

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

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

REPORT NUMBER: ITL88309-GONIOPHOTOMETRY

PAGE: 1 OF 7

ISSUE DATE: 09/25/16

PREPARED FOR: B-K LIGHTING, INC.

CATALOG NUMBER: MA-LED-x51/x51-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, 114.8 WATTS,

0.963 AMPS

MOUNTING: WALL

LED DRIVERS: TWO THOMAS RESEARCH PRODUCTS

PLED75W-054-C1400-D, DRIVERS HAVE

MULTIPLE LEADS, ONLY LINE INPUT AND

LED OUTPUT LEADS CONNECTED FOR THIS TEST.

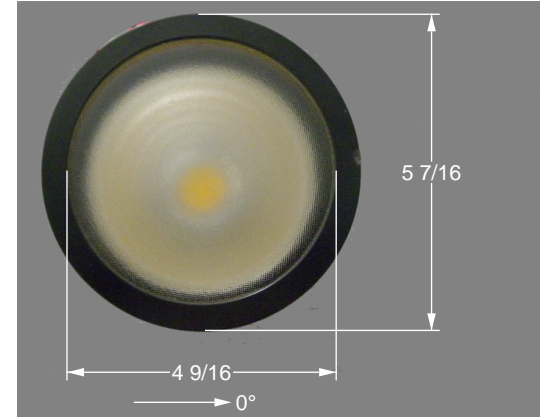
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE

PROVIDED AT RATED INPUT VOLTAGE

(120VAC, 60Hz) TO THE DRIVERS.

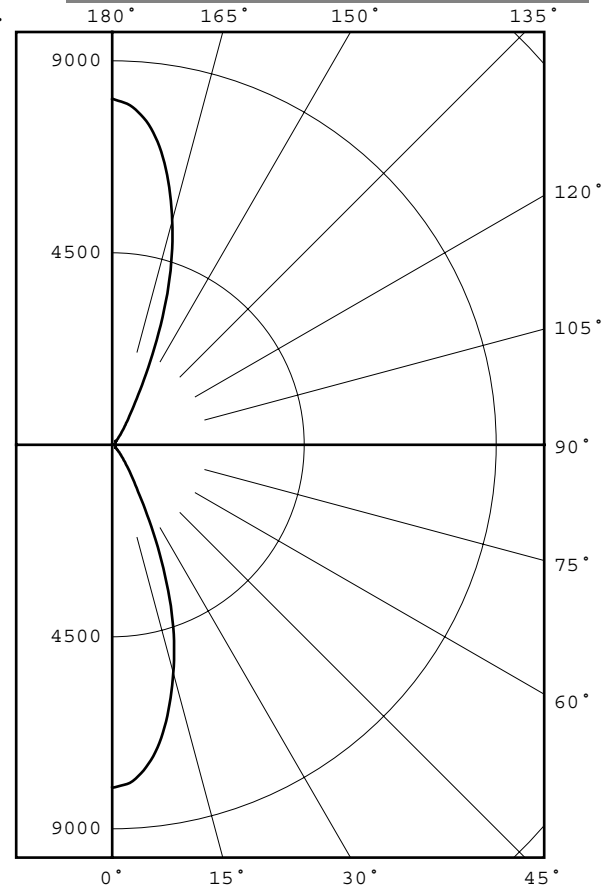
TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET



DEG	CANDELA	LUMENS
0	8039	
5	7728	710
15	5535	1518
25	2287	1065
35	581	386
45	188	153
55	72	67
65	35	35
75	17	18
85	3	4
90	0	
95	3	3
105	14	15
115	29	29
125	56	52
135	145	118
145	467	311
155	1996	945
165	5430	1483
175	7761	712
180	8110	

ZONAL LUMEN	SUMMARY	
ZONE	LUMENS	%FIXT
0- 30	3293	43.2
0- 40	3679	48.2
0- 60	3899	51.1
0- 90	3957	51.9
90-120	47	0.6
90-130	99	1.3
90-150	529	6.9
90-180	3669	48.1
0-180	7625	100.0



Checked J. VILLANUEVA

Approved R. BEATTIE
Lighting Engineer

EFFICACY = 66.4 lm/W

CIE TYPE - GENERAL DIFFUSE

LUMINAIRE SPACING CRITERION = 0.63

BEAM ANGLE (50%) : 38.4 DEGREES

FIELD ANGLE (10%) : 61.7 DEGREES

THIS REPORT IS BASED ON PUBLISHED INDUSTRY PROCEDURES. FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE.



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LUMINOUS DIAMETER: 4.562

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE
IN DEG

45	25206.
55	11901.
65	7852.
75	6227.
85	3263.



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CANDELA DISTRIBUTION

0.0	8039
5.0	7728
10.0	6851
15.0	5535
20.0	4015
25.0	2287
30.0	1089
35.0	581
40.0	328
45.0	188
50.0	113
55.0	72
60.0	49
65.0	35
70.0	26
75.0	17
80.0	10
85.0	3
90.0	0
95.0	3
100.0	8
105.0	14
110.0	21
115.0	29
120.0	39
125.0	56
130.0	87
135.0	145
140.0	257
145.0	467
150.0	899
155.0	1996
160.0	3774
165.0	5430
170.0	6843
175.0	7761
180.0	8110



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	188
5- 10	521
10- 15	732
15- 20	786
20- 25	654
25- 30	411
30- 35	238
35- 40	148
40- 45	93
45- 50	60
50- 55	40
55- 60	28
60- 65	20
65- 70	15
70- 75	11
75- 80	7
80- 85	4
85- 90	1
90- 95	0
95-100	3
100-105	6
105-110	9
110-115	13
115-120	16
120-125	22
125-130	30
130-135	46
135-140	73
140-145	117
145-150	194
150-155	349
155-160	596
160-165	757
165-170	726
170-175	523
175-180	189

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	710
0- 20	2228
0- 30	3293
0- 40	3679
0- 50	3832
0- 60	3899
0- 70	3934
0- 80	3952
0- 90	3957
0-100	3960
0-110	3975
0-120	4004
0-130	4056
0-140	4175
0-150	4486
0-160	5430
0-170	6913
0-180	7625



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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	99	99	99	99	84	84	84	71	71	71	58	58	58	52
1	101	98	95	92	93	91	88	86	78	76	75	66	65	64	55	55	54	49
2	94	89	84	80	88	83	79	76	72	69	67	62	60	58	52	51	50	46
3	89	81	76	71	82	76	72	68	67	63	61	58	56	54	50	48	47	44
4	83	75	69	64	78	71	65	61	62	59	56	55	52	50	48	46	44	41
5	78	69	63	58	73	66	60	56	58	54	51	52	49	46	45	43	42	39
6	74	64	58	54	69	61	56	52	55	51	47	49	46	43	43	41	40	37
7	70	60	54	50	66	57	52	48	52	47	44	46	43	41	41	39	38	35
8	66	56	50	46	62	54	48	45	49	45	42	44	41	39	40	37	36	34
9	63	53	47	43	59	51	45	42	46	42	39	42	39	37	38	36	34	32
10	60	50	44	40	56	48	43	39	44	40	37	40	37	35	36	34	32	31

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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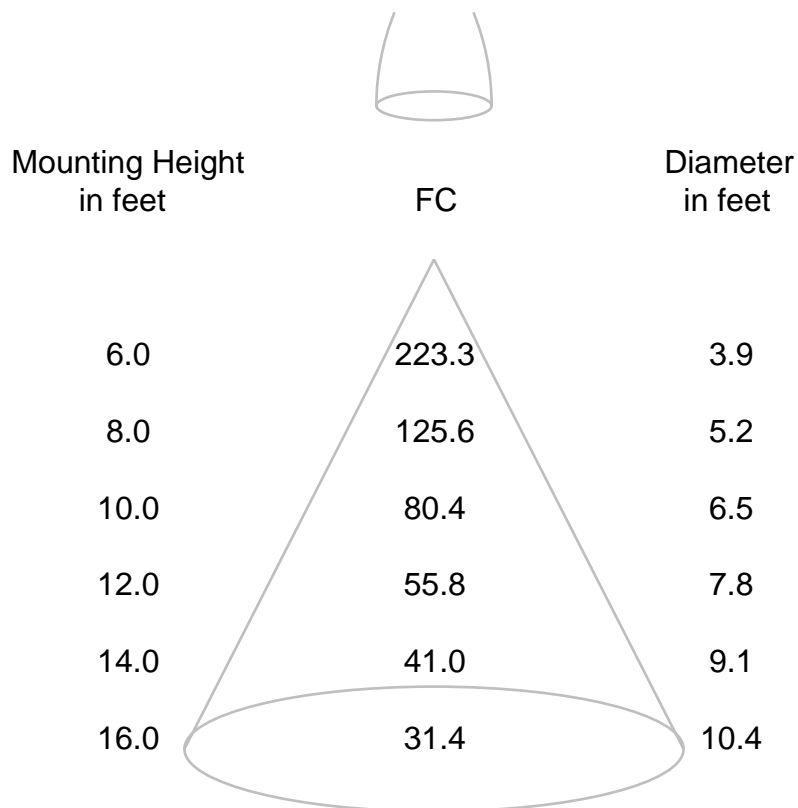
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CONE OF LIGHT DIAGRAM

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





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