



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-22-P25-835-D-POE\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19435.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 15-JAN-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-22" LED ARRAYS 2x2' LUMINAIRE

[MORE] WHITE REFLECTOR w/2 PIECE FROSTED ACRYLIC LENS IN DOOR

[LUMCAT] AT1-22-P25-835-D-PoE

[\_SEARCH\_SOURCETYPE] LED

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

[\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2506
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	23.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.76 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	2588	2817	3043
55	2276	2570	2762
65	2011	2352	2583
75	1670	2116	2446
85	898	796	755

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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>
<b>0</b>	986.262	986.262	986.262	986.262	986.262
<b>5</b>	984.206	981.123	980.609	980.095	979.067
<b>10</b>	962.107	961.593	959.537	965.704	967.246
<b>15</b>	929.214	928.186	931.784	944.632	948.744
<b>20</b>	879.361	881.931	896.322	914.824	923.561
<b>25</b>	818.202	826.939	850.066	875.764	889.126
<b>30</b>	754.986	766.293	796.102	830.022	842.871
<b>35</b>	686.118	698.452	732.373	769.891	782.226
<b>40</b>	609.026	620.333	656.823	692.285	707.703
<b>45</b>	528.850	542.213	575.619	609.026	621.874
<b>50</b>	452.272	465.121	498.527	530.906	539.643
<b>55</b>	377.236	389.057	426.061	453.300	457.926
<b>60</b>	307.854	319.674	354.623	380.320	382.376
<b>65</b>	245.666	255.431	287.296	309.909	315.563
<b>70</b>	183.479	192.730	223.052	243.096	250.806
<b>75</b>	124.889	134.654	158.295	173.200	182.965
<b>80</b>	69.383	81.717	83.259	82.745	81.717
<b>85</b>	22.614	26.725	20.044	19.530	19.016
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	356.88	N.A.	14.20
0-30	749.18	N.A.	29.90
0-40	1206.74	N.A.	48.20
0-60	2029.96	N.A.	81.00
0-80	2471.96	N.A.	98.60
0-90	2505.8	N.A.	100.00
10-90	2412.75	N.A.	96.30
20-40	849.86	N.A.	33.90
20-50	1294.92	N.A.	51.70
40-70	1104.36	N.A.	44.10
60-80	442.00	N.A.	17.60
70-80	160.87	N.A.	6.40
80-90	33.84	N.A.	1.40
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	2505.8	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	93.05
10-20	263.82
20-30	392.31
30-40	457.56
40-50	445.06
50-60	378.16
60-70	281.13
70-80	160.87
80-90	33.84
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	181	181	181	181	177	177	177	177	169	169	169	162	162	162	155	155	155	152
1	166	159	153	147	162	156	150	145	149	144	140	143	139	136	138	135	132	129
2	151	139	129	121	147	136	127	119	131	123	116	126	120	114	121	116	111	108
3	138	123	111	101	135	120	109	100	116	106	98	112	104	97	108	101	95	92
4	127	109	96	86	123	107	95	86	103	93	84	100	91	83	97	89	82	79
5	117	98	84	75	114	96	84	74	93	82	73	90	80	73	87	79	72	69
6	108	88	75	65	105	87	74	65	84	73	65	82	72	64	79	70	63	60
7	100	80	67	58	98	79	67	58	77	66	57	75	64	57	72	63	57	54
8	94	73	61	52	91	72	60	52	70	59	51	68	58	51	67	58	51	48
9	88	68	55	47	85	67	55	47	65	54	47	63	53	46	62	53	46	43
10	82	62	51	43	80	62	50	43	60	50	42	59	49	42	57	48	42	39

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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

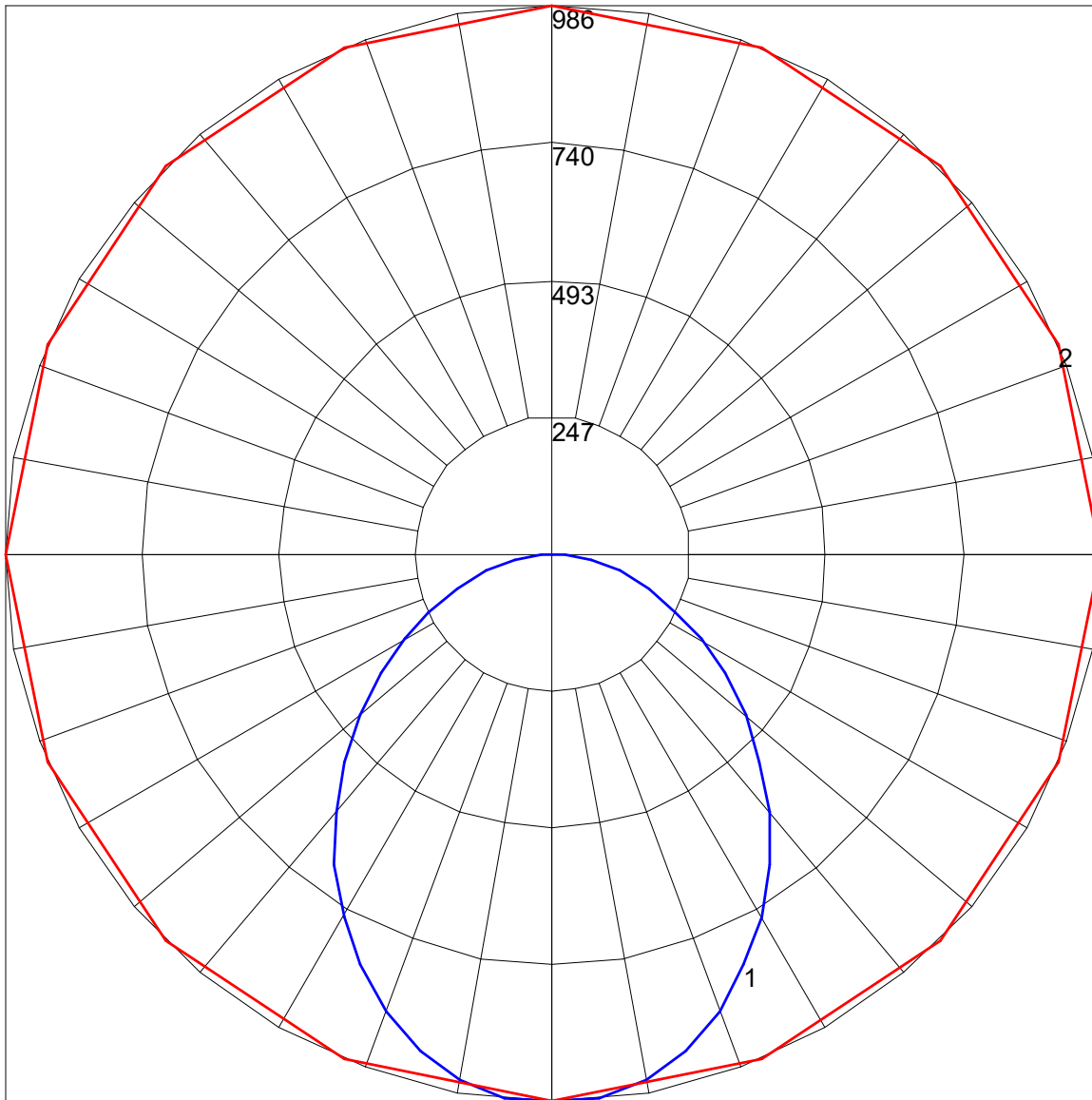
X=2H	Y=2H	13.0	14.6	13.4	14.9	15.2	14.2	15.8	14.6	16.1	16.4
	3H	14.7	16.1	15.0	16.4	16.8	16.1	17.5	16.5	17.9	18.2
	4H	15.3	16.6	15.7	17.0	17.3	16.8	18.2	17.2	18.5	18.9
	6H	15.7	16.9	16.1	17.3	17.7	17.2	18.5	17.7	18.9	19.3
	8H	15.8	17.0	16.2	17.4	17.8	17.3	18.5	17.8	18.9	19.3
	12H	15.8	17.0	16.2	17.3	17.8	17.3	18.5	17.8	18.9	19.3

UGR Viewed Endwise

4H	2H	13.8	15.1	14.2	15.5	15.9	14.7	16.1	15.1	16.4	16.8
	3H	15.7	16.8	16.1	17.2	17.6	16.9	18.0	17.3	18.4	18.8
	4H	16.4	17.4	16.8	17.8	18.2	17.7	18.8	18.2	19.2	19.6
	6H	16.9	17.8	17.3	18.2	18.7	18.3	19.1	18.7	19.6	20.0
	8H	17.0	17.9	17.5	18.3	18.8	18.4	19.2	18.8	19.6	20.1
	12H	17.1	17.9	17.6	18.3	18.8	18.4	19.1	18.9	19.6	20.1
8H	4H	16.8	17.6	17.2	18.0	18.5	18.0	18.8	18.4	19.3	19.7
	6H	17.4	18.1	17.9	18.6	19.1	18.6	19.3	19.1	19.8	20.2
	8H	17.6	18.2	18.1	18.7	19.2	18.7	19.3	19.2	19.8	20.3
	12H	17.7	18.3	18.3	18.8	19.3	18.8	19.3	19.3	19.8	20.4
12H	4H	16.8	17.6	17.3	18.0	18.5	18.0	18.7	18.5	19.2	19.7
	6H	17.5	18.1	18.0	18.6	19.1	18.6	19.2	19.1	19.7	20.2
	8H	17.7	18.3	18.2	18.8	19.3	18.8	19.3	19.3	19.8	20.4

Maximum UGR = 20.4

POLAR GRAPH



Maximum Candela = 986.262 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)