



Report of Test

LLIA001574-004A-R02*

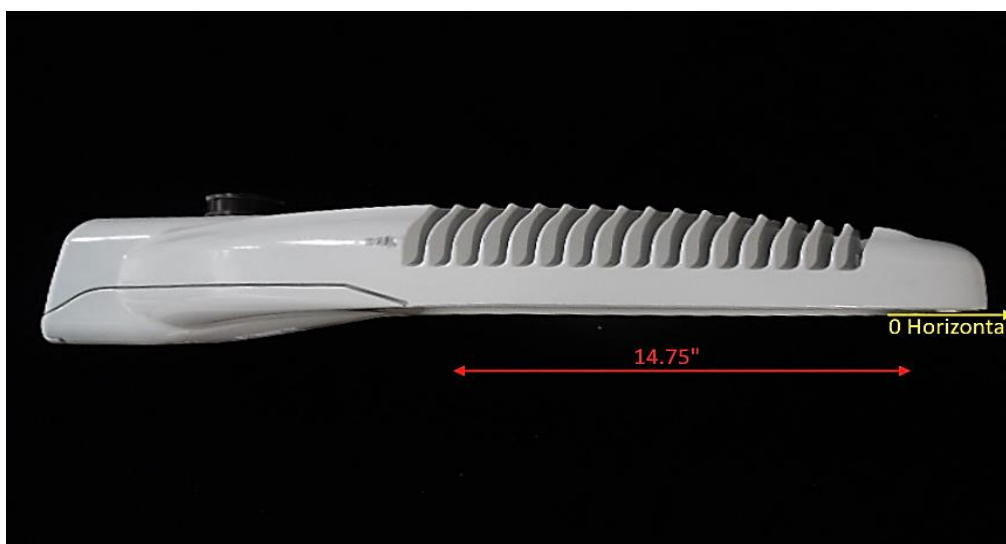
Roadway/Area Light Distribution Photometry Test Report

Catalog Number: NXT-48M-5-X-2ES-6-XX-4-XX-X-XX-X

Pole/arm mounted, grey painted cast aluminum housing and door/driver compartment cover, two circuit boards, two clear plastic lenses with optic below each LED and clear flat glass enclosure.

48 white LEDs

Osram Optotronic OT180/UNV/800C/2DIM/P6 LED driver labeled as 600mA, WH91-5U1-03 surge suppressor



Prepared For:
LED Roadway Lighting
84 Chain Lake Drive
Suite 403
Halifax, Nova Scotia B3S 1A2, Canada

Performance Summary			
Input Voltage	120.0 V	Luminous Flux	11269.0 Lumens
Input Current	0.7673 A	Total Efficacy	123.2 Lm/W
Input Power	91.47 W		
Frequency	60.00 Hz	Roadway Throw	Medium
Power Factor	0.994	Roadway Type	Type II
Current THD	5.6 %	IES BUG Rating	B3 - U0 - G2

*This test report supersedes test report LLIA001574-004A-R01

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

Test date: 11/03/2021

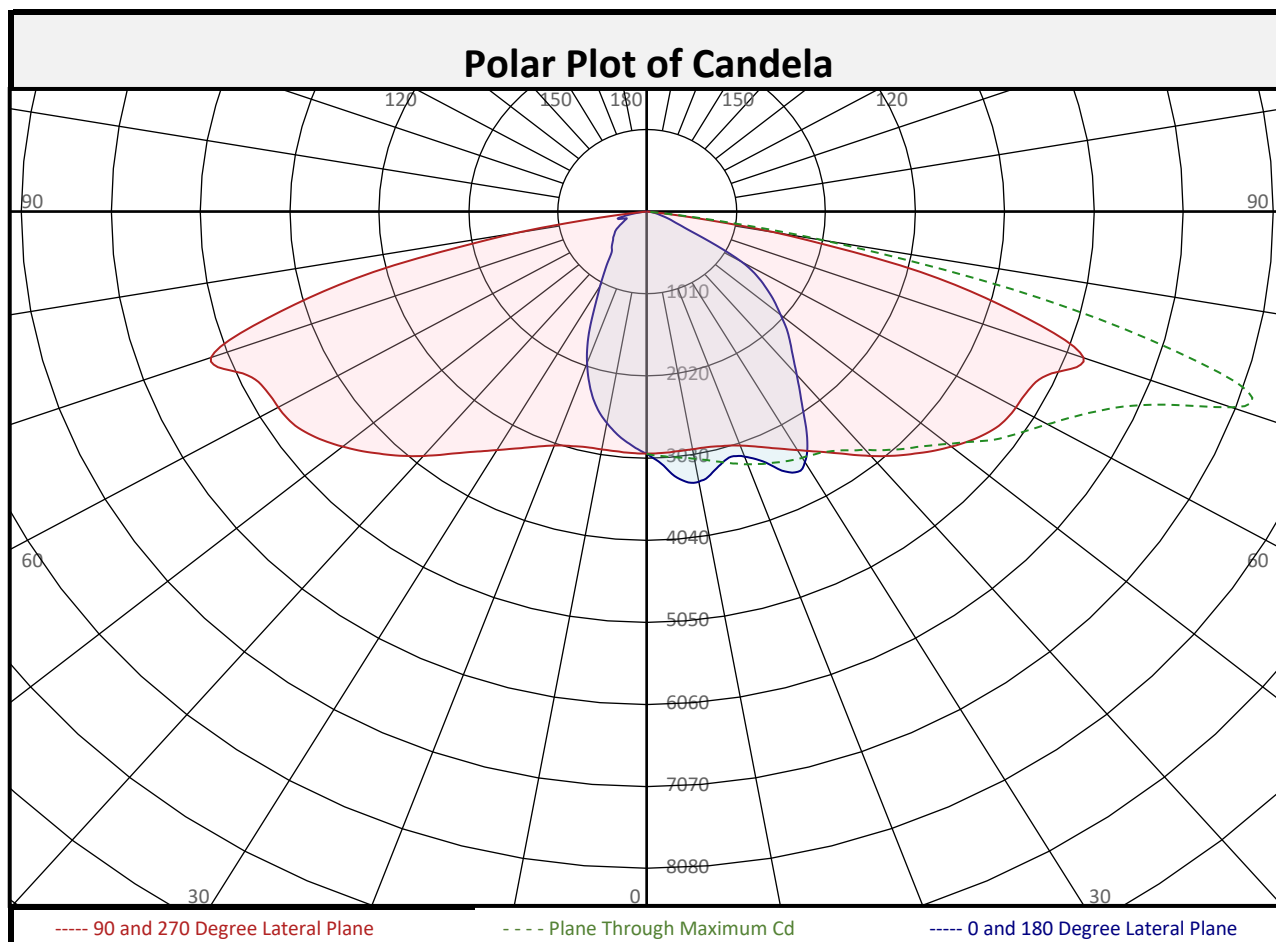
Report date: 11/11/2021

Signed: _____



Report of Test

LLIA001574-004A-R02

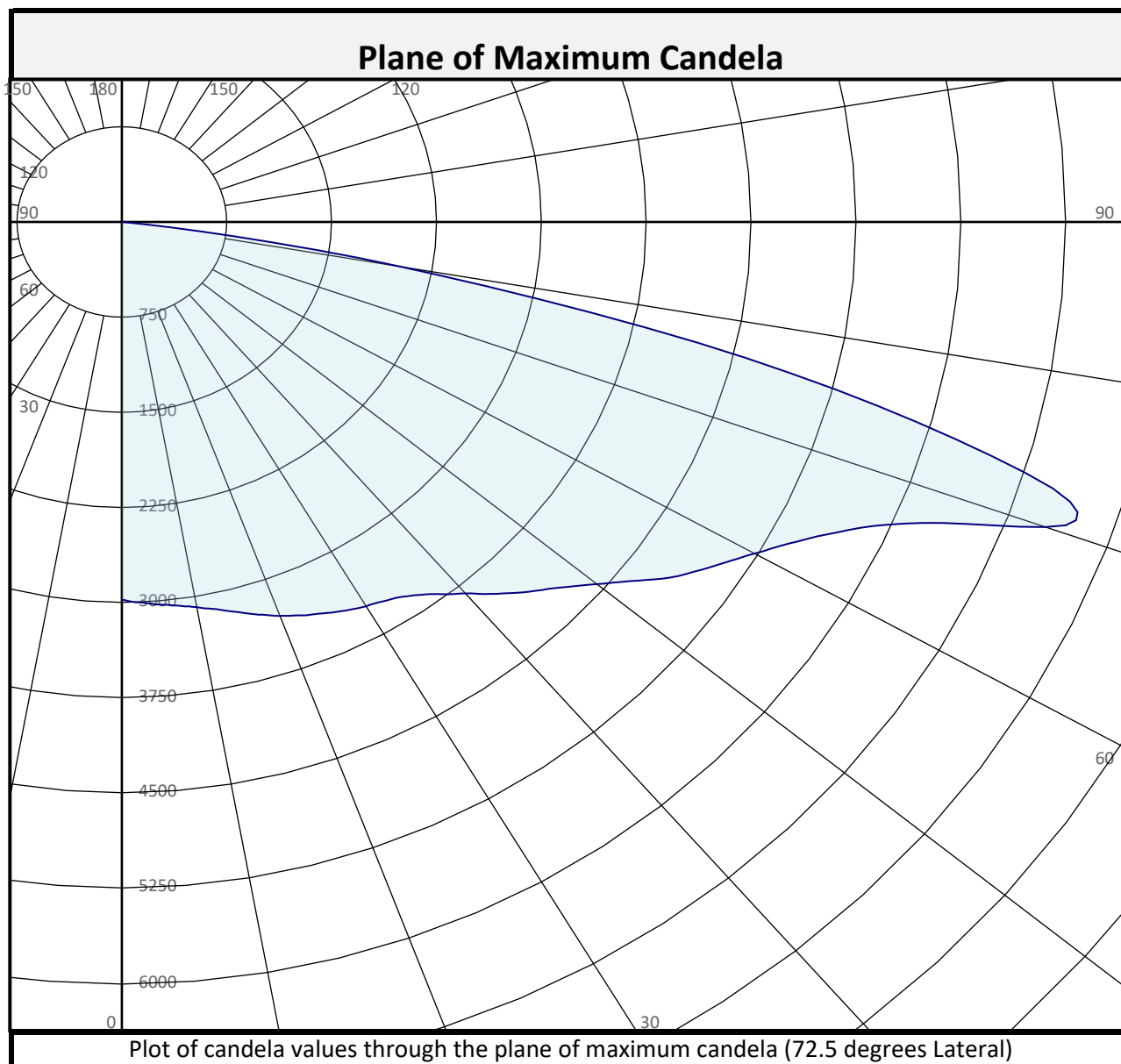


Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	287.0	2.5%		90-100	0.0	0.0%		0-20	1114	9.9%
10-20	827.1	7.3%		100-110	0.0	0.0%		0-30	2406	21.4%
20-30	1291	11.5%		110-120	0.0	0.0%		0-40	4076	36.2%
30-40	1671	14.8%		120-130	0.0	0.0%		0-60	8076	71.7%
40-50	1924	17.1%		130-140	0.0	0.0%		0-80	11182	99.2%
50-60	2075	18.4%		140-150	0.0	0.0%		10-90	10982	97.5%
60-70	1940	17.2%		150-160	0.0	0.0%		20-50	4887	43.4%
70-80	1167	10.4%		160-170	0.0	0.0%		40-90	7193	63.8%
80-90	86.9	0.8%		170-180	0.0	0.0%		60-90	3193	28.3%
0-90	11269	100.0%		90-180	0.0	0.0%		0-180	11269	100.0%



Report of Test

LLIA001574-004A-R02

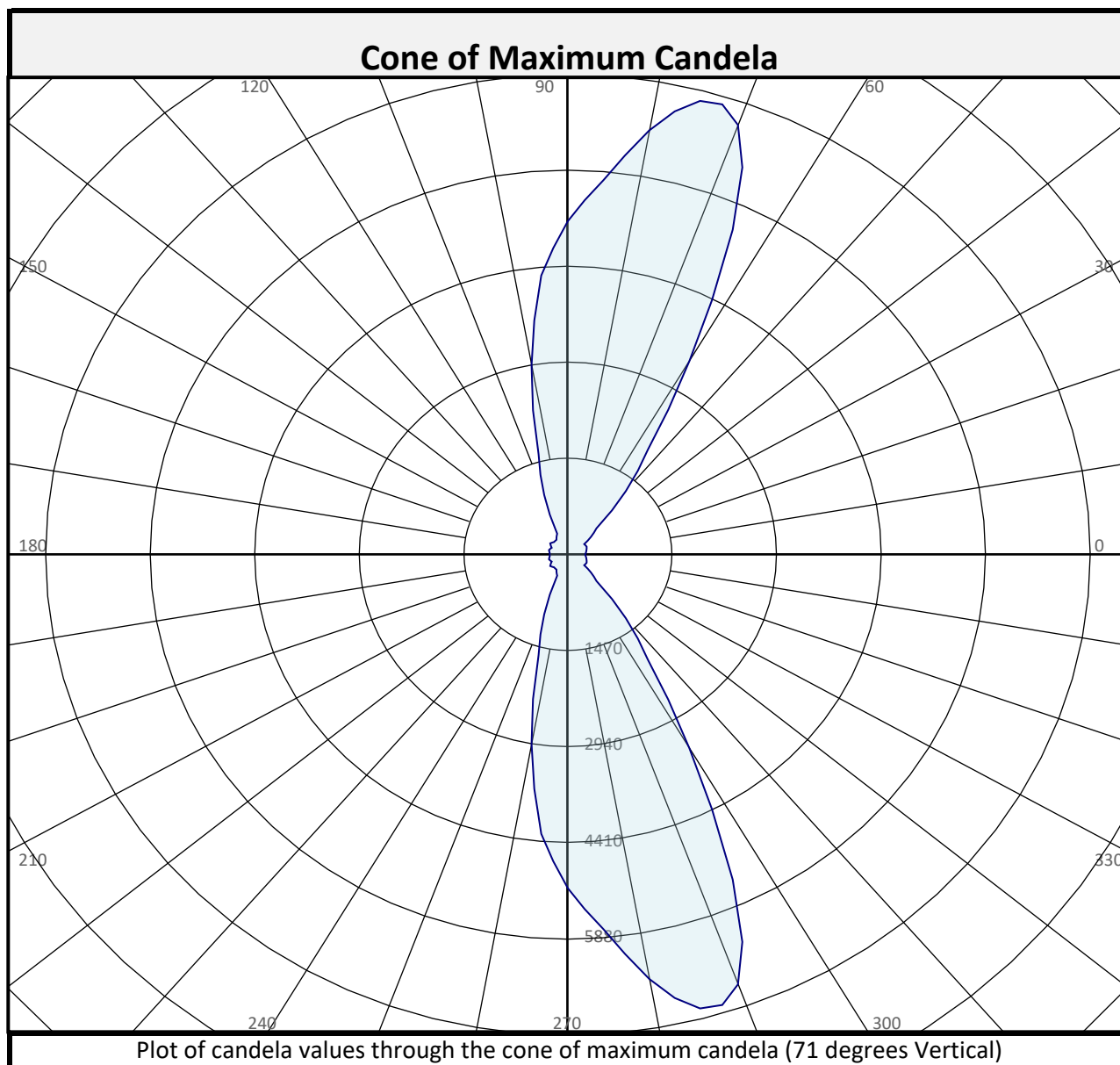


Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	7456.0	66.2%	0.0	0.0%	7456.0	66.2%
House Side	3813.1	33.8%	0.0	0.0%	3813.1	33.8%
Total	11269.0	100.0%	0.0	0.0%	11269.0	100.0%

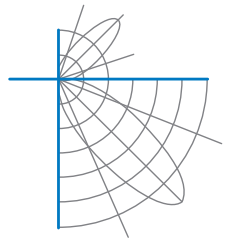


Report of Test

LLIA001574-004A-R02



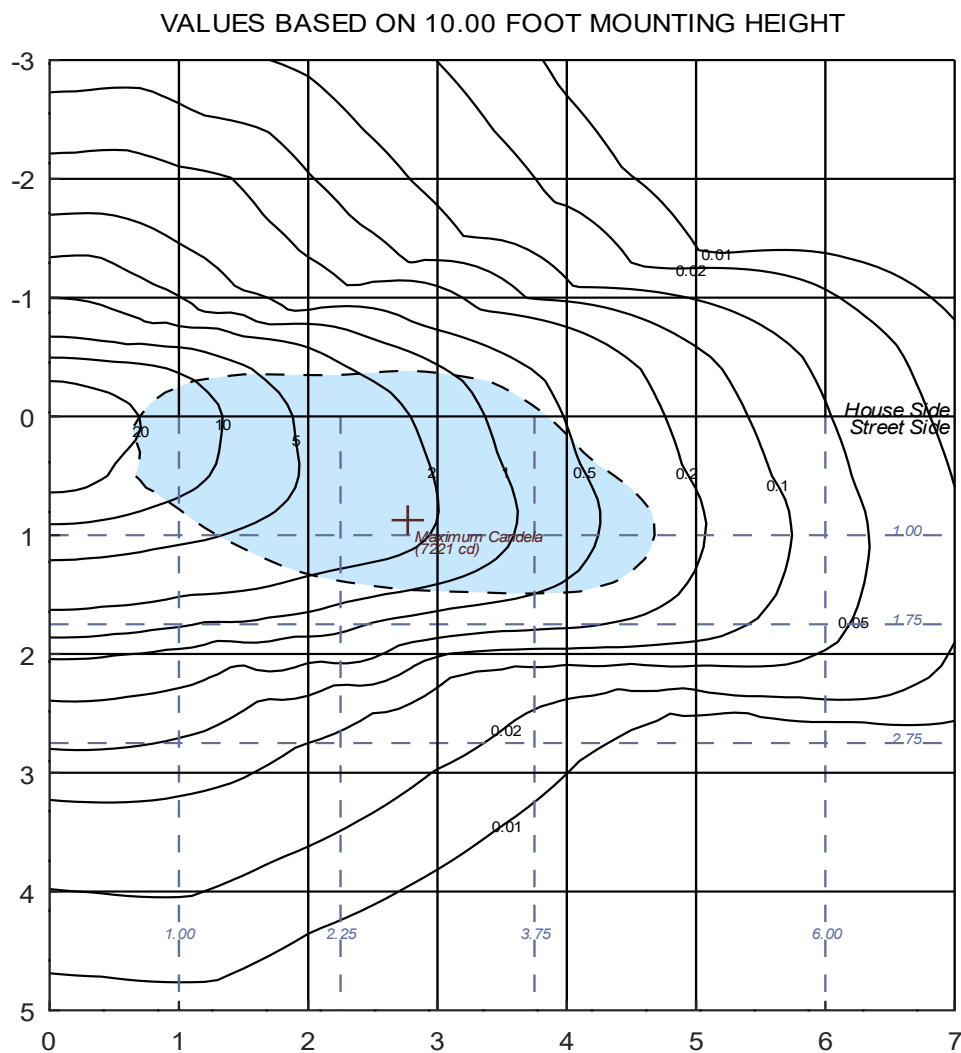
Street and House Side Flux Summary						
	Downward		Upward		Total	
	Lumens	% of Total	Lumens	% of Total	Lumens	% of Total
Street Side	7456.0	66.2%	0.0	0.0%	7456.0	66.2%
House Side	3813.1	33.8%	0.0	0.0%	3813.1	33.8%
Total	11269.0	100.0%	0.0	0.0%	11269.0	100.0%



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Iso-Illuminance Plot



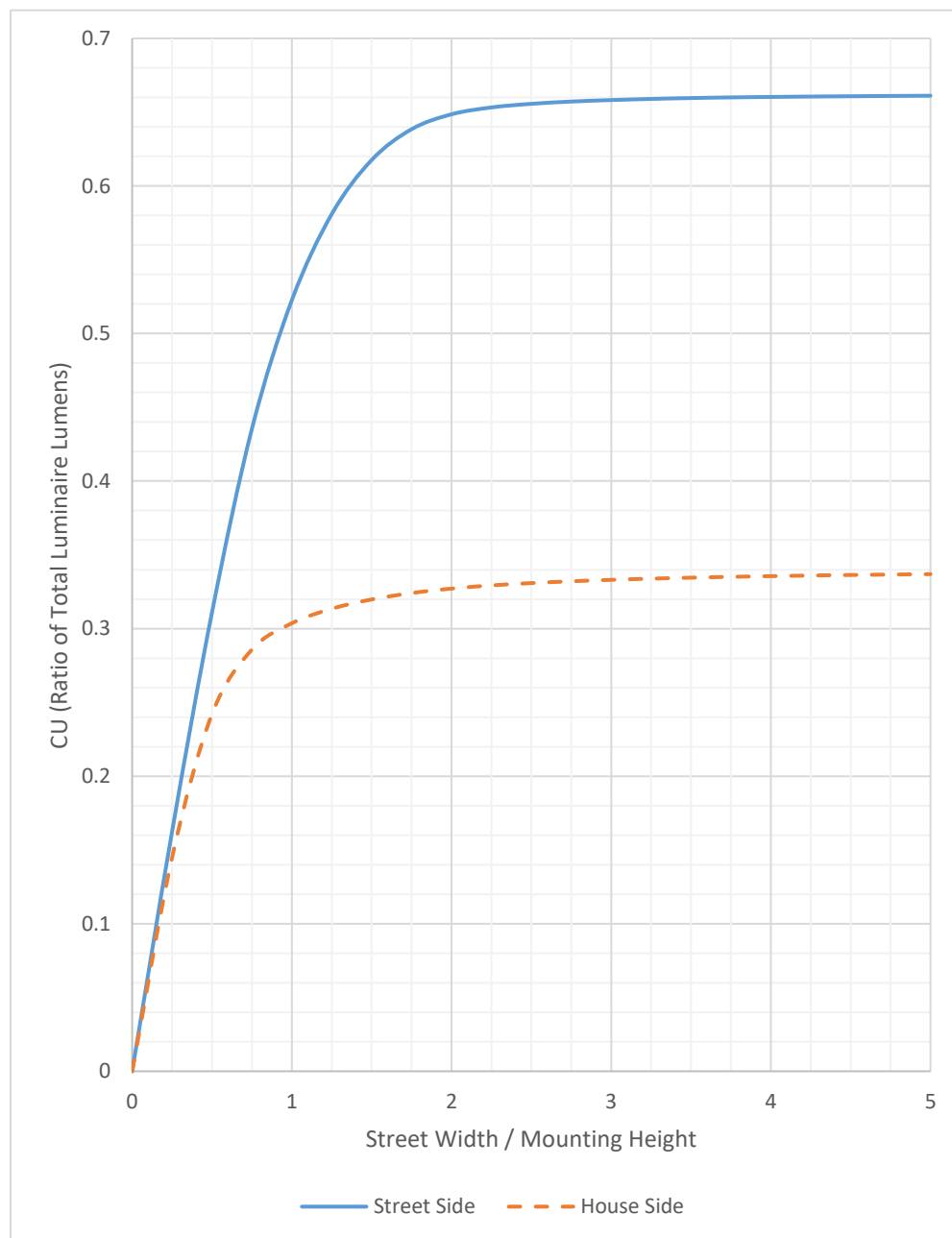
The isofootcandle values shown in the plot above are based on a mounting height of $h = 10.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution of room reflections.



Report of Test

LLIA001574-004A-R02

Coefficients of Utilization Plot

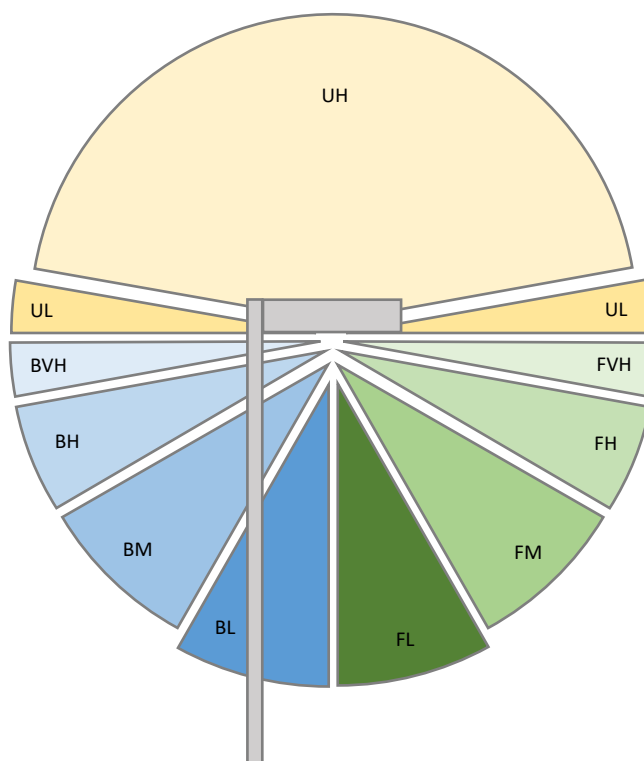




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LCS Tables and Bug Classification



Back Light

BL - Back Low (0°-30°)	1027.7 Lm
BM - Back Mid (30°-60°)	1885.8 Lm
BH - Back High (60°-80°)	870.6 Lm
BVH - Back Very High (80°-90°)	28.9 Lm

Uplight

UL - Upward Low (90°-100°)	0.0 Lm
UH - Upward High (100°-180°)	0.0 Lm

Forward Light

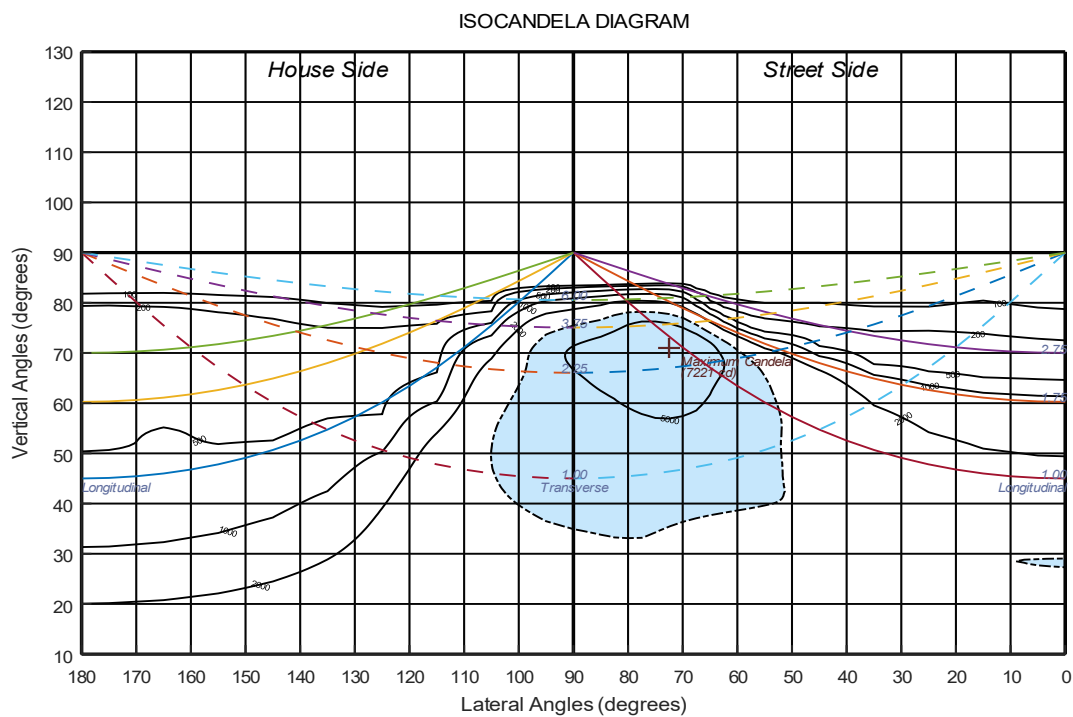
FL - Forward Low (0°-30°)	1377.8 Lm
FM - Forward Mid (30°-60°)	3784.3 Lm
FH - Forward High (60°-80°)	2235.9 Lm
FVH - Forward Very High (80°-90°)	57.9 Lm

BUG Ratings: B3 - U0 - G2



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Iso-Candela Plot



Half-max Candela Contour Line



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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles														
	0	5	15	25	35	45	55	57.5	60	62.5	65	67.5	70	72.5	75	
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	0	2976	2976	2976	2976	2976	2976	2976	2976	2976	2976	2976	2976	2976	2976	
	2.5	3076	3075	3072	3061	3051	3041	3029	3025	3020	3018	3012	3007	3006	3001	2998
	5	3237	3235	3224	3199	3164	3125	3084	3075	3064	3057	3047	3041	3034	3027	3018
	7.5	3348	3348	3337	3314	3287	3246	3172	3150	3130	3111	3094	3078	3064	3050	3039
	10	3374	3372	3367	3368	3354	3317	3255	3237	3214	3187	3158	3134	3111	3083	3065
	12.5	3315	3311	3320	3335	3343	3350	3308	3291	3272	3253	3227	3195	3164	3126	3101
	15	3219	3214	3221	3246	3284	3316	3331	3321	3310	3295	3276	3255	3220	3182	3147
	17.5	3160	3156	3154	3165	3202	3259	3309	3320	3328	3324	3316	3301	3278	3246	3201
	20	3206	3198	3174	3143	3142	3193	3278	3297	3311	3331	3340	3332	3323	3304	3263
	22.5	3309	3299	3257	3195	3139	3155	3244	3268	3294	3321	3343	3359	3360	3357	3339
	25	3491	3479	3409	3293	3192	3161	3223	3249	3280	3316	3348	3373	3391	3404	3406
	27.5	3615	3607	3572	3448	3287	3202	3232	3253	3284	3325	3362	3396	3424	3455	3464
	30	3556	3564	3595	3555	3423	3281	3274	3294	3318	3351	3387	3429	3462	3498	3517
	32.5	3361	3366	3438	3517	3522	3387	3346	3358	3377	3398	3424	3464	3499	3536	3569
	35	3090	3098	3203	3331	3512	3507	3434	3446	3460	3478	3499	3527	3560	3598	3632
	37.5	2839	2853	2957	3118	3375	3566	3535	3547	3562	3581	3603	3629	3659	3697	3732
	40	2626	2638	2744	2910	3201	3543	3623	3646	3669	3698	3722	3752	3787	3823	3854
	42.5	2439	2451	2564	2737	3040	3450	3704	3737	3779	3822	3857	3898	3938	3976	4002
	45	2283	2292	2393	2592	2907	3335	3750	3819	3884	3947	4009	4049	4088	4122	4146
	47.5	2134	2144	2233	2444	2797	3239	3787	3895	3990	4076	4150	4200	4235	4265	4288
	50	1961	1972	2065	2292	2671	3139	3817	3968	4097	4209	4303	4372	4411	4441	4445
	52.5	1807	1816	1906	2117	2517	3047	3849	4055	4223	4364	4473	4562	4617	4646	4642
	55	1641	1650	1744	1952	2345	2992	3890	4134	4346	4524	4656	4765	4831	4865	4855
	57.5	1466	1479	1560	1807	2158	2919	3890	4151	4405	4623	4797	4932	5006	5039	5029
	60	1228	1252	1332	1594	1963	2782	3846	4131	4422	4694	4919	5084	5187	5227	5219
	62.5	796	812	916	1216	1681	2607	3763	4090	4439	4767	5036	5245	5383	5453	5438
	65	470	482	513	696	1165	2360	3636	4037	4479	4892	5230	5471	5641	5743	5751
	67.5	341	354	371	421	547	1690	3310	3819	4403	5029	5531	5876	6072	6200	6265
	70	273	281	297	324	311	808	2466	3099	3841	4731	5653	6363	6808	7031	7056
	72.5	200	209	232	250	242	364	1187	1783	2565	3565	4766	5901	6636	6984	6914
	75	148	155	181	185	186	211	338	514	944	1711	2847	4079	5044	5596	5774
	77.5	116	121	144	129	137	143	176	198	261	491	1138	2239	3230	3820	4103
	80	81	85	107	89	86	100	99	107	121	142	244	712	1534	2013	2212
	82.5	46	50	69	69	48	54	52	54	56	60	73	141	392	570	607
	85	18	19	28	26	19	19	20	20	20	20	20	20	21	21	21
	87.5	3	3	4	4	4	4	5	5	6	6	6	7	7	8	8
	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

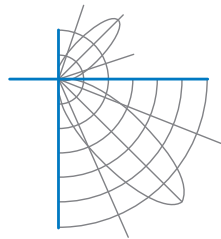


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles														
		77.5	80	82.5	85	90	95	105	115	125	135	145	155	165	175	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	0	2976	2976	2976	2976	2976	2976	2976	2976	2976	2976	2976	2976	2976	2976	2976
	2.5	2990	2990	2988	2985	2971	2968	2954	2939	2930	2919	2910	2906	2903	2905	2912
	5	3005	2999	2995	2989	2970	2956	2930	2905	2883	2864	2848	2838	2834	2830	2832
	7.5	3025	3012	3000	2990	2965	2945	2905	2869	2837	2809	2782	2762	2753	2746	2744
	10	3044	3025	3010	2996	2966	2940	2884	2837	2790	2750	2707	2676	2661	2643	2641
	12.5	3070	3043	3023	3006	2971	2936	2870	2806	2741	2681	2627	2581	2553	2530	2527
	15	3111	3078	3053	3030	2987	2947	2864	2780	2692	2611	2532	2465	2419	2386	2383
	17.5	3163	3124	3090	3063	3016	2972	2873	2763	2645	2528	2418	2320	2252	2211	2203
	20	3223	3182	3142	3111	3058	3006	2890	2750	2598	2438	2284	2154	2060	2014	2005
	22.5	3300	3253	3216	3178	3121	3058	2919	2749	2549	2333	2133	1969	1854	1795	1785
	25	3381	3342	3302	3263	3198	3130	2968	2752	2495	2215	1964	1760	1614	1539	1528
	27.5	3456	3427	3396	3355	3285	3214	3029	2763	2429	2081	1772	1521	1357	1282	1273
	30	3527	3510	3488	3449	3383	3312	3099	2777	2357	1925	1550	1281	1145	1090	1085
	32.5	3592	3593	3582	3553	3493	3417	3177	2793	2281	1753	1324	1098	989	935	929
	35	3666	3680	3685	3667	3615	3533	3258	2802	2191	1559	1137	948	850	808	802
	37.5	3770	3795	3808	3802	3761	3668	3342	2798	2081	1360	983	808	728	691	687
	40	3897	3932	3947	3948	3920	3816	3435	2785	1947	1177	828	688	640	624	622
	42.5	4033	4057	4082	4094	4070	3960	3507	2762	1780	997	694	623	606	596	595
	45	4167	4184	4204	4223	4215	4097	3563	2710	1561	808	614	591	575	563	561
	47.5	4301	4317	4339	4362	4358	4216	3604	2610	1301	658	572	558	543	529	527
	50	4452	4458	4473	4496	4490	4334	3617	2444	1035	592	537	524	517	507	504
	52.5	4628	4615	4611	4626	4615	4438	3592	2195	777	559	501	494	515	484	473
	55	4815	4772	4747	4733	4718	4515	3526	1858	597	528	471	473	503	463	447
	57.5	4977	4905	4853	4818	4786	4531	3389	1450	507	492	441	448	461	429	418
	60	5160	5052	4960	4900	4811	4489	3196	1051	457	452	419	428	423	384	374
	62.5	5375	5244	5098	5002	4828	4422	2947	737	417	410	416	397	382	338	330
	65	5683	5530	5333	5179	4884	4355	2631	553	381	370	397	356	344	301	294
	67.5	6220	6066	5821	5587	5099	4365	2240	451	340	330	376	311	312	270	265
	70	6931	6643	6260	5877	5245	4398	1792	379	294	291	326	266	284	249	245
	72.5	6598	6169	5713	5279	4666	3942	1237	310	253	249	269	232	278	288	294
	75	5632	5255	4742	4289	3781	3212	684	226	199	200	227	219	303	343	343
	77.5	4173	4033	3630	3140	2655	2171	273	151	137	148	188	214	259	275	274
	80	2273	2251	2092	1785	1455	1154	114	93	85	99	129	148	169	176	173
	82.5	596	564	522	444	341	252	47	46	45	52	68	77	83	80	75
	85	21	20	20	20	19	18	17	16	16	17	22	30	19	7	3
	87.5	8	8	9	8	8	8	7	5	4	3	3	2	1	1	0
	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles														
	0	5	15	25	35	45	55	57.5	60	62.5	65	67.5	70	72.5	75	
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	92.5	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
	97.5	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
	102.5	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
	107.5	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
	112.5	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
	117.5	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
	122.5	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
	127.5	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
	132.5	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
	137.5	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
	142.5	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
	147.5	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
	152.5	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
	157.5	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
	162.5	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
	167.5	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
	172.5	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
	177.5	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



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Luminous Intensity (Candela) Table

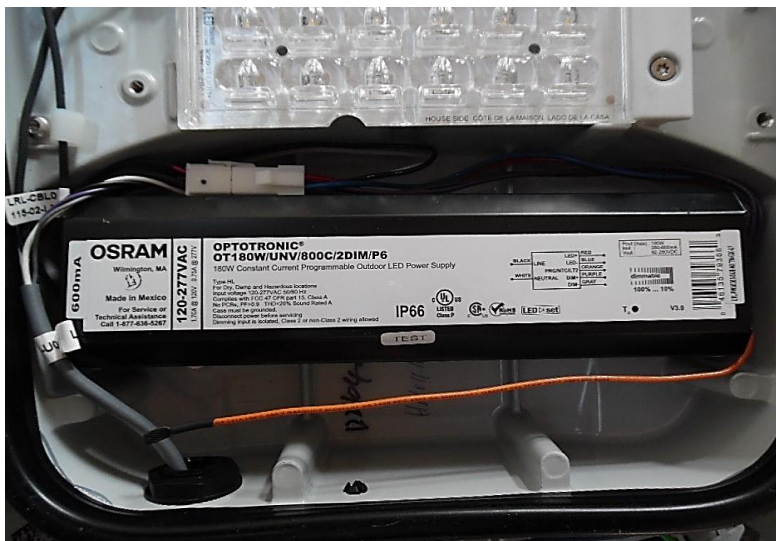
		Lateral (C-Plane) Angles														
		77.5	80	82.5	85	90	95	105	115	125	135	145	155	165	175	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	92.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	97.5	0	0	0	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
	102.5	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
	107.5	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
	112.5	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
	117.5	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
	122.5	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
	127.5	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
	132.5	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
	137.5	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
	142.5	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
	147.5	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
	152.5	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
	157.5	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
	162.5	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
	167.5	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
	172.5	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
	177.5	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



Report of Test

LLIA001574-004A-R02

Additional Pictures of Test Subject





Report of Test

LLIA001574-004A-R02

Test Distance 9.5 m
Ambient Temperature 24.9 °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 publications: IES LM-79-19. Format of reports and angular increments based on IES LM-31-95 and LM-10-96.

The device under test emits no detectable uplight, as defined by ANSI/IES LM-31-20. For the purpose of this report, certain non-zero uplight readings, attributable to instrument artifacts, have been assigned a zero value.

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

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 IES C-Type spherical coordinate system as defined in IES LM-75-01.

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.

Revision

- R01 - 11/08/2021 - Changed Additional Pictures of Test Subject page to include photograph of LED driver
- R02 - 11/11/2021 - Revised Catalog Number and quantity of LEDs



Report of Test

LLIA001574-004B-R02*

Integrating Sphere Report

Catalog Number: NXT-48M-5-X-2ES-6-XX-4-XX-X-XX-X

Pole/arm mounted, grey painted cast aluminum housing and door/driver compartment cover, two circuit boards, two clear plastic lenses with optic below each LED and clear flat glass enclosure.

48 white LEDs

Osram Optotronic OT180/UNV/800C/2DIM/P6 LED driver labeled as 600mA, WH91-5U1-03 surge suppressor



Performance Summary

Voltage	120.0 Vac
Current	0.7683 A
Power	91.55 W
Frequency	59.99 Hz
Power Factor	0.993
Current THD	5.4 %
Total Luminous Flux	11265.7 lm
Efficacy	123.1 lm/W
Chromaticity (x,y)	(0.4322, 0.4072)
(u',v')	(0.2462, 0.5219)
Duv	0.0019
CCT	3106 K
CRI (Ra)	73
R9	-27
TM-30: Rf	72
TM-30: Rg	96
TM-30: Rcs,h1	-15

Prepared For:

LED Roadway Lighting

84 Chain Lake Drive

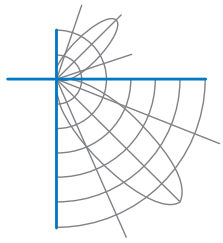
Suite 403

Halifax, Nova Scotia B3S 1A2, Canada

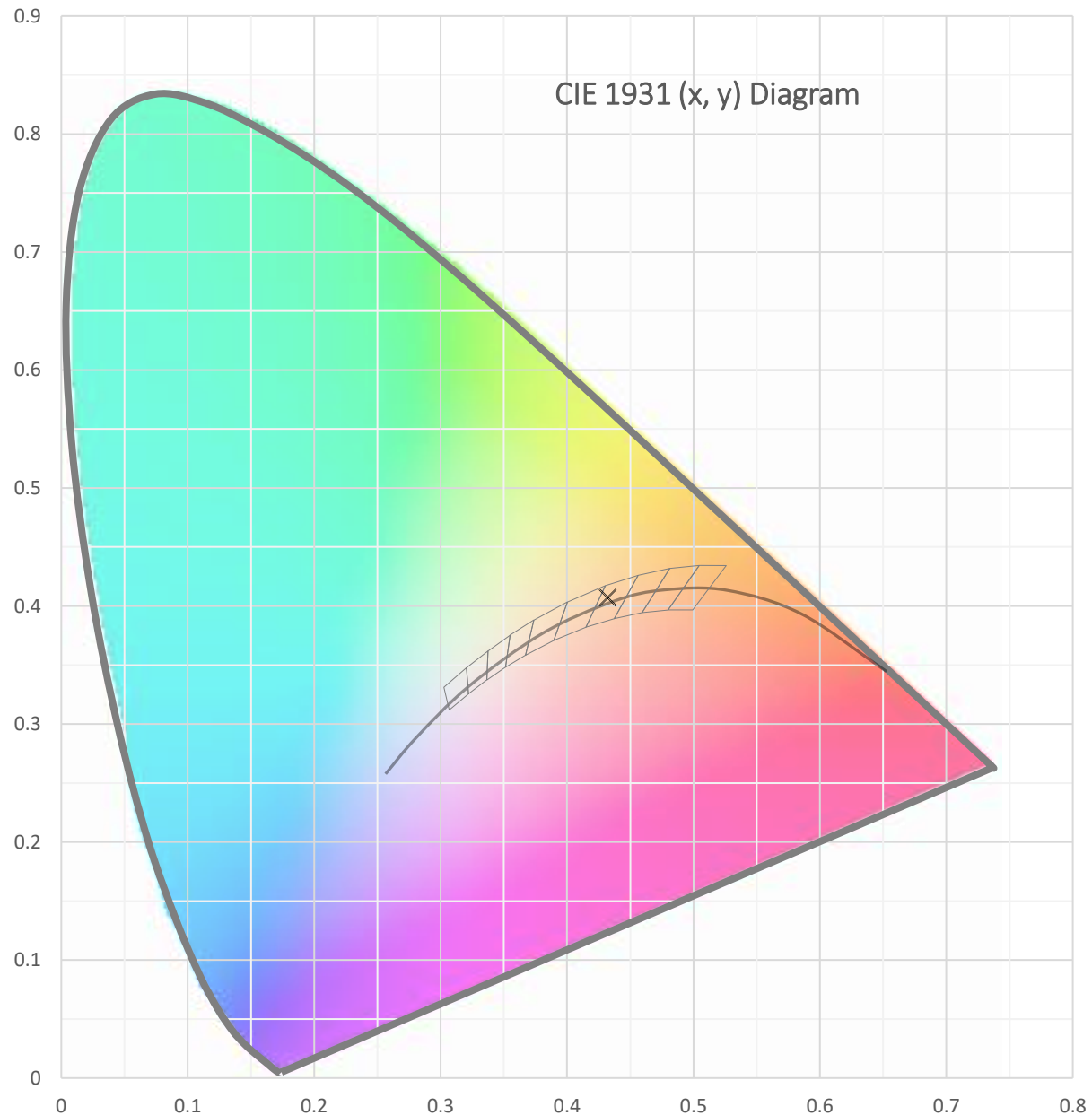
*This test report supersedes test report LLIA001574-004B-R01

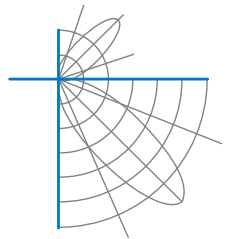
Test date: 11/02/2021

Report date: 11/11/2021

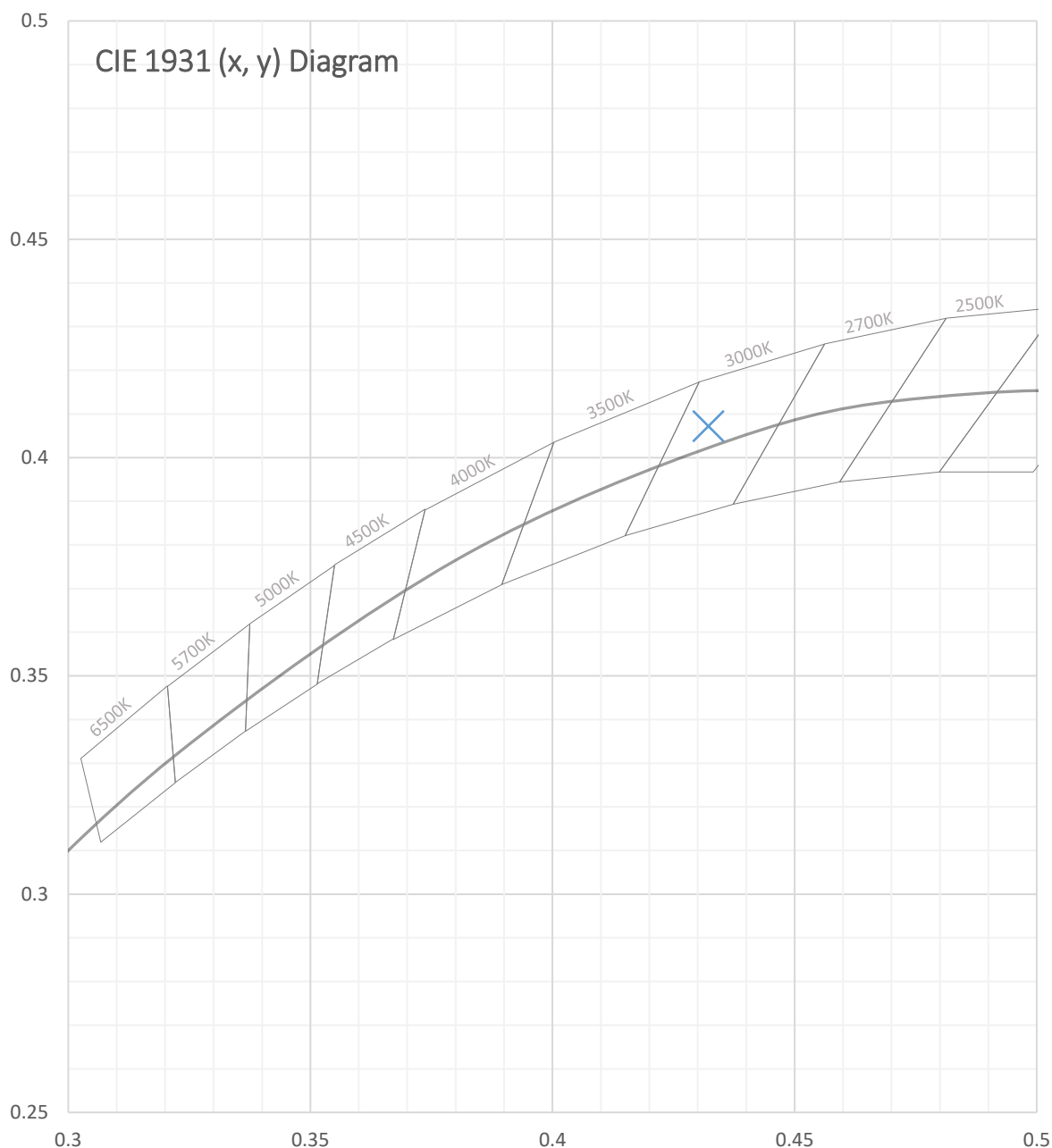


Test Report Number: LLIA001574-004B-R02





Test Report Number: LLIA001574-004B-R02





Test Report Number: LLIA001574-004B-R02

Total Radiant Flux	32.32 W
Total Luminous Flux	11265.7 Lm
Chromaticity CIE 1931 (x, y)	(0.4322, 0.4072)
Chromaticity CIE 1976 (u', v')	(0.2462, 0.5219)
Correlated Color Temperature (CCT)	3106 K
Color Rendering Index (Ra)	73
R1	70
R2	81
R3	91
R4	72
R5	69
R6	73
R7	80
R8	48
R9	-27
R10	55
R11	68
R12	49
R13	71
R14	95
TM-30: Rf	72
TM-30: Rg	96
TM-30: Rcs,h1	-15
Distance from Planckian Locus (Duv)	0.0019
Scotopic/Photopic Ratio $\frac{V_{\lambda}}{V_{\lambda}^{\prime}}$	1.225

Electrical Data

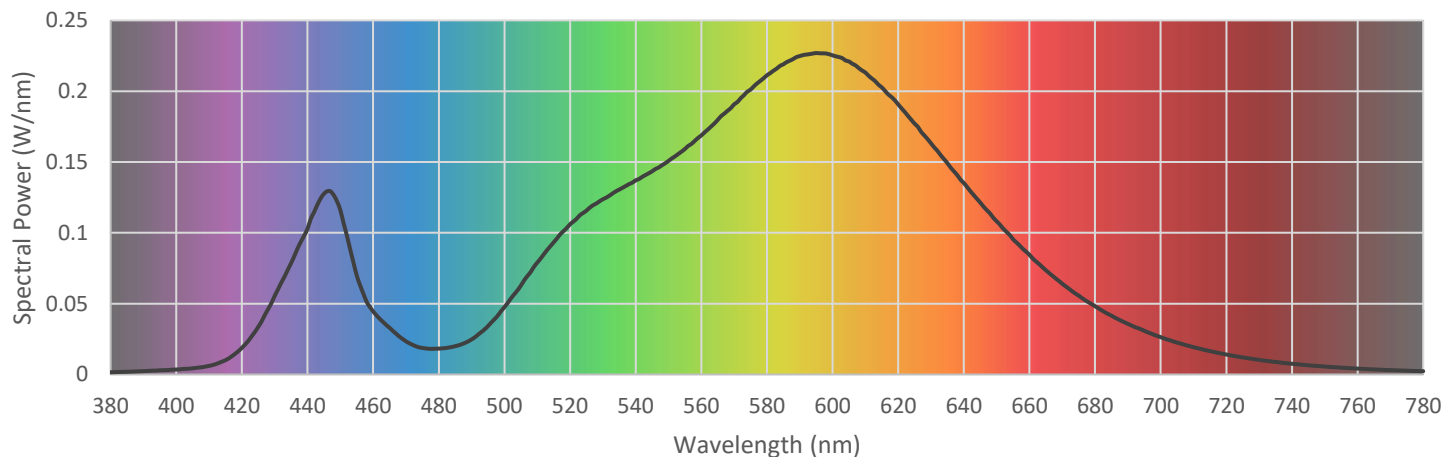
Voltage	120.0 Vac
Current	0.7683 A
Power	91.55 W
Frequency	59.99 Hz
Power Factor	0.993
Current THD	5.4 %



Test Report Number: LLIA001574-004B-R02

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

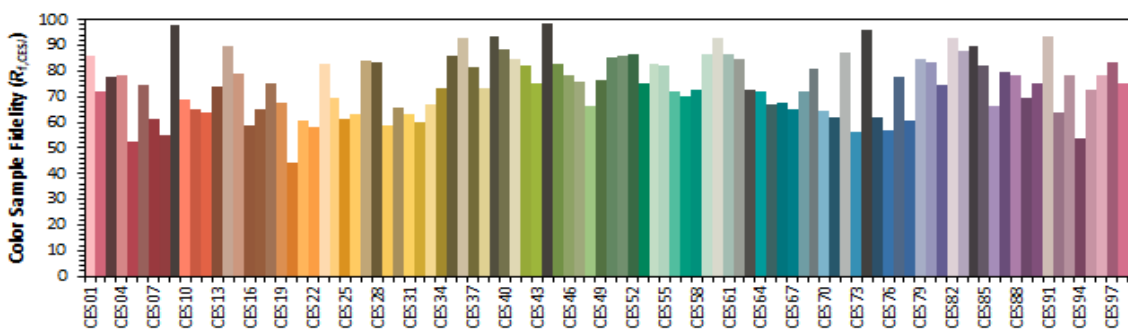
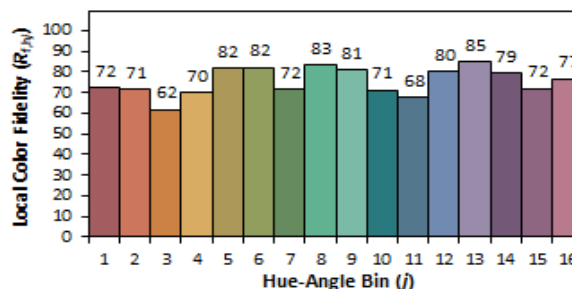
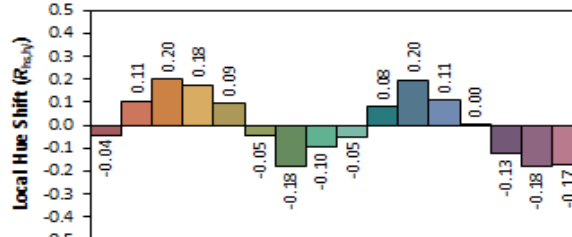
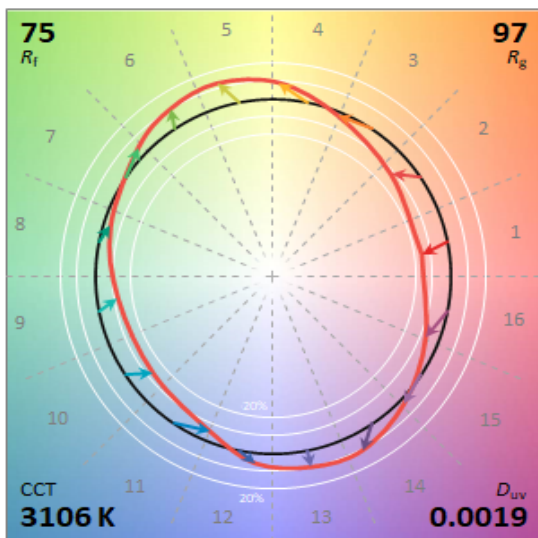
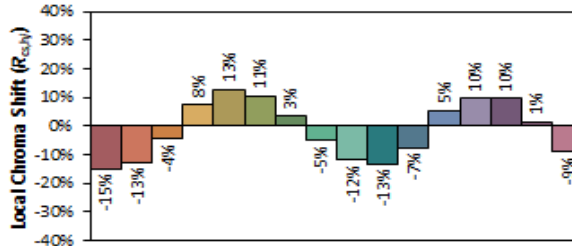
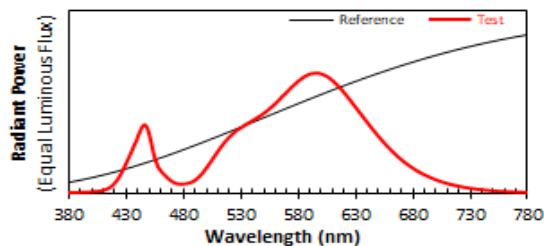
380	0.001592	480	0.018248	580	0.211236	680	0.048140
385	0.001899	485	0.019972	585	0.218980	685	0.041508
390	0.002352	490	0.024757	590	0.224763	690	0.035725
395	0.002943	495	0.034176	595	0.226928	695	0.030788
400	0.003490	500	0.047545	600	0.225318	700	0.026331
405	0.004362	505	0.062722	605	0.220985	705	0.022502
410	0.006067	510	0.078929	610	0.213173	710	0.019255
415	0.010106	515	0.093271	615	0.202687	715	0.016487
420	0.018833	520	0.106064	620	0.190662	720	0.014086
425	0.033710	525	0.115699	625	0.177053	725	0.012032
430	0.055572	530	0.123714	630	0.163196	730	0.010298
435	0.078703	535	0.130558	635	0.149156	735	0.008807
440	0.102969	540	0.137043	640	0.135149	740	0.007553
445	0.127588	545	0.143435	645	0.121392	745	0.006486
450	0.115949	550	0.150774	650	0.108159	750	0.005587
455	0.069850	555	0.159191	655	0.095469	755	0.004788
460	0.044457	560	0.168770	660	0.084463	760	0.004153
465	0.032969	565	0.179743	665	0.073593	765	0.003567
470	0.023424	570	0.190725	670	0.064044	770	0.003076
475	0.018746	575	0.201081	675	0.055669	775	0.002670
						780	0.002302





Test Report Number: LLIA001574-004B-R02

IES TM-30 Details



Notes:

x 0.4322
y 0.4071
u' 0.2463
v' 0.5219

CIE 13.3-1995
(CRI)

R_a 73
R_g -27

Test Report Number: LLIA001574-004B-R02

Test Equipment Configuration:	LightLab International Allentown 2m Integrating Sphere Measurements acquired using a Labsphere CDS 2600 spectroradiometer Testing was performed using 4 π geometry
Test Temperature:	25.4 °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:	<p>The measurements and other derived quantities contained in this report are based on the absolute data as measured.</p> <p>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.</p> <p>This report is free of erasures and corrections</p> <p>This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered.</p> <p>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.</p>
Revision:	<p>R01 - 11/08/2021 - Edited to keep revision number consistent with 004A</p> <p>R02 - 11/11/2021 - Revised Catalog Number and quantity of LEDs</p>

Sphere Report Template V2-15



Report of Test

LLIA001574-004C-R02*

Electrical Test Report

Catalog Number: NXT-48M-5-X-2ES-6-XX-4-XX-X-XX-X

Pole/arm mounted, grey painted cast aluminum housing and door/driver compartment cover, two circuit boards, two clear plastic lenses with optic below each LED and clear flat glass enclosure.

48 white LEDs

Osram Optotronic OT180/UNV/800C/2DIM/P6 LED driver labeled as 600mA, WH91-5U1-03 surge suppressor



Performance Summary

Voltage	277.0 Vac
Current	0.3524 A
Power	90.36 W
Frequency	60.00 Hz
Power Factor	0.926
Current THD	12.9 %

Ambient Temperature: 25.3 °C

Prepared For:
LED Roadway Lighting
84 Chain Lake Drive
Suite 403

Halifax, Nova Scotia B3S 1A2, Canada

*This test report supersedes test report LLIA001574-004C-R01

R01 - 11/08/2021 - Edited to keep revision number consistent with 004A

R02 - 11/11/2021 - Revised Catalog Number and quantity of LEDs

Tested in accordance with the applicable sections of IES LM-79-19. 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. 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 must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Test date: 11/05/2021

Report date: 11/11/2021

Electrical Report Template V1-3