



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-22-P52-835-D-POE\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19435.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 3-JAN-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-22" LED ARRAYS 2x2' LUMINAIRE

[MORE] WHITE REFLECTOR w/2 PIECE FROSTED ACRYLIC LENS IN DOOR

[LUMCAT] AT2-22-P52-835-D-PoE

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Commercial, Office, Direct

[\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5397
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	46.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.30
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	5573	6066	6553
55	4901	5535	5949
65	4331	5065	5564
75	3596	4557	5268
85	1933	1714	1626

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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>	2124.045	2124.045	2124.045	2124.045	2124.045
<b>5</b>	2119.618	2112.977	2111.870	2110.763	2108.549
<b>10</b>	2072.023	2070.916	2066.489	2079.771	2083.092
<b>15</b>	2001.185	1998.971	2006.719	2034.390	2043.245
<b>20</b>	1893.820	1899.355	1930.346	1970.193	1989.010
<b>25</b>	1762.105	1780.922	1830.730	1886.072	1914.851
<b>30</b>	1625.963	1650.313	1714.511	1787.563	1815.234
<b>35</b>	1477.645	1504.209	1577.261	1658.061	1684.626
<b>40</b>	1311.617	1335.968	1414.554	1490.927	1524.132
<b>45</b>	1138.949	1167.727	1239.672	1311.617	1339.289
<b>50</b>	974.028	1001.699	1073.645	1143.376	1162.193
<b>55</b>	812.428	837.885	917.579	976.242	986.203
<b>60</b>	663.003	688.461	763.727	819.069	823.496
<b>65</b>	529.074	550.104	618.729	667.431	679.606
<b>70</b>	395.145	415.069	480.373	523.540	540.143
<b>75</b>	268.965	289.995	340.910	373.008	394.039
<b>80</b>	149.425	175.989	179.310	178.203	175.989
<b>85</b>	48.701	57.556	43.167	42.060	40.953
<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	768.58	N.A.	14.20
0-30	1613.46	N.A.	29.90
0-40	2598.87	N.A.	48.20
0-60	4371.79	N.A.	81.00
0-80	5323.7	N.A.	98.60
0-90	5396.58	N.A.	100.00
10-90	5196.18	N.A.	96.30
20-40	1830.29	N.A.	33.90
20-50	2788.79	N.A.	51.70
40-70	2378.38	N.A.	44.10
60-80	951.91	N.A.	17.60
70-80	346.45	N.A.	6.40
80-90	72.88	N.A.	1.40
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	5396.58	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	200.40
10-20	568.18
20-30	844.88
30-40	985.41
40-50	958.50
50-60	814.43
60-70	605.46
70-80	346.45
80-90	72.88
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	378	378	378	378	370	370	370	370	353	353	353	338	338	338	324	324	324	318
1	347	332	319	308	338	325	313	303	312	302	293	299	291	284	288	282	276	269
2	317	291	270	252	308	285	266	249	274	258	244	264	250	238	254	243	233	226
3	289	257	231	211	282	252	228	209	242	222	206	234	216	202	226	211	199	192
4	266	228	201	180	258	224	199	179	216	194	176	209	190	174	202	185	172	165
5	245	205	177	156	238	201	175	155	194	171	153	188	168	152	182	164	150	143
6	226	185	157	137	220	182	155	136	176	153	135	171	150	134	166	147	133	126
7	210	168	141	121	205	165	139	121	160	137	120	156	135	119	152	133	118	112
8	196	154	127	109	191	151	126	108	147	124	108	143	122	107	140	121	106	100
9	183	141	115	98	179	139	115	98	136	113	97	132	112	97	129	110	96	91
10	172	130	106	89	168	129	105	89	126	104	89	123	102	88	120	101	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

X=2H	Y=2H	13.1	14.7	13.5	15.0	15.3	UGR Viewed Endwise			
	3H	14.8	16.2	15.1	16.5	16.9	14.3	15.9	14.7	16.5
	4H	15.4	16.7	15.8	17.1	17.4	16.2	17.6	16.6	18.3
	6H	15.8	17.0	16.2	17.4	17.8	16.9	18.3	17.3	18.6
	8H	15.9	17.1	16.3	17.5	17.9	17.3	18.6	17.8	19.0
	12H	15.9	17.1	16.3	17.4	17.9	17.4	18.6	17.9	19.0

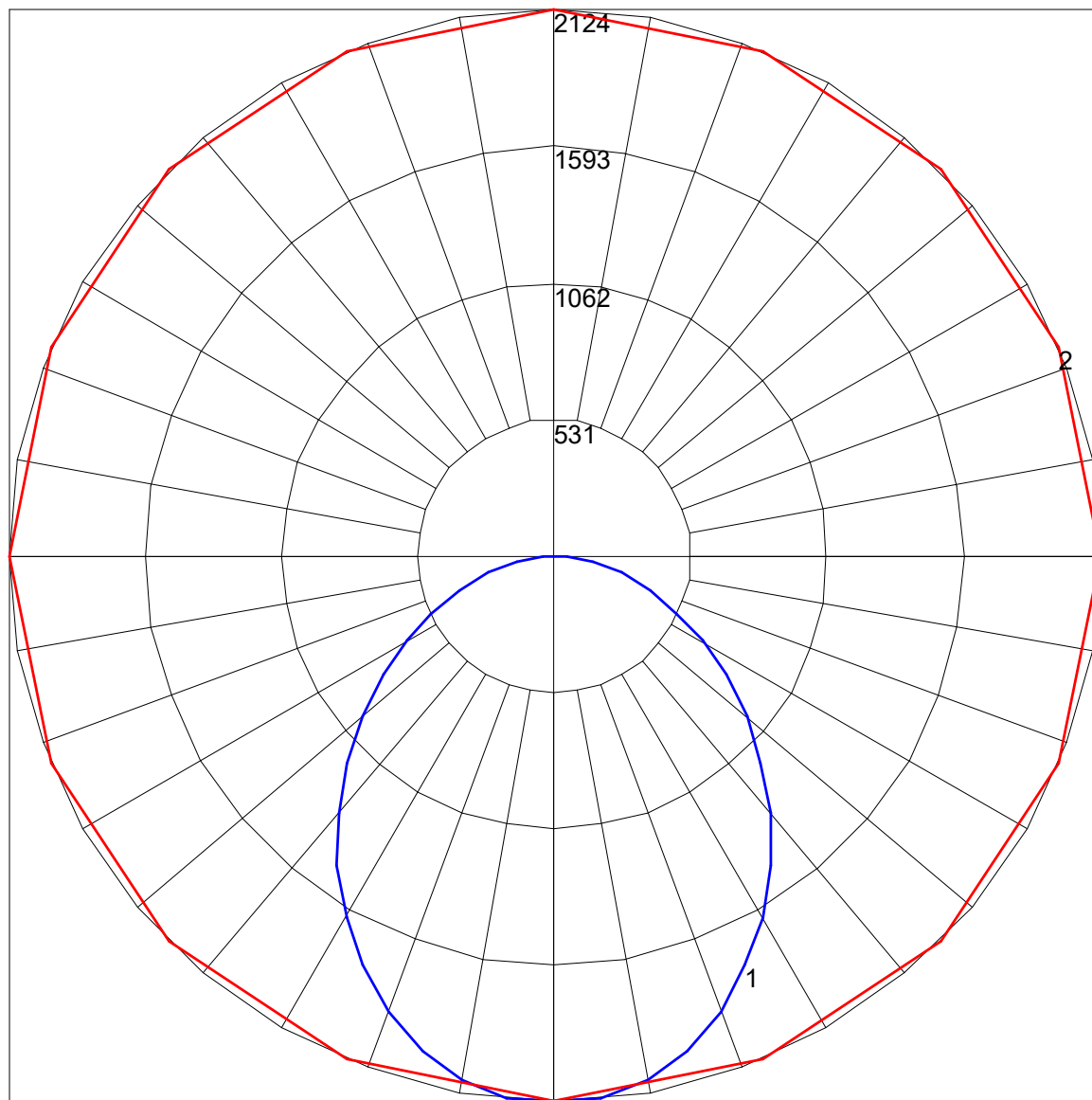
4H	2H	13.9	15.2	14.3	15.6	16.0	14.8	16.2	15.2	16.5	16.9
	3H	15.8	16.9	16.2	17.3	17.7	17.0	18.1	17.4	18.5	18.9
	4H	16.5	17.5	16.9	17.9	18.3	17.8	18.9	18.3	19.3	19.7
	6H	17.0	17.9	17.4	18.3	18.8	18.4	19.2	18.8	19.7	20.1
	8H	17.1	18.0	17.6	18.4	18.9	18.5	19.3	18.9	19.7	20.2
	12H	17.2	18.0	17.7	18.4	18.9	18.5	19.2	19.0	19.7	20.2

8H	4H	16.9	17.7	17.3	18.1	18.6	18.1	18.9	18.5	19.4	19.8
	6H	17.5	18.2	18.0	18.7	19.2	18.7	19.4	19.2	19.9	20.3
	8H	17.7	18.3	18.2	18.8	19.3	18.8	19.4	19.3	19.9	20.4
	12H	17.8	18.4	18.4	18.9	19.4	18.9	19.4	19.4	19.9	20.5

12H	4H	16.9	17.7	17.4	18.1	18.6	18.1	18.8	18.6	19.3	19.8
	6H	17.6	18.2	18.1	18.7	19.2	18.7	19.3	19.2	19.8	20.3
	8H	17.8	18.4	18.3	18.9	19.4	18.9	19.4	19.4	19.9	20.5

Maximum UGR = 20.5

POLAR GRAPH



Maximum Candela = 2124.045 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)