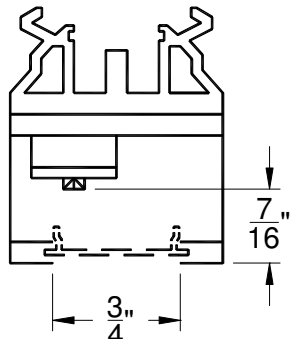
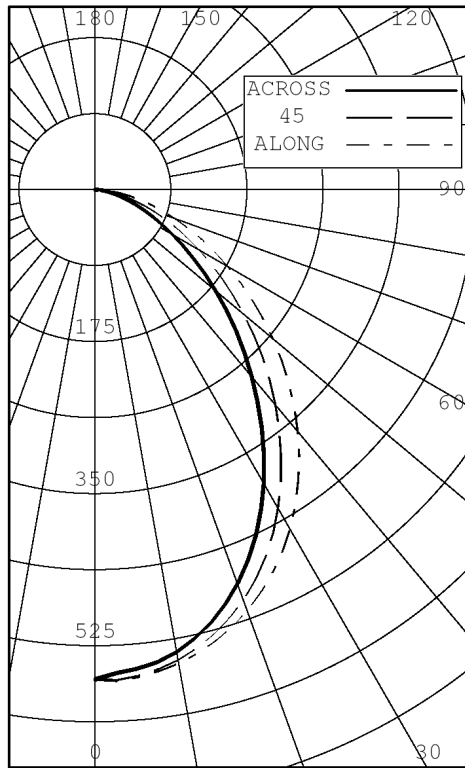




INDEPENDENT TEST LABORATORY REPORT No. 28762

ELECTRIX INC - LINEAR LED LUMINAIRE, CAT# L140-10-48-W3-90F
WITH FROSTED FLAT PLASTIC LENS
LED ARRAY. LUMINAIRE OUTPUT = 1182 LMS
LUMINAIRE OPERATING AT 24.0 VDC AND 39.2 WATTS



INTENSITY (CANDLEPOWER) SUMMARY						OUTPUT LUMENS
ANGLE	ALONG	22.5	45	67.5	ACROSS	
0	564	564	564	564	564	
5	564	561	562	559	554	54
10	554	550	550	545	541	
15	538	533	530	522	516	148
20	514	510	501	489	481	
25	485	478	465	448	439	212
30	450	441	422	400	389	
35	408	398	373	347	335	232
40	363	352	323	294	281	
45	315	303	272	243	229	210
50	267	254	223	195	181	
55	220	206	178	151	139	160
60	176	163	138	113	103	
65	135	123	102	81	73	102
70	99	88	71	56	50	
75	67	58	45	36	33	51
80	40	33	25	20	19	
85	17	13	9	9	8	13
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	414	35.05
0-40	646	54.69
0-60	1016	85.98
0-90	1182	100.00
40-90	536	45.31
60-90	166	14.02
90-180	0	0.00
0-180	1182	100.00

EFFICACY (LUMENS PER WATT): 30.2

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 50.000 INS
WIDTH: 0.750 INS

LUMINANCE SUMMARY CD./SQ.M.

ANGLE	ALONG	45	ACROSS
45	18436	15983	13457
55	15868	12868	10029
65	13193	9996	7211
75	10763	7243	5250
85	8157	4374	3880

S/MH: 1.1
SC (ALONG): 1.2, SC (ACROSS): 1.1

CERTIFIED BY:

Ryder Trumey

DATE: MAR 9, 2011

PREPARED FOR:

ELECTRIX INC
NEW HAVEN, CT

TESTED IN ACCORDANCE WITH IES PROCEDURES.

LIGHTING SCIENCES, INC.
 7826 E. EVANS RD.
 SCOTTSDALE, AZ, USA 85260

INDEPENDENT TEST LABORATORY REPORT No. 28762

ELECTRIX INC - LINEAR LED LUMINAIRE, CAT# L140-10-48-W3-90F
 WITH FROSTED FLAT PLASTIC LENS
 LED ARRAY. LUMINAIRE OUTPUT = 1182 LMS
 LUMINAIRE OPERATING AT 24.0 VDC AND 39.2 WATTS

INTENSITY (CANDLEPOWER) DATA
 IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0.0	564	564	564	564	564	564	
2.5	566	563	565	562	557	563	
5.0	564	561	562	559	554	560	54
7.5	560	556	557	553	549	555	
10.0	554	550	550	545	541	548	
12.5	547	543	541	535	529	539	
15.0	538	533	530	522	516	528	148
17.5	527	523	516	506	500	515	
20.0	514	510	501	489	481	499	
22.5	501	495	484	470	461	482	
25.0	485	478	465	448	439	463	212
27.5	468	461	444	424	414	443	
30.0	450	441	422	400	389	420	
32.5	430	420	398	374	362	397	
35.0	408	398	373	347	335	373	232
37.5	386	376	348	321	307	348	
40.0	363	352	323	294	281	323	
42.5	339	328	297	268	255	298	
45.0	315	303	272	243	229	273	210
47.5	291	278	248	218	205	248	
50.0	267	254	223	195	181	224	
52.5	243	230	200	172	159	201	
55.0	220	206	178	151	139	179	160
57.5	198	184	157	131	120	158	
60.0	176	163	138	113	103	138	
62.5	155	142	119	96	87	120	
65.0	135	123	102	81	73	103	102
67.5	116	105	86	68	61	87	
70.0	99	88	71	56	50	72	
72.5	82	73	57	45	41	59	
75.0	67	58	45	36	33	47	51
77.5	53	45	35	28	25	37	
80.0	40	33	25	20	19	27	
82.5	28	23	16	14	13	19	
85.0	17	13	9	9	8	11	13
87.5	7	4	3	3	3	4	
90.0	0	0	0	0	0	0	

LIGHTING SCIENCES, INC.
7826 E. EVANS RD.
SCOTTSDALE, AZ, USA 85260

INDEPENDENT TEST LABORATORY REPORT No. 28762

ELECTRIX INC - LINEAR LED LUMINAIRE, CAT# L140-10-48-W3-90F
WITH FROSTED FLAT PLASTIC LENS
LED ARRAY. LUMINAIRE OUTPUT = 1182 LMS
LUMINAIRE OPERATING AT 24.0 VDC AND 39.2 WATTS

AVERAGE LUMINANCE DATA

CD./SQ.M (FOOTLAMBERTS)

ANGLE	ALONG	22.5	45	67.5	ACROSS
0	23303 (6801)	23303 (6801)	23303 (6801)	23303 (6801)	23303 (6801)
30	21455 (6262)	21126 (6165)	20178 (5889)	19113 (5578)	18558 (5416)
40	19578 (5714)	19034 (5555)	17425 (5085)	15922 (4647)	15140 (4418)
45	18436 (5380)	17728 (5174)	15983 (4665)	14231 (4153)	13457 (3927)
50	17175 (5012)	16388 (4783)	14371 (4194)	12551 (3663)	11645 (3398)
55	15868 (4631)	14893 (4346)	12868 (3755)	10924 (3188)	10029 (2927)
60	14528 (4240)	13488 (3936)	11386 (3323)	9373 (2735)	8473 (2473)
65	13193 (3850)	12055 (3518)	9996 (2917)	7976 (2328)	7211 (2104)
70	11903 (3474)	10703 (3123)	8629 (2518)	6739 (1967)	6072 (1772)
75	10763 (3141)	9346 (2727)	7243 (2114)	5728 (1672)	5250 (1532)
80	9497 (2771)	7956 (2322)	5961 (1740)	4838 (1412)	4522 (1319)
85	8157 (2380)	6305 (1840)	4374 (1276)	4045 (1180)	3880 (1132)

LIGHTING SCIENCES, INC.
 7826 E. EVANS RD.
 SCOTTSDALE, AZ, USA 85260

INDEPENDENT TEST LABORATORY REPORT No. 28762

ELECTRIX INC - LINEAR LED LUMINAIRE, CAT# L140-10-48-W3-90F
 WITH FROSTED FLAT PLASTIC LENS
 LED ARRAY. LUMINAIRE OUTPUT = 1182 LMS
 LUMINAIRE OPERATING AT 24.0 VDC AND 39.2 WATTS

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	1.221	1.221	1.221	1.191	1.191	1.191	1.191	1.161	1.161	1.161	1.161	1.111	1.111	1.111	1.111	1.061	1.061	1.061	1.061	1.021	1.021	1.021	1.021	1.00
1	1.131	1.091	1.051	1.021	1.111	1.071	1.031	1.001	1.081	1.051	1.020	0.991	1.000	0.980	0.961	0.941	0.970	0.950	0.931	0.911	0.930	0.910	0.891	0.871	0.88
2	1.050	0.980	0.920	0.871	1.030	0.960	0.910	0.861	1.010	0.940	0.890	0.851	0.910	0.870	0.831	0.811	0.880	0.840	0.811	0.791	0.850	0.820	0.791	0.771	0.78
3	0.970	0.880	0.810	0.751	0.950	0.860	0.800	0.741	0.930	0.850	0.790	0.741	0.820	0.770	0.721	0.701	0.800	0.750	0.711	0.691	0.770	0.730	0.701	0.681	0.68
4	0.910	0.800	0.720	0.661	0.890	0.790	0.710	0.661	0.870	0.770	0.710	0.651	0.750	0.690	0.641	0.621	0.730	0.680	0.631	0.611	0.710	0.660	0.631	0.611	0.61
5	0.840	0.720	0.640	0.581	0.820	0.710	0.630	0.581	0.800	0.700	0.630	0.571	0.680	0.620	0.571	0.551	0.660	0.610	0.561	0.541	0.640	0.600	0.561	0.541	0.54
6	0.780	0.660	0.570	0.521	0.760	0.650	0.570	0.511	0.750	0.640	0.560	0.511	0.620	0.550	0.501	0.481	0.600	0.540	0.501	0.481	0.590	0.540	0.501	0.481	0.48
7	0.720	0.590	0.510	0.461	0.710	0.580	0.510	0.451	0.690	0.580	0.500	0.451	0.560	0.490	0.451	0.431	0.550	0.490	0.441	0.421	0.540	0.480	0.441	0.421	0.42
8	0.670	0.540	0.460	0.411	0.660	0.530	0.460	0.401	0.640	0.530	0.450	0.401	0.510	0.450	0.401	0.381	0.500	0.440	0.401	0.381	0.490	0.440	0.401	0.381	0.38
9	0.630	0.500	0.420	0.361	0.610	0.490	0.410	0.361	0.600	0.480	0.410	0.361	0.470	0.410	0.361	0.341	0.460	0.400	0.361	0.341	0.450	0.400	0.351	0.331	0.34
10	0.580	0.460	0.370	0.331	0.570	0.450	0.370	0.321	0.560	0.440	0.370	0.321	0.430	0.370	0.321	0.301	0.430	0.360	0.321	0.301	0.420	0.360	0.321	0.301	0.30

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

LUMINAIRE INPUT WATTS 39.2

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.

LIGHTING SCIENCES, INC.
7826 E. EVANS RD.
SCOTTSDALE, AZ, USA 85260

INDEPENDENT TEST LABORATORY REPORT No. 28762

ELECTRIX INC - LINEAR LED LUMINAIRE, CAT# L140-10-48-W3-90F
WITH FROSTED FLAT PLASTIC LENS
LED ARRAY. LUMINAIRE OUTPUT = 1182 LMS
LUMINAIRE OPERATING AT 24.0 VDC AND 39.2 WATTS

ELECTRICAL MEASUREMENTS

INPUT VOLTAGE:	24.0	VOLTS DC
INPUT CURRENT:	1.630	AMPS
INPUT POWER:	39.2	WATTS
POWER FACTOR:	N/A	PERCENT
TOTAL HARMONIC DISTORTION:	N/A	PERCENT
OFF STATE POWER:	0.00	WATTS

LIGHT OUTPUT

LUMENS:	1182	lm
EFFICACY:	30.2	lm/W

SPECTRAL MEASUREMENTS

X:	0.4374	
y:	0.4051	
u/u':	0.2504	
v:	0.3479	
v':	0.5219	
Duv:	0.0003	
CRI (R _a):	86.1	
CRI (R _g):	51.5	
CCT:	2998	K
RADIANT FLUX:	4175	mW

LIGHTING SCIENCES, INC.
 7826 E. EVANS RD.
 SCOTTSDALE, AZ, USA 85260

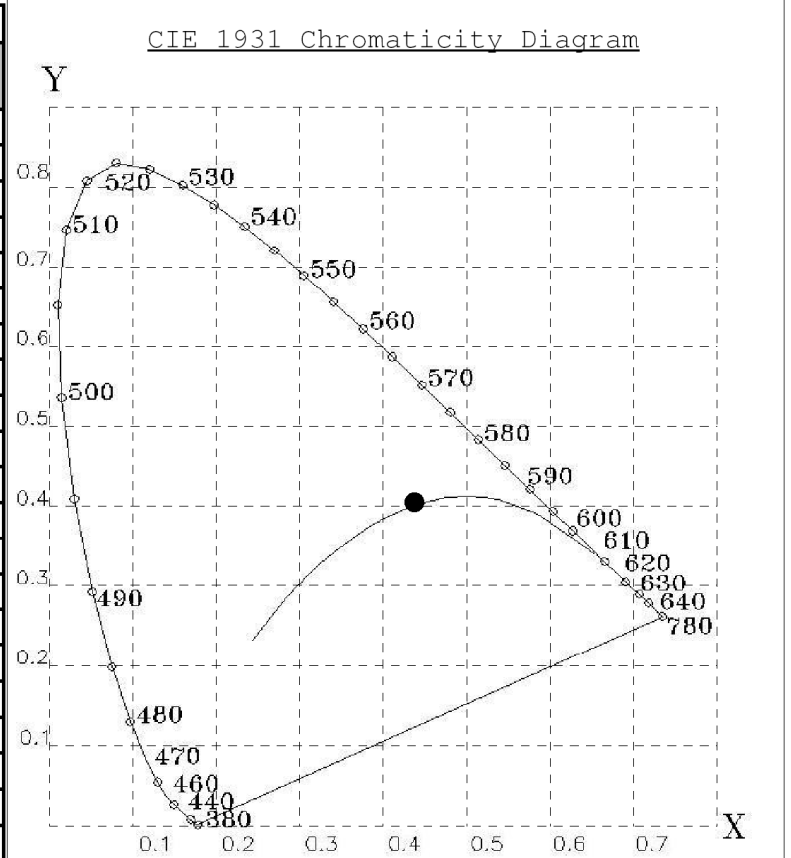
INDEPENDENT TEST LABORATORY REPORT No. 28762

ELECTRIX INC - LINEAR LED LUMINAIRE, CAT# L140-10-48-W3-90F
 WITH FROSTED FLAT PLASTIC LENS
 LED ARRAY. LUMINAIRE OUTPUT = 1182 LMS
 LUMINAIRE OPERATING AT 24.0 VDC AND 39.2 WATTS



Tabulated Spectral Power Distribution

Wavelength [nm]	[mW/nm]	Wavelength [nm]	[mW/nm]
380	0.74706	590	20.01711
390	0.71122	600	20.96504
400	0.48115	610	21.83344
410	0.44511	620	22.33790
420	0.95390	630	22.21920
430	3.15383	640	21.54145
440	8.11749	650	20.10884
450	13.08305	660	18.27651
460	6.49085	670	16.04122
470	3.87372	680	13.79956
480	2.90668	690	11.51752
490	3.57644	700	9.38926
500	5.87447	710	7.56412
510	8.79023	720	5.90347
520	11.47809	730	4.49200
530	13.68926	740	3.42835
540	15.21225	750	2.63664
550	16.40652	760	2.01321
560	17.39714	770	1.55713
570	18.40849	780	0.60262
580	19.22946		



LIGHTING SCIENCES, INC.
7826 E. EVANS RD.
SCOTTSDALE, AZ, USA 85260

INDEPENDENT TEST LABORATORY REPORT No. 28762

ELECTRIX INC - LINEAR LED LUMINAIRE, CAT# L140-10-48-W3-90F
WITH FROSTED FLAT PLASTIC LENS
LED ARRAY. LUMINAIRE OUTPUT = 1182 LMS
LUMINAIRE OPERATING AT 24.0 VDC AND 39.2 WATTS

LUMINOUS OPENING



SIDE VIEW



All testing was conducted in accordance with LM-79-08,

Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products as published by the Illuminating Engineering Society of North America (IESNA).

The condition of the item tested was new. Stabilization time before testing exceeded 16 hours.

The test results (luminous distribution and flux) were obtained by using a Lighting Sciences series 6000 Type C Moving Mirror Goniophotometer

- The photometric reference standard used is a set of three incandescent luminous intensity standard lamps calibrated and traceable to the U.S. National Institute of Standards and Technology.

The test results (colorimetric and luminous flux) were obtained by using a Lighting Sciences model 4000 Integrating Sphere of either 1 or 2 meters diameter, having an internal reflectance exceeding 0.80. 4π geometry was used. Correction factors were applied for spectral mismatch and self-absorption. The spectroradiometer employed was a LSC model 500E having a bandwidth of .84.

- The photometric reference standard used is a set of three incandescent luminous flux standard lamps calibrated and traceable to the U.S. National Institute of Standards and Technology.
- The colorimetric reference standard used is an incandescent spectral standard lamp calibrated and traceable to the U.S. National Institute of Standards and Technology.

Power measurements were obtained with a Yokogawa WT210 power analyzer.

Ambient temperature during testing was $25^{\circ} \text{C} \pm 1^{\circ} \text{C}$, measured using an Omega model DP460.

Calibration certificates are on file at the laboratories of Lighting Sciences Inc.