



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-24-L70-835-D-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19260.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 3-JAN-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4-56 LED 22" ARRAYS 2x4' RECESSED LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CONCAVE LX4 LENS IN DOOR

[LUMCAT] AT3-24-L70-835-D-DIM-UNV

[\_SEARCH\_SOURCETYPE]LED

[\_SEARCH\_APPLICATION]INDOOR,COMMERCIAL,DIRECT,OFFICE,ARCHITECTURAL

[\_SEARCH\_MOUNTING]RECESSED

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6722
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	63.34
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 ft
Luminous Width (90-270)	1.88 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3062	3422	3651
55	2609	3024	3217
65	2369	2894	3109
75	2015	2755	2755
85	1785	1273	1190

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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>	2678.223	2678.223	2678.223	2678.223	2678.223
<b>5</b>	2664.057	2665.002	2665.002	2665.946	2666.890
<b>10</b>	2610.228	2613.061	2619.672	2628.171	2633.838
<b>15</b>	2513.903	2520.514	2535.623	2558.288	2568.676
<b>20</b>	2369.415	2383.580	2419.466	2462.907	2480.850
<b>25</b>	2174.876	2192.818	2245.703	2304.254	2330.696
<b>30</b>	1969.948	2162.599	2042.664	2036.054	2184.319
<b>35</b>	1762.187	1794.296	1885.899	1975.614	2009.611
<b>40</b>	1562.926	1599.756	1709.303	1797.129	1825.460
<b>45</b>	1419.383	1464.712	1586.535	1666.806	1692.304
<b>50</b>	1194.623	1246.563	1359.887	1425.993	1442.992
<b>55</b>	981.197	1035.025	1137.017	1190.846	1209.733
<b>60</b>	797.990	853.707	940.589	989.696	1005.750
<b>65</b>	656.335	717.718	801.767	848.041	861.262
<b>70</b>	496.737	561.898	638.392	675.222	681.832
<b>75</b>	341.861	407.022	467.461	473.128	467.461
<b>80</b>	220.982	287.087	281.421	195.484	177.541
<b>85</b>	101.992	117.101	72.716	68.939	67.994
<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	967.96	N.A.	14.40
0-30	2005.71	N.A.	29.80
0-40	3187.81	N.A.	47.40
0-60	5384.13	N.A.	80.10
0-80	6609.29	N.A.	98.30
0-90	6721.6	N.A.	100.00
10-90	6468.62	N.A.	96.20
20-40	2219.84	N.A.	33.00
20-50	3412.3	N.A.	50.80
40-70	2964.26	N.A.	44.10
60-80	1225.16	N.A.	18.20
70-80	457.22	N.A.	6.80
80-90	112.32	N.A.	1.70
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	6721.6	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	252.98
10-20	714.98
20-30	1037.75
30-40	1182.1
40-50	1192.46
50-60	1003.86
60-70	767.94
70-80	457.22
80-90	112.32
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	207	207	207	207	202	202	202	202	193	193	193	185	185	185	177	177	177	174
1	189	181	174	167	184	177	170	164	170	164	159	163	158	154	157	153	150	146
2	172	158	147	137	168	155	144	135	149	140	132	143	136	129	138	132	126	123
3	157	139	126	114	153	137	124	113	132	121	111	127	117	109	122	114	108	104
4	144	124	109	98	141	122	108	97	117	105	96	113	103	94	110	100	93	89
5	133	111	96	84	129	109	95	84	106	93	83	102	91	82	99	89	81	78
6	123	100	85	74	120	99	84	74	96	83	73	93	81	72	90	80	72	68
7	114	91	76	66	111	90	76	66	87	74	65	85	73	65	82	72	64	61
8	107	83	69	59	104	82	68	59	80	67	58	78	66	58	76	65	58	54
9	100	77	63	53	97	76	62	53	74	61	53	72	61	53	70	60	52	49
10	94	71	57	48	91	70	57	48	68	56	48	67	56	48	65	55	48	45

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**UGR TABLE - CORRECTED**

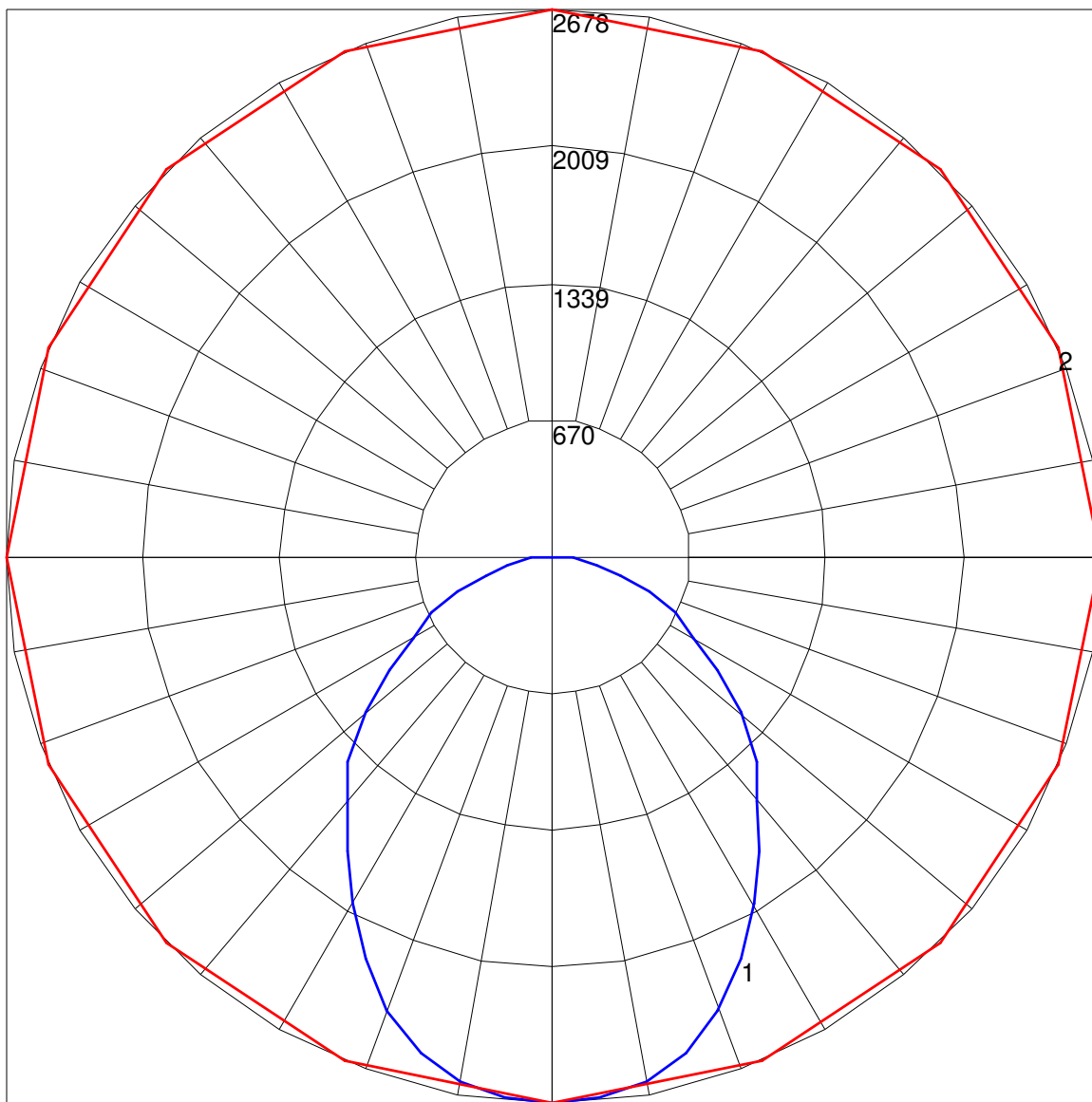
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	13.1	14.7	13.5	15.0	15.3	14.2	15.8	14.5	16.1	16.4
	3H	14.9	16.3	15.2	16.6	17.0	16.2	17.7	16.6	18.0	18.3
	4H	15.5	16.9	15.9	17.2	17.6	16.9	18.3	17.3	18.7	19.0
	6H	16.0	17.3	16.4	17.7	18.1	17.3	18.5	17.7	18.9	19.3
	8H	16.2	17.4	16.7	17.8	18.2	17.3	18.5	17.7	18.9	19.3
	12H	16.4	17.5	16.8	17.9	18.3	17.4	18.5	17.8	18.9	19.3
4H	2H	13.9	15.3	14.3	15.7	16.0	14.8	16.1	15.2	16.5	16.9
	3H	16.0	17.1	16.4	17.5	17.9	17.0	18.2	17.5	18.6	19.0
	4H	16.8	17.8	17.2	18.2	18.6	17.9	19.0	18.4	19.4	19.8
	6H	17.4	18.4	17.9	18.8	19.2	18.3	19.2	18.8	19.7	20.1
	8H	17.7	18.5	18.1	19.0	19.4	18.4	19.3	18.9	19.7	20.2
	12H	17.8	18.6	18.3	19.1	19.6	18.5	19.2	18.9	19.7	20.2
8H	4H	17.2	18.1	17.7	18.5	19.0	18.2	19.1	18.7	19.5	20.0
	6H	18.1	18.8	18.6	19.3	19.8	18.7	19.4	19.2	19.9	20.4
	8H	18.4	19.0	18.9	19.6	20.0	18.8	19.5	19.3	20.0	20.5
	12H	18.7	19.2	19.2	19.7	20.3	18.9	19.5	19.4	20.0	20.5
12H	4H	17.3	18.0	17.7	18.5	19.0	18.2	19.0	18.7	19.5	20.0
	6H	18.2	18.8	18.7	19.3	19.8	18.8	19.4	19.3	19.9	20.4
	8H	18.5	19.1	19.0	19.6	20.2	18.9	19.5	19.5	20.0	20.6

Maximum UGR = 20.6

POLAR GRAPH



Maximum Candela = 2678.223 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.)