

Report of Test

LLIA001367-002A

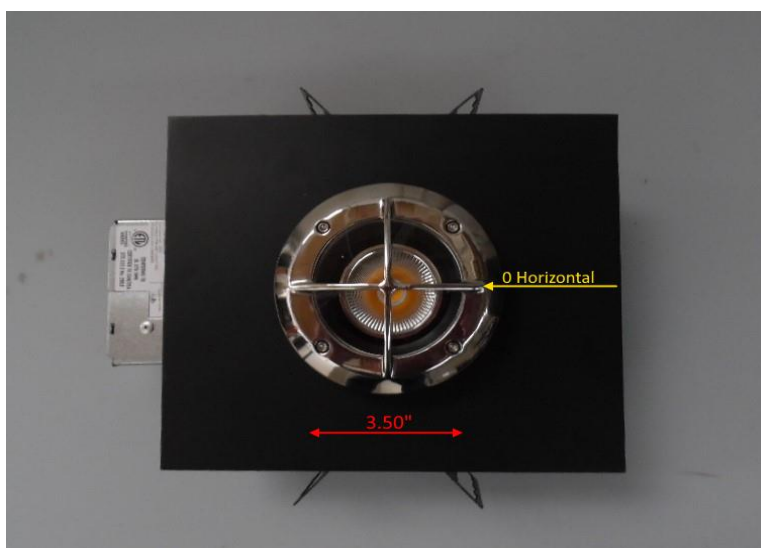
Indoor Distribution Photometry Test Report

Catalog Number: RXI-L2630454PNCC00

Recessed mounted, formed steel housing, spun semi-specular aluminum reflector with clear glass enclosure and decorative steel grill.

One Citizen white LED with specular faceted aluminum reflector

One eldoLED ECOdrive 561/S LED driver labeled as 700mA



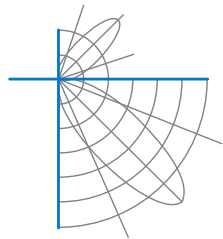
Prepared For:
Designplan Lighting, Inc
79 Trenton Avenue
Frenchtown, NJ 08825, USA

Performance Summary			
Input Voltage	120.0 V	Luminous Flux	2035.9 Lumens
Input Current	0.2374 A	Total Efficacy	72.9 Lm/W
Input Power	27.93 W	Downward Flux	2035.7 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.980		
Current THD	12.4 %		

This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

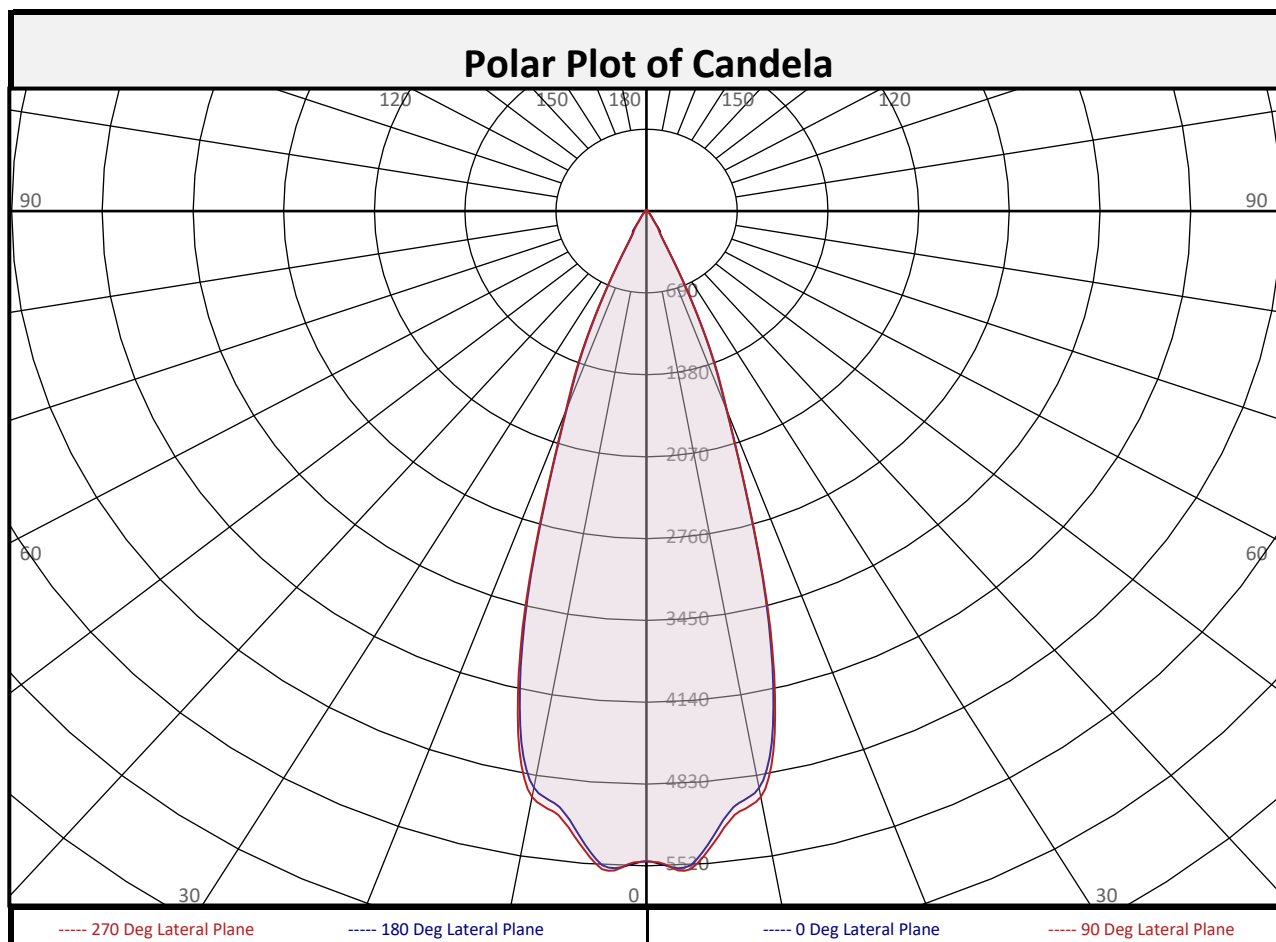
Test date: 12/15/2020
Report date: 12/18/2020

Signed: _____

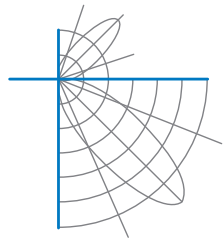


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Zonal Flux Summary											
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total	
0-10	500.0	24.6%		90-100	0.2	0.0%		0-20	1480	72.7%	
10-20	979.9	48.1%		100-110	0.0	0.0%		0-30	1888	92.7%	
20-30	408.3	20.1%		110-120	0.0	0.0%		0-40	1960	96.3%	
30-40	71.7	3.5%		120-130	0.0	0.0%		0-60	2013	98.9%	
40-50	32.0	1.6%		130-140	0.0	0.0%		0-80	2032	99.8%	
50-60	21.0	1.0%		140-150	0.0	0.0%		10-90	1536	75.4%	
60-70	12.9	0.6%		150-160	0.0	0.0%		20-50	512.0	25.1%	
70-80	6.6	0.3%		160-170	0.0	0.0%		40-90	75.8	3.7%	
80-90	3.3	0.2%		170-180	0.0	0.0%		60-90	22.8	1.1%	
0-90	2036	100.0%		90-180	0.2	0.0%		0-180	2036	100.0%	

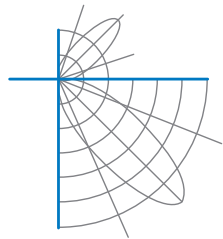


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Luminous Intensity (Candela) Table

	Lateral (C-Plane) Angles									
Vertical (Gamma) Angles		0	22.5	45	67.5	90	112.5	135	157.5	180
	0	5481	5481	5481	5481	5481	5481	5481	5481	5481
	2.5	5545	5535	5520	5542	5565	5542	5520	5535	5545
	5	5362	5398	5484	5430	5408	5430	5484	5398	5362
	7.5	5068	5116	5321	5174	5136	5174	5321	5116	5068
	10	4935	4972	4672	5026	5015	5026	4672	4972	4935
	12.5	4443	4606	4417	4642	4511	4642	4417	4606	4443
	15	3591	3742	4088	3762	3646	3762	4088	3742	3591
	17.5	2562	2655	3084	2664	2592	2664	3084	2655	2562
	20	1772	1927	2222	1930	1799	1930	2222	1927	1772
	22.5	1249	1525	1645	1527	1281	1527	1645	1525	1249
	25	686	912	941	924	716	924	941	912	686
	27.5	270	361	384	382	293	382	384	361	270
	30	204	242	243	231	190	231	243	242	204
	32.5	156	172	162	155	135	155	162	172	156
	35	92	99	95	96	89	96	95	99	92
	37.5	72	76	74	75	71	75	74	76	72
	40	59	62	61	61	58	61	61	62	59
	42.5	47	50	50	50	48	50	50	50	47
	45	39	41	40	41	39	41	40	41	39
	47.5	32	34	33	34	33	34	33	34	32
	50	28	30	29	30	28	30	29	30	28
	52.5	24	27	26	27	25	27	26	27	24
	55	21	23	23	23	22	23	23	23	21
	57.5	20	22	22	22	20	22	22	22	20
	60	18	19	19	19	19	19	19	19	18
	62.5	16	15	15	16	16	16	15	15	16
	65	13	13	12	13	14	13	12	13	13
	67.5	11	10	9	10	11	10	9	10	11
	70	9	8	8	9	9	9	8	8	9
	72.5	8	7	6	7	8	7	6	7	8
	75	6	6	5	6	6	6	5	6	6
	77.5	6	5	5	6	6	6	5	5	6
	80	5	5	5	5	5	5	5	5	5
	82.5	4	4	4	5	5	5	4	4	4
	85	3	3	2	3	3	3	2	3	3
	87.5	3	2	2	2	3	2	2	2	3
90	1	1	1	1	2	1	1	1	1	

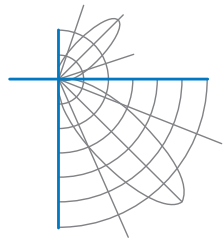


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Luminous Intensity (Candela) Table

	Lateral (C-Plane) Angles									
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	90	1	1	1	1	2	1	1	1	1
	92.5	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0
	97.5	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0
	102.5	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0
	107.5	0	0	0	0	0	0	0	0	0
	110	0	0	0	0	0	0	0	0	0
	112.5	0	0	0	0	0	0	0	0	0
	115	0	0	0	0	0	0	0	0	0
	117.5	0	0	0	0	0	0	0	0	0
	120	0	0	0	0	0	0	0	0	0
	122.5	0	0	0	0	0	0	0	0	0
	125	0	0	0	0	0	0	0	0	0
	127.5	0	0	0	0	0	0	0	0	0
	130	0	0	0	0	0	0	0	0	0
	132.5	0	0	0	0	0	0	0	0	0
	135	0	0	0	0	0	0	0	0	0
	137.5	0	0	0	0	0	0	0	0	0
	140	0	0	0	0	0	0	0	0	0
	142.5	0	0	0	0	0	0	0	0	0
	145	0	0	0	0	0	0	0	0	0
	147.5	0	0	0	0	0	0	0	0	0
	150	0	0	0	0	0	0	0	0	0
	152.5	0	0	0	0	0	0	0	0	0
	155	0	0	0	0	0	0	0	0	0
	157.5	0	0	0	0	0	0	0	0	0
	160	0	0	0	0	0	0	0	0	0
	162.5	0	0	0	0	0	0	0	0	0
	165	0	0	0	0	0	0	0	0	0
	167.5	0	0	0	0	0	0	0	0	0
	170	0	0	0	0	0	0	0	0	0
	172.5	0	0	0	0	0	0	0	0	0
	175	0	0	0	0	0	0	0	0	0
	177.5	0	0	0	0	0	0	0	0	0
	180	0	0	0	0	0	0	0	0	0



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Coefficients of Utilization/Room Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	80					70					50				30				10			0
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	0
RCR																						
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102	100
1	114	112	110	108		112	110	108	106		106	105	103		102	101	100		99	98	97	96
2	110	106	103	100		108	105	102	99		101	99	97		98	97	95		96	94	93	91
3	106	101	97	94		104	100	96	93		97	94	92		95	92	90		93	91	89	87
4	102	96	92	89		101	95	91	88		93	90	87		91	88	86		90	87	85	84
5	99	92	88	84		97	91	87	84		90	86	83		88	85	83		87	84	82	81
6	95	89	84	81		94	88	83	80		86	83	80		85	82	79		84	81	79	78
7	92	85	80	77		91	85	80	77		83	79	77		82	79	76		81	78	76	75
8	89	82	77	74		88	82	77	74		81	77	74		80	76	74		79	76	73	72
9	87	79	75	72		86	79	74	71		78	74	71		77	74	71		76	73	71	70
10	84	76	72	69		83	76	72	69		75	71	69		75	71	69		74	71	68	67

For absolute test reports, RUs are expressed as a percentage of total lumen output. For relative test reports, CUs are expressed as a percentage of total lamp output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are lambertian reflectors. 2) Incident flux on each surface is uniformly distributed. 3) The room is spectrally neutral. When luminaires are not evenly distributed throughout the room, or do not exhibit lateral symmetry, CU values may differ from actual performance.

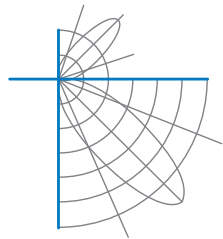
Circle of Light Plot

Height(ft)	Illuminance at Nadir (fc)	Ground-level distance to half-of-nadir illuminance (ft)	
		0-180 deg	90-270 deg
6.0	152.2	3.49	3.51
8.0	85.6	4.65	4.68
10.0	54.8	5.82	5.85
12.0	38.1	6.98	7.02
14.0	28.0	8.15	8.19
16.0	21.4	9.31	9.36

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	882965	882965	882965
45	8801	9198	8943
55	5879	6454	6076
65	5118	4718	5298
75	3818	3360	4006
85	5999	4135	6357

Spacing Criterion

0 degree plane:	0.6
90 degree plane:	0.6
180 degree plane:	0.6
270 degree plane:	0.6



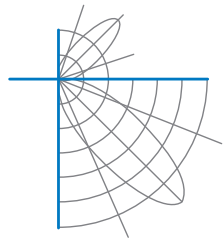
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UGR TABLE - CORRECTED

Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	9.1	10.0	9.5	10.3	10.6	9.2	10.1	9.6	10.4	10.7
	3H	10.0	10.8	10.4	11.1	11.5	10.2	11.0	10.6	11.3	11.7
	4H	10.4	11.1	10.8	11.5	11.9	10.5	11.3	11.0	11.7	12.0
	6H	10.8	11.5	11.2	11.9	12.3	11.0	11.7	11.5	12.1	12.5
	8H	11.0	11.7	11.5	12.1	12.5	11.3	12.0	11.8	12.4	12.8
	12H	11.3	11.9	11.7	12.3	12.7	11.6	12.2	12.0	12.6	13.0
4H	2H	9.3	10.0	9.7	10.4	10.8	9.4	10.1	9.8	10.5	10.9
	3H	10.4	11.0	10.8	11.4	11.8	10.5	11.1	10.9	11.5	11.9
	4H	10.8	11.4	11.2	11.8	12.2	11.0	11.6	11.4	12.0	12.4
	6H	11.5	12.0	12.0	12.4	12.9	11.7	12.2	12.2	12.6	13.1
	8H	11.8	12.2	12.3	12.7	13.1	12.1	12.5	12.6	13.0	13.5
	12H	12.1	12.5	12.6	13.0	13.4	12.4	12.8	12.9	13.3	13.8
8H	4H	10.9	11.4	11.4	11.8	12.3	11.1	11.5	11.6	12.0	12.5
	6H	11.8	12.1	12.3	12.6	13.1	12.0	12.3	12.5	12.8	13.3
	8H	12.2	12.5	12.8	13.1	13.6	12.5	12.8	13.1	13.3	13.8
	12H	12.7	12.9	13.2	13.4	14.0	13.0	13.2	13.5	13.7	14.3
12H	4H	11.0	11.3	11.4	11.8	12.3	11.1	11.5	11.6	12.0	12.5
	6H	11.9	12.2	12.4	12.6	13.2	12.0	12.3	12.6	12.8	13.4
	8H	12.4	12.6	12.9	13.1	13.7	12.6	12.9	13.2	13.4	14.0

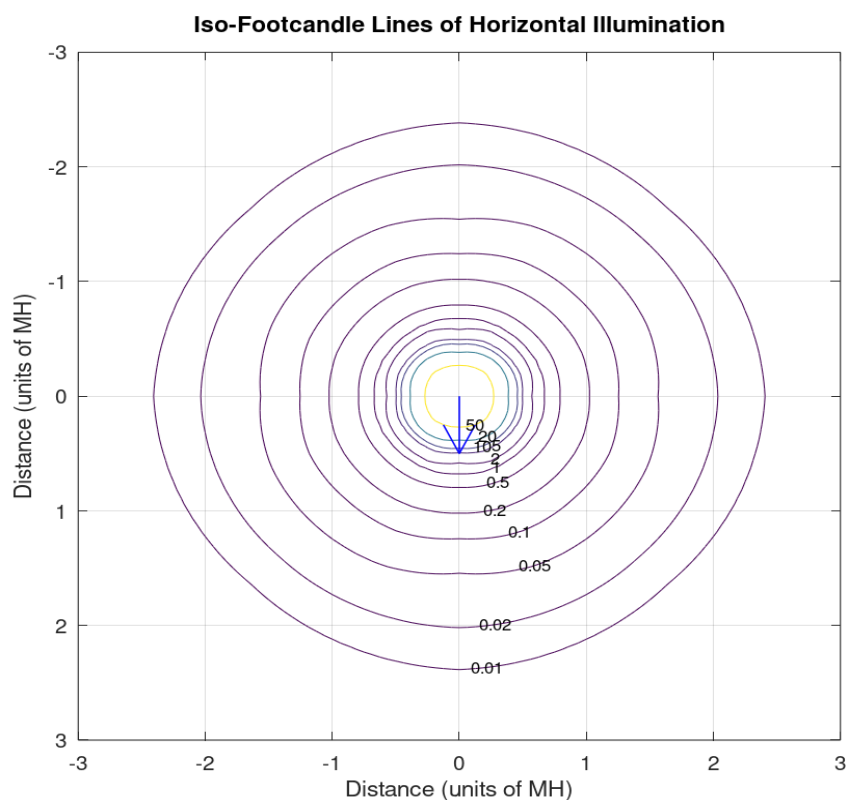
Maximum UGR = 14.3



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Iso-Illuminance Plot



The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution of room reflections.

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Test Distance 9.5 m
Ambient Temperature 24.7 °C

Notes

The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Tested in accordance with the applicable sections of IES LM-79-19. Format of reports and angular increments based on IES LM-41-14 and LM-46-04.

The luminous intensity values, and other derived quantities, contained in this report are based on the absolute data, as measured.

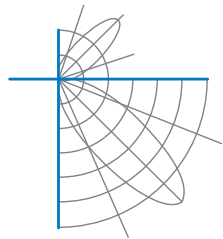
Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections.

Photometric intensity values are reported using the CIE C-Gamma coordinate system as defined in CIE publication number 121.

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered.

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.



Report of Test

LLIA001367-002B

Integrating Sphere Report

Catalog Number: RXI-L2630454PNCC00

Recessed mounted, formed steel housing, spun semi-specular aluminum reflector with clear glass enclosure and decorative steel grill.

One Citizen white LED with specular faceted aluminum reflector

One eldoLED ECOdrive 561/S LED driver labeled as 700mA



Performance Summary

Voltage	120.0 Vac
Current	0.2373 A
Power	27.95 W
Frequency	59.99 Hz
Power Factor	0.981
Current THD	12.4 %
Total Luminous Flux	2072.9 lm
Efficacy	74.2 lm/W
Chromaticity (x,y)	(0.4325, 0.4067)
(u',v')	(0.2466, 0.5218)
Duv	0.0017
CCT	3098 K
CRI (Ra)	81
R9	-2
TM-30: Rf	82
TM-30: Rg	97
TM-30: Rcs,h1	-12

Prepared For:

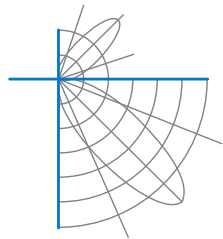
Designplan Lighting, Inc

79 Trenton Avenue

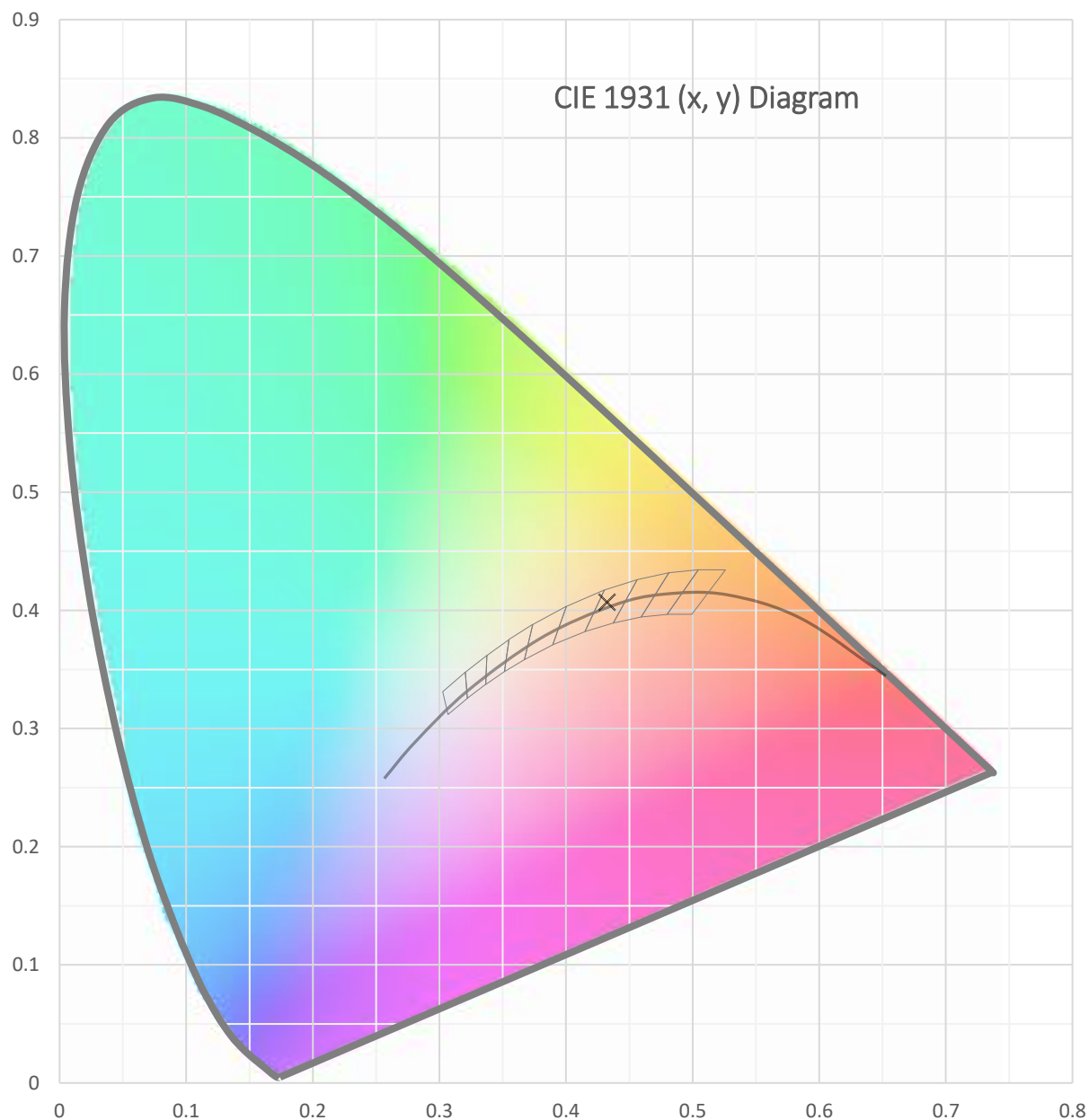
Frenchtown, NJ 08825, USA

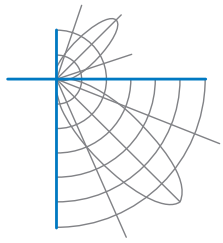
Test date: 12/16/2020

Report date: 12/18/2020

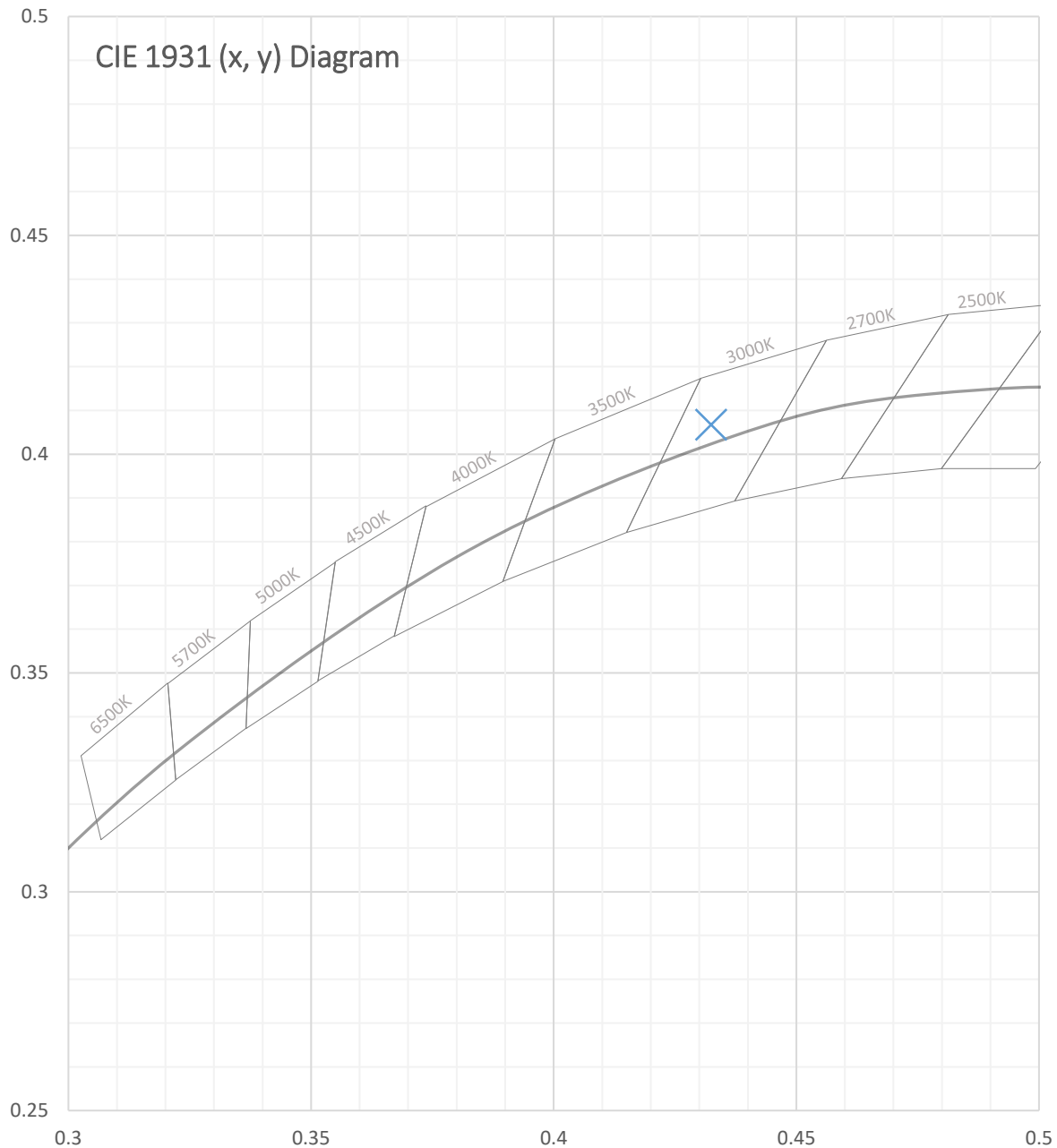


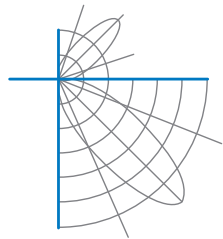
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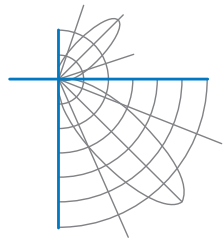


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Total Radiant Flux	6.198 W
Total Luminous Flux	2072.9 Lm
Chromaticity CIE 1931 (x, y)	(0.4325, 0.4067)
Chromaticity CIE 1976 (u', v')	(0.2466, 0.5218)
Correlated Color Temperature (CCT)	3098 K
Color Rendering Index (Ra)	81
R1	78
R2	88
R3	97
R4	80
R5	79
R6	85
R7	83
R8	57
R9	-2
R10	73
R11	79
R12	68
R13	80
R14	98
TM-30: Rf	82
TM-30: Rg	97
TM-30: Rcs,h1	-12
Distance from Planckian Locus (Duv)	0.0017
Scotopic/Photopic Ratio $\frac{V_{\lambda}}{V_{\lambda}^{\text{scot}}}$	1.339

Electrical Data

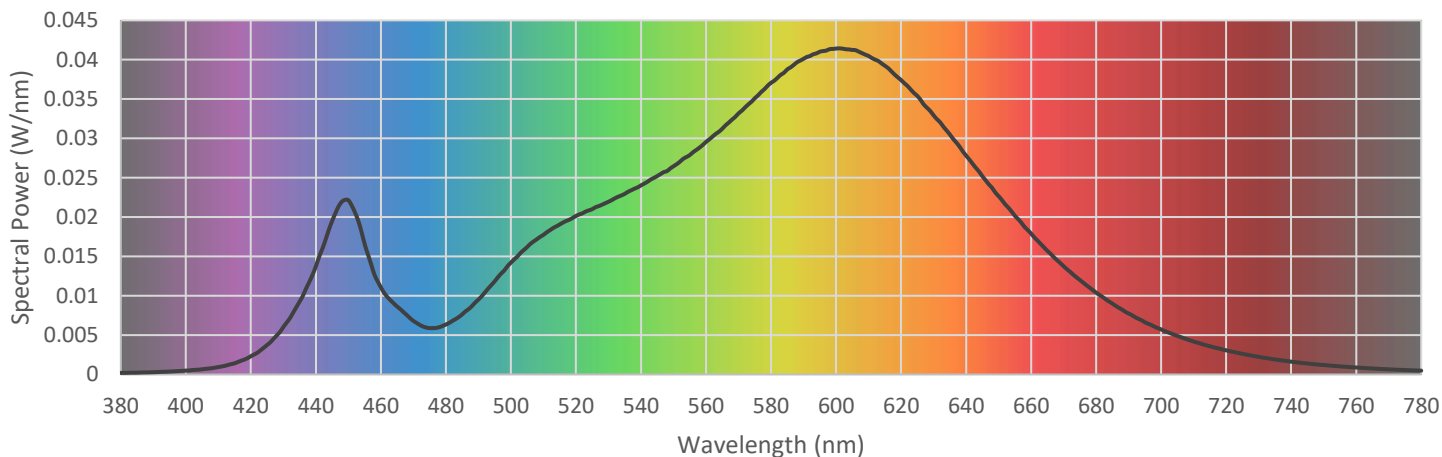
Voltage	120.0 Vac
Current	0.2373 A
Power	27.95 W
Frequency	59.99 Hz
Power Factor	0.981
Current THD	12.4 %

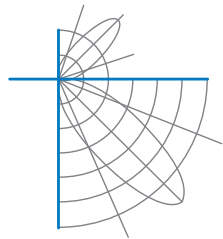


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Summary Spectral Power Distribution (wavelength - nm, spectral power - W/nm)

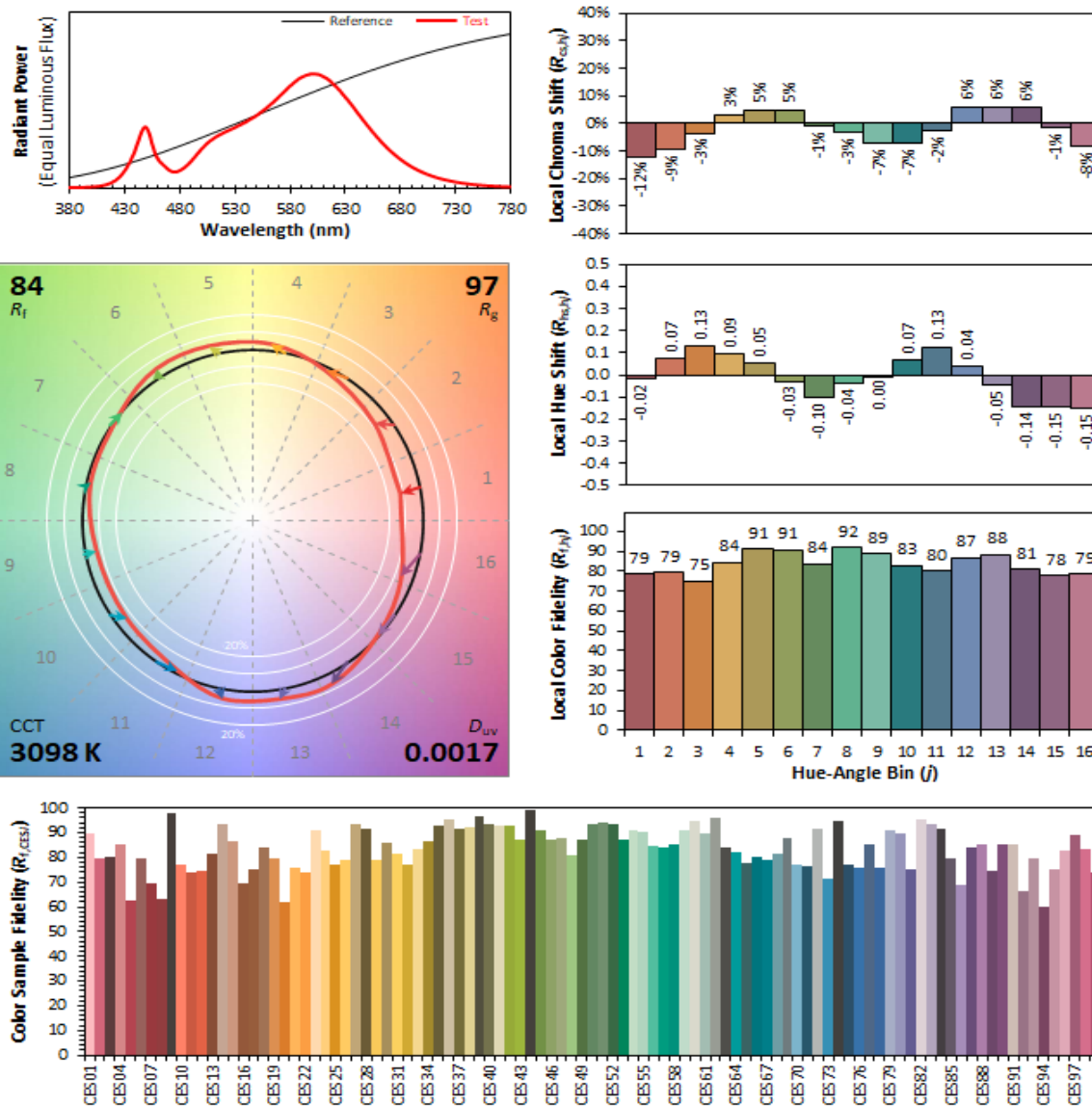
380	0.000203	480	0.006353	580	0.037064	680	0.010405
385	0.000228	485	0.007635	585	0.038772	685	0.009011
390	0.000288	490	0.009521	590	0.040112	690	0.007745
395	0.000372	495	0.011840	595	0.041016	695	0.006636
400	0.000489	500	0.014214	600	0.041414	700	0.005725
405	0.000660	505	0.016203	605	0.041242	705	0.004900
410	0.000941	510	0.017747	610	0.040474	710	0.004183
415	0.001420	515	0.019066	615	0.039234	715	0.003583
420	0.002320	520	0.020144	620	0.037417	720	0.003068
425	0.003743	525	0.021008	625	0.035397	725	0.002622
430	0.006034	530	0.021947	630	0.032931	730	0.002247
435	0.009267	535	0.022952	635	0.030505	735	0.001908
440	0.013746	540	0.024029	640	0.027819	740	0.001626
445	0.019507	545	0.025215	645	0.025195	745	0.001396
450	0.022138	550	0.026460	650	0.022661	750	0.001199
455	0.016569	555	0.027882	655	0.020170	755	0.001027
460	0.011063	560	0.029550	660	0.017899	760	0.000885
465	0.008624	565	0.031228	665	0.015711	765	0.000760
470	0.006803	570	0.033181	670	0.013757	770	0.000651
475	0.005893	575	0.035101	675	0.012013	775	0.000562
						780	0.000484





Test Report Number: LLIA001367-002B

IES TM-30 Details

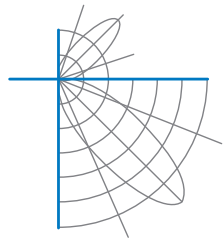


Notes:

x 0.4325
y 0.4067
u' 0.2466
v' 0.5217

CIE 13.3-1995
(CRI)

R_a 81
 R_g -2



Test Report Number: LLIA001367-002B

Test Equipment Configuration: LightLab International Allentown 2m Integrating Sphere
Measurements acquired using a Labsphere CDS 2600 spectroradiometer
Testing was performed using 4π geometry

Test Temperature: 24.9 °C

Test Procedure: Tested in accordance with the applicable sections of:
LM-79-19, LM-78-07, LM-58-13, ANSI_ANSI C78.377-2017, TM-30-18

Significance: The laboratory has not participated in the selection of samples to be tested.
All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Notes: The measurements and other derived quantities contained in this report are based on the absolute data as measured.

Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered.

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.