



UL Verification Services

7826 East Evans Road
Scottsdale, AZ 85260

Photometric Indoor Test Report

Relevant Standards

IES LM-79-2008

ANSI C82.77-2002

Prepared For

Architectural Lighting Works

30984 Santana Street

Hayward, CA 94544

Catalog Number

LPR3.5T-DRY-2'-1-HP10-3500K-LLED-120-EXT-AL

Project Number

10194509

Test Number

32496

Test Date

2014-01-16

Prepared By

Robert O'Farrell, Technician

Approved By

Jim Domigan, Laboratory Team Leader

The results contained in this report pertain only to the tested sample.

This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.

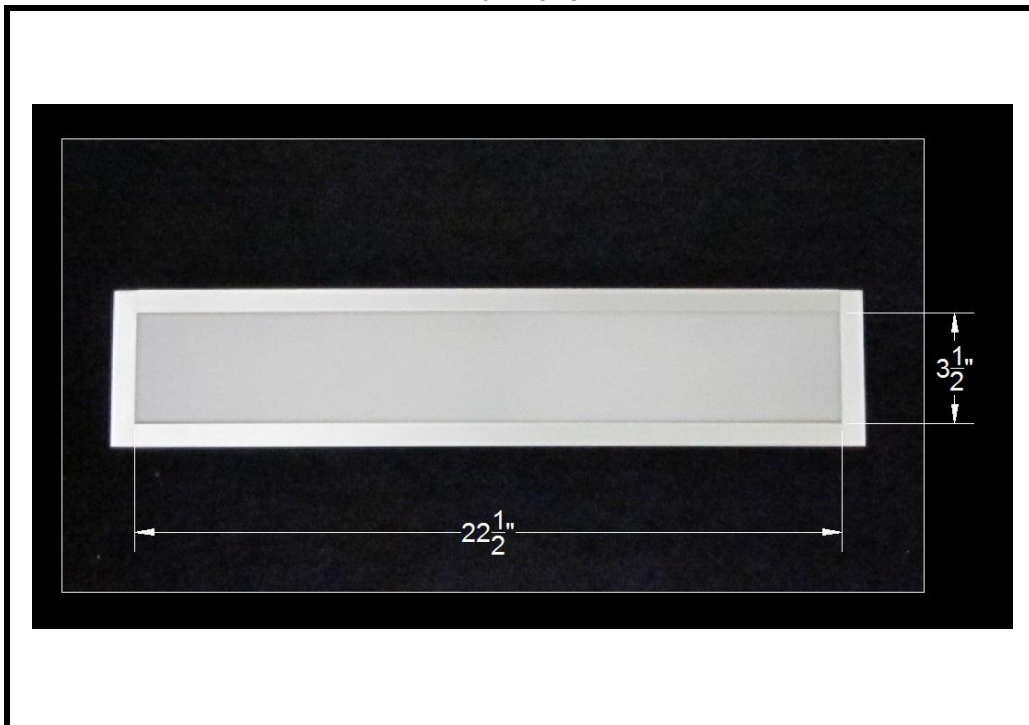


UL Verification Services

7826 East Evans Road
Scottsdale, AZ 85260

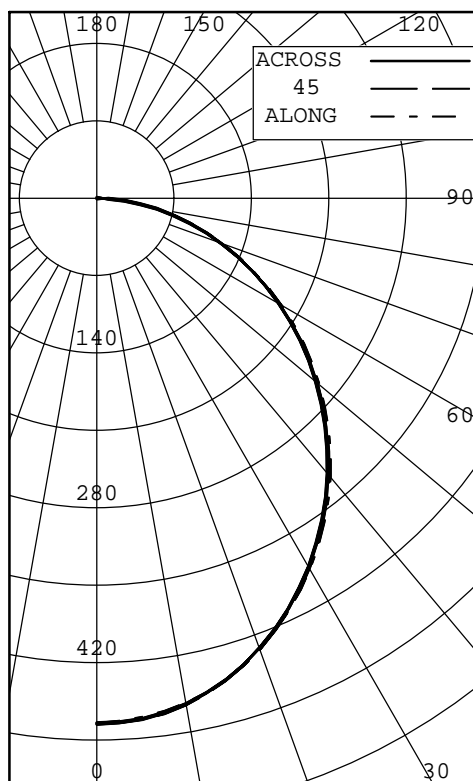
Luminaire Description: Formed aluminum housing, frosted plastic lens
Catalog Number: LPR3.5T-DRY-2'-1-HP10-3500K-LLED-120-EXT-AL
Lamp: 72 LEDs
Mounting: Downlight
Ballast/Driver: One Thomas Research LED30W-66-C0450 Driver

Luminaire



Test Conditions

Test Temperature:	24.6 °C
Voltage:	120.0 VAC
Current:	0.1570 A
Power:	18.40 W
Power Factor:	0.984
Frequency:	60 Hz
Current THD:	5.34 %



INTENSITY (CANDLEPOWER) SUMMARY OUTPUT
LUMENS

ANGLE	ALONG	22.5	45	67.5	ACROSS	
0	475	475	475	475	475	
5	471	473	473	473	473	46
10	464	465	466	465	465	
15	451	452	452	451	451	127
20	433	435	434	433	432	
25	412	413	412	411	410	189
30	386	387	386	385	384	
35	359	359	357	356	355	223
40	329	329	327	326	325	
45	297	296	294	293	292	227
50	263	262	261	260	259	
55	229	228	227	226	225	202
60	193	193	191	191	190	
65	158	157	156	155	155	155
70	123	122	121	121	121	
75	90	88	88	87	87	93
80	58	57	56	55	55	
85	28	27	26	26	25	29
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	362	28.03
0-40	585	45.32
0-60	1014	78.57
0-90	1291	100.00
40-90	706	54.68
60-90	277	21.43
90-180	0	0.00
0-180	1291	100.00

EFFICACY (LUMENS PER WATT): 70.1

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 22.500 INS
WIDTH: 3.500 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 1.2
SC: 1.2

ANGLE	ALONG	45	ACROSS
45	8257	8225	8170
55	7846	7802	7747
65	7353	7302	7251
75	6813	6673	6637
85	6210	5864	5746

TESTED IN ACCORDANCE WITH IES PROCEDURES.

**UL Verification Services**7826 East Evans Road
Scottsdale, AZ 85260INTENSITY (CANDLEPOWER) DATA
IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0.0	475	475	475	475	475	475	46
2.5	473	475	475	475	475	475	
5.0	471	473	473	473	473	473	
7.5	468	469	470	470	469	470	
10.0	464	465	466	465	465	465	
12.5	458	459	460	459	458	459	127
15.0	451	452	452	451	451	452	
17.5	443	444	444	443	442	443	
20.0	433	435	434	433	432	434	
22.5	423	425	423	422	421	423	
25.0	412	413	412	411	410	411	189
27.5	399	400	399	398	397	399	
30.0	386	387	386	385	384	386	
32.5	373	373	372	371	370	372	
35.0	359	359	357	356	355	357	
37.5	344	344	342	341	341	342	223
40.0	329	329	327	326	325	327	
42.5	313	313	311	310	309	311	
45.0	297	296	294	293	292	295	
47.5	280	279	278	277	276	278	
50.0	263	262	261	260	259	261	202
52.5	246	245	244	243	242	244	
55.0	229	228	227	226	225	227	
57.5	211	210	209	208	207	209	
60.0	193	193	191	191	190	192	
62.5	176	175	174	173	173	174	155
65.0	158	157	156	155	155	156	
67.5	141	140	139	138	138	139	
70.0	123	122	121	121	121	122	
72.5	106	105	105	104	104	105	
75.0	90	88	88	87	87	88	93
77.5	73	72	71	71	71	72	
80.0	58	57	56	55	55	56	
82.5	42	41	40	40	40	41	
85.0	28	27	26	26	25	26	
87.5	13	12	12	11	11	12	29
90.0	0	0	0	0	0	0	



COEFFICIENTS OF UTILIZATION

ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC WALL	90				80				70				50				30				10				0
	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																									
0	1.221	.221	.221	.22	1.191	.191	.191	.19	1.161	.161	.161	.16	1.111	.111	.11	1.061	.061	.06	1.021	.021	.02	1.00			
1	1.121	.071	.030	.99	1.091	.051	.010	.97	1.071	.030	.990	.96	0.980	.950	.93	0.940	.920	.90	0.910	.890	.87	0.85			
2	1.030	.950	.880	.82	1.000	.930	.860	.81	0.980	.910	.850	.80	0.870	.820	.78	0.840	.800	.76	0.810	.780	.75	0.73			
3	0.940	.830	.750	.69	0.920	.820	.740	.68	0.890	.800	.730	.68	0.780	.710	.66	0.750	.700	.65	0.720	.680	.64	0.62			
4	0.870	.750	.660	.59	0.850	.740	.650	.59	0.830	.720	.650	.58	0.700	.630	.58	0.670	.620	.57	0.650	.600	.56	0.54			
5	0.800	.670	.580	.51	0.780	.660	.570	.51	0.760	.650	.560	.51	0.630	.550	.50	0.610	.540	.50	0.590	.530	.49	0.47			
6	0.740	.600	.510	.45	0.720	.590	.500	.44	0.700	.580	.500	.44	0.560	.490	.44	0.550	.480	.43	0.530	.470	.43	0.41			
7	0.680	.540	.450	.39	0.660	.530	.450	.39	0.650	.520	.440	.38	0.510	.430	.38	0.490	.430	.38	0.480	.420	.37	0.35			
8	0.630	.490	.400	.34	0.620	.480	.400	.34	0.600	.470	.390	.34	0.460	.390	.34	0.450	.380	.33	0.440	.380	.33	0.31			
9	0.580	.450	.360	.30	0.570	.440	.360	.30	0.560	.430	.350	.30	0.420	.350	.30	0.410	.340	.30	0.400	.340	.29	0.28			
10	0.540	.410	.320	.27	0.530	.400	.320	.27	0.520	.390	.320	.27	0.380	.310	.27	0.380	.310	.26	0.370	.310	.26	0.25			

THE ABOVE COEFFICIENTS HAVE BEEN CALCULATED BASED ON LUMINAIRE LUMENS
BECAUSE IN AN ABSOLUTE TEST THE BARE LAMP LUMENS ARE UNKNOWN.
LIGHTING DESIGN CALCULATIONS MADE USING THESE COEFFICIENTS SHOULD
THEREFORE USE THE LUMINAIRE LUMENS IN THE CALCULATION FORMULA

LABORATORY RESULTS MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
BALLAST AND FIELD FACTORS HAVE NOT BEEN APPLIED.

TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST
LUMINOUS OPENING OF LUMINAIRE.