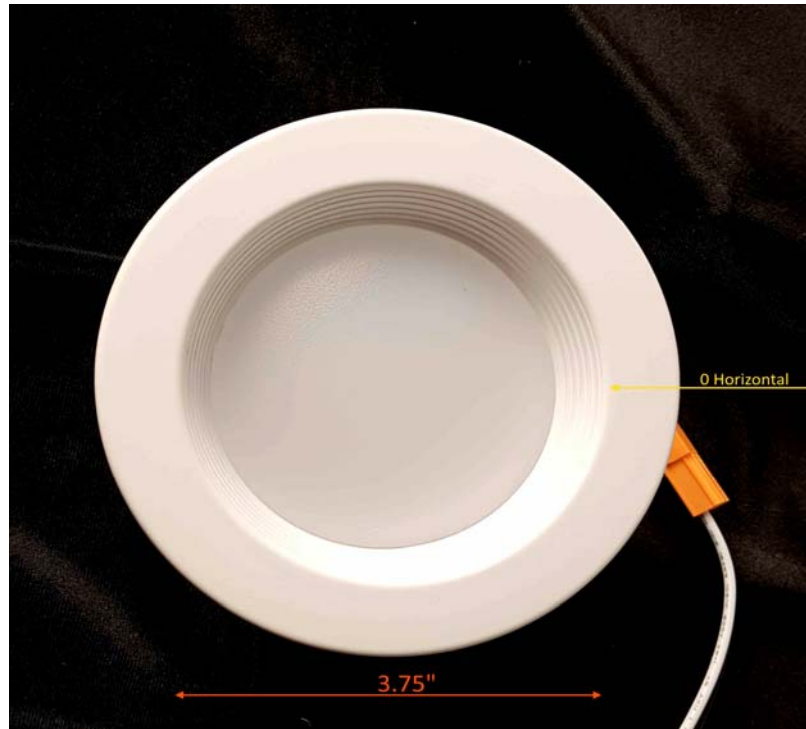




# Report of Test

## LLIA000961-001

Catalog Number: RTL/433WH/10W/D-61  
LED indoor recessed downlight, formed white aluminum housing/reflector, translucent white plastic enclosure.  
15 white LEDs, one DL6-2318E-15S-3528-V2.0 LED board.  
120.0Vac, 60.00Hz, 0.0826A, 9.83W, 0.992PF, 12.3%THD(i)



### Performance Summary

Total Light Output	730 lm
Luminaire Power	9.83 W
Luminous Efficacy	74.3 lm/W

**PREPARED FOR : Topaz Lighting Corp, 925 Waverly Avenue, Holtsville, NY 11742, USA**

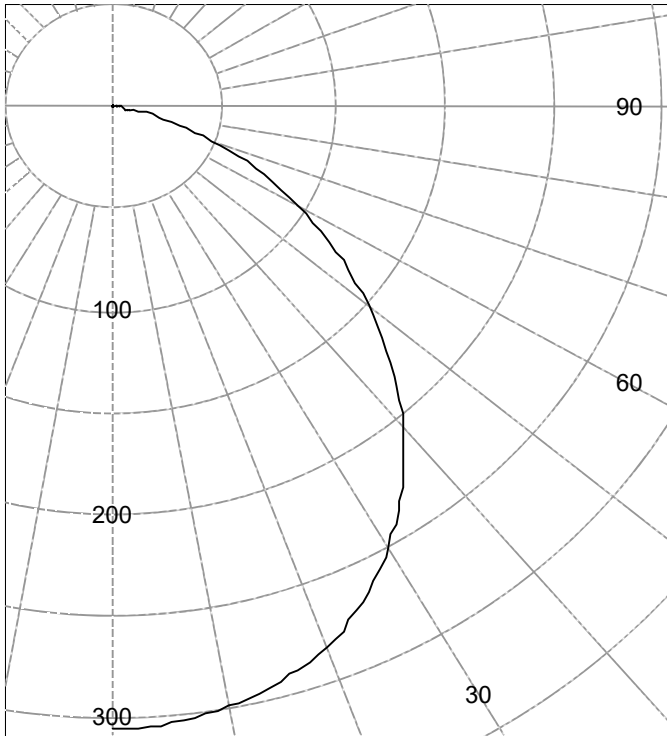


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Legend: All planes - Black (cd)



(Rotational symmetry)

**AVERAGE LUMINANCE (cd / m<sup>2</sup>)**

Gamma	C0
45.0	35480
55.0	30309
65.0	23742
75.0	14887
85.0	8401

**INTENSITY SUMMARY (cd)**

Gamma	All Planes	Flux (lm)	Gamma	C0	Flux (lm)
0	304		90	0	
5	303	29	95	0	0
10	299		100	0	
15	292	82	105	0	0
20	282		110	0	
25	268	123	115	0	0
30	250		120	0	
35	228	143	125	0	0
40	204		130	0	
45	178	137	135	0	0
50	151		140	0	
55	123	110	145	0	0
60	97		150	0	
65	71	71	155	0	0
70	48		160	0	
75	27	30	165	0	0
80	13		170	0	
85	5	6	175	0	0
90	0		180	0	

**ZONAL FLUX AND PERCENTAGES**

Zone	Flux (lm)	%Lamp	%Luminaire
0-30	234	N / A	32.1
0-40	377	N / A	51.6
0-60	624	N / A	85.4
0-90	730	N / A	100.0
40-90	353	N / A	48.4
60-90	106	N / A	14.6
90-180	0	N / A	0.0
0-180	730	N / A	100.0

Total Light Output = 730 lm

Spacing Criterion: 0-180 1.2  
Spacing Criterion: 90-270 1.2

Signed:

Authorized Signatory

Date of test 19-Mar-2018  
Date of report 20-Mar-2018



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**Intensity (cd) and Flux (lm) data**

Gamma	Intensity	Flux	Gamma	Intensity	Flux
0.0	304		90.0	0	
2.5	304		92.5	0	
5.0	303	29	95.0	0	0
7.5	302		97.5	0	
10.0	299		100.0	0	
12.5	296		102.5	0	
15.0	292	82	105.0	0	0
17.5	288		107.5	0	
20.0	282		110.0	0	
22.5	276		112.5	0	
25.0	268	123	115.0	0	0
27.5	259		117.5	0	
30.0	250		120.0	0	
32.5	239		122.5	0	
35.0	228	143	125.0	0	0
37.5	216		127.5	0	
40.0	204		130.0	0	
42.5	191		132.5	0	
45.0	178	137	135.0	0	0
47.5	164		137.5	0	
50.0	151		140.0	0	
52.5	137		142.5	0	
55.0	123	110	145.0	0	0
57.5	110		147.5	0	
60.0	97		150.0	0	
62.5	84		152.5	0	
65.0	71	71	155.0	0	0
67.5	59		157.5	0	
70.0	48		160.0	0	
72.5	37		162.5	0	
75.0	27	30	165.0	0	0
77.5	19		167.5	0	
80.0	13		170.0	0	
82.5	9		172.5	0	
85.0	5	6	175.0	0	0
87.5	2		177.5	0	
90.0	0		180.0	0	



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**Coefficients Of Utilization - Zonal Cavity Method**

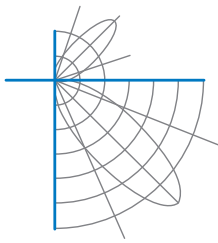
Effective Floor Cavity Reflectance 0.20

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	106	106	106	102	102	102	100
1		110	106	102	98	107	104	100	97	99	96	94	95	93	91	92	90	88	86
2		101	93	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74
3		93	83	75	69	90	81	74	69	78	72	67	76	71	66	73	69	65	63
4		85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55
5		79	66	58	52	77	65	57	51	63	56	51	61	55	50	60	54	50	48
6		73	60	52	45	71	59	51	45	57	50	45	56	49	44	54	49	44	42
7		68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	38
8		63	50	42	36	62	49	42	36	48	41	36	47	40	36	46	40	35	34
9		59	46	38	33	58	45	38	33	44	37	33	43	37	32	42	36	32	30
10		55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28

For absolute test reports, CUs are expressed as a percentage of total lumen output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are lambertian reflectors. 2) Incident flux on each surface is uniformly distributed. 3) The room is spectrally neutral. When luminaires are not evenly distributed throughout the room, or do not exhibit lateral symmetry, CU values may differ from actual performance.

**Circle of Light Plot**

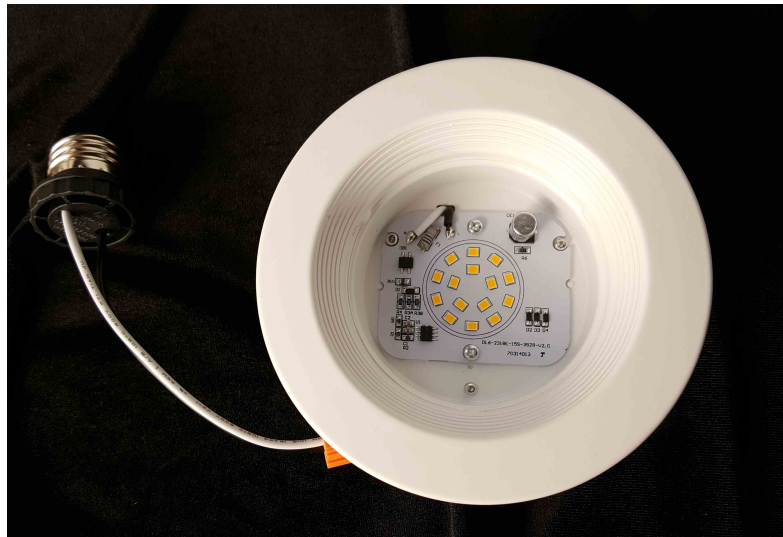
Height(ft)	Illuminance at Nadir (fc)	Beam Width (across 50% Nadir Illum)	
		0-180	90-270
6.0	8.5	7.31	7.31
8.0	4.8	9.75	9.75
10.0	3.0	12.18	12.18
12.0	2.1	14.62	14.62
14.0	1.6	17.06	17.06
16.0	1.2	19.49	19.49

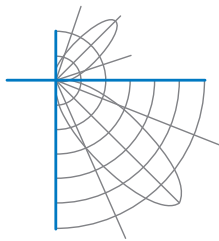


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**Test Distance** 9.5 m  
**Test Temperature** 24.8 °C

**Notes** The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Tested in accordance with the applicable sections of publications: IES LM-79-08 (Sec. 12), IES LM-16-93, IES LM-58-13, CIE 13.3:1995, CIE 15:2004, ANSI C78.377:2015, ANSI C82.77-10:2014.

The luminous intensity values, and other derived quantities, contained in this report are based on the absolute data, as measured.

Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections.

Photometric intensity values are reported using the CIE Gamma coordinate system as defined in CIE publication number 121.

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with \* are not covered.

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