

**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): DLR0114(R6R11950120WS)**

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

**Type of  
Luminaire:** Downlights

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

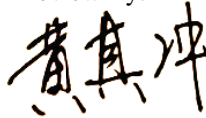
**Prepared By:**

Test & Report By:



Engineer: Sun Fangfang

Review By:



Manager: Huang Qichong

### 1.1 Rated Values:

Rated Voltage / Frequency	120Vac, 60 Hz
Nominal Power	10.5W
Rated Initial Lamp Lumen	900 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

<b>Test date</b>	2020-09-15	<b>Test Ambient:</b>	25.3 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	DLR0114(R6R11950120WS)	5000K	

### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz )	Current (A)	Power (W)	Power Factor
202009150017	120.0	60	0.084	9.96	0.982

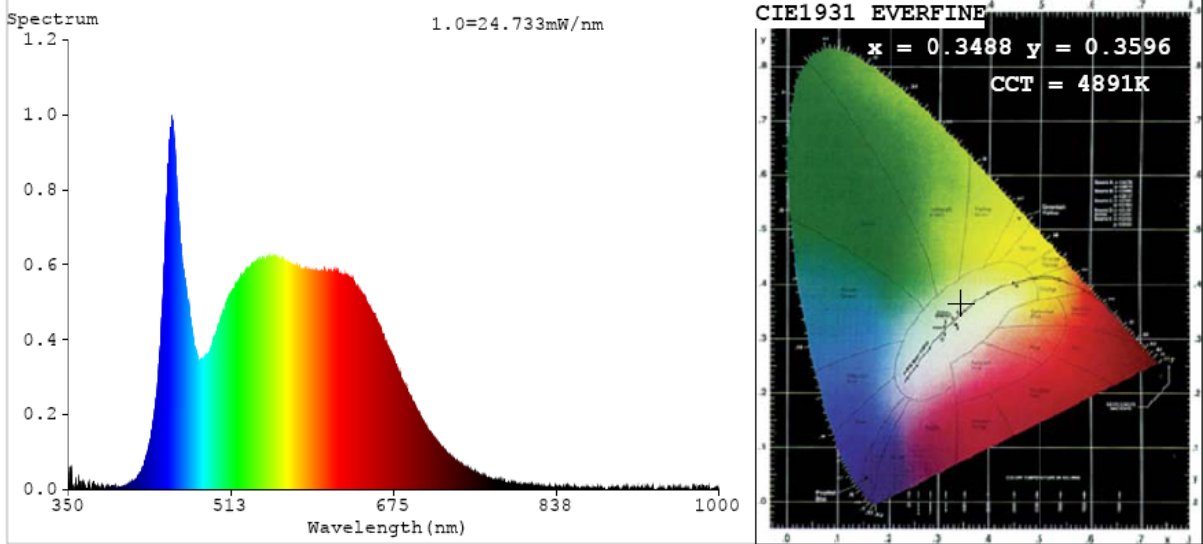
### Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	92	R9	71
Frequency (Hz)	60	R2	95	R10	86
CCT (K)	4891	R3	95	R11	90
Duv	0.0025	R4	91	R12	64
Chromaticity (x, y)	x=0.3488 y=0.3596	R5	90	R13	93
Chromaticity (u', v')	u'=0.2108 v'=0.4890	R6	91	R14	97
Color Rendering Index (CRI)	92.3	R7	96	R15	91
R9	71	R8	89	--	--

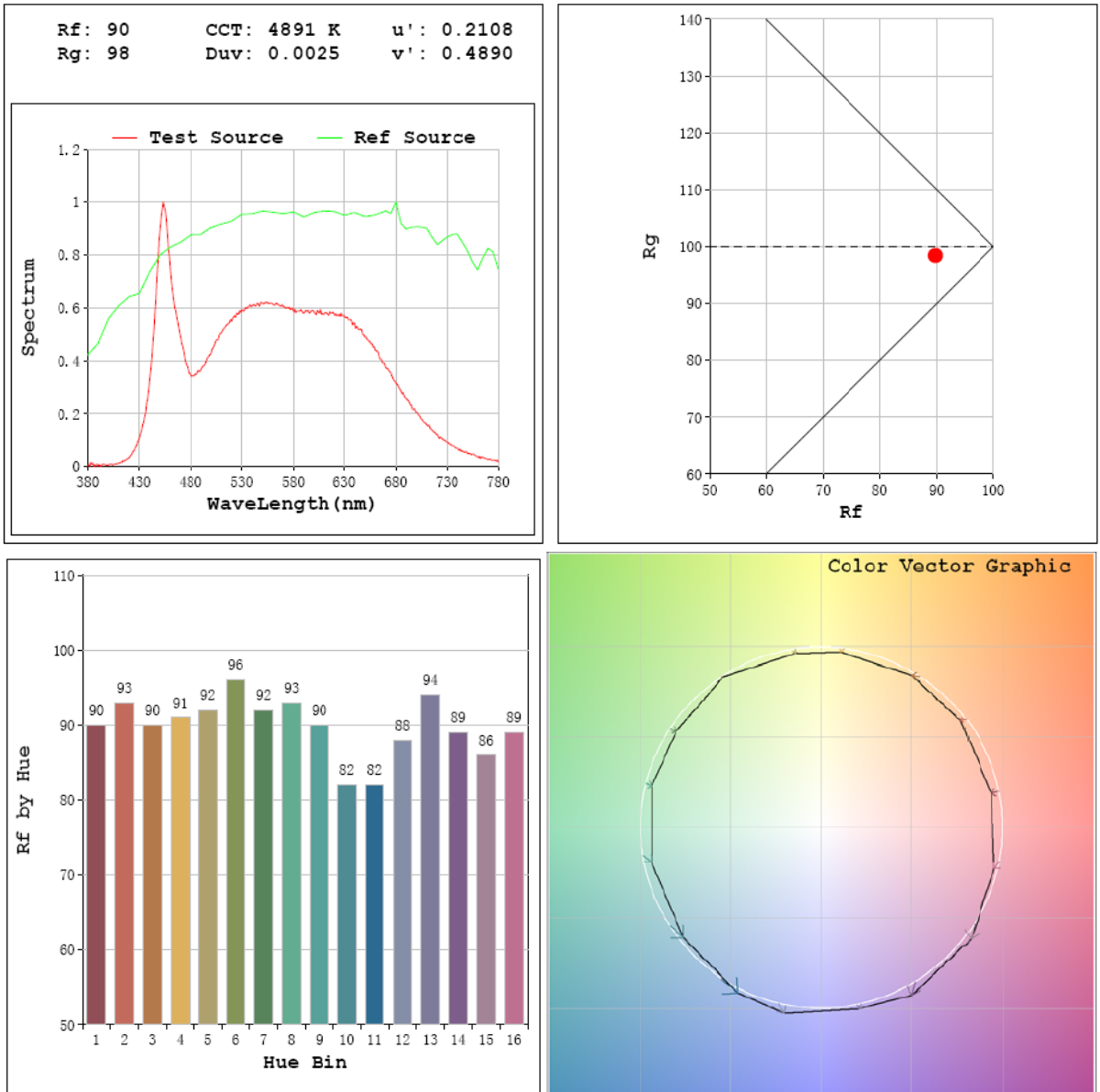
### Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1026.6
Luminous Efficacy (lm/W)	103.07
Beam Angle (°)	99.4
Center Beam Candle Power (cd)	439.3

# Spectral Power Distribution & Chromaticity Diagram



## T30



# Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	333.9	32.5%
0-40	538.5	52.5%
0-60	892.9	87.0%
60-90	133.8	13.0%
70-100	44.9	4.4%
90-120	0.0	0.0%
0-90	1026.6	100.0%
90-180	0.0	0.0%
0-180	1026.6	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	41.4	4.0%	90-100	0.0	0.0%
10-20	117.5	11.4%	100-110	0.0	0.0%
20-30	175.0	17.0%	110-120	0.0	0.0%
30-40	204.6	19.9%	120-130	0.0	0.0%
40-50	197.6	19.2%	130-140	0.0	0.0%
50-60	156.8	15.3%	140-150	0.0	0.0%
60-70	88.9	8.7%	150-160	0.0	0.0%
70-80	31.5	3.1%	160-170	0.0	0.0%
80-90	13.4	1.3%	170-180	0.0	0.0%

## Photometric Data

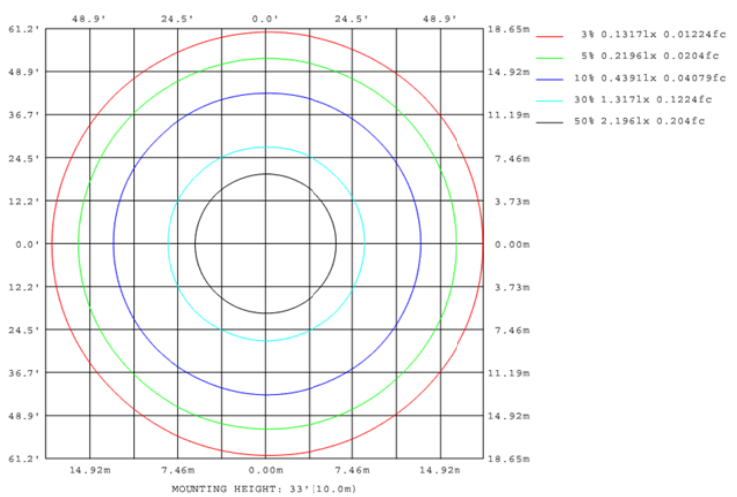
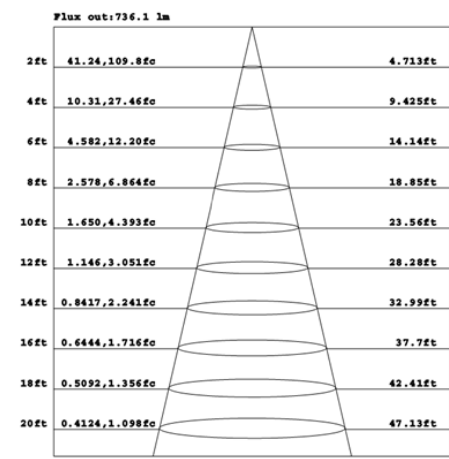
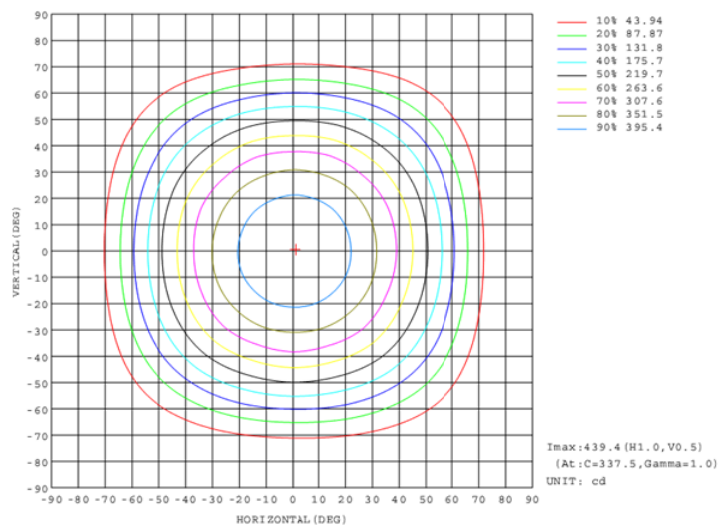
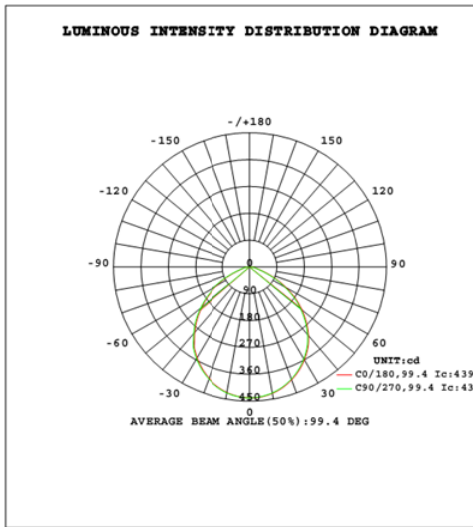
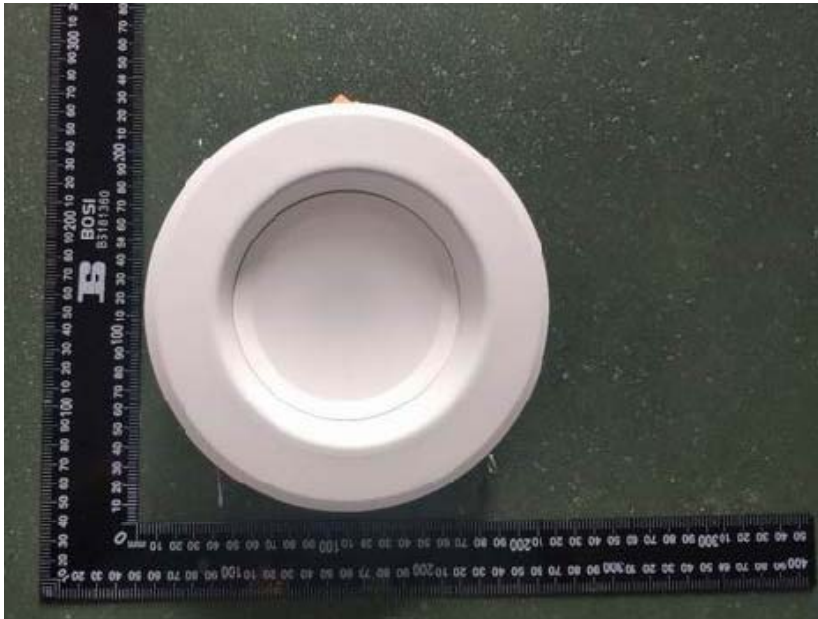


Table--1

UNIT: cd

C(°) \ γ (°)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	439	439	439	439	439	439	439	439	439	439	439	439	439	439	439	439			
5	437	438	437	437	437	436	436	436	436	436	436	436	436	437	437	437			
10	431	431	430	430	429	429	428	428	428	427	428	428	429	429	430	430			
15	419	419	419	418	417	417	415	415	415	414	415	415	417	417	419	419			
20	403	403	402	402	401	400	399	398	397	397	398	398	400	401	403	403			
25	383	384	382	382	380	380	378	378	377	376	377	378	380	381	383	383			
30	360	360	359	359	356	356	354	353	352	351	353	353	356	357	359	359			
35	333	334	332	332	329	329	326	326	325	324	325	326	329	330	332	332			
40	301	297	300	295	296	291	292	288	286	290	287	292	291	297	295	300			
45	264	261	263	258	259	254	255	251	249	252	250	254	254	259	259	263			
50	225	222	223	219	219	215	215	211	210	212	211	215	215	220	220	224			
55	184	182	183	179	178	174	173	170	169	169	170	173	174	179	180	183			
60	139	140	138	137	133	131	128	127	126	125	128	128	132	134	138	138			
65	95.9	96.8	94.4	93.4	89.5	87.7	84.1	83.4	83.0	82.1	84.3	85.3	89.1	90.8	94.7	95.3			
70	55.6	56.4	54.4	53.6	50.5	49.2	46.5	46.0	45.8	45.1	46.8	47.5	50.3	51.6	54.5	55.3			
75	29.9	30.3	29.4	28.9	27.5	26.9	25.7	25.5	25.4	25.2	25.9	26.2	27.3	27.9	29.3	29.6			
80	19.3	19.3	19.0	18.9	18.6	18.4	18.1	18.0	18.0	17.9	18.2	18.4	18.8	18.9	19.3	19.3			
85	13.3	13.4	12.9	12.7	12.0	11.7	11.1	10.9	11.4	11.3	11.7	11.9	12.5	12.8	13.4	13.6			
90	6.37	6.34	6.26	6.17	6.14	6.12	6.09	6.07	6.70	6.71	6.71	6.72	6.72	6.73	6.80	6.94			

### 3. Product Photo



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