



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-14-P52-8TW-D-POE 4000K\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19434.0

[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 1x4' LUMINAIRE

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

[LUMCAT] AT3-14-P52-8TW-D-PoE 4000k

[\_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	4858
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	97
Total Luminaire Watts	50.06
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.06
Spacing Criterion (Diagonal)	1.22
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 ft
Luminous Width (90-270)	0.77 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6287	6072	6016
55	5348	5220	5018
65	4752	4605	3402
75	3776	2696	2466
85	3111	2139	1588

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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>	2215.035	2215.035	2215.035	2215.035	2215.035
<b>5</b>	2191.430	2188.384	2185.339	2181.531	2180.008
<b>10</b>	2165.541	2157.165	2143.459	2132.799	2129.753
<b>15</b>	2074.929	2066.554	2045.995	2030.004	2020.867
<b>20</b>	1977.465	1958.429	1925.687	1896.752	1885.330
<b>25</b>	1772.637	1752.839	1720.097	1692.686	1685.071
<b>30</b>	1630.247	1605.120	1567.809	1545.727	1538.874
<b>35</b>	1476.436	1452.831	1420.089	1403.338	1398.008
<b>40</b>	1315.772	1292.929	1267.039	1257.902	1252.572
<b>45</b>	1198.510	1173.382	1157.392	1149.016	1146.732
<b>50</b>	1004.342	986.067	975.407	968.554	963.986
<b>55</b>	826.926	811.697	807.129	793.423	775.909
<b>60</b>	664.739	654.840	651.794	613.722	577.173
<b>65</b>	541.385	535.294	524.634	430.976	387.574
<b>70</b>	396.711	395.188	344.933	260.413	253.560
<b>75</b>	263.459	266.505	188.076	175.893	172.086
<b>80</b>	161.426	141.628	117.262	111.171	107.363
<b>85</b>	73.098	57.108	50.255	40.356	37.311
<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	783.89	N.A.	16.10
0-30	1584.43	N.A.	32.60
0-40	2477.94	N.A.	51.00
0-60	4082.24	N.A.	84.00
0-80	4795.77	N.A.	98.70
0-90	4857.71	N.A.	100.00
10-90	4650.19	N.A.	95.70
20-40	1694.05	N.A.	34.90
20-50	2578.33	N.A.	53.10
40-70	2085.29	N.A.	42.90
60-80	713.53	N.A.	14.70
70-80	232.54	N.A.	4.80
80-90	61.94	N.A.	1.30
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	4857.71	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	207.52
10-20	576.37
20-30	800.54
30-40	893.51
40-50	884.28
50-60	720.02
60-70	480.98
70-80	232.54
80-90	61.94
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	387	387	387	387	378	378	378	378	362	362	362	346	346	346	332	332	332	325
1	357	343	330	319	348	335	324	313	322	312	303	309	301	294	297	291	286	279
2	327	302	282	264	319	296	277	261	285	269	255	274	261	249	265	254	244	237
3	300	268	243	223	292	263	240	221	253	234	217	245	228	214	236	222	210	203
4	276	239	212	192	269	235	210	190	227	205	188	220	201	185	213	196	183	176
5	255	215	188	167	248	212	186	166	205	182	164	199	178	163	193	175	161	154
6	236	195	167	147	230	192	166	147	186	163	145	181	160	144	176	157	143	136
7	220	178	150	131	214	175	149	131	170	147	130	166	145	129	161	142	128	122
8	205	163	136	118	200	161	135	118	156	133	117	152	131	116	149	130	116	110
9	192	150	124	107	188	148	123	107	144	122	106	141	120	106	138	119	105	99
10	180	139	114	97	176	137	113	97	134	112	97	131	111	96	128	110	96	91

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**UGR TABLE - CORRECTED**

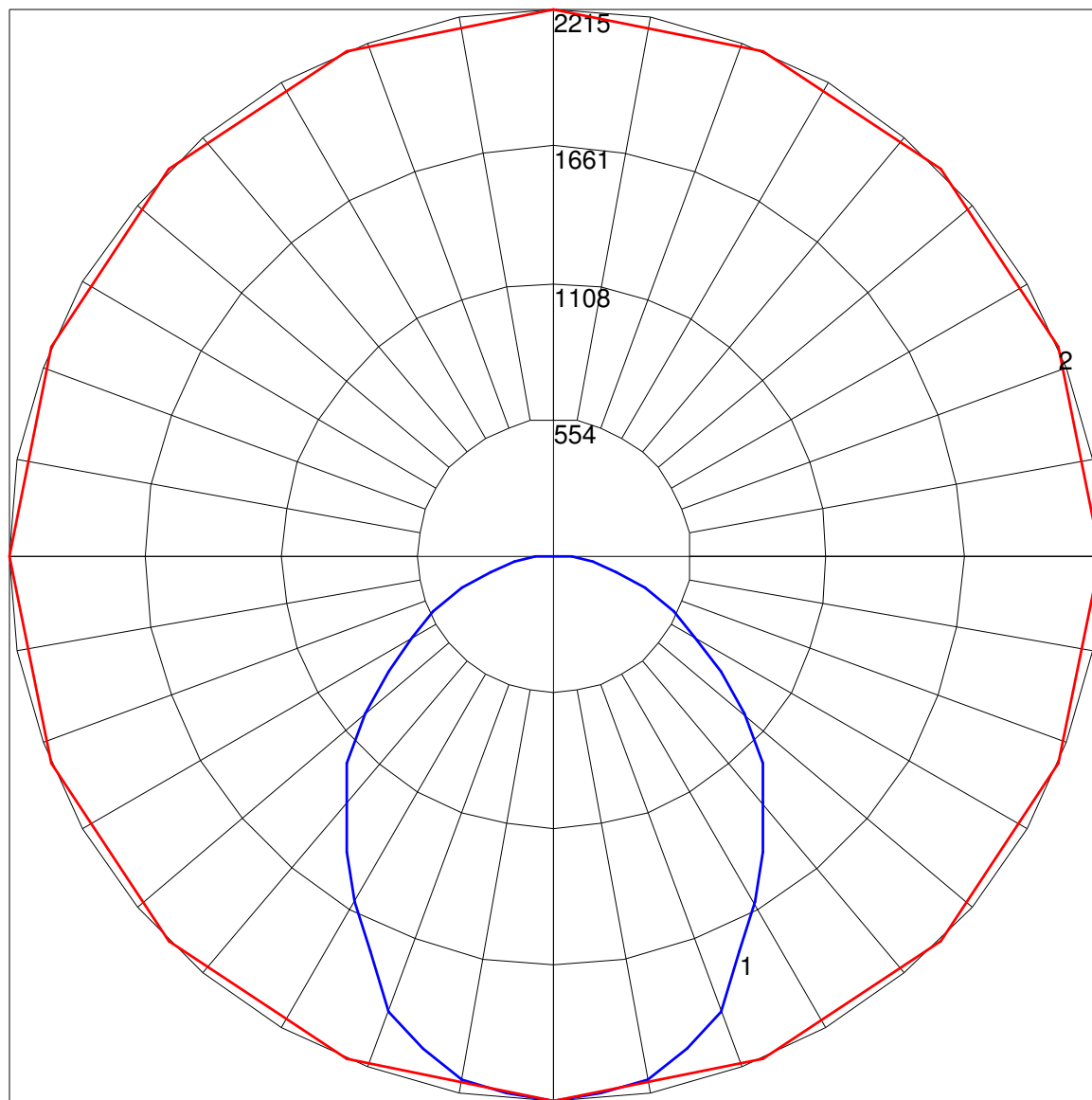
Reflectances

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	13.5	15.1	13.9	15.4	15.7	13.2	14.7	13.5	15.0	15.3
	3H	15.2	16.6	15.6	16.9	17.3	14.1	15.5	14.5	15.8	16.2
	4H	15.8	17.1	16.2	17.4	17.8	14.4	15.7	14.8	16.1	16.5
	6H	16.2	17.4	16.6	17.8	18.2	14.7	15.9	15.1	16.3	16.7
	8H	16.3	17.5	16.8	17.9	18.3	14.8	15.9	15.2	16.3	16.7
	12H	16.4	17.5	16.9	17.9	18.4	14.8	15.9	15.2	16.3	16.7
4H	2H	14.1	15.4	14.5	15.8	16.1	13.8	15.1	14.2	15.5	15.8
	3H	15.9	17.0	16.4	17.4	17.8	14.9	16.0	15.3	16.4	16.8
	4H	16.7	17.6	17.1	18.0	18.5	15.3	16.3	15.7	16.7	17.1
	6H	17.2	18.0	17.6	18.5	18.9	15.7	16.5	16.1	17.0	17.4
	8H	17.4	18.1	17.8	18.6	19.1	15.8	16.6	16.3	17.0	17.5
	12H	17.5	18.2	18.0	18.7	19.1	15.9	16.6	16.3	17.0	17.5
8H	4H	16.8	17.6	17.2	18.0	18.5	15.6	16.3	16.0	16.8	17.3
	6H	17.4	18.0	17.9	18.5	19.0	16.0	16.7	16.5	17.2	17.6
	8H	17.6	18.2	18.1	18.7	19.2	16.2	16.8	16.7	17.3	17.8
	12H	17.8	18.3	18.3	18.8	19.4	16.3	16.8	16.8	17.3	17.9
12H	4H	16.8	17.5	17.3	18.0	18.4	15.6	16.3	16.1	16.8	17.2
	6H	17.4	18.0	17.9	18.5	19.0	16.1	16.7	16.6	17.1	17.7
	8H	17.7	18.2	18.2	18.7	19.3	16.3	16.8	16.8	17.3	17.8

Maximum UGR = 19.4

POLAR GRAPH



Maximum Candela = 2215.035 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.)