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Photometric Test Report

Relevant Standards

IES LM-79-2008, 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

LDPI Inc

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Catalog Number

LE101-79-5-V1-CP1-S-SM-PD

Order Number

14098088

Test Number

14098088.02

Test Date

2021-12-09 - 2021-12-13

Prepared By

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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 3-meter integrating sphere using the 4π geometry method.

Absorption correction was employed for Sphere measurement



Luminaire Description: Formed steel housing, frosted plastic lens enclosure
Lamp: 176 white LEDs
Mounting: Recessed
Ballast/Driver: One Advance XI075C200V054BST1

Luminaire



Luminaire Characteristics

Luminous Length: 47.00 in.
Luminous Width: 8.000 in.

Summary of Results

Integrating Sphere

Luminous Flux: 9366 Lumens
Efficacy: 129.63 lm/w
CCT: 5165 K
CRI (Ra): 84.7

Distribution

Total Luminaire Output: 8951 Lumens
Luminaire Efficacy: 124 lm/w
Maximum Candela: 3331 Candela

Electrical Data at 120 VAC

Test Temperature: 25.0 °C
Voltage: 120.2 VAC
Current: 0.6030 A
Power: 72.25 W
Power Factor: 0.997
Frequency: 60 Hz
Current THD: 7.11 %

In-Situ

LED Temperature: 47.7 °C
Driver Temperature: 62.3 °C
Measured LED Current: 0.1165 A

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



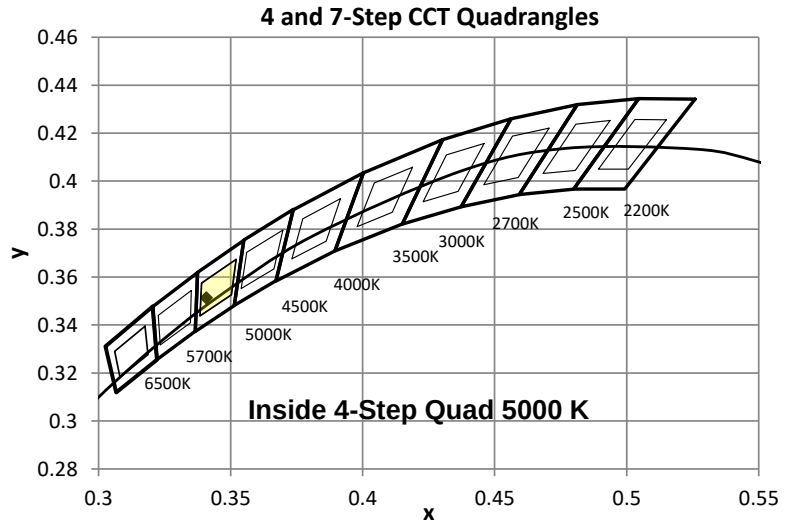
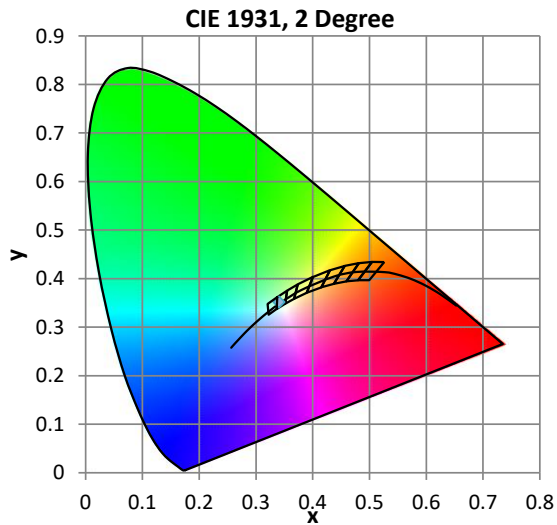
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.0 °C	120.2 VAC	0.6030 A	72.25 W	0.997	60 Hz	7.11 %

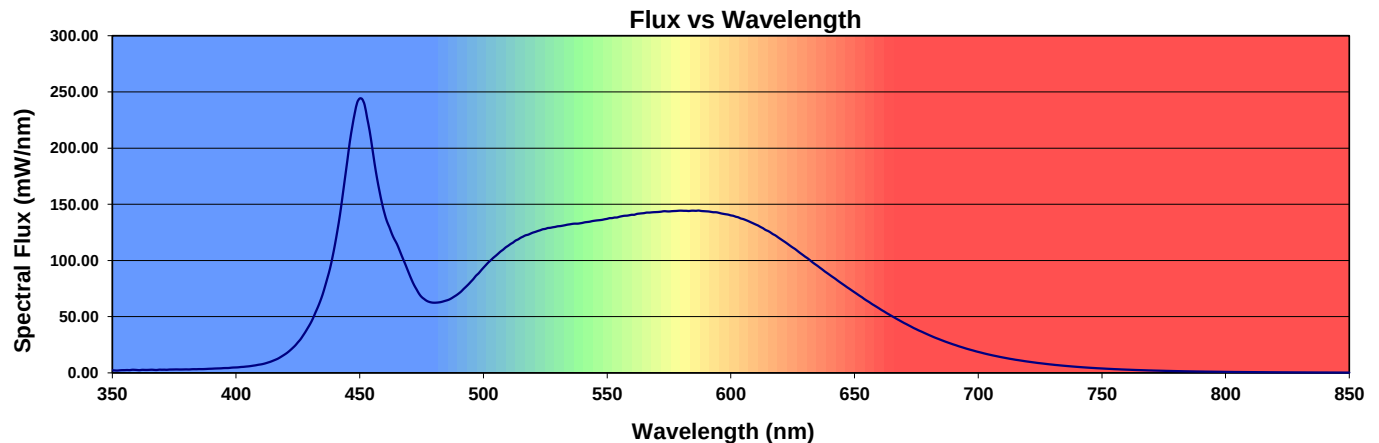
Summary of Results

Total Output:	9366 Lumens	Chromaticity (x):	0.3408
Efficacy:	129.6 lm/w	Chromaticity (y):	0.3514
CCT:	5165 K	Chromaticity (u'):	0.2086
CRI (Ra):	84.7	Chromaticity (v'):	0.4839
CRI (R9):	16.8	TM-30 Rf:	85
Peak Wavelength:	450 nm	TM-30 Rg:	97
Dominant Wavelength:	555 nm	TM-30 Rcs,h1:	-11%
S/P Ratio:	2	Duv:	0.0016
M/P Ratio:	0.85	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
84.7	83.5	88.9	92.3	85.2	84.2	84.5	88.0	70.9	16.8	73.3	85.0	65.3	84.9	95.9	78.4





Distribution - Goniophotometer

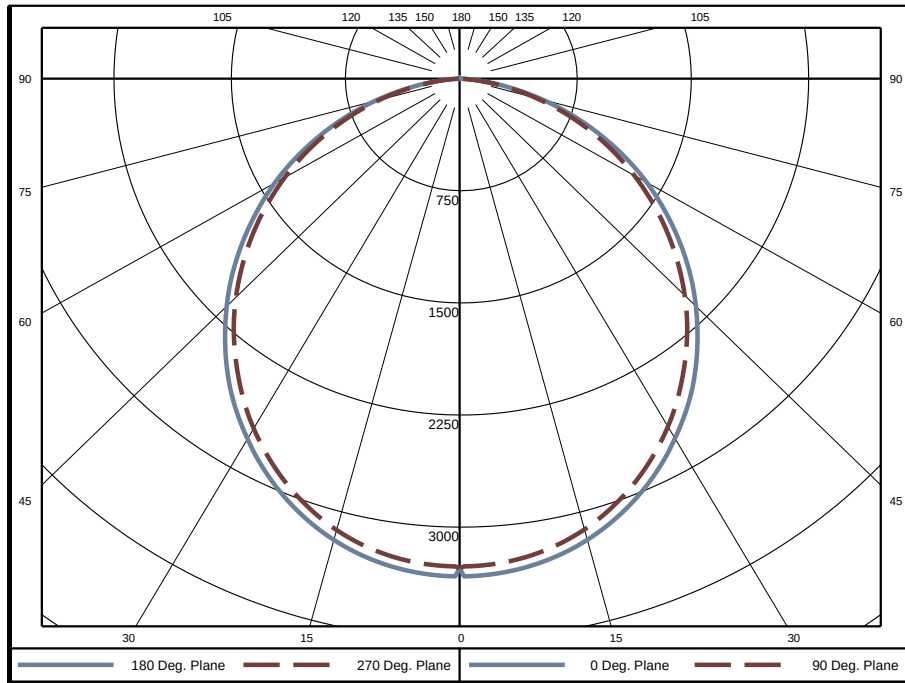
Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.0 °C	120.0 VAC	0.6033 A	72.19 W	0.997	60 Hz	7.13 %

Summary of Results

Spacing Criteria	Total Lumen Output:	8951 Lumens
0-180: 1.26	Luminaire Efficacy:	124.0 lm/w
90-270: 1.22	Maximum Candela:	3331 Candela
Corrected UGR (Room Dimension: X=4H, Y=8H, Reflectances: 70/50/20%, S/H: 1)		
Crosswise: 24.7	Endwise: 24.4	

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	78.2	0.9%	60-65	592.9	6.6%	120-125	0	0.0%
5-10	231.7	2.6%	65-70	481.5	5.4%	125-130	0	0.0%
10-15	376.9	4.2%	70-75	356.7	4.0%	130-135	0	0.0%
15-20	508.1	5.7%	75-80	226.1	2.5%	135-140	0	0.0%
20-25	620.3	6.9%	80-85	104.3	1.2%	140-145	0	0.0%
25-30	709.6	7.9%	85-90	19.8	0.2%	145-150	0	0.0%
30-35	773.7	8.6%	90-95	0	0.0%	150-155	0	0.0%
35-40	810.8	9.1%	95-100	0	0.0%	155-160	0	0.0%
40-45	819.7	9.2%	100-105	0	0.0%	160-165	0	0.0%
45-50	800.6	8.9%	105-110	0	0.0%	165-170	0	0.0%
50-55	754.8	8.4%	110-115	0	0.0%	170-175	0	0.0%
55-60	684.9	7.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	4109	45.9%
0-60	7169	80.1%
0-90	8951	100.0%
90-180	0	0.0%



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	3276	3276	3276	3276	3276	3276	3276	3276	3276	3276	3276	3276	3276	3276	3276
	5	3316	3274	3246	3245	3250	3245	3246	3274	3316	3274	3246	3245	3250	3245	3246
	10	3271	3228	3199	3198	3204	3198	3199	3228	3271	3228	3199	3198	3204	3198	3199
	15	3194	3151	3122	3119	3123	3119	3122	3151	3194	3151	3122	3119	3123	3119	3122
	20	3086	3043	3012	3005	3008	3005	3012	3043	3086	3043	3012	3005	3008	3005	3012
	25	2948	2905	2872	2864	2864	2864	2872	2905	2948	2905	2872	2864	2864	2864	2872
	30	2783	2743	2707	2695	2695	2695	2707	2743	2783	2743	2707	2695	2695	2695	2707
	35	2600	2558	2522	2505	2500	2505	2522	2558	2600	2558	2522	2505	2500	2505	2522
	40	2390	2353	2316	2297	2290	2297	2316	2353	2390	2353	2316	2297	2290	2297	2316
	45	2162	2128	2092	2072	2065	2072	2092	2128	2162	2128	2092	2072	2065	2072	2092
	50	1921	1889	1853	1832	1823	1832	1853	1889	1921	1889	1853	1832	1823	1832	1853
	55	1665	1641	1604	1582	1573	1582	1604	1641	1665	1641	1604	1582	1573	1582	1604
	60	1405	1380	1347	1325	1315	1325	1347	1380	1405	1380	1347	1325	1315	1325	1347
	65	1129	1112	1082	1062	1054	1062	1082	1112	1129	1112	1082	1062	1054	1062	1082
	70	850	836	814	797	789	797	814	836	850	836	814	797	789	797	814
	75	575	565	548	537	530	537	548	565	575	565	548	537	530	537	548
	80	312	308	299	292	289	292	299	308	312	308	299	292	289	292	299
	85	100	98	97	95	92	95	97	98	100	98	97	95	92	95	97
	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	13510	13510
	45	12610	12200
	55	11970	11530
	65	11020	10550
	75	9151	8735
	85	4741	4588



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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	78	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	51
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	35	29	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

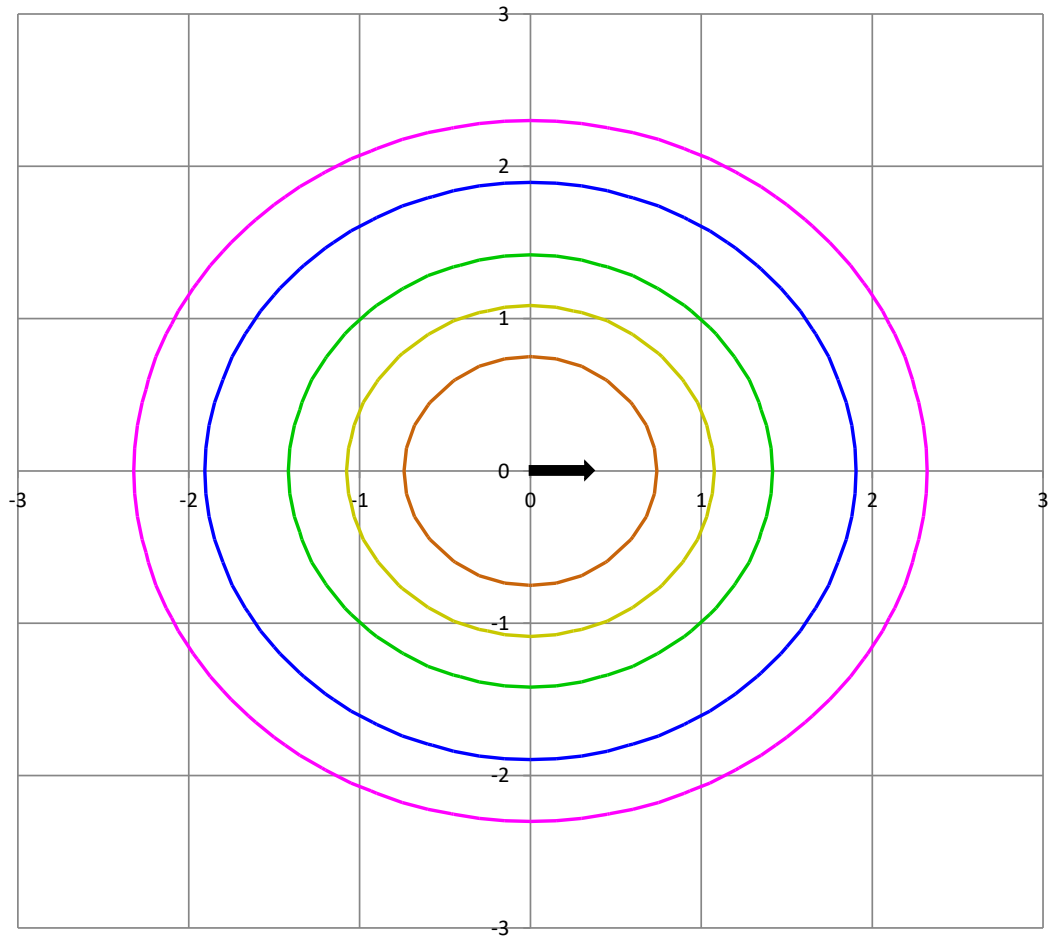
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	3276 Candela
Central Cone Intensity:	3271 Candela
Beam Flux:	6408.8 Lumens
Beam Angle (0-180):	111.0 Degrees
Beam Angle (90-270):	107.4 Degrees
Field Angle (0-180):	159.4 Degrees
Field Angle (90-270):	158.3 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		205	4.94
6.00		91.0	7.41
8.00		51.2	9.88
10.0		32.8	12.4
12.0		22.8	14.8
14.0		16.7	17.3
16.0		12.8	19.8

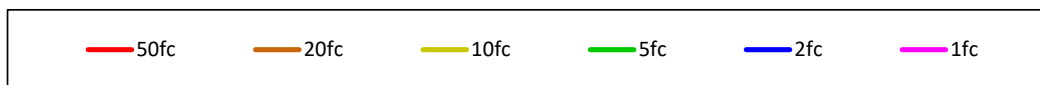


ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height





In-Situ Test

In-Situ Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
23.4 °C	120.0 VAC	N/A	N/A	N/A	60 Hz	N/A

Summary of Results

LED Temperature: 47.7 °C
Driver Temperature: 62.3 °C
Measured LED Current: 0.1165 A

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

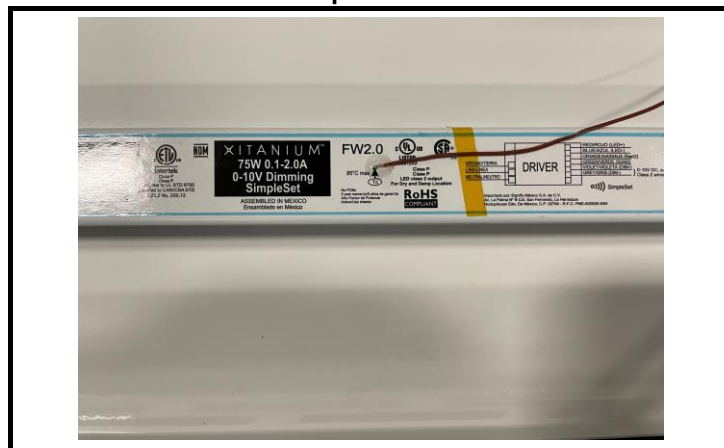
LED Temperature Location



Thermocouple Reference



Driver Temperature Location



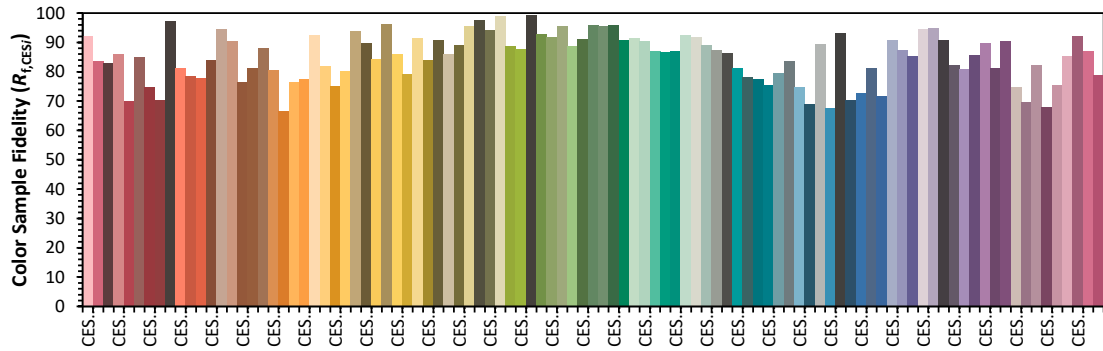
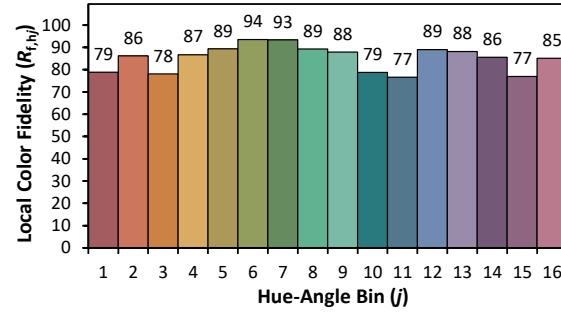
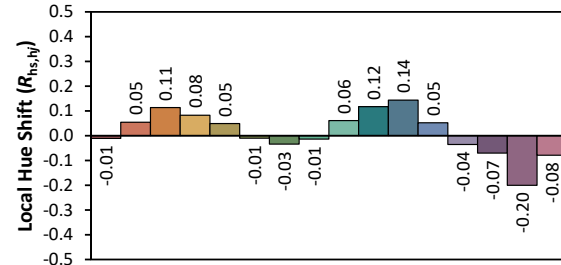
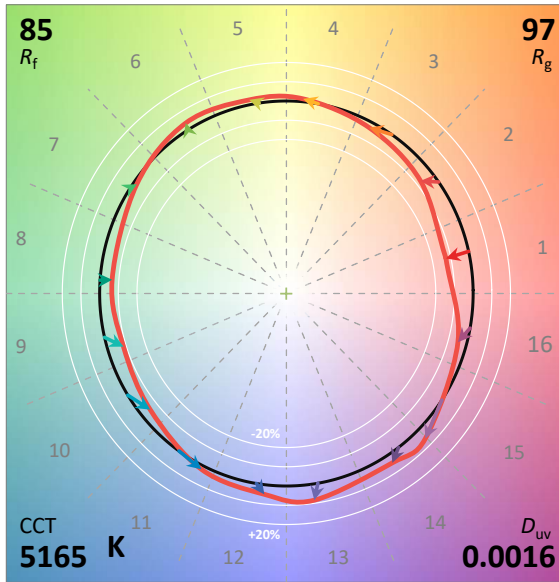
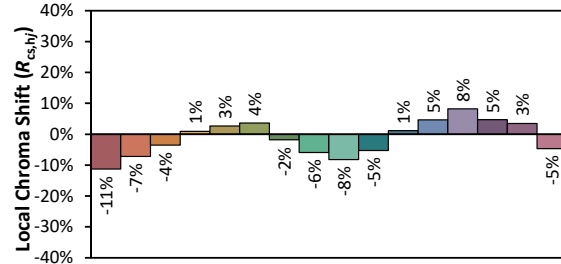
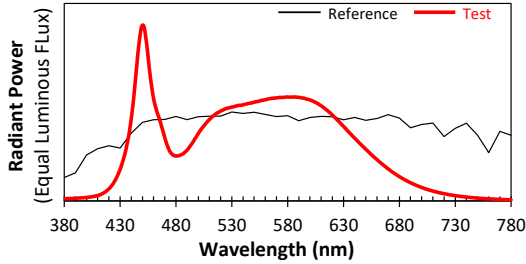
ANSI/IES TM-30-18 Color Rendition Report

Date: 2021-12-09

Manufacturer: LDPI Inc

Model:

LE101-79-5-V1-CP1-S-SM-PD



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

x 0.3408
y 0.3514
u' 0.2086
v' 0.4839

CIE 13.3-1995
(CRI)

R_a 85

R_g 17

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