



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-14-P52-835-D-POE_.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] 15-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] AT1-14-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	5240
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	46.9
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	6782	6549	6489
55	5769	5630	5413
65	5126	4967	3669
75	4073	2908	2660
85	3356	2307	1713

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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	2389.210	2389.210	2389.210	2389.210	2389.210
5	2363.749	2360.464	2357.179	2353.072	2351.429
10	2335.824	2326.790	2312.006	2300.508	2297.223
15	2238.088	2229.053	2206.878	2189.630	2179.774
20	2132.959	2112.426	2077.110	2045.900	2033.580
25	1912.025	1890.671	1855.354	1825.787	1817.574
30	1758.439	1731.335	1691.091	1667.273	1659.881
35	1592.533	1567.072	1531.755	1513.686	1507.937
40	1419.235	1394.596	1366.671	1356.815	1351.066
45	1292.752	1265.649	1248.401	1239.367	1236.903
50	1083.317	1063.605	1052.107	1044.715	1039.787
55	891.950	875.523	870.596	855.812	836.922
60	717.009	706.332	703.047	661.981	622.558
65	583.956	577.386	565.887	464.865	418.050
70	427.906	426.263	372.056	280.890	273.498
75	284.176	287.461	202.865	189.724	185.618
80	174.119	152.765	126.483	119.912	115.806
85	78.846	61.599	54.207	43.530	40.245
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	845.53	N.A.	16.10
0-30	1709.02	N.A.	32.60
0-40	2672.79	N.A.	51.00
0-60	4403.24	N.A.	84.00
0-80	5172.87	N.A.	98.70
0-90	5239.69	N.A.	100.00
10-90	5015.85	N.A.	95.70
20-40	1827.26	N.A.	34.90
20-50	2781.07	N.A.	53.10
40-70	2249.26	N.A.	42.90
60-80	769.63	N.A.	14.70
70-80	250.83	N.A.	4.80
80-90	66.81	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	5239.69	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	223.84
10-20	621.69
20-30	863.49
30-40	963.77
40-50	953.81
50-60	776.64
60-70	518.81
70-80	250.83
80-90	66.81
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	369	369	369	369	353	353	353	338	338	338	324	324	324	318
1	349	335	322	311	340	328	316	306	314	305	296	302	294	287	291	284	279	272
2	319	295	275	258	311	289	271	255	278	263	249	268	255	244	258	248	238	232
3	293	262	237	218	285	257	234	216	247	228	212	239	222	209	231	217	205	199
4	270	234	207	187	263	230	205	186	222	200	183	214	196	181	208	192	179	172
5	249	210	183	163	243	207	181	162	200	178	161	194	174	159	188	171	157	151
6	231	190	163	144	225	187	162	143	182	159	142	177	156	141	172	154	140	133
7	215	173	147	128	209	171	146	128	166	143	127	162	141	126	157	139	125	119
8	200	159	133	115	195	157	132	115	153	130	114	149	128	113	145	127	113	107
9	188	147	121	104	183	145	121	104	141	119	104	138	118	103	135	116	103	97
10	176	136	111	95	172	134	111	95	131	109	95	128	108	94	125	107	94	88

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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	13.8	15.4	14.2	15.7	16.0	UGR Viewed Endwise			
	3H	15.5	16.9	15.9	17.2	17.6	13.5	15.0	13.8	15.3
	4H	16.1	17.4	16.5	17.7	18.1	14.4	15.8	14.8	16.1
	6H	16.5	17.7	16.9	18.1	18.5	14.7	16.0	15.1	16.4
	8H	16.6	17.8	17.1	18.2	18.6	15.0	16.2	15.4	16.6
	12H	16.7	17.8	17.2	18.2	18.7	15.1	16.2	15.5	16.6

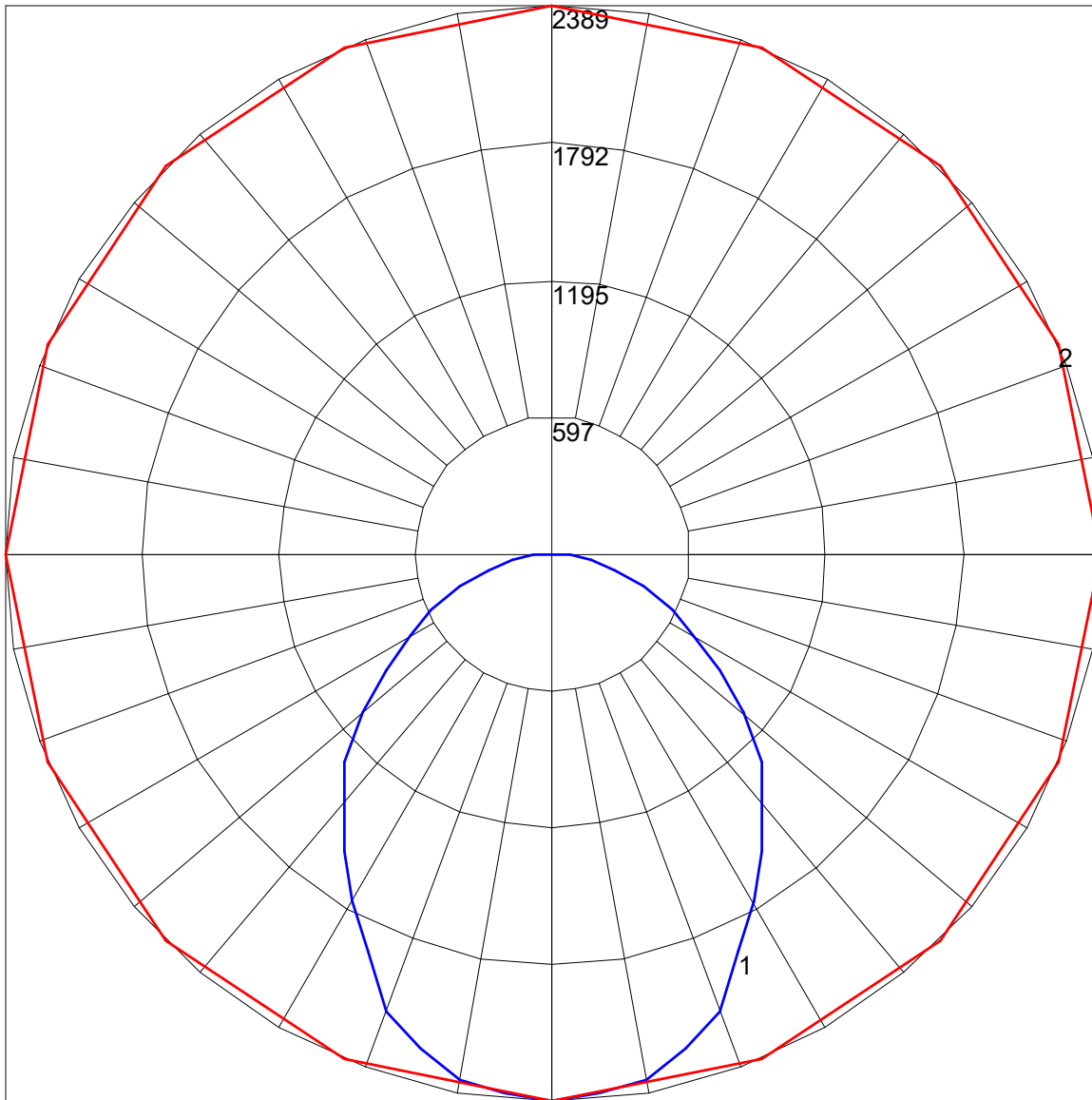
4H	2H	14.4	15.7	14.8	16.1	16.4	14.1	15.4	14.5	15.8	16.1
	3H	16.2	17.3	16.7	17.7	18.1	15.2	16.3	15.6	16.7	17.1
	4H	17.0	17.9	17.4	18.3	18.8	15.6	16.6	16.0	17.0	17.4
	6H	17.5	18.3	17.9	18.8	19.2	16.0	16.8	16.4	17.3	17.7
	8H	17.7	18.4	18.1	18.9	19.4	16.1	16.9	16.6	17.3	17.8
	12H	17.8	18.5	18.3	19.0	19.4	16.2	16.9	16.6	17.3	17.8

8H	4H	17.1	17.9	17.5	18.3	18.8	15.9	16.6	16.3	17.1	17.6
	6H	17.7	18.3	18.2	18.8	19.3	16.3	17.0	16.8	17.5	17.9
	8H	17.9	18.5	18.4	19.0	19.5	16.5	17.1	17.0	17.6	18.1
	12H	18.1	18.6	18.6	19.1	19.7	16.6	17.1	17.1	17.6	18.2

12H	4H	17.1	17.8	17.6	18.3	18.7	15.9	16.6	16.4	17.1	17.5
	6H	17.7	18.3	18.2	18.8	19.3	16.4	17.0	16.9	17.4	18.0
	8H	18.0	18.5	18.5	19.0	19.6	16.6	17.1	17.1	17.6	18.1

Maximum UGR = 19.7

POLAR GRAPH



Maximum Candela = 2389.21 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.)