

itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

NVLAP
NVLAP LAB CODE: 200925-0

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

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REPORT NUMBER: ITL88307-GONIOPHOTOMETRY

PAGE: 1 OF 7

ISSUE DATE: 09/28/16

PREPARED FOR: B-K LIGHTING, INC.

CATALOG NUMBER: MA-LED-x48/x48-FL/FL-12-C

LUMINAIRE: MACHINED BLACK PAINTED METAL WALL MOUNTING BRACKET AND HOUSING WITH 2 DISTINCT OPTICAL COMPARTMENTS, EACH OPTICAL COMPARTMENT CONSISTS OF: DIFFUSE METAL CIRCUIT BOARD MOUNTING BASE, 1 CIRCUIT BOARD WITH 1 LED, MOLDED WHITE PLASTIC LED SURROUND/REFLECTOR MOUNTING BASE, MOLDED MULTI-FACETED TIERED WHITE PLASTIC REFLECTOR WITH TEXTURED SEMI-SPECULAR FINISH, CLEAR MICRO-PRISMATIC FLAT GLASS LENS IN MACHINED BLACK PAINTED CYLINDRICAL METAL FRAME WITH UNFINISHED INTERIOR. LENS PRISMS OUT.

LAMPS: TWO WHITE MULTI-CHIP LIGHT EMITTING DIODES (LEDs), 1 VERTICAL BASE-UP POSITION, 1 VERTICAL BASE-DOWN POSITION.

INPUT ELECTRICAL: 120.0 VOLTS, 85.0 WATTS, 0.713 AMPS

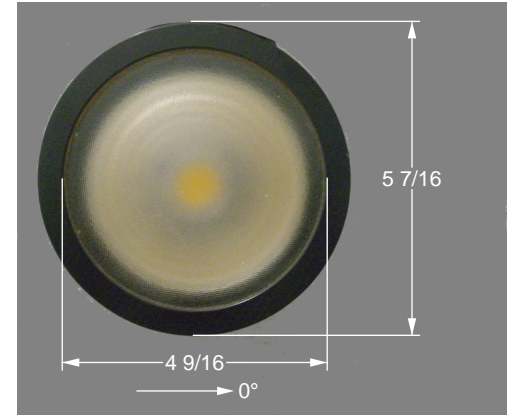
MOUNTING: WALL

LED DRIVERS: TWO ELDOLED ECODRIVE 561/S, DRIVERS HAVE MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST. CLIENT STATES EACH DRIVER PROGRAMMED FOR 1050mA OUTPUT.

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

TEST PROCEDURE: IESNA LM-79-08

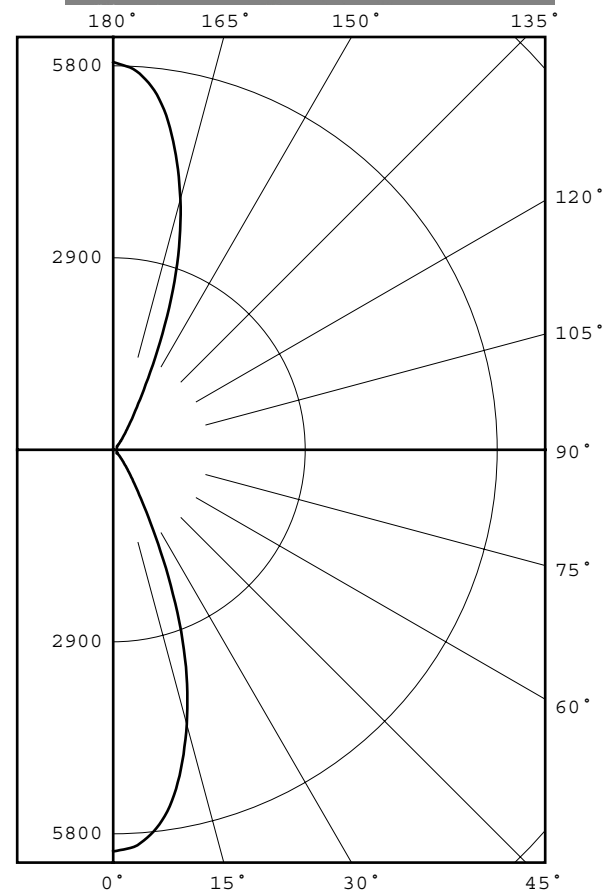
TEST DISTANCE = 20.0 FEET



DEG	CANDELA	LUMENS
0	6066	
5	5883	543
15	4291	1173
25	1701	796
35	413	275
45	134	109
55	53	49
65	26	26
75	12	13
85	3	3
90	0	
95	2	2
105	11	12
115	23	23
125	46	43
135	112	90
145	331	221
155	1417	673
165	3920	1069
175	5614	515
180	5856	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	2511	44.6
0- 40	2786	49.5
0- 60	2944	52.3
0- 90	2986	53.0
90-120	38	0.7
90-130	80	1.4
90-150	391	6.9
90-180	2648	47.0
0-180	5634	100.0

EFFICACY = 66.3 lm/W
CIE TYPE - GENERAL DIFFUSE
LUMINAIRE SPACING CRITERION = 0.63
BEAM ANGLE (50%) : 40.2 DEGREES
FIELD ANGLE (10%) : 64.0 DEGREES



Checked J. VILLANUEVA
Approved R. BEATTIE
Lighting Engineer



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LUMINOUS DIAMETER: 4.562

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE
IN DEG

45	17966.
55	8760.
65	5833.
75	4396.
85	3263.



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PAGE: 3 OF 7

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CANDELA DISTRIBUTION

0.0	6066
5.0	5883
10.0	5295
15.0	4291
20.0	3066
25.0	1701
30.0	789
35.0	413
40.0	231
45.0	134
50.0	81
55.0	53
60.0	36
65.0	26
70.0	18
75.0	12
80.0	7
85.0	3
90.0	0
95.0	2
100.0	6
105.0	11
110.0	17
115.0	23
120.0	32
125.0	46
130.0	70
135.0	112
140.0	187
145.0	331
150.0	635
155.0	1417
160.0	2711
165.0	3920
170.0	4937
175.0	5614
180.0	5856



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PAGE: 4 OF 7

5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	143
5- 10	400
10- 15	567
15- 20	605
20- 25	494
25- 30	302
30- 35	170
35- 40	105
40- 45	66
45- 50	43
50- 55	29
55- 60	20
60- 65	15
65- 70	11
70- 75	8
75- 80	5
80- 85	3
85- 90	1
90- 95	0
95-100	2
100-105	4
105-110	7
110-115	10
115-120	13
120-125	18
125-130	25
130-135	36
135-140	54
140-145	84
145-150	137
150-155	246
155-160	426
160-165	545
165-170	524
170-175	378
175-180	137

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	543
0- 20	1716
0- 30	2511
0- 40	2786
0- 50	2895
0- 60	2944
0- 70	2970
0- 80	2983
0- 90	2986
0-100	2989
0-110	3000
0-120	3024
0-130	3066
0-140	3157
0-150	3378
0-160	4050
0-170	5119
0-180	5634



REPORT NUMBER: ITL88307-GONIOPHOTOMETRY

PAGE: 5 OF 7

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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	101	98	95	92	94	91	89	86	78	77	75	67	66	65	56	56	55	50
2	95	89	85	81	88	84	80	76	73	70	68	63	61	59	54	52	51	47
3	89	82	76	72	83	77	72	68	68	64	61	59	57	55	51	49	48	45
4	84	76	70	65	78	71	66	62	63	59	56	56	53	51	49	47	45	42
5	79	70	64	59	74	66	61	57	59	55	52	53	50	47	46	44	43	40
6	74	65	59	54	70	62	56	52	56	51	48	50	47	44	44	42	41	38
7	70	61	55	50	66	58	52	49	52	48	45	47	44	42	42	40	39	36
8	67	57	51	47	63	54	49	45	50	45	42	45	42	39	41	38	37	35
9	63	54	48	44	60	51	46	42	47	43	40	43	40	37	39	37	35	33
10	60	51	45	41	57	49	43	40	45	41	38	41	38	36	37	35	33	32

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.



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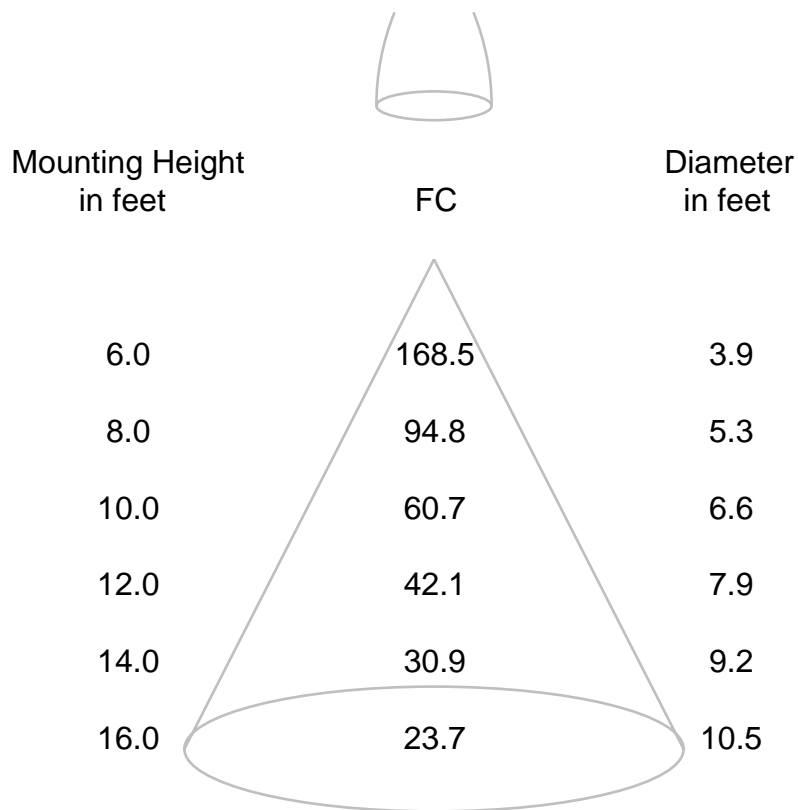
PAGE: 6 OF 7

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CONE OF LIGHT DIAGRAM

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





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