

**LM-79-08 Test Report**  
For  
**RAB LIGHTING INC**

**(Brand Name: N/A)**

170 Ludlow Ave, PO BOX 970, Northvale, NJ 07647-2305 USA

**Model name(s): DLS0060(DSK6R119FA120WS)**

**Report Type:** Testing and Report According to IES LM-79-2008

**Type of  
Luminaire:** Downlights

**Report Date:** 2020-09-11

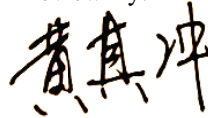
**Prepared By:**

Test & Report By:



Engineer: Sun Fangfang

Review By:



Manager: Huang Qichong

**1.1 Rated Values:**

Rated Voltage / Frequency	120Vac, 60 Hz
Nominal Power	11.0W
Rated Initial Lamp Lumen	1000 lm
Declared CCT	2700K/3000K/4000K/5000K

**1.2 Test Specifications:**

Test item	<ol style="list-style-type: none"> <li>1. Total Luminous Flux</li> <li>2. Luminous Distribution Intensity</li> <li>3. Luminous Efficacy</li> <li>4. Correlated Color Temperature</li> <li>5. Color Rendering Index</li> <li>6. Chromaticity Coordinate</li> <li>7. Electrical Parameters</li> </ol>
Reference Standard	<ol style="list-style-type: none"> <li>1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products</li> <li>2. ANSI C78.377-2015 Specifications for the Chromaticity of Solid State Lighting Products</li> <li>3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources</li> <li>4. CIE 15-2004 Technical Report Colorimetry</li> <li>5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source</li> <li>6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems</li> </ol>
Reference Work Instruction	QD25

**1.3 Test Methods****1) Photometric and Light Distribution Measurement – Goniophotometer Method:**

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at 25°C ±1°C, measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1°vertical intervals and 22.5°horizontal intervals.

**2) Chromaticity Measurement – Sphere-Spectroradiometer Method:**

Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25°C ±1°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 sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm.

**3) Electrical Measurements:**

Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at 25°C ±1°C. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.

**2.1.1 Electrical, Photometric and Chromaticity Measurements**

<b>Test date</b>	2020-09-11	<b>Test Ambient:</b>	25.3 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	DLS0060(DSK6R119FA120WS)	2700K	

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz )	Current (A)	Power (W)	Power Factor
202009110001	120.0	60	0.088	10.40	0.985

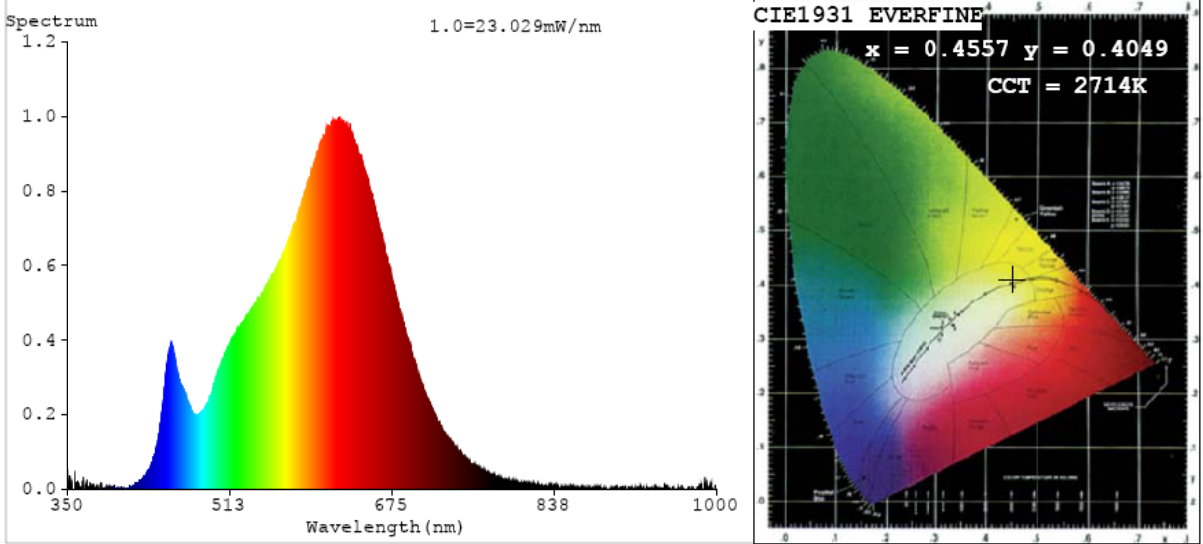
**Chromaticity Measurement - Sphere-Spectroradiometer Method:**

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	94	R9	58
Frequency (Hz)	60	R2	98	R10	95
CCT (K)	2714	R3	98	R11	95
Duv	0.0018	R4	93	R12	86
Chromaticity (x, y)	x=0.4557 y=0.4049	R5	94	R13	95
Chromaticity (u', v')	u'=0.2624 v'=0.5245	R6	97	R14	100
Color Rendering Index (CRI)	93.0	R7	90	R15	89
R9	58	R8	80	--	--

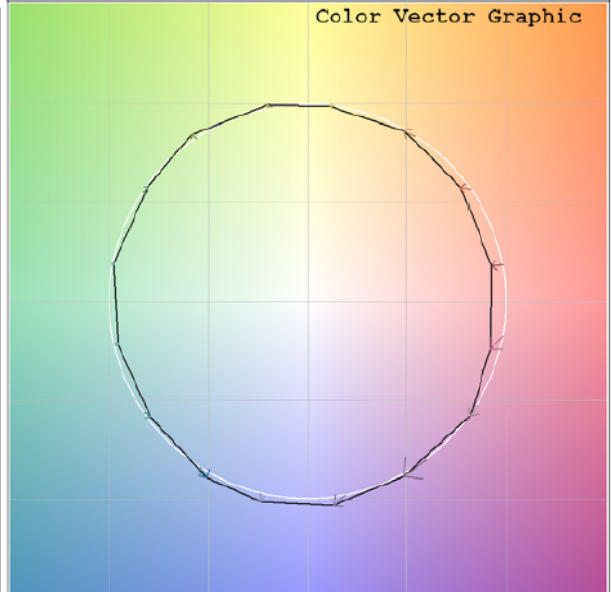
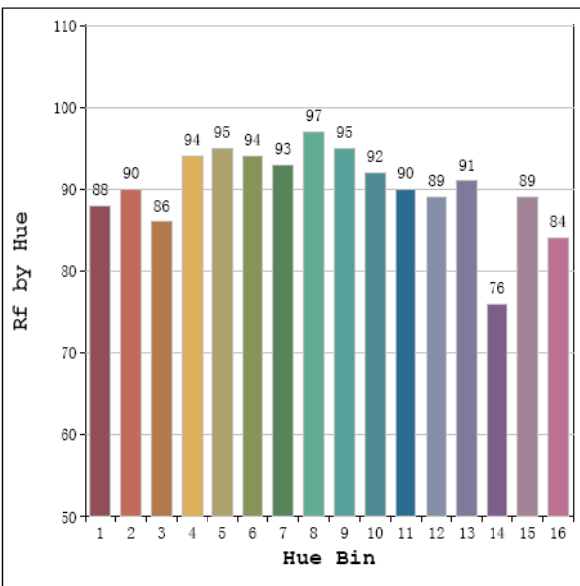
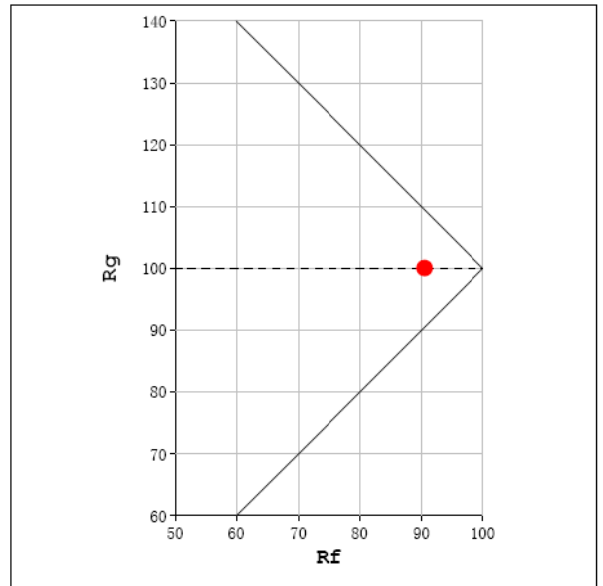
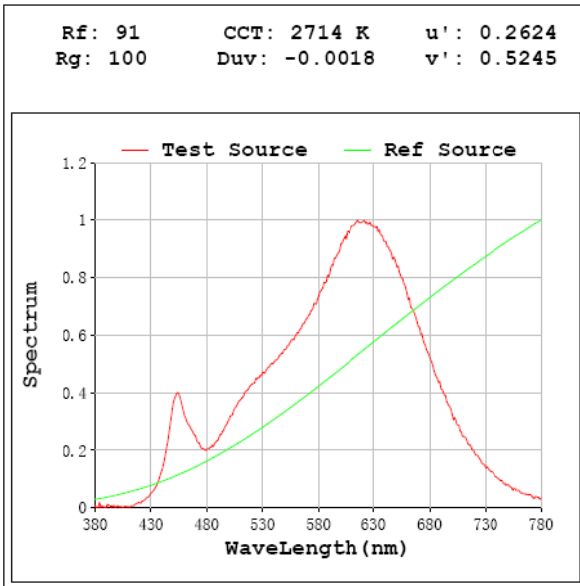
**Photometric Measurement – Goniophotometer Method:**

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1043.2
Luminous Efficacy (lm/W)	100.31
Beam Angle (°)	107.3
Center Beam Candle Power (cd)	370.4

# Spectral Power Distribution & Chromaticity Diagram



## T30

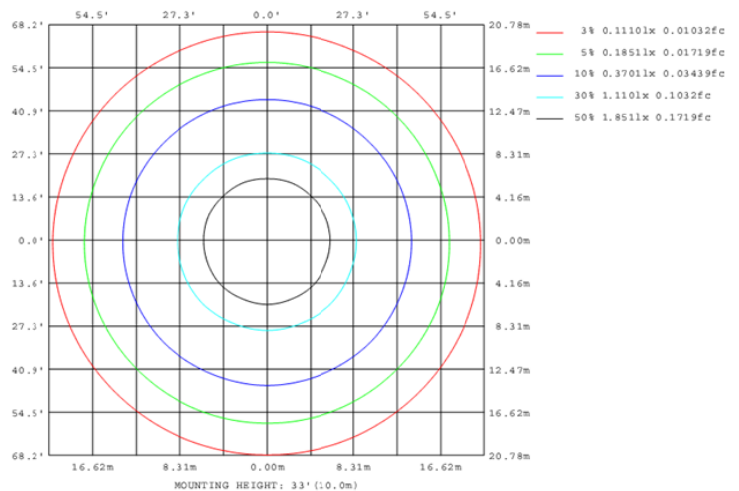
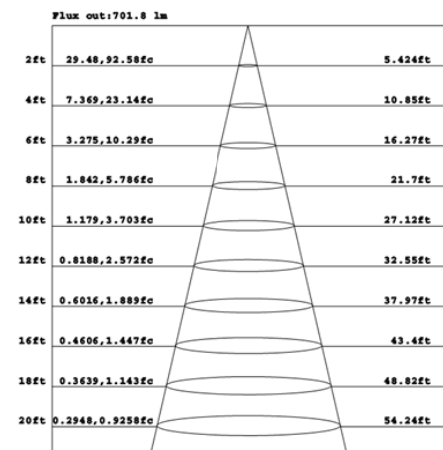
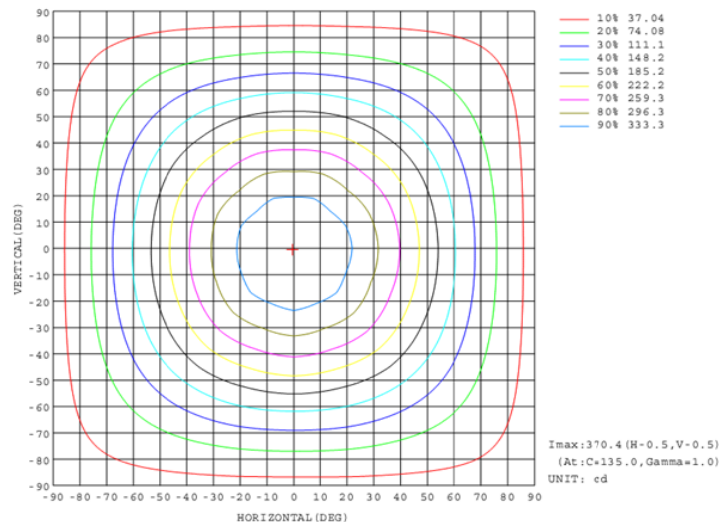
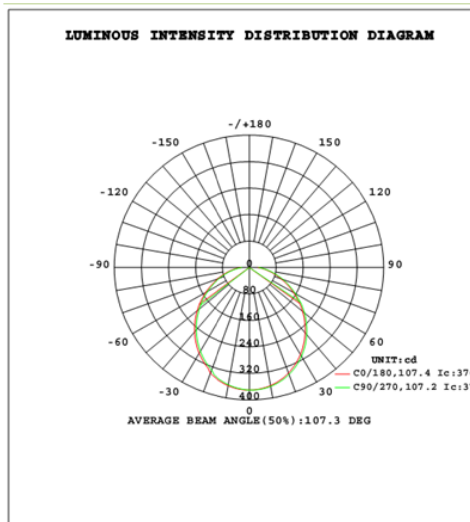


# Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	282.1	27.0%
0-40	456.9	43.8%
0-60	793.5	76.1%
60-90	249.7	23.9%
70-100	125.8	12.1%
90-120	0.0	0.0%
0-90	1043.2	100.0%
90-180	0.0	0.0%
0-180	1043.2	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	35.0	3.4%	90-100	0.0	0.0%
10-20	99.4	9.5%	100-110	0.0	0.0%
20-30	147.7	14.2%	110-120	0.0	0.0%
30-40	174.8	16.8%	120-130	0.0	0.0%
40-50	177.9	17.1%	130-140	0.0	0.0%
50-60	158.7	15.2%	140-150	0.0	0.0%
60-70	123.9	11.9%	150-160	0.0	0.0%
70-80	82.3	7.9%	160-170	0.0	0.0%
80-90	43.5	4.2%	170-180	0.0	0.0%

## Photometric Data



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.



## 2.1.2 Electrical, Photometric and Chromaticity Measurements

<b>Test date</b>	2020-09-11	<b>Test Ambient:</b>	25.3 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	DLS0060(DSK6R119FA120WS)		3000K

### Electrical Measurement:

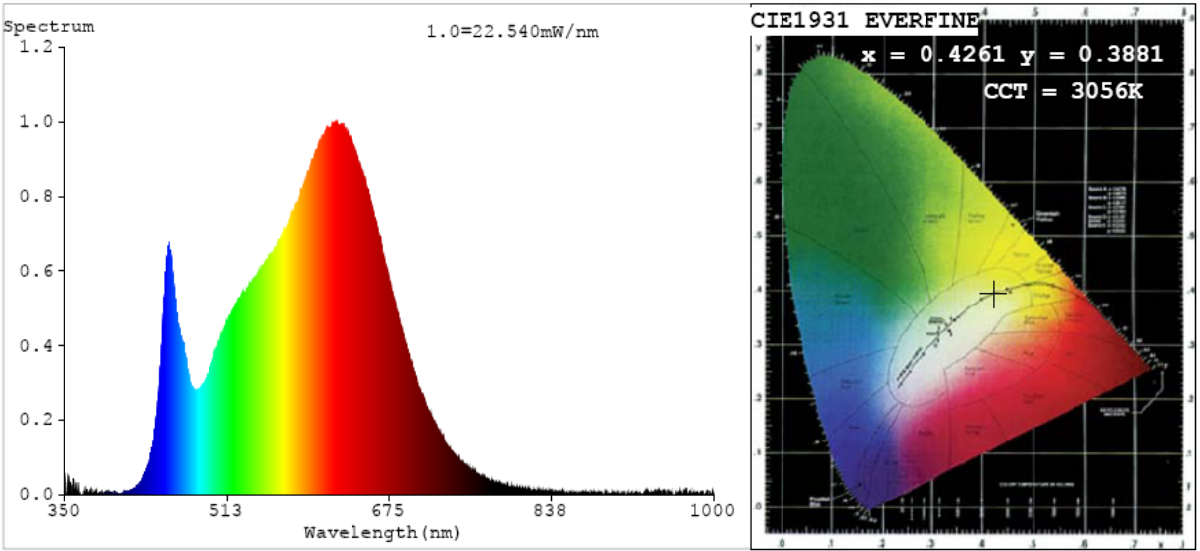
Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202009110001	120.0	60	0.087	10.30	0.983

### Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
CCT (K)	3056
Duv	0.0050
Chromaticity (x, y)	x=0.4261 y=0.3881
Chromaticity (u', v')	u'=0.2505 v'=0.5144
Color Rendering Index (CRI)	94.7
R9	72
Total Luminous (lm)	1103
Luminous Efficacy (lm/W)	107.01

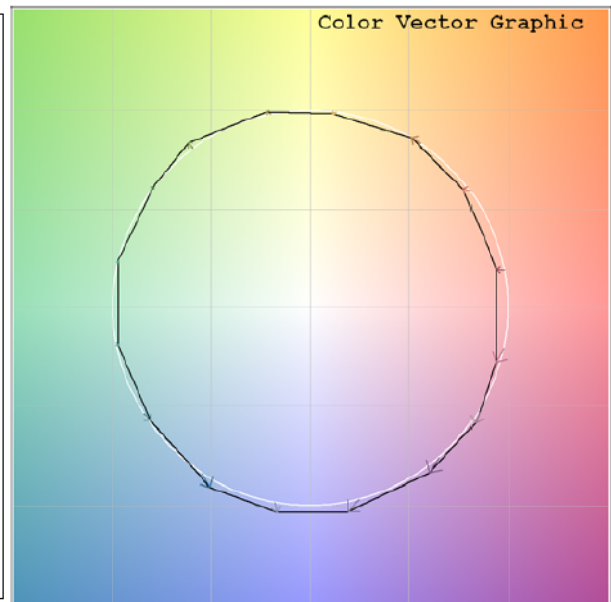
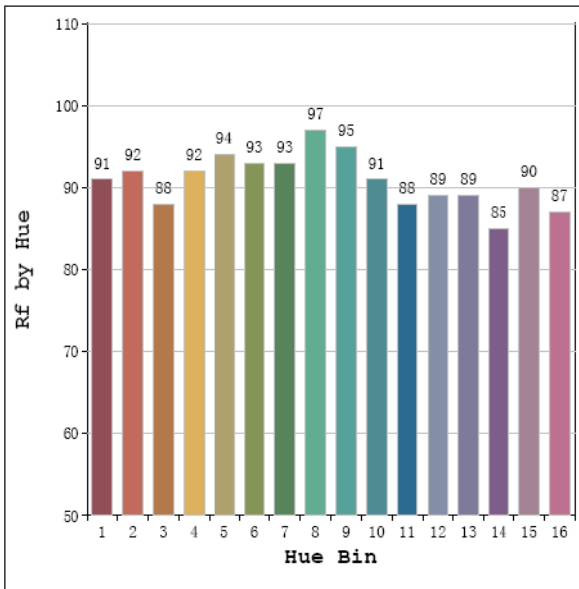
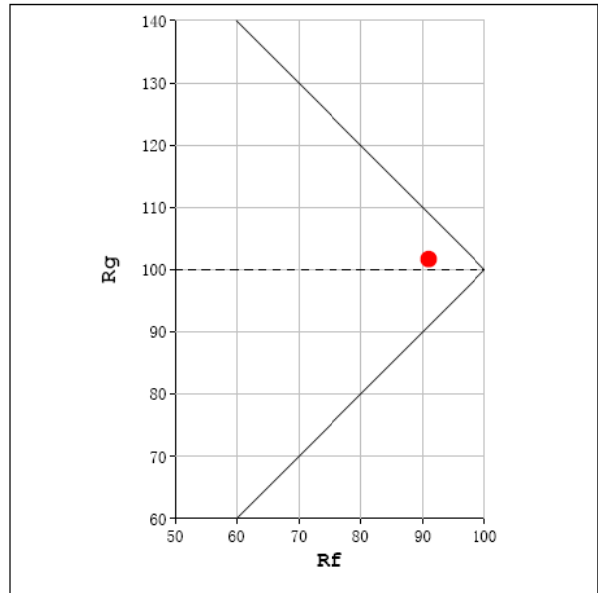
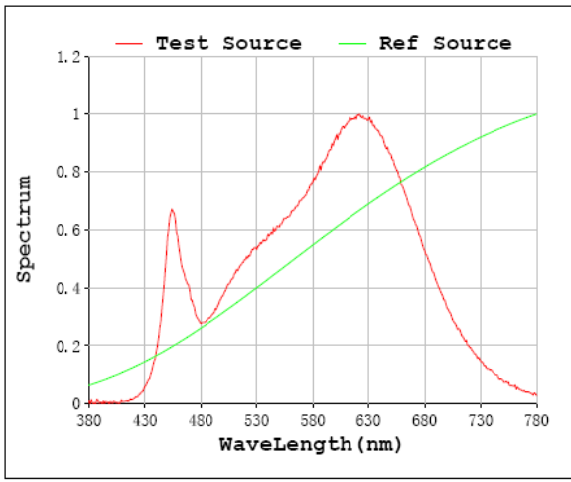
Special Color Rendering Indices			
R1	97	R9	72
R2	98	R10	98
R3	97	R11	96
R4	95	R12	83
R5	97	R13	99
R6	95	R14	99
R7	91	R15	95
R8	86	--	--

## Spectral Power Distribution & Chromaticity Diagram



# T30

Rf: 91 CCT: 3056 K u': 0.2505  
 Rg: 102 Duv: -0.0050 v': 0.5133





### 2.1.3 Electrical, Photometric and Chromaticity Measurements

Test date	2020-09-11	Test Ambient:	25.3 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DLS0060(DSK6R119FA120WS)		4000K

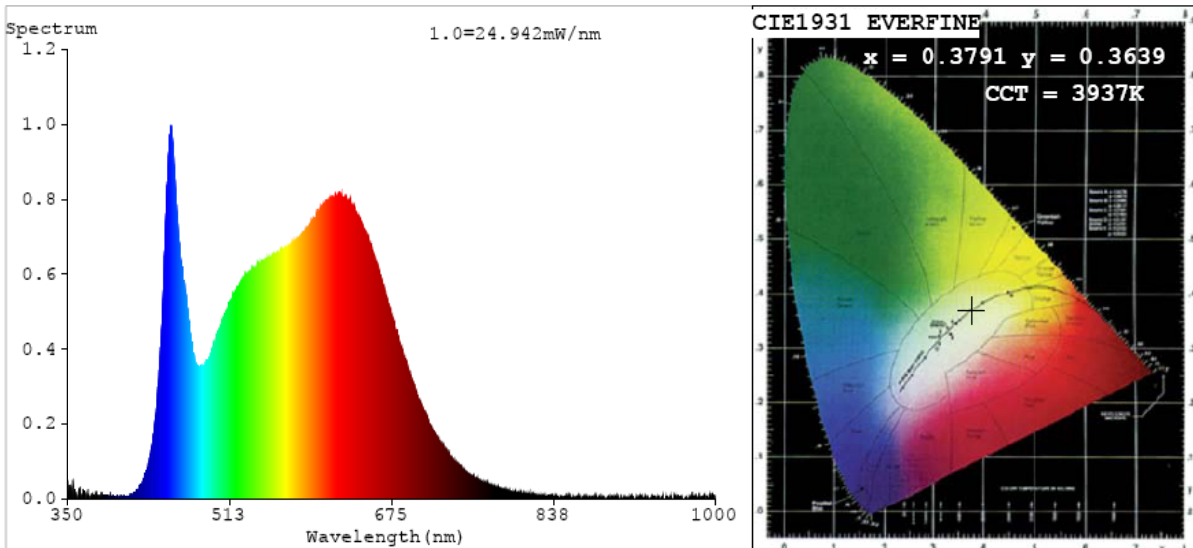
#### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz )	Current (A)	Power (W)	Power Factor
202009110001	120.0	60	0.086	10.18	0.982

#### Chromaticity Measurement - Sphere-Spectroradiometer Method:

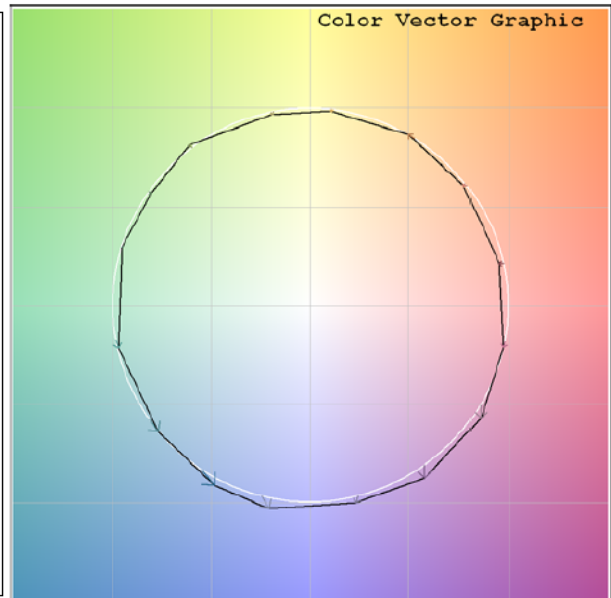
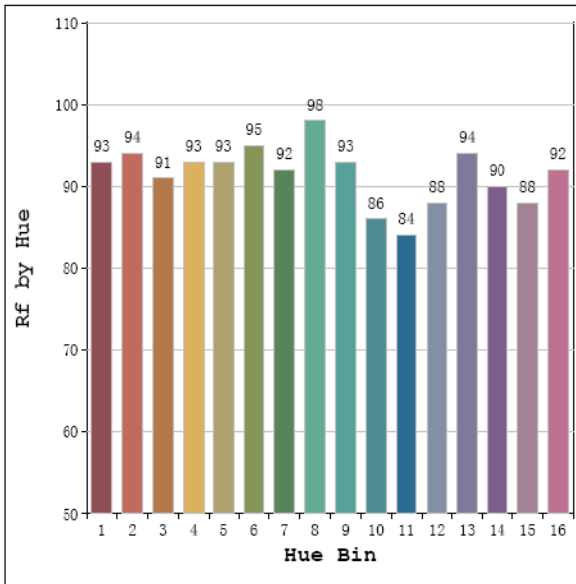
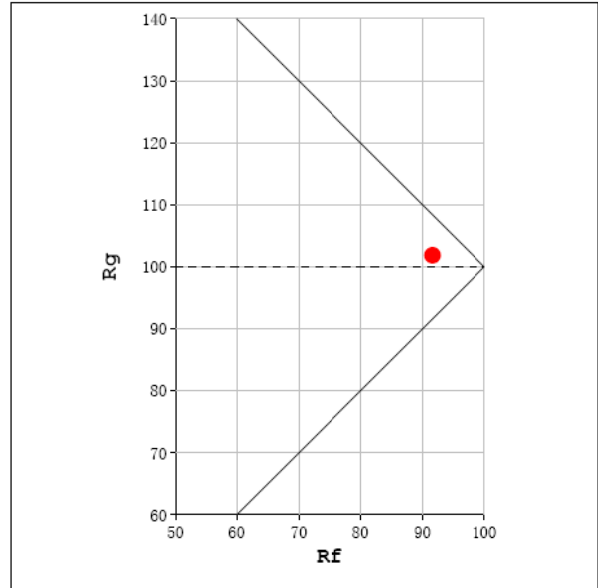
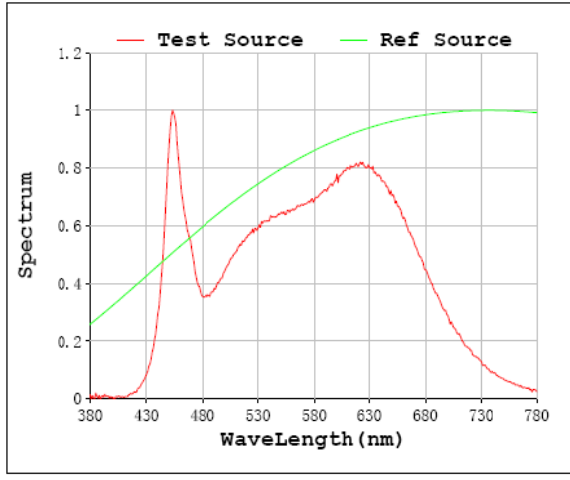
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	98	R9	90
Frequency (Hz)	60	R2	98	R10	98
CCT (K)	3937	R3	98	R11	97
Duv	0.0058	R4	97	R12	76
Chromaticity (x, y)	x=0.3791 y=0.3639	R5	97	R13	98
Chromaticity (u', v')	u'=0.2295 v'=0.4956	R6	94	R14	98
Color Rendering Index (CRI)	96.5	R7	95	R15	98
R9	90	R8	95	--	--
Total Luminous (lm)	1174				
Luminous Efficacy (lm/W)	115.35				

### Spectral Power Distribution & Chromaticity Diagram



**T30**

Rf: 92      CCT: 3937 K      u': 0.2295  
 Rg: 102      Duv: -0.0058      v': 0.4956



**2.1.4 Electrical, Photometric and Chromaticity Measurements**

<b>Test date</b>	2020-09-11	<b>Test Ambient:</b>	25.3 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	DLS0060(DSK6R119FA120WS)		5000K

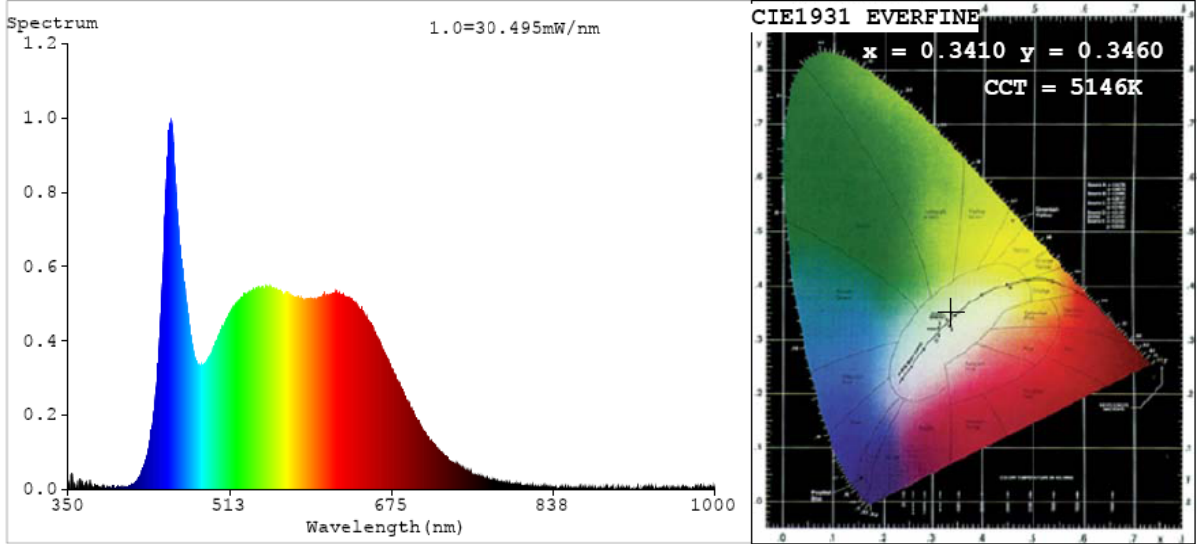
**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz )	Current (A)	Power (W)	Power Factor
202009110001	120.0	60	0.088	10.42	0.983

**Chromaticity Measurement - Sphere-Spectroradiometer Method:**

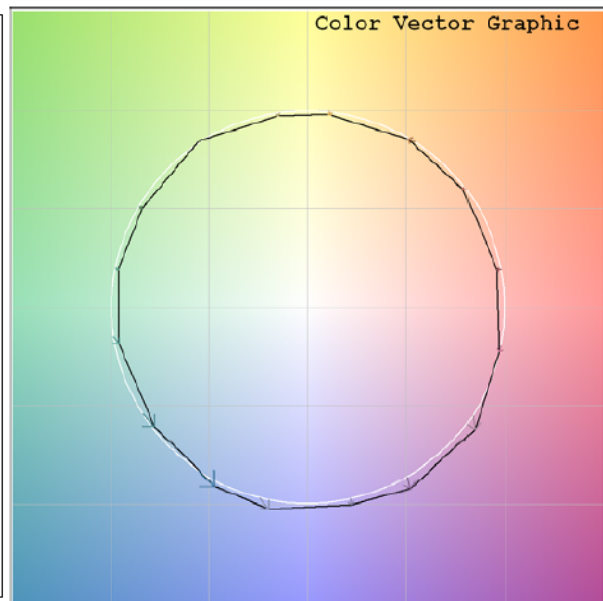
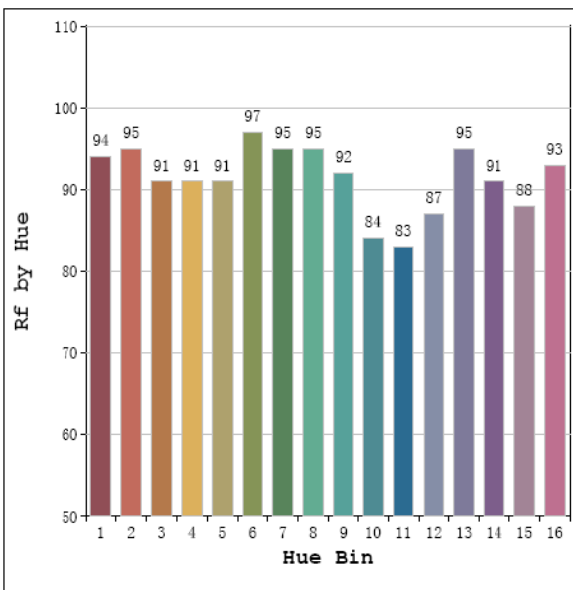
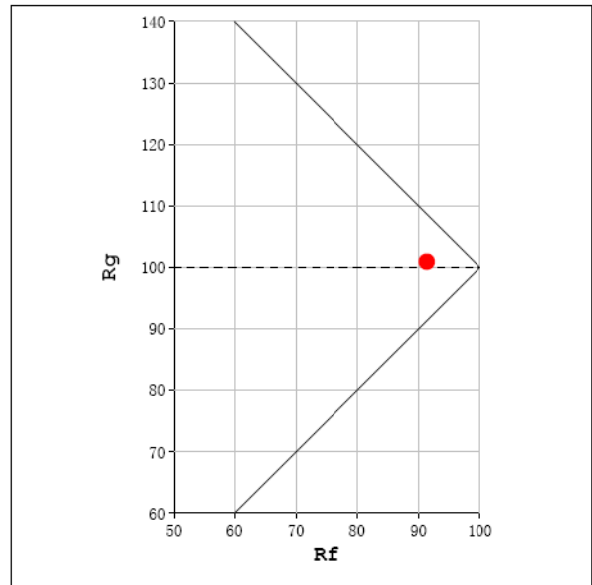
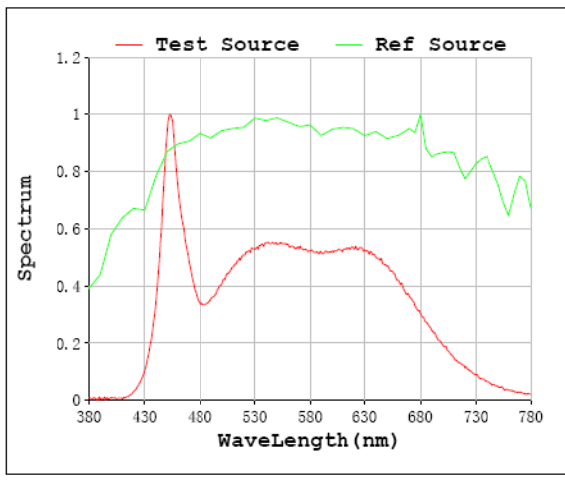
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	97	R9	89
Frequency (Hz)	60	R2	97	R10	92
CCT (K)	5146	R3	95	R11	96
Duv	0.0012	R4	96	R12	73
Chromaticity (x, y)	x=0.3410 y=0.3460	R5	96	R13	98
Chromaticity (u', v')	u'=0.2108 v'=0.4813	R6	93	R14	97
Color Rendering Index (CRI)	95.8	R7	97	R15	98
R9	89	R8	95	--	--
Total Luminous (lm)	1136				
Luminous Efficacy (lm/W)	109.07				

**Spectral Power Distribution & Chromaticity Diagram**



# T30

Rf: 91      CCT: 5146 K      u': 0.2108  
 Rg: 101      Duv: -0.0012      v': 0.4813



### 3. Product Photo



**\*\*\*\*\* END OF REPORT \*\*\*\*\***