

**REPORT NUMBER:** ITL90437-GONIOPHOTOMETRY

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**ISSUE DATE:** 05/07/18

**REVISED:** 05/21/18

**PREPARED FOR:** BOCK LIGHTING

**ADDRESS:** 2476 EDISON BLVD

TWINSBURG, OH 44087

**CATALOG NUMBER:** BRL12-LBA01-1-3000LM-40K/4CD-PA12

**LUMINAIRE:** FABRICATED WHITE PAINTED METAL DRIVER HOUSING, EXTRUDED BLACK FINISHED FINNED METAL HEAT SINK WITH SUNON HA60151V4-000U-999 COOLING FAN ON TOP, ONE CIRCUIT BOARD WITH ONE LED, MOLDED WHITE PLASTIC LED SURROUND, INTERIOR FROSTED PLASTIC LENS SUSPENDED BELOW LED WITH 4 SEMI-SPECULAR METAL STANDOFFS, WHITE PAINTED FLAT METAL REFLECTOR MOUNTING COLLAR, CLEAR PLASTIC REFLECTOR WITH LINEAR EXTERIOR VERTICAL PRISMS, CLEAR RADIALLY PRISMATIC PLASTIC BOTTOM LENS, FORMED SEMI-SPECULAR METAL LENS MOUNTING RING. LENS PRISMS IN.

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

**INPUT ELECTRICAL:** 120.0 VOLTS, 25.8 WATTS, 0.216 AMPS

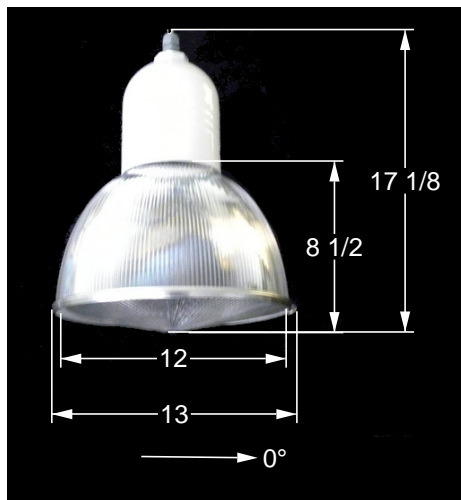
**MOUNTING:** PENDANT

**LED DRIVER:** ADVANCE XI036C100V054DSM5, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST. CLIENT STATES DRIVER PROGRAMMED FOR 660mA OUTPUT. INVENTRONICS DHV-003S012SS DC/DC CONVERTER ATTACHED TO OUTPUT LEADS.

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

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 35.0 FEET



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 *C STOUT*

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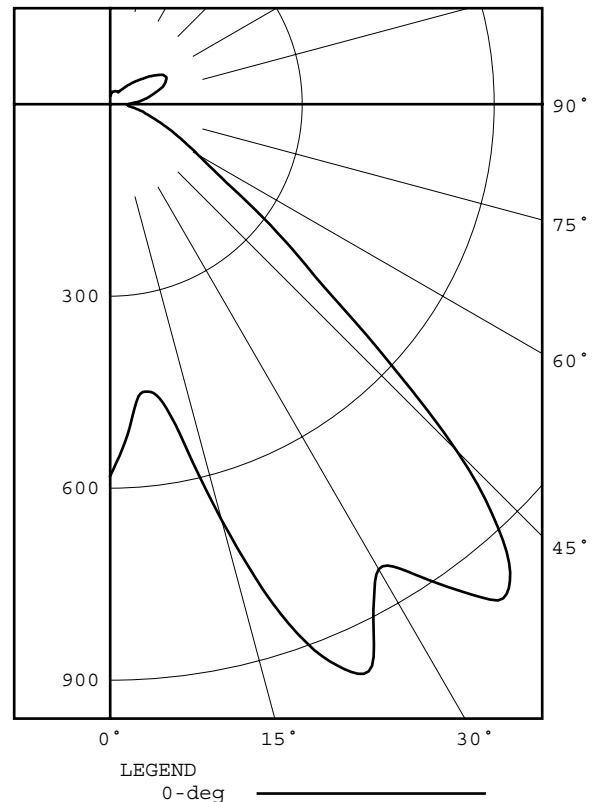
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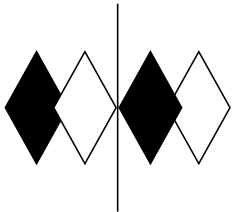
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DEG	CANDELA	LUMENS
0	581	
5	467	45
15	672	198
25	968	425
35	921	578
45	765	561
55	247	234
65	115	116
75	58	63
85	29	34
90	28	
95	44	47
105	75	79
115	97	94
125	76	68
135	45	36
145	24	16
155	23	10
165	20	6
175	17	2
180	12	

ZONAL ZONE	LUMEN LUMENS	SUMMARY %FIXT
0- 30	668	25.6
0- 40	1246	47.7
0- 60	2042	78.1
0- 90	2254	86.3
90-120	221	8.4
90-130	289	11.1
90-150	340	13.0
90-180	358	13.7
0-180	2613	100.0

EFFICACY = 101.3 lm/W  
CIE TYPE - SEMI-DIRECT  
SPACING CRITERION: 1.61  
BEAM ANGLE (50%) : 38.4 DEGREES  
FIELD ANGLE (10%) : 134.8 DEGREES





# itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



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](mailto:itl@itlboulder.com) • WEBSITE: [www.itlboulder.com](http://www.itlboulder.com)

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LUMINOUS DIAMETER: 12.000  
HEIGHT OF SIDE : 8.500

LUMINANCE DATA IN CANDELA/SQ M  
ANGLE AVERAGE  
IN DEG

45	7796.
55	2579.
65	1271.
75	703.
85	403.



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CANDELA DISTRIBUTION

0.0	581
5.0	467
10.0	474
15.0	672
20.0	895
25.0	968
30.0	839
35.0	921
40.0	972
45.0	765
50.0	416
55.0	247
60.0	159
65.0	115
70.0	82
75.0	58
80.0	42
85.0	29
90.0	28
95.0	44
100.0	60
105.0	75
110.0	90
115.0	97
120.0	92
125.0	76
130.0	59
135.0	45
140.0	33
145.0	24
150.0	22
155.0	23
160.0	22
165.0	20
170.0	20
175.0	17
180.0	12



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5-DEGREE
ZONAL LUMEN SUMMARY

Table with 2 columns: Zonal Range, Lumen Value. Rows include 0-5 (12), 5-10 (33), 10-15 (67), 15-20 (131), 20-25 (198), 25-30 (227), 30-35 (257), 35-40 (321), 40-45 (326), 45-50 (235), 50-55 (143), 55-60 (91), 60-65 (66), 65-70 (49), 70-75 (36), 75-80 (27), 80-85 (19), 85-90 (15), 90-95 (19), 95-100 (28), 100-105 (36), 105-110 (44), 110-115 (47), 115-120 (46), 120-125 (39), 125-130 (29), 130-135 (21), 135-140 (14), 140-145 (9), 145-150 (7), 150-155 (6), 155-160 (5), 160-165 (3), 165-170 (2), 170-175 (1), 175-180 (0)

10-DEGREE
ZONAL LUMEN SUMMARY

Table with 2 columns: Zonal Range, Lumen Value. Rows include 0-10 (45), 0-20 (243), 0-30 (668), 0-40 (1246), 0-50 (1807), 0-60 (2042), 0-70 (2157), 0-80 (2221), 0-90 (2254), 0-100 (2302), 0-110 (2381), 0-120 (2475), 0-130 (2543), 0-140 (2579), 0-150 (2595), 0-160 (2605), 0-170 (2611), 0-180 (2613)



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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	116	116	116	116	111	111	111	111	111	103	103	103	96	96	96	89	89	89	86
1	107	103	99	96	103	99	96	93	93	93	90	88	87	85	83	81	79	78	75
2	99	91	85	81	95	88	83	79	83	78	75	78	74	71	73	70	68	65	65
3	91	81	74	68	87	79	72	67	74	69	64	70	65	61	65	62	59	56	56
4	83	73	65	59	80	70	63	58	66	60	55	63	57	53	59	55	51	49	49
5	77	65	57	51	74	63	56	50	60	53	48	56	51	47	53	49	45	43	43
6	71	59	51	45	68	57	49	44	54	47	42	51	45	41	48	43	40	37	37
7	66	53	45	39	63	52	44	39	49	42	38	46	41	36	44	39	35	33	33
8	61	48	40	35	59	47	40	34	45	38	33	42	37	32	40	35	31	29	29
9	57	44	36	31	55	43	36	31	41	34	30	39	33	29	37	32	28	26	26
10	53	40	33	28	51	39	32	27	38	31	27	36	30	26	34	29	25	24	24

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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## CONE OF LIGHT DIAGRAM

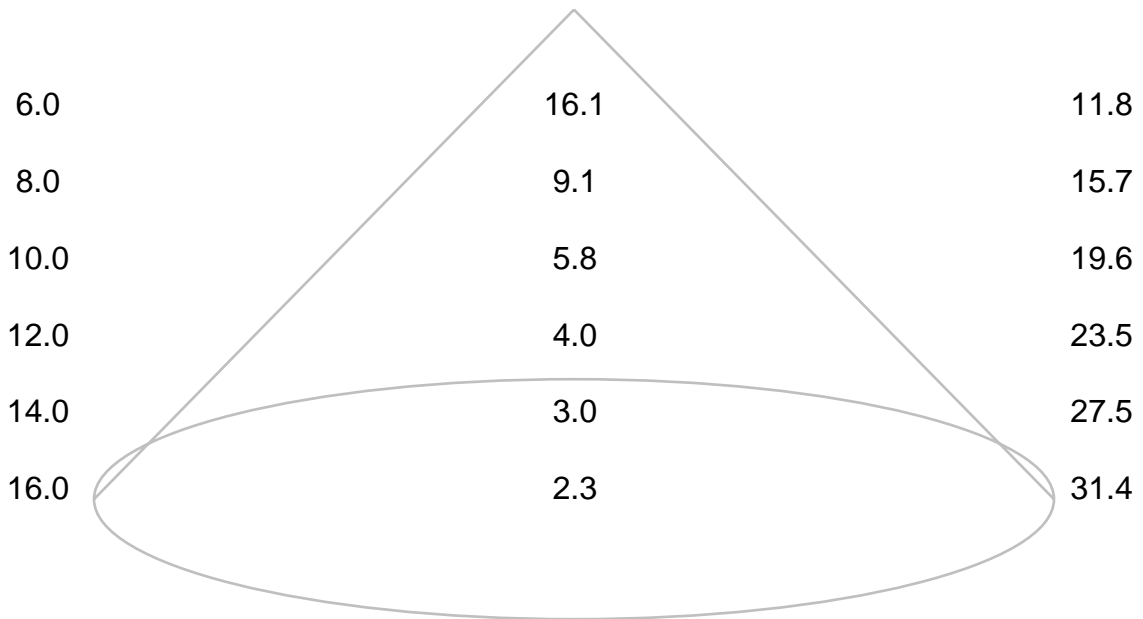
(diameter shown is where fc/lux value is half the fc/lux at nadir)



Mounting Height  
in feet/meters

FC/LUX

Diameter  
in feet/meters



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