

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):
DISK34-8

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

**Type of
Luminaire:** Downlights

Report Date: 2025-09-19

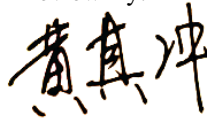
Prepared By:

Test & Report By:



Engineer: Sun Fangfang

Review By:



Manager: Huang Qichong

1.1 Rated Values:	
Rated Voltage / Frequency	120Vac, 60 Hz
Nominal Power	18.0W
Rated Initial Lamp Lumen	1500lm (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	2025-09-17	Test Ambient:	25.1 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DISK34-8	2700K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202509090014	120.0	60	0.159	17.40	0.915

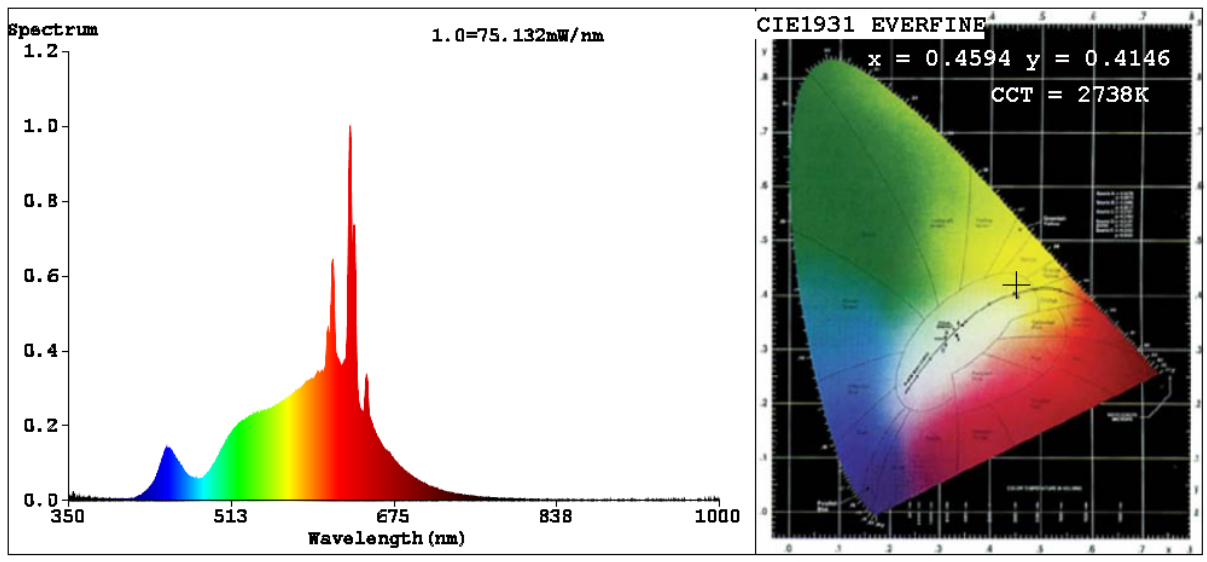
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	97	R9	62
Frequency (Hz)	60	R2	96	R10	89
CCT (K)	2738	R3	94	R11	96
Duv	0.0015	R4	97	R12	85
Chromaticity (x, y)	x=0.4594 y=0.4146	R5	96	R13	96
Chromaticity (u', v')	u'=0.2604 v'=0.5288	R6	97	R14	95
Color Rendering Index (CRI)	94.3	R7	94	R15	91
R9	62	R8	85	--	--
Rg	101				
Rf	92				
Rcs,h1%	-5				

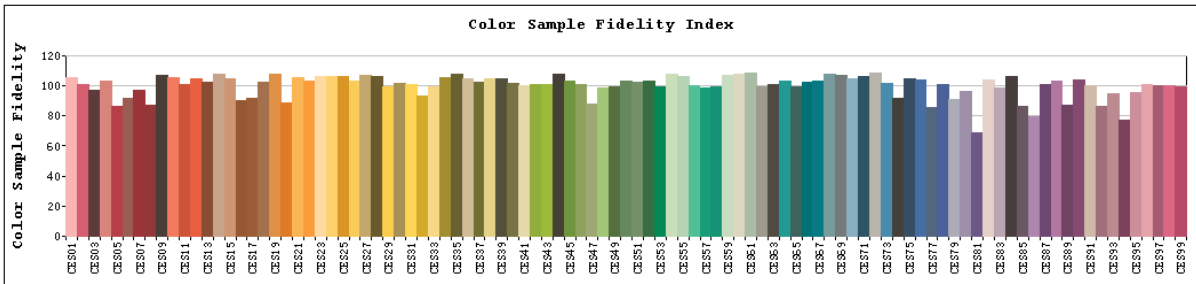
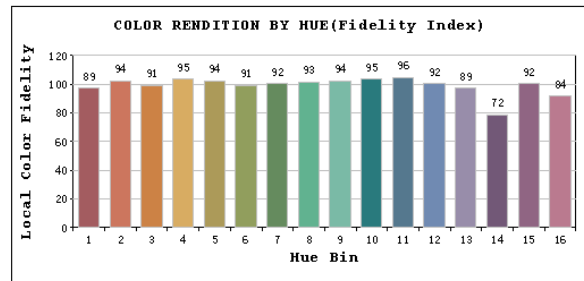
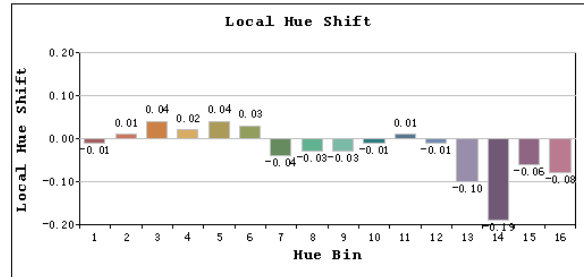
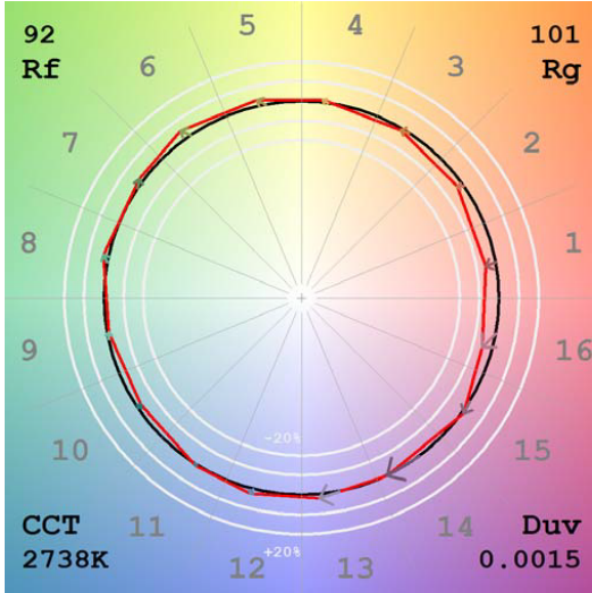
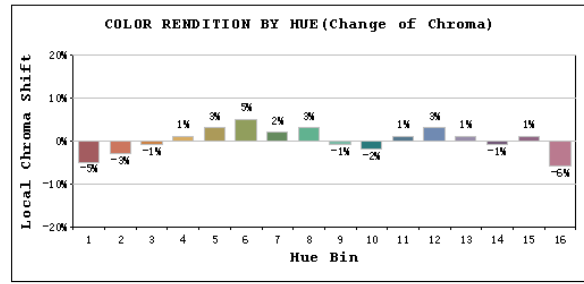
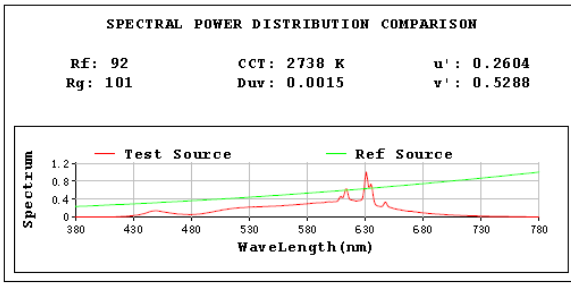
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1532.5
Luminous Efficacy (lm/W)	88.07
Beam Angle (°)	113.3
Center Beam Candle Power (cd)	510.1

Spectral Power Distribution & Chromaticity Diagram



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Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	395.6	25.8%
0-40	648.6	42.3%
0-60	1149.6	75.0%
60-90	348.4	22.7%
70-100	173.9	11.3%
90-120	17.7	1.2%
0-90	1497.9	97.7%
90-180	34.6	2.3%
0-180	1532.5	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	48.2	3.1%	90-100	11.5	0.8%
10-20	138.1	9.0%	100-110	3.0	0.2%
20-30	209.3	13.7%	110-120	3.2	0.2%
30-40	253.0	16.5%	120-130	3.8	0.2%
40-50	261.8	17.1%	130-140	4.1	0.3%
50-60	239.2	15.6%	140-150	3.7	0.2%
60-70	186.0	12.1%	150-160	2.8	0.2%
70-80	114.3	7.5%	160-170	1.8	0.1%
80-90	48.1	3.1%	170-180	0.6	0.0%

Photometric Data

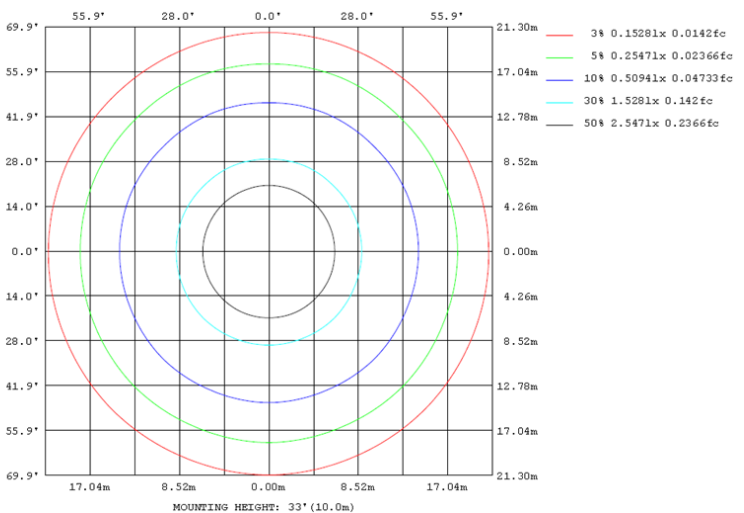
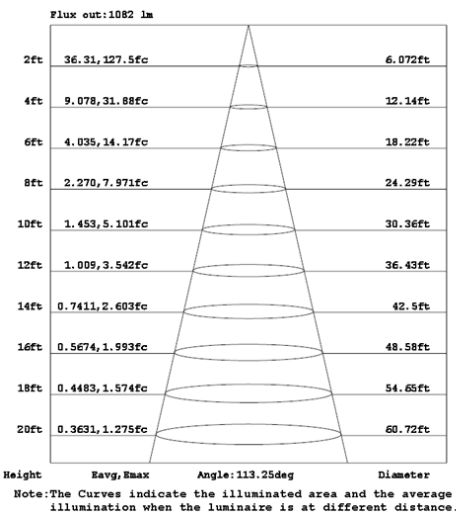
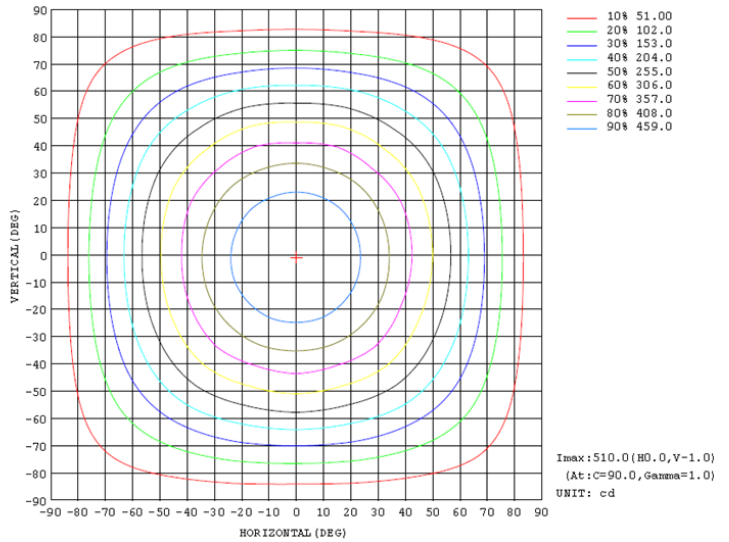
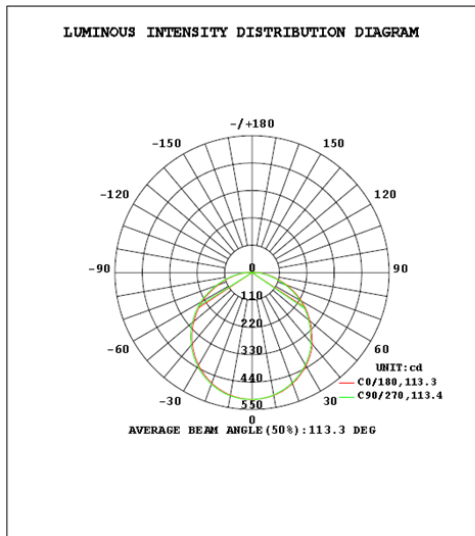


Table--1

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	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510			
5	507	508	508	508	508	508	508	508	508	507	508	506	506	506	507	507			
10	500	501	502	502	503	502	501	501	501	500	500	499	499	498	499	499			
15	488	490	491	492	491	491	492	490	490	488	488	487	487	486	487	487			
20	473	475	475	477	477	477	476	476	475	473	472	470	471	470	471	472			
25	452	455	456	458	458	458	457	456	455	453	453	450	451	449	451	452			
30	429	432	433	436	435	436	434	434	432	430	429	426	427	426	427	428			
35	403	406	407	409	409	410	408	407	406	403	402	400	400	399	401	401			
40	373	377	378	381	380	381	379	378	377	373	370	370	367	368	367	371			
45	340	338	345	342	348	342	347	339	338	340	333	337	331	335	332	338			
50	305	303	310	308	313	308	312	305	303	305	299	301	296	300	297	303			
55	268	267	273	272	277	272	275	269	267	268	262	264	260	263	260	266			
60	229	229	234	233	237	234	236	231	229	229	224	225	221	224	222	227			
65	186	189	192	194	197	195	195	191	189	187	184	181	181	180	182	182			
70	144	149	150	153	153	154	152	151	149	145	144	141	141	139	142	142			
75	105	109	111	114	114	115	113	112	110	106	105	102	102	101	103	104			
80	70.2	73.6	74.4	77.2	76.9	78.3	76.1	75.7	74.0	70.5	69.6	66.9	67.0	65.9	67.9	68.5			
85	41.3	43.8	44.2	46.4	46.1	47.3	45.6	45.5	44.2	41.6	40.9	38.7	39.1	38.1	39.7	40.1			
90	20.8	22.3	22.5	23.9	23.8	24.6	23.6	23.5	22.7	21.0	20.6	19.3	19.6	18.9	19.9	20.2			
95	8.91	9.52	9.59	10.4	10.3	10.8	10.3	10.2	9.74	8.95	8.89	8.25	8.37	8.08	8.54	8.65			
100	3.90	3.92	3.94	4.28	4.32	4.49	4.22	4.21	4.08	3.81	3.87	3.69	3.61	3.51	3.68	3.71			
105	2.71	2.45	2.41	2.47	2.61	2.73	2.61	2.48	2.39	2.47	2.65	2.64	2.43	2.35	2.39	2.54			
110	3.21	2.81	2.50	2.53	2.76	3.01	2.83	2.63	2.49	2.57	2.84	2.95	2.72	2.50	2.62	2.93			
115	3.80	3.36	2.90	2.85	3.25	3.55	3.44	3.01	2.84	3.11	3.51	3.51	3.14	2.89	3.10	3.55			
120	4.43	3.89	3.35	3.30	3.75	4.19	3.97	3.42	3.26	3.52	4.12	4.12	3.50	3.34	3.60	4.15			
125	5.08	4.36	3.84	3.74	4.18	4.72	4.50	3.92	3.73	4.00	4.70	4.66	3.96	3.76	4.08	4.77			
130	5.74	4.90	4.43	4.19	5.27	6.22	4.97	4.39	4.28	5.14	5.41	5.43	4.47	4.28	4.59	5.34			
135	6.48	5.31	4.94	4.63	5.26	5.69	5.46	4.75	4.65	4.92	5.87	5.49	4.82	4.66	4.96	6.43			
140	6.91	5.59	5.13	5.05	5.34	6.10	5.63	5.58	4.93	5.34	5.86	5.84	5.89	4.99	5.29	5.85			
145	6.47	7.48	5.53	5.57	6.71	7.34	5.71	5.40	5.22	6.61	6.28	6.16	5.54	5.38	5.57	5.96			
150	6.19	6.70	5.79	5.70	5.97	6.05	6.26	6.10	5.52	5.68	6.09	6.95	6.89	5.72	5.87	6.65			
155	7.35	6.18	6.04	5.98	6.02	7.24	5.88	5.88	5.81	5.87	5.83	6.00	5.91	6.06	6.15	6.27			
160	6.39	7.29	6.31	6.24	5.90	5.98	6.01	6.06	6.06	6.45	6.04	5.83	5.94	6.35	6.34	6.25			
165	6.49	6.54	7.84	6.34	5.79	6.09	6.19	6.22	6.27	6.36	6.24	5.97	5.88	6.18	6.42	6.38			
170	6.64	6.66	6.65	6.16	5.83	6.25	6.37	6.40	6.39	6.79	6.44	6.05	5.88	6.23	6.27	6.49			
175	6.76	6.76	6.58	5.83	5.90	6.39	6.48	6.42	6.24	6.54	6.52	6.19	5.98	6.03	6.19	6.49			
180	6.54	6.87	6.44	6.42	6.42	6.41	6.61	6.50	6.56	6.88	6.43	6.42	6.42	6.42	6.60	6.51			

2.1.2 Electrical, Photometric and Chromaticity Measurements

Test date	2025-09-17	Test Ambient:	25.1 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DISK34-8	3000K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202509090014	120.0	60	0.157	17.30	0.919

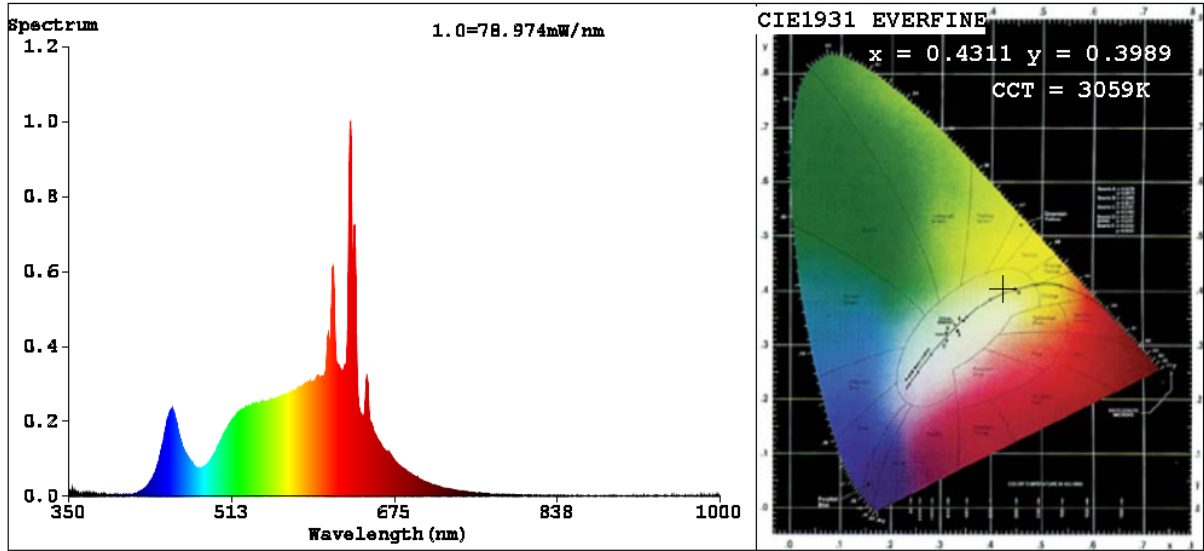
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	99	R9	75
Frequency (Hz)	60	R2	98	R10	92
CCT (K)	3059	R3	94	R11	93
Duv	-0.0012	R4	96	R12	83
Chromaticity (x, y)	x=0.4311 y=0.3989	R5	98	R13	99
Chromaticity (u', v')	u'=0.2490 v'=0.5185	R6	97	R14	95
Color Rendering Index (CRI)	95.8	R7	95	R15	96
R9	75	R8	90	--	--
Rg	103				
Rf	92				
Rcs,h1%	-4				

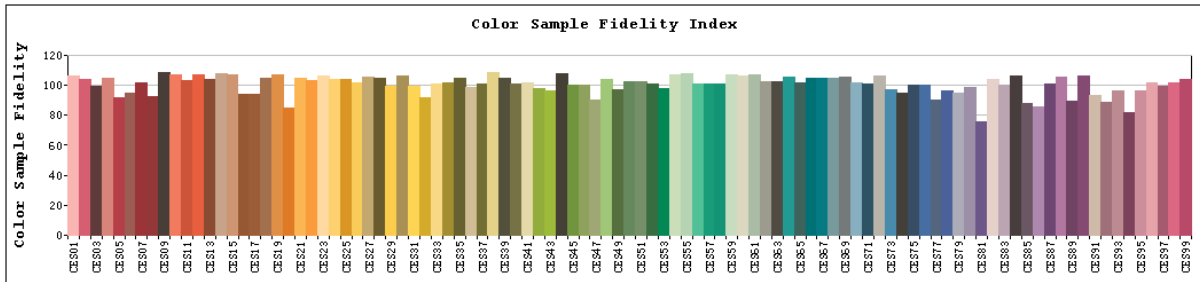
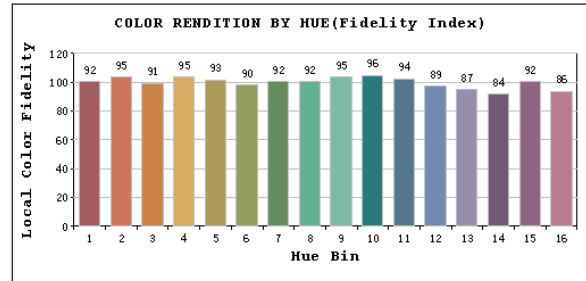
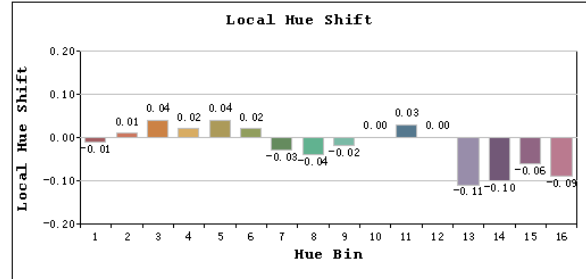
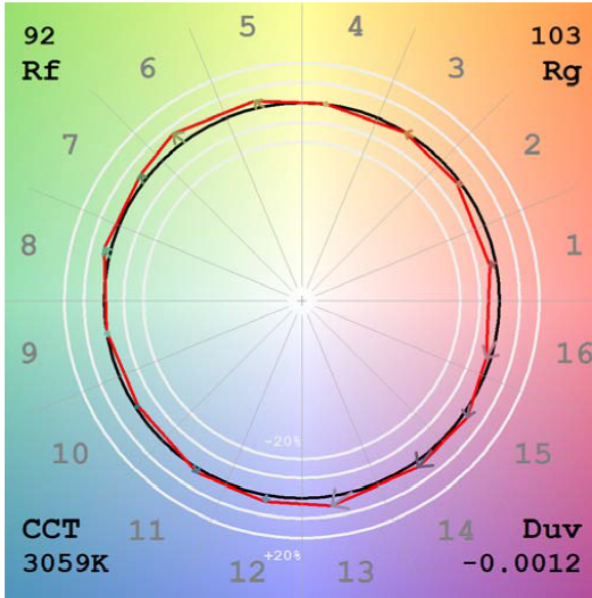
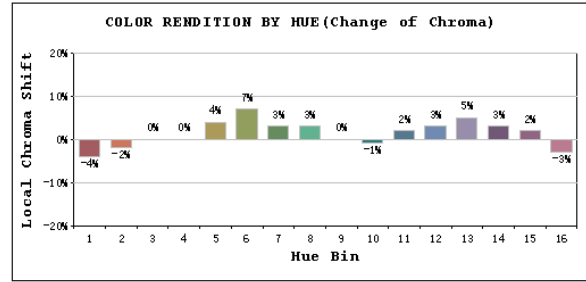
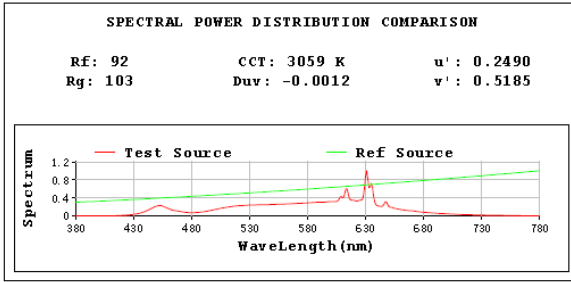
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1603.5
Luminous Efficacy (lm/W)	92.69

Spectral Power Distribution & Chromaticity Diagram



TM30



2.1.3 Electrical, Photometric and Chromaticity Measurements

Test date	2025-09-17	Test Ambient:	25.1 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DISK34-8	3500K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202509090014	120.0	60	0.155	17.20	0.923

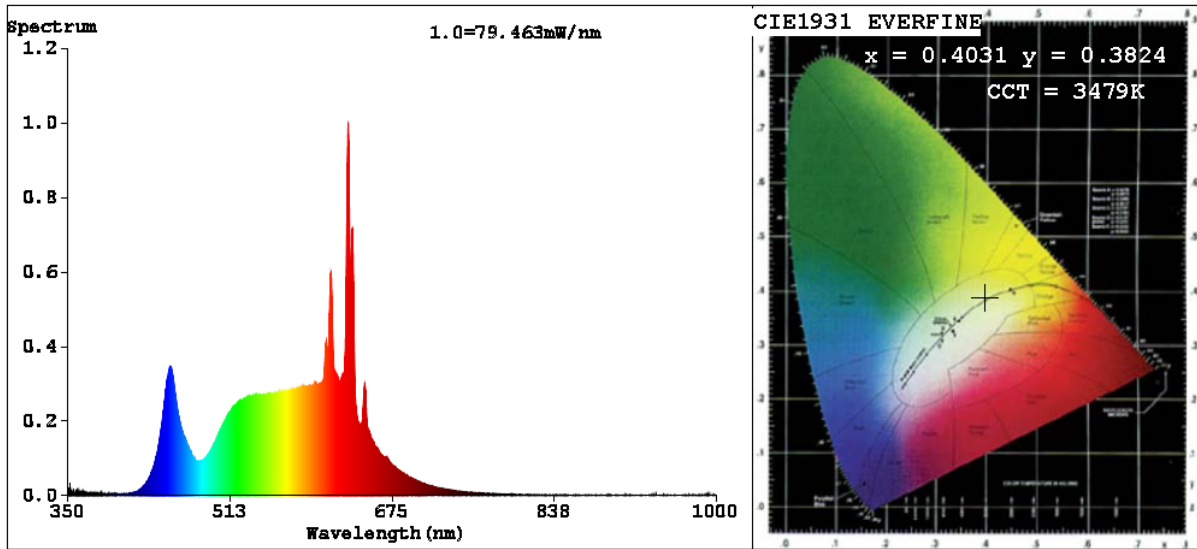
Chromaticity Measurement - Sphere-Spectroradiometer Method:

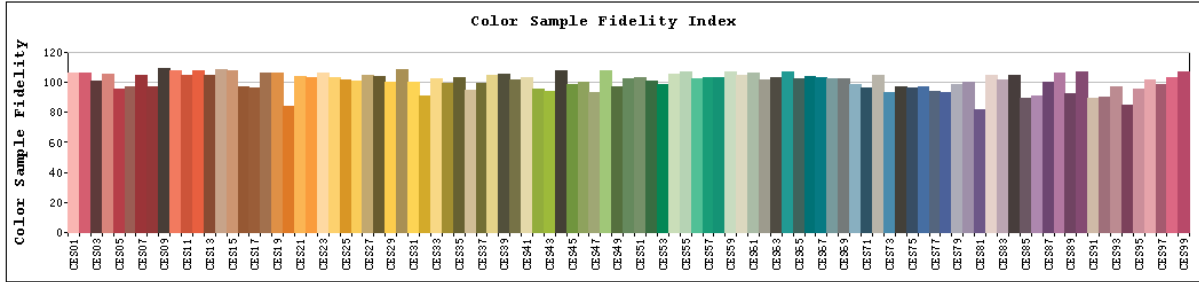
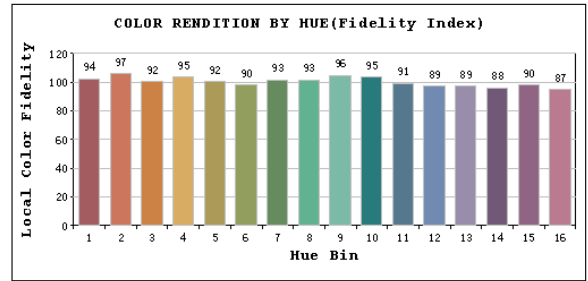
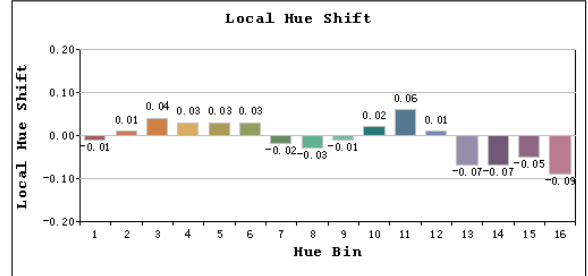
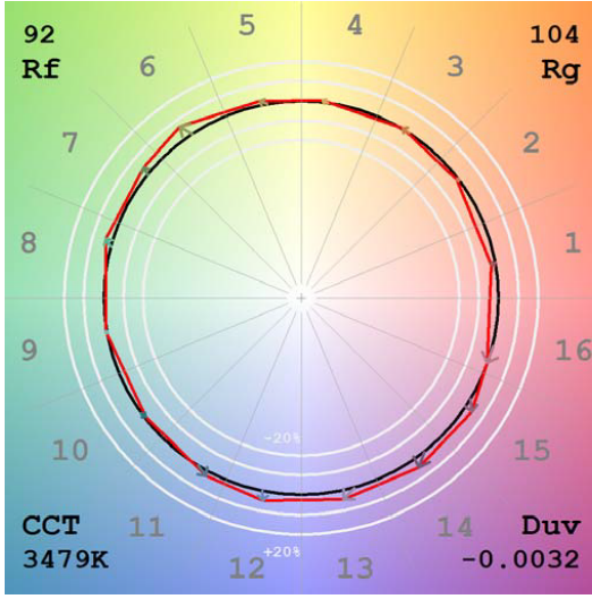
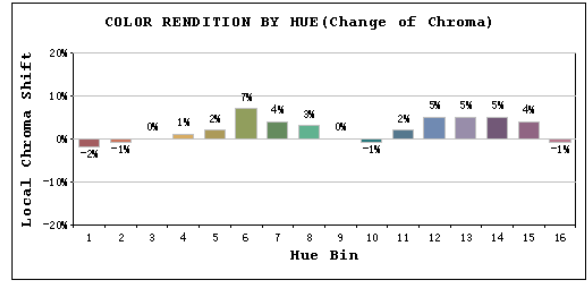
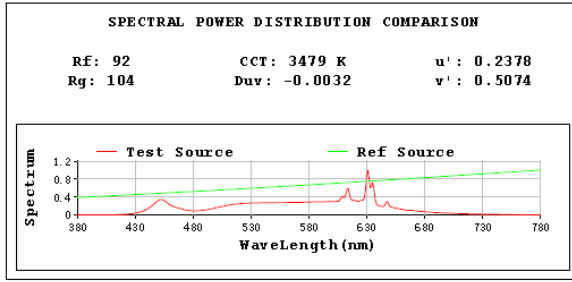
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	98	R9	86
Frequency (Hz)	60	R2	98	R10	93
CCT (K)	3479	R3	92	R11	92
Duv	-0.0032	R4	95	R12	79
Chromaticity (x, y)	x=0.4031 y=0.3824	R5	100	R13	99
Chromaticity (u', v')	u'=0.2378 v'=0.5074	R6	96	R14	94
Color Rendering Index (CRI)	96.3	R7	96	R15	99
R9	86	R8	95	--	--
Rg	104				
Rf	92				
Rcs,h1%	-2				

Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1656.2
Luminous Efficacy (lm/W)	96.29

Spectral Power Distribution & Chromaticity Diagram





2.1.4 Electrical, Photometric and Chromaticity Measurements

Test date	2025-09-17	Test Ambient:	25.1 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DISK34-8	4000K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202509090014	120.0	60	0.156	17.20	0.922

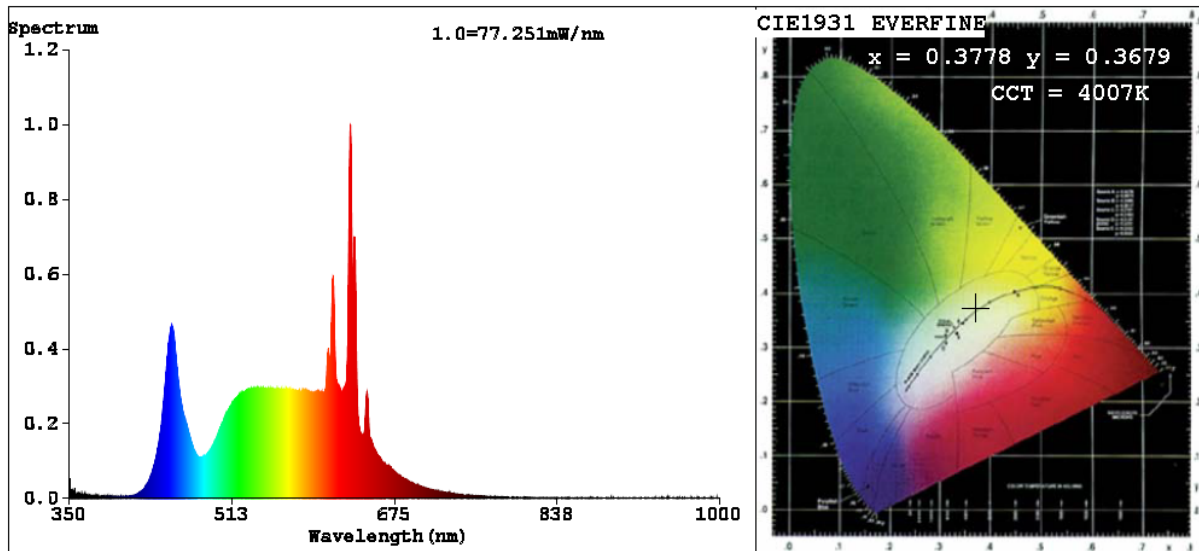
Chromaticity Measurement - Sphere-Spectroradiometer Method:

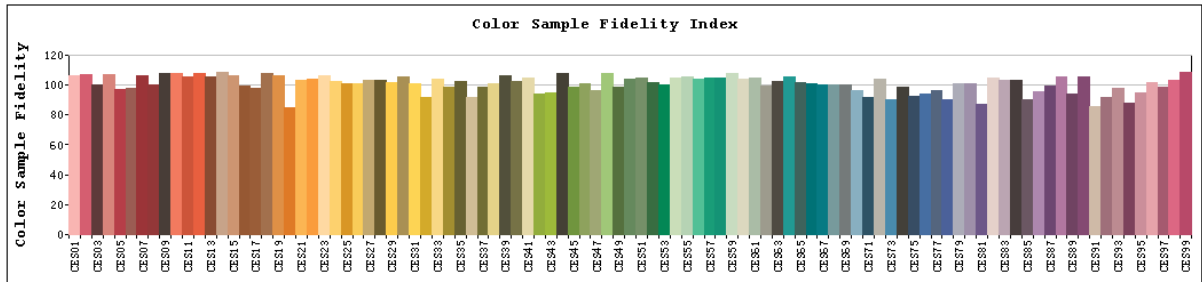
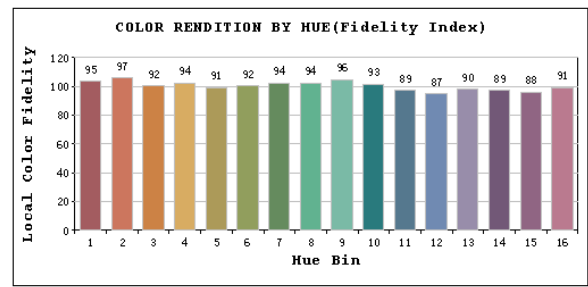
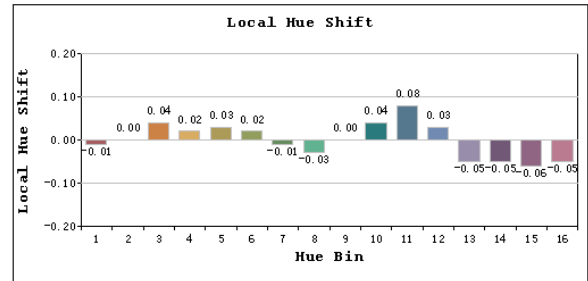
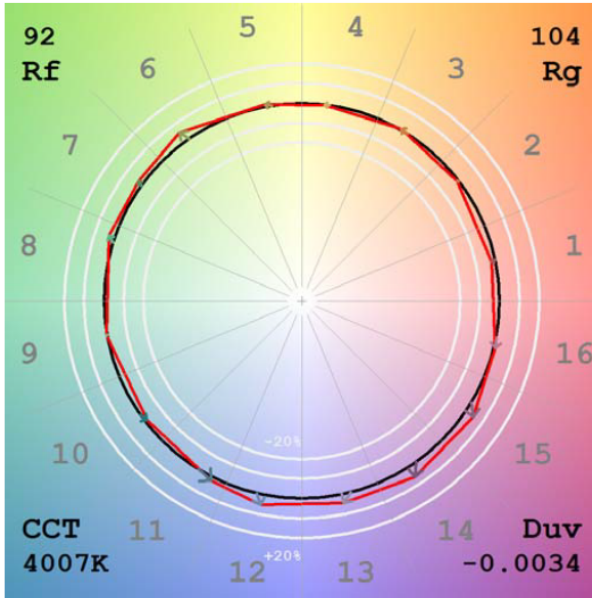
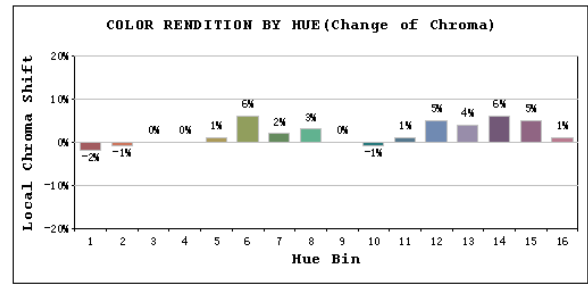
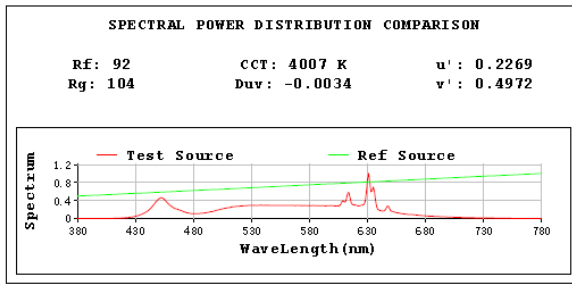
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	98	R9	93
Frequency (Hz)	60	R2	98	R10	91
CCT (K)	4007	R3	91	R11	92
Duv	-0.0034	R4	95	R12	74
Chromaticity (x, y)	x=0.3778 y=0.3679	R5	99	R13	99
Chromaticity (u', v')	u'=0.2269 v'=0.4972	R6	94	R14	93
Color Rendering Index (CRI)	96.3	R7	97	R15	98
R9	93	R8	99	--	--
Rg	104				
Rf	92				
Rcs,h1%	-2				

Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1674.6
Luminous Efficacy (lm/W)	97.36

Spectral Power Distribution & Chromaticity Diagram





2.1.5 Electrical, Photometric and Chromaticity Measurements

Test date	2025-09-17	Test Ambient:	25.1 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DISK34-8	5000K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202509090014	120.0	60	0.158	17.40	0.916

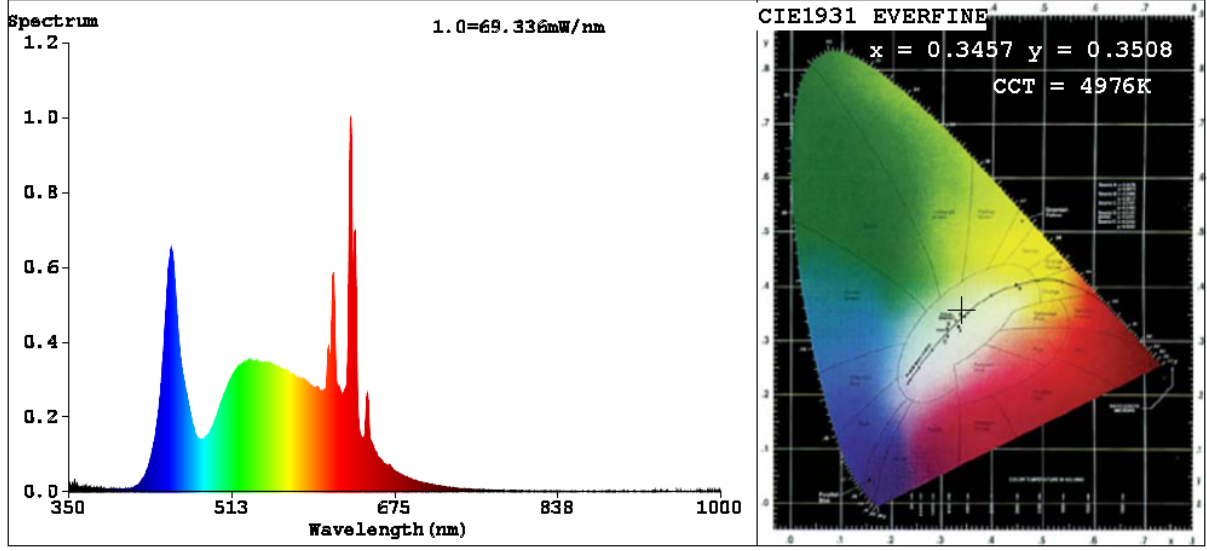
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	99	R9	92
Frequency (Hz)	60	R2	95	R10	85
CCT (K)	4976	R3	88	R11	93
Duv	-0.0006	R4	96	R12	65
Chromaticity (x, y)	x=0.3457 y=0.3508	R5	96	R13	98
Chromaticity (u', v')	u'=0.2121 v'=0.4844	R6	91	R14	92
Color Rendering Index (CRI)	95.1	R7	97	R15	98
R9	92	R8	99	--	--
Rg	104				
Rf	91				
Rcs,h1%	-2				

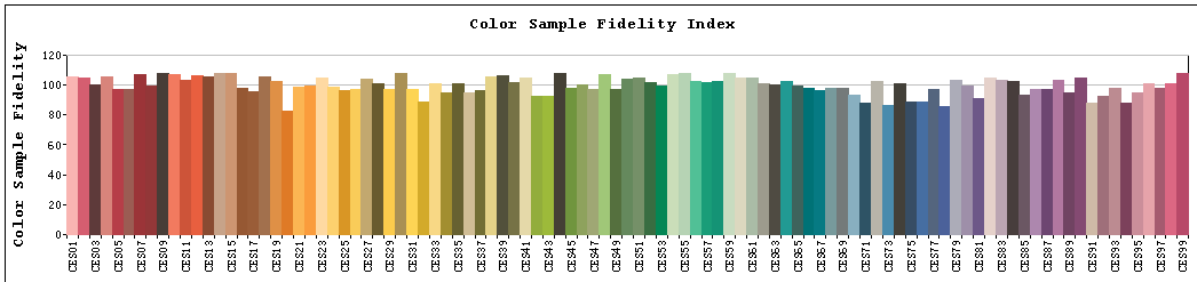
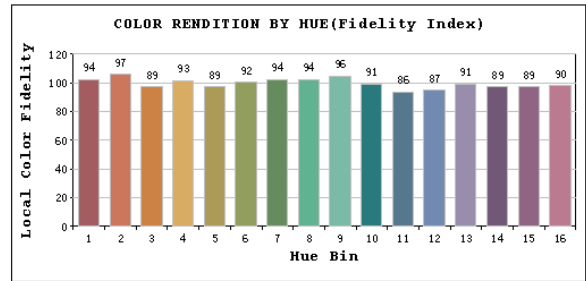
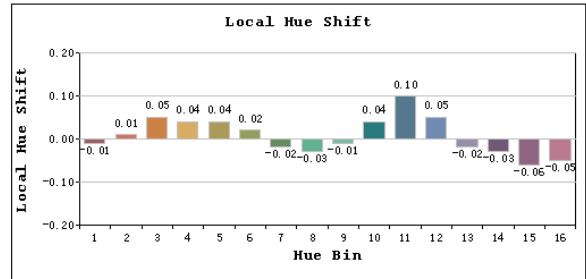
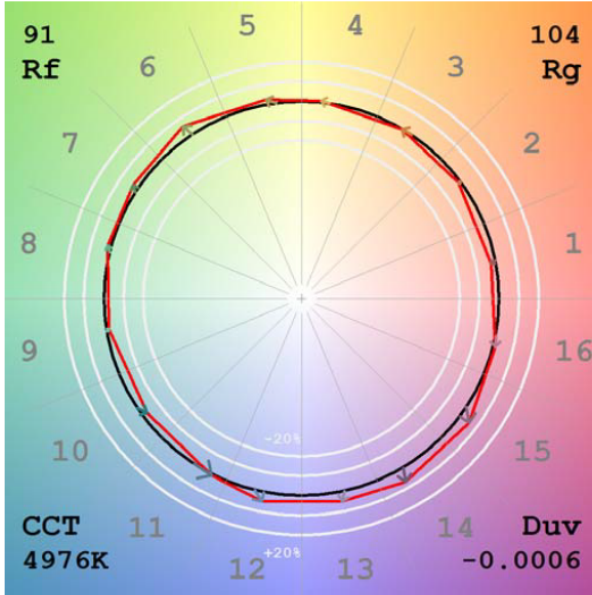
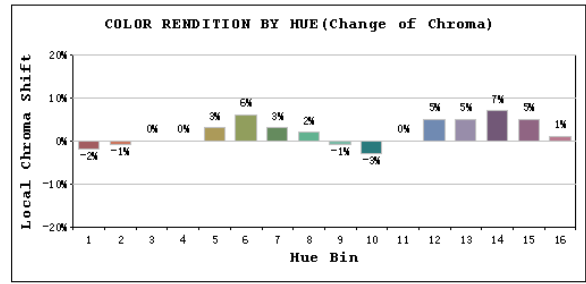
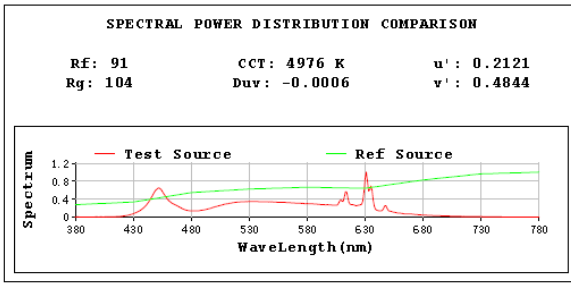
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1642.8
Luminous Efficacy (lm/W)	94.41

Spectral Power Distribution & Chromaticity Diagram

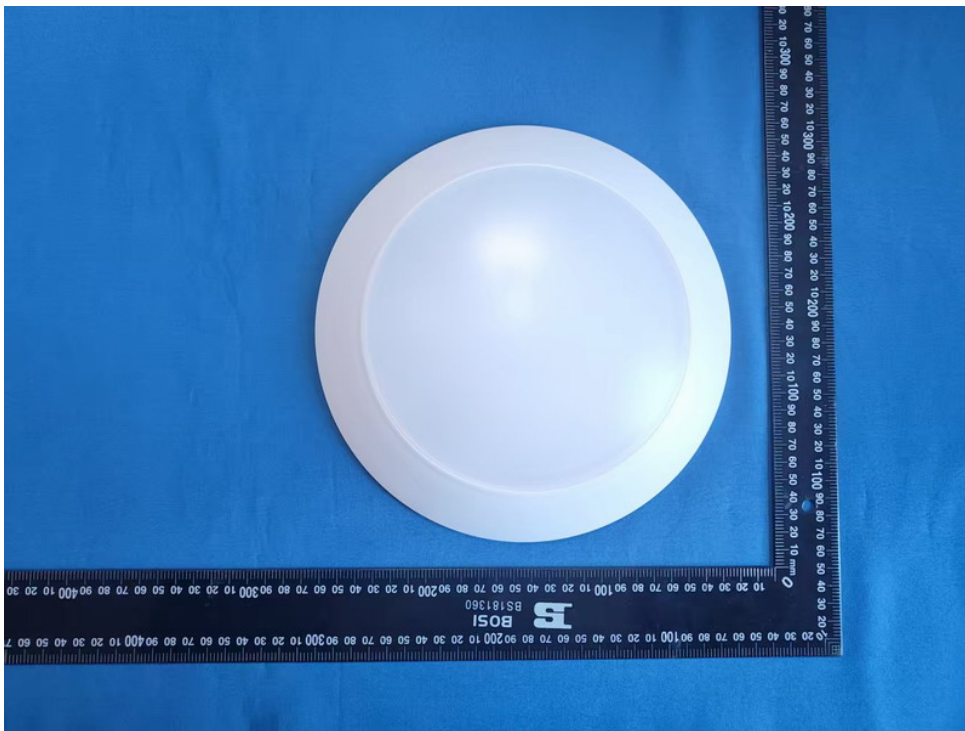
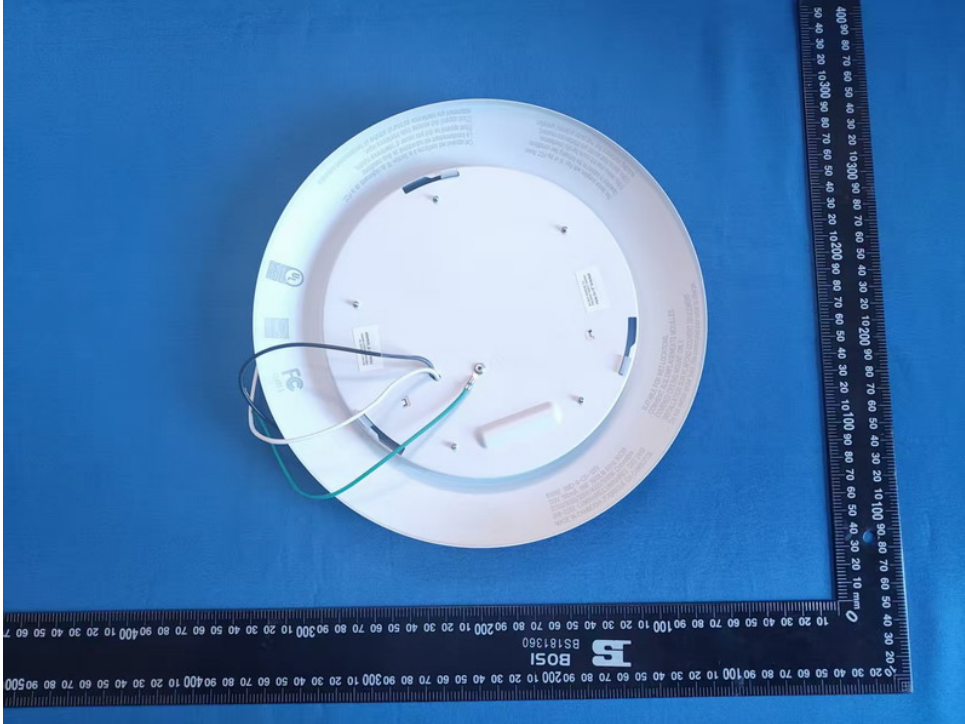


TM30



Sample No.	Wattage and CCT setting	Test Voltage(V)	Flux(lm)	P(W)	Luminous Efficacy lm/W
DISK34-8	2700K setting	120	1532.5	17.40	88.07
	3000K setting	120	1603.5	17.30	92.69
	3500K setting	120	1656.2	17.20	96.29
	4000K setting	120	1674.6	17.20	97.36
	5000K setting	120	1642.8	17.40	94.41

3. Product Photo



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