



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AMD2ARNG-L27-8TW-A-DALI-UNV 4000K READING ONLY\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN from BALLABS TEST NO. 18939.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 25-AUG-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 2x2' MULTI COMPARTMENT LED TROFFER  
 [MORE] FROSTED ACRYLIC DIFFUSER  
 [LUMCAT] AMD2ARNG-L27-8TW-A-DALI-UNV 4000k READING ONLY  
 [ \_SEARCH\_SOURCETYPE]LED  
 [ \_SEARCH\_APPLICATION]INDOOR,DIRECT, MEDICAL  
 [ \_SEARCH\_MOUNTING]RECESSED

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1772
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	98
Total Luminaire Watts	18.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	2.08
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.42
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3866	2847	1364
55	4022	2819	1175
65	3541	2641	1024
75	2019	1923	812
85	390	780	674

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
<b>0</b>	617.083	617.083	617.083	617.083	617.083	617.083	617.083	617.083	617.083
<b>5</b>	700.558	699.502	683.652	658.292	628.706	598.063	571.647	552.627	543.118
<b>10</b>	769.240	758.674	718.521	662.519	603.347	546.288	500.852	471.265	457.529
<b>15</b>	849.546	829.469	769.240	687.878	601.233	520.928	460.699	423.716	409.980
<b>20</b>	889.698	853.772	769.240	658.292	536.778	439.566	367.714	326.505	312.768
<b>25</b>	923.511	883.359	781.920	653.009	515.645	406.810	333.901	289.522	276.842
<b>30</b>	960.494	904.492	781.920	622.366	469.152	350.807	274.729	234.576	222.953
<b>35</b>	982.684	918.228	780.864	607.573	445.906	326.505	249.369	213.443	200.763
<b>40</b>	956.267	883.359	731.201	549.457	382.507	270.502	203.933	171.177	163.781
<b>45</b>	934.078	855.886	687.878	494.512	329.674	225.066	168.007	140.534	132.081
<b>50</b>	868.565	787.203	623.423	435.339	278.955	187.027	138.421	117.288	109.891
<b>55</b>	788.260	709.011	552.627	367.714	230.349	154.271	110.948	96.155	88.759
<b>60</b>	662.519	599.120	471.265	306.428	187.027	120.458	88.759	72.909	68.682
<b>65</b>	511.418	472.322	381.450	252.539	147.931	95.098	67.626	56.002	51.776
<b>70</b>	329.674	316.995	274.729	190.197	105.665	68.682	47.549	39.096	35.926
<b>75</b>	178.574	178.574	170.120	127.855	71.852	43.323	30.643	27.473	27.473
<b>80</b>	68.682	77.135	87.702	72.909	45.436	28.530	23.246	22.190	22.190
<b>85</b>	11.623	13.736	23.246	28.530	20.076	16.906	16.906	16.906	13.736
<b>90</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : AMD2ARNG-L27-8TW-A-DALI-UNV 4000K READING ONLY\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	229.36	N.A.	12.90
0-30	485.11	N.A.	27.40
0-40	803.52	N.A.	45.30
0-60	1429.93	N.A.	80.70
0-80	1748.07	N.A.	98.70
0-90	1771.91	N.A.	100.00
10-90	1712.81	N.A.	96.70
20-40	574.16	N.A.	32.40
20-50	904.46	N.A.	51.00
40-70	841.26	N.A.	47.50
60-80	318.14	N.A.	18.00
70-80	103.29	N.A.	5.80
80-90	23.83	N.A.	1.30
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1771.91	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	59.09
10-20	170.27
20-30	255.75
30-40	318.41
40-50	330.30
50-60	296.11
60-70	214.85
70-80	103.29
80-90	23.83
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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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	124	124	124	124	121	121	121	121	115	115	115	111	111	111	106	106	106	104
1	113	109	104	100	111	106	102	99	102	99	96	98	95	93	94	92	90	88
2	103	95	88	82	100	93	86	81	89	84	79	86	81	77	83	79	76	73
3	94	83	75	68	92	82	74	68	79	72	66	76	70	65	73	68	64	62
4	86	74	65	58	84	72	64	57	70	62	57	67	61	56	65	60	55	53
5	79	66	57	50	77	65	56	49	62	55	49	60	54	48	58	53	48	46
6	73	59	50	43	71	58	49	43	56	49	43	55	48	42	53	47	42	40
7	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
8	63	49	40	34	61	48	40	34	47	39	34	46	39	33	44	38	33	31
9	59	45	36	31	57	44	36	30	43	36	30	42	35	30	41	35	30	28
10	55	41	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25

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## UGR TABLE - CORRECTED

### Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

### Room Size UGR Viewed Crosswise

X=2H	Y=2H	19.4	21.1	19.8	21.4	21.7	UGR Viewed Endwise	12.5	14.1	12.9	14.4	14.8
	3H	21.0	22.4	21.3	22.7	23.1	14.0	15.4	14.3	15.8	16.1	
	4H	21.3	22.7	21.7	23.0	23.4	14.4	15.8	14.8	16.2	16.6	
	6H	21.5	22.7	21.9	23.1	23.5	14.8	16.1	15.2	16.5	16.8	
	8H	21.5	22.7	21.9	23.1	23.5	14.9	16.1	15.3	16.5	16.9	
	12H	21.5	22.6	21.9	23.0	23.4	15.0	16.2	15.4	16.6	17.0	

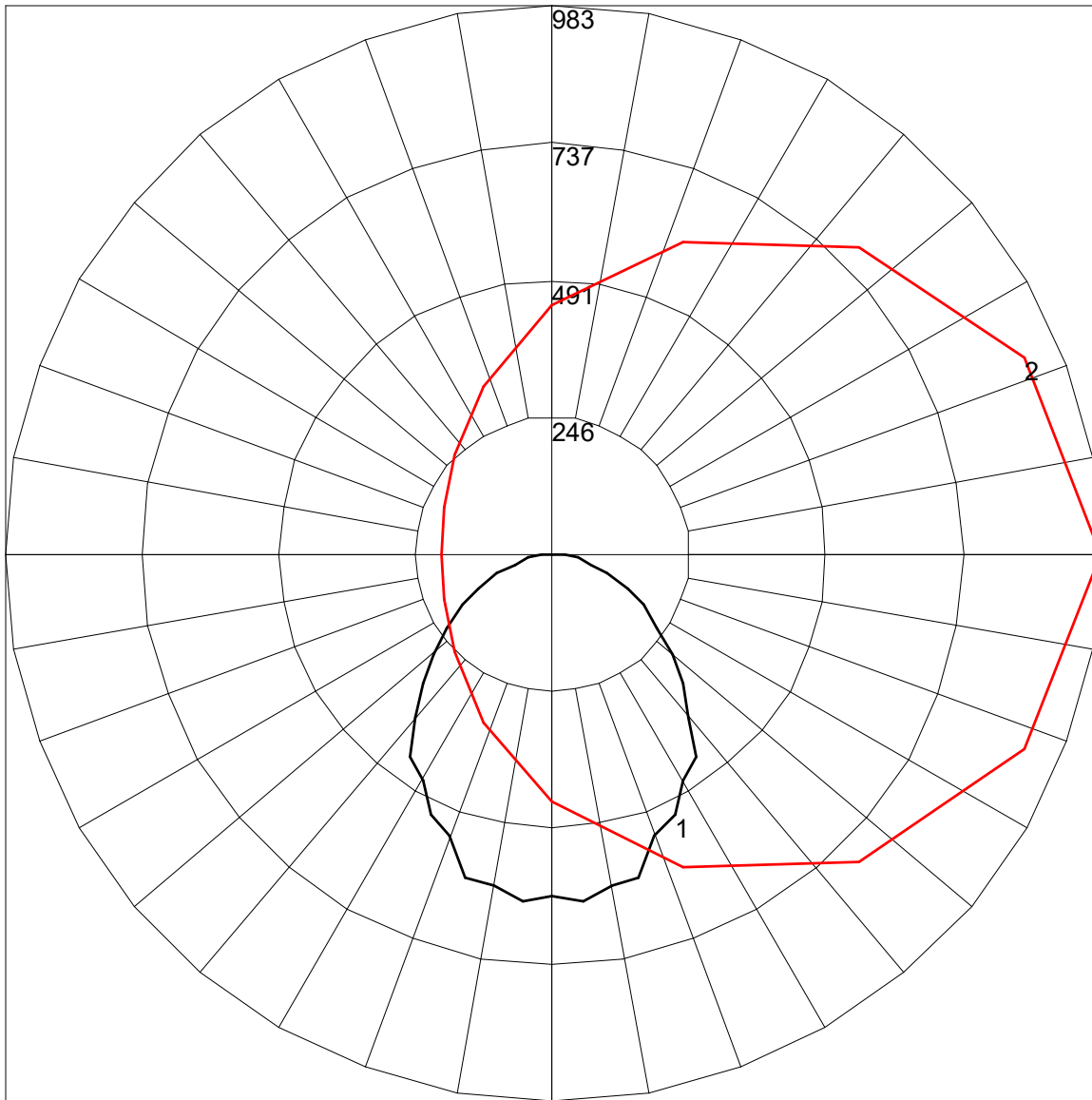
4H	2H	19.8	21.1	20.2	21.5	21.9	14.0	15.3	14.4	15.7	16.1	
	3H	21.5	22.6	21.9	23.0	23.4	15.6	16.7	16.0	17.1	17.5	
	4H	21.9	23.0	22.4	23.4	23.8	16.1	17.2	16.6	17.6	18.0	
	6H	22.2	23.1	22.6	23.5	24.0	16.5	17.4	17.0	17.9	18.3	
	8H	22.2	23.0	22.6	23.5	23.9	16.7	17.5	17.1	18.0	18.4	
	12H	22.2	22.9	22.7	23.4	23.9	16.8	17.5	17.2	18.0	18.5	

8H	4H	22.1	22.9	22.5	23.3	23.8	16.6	17.5	17.1	17.9	18.4	
	6H	22.3	23.0	22.8	23.5	24.0	17.1	17.9	17.6	18.3	18.8	
	8H	22.4	23.0	22.9	23.5	24.0	17.3	18.0	17.8	18.5	19.0	
	12H	22.4	22.9	22.9	23.4	24.0	17.5	18.1	18.0	18.5	19.1	

12H	4H	22.0	22.8	22.5	23.3	23.8	16.6	17.4	17.1	17.9	18.4	
	6H	22.3	23.0	22.9	23.4	24.0	17.2	17.9	17.7	18.3	18.9	
	8H	22.4	23.0	22.9	23.5	24.0	17.5	18.0	18.0	18.5	19.1	

Maximum UGR = 24.0

POLAR GRAPH



Maximum Candela = 982.684 Located At Horizontal Angle = 0, Vertical Angle = 35  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (35) (Through Max. Cd.)