd
Number of c-planes: 72

Iso-illuminance Diagram (Iso-lux)



50.0 %	82.2 lx
30.0 %	49.3 lx
10.0 %	16.4 lx
5.0 %	8.22 lx
3.0 %	4.93 lx

Peak illuminance: 164 lx
Mounting height: 3 m
Number of c-planes: 72

Prudential Lighting

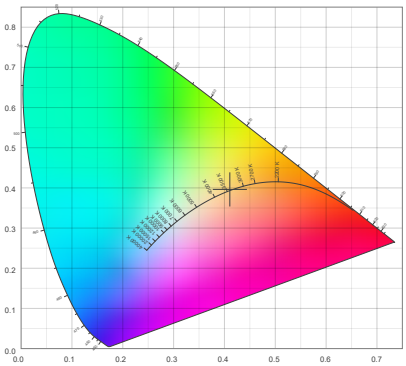
Light measurement results

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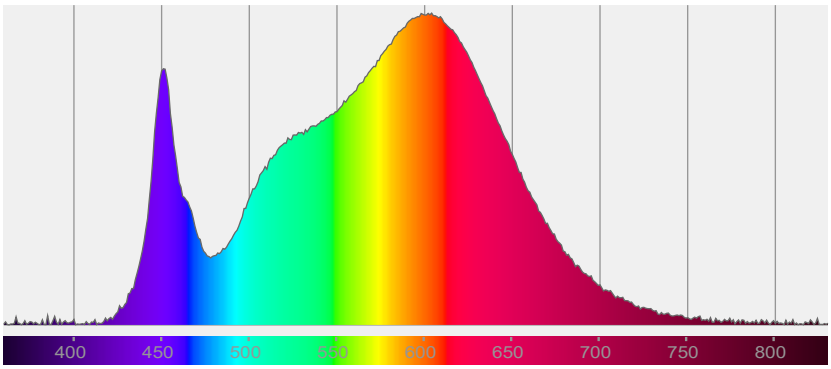
Color details

Correlated Color Temperature, Target	CCT = 3436 K	MacAdam Steps	SDCM = NaN
Correlated Color Temperature, Measured	CCT = 3436 K	Color deviation from BBL	Duv = 0.0013
Color Rendering Index	CRI 84.2	Color coordinates CIE 1931	(x;y) = (0.4106;0.3962)
Color Rendering Index, R9 (red)	R9 = 11.2	Color coordinate CIEs 1960	(u;v) = (0.2369;0.3429)
Color Rendering TM30-18	Rf 85.5	Color coordinate CIEs 1976	(u';v') = (0.2369;0.5143)
	Rg 96.0	Color Quality Scale	CQS = 84.0

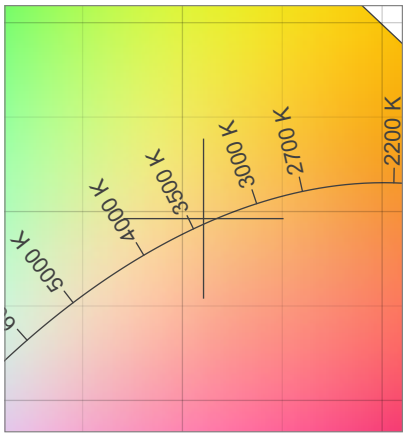
CIE 1931 Chromaticity diagram



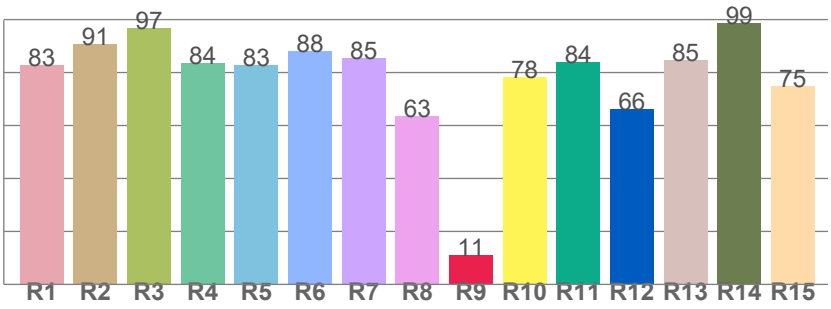
Spectral power distribution



CIE 1931 Chromaticity - zoomed



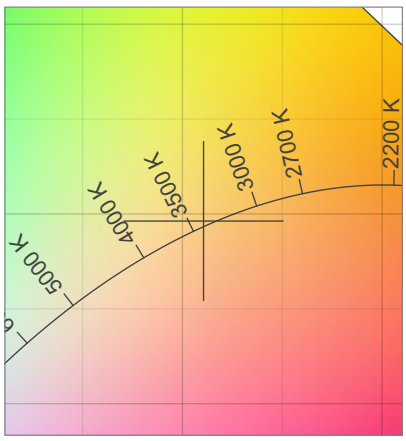
Color Rendering Index per reference color (CIE 1995)



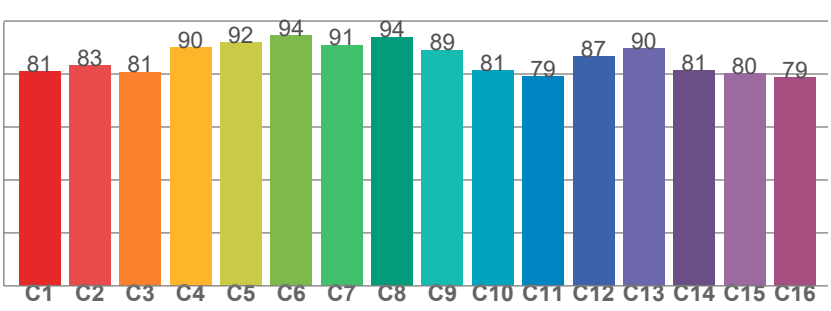
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.8	90.7	96.9	83.7	82.7	88.2	85.4	63.4	11.2	78.5	83.8	66.2	84.8	98.6	74.7

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
80.9	83.3	80.8	90.0	92.1	94.5	91.0	94.0	89.1	81.5	79.2	86.6	89.5	81.4	80.3	78.7

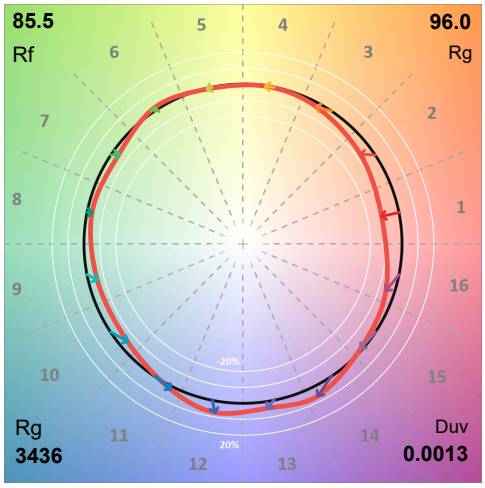
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Color details - ANSI/IES TM-30-18 Color Rendition Report

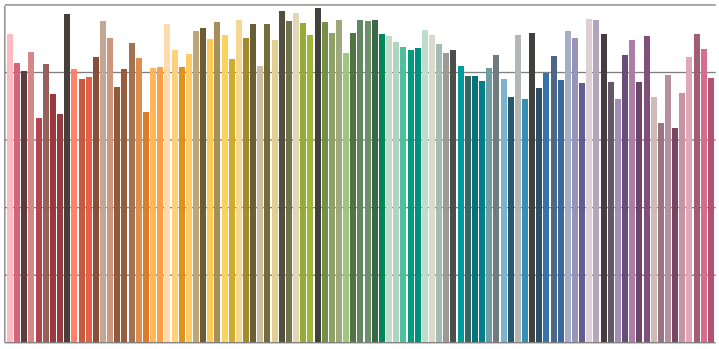
Color Vector Graphic



Color Distortion Graphic

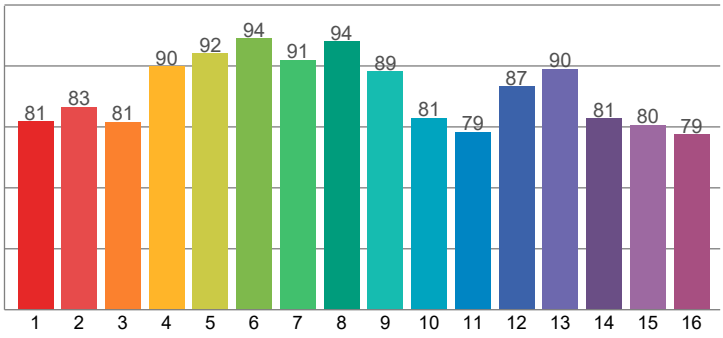


Color Rendition by Color Evaluation Sample (CES)



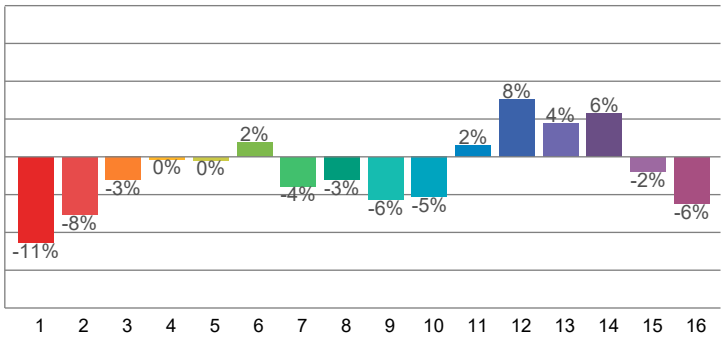
Color evaluation sample CES01 through CES99

Local Color Fidelity (per hue bin)



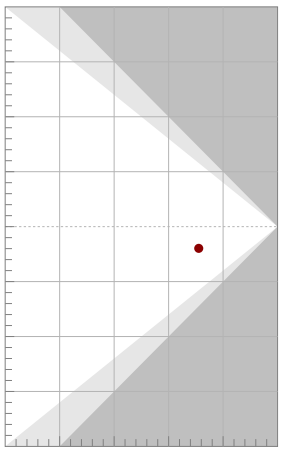
Hue angle bin (j)

Local Chroma Shift (per hue bin)



Hue angle bin (j)

Gamut Index vs. Fidelity Index



Gamut index (Rg)

Fidelity index (Rf)

CIE x	0.4106
CIE y	0.4106
CIE u'	0.2369
CIE v'	0.5143

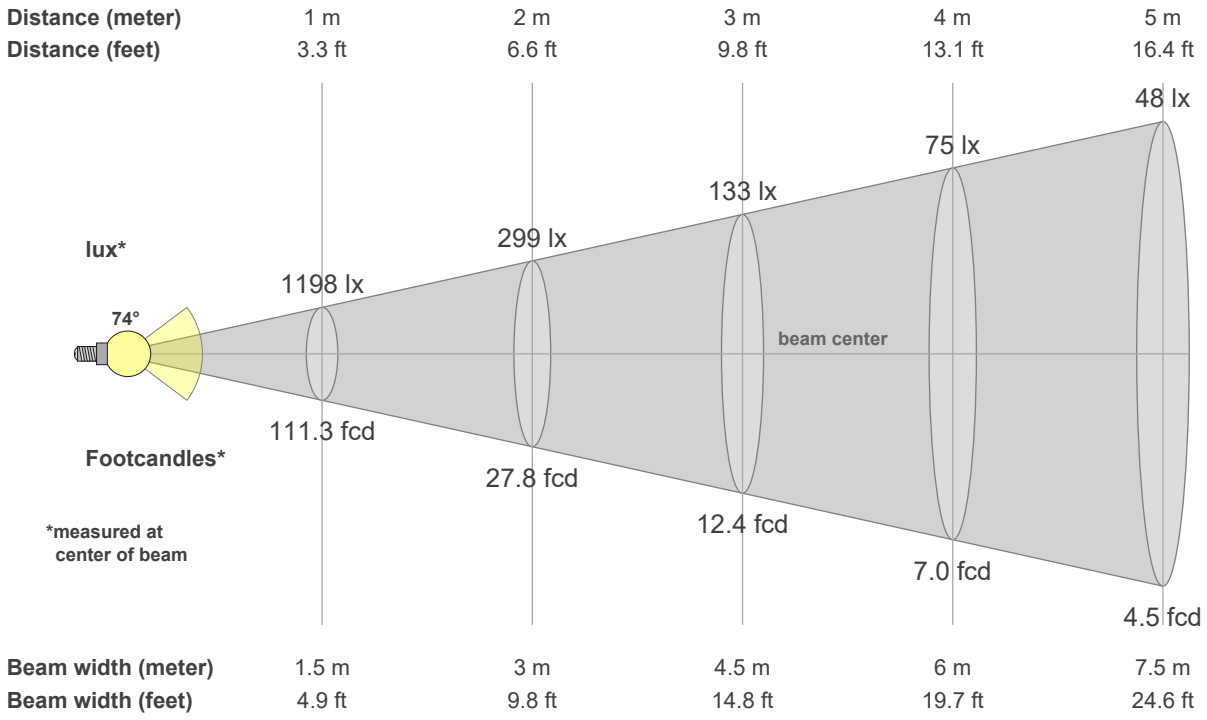
CIE	13.3-1995
Ra	84.2
R9	11.2

Prudential Lighting

Light measurement results

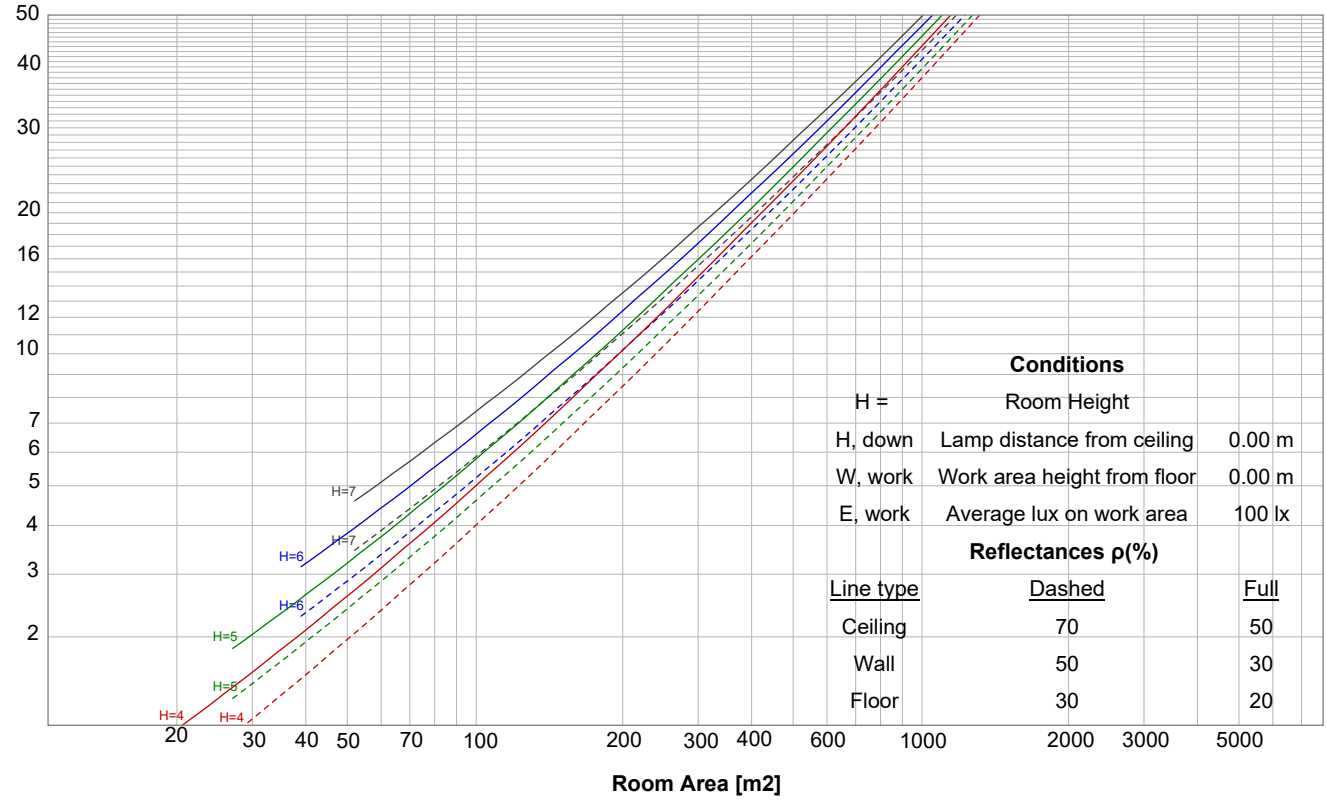
Print date 8/13/2026

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
1198	299	133	75	48	33	24	19	15	12	10	8	7	6	5	5	4	4	3	3	lux
111.3	27.8	12.4	7	4.5	3.1	2.3	1.7	1.4	1.1	0.9	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.3	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
1198	1193	1171	1137	1088	1025	951	863	769	670	566	463	364	278	200	133	76	30	3	1	cd
100%	100%	98%	95%	91%	86%	79%	72%	64%	56%	47%	39%	30%	23%	17%	11%	6%	2%	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
1198	1390	1522	1472	1315	1149	999	853	710	578	460	359	272	203	142	93	51	21	4	5	cd
100%	116%	127%	123%	110%	96%	83%	71%	59%	48%	38%	30%	23%	17%	12%	8%	4%	2%	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
1198	1186	1163	1120	1068	1000	926	838	743	643	540	439	345	260	188	122	69	25	5	5	cd
100%	99%	97%	93%	89%	83%	77%	70%	62%	54%	45%	37%	29%	22%	16%	10%	6%	2%	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
1198	1035	915	830	765	709	655	599	545	486	426	363	305	246	189	132	78	34	4	2	cd
100%	86%	76%	69%	64%	59%	55%	50%	46%	41%	36%	30%	25%	21%	16%	11%	6%	3%	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	110.2	110.2	110.2	105.1	105.1	105.1	100.5	100.5	100.5	98.3
1	109.4	105.0	101.1	97.6	106.5	102.6	99.1	95.9	98.1	95.2	92.5	93.9	91.6	89.4	90.1	88.2	86.5	84.3
2	100.3	92.7	86.4	81.2	97.6	90.7	84.9	80.1	86.9	82.1	78.0	83.5	79.5	76.0	80.2	77.0	74.0	71.9
3	92.1	82.3	74.7	68.7	89.5	80.6	73.6	68.0	77.5	71.5	66.6	74.5	69.5	65.2	71.8	67.6	63.9	61.8
4	84.8	73.6	65.4	59.1	82.5	72.2	64.5	58.6	69.5	62.9	57.7	67.0	61.3	56.7	64.7	59.8	55.8	53.7
5	78.4	66.3	57.8	51.6	76.2	65.1	57.2	51.2	62.8	55.9	50.5	60.7	54.6	49.8	58.7	53.4	49.2	47.1
6	72.7	60.1	51.6	45.5	70.7	59.1	51.1	45.3	57.1	50.0	44.8	55.3	49.0	44.3	53.6	48.1	43.8	41.8
7	67.6	54.8	46.5	40.6	65.8	53.9	46.0	40.4	52.3	45.2	40.0	50.7	44.4	39.6	49.2	43.6	39.3	37.3
8	63.1	50.2	42.1	36.6	61.5	49.5	41.8	36.4	48.1	41.1	36.1	46.7	40.4	35.8	45.4	39.7	35.5	33.6
9	59.1	46.3	38.5	33.1	57.7	45.7	38.2	33.0	44.4	37.6	32.8	43.2	37.0	32.5	42.1	36.5	32.3	30.5
10	55.6	42.9	35.3	30.3	54.2	42.3	35.1	30.2	41.2	34.6	29.9	40.2	34.1	29.7	39.2	33.6	29.5	27.9

Prudential Lighting

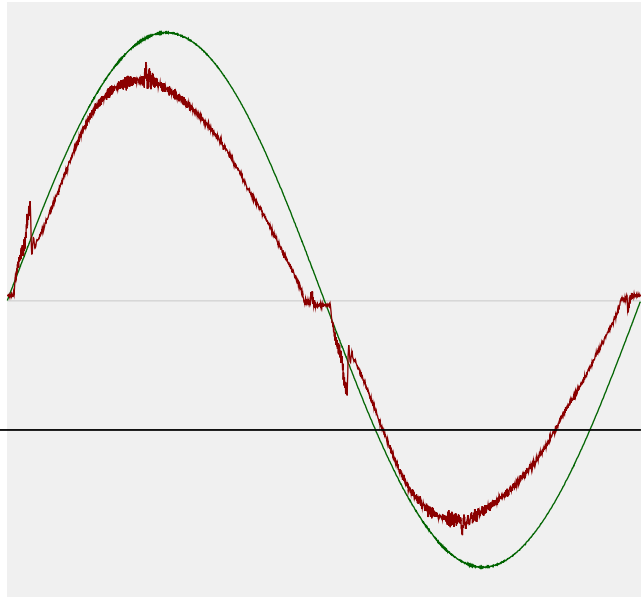
Light measurement results

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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	8.362%
Total harmonic distortion of the voltage	0.1027%

Input power curve



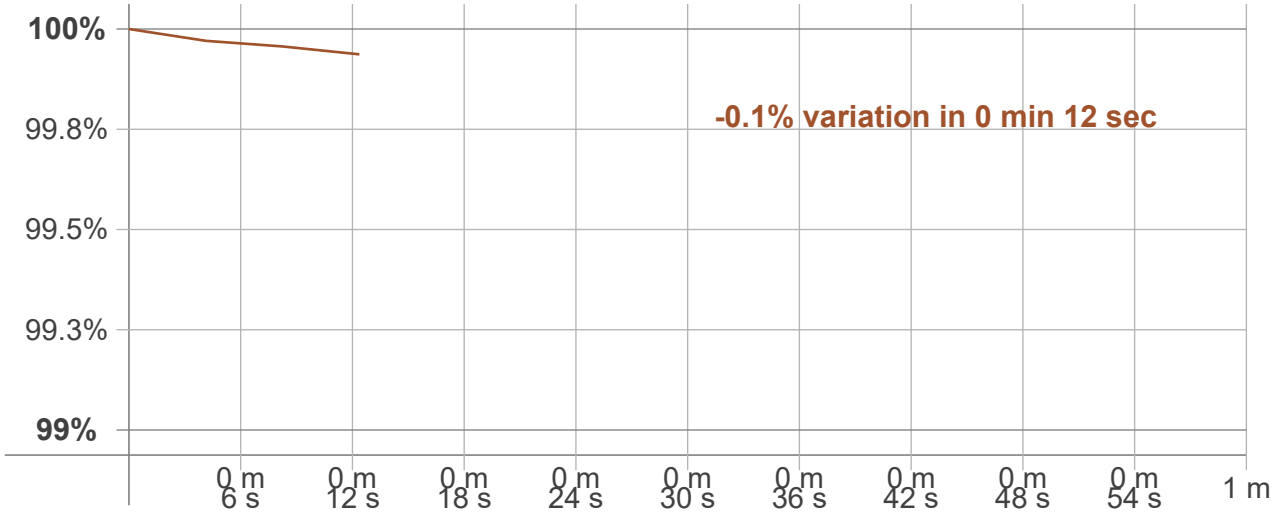
Efficiency

Radiated power efficiency	35.56
Lumen efficiency	118.9 lm/W

Stabilization details

Warmup Conditions		Color Temperature Change	
Stable period	15 min	CCT start	3436 K
Stable change max	1%	CCT shift	0 K
Minimum time	15 min	CCT end	3436 K
Warmup Result		**Output Change**	
Total warmup time	Not completed	Output start	2754 lm
Warmup variation	-0.0632%	Output change	-1.0603 lm
		Output end	2753 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

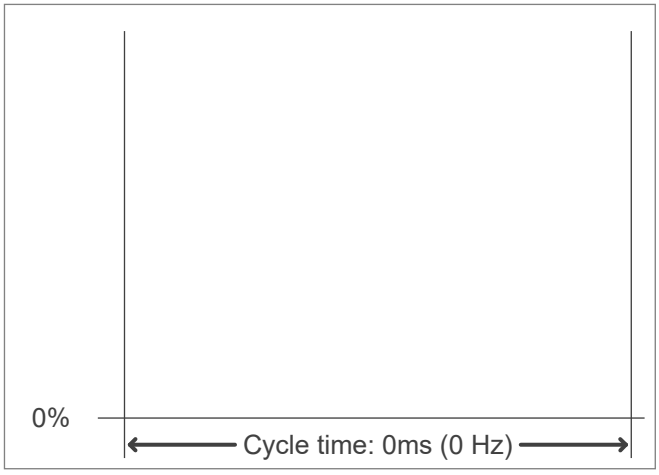
Flicker indices according to California Energy Commission (CEC) 2016b

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 %

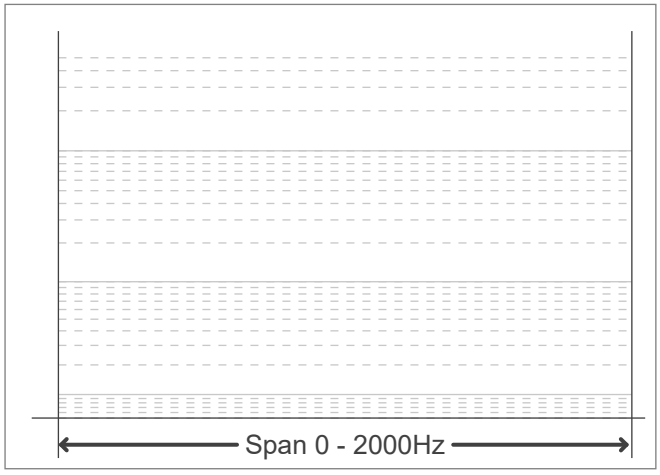
Flicker indices according to Lighting Research Center (2015)

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

