



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-22-P52-8TW-D-POE 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 18872.0

[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 2x2' RECESSED LUMINAIRE w/WHITE

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

[MORE] DIFFUSER

[LUMCAT] AT1-22-P52-8TW-D-PoE 4000k

[_SEARCH_SOURCE] 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	5224
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	50.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.32
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	5212	5885	6541
55	4592	5530	6069
65	3965	5135	5852
75	3345	4921	5471
85	2199	2696	2412

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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	1972.958	1972.958	1972.958	1972.958	1972.958
5	1974.745	1967.597	1965.810	1964.023	1964.023
10	1933.642	1931.855	1930.068	1939.003	1947.939
15	1862.158	1867.519	1883.603	1897.900	1915.771
20	1763.868	1779.952	1812.119	1844.287	1876.455
25	1642.345	1667.364	1715.616	1769.229	1812.119
30	1517.248	1547.629	1606.603	1687.022	1731.700
35	1381.428	1402.873	1485.080	1586.945	1626.261
40	1225.951	1254.544	1345.686	1463.635	1494.016
45	1065.112	1100.854	1202.718	1313.518	1336.751
50	907.847	947.163	1059.750	1150.892	1172.338
55	761.305	802.408	916.782	990.053	1006.137
60	614.762	668.375	772.027	836.363	859.595
65	484.304	537.917	627.272	680.885	714.840
70	366.355	405.672	502.175	536.130	566.511
75	250.194	287.723	368.143	378.865	409.246
80	142.968	173.349	221.600	176.923	178.710
85	55.400	60.761	67.910	57.187	60.761
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	718.10	N.A.	13.70
0-30	1510.96	N.A.	28.90
0-40	2444.71	N.A.	46.80
0-60	4179.54	N.A.	80.00
0-80	5141.38	N.A.	98.40
0-90	5224.42	N.A.	100.00
10-90	5037.73	N.A.	96.40
20-40	1726.6	N.A.	33.00
20-50	2656.14	N.A.	50.80
40-70	2342.39	N.A.	44.80
60-80	961.84	N.A.	18.40
70-80	354.28	N.A.	6.80
80-90	83.04	N.A.	1.60
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	5224.42	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	186.69
10-20	531.41
20-30	792.86
30-40	933.74
40-50	929.54
50-60	805.29
60-70	607.55
70-80	354.28
80-90	83.04
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	388	388	388	388	378	378	378	378	362	362	362	346	346	346	332	332	332	326
1	355	339	326	313	346	332	320	308	318	308	299	306	297	289	294	287	281	274
2	323	297	275	256	314	290	270	253	279	262	247	268	254	242	258	247	236	229
3	295	261	235	214	287	256	231	212	246	225	208	237	219	204	229	214	201	194
4	270	232	203	182	263	227	201	181	219	196	178	212	192	176	205	187	173	166
5	249	207	178	157	242	204	177	156	197	173	154	190	169	153	184	166	151	144
6	230	187	158	137	224	184	157	137	178	154	136	173	151	134	167	148	133	127
7	214	170	142	122	208	167	140	121	162	138	120	158	136	119	153	134	119	112
8	199	155	128	109	194	153	127	109	149	125	108	145	123	107	141	121	106	100
9	186	143	116	98	181	141	115	98	137	114	97	133	112	97	130	111	96	90
10	174	132	106	89	170	130	105	89	127	104	89	124	103	88	121	102	88	82

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UGR TABLE - CORRECTED

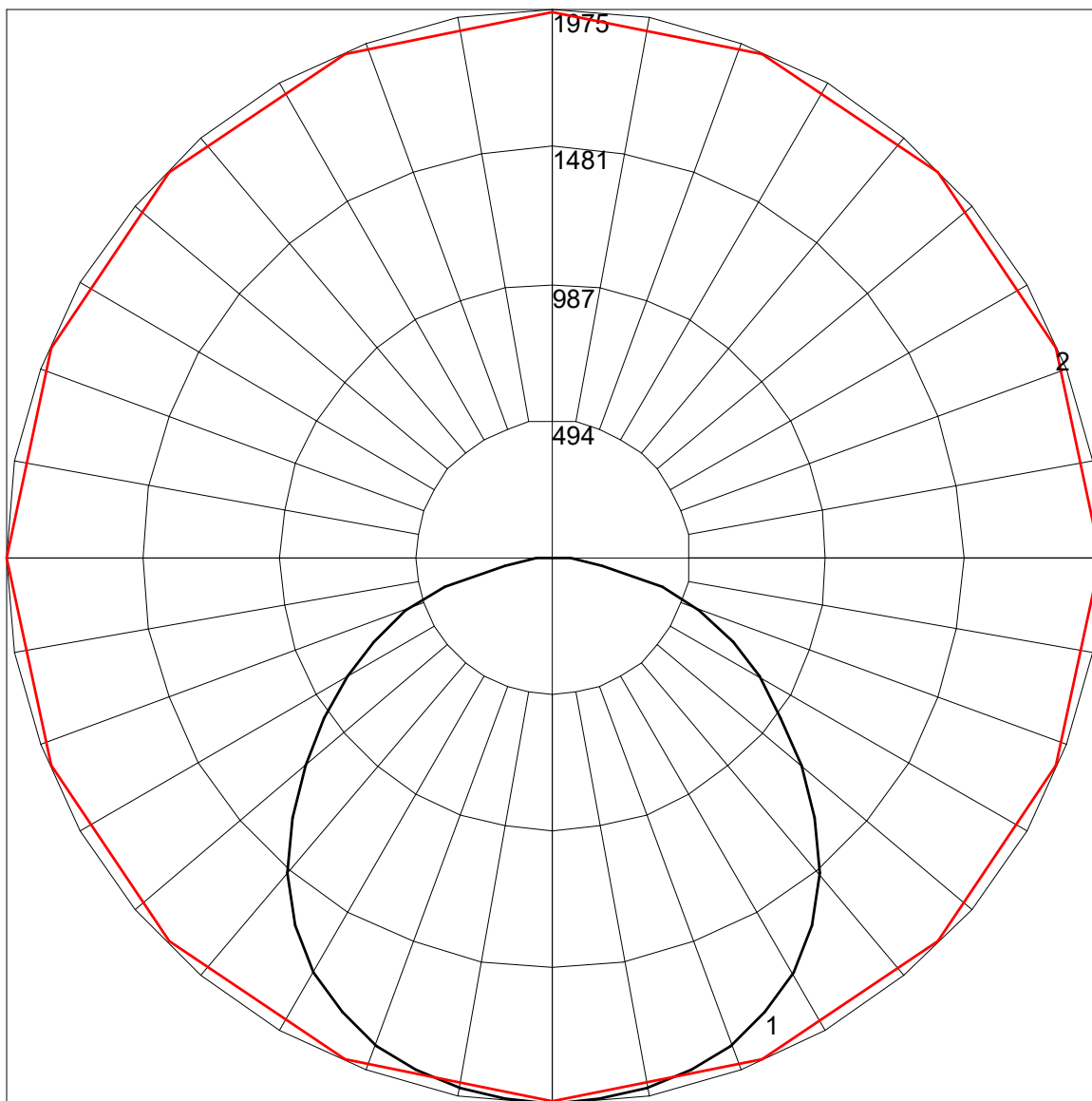
Reflectances

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	12.8	14.4	13.2	14.7	15.1	14.4	16.0	14.8	16.4	16.7
	3H	14.4	15.9	14.8	16.2	16.6	16.4	17.8	16.8	18.2	18.5
	4H	15.0	16.4	15.4	16.8	17.1	17.1	18.5	17.5	18.9	19.2
	6H	15.4	16.7	15.9	17.1	17.5	17.5	18.8	17.9	19.2	19.6
	8H	15.6	16.8	16.0	17.2	17.6	17.6	18.8	18.0	19.2	19.6
	12H	15.6	16.8	16.0	17.2	17.6	17.6	18.8	18.1	19.2	19.6
4H	2H	13.7	15.1	14.1	15.4	15.8	15.0	16.3	15.4	16.7	17.1
	3H	15.6	16.7	16.0	17.1	17.5	17.1	18.3	17.6	18.7	19.1
	4H	16.3	17.3	16.7	17.7	18.2	18.0	19.1	18.5	19.5	19.9
	6H	16.8	17.7	17.2	18.1	18.6	18.5	19.4	19.0	19.9	20.3
	8H	16.9	17.8	17.4	18.2	18.7	18.6	19.5	19.1	19.9	20.4
	12H	17.0	17.8	17.5	18.3	18.7	18.7	19.5	19.2	19.9	20.4
8H	4H	16.8	17.6	17.2	18.1	18.5	18.3	19.1	18.8	19.6	20.1
	6H	17.4	18.1	17.9	18.6	19.1	18.9	19.6	19.4	20.1	20.6
	8H	17.6	18.3	18.1	18.8	19.3	19.0	19.7	19.6	20.2	20.7
	12H	17.8	18.3	18.3	18.8	19.4	19.2	19.7	19.7	20.2	20.8
12H	4H	16.8	17.6	17.3	18.1	18.5	18.3	19.1	18.8	19.6	20.0
	6H	17.5	18.2	18.0	18.6	19.2	18.9	19.6	19.5	20.0	20.6
	8H	17.8	18.4	18.3	18.8	19.4	19.1	19.7	19.6	20.2	20.7

Maximum UGR = 20.8

POLAR GRAPH



Maximum Candela = 1974.745 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)