



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-22-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] 15-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] AT1-22-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	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)	1.16
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	5411	5889	6363
55	4758	5374	5776
65	4205	4918	5402
75	3491	4425	5114
85	1877	1664	1578

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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	2062.255	2062.255	2062.255	2062.255	2062.255
5	2057.957	2051.509	2050.434	2049.359	2047.210
10	2011.747	2010.672	2006.373	2019.269	2022.493
15	1942.969	1940.820	1948.342	1975.209	1983.806
20	1838.728	1844.101	1874.191	1912.879	1931.148
25	1710.844	1729.113	1777.473	1831.205	1859.146
30	1578.662	1602.305	1664.634	1735.561	1762.428
35	1434.659	1460.451	1531.378	1609.827	1635.619
40	1273.461	1297.104	1373.404	1447.555	1479.794
45	1105.816	1133.757	1203.609	1273.461	1300.328
50	945.693	972.559	1042.411	1110.114	1128.384
55	788.794	813.511	890.886	947.842	957.514
60	643.716	668.433	741.509	795.242	799.540
65	513.683	534.102	600.730	648.015	659.836
70	383.650	402.994	466.399	508.310	524.430
75	261.140	281.559	330.993	362.157	382.576
80	145.078	170.870	174.093	173.019	170.870
85	47.285	55.882	41.911	40.837	39.762
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	746.22	N.A.	14.20
0-30	1566.53	N.A.	29.90
0-40	2523.27	N.A.	48.20
0-60	4244.61	N.A.	81.00
0-80	5168.83	N.A.	98.60
0-90	5239.59	N.A.	100.00
10-90	5045.02	N.A.	96.30
20-40	1777.05	N.A.	33.90
20-50	2707.66	N.A.	51.70
40-70	2309.19	N.A.	44.10
60-80	924.22	N.A.	17.60
70-80	336.37	N.A.	6.40
80-90	70.76	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	5239.59	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	194.57
10-20	551.65
20-30	820.31
30-40	956.74
40-50	930.61
50-60	790.73
60-70	587.84
70-80	336.37
80-90	70.76
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	347	332	319	308	338	325	313	303	312	302	293	299	291	284	288	282	276	269
2	316	291	270	252	308	285	266	249	274	258	244	263	250	238	254	243	233	226
3	289	257	231	211	281	252	228	209	242	222	206	234	216	202	225	211	199	192
4	265	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	152	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	139	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	13.0	14.6	13.4	14.9	15.2	14.2	15.8	14.6	16.1	16.4
	3H	14.7	16.1	15.0	16.4	16.8	16.1	17.5	16.5	17.9	18.2
	4H	15.3	16.6	15.7	17.0	17.3	16.8	18.2	17.2	18.5	18.9
	6H	15.7	16.9	16.1	17.3	17.7	17.2	18.5	17.7	18.9	19.3
	8H	15.8	17.0	16.2	17.4	17.8	17.3	18.5	17.8	18.9	19.3
	12H	15.8	17.0	16.2	17.3	17.8	17.3	18.5	17.8	18.9	19.3

UGR Viewed Endwise

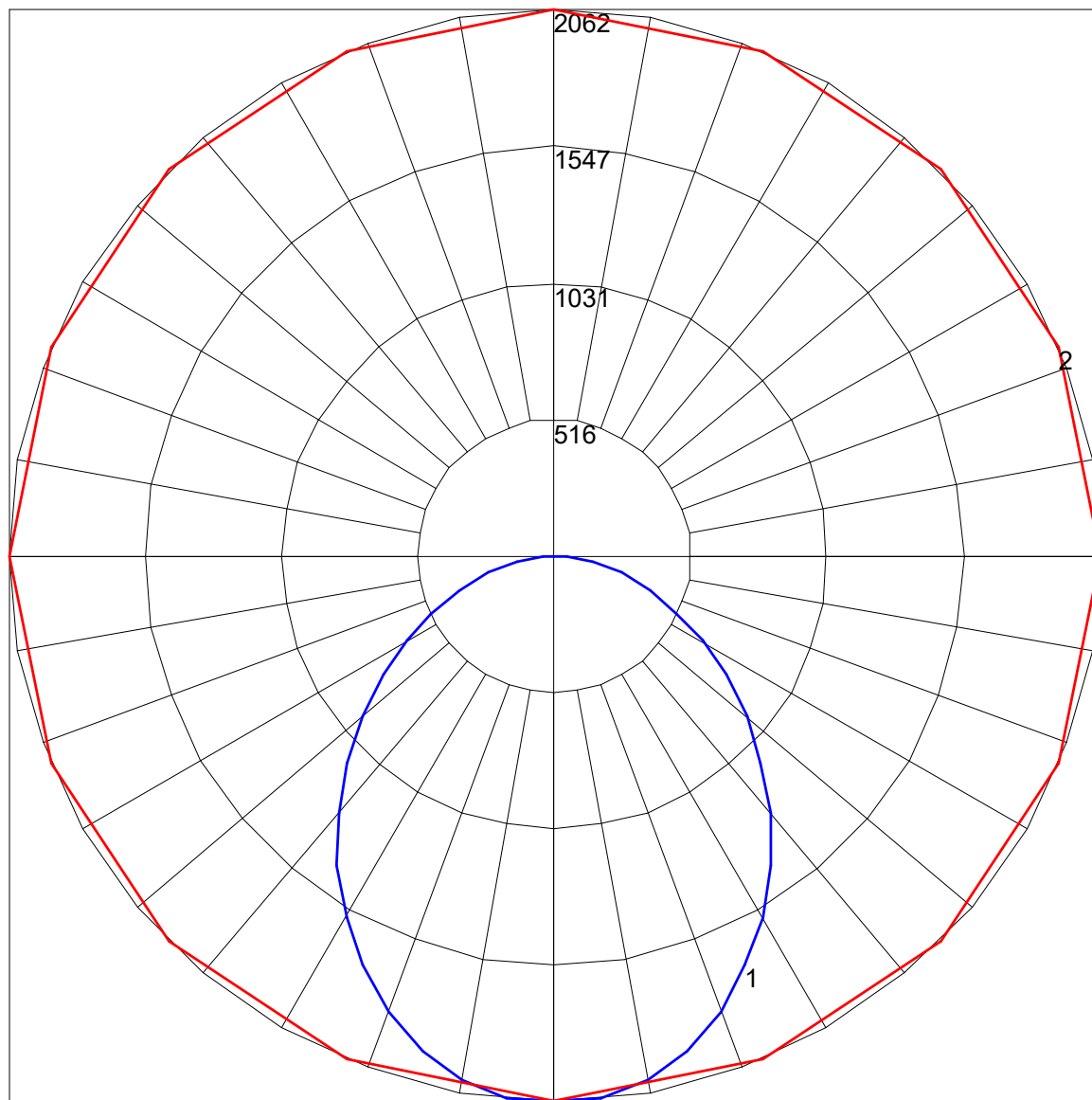
4H	2H	13.8	15.1	14.2	15.5	15.9	14.7	16.1	15.1	16.4	16.8
	3H	15.7	16.8	16.1	17.2	17.6	16.9	18.0	17.3	18.4	18.8
	4H	16.4	17.4	16.8	17.8	18.2	17.7	18.8	18.2	19.2	19.6
	6H	16.9	17.8	17.3	18.2	18.7	18.3	19.1	18.7	19.6	20.0
	8H	17.0	17.9	17.5	18.3	18.8	18.4	19.2	18.8	19.6	20.1
	12H	17.1	17.9	17.6	18.3	18.8	18.4	19.1	18.9	19.6	20.1

8H	4H	16.8	17.6	17.2	18.0	18.5	18.0	18.8	18.4	19.3	19.7
	6H	17.4	18.1	17.9	18.6	19.1	18.6	19.3	19.1	19.8	20.2
	8H	17.6	18.2	18.1	18.7	19.2	18.7	19.3	19.2	19.8	20.3
	12H	17.7	18.3	18.3	18.8	19.3	18.8	19.3	19.3	19.8	20.4

12H	4H	16.8	17.6	17.3	18.0	18.5	18.0	18.7	18.5	19.2	19.7
	6H	17.5	18.1	18.0	18.6	19.1	18.6	19.2	19.1	19.7	20.2
	8H	17.7	18.3	18.2	18.8	19.3	18.8	19.3	19.3	19.8	20.4

Maximum UGR = 20.4

POLAR GRAPH



Maximum Candela = 2062.255 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.)