

**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): DLR0080(R6S10927120WB)**

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

**Type of  
Luminaire:** Downlights

**Report Date:** 2019-09-30

**Prepared By:**

Test & Report By:



Engineer: Sun Fangfang

Review By:



Manager: Huang Qichong

<b>1.1 Rated Values:</b>	
Rated Voltage / Frequency	120Vac, 50/60 Hz
Nominal Power	10.0W
Rated Initial Lamp Lumen	900 lm
Declared CCT	2700K

## 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

<p><b>1) Photometric and Light Distribution Measurement – Goniophotometer Method:</b></p> <p>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.</p>
<p><b>2) Chromaticity Measurement – Sphere-Spectroradiometer Method:</b></p> <p>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.</p>
<p><b>3) Electrical Measurements:</b></p> <p>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.</p>

## 2.1 Electrical, Photometric and Chromaticity Measurements

<b>Test date</b>	2019-09-28	<b>Test Ambient:</b>	25.6 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	DLR0080(R6S10927120WB)		

### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
1908250064	120.0	60	0.084	9.99	0.981

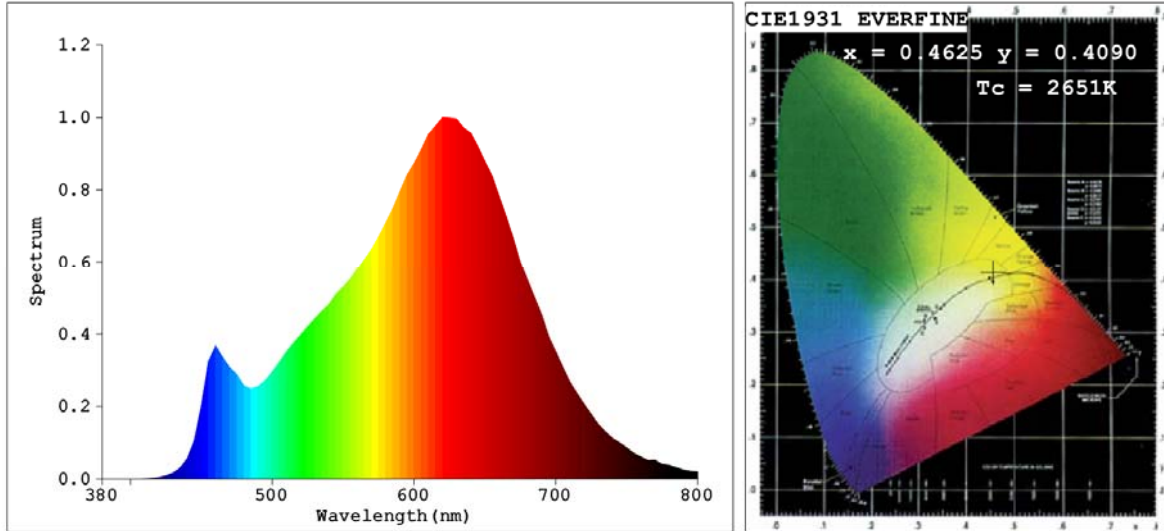
### Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	96	R9	66
Frequency (Hz)	60	R2	99	R10	100
CCT (K)	2651	R3	96	R11	95
Duv	0.00079	R4	93	R12	84
Chromaticity (x, y)	x=0.4625 y=0.4090	R5	95	R13	98
Chromaticity (u', v')	u'=0.2649 v'=0.5272	R6	96	R14	99
Color Rendering Index (CRI)	93.4	R7	90	R15	91
R9	66	R8	82	--	--

### Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	912.89
Luminous Efficacy (lm/W)	91.38
Beam Angle (°)	114.2
Center Beam Candle Power (cd)	303.1

## Spectral Power Distribution & Chromaticity Diagram

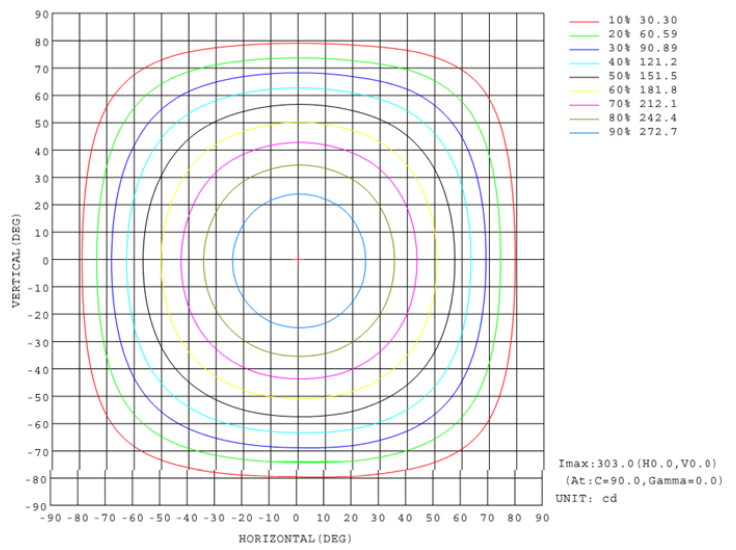
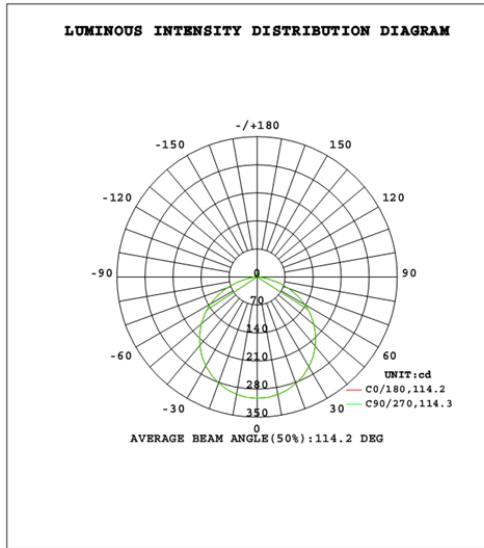


## Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	236.0	25.8%
0-40	387.5	42.5%
0-60	690.2	75.6%
60-90	182.7	20.0%
70-100	78.9	8.6%
90-120	18.3	2.0%
0-90	872.9	95.6%
90-180	40.0	4.4%
0-180	912.9	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	28.7	3.1%	90-100	6.4	0.7%
10-20	82.3	9.0%	100-110	6.1	0.7%
20-30	125.1	13.7%	110-120	5.8	0.6%
30-40	151.6	16.6%	120-130	5.5	0.6%
40-50	158.3	17.3%	130-140	5.1	0.6%
50-60	144.4	15.8%	140-150	4.5	0.5%
60-70	110.1	12.1%	150-160	3.6	0.4%
70-80	58.5	6.4%	160-170	2.3	0.3%
80-90	14.0	1.5%	170-180	0.8	0.1%

# Photometric Data



Flux out: 690.2 lm

Height	Havg, Hmax	Angle: 114.09deg	Diameter
1ft	73.24, 303.1fc		3.085ft
2ft	18.31, 75.77fc		6.17ft
3ft	8.137, 33.67fc		9.255ft
4ft	4.577, 18.94fc		12.34ft
5ft	2.929, 12.12fc		15.42ft
6ft	2.034, 8.418fc		18.51ft
7ft	1.495, 6.185fc		21.59ft
8ft	1.144, 4.735fc		24.68ft
9ft	0.9042, 3.742fc		27.76ft
10ft	0.7324, 3.031fc		30.85ft

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

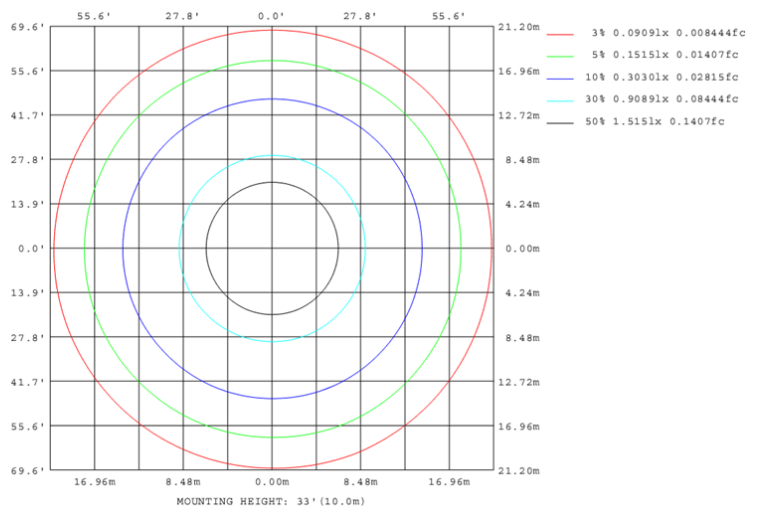
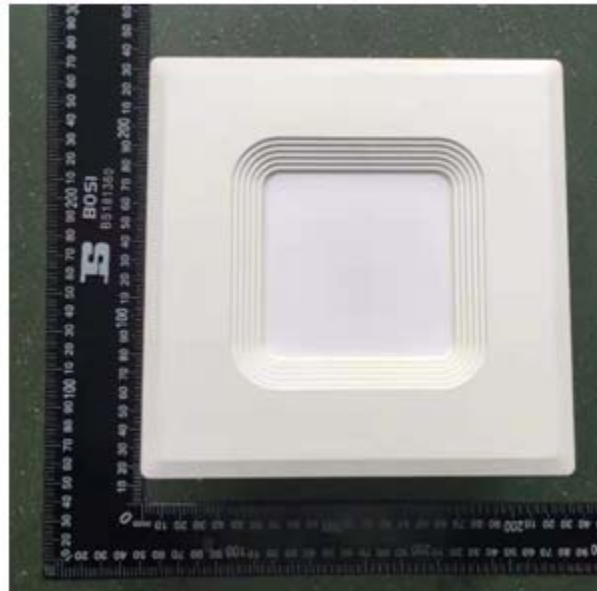
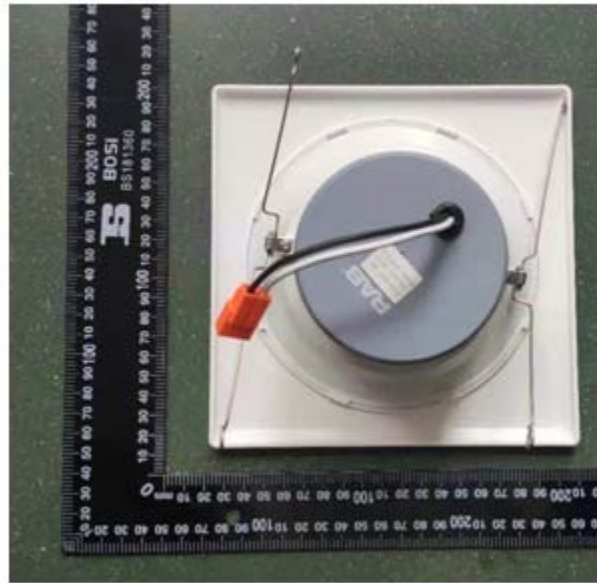


Table--1

UNIT: cd

γ (DEG)	C (DEG)																		
	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	303	303	303	303	303	303	303	303	303	303	303	303	303	303	303	303			
5	302	302	302	302	302	302	302	302	301	301	301	301	302	302	302	302			
10	298	298	298	299	298	298	298	298	297	297	297	297	297	298	298	298			
15	292	292	292	293	292	292	291	291	291	290	290	290	291	291	292	292			
20	283	284	284	284	284	283	283	282	282	281	281	281	282	282	283	283			
25	272	273	273	273	273	272	271	271	270	269	270	270	270	270	271	272			
30	259	260	260	260	259	259	258	257	257	256	256	256	257	257	258	258			
35	243	244	244	245	244	244	242	242	241	240	240	240	241	241	243	243			
40	226	227	227	228	226	226	225	224	223	222	223	222	223	223	225	225			
45	206	208	208	208	207	207	205	205	203	202	203	203	203	204	206	206			
50	185	187	187	188	186	186	184	184	182	181	182	181	182	182	185	185			
55	163	164	164	165	163	163	162	161	160	159	159	159	160	160	162	163			
60	139	141	141	141	139	139	138	137	136	134	135	135	135	136	138	139			
65	112	114	115	116	112	112	112	111	109	108	110	109	109	109	113	113			
70	84.0	85.9	87.9	88.0	84.5	84.5	84.6	83.8	81.4	80.1	82.7	81.7	81.0	81.6	85.9	86.0			
75	55.6	57.5	58.8	59.4	56.1	56.1	55.6	55.1	53.3	52.0	54.0	53.2	52.8	53.4	57.1	57.6			
80	27.1	29.0	30.1	30.6	27.4	27.6	27.2	26.7	25.2	24.0	25.9	25.0	24.7	25.2	28.9	29.2			
85	9.12	9.64	9.70	9.87	9.20	9.23	9.00	8.93	8.73	8.62	8.82	8.67	8.71	8.78	9.47	9.53			
90	5.97	6.16	6.09	6.18	6.00	5.98	5.91	5.90	6.05	6.06	6.05	6.05	6.05	6.08	6.14	6.15			
95	5.66	5.66	5.68	5.68	5.67	5.65	5.65	5.64	5.99	5.99	5.98	5.98	5.98	5.99	5.98	5.98			
100	5.48	5.48	5.49	5.49	5.47	5.47	5.47	5.45	6.00	6.00	6.00	6.01	5.99	6.00	5.99	5.99			
105	5.38	5.38	5.39	5.39	5.37	5.37	5.37	5.37	6.07	6.07	6.07	6.07	6.05	6.07	6.05	6.05			
110	5.37	5.37	5.37	5.37	5.36	5.36	5.36	5.37	6.15	6.16	6.15	6.15	6.14	6.14	6.14	6.13			
115	5.43	5.42	5.42	5.41	5.42	5.41	5.42	5.42	6.25	6.27	6.26	6.26	6.24	6.25	6.23	6.22			
120	5.54	5.52	5.52	5.52	5.53	5.53	5.53	5.54	6.39	6.40	6.38	6.38	6.37	6.38	6.36	6.35			
125	5.72	5.70	5.70	5.69	5.70	5.70	5.71	5.72	6.55	6.55	6.55	6.55	6.54	6.54	6.52	6.51			
130	5.94	5.92	5.91	5.90	5.91	5.92	5.93	5.94	6.74	6.76	6.74	6.75	6.73	6.73	6.70	6.70			
135	6.20	6.18	6.16	6.16	6.18	6.18	6.19	6.20	6.97	6.98	6.97	6.98	6.96	6.96	6.93	6.93			
140	6.47	6.46	6.46	6.44	6.46	6.46	6.49	6.49	7.22	7.23	7.22	7.23	7.21	7.20	7.17	7.17			
145	6.79	6.77	6.77	6.75	6.77	6.77	6.79	6.79	7.48	7.49	7.48	7.49	7.47	7.46	7.44	7.43			
150	7.13	7.10	7.10	7.09	7.10	7.10	7.13	7.12	7.72	7.74	7.72	7.72	7.71	7.72	7.68	7.69			
155	7.44	7.42	7.43	7.41	7.43	7.42	7.44	7.44	7.95	7.96	7.95	7.96	7.94	7.94	7.91	7.92			
160	7.75	7.74	7.74	7.73	7.73	7.73	7.74	7.75	8.16	8.17	8.15	8.15	8.14	8.14	8.12	8.12			
165	8.04	8.02	8.03	8.02	8.03	8.02	8.03	8.03	8.34	8.35	8.33	8.33	8.32	8.33	8.31	8.31			
170	8.30	8.28	8.28	8.27	8.28	8.27	8.29	8.29	8.49	8.49	8.47	8.47	8.46	8.46	8.45	8.46			
175	8.48	8.47	8.47	8.47	8.47	8.46	8.47	8.47	8.58	8.57	8.56	8.56	8.56	8.56	8.55	8.54			
180	8.60	8.59	8.59	8.59	8.58	8.58	8.58	8.58	8.60	8.59	8.59	8.58	8.57	8.58	8.58	8.57			

### 3. Product Photo



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