

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): DLR0074(R6S10827120WB)

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

**Type of
Luminaire:** Downlights

Report Date: 2019-09-30

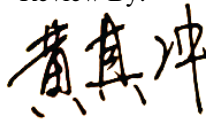
Prepared By:

Test & Report By:



Engineer: Sun Fangfang

Review By:



Manager: Huang Qichong

1.1 Rated Values:	
Rated Voltage / Frequency	120Vac, 50/60 Hz
Nominal Power	10.0W
Rated Initial Lamp Lumen	1000 lm
Declared CCT	2700K

1.2 Test Specifications:

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

1.3 Test Methods

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

Test date	2019-09-28	Test Ambient:	25.6 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DLR0074(R6S10827120WB)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
1908250058	120.0	60	0.084	9.97	0.980

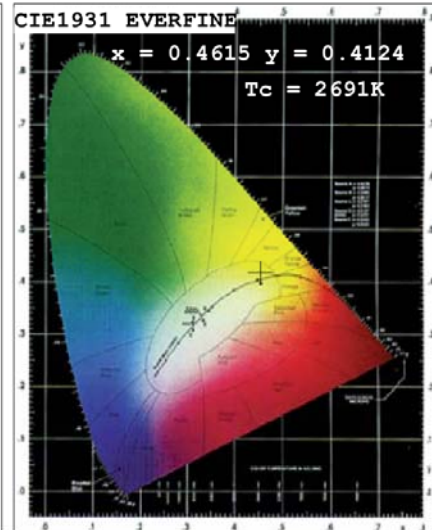
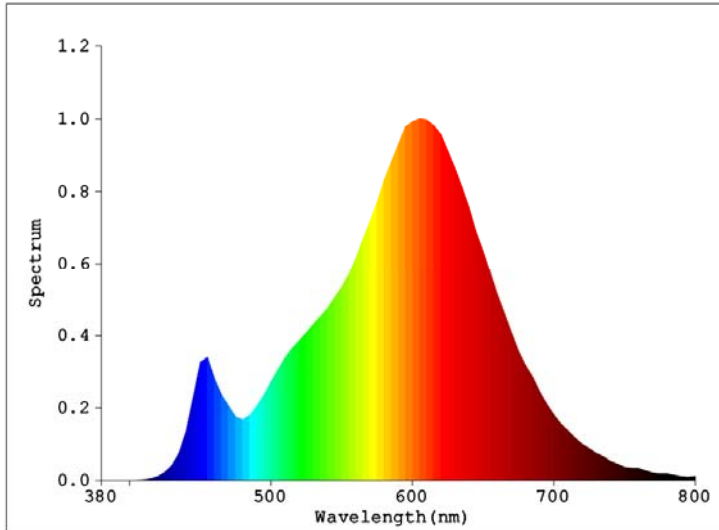
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	8
Frequency (Hz)	60	R2	92	R10	82
CCT (K)	2691	R3	95	R11	79
Duv	0.00054	R4	80	R12	75
Chromaticity (x, y)	x=0.4615 y=0.4124	R5	81	R13	84
Chromaticity (u', v')	u'=0.2627 v'=0.5283	R6	91	R14	98
Color Rendering Index (CRI)	82.3	R7	81	R15	73
R9	8	R8	57	--	--

Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1043.9
Luminous Efficacy (lm/W)	104.71
Beam Angle (°)	113.8
Center Beam Candle Power (cd)	348.4

Spectral Power Distribution & Chromaticity Diagram

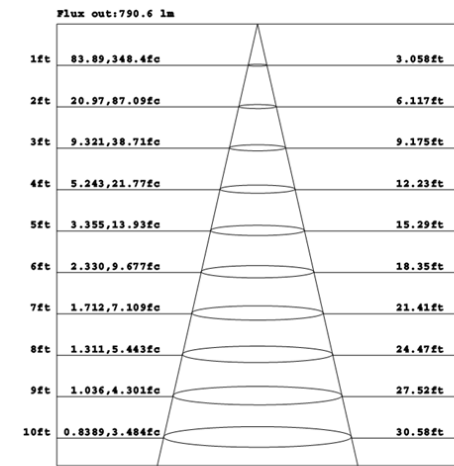
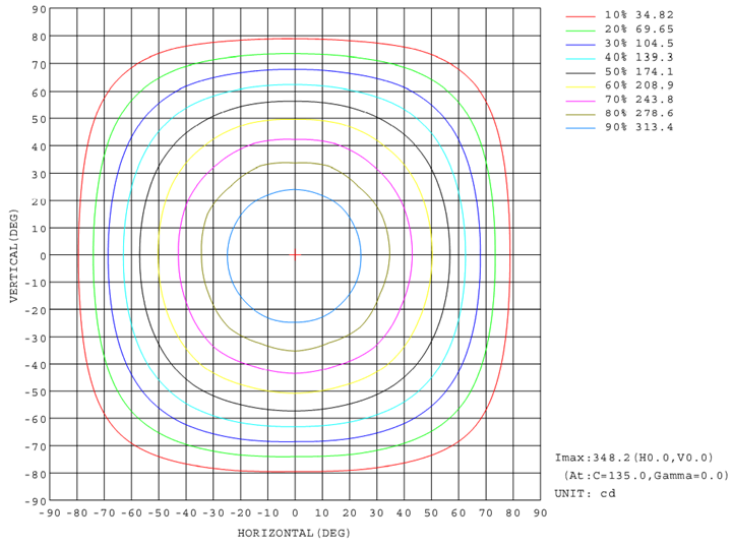
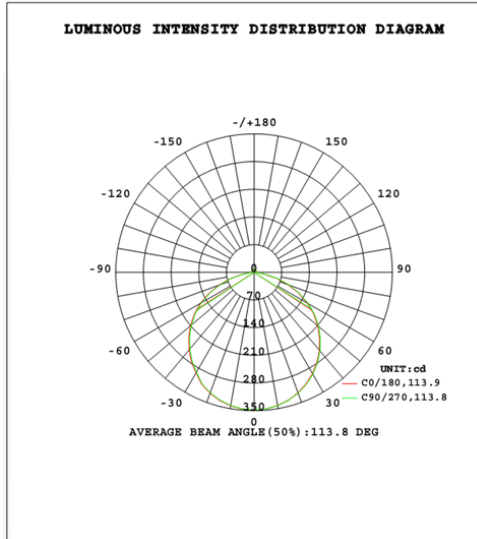


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	271.2	26.0%
0-40	444.4	42.6%
0-60	790.6	75.7%
60-90	207.8	19.9%
70-100	89.8	8.6%
90-120	20.8	2.0%
0-90	998.4	95.6%
90-180	45.5	4.4%
0-180	1043.9	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	33.0	3.2%	90-100	7.3	0.7%
10-20	94.6	9.1%	100-110	6.9	0.7%
20-30	143.6	13.8%	110-120	6.6	0.6%
30-40	173.3	16.6%	120-130	6.3	0.6%
40-50	181.0	17.3%	130-140	5.8	0.6%
50-60	165.2	15.8%	140-150	5.1	0.5%
60-70	125.3	12.0%	150-160	4.0	0.4%
70-80	66.6	6.4%	160-170	2.6	0.3%
80-90	15.9	1.5%	170-180	0.9	0.1%

Photometric Data



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

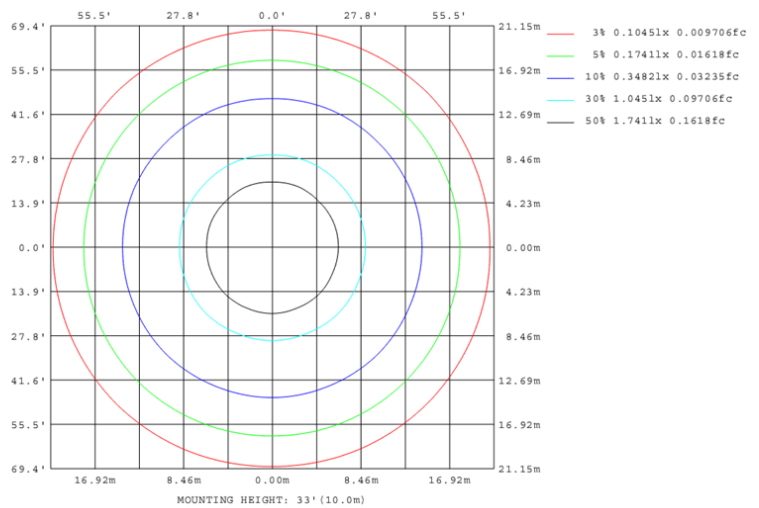
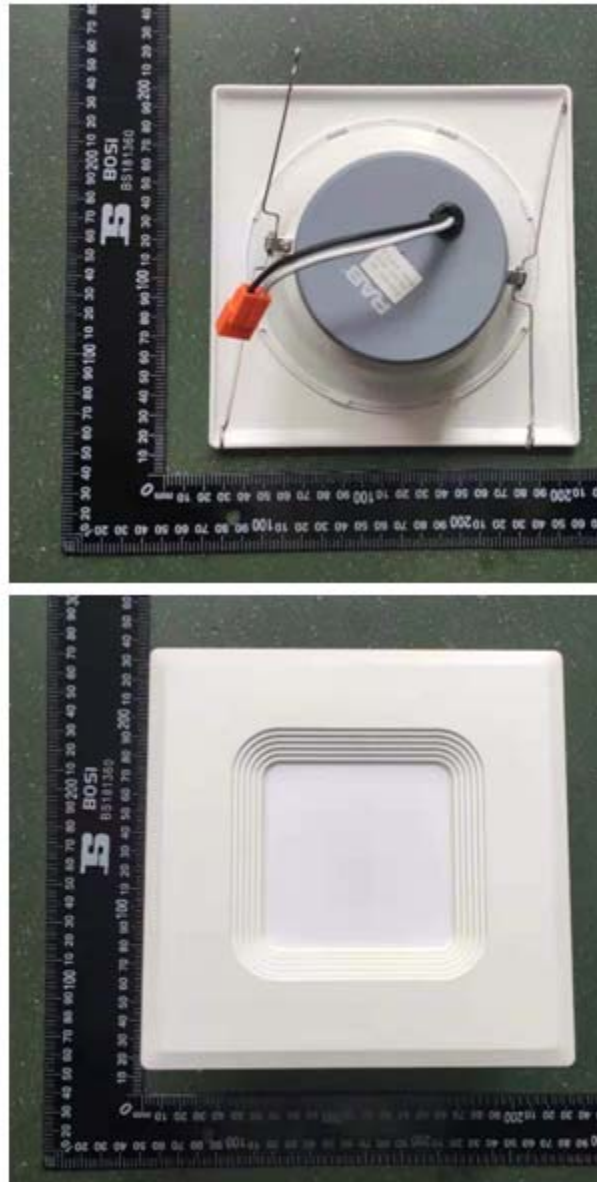


Table--1

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	348	348	348	348	348	348	348	348	348	348	348	348	348	348	348	348			
5	347	347	347	347	347	347	347	347	347	347	347	346	346	346	347	346			
10	342	342	342	342	343	343	343	343	343	342	342	342	342	342	342	342			
15	335	335	335	335	335	336	336	336	336	335	335	334	334	334	335	334			
20	324	325	325	326	325	326	326	326	326	325	325	324	324	324	324	324			
25	311	312	312	313	313	314	313	313	313	312	312	311	311	311	311	311			
30	296	293	297	293	297	297	298	296	294	297	293	295	291	295	292	295			
35	277	275	279	276	280	277	280	277	276	279	275	278	274	277	274	277			
40	257	255	259	256	260	257	261	257	256	259	255	257	253	256	254	257			
45	235	233	237	235	237	236	239	235	234	236	233	234	231	234	232	234			
50	210	209	213	211	213	212	215	211	210	212	209	210	207	209	208	210			
55	185	184	187	186	188	187	189	186	185	186	184	184	181	183	182	184			
60	155	157	158	159	159	160	162	159	158	158	157	156	154	154	155	156			
65	123	127	129	129	129	130	131	129	127	127	129	125	123	123	127	124			
70	91.5	95.0	97.2	97.5	95.7	98.6	99.5	97.6	95.5	95.3	96.9	93.3	91.5	91.9	94.8	93.1			
75	59.3	63.1	64.2	65.7	63.5	66.6	66.4	65.6	63.4	63.4	64.0	61.5	59.5	60.1	62.0	61.3			
80	27.4	30.8	32.1	33.1	31.2	34.1	34.0	33.0	31.3	31.0	32.1	29.2	27.8	28.1	30.5	29.2			
85	9.74	10.3	10.5	10.9	10.5	11.2	10.9	10.9	10.5	10.4	10.5	9.93	9.75	9.78	10.1	9.98			
90	6.70	6.72	6.73	6.94	6.91	7.05	6.88	6.89	7.10	6.94	6.91	6.90	6.90	6.91	6.90	6.89			
95	6.40	6.41	6.43	6.43	6.43	6.44	6.44	6.43	6.84	6.84	6.82	6.82	6.82	6.83	6.82	6.82			
100	6.20	6.21	6.24	6.23	6.23	6.23	6.24	6.23	6.84	6.85	6.83	6.84	6.83	6.84	6.83	6.83			
105	6.11	6.11	6.14	6.12	6.11	6.12	6.12	6.11	6.89	6.90	6.90	6.90	6.89	6.91	6.90	6.90			
110	6.12	6.11	6.11	6.11	6.10	6.10	6.10	6.09	6.99	7.00	6.99	7.00	6.99	7.01	7.00	6.99			
115	6.19	6.18	6.18	6.17	6.17	6.15	6.16	6.15	7.10	7.12	7.11	7.12	7.11	7.12	7.11	7.11			
120	6.33	6.31	6.32	6.30	6.31	6.29	6.29	6.29	7.24	7.26	7.25	7.26	7.25	7.26	7.25	7.24			
125	6.53	6.51	6.51	6.50	6.50	6.48	6.48	6.48	7.42	7.44	7.43	7.44	7.43	7.45	7.43	7.43			
130	6.78	6.76	6.76	6.75	6.74	6.72	6.73	6.72	7.63	7.65	7.65	7.66	7.66	7.68	7.65	7.65			
135	7.07	7.05	7.05	7.04	7.03	7.01	7.03	7.00	7.88	7.90	7.90	7.91	7.91	7.92	7.91	7.90			
140	7.40	7.37	7.38	7.35	7.35	7.33	7.34	7.32	8.16	8.19	8.18	8.20	8.19	8.21	8.20	8.19			
145	7.75	7.73	7.73	7.70	7.70	7.69	7.69	7.68	8.45	8.48	8.47	8.50	8.49	8.51	8.48	8.49			
150	8.13	8.10	8.11	8.08	8.08	8.07	8.07	8.05	8.74	8.76	8.76	8.77	8.76	8.78	8.76	8.76			
155	8.50	8.46	8.48	8.44	8.45	8.43	8.44	8.43	9.01	9.03	9.01	9.03	9.02	9.04	9.02	9.02			
160	8.84	8.81	8.82	8.80	8.80	8.78	8.79	8.77	9.25	9.26	9.25	9.26	9.26	9.27	9.25	9.25			
165	9.16	9.14	9.15	9.12	9.13	9.10	9.11	9.10	9.46	9.46	9.44	9.46	9.44	9.46	9.45	9.44			
170	9.43	9.41	9.42	9.40	9.41	9.39	9.40	9.38	9.63	9.62	9.61	9.62	9.62	9.62	9.61	9.61			
175	9.64	9.63	9.63	9.61	9.62	9.61	9.61	9.60	9.73	9.73	9.72	9.72	9.71	9.71	9.71	9.70			
180	9.76	9.75	9.75	9.74	9.73	9.74	9.73	9.73	9.76	9.75	9.75	9.75	9.73	9.74	9.73	9.73			

3. Product Photo



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