



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-22-P25-835-D-POE_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 18872.0

[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 2x2' RECESSED LUMINAIRE w/WHITE

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

[MORE] DIFFUSER

[LUMCAT] AT1-22-P25-835-D-PoE

[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	2506
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	23.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.32
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	2500	2823	3138
55	2203	2653	2912
65	1902	2464	2808
75	1605	2361	2625
85	1055	1293	1157

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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	946.501	946.501	946.501	946.501	946.501
5	947.359	943.929	943.072	942.215	942.215
10	927.640	926.783	925.925	930.212	934.499
15	893.347	895.919	903.635	910.493	919.067
20	846.193	853.909	869.341	884.773	900.205
25	787.894	799.897	823.045	848.765	869.341
30	727.880	742.455	770.747	809.327	830.761
35	662.723	673.011	712.448	761.316	780.178
40	588.134	601.851	645.576	702.160	716.735
45	510.974	528.120	576.989	630.144	641.289
50	435.528	454.389	508.402	552.126	562.414
55	365.226	384.945	439.815	474.965	482.681
60	294.924	320.645	370.370	401.234	412.380
65	232.339	258.059	300.926	326.646	342.935
70	175.754	194.616	240.912	257.201	271.776
75	120.027	138.031	176.612	181.756	196.330
80	68.587	83.162	106.310	84.876	85.734
85	26.577	29.150	32.579	27.435	29.150
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	344.50	N.A.	13.70
0-30	724.87	N.A.	28.90
0-40	1172.82	N.A.	46.80
0-60	2005.08	N.A.	80.00
0-80	2466.51	N.A.	98.40
0-90	2506.35	N.A.	100.00
10-90	2416.79	N.A.	96.40
20-40	828.32	N.A.	33.00
20-50	1274.25	N.A.	50.80
40-70	1123.73	N.A.	44.80
60-80	461.43	N.A.	18.40
70-80	169.96	N.A.	6.80
80-90	39.84	N.A.	1.60
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	2506.35	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	89.56
10-20	254.94
20-30	380.36
30-40	447.95
40-50	445.94
50-60	386.33
60-70	291.47
70-80	169.96
80-90	39.84
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	181	181	181	181	177	177	177	177	169	169	169	162	162	162	155	155	155	152
1	166	158	152	146	161	155	149	144	149	144	139	143	139	135	137	134	131	128
2	151	138	128	120	147	136	126	118	130	122	115	125	119	113	121	115	110	107
3	138	122	110	100	134	119	108	99	115	105	97	111	102	95	107	100	94	91
4	126	108	95	85	123	106	94	84	102	92	83	99	90	82	96	88	81	78
5	116	97	83	73	113	95	82	73	92	81	72	89	79	71	86	77	71	67
6	107	87	74	64	105	86	73	64	83	72	63	81	70	63	78	69	62	59
7	100	79	66	57	97	78	66	57	76	64	56	74	63	56	71	62	55	52
8	93	72	60	51	91	71	59	51	69	58	50	68	57	50	66	57	50	47
9	87	67	54	46	85	66	54	46	64	53	45	62	52	45	61	52	45	42
10	81	62	50	42	80	61	49	42	59	49	41	58	48	41	56	47	41	38

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UGR TABLE - CORRECTED

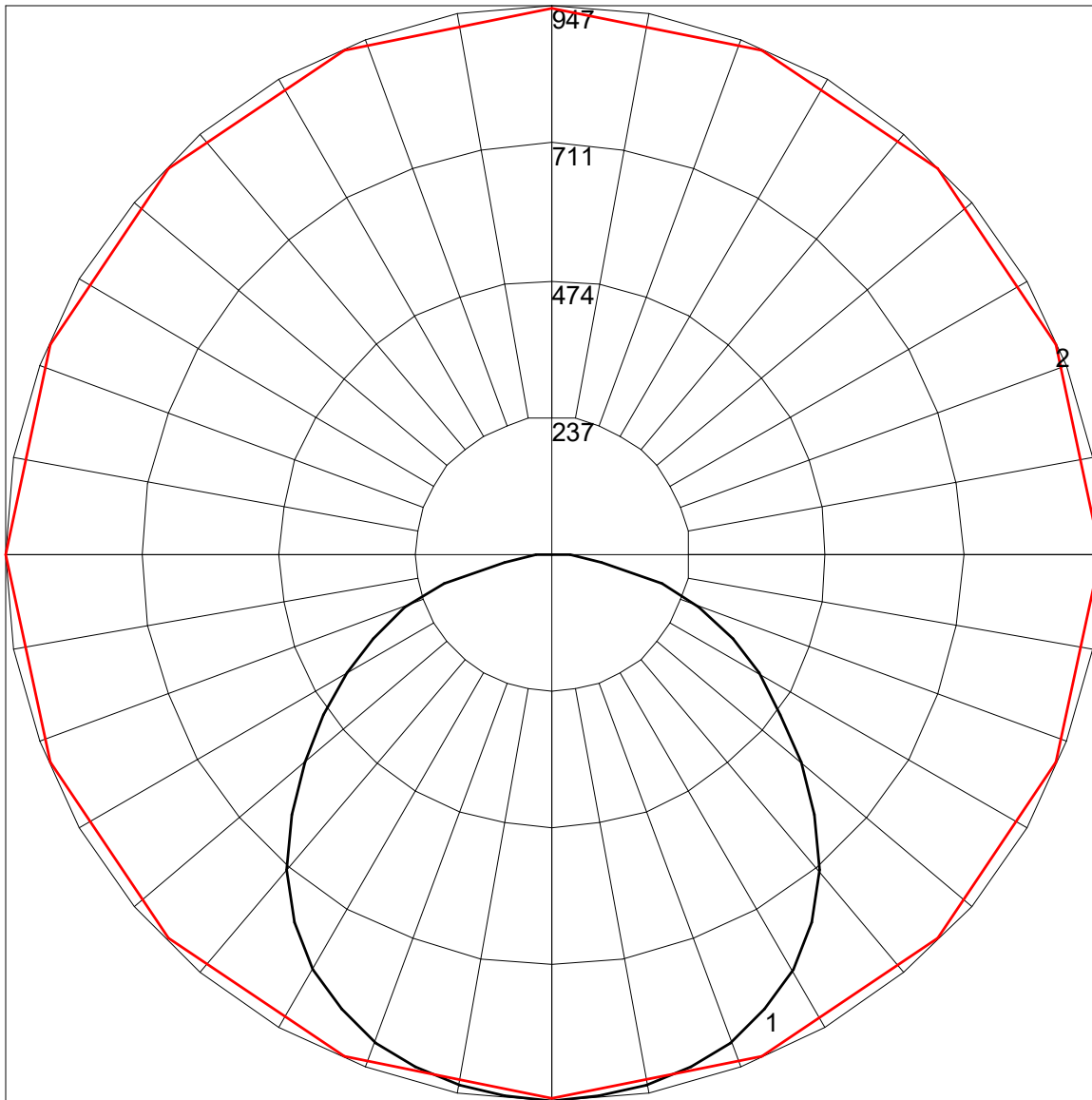
Reflectances

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	12.9	14.5	13.3	14.8	15.2	14.5	16.1	14.9	16.5	16.8
	3H	14.5	16.0	14.9	16.3	16.7	16.5	17.9	16.9	18.3	18.6
	4H	15.1	16.5	15.5	16.9	17.2	17.2	18.6	17.6	19.0	19.3
	6H	15.5	16.8	16.0	17.2	17.6	17.6	18.9	18.0	19.3	19.7
	8H	15.7	16.9	16.1	17.3	17.7	17.7	18.9	18.1	19.3	19.7
	12H	15.7	16.9	16.1	17.3	17.7	17.7	18.9	18.2	19.3	19.7
4H	2H	13.8	15.2	14.2	15.5	15.9	15.1	16.4	15.5	16.8	17.2
	3H	15.7	16.8	16.1	17.2	17.6	17.2	18.4	17.7	18.8	19.2
	4H	16.4	17.4	16.8	17.8	18.3	18.1	19.2	18.6	19.6	20.0
	6H	16.9	17.8	17.3	18.2	18.7	18.6	19.5	19.1	20.0	20.4
	8H	17.0	17.9	17.5	18.3	18.8	18.7	19.6	19.2	20.0	20.5
	12H	17.1	17.9	17.6	18.4	18.8	18.8	19.6	19.3	20.0	20.5
8H	4H	16.9	17.7	17.3	18.2	18.6	18.4	19.2	18.9	19.7	20.2
	6H	17.5	18.2	18.0	18.7	19.2	19.0	19.7	19.5	20.2	20.7
	8H	17.7	18.4	18.2	18.9	19.4	19.1	19.8	19.7	20.3	20.8
	12H	17.9	18.4	18.4	18.9	19.5	19.3	19.8	19.8	20.3	20.9
12H	4H	16.9	17.7	17.4	18.2	18.6	18.4	19.2	18.9	19.7	20.1
	6H	17.6	18.3	18.1	18.7	19.3	19.0	19.7	19.6	20.1	20.7
	8H	17.9	18.5	18.4	18.9	19.5	19.2	19.8	19.7	20.3	20.8

Maximum UGR = 20.9

POLAR GRAPH



Maximum Candela = 947.359 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)