



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-24-P100-8TW-D-POE 4000K_.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-P100-8TW-D-PoE 4000k

[_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	10070
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	95.2
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	4598	5377	5833
55	3988	4884	5262
65	3546	4648	5024
75	3028	4501	4624
85	2552	2734	2795

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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	3874.369	3874.369	3874.369	3874.369	3874.369
5	3877.639	3874.369	3884.178	3884.178	3887.447
10	3773.015	3776.284	3799.171	3818.788	3828.596
15	3642.234	3661.851	3704.355	3750.128	3776.284
20	3413.368	3462.411	3534.340	3622.617	3661.851
25	3141.999	3187.772	3305.475	3432.986	3488.567
30	2873.899	2936.020	3099.496	3262.971	3325.092
35	2638.495	2713.693	2909.864	3089.687	3155.077
40	2291.927	2380.203	2599.260	2775.814	2824.857
45	2007.479	2102.295	2347.508	2497.906	2546.948
50	1700.145	1808.039	2030.366	2161.146	2197.111
55	1412.428	1523.592	1729.571	1834.195	1863.621
60	1160.676	1271.839	1458.201	1546.478	1572.634
65	925.271	1046.243	1212.988	1288.187	1311.074
70	699.675	827.186	971.044	1026.626	1036.435
75	483.887	614.668	719.292	745.448	738.909
80	304.064	421.767	461.001	353.107	320.412
85	137.319	192.901	147.128	147.128	150.397
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1409.8	N.A.	14.00
0-30	2939.38	N.A.	29.20
0-40	4737.66	N.A.	47.00
0-60	8021.98	N.A.	79.70
0-80	9878.32	N.A.	98.10
0-90	10069.54	N.A.	100.00
10-90	9702.08	N.A.	96.40
20-40	3327.86	N.A.	33.00
20-50	5099.81	N.A.	50.60
40-70	4439.95	N.A.	44.10
60-80	1856.33	N.A.	18.40
70-80	700.70	N.A.	7.00
80-90	191.22	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	10069.54	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	367.46
10-20	1042.34
20-30	1529.57
30-40	1798.29
40-50	1771.95
50-60	1512.37
60-70	1155.63
70-80	700.70
80-90	191.22
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	441	441	441	441	431	431	431	431	412	412	412	394	394	394	378	378	378	371
1	403	386	370	356	393	377	363	350	362	350	339	347	338	329	334	326	319	311
2	367	337	312	291	358	330	307	288	317	298	281	305	289	274	294	280	268	260
3	336	297	267	243	326	291	263	241	280	256	237	270	249	232	260	243	228	220
4	308	264	232	207	299	259	229	205	250	223	203	241	218	200	233	213	197	189
5	283	236	203	179	276	232	201	178	224	197	176	217	193	174	210	189	172	164
6	262	213	180	157	255	210	179	156	203	175	155	197	172	153	191	169	152	144
7	243	194	162	139	237	191	160	139	185	158	137	180	155	136	175	152	135	128
8	227	177	146	124	221	175	145	124	170	143	123	165	140	122	161	138	122	115
9	212	163	133	112	207	161	132	112	156	130	111	152	128	111	149	126	110	103
10	199	150	121	102	194	149	121	102	145	119	101	141	118	101	138	116	100	94

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UGR TABLE - CORRECTED

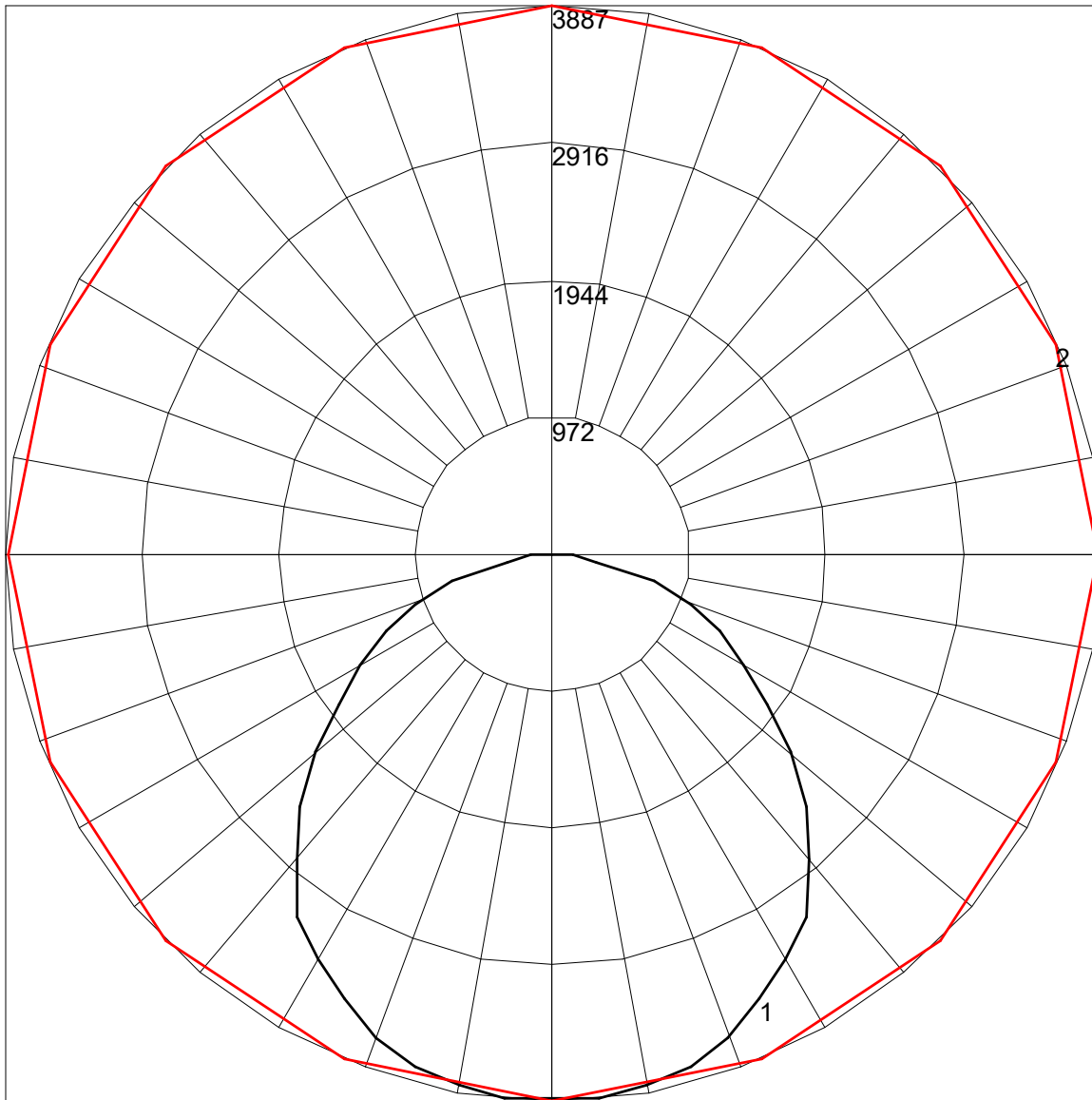
Reflectances

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 = 3887.447 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.)