



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-24-L55-840-D-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 18876.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 11-04-2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 2x4' RECESSED LUMINAIRE

[MORE] WITH FROST CONCAVE ACRYLIC LENS w/SHALLOW ACRYLIC CENTER

[MORE] DIFFUSER

[LUMCAT] AT1-24-L55-840-D-DIM-UNV

[LAMPCAT] HLM 80 CRI, 4000K CCT

[\_SEARCH\_SOURCETYPE] LED

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

[\_SEARCH\_MOUNTING] Ceiling, Recessed

[\_SEARCH\_CERTIFICATION] DLC

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5688
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	48
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 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	2597	3037	3295
55	2253	2759	2973
65	2003	2626	2838
75	1710	2543	2612
85	1441	1544	1579

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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>	2188.668	2188.668	2188.668	2188.668	2188.668
<b>5</b>	2190.515	2188.668	2194.209	2194.209	2196.056
<b>10</b>	2131.411	2133.258	2146.187	2157.269	2162.810
<b>15</b>	2057.532	2068.614	2092.625	2118.483	2133.258
<b>20</b>	1928.244	1955.949	1996.582	2046.451	2068.614
<b>25</b>	1774.945	1800.803	1867.294	1939.326	1970.724
<b>30</b>	1623.493	1658.585	1750.934	1843.283	1878.376
<b>35</b>	1490.510	1532.991	1643.810	1745.393	1782.333
<b>40</b>	1294.731	1344.599	1468.347	1568.083	1595.788
<b>45</b>	1134.044	1187.606	1326.129	1411.090	1438.795
<b>50</b>	960.428	1021.378	1146.973	1220.852	1241.169
<b>55</b>	797.894	860.691	977.051	1036.154	1052.777
<b>60</b>	655.677	718.474	823.752	873.620	888.396
<b>65</b>	522.694	591.033	685.228	727.709	740.638
<b>70</b>	395.253	467.285	548.552	579.951	585.492
<b>75</b>	273.353	347.232	406.335	421.111	417.417
<b>80</b>	171.769	238.260	260.424	199.474	181.004
<b>85</b>	77.573	108.972	83.114	83.114	84.961
<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	796.41	N.A.	14.00
0-30	1660.48	N.A.	29.20
0-40	2676.35	N.A.	47.00
0-60	4531.69	N.A.	79.70
0-80	5580.35	N.A.	98.10
0-90	5688.38	N.A.	100.00
10-90	5480.8	N.A.	96.40
20-40	1879.94	N.A.	33.00
20-50	2880.93	N.A.	50.60
40-70	2508.17	N.A.	44.10
60-80	1048.66	N.A.	18.40
70-80	395.83	N.A.	7.00
80-90	108.02	N.A.	1.90
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	5688.38	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	207.58
10-20	588.83
20-30	864.07
30-40	1015.87
40-50	1000.99
50-60	854.35
60-70	652.82
70-80	395.83
80-90	108.02
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	104	100	96	106	102	98	94	98	94	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	44
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25

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**UGR TABLE - CORRECTED**

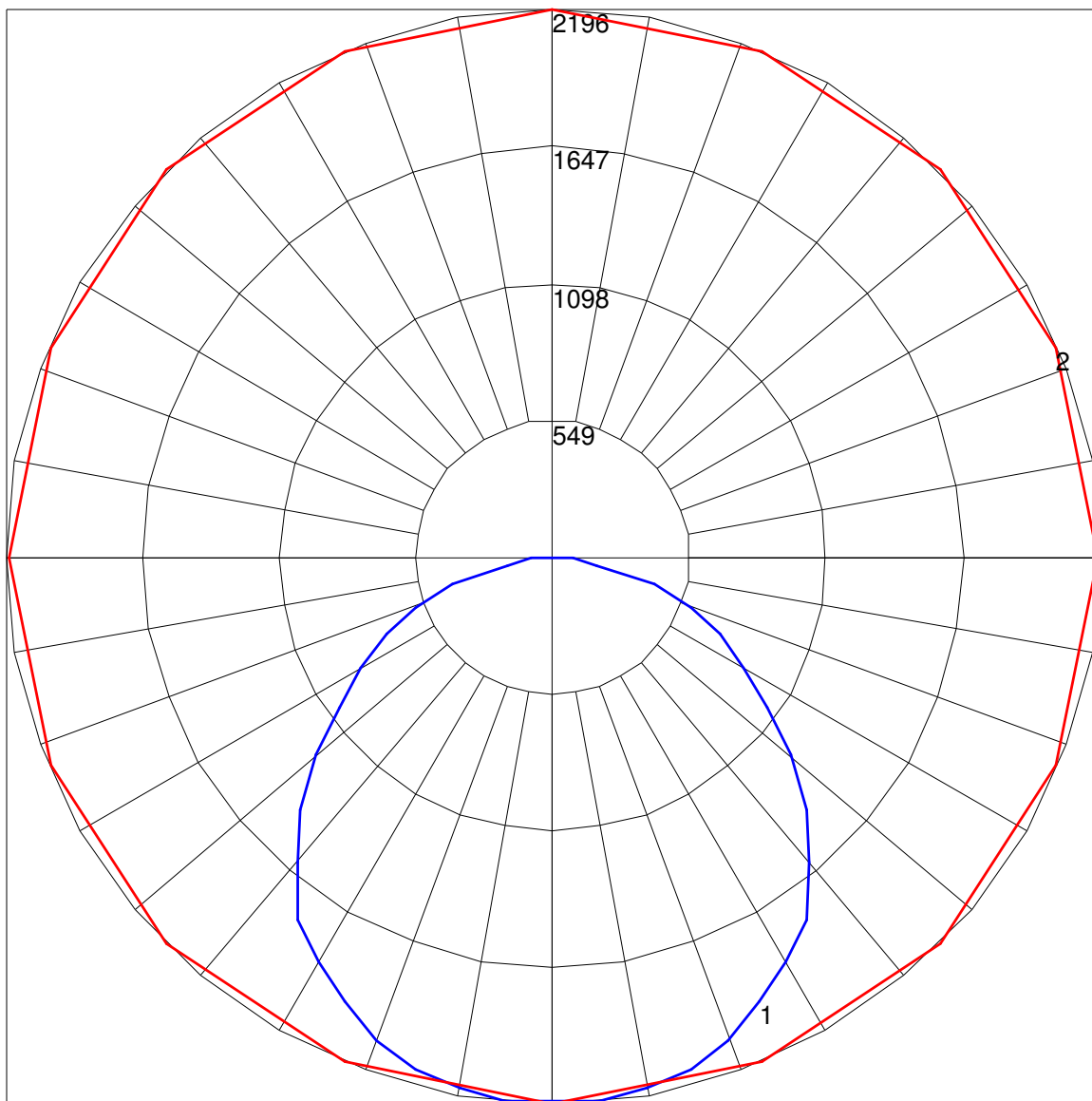
Reflectances

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	14.5	16.1	14.8	16.4	16.7	15.9	17.5	16.3	17.8	18.2
	3H	16.2	17.6	16.6	18.0	18.3	17.9	19.3	18.3	19.7	20.0
	4H	16.8	18.2	17.2	18.5	18.9	18.6	20.0	19.0	20.4	20.7
	6H	17.3	18.6	17.7	19.0	19.4	19.0	20.3	19.5	20.7	21.1
	8H	17.5	18.7	17.9	19.1	19.5	19.1	20.3	19.6	20.7	21.1
	12H	17.6	18.8	18.0	19.2	19.6	19.2	20.4	19.6	20.7	21.2
4H	2H	15.4	16.8	15.8	17.1	17.5	16.5	17.9	16.9	18.2	18.6
	3H	17.4	18.5	17.8	18.9	19.3	18.7	19.9	19.1	20.3	20.7
	4H	18.2	19.2	18.6	19.6	20.0	19.6	20.7	20.1	21.1	21.5
	6H	18.8	19.7	19.3	20.2	20.6	20.1	21.0	20.6	21.5	21.9
	8H	19.0	19.9	19.5	20.3	20.8	20.3	21.1	20.7	21.5	22.0
	12H	19.2	20.0	19.7	20.4	20.9	20.3	21.1	20.8	21.6	22.1
8H	4H	18.7	19.5	19.1	20.0	20.4	19.9	20.8	20.4	21.2	21.7
	6H	19.5	20.2	20.0	20.7	21.2	20.6	21.3	21.0	21.7	22.2
	8H	19.8	20.5	20.3	21.0	21.5	20.7	21.4	21.2	21.9	22.4
	12H	20.1	20.7	20.6	21.1	21.7	20.9	21.5	21.4	21.9	22.5
12H	4H	18.7	19.5	19.2	20.0	20.4	20.0	20.7	20.4	21.2	21.7
	6H	19.6	20.3	20.1	20.7	21.3	20.6	21.3	21.1	21.7	22.3
	8H	20.0	20.6	20.5	21.1	21.6	20.9	21.4	21.4	21.9	22.5

Maximum UGR = 22.5

POLAR GRAPH



Maximum Candela = 2196.056 Located At Horizontal Angle = 90, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)