



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-22-L30-835-D-(L25)-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN from BALLABS TEST NO. 18882.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 4-16-2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 2x2' RECESSED LUMINAIRE  
 [MORE] WITH FROST CONCAVE ACRYLIC LENS w/DEEP ACRYLIC CENTER  
 [MORE] DIFFUSER  
 [LUMCAT] AT2-22-L30-835-D-(L25)-DIM-UNV  
 [LAMPCAT] HLM 80 CRI, 3500K CCT  
 [ \_SEARCH\_SOURCETYPE] LED  
 [ \_SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Office, Direct  
 [ \_SEARCH\_MOUNTING] Ceiling, Recessed  
 [ \_SEARCH\_CERTIFICATION] DLC

### 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)	101
Total Luminaire Watts	24.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.28
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	2639	2830	3027
55	2311	2495	2701
65	1968	2207	2407
75	1566	1876	2120
85	775	1162	1017

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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>	1024.849	1024.849	1024.849	1024.849	1024.849
<b>5</b>	1022.409	1017.528	1018.748	1017.528	1017.528
<b>10</b>	998.007	998.007	1000.448	1001.668	1002.888
<b>15</b>	958.966	962.626	969.946	974.826	979.707
<b>20</b>	912.603	917.484	929.684	940.665	949.205
<b>25</b>	850.380	860.141	877.222	890.642	902.843
<b>30</b>	778.397	788.157	816.219	833.300	843.060
<b>35</b>	703.973	710.074	744.235	764.976	778.397
<b>40</b>	622.230	629.550	662.491	685.673	699.093
<b>45</b>	539.266	549.026	578.307	603.929	618.569
<b>50</b>	458.742	469.722	496.564	517.305	534.385
<b>55</b>	383.098	391.639	413.600	430.680	447.761
<b>60</b>	309.895	322.095	340.396	358.697	369.678
<b>65</b>	240.351	256.212	269.633	281.833	294.034
<b>70</b>	175.688	196.429	203.750	214.730	226.931
<b>75</b>	117.126	128.106	140.307	156.167	158.608
<b>80</b>	63.443	74.424	82.964	90.284	87.844
<b>85</b>	19.521	25.621	29.281	31.722	25.621
<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	369.95	N.A.	14.80
0-30	773.00	N.A.	30.80
0-40	1235.11	N.A.	49.30
0-60	2052.38	N.A.	81.90
0-80	2469.47	N.A.	98.50
0-90	2506.32	N.A.	100.00
10-90	2409.69	N.A.	96.10
20-40	865.16	N.A.	34.50
20-50	1310.95	N.A.	52.30
40-70	1085.02	N.A.	43.30
60-80	417.09	N.A.	16.60
70-80	149.34	N.A.	6.00
80-90	36.86	N.A.	1.50
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	2506.32	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	96.64
10-20	273.31
20-30	403.05
30-40	462.11
40-50	445.80
50-60	371.47
60-70	267.75
70-80	149.34
80-90	36.86
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	101	97	107	103	99	95	98	95	92	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	87	82	77	83	79	75	80	77	74	72
3	91	81	73	67	89	80	72	67	77	71	65	74	69	64	71	67	63	61
4	84	72	64	57	82	71	63	57	69	62	56	66	60	55	64	59	55	53
5	77	65	56	50	75	64	56	50	62	55	49	60	53	48	58	52	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	42	40
7	67	53	45	39	65	53	45	39	51	44	38	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	44	39	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	27

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**UGR TABLE - CORRECTED**

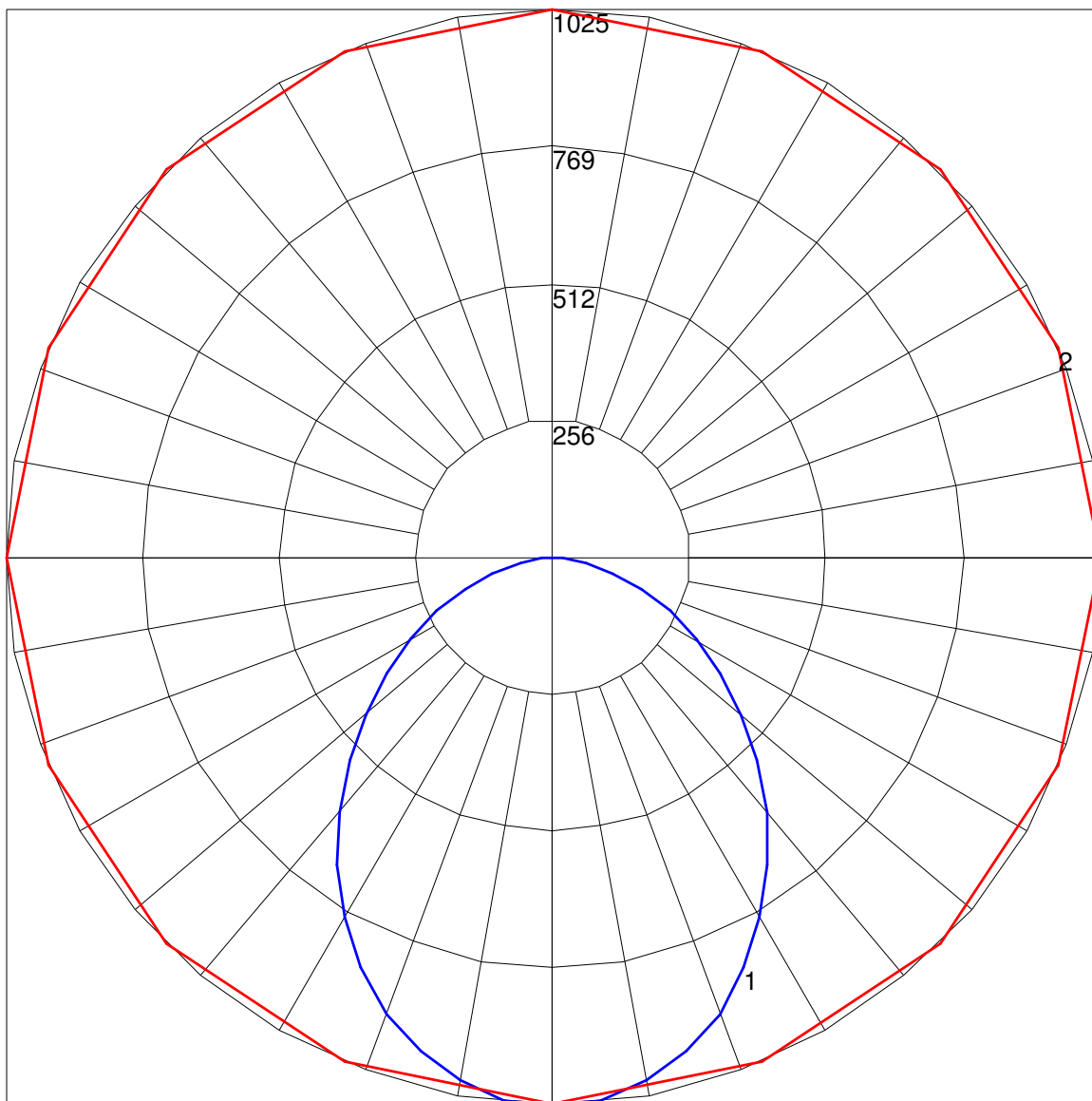
Reflectances

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	14.6	16.2	14.9	16.5	16.8	15.4	17.0	15.7	17.3	17.6
	3H	16.2	17.6	16.6	17.9	18.3	17.1	18.5	17.5	18.9	19.2
	4H	16.7	18.1	17.1	18.4	18.8	17.8	19.1	18.2	19.5	19.8
	6H	17.1	18.3	17.5	18.7	19.1	18.2	19.5	18.7	19.8	20.2
	8H	17.1	18.3	17.6	18.7	19.1	18.4	19.5	18.8	19.9	20.3
	12H	17.2	18.3	17.6	18.7	19.1	18.4	19.5	18.8	19.9	20.4
4H	2H	15.3	16.6	15.7	16.9	17.3	15.9	17.2	16.3	17.6	17.9
	3H	17.1	18.2	17.5	18.6	19.0	17.8	19.0	18.3	19.4	19.8
	4H	17.7	18.7	18.2	19.2	19.6	18.7	19.7	19.1	20.1	20.5
	6H	18.2	19.1	18.6	19.5	20.0	19.3	20.1	19.7	20.6	21.0
	8H	18.3	19.1	18.8	19.6	20.1	19.4	20.2	19.9	20.7	21.2
	12H	18.4	19.1	18.9	19.6	20.1	19.5	20.2	20.0	20.7	21.2
8H	4H	18.1	18.9	18.5	19.3	19.8	18.9	19.7	19.4	20.2	20.6
	6H	18.7	19.3	19.2	19.8	20.3	19.6	20.3	20.1	20.8	21.3
	8H	18.8	19.5	19.3	20.0	20.4	19.8	20.5	20.4	21.0	21.5
	12H	19.0	19.5	19.5	20.0	20.5	20.0	20.5	20.5	21.0	21.6
12H	4H	18.1	18.9	18.6	19.3	19.8	18.9	19.7	19.4	20.1	20.6
	6H	18.7	19.3	19.2	19.8	20.3	19.7	20.3	20.2	20.7	21.3
	8H	19.0	19.5	19.5	20.0	20.6	19.9	20.5	20.4	21.0	21.5

Maximum UGR = 21.6

POLAR GRAPH



Maximum Candela = 1024.849 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.)