

**REPORT NUMBER:** ITL93970-GONIOPHOTOMETRY

**PAGE:** 1 OF 6

**ISSUE DATE:** 09/21/20

**PREPARED FOR:** LITELAB CORPORATION

**ADDRESS:** 251 ELM STREET

BUFFALO, NY 14203

**CATALOG NUMBER:** LED-(BUS)-(VINYL)-(LENGTH)-CL-(FINISH)

**LUMINAIRE:** EXTRUDED DIFFUSE TRACK MOUNTING WITH FABRICATED SEMI-DIFFUSE METAL METAL DRIVER HOUSING, EXTRUDED DIFFUSE METAL HOUSING, ONE CIRCUIT BOARD WITH 1 LED, FABRICATED DIFFUSE METAL CIRCUIT BOARD MOUNTING CLIPS, FABRICATED SEMI-DIFFUSE METAL REFLECTOR, MOLDED CLEAR PLASTIC LENS.

**LAMP:** ONE WHITE MULTI-CHIP LIGHT EMITTING DIODE (LED), VERTICAL BASE-UP POSITION.

**LED DRIVER:** MAGTECH INDUSTRIES CORP Q22-U24-C0700-XP, DRIVER HAS MULTIPLE LEADS, LINE INPUT, LED OUTPUT LEADS AND DIMMER LEADS CONNECTED FOR THIS TEST. DIMMING LEADS ATTACHED TO A LITELAB PROPRIETARY DIMMING CONTROLLER. POTENTIOMETER SET FOR HIGHEST OUTPUT SETTING.

**NOTE:** DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE DRIVER.

**INPUT ELECTRICAL:** 120.0 VOLTS, 13.9 WATTS, 0.117 AMPS

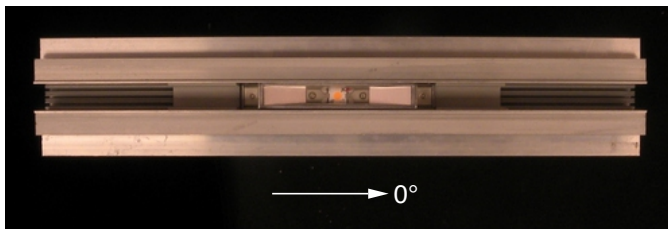
POWER FACTOR: 99.0%, VOLTAGE THD: 0.1, CURRENT THD: 12.6

TEST PROCEDURE: IESNA LM-79-19

TEST DISTANCE = 20.0 FEET

AMBIENT: 25.0

THIS REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.



Approved           *R BERGIN*

**REPORT NUMBER:** ITL93970-GONIOPHOTOMETRY

**PAGE:** 2 OF 6

**ISSUE DATE:** 09/21/20

**PREPARED FOR:** LITELAB CORPORATION

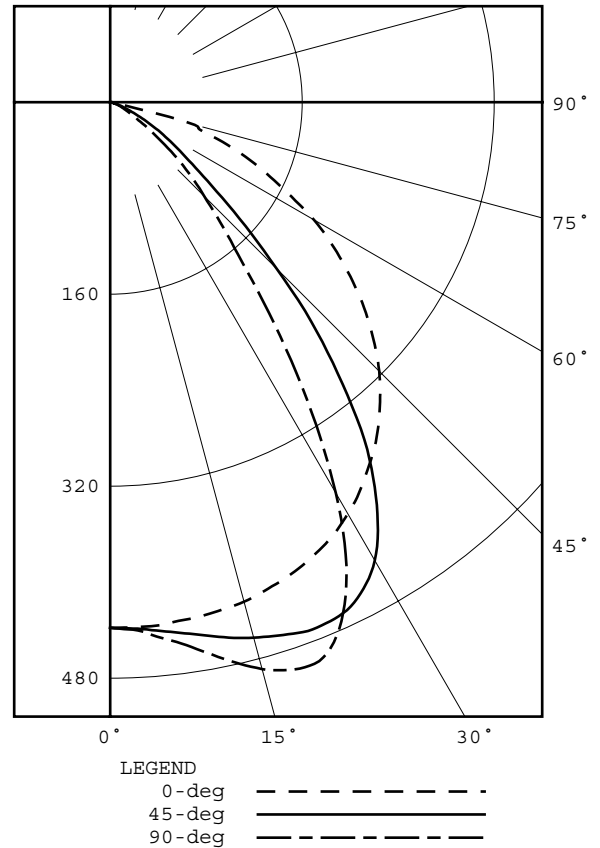
**CATALOG NUMBER:** LED- (BUS) - (VINYL) - (LENGTH) -CL- (FINISH)

CANDELA DISTRIBUTION						FLUX
	0.0	22.5	45.0	67.5	90.0	
0	438	438	438	438	438	
5	438	439	442	445	447	42
15	431	441	462	481	489	131
25	412	433	467	470	462	206
35	374	402	382	298	263	218
45	317	334	196	124	111	168
55	239	203	71	50	40	104
65	147	57	23	14	12	45
75	73	9	5	4	4	13
85	2	1	1	1	1	1
90	0	0	0	0	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	379	40.8
0- 40	597	64.2
0- 60	869	93.5
0- 90	929	100.0
90-180	0	0.0
0-180	929	100.0

EFFICACY = 66.8 lm/W  
 CIE TYPE - DIRECT  
 PLANE : 0-DEG 90-DEG  
 SPACING CRITERIA : 1.33 1.21  
 BEAM ANGLE (50%) : 107.6 X 71.3 DEGREES  
 FIELD ANGLE (10%) : 152.0 X 106.5 DEGREES  
 LUMINOUS LENGTH : 4.500 0.813

LUMINANCE DATA IN CANDELA/SQ M			
ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	190051.	117508.	66548.
55	176646.	52476.	29564.
65	147457.	23072.	12037.
75	119570.	8190.	6552.
85	9728.	4864.	4864.





PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

**REPORT NUMBER:** ITL93970-GONIOPHOTOMETRY

**PAGE:** 3 OF 6

**ISSUE DATE:** 09/21/20

**PREPARED FOR:** LITELAB CORPORATION

**CATALOG NUMBER:** LED-(BUS) - (VINYL) - (LENGTH) -CL- (FINISH)

CANDELA DISTRIBUTION  
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	438	438	438	438	438
2.5	438	438	439	440	440
5.0	438	439	442	445	447
7.5	436	440	446	452	455
10.0	435	441	451	461	466
12.5	433	441	457	471	478
15.0	431	441	462	481	489
17.5	427	440	466	488	496
20.0	423	439	470	492	498
22.5	418	436	470	487	487
25.0	412	433	467	470	462
27.5	405	428	457	442	425
30.0	396	421	441	401	376
32.5	386	413	415	354	320
35.0	374	402	382	298	263
37.5	362	390	343	244	210
40.0	348	375	295	194	166
42.5	333	357	248	153	136
45.0	317	334	196	124	111
47.5	299	308	153	101	92
50.0	280	278	116	85	73
52.5	260	241	90	66	54
55.0	239	203	71	50	40
57.5	218	161	57	36	28
60.0	196	122	44	26	21
62.5	170	86	32	19	15
65.0	147	57	23	14	12
67.5	126	37	16	10	9
70.0	104	25	11	8	7
72.5	81	17	7	6	5
75.0	73	9	5	4	4
77.5	14	6	3	3	3
80.0	6	3	2	2	2
82.5	5	2	1	2	2
85.0	2	1	1	1	1
87.5	1	0	0	0	1
90.0	0	0	0	0	0



INDEPENDENT TESTING LABORATORIES, INC.  
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

**REPORT NUMBER:** ITL93970-GONIOPHOTOMETRY

**PAGE:** 4 OF 6

**ISSUE DATE:** 09/21/20

**PREPARED FOR:** LITELAB CORPORATION

**CATALOG NUMBER:** LED- (BUS) - (VINYL) - (LENGTH) -CL- (FINISH)

5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	11
5- 10	32
10- 15	54
15- 20	76
20- 25	96
25- 30	110
30- 35	112
35- 40	105
40- 45	92
45- 50	77
50- 55	60
55- 60	44
60- 65	28
65- 70	17
70- 75	10
75- 80	4
80- 85	1
85- 90	0

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	42
0- 20	173
0- 30	379
0- 40	597
0- 50	765
0- 60	869
0- 70	915
0- 80	928
0- 90	929



PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

**REPORT NUMBER:** ITL93970-GONIOPHOTOMETRY

**PAGE:** 5 OF 6

**ISSUE DATE:** 09/21/20

**PREPARED FOR:** LITELAB CORPORATION

**CATALOG NUMBER:** LED- (BUS) - (VINYL) - (LENGTH) -CL- (FINISH)

COEFFICIENTS OF 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
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58	67	61	57	65	60	57	55
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49
7	72	60	52	47	70	59	52	47	58	51	47	57	51	46	55	50	46	44
8	67	55	48	43	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	43	39	49	43	38	48	43	38	48	42	38	36
10	59	47	40	35	58	47	40	35	46	40	35	45	39	35	44	39	35	33

ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS TEST SAMPLE.

**REPORT NUMBER:** ITL93970-GONIOPHOTOMETRY

**PAGE:** 6 OF 6

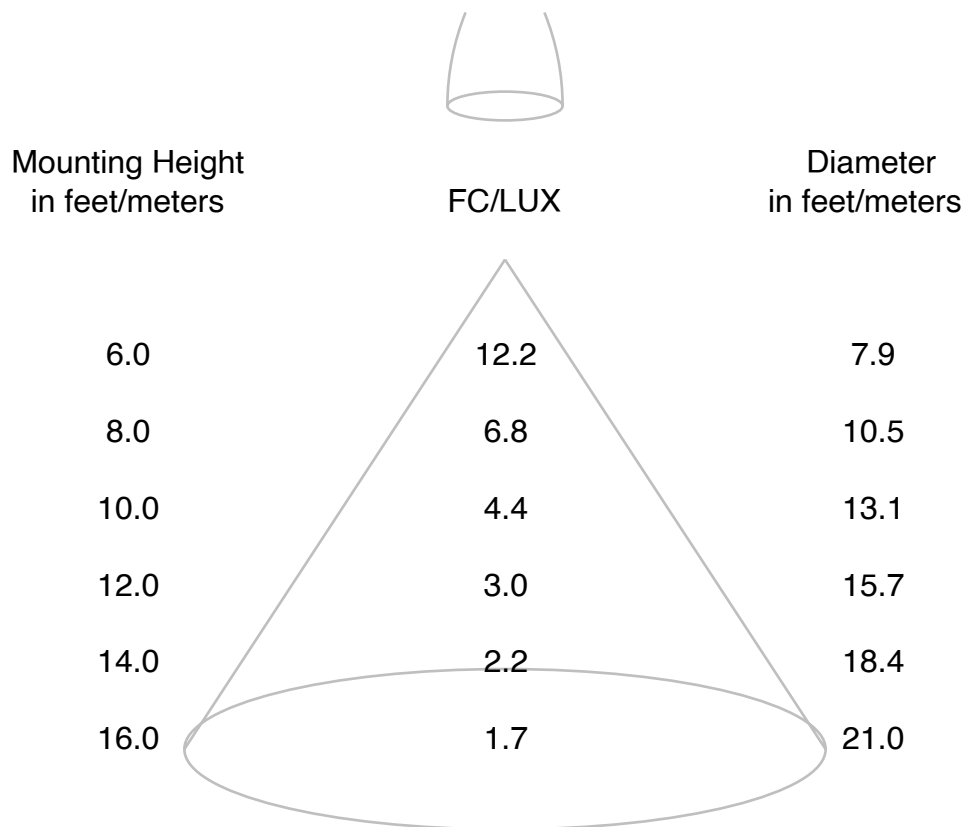
**ISSUE DATE:** 09/21/20

**PREPARED FOR:** LITELAB CORPORATION

**CATALOG NUMBER:** LED- (BUS) - (VINYL) - (LENGTH) -CL- (FINISH)

## CONE OF LIGHT DIAGRAM

(diameter shown is where fc/lux value is half the fc/lux at nadir)



If distances are feet, results are footcandles.  
If distances are meters, results are lux.

Note: The candela values used to generate this diagram were obtained by averaging the photometric data into a single plane.