

LM-79-08 Test Report
For
RAB LIGHTING INC

(Brand Name: N/A)

408 W 14th St, New York, NY 10014, USA

Model name(s):
DISK-6/PIR

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

**Type of
Luminaire:** Downlights

Report Date: 2025-10-24

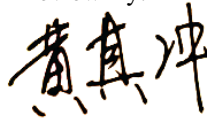
Prepared By:

Test & Report By:



Engineer: Sun Fangfang

Review By:



Manager: Huang Qichong

1.1 Rated Values:	
Rated Voltage / Frequency	120Vac, 60 Hz
Nominal Power	12.0W
Rated Initial Lamp Lumen	1050lm (mode2700K)
Declared CCT	2700K/3000K/3500K/4000K/5000K

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: 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: 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: 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>

2.1.1 Electrical, Photometric and Chromaticity Measurements

Test date	2025-10-22	Test Ambient:	25.1 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DISK-6/PIR	2700K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202510180025	120.0	60	0.108	11.70	0.904

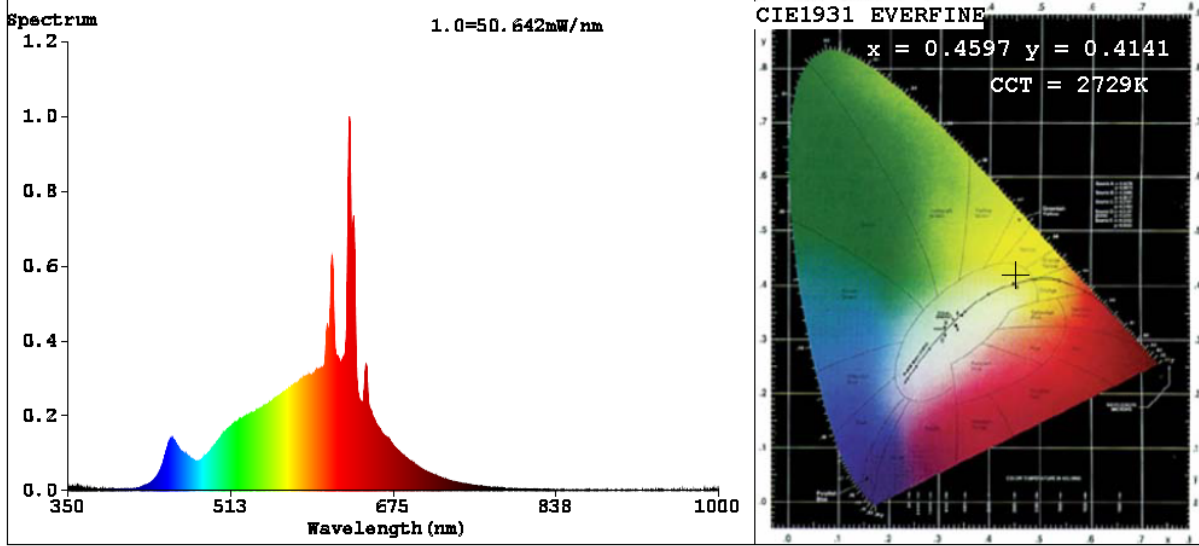
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	98	R9	68
Frequency (Hz)	60	R2	99	R10	95
CCT (K)	2729	R3	98	R11	99
Duv	0.0013	R4	98	R12	87
Chromaticity (x, y)	x=0.4597 y=0.4141	R5	97	R13	98
Chromaticity (u', v')	u'=0.2609 v'=0.5286	R6	97	R14	97
Color Rendering Index (CRI)	95.8	R7	93	R15	92
R9	68	R8	86	--	--
Rg	99				
Rf	93				
Rcs,h1%	-5				

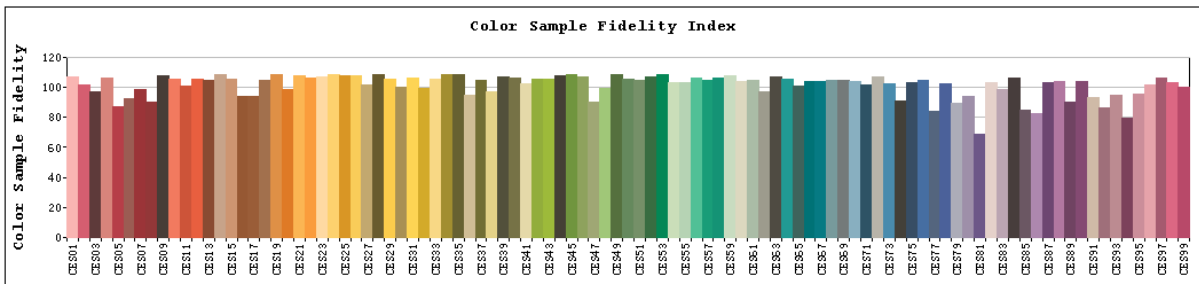
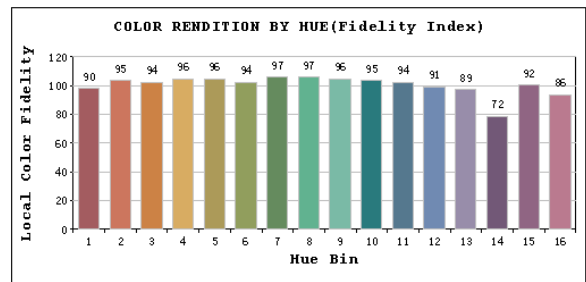
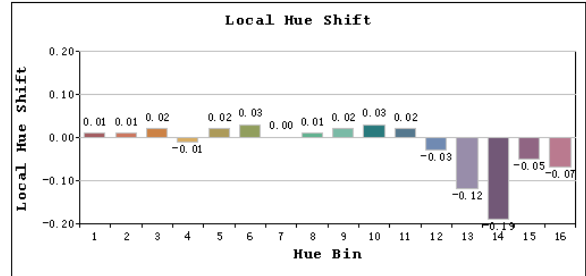
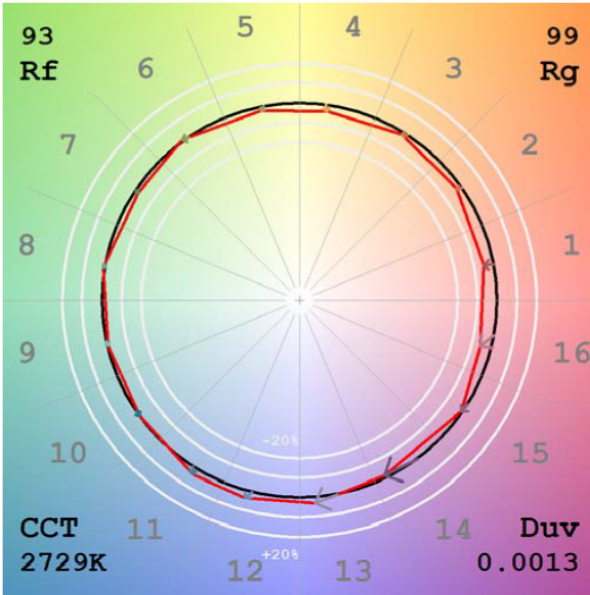
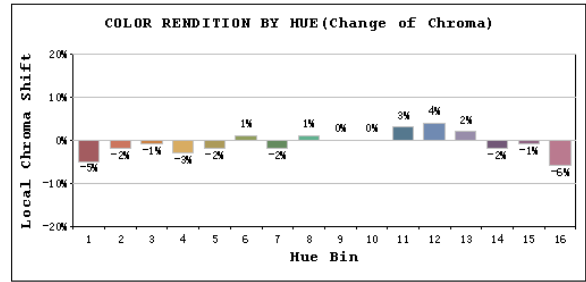
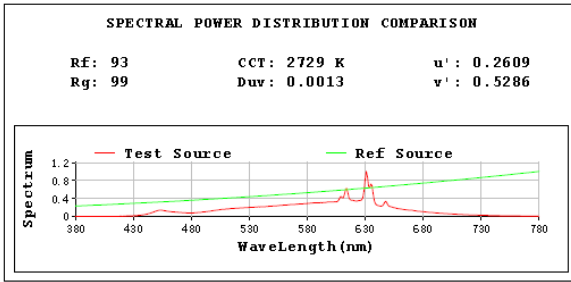
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1057.6
Luminous Efficacy (lm/W)	90.40
Beam Angle (°)	111.7
Center Beam Candle Power (cd)	356.5

Spectral Power Distribution & Chromaticity Diagram



TM30



Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	273.3	25.8%
0-40	446.3	42.2%
0-60	788.1	74.5%
60-90	241.5	22.8%
70-100	122.2	11.5%
90-120	12.6	1.2%
0-90	1029.6	97.4%
90-180	28.0	2.6%
0-180	1057.6	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	33.5	3.2%	90-100	7.9	0.7%
10-20	95.6	9.0%	100-110	2.1	0.2%
20-30	144.2	13.6%	110-120	2.7	0.3%
30-40	173.0	16.4%	120-130	3.6	0.3%
40-50	179.1	16.9%	130-140	4.2	0.4%
50-60	162.7	15.4%	140-150	3.6	0.3%
60-70	127.2	12.0%	150-160	2.5	0.2%
70-80	79.9	7.6%	160-170	1.2	0.1%
80-90	34.4	3.3%	170-180	0.4	0.0%

Photometric Data

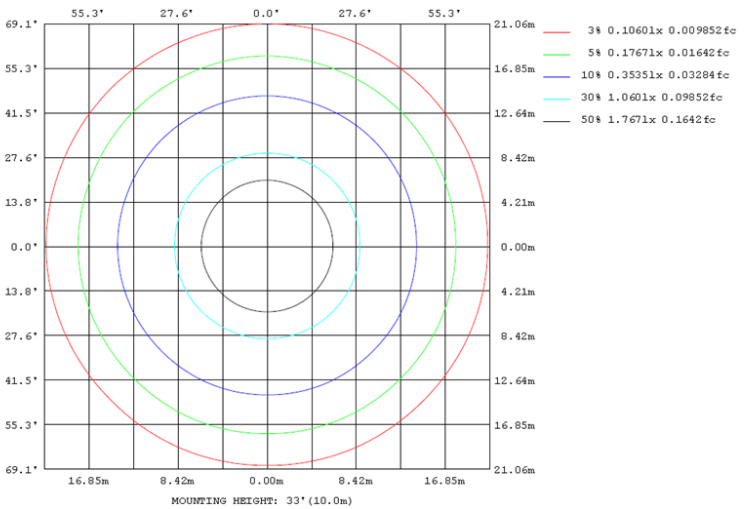
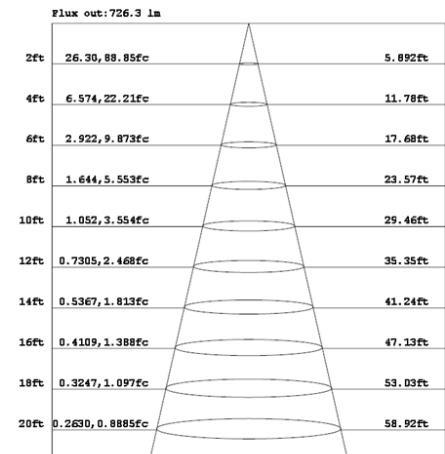
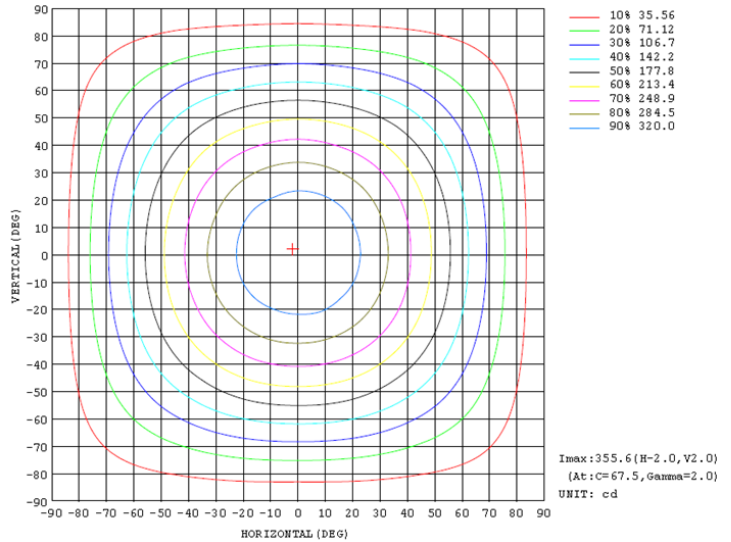
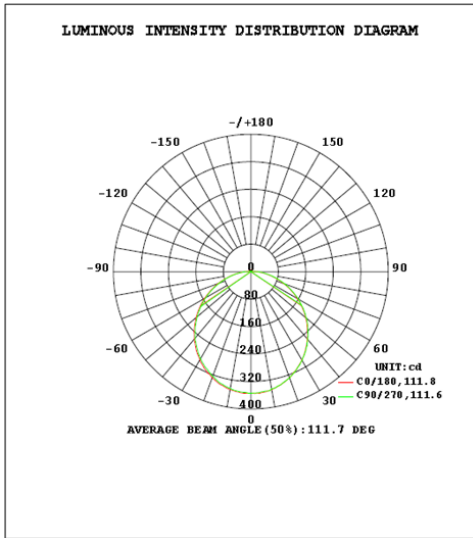


Table--1

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	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354			
5	353	352	352	352	351	352	352	352	354	353	353	354	351	352	353	353			
10	349	346	346	347	345	346	347	346	349	347	349	349	347	347	349	347			
15	340	338	339	339	337	336	337	337	340	339	339	342	340	340	341	340			
20	329	327	326	327	325	324	326	326	329	326	329	330	329	328	330	328			
25	314	312	312	313	310	312	312	312	314	313	315	315	315	314	316	314			
30	296	296	294	295	293	292	293	295	297	296	299	299	299	297	297	297			
35	278	275	274	275	273	274	274	275	278	277	279	280	279	278	280	278			
40	255	255	253	254	252	252	253	254	256	256	259	259	257	257	259	256			
45	233	231	230	231	229	229	229	231	233	233	234	236	235	234	235	234			
50	208	207	206	206	204	204	205	206	209	208	210	210	211	210	211	209			
55	182	181	179	180	178	179	179	181	183	182	185	186	186	184	185	183			
60	155	154	153	153	151	153	152	154	156	156	159	158	159	158	159	156			
65	128	127	125	126	124	126	125	127	129	130	132	132	132	131	132	130			
70	101	100.0	98.4	98.9	97.7	98.7	98.6	99.9	102	102	105	104	106	104	105	103			
75	74.5	73.9	72.3	72.7	71.9	72.7	72.6	74.3	76.5	76.3	78.0	78.2	79.2	77.5	78.4	76.2			
80	50.2	50.0	48.5	49.2	48.1	48.9	49.0	50.3	52.2	52.3	54.1	53.9	54.8	53.3	53.7	51.9			
85	29.6	29.7	28.6	29.2	28.3	29.0	28.8	29.9	31.4	31.4	32.8	32.6	33.3	32.2	32.4	30.9			
90	14.8	14.9	14.3	14.7	14.1	14.4	14.2	15.0	15.9	15.9	16.9	16.7	17.2	16.4	16.5	15.5			
95	6.08	6.18	5.91	6.08	5.52	5.40	5.17	5.92	6.44	6.50	7.14	7.06	7.19	6.72	6.73	6.26			
100	2.51	2.50	2.53	2.56	2.32	1.74	1.84	2.37	2.54	2.55	2.80	2.82	2.86	2.72	2.67	2.48			
105	1.93	1.82	1.84	1.92	1.97	1.71	1.69	1.85	1.86	1.78	1.83	1.89	1.94	1.87	1.71	1.72			
110	2.45	2.29	2.30	2.30	2.11	1.94	1.96	2.19	2.31	2.16	2.13	2.08	1.97	1.80	1.84	1.91			
115	3.14	3.28	3.15	2.74	2.43	2.36	2.44	2.70	2.95	3.09	2.97	2.68	2.21	2.07	2.13	2.31			
120	3.80	4.09	4.04	3.29	2.90	2.75	2.98	3.29	3.66	4.67	4.50	3.30	2.69	2.47	2.51	2.86			
125	4.58	5.02	4.81	4.00	3.38	3.18	3.48	3.83	4.43	4.85	4.75	3.93	3.26	3.05	2.89	3.41			
130	7.69	6.25	7.93	4.85	3.90	3.69	3.92	4.39	6.45	5.90	6.28	4.60	3.85	3.64	2.92	3.92			
135	7.45	7.30	7.66	5.60	4.47	4.09	3.90	4.97	7.15	6.33	7.65	6.07	4.44	4.17	3.16	4.29			
140	7.01	6.33	6.92	5.84	5.65	4.12	3.86	6.02	7.74	6.61	6.75	6.04	5.34	4.20	3.40	4.19			
145	5.51	5.47	7.18	6.31	5.92	3.86	3.89	6.05	8.16	6.87	7.92	6.42	6.70	3.75	3.61	4.13			
150	6.11	5.22	7.56	5.57	4.43	3.64	4.04	5.19	9.07	7.04	8.53	6.74	6.39	3.45	3.77	4.22			
155	5.97	7.28	6.05	4.11	3.53	3.63	4.20	4.59	8.11	9.50	9.21	6.37	4.62	3.40	3.67	4.34			
160	4.54	4.77	4.07	3.55	3.49	3.67	4.33	4.58	4.96	6.29	5.40	5.17	4.11	3.50	3.54	4.15			
165	4.09	4.04	3.85	3.60	3.57	3.70	4.17	4.62	4.78	4.81	4.73	4.52	4.04	3.54	3.54	3.80			
170	3.82	3.82	3.71	3.69	3.69	3.67	3.86	4.35	4.56	4.63	4.56	4.31	3.68	3.67	3.65	3.68			
175	3.80	3.77	3.77	3.77	3.76	3.77	3.78	3.78	3.76	3.78	3.76	3.77	3.73	3.75	3.76	3.75			
180	3.83	3.83	3.83	3.84	3.82	3.82	3.81	3.82	3.83	3.81	3.81	3.82	3.79	3.81	3.84	3.79			

2.1.2 Electrical, Photometric and Chromaticity Measurements

Test date	2025-10-22	Test Ambient:	25.1 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DISK-6/PIR	3000K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202510180025	120.0	60	0.109	11.80	0.904

Chromaticity Measurement - Sphere-Spectroradiometer Method:

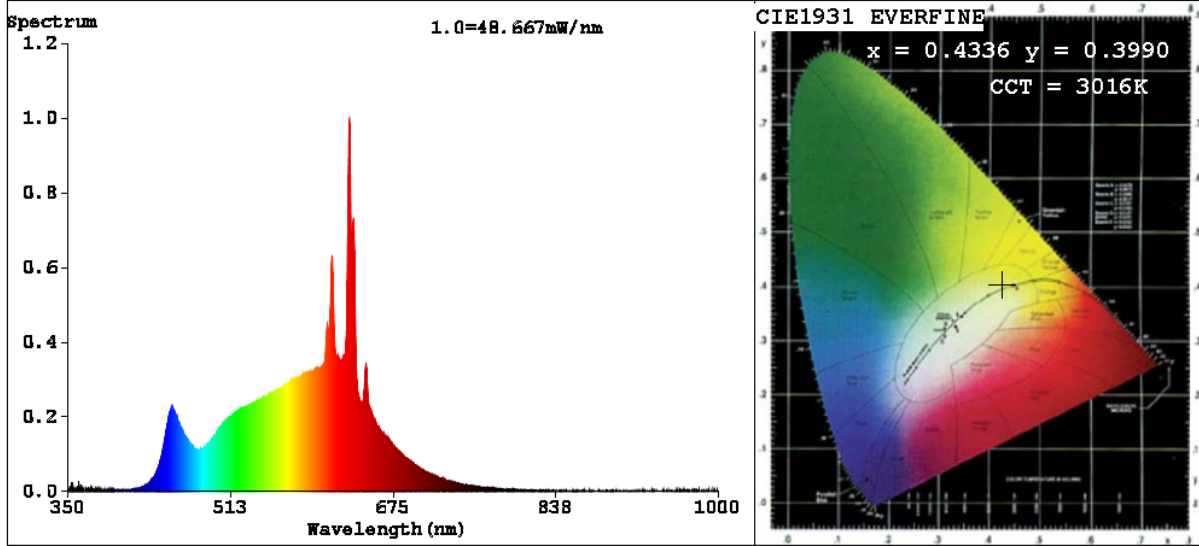
Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
CCT (K)	3016
Duv	-0.0016
Chromaticity (x, y)	x=0.4336 y=0.3990
Chromaticity (u', v')	u'=0.2506 v'=0.5189
Color Rendering Index (CRI)	96.7
R9	78
Rg	101
Rf	93
Rcs,h1%	-4

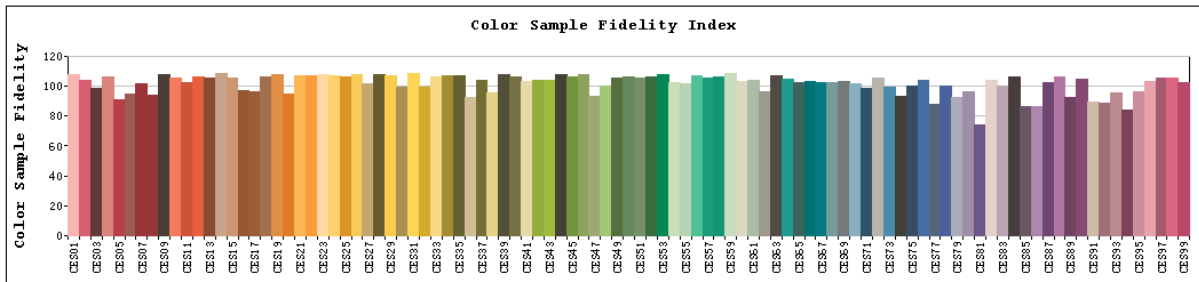
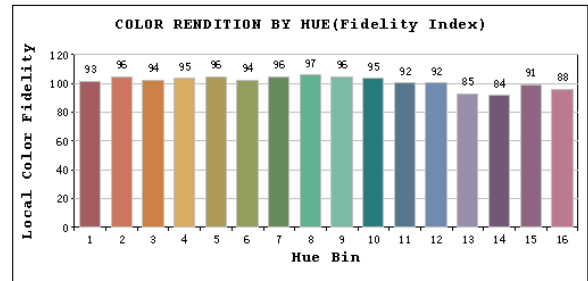
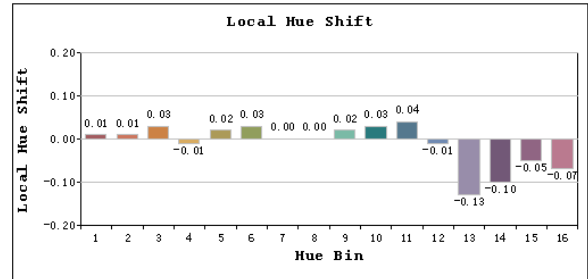
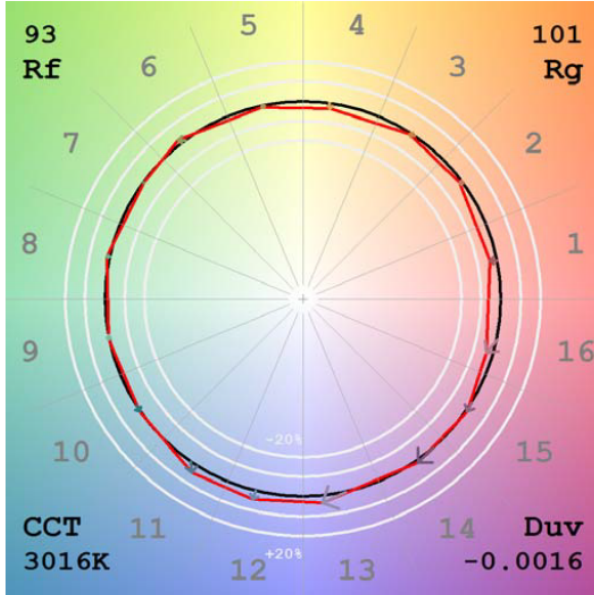
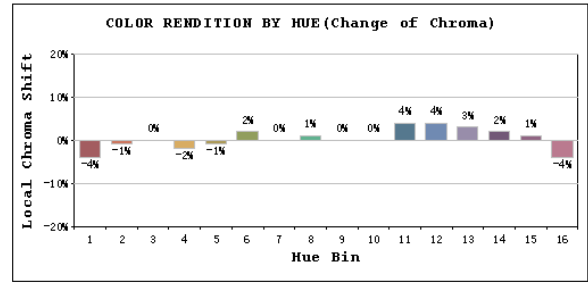
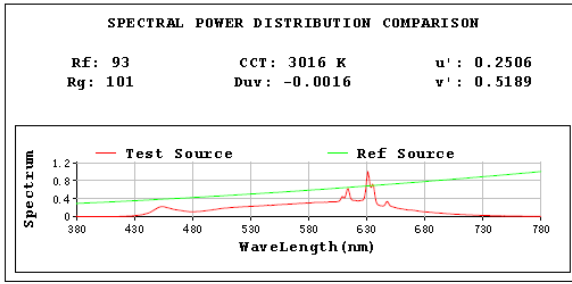
Special Color Rendering Indices			
R1	99	R9	78
R2	99	R10	99
R3	99	R11	97
R4	99	R12	85
R5	99	R13	99
R6	95	R14	98
R7	94	R15	96
R8	90	--	--

Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1111.1
Luminous Efficacy (lm/W)	94.16

Spectral Power Distribution & Chromaticity Diagram





2.1.3 Electrical, Photometric and Chromaticity Measurements

Test date	2025-10-22	Test Ambient:	25.1 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DISK-6/PIR	3500K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202510180025	120.0	60	0.110	12.00	0.909

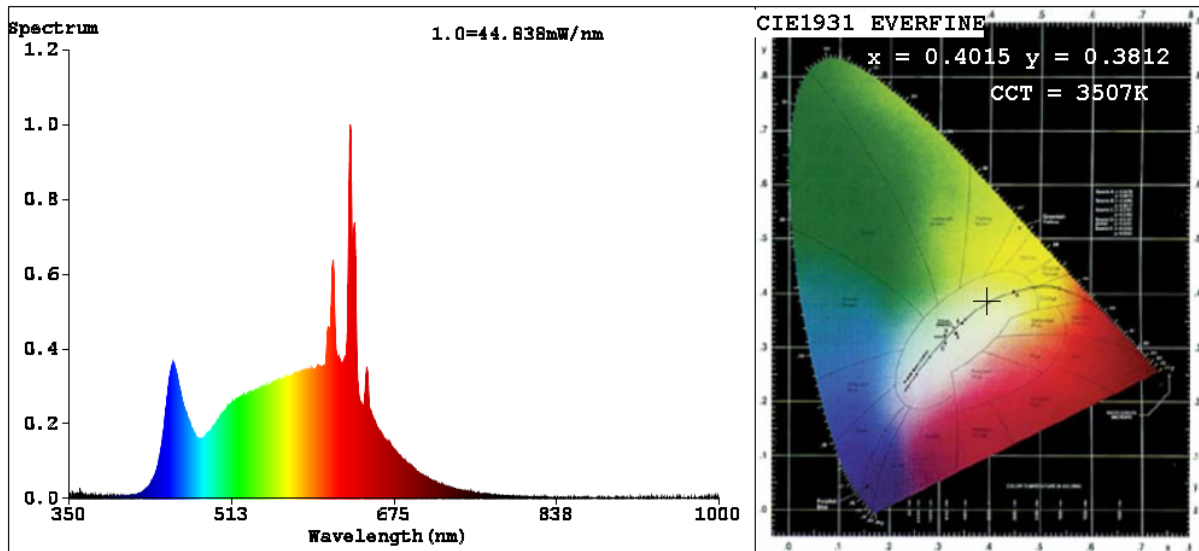
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	97	R9	88
Frequency (Hz)	60	R2	98	R10	98
CCT (K)	3507	R3	99	R11	97
Duv	-0.0034	R4	99	R12	81
Chromaticity (x, y)	x=0.4015 y=0.3812	R5	98	R13	97
Chromaticity (u', v')	u'=0.2372 v'=0.5066	R6	94	R14	98
Color Rendering Index (CRI)	96.7	R7	95	R15	98
R9	88	R8	94	--	--
Rg	101				
Rf	93				
Rcs,h1%	-2				

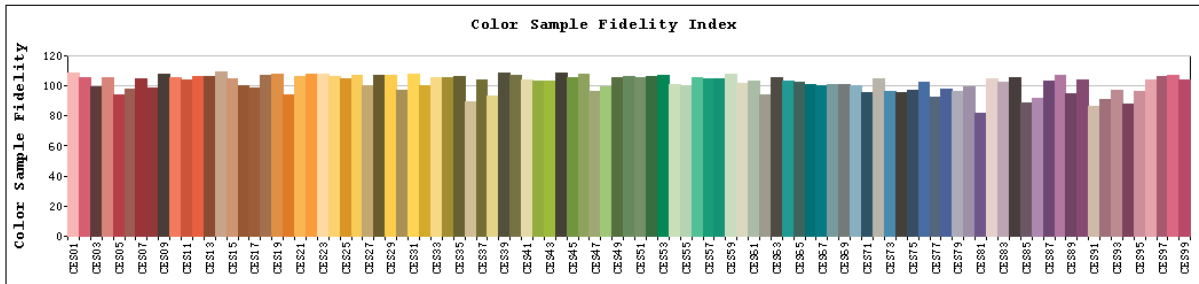
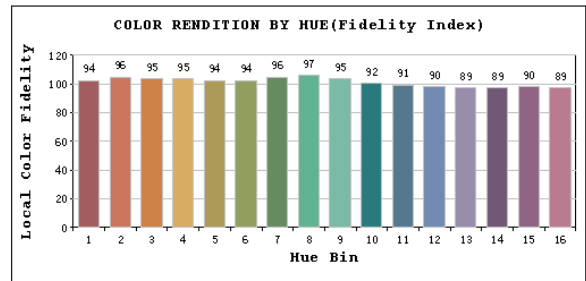
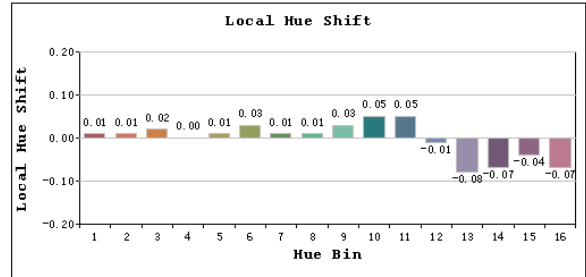
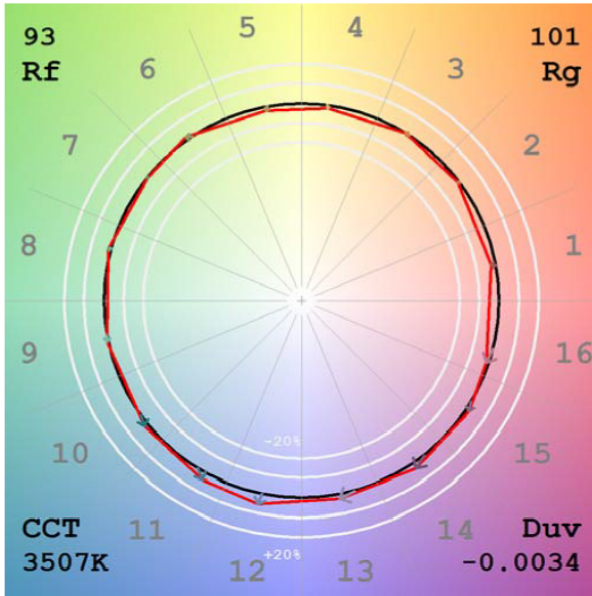
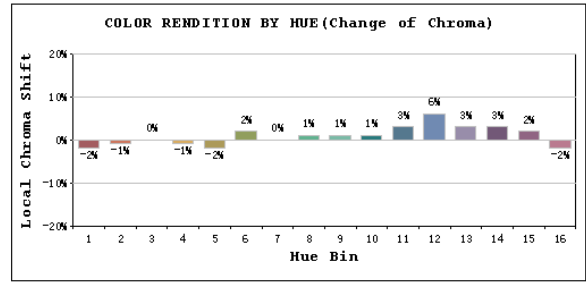
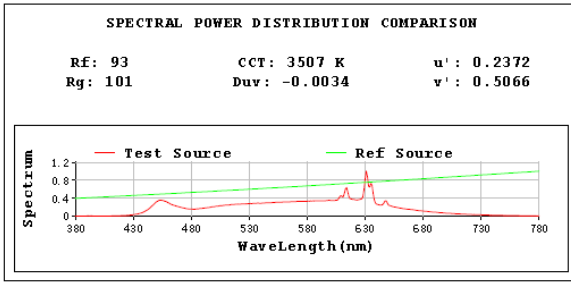
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1165.1
Luminous Efficacy (lm/W)	97.09

Spectral Power Distribution & Chromaticity Diagram



TM30



2.1.4 Electrical, Photometric and Chromaticity Measurements

Test date	2025-10-22	Test Ambient:	25.1 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DISK-6/PIR	4000K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202510180025	120.0	60	0.110	12.00	0.908

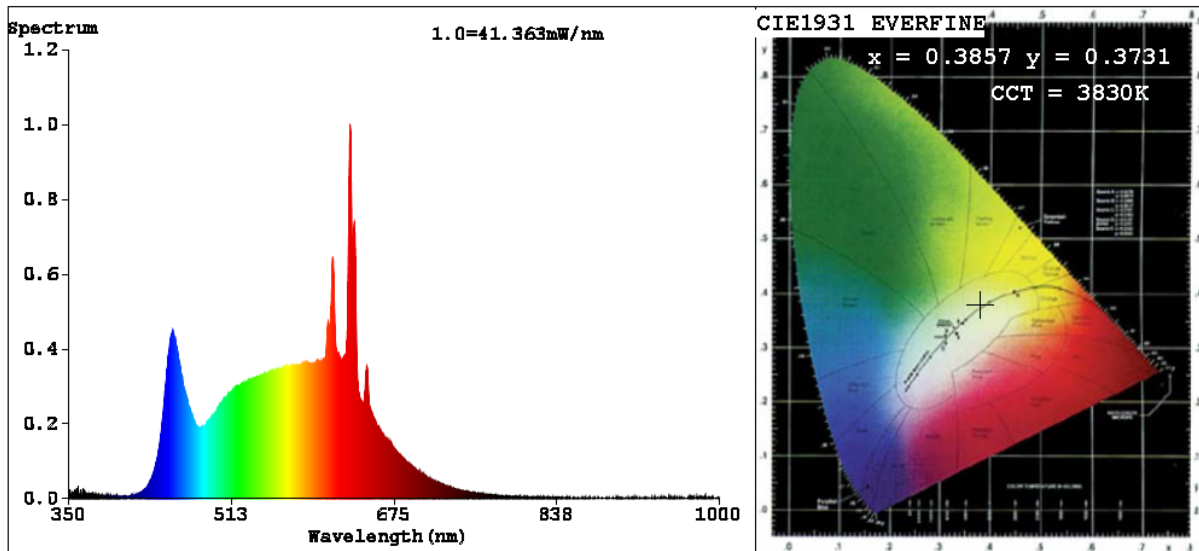
Chromaticity Measurement - Sphere-Spectroradiometer Method:

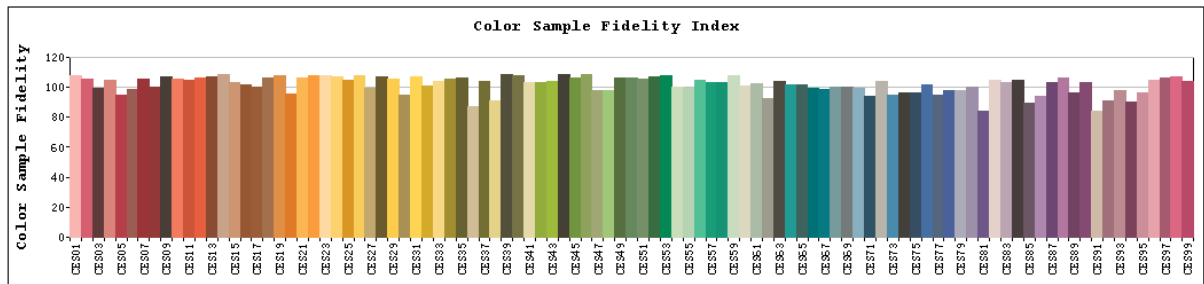
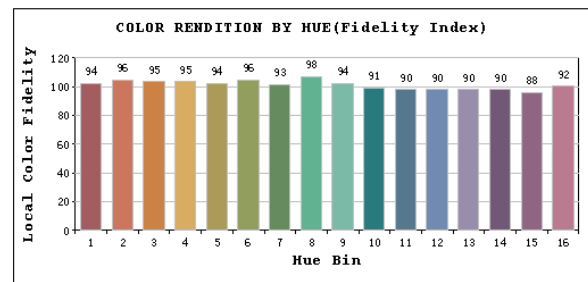
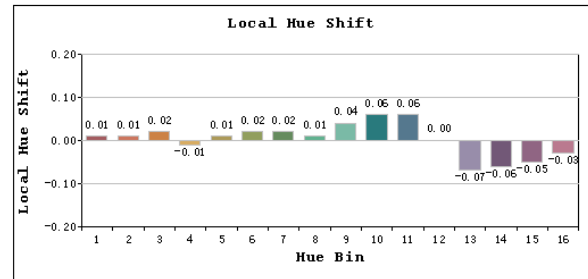
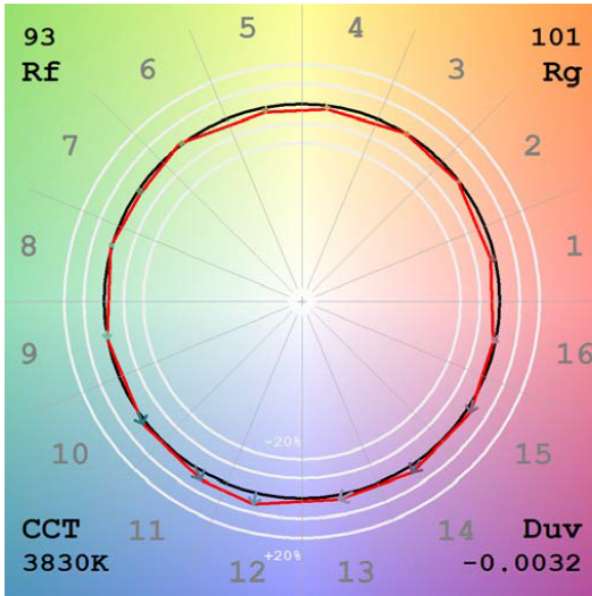
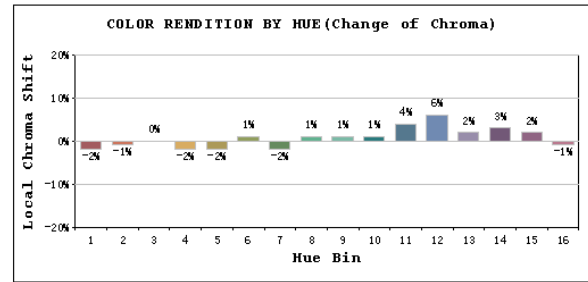
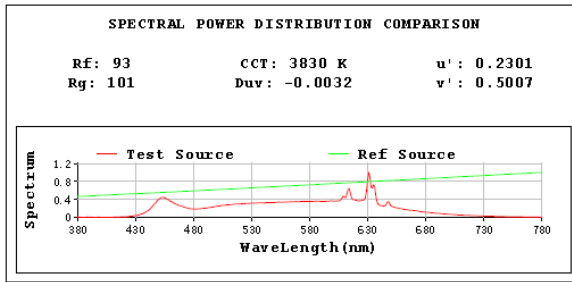
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	97	R9	91
Frequency (Hz)	60	R2	98	R10	98
CCT (K)	3830	R3	98	R11	97
Duv	-0.0032	R4	99	R12	79
Chromaticity (x, y)	x=0.3857 y=0.3731	R5	97	R13	97
Chromaticity (u', v')	u'=0.2301 v'=0.5007	R6	94	R14	98
Color Rendering Index (CRI)	96.8	R7	95	R15	98
R9	91	R8	95	--	--
Rg	101				
Rf	93				
Rcs,h1%	-2				

Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1159.0
Luminous Efficacy (lm/W)	96.59

Spectral Power Distribution & Chromaticity Diagram





2.1.5 Electrical, Photometric and Chromaticity Measurements

Test date	2025-10-22	Test Ambient:	25.1 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DISK-6/PIR	5000K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202510180025	120.0	60	0.107	11.70	0.903

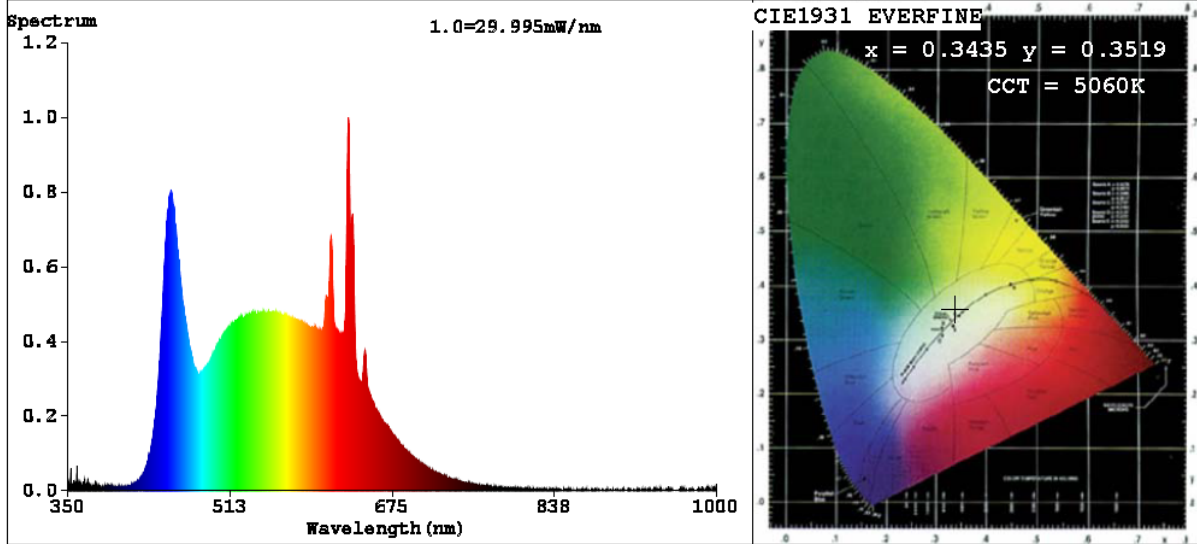
Chromaticity Measurement - Sphere-Spectroradiometer Method:

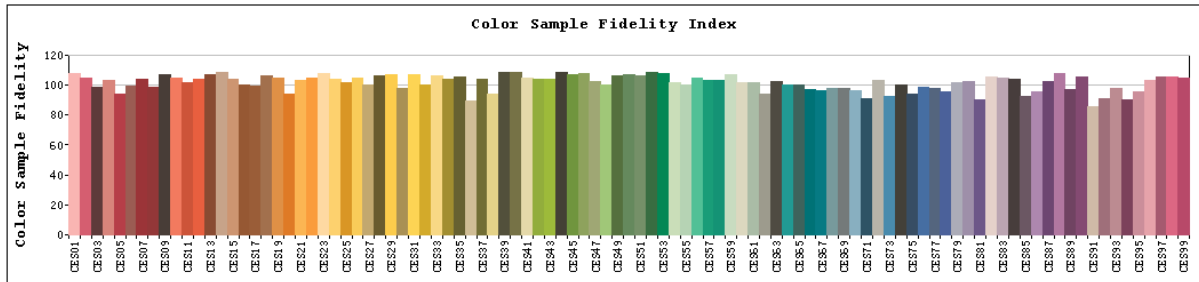
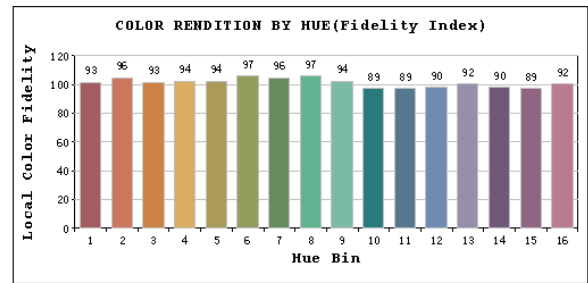
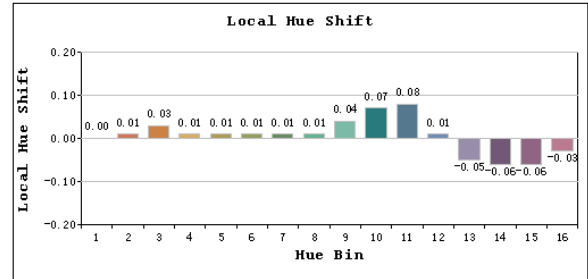
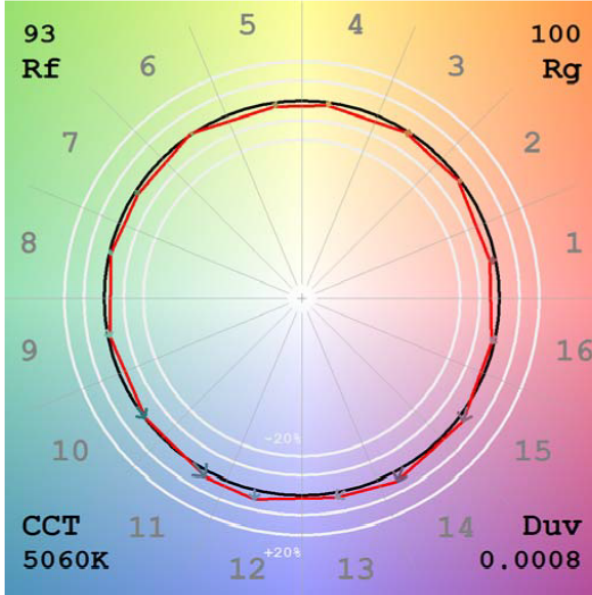
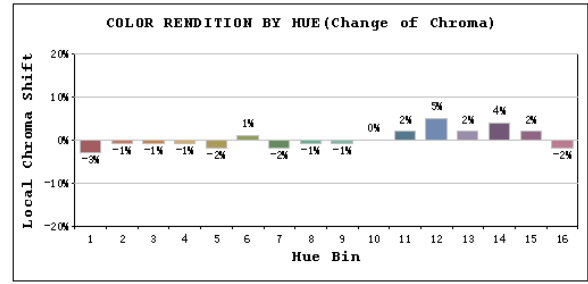
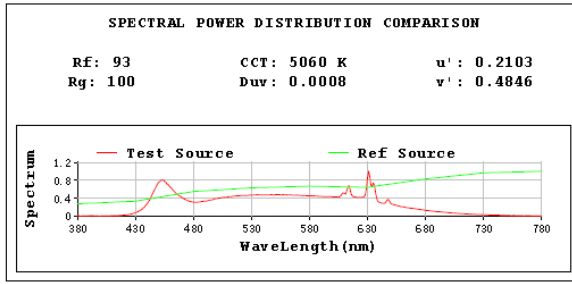
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	98	R9	85
Frequency (Hz)	60	R2	99	R10	96
CCT (K)	5060	R3	97	R11	97
Duv	0.0008	R4	97	R12	76
Chromaticity (x, y)	x=0.3435 y=0.3519	R5	97	R13	99
Chromaticity (u', v')	u'=0.2103 v'=0.4846	R6	95	R14	98
Color Rendering Index (CRI)	96.4	R7	96	R15	97
R9	85	R8	93	--	--
Rg	100				
Rf	93				
Rcs,h1%	-3				

Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1118.6
Luminous Efficacy (lm/W)	95.60

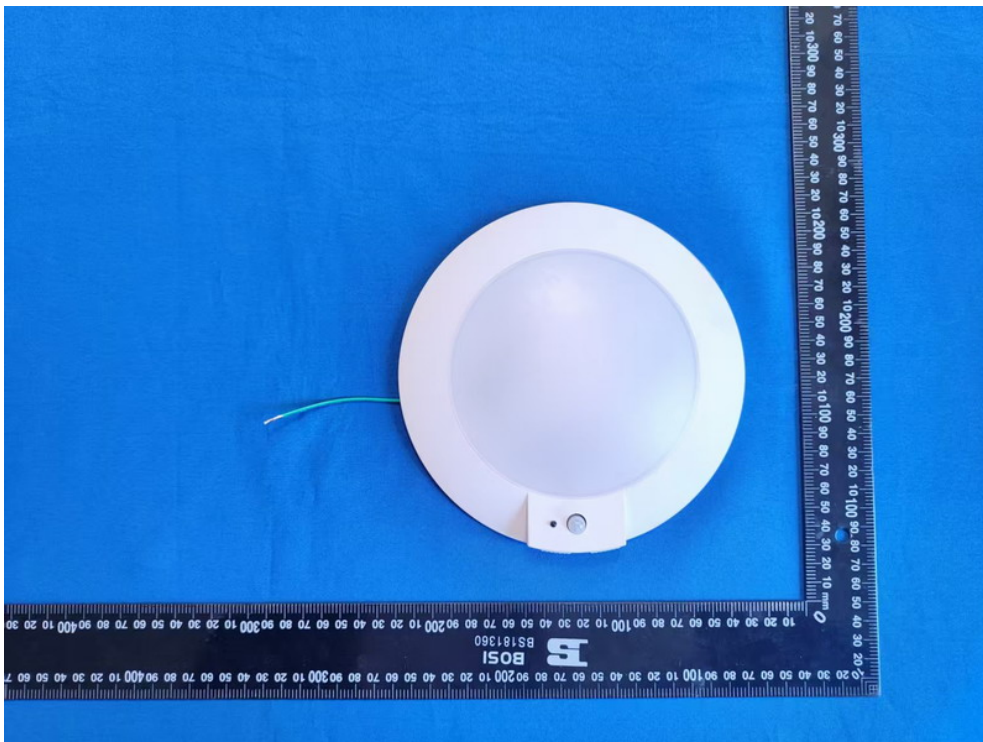
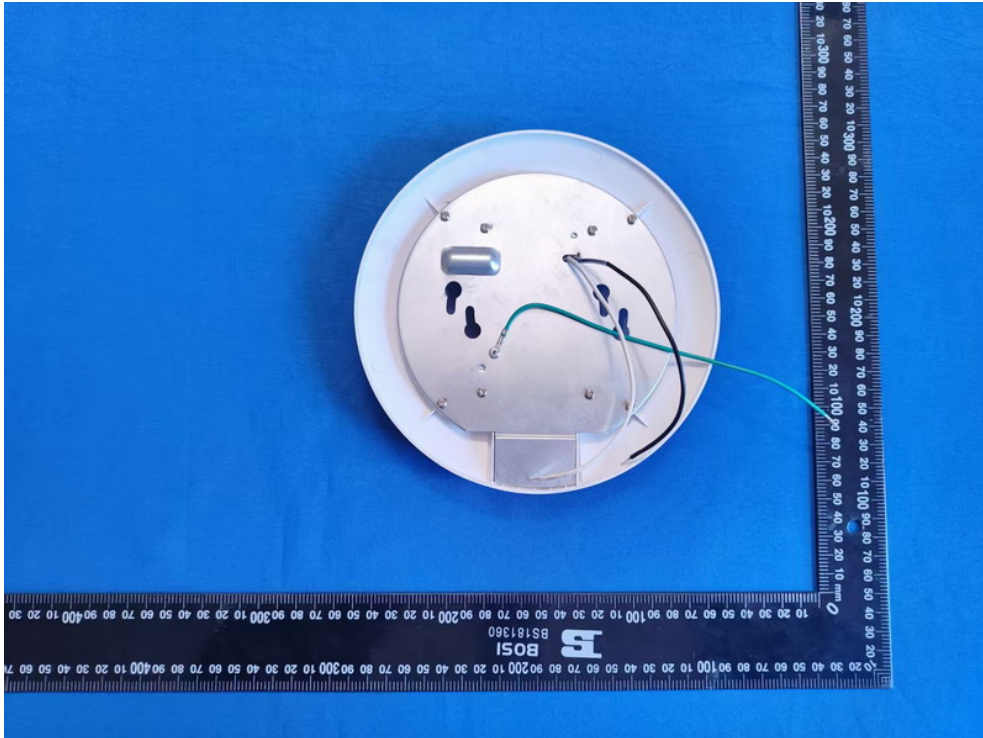
Spectral Power Distribution & Chromaticity Diagram





Sample No.	Wattage and CCT setting	Test Voltage(V)	Flux(lm)	P(W)	Luminous Efficacy lm/W
DISK-6/PIR	2700K setting	120	1057.6	11.70	90.40
	3000K setting	120	1111.1	11.80	94.16
	3500K setting	120	1165.1	12.00	97.09
	4000K setting	120	1159.0	12.00	96.59
	5000K setting	120	1118.6	11.70	95.60

3. Product Photo



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