



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-22-P16-835-D-POE.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19435.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 3-JAN-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-22" LED ARRAYS 2x2' LUMINAIRE

[MORE] WHITE REFLECTOR w/2 PIECE FROSTED ACRYLIC LENS IN DOOR

[LUMCAT] AT2-22-P16-835-D-PoE

[_SEARCH_SOURCE TYPE] LED

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

[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1698
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	14.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.30
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	1753	1908	2062
55	1542	1741	1872
65	1363	1594	1750
75	1131	1434	1657
85	608	539	512

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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	668.265	668.265	668.265	668.265	668.265
5	666.872	664.783	664.435	664.086	663.390
10	651.898	651.550	650.157	654.336	655.381
15	629.611	628.915	631.352	640.058	642.844
20	595.832	597.573	607.324	619.860	625.780
25	554.392	560.312	575.983	593.394	602.449
30	511.559	519.220	539.418	562.401	571.107
35	464.895	473.253	496.237	521.658	530.016
40	412.660	420.321	445.046	469.074	479.521
45	358.335	367.389	390.025	412.660	421.366
50	306.448	315.154	337.789	359.728	365.648
55	255.605	263.615	288.688	307.144	310.278
60	208.593	216.603	240.283	257.695	259.088
65	166.457	173.073	194.664	209.986	213.817
70	124.320	130.589	151.135	164.716	169.939
75	84.621	91.238	107.257	117.356	123.972
80	47.012	55.370	56.414	56.066	55.370
85	15.322	18.108	13.581	13.233	12.885
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	241.81	N.A.	14.20
0-30	507.63	N.A.	29.90
0-40	817.65	N.A.	48.20
0-60	1375.45	N.A.	81.00
0-80	1674.94	N.A.	98.60
0-90	1697.87	N.A.	100.00
10-90	1634.82	N.A.	96.30
20-40	575.84	N.A.	33.90
20-50	877.41	N.A.	51.70
40-70	748.28	N.A.	44.10
60-80	299.49	N.A.	17.60
70-80	109.00	N.A.	6.40
80-90	22.93	N.A.	1.40
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	1697.87	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	63.05
10-20	178.76
20-30	265.82
30-40	310.03
40-50	301.56
50-60	256.23
60-70	190.49
70-80	109.00
80-90	22.93
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	122	122	122	122	119	119	119	119	114	114	114	109	109	109	105	105	105	103
1	112	107	103	99	109	105	101	98	101	98	95	97	94	92	93	91	89	87
2	102	94	87	82	100	92	86	81	89	83	79	85	81	77	82	78	75	73
3	94	83	75	68	91	81	74	68	78	72	66	75	70	65	73	68	64	62
4	86	74	65	58	83	72	64	58	70	63	57	67	61	56	65	60	55	53
5	79	66	57	50	77	65	56	50	63	55	50	61	54	49	59	53	49	46
6	73	60	51	44	71	59	50	44	57	49	44	55	48	43	54	48	43	41
7	68	54	45	39	66	53	45	39	52	44	39	50	44	39	49	43	38	36
8	63	50	41	35	62	49	41	35	48	40	35	46	40	35	45	39	34	32
9	59	46	37	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
10	56	42	34	29	54	42	34	29	41	34	29	40	33	29	39	33	28	27

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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

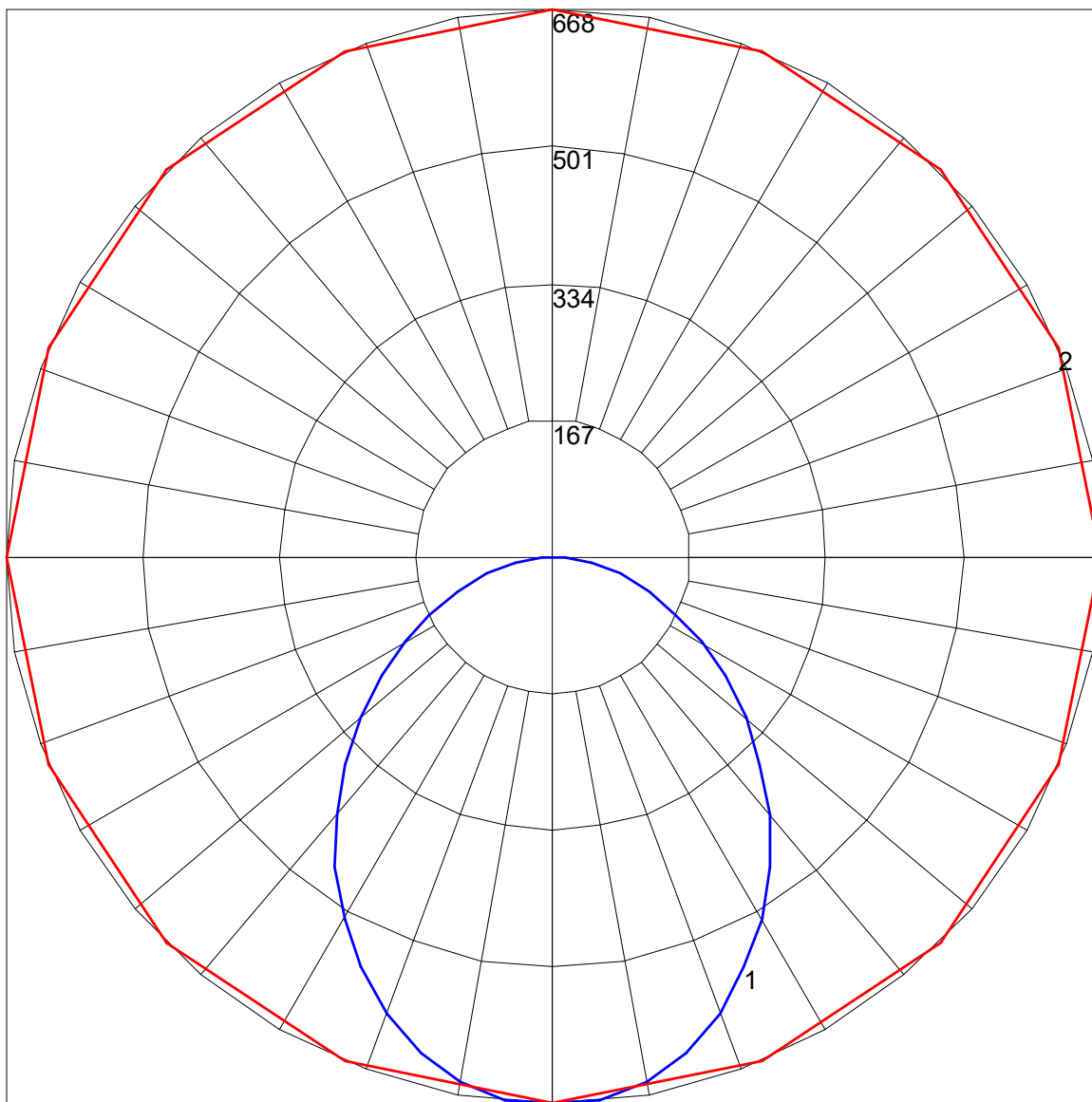
X=2H	Y=2H	13.0	14.6	13.4	14.9	15.2	14.2	15.8	14.6	16.1	16.4
	3H	14.7	16.1	15.0	16.4	16.8	16.1	17.5	16.5	17.9	18.2
	4H	15.3	16.6	15.7	17.0	17.3	16.8	18.2	17.2	18.5	18.9
	6H	15.7	16.9	16.1	17.3	17.7	17.2	18.5	17.7	18.9	19.3
	8H	15.8	17.0	16.2	17.4	17.8	17.3	18.5	17.8	18.9	19.3
	12H	15.8	17.0	16.2	17.3	17.8	17.3	18.5	17.8	18.9	19.3

UGR Viewed Endwise

4H	2H	13.8	15.1	14.2	15.5	15.9	14.7	16.1	15.1	16.4	16.8
	3H	15.7	16.8	16.1	17.2	17.6	16.9	18.0	17.3	18.4	18.8
	4H	16.4	17.4	16.8	17.8	18.2	17.7	18.8	18.2	19.2	19.6
	6H	16.9	17.8	17.3	18.2	18.7	18.3	19.1	18.7	19.6	20.0
	8H	17.0	17.9	17.5	18.3	18.8	18.4	19.2	18.8	19.6	20.1
	12H	17.1	17.9	17.6	18.3	18.8	18.4	19.1	18.9	19.6	20.1
8H	4H	16.8	17.6	17.2	18.0	18.5	18.0	18.8	18.4	19.3	19.7
	6H	17.4	18.1	17.9	18.6	19.1	18.6	19.3	19.1	19.8	20.2
	8H	17.6	18.2	18.1	18.7	19.2	18.7	19.3	19.2	19.8	20.3
	12H	17.7	18.3	18.3	18.8	19.3	18.8	19.3	19.3	19.8	20.4
12H	4H	16.8	17.6	17.3	18.0	18.5	18.0	18.7	18.5	19.2	19.7
	6H	17.5	18.1	18.0	18.6	19.1	18.6	19.2	19.1	19.7	20.2
	8H	17.7	18.3	18.2	18.8	19.3	18.8	19.3	19.3	19.8	20.4

Maximum UGR = 20.4

POLAR GRAPH



Maximum Candela = 668.265 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.)