



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-22-L40-835-D-DIM-UNV\_.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] 17-JUL-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-42 LED 22"ARRAYS 2x2'RECESSED LUMINAIRE

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

[LUMCAT] AT3-22-L40-835-D-DIM-UNV

[LAMPCAT] HLM 80 CRI 3500K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3831
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	37.2
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	3956	4306	4652
55	3479	3929	4223
65	3075	3596	3949
75	2552	3235	3739
85	1372	1216	1154

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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>	1507.729	1507.729	1507.729	1507.729	1507.729
<b>5</b>	1504.587	1499.872	1499.087	1498.301	1496.730
<b>10</b>	1470.802	1470.016	1466.874	1476.302	1478.659
<b>15</b>	1420.518	1418.947	1424.447	1444.089	1450.374
<b>20</b>	1344.307	1348.235	1370.234	1398.519	1411.876
<b>25</b>	1250.810	1264.167	1299.523	1338.807	1359.235
<b>30</b>	1154.171	1171.456	1217.026	1268.881	1288.523
<b>35</b>	1048.889	1067.746	1119.601	1176.956	1195.812
<b>40</b>	931.037	948.322	1004.105	1058.318	1081.888
<b>45</b>	808.470	828.898	879.967	931.037	950.679
<b>50</b>	691.403	711.045	762.114	811.612	824.969
<b>55</b>	576.693	594.763	651.333	692.974	700.045
<b>60</b>	470.625	488.696	542.123	581.407	584.550
<b>65</b>	375.557	390.485	439.198	473.768	482.411
<b>70</b>	280.490	294.632	340.987	371.629	383.414
<b>75</b>	190.921	205.849	241.991	264.776	279.704
<b>80</b>	106.067	124.924	127.281	126.495	124.924
<b>85</b>	34.570	40.856	30.642	29.856	29.070
<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	545.57	N.A.	14.20
0-30	1145.3	N.A.	29.90
0-40	1844.78	N.A.	48.20
0-60	3103.27	N.A.	81.00
0-80	3778.97	N.A.	98.60
0-90	3830.7	N.A.	100.00
10-90	3688.45	N.A.	96.30
20-40	1299.21	N.A.	33.90
20-50	1979.59	N.A.	51.70
40-70	1688.27	N.A.	44.10
60-80	675.70	N.A.	17.60
70-80	245.92	N.A.	6.40
80-90	51.73	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	3830.7	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	142.25
10-20	403.32
20-30	599.73
30-40	699.48
40-50	680.38
50-60	578.11
60-70	429.78
70-80	245.92
80-90	51.73
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	63	60
4	84	72	63	57	81	70	62	56	68	61	56	66	60	55	64	58	54	52
5	77	64	56	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34	45	38	34	44	38	33	32
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	28
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26

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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	16.0	17.6	16.4	17.9	18.2	17.2	18.8	17.6	19.1	19.4
	3H	17.7	19.1	18.0	19.4	19.8	19.1	20.5	19.5	20.9	21.2
	4H	18.3	19.6	18.7	20.0	20.3	19.8	21.2	20.2	21.5	21.9
	6H	18.7	19.9	19.1	20.3	20.7	20.2	21.5	20.7	21.9	22.3
	8H	18.8	20.0	19.2	20.4	20.8	20.3	21.5	20.8	21.9	22.3
	12H	18.8	20.0	19.2	20.3	20.8	20.3	21.5	20.8	21.9	22.3

UGR Viewed Endwise

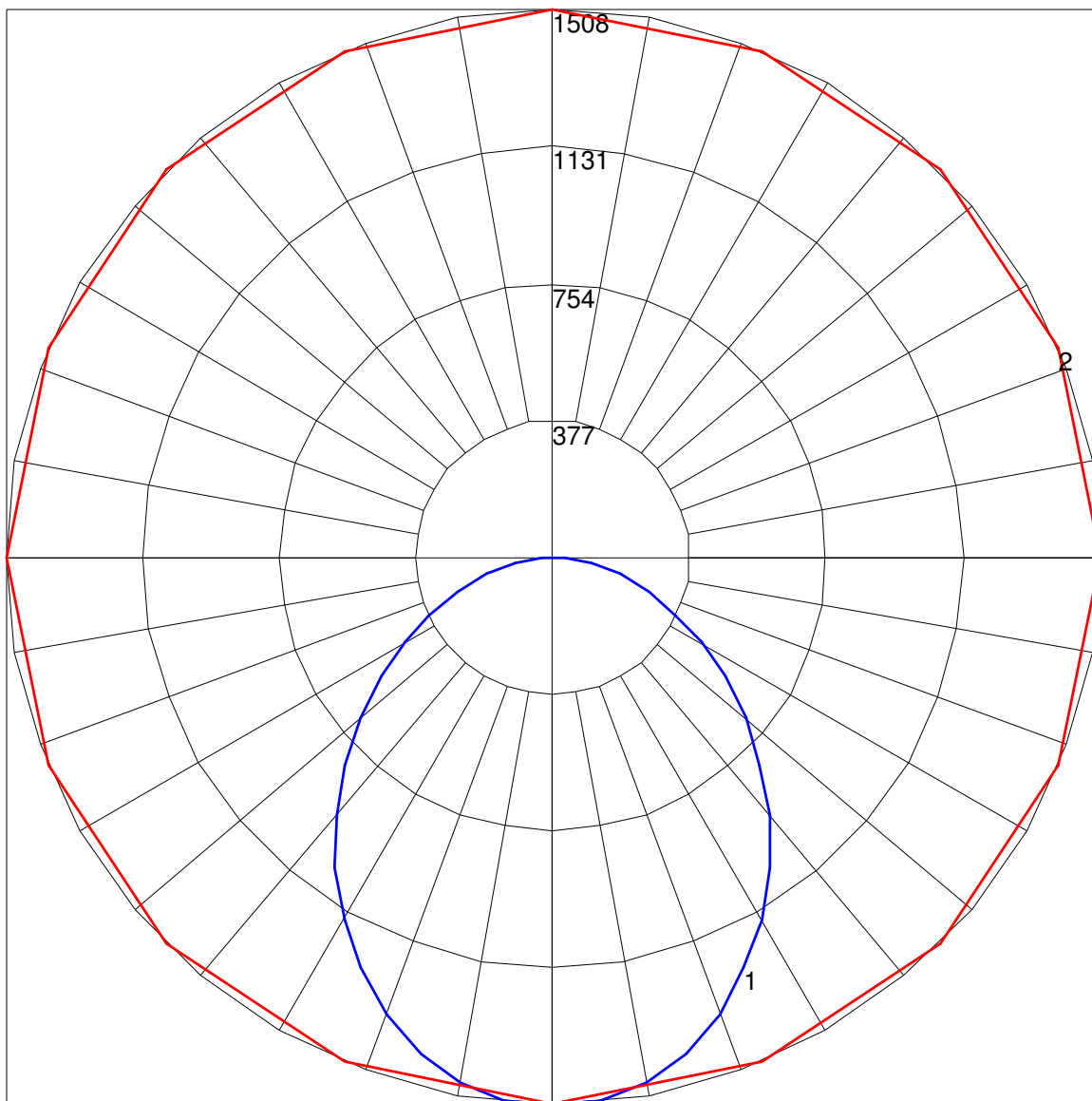
4H	2H	16.8	18.1	17.2	18.5	18.9	17.7	19.1	18.1	19.4	19.8
	3H	18.7	19.8	19.1	20.2	20.6	19.9	21.0	20.3	21.4	21.8
	4H	19.4	20.4	19.8	20.8	21.2	20.7	21.8	21.2	22.2	22.6
	6H	19.9	20.8	20.3	21.2	21.7	21.3	22.1	21.7	22.6	23.0
	8H	20.0	20.9	20.5	21.3	21.8	21.4	22.2	21.8	22.6	23.1
	12H	20.1	20.9	20.6	21.3	21.8	21.4	22.1	21.9	22.6	23.1

8H	4H	19.8	20.6	20.2	21.0	21.5	21.0	21.8	21.4	22.3	22.7
	6H	20.4	21.1	20.9	21.6	22.1	21.6	22.3	22.1	22.8	23.2
	8H	20.6	21.2	21.1	21.7	22.2	21.7	22.3	22.2	22.8	23.3
	12H	20.7	21.3	21.3	21.8	22.3	21.8	22.3	22.3	22.8	23.4

12H	4H	19.8	20.6	20.3	21.0	21.5	21.0	21.7	21.5	22.2	22.7
	6H	20.5	21.1	21.0	21.6	22.1	21.6	22.2	22.1	22.7	23.2
	8H	20.7	21.3	21.2	21.8	22.3	21.8	22.3	22.3	22.8	23.4

Maximum UGR = 23.4

POLAR GRAPH



Maximum Candela = 1507.729 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.)