

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-24-L84-RGB835-D-DMX-UNV WHITE ONLY\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 18887.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 1 DEC 2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 2x4' RECESSED LUMINAIRE

[MORE] WITH FROST CONCAVE ACRYLIC LENS w/DEEP ACRYLIC CENTER

[MORE] DIFFUSER

[LUMCAT] AT2-24-L84-RGB835-D-DMX-UNV white only

[\_SEARCH\_SOURCE] LED

[\_SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Commercial, Office, Direct

[\_SEARCH\_MOUNTING] Ceiling, Recessed

[\_SEARCH\_CERTIFICATION] DLC

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8493
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	95
Total Luminaire Watts	89.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.26
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 ft
Luminous Width (90-270)	1.77 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4194	4463	4651
55	3612	3897	4044
65	3142	3477	3645
75	2600	3113	3267
85	1981	2489	2285

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : AT2-24-L84-RGB835-D-DMX-UNV WHITE ONLY\_.IES****CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0</b>	3566.826	3566.826	3566.826	3566.826	3566.826
<b>5</b>	3566.826	3566.826	3566.826	3572.292	3572.292
<b>10</b>	3462.964	3465.698	3476.630	3490.296	3501.229
<b>15</b>	3337.237	3348.170	3375.502	3400.101	3416.500
<b>20</b>	3145.913	3165.046	3208.777	3252.508	3274.374
<b>25</b>	2883.526	2905.392	2968.255	3020.186	3039.318
<b>30</b>	2634.805	2667.603	2735.933	2798.797	2823.396
<b>35</b>	2416.149	2448.947	2528.210	2596.540	2615.672
<b>40</b>	2090.898	2131.896	2213.892	2274.022	2301.354
<b>45</b>	1831.244	1869.509	1948.772	2003.436	2030.768
<b>50</b>	1546.991	1585.256	1656.319	1710.983	1724.649
<b>55</b>	1279.138	1311.936	1380.266	1426.730	1432.197
<b>60</b>	1041.349	1074.148	1131.545	1167.076	1183.476
<b>65</b>	819.960	852.758	907.422	937.488	951.154
<b>70</b>	614.970	639.569	694.233	724.298	735.231
<b>75</b>	415.446	445.512	497.442	522.041	522.041
<b>80</b>	245.988	276.053	322.518	311.585	303.385
<b>85</b>	106.595	133.927	133.927	122.994	122.994
<b>90</b>	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : AT2-24-L84-RGB835-D-DMX-UNV WHITE ONLY\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1286.62	N.A.	15.10
0-30	2654.97	N.A.	31.30
0-40	4217.4	N.A.	49.70
0-60	6940.08	N.A.	81.70
0-80	8343.86	N.A.	98.20
0-90	8493.31	N.A.	100.00
10-90	8155.89	N.A.	96.00
20-40	2930.78	N.A.	34.50
20-50	4422.19	N.A.	52.10
40-70	3612.88	N.A.	42.50
60-80	1403.78	N.A.	16.50
70-80	513.58	N.A.	6.00
80-90	149.45	N.A.	1.80
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	8493.31	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	337.42
10-20	949.20
20-30	1368.35
30-40	1562.44
40-50	1491.41
50-60	1231.27
60-70	890.20
70-80	513.58
80-90	149.45
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	179	179	179	179	175	175	175	175	168	168	168	160	160	160	154	154	154	151
1	165	158	152	146	161	154	149	144	148	143	139	142	138	135	137	134	131	128
2	150	139	129	120	147	136	127	119	130	123	116	125	119	114	121	116	111	108
3	138	122	111	101	134	120	109	100	116	106	99	112	104	97	108	101	95	92
4	127	109	96	87	123	107	95	86	103	93	85	100	91	84	97	89	83	79
5	117	98	85	75	114	96	84	75	93	82	74	90	81	73	88	79	73	69
6	108	89	76	66	105	87	75	66	85	74	65	82	72	65	80	71	64	61
7	101	81	68	59	98	80	67	59	77	66	58	75	65	58	73	64	57	55
8	94	74	61	53	92	73	61	53	71	60	52	69	59	52	67	58	52	49
9	88	68	56	48	86	67	56	48	66	55	48	64	54	47	62	54	47	44
10	83	63	51	44	81	62	51	44	61	50	43	59	50	43	58	49	43	40

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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	14.7	16.2	15.0	16.5	16.9	15.3	16.9	15.6	17.2	17.5
	3H	16.3	17.7	16.7	18.0	18.4	17.0	18.5	17.4	18.8	19.2
	4H	16.9	18.2	17.3	18.5	18.9	17.7	19.1	18.1	19.4	19.8
	6H	17.3	18.5	17.7	18.9	19.3	18.2	19.5	18.6	19.8	20.2
	8H	17.4	18.6	17.8	19.0	19.4	18.4	19.6	18.8	19.9	20.3
	12H	17.5	18.6	17.9	19.0	19.4	18.5	19.6	18.9	20.0	20.4

### UGR Viewed Endwise

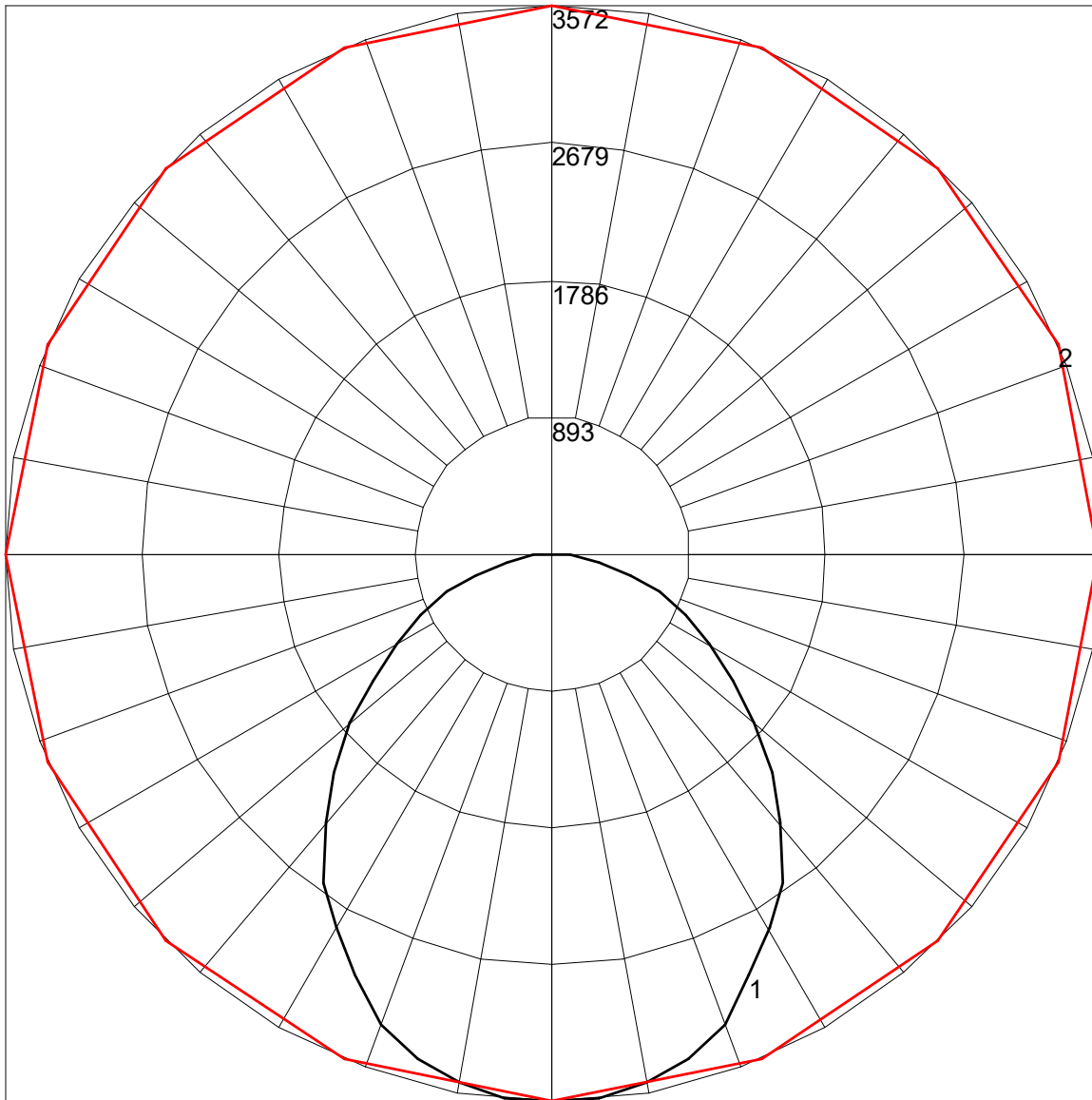
4H	2H	15.3	16.7	15.7	17.0	17.4	15.8	17.2	16.2	17.5	17.9
	3H	17.2	18.3	17.6	18.7	19.1	17.8	18.9	18.2	19.3	19.7
	4H	17.9	18.9	18.3	19.3	19.7	18.6	19.7	19.1	20.1	20.5
	6H	18.4	19.3	18.9	19.8	20.2	19.3	20.2	19.7	20.6	21.1
	8H	18.6	19.4	19.1	19.9	20.4	19.5	20.3	19.9	20.8	21.2
	12H	18.7	19.5	19.2	20.0	20.4	19.6	20.4	20.1	20.8	21.3

8H	4H	18.2	19.1	18.7	19.5	20.0	18.9	19.8	19.4	20.2	20.7
	6H	19.0	19.6	19.5	20.1	20.6	19.7	20.4	20.2	20.9	21.4
	8H	19.2	19.8	19.7	20.3	20.8	20.0	20.6	20.5	21.1	21.6
	12H	19.4	20.0	20.0	20.5	21.0	20.2	20.7	20.7	21.2	21.8

12H	4H	18.3	19.0	18.8	19.5	20.0	19.0	19.7	19.4	20.2	20.6
	6H	19.0	19.7	19.6	20.1	20.7	19.8	20.4	20.3	20.8	21.4
	8H	19.4	19.9	19.9	20.4	21.0	20.1	20.6	20.6	21.1	21.7

Maximum UGR = 21.8

POLAR GRAPH



Maximum Candela = 3572.292 Located At Horizontal Angle = 67.5, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)