



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-24-P58-8TW-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-P58-835-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	5952
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	49.81
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	2711	3030	3232
55	2310	2677	2849
65	2098	2562	2752
75	1784	2439	2439
85	1581	1127	1054

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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	2371.435	2371.435	2371.435	2371.435	2371.435
5	2358.892	2359.728	2359.728	2360.564	2361.400
10	2311.229	2313.738	2319.591	2327.117	2332.134
15	2225.938	2231.791	2245.170	2265.239	2274.437
20	2098.001	2110.543	2142.319	2180.783	2196.671
25	1925.745	1941.633	1988.460	2040.303	2063.717
30	1744.292	1914.875	1808.679	1802.825	1934.107
35	1560.330	1588.761	1669.871	1749.309	1779.412
40	1383.894	1416.506	1513.504	1591.269	1616.355
45	1256.793	1296.931	1404.799	1475.875	1498.452
50	1057.780	1103.771	1204.113	1262.647	1277.698
55	868.801	916.464	1006.773	1054.435	1071.159
60	706.580	755.916	832.845	876.327	890.542
65	581.152	635.504	709.925	750.899	762.605
70	439.836	497.533	565.264	597.876	603.729
75	302.701	360.398	413.914	418.931	413.914
80	195.668	254.202	249.185	173.091	157.204
85	90.309	103.688	64.387	61.042	60.206
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	857.08	N.A.	14.40
0-30	1775.96	N.A.	29.80
0-40	2822.65	N.A.	47.40
0-60	4767.38	N.A.	80.10
0-80	5852.2	N.A.	98.30
0-90	5951.65	N.A.	100.00
10-90	5727.65	N.A.	96.20
20-40	1965.56	N.A.	33.00
20-50	3021.43	N.A.	50.80
40-70	2624.71	N.A.	44.10
60-80	1084.82	N.A.	18.20
70-80	404.84	N.A.	6.80
80-90	99.45	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	5951.65	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	224.00
10-20	633.08
20-30	918.87
30-40	1046.69
40-50	1055.86
50-60	888.87
60-70	679.97
70-80	404.84
80-90	99.45
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	256	256	256	256	250	250	250	250	239	239	239	228	228	228	219	219	219	215
1	234	224	215	207	228	219	211	204	210	203	197	202	196	191	194	190	185	181
2	213	196	182	169	208	192	179	167	184	173	164	177	168	160	171	163	156	152
3	195	173	155	142	190	169	153	140	163	149	138	157	145	136	152	142	133	129
4	179	154	135	121	174	151	133	120	145	130	118	140	127	117	136	124	115	110
5	165	138	119	105	160	135	117	104	131	115	103	126	113	102	122	110	101	96
6	152	124	105	92	148	122	104	91	118	102	91	115	101	90	111	99	89	85
7	142	113	94	81	138	111	94	81	108	92	80	105	91	80	102	89	79	75
8	132	103	85	73	129	102	85	73	99	83	72	96	82	72	94	81	71	67
9	124	95	78	66	120	94	77	66	91	76	65	89	75	65	87	74	65	61
10	116	88	71	60	113	87	71	60	85	70	60	83	69	59	81	68	59	55

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UGR TABLE - CORRECTED

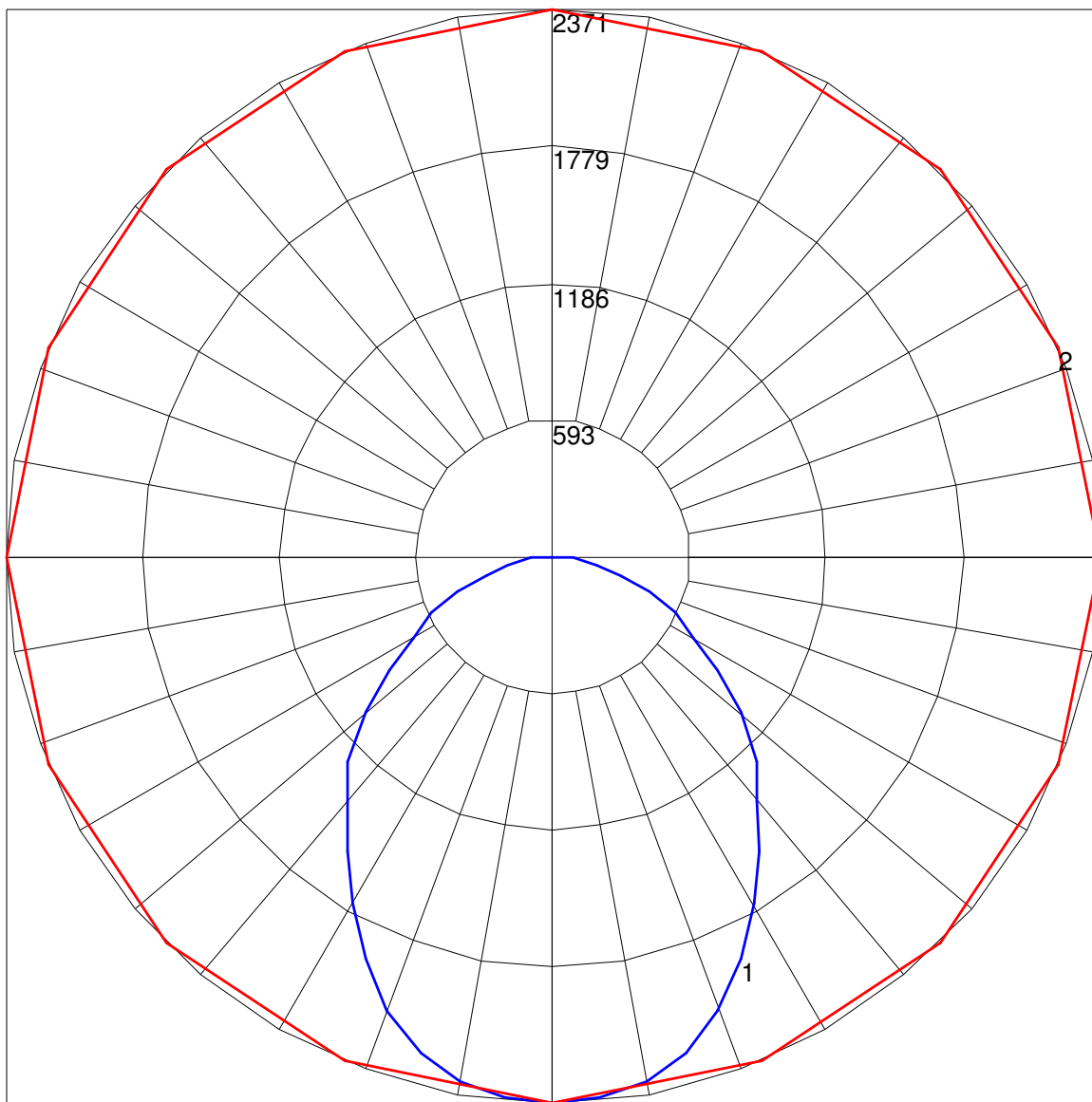
Reflectances

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 = 2371.435 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.)