



# Photometric Test Report

## Relevant Standards

- IES LM-79-2008
- ANSI C82.77:2014

## Prepared For

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## Project Number

**DLF1809102**

## Data Number

**DLF1809102-2aREV3**

## Test Date

**2019/1/4**

## Issue Date

**2019/1/4**

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## Approved By

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## 1.0 Test Summary

DLC Technical Requirements v4.4

<b>Outdoor - Architectural Flood and Spot Luminaires</b>			
<b>Requirement Category</b>	<b>Test Method</b>	<b>Requirements</b>	<b>Test value</b>
Lamp Output (lm)	IES LM-79-2008	1000	2429
Zonal Lumen Requirement (0°-90°)	IES LM-79-2008	≥85%	100.00%
Minimum Luminaire Efficacy (lm/W)	IES LM-79-2008	90	123.3
Allowable CCTs* (K)	IES LM-79-2008	5700	4750
Minimum CRI	IES LM-79-2008 CIE 13.3-1995	65	71
Power Factor	ANSI C82.77:2014	0.873	0.910
Total Harmonic Distortion (A%)	ANSI C82.77:2014	25.00%	17.78%
Power (Input Wattage)	IES LM-79-2008	Wrost Case	19.7
Input Voltage	IES LM-79-2008	Wrost Case	120
Input Current	IES LM-79-2008	Wrost Case	0.166

## 2.0 Test List

<b>Test Item</b>	<b>Test</b>	<b>Test Date</b>	<b>Model Number</b>	<b>Sample No.</b>
1	Integrating Sphere Test	2019/1/4	FFLED18	B1
2	Goniophotometer Test	2019/1/4	FFLED18	B1
3	THD and PF Test	2019/1/4	FFLED18	B1

### Remark(If any)

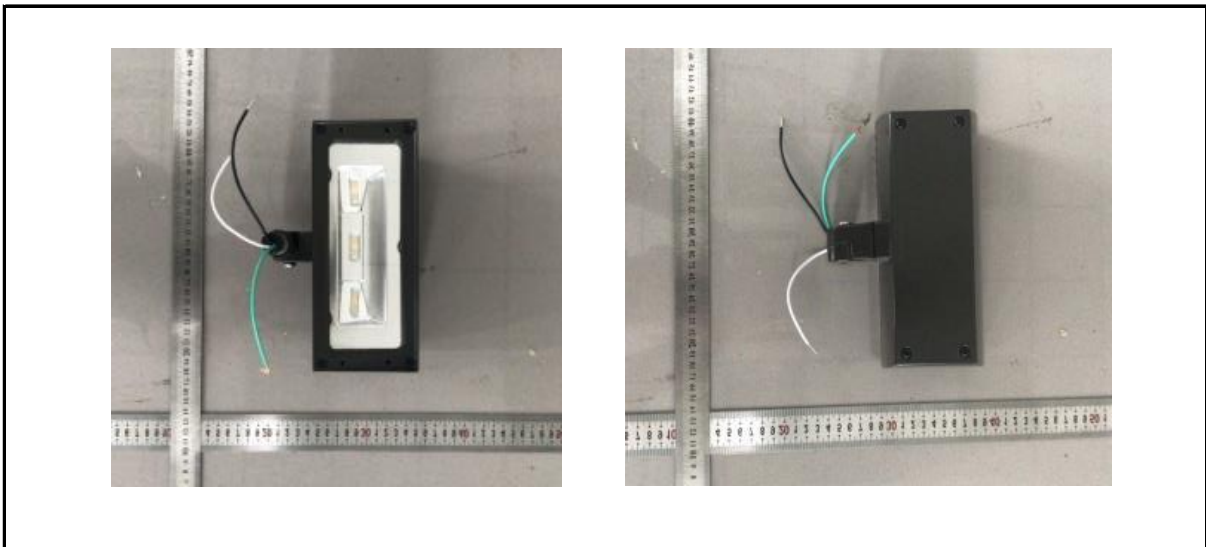
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### 3.0 Production Description

**Luminaire Description:** FFLED18

**Electrical Specification:** 120V-277V,50/60HZ, 18W

#### Photos of Luminaire Characteristics



## 4.0 LM-79 Measurement and Test Results

### 4.1 Integrating Sphere Test

Model No.	FFLED18	Sample ID.	B1
Operate time (Min.)	90	Stabilization time (Min.)	45

#### Test Method

The samples were tested according to the IES LM-79-2008.

Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ .

The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.

The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within  $\pm 0.2$  percent under load.

The sample was measured using  $4\pi$  geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.

#### Test Conditions

Temperature ( $^{\circ}\text{C}$ )	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
25.3	119.99	60.00	0.166	19.7	0.988

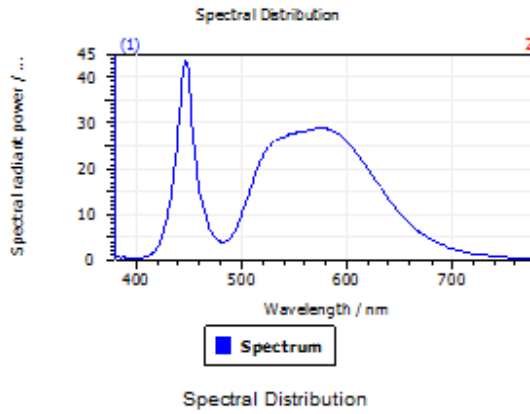
#### Test Result

CCT (K)	CRI (Ra)	Duv
4750	71	6.6E-03

## 4.1 Integrating Sphere Test

### Spectroradiometric Parameters

#### Results

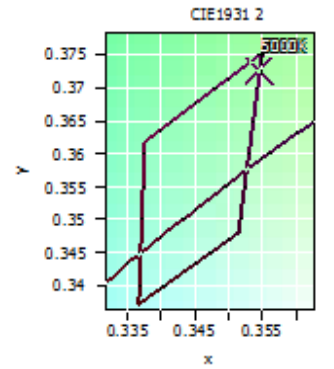


#### Spectral values

DominantWavelength	570.83 nm
Purity	0.182
PeakWavelength	446.76 nm
Width50%	18.73 nm

#### Color Coordinates

Correlated Color Temperature	4750 K		
x:	0.3545	u:	0.2097
y:	0.3726	v:	0.3306
CRI01	67.8	CRI09	-34.6
CRI02	74.7	CRI10	40.4
CRI03	80.5	CRI11	69.4
CRI04	72.5	CRI12	37.1
CRI05	68.3	CRI13	68.3
CRI06	65.7	CRI14	89.0
CRI07	81.2	CRI15	60.0
CRI08	55.7	CRI16	62.3
ResultsCRI	70.8		



PlanckDistance 6.6E-003

## 4.0 LM-79 Measurement and Test Results

### 4.3 Goniophotometer Test

Model No.	FFLED18	Sample ID.	B1
Operate time (Min.)	90	Stabilization time (Min.)	45

#### Test Method

The samples were tested according to the IES LM-79-2008.

Photometric parameters were measured using a type C goniophotometer and software.

The ambient temperature shall be maintained at  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ , measured at a point not more than 1 m from the sample and at the same height as the sample.

The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within  $\pm 0.2$  percent under load.

The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at  $0.5^{\circ}$  vertical intervals and  $10^{\circ}$  horizontal intervals.

#### Test Conditions

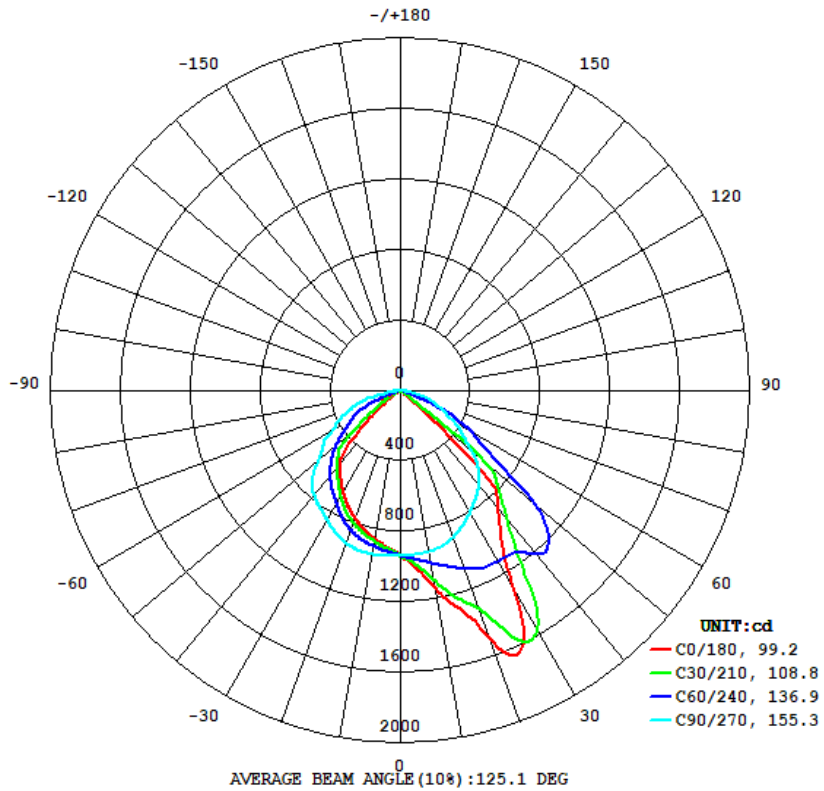
Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Orientation
25.1	120.01	60	0.166	19.7	0.987	Light Down

#### Test Result

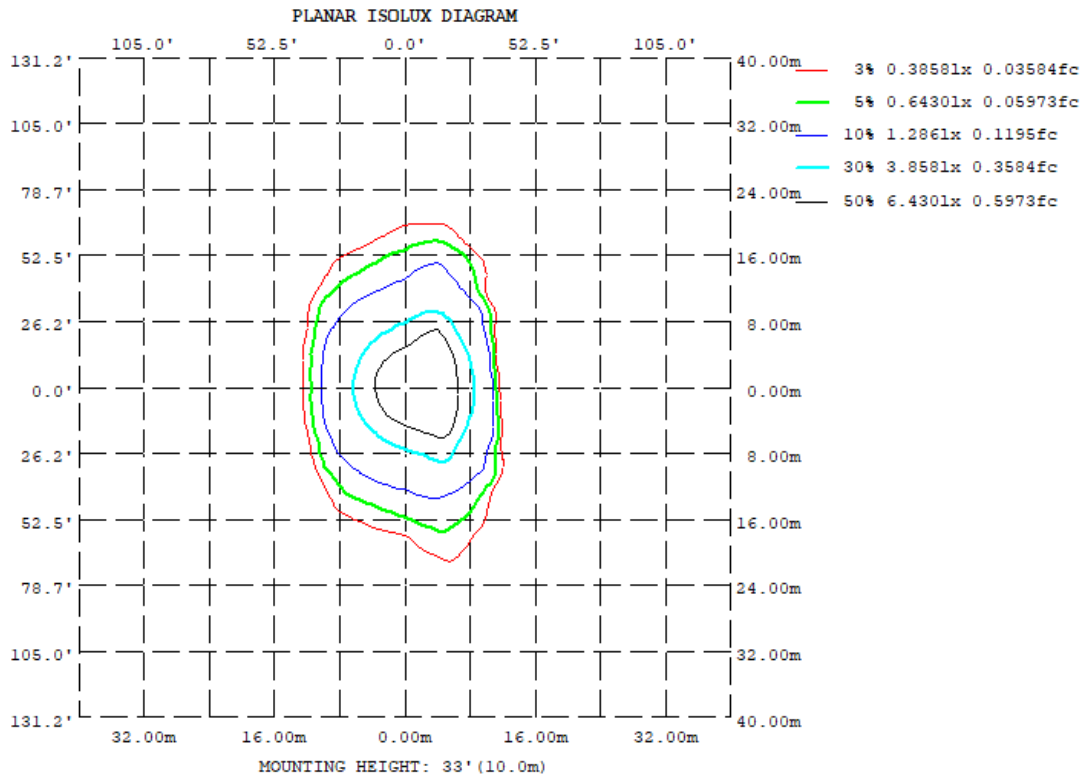
Flux(lm)	Zonal Lumen Requirement (0°-90°)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
		Horizontal Spread	Vertical Spread	Horizontal Spread	Vertical Spread	
2429	100.00%	99.2	155.3	57.6	111.8	123.3

### 4.3 Goniophotometer Test

#### Light Distribution Curve



#### Isolux Plot



### 4.3 Goniophotometer Test

#### Zonal Lumen Summary

DEG	LUMINOUS INTENSITY:cd								
	C0	C45	C90	C135	C180	C225	C270	C315	
7									
10	1133	1041	930.6	875.1	858.0	884.5	946.9	1075	
20	1492	1219	887.3	803.8	769.8	820.7	922.8	1290	
30	1310	1453	800.5	694.0	660.1	709.0	845.5	1589	
40	876.5	1201	704.9	572.2	539.3	592.3	772.3	1043	
50	58.84	722.4	538.8	433.3	181.4	452.4	612.8	715.0	
60	8.107	75.69	346.8	99.88	116.3	155.8	449.1	18.69	
70	0.1777	5.791	211.1	65.44	33.13	88.46	301.3	3.201	
80	0.0300	0.0442	50.83	12.28	8.382	15.77	66.23	0.0268	
90	0	0	0	0	0	0	0	0	
100	0	0	0	0	0	0	0	0	
110	0	0	0	0	0	0	0	0	
120	0	0	0	0	0	0	0	0	
130	0	0	0	0	0	0	0	0	
140	0	0	0	0	0	0	0	0	
150	0	0	0	0	0	0	0	0	
160	0	0	0	0	0	0	0	0	
170	0	0	0	0	0	0	0	0	
180	0	0	0	0	0	0	0	0	



### 4.3 Goniophotometer Test

#### ZONAL LUMEN SUMMARY

	Zonal (lm)		Total (lm)	Percent
0-10	90.86	0 - 10	90.86	3.74%
10-20	282.70	0 - 20	373.56	15.38%
20-30	474.60	0 - 30	848.15	34.92%
30-40	557.70	0 - 40	1405.86	57.89%
40-50	507.51	0 - 50	1913.36	78.79%
50-60	305.22	0 - 60	2218.58	91.36%
60-70	149.87	0 - 70	2368.45	97.53%
70-80	53.79	0 - 80	2422.24	99.74%
80-90	6.28	0 - 90	2428.52	100.00%
90-100	0.00	0 - 100	2428.52	100.00%
100-110	0.00	0 - 110	2428.52	100.00%
110-120	0.00	0 - 120	2428.52	100.00%
120-130	0.00	0 - 130	2428.52	100.00%
130-140	0.00	0 - 140	2428.52	100.00%
140-150	0.00	0 - 150	2428.52	100.00%
150-160	0.00	0 - 160	2428.52	100.00%
160-170	0.00	0 - 170	2428.52	100.00%
170-180	0.00	0 - 180	2428.52	100.00%

### 4.3 Goniophotometer Test

#### Axial Candela

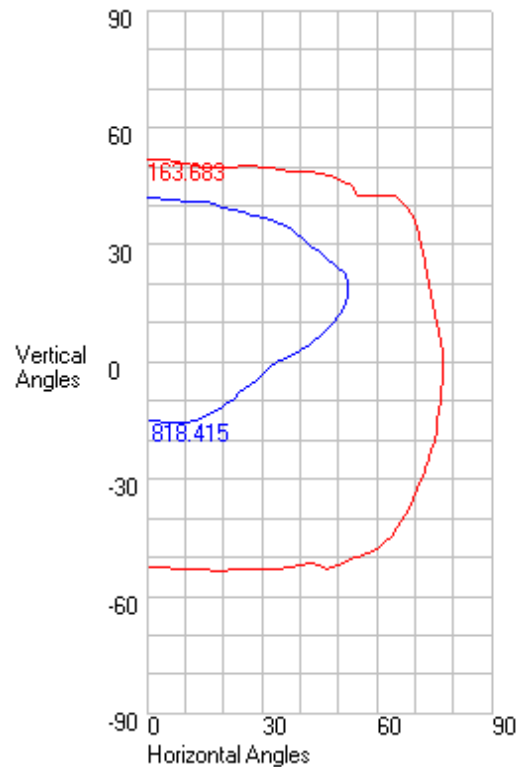
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	1.02	85	0.24
75	212.25	75	0.11
65	382.75	65	2.95
55	541.19	55	13.24
47.5	663.24	47.5	392
42.5	742.94	42.5	800.83
37.5	790.38	37.5	943.93
33	823.29	33	1130.9
29	853.91	29	1374.4
25.5	883.41	25.5	1598.99
22.5	905.19	22.5	1561.75
19.5	924.66	19.5	1470.63
17	934.23	17	1361.65
15	941.88	15	1274.47
13	943.9	13	1218.01
11	945.92	11	1161.56
9	946.41	9	1107.44
7	945.36	7	1055.65
5	944.31	5	1003.86
3	941.7	3	977.43
1	939.09	1	951
0	937.79	0	937.79
-1	937.34	-1	929.48
-3	936.45	-3	912.87
-5	935.56	-5	896.25
-7	933.57	-7	880.94
-9	931.58	-9	865.63
-11	927.74	-11	849.78
-13	922.05	-13	833.38
-15	916.35	-15	816.98
-17	904.72	-17	798.12
-19.5	890.19	-19.5	774.55
-22.5	867.16	-22.5	744.32
-25.5	842.39	-25.5	712.92
-29	809.85	-29	671.85
-33	773.16	-33	623.69
-37.5	729.91	-37.5	569.37
-42.5	672.39	-42.5	467.95
-47.5	589.32	-47.5	288.99
-55	439.37	-55	101.41
-65	275.68	-65	71.84
-75	143.26	-75	20.48
-85	1.99	-85	3.99
-90	0	-90	0.01

### 4.3 Goniophotometer Test

#### Characteristics

NEMA Type	7 H x 6 V
Maximum Candela	1636.83
Maximum Candela Angle	11 H 22.5 V
Horizontal Beam Angle (50%)	98.2
Vertical Beam Angle (50%)	56.4
Horizontal Field Angle (10%)	146.8
Vertical Field Angle (10%)	103.2
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	1251
Beam Efficiency	N.A.
Field Lumens	2341
Field Efficiency	N.A.
Spill Lumens	89
Luminaire Lumens	2429
Total Efficiency	N.A.
Total Luminaire Watts	19.7034
Ballast Factor	1

#### ISOCANDELA CURVES







LUMEN TABULATION

	0	1	3	5	7	9	11	13	15	17	20	23	26	29	33	38	43	48	55	65	75	85	90	Total
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
55	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0	0	0	0
47.5	0.46 *	0.93 *	0.92 *	0.88 *	0.83 *	0.8	0.7	0.7	0.7	1	1.2	1.1	1.2	1.3	1.3	1.2	1.1	1.3	1.1	0.4	0	0	0	0
42.5	0.91 *	1.83 *	1.82 *	1.79 *	1.75 *	1.69 *	1.65 *	1.63 *	1.61 *	1.96 *	2.26 *	2.12 *	2.31 *	2.45 *	2.39 *	2.11 *	1.75 *	1.96 *	1.5	0.5	0.1	0	0	0
37.5	1.33 *	2.67 *	2.67 *	2.66 *	2.64 *	2.62 *	2.60 *	2.56 *	2.50 *	3.00 *	3.43 *	3.24 *	3.53 *	3.72 *	3.74 *	3.40 *	2.71 *	2.96 *	2.27 *	0.8	0.1	0	0	0
33	1.42 *	2.86 *	2.86 *	2.84 *	2.80 *	2.78 *	2.75 *	2.71 *	2.67 *	3.26 *	3.81 *	3.64 *	3.95 *	4.17 *	4.29 *	4.03 *	3.14 *	3.41 *	2.70 *	0.93 *	0.1	0	0	0
29	1.53 *	3.07 *	3.07 *	3.05 *	3.03 *	3.01 *	2.97 *	2.93 *	2.86 *	3.49 *	4.07 *	3.89 *	4.21 *	4.40 *	4.53 *	4.30 *	3.30 *	3.55 *	2.78 *	0.93 *	0.1	0	0	0
25.5	1.59 *	3.18 *	3.16 *	3.14 *	3.11 *	3.08 *	3.06 *	3.02 *	2.95 *	3.56 *	4.13 *	3.93 *	4.20 *	4.35 *	4.48 *	4.19 *	3.19 *	3.46 *	2.65 *	0.87 *	0.1	0	0	0
22.5	1.44 *	2.88 *	2.88 *	2.86 *	2.84 *	2.82 *	2.80 *	2.75 *	2.68 *	3.26 *	3.77 *	3.55 *	3.78 *	3.97 *	4.05 *	3.72 *	2.87 *	3.18 *	2.39 *	0.77 *	0.1	0	0	0
19.5	1.38 *	2.77 *	2.77 *	2.77 *	2.75 *	2.75 *	2.73 *	2.67 *	2.60 *	3.18 *	3.69 *	3.45 *	3.73 *	3.96 *	3.98 *	3.67 *	2.93 *	3.27 *	2.43 *	0.79 *	0.1	0	0	0
17	1.08 *	2.16 *	2.16 *	2.15 *	2.13 *	2.11 *	2.10 *	2.07 *	2.04 *	2.49 *	2.87 *	2.71 *	2.96 *	3.14 *	3.16 *	2.97 *	2.44 *	2.73 *	2.00 *	0.67 *	0.1	0	0	0
15	0.80 *	1.61 *	1.61 *	1.61 *	1.60 *	1.58 *	1.56 *	1.55 *	1.53 *	1.87 *	2.16 *	2.04 *	2.24 *	2.38 *	2.41 *	2.29 *	1.91 *	2.15 *	1.58 *	0.54 *	0.1	0	0	0
13	0.76 *	1.52 *	1.53 *	1.53 *	1.52 *	1.50 *	1.49 *	1.47 *	1.45 *	1.77 *	2.04 *	1.94 *	2.13 *	2.26 *	2.29 *	2.20 *	1.85 *	2.09 *	1.55 *	0.55 *	0.1	0	0	0
11	0.72 *	1.45 *	1.45 *	1.45 *	1.44 *	1.43 *	1.42 *	1.40 *	1.37 *	1.68 *	1.95 *	1.85 *	2.04 *	2.15 *	2.17 *	2.11 *	1.79 *	2.03 *	1.52 *	0.55 *	0.1	0	0	0
9	0.69 *	1.38 *	1.38 *	1.38 *	1.37 *	1.36 *	1.35 *	1.33 *	1.31 *	1.60 *	1.86 *	1.77 *	1.94 *	2.05 *	2.08 *	2.04 *	1.74 *	1.96 *	1.48 *	0.55 *	0.1	0	0	0
7	0.66 *	1.32 *	1.32 *	1.31 *	1.31 *	1.30 *	1.28 *	1.27 *	1.25 *	1.53 *	1.77 *	1.69 *	1.86 *	1.97 *	2.01 *	1.98 *	1.68 *	1.90 *	1.44 *	0.55 *	0.1	0	0	0
5	0.63 *	1.26 *	1.26 *	1.25 *	1.25 *	1.24 *	1.23 *	1.21 *	1.19 *	1.46 *	1.70 *	1.62 *	1.79 *	1.90 *	1.95 *	1.91 *	1.62 *	1.82 *	1.40 *	0.54 *	0.1	0	0	0
3	0.60 *	1.21 *	1.21 *	1.21 *	1.20 *	1.19 *	1.18 *	1.17 *	1.15 *	1.41 *	1.64 *	1.57 *	1.73 *	1.84 *	1.88 *	1.85 *	1.56 *	1.75 *	1.35 *	0.54 *	0.1	0	0	0
1	0.59 *	1.17 *	1.17 *	1.17 *	1.16 *	1.15 *	1.14 *	1.13 *	1.11 *	1.36 *	1.58 *	1.51 *	1.67 *	1.77 *	1.81 *	1.78 *	1.50 *	1.68 *	1.30 *	0.53 *	0.1	0	0	0
0	0.29 *	0.57 *	0.57 *	0.57 *	0.57 *	0.57 *	0.56 *	0.55 *	0.55 *	0.67 *	0.77 *	0.74 *	0.81 *	0.86 *	0.88 *	0.86 *	0.73 *	0.81 *	0.63 *	0.26 *	0.1	0	0	0



-1	0.28 *	0.57 *	0.57 *	0.57 *	0.56 *	0.56 *	0.55 *	0.55 *	0.54 *	0.66 *	0.76 *	0.73 *	0.80 *	0.85 *	0.87 *	0.85 *	0.72 *	0.79 *	0.62 *	0.26 *	0.1	0	
-3	0.56 *	1.12 *	1.12 *	1.12 *	1.11 *	1.10 *	1.09 *	1.08 *	1.06 *	1.30 *	1.50 *	1.43 *	1.58 *	1.67 *	1.71 *	1.68 *	1.41 *	1.57 *	1.23 *	0.52 *	0.1	0	
-5	0.55 *	1.10 *	1.10 *	1.10 *	1.09 *	1.08 *	1.07 *	1.06 *	1.04 *	1.27 *	1.47 *	1.40 *	1.55 *	1.64 *	1.68 *	1.65 *	1.38 *	1.54 *	1.20 *	0.51 *	0.1	0	
-7	0.54 *	1.08 *	1.08 *	1.08 *	1.07 *	1.06 *	1.05 *	1.04 *	1.02 *	1.25 *	1.44 *	1.37 *	1.51 *	1.61 *	1.64 *	1.61 *	1.35 *	1.50 *	1.18 *	0.50 *	0.1	0	
-9	0.53 *	1.06 *	1.06 *	1.06 *	1.05 *	1.04 *	1.03 *	1.02 *	1.00 *	1.22 *	1.41 *	1.35 *	1.48 *	1.57 *	1.61 *	1.58 *	1.32 *	1.47 *	1.15 *	0.49 *	0.1	0	
-11	0.52 *	1.04 *	1.04 *	1.04 *	1.03 *	1.03 *	1.02 *	1.00 *	0.98 *	1.20 *	1.39 *	1.32 *	1.45 *	1.54 *	1.57 *	1.54 *	1.29 *	1.43 *	1.12 *	0.48 *	0.1	0	
-13	0.51 *	1.03 *	1.02 *	1.02 *	1.02 *	1.01 *	1.00 *	0.98 *	0.97 *	1.18 *	1.36 *	1.29 *	1.42 *	1.50 *	1.53 *	1.50 *	1.25 *	1.39 *	1.09 *	0.47 *	0.1	0	
-15	0.50 *	1.01 *	1.00 *	1.00 *	1.00 *	0.99 *	0.98 *	0.96 *	0.95 *	1.15 *	1.33 *	1.27 *	1.39 *	1.47 *	1.50 *	1.46 *	1.22 *	1.35 *	1.06 *	0.46 *	0.1	0	
-17	0.49 *	0.98 *	0.98 *	0.98 *	0.97 *	0.97 *	0.96 *	0.94 *	0.92 *	1.12 *	1.30 *	1.24 *	1.36 *	1.44 *	1.47 *	1.43 *	1.18 *	1.31 *	1.03 *	0.44 *	0.1	0	
-20	0.60 *	1.20 *	1.20 *	1.19 *	1.19 *	1.18 *	1.16 *	1.14 *	1.12 *	1.37 *	1.58 *	1.50 *	1.65 *	1.75 *	1.79 *	1.73 *	1.44 *	1.58 *	1.24 *	0.54 *	0.1	0	
-23	0.69 *	1.39 *	1.39 *	1.38 *	1.37 *	1.36 *	1.35 *	1.32 *	1.30 *	1.58 *	1.82 *	1.74 *	1.91 *	2.03 *	2.07 *	2.00 *	1.65 *	1.81 *	1.42 *	0.61 *	0.1	0	
-26	0.67 *	1.33 *	1.33 *	1.33 *	1.32 *	1.30 *	1.29 *	1.27 *	1.24 *	1.51 *	1.74 *	1.66 *	1.83 *	1.95 *	1.98 *	1.91 *	1.58 *	1.72 *	1.36 *	0.58 *	0.1	0	
-29	0.74 *	1.48 *	1.48 *	1.47 *	1.46 *	1.44 *	1.42 *	1.40 *	1.37 *	1.67 *	1.93 *	1.84 *	2.04 *	2.16 *	2.20 *	2.12 *	1.73 *	1.89 *	1.50 *	0.64 *	0.1	0	
-33	0.79 *	1.58 *	1.58 *	1.57 *	1.56 *	1.54 *	1.52 *	1.49 *	1.46 *	1.78 *	2.06 *	1.98 *	2.19 *	2.31 *	2.34 *	2.25 *	1.84 *	2.01 *	1.60 *	0.67 *	0.1	0	
-38	0.82 *	1.64 *	1.63 *	1.62 *	1.61 *	1.59 *	1.57 *	1.54 *	1.51 *	1.84 *	2.14 *	2.05 *	2.26 *	2.38 *	2.41 *	2.28 *	1.86 *	2.04 *	1.61 *	0.7	0.1	0	
-43	0.79 *	1.59 *	1.59 *	1.58 *	1.57 *	1.55 *	1.54 *	1.52 *	1.49 *	1.81 *	2.08 *	1.97 *	2.17 *	2.29 *	2.29 *	2.14 *	1.76 *	1.94 *	1.52 *	0.6	0.1	0	
-48	0.58 *	1.17 *	1.17 *	1.17 *	1.16 *	1.15 *	1.14 *	1.13 *	1.11 *	1.36 *	1.55 *	1.46 *	1.61 *	1.72 *	1.71 *	1.57 *	1.32 *	1.51 *	1.22 *	0.5	0.1	0	
-55	0.45 *	0.91 *	0.92 *	0.92 *	0.91 *	0.90 *	0.89 *	0.89 *	0.89 *	1.10 *	1.28 *	1.21 *	1.33 *	1.44 *	1.46 *	1.39 *	1.26 *	1.51 *	1.3	0.6	0.1	0	
-65	0.3	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.8	0.9	0.9	1	0.9	1.1	1	0.4	0.1	0	
-75	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.1	0	0	
-85	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	
-90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	28	56	56	56	55	55	54	53	53	64	74	71	77	82	83	79	65	72	56	22	3.2	0	1215

## 5.0 THD and PF Test

Model No.	FFLED18	Sample ID.	B1
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### Test Method

The samples were tested according to the ANSI C82.77:2002.

The total harmonic distortion shall be measured to the 40th order.

The ambient temperature condition was maintained at  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ . The sample measurements were made using a digital power meter and power supply. The sample was operated at rated voltage and was stabilized before measurement. The total harmonic distortion were calculated.

### Test Results

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD
25.1	277.01	60	0.078	19.6	0.910	17.78%
25.1	119.99	60	0.166	19.7	0.988	11.89%

## 6.0 Equipment Information

Test Equipment			
Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
DLF107	Integrating Sphere System	2018/12/26	2019/12/25
DLF108	Auxiliary Lamp	2018/12/26	2019/12/25
DLF122	Measurement Standard Lamp Standard Lamp Type: 220 V, 0.4720 A, Tungsten, Omni-derectional	2018/12/26	2019/12/25
DLF116	AC Power Source	2018/12/26	2019/12/25
DLF113	Power Meter	2018/12/26	2019/12/25
DLF112	Temperature Recorder	2018/12/26	2019/12/25
DLF114	Temperature & Humidity Datalogger	2018/12/26	2019/12/25
DLF101	Goniophotometer	2018/12/26	2019/12/25
DLF125	Standard Lamp Standard Lamp Type: 76.58 V, 6.7875 A, Tungsten, Omni-derectional	2018/12/26	2019/12/25
DLF104	AC Power Source	2018/12/26	2019/12/25
DLF507	DC Power Source	2018/12/26	2019/12/25
DLF102	Power Meter	2018/12/26	2019/12/25
DLF111	Temperature & Humidity Datalogger	2018/12/26	2019/12/25
DLF119	Power Meter	2018/12/26	2019/12/25
DLF031	Temperature data logger	2018/12/26	2019/12/25
DLF022	Digital power meter	2018/12/26	2019/12/25
DLF003	Temperature & Humidity Datalogger	2018/12/26	2019/12/25

\*\*\*\*\* End of Test Report\*\*\*\*\*