TEST REPORT

For

RAB Lighting INC

408 W 14th St New York, NY 10014 United States

Model Number:	T10303(T8-12-48GC-8CCT-HYB)	
Report Type:	Electrical, Photometric and ISTMT tests according to the following standards and show the compliance to DLC Program SSL Technical Requirements V5.1	
Standards:	ANSI/IES LM-79-19: Approved method :Optical and Electrical Measurements of Solid-State Lighting Products ANSI C82.77-10-2014: Harmonic Emission Limits – Related Power Quality Requirements for Lighting *ANSI/UL 1993-2021: Self-Ballasted Lamps and Lamp Adapters(This method is not in NVLAP accreditation scope) *CIE 190:2010 Calculation and presentation of unified glare rating tables for indoor lighting luminaires(This method is not in NVLAP accreditation scope) *IES TM-30-18: IES Method for Evaluating Light Source Color Rendition(This method is not in NVLAP accreditation scope)	
Reviewed By:	Ezer Pan	Ezer Pan
Report Number:	2502Q44318E-EE	
Sample Size:	Two test samples were in good condition and received on 2024-12-28, and used for testing.	
Test Date:	2024-12-31 to 2025-01-07	
Report Date:	2025-02-24	
Approved by:	Blake Zhang / EE Engineer	Blake zhang
Prepared By:	Bay Area Compliance Laboratories Corp. (Shenzhen) 5F (B-West), 6F, 7F, the 3rd Phase of Wan Li Industrial Building D Shihua Road, Futian Free Trade Zone Shenzhen 518038 China. Tel: +86-755-33320018 Fax: +86-755-33320008	
Test Location 1:	Test facility was located at No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.	
Test Location 2:	Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.	

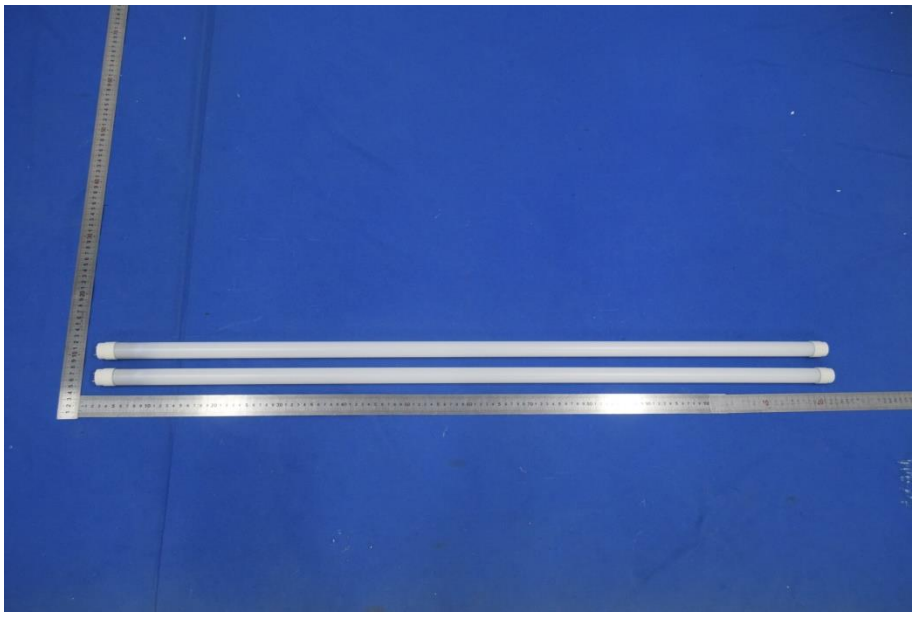
1. Product Description and Rating#

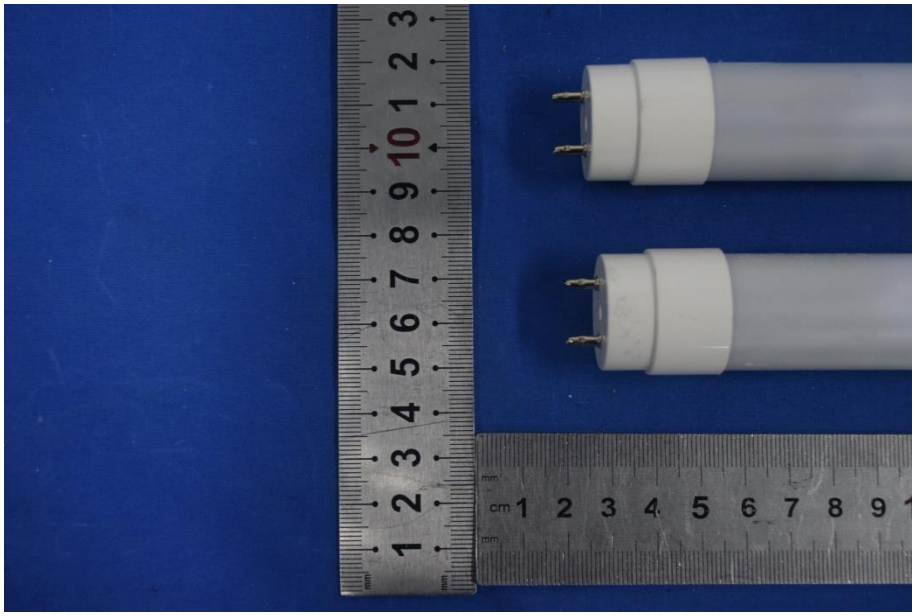
Test Model	Primary Use	Rated Voltage	Power(W)	Light Output(lm)	Efficacy (lm/W)	CCT(K)	LED Model	Test Item
T10303(T8-12-48GC-8CCT-HYB)	4-FT T8 Linear Replacement Lamps-Dual Mode Internal Driver (UL Type A or B)	AC 120-277V 60Hz	12W	1650lm	137.5lm/W	3000K/3500K/4000K/5000K/6500K	L128-xxxxRA35xxxxx	All

Note:

1、 The applicant RAB Lighting INC declare that their products with model T10303(T8-12-48GC-8CCT-HYB) are the same to the products in report# 2402A112240E-EE and is authorized by original applicant to use their test data.
2、 All the data in previous report (2402A112240E-EE) is shared in this report.

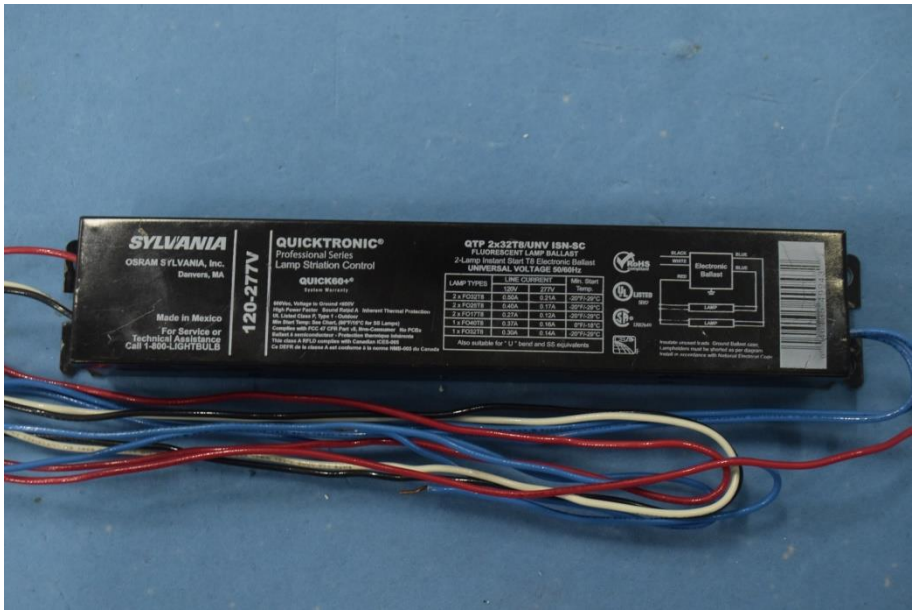
2. Product Photo (Model: T10303(T8-12-48GC-8CCT-HYB))





3. Housing Photo (Model: Lithonia 2GT8 lensed 2X4 Recessed Troffer)

4. Ballast Photo (Model: QTP 2x32T8/UNV ISN-SC)



5. Test Result

Test Mode：Type A

Test Model:T10303(T8-12-48GC-8CCT-HYB)

Test CCT: 3000K (Input Control Signal Applied: 0%)

Test Condition: Method: Integrating Sphere System; Orientation: Downward; Test Voltage: 120.1 V 60Hz; Housing: None.

Ballast: QTP 2x32T8/UNV ISN-SC

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
Light Output(lm) △△	1650.5	≥1600	≥1440	Pass
Power(W) △△	13.66	None.	None.	N/A
Total Efficacy(lm/W) △△	120.83	≥120	≥116.4	Pass
CCT(K) △△	3079	2870~3220	No tolerances	Pass
Duv△△	0.00179	-0.0059~0.0061	No tolerances	Pass
IES R_f△△	84	70	69	Pass
IES R_g△△	96	89	88	Pass
IES Rcs,h1△△	-11%	-12%~23%	-13%~22%	Pass
R_a△△	82.1	≥80	≥79	Pass
R9△△	5	≥0	≥-1	Pass

Test Condition: Method: Goniophotometer; Orientation: Downward; Test Voltage: 120.1V 60Hz; Housing: None.

Ballast: QTP 2x32T8/UNV ISN-SC

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
Light Output(lm) △	1653.45	≥1600	≥1440	Pass
Power(W) △	13.67	None.	None.	N/A
Total Efficacy(lm/W) △	120.95	≥120	≥116.4	Pass
Beam Angle△	197.4	≥140	≥135	Pass
Power Factor△	0.9985	≥0.9	≥0.87	Pass
THDi△	19.91%	≤20%	≤25%	Pass

Test Condition: Test Voltage: 120.1V 60Hz; Housing: Lithonia 2GT8 lensed 2X4 Recessed Troffer. Ballast: QTP 2x32T8/UNV ISN-SC

Two tubes with ballast were placed in a reference housing during testing.

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
$TMP_{LED\#1}$(°C) △△	44.8	≤105	With tolerance of ⩽ 1.1°C or 0.4%, whichever is greater due to thermocouple tolerance	Pass
$TMP_{LED\#2}$(°C) △△	44.2	≤105	With tolerance of ⩽ 1.1°C or 0.4%, whichever is greater due to thermocouple tolerance	Pass
Drive Current/Individual LED source(mA) △△	37	≤150	With +5% Tolerence	Pass
L_{70} Lumen Maintenance Life (Hours) △△	＞102000	≥50000	None.	Pass
Color Maintenance△△	0.0011	≤0.004	≤0.0044	Pass

Test Condition: Method: Integrating THDi、PF Test ; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor△△	0.9981	≥0.9	≥0.87	Pass
120	THDi△△	22.18%	≤20%	≤25%	Pass[i]
277	Power Factor△△	0.9286	≥0.9	≥0.87	Pass
277	THDi△△	19.81%	≤20%	≤25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V5.1.
3. The conclusion is only for information. When determining the compliance of the result, tolerances and/or allowances may be applied to the measured value.

i. +5% tolerance was used to meet the DLC requirements

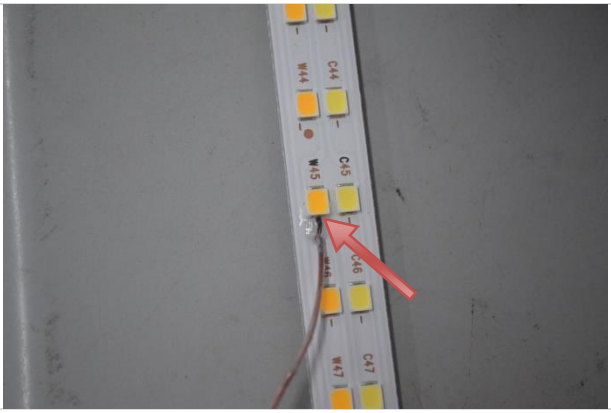
△ Test facility was located at No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.

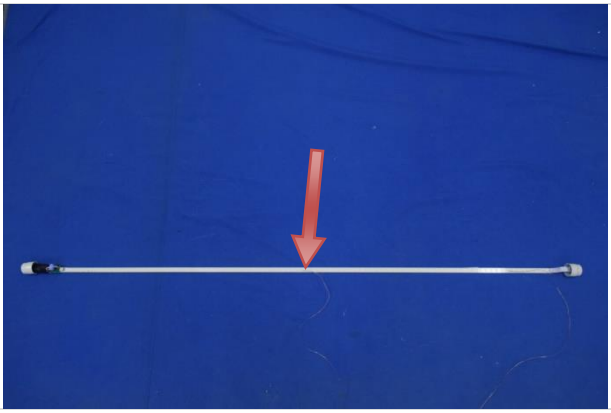
△△ Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.

Test Model:T10303(T8-12-48GC-8CCT-HYB)

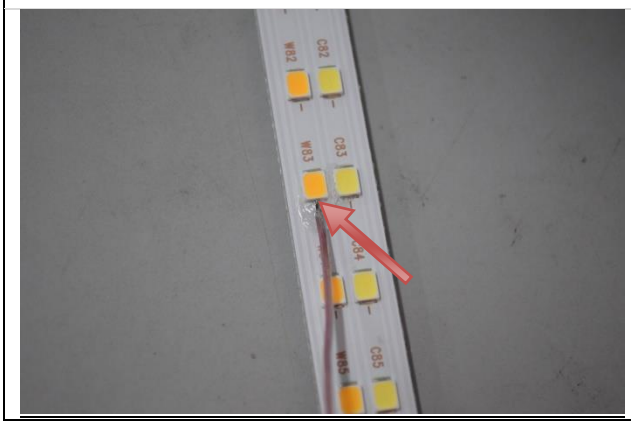
Test CCT: 3000K

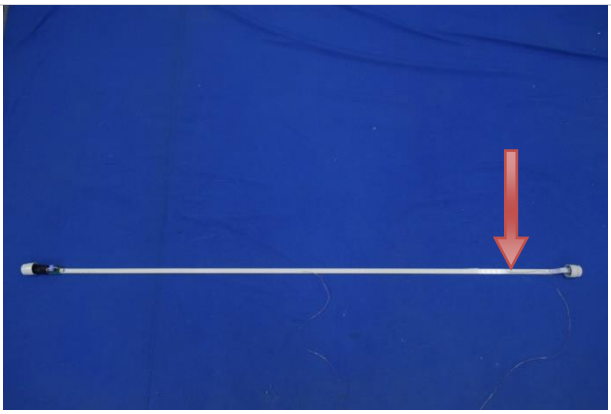
Temperature measurement point on $TMP_{LED\#1}$





Temperature measurement point on $TMP_{LED\#2}$





[Integrating Sphere System]

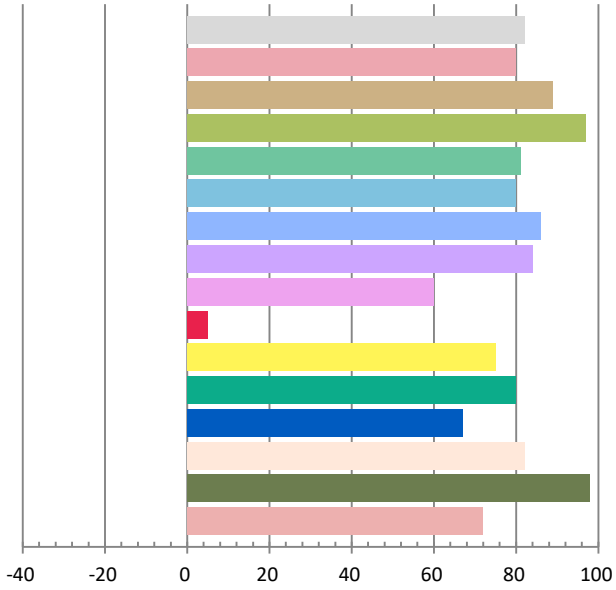
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.1	60	0.114	13.66	0.9981	1650.5	120.83

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
4.9243	3079	0.00179	0.4339	0.4075	0.2472	0.5223

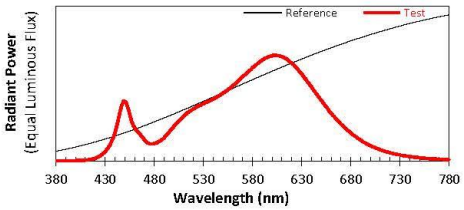
Color Rendering Index

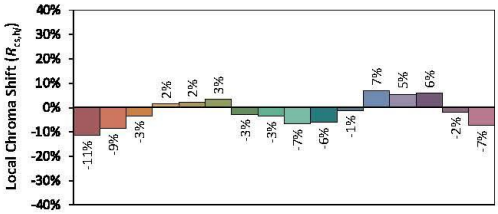
Ra			
82.1			
R1	R2	R3	R4
80	89	97	81
R5	R6	R7	R8
80	86	84	60
R9	R10	R11	R12
5	75	80	67
R13	R14	R15	
82	98	72	

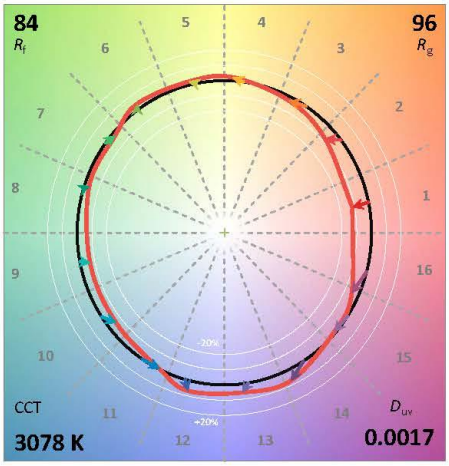


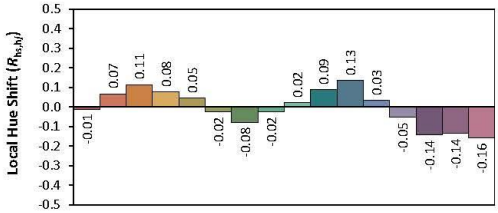
ANSI/IES TM-30-18 Color Rendition Report

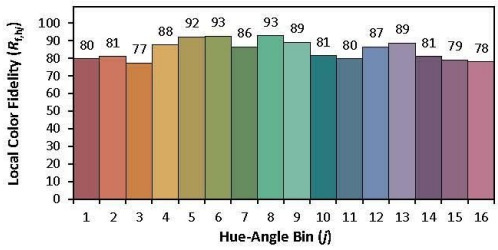
Source:	User SPD	**Manufacturer:**	RAB Lighting INC
Date:	2025/1/2	**Model:**	T10303(T8-12-48GC-8CCT-HYB)

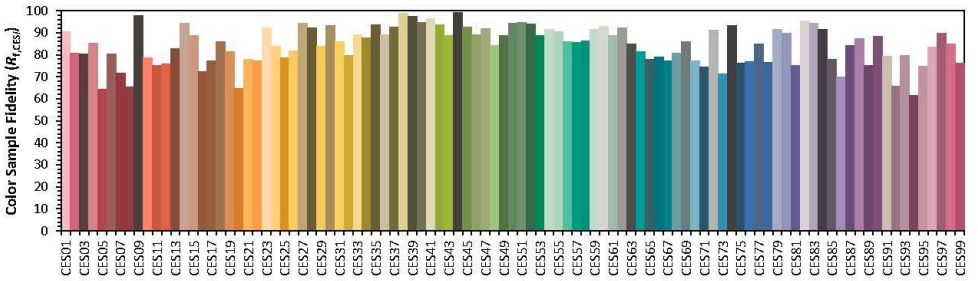












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

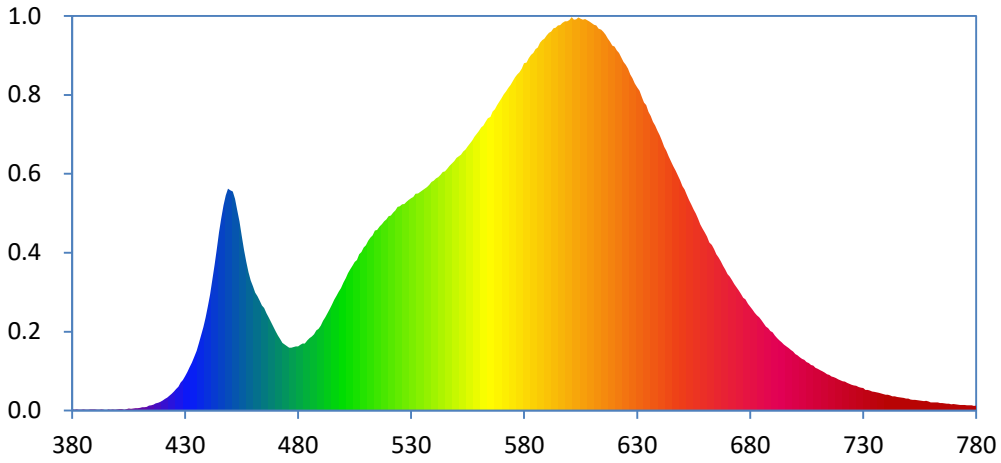
x	0.4339
y	0.4074
u'	0.2472
v'	0.5222

CIE 13.3-1995 (CRI)

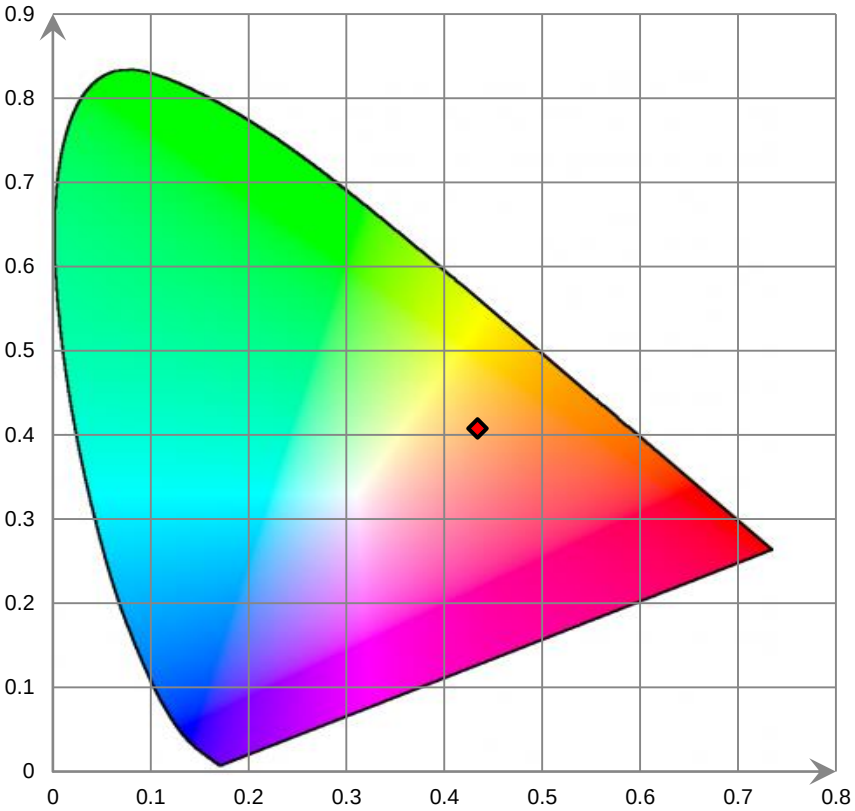
R_a	82
R_9	5

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

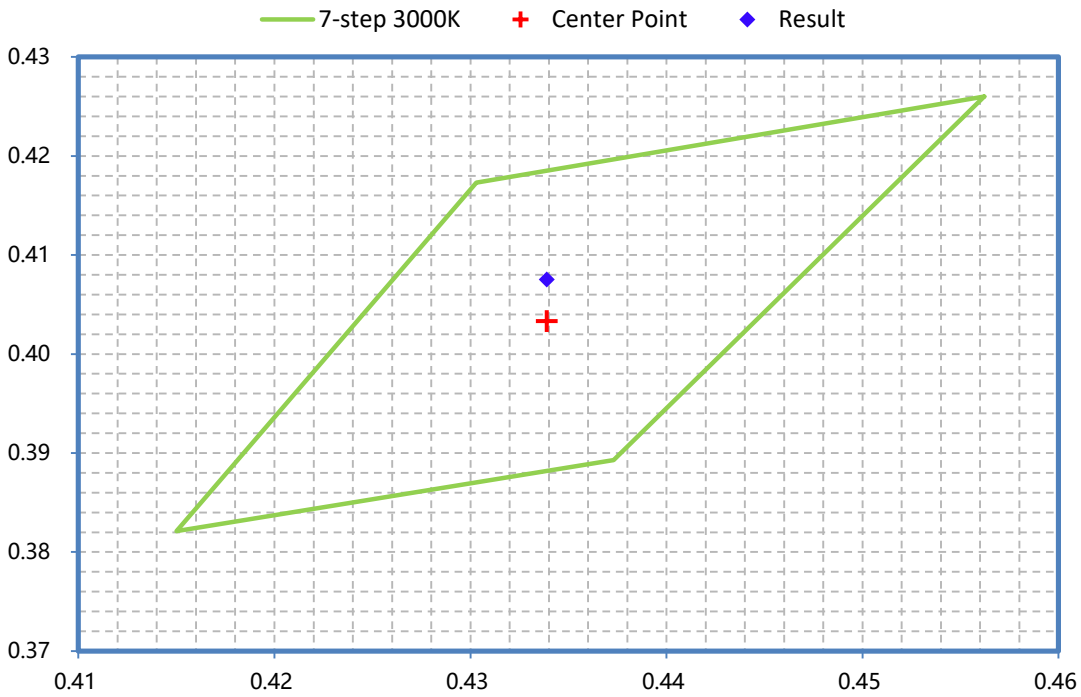
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



[Goniophotometer System]

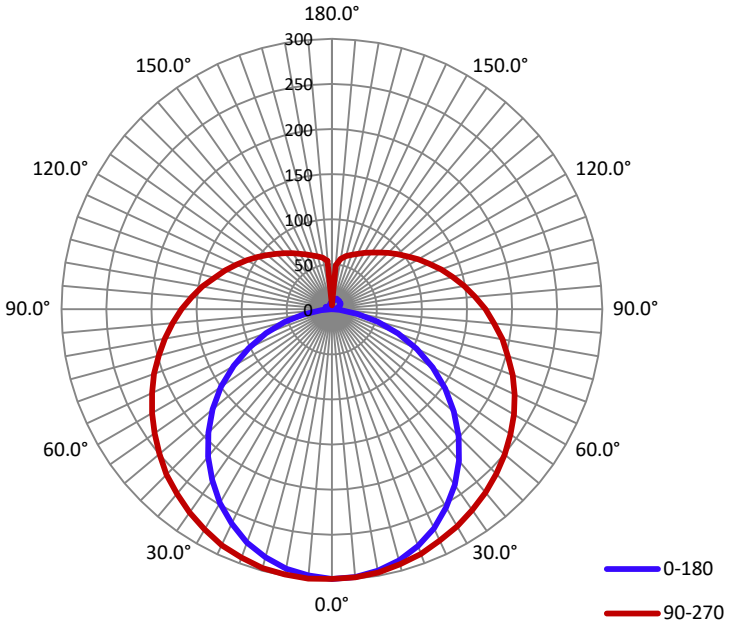
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.1	60	0.114	13.67	0.9985

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I_{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
1653.45	120.95	301.1	1.24	1.42

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I_{max}):	110.9	152.4	197.4	151.6	153.1
Field Angle (10% I_{max}):	160.1	350.1	353.9	350.3	303.6

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0°	299	299	299	299	299	299	299	299
1°	299	299	300	299	299	300	298	300
2°	299	299	300	299	299	300	298	299
3°	298	299	300	299	299	300	298	299
4°	299	299	299	298	298	298	296	298
5°	298	299	299	299	299	298	297	297
6°	298	298	298	298	298	296	296	297
7°	297	297	298	298	298	298	296	296
8°	296	297	298	297	297	297	294	295
9°	295	296	299	297	297	295	294	294
10°	294	295	297	296	296	295	293	292
11°	294	295	296	296	295	294	292	293
12°	293	294	295	295	295	293	292	292
13°	291	292	294	294	294	292	290	289
14°	289	290	293	293	293	292	288	287
15°	288	290	292	293	293	291	287	286
16°	287	288	291	292	292	289	286	284
17°	285	287	289	291	291	288	285	283
18°	283	285	288	290	290	288	283	280
19°	281	283	288	290	289	286	281	279
20°	279	281	286	288	289	285	280	276
21°	277	279	284	287	288	283	278	274
22°	275	278	283	286	286	281	276	272
23°	274	276	281	285	286	281	275	270
24°	270	274	278	284	284	280	272	267
25°	268	272	277	283	283	279	271	266
26°	266	269	276	281	282	277	269	262
27°	263	266	275	280	281	276	268	260
28°	260	264	272	279	281	274	265	257
29°	257	261	271	278	279	273	263	256
30°	253	259	268	276	278	272	261	253
31°	251	256	267	274	277	270	260	249
32°	248	254	264	273	276	270	257	247
33°	245	250	262	272	274	267	254	243
34°	241	248	260	271	273	266	252	240
35°	238	245	257	269	272	265	251	237
36°	235	242	255	268	270	263	248	234
37°	231	238	254	266	269	261	246	230
38°	227	235	251	265	268	260	243	228
39°	223	232	250	264	267	258	241	224
40°	220	229	247	261	265	256	239	221
41°	215	225	244	260	264	254	236	218
42°	212	222	242	258	262	253	234	214
43°	207	218	239	256	261	251	231	210
44°	203	215	237	255	259	249	229	207
45°	199	212	235	253	258	248	227	204
46°	195	208	233	251	257	245	224	200
47°	191	204	230	250	255	244	222	197
48°	186	201	228	249	253	242	219	193

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
49°	181	197	225	247	252	240	217	190
50°	177	193	222	245	250	237	214	186
51°	172	189	220	243	249	236	211	182
52°	168	186	217	241	247	234	209	179
53°	163	182	215	239	245	232	206	175
54°	158	178	212	237	243	230	203	171
55°	153	174	209	235	242	228	201	167
56°	149	170	207	233	241	226	199	164
57°	144	166	204	231	238	225	196	160
58°	139	162	202	230	237	223	193	156
59°	134	159	200	228	234	221	191	152
60°	129	155	197	225	233	218	188	149
61°	124	151	194	224	231	217	186	145
62°	119	147	191	221	229	215	183	141
63°	114	143	189	219	227	212	181	136
64°	109	139	186	218	225	210	178	133
65°	104	135	183	215	224	208	175	129
66°	99	131	181	213	222	206	173	126
67°	94	127	178	211	219	204	170	122
68°	88	123	176	209	218	202	168	119
69°	83	119	174	207	215	199	165	115
70°	78	116	171	205	214	197	163	112
71°	73	112	168	203	211	195	161	108
72°	68	109	166	200	209	193	159	106
73°	63	105	163	198	207	191	156	102
74°	58	102	161	196	205	189	153	99
75°	53	99	158	193	202	187	151	96
76°	48	95	156	192	201	185	149	92
77°	43	92	154	189	198	182	146	90
78°	38	89	151	188	196	181	144	87
79°	33	86	149	185	194	178	142	84
80°	29	83	146	183	192	176	139	81
81°	25	81	144	181	190	173	137	78
82°	20	78	142	178	188	171	135	76
83°	16	76	140	176	186	169	133	74
84°	12	73	137	174	183	167	131	71
85°	9	71	135	172	181	165	129	69
86°	6	69	133	170	179	163	127	67
87°	4	67	131	167	177	161	124	65
88°	1	65	129	165	175	159	122	63
89°	0	63	126	163	172	156	121	61
90°	0	61	125	161	170	154	119	60
91°	0	59	123	158	168	153	116	58
92°	0	58	121	157	166	150	115	57
93°	0	57	119	154	164	148	113	55
94°	1	55	117	152	161	146	111	54
95°	1	54	114	150	159	144	109	53
96°	1	53	113	148	158	142	108	52
97°	2	52	111	146	155	140	106	51

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
98°	2	51	110	144	153	137	104	50
99°	2	50	108	142	151	135	102	49
100°	3	49	106	139	149	133	101	48
101°	4	49	104	137	147	131	99	47
102°	4	48	103	135	145	130	98	47
103°	5	48	101	133	143	128	96	46
104°	5	47	100	131	141	126	95	46
105°	6	47	98	129	139	124	93	45
106°	7	46	97	127	137	122	92	45
107°	7	46	95	125	135	120	90	44
108°	7	46	94	124	132	119	89	44
109°	7	46	92	121	131	117	88	44
110°	8	45	91	120	129	115	87	44
111°	8	45	90	118	127	114	86	43
112°	9	45	89	116	125	112	84	43
113°	9	45	87	115	123	110	83	43
114°	10	45	86	113	121	109	82	43
115°	10	45	85	111	119	107	81	43
116°	11	45	84	109	118	105	80	43
117°	11	45	83	108	116	104	79	43
118°	11	46	82	106	114	103	78	44
119°	11	46	81	105	112	101	77	44
120°	11	46	80	103	111	100	76	44
121°	11	46	79	101	109	98	76	44
122°	12	46	78	100	108	97	75	44
123°	12	46	77	99	106	95	74	44
124°	12	47	76	97	104	94	73	45
125°	12	47	75	96	103	92	72	45
126°	12	47	75	94	101	91	72	45
127°	12	47	74	93	100	90	71	45
128°	11	48	73	92	98	89	70	46
129°	11	48	72	90	97	88	70	46
130°	11	48	72	89	95	86	69	46
131°	12	48	71	88	94	85	68	47
132°	12	49	70	87	92	84	68	47
133°	12	49	70	85	91	83	67	47
134°	12	49	69	84	90	82	67	47
135°	12	50	69	83	88	81	66	48
136°	12	50	68	82	87	80	66	48
137°	12	50	68	81	86	79	65	48
138°	12	51	67	80	85	78	65	49
139°	12	51	67	79	84	77	64	49
140°	12	51	66	78	82	76	64	49
141°	13	51	66	77	81	75	64	50
142°	13	52	65	76	80	74	63	50
143°	13	52	65	75	79	73	63	50
144°	13	52	64	74	78	73	63	51
145°	12	53	64	73	77	72	62	51
146°	12	53	64	72	76	71	62	51

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
147°	12	53	64	72	75	70	61	52
148°	12	53	63	71	74	69	61	52
149°	13	53	63	70	73	69	61	52
150°	13	54	62	69	72	68	61	52
151°	13	54	62	69	71	67	60	53
152°	13	54	62	68	71	67	60	53
153°	13	53	61	67	70	66	60	53
154°	13	53	61	67	69	65	60	53
155°	13	53	61	66	68	65	60	53
156°	13	53	61	65	67	64	59	53
157°	13	52	60	64	66	64	59	53
158°	13	51	60	64	66	63	59	52
159°	13	50	60	63	65	63	59	51
160°	12	49	60	63	64	62	59	50
161°	12	48	59	63	64	62	58	47
162°	12	48	59	62	63	61	58	44
163°	12	48	59	62	62	61	58	42
164°	11	48	59	61	62	60	58	40
165°	11	49	57	61	61	60	56	38
166°	10	48	56	60	61	59	51	37
167°	10	47	56	59	60	59	47	36
168°	9	43	54	59	60	57	45	34
169°	9	35	51	57	59	56	41	33
170°	9	27	49	56	57	53	36	29
171°	9	21	49	53	56	46	33	24
172°	8	19	49	50	52	38	32	19
173°	9	17	48	49	49	32	32	17
174°	9	16	38	49	49	27	33	17
175°	9	15	25	48	49	19	26	17
176°	10	15	21	31	40	14	19	16
177°	10	11	19	22	23	14	17	16
178°	10	8	15	18	15	11	16	12
179°	10	6	7	10	5	6	11	9
180°	9	10	10	8	4	1	6	6

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0°	299	299	299	299	299	299	299	299
1°	298	299	301	299	299	300	299	300
2°	298	298	300	299	300	301	298	300
3°	298	298	299	299	300	300	299	300
4°	298	298	299	299	300	300	299	300
5°	296	298	298	299	300	301	300	299
6°	295	296	299	299	299	300	299	300
7°	296	296	298	299	300	300	299	299
8°	294	296	298	298	299	300	299	298
9°	293	295	297	298	300	300	298	298
10°	292	293	296	297	299	300	297	297
11°	291	292	296	297	299	299	298	296
12°	290	291	294	297	298	300	297	296
13°	288	290	293	296	297	299	296	294
14°	287	289	292	296	297	298	294	293
15°	285	288	291	294	297	299	293	292
16°	283	285	290	293	296	297	293	292
17°	281	284	289	292	296	296	292	290
18°	280	282	288	292	295	295	290	289
19°	277	280	286	291	294	294	290	286
20°	275	279	284	290	293	293	288	285
21°	272	276	284	289	292	293	287	283
22°	270	274	282	288	291	292	285	281
23°	268	272	280	287	290	291	284	279
24°	266	270	278	286	289	290	282	276
25°	262	268	276	284	289	287	281	274
26°	260	265	275	282	287	287	278	272
27°	257	262	272	280	286	285	277	270
28°	254	259	270	279	285	284	275	268
29°	251	257	269	278	283	283	274	264
30°	248	254	266	277	282	281	271	262
31°	245	251	265	275	281	280	269	259
32°	242	249	263	274	279	279	267	257
33°	239	245	260	272	278	277	265	253
34°	236	242	257	270	277	276	263	251
35°	231	240	255	269	275	275	260	247
36°	228	237	252	266	273	272	257	244
37°	225	233	251	264	273	270	255	241
38°	221	229	248	263	271	269	253	238
39°	217	226	245	261	269	266	250	234
40°	213	223	243	259	267	265	247	231
41°	210	219	240	258	266	263	246	228
42°	205	216	238	256	264	261	243	225
43°	202	212	235	254	262	259	241	221
44°	198	209	232	251	261	258	238	217
45°	194	205	230	249	259	256	235	213
46°	189	202	227	247	257	253	232	209
47°	185	198	224	245	255	251	229	206
48°	181	194	221	244	253	249	227	202

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
49°	177	191	219	241	251	247	224	198
50°	172	186	216	239	249	245	221	194
51°	168	182	213	238	248	243	218	190
52°	163	179	210	235	246	241	216	186
53°	159	175	207	233	244	239	214	182
54°	154	171	205	231	242	237	210	179
55°	150	167	202	228	240	235	207	174
56°	145	163	199	226	238	232	204	171
57°	140	159	196	224	236	230	201	166
58°	135	155	193	222	234	228	199	162
59°	130	151	191	220	232	226	196	158
60°	126	147	188	218	230	224	193	154
61°	121	144	185	216	228	221	191	150
62°	116	140	183	213	226	219	187	146
63°	111	136	179	211	224	217	185	142
64°	106	132	177	209	222	215	182	138
65°	102	128	174	207	220	212	179	134
66°	97	124	171	204	218	210	176	130
67°	92	121	169	202	216	208	174	127
68°	87	117	166	201	214	206	171	123
69°	83	113	163	198	212	204	169	119
70°	78	110	160	196	210	201	166	115
71°	73	106	158	194	207	199	163	111
72°	68	103	156	191	205	197	160	108
73°	64	99	153	189	203	195	158	104
74°	59	96	151	187	201	193	155	101
75°	54	92	148	184	199	191	153	98
76°	49	89	146	183	197	188	150	94
77°	45	86	143	180	194	186	148	91
78°	40	83	140	179	192	184	146	88
79°	36	80	138	176	190	182	143	85
80°	31	78	135	174	188	179	140	82
81°	27	75	133	172	186	177	137	79
82°	23	72	131	170	184	174	135	77
83°	19	69	129	167	182	173	133	74
84°	15	67	126	165	179	170	130	72
85°	12	65	124	163	177	168	128	69
86°	8	63	122	161	175	166	126	67
87°	5	61	120	159	173	163	124	65
88°	3	59	118	157	171	161	122	62
89°	1	57	117	155	169	159	120	61
90°	0	55	115	152	167	157	118	59
91°	0	54	113	150	164	155	116	57
92°	0	52	111	148	162	153	114	56
93°	0	51	109	146	160	151	112	55
94°	0	50	107	145	158	149	110	53
95°	0	49	106	143	156	147	109	52
96°	1	48	104	141	154	145	107	51
97°	1	47	102	139	152	143	105	50

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
98°	1	46	101	137	150	141	103	49
99°	2	45	99	135	148	139	102	48
100°	3	44	98	133	146	137	100	47
101°	3	44	96	131	144	135	99	47
102°	4	43	95	129	141	133	97	46
103°	4	43	94	127	139	131	96	46
104°	5	43	92	126	137	130	94	45
105°	6	42	91	124	135	128	93	45
106°	6	42	89	122	133	126	92	44
107°	7	42	88	120	132	124	90	44
108°	7	41	87	119	129	122	89	44
109°	7	41	86	117	128	121	88	44
110°	7	41	85	115	126	119	87	43
111°	7	41	83	114	124	117	85	43
112°	7	41	82	112	122	115	84	43
113°	7	41	81	110	121	114	83	43
114°	7	41	80	109	119	112	82	43
115°	7	41	79	108	117	111	81	43
116°	7	41	78	106	115	109	80	44
117°	6	42	77	104	114	108	79	44
118°	6	42	76	103	112	106	78	44
119°	6	42	76	101	110	104	77	44
120°	5	42	75	100	109	103	76	44
121°	5	42	74	98	107	101	75	44
122°	4	43	73	97	106	100	75	45
123°	4	43	72	96	104	98	74	45
124°	3	43	72	94	102	97	73	45
125°	2	43	71	93	101	96	73	45
126°	2	44	70	92	99	94	72	46
127°	1	44	70	91	98	93	71	46
128°	1	44	69	90	96	92	70	46
129°	1	45	68	88	95	91	70	46
130°	1	45	68	87	94	89	69	47
131°	1	45	67	86	92	88	69	47
132°	1	46	67	85	91	87	68	47
133°	1	46	66	84	90	86	67	48
134°	1	46	66	82	89	85	67	48
135°	1	47	65	81	87	84	66	48
136°	1	47	65	80	86	82	66	49
137°	1	47	64	79	85	81	65	49
138°	1	48	64	78	84	80	65	49
139°	2	48	64	77	82	79	64	50
140°	2	48	63	76	81	79	64	50
141°	2	49	63	75	80	77	64	50
142°	2	49	62	75	79	76	63	51
143°	2	49	62	74	78	75	63	51
144°	3	50	62	73	77	74	63	51
145°	3	50	61	72	76	74	62	52
146°	3	50	61	71	75	73	62	52

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
147°	3	51	61	70	74	72	62	52
148°	4	51	61	70	73	71	61	53
149°	4	51	60	69	72	70	61	53
150°	4	52	60	68	71	70	61	53
151°	4	52	60	67	70	69	60	53
152°	5	51	60	67	69	68	60	54
153°	5	51	59	66	68	67	60	53
154°	5	51	59	65	68	67	60	54
155°	5	52	59	65	67	66	60	54
156°	5	52	59	64	66	65	60	54
157°	5	52	59	64	66	65	59	53
158°	6	51	59	63	65	64	59	53
159°	6	51	58	63	64	64	59	53
160°	6	51	58	62	63	63	59	54
161°	6	50	58	61	63	62	59	54
162°	6	50	58	61	62	62	58	54
163°	6	48	58	61	62	61	58	54
164°	6	47	57	60	61	61	58	54
165°	7	45	55	60	61	61	57	54
166°	7	43	51	59	60	60	57	53
167°	7	41	48	59	60	60	57	51
168°	7	40	47	58	59	59	56	48
169°	7	38	44	58	58	58	56	44
170°	7	36	42	57	58	58	56	39
171°	7	33	39	55	57	57	55	31
172°	7	28	37	51	56	56	55	26
173°	7	24	36	45	56	56	53	23
174°	7	23	36	39	55	56	49	21
175°	8	23	35	33	54	55	39	20
176°	8	21	26	29	50	53	28	19
177°	9	20	22	19	35	47	24	19
178°	9	19	21	18	20	29	21	15
179°	9	16	19	16	10	24	16	10
180°	10	10	10	8	4	19	5	6

Zonal Lumen Density Measurement

Deg	Flux (lm)	%
0-5	7.1	0.43
5-10	21.3	1.29
10-15	34.8	2.10
15-20	47.4	2.87
20-25	58.8	3.56
25-30	68.6	4.15
30-35	76.8	4.65
35-40	83.1	5.02
40-45	87.5	5.30
45-50	90.0	5.44
50-55	90.5	5.47
55-60	89.4	5.41
60-65	86.6	5.24
65-70	82.6	4.99
70-75	77.5	4.69
75-80	71.8	4.34
80-85	65.7	3.98
85-90	59.9	3.62
90-95	55.0	3.33
95-100	50.6	3.06
100-105	46.5	2.81
105-110	42.6	2.57
110-115	38.8	2.35
115-120	35.1	2.12
120-125	31.6	1.91
125-130	28.3	1.72
130-135	25.2	1.52
135-140	22.2	1.34
140-145	19.4	1.17
145-150	16.6	1.01
150-155	13.9	0.84
155-160	11.2	0.67
160-165	8.4	0.51
165-170	5.5	0.33
170-175	2.6	0.16
175-180	0.5	0.03

Deg	Flux (lm)	%
0-5	7.1	0.43
0-10	28.4	1.72
0-15	63.2	3.82
0-20	110.7	6.69
0-25	169.5	10.25
0-30	238.1	14.40
0-35	314.9	19.05
0-40	398.0	24.07
0-45	485.5	29.37
0-50	575.5	34.81
0-55	666.0	40.28
0-60	755.4	45.69
0-65	842.0	50.93
0-70	924.6	55.92
0-75	1002.2	60.61
0-80	1074.0	64.95
0-85	1139.7	68.93
0-90	1199.6	72.55
0-95	1254.6	75.88
0-100	1305.2	78.94
0-105	1351.7	81.75
0-110	1394.2	84.32
0-115	1433.0	86.67
0-120	1468.1	88.79
0-125	1499.8	90.70
0-130	1528.0	92.42
0-135	1553.2	93.94
0-140	1575.4	95.28
0-145	1594.8	96.45
0-150	1611.4	97.46
0-155	1625.3	98.30
0-160	1636.4	98.97
0-165	1644.8	99.48
0-170	1650.3	99.81
0-175	1652.9	99.97
0-180	1653.5	100.00

Test Model:T10303(T8-12-48GC-8CCT-HYB)

Test CCT: 3500K (Input Control Signal Applied: 25%)

Test Condition: Method: Integrating Sphere System; Orientation: Downward; Test Voltage: 120.0V 60Hz; Housing: None.

Ballast: QTP 2x32T8/UNV ISN-SC

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
Light Output(lm) △△	1706.1	≥1600	≥1440	Pass
Power(W) △△	13.63	None.	None.	N/A
Total Efficacy(lm/W) △△	125.16	≥120	≥116.4	Pass
CCT(K) △△	3450	3220~3710	No tolerances	Pass
Duv△△	-0.000462	-0.0055~0.0065	No tolerances	Pass
IES R_f△△	85	70	69	Pass
IES R_g△△	96	89	88	Pass
IES Rcs,h1△△	-11%	-12%~23%	-13%~22%	Pass
R_a△△	84	≥80	≥79	Pass
R9△△	13	≥0	≥-1	Pass

Test Condition: Method: Integrating THDi、PF Test ; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor△△	0.9979	≥0.9	≥0.87	Pass
120	THDi△△	22.10%	≤20%	≤25%	Pass[i]
277	Power Factor△△	0.9281	≥0.9	≥0.87	Pass
277	THDi△△	19.82%	≤20%	≤25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V5.1.
3. The conclusion is only for information. When determining the compliance of the result, tolerances and/or allowances may be applied to the measured value.

i. +5% tolerance was used to meet the DLC requirements

△△ Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.

[Integrating Sphere System]

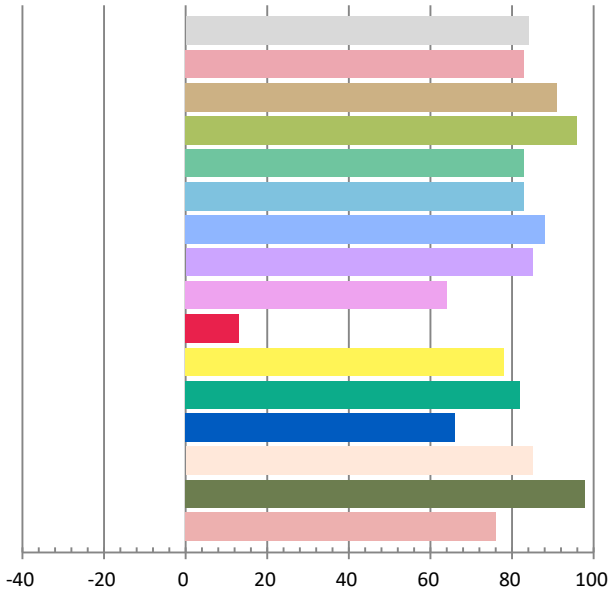
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.1138	13.63	0.9979	1706.1	125.16

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
5.1705	3450	-0.00046	0.4077	0.3908	0.2372	0.5117

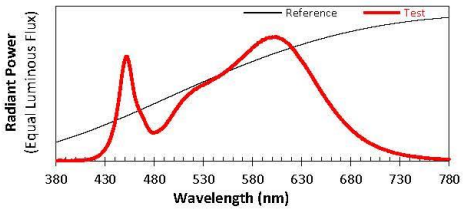
Color Rendering Index

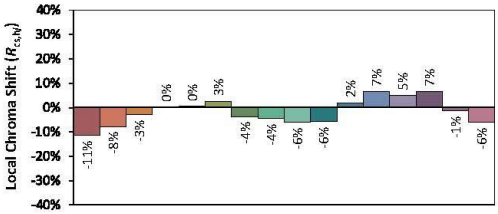
Ra			
84.0			
R1	R2	R3	R4
83	91	96	83
R5	R6	R7	R8
83	88	85	64
R9	R10	R11	R12
13	78	82	66
R13	R14	R15	
85	98	76	

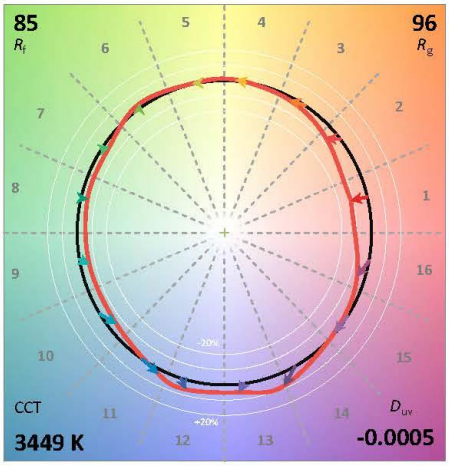


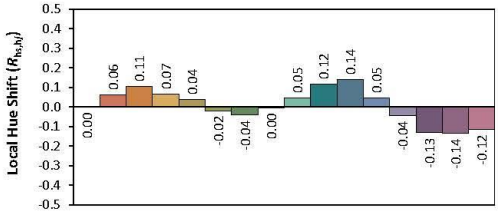
ANSI/IES TM-30-18 Color Rendition Report

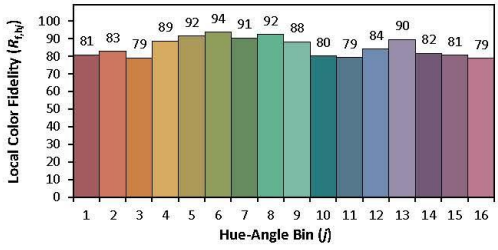
Source:	User SPD	**Manufacturer:**	RAB Lighting INC
Date:	2025/1/2	**Model:**	T10303(T8-12-48GC-8CCT-HYB)

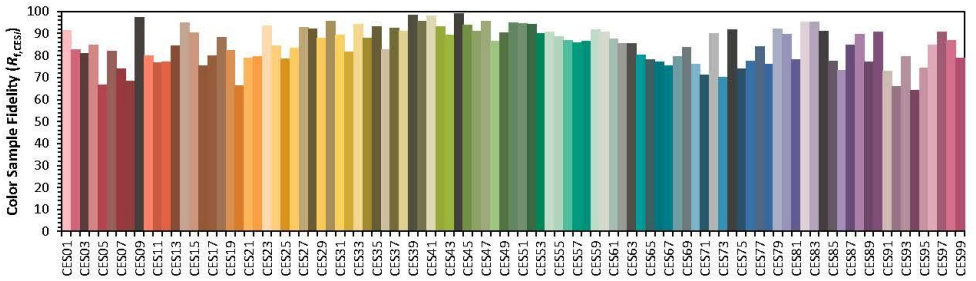












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

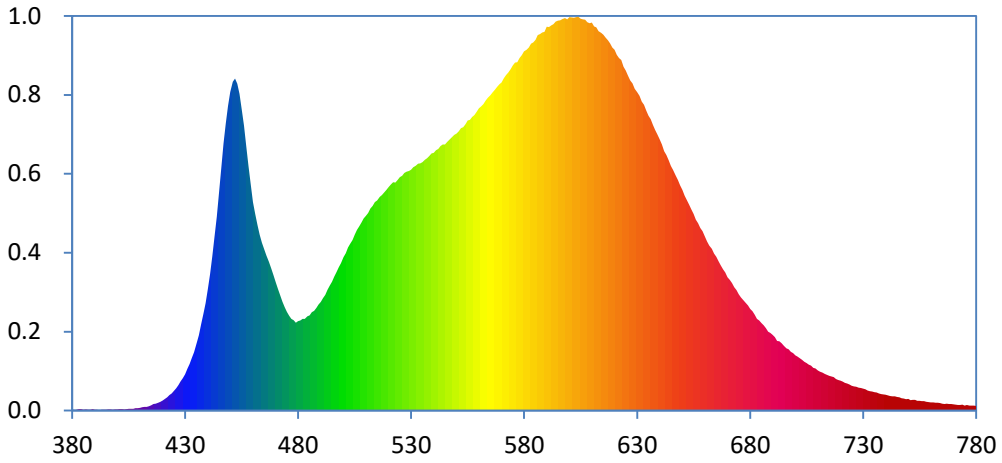
x	0.4077
y	0.3907
u'	0.2373
v'	0.5116

CIE 13.3-1995 (CRI)

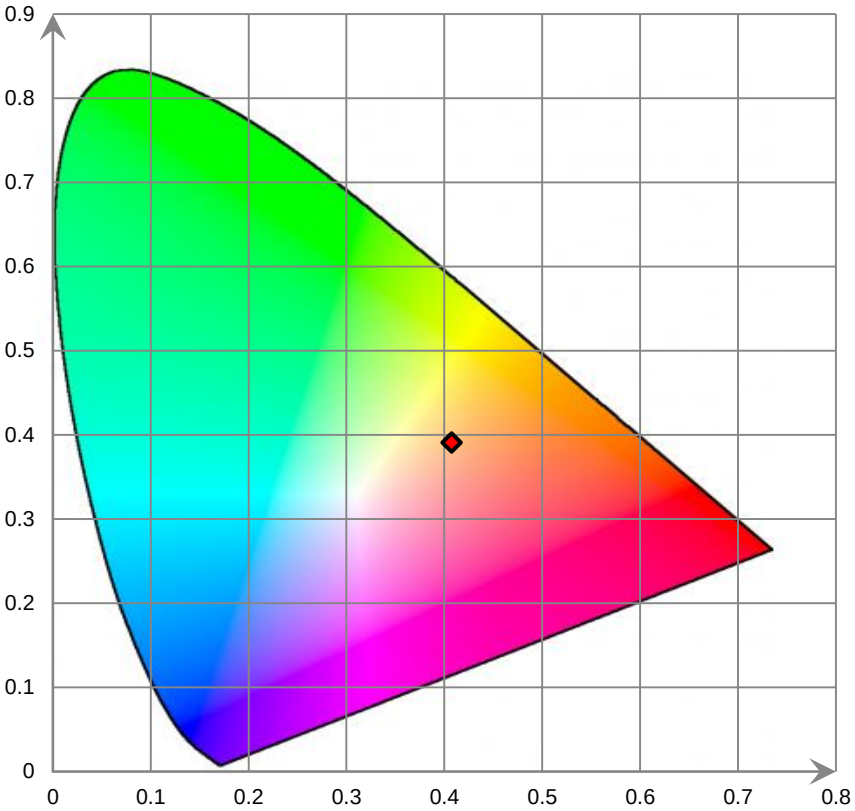
R_a	84
R_9	13

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

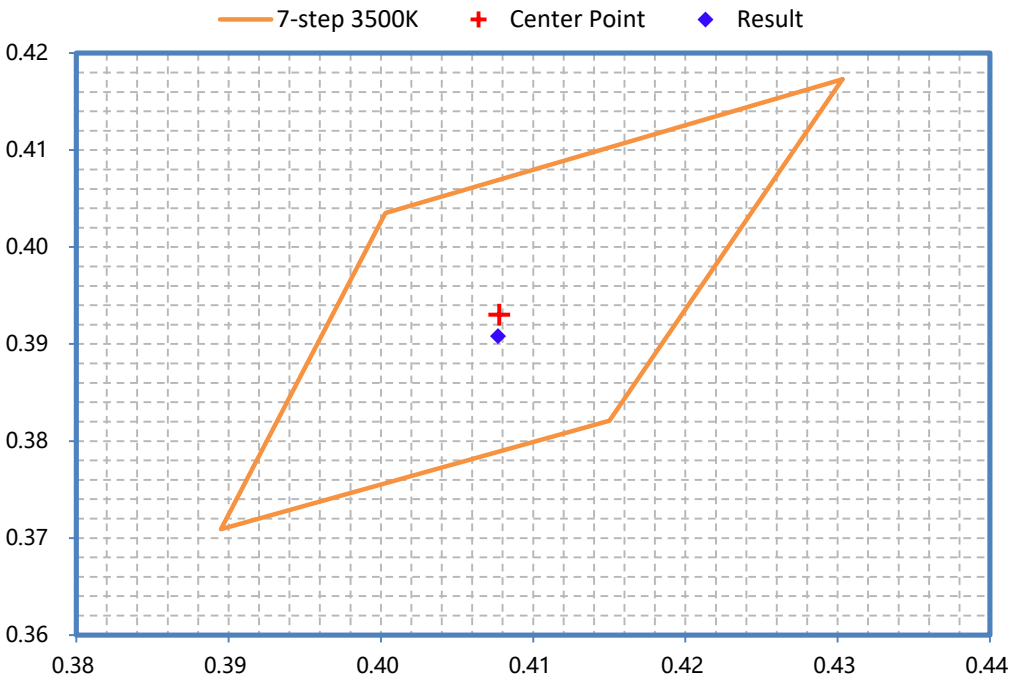
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test Model:T10303(T8-12-48GC-8CCT-HYB)

Test CCT: 4000K (Input Control Signal Applied: 50%)

Test Condition: Method: Integrating Sphere System; Orientation: Downward; Test Voltage: 120.1V 60Hz; Housing: None.

Ballast: QTP 2x32T8/UNV ISN-SC

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
Light Output(lm) △△	1736.3	≥1600	≥1440	Pass
Power(W) △△	13.55	None.	None.	N/A
Total Efficacy(lm/W) △△	128.11	≥120	≥116.4	Pass
CCT(K) △△	3909	3710~4260	No tolerances	Pass
Duv△△	-0.00147	-0.005~0.007	No tolerances	Pass
IES R_f△△	85	70	69	Pass
IES R_g△△	96	89	88	Pass
IES Rcs,h1△△	-11%	-12%~23%	-13%~22%	Pass
R_a△△	85.3	≥80	≥79	Pass
R_9△△	19	≥0	≥-1	Pass

Test Condition: Method: Integrating THDi、PF Test ; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor△△	0.9982	≥0.9	≥0.87	Pass
120	THDi△△	22.11%	≤20%	≤25%	Pass[i]
277	Power Factor△△	0.9283	≥0.9	≥0.87	Pass
277	THDi△△	19.83%	≤20%	≤25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V5.1.
3. The conclusion is only for information. When determining the compliance of the result, tolerances and/or allowances may be applied to the measured value.

i. +5% tolerance was used to meet the DLC requirements

△△ Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.

[Integrating Sphere System]

Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.1	60	0.1131	13.55	0.9982	1736.3	128.11

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
5.3424	3909	-0.00147	0.3834	0.3755	0.2276	0.5015

Color Rendering Index

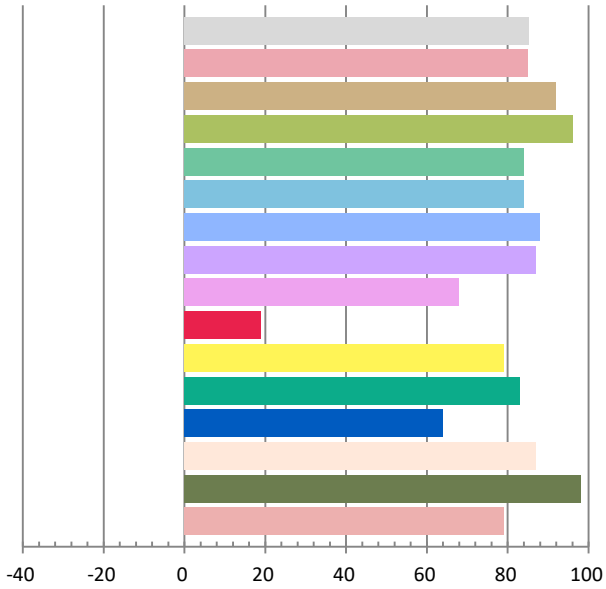
Ra
85.3

R1	R2	R3	R4
85	92	96	84

R5	R6	R7	R8
84	88	87	68

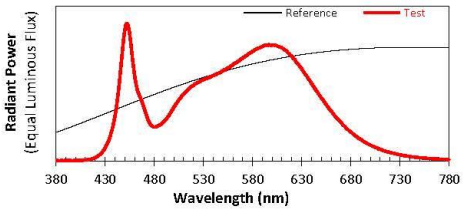
R9	R10	R11	R12
19	79	83	64

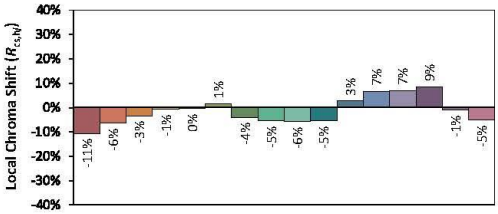
R13	R14	R15
87	98	79

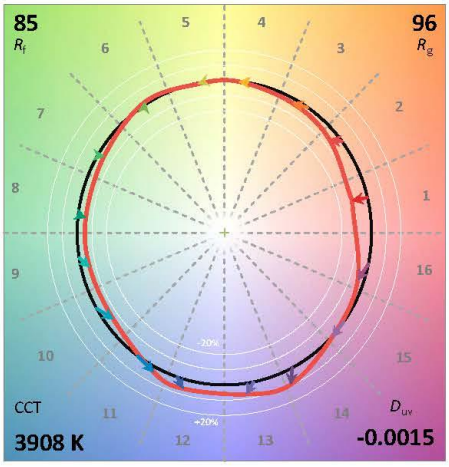


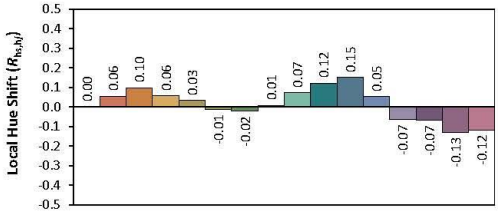
ANSI/IES TM-30-18 Color Rendition Report

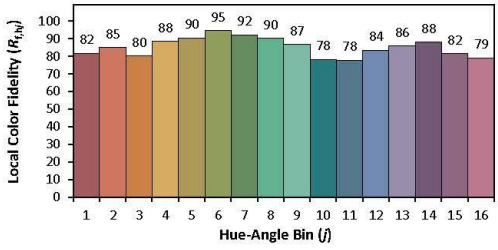
Source:	User SPD	**Manufacturer:**	RAB Lighting INC
Date:	2025/1/2	**Model:**	T10303(T8-12-48GC-8CCT-HYB)

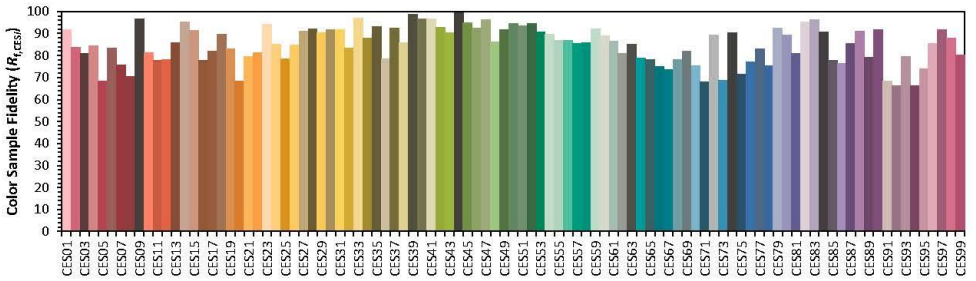












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

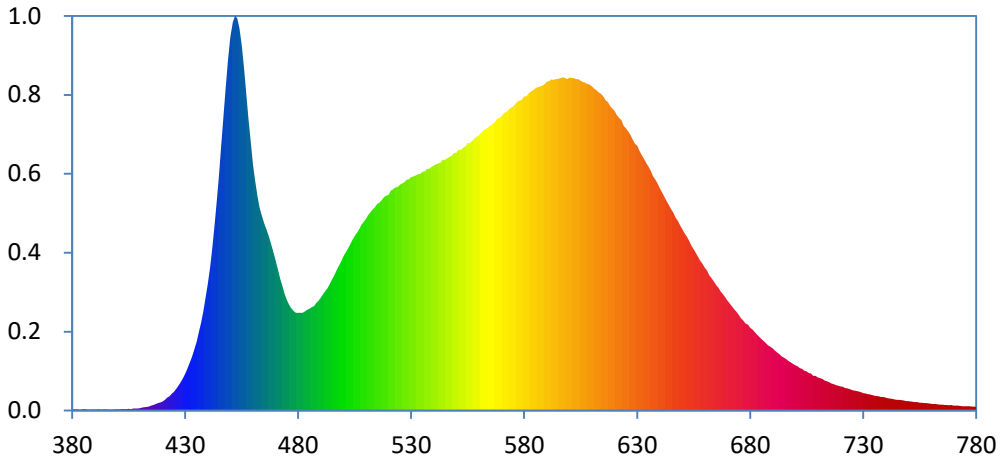
x	0.3834
y	0.3753
u'	0.2277
v'	0.5014

CIE 13.3-1995 (CRI)

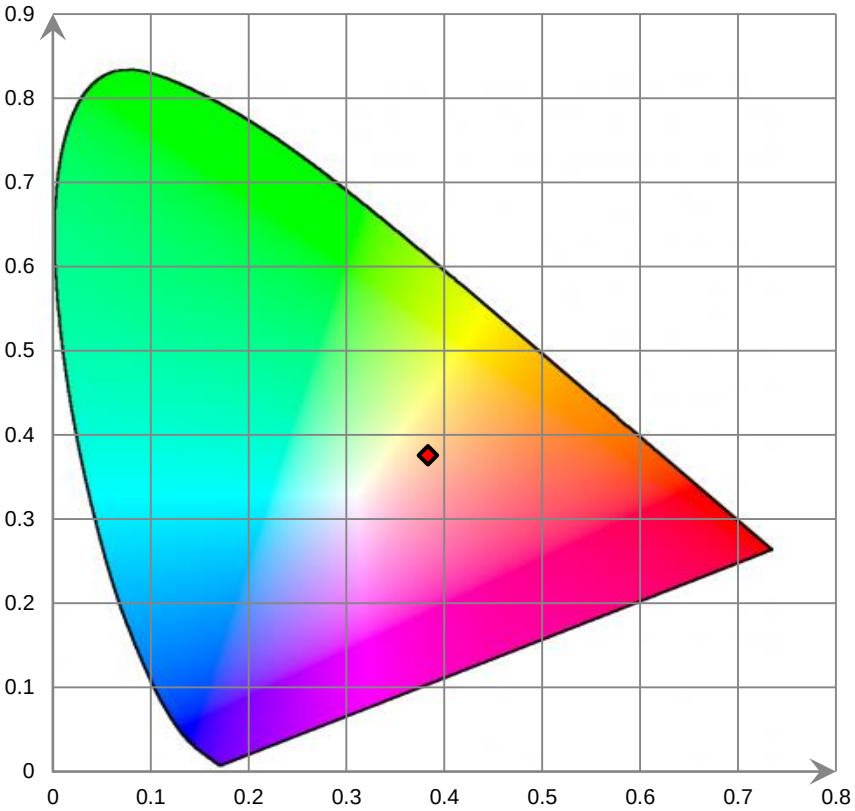
R_a	85
R_9	19

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

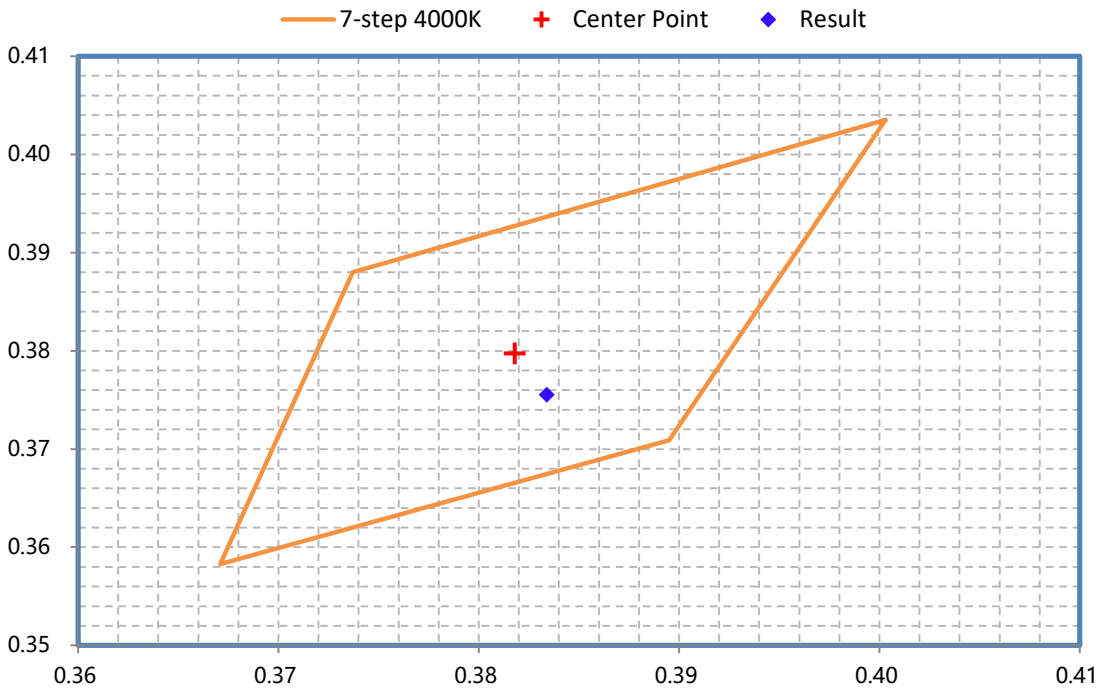
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test Model:T10303(T8-12-48GC-8CCT-HYB)

Test CCT: 5000K (Input Control Signal Applied: 75%)

Test Condition: Method: Integrating Sphere System; Orientation: Downward; Test Voltage: 120.0V 60Hz; Housing: None.

Ballast: QTP 2x32T8/UNV ISN-SC

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
Light Output(lm) △△	1727.8	≥1600	≥1440	Pass
Power(W) △△	13.6	None.	None.	N/A
Total Efficacy(lm/W) △△	127.05	≥120	≥116.4	Pass
CCT(K) △△	5209	4746~5312	No tolerances	Pass
Duv△△	0.000354	-0.004~0.008	No tolerances	Pass
IES R_f△△	85	70	69	Pass
IES R_g△△	96	89	88	Pass
IES Rcs,h1△△	-11%	-12%~23%	-13%~22%	Pass
R_a△△	85.4	≥80	≥79	Pass
R_9△△	19	≥0	≥-1	Pass

Test Condition: Method: Integrating THDi、PF Test ; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor△△	0.9983	≥0.9	≥0.87	Pass
120	THDi△△	22.14%	≤20%	≤25%	Pass[i]
277	Power Factor△△	0.9281	≥0.9	≥0.87	Pass
277	THDi△△	19.80%	≤20%	≤25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V5.1.
3. The conclusion is only for information. When determining the compliance of the result, tolerances and/or allowances may be applied to the measured value.

i. +5% tolerance was used to meet the DLC requirements

△△ Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.

[Integrating Sphere System]

Photometric and Electrical Measurement Result

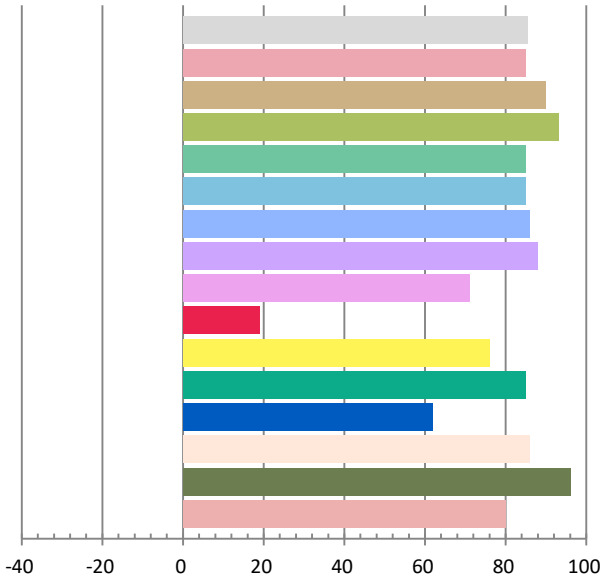
Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.1135	13.6	0.9983	1727.8	127.05

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
5.4671	5209	0.00035	0.3395	0.3478	0.2091	0.4820

Color Rendering Index

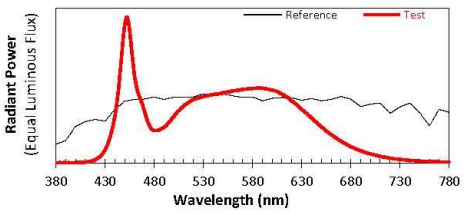
Ra
85.4

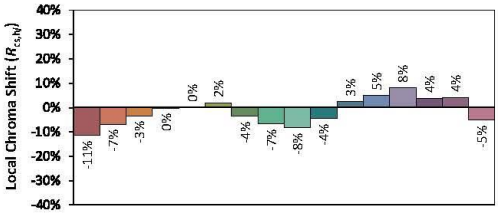
R1	R2	R3	R4
85	90	93	85
R5	R6	R7	R8
85	86	88	71
R9	R10	R11	R12
19	76	85	62
R13	R14	R15	
86	96	80	

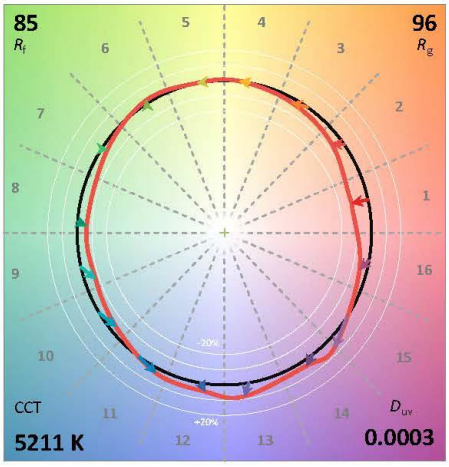


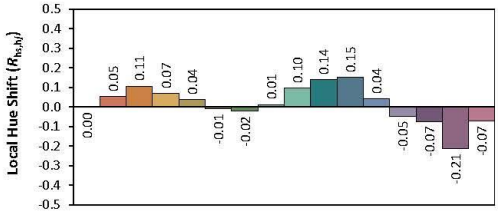
ANSI/IES TM-30-18 Color Rendition Report

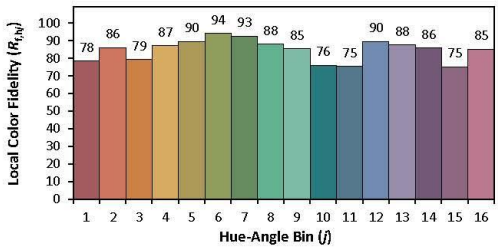
Source:	User SPD	Manufacturer:	RAB Lighting INC
Date:	2025/1/2	Model:	T10303(T8-12-48GC-8CCT-HYB)

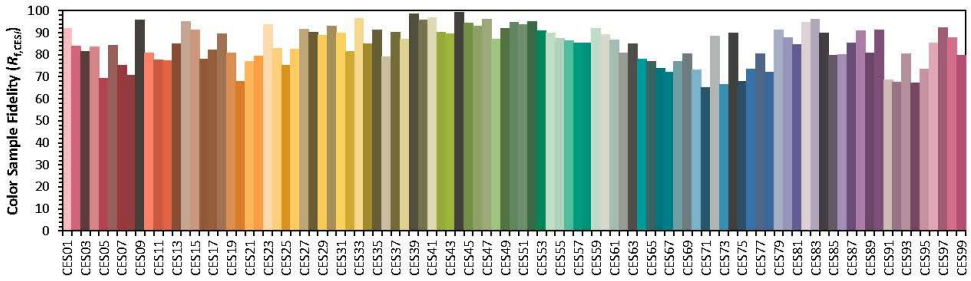












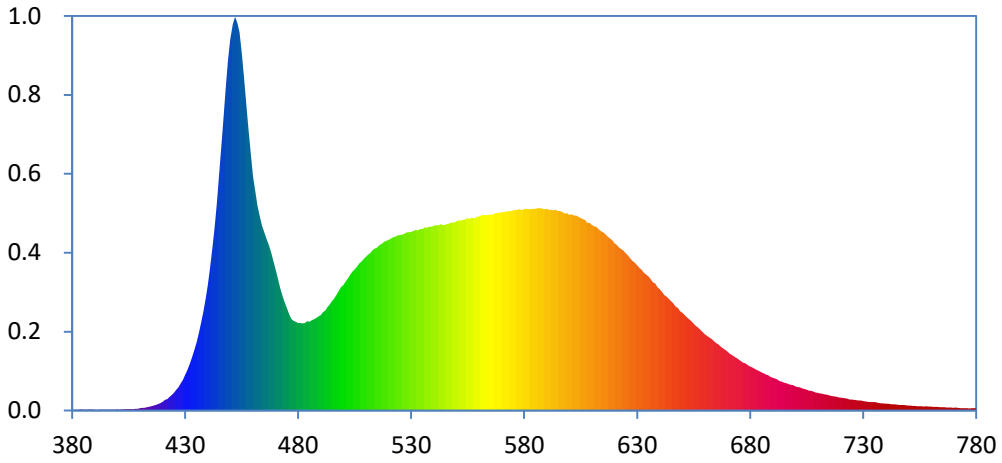
Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3395
y	0.3476
u'	0.2092
v'	0.4819

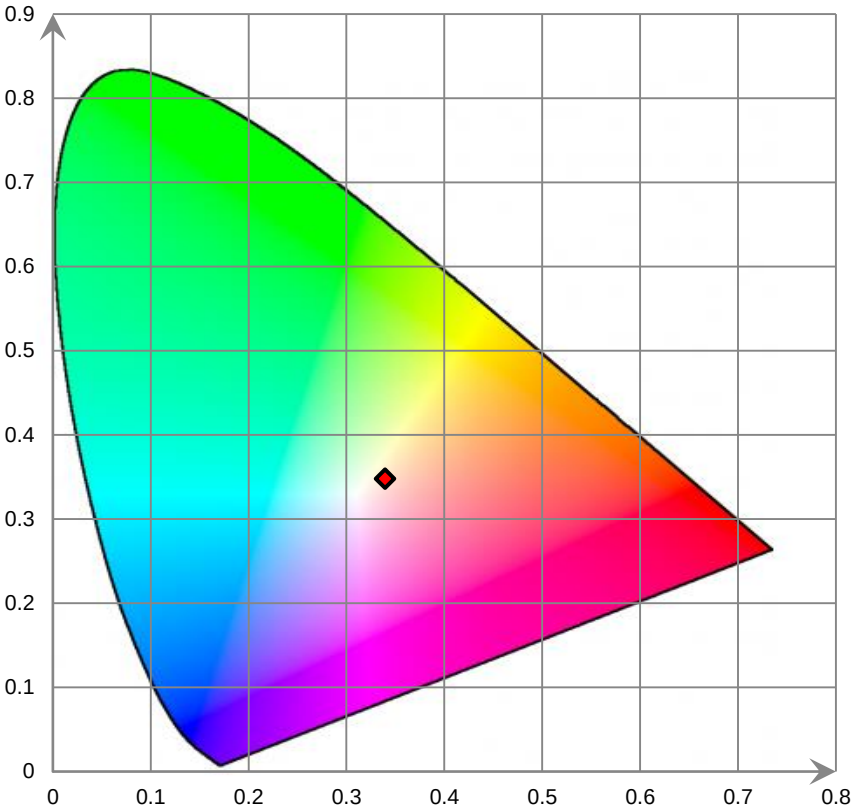
CIE 13.3-1995 (CRI)	
R_a	85
R_9	20

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

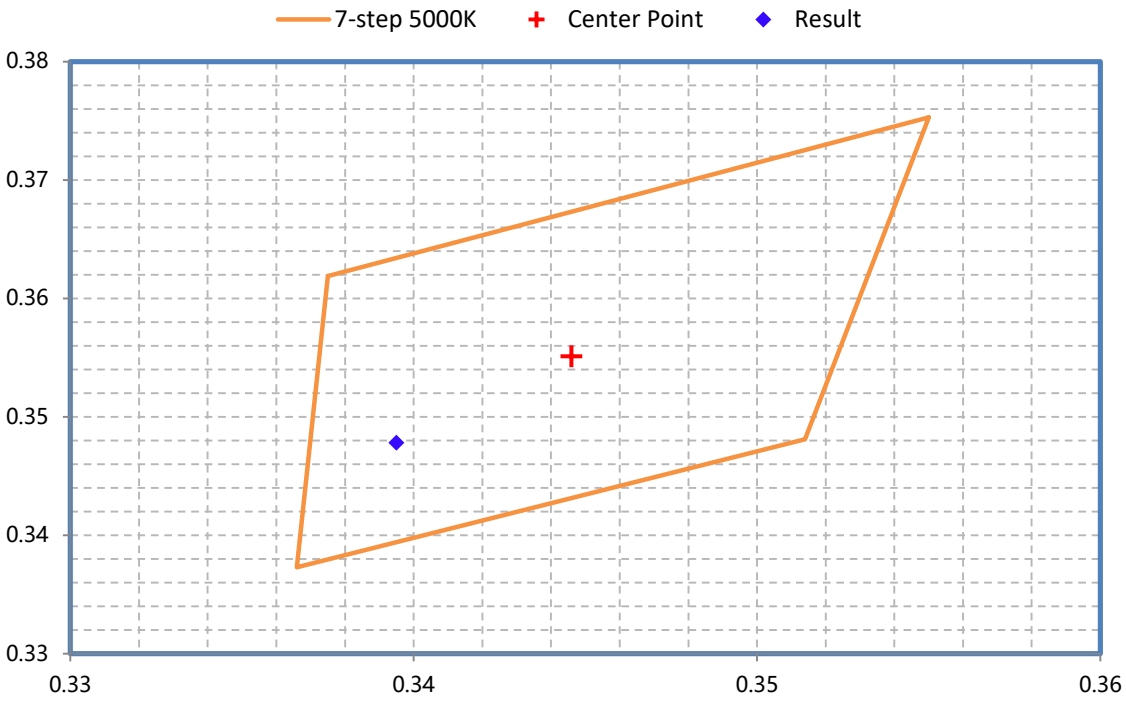
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test Model:T10303(T8-12-48GC-8CCT-HYB)

Test CCT: 6500K (Input Control Signal Applied: 100%)

Test Condition: Method: Integrating Sphere System; Orientation: Downward; Test Voltage: 120.0V 60Hz; Housing: None.

Ballast: QTP 2x32T8/UNV ISN-SC

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
Light Output(lm) △△	1671	≥1600	≥1440	Pass
Power(W) △△	13.62	None.	None.	N/A
Total Efficacy(lm/W) △△	122.69	≥120	≥116.4	Pass
CCT(K) △△	6572	6022~7042	No tolerances	Pass
Duv △△	0.00446	-0.0029~0.0091	No tolerances	Pass
IES R_f △△	83	70	69	Pass
IES R_g △△	94	89	88	Pass
IES Rcs,h1 △△	-13%	-12%~23%	-13%~22%	Pass
R_a △△	83.5	≥80	≥79	Pass
R_9 △△	9	≥0	≥-1	Pass

Test Condition: Method: Integrating THDi、PF Test ; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor △△	0.9980	≥0.9	≥0.87	Pass
120	THDi △△	22.00%	≤20%	≤25%	Pass[i]
277	Power Factor △△	0.9280	≥0.9	≥0.87	Pass
277	THDi △△	19.79%	≤20%	≤25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V5.1.
3. The conclusion is only for information. When determining the compliance of the result, tolerances and/or allowances may be applied to the measured value.

i. +5% tolerance was used to meet the DLC requirements

△△ Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.

[Integrating Sphere System]

Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.1137	13.62	0.998	1671	122.69

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
5.3893	6572	0.00446	0.3113	0.3301	0.1965	0.4687

Color Rendering Index

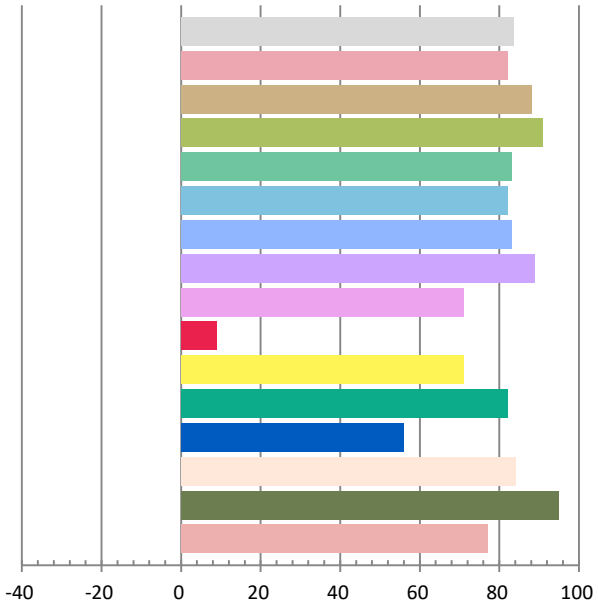
Ra
83.5

R1	R2	R3	R4
82	88	91	83

R5	R6	R7	R8
82	83	89	71

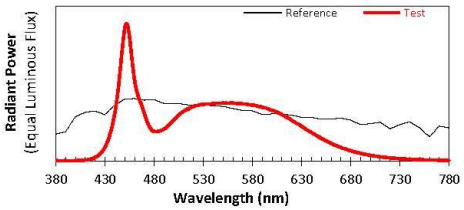
R9	R10	R11	R12
9	71	82	56

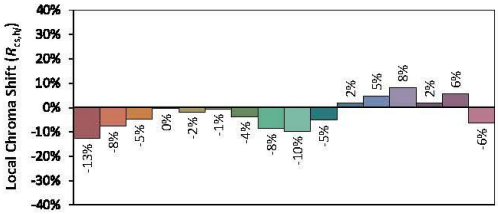
R13	R14	R15
84	95	77

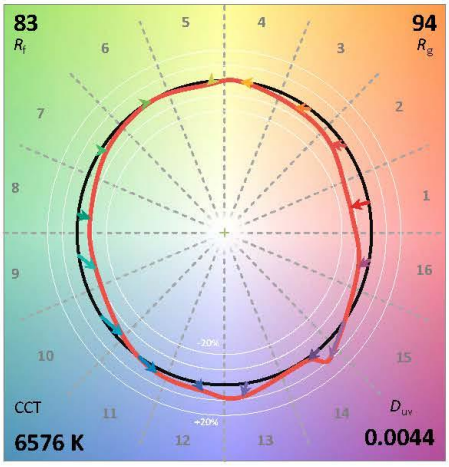


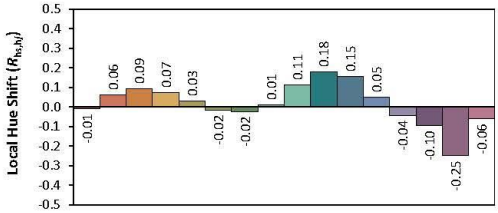
ANSI/IES TM-30-18 Color Rendition Report

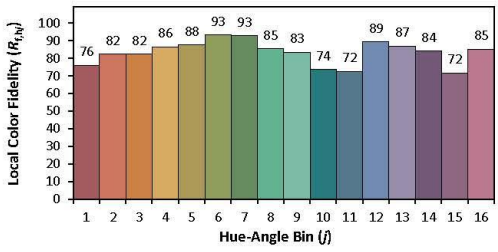
Source:	User SPD	Manufacturer:	RAB Lighting INC
Date:	2025/1/2	Model:	T10303(T8-12-48GC-8CCT-HYB)

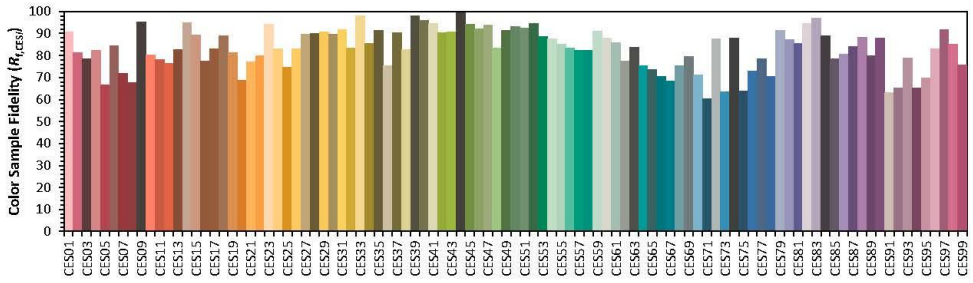












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

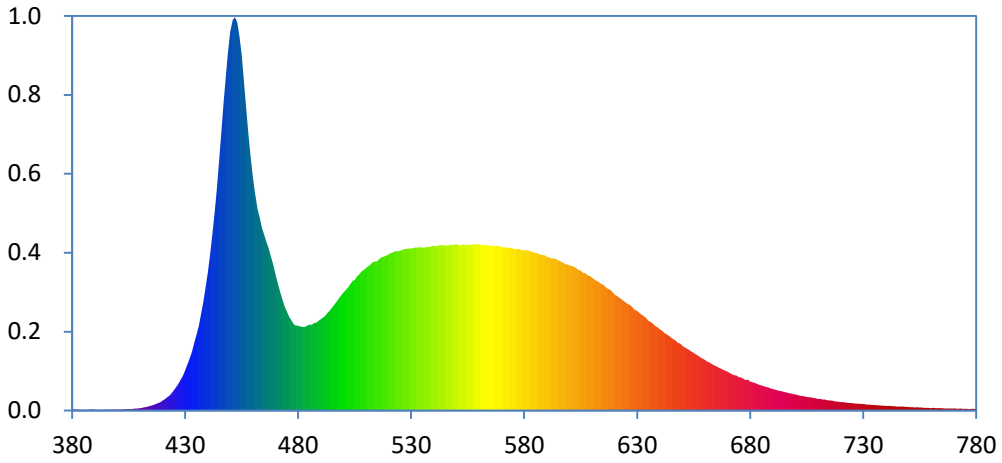
x	0.3112
y	0.3299
u'	0.1965
v'	0.4686

CIE 13.3-1995 (CRI)

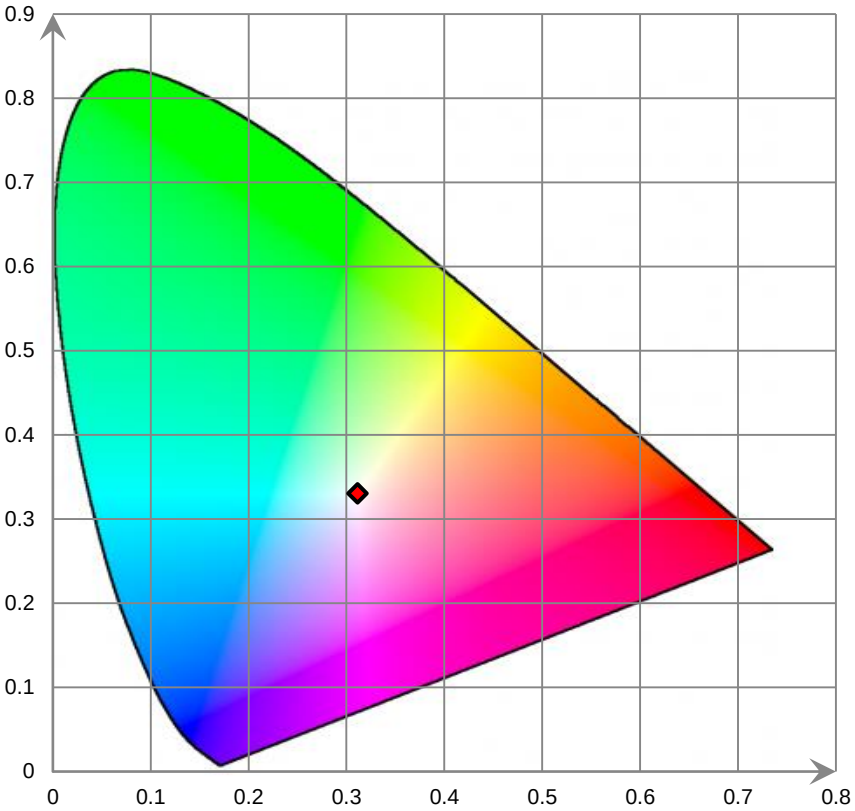
R_a	83
R_9	10

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

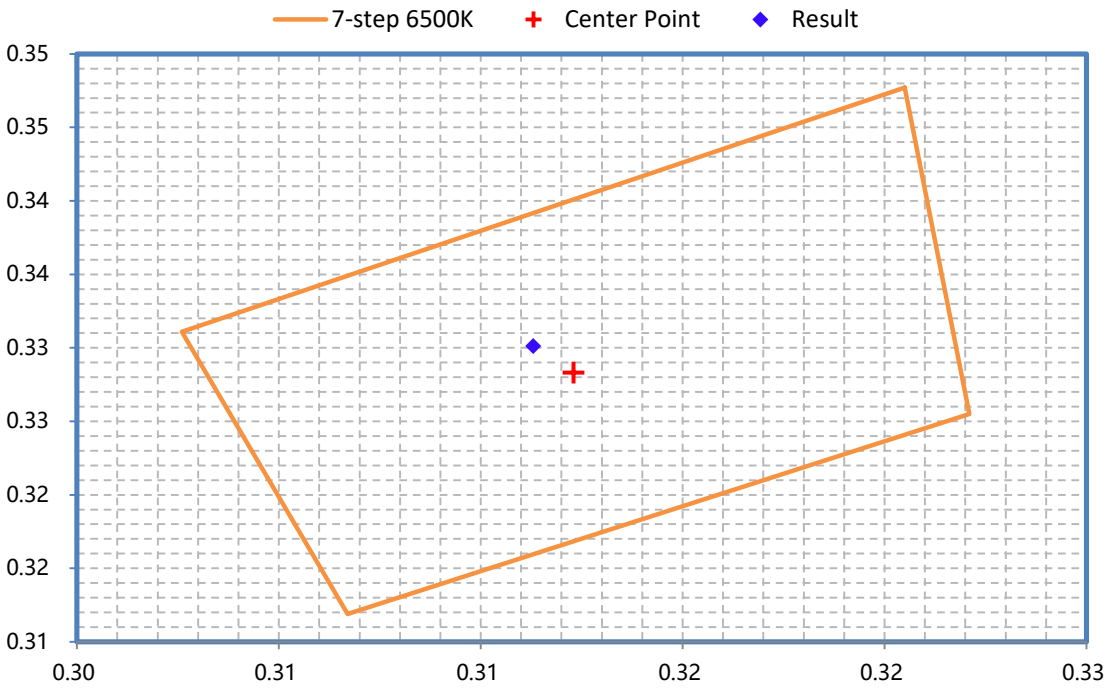
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test Mode：Type B

Test Model:T10303(T8-12-48GC-8CCT-HYB)

Test CCT: 3000K (Input Control Signal Applied: 0%)

Test Condition: Method: Integrating Sphere System; Orientation: Downward; Test Voltage: 120.0V 60Hz; Housing: None. Ballast: None.

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
Light Output(lm) △△	1657.3	≥1600	≥1440	Pass
Power(W) △△	11.3	None.	None.	N/A
Total Efficacy(lm/W) △△	146.69	≥120	≥116.4	Pass
CCT(K) △△	3075	2870~3220	No tolerances	Pass
Duv△△	0.00201	-0.0059~0.0061	No tolerances	Pass
IES R_f△△	84	70	69	Pass
IES R_g△△	96	89	88	Pass
IES Rcs,h1△△	-11%	-12%~23%	-13%~22%	Pass
R_a△△	81.9	≥80	≥79	Pass
R9△△	4	≥0	≥-1	Pass

Test Condition: Method: Goniophotometer; Orientation: Downward; Test Voltage: 120.1V 60Hz; Housing: None. Ballast: None.

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
Light Output(lm) △	1658.61	≥1600	≥1440	Pass
Power(W) △	11.3	None.	None.	N/A
Total Efficacy(lm/W) △	146.78	≥120	≥116.4	Pass
Beam Angle△	195.5	≥140	≥135	Pass
Power Factor△	0.9709	≥0.9	≥0.87	Pass
THDi△	22.45%	≤20%	≤25%	Pass[i]

Test Condition: Method: Integrating THDi、PF Test ; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor△△	0.9708	≥0.9	≥0.87	Pass
120	THDi△△	22.15%	≤20%	≤25%	Pass[i]
277	Power Factor△△	0.9295	≥0.9	≥0.87	Pass
277	THDi△△	19.86%	≤20%	≤25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V5.1.
3. The conclusion is only for information. When determining the compliance of the result, tolerances and/or allowances may be applied to the measured value.

i. +5% tolerance was used to meet the DLC requirements

△ Test facility was located at No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.

△△ Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.

[Integrating Sphere System]

Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.09697	11.3	0.9708	1657.3	146.69

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
4.9364	3075	0.00201	0.4345	0.4083	0.2472	0.5227

Color Rendering Index

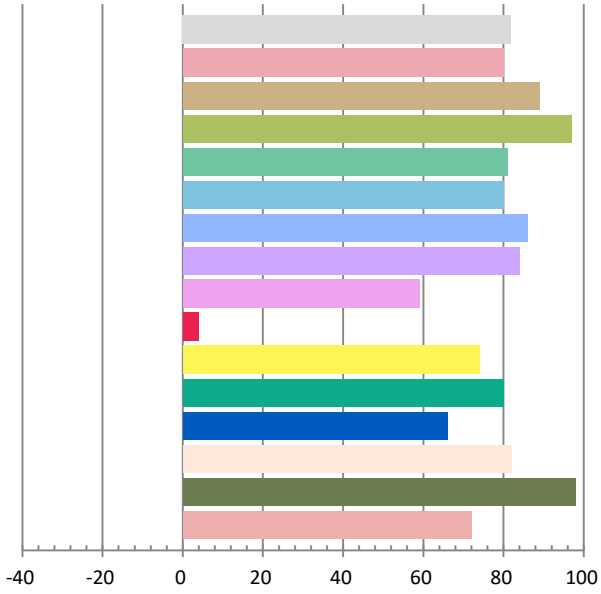
Ra
81.9

R1	R2	R3	R4
80	89	97	81

R5	R6	R7	R8
80	86	84	59

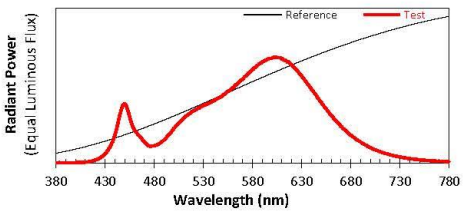
R9	R10	R11	R12
4	74	80	66

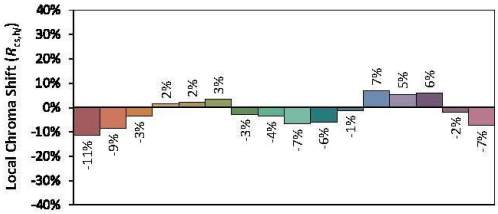
R13	R14	R15
82	98	72

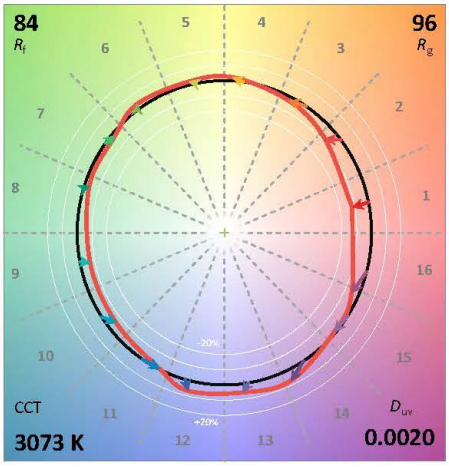


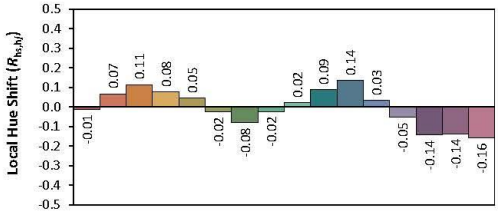
ANSI/IES TM-30-18 Color Rendition Report

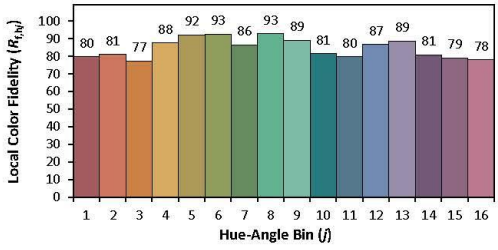
Source:	User SPD	**Manufacturer:**	RAB Lighting INC
Date:	2025/1/2	**Model:**	T10303(T8-12-48GC-8CCT-HYB)6

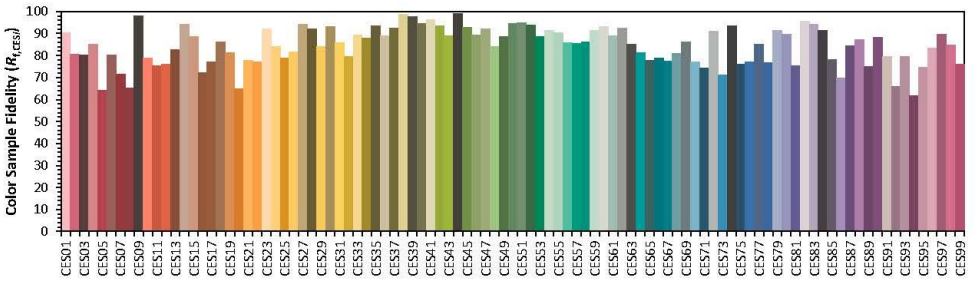












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

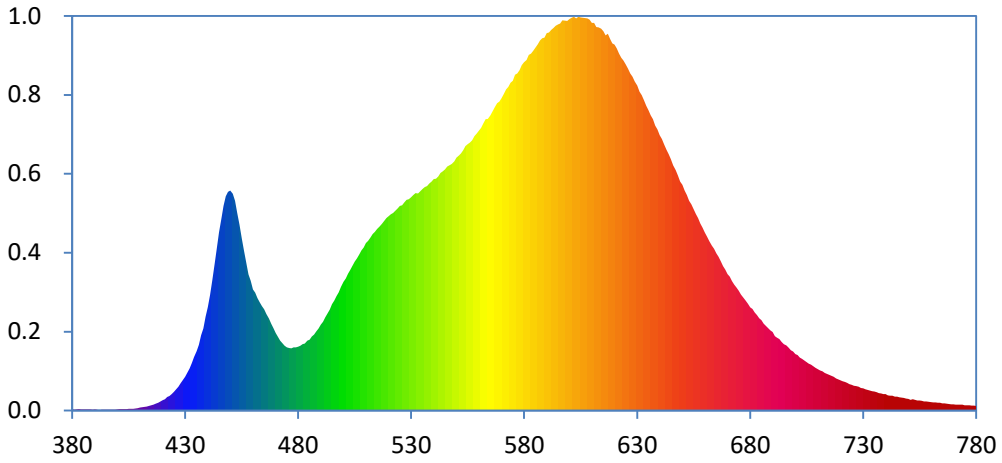
x	0.4346
y	0.4081
u'	0.2473
v'	0.5226

CIE 13.3-1995 (CRI)

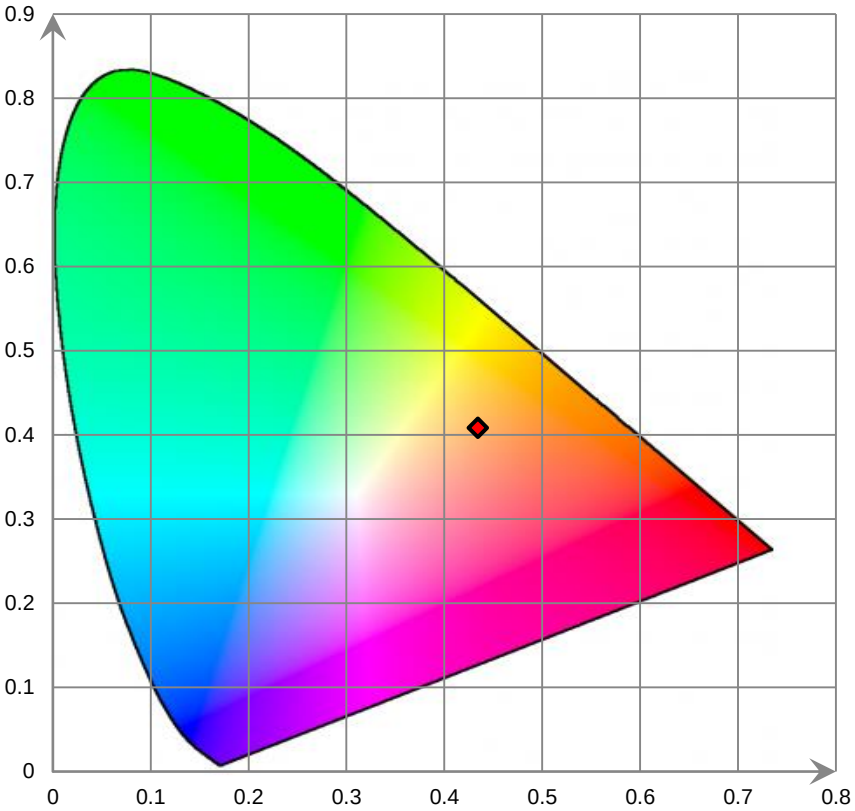
R_a	82
R_9	4

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

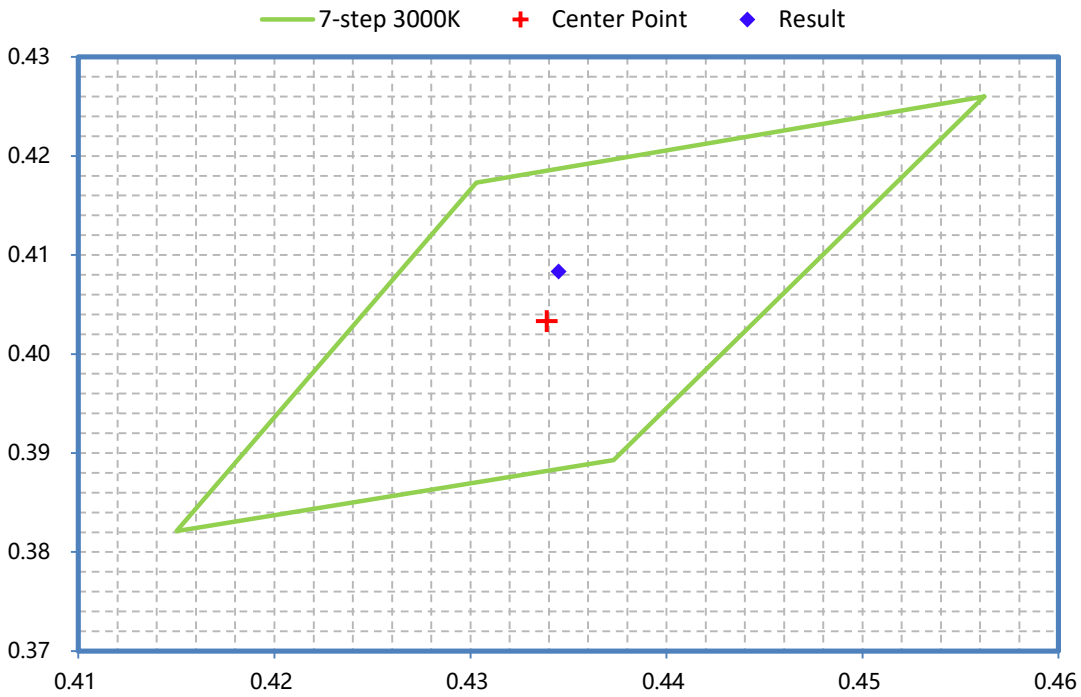
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



[Goniophotometer System]

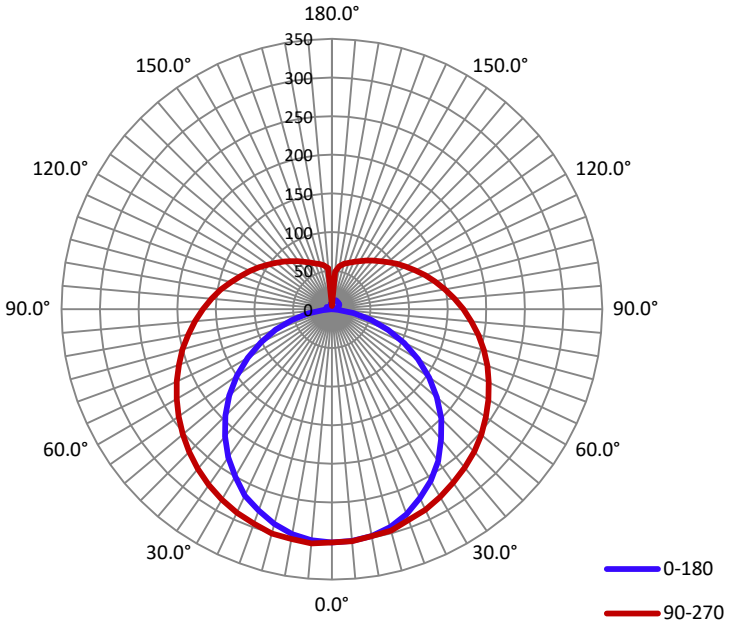
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.0	60	0.097	11.3	0.9709

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I_{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
1658.61	146.78	304.2	1.24	1.42

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I_{max}):	110.4	151.6	195.5	151.0	152.1
Field Angle (10% I_{max}):	159.7	350.1	353.8	350.2	303.5

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0°	302	302	302	302	302	302	302	302
1°	302	301	301	302	301	302	302	302
2°	301	301	302	301	302	302	302	301
3°	302	300	303	301	302	302	301	301
4°	301	301	302	301	302	301	302	300
5°	301	301	302	301	301	301	301	299
6°	300	300	301	300	301	300	300	299
7°	300	299	301	300	301	300	299	299
8°	300	299	300	300	300	299	298	297
9°	298	298	300	299	299	299	298	297
10°	298	298	299	299	298	298	297	296
11°	296	296	298	298	298	297	296	295
12°	295	295	298	297	298	297	295	292
13°	294	294	296	297	296	296	293	292
14°	293	293	296	296	296	294	291	289
15°	292	292	295	295	297	294	290	288
16°	290	290	293	294	295	293	289	286
17°	288	289	291	294	294	292	288	284
18°	286	287	290	292	293	290	287	282
19°	284	285	290	291	293	290	285	280
20°	282	284	288	290	290	288	283	279
21°	280	282	286	289	290	287	282	276
22°	276	280	285	287	289	286	280	274
23°	277	277	283	287	287	284	277	272
24°	273	275	281	286	287	283	276	269
25°	270	273	280	284	287	282	274	267
26°	268	271	278	283	285	281	272	264
27°	265	268	277	282	284	280	271	262
28°	262	266	274	281	283	278	269	259
29°	259	263	272	280	281	276	266	256
30°	256	261	270	278	281	275	264	254
31°	254	257	268	277	279	273	263	251
32°	249	254	267	275	278	272	260	247
33°	247	252	264	274	276	270	257	245
34°	244	249	262	272	275	269	255	242
35°	240	246	260	270	274	267	253	238
36°	235	243	258	269	272	266	250	235
37°	233	240	255	267	272	264	249	232
38°	229	237	253	265	271	263	246	229
39°	225	234	251	265	269	261	243	226
40°	220	230	249	263	268	259	241	222
41°	217	226	246	262	266	257	240	219
42°	213	223	244	259	265	256	236	215
43°	209	219	242	258	263	255	234	212
44°	205	216	239	256	262	252	231	208
45°	200	212	236	255	261	251	229	204
46°	196	208	234	253	259	249	227	201
47°	192	205	231	251	257	247	223	197
48°	187	201	228	249	255	245	221	194

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
49°	183	198	226	247	254	243	218	190
50°	178	194	224	246	253	242	216	187
51°	173	190	222	243	250	239	213	182
52°	168	186	219	241	248	237	211	179
53°	163	182	216	241	246	235	208	175
54°	159	178	213	238	245	233	205	172
55°	154	174	210	235	243	232	203	168
56°	149	171	208	233	242	229	200	163
57°	144	167	206	232	240	227	198	160
58°	139	163	202	230	238	225	195	156
59°	134	158	200	228	236	223	192	153
60°	129	155	198	227	234	221	190	149
61°	124	151	195	224	232	219	187	145
62°	118	147	192	222	230	217	185	141
63°	114	143	190	221	228	215	182	137
64°	108	138	187	218	227	213	179	133
65°	104	134	184	216	224	211	177	130
66°	98	130	182	213	222	208	174	126
67°	93	127	179	212	220	207	172	122
68°	88	123	176	209	218	204	169	119
69°	83	119	174	207	216	201	167	115
70°	78	115	171	205	214	200	164	112
71°	73	112	169	203	212	198	161	108
72°	67	108	166	201	210	196	159	105
73°	63	105	164	199	208	194	157	102
74°	57	102	161	196	206	191	154	99
75°	52	99	159	194	204	189	152	96
76°	47	95	156	192	201	187	149	92
77°	42	92	154	190	199	185	147	89
78°	38	89	151	187	197	183	145	87
79°	33	86	148	185	195	180	142	84
80°	28	83	147	183	193	178	140	81
81°	24	80	144	181	190	176	138	78
82°	20	78	142	178	188	173	136	76
83°	15	75	140	175	186	172	134	73
84°	12	73	137	174	184	169	131	71
85°	8	70	135	172	181	167	129	69
86°	6	68	133	169	179	165	127	67
87°	3	66	131	167	177	163	125	65
88°	1	64	128	165	175	161	123	63
89°	0	62	126	163	173	158	121	61
90°	0	61	124	161	170	156	119	59
91°	0	59	123	158	168	154	117	58
92°	0	58	121	156	166	152	115	56
93°	0	56	119	154	164	150	113	55
94°	1	55	117	152	162	148	111	54
95°	1	54	115	150	159	146	109	52
96°	1	53	113	147	158	144	108	51
97°	2	52	111	146	155	142	106	50

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
98°	2	51	109	144	153	139	104	49
99°	3	50	107	141	151	137	103	49
100°	3	49	106	139	149	135	101	48
101°	4	49	104	136	147	133	100	47
102°	4	48	103	134	145	131	98	47
103°	5	47	101	133	143	129	97	46
104°	6	47	100	130	141	128	95	45
105°	6	47	98	129	139	126	94	45
106°	7	46	96	127	136	123	92	45
107°	7	46	95	125	135	122	91	44
108°	7	46	94	123	133	120	90	44
109°	7	45	92	121	131	118	88	44
110°	8	45	91	119	129	117	87	44
111°	9	45	89	118	127	115	86	43
112°	9	45	88	116	125	113	85	43
113°	9	45	87	114	123	111	84	43
114°	10	45	86	113	121	110	82	43
115°	10	45	85	111	119	108	81	43
116°	11	45	83	109	117	107	80	43
117°	11	45	82	107	116	105	79	43
118°	11	45	82	106	114	104	78	43
119°	11	46	81	104	112	102	77	44
120°	11	46	80	103	111	101	77	44
121°	11	46	79	101	109	99	76	44
122°	11	46	78	99	107	98	75	44
123°	12	46	77	98	105	96	74	44
124°	12	47	76	97	104	95	73	45
125°	12	47	75	95	103	94	72	45
126°	12	47	74	94	101	92	72	45
127°	11	47	73	93	99	91	71	45
128°	11	48	73	91	98	90	70	46
129°	11	48	72	90	96	88	70	46
130°	11	48	72	89	95	87	69	46
131°	11	48	71	87	94	86	69	47
132°	12	49	70	86	92	85	68	47
133°	12	49	70	85	91	84	67	47
134°	12	49	69	84	89	83	67	47
135°	12	50	68	83	88	82	66	48
136°	12	50	68	82	87	80	66	48
137°	12	50	68	81	86	80	65	48
138°	12	50	67	80	84	79	65	49
139°	12	51	67	79	83	77	65	49
140°	12	51	66	78	82	77	64	49
141°	12	51	66	76	81	76	64	50
142°	12	52	65	76	80	75	63	50
143°	12	52	65	75	79	74	63	50
144°	12	52	64	74	78	73	63	51
145°	12	53	64	73	77	72	62	51
146°	12	53	64	72	76	71	62	51

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
147°	12	53	63	71	75	71	62	52
148°	12	53	63	70	74	70	61	52
149°	12	53	62	70	73	69	61	52
150°	12	53	62	69	72	68	61	52
151°	13	54	62	68	71	68	60	52
152°	13	53	61	68	70	67	60	53
153°	13	53	61	67	69	66	60	53
154°	13	53	61	66	69	66	60	53
155°	13	53	61	66	68	65	60	53
156°	13	53	60	65	67	64	60	53
157°	13	53	60	64	66	64	59	53
158°	12	52	60	64	66	63	59	52
159°	12	51	60	63	65	63	59	51
160°	12	49	59	63	64	62	59	50
161°	12	49	59	62	64	62	59	47
162°	12	48	59	62	63	61	58	45
163°	11	48	59	61	62	61	58	43
164°	11	48	58	61	62	61	58	40
165°	10	48	57	60	61	60	56	38
166°	10	48	56	60	61	60	51	37
167°	10	46	56	59	60	59	47	35
168°	9	43	54	58	59	59	45	34
169°	9	36	51	57	59	57	41	32
170°	9	28	49	56	57	56	37	29
171°	8	22	49	53	56	53	33	23
172°	8	20	49	50	52	46	32	19
173°	8	18	47	49	49	38	32	18
174°	9	17	39	49	48	32	33	18
175°	9	16	26	48	49	27	26	18
176°	10	15	21	32	41	18	20	17
177°	10	12	19	22	23	15	18	17
178°	10	8	15	19	15	15	17	14
179°	10	6	7	10	6	11	12	9
180°	9	10	10	8	4	6	6	6

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0°	302	302	302	302	302	302	302	302
1°	302	301	302	301	302	302	303	302
2°	301	301	301	302	303	302	303	303
3°	301	301	303	302	303	303	303	302
4°	299	300	302	301	303	303	303	302
5°	300	300	301	301	304	303	303	303
6°	300	299	301	302	303	303	303	303
7°	298	298	301	301	303	303	303	302
8°	297	297	301	300	302	303	303	301
9°	296	297	299	301	302	303	302	300
10°	296	295	299	300	302	303	301	299
11°	294	295	298	299	302	302	301	298
12°	293	294	296	299	301	300	300	298
13°	291	292	296	298	301	300	300	297
14°	289	291	295	297	300	300	299	296
15°	288	289	293	297	300	300	298	294
16°	286	288	293	297	299	299	297	293
17°	284	286	291	295	299	298	295	291
18°	282	285	290	294	298	297	294	291
19°	279	282	288	293	296	295	294	289
20°	277	280	288	292	295	294	291	287
21°	275	279	286	290	295	294	290	285
22°	273	276	284	289	294	292	288	283
23°	271	274	282	288	293	292	286	281
24°	268	272	280	286	291	291	285	278
25°	266	269	278	286	291	290	284	276
26°	263	266	277	284	290	288	282	274
27°	259	264	274	283	289	287	280	272
28°	256	262	273	281	286	285	278	270
29°	253	259	271	280	286	284	276	266
30°	250	256	269	279	285	282	274	264
31°	248	253	266	277	283	281	273	261
32°	244	251	264	275	282	279	270	258
33°	241	247	262	273	281	277	268	255
34°	237	244	259	272	279	276	265	251
35°	234	241	257	270	277	275	263	248
36°	230	238	254	268	276	272	260	245
37°	226	234	252	267	274	271	258	242
38°	222	231	250	265	272	268	256	239
39°	218	228	247	263	271	267	253	235
40°	215	224	244	261	270	265	251	232
41°	211	221	242	259	268	263	248	228
42°	207	218	239	257	267	261	245	225
43°	203	214	237	255	264	259	243	222
44°	199	210	234	253	262	257	240	217
45°	195	206	231	251	261	256	237	214
46°	191	203	228	248	259	253	234	210
47°	186	199	225	247	257	251	232	207
48°	182	195	223	245	255	249	229	202

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
49°	178	191	220	243	253	247	227	198
50°	173	187	217	240	252	244	224	195
51°	169	183	214	238	250	243	221	190
52°	164	179	211	236	247	240	217	187
53°	159	176	208	234	246	238	215	183
54°	156	172	205	232	243	236	212	178
55°	150	168	203	229	242	234	209	175
56°	145	163	200	227	240	232	206	170
57°	140	160	197	225	238	229	203	167
58°	135	156	194	223	236	227	200	163
59°	130	152	191	221	233	225	197	158
60°	126	148	188	219	232	222	195	154
61°	121	144	186	216	230	220	191	150
62°	116	140	183	214	228	218	189	146
63°	111	136	180	212	225	216	186	143
64°	106	132	177	210	224	214	183	138
65°	101	128	175	207	221	212	180	134
66°	97	124	172	204	220	209	177	130
67°	92	121	169	203	217	207	175	127
68°	87	117	166	200	215	204	172	123
69°	82	113	163	198	213	202	169	119
70°	78	110	161	196	211	200	167	115
71°	73	106	158	194	208	198	164	111
72°	68	102	155	192	207	195	161	107
73°	63	99	153	189	204	192	159	104
74°	58	95	151	187	202	191	156	100
75°	53	92	148	185	200	189	154	97
76°	49	89	146	183	198	186	151	94
77°	44	86	143	181	195	184	148	91
78°	40	83	140	179	193	181	146	88
79°	35	80	138	176	191	180	143	85
80°	31	77	135	174	189	177	140	82
81°	27	74	133	172	186	175	138	79
82°	22	72	131	170	184	173	135	76
83°	18	69	129	167	182	170	133	74
84°	15	67	126	165	180	168	131	71
85°	11	65	124	163	178	166	129	69
86°	8	62	122	161	176	164	127	66
87°	5	60	120	159	174	162	124	65
88°	2	59	118	157	171	160	122	63
89°	1	57	116	155	169	158	120	61
90°	0	55	115	152	167	155	118	59
91°	0	54	113	150	165	153	116	57
92°	0	52	110	149	163	151	115	56
93°	0	51	109	146	161	149	113	54
94°	0	50	107	144	158	147	111	53
95°	0	49	105	142	156	145	109	52
96°	1	48	104	140	154	143	107	51
97°	1	47	102	139	152	141	106	50

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
98°	1	46	100	136	150	139	104	49
99°	2	45	99	135	148	137	102	48
100°	3	44	97	133	146	135	101	47
101°	3	44	96	131	144	133	99	46
102°	4	43	95	129	142	131	98	46
103°	5	43	93	127	139	129	96	45
104°	5	42	92	126	137	128	95	45
105°	6	42	91	124	135	126	93	45
106°	6	42	89	122	133	124	92	44
107°	7	42	88	120	132	122	91	44
108°	7	41	87	118	130	121	89	44
109°	7	41	85	117	128	119	88	43
110°	7	41	84	115	126	117	87	43
111°	7	41	83	113	124	115	86	43
112°	7	41	82	112	122	114	85	43
113°	7	41	81	110	120	112	84	43
114°	7	41	80	109	119	110	82	43
115°	7	41	79	107	117	109	81	43
116°	7	41	78	106	115	108	80	43
117°	6	42	77	104	114	106	79	43
118°	6	42	76	103	112	104	78	44
119°	6	42	75	101	110	103	77	44
120°	5	42	75	99	109	101	77	44
121°	5	42	74	98	107	100	76	44
122°	4	43	73	97	106	98	75	44
123°	4	43	72	95	104	97	74	45
124°	3	43	71	94	103	96	73	45
125°	3	43	71	93	101	94	73	45
126°	2	44	70	91	99	93	72	45
127°	2	44	70	90	98	92	71	46
128°	1	44	69	89	97	90	70	46
129°	1	45	68	88	95	89	70	46
130°	1	45	68	86	94	88	69	47
131°	1	45	67	85	92	87	69	47
132°	1	46	67	84	91	86	68	47
133°	1	46	66	83	90	84	68	48
134°	1	46	65	82	89	83	67	48
135°	1	47	65	81	87	82	66	48
136°	1	47	65	80	86	81	66	48
137°	1	47	64	79	85	80	66	49
138°	1	48	64	78	84	79	65	49
139°	2	48	63	77	82	78	65	49
140°	2	48	63	76	81	77	64	50
141°	2	49	63	75	80	76	64	50
142°	2	49	62	74	79	75	63	51
143°	2	49	62	73	78	74	63	51
144°	3	50	62	73	77	73	63	51
145°	3	50	61	72	76	73	62	51
146°	3	50	61	71	75	72	62	52

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
147°	3	51	61	70	74	71	62	52
148°	4	51	60	69	73	70	62	52
149°	4	51	60	68	72	69	61	53
150°	4	52	60	68	71	69	61	53
151°	4	52	60	67	70	68	61	53
152°	4	52	59	66	69	67	60	53
153°	5	52	59	66	69	67	60	54
154°	5	52	59	65	68	66	60	54
155°	5	51	59	64	67	65	60	53
156°	5	52	59	64	66	65	59	53
157°	5	52	59	63	65	64	60	54
158°	6	52	58	63	65	64	59	54
159°	6	51	58	62	64	63	59	54
160°	6	51	58	62	63	62	59	53
161°	6	49	58	61	63	62	59	53
162°	6	48	58	61	62	61	59	53
163°	6	47	58	60	62	61	58	54
164°	6	46	58	60	61	60	58	54
165°	6	45	56	59	61	60	58	53
166°	6	43	50	59	60	60	57	52
167°	6	41	48	59	60	59	57	51
168°	6	39	48	59	59	59	57	48
169°	7	38	44	57	59	58	55	43
170°	7	36	41	57	58	58	55	38
171°	6	32	39	56	57	57	55	30
172°	7	27	37	50	56	55	55	26
173°	7	24	36	44	55	55	53	23
174°	7	23	36	39	55	54	48	21
175°	8	22	34	33	54	52	39	20
176°	8	21	26	28	50	46	28	19
177°	8	20	22	19	34	29	24	19
178°	9	19	21	17	20	24	21	15
179°	9	16	19	16	10	19	16	10
180°	9	10	10	8	4	6	6	6

Zonal Lumen Density Measurement

Deg	Flux (lm)	%
0-5	7.2	0.43
5-10	21.5	1.30
10-15	35.1	2.12
15-20	47.9	2.88
20-25	59.3	3.58
25-30	69.2	4.17
30-35	77.4	4.67
35-40	83.7	5.04
40-45	88.1	5.31
45-50	90.5	5.46
50-55	91.0	5.48
55-60	89.7	5.41
60-65	86.9	5.24
65-70	82.8	4.99
70-75	77.7	4.68
75-80	71.8	4.33
80-85	65.7	3.97
85-90	59.9	3.61
90-95	55.0	3.31
95-100	50.6	3.05
100-105	46.4	2.80
105-110	42.5	2.57
110-115	38.7	2.33
115-120	35.1	2.12
120-125	31.6	1.90
125-130	28.2	1.70
130-135	25.1	1.52
135-140	22.2	1.34
140-145	19.3	1.16
145-150	16.6	1.00
150-155	13.8	0.83
155-160	11.1	0.67
160-165	8.4	0.51
165-170	5.5	0.33
170-175	2.6	0.16
175-180	0.5	0.03

Deg	Flux (lm)	%
0-5	7.2	0.43
0-10	28.7	1.73
0-15	63.8	3.85
0-20	111.6	6.73
0-25	170.9	10.31
0-30	240.2	14.48
0-35	317.6	19.15
0-40	401.2	24.19
0-45	489.3	29.50
0-50	579.8	34.96
0-55	670.7	40.44
0-60	760.5	45.85
0-65	847.4	51.09
0-70	930.2	56.08
0-75	1007.8	60.76
0-80	1079.7	65.09
0-85	1145.4	69.06
0-90	1205.3	72.67
0-95	1260.3	75.98
0-100	1310.9	79.03
0-105	1357.3	81.83
0-110	1399.8	84.40
0-115	1438.6	86.73
0-120	1473.7	88.85
0-125	1505.2	90.75
0-130	1533.5	92.45
0-135	1558.6	93.97
0-140	1580.7	95.31
0-145	1600.1	96.47
0-150	1616.6	97.47
0-155	1630.5	98.30
0-160	1641.6	98.97
0-165	1650.0	99.48
0-170	1655.5	99.81
0-175	1658.1	99.97
0-180	1658.6	100.00

Test Model:T10303(T8-12-48GC-8CCT-HYB)

Test CCT: 3500K (Input Control Signal Applied: 25%)

Test Condition: Method: Integrating Sphere System; Orientation: Downward; Test Voltage: 120.0V 60Hz; Housing: None. Ballast: None.

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
Light Output(lm) △△	1709.9	≥1600	≥1440	Pass
Power(W) △△	11.28	None.	None.	N/A
Total Efficacy(lm/W) △△	151.65	≥120	≥116.4	Pass
CCT(K) △△	3446	3220~3710	No tolerances	Pass
Duv△△	-0.00022	-0.0055~0.0065	No tolerances	Pass
IES R_f△△	85	70	69	Pass
IES R_g△△	96	89	88	Pass
IES Rcs,h1△△	-11%	-12%~23%	-13%~22%	Pass
R_a△△	83.8	≥80	≥79	Pass
R9△△	12	≥0	≥-1	Pass

Test Condition: Method: Integrating THDi、PF Test ; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor△△	0.9706	≥0.9	≥0.87	Pass
120	THDi△△	21.94%	≤20%	≤25%	Pass[i]
277	Power Factor△△	0.9220	≥0.9	≥0.87	Pass
277	THDi△△	19.80%	≤20%	≤25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V5.1.
3. The conclusion is only for information. When determining the compliance of the result, tolerances and/or allowances may be applied to the measured value.

i. +5% tolerance was used to meet the DLC requirements

△△ Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.

[Integrating Sphere System]

Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.0968	11.28	0.9706	1709.9	151.65

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
5.1717	3446	-0.00022	0.4082	0.3916	0.2372	0.5121

Color Rendering Index

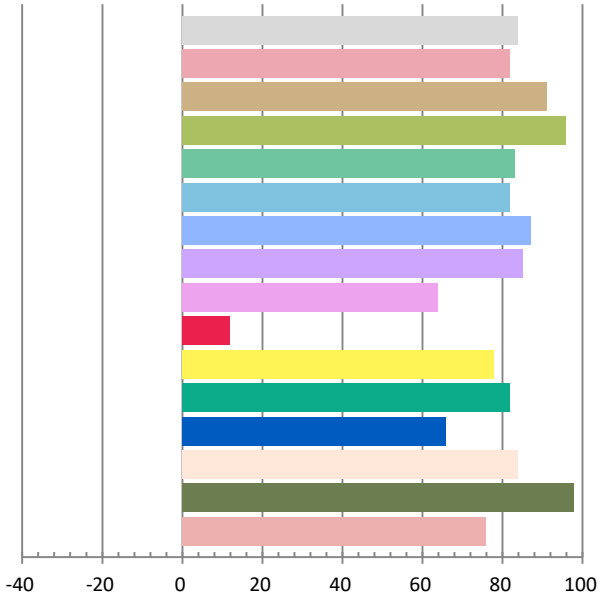
Ra
83.8

R1	R2	R3	R4
82	91	96	83

R5	R6	R7	R8
82	87	85	64

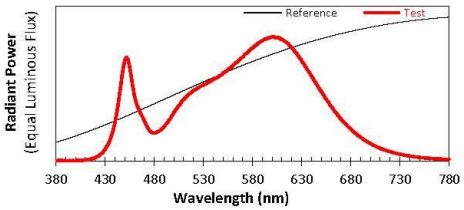
R9	R10	R11	R12
12	78	82	66

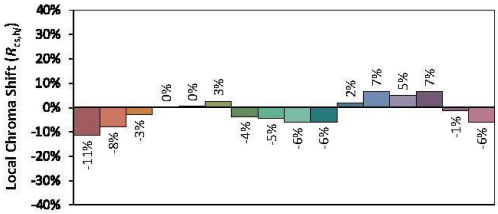
R13	R14	R15
84	98	76

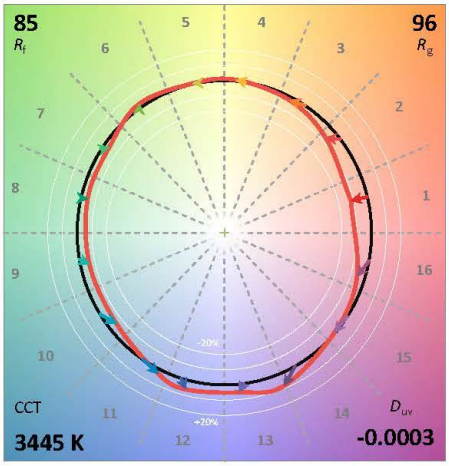


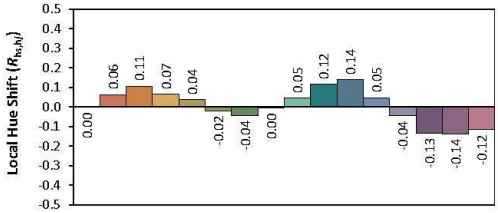
ANSI/IES TM-30-18 Color Rendition Report

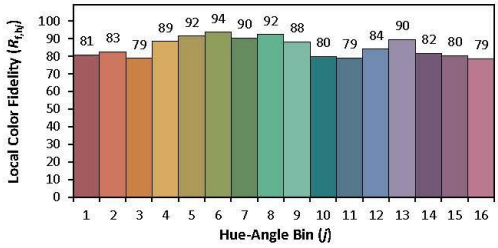
Source:	User SPD	**Manufacturer:**	RAB Lighting INC
Date:	2025/1/2	**Model:**	T10303(T8-12-48GC-8CCT-HYB)

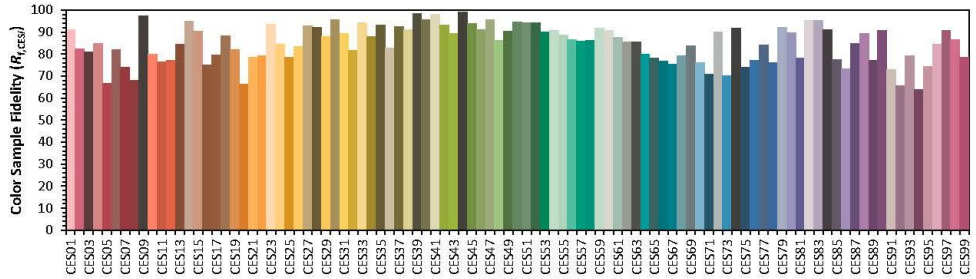












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

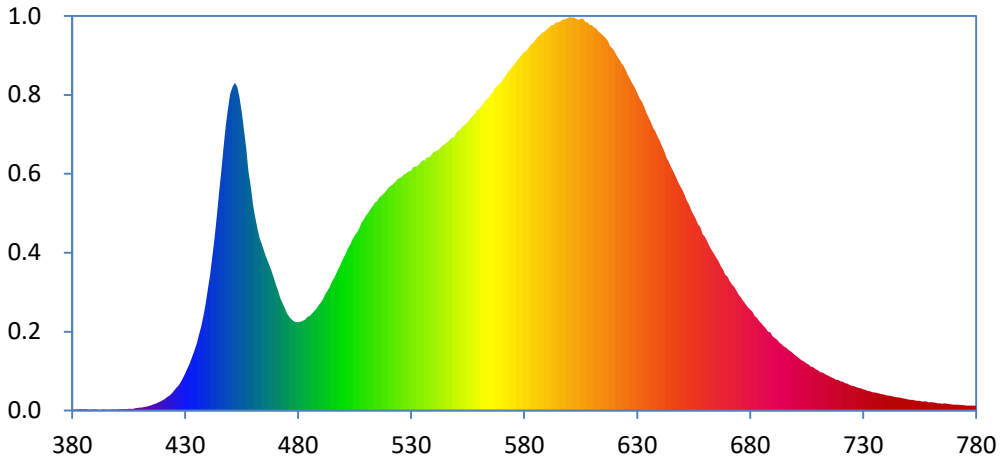
x	0.4082
y	0.3915
u'	0.2372
v'	0.5120

CIE 13.3-1995 (CRI)

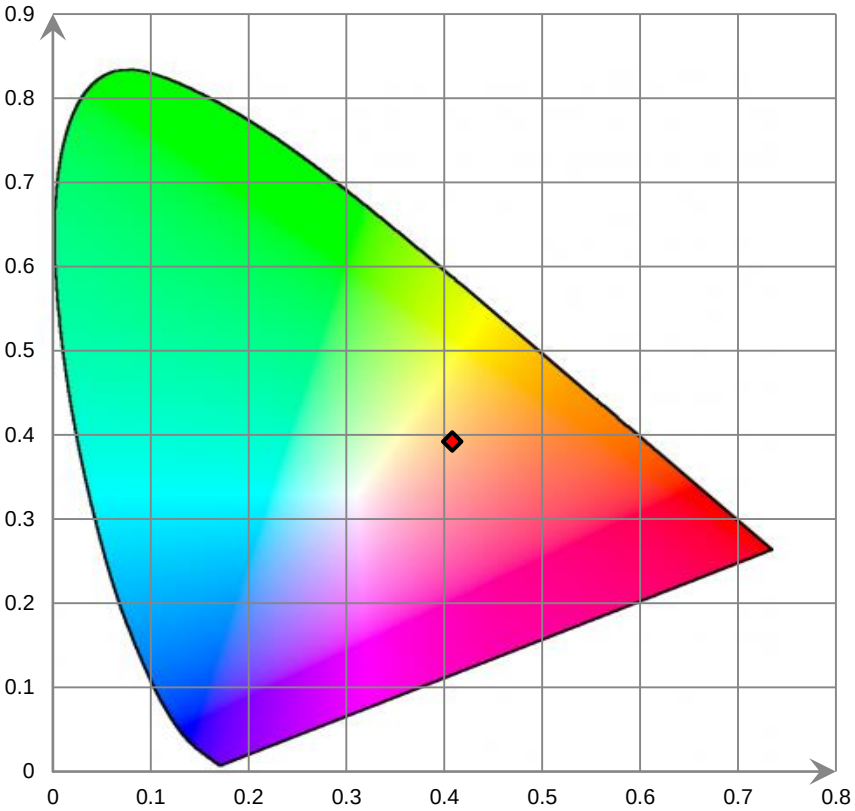
R_a	84
R_9	12

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

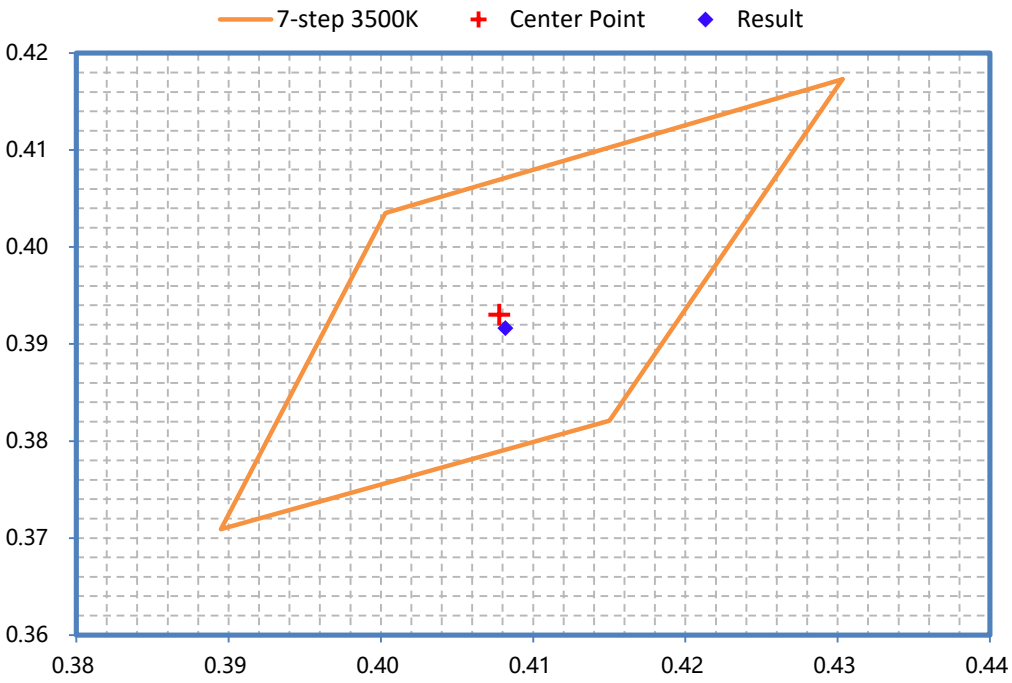
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test Model:T10303(T8-12-48GC-8CCT-HYB)

Test CCT: 4000K (Input Control Signal Applied: 50%)

Test Condition: Method: Integrating Sphere System; Orientation: Downward; Test Voltage: 120.1V 60Hz; Housing: None. Ballast: None.

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
Light Output(lm) △△	1743.6	≥1600	≥1440	Pass
Power(W) △△	11.18	None.	None.	N/A
Total Efficacy(lm/W) △△	156.01	≥120	≥116.4	Pass
CCT(K) △△	3895	3710~4260	No tolerances	Pass
Duv△△	-0.00119	-0.005~0.007	No tolerances	Pass
IES R_f△△	85	70	69	Pass
IES R_g△△	96	89	88	Pass
IES Rcs,h1△△	-11%	-12%~23%	-13%~22%	Pass
R_a△△	85	≥80	≥79	Pass
R_9△△	18	≥0	≥-1	Pass

Test Condition: Method: Integrating THDi、PF Test ; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor△△	0.9714	≥0.9	≥0.87	Pass
120	THDi△△	21.94%	≤20%	≤25%	Pass[i]
277	Power Factor△△	0.9226	≥0.9	≥0.87	Pass
277	THDi△△	19.78%	≤20%	≤25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V5.1.
3. The conclusion is only for information. When determining the compliance of the result, tolerances and/or allowances may be applied to the measured value.

i. +5% tolerance was used to meet the DLC requirements

△△ Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.

[Integrating Sphere System]

Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.1	60	0.0958	11.18	0.9714	1743.6	156.01

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
5.3499	3895	-0.00119	0.3843	0.3766	0.2277	0.5021

Color Rendering Index

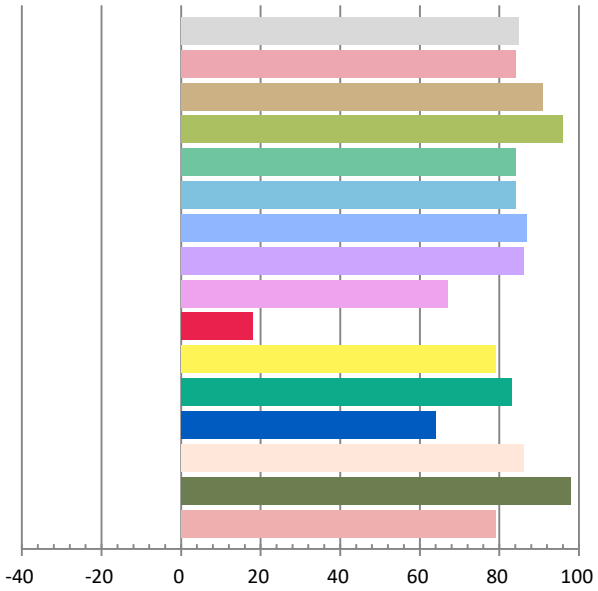
Ra
85.0

R1	R2	R3	R4
84	91	96	84

R5	R6	R7	R8
84	87	86	67

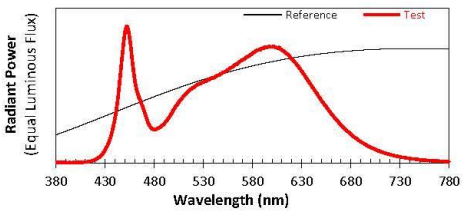
R9	R10	R11	R12
18	79	83	64

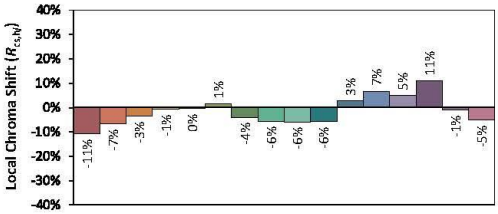
R13	R14	R15
86	98	79

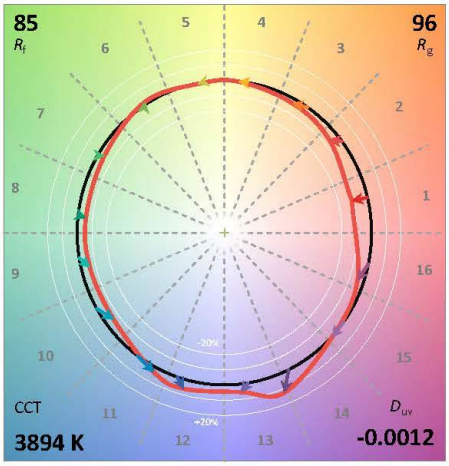


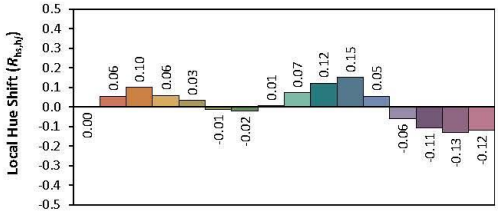
ANSI/IES TM-30-18 Color Rendition Report

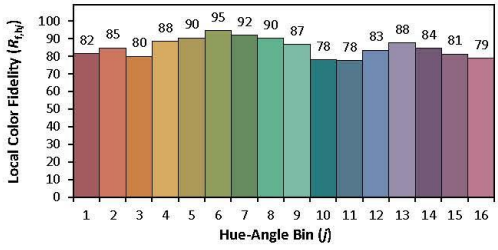
Source:	User SPD	**Manufacturer:**	RAB Lighting INC
Date:	2025/1/2	**Model:**	T10303(T8-12-48GC-8CCT-HYB)

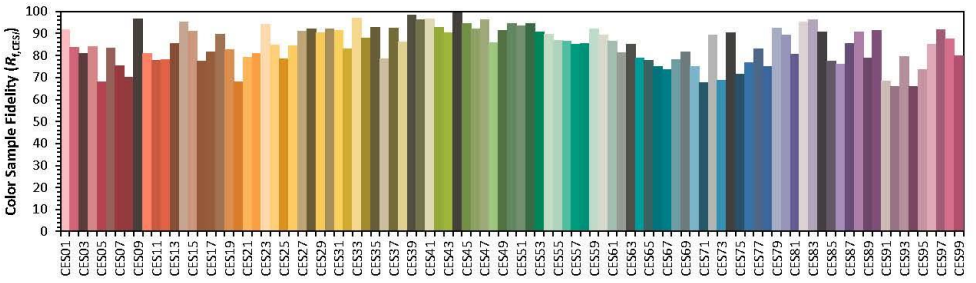












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

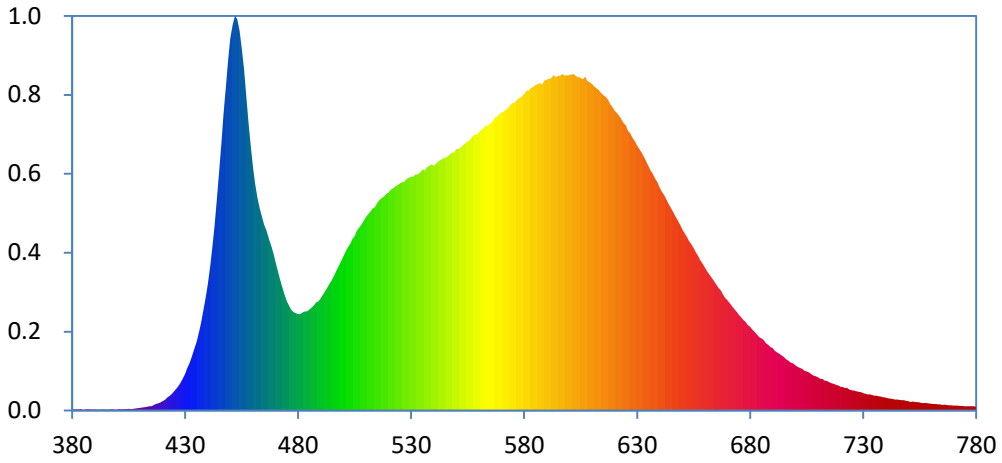
x	0.3843
y	0.3764
u'	0.2278
v'	0.5020

CIE 13.3-1995 (CRI)

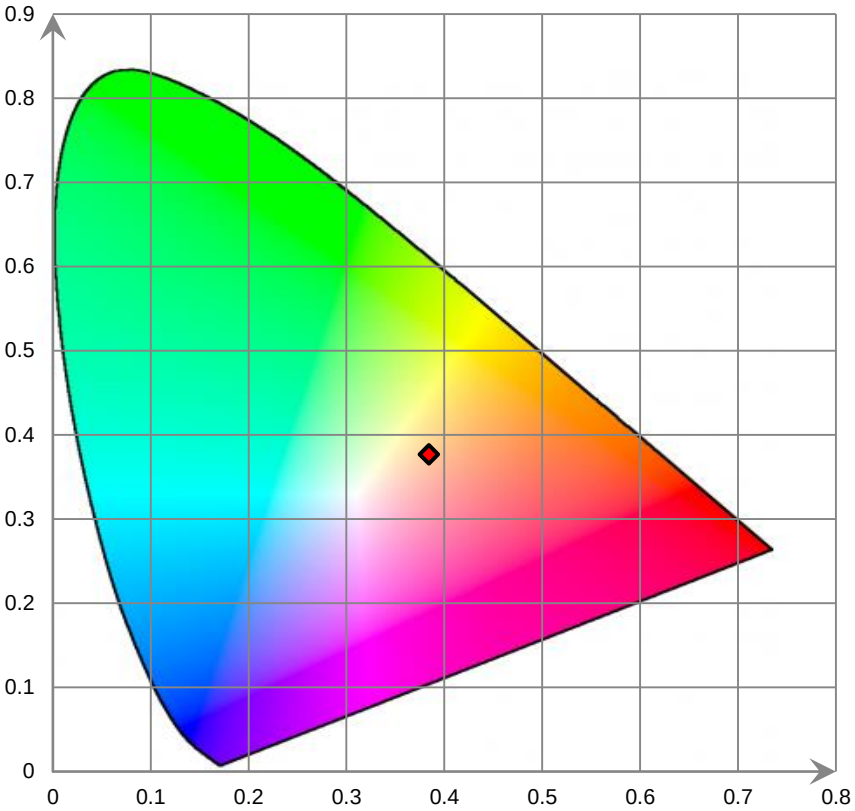
R_a	85
R_9	18

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

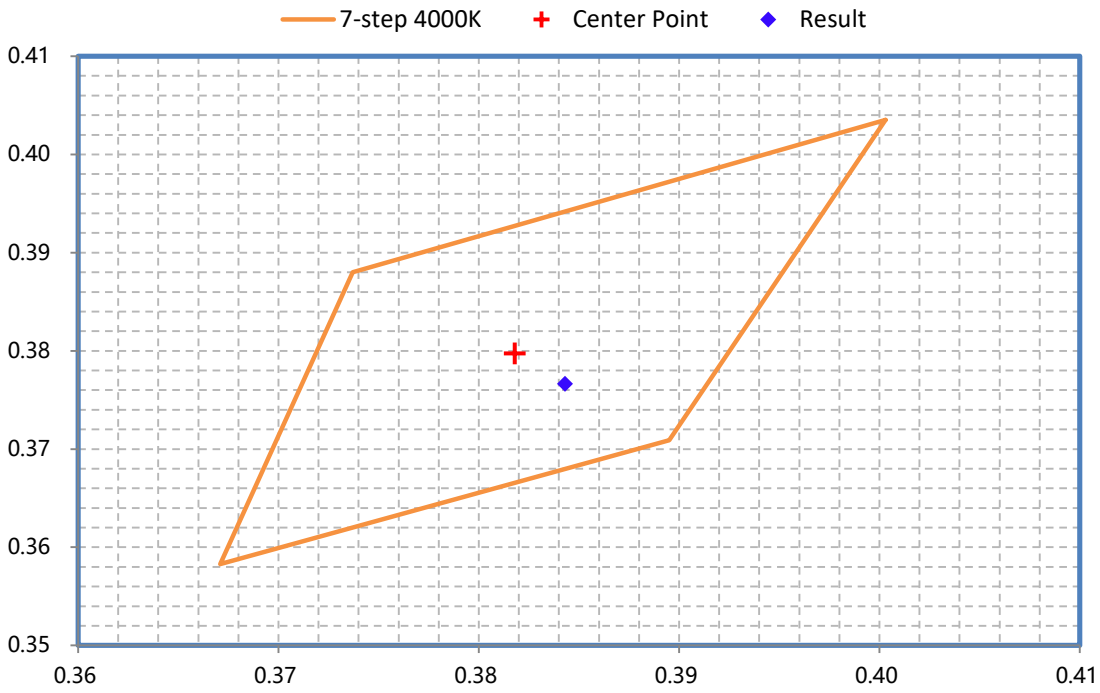
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test Model:T10303(T8-12-48GC-8CCT-HYB)

Test CCT: 5000K (Input Control Signal Applied: 75%)

Test Condition: Method: Integrating Sphere System; Orientation: Downward; Test Voltage: 120.0V 60Hz; Housing: None. Ballast: None.

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
Light Output(lm) △△	1732.7	≥1600	≥1440	Pass
Power(W) △△	11.21	None.	None.	N/A
Total Efficacy(lm/W) △△	154.56	≥120	≥116.4	Pass
CCT(K) △△	5176	4746~5312	No tolerances	Pass
Duv△△	0.000557	-0.004~0.008	No tolerances	Pass
IES R_f△△	84	70	69	Pass
IES R_g△△	96	89	88	Pass
IES Rcs,h1△△	-11%	-12%~23%	-13%~22%	Pass
R_a△△	85.1	≥80	≥79	Pass
R_9△△	18	≥0	≥-1	Pass

Test Condition: Method: Integrating THDi、PF Test ; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor△△	0.9703	≥0.9	≥0.87	Pass
120	THDi△△	22.00%	≤20%	≤25%	Pass[i]
277	Power Factor△△	0.9287	≥0.9	≥0.87	Pass
277	THDi△△	19.77%	≤20%	≤25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V5.1.
3. The conclusion is only for information. When determining the compliance of the result, tolerances and/or allowances may be applied to the measured value.

i. +5% tolerance was used to meet the DLC requirements

△△ Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.

[Integrating Sphere System]

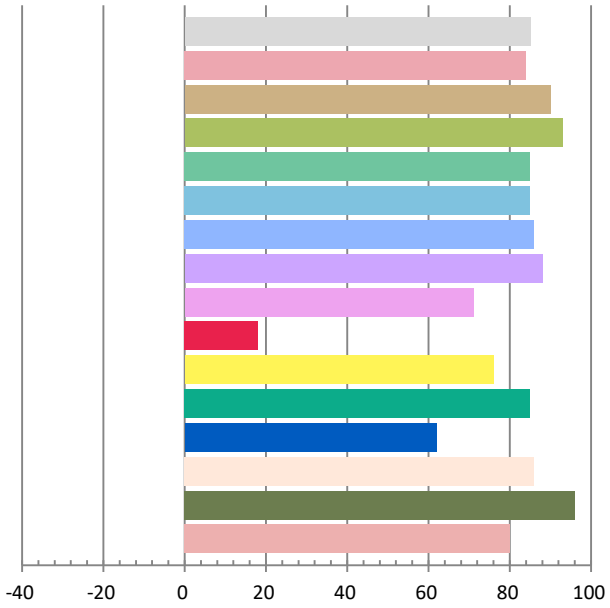
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.0963	11.21	0.9703	1732.7	154.56

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
5.4690	5176	0.00056	0.3404	0.3489	0.2093	0.4827

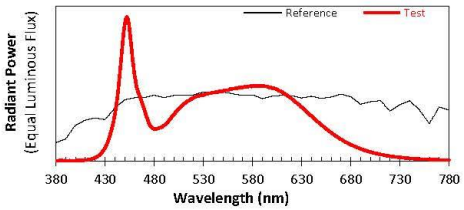
Color Rendering Index

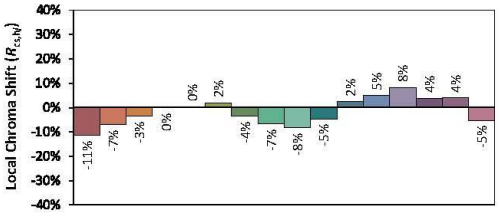
Ra			
85.1			
R1	R2	R3	R4
84	90	93	85
R5	R6	R7	R8
85	86	88	71
R9	R10	R11	R12
18	76	85	62
R13	R14	R15	
86	96	80	

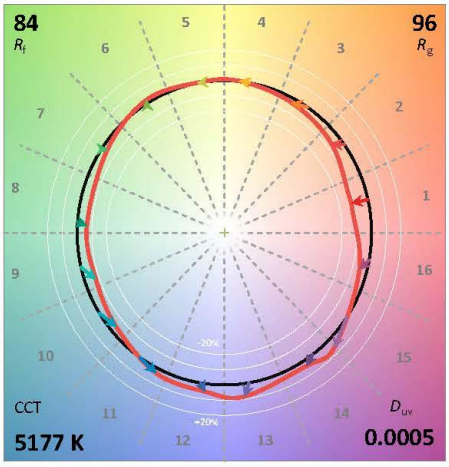


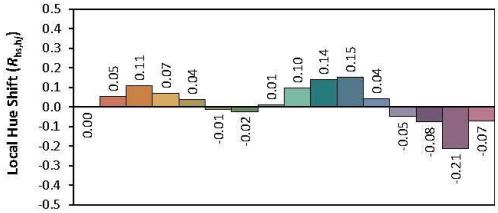
ANSI/IES TM-30-18 Color Rendition Report

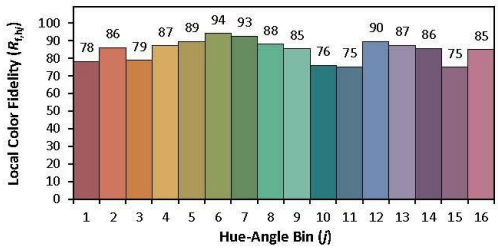
Source:	User SPD	**Manufacturer:**	RAB Lighting INC
Date:	2025/1/2	**Model:**	T10303(T8-12-48GC-8CCT-HYB)

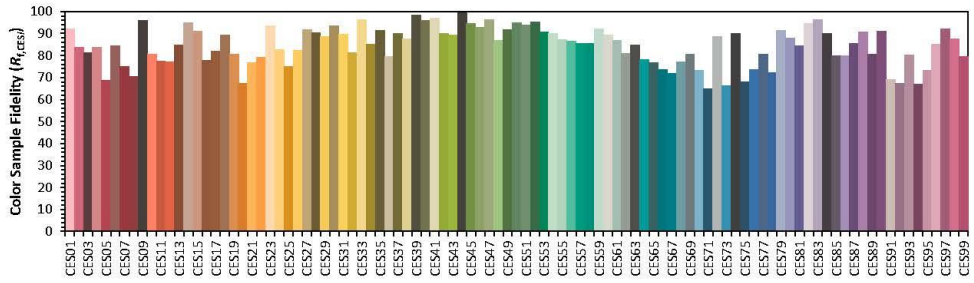












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

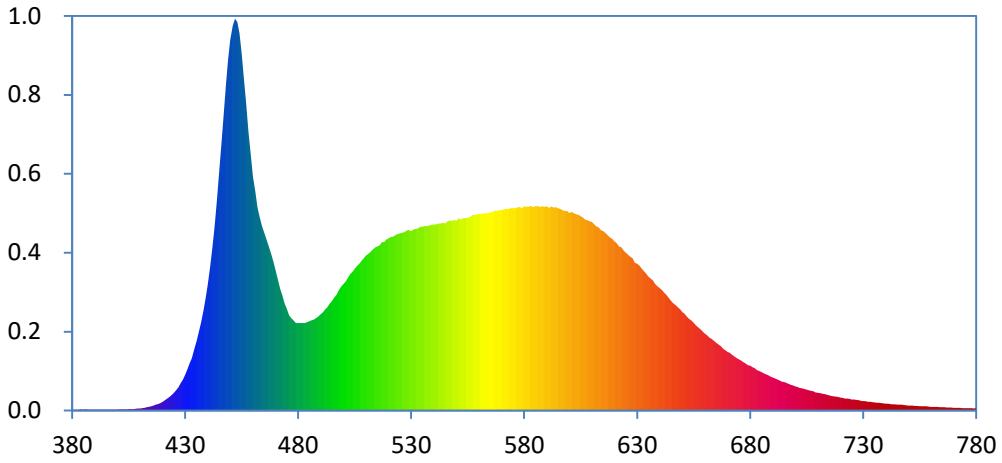
x	0.3404
y	0.3487
u'	0.2093
v'	0.4826

CIE 13.3-1995 (CRI)

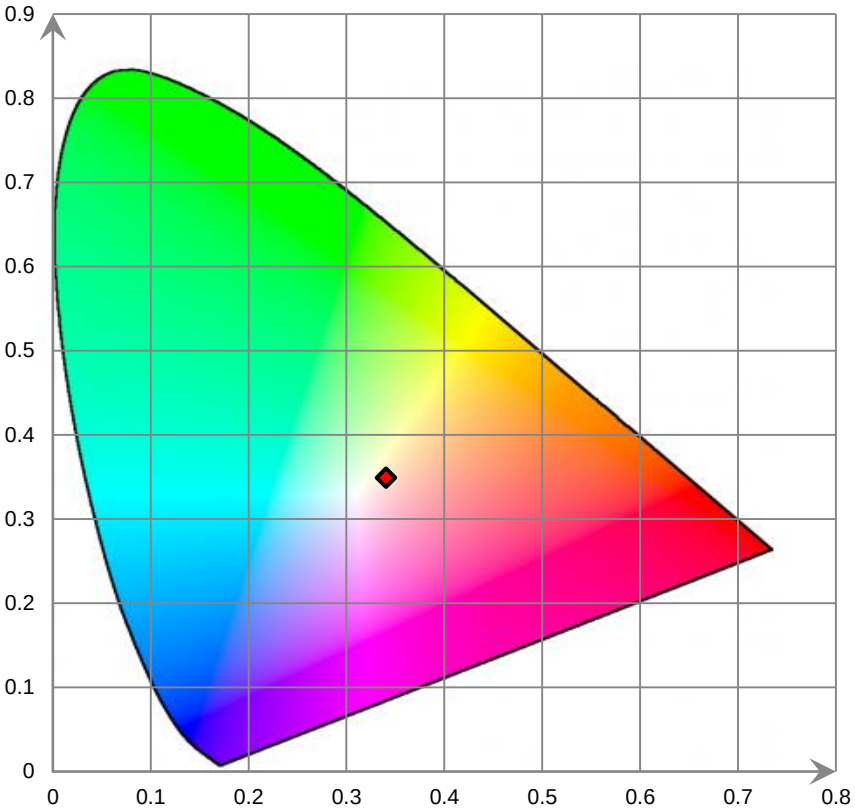
R_a	85
R_9	18

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

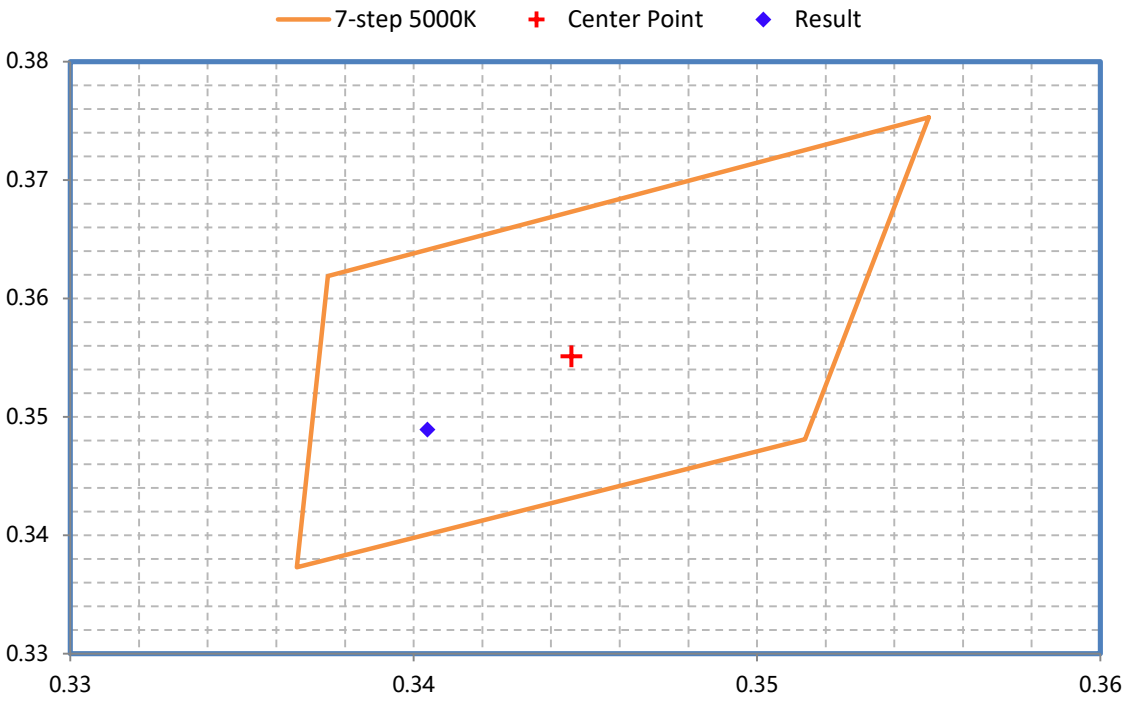
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test Model:T10303(T8-12-48GC-8CCT-HYB)

Test CCT:6500K (Input Control Signal Applied: 100%)

Test Condition: Method: Integrating Sphere System; Orientation: Downward; Test Voltage: 120.1V 60Hz; Housing: None. Ballast: None.

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
Light Output(lm) △△	1666.3	≥1600	≥1440	Pass
Power(W) △△	11.17	None.	None.	N/A
Total Efficacy(lm/W) △△	149.18	≥120	≥116.4	Pass
CCT(K) △△	6530	6022~7042	No tolerances	Pass
Duv△△	0.00477	-0.0029~0.0091	No tolerances	Pass
IES R_f△△	83	70	69	Pass
IES R_g△△	94	89	88	Pass
IES Rcs,h1△△	-13%	-12%~23%	-13%~22%	Pass
R_a△△	83.3	≥80	≥79	Pass
R_9△△	8	≥0	≥-1	Pass

Test Condition: Method: Integrating THDi、PF Test ; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor△△	0.9710	≥0.9	≥0.87	Pass
120	THDi△△	21.98%	≤20%	≤25%	Pass[i]
277	Power Factor△△	0.9226	≥0.9	≥0.87	Pass
277	THDi△△	19.69%	≤20%	≤25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V5.1.
3. The conclusion is only for information. When determining the compliance of the result, tolerances and/or allowances may be applied to the measured value.

i. +5% tolerance was used to meet the DLC requirements

△△ Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.

[Integrating Sphere System]

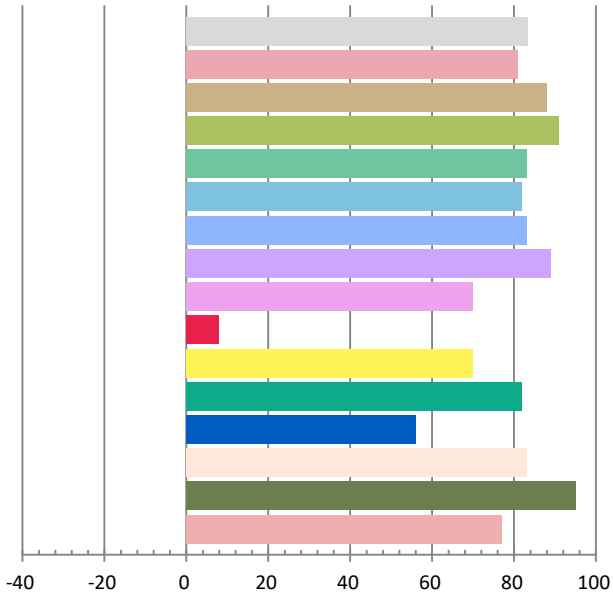
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.1	60	0.0958	11.17	0.971	1666.3	149.18

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
5.3593	6530	0.00477	0.3119	0.3313	0.1964	0.4694

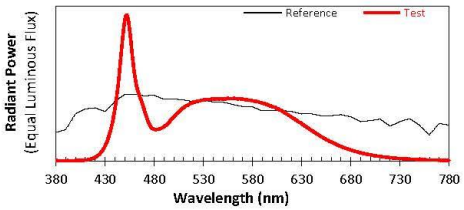
Color Rendering Index

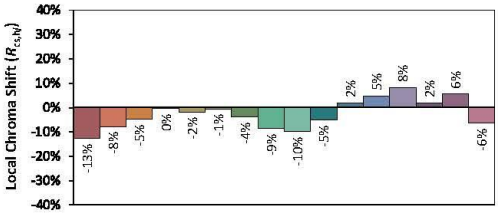
Ra			
83.3			
R1	R2	R3	R4
81	88	91	83
R5	R6	R7	R8
82	83	89	70
R9	R10	R11	R12
8	70	82	56
R13	R14	R15	
83	95	77	

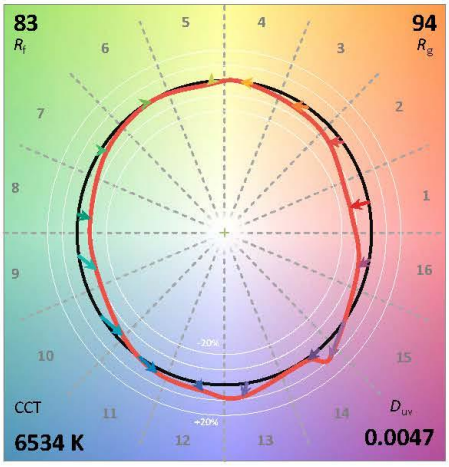


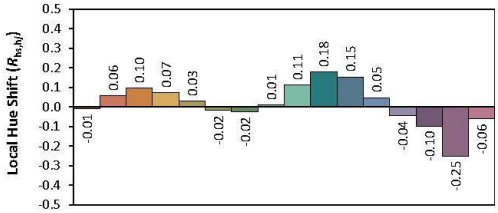
ANSI/IES TM-30-18 Color Rendition Report

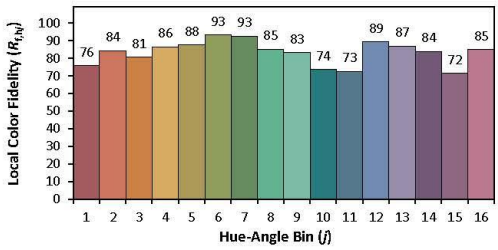
Source:	User SPD	Manufacturer:	RAB Lighting INC
Date:	2025/1/2	Model:	T10303(T8-12-48GC-8CCT-HYB)

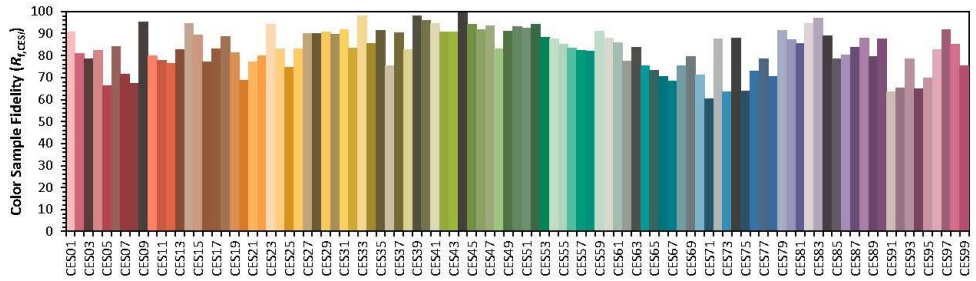












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

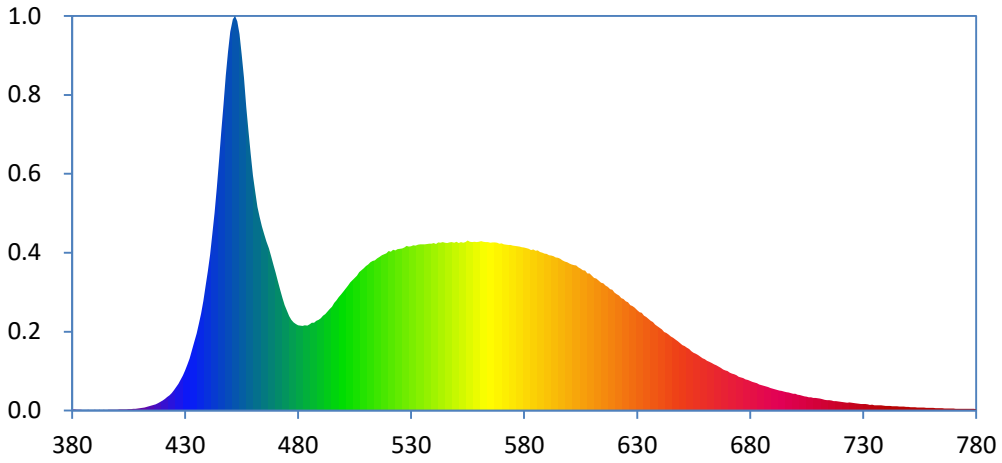
x	0.3118
y	0.3311
u'	0.1964
v'	0.4693

CIE 13.3-1995 (CRI)

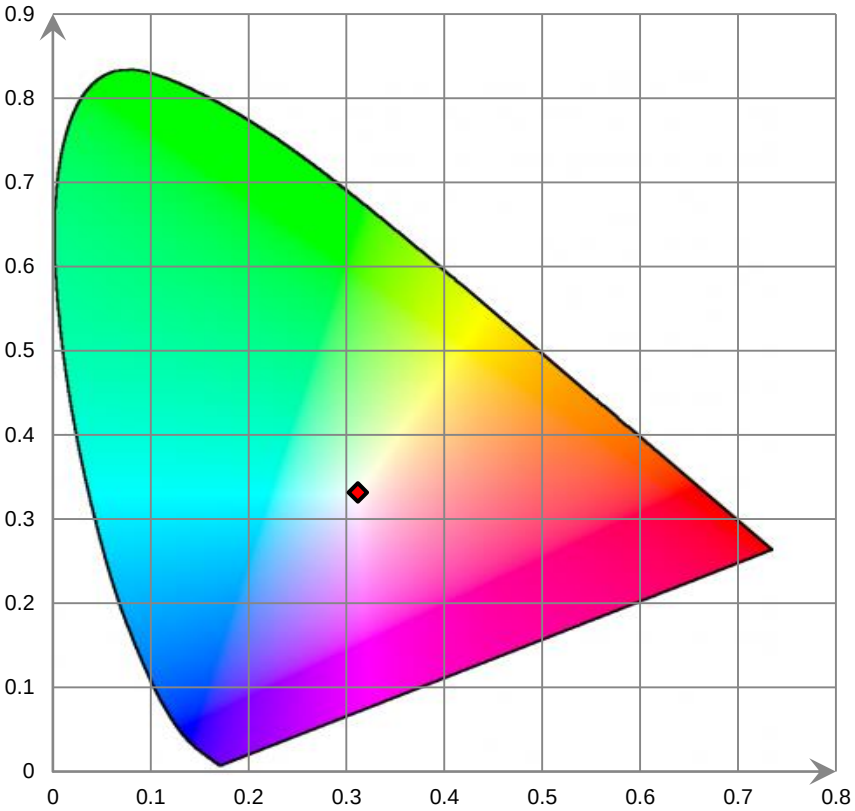
R_a	83
R_9	8

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

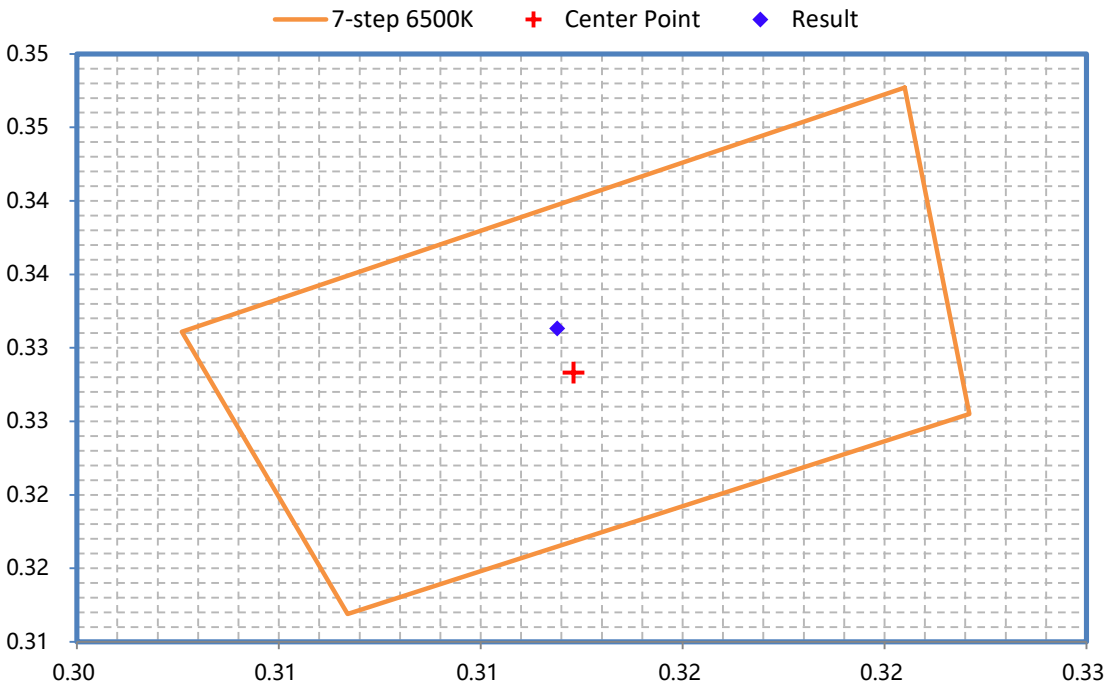
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



6. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
1.5m temperature integrating sphere	SENSING	SPR-600	S09008	2024-07-25	2025-07-24
High-precision rapid spectral analysis system	EVERFINE	HAAS-2000	M112048CA1361125	2024-07-25	2025-07-24
Digital power meter	YOKOGAWA	WT310	13398	2024-07-25	2025-07-24
Digital CC&CV DC Power Supply	EVERFINE	WY5015	11060010	2024-07-25	2025-07-24
thermometer	SENSING	N/A	N/A	2024-07-25	2025-07-24
Standard Light Source	EVERFINE	D204	N/A	2023-05-12	2025-05-11
Precision frequency power supply	ALL Power	APW-105N	970613	2024-07-25	2025-07-24
AC POWER SUPPLY	EVERFINE	VPS1030 PWM	1012017	2024-08-30	2025-08-29
Digital CC&CV DC Power Supply	EVERFINE	WY12010	1009009	2024-08-30	2025-08-29
Digital power meter	YOKOGAWA	WT-210	91J926132	2024-08-30	2025-08-29
full-field speed goniophotometer	EVERFINE	GO-R5000	YG108492N10120001	2024-07-25	2025-07-24
wireless remote thermohygrometer	N/A	AOK-5017B	N/A	2024-09-06	2025-09-05
Standard Light Source	EVERFINE	D908	N/A	2023-05-12	2025-05-11
Multimeter	FLUKE	115C	N/A	2024-07-25	2025-07-24
Hybrid Recorder	YOKOGAWA	DR240	10#	2024-07-25	2025-07-24
AC POWER SUPPLY	HengPu	HPA 1103	0003394	2024-07-25	2025-07-24

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attested that all calibration has been performed using suitable standards traceable to National Primary Standards and International System of Units (SI).

7. Test Method

Product was tested with no seasoning. All stabilization and measurements were made in compliance with ANSI/IES LM-79-19. The product was operated at rated voltage or at voltage required by manufacturer. The ambient temperature of the sample was maintained at 25°C±1.2°C during measurement. And relative humidity is maintained between 10% and 65%.The air flow around the SSL product is less than 0.2m/s.

Integrating Sphere System
The system includes AC power source, digital power meter, DC power supply, Spectroradiometer, and integrating sphere. The integrating sphere system is calibrated by standard spectrum light source before measurement. 4π geometry was used during measurement.

Goniophotometer System
Type C goniophotometer was used for measuring luminous intensity distribution. The vertical angle (γ) test intervals were set no more than 1 degree while data for 1 degree intervals is reported. The horizontal angle (C plane) test intervals were set no more than 22.5 degree.

ISTMT Test
The LED which has the highest temperature was measured at the location of LED case which is specified by LED source manufacturer and detailed by LM-80 report. The drive current of LED package/module/ array was calculated as the total output current of the driver measured by multimeter, divided by the number of branches in parallel of LEDs.

Directions

1. The information marked “superscript #” is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.
2. This report includes some test methods are not in NVLAP accreditation scope marked *.
3. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K=2 with the 95% confidence interval.
6. This report cannot be reproduced except in full, without prior written approval of the Company.
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**********END OF REPORT**********