



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-24-P27-8TW-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-P27-835-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	2771
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	24.23
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	1262	1411	1505
55	1076	1246	1326
65	977	1193	1281
75	831	1136	1136
85	736	525	491

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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	1104.040	1104.040	1104.040	1104.040	1104.040
5	1098.200	1098.590	1098.590	1098.979	1099.368
10	1076.011	1077.178	1079.904	1083.407	1085.743
15	1036.303	1039.028	1045.256	1054.599	1058.882
20	976.740	982.580	997.373	1015.281	1022.677
25	896.546	903.942	925.743	949.879	960.779
30	812.069	891.485	842.044	839.319	900.439
35	726.424	739.660	777.422	814.405	828.419
40	644.283	659.465	704.623	740.828	752.507
45	585.110	603.796	654.015	687.105	697.616
50	492.458	513.869	560.584	587.835	594.842
55	404.477	426.667	468.711	490.901	498.687
60	328.954	351.922	387.738	407.981	414.599
65	270.560	295.864	330.511	349.587	355.037
70	204.769	231.630	263.163	278.346	281.071
75	140.925	167.786	192.701	195.037	192.701
80	91.095	118.346	116.010	80.584	73.187
85	42.044	48.273	29.976	28.419	28.029
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	399.02	N.A.	14.40
0-30	826.81	N.A.	29.80
0-40	1314.1	N.A.	47.40
0-60	2219.49	N.A.	80.10
0-80	2724.54	N.A.	98.30
0-90	2770.84	N.A.	100.00
10-90	2666.55	N.A.	96.20
20-40	915.08	N.A.	33.00
20-50	1406.65	N.A.	50.80
40-70	1221.95	N.A.	44.10
60-80	505.05	N.A.	18.20
70-80	188.48	N.A.	6.80
80-90	46.30	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	2770.84	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	104.29
10-20	294.74
20-30	427.79
30-40	487.29
40-50	491.57
50-60	413.82
60-70	316.57
70-80	188.48
80-90	46.30
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	106	106	106	106	104	104	104	104	99	99	99	95	95	95	91	91	91	89
1	97	93	89	86	95	91	88	85	87	85	82	84	82	79	81	79	77	75
2	89	81	75	70	86	80	74	70	77	72	68	74	70	66	71	68	65	63
3	81	72	65	59	79	70	64	58	68	62	57	65	60	56	63	59	55	53
4	74	64	56	50	72	63	55	50	60	54	49	58	53	48	56	52	48	46
5	68	57	49	43	67	56	49	43	54	48	43	53	47	42	51	46	42	40
6	63	52	44	38	62	51	43	38	49	43	38	48	42	37	46	41	37	35
7	59	47	39	34	57	46	39	34	45	38	33	44	38	33	42	37	33	31
8	55	43	35	30	53	42	35	30	41	35	30	40	34	30	39	34	30	28
9	51	40	32	27	50	39	32	27	38	32	27	37	31	27	36	31	27	25
10	48	37	30	25	47	36	29	25	35	29	25	34	29	25	34	28	25	23

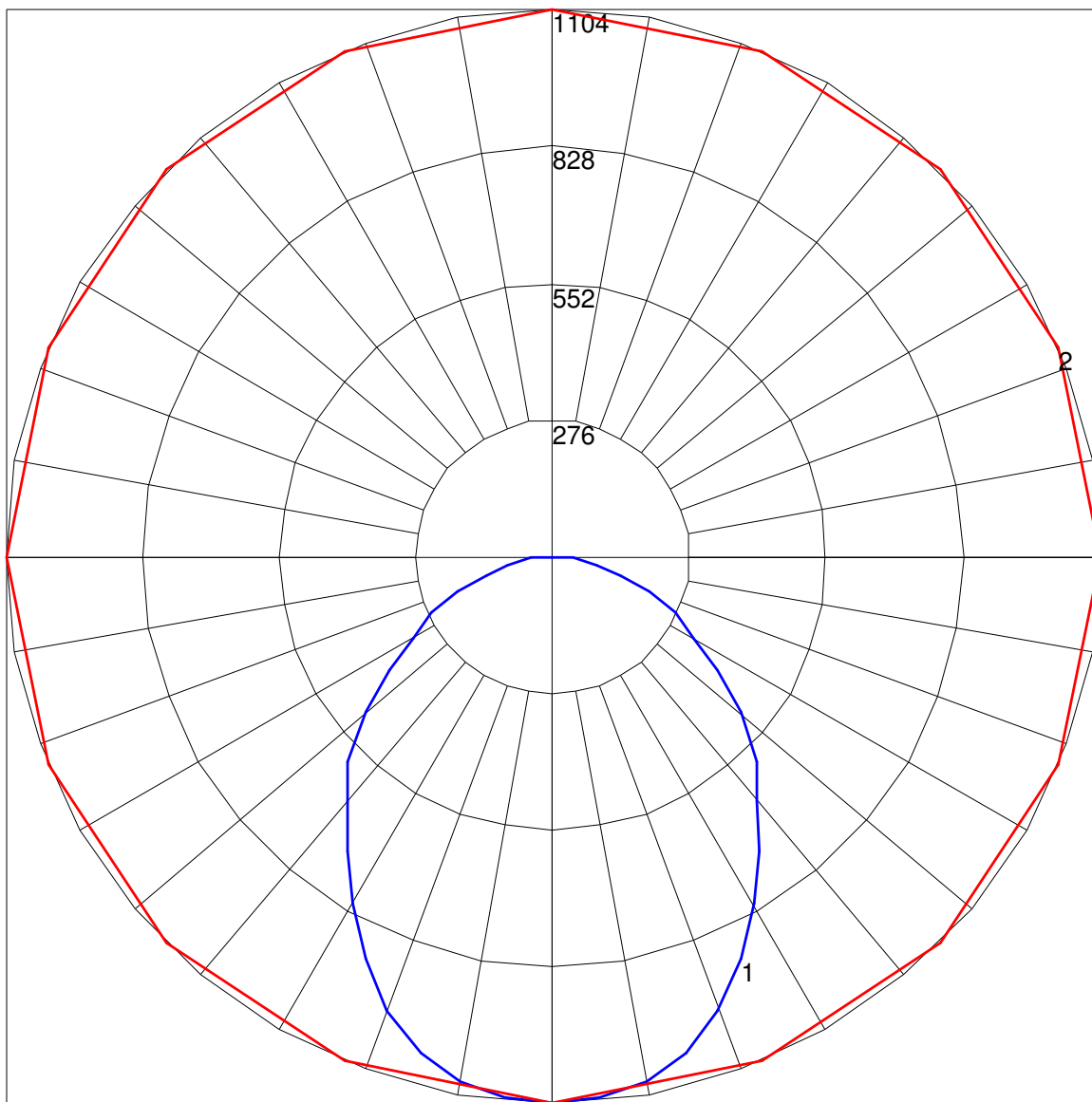
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UGR TABLE - CORRECTED

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	12.3	13.9	12.7	14.2	14.5	13.4	15.0	13.7	15.3	15.6
	3H	14.1	15.5	14.4	15.8	16.2	15.4	16.9	15.8	17.2	17.5
	4H	14.7	16.1	15.1	16.4	16.8	16.1	17.5	16.5	17.9	18.2
	6H	15.2	16.5	15.6	16.9	17.3	16.5	17.7	16.9	18.1	18.5
	8H	15.4	16.6	15.9	17.0	17.4	16.5	17.7	16.9	18.1	18.5
	12H	15.6	16.7	16.0	17.1	17.5	16.6	17.7	17.0	18.1	18.5
4H	2H	13.1	14.5	13.5	14.9	15.2	14.0	15.3	14.4	15.7	16.1
	3H	15.2	16.3	15.6	16.7	17.1	16.2	17.4	16.7	17.8	18.2
	4H	16.0	17.0	16.4	17.4	17.8	17.1	18.2	17.6	18.6	19.0
	6H	16.6	17.6	17.1	18.0	18.4	17.5	18.4	18.0	18.9	19.3
	8H	16.9	17.7	17.3	18.2	18.6	17.6	18.5	18.1	18.9	19.4
	12H	17.0	17.8	17.5	18.3	18.8	17.7	18.4	18.1	18.9	19.4
8H	4H	16.4	17.3	16.9	17.7	18.2	17.4	18.3	17.9	18.7	19.2
	6H	17.3	18.0	17.8	18.5	19.0	17.9	18.6	18.4	19.1	19.6
	8H	17.6	18.2	18.1	18.8	19.2	18.0	18.7	18.5	19.2	19.7
	12H	17.9	18.4	18.4	18.9	19.5	18.1	18.7	18.6	19.2	19.7
12H	4H	16.5	17.2	16.9	17.7	18.2	17.5	18.2	17.9	18.7	19.2
	6H	17.4	18.0	17.9	18.5	19.0	18.0	18.6	18.5	19.1	19.6
	8H	17.7	18.3	18.2	18.8	19.4	18.1	18.7	18.7	19.2	19.8

Maximum UGR = 19.8

POLAR GRAPH



Maximum Candela = 1104.04 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.)