

# L I A V e r i f i e d S c h e d u l e o f C e r t i f i c a t i o n



**Schedule No.** : TSD004-0070 (Issue 1)

**Certificate No.** : 004-0070

**Certificate Holder:** : Energys Group  
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**This Schedule is to be read in conjunction with the accompanying certificate. The data shown relates only to the unit(s) tested. This schedule and any subsequent schedule(s) may not be reproduced except in full without the written approval of the Testing Laboratory.**

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## 1. INTRODUCTION

This Schedule of certification accompanies the certificate identified on page one as part of the LIA Verified scheme for LED products. Assessment is carried out in line with the requirements set out in LIA Laboratory's Technical Scheme Document TSD-004.

## 2. CERTIFICATION STATUS

Final - The products have achieved 2000 hours of operation as required by the scheme.

## 3. SCOPE

The products listed in Table 1, supplied by the certificate holder identified on page one have been assessed and are covered under certificate no. 004-0070.

**Table 1. *Products covered under scope***

<b>Model No.</b>	<b>Product Name</b>
SDL-A12-840-R02	LED Wall Light - Slim Base
SDL-809-840-R02	LED Wall Light - Slim Extended Base



#### 4. DOCUMENTATION

As part of the assessment process the following documents have been evaluated and form part of the Technical File held by the certificate holder and LIA Laboratory Ltd. It should be noted that in order to maintain certification the certificate holder is required to maintain up to date technical documentation related to all of the products identified in section three of this schedule.

All client documentation held by LIA Laboratory Ltd is maintained as strictly confidential.

**Table 2. Critical Documents**

Document reference	Title/Description
CB1020A	Safety Test Report
GBLIA0096	IECEE CB Safety Test Certificate
SDL02 Manual 1802509	Installation Guide
PV170 Final Report	Performance Test Report

#### 5. OBSERVATIONS AND LIMITATIONS

When installed in accordance with the manufacturer's instructions, this product is deemed to comply with the specified end use.



# **Appendix A**

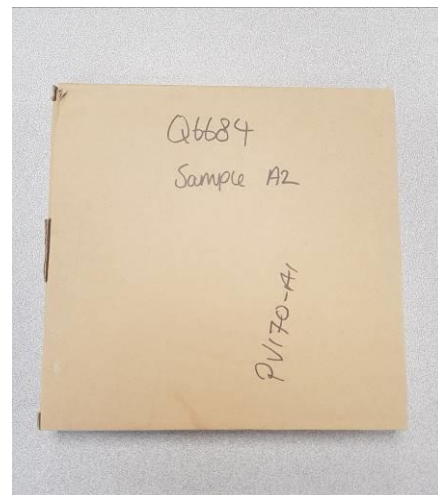
# **PRODUCT TECHNICAL SPECIFICATIONS**

## A.1. LED Wall Light - Slim Base

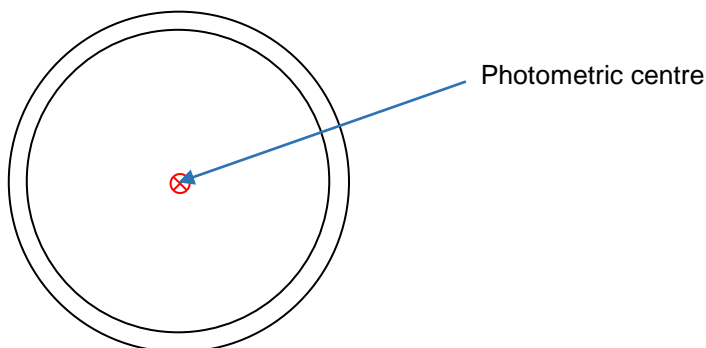
### A.1.1. PRODUCT DETAILS

**Table A.1 Product Specifications**

Product Name	LED Wall Light - Slim Base
Model No.	SDL-A12-840-R02
Product Description	LED Wall Light
Nominal Dimensions	Ø - 240mm; H – 40mm
Product Supply Requirement	220-240V AC, 50/60Hz
Lamp Type and Power	LED, 12W



**Figure 1. Product Images**



**Figure 2. Product diagram**

## A.1.2. SAFETY EVALUATION

Safety assessment was carried out in accordance with the requirements set in LIA Laboratory's technical scheme document TSD-004, the clauses verified are shown in Table A.2 and have been evaluated against IEC 60598-1:2014 and IEC 60598-2-1:1979+AMD1:1987.

The product has been found to conform to the requirements laid out in the identified clauses.

**Table A.2 Safety Test Results**

Clause No.	Title
1.5	Marking
1.6	Construction
1.7	Creepage Distances and Clearances
1.8	Provision for Earthing
1.9	Terminals
1.10	External and Internal Wiring
1.11	Protection against Electric Shock
1.12	Endurance Tests and Thermal Tests
1.13	Resistance to Dust and Moisture – IP65
1.14	Insulation Resistance and Electric Strength
1.15	Resistance to Heat, Fire and Tracking

### A.1.3. CENTRE BEAM INTENSITY AND BEAM ANGLE

Table A.3 *Beam Angle value for model SDL-A12-840-R02*

Centre Beam Intensity (cd)	Beam Angle (Lamp orientation)	Beam Angle Result (°)
492	0° - 180°	109.5
	90° - 270°	109.7

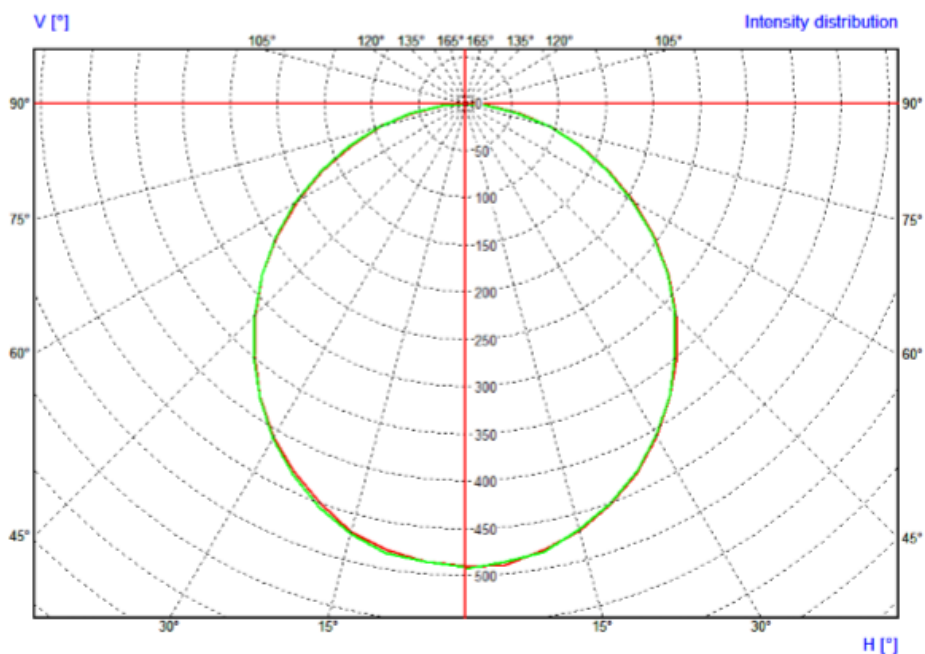


Figure 3. *Polar Diagram for SDL-A12-840-R02*

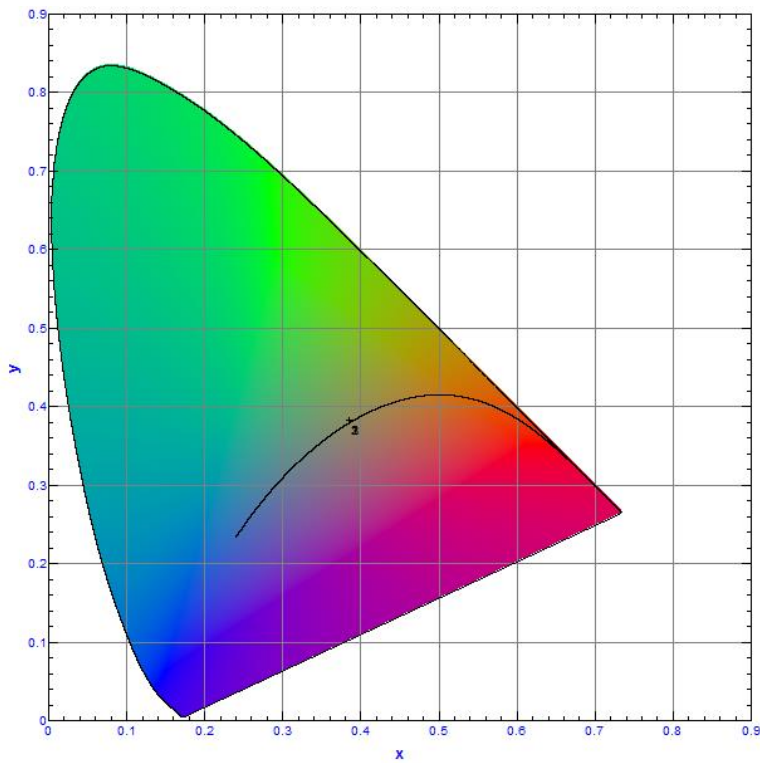




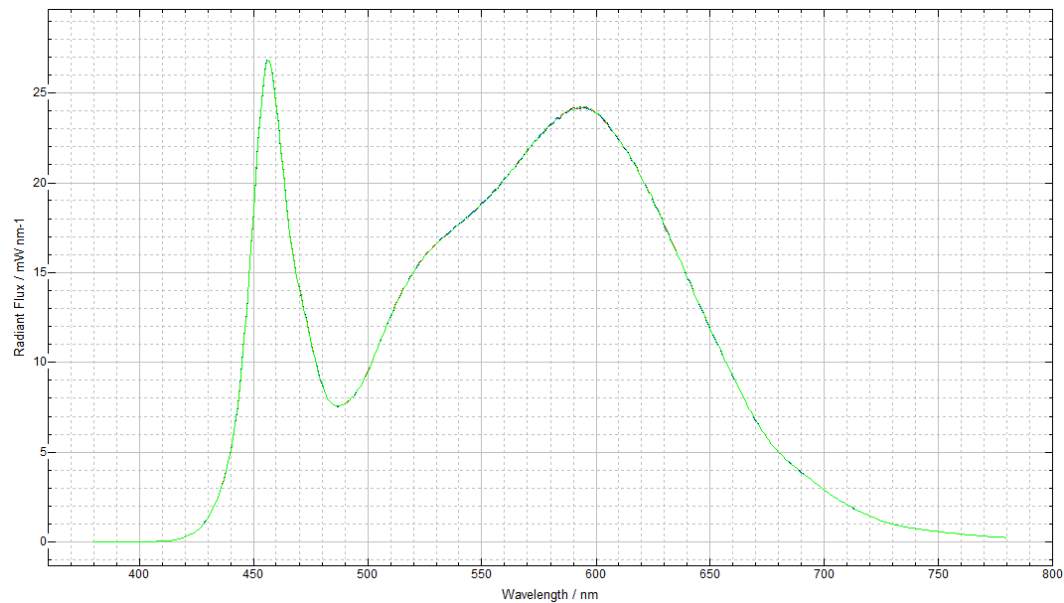
### A.1.4. COLORIMETRY

Table A.4 Colorimetry values for model SDL-A12-840-R02

<b>COLORIMETRY &amp; LUMINOUS FLUX</b>	x coordinate	0.3848
	y coordinate	0.3828
	u coordinate	0.2256
	v coordinate	0.3366
	u' coordinate	0.2256
	v' coordinate	0.5049
	Dominant Wavelength (nm)	581.0
	Purity (%)	34.9
	Correlated Colour Temperature (K)	3927
	Ra (%)	81.6
	R1 (%)	80.0
	R2 (%)	90.7
	R3 (%)	95.6
	R4 (%)	77.2
	R5 (%)	79.3
	R6 (%)	86.2
	R7 (%)	83.4
	R8 (%)	60.6
	R9 (%)	2.6
	R10 (%)	76.6
R11 (%)	75.1	
R12 (%)	56.0	
R13 (%)	83.1	
R14 (%)	98.2	
Lumen Output (lm)	1360	



**Figure 4. CIE 1931 diagram for model SDL-A12-840-R02**



**Figure 5. Spectral Flux for model SDL-A12-840-R02**

### A.1.5. LIFE TEST

Table A.5 Colorimetry depreciation of model SDL-A12-840-R02

Measured Value	0 hours	100 hours	% Maintained (0-100hrs)	2000 hours	% Maintained (0-2000hrs)
Correlated Colour Temperature (K)	3927	3944	100.4	3922	99.9
Ra (%)	81.6	81.3	99.6	81	98.8
Luminous Flux (lm)	1360	1361	100.1	1520	111.8
Luminous Efficacy (lm/W)	113	106	94	118	104

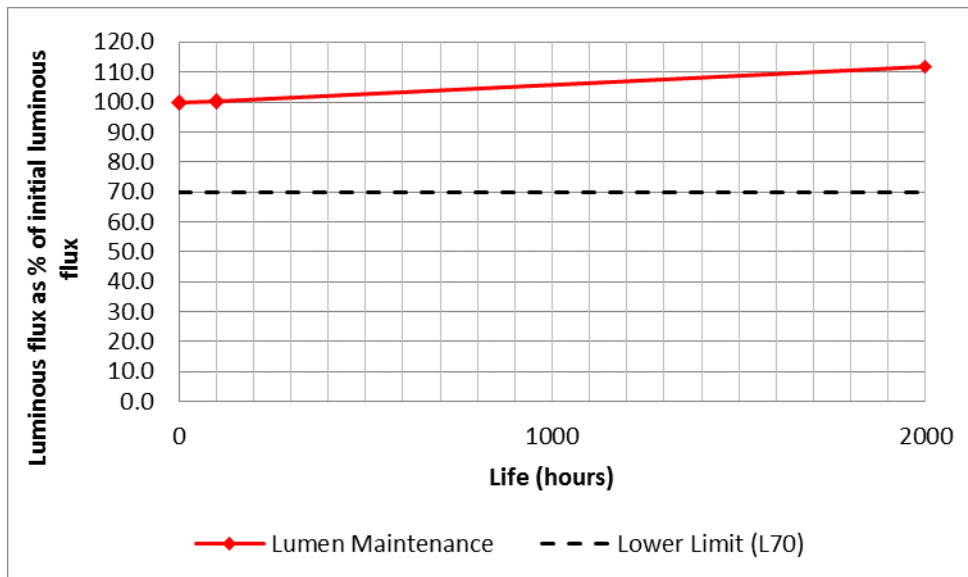


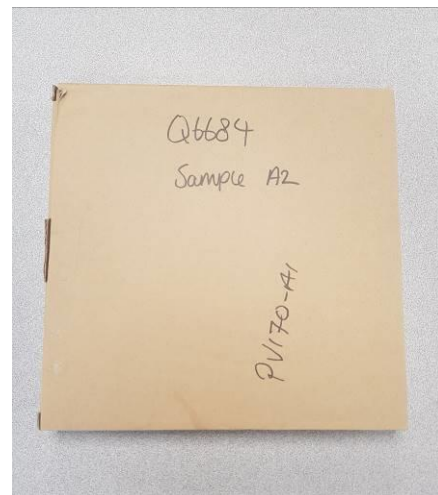
Figure 6. Luminous flux depreciation curve for SDL-A12-840-R02

## A.2. LED Wall Light - Slim Extended Base

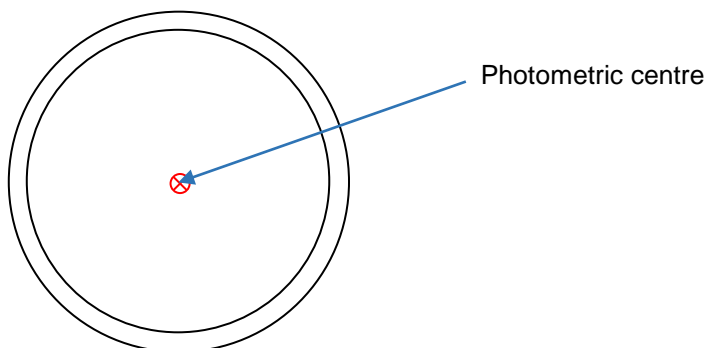
### A.2.1. PRODUCT DETAILS

**Table A.6 Product Specifications**

Product Name	LED Wall Light - Slim Extended Base
Model No.	SDL-809-840-R02
Product Description	LED Wall Light
Nominal Dimensions	Ø - 240mm; H – 40mm
Product Supply Requirement	220-240V AC, 50/60Hz
Lamp Type and Power	LED, 9W



**Figure 7. Product Images**



**Figure 8. Product diagram**

## A.2.2. SAFETY EVALUATION

Safety assessment was carried out in accordance with the requirements set in LIA Laboratory's technical scheme document TSD-004, the clauses verified are shown in Table A.7 and have been evaluated against IEC 60598-1:2014 and IEC 60598-2-1:1979+AMD1:1987.

The product has been found to conform to the requirements laid out in the identified clauses.

**Table A.7 Safety Test Results**

Clause No.	Title
1.5	Marking
1.6	Construction
1.7	Creepage Distances and Clearances
1.8	Provision for Earthing
1.9	Terminals
1.10	External and Internal Wiring
1.11	Protection against Electric Shock
1.12	Endurance Tests and Thermal Tests
1.13	Resistance to Dust and Moisture – IP65
1.14	Insulation Resistance and Electric Strength
1.15	Resistance to Heat, Fire and Tracking

### A.2.3. CENTRE BEAM INTENSITY AND BEAM ANGLE

Table A.8 *Beam Angle value for model SDL-809-840-R02*

Centre Beam Intensity (cd)	Beam Angle (Lamp orientation)	Beam Angle Result (°)
334	0° - 180°	110.1
	90° - 270°	110.4

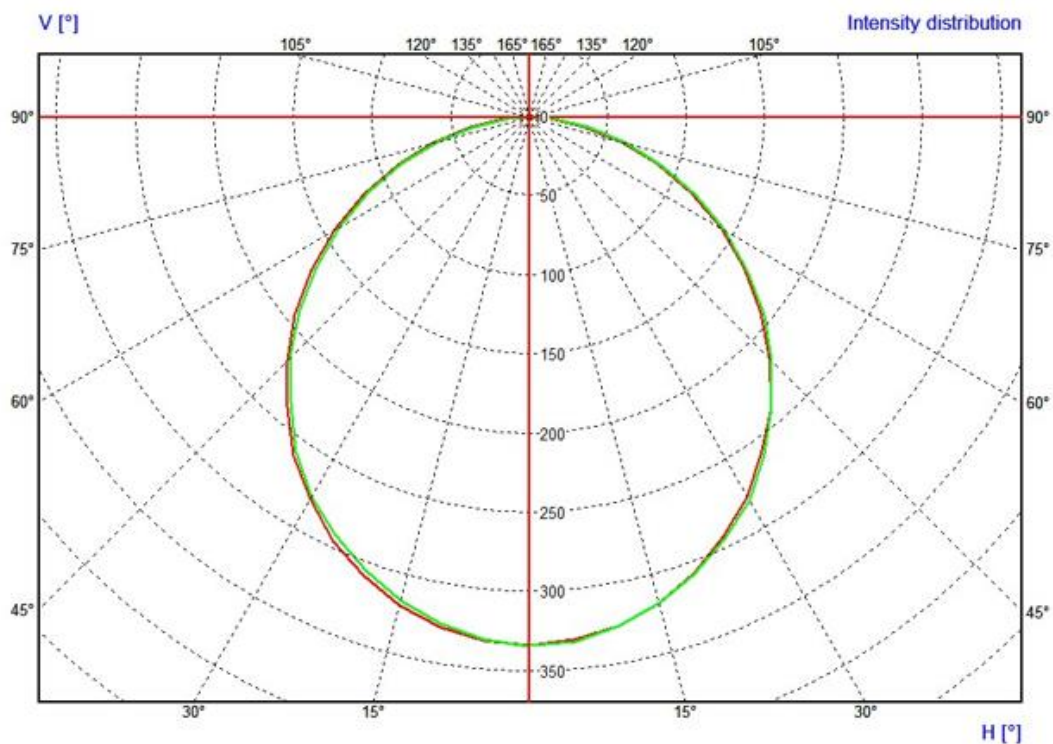


Figure 9. *Polar Diagram for model SDL-809-840-R02*

## A.2.4. COLORIMETRY

Table A.9 Colorimetry values for model SDL-809-840-R02

<b>COLORIMETRY &amp; LUMINOUS FLUX</b>	x coordinate	0.3879
	y coordinate	0.3836
	u coordinate	0.2273
	v coordinate	0.3371
	u' coordinate	0.2273
	v' coordinate	0.5057
	Dominant Wavelength (nm)	581.0
	Purity (%)	36.5
	Correlated Colour Temperature (K)	3854
	Ra (%)	82.2
	R1 (%)	80.9
	R2 (%)	91.2
	R3 (%)	95.7
	R4 (%)	78.1
	R5 (%)	80.0
	R6 (%)	86.7
	R7 (%)	83.8
	R8 (%)	61.5
	R9 (%)	5.4
	R10 (%)	77.8
R11 (%)	76.3	
R12 (%)	57.4	
R13 (%)	83.9	
R14 (%)	98.3	
Lumen Output (lm)	989	

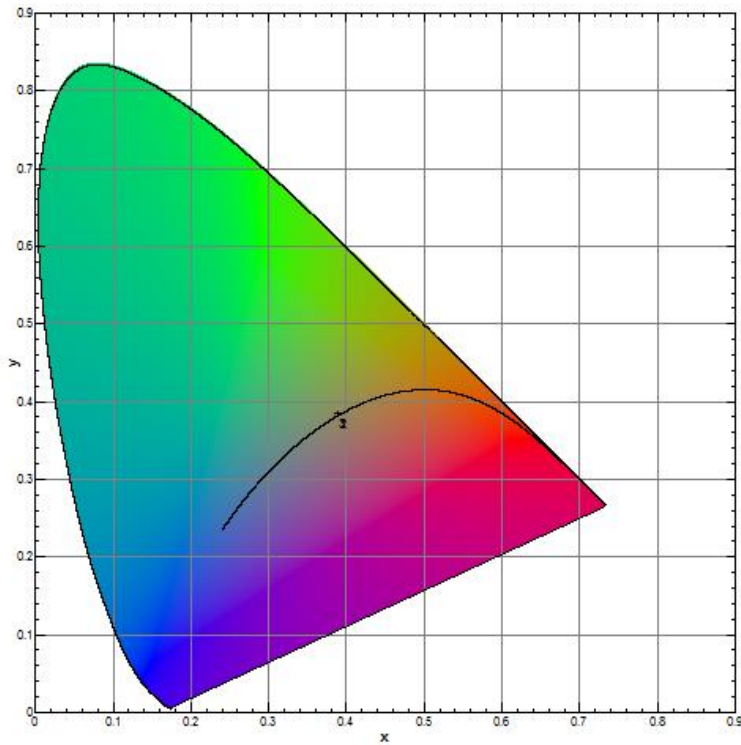


Figure 10. CIE 1931 diagram for model *SDL-809-840-R02*

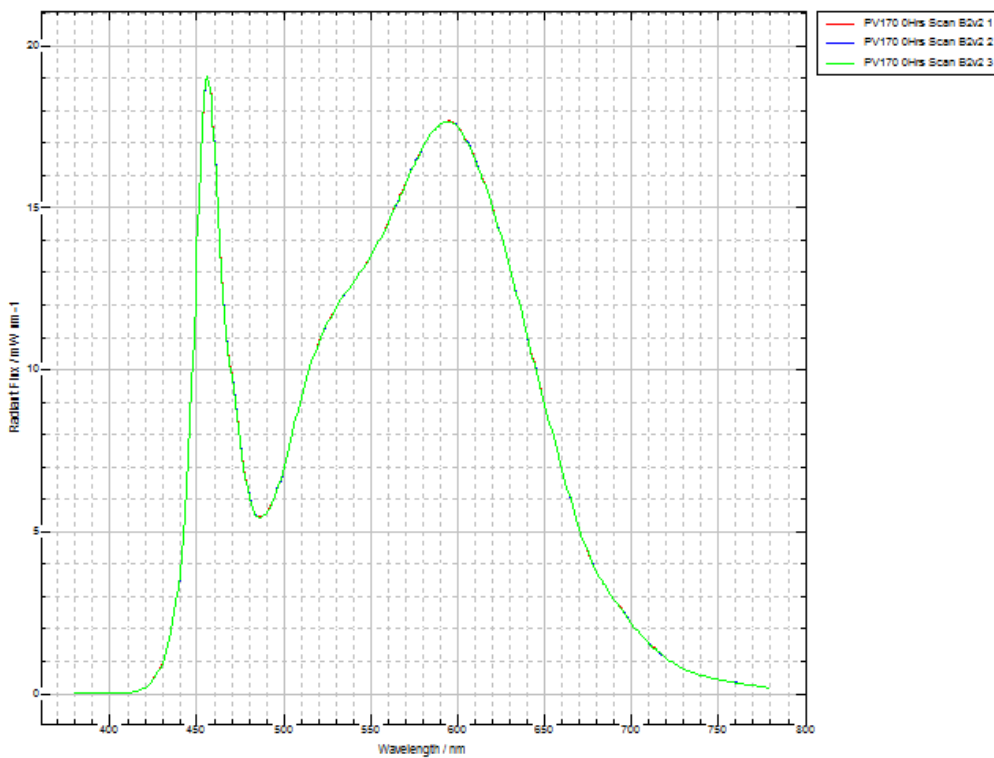


Figure 11. Spectral Flux for model *SDL-809-840-R02*





### **A.2.5. LIFE TEST**

Due to the identical construction and critical components used in this model, the life assessment was carried out as a family variant. Life testing was conducted on the LED Wall Light - Slim Base – Model No. SDL-A12-840-R02 as this was considered to be the most onerous. Refer to section A.1.5 for the measured values.

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**END**