



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-24-P58-835-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-P58-835-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	5802
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
Total Luminaire Watts	47.5
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	2649	3098	3361
55	2298	2814	3032
65	2043	2678	2895
75	1745	2593	2664
85	1470	1575	1610

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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>	2232.263	2232.263	2232.263	2232.263	2232.263
<b>5</b>	2234.147	2232.263	2237.914	2237.914	2239.798
<b>10</b>	2173.866	2175.750	2188.936	2200.239	2205.890
<b>15</b>	2098.515	2109.818	2134.307	2160.680	2175.750
<b>20</b>	1966.652	1994.908	2036.351	2087.213	2109.818
<b>25</b>	1810.299	1836.672	1904.487	1977.954	2009.978
<b>30</b>	1655.830	1691.622	1785.810	1879.999	1915.790
<b>35</b>	1520.199	1563.526	1676.552	1780.159	1817.834
<b>40</b>	1320.520	1371.382	1497.594	1599.317	1627.574
<b>45</b>	1156.632	1211.262	1352.544	1439.197	1467.454
<b>50</b>	979.558	1041.723	1169.819	1245.169	1265.891
<b>55</b>	813.787	877.835	996.512	1056.793	1073.747
<b>60</b>	668.737	732.785	840.160	891.021	906.091
<b>65</b>	533.106	602.805	698.877	742.204	755.390
<b>70</b>	403.126	476.593	559.479	591.503	597.154
<b>75</b>	278.797	354.148	414.429	429.499	425.731
<b>80</b>	175.190	243.006	265.611	203.447	184.609
<b>85</b>	79.118	111.142	84.769	84.769	86.653
<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	812.27	N.A.	14.00
0-30	1693.56	N.A.	29.20
0-40	2729.66	N.A.	47.00
0-60	4621.96	N.A.	79.70
0-80	5691.51	N.A.	98.10
0-90	5801.68	N.A.	100.00
10-90	5589.97	N.A.	96.40
20-40	1917.39	N.A.	33.00
20-50	2938.32	N.A.	50.60
40-70	2558.13	N.A.	44.10
60-80	1069.55	N.A.	18.40
70-80	403.72	N.A.	7.00
80-90	110.18	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	5801.68	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	211.71
10-20	600.56
20-30	881.28
30-40	1036.1
40-50	1020.93
50-60	871.37
60-70	665.83
70-80	403.72
80-90	110.18
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	252	252	252	252	246	246	246	246	235	235	235	225	225	225	216	216	216	212
1	230	220	211	203	224	215	207	200	206	200	194	198	193	188	191	186	182	178
2	210	192	178	166	204	188	175	164	181	170	160	174	165	157	168	160	153	149
3	192	169	152	139	186	166	150	137	160	146	135	154	142	133	149	139	130	126
4	176	151	132	118	171	148	131	117	142	127	116	137	125	114	133	122	113	108
5	162	135	116	102	157	132	115	102	128	112	100	124	110	99	120	108	98	94
6	150	122	103	90	146	120	102	89	116	100	88	112	98	88	109	96	87	82
7	139	111	92	79	135	109	91	79	106	90	78	103	88	78	100	87	77	73
8	129	101	83	71	126	100	83	71	97	81	70	94	80	70	92	79	69	65
9	121	93	76	64	118	92	75	64	89	74	64	87	73	63	85	72	63	59
10	114	86	69	58	111	85	69	58	83	68	58	81	67	58	79	66	57	54

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**UGR TABLE - CORRECTED**

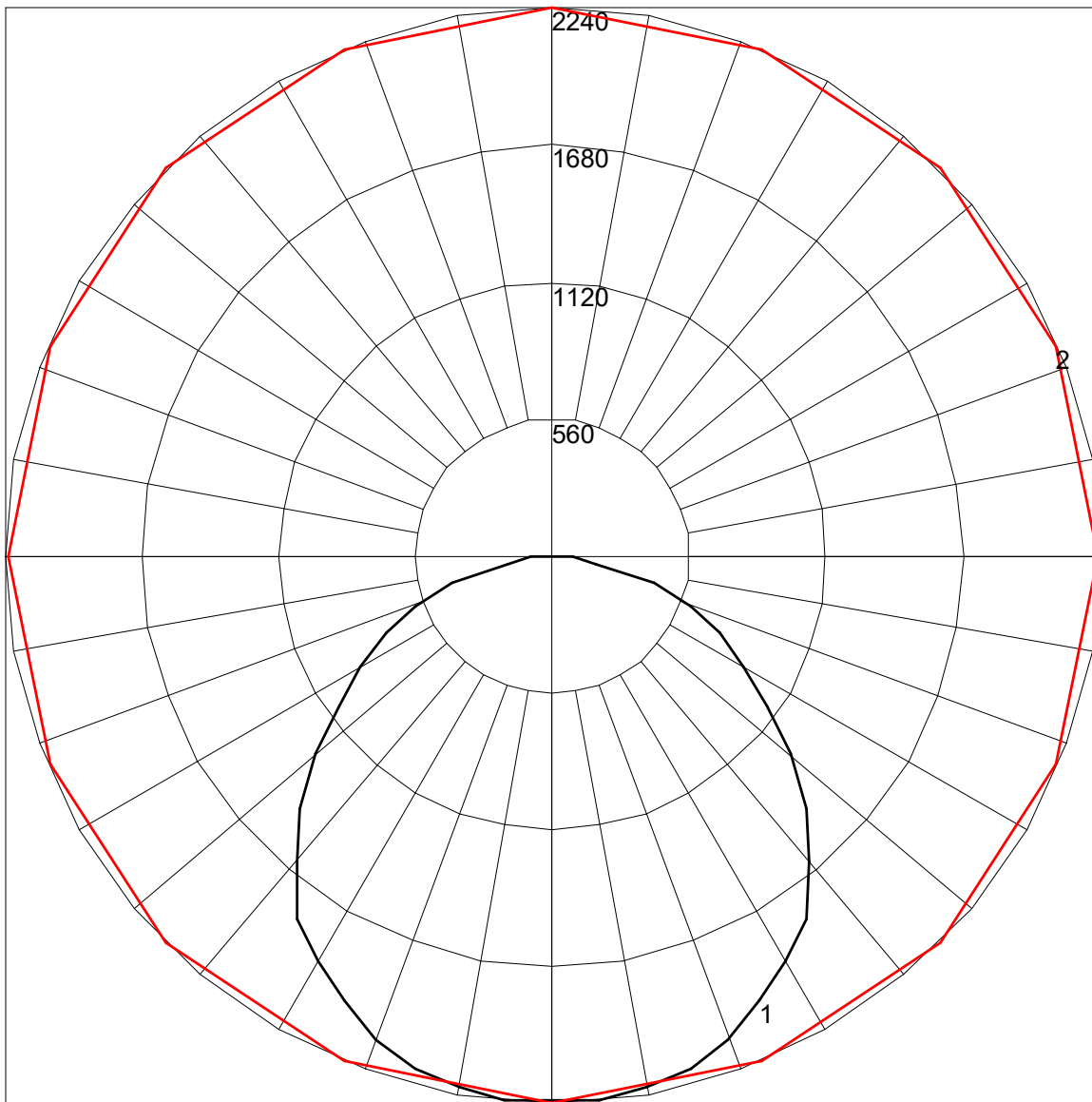
Reflectances

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 = 2239.798 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.)