

# itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.  
3386 LONGHORN ROAD, BOULDER, CO 80302 USA

PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL62873

DATE: 08/06/09

PREPARED FOR: NEXXUS LIGHTING, INC.

CATALOG NUMBER: AE26R16NW25

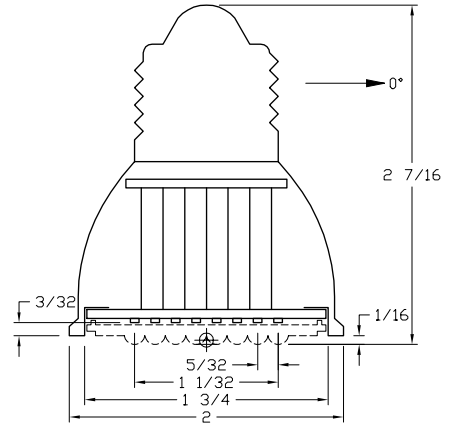
LAMP: ONE PAR-16 STYLE MEDIUM BASE LED LAMP WITH INTEGRAL LED DRIVER, MOLDED FINNED WHITE PLASTIC BODY, ONE WHITE CIRCUIT BOARD WITH 40 VERTICAL BASE-UP WHITE LIGHT EMITTING DIODES (LEDS), MULTIPLE METAL POSTS BETWEEN UPPER AND LOWER HOUSING, FROSTED FLAT PLASTIC LENS WITH ONE CLEAR HEMISPHERICAL OPTIC BELOW EACH LED, VERTICAL BASE-UP POSITION.

TOTAL INPUT WATTS = 2.63 AT 120.0 VOLTS AC

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

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 25.25 FEET



## CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	286	286	286	286	286
5	261	262	265	267	268
15	114	120	139	156	162
25	41	44	52	62	65
35	32	31	33	35	37
45	30	29	32	33	32
55	24	23	26	27	21
65	15	15	15	16	13
75	7	7	7	7	7
85	3	3	3	3	3
90	1	1	1	1	1

## FLUX

23
37
25
21
23
21
14
7
3
3

## ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	87	48.3
0- 40	108	60.1
0- 60	154	85.7
0- 90	179	100.0
90-180	0	0.0
0-180	179	100.0

EFFICACY = 68.1 Lm/W

CIE TYPE - DIRECT

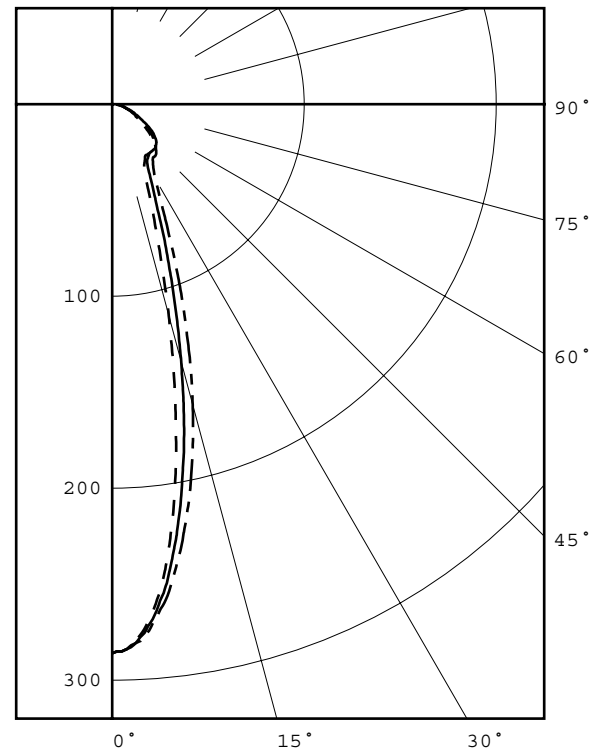
PLANE : 0-DEG 90-DEG

SPACING CRITERIA : 0.4 0.5

LUMINOUS DIAMETER: 1.750

## LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	27341.	29163.	29163.
55	26965.	29212.	23594.
65	22873.	22873.	19823.
75	17429.	17429.	17429.
85	22182.	22182.	22182.



### LEGEND:

0-deg: - - - - -  
45-deg: \_\_\_\_\_  
90-deg: - . - . - .

Checked ..... *N.WHITE* .....

Approved ..... *R.BEATTIE* .....



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CANDELA DISTRIBUTION  
 LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	286	286	286	286	286
0.5	285	286	285	285	285
1.0	285	285	285	285	285
1.5	284	284	284	284	284
2.0	282	282	282	283	283
2.5	280	280	281	281	281
3.0	277	278	278	279	280
3.5	274	275	276	277	277
4.0	270	271	272	274	275
4.5	266	267	269	271	271
5.0	261	262	265	267	268
5.5	256	257	260	263	264
6.0	250	252	256	259	261
6.5	244	246	251	255	257
7.0	237	240	245	250	252
7.5	230	233	239	245	247
8.0	222	226	233	240	242
8.5	215	219	227	234	237
9.0	207	211	220	229	232
9.5	199	204	214	223	226
10.0	191	196	207	217	221
10.5	183	188	200	211	215
11.0	174	180	193	205	210
11.5	166	172	187	199	204
12.0	158	164	180	194	198
12.5	150	157	173	188	192
13.0	142	149	166	181	186
13.5	135	142	159	175	180
14.0	127	134	152	169	174
14.5	120	127	145	163	168
15.0	114	120	139	156	162
15.5	107	114	132	150	156
16.0	101	107	126	144	150
16.5	95	102	120	138	144
17.0	90	96	114	132	138
17.5	84	91	108	126	132
18.0	80	86	103	121	126
18.5	75	81	98	115	121
19.0	71	76	93	110	115
19.5	67	72	88	105	110
20.0	64	69	84	100	105
22.5	50	54	65	78	82
25.0	41	44	52	62	65
27.5	36	37	43	50	53
30.0	34	34	37	43	45
32.5	32	32	34	38	40
35.0	32	31	33	35	37
37.5	32	31	32	34	35
40.0	31	30	32	34	35
42.5	31	30	32	33	34
45.0	30	29	32	33	32
47.5	29	28	31	32	30
50.0	28	27	30	31	27
52.5	26	25	28	29	24
55.0	24	23	26	27	21
57.5	22	21	23	25	18
60.0	19	19	20	22	16
62.5	17	17	17	19	14
65.0	15	15	15	16	13
67.5	13	13	12	13	11
70.0	11	11	10	11	10
72.5	9	9	8	9	8
75.0	7	7	7	7	7
77.5	6	6	6	6	6
80.0	5	5	5	5	5



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CANDELA DISTRIBUTION  
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
82.5	4	4	4	4	4
85.0	3	3	3	3	3
87.5	2	2	2	2	2
90.0	1	1	1	1	1



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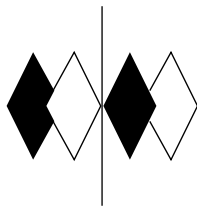
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100
1	111	107	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87	87
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77	77
3	95	86	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68	68
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61	61
5	83	73	65	59	81	72	64	59	70	63	59	68	62	58	66	61	57	56	56
6	78	67	60	54	77	66	59	54	65	58	54	63	57	53	62	57	53	51	51
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47	47
8	70	59	51	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44	44
9	67	55	48	44	65	55	48	43	54	48	43	53	47	43	52	47	43	41	41
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39	39

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 LUMINAIRE SAMPLE.



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REPORT NUMBER: ITL62884 Page 1 of 1  
DATE: 8/07/09  
PREPARED FOR: NEXXUS LIGHTING, INC.

CATALOG NUMBER: AE26R16NW25

LAMP: ONE PAR-16 STYLE MEDIUM BASE LED LAMP WITH INTEGRAL LED DRIVER, MOLDED FINNED WHITE PLASTIC BODY, ONE WHITE CIRCUIT BOARD WITH 40 VERTICAL BASE-UP WHITE LIGHT EMITTING DIODES (LEDS), MULTIPLE METAL POSTS BETWEEN UPPER AND LOWER HOUSING, FROSTED FLAT PLASTIC LENS WITH ONE CLEAR HEMISPHERICAL OPTIC BELOW EACH LED, VERTICAL BASE-UP POSITION.

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

INSTRUMENTATION: Kikusui PCR500L AC Power Source  
Yokogawa WT210 Digital Power Meter  
Optronics OL770 Spectroradiometer  
ITL 1.5 Meter Diameter Integrating Sphere

OBJECT OF TEST: Measure the Correlated Color Temperature (CCT), Color Rendering Index (CRI), Chromaticity Coordinates (x,y), ANSI C78.377 Duv, and input electrical parameters.

PROCEDURE: The lamp was provided by customer and the LEDs had an unknown number of burn hours. The lamp was mounted inside the integrating sphere with the lamp in a base up position (LEDS facing down). The lamp was allowed to stabilize at 120 VAC input. After stabilization occurred, CCT, CRI, x/y chromaticity coordinates, ANSI C78.377 Duv, and input electrical data were measured with the lamp operating in the integrating sphere. In order to measure the mean performance, twenty data sets were recorded and averaged within the OL770. Readings were taken with the lamp operating at 120 VAC input in a 25 +/-1 degree Celsius free air ambient and in accordance with IESNA LM-79-08. All data are traceable to the National Institute of Standards and Technology.

RESULTS:

SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Correlated Color Temp CCT (K)	5375
Chromaticity Ordinate x	0.3353
Chromaticity Ordinate y	0.3425
Color Rendering Index (CRI)	77
ANSI C78.377-2008 Duv	-0.001
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (mA AC)	23.7
Input Power (Watts)	2.62
Input Power Factor (%)	92.1

Checked: <u>N Gully</u>
Approved: <u>R Bergin</u>