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7036 Snowdrift Road  
Allentown, PA 18106  
610-774-1300



## Photometric Test Report

### Relevant Standards

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

### Prepared For

#### **RBW Studio LLC**

Reland Boyle  
67 34th St, Mailbox 5, Unit 6A  
Brooklyn, NY 11232  
United States

### Catalog Number

#### **Print Sconce Large Clear 2700K (500mA)**

Order Number

13802732

Test Number

13802732.04

### Test Date

2021-07-23 - 2021-07-26

Prepared By

Josh Mitchell, Technician

Approved By

Kevin Rodriguez, Project Handler

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  $4\pi$  geometry method.

Absorption correction was employed for Sphere measurement



**Luminaire Description:** Cast aluminum housing, rubber inner lens, frosted glass outer lens enclosure  
**Lamp:** 36 white LEDs  
**Mounting:** Pendant  
**Ballast/Driver:** One ERP ESS030W-0500-42

**Luminaire**



**Luminaire Characteristics**

Luminous Diameter: 16.00 in.  
Luminous Height: 11.25 in.

**Summary of Results**

**Integrating Sphere**

Luminous Flux: 1337 Lumens  
Efficacy: 67.4 lm/w  
CCT: 2593 K  
CRI (Ra): 90.4

**Distribution**

Total Luminaire Output: 1317 Lumens  
Luminaire Efficacy: 66.8 lm/w  
Maximum Candela: 317 Candela

**Electrical Data at 120 VAC**

Test Temperature: 24.9 °C  
Voltage: 120.0 VAC  
Current: 0.1679 A  
Power: 19.84 W  
Power Factor: 0.985  
Frequency: 60 Hz  
Current THD: 13.7 %



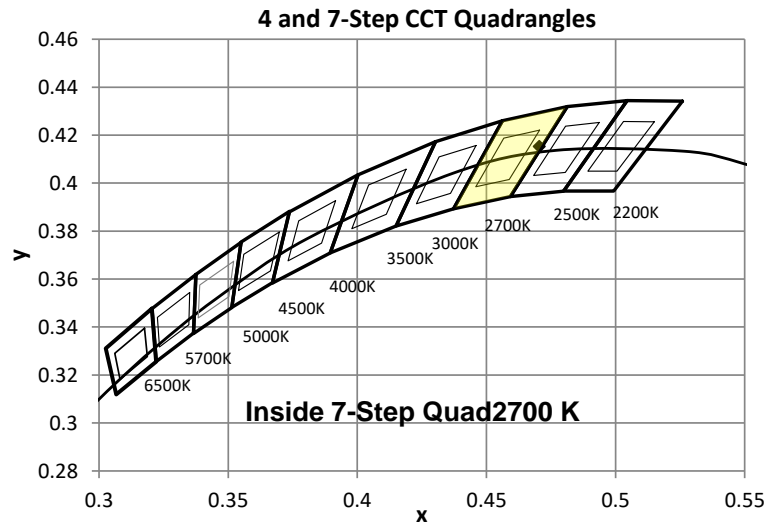
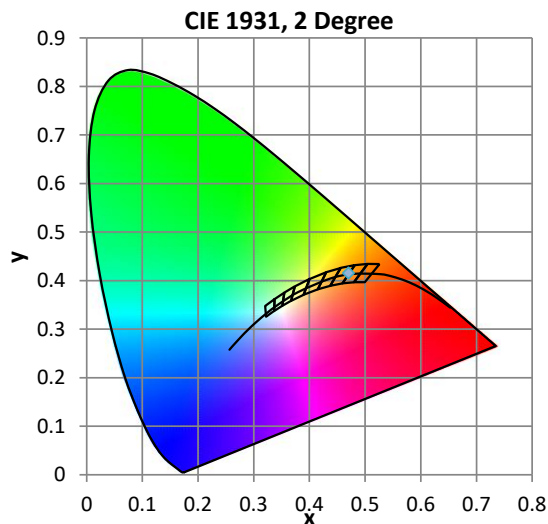
## Color Quality - Integrating Sphere

### Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.9 °C	120.0 VAC	0.1679 A	19.84 W	0.985	60 Hz	13.7 %

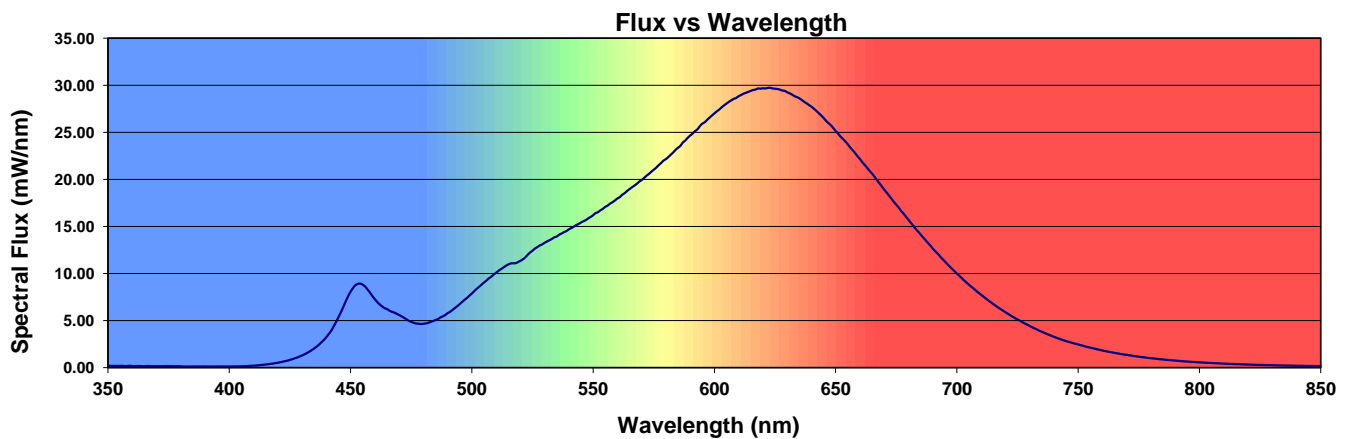
### Summary of Results

Total Output:	1337 Lumens	Chromaticity (x):	0.4704
Efficacy:	67.4 lm/w	Chromaticity (y):	0.4154
CCT:	2593 K	Chromaticity (u'):	0.2671
CRI (Ra):	90.4	Chromaticity (v'):	0.5307
CRI (R9):	48.4	TM-30 Rf:	91
Peak Wavelength:	623 nm	TM-30 Rg:	98
Dominant Wavelength:	585 nm	TM-30 Rcs,h1:	-6%
S/P Ratio:	1.2	Duv:	0.0009
M/P Ratio:	0.44	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
90.4	89.8	95.0	98.7	89.6	89.4	94.6	89.8	76.0	48.4	87.7	90.0	81.6	91.0	98.7	85.1





## Distribution - Goniophotometer

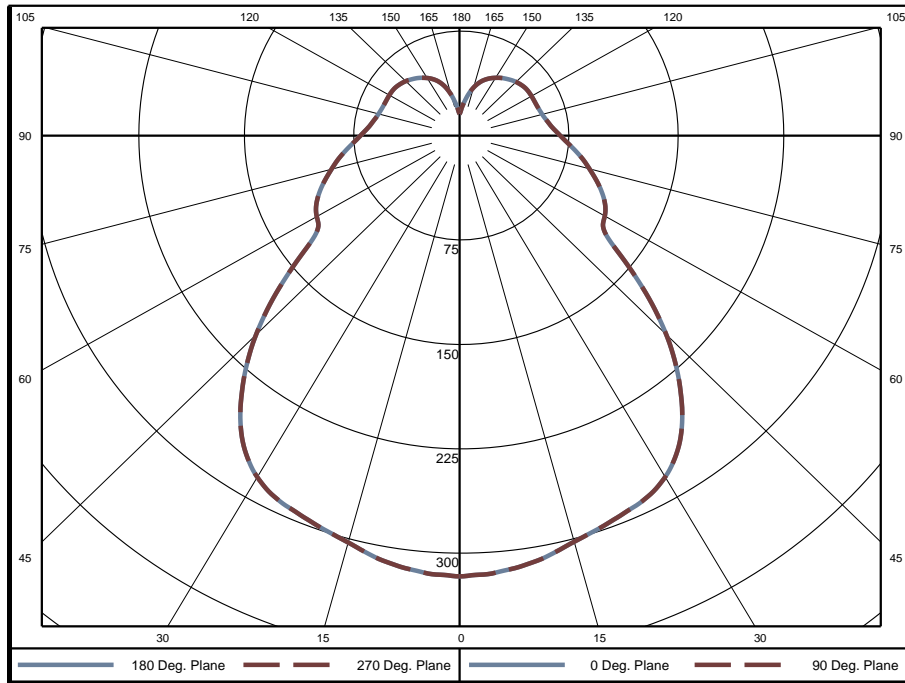
### Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.0 °C	120.0 VAC	0.1669 A	19.72 W	0.985	60 Hz	13.8 %

### Summary of Results

<b>Spacing Criteria</b>	<b>Total Lumen Output:</b>	1317 Lumens
0-180: 1.32	<b>Luminaire Efficacy:</b>	66.8 lm/w
90-270: 1.32	<b>Maximum Candela:</b>	317 Candela
<b>Corrected UGR (Room Dimension: X=4H, Y=8H, Reflectances: 70/50/20%, S/H: 1)</b>		
<b>Crosswise: 14.3</b>	<b>Endwise: 14.3</b>	

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	7.54	0.6%	60-65	54.75	4.2%	120-125	26.31	2.0%
5-10	22.33	1.7%	65-70	53.42	4.1%	125-130	24.58	1.9%
10-15	36.29	2.8%	70-75	50.53	3.8%	130-135	22.38	1.7%
15-20	49.32	3.7%	75-80	47.16	3.6%	135-140	19.90	1.5%
20-25	61.64	4.7%	80-85	43.37	3.3%	140-145	17.24	1.3%
25-30	72.80	5.5%	85-90	39.55	3.0%	145-150	14.52	1.1%
30-35	80.77	6.1%	90-95	36.41	2.8%	150-155	11.78	0.9%
35-40	83.52	6.3%	95-100	33.92	2.6%	155-160	9.04	0.7%
40-45	80.62	6.1%	100-105	31.97	2.4%	160-165	6.32	0.5%
45-50	72.19	5.5%	105-110	30.36	2.3%	165-170	3.79	0.3%
50-55	59.78	4.5%	110-115	28.98	2.2%	170-175	1.77	0.1%
55-60	54.22	4.1%	115-120	27.70	2.1%	175-180	0.45	0.0%

Zone	Lumens	% of Luminaire
0-40	414	31.5%
0-60	681	51.7%
0-90	970	73.6%
90-180	347	26.4%



**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	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6
	5	314.4	314.4	314.4	314.4	314.4	314.4	314.4	314.4	314.4	314.4	314.4	314.4	314.4	314.4	314.4
	10	309.9	309.9	309.9	309.9	309.9	309.9	309.9	309.9	309.9	309.9	309.9	309.9	309.9	309.9	309.9
	15	302.3	302.3	302.3	302.3	302.3	302.3	302.3	302.3	302.3	302.3	302.3	302.3	302.3	302.3	302.3
	20	296.6	296.6	296.6	296.6	296.6	296.6	296.6	296.6	296.6	296.6	296.6	296.6	296.6	296.6	296.6
	25	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6
	30	282.7	282.7	282.7	282.7	282.7	282.7	282.7	282.7	282.7	282.7	282.7	282.7	282.7	282.7	282.7
	35	264.4	264.4	264.4	264.4	264.4	264.4	264.4	264.4	264.4	264.4	264.4	264.4	264.4	264.4	264.4
	40	235.2	235.2	235.2	235.2	235.2	235.2	235.2	235.2	235.2	235.2	235.2	235.2	235.2	235.2	235.2
	45	199.6	199.6	199.6	199.6	199.6	199.6	199.6	199.6	199.6	199.6	199.6	199.6	199.6	199.6	199.6
	50	157.6	157.6	157.6	157.6	157.6	157.6	157.6	157.6	157.6	157.6	157.6	157.6	157.6	157.6	157.6
	55	121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9
	60	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1
	65	109.5	109.5	109.5	109.5	109.5	109.5	109.5	109.5	109.5	109.5	109.5	109.5	109.5	109.5	109.5
	70	101.2	101.2	101.2	101.2	101.2	101.2	101.2	101.2	101.2	101.2	101.2	101.2	101.2	101.2	101.2
	75	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3
80	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0
85	75.8	75.8	75.8	75.8	75.8	75.8	75.8	75.8	75.8	75.8	75.8	75.8	75.8	75.8	75.8	75.8
90	69.1	69.1	69.1	69.1	69.1	69.1	69.1	69.1	69.1	69.1	69.1	69.1	69.1	69.1	69.1	69.1
95	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1
100	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
105	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7
110	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5
115	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0
120	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9
125	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8
130	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
135	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6
140	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7
145	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5
150	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9
155	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9
160	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9
165	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2
170	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1
175	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1
180	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8

**Average Luminance (cd/m<sup>2</sup>)**  
Horizontal Angle (Degrees)

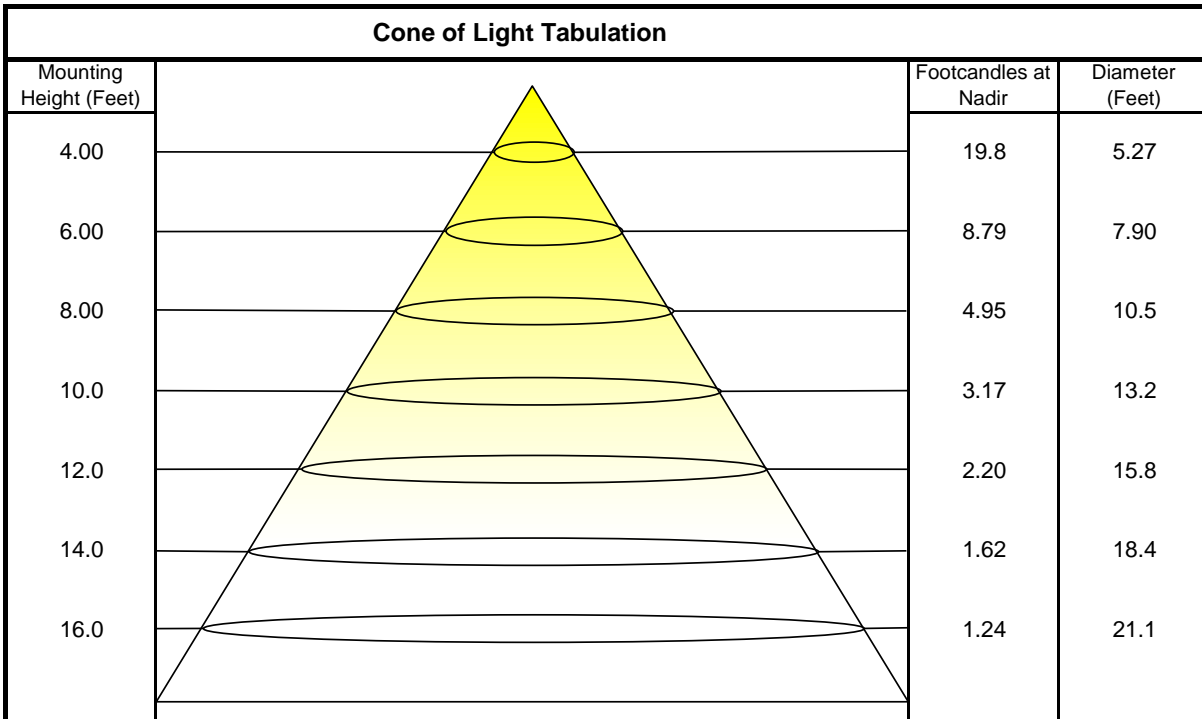
Vertical Angle (Degrees)	0	45	90
	0	2441	2441
	45	1148	1148
	55	719	719
	65	684	684
	75	633	633
	85	597	597



### 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	96	96	96	87	87	87	78	78	78	74
1	101	95	90	86	95	90	86	82	81	78	75	73	70	68	65	63	61	57
2	91	82	75	69	86	78	72	66	70	65	61	63	59	56	57	53	50	47
3	83	72	64	57	78	69	61	55	62	56	51	56	51	47	50	46	43	39
4	76	64	55	48	72	61	53	47	55	48	43	50	44	40	45	40	37	34
5	70	57	48	42	66	54	46	40	49	43	37	45	39	35	40	36	32	29
6	65	51	43	36	61	49	41	35	45	38	33	40	35	30	37	32	28	26
7	60	47	38	32	57	45	37	31	41	34	29	37	31	27	34	29	25	23
8	56	42	34	28	53	41	33	28	37	31	26	34	28	24	31	26	22	20
9	52	39	31	25	49	37	30	25	34	28	23	31	26	22	29	24	20	18
10	49	36	28	23	46	34	27	22	32	25	21	29	24	20	26	22	18	17

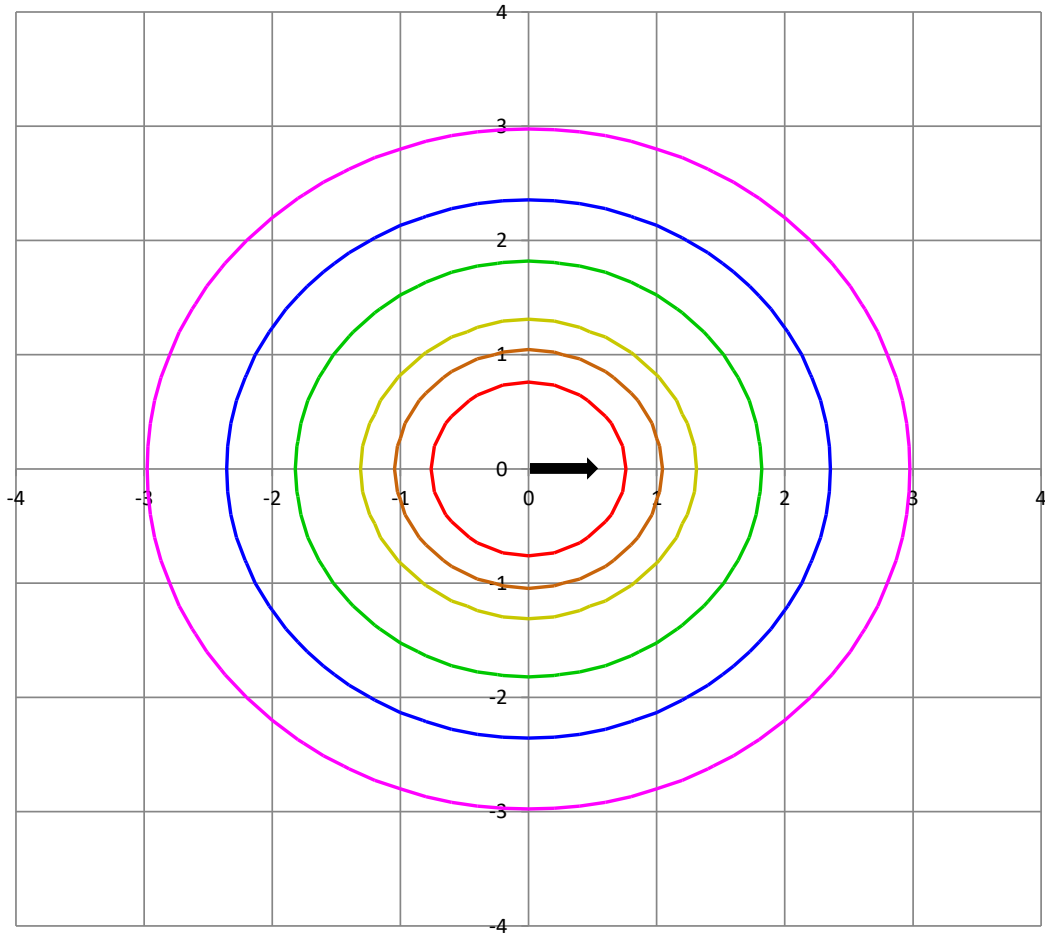
Beam and Field Information	
CIE Type:	Semi-Direct
Center Beam Intensity:	316.6 Candela
Central Cone Intensity:	316 Candela
Beam Flux:	566.3 Lumens
Beam Angle (0-180):	99.8 Degrees
Beam Angle (90-270):	99.8 Degrees
Field Angle (0-180):	335.1 Degrees
Field Angle (90-270):	335.1 Degrees



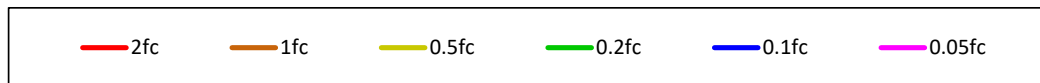


# ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height





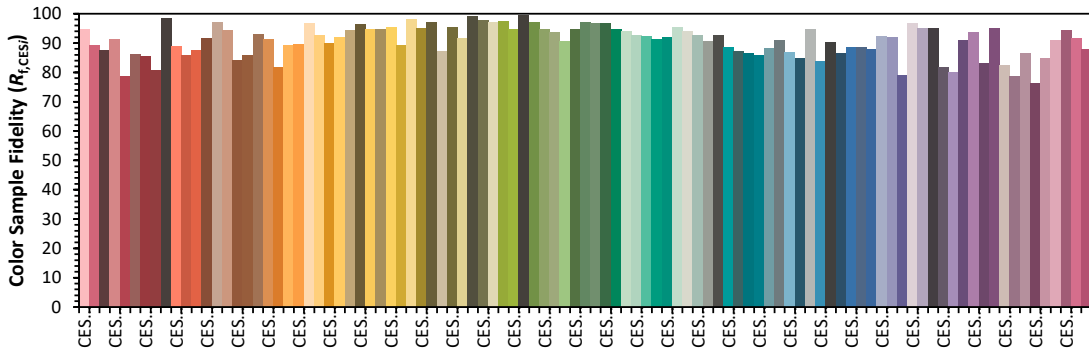
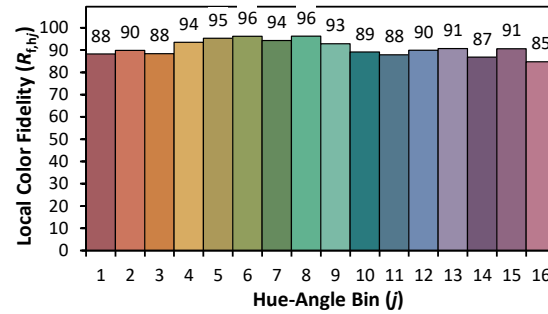
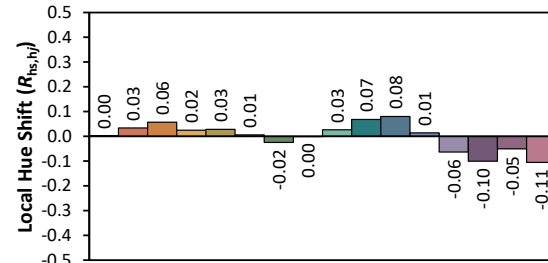
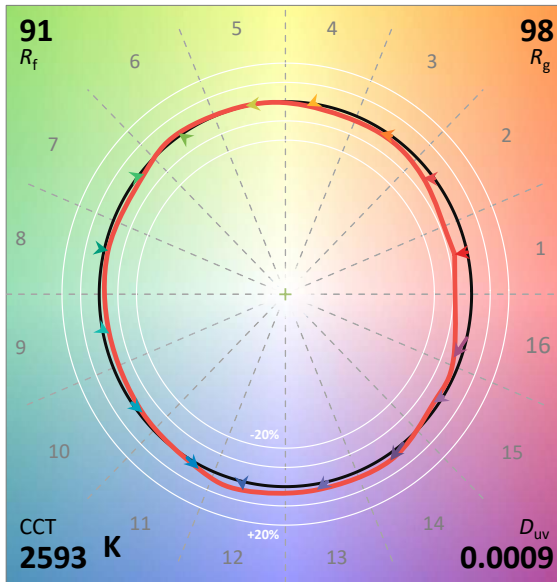
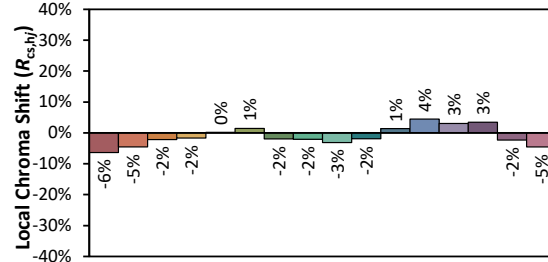
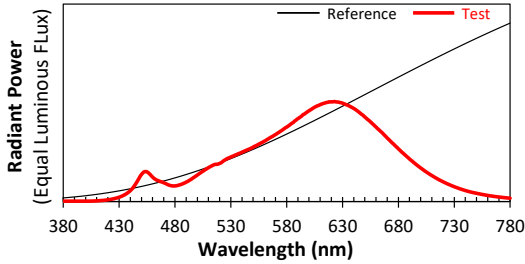
# ANSI/IES TM-30-18 Color Rendition Report

Date: 2021-07-23

Manufacturer: RBW Studio LLC

Model:

Print Sconce Large Clear 2700K (500mA)



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

$x$  0.4704  
 $y$  0.4154  
 $u'$  0.2671  
 $v'$  0.5307

CIE 13.3-1995  
(CRI)

$R_a$  90

$R_g$  48

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