



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-22-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] 16-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] AT3-22-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	2331
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	100
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	2407	2620	2830
55	2117	2391	2569
65	1871	2188	2403
75	1553	1968	2275
85	835	740	702

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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>	917.389	917.389	917.389	917.389	917.389
<b>5</b>	915.477	912.608	912.130	911.652	910.696
<b>10</b>	894.920	894.442	892.530	898.267	899.701
<b>15</b>	864.325	863.369	866.715	878.666	882.491
<b>20</b>	817.953	820.344	833.729	850.939	859.066
<b>25</b>	761.065	769.192	790.704	814.607	827.036
<b>30</b>	702.264	712.781	740.508	772.060	784.011
<b>35</b>	638.204	649.678	681.229	716.127	727.601
<b>40</b>	566.496	577.013	610.955	643.941	658.283
<b>45</b>	491.919	504.349	535.422	566.496	578.447
<b>50</b>	420.689	432.640	463.714	493.832	501.958
<b>55</b>	350.893	361.888	396.308	421.645	425.948
<b>60</b>	286.355	297.351	329.858	353.761	355.673
<b>65</b>	228.511	237.594	267.233	288.268	293.526
<b>70</b>	170.666	179.271	207.476	226.120	233.291
<b>75</b>	116.168	125.251	147.241	161.105	170.188
<b>80</b>	64.538	76.011	77.445	76.967	76.011
<b>85</b>	21.034	24.859	18.644	18.166	17.688
<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	331.95	N.A.	14.20
0-30	696.86	N.A.	29.90
0-40	1122.47	N.A.	48.20
0-60	1888.2	N.A.	81.00
0-80	2299.34	N.A.	98.60
0-90	2330.82	N.A.	100.00
10-90	2244.27	N.A.	96.30
20-40	790.51	N.A.	33.90
20-50	1204.5	N.A.	51.70
40-70	1027.24	N.A.	44.10
60-80	411.13	N.A.	17.60
70-80	149.63	N.A.	6.40
80-90	31.48	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	2330.82	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	86.55
10-20	245.40
20-30	364.91
30-40	425.60
40-50	413.98
50-60	351.76
60-70	261.50
70-80	149.63
80-90	31.48
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	67	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

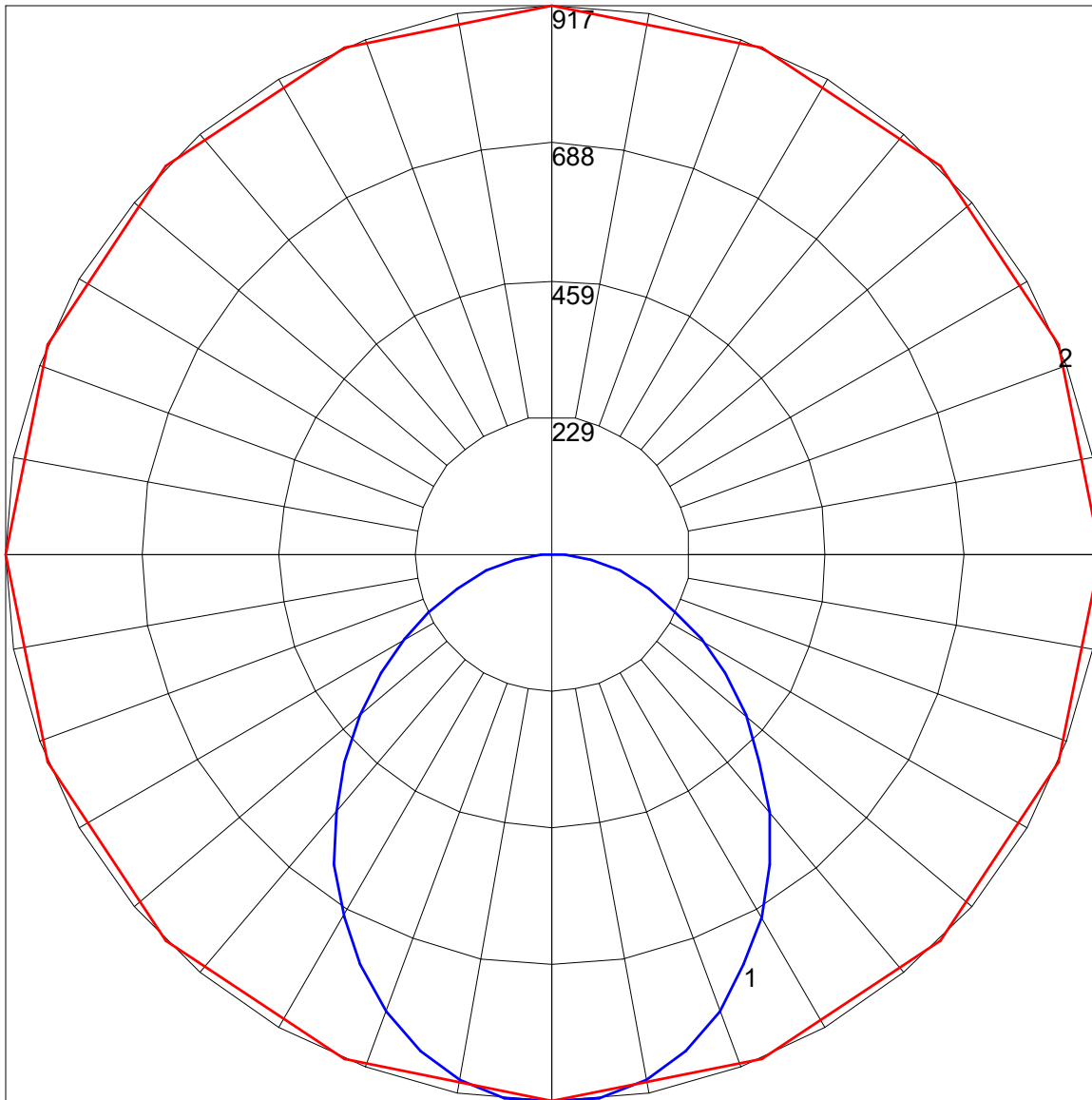
X=2H	Y=2H	12.8	14.4	13.2	14.7	15.0	14.0	15.6	14.4	15.9	16.2
	3H	14.5	15.9	14.8	16.2	16.6	15.9	17.3	16.3	17.7	18.0
	4H	15.1	16.4	15.5	16.8	17.1	16.6	18.0	17.0	18.3	18.7
	6H	15.5	16.7	15.9	17.1	17.5	17.0	18.3	17.5	18.7	19.1
	8H	15.6	16.8	16.0	17.2	17.6	17.1	18.3	17.6	18.7	19.1
	12H	15.6	16.8	16.0	17.1	17.6	17.1	18.3	17.6	18.7	19.1

UGR Viewed Endwise

4H	2H	13.6	14.9	14.0	15.3	15.7	14.5	15.9	14.9	16.2	16.6
	3H	15.5	16.6	15.9	17.0	17.4	16.7	17.8	17.1	18.2	18.6
	4H	16.2	17.2	16.6	17.6	18.0	17.5	18.6	18.0	19.0	19.4
	6H	16.7	17.6	17.1	18.0	18.5	18.1	18.9	18.5	19.4	19.8
	8H	16.8	17.7	17.3	18.1	18.6	18.2	19.0	18.6	19.4	19.9
	12H	16.9	17.7	17.4	18.1	18.6	18.2	18.9	18.7	19.4	19.9
8H	4H	16.6	17.4	17.0	17.8	18.3	17.8	18.6	18.2	19.1	19.5
	6H	17.2	17.9	17.7	18.4	18.9	18.4	19.1	18.9	19.6	20.0
	8H	17.4	18.0	17.9	18.5	19.0	18.5	19.1	19.0	19.6	20.1
	12H	17.5	18.1	18.1	18.6	19.1	18.6	19.1	19.1	19.6	20.2
12H	4H	16.6	17.4	17.1	17.8	18.3	17.8	18.5	18.3	19.0	19.5
	6H	17.3	17.9	17.8	18.4	18.9	18.4	19.0	18.9	19.5	20.0
	8H	17.5	18.1	18.0	18.6	19.1	18.6	19.1	19.1	19.6	20.2

Maximum UGR = 20.2

POLAR GRAPH



Maximum Candela = 917.389 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.)