



# TECHLUME

A U S T R A L I A

## LM-79 Test Report

Testing Method:	IES Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products
Relevant Standards:	IES LM-79-08
Test Date and Time:	30/03/2023 5:16:35 PM
Test Location:	Techlume Australia - East Goderich Street Deloraine, TAS 7304
Operator:	Johnny Elmer
Measurement Number:	VFR-230330-0038-MS
Measurement Method:	Far Field, Type C Horizontal
Measurement Distance:	457.7 cm

### Equipment Used

System Name:	LabSpion Goniometer
Sensor Name / Model:	Viso LabSensor Model2 / Freedom VIS (Custom Viso)
Spectrometer Range:	360 nm – 830 nm
Calibration Date:	7/12/2022
Flicker Meter Type:	Viso Systems LabFlicker
Manufacturer:	Viso Systems, Denmark

### Test Conditions

Ambient Temperature:	25 °C ± 1 °C
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### Remarks

The results stated in this report represent the tested sample only. All photometric and colourimetric data has been measured in compliance with IES LM-79-08 standards.

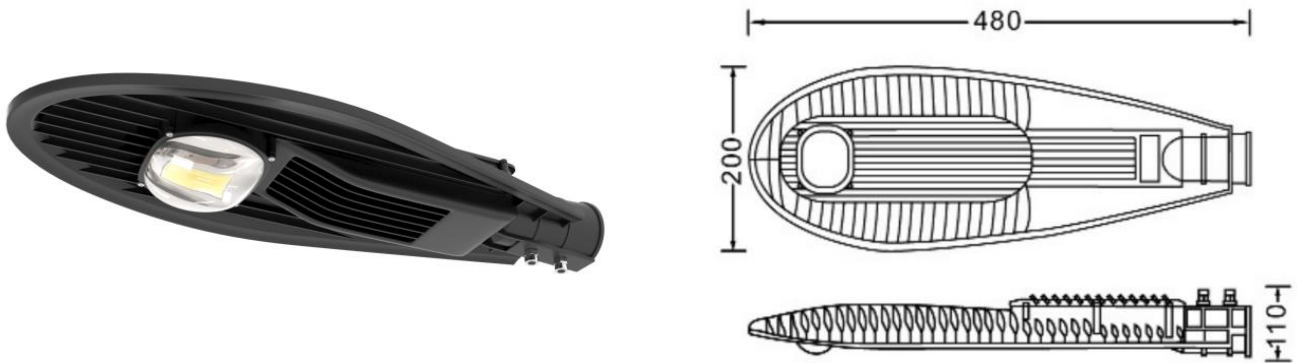


### Product Overview

Product Description: DEX 30W 12V Streetlight, Spigot Dia 46mm, IP65, 5700K, Non-Dim

Item Number: LC6525

Manufacturer: Decrolux Lighting Pty Ltd



### Photometric Measurements

Total Luminous Flux	Luminous Efficacy	Luminous Intensity
3277 lm	107 Lumen/watt	2039 cd

Correlated Colour Temperature, Target	Correlated Colour Temperature, Measured	Colour Rendering Index (CRI)
5700 K	5605 K	Ra 82.5

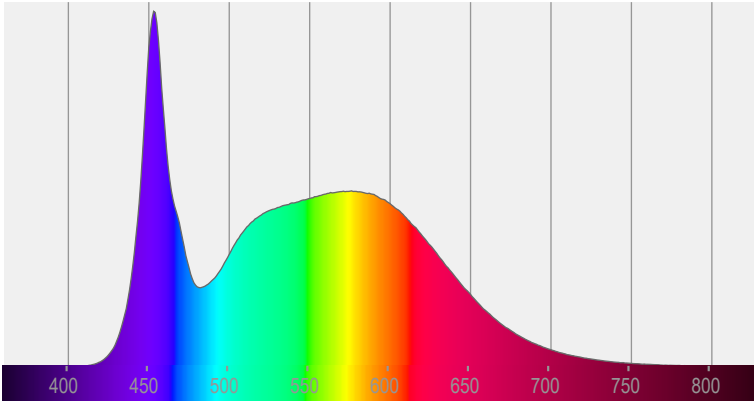
### Electrical Measurements

Input Voltage	Input Current	Input Power	Input Voltage Frequency
240 VAC	0.177 A	30.7 W	60 Hz

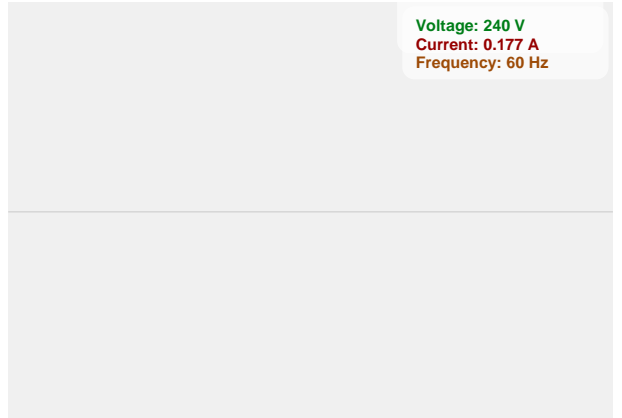
Power Factor	Stabilisation Time	Stabilisation Variation	Hours Operated Prior to Test
0.72	Lamp stabilized in 30 min 0 sec	-1.3%	0 hours



### Spectral Power Distribution (SPD)



### Input Power Curve

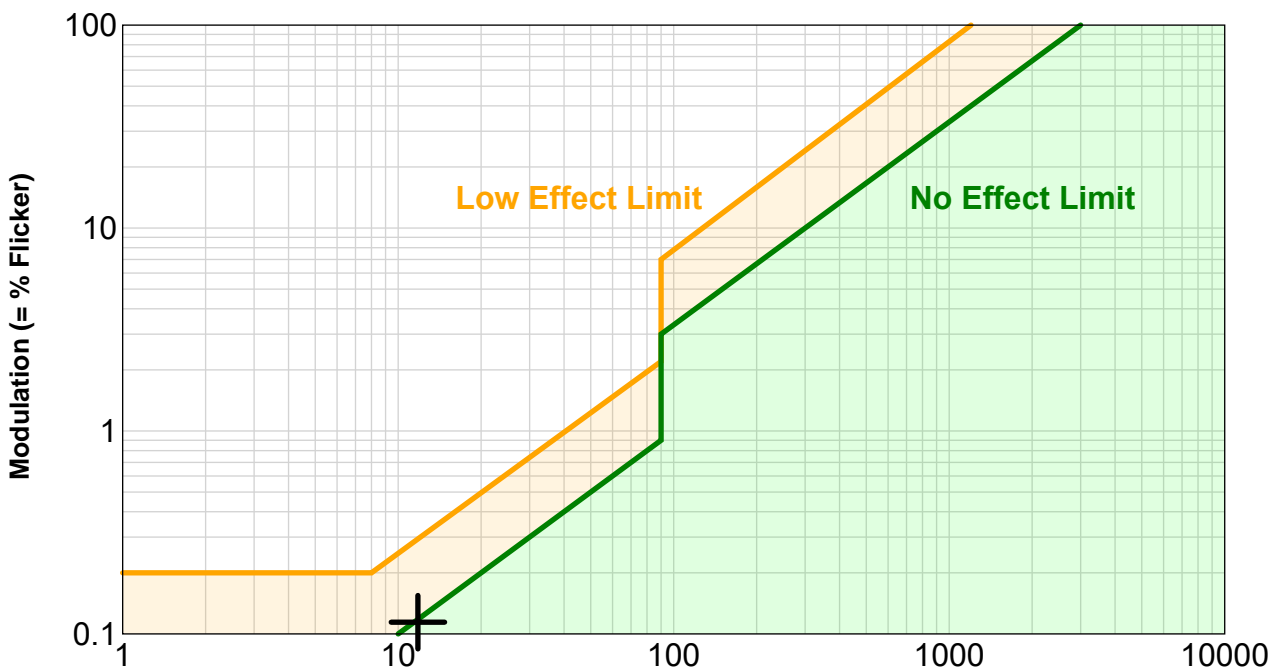


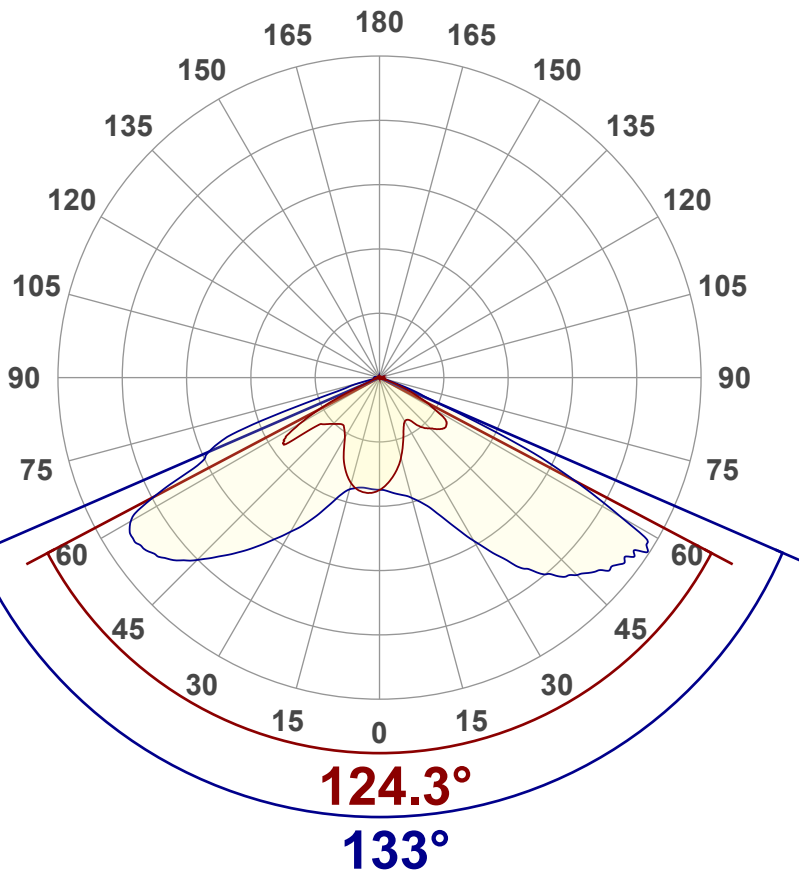
### Flicker Details

Flicker Sample Rate	Flicker Percentage	Flicker Frequency	Flicker Index
20000 sample/s	0.11%	11.79 Hz	0

Flicker SVM Value	Flicker PstLM Value	Measurement Time (PstLM)	Measurement Time (all other indices)
0	0.01	180 s	1.2 s

### IEEE 1789 Frequency/Modulation Plot



**Angular Distribution – 0° / 90° Plane**

**Main Values**

<b>Total Lumen Output</b>	3277 lm
<b>Lumen Up%</b>	0.41%
<b>Lumen Down%</b>	99.59%
<b>Peak Intensity</b>	2039 cd
<b>Beam Angle (90%)</b>	133°

**Cut-off Angle**

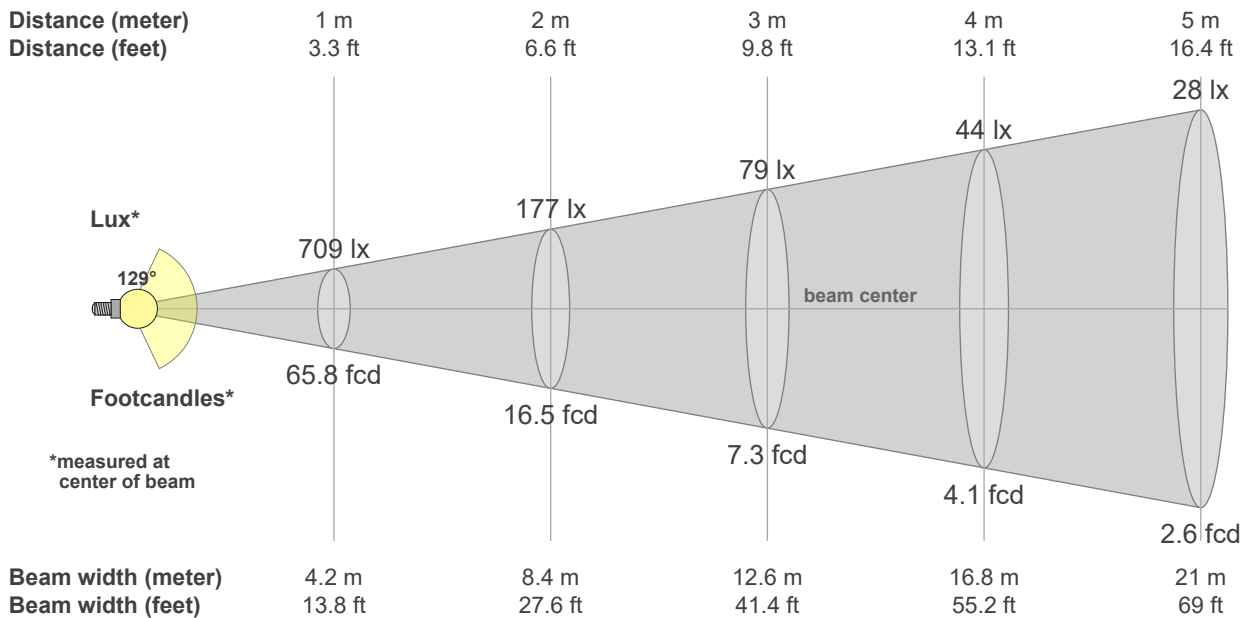
<b>Average 2.5%</b>	151.7°
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**Field Angle**

<b>Average 10%</b>	143.8°
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**Intensity Ratio**

<b>In 120° Cone</b>	79.4%
<b>In 90° Cone</b>	42.2%

**C000-C180**
**C090-C270**

**Beam intensities from 1 – 20m**

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
709	177	79	44	28	20	14	11	9	7	6	5	4	4	3	3	2	2	2	2	lux
65.8	16.5	7.3	4.1	2.6	1.8	1.3	1	0.8	0.7	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	fc



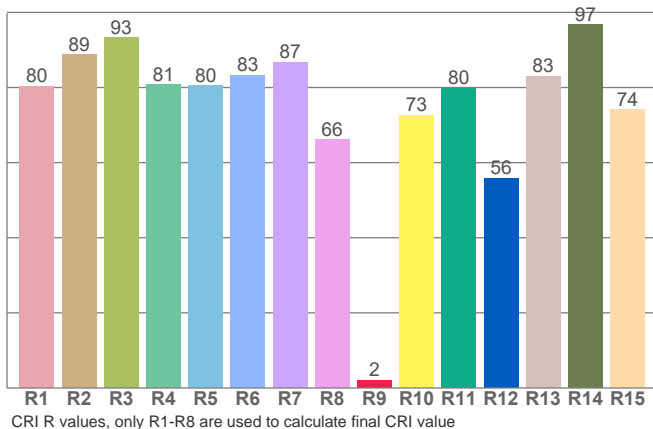
**Colour Details**

Colour Rendering Index (CRI)	Colour Rendering Index R9 Value	Colour Rendering TM30-18
Ra 82.5	R9 = 2.1	R <sub>f</sub> 82.6, R <sub>g</sub> 93.4

Colour Quality Scale	Correlated Colour Temperature, Target	Correlated Colour Temperature, Measured
CQS = 80.1	CCT = 5700 K	CCT = 5605 K

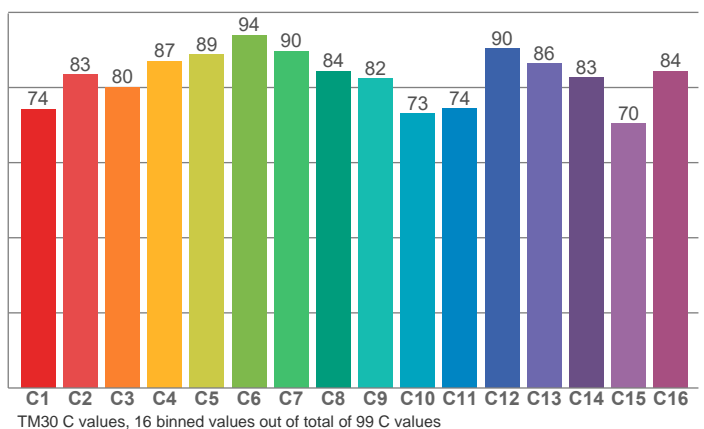
MacAdam Steps	Colour Coordinates CIE 1931	Colour Deviation from BBL
SDCM = 6.1	(x;y) = (0.328;0.337)	Duv = 0.0011

**Colour Rendering Index per reference colour (CIE 1995)**



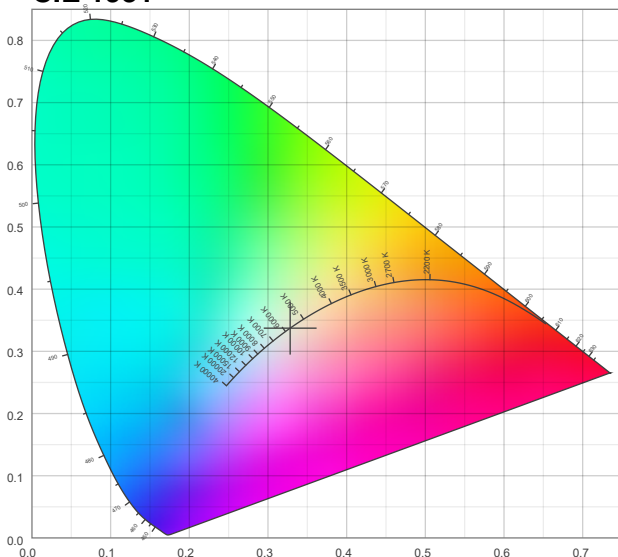
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
80.4	88.8	93.3	80.8	80.5	83.3	86.8	66.1	2.1	72.7	79.8	55.8	83.0	96.7	74.0

**TM30-18 R<sub>f</sub>-values per hue bin**

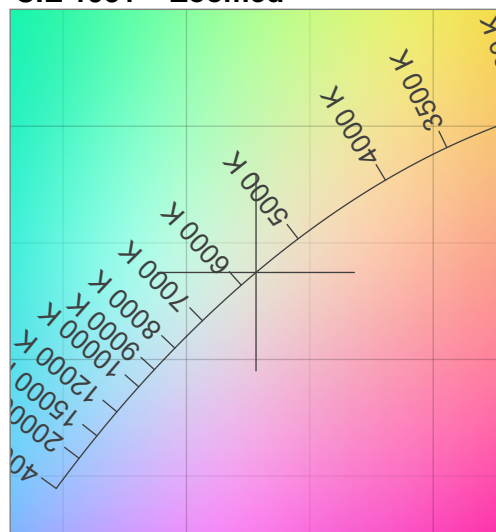


C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
74.2	83.5	80.0	87.1	88.8	93.9	89.7	84.3	82.3	73.0	74.4	90.4	86.3	82.6	70.4	84.3

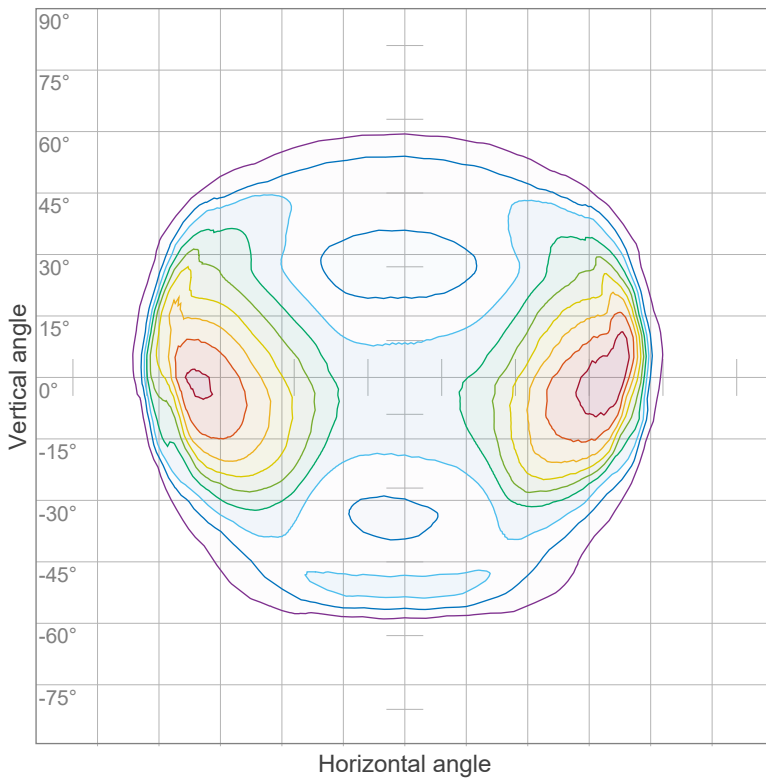
**CIE 1931**



**CIE 1931 – Zoomed**



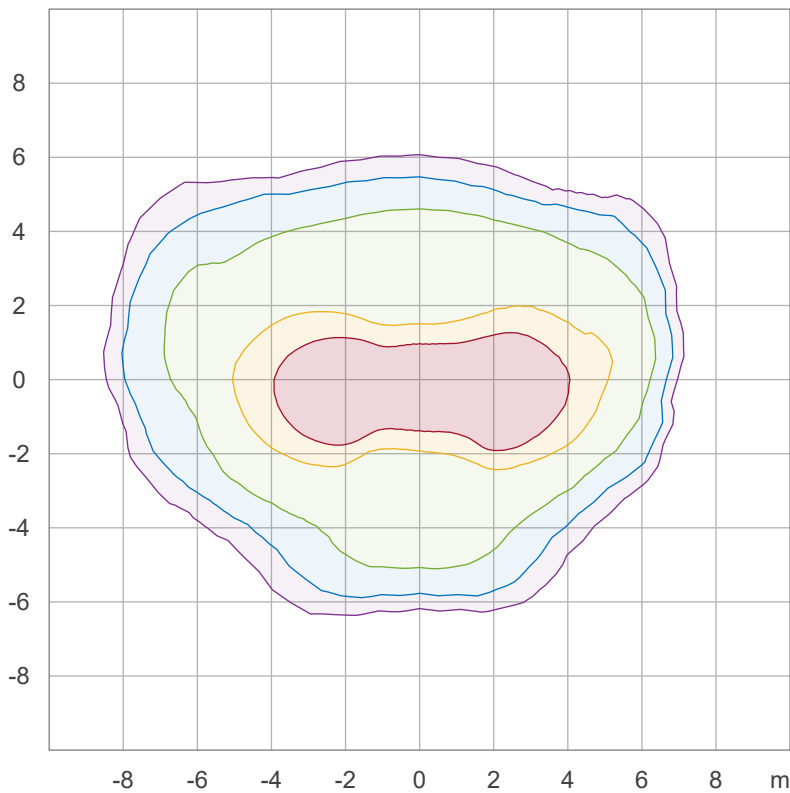
**Iso-intensity Diagram (Iso-Candela)**



90 %	1829.6 cd
80 %	1626.3 cd
70 %	1423.0 cd
60 %	1219.7 cd
50 %	1016.4 cd
40 %	813.1 cd
30 %	609.9 cd
20 %	406.6 cd
10 %	203.3 cd

Peak intensity: 2032.9 cd  
Number of c-planes: 72

**Iso-illuminance Diagram (Iso-lux)**



50.0 %	45.2 lx
30.0 %	27.1 lx
10.0 %	9.0 lx
5.0 %	4.5 lx
3.0 %	2.7 lx

Peak illuminance: 90.4 lx  
Mounting height: 3.0 m  
Number of c-planes: 72

