



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-22-P26-8TW-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-P25-8TW-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	2507
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	100
Total Luminaire Watts	25.1
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	2501	2824	3139
55	2204	2654	2913
65	1903	2465	2809
75	1605	2362	2626
85	1055	1294	1158

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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>	946.879	946.879	946.879	946.879	946.879
<b>5</b>	947.737	944.306	943.448	942.591	942.591
<b>10</b>	928.010	927.152	926.295	930.583	934.872
<b>15</b>	893.703	896.276	903.995	910.857	919.433
<b>20</b>	846.531	854.250	869.688	885.126	900.564
<b>25</b>	788.208	800.216	823.373	849.104	869.688
<b>30</b>	728.171	742.751	771.055	809.650	831.092
<b>35</b>	662.987	673.279	712.732	761.620	780.489
<b>40</b>	588.369	602.092	645.833	702.440	717.021
<b>45</b>	511.178	528.331	577.219	630.395	641.545
<b>50</b>	435.702	454.571	508.604	552.346	562.638
<b>55</b>	365.372	385.098	439.990	475.155	482.874
<b>60</b>	295.042	320.772	370.518	401.394	412.544
<b>65</b>	232.431	258.162	301.046	326.776	343.072
<b>70</b>	175.824	194.693	241.008	257.304	271.885
<b>75</b>	120.075	138.087	176.682	181.828	196.409
<b>80</b>	68.614	83.195	106.352	84.910	85.768
<b>85</b>	26.588	29.161	32.592	27.446	29.161
<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	344.64	N.A.	13.70
0-30	725.15	N.A.	28.90
0-40	1173.28	N.A.	46.80
0-60	2005.88	N.A.	80.00
0-80	2467.49	N.A.	98.40
0-90	2507.35	N.A.	100.00
10-90	2417.75	N.A.	96.40
20-40	828.65	N.A.	33.00
20-50	1274.76	N.A.	50.80
40-70	1124.18	N.A.	44.80
60-80	461.61	N.A.	18.40
70-80	170.03	N.A.	6.80
80-90	39.85	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	2507.35	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	89.60
10-20	255.04
20-30	380.52
30-40	448.13
40-50	446.11
50-60	386.48
60-70	291.58
70-80	170.03
80-90	39.85
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	186	186	186	186	182	182	182	182	174	174	174	166	166	166	159	159	159	156
1	170	163	156	150	166	159	153	148	153	148	143	147	143	139	141	138	135	132
2	155	142	132	123	151	139	130	122	134	126	119	129	122	116	124	118	113	110
3	142	125	113	103	138	123	111	102	118	108	100	114	105	98	110	103	96	93
4	130	111	98	87	126	109	96	87	105	94	85	102	92	84	98	90	83	80
5	119	100	86	75	116	98	85	75	94	83	74	91	81	73	89	80	73	69
6	110	90	76	66	107	88	75	66	85	74	65	83	72	65	80	71	64	61
7	102	82	68	58	100	80	67	58	78	66	58	76	65	57	73	64	57	54
8	95	74	61	52	93	73	61	52	71	60	52	69	59	51	68	58	51	48
9	89	68	56	47	87	68	55	47	66	55	47	64	54	46	62	53	46	43
10	84	63	51	43	82	62	51	43	61	50	42	59	49	42	58	49	42	39

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**UGR TABLE - CORRECTED**

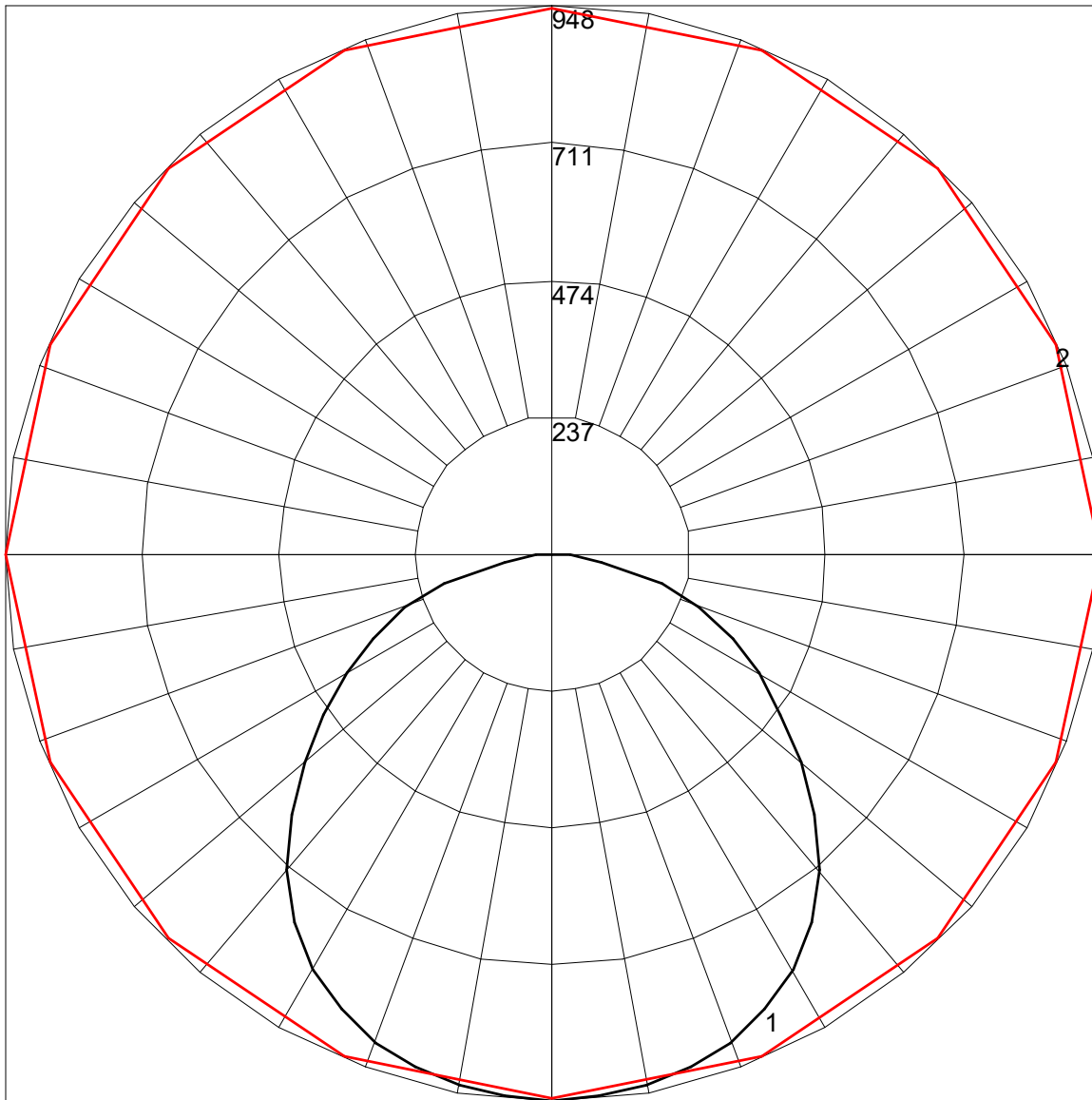
Reflectances

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 = 947.737 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.)