



Photometric Test Report

Relevant Standards

- ☒ IES LM-79-2008
- ☒ ANSI C82.77:2017

Prepared For

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1.0 Test Summary

DLC Technical Requirements v5.1

Retrofit Kits for Direct Linear Ambient Luminaires				
Requirement Category	Test Method	Requirements		Test value
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77:2014	20.00%	120V	8.11%
		20.00%	277V	13.65%
Power Factor (THD & PF - section 4.3)	ANSI C82.77:2014	0.9	120V	0.993
		0.9	277V	0.946
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2008	7 step	5029±355	4934
		4 step	5029±220	
Minimum CRI (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥80		84
Minimum R9 (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥0		8
Minimum Rf (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	≥70		84
Minimum Rg (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	≥89		94
Minimum IES Rcs,h1 (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	-12%≤IES Rcs,h1≤+23%		-12%

2.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2021/9/10	VEKM-L42F/HO/850	M1

Remark(If any)

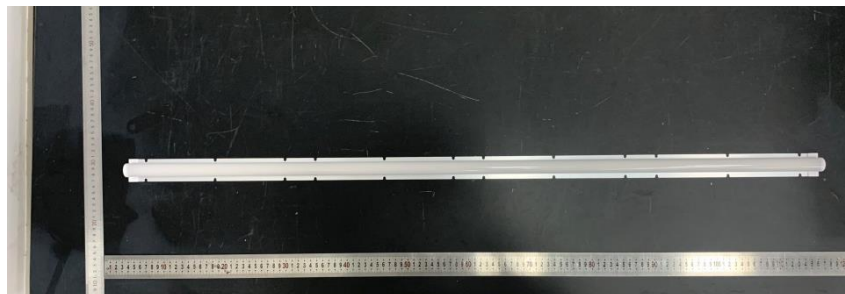
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3.0 Production Description

Tested Model: VEKM-L42F/HO/850

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

Test in Fixture: Lithonia C2 32 MVOLT GEB10IS
Photos of Luminaire Characteristics



4.0 LM-79 Measurement and Test Results

4.1 Integrating Sphere Test

Model No.	VEKM-L42F/HO/850	Sample ID.	M1
Operate time (Min.)	90	Stabilization time (Min.)	70
Temperature (°C)	25.1	Humidity (%RH)	52.0

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 ± 0.2 percent under load.

The sample was measured using 4π 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 Result

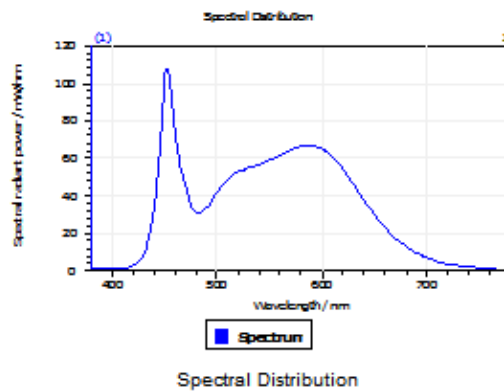
Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD
119.95	60	0.370	44.08	0.993	8.11%
277.08	60	0.168	44.14	0.946	13.65%

CCT (K)	CRI	R9	Duv	Light Output (lm)	Efficacy (lm/W)
4934	83.9	8.4	0.002	6209	140.7

Rf	Rg	IES Rcs,h1
84	94	-12%

4.1 Integrating Sphere Test

Results



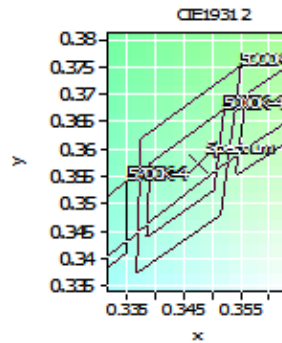
Spectral values

DominantWavelength 571.65 nm
Purity 0.116
PeakWavelength 452.51 nm
Radiant Power 12.83 W
Width50%:

Color Coordinates

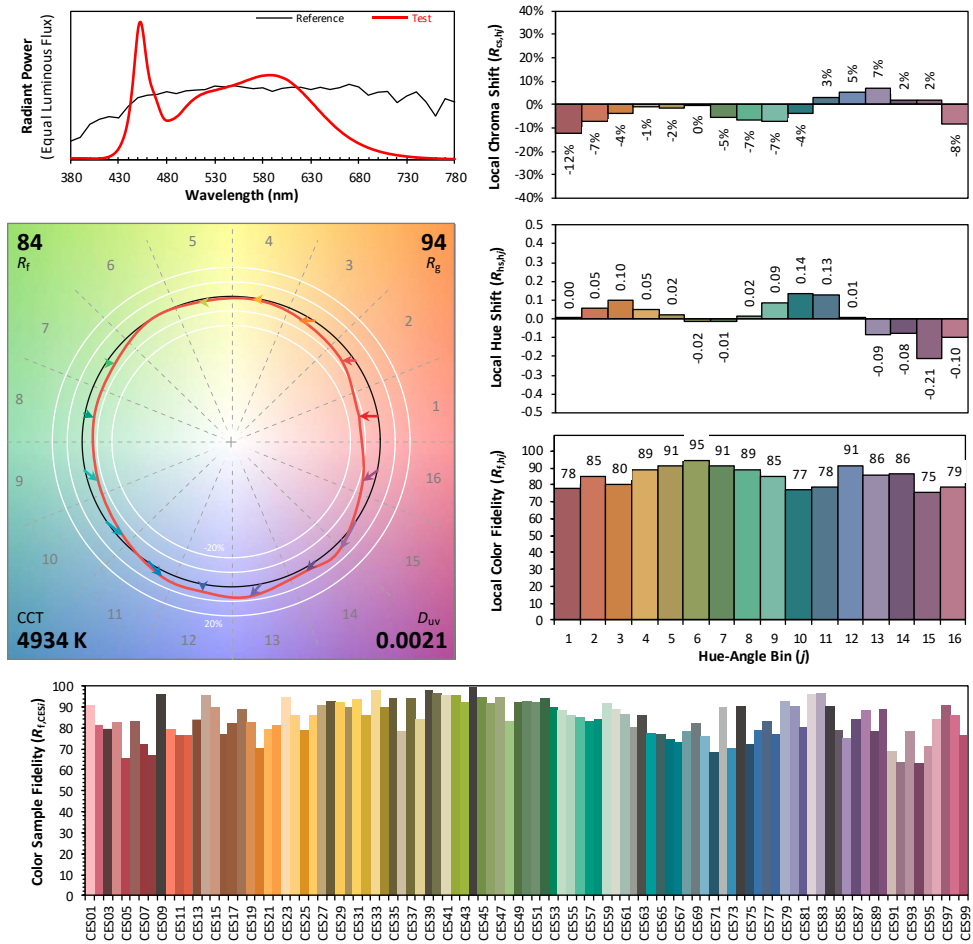
Correlated Color Temporal 4934 K
x: 0.3474 u: 0.2107 u': 0.2107
y: 0.3576 v: 0.3253 v': 0.4879

CRI01	82.2	CRI09	8.4
CRI02	91.4	CRI10	79.1
CRI03	95.3	CRI11	80.6
CRI04	81.0	CRI12	58.9
CRI05	82.4	CRI13	85.1
CRI06	87.2	CRI14	98.0
CRI07	86.0	CRI15	75.7
CRI08	65.8	CRI16	71.1
ResultsCRI	83.9		



PlanckDistance 2.0E-003

4.1 Integrating Sphere Test



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x **0.3474**
 y **0.3576**
 u' **0.2107**
 v' **0.4879**

CIE 13.3-1995
(CRI)

R_a 84
 R_9 9

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.0

5.0 Equipment Information

Test Equipment			
Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
DLF107	Integrating Sphere System	2020/12/26	2021/12/25
DLF108	Auxiliary Lamp	2020/12/26	2021/12/25
DLF122	Measurement Standard Lamp Standard Lamp Type: 220 V, 0.4720 A, Tungsten, Omni-derectional	2020/12/26	2021/12/25
DLF116	AC Power Source	2020/12/26	2021/12/25
DLF113	Power Meter	2020/12/26	2021/12/25
DLF112	Temperature Recorder	2020/12/26	2021/12/25
DLF114	Temperature & Humidity Datalogger	2020/12/26	2021/12/25
DLF101	Goniophotometer	2020/12/26	2021/12/25
DLF125	Standard Lamp Standard Lamp Type: 76.58 V, 6.7875 A, Tungsten, Omni-derectional	2020/12/26	2021/12/25
DLF104	AC Power Source	2020/12/26	2021/12/25
DLF507	DC Power Source	2020/12/26	2021/12/25
DLF102	Power Meter	2020/12/26	2021/12/25
DLF111	Temperature & Humidity Datalogger	2020/12/26	2021/12/25
DLF119	Power Meter	2020/12/26	2021/12/25
DLF031	Temperature data logger	2020/12/26	2021/12/25
DLF022	Digital power meter	2020/12/26	2021/12/25
DLF003	Temperature & Humidity Datalogger	2020/12/26	2021/12/25

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