



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-24-P27-8TW-D-POE 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 18876.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 26-JUN-2020

[MANUFAC] WILLIAMS LINEAR

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

[LUMINAIRE] 22" LED ARRAYS-SERIES 2x4' RECESSED LUMINAIRE w/WHITE

[MORE] REFL, FROST CONCAVE ACRYLIC LENS w/SHALLOW ACRYLIC CENTER

[MORE] DIFFUSER

[LUMCAT] AT1-24-P27-8TW-D-PoE 4000k

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Educational, Office, Direct

[_SEARCH_MOUNTING] Ceiling, Recessed

[_SEARCH_CERTIFICATION] DLC

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2717
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	24.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 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	1241	1451	1574
55	1076	1318	1420
65	957	1254	1356
75	817	1214	1247
85	688	738	754

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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	1045.339	1045.339	1045.339	1045.339	1045.339
5	1046.221	1045.339	1047.986	1047.986	1048.868
10	1017.993	1018.875	1025.050	1030.343	1032.989
15	982.707	988.000	999.468	1011.818	1018.875
20	920.957	934.189	953.596	977.414	988.000
25	847.739	860.089	891.846	926.250	941.246
30	775.404	792.164	836.271	880.378	897.139
35	711.889	732.179	785.107	833.625	851.268
40	618.382	642.200	701.304	748.939	762.171
45	541.636	567.218	633.379	673.957	687.189
50	458.714	487.825	547.811	583.096	592.800
55	381.086	411.079	466.654	494.882	502.821
60	313.161	343.154	393.436	417.254	424.311
65	249.646	282.286	327.275	347.564	353.739
70	188.779	223.182	261.996	276.993	279.639
75	130.557	165.843	194.071	201.129	199.364
80	82.039	113.796	124.382	95.271	86.450
85	37.050	52.046	39.696	39.696	40.579
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	380.38	N.A.	14.00
0-30	793.07	N.A.	29.20
0-40	1278.26	N.A.	47.00
0-60	2164.4	N.A.	79.70
0-80	2665.26	N.A.	98.10
0-90	2716.85	N.A.	100.00
10-90	2617.71	N.A.	96.40
20-40	897.89	N.A.	33.00
20-50	1375.97	N.A.	50.60
40-70	1197.94	N.A.	44.10
60-80	500.85	N.A.	18.40
70-80	189.06	N.A.	7.00
80-90	51.59	N.A.	1.90
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	2716.85	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	99.14
10-20	281.23
20-30	412.69
30-40	485.19
40-50	478.09
50-60	408.05
60-70	311.80
70-80	189.06
80-90	51.59
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	118	118	118	118	115	115	115	115	110	110	110	105	105	105	101	101	101	99
1	108	103	99	95	105	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	78	96	88	82	77	85	80	75	81	77	73	78	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	67	62	70	65	61	59
4	82	70	62	55	80	69	61	55	67	60	54	64	58	53	62	57	53	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	63	51	43	37	49	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	38	33	43	37	33	31
9	57	44	35	30	55	43	35	30	42	35	30	41	34	30	40	34	29	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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UGR TABLE - CORRECTED

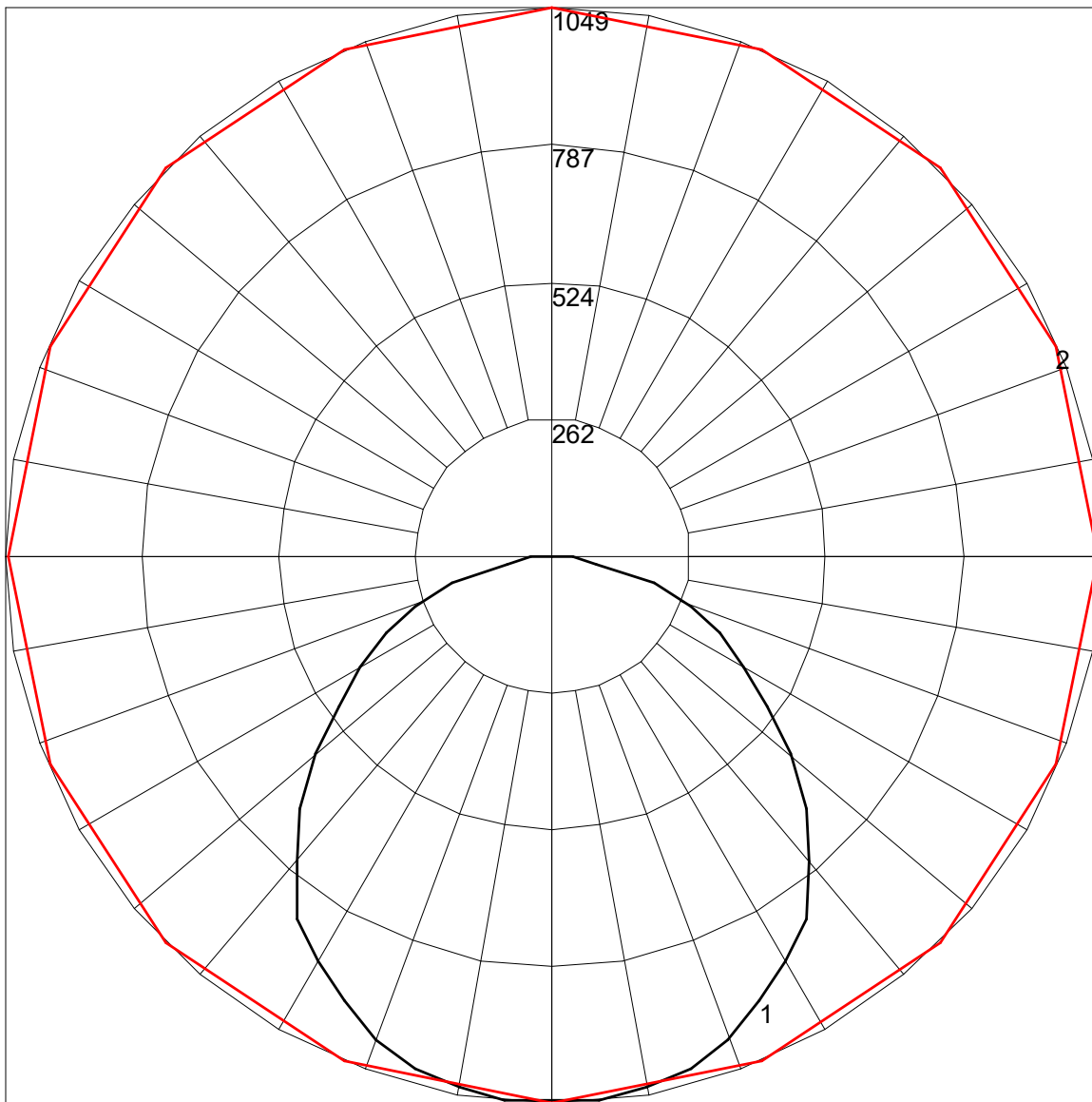
Reflectances

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	12.0	13.6	12.3	13.9	14.2	13.4	15.0	13.8	15.3	15.7
	3H	13.7	15.1	14.1	15.5	15.8	15.4	16.8	15.8	17.2	17.5
	4H	14.3	15.7	14.7	16.0	16.4	16.1	17.5	16.5	17.9	18.2
	6H	14.8	16.1	15.2	16.5	16.9	16.5	17.8	17.0	18.2	18.6
	8H	15.0	16.2	15.4	16.6	17.0	16.6	17.8	17.1	18.2	18.6
	12H	15.1	16.3	15.5	16.7	17.1	16.7	17.9	17.1	18.2	18.7
4H	2H	12.9	14.3	13.3	14.6	15.0	14.0	15.4	14.4	15.7	16.1
	3H	14.9	16.0	15.3	16.4	16.8	16.2	17.4	16.6	17.8	18.2
	4H	15.7	16.7	16.1	17.1	17.5	17.1	18.2	17.6	18.6	19.0
	6H	16.3	17.2	16.8	17.7	18.1	17.6	18.5	18.1	19.0	19.4
	8H	16.5	17.4	17.0	17.8	18.3	17.8	18.6	18.2	19.0	19.5
	12H	16.7	17.5	17.2	17.9	18.4	17.8	18.6	18.3	19.1	19.6
8H	4H	16.2	17.0	16.6	17.5	17.9	17.4	18.3	17.9	18.7	19.2
	6H	17.0	17.7	17.5	18.2	18.7	18.1	18.8	18.5	19.2	19.7
	8H	17.3	18.0	17.8	18.5	19.0	18.2	18.9	18.7	19.4	19.9
	12H	17.6	18.2	18.1	18.6	19.2	18.4	19.0	18.9	19.4	20.0
12H	4H	16.2	17.0	16.7	17.5	17.9	17.5	18.2	17.9	18.7	19.2
	6H	17.1	17.8	17.6	18.2	18.8	18.1	18.8	18.6	19.2	19.8
	8H	17.5	18.1	18.0	18.6	19.1	18.4	18.9	18.9	19.4	20.0

Maximum UGR = 20.0

POLAR GRAPH



Maximum Candela = 1048.868 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)