



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-24-P100-8TW-D-POE 4000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19260.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 3-JAN-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4-22" LED ARRAYS 2x4' LUMINAIRE

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

[LUMCAT] AT2-24-P100-835-D-PoE 4000k

[_SEARCH_SOURCETYPE]LED

[_SEARCH_APPLICATION]INDOOR,COMMERCIAL,DIRECT,OFFICE,ARCHITECTURAL

[_SEARCH_MOUNTING]RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10270
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	95.24
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 ft
Luminous Width (90-270)	1.88 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4678	5229	5578
55	3987	4620	4916
65	3620	4422	4750
75	3079	4210	4210
85	2727	1945	1818

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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	4092.237	4092.237	4092.237	4092.237	4092.237
5	4070.593	4072.036	4072.036	4073.479	4074.922
10	3988.344	3992.673	4002.774	4015.760	4024.418
15	3841.162	3851.263	3874.350	3908.981	3924.854
20	3620.389	3642.034	3696.866	3763.242	3790.658
25	3323.139	3350.555	3431.361	3520.825	3561.228
30	3010.017	3304.381	3121.125	3111.024	3337.569
35	2692.565	2741.626	2881.593	3018.674	3070.621
40	2388.100	2444.376	2611.759	2745.955	2789.244
45	2168.770	2238.032	2424.174	2546.826	2585.786
50	1825.346	1904.708	2077.864	2178.871	2204.844
55	1499.236	1581.485	1737.325	1819.574	1848.433
60	1219.302	1304.437	1437.189	1512.223	1536.753
65	1002.858	1096.650	1225.074	1295.779	1315.980
70	758.997	858.562	975.442	1031.717	1041.818
75	522.352	621.916	714.266	722.923	714.266
80	337.653	438.660	430.002	298.693	271.277
85	155.840	178.927	111.108	105.336	103.893
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1479.02	N.A.	14.40
0-30	3064.66	N.A.	29.80
0-40	4870.86	N.A.	47.40
0-60	8226.77	N.A.	80.10
0-80	10098.78	N.A.	98.30
0-90	10270.39	N.A.	100.00
10-90	9883.85	N.A.	96.20
20-40	3391.85	N.A.	33.00
20-50	5213.89	N.A.	50.80
40-70	4529.3	N.A.	44.10
60-80	1872.00	N.A.	18.20
70-80	698.61	N.A.	6.80
80-90	171.62	N.A.	1.70
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	10270.39	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	386.55
10-20	1092.47
20-30	1585.64
30-40	1806.21
40-50	1822.04
50-60	1533.87
60-70	1173.39
70-80	698.61
80-90	171.62
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	441	441	441	441	431	431	431	431	412	412	412	394	394	394	378	378	378	371
1	404	387	371	357	394	378	364	351	362	351	340	348	339	330	335	327	320	312
2	368	338	313	292	358	331	308	289	318	299	282	306	290	276	295	281	270	262
3	336	298	268	245	327	292	265	242	281	258	238	271	251	234	261	244	230	222
4	309	265	233	208	300	260	230	207	251	225	204	242	220	201	234	215	199	191
5	284	237	205	180	277	233	202	179	225	198	177	218	194	176	211	190	174	166
6	263	214	182	158	256	211	180	158	204	177	156	198	174	155	192	170	153	146
7	244	195	163	140	238	192	162	140	186	159	139	181	156	138	176	154	137	130
8	228	178	147	126	222	176	146	125	171	144	125	166	142	124	162	140	123	116
9	213	164	134	114	208	162	133	113	158	131	113	154	129	112	150	128	112	105
10	200	152	123	103	195	150	122	103	146	120	103	143	119	102	139	118	102	95

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UGR TABLE - CORRECTED

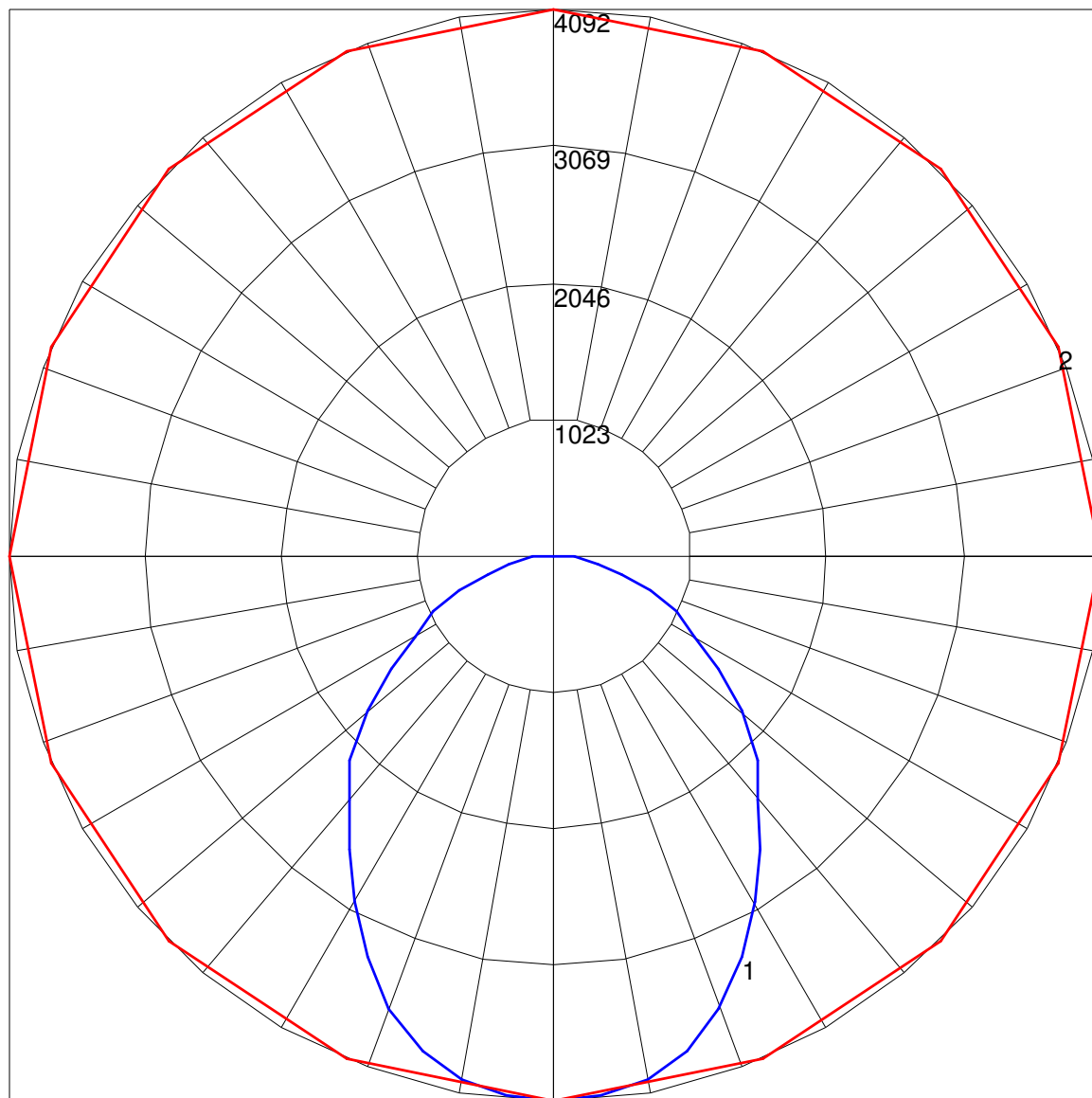
Reflectances

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	11.9	13.5	12.3	13.8	14.1	13.0	14.6	13.3	14.9	15.2
	3H	13.7	15.1	14.0	15.4	15.8	15.0	16.5	15.4	16.8	17.1
	4H	14.3	15.7	14.7	16.0	16.4	15.7	17.1	16.1	17.5	17.8
	6H	14.8	16.1	15.2	16.5	16.9	16.1	17.3	16.5	17.7	18.1
	8H	15.0	16.2	15.5	16.6	17.0	16.1	17.3	16.5	17.7	18.1
	12H	15.2	16.3	15.6	16.7	17.1	16.2	17.3	16.6	17.7	18.1
4H	2H	12.7	14.1	13.1	14.5	14.8	13.6	14.9	14.0	15.3	15.7
	3H	14.8	15.9	15.2	16.3	16.7	15.8	17.0	16.3	17.4	17.8
	4H	15.6	16.6	16.0	17.0	17.4	16.7	17.8	17.2	18.2	18.6
	6H	16.2	17.2	16.7	17.6	18.0	17.1	18.0	17.6	18.5	18.9
	8H	16.5	17.3	16.9	17.8	18.2	17.2	18.1	17.7	18.5	19.0
	12H	16.6	17.4	17.1	17.9	18.4	17.3	18.0	17.7	18.5	19.0
8H	4H	16.0	16.9	16.5	17.3	17.8	17.0	17.9	17.5	18.3	18.8
	6H	16.9	17.6	17.4	18.1	18.6	17.5	18.2	18.0	18.7	19.2
	8H	17.2	17.8	17.7	18.4	18.8	17.6	18.3	18.1	18.8	19.3
	12H	17.5	18.0	18.0	18.5	19.1	17.7	18.3	18.2	18.8	19.3
12H	4H	16.1	16.8	16.5	17.3	17.8	17.1	17.8	17.5	18.3	18.8
	6H	17.0	17.6	17.5	18.1	18.6	17.6	18.2	18.1	18.7	19.2
	8H	17.3	17.9	17.8	18.4	19.0	17.7	18.3	18.3	18.8	19.4

Maximum UGR = 19.4

POLAR GRAPH



Maximum Candela = 4092.237 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.)