



UL Solutions
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Photometric Test Report

Relevant Standards
IES LM-79-2019, ANSI C82.77-10-2014, UL 1598-2008
CIE 13.3-1995, CIE 15-2004, ANSI C78.377-2017
IES TM-30-2018

Prepared For
RBW STUDIO LLC

575 Boices Ln
Kingston, NY 12401
United States

Catalog Number
Tidal Large. 2700K. Cream White.

Order Number
15719547
Test Number
15719547.02

Test Date
2025-03-14 - 2025-03-18

Prepared By

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Approved By

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The results contained in this report pertain only to the tested sample.
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Laboratory results may not be representative of field performance
Ballast factors have not been applied

Testing was performed in a 2-meter integrating sphere using the 4π geometry method.

Absorption correction was employed for Sphere measurement

Luminaire Description: Round fixture w/ frosted cover and large round metal cream shade
Lamp: 72 white LED's
Mounting: Surface – Ceiling
Ballast/Driver: ERP PSB

Luminaire



Luminaire Characteristics

Luminous Diameter: 31.00 in.
 Luminous Height: 5.00 in.

Summary of Results

Integrating Sphere

Luminous Flux: 2359 Lumens
 Efficacy: 87.13 lm/w
 CCT: 2672 K
 CRI (Ra): 93.8

Distribution

Total Luminaire Output: 2354 Lumens
 Luminaire Efficacy: 87 lm/w
 Maximum Candela: 494 Candela

Electrical Data at 120 VAC

Test Temperature: 24.5 °C
 Voltage: 120.0 VAC
 Current: 0.2315 A
 Power: 27.07 W
 Power Factor: 0.975
 Frequency: 60 Hz
 Current THD: 14.8 %

In-Situ

LED Temperature: 55.9 °C
 Driver Temperature: 67.6 °C
 Measured LED Current: 0.05730 A

Temperature is offset to an ambient temperature of 25°C as described in UL1598-2008.

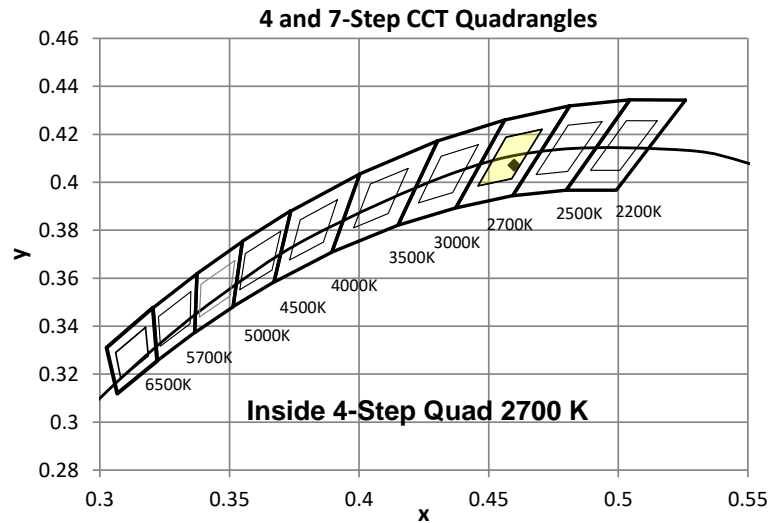
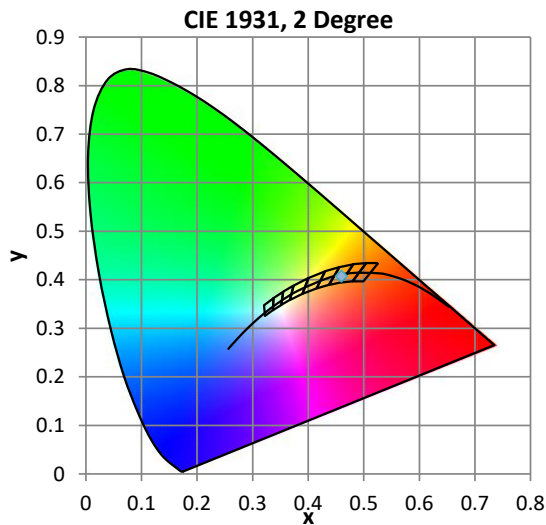
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.5 °C	120.0 VAC	0.2315 A	27.07 W	0.975	60 Hz	14.8 %

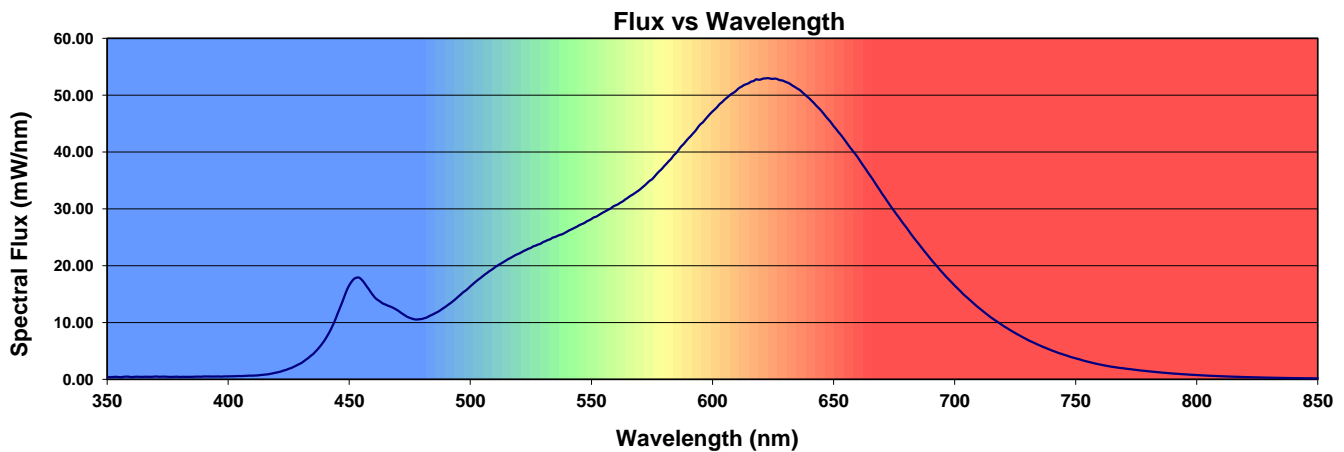
Summary of Results

Total Output:	2359 Lumens	Chromaticity (x):	0.4598
Efficacy:	87.1 lm/w	Chromaticity (y):	0.4071
CCT:	2672 K	Chromaticity (u'):	0.2640
CRI (Ra):	93.8	Chromaticity (v'):	0.5260
CRI (R9):	60.9	TM-30 Rf:	93
Peak Wavelength:	623 nm	TM-30 Rg:	99
Dominant Wavelength:	555 nm	TM-30 Rcs,h1:	-5%
S/P Ratio:	1.3	Duv:	-0.0012
M/P Ratio:	0.5 WELL Building Standard v2		



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
93.8	95.2	98.9	97.8	94.8	95.6	96.8	90.4	81.1	60.9	96.8	97.1	89.6	96.6	99.6	90.4



Distribution - Goniophotometer

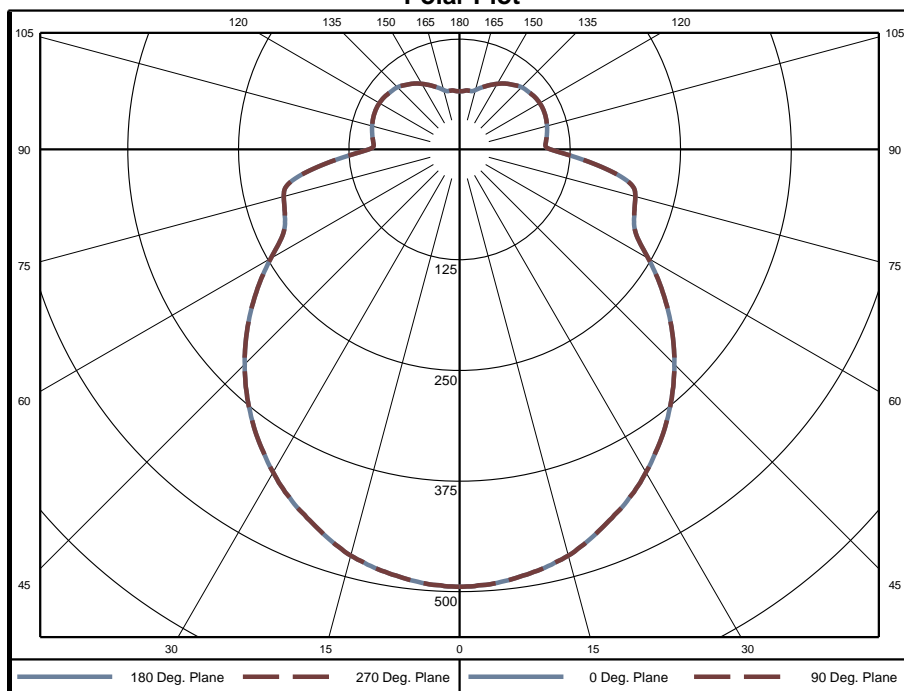
Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.9 °C	120.0 VAC	0.2303 A	27.06 W	0.979	60 Hz	13.7 %

Summary of Results

Spacing Criteria	Total Lumen Output:	2354 Lumens
0-180: 1.27	Luminaire Efficacy:	87.0 lm/w
90-270: 1.27	Maximum Candela:	494 Candela
Corrected UGR (Room Dimension: X=4H, Y=8H, Reflectances: 70/50/20%, S/H: 1)		
Crosswise: 16.2	Endwise: 16.2	

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	11.8	0.5%	60-65	112.5	4.8%	120-125	48.2	2.0%
5-10	34.9	1.5%	65-70	108.4	4.6%	125-130	44.6	1.9%
10-15	57.0	2.4%	70-75	108.7	4.6%	130-135	40.7	1.7%
15-20	77.0	3.3%	75-80	107.3	4.6%	135-140	36.1	1.5%
20-25	94.5	4.0%	80-85	90.5	3.8%	140-145	31.1	1.3%
25-30	109.3	4.6%	85-90	66.4	2.8%	145-150	26.1	1.1%
30-35	120.7	5.1%	90-95	53.8	2.3%	150-155	21.0	0.9%
35-40	128.5	5.5%	95-100	53.9	2.3%	155-160	16.3	0.7%
40-45	132.6	5.6%	100-105	54.3	2.3%	160-165	11.9	0.5%
45-50	132.7	5.6%	105-110	54.0	2.3%	165-170	8.1	0.3%
50-55	129.0	5.5%	110-115	52.9	2.2%	170-175	4.8	0.2%
55-60	121.9	5.2%	115-120	51.0	2.2%	175-180	1.6	0.1%

Zone	Lumens	% of Luminaire
0-40	634	26.9%
0-60	1150	48.8%
0-90	1744	74.1%
90-180	610	25.9%

Candela Tabulation
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	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	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2
	5	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7
	10	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7	484.7
	15	475.2	475.2	475.2	475.2	475.2	475.2	475.2	475.2	475.2	475.2	475.2	475.2	475.2	475.2	475.2
	20	459.2	459.2	459.2	459.2	459.2	459.2	459.2	459.2	459.2	459.2	459.2	459.2	459.2	459.2	459.2
	25	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2
	30	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5	421.5
	35	398.2	398.2	398.2	398.2	398.2	398.2	398.2	398.2	398.2	398.2	398.2	398.2	398.2	398.2	398.2
	40	372.2	372.2	372.2	372.2	372.2	372.2	372.2	372.2	372.2	372.2	372.2	372.2	372.2	372.2	372.2
	45	343.5	343.5	343.5	343.5	343.5	343.5	343.5	343.5	343.5	343.5	343.5	343.5	343.5	343.5	343.5
	50	313.2	313.2	313.2	313.2	313.2	313.2	313.2	313.2	313.2	313.2	313.2	313.2	313.2	313.2	313.2
	55	280.4	280.4	280.4	280.4	280.4	280.4	280.4	280.4	280.4	280.4	280.4	280.4	280.4	280.4	280.4
	60	246.7	246.7	246.7	246.7	246.7	246.7	246.7	246.7	246.7	246.7	246.7	246.7	246.7	246.7	246.7
	65	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4	219.4
	70	210.3	210.3	210.3	210.3	210.3	210.3	210.3	210.3	210.3	210.3	210.3	210.3	210.3	210.3	210.3
	75	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9
	80	188.7	188.7	188.7	188.7	188.7	188.7	188.7	188.7	188.7	188.7	188.7	188.7	188.7	188.7	188.7
	85	142.7	142.7	142.7	142.7	142.7	142.7	142.7	142.7	142.7	142.7	142.7	142.7	142.7	142.7	142.7
	90	103.2	103.2	103.2	103.2	103.2	103.2	103.2	103.2	103.2	103.2	103.2	103.2	103.2	103.2	103.2
	95	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1
	100	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4
	105	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4
	110	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9
	115	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9
	120	104.8	104.8	104.8	104.8	104.8	104.8	104.8	104.8	104.8	104.8	104.8	104.8	104.8	104.8	104.8
	125	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7
	130	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6
	135	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4
	140	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2
	145	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9
	150	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7
	155	80.3	80.3	80.3	80.3	80.3	80.3	80.3	80.3	80.3	80.3	80.3	80.3	80.3	80.3	80.3
	160	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8
	165	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6
	170	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4
	175	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6
	180	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0

Average Luminance (cd/m²)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
	0	45	90	
	0	1015	1015	1015
	45	828	828	828
	55	776	776	776
	65	740	740	740
	75	925	925	925
	85	1005	1005	1005



Coefficients of Utilization - Zonal Cavity Method

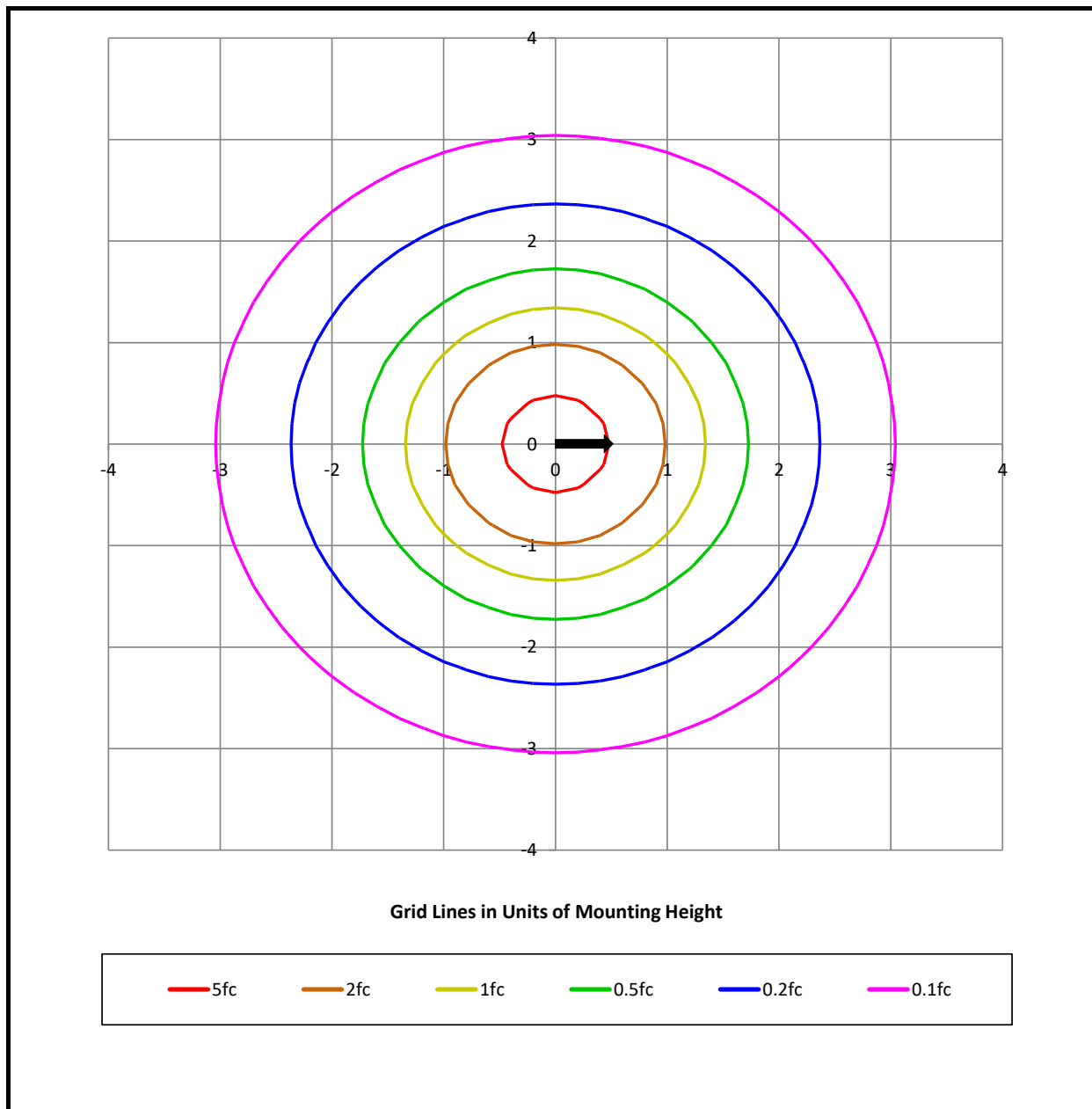
Effective Floor Cavity Reflectance 20%																		
Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as percent of total lumen output delivered to the task surface **																	
0	113	113	113	113	107	107	107	107	97	97	97	87	87	87	78	78	78	74
1	100	94	89	85	95	90	85	81	81	77	73	72	69	67	64	62	60	56
2	90	81	73	67	85	77	70	64	69	63	59	62	57	54	55	52	49	45
3	82	70	62	55	77	67	59	53	60	54	48	54	49	44	48	44	40	37
4	74	62	53	46	70	59	50	44	53	46	41	48	42	37	43	38	34	31
5	68	55	46	39	64	52	44	38	47	40	35	43	37	32	38	33	29	27
6	63	49	40	34	59	47	39	33	43	35	30	38	32	28	35	30	26	23
7	58	45	36	29	55	42	34	28	39	32	27	35	29	25	32	27	23	20
8	54	40	32	26	51	39	31	25	35	28	24	32	26	22	29	24	20	18
9	50	37	29	23	48	35	28	23	32	26	21	29	24	20	27	22	18	16
10	47	34	26	21	45	33	25	20	30	23	19	27	22	18	25	20	17	15

Beam and Field Information	
CIE Type:	Semi-Direct
Center Beam Intensity:	494.2 Candela
Central Cone Intensity:	493 Candela
Beam Flux:	1148.6 Lumens
Beam Angle (0-180):	119.9 Degrees
Beam Angle (90-270):	119.9 Degrees
Field Angle (0-180):	N/A
Field Angle (90-270):	N/A

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		30.9	5.08
6.00		13.7	7.61
8.00		7.72	10.2
10.0		4.94	12.7
12.0		3.43	15.2
14.0		2.52	17.8
16.0		1.93	20.3

ISOFootcandle Plot

Mounting Height - 8 Feet



In-Situ Test

In-Situ Test Conditions

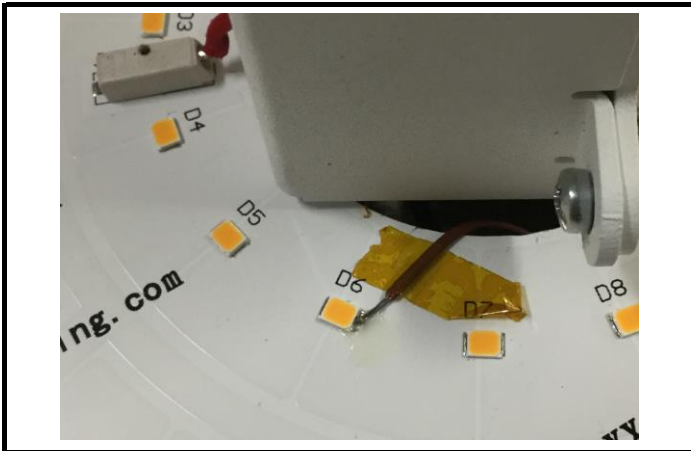
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
22.2 °C	120.0 VAC	N/A	N/A	N/A	60 Hz	N/A

Summary of Results

LED Temperature: 55.9 °C
 Driver Temperature: 67.6 °C
 Measured LED Current: 0.05730 A

Temperatures are offset to an ambient temperature of 25°C as described in UL1598-2008

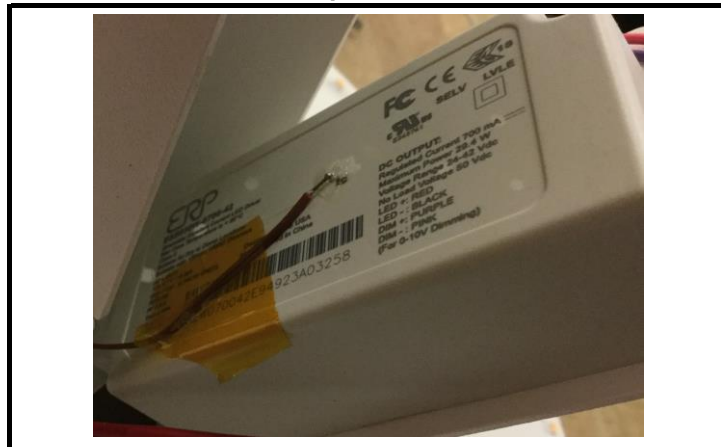
LED Temperature Location



Thermocouple Reference



Driver Temperature Location



ANSI/IES TM-30-18 Color Rendition Report

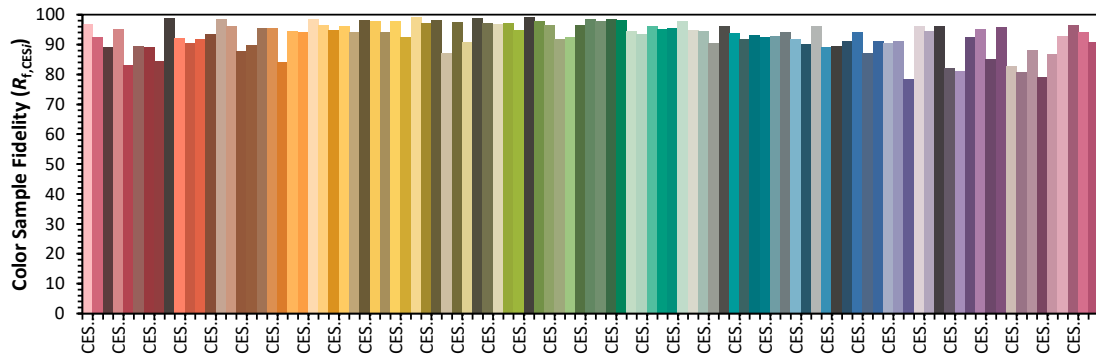
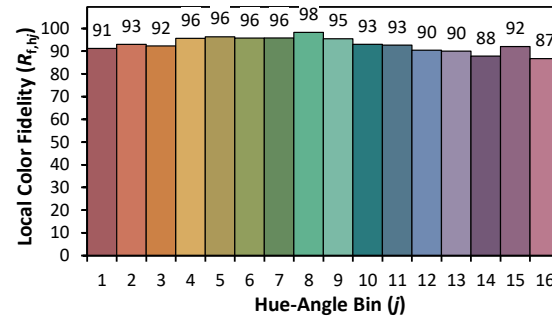
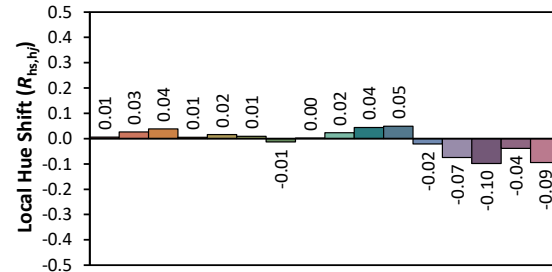
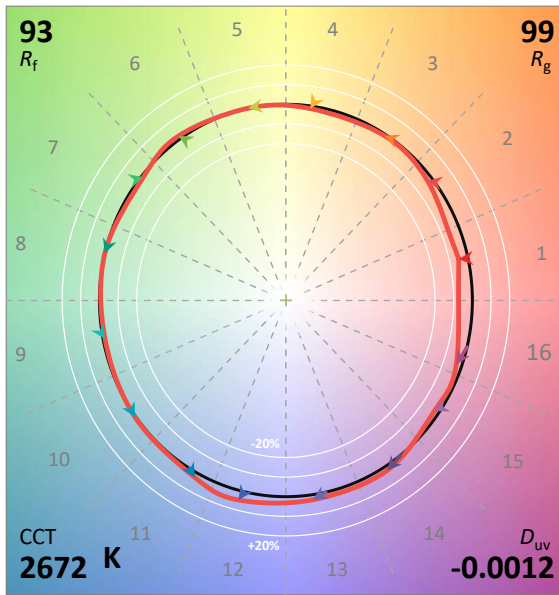
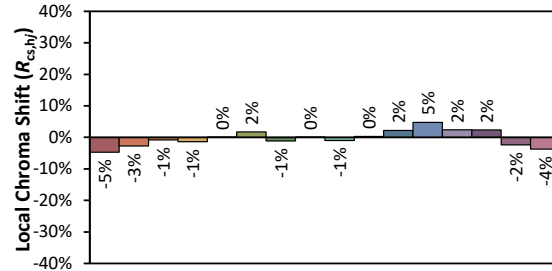
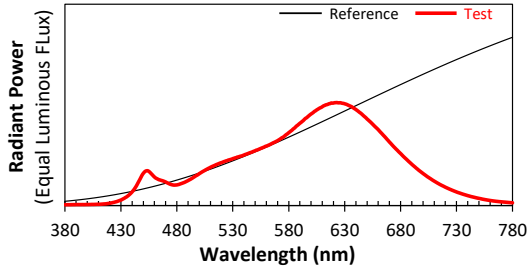
Date: 2025-03-14

Manufacturer:

RBW STUDIO LLC

Model:

Tidal Large. 2700K. Cream White.



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

x 0.4598
 y 0.4071
 u' 0.2640
 v' 0.5260

CIE 13.3-1995
(CRI)

R_a 94

R_g 61

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