LIGHT LABORATORY INC. 8165 E Kaiser Blvd. Anaheim, CA 92808 p. 714.282.2270 f. 714.676.5558



Report No:	L031611001
Prepared For:	GARVIN INDUSTRIES INC 3700 SANDRA STREET, FRANKLIN PARK, IL 60131
Model Number:	TL120LED
Test:	Photometric/Electrical Test

Standards Used:Appropriate part or all test guidelines were used for test performed:IESNA LM79: 2008Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting ProductsANSI NEMA ANSLG C78.377: 2008Specification of the Chromaticity of Solid State Lighting ProductsANSI C82.77:2002:Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Catalog number is TL120LED. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date:	3/30/16		
Date of Tests:	4/6/16	-	4/11/16

Seasoning of Sample: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	
Yokogawa Digital Power Meter	WT210	MT-EL06-S1	11/18/16
Xitron Power Analyzer	2503AH	MT-EL01	11/30/16
ITECH DC Power Supply	IT6122	PSDC-03-S1	11/17/16
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/24/16
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	
LLI 2M Sphere	2MR97	CD-SN03-S2	
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

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Test Summary	
Manufacturer:	GARVIN INDUSTRIES INC
Model Number:	TL120LED
Driver Model Number:	N/A
Total Lumens:	13889.66
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	1.06
Input Power (W):	120.97
Input Power Factor:	0.98
Current ATHD @ 120V(%):	16%
Current ATHD @ 277V(%):	N/A
Efficacy:	115
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:30
Total Operating Time (Hours):	1:00
Off State Power(W):	0.00



FIG.1 LUMINAIRE

^{*}All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.



Report No: L031611001 Date: 4/11/2016

Test Methods

Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Disclaimers:

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

Report Prepared by :

Keyur Patel

Test Report Released by:

UMP

*Attached are photometric data reports. Total number of pages: 8

Jeff Ahn Engineering Manager

Test Report Reviewed by:

enel

Steve Kang Quality Assurance

*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

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Photometric Test Report

IES INDOOR REPORT PHOTOMETRIC FILENAME : L031611001.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002 [TEST] L031611001 [TESTLAB] LIGHT LABORATORY, INC. [ISSUEDATE] 4/11/2016 [MANUFAC] GARVIN INDUSTRIES INC [LUMCAT] TL120LED [LUMINAIRE] 120 Watt "Corncob" LED Temporary Job Site Light with a Steel Cage [MORE] SIZE: 7"DIA. X 15.5"H. [BALLASTCAT] N/A [LAMPPOSITION] 0,0 [LAMPCAT] N/A [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS. [INPUT] 120VAC, 120.97W [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	13890
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	120.97
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	0.33 ft (Diameter)
Luminous Width (90-270)	0.33 ft (Diameter)
Luminous Height	0.67 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	58873	58873	58873
55	60457	60457	60457
65	60605	60605	60605
75	63737	63737	63737
85	63565	63565	63565

CANDELA TABULATION

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	229.77	N.A.	1.70
0-30	616.12	N.A.	4.40
0-40	1264.5	N.A.	9.10
0-60	3342.73	N.A.	24.10
0-80	6135.66	N.A.	44.20
0-90	7613.28	N.A.	54.80
10-90	7564.75	N.A.	54.50
20-40	1034.73	N.A.	7.40
20-50	1952.71	N.A.	14.10
40-70	3413.72	N.A.	24.60
60-80	2792.93	N.A.	20.10
70-80	1457.44	N.A.	10.50
80-90	1477.62	N.A.	10.60
90-110	2816.6	N.A.	20.30
90-120	3960.15	N.A.	28.50
90-130	4893.01	N.A.	35.20
90-150	6009.8	N.A.	43.30
90-180	6276.39	N.A.	45.20
110-180	3459.79	N.A.	24.90
0-180	13889.66	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	48.53
10-20	181.24
20-30	386.35
30-40	648.39
40-50	917.97
50-60	1160.25
60-70	1335.49
70-80	1457.44
80-90	1477.62
90-100	1457.2
100-110	1359.4
110-120	1143.54
120-130	932.87
130-140	691.52
140-150	425.27
150-160	200.41
160-170	60.10
170-180	6.08

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	70	80 50	30	10	70	70 50	30	10	50	50 30	10	50	30 30	10	50	10 30	10	0 0
0	108	108	8108	3108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	93	87	81	75	86	80	75	70	67	63	59	56	52	50	45	43	40	35
2	83	73	64	57	76	67	59	53	56	50	45	46	41	37	36	33	30	25
3	74	62	53	45	68	57	49	42	48	41	35	39	33	29	31	26	23	19
4	67	54	44	37	61	49	41	34	41	34	29	33	28	23	26	22	18	15
5	61	47	38	30	56	43	35	28	36	29	24	29	24	19	23	19	15	12
6	56	42	32	26	51	38	30	24	32	25	20	26	20	16	20	16	13	10
7	51	37	28	22	47	34	26	20	29	22	17	23	18	14	18	14	11	8
8	48	34	25	19	43	31	23	17	26	19	15	21	16	12	17	12	9	7
9	44	30	22	16	40	28	20	15	24	17	13	19	14	10	15	11	8	6
10	41	28	20	14	38	26	18	13	22	15	11	18	13	9	14	10	7	5

POLAR GRAPH



Maximum Candela = 1397 Located At Horizontal Angle = 0, Vertical Angle = 75 # 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.) # 2 - Horizontal Cone Through Vertical Angle (75) (Through Max. Cd.)