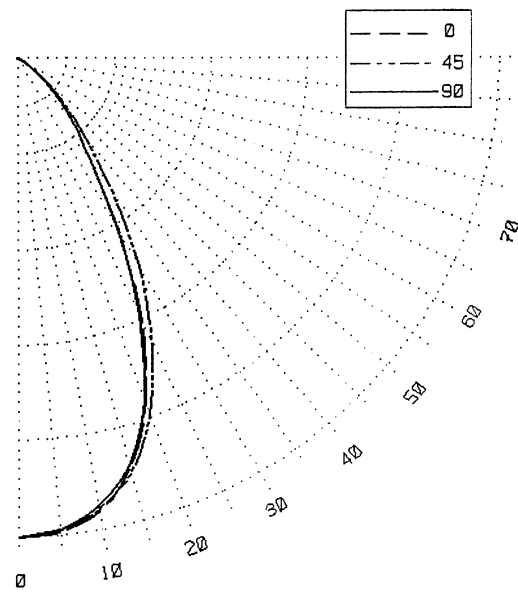


BALLABS CERTIFIED TEST REPORT NO.: 20315.0 DATE 04/16/18  
PREPARED FOR: H.E. WILLIAMS, INC CARTHAGE, MO  
DESCRIPTION: GEN7 V13 LED 4"SHORT HEATSINK 4"SQ CAST HOUSING DOWNLIGHT  
WHITE MIXING CHAMBER & 4"SATIN TRIM w/FROST FILM  
ADVANCE #XI025C070V054DSM1 @ 625mA  
CATALOG NBR: 4DS-L20/835-DIM-UNV-O-W-O-F-SG  
LAMP TYPE : BXRE-35E2000

CANDLEPOWER DISTRIBUTION						
VERT	HORIZONTAL ANGLE					ZONAL
ANG	0	22.5	45	67.5	90	LUMENS
0	1717.	1717.	1717.	1717.	1717.	
5	1704.	1701.	1698.	1698.	1695.	162.2
10	1650.	1645.	1644.	1638.	1632.	
15	1529.	1533.	1545.	1526.	1516.	434.2
20	1320.	1336.	1366.	1327.	1313.	
25	1038.	1084.	1124.	1076.	1014.	498.7
30	719.	767.	859.	755.	704.	
35	453.	505.	583.	489.	453.	318.9
40	311.	341.	377.	344.	312.	
45	204.	225.	240.	232.	206.	174.6
50	132.	135.	143.	131.	125.	
55	60.	69.	73.	70.	58.	60.7
60	22.	25.	30.	26.	22.	
65	9.	11.	11.	10.	8.	10.5
70	3.	4.	4.	4.	2.	
75	1.	1.	1.	1.	0.	1.0
80	0.	0.	0.	0.	0.	
85	0.	0.	0.	0.	0.	.0
90	0.	0.	0.	0.	0.	



*[Handwritten signature]*

**NVLAP<sup>®</sup>**  
TESTING

NVLAP LAB CODE 200921-0

LUMEN SUMMARY							
ZONE	LUMENS	%LAMP	%FIXT	ZONE	LUMENS	%LAMP	%FIXT
0- 30	1095.	NA.	65.9	90-120	0.	NA.	.0
0- 40	1414.	NA.	85.1	90-130	0.	NA.	.0
0- 60	1649.	NA.	99.3	90-150	0.	NA.	.0
0- 90	1661.	NA.	100.0	90-180	0.	NA.	.0
TOTAL LUMINAIRE = 0-180					1661.	NA.	100.0

IES SPACING CRITERIA: END= .9 DIAGONAL = .9 CROSS= .9

THIS BALLABS REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THIS CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.

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 LAMP TYPE : BXRE-35E2000

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LUMINANCES-CD/SQ-M			
HORIZONTAL ANGLE			
VERT	0	45	90
ANGLE			
45	27749.	32563.	28032.
55	10123.	12218.	9774.
65	2132.	2606.	1895.
75	387.	387.	0.
85	0.	0.	0.

\*\*MAXIMUM BRIGHTNESSES NOT MEASURED\*\*

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#### ZONAL CAVITY COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE=.20

CEILING	.80				.70				.50				.30				.10		.00
WALL	.70	.50	.30	.10	.70	.50	.30	.10	.50	.30	.10	.50	.30	.10	.50	.30	.10	.50	.00
RCR																			
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00	
1	1.14	1.11	1.09	1.06	1.11	1.09	1.07	1.05	1.05	1.03	1.01	1.01	1.00	.98	.98	.97	.96	.94	
2	1.08	1.03	.99	.96	1.06	1.02	.98	.95	.98	.95	.93	.95	.93	.91	.93	.91	.89	.87	
3	1.03	.96	.91	.87	1.01	.95	.90	.87	.92	.89	.85	.90	.87	.84	.88	.85	.83	.81	
4	.97	.90	.84	.80	.95	.89	.83	.79	.86	.82	.79	.84	.81	.78	.83	.79	.77	.75	
5	.92	.84	.78	.73	.90	.83	.77	.73	.81	.76	.72	.79	.75	.72	.78	.74	.71	.70	
6	.87	.78	.72	.68	.86	.78	.72	.68	.76	.71	.67	.75	.70	.67	.73	.69	.66	.65	
7	.83	.73	.67	.63	.81	.73	.67	.63	.71	.66	.62	.70	.66	.62	.69	.65	.62	.60	
8	.78	.68	.62	.58	.77	.68	.62	.58	.67	.61	.58	.65	.61	.57	.64	.60	.57	.56	
9	.73	.63	.57	.53	.72	.63	.57	.53	.62	.56	.53	.61	.56	.53	.60	.56	.52	.51	
10	.69	.59	.53	.49	.68	.58	.53	.49	.58	.52	.49	.57	.52	.48	.56	.51	.48	.47	

TESTED IN ACCORDANCE WITH CURRENT IES PROCEDURES

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ELECTRICAL CHARACTERISTICS 119.96V .2098A 24.9690W

LUMINOUS EFFICACY (LUMENS / WATTS) = 66.5

TESTED IN ACCORDANCE WITH CURRENT IES STANDARDS  
UTILIZING ABSOLUTE PHOTOMETRY PER LM-79-08

