



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-24-P100-835-D-POE_.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] 26-JUN-2020

[MANUFAC] WILLIAMS LINEAR

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

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

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

[MORE] DIFFUSER

[LUMCAT] AT1-24-P100-835-D-PoE

[_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	10049
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	81.2
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	4588	5365	5821
55	3980	4873	5251
65	3538	4639	5014
75	3022	4491	4614
85	2546	2728	2789

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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>
0	3866.276	3866.276	3866.276	3866.276	3866.276
5	3869.539	3866.276	3876.064	3876.064	3879.327
10	3765.133	3768.395	3791.234	3810.810	3820.598
15	3634.626	3654.202	3696.617	3742.294	3768.395
20	3406.238	3455.178	3526.957	3615.049	3654.202
25	3135.436	3181.113	3298.570	3425.814	3481.280
30	2867.896	2929.887	3093.021	3256.155	3318.146
35	2632.983	2708.024	2903.785	3083.233	3148.486
40	2287.139	2375.231	2593.831	2770.015	2818.956
45	2003.286	2097.903	2342.604	2492.688	2541.628
50	1696.594	1804.262	2026.124	2156.632	2192.521
55	1409.478	1520.409	1725.958	1830.364	1859.728
60	1158.251	1269.183	1455.155	1543.248	1569.349
65	923.338	1044.058	1210.454	1285.496	1308.335
70	698.214	825.458	969.016	1024.482	1034.270
75	482.877	613.384	717.790	743.891	737.366
80	303.429	420.886	460.038	352.369	319.743
85	137.033	192.498	146.821	146.821	150.083
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1406.86	N.A.	14.00
0-30	2933.24	N.A.	29.20
0-40	4727.77	N.A.	47.00
0-60	8005.23	N.A.	79.70
0-80	9857.68	N.A.	98.10
0-90	10048.51	N.A.	100.00
10-90	9681.82	N.A.	96.40
20-40	3320.91	N.A.	33.00
20-50	5089.16	N.A.	50.60
40-70	4430.67	N.A.	44.10
60-80	1852.45	N.A.	18.40
70-80	699.24	N.A.	7.00
80-90	190.83	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	10048.51	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	366.69
10-20	1040.17
20-30	1526.38
30-40	1794.53
40-50	1768.25
50-60	1509.21
60-70	1153.21
70-80	699.24
80-90	190.83
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	436	436	436	436	426	426	426	426	407	407	407	390	390	390	374	374	374	366
1	399	381	366	352	389	373	359	346	358	346	335	343	334	325	330	322	315	308
2	363	333	309	288	354	326	304	284	313	294	278	301	285	271	290	277	265	257
3	332	293	264	240	323	288	260	238	277	253	234	267	247	230	257	240	226	218
4	304	261	229	205	296	256	226	203	247	221	200	238	216	198	230	211	195	187
5	280	234	201	177	272	229	199	176	222	195	174	214	191	172	208	187	170	162
6	259	211	178	155	252	207	177	154	201	173	153	195	170	152	189	167	150	143
7	241	191	160	137	234	189	158	137	183	156	136	178	153	135	173	151	134	127
8	224	175	144	123	218	173	143	123	168	141	122	163	139	121	159	137	120	113
9	210	161	131	111	205	159	130	111	155	128	110	151	127	110	147	125	109	102
10	197	149	120	101	192	147	119	101	143	118	100	140	116	100	137	115	99	93

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UGR TABLE - CORRECTED

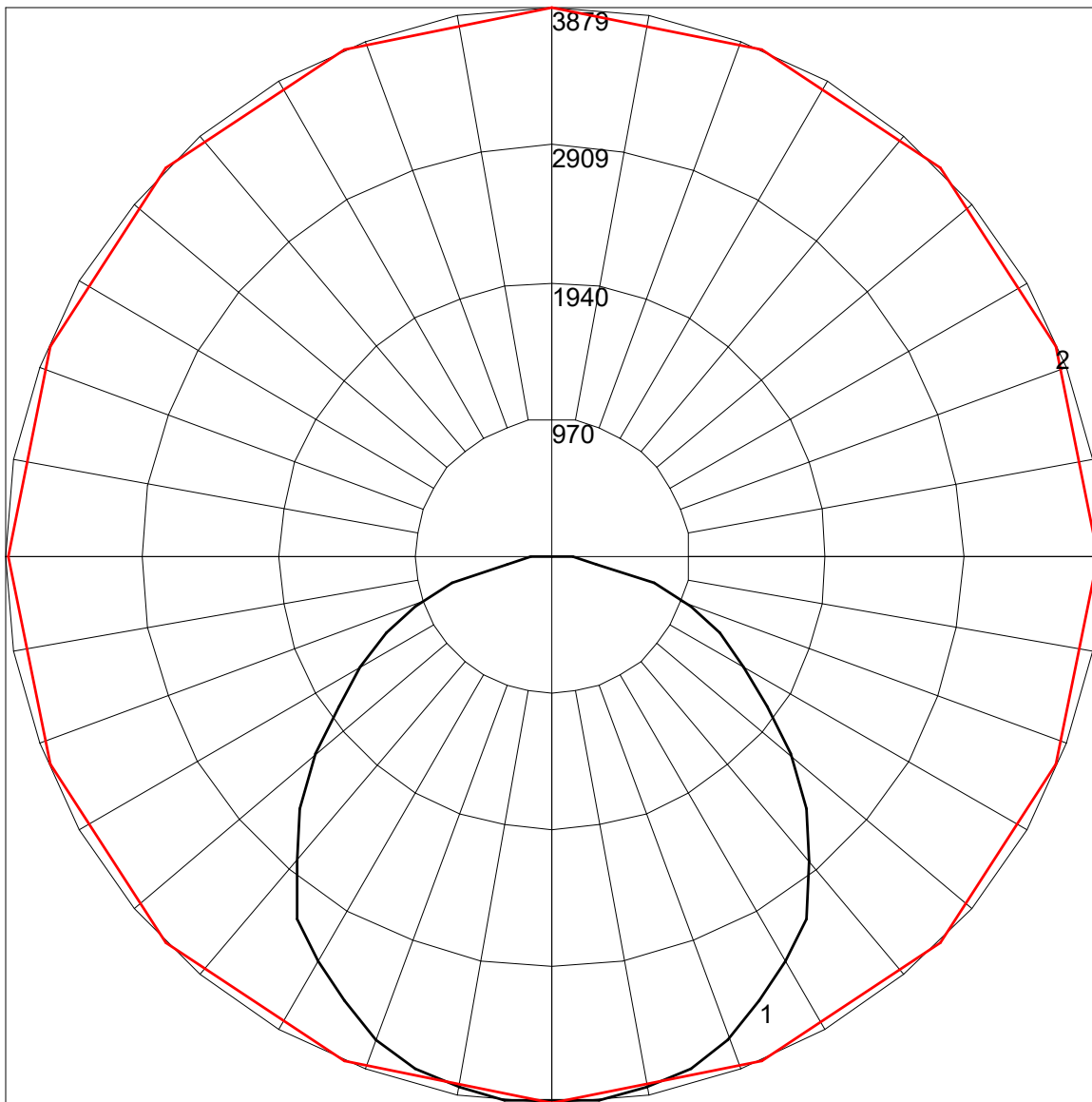
Reflectances

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	12.0	13.6	12.3	13.9	14.2	13.4	15.0	13.8	15.3	15.7
	3H	13.7	15.1	14.1	15.5	15.8	15.4	16.8	15.8	17.2	17.5
	4H	14.3	15.7	14.7	16.0	16.4	16.1	17.5	16.5	17.9	18.2
	6H	14.8	16.1	15.2	16.5	16.9	16.5	17.8	17.0	18.2	18.6
	8H	15.0	16.2	15.4	16.6	17.0	16.6	17.8	17.1	18.2	18.6
	12H	15.1	16.3	15.5	16.7	17.1	16.7	17.9	17.1	18.2	18.7
4H	2H	12.9	14.3	13.3	14.6	15.0	14.0	15.4	14.4	15.7	16.1
	3H	14.9	16.0	15.3	16.4	16.8	16.2	17.4	16.6	17.8	18.2
	4H	15.7	16.7	16.1	17.1	17.5	17.1	18.2	17.6	18.6	19.0
	6H	16.3	17.2	16.8	17.7	18.1	17.6	18.5	18.1	19.0	19.4
	8H	16.5	17.4	17.0	17.8	18.3	17.8	18.6	18.2	19.0	19.5
	12H	16.7	17.5	17.2	17.9	18.4	17.8	18.6	18.3	19.1	19.6
8H	4H	16.2	17.0	16.6	17.5	17.9	17.4	18.3	17.9	18.7	19.2
	6H	17.0	17.7	17.5	18.2	18.7	18.1	18.8	18.5	19.2	19.7
	8H	17.3	18.0	17.8	18.5	19.0	18.2	18.9	18.7	19.4	19.9
	12H	17.6	18.2	18.1	18.6	19.2	18.4	19.0	18.9	19.4	20.0
12H	4H	16.2	17.0	16.7	17.5	17.9	17.5	18.2	17.9	18.7	19.2
	6H	17.1	17.8	17.6	18.2	18.8	18.1	18.8	18.6	19.2	19.8
	8H	17.5	18.1	18.0	18.6	19.1	18.4	18.9	18.9	19.4	20.0

Maximum UGR = 20.0

POLAR GRAPH



Maximum Candela = 3879.327 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)