



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-24-L100-835-D-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 18887.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 03-JAN-2020

[MANUFAC] WILLIAMS LINEAR

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

[LUMINAIRE] 4-32 LED 22"ARRAYS-SERIES 2x4' RECESSED LUMINAIRE w/WHITE

[MORE] REFL, FROST CONCAVE ACRYLIC LENS w/DEEP ACRYLIC CENTER

[MORE] DIFFUSER

[LUMCAT] AT2-24-L100-835-D-DIM-UNV

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Office, Direct

[_SEARCH_MOUNTING] Ceiling, Recessed

[_SEARCH_CERTIFICATION] DLC

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10330
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	86.89
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.26
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	5101	5428	5657
55	4393	4740	4918
65	3821	4229	4433
75	3162	3786	3973
85	2409	3027	2780

IES INDOOR REPORT
 PHOTOMETRIC FILENAME : AT2-24-L100-835-D-DIM-UNV_.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	4337.960	4337.960	4337.960	4337.960	4337.960
5	4337.960	4337.960	4337.960	4344.608	4344.608
10	4211.643	4214.968	4228.264	4244.885	4258.181
15	4058.735	4072.031	4105.272	4135.189	4155.134
20	3826.047	3849.316	3902.502	3955.687	3982.280
25	3506.933	3533.526	3609.980	3673.138	3696.407
30	3204.439	3244.328	3327.431	3403.885	3433.802
35	2938.511	2978.400	3074.799	3157.902	3181.170
40	2542.942	2592.803	2692.527	2765.657	2798.898
45	2227.152	2273.689	2370.088	2436.570	2469.811
50	1881.445	1927.982	2014.409	2080.891	2097.511
55	1555.682	1595.571	1678.674	1735.184	1741.832
60	1266.485	1306.374	1376.180	1419.394	1439.338
65	997.232	1037.121	1103.604	1140.169	1156.789
70	747.924	777.841	844.323	880.888	894.185
75	505.264	541.829	604.987	634.904	634.904
80	299.170	335.735	392.245	378.948	368.976
85	129.640	162.881	162.881	149.585	149.585
90	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT
PHOTOMETRIC FILENAME : AT2-24-L100-835-D-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1564.78	N.A.	15.10
0-30	3228.96	N.A.	31.30
0-40	5129.19	N.A.	49.70
0-60	8440.5	N.A.	81.70
0-80	10147.77	N.A.	98.20
0-90	10329.53	N.A.	100.00
10-90	9919.16	N.A.	96.00
20-40	3564.4	N.A.	34.50
20-50	5378.25	N.A.	52.10
40-70	4393.97	N.A.	42.50
60-80	1707.27	N.A.	16.50
70-80	624.61	N.A.	6.00
80-90	181.76	N.A.	1.80
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	10329.53	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	410.37
10-20	1154.42
20-30	1664.18
30-40	1900.23
40-50	1813.85
50-60	1497.46
60-70	1082.66
70-80	624.61
80-90	181.76
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : AT2-24-L100-835-D-DIM-UNV_.IES

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	299	299	299	299	292	292	292	292	279	279	279	267	267	267	256	256	256	251
1	274	263	252	243	267	257	248	239	246	239	232	237	230	224	228	222	218	213
2	250	231	214	200	244	226	211	198	217	204	193	209	198	189	201	193	185	179
3	229	204	184	168	223	200	182	167	193	177	164	186	172	161	179	168	158	153
4	211	182	160	144	205	178	159	143	172	155	141	166	151	139	161	148	137	132
5	194	163	141	125	189	160	140	125	155	137	123	150	134	122	146	132	121	115
6	180	148	126	110	175	145	125	110	141	123	109	137	120	108	133	118	107	102
7	167	134	113	98	163	132	112	98	129	110	97	125	109	96	122	107	96	91
8	156	123	102	88	152	121	102	88	118	100	87	115	99	87	112	97	86	82
9	146	113	93	80	143	112	93	79	109	91	79	106	90	79	104	89	78	74
10	137	105	86	73	134	104	85	72	101	84	72	99	83	72	97	82	72	67

IES INDOOR REPORT
PHOTOMETRIC FILENAME : AT2-24-L100-835-D-DIM-UNV_.IES

UGR TABLE - CORRECTED

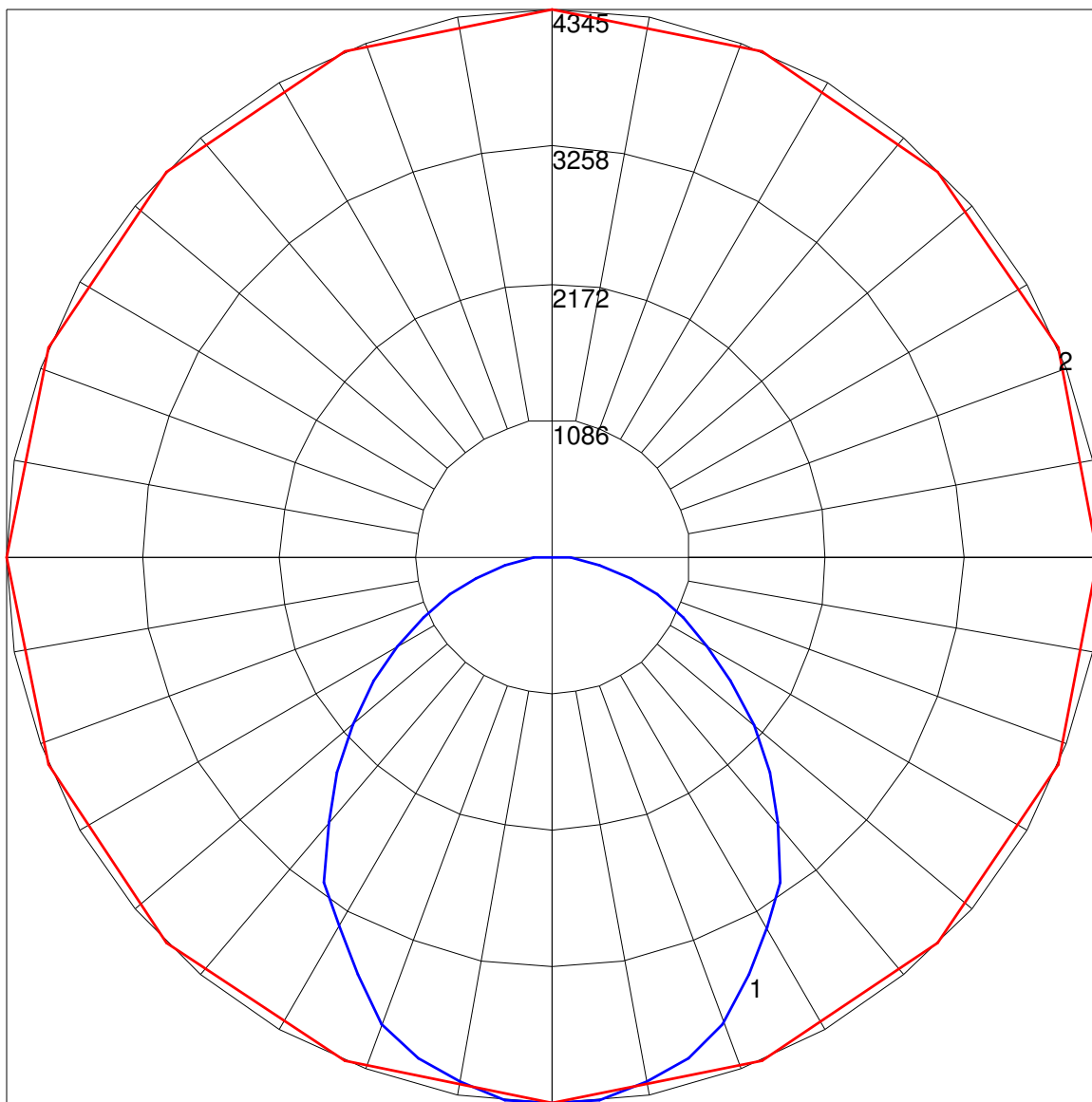
Reflectances

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	13.5	15.1	13.9	15.4	15.8	14.2	15.8	14.5	16.1	16.4
	3H	15.2	16.6	15.6	16.9	17.3	15.9	17.4	16.3	17.7	18.1
	4H	15.8	17.1	16.2	17.4	17.8	16.6	18.0	17.0	18.3	18.7
	6H	16.2	17.4	16.6	17.8	18.2	17.1	18.4	17.5	18.7	19.1
	8H	16.3	17.5	16.7	17.9	18.3	17.3	18.5	17.7	18.8	19.2
	12H	16.4	17.5	16.8	17.9	18.3	17.4	18.5	17.8	18.9	19.3
4H	2H	14.2	15.6	14.6	15.9	16.3	14.7	16.1	15.1	16.4	16.8
	3H	16.1	17.2	16.5	17.6	18.0	16.7	17.8	17.1	18.2	18.6
	4H	16.8	17.8	17.2	18.2	18.6	17.5	18.6	18.0	19.0	19.4
	6H	17.3	18.2	17.8	18.7	19.1	18.2	19.1	18.6	19.5	20.0
	8H	17.5	18.3	18.0	18.8	19.3	18.4	19.2	18.8	19.7	20.1
	12H	17.6	18.4	18.1	18.9	19.3	18.5	19.3	19.0	19.7	20.2
8H	4H	17.1	18.0	17.6	18.4	18.9	17.8	18.7	18.3	19.1	19.6
	6H	17.9	18.5	18.4	19.0	19.5	18.6	19.3	19.1	19.8	20.3
	8H	18.1	18.7	18.6	19.2	19.7	18.9	19.5	19.4	20.0	20.5
	12H	18.3	18.9	18.9	19.4	19.9	19.1	19.6	19.6	20.1	20.7
12H	4H	17.2	17.9	17.7	18.4	18.9	17.9	18.6	18.3	19.1	19.5
	6H	17.9	18.6	18.5	19.0	19.6	18.7	19.3	19.2	19.7	20.3
	8H	18.3	18.8	18.8	19.3	19.9	19.0	19.5	19.5	20.0	20.6

Maximum UGR = 20.7

POLAR GRAPH



Maximum Candela = 4344.608 Located At Horizontal Angle = 67.5, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (67.5 - 247.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)