

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: ITL62869

DATE: 08/05/09

PREPARED FOR: NEXXUS LIGHTING, INC.

CATALOG NUMBER: ADCMR16NW25

LAMP: ONE MR-16 STYLE BI-PIN BASE LED LAMP, MOLDED FINNED WHITE PLASTIC BODY, ONE WHITE CIRCUIT BOARD WITH 39 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 = 3.14 AT 12.0 VOLTS DC

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (12VDC) TO THE LAMP.

TEST PROCEDURE: IESNA LM-79-08

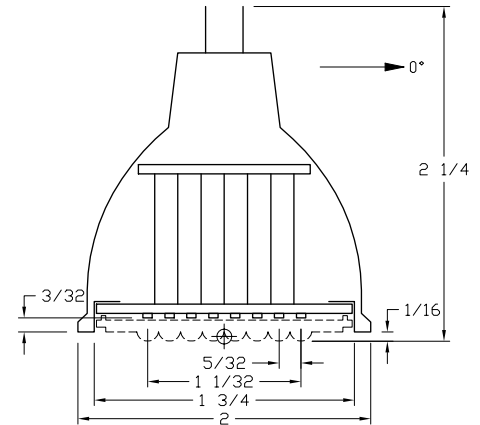
TEST DISTANCE = 25.25 FEET

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	319	319	319	319	319
5	291	291	294	297	298
15	125	133	154	175	182
25	46	49	58	71	75
35	36	35	37	40	41
45	33	32	34	35	35
55	26	25	27	28	22
65	17	16	16	17	14
75	8	8	8	8	8
85	3	3	3	3	3
90	1	1	1	1	1

FLUX

25
42
28
23
25
23
16
8
3
3



ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	97	49.0
0- 40	121	61.2
0- 60	170	85.9
0- 90	197	100.0
90-180	0	0.0
0-180	197	100.0

EFFICACY = 62.7 Lm/W

CIE TYPE - DIRECT

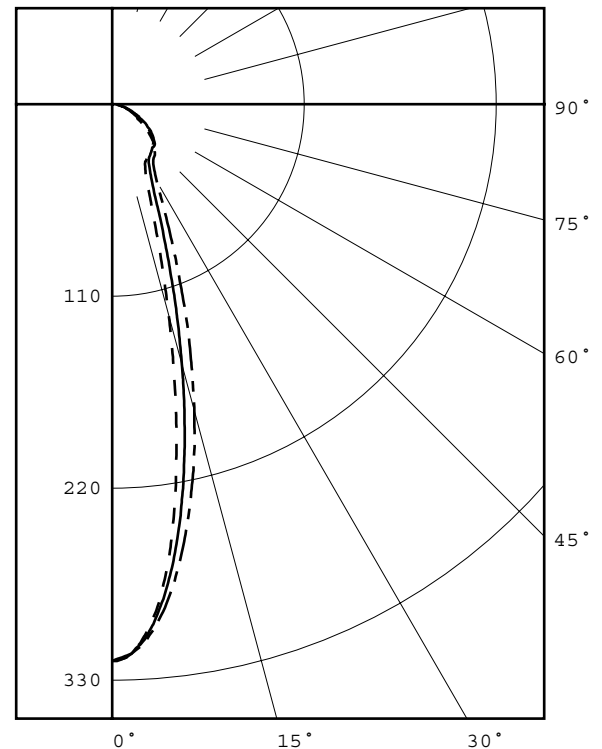
PLANE : 0-DEG 90-DEG

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	30075.	30986.	31898.
55	29212.	30335.	24718.
65	25922.	24398.	21348.
75	19919.	19919.	19919.
85	22182.	22182.	22182.



LEGEND:

0-deg: - - - - -
45-deg: _____
90-deg: - . - . - .

Checked *N. WHITE*

Approved *R. BEATTIE*



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: ITL62869

DATE: 08/05/09

PREPARED FOR: NEXXUS LIGHTING, INC.

CANDELA DISTRIBUTION
 LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	319	319	319	319	319
0.5	319	318	318	318	318
1.0	318	318	317	318	318
1.5	317	316	316	317	317
2.0	314	314	315	315	315
2.5	312	312	312	313	313
3.0	309	309	310	311	311
3.5	305	305	307	308	309
4.0	301	301	303	305	305
4.5	296	297	299	301	302
5.0	291	291	294	297	298
5.5	285	286	289	293	294
6.0	278	280	284	288	290
6.5	271	273	278	283	285
7.0	264	266	272	278	280
7.5	256	259	266	272	275
8.0	247	250	259	266	269
8.5	239	242	252	260	264
9.0	230	234	245	254	258
9.5	221	225	238	248	252
10.0	211	217	230	242	246
10.5	202	208	223	235	240
11.0	193	199	215	229	234
11.5	184	191	207	222	227
12.0	175	182	200	216	221
12.5	166	173	192	209	215
13.0	157	165	184	202	208
13.5	149	156	177	196	202
14.0	140	148	169	189	195
14.5	133	140	162	182	188
15.0	125	133	154	175	182
15.5	118	125	147	169	175
16.0	111	119	140	162	168
16.5	105	112	134	155	162
17.0	99	106	127	149	155
17.5	93	100	121	143	149
18.0	88	94	115	136	143
18.5	83	89	109	130	137
19.0	78	84	103	124	131
19.5	74	80	98	119	125
20.0	70	76	93	113	119
22.5	56	60	73	89	94
25.0	46	49	58	71	75
27.5	41	42	49	58	61
30.0	38	38	43	49	51
32.5	37	36	39	43	45
35.0	36	35	37	40	41
37.5	35	34	36	38	39
40.0	34	33	35	37	38
42.5	34	33	34	36	36
45.0	33	32	34	35	35
47.5	32	30	33	34	32
50.0	30	29	31	32	29
52.5	28	27	29	30	26
55.0	26	25	27	28	22
57.5	24	23	24	25	20
60.0	22	21	22	23	17
62.5	19	19	19	20	16
65.0	17	16	16	17	14
67.5	14	14	13	14	12
70.0	12	12	11	12	11
72.5	10	10	9	10	9
75.0	8	8	8	8	8
77.5	7	7	6	6	6
80.0	5	5	5	5	5



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: ITL62869

DATE: 08/05/09

PREPARED FOR: NEXXUS LIGHTING, INC.

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



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: ITL62869

DATE: 08/05/09

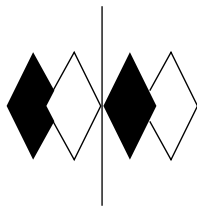
PREPARED FOR: NEXXUS LIGHTING, INC.

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	111	111	106	106	106	102	102	102	100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	88			
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77			
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	78	74	70	69			
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56			
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	53	52			
7	75	63	56	51	73	62	55	51	61	55	50	60	54	50	58	53	50	48			
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45			
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42			
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40			

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.



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: ITL62880 Page 1 of 1
DATE: 8/05/09
PREPARED FOR: NEXXUS LIGHTING, INC.

CATALOG NUMBER: ADCMR16NW25

LAMP: ONE MR-16 STYLE BI-PIN BASE LED LAMP, MOLDED FINNED WHITE PLASTIC BODY, ONE WHITE CIRCUIT BOARD WITH 39 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 (12VDC) TO THE LAMP.

INSTRUMENTATION: BK Precision 1745A DC Power Supply
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 12 VDC 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 12 VDC 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)	5302
Chromaticity Ordinate x	0.3372
Chromaticity Ordinate y	0.3482
Color Rendering Index (CRI)	77
ANSI C78.377-2008 Duv	0.002
ELECTRICAL	
Input Voltage (Volts DC)	12.0
Input Current (mA DC)	261
Input Power (Watts)	3.13

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