

**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): DLR0109(R4R8950120WB)**

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

**Type of  
Luminaire:** Downlights

**Report Date:** 2020-09-15

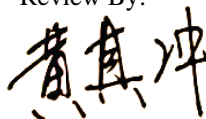
**Prepared By:**

Test & Report By:



Engineer: Sun Fangfang

Review By:



Manager: Huang Qichong

**1.1 Rated Values:**

Rated Voltage / Frequency	120Vac, 60 Hz
Nominal Power	8.0W
Rated Initial Lamp Lumen	700 lm
Declared CCT	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  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ , measured at a point not more than 1 m from the sample and at the same height as the sample. The 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  $1^{\circ}$  vertical intervals and  $22.5^{\circ}$  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  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ . 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 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  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ . 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

Test date	2020-09-15	Test Ambient:	25.3 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DLR0109(R4R8950120WB)	5000K	

#### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz )	Current (A)	Power (W)	Power Factor
202009150022	120.0	60	0.063	7.42	0.979

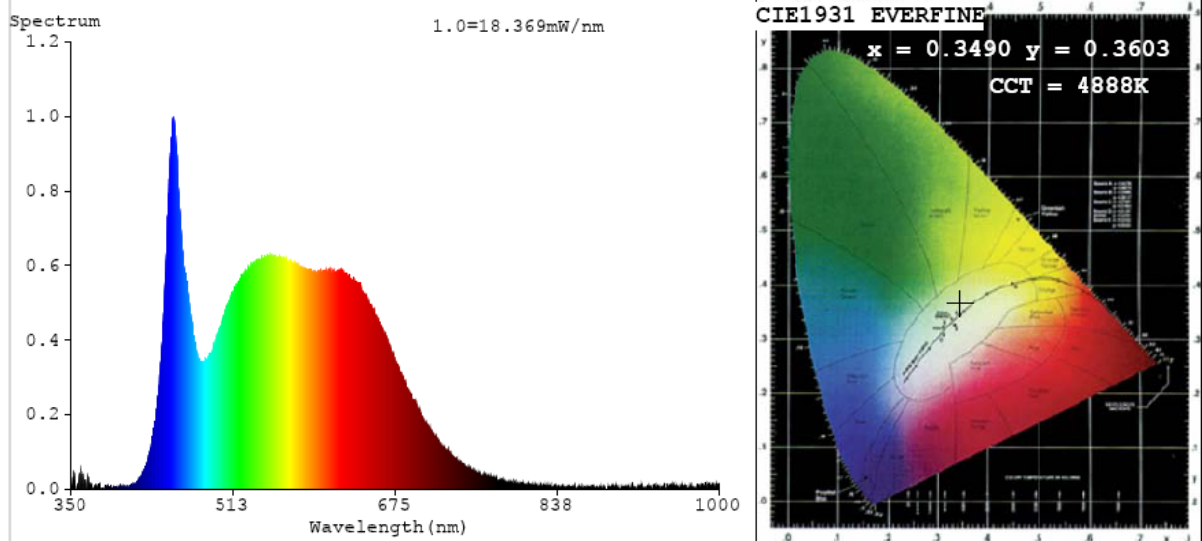
#### Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	92	R9	71
Frequency (Hz)	60	R2	95	R10	86
CCT (K)	4888	R3	95	R11	90
Duv	0.0028	R4	91	R12	64
Chromaticity (x, y)	x=0.3490 y=0.3603	R5	90	R13	93
Chromaticity (u', v')	u'=0.2107 v'=0.4894	R6	90	R14	97
Color Rendering Index (CRI)	92.3	R7	96	R15	91
R9	71	R8	89	--	--

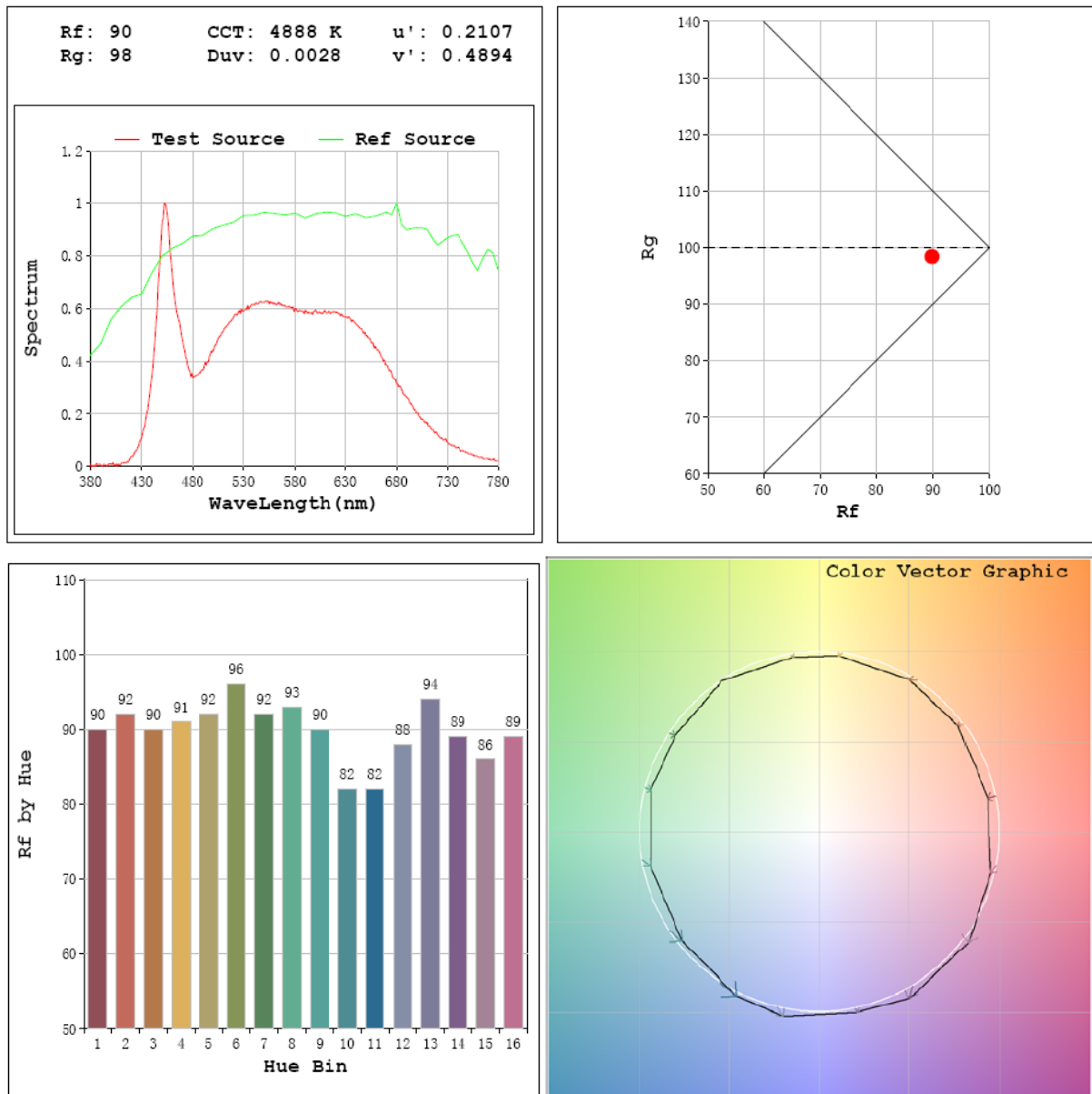
#### Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	775.38
Luminous Efficacy (lm/W)	104.50
Beam Angle (°)	99.7
Center Beam Candle Power (cd)	328.1

## Spectral Power Distribution & Chromaticity Diagram



**T30**

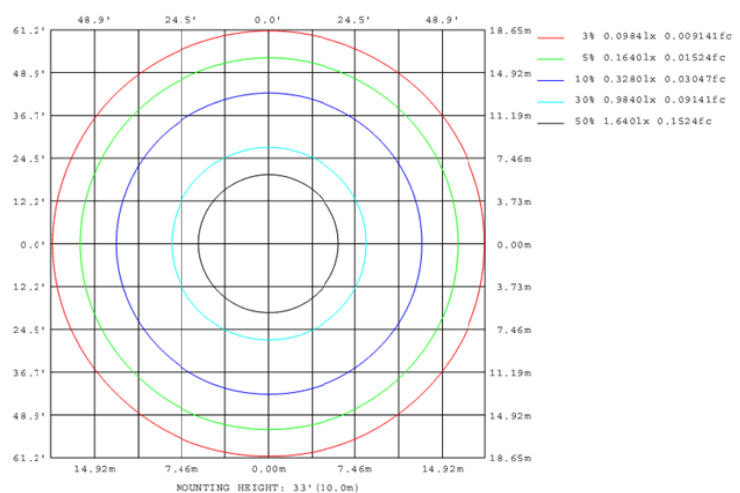
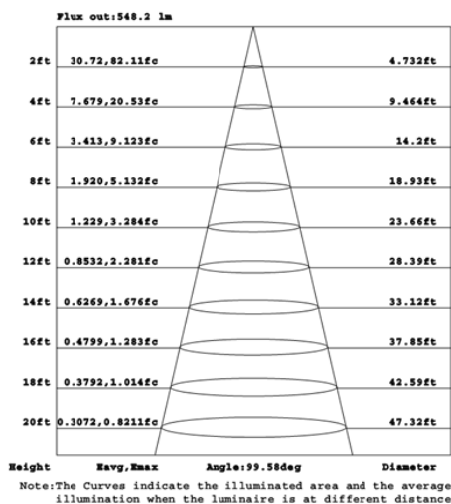
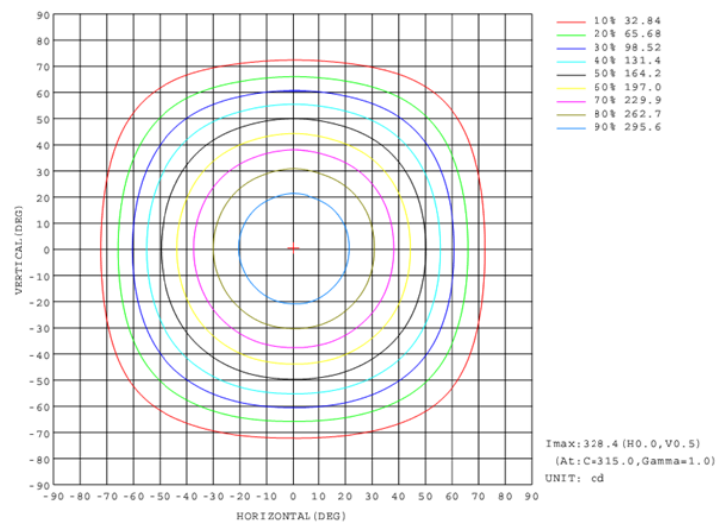
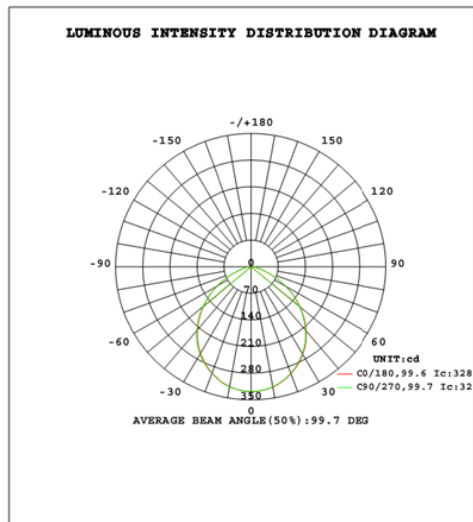


## Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	248.8	32.1%
0-40	400.7	51.7%
0-60	667.2	86.0%
60-90	108.2	14.0%
70-100	37.3	4.8%
90-120	0.0	0.0%
0-90	775.4	100.0%
90-180	0.0	0.0%
0-180	775.4	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	31.0	4.0%	90-100	0.0	0.0%
10-20	87.7	11.3%	100-110	0.0	0.0%
20-30	130.2	16.8%	110-120	0.0	0.0%
30-40	151.8	19.6%	120-130	0.0	0.0%
40-50	147.6	19.0%	130-140	0.0	0.0%
50-60	119.0	15.3%	140-150	0.0	0.0%
60-70	70.9	9.1%	150-160	0.0	0.0%
70-80	27.0	3.5%	160-170	0.0	0.0%
80-90	10.3	1.3%	170-180	0.0	0.0%

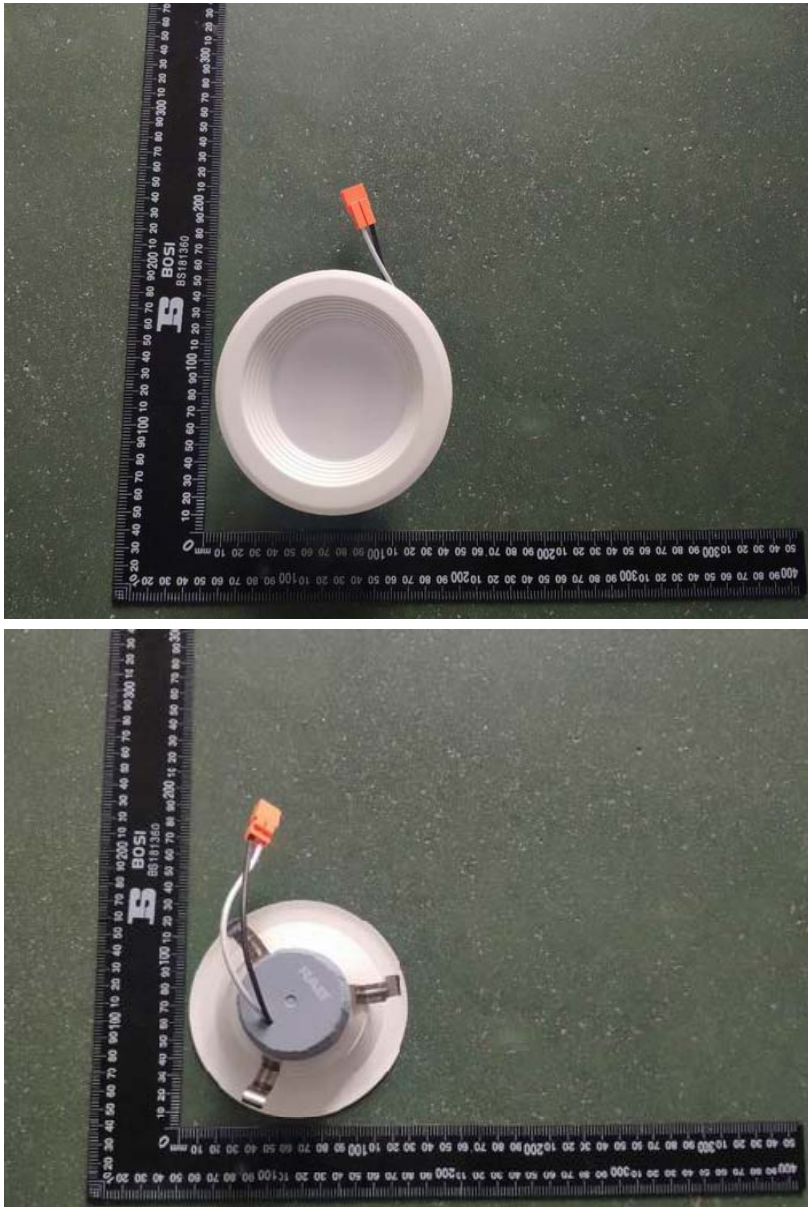
## Photometric Data



UNIT: cd

[illegible]

### 3. Product Photo



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