

**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: ITL88306-GONIOPHOTOMETRY

PAGE: 1 OF 7

ISSUE DATE: 09/27/16

PREPARED FOR: B-K LIGHTING, INC.

CATALOG NUMBER: MA-LED-x45/x45-WFL/WFL-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, 68.7 WATTS,

0.576 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.

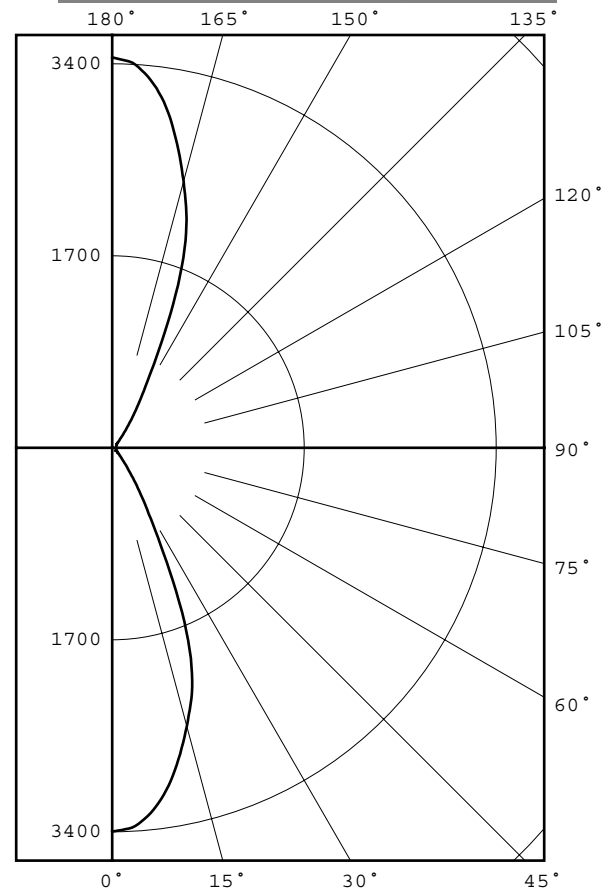
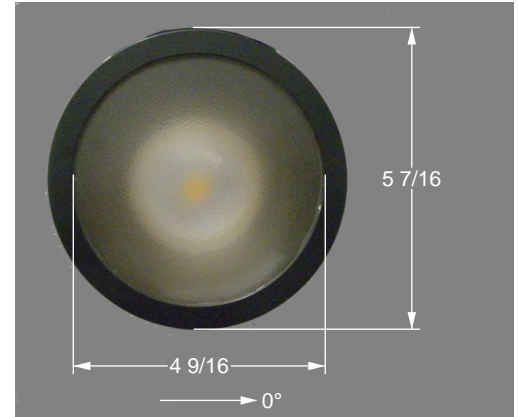
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE

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	3398	
5	3297	305
15	2551	708
25	1209	560
35	302	200
45	92	75
55	43	39
65	19	20
75	8	9
85	1	2
90	0	
95	1	2
105	8	8
115	17	17
125	37	34
135	80	65
145	264	175
155	1039	491
165	2441	675
175	3327	306
180	3457	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	1574	42.6
0- 40	1774	48.1
0- 60	1888	51.1
0- 90	1918	52.0
90-120	27	0.7
90-130	61	1.7
90-150	301	8.2
90-180	1773	48.0
0-180	3691	100.0

EFFICACY = 53.7 lm/W

CIE TYPE - GENERAL DIFFUSE

LUMINAIRE SPACING CRITERION = 0.67

BEAM ANGLE (50%) : 41.8 DEGREES

FIELD ANGLE (10%) : 66.1 DEGREES

Checked J. VILLANUEVA

Approved R. BEATTIE  
Lighting Engineer

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	12335.
55	7107.
65	4262.
75	2930.
85	1088.



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#### CANDELA DISTRIBUTION

0.0	3398
5.0	3297
10.0	2991
15.0	2551
20.0	2053
25.0	1209
30.0	588
35.0	302
40.0	153
45.0	92
50.0	63
55.0	43
60.0	29
65.0	19
70.0	13
75.0	8
80.0	4
85.0	1
90.0	0
95.0	1
100.0	4
105.0	8
110.0	12
115.0	17
120.0	25
125.0	37
130.0	54
135.0	80
140.0	135
145.0	264
150.0	509
155.0	1039
160.0	1873
165.0	2441
170.0	2960
175.0	3327
180.0	3457



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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	80
5- 10	225
10- 15	328
15- 20	380
20- 25	344
25- 30	217
30- 35	127
35- 40	73
40- 45	44
45- 50	31
50- 55	23
55- 60	16
60- 65	11
65- 70	8
70- 75	5
75- 80	3
80- 85	1
85- 90	0
90- 95	0
95-100	1
100-105	3
105-110	5
110-115	7
115-120	10
120-125	14
125-130	20
130-135	27
135-140	39
140-145	64
145-150	111
150-155	187
155-160	305
160-165	356
165-170	319
170-175	225
175-180	81

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	305
0- 20	1013
0- 30	1574
0- 40	1774
0- 50	1849
0- 60	1888
0- 70	1907
0- 80	1916
0- 90	1918
0-100	1919
0-110	1928
0-120	1945
0-130	1979
0-140	2044
0-150	2219
0-160	2710
0-170	3385
0-180	3691



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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	84	84	84	71	71	71	58	58	58	52
1	101	97	94	92	93	91	88	86	78	76	75	66	65	64	55	54	54	49
2	94	89	84	80	88	83	79	76	72	69	67	62	60	58	52	51	50	46
3	88	81	76	71	82	76	71	67	67	63	60	58	55	53	50	48	47	43
4	83	75	69	64	77	70	65	61	62	58	55	54	52	49	47	45	44	41
5	78	69	63	58	73	65	60	55	58	54	51	51	48	46	45	43	41	38
6	73	64	58	53	69	61	55	51	54	50	47	48	45	43	43	41	39	36
7	69	60	53	49	65	57	51	47	51	47	44	46	43	40	41	39	37	35
8	66	56	50	45	62	53	48	44	48	44	41	43	40	38	39	37	35	33
9	62	52	46	42	59	50	45	41	45	41	38	41	38	36	37	35	33	31
10	59	49	43	39	56	47	42	38	43	39	36	39	36	34	36	33	32	30

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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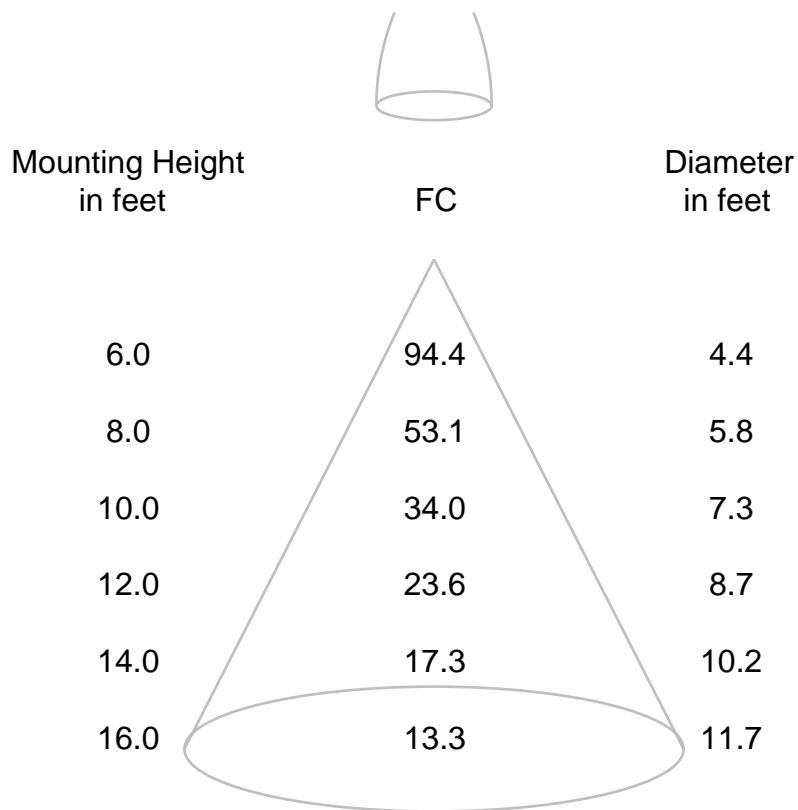
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## CONE OF LIGHT DIAGRAM

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





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