



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-14-P16-835-D-POE_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]GEN FROM BALLABS TEST NO. 19434.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 15-JAN-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-22" LED ARRAYS 1x4' LUMINAIRE

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

[LUMCAT] AT1-14-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	1649
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	14.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.06
Spacing Criterion (Diagonal)	1.22
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 ft
Luminous Width (90-270)	0.77 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2134	2061	2042
55	1815	1772	1703
65	1613	1563	1155
75	1282	915	837
85	1056	726	539

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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	751.871	751.871	751.871	751.871	751.871
5	743.859	742.825	741.791	740.499	739.982
10	735.071	732.228	727.576	723.957	722.923
15	704.314	701.471	694.492	689.065	685.963
20	671.231	664.769	653.655	643.834	639.957
25	601.704	594.984	583.870	574.565	571.981
30	553.371	544.842	532.177	524.682	522.356
35	501.161	493.149	482.035	476.349	474.540
40	446.626	438.872	430.084	426.982	425.173
45	406.822	398.293	392.865	390.022	389.247
50	340.914	334.711	331.092	328.766	327.215
55	280.692	275.523	273.972	269.319	263.375
60	225.639	222.279	221.245	208.322	195.916
65	183.768	181.700	178.082	146.291	131.558
70	134.660	134.143	117.084	88.395	86.068
75	89.429	90.462	63.841	59.705	58.413
80	54.794	48.074	39.803	37.736	36.443
85	24.813	19.385	17.059	13.699	12.665
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	266.08	N.A.	16.10
0-30	537.82	N.A.	32.60
0-40	841.11	N.A.	51.00
0-60	1385.68	N.A.	84.00
0-80	1627.88	N.A.	98.70
0-90	1648.9	N.A.	100.00
10-90	1578.46	N.A.	95.70
20-40	575.03	N.A.	34.90
20-50	875.19	N.A.	53.10
40-70	707.83	N.A.	42.90
60-80	242.20	N.A.	14.70
70-80	78.93	N.A.	4.80
80-90	21.03	N.A.	1.30
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	1648.9	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	70.44
10-20	195.64
20-30	271.74
30-40	303.29
40-50	300.16
50-60	244.40
60-70	163.27
70-80	78.93
80-90	21.03
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	62
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	50	44	39	37
8	63	50	42	36	62	49	42	36	48	41	36	47	40	36	46	40	35	34
9	59	46	38	33	58	46	38	33	44	37	33	43	37	32	42	37	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	30	28

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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	13.8	15.4	14.2	15.7	16.0	UGR Viewed Endwise			
	3H	15.5	16.9	15.9	17.2	17.6	13.5	15.0	13.8	15.3
	4H	16.1	17.4	16.5	17.7	18.1	14.4	15.8	14.8	16.1
	6H	16.5	17.7	16.9	18.1	18.5	14.7	16.0	15.1	16.4
	8H	16.6	17.8	17.1	18.2	18.6	15.0	16.2	15.4	16.6
	12H	16.7	17.8	17.2	18.2	18.7	15.1	16.2	15.5	16.6

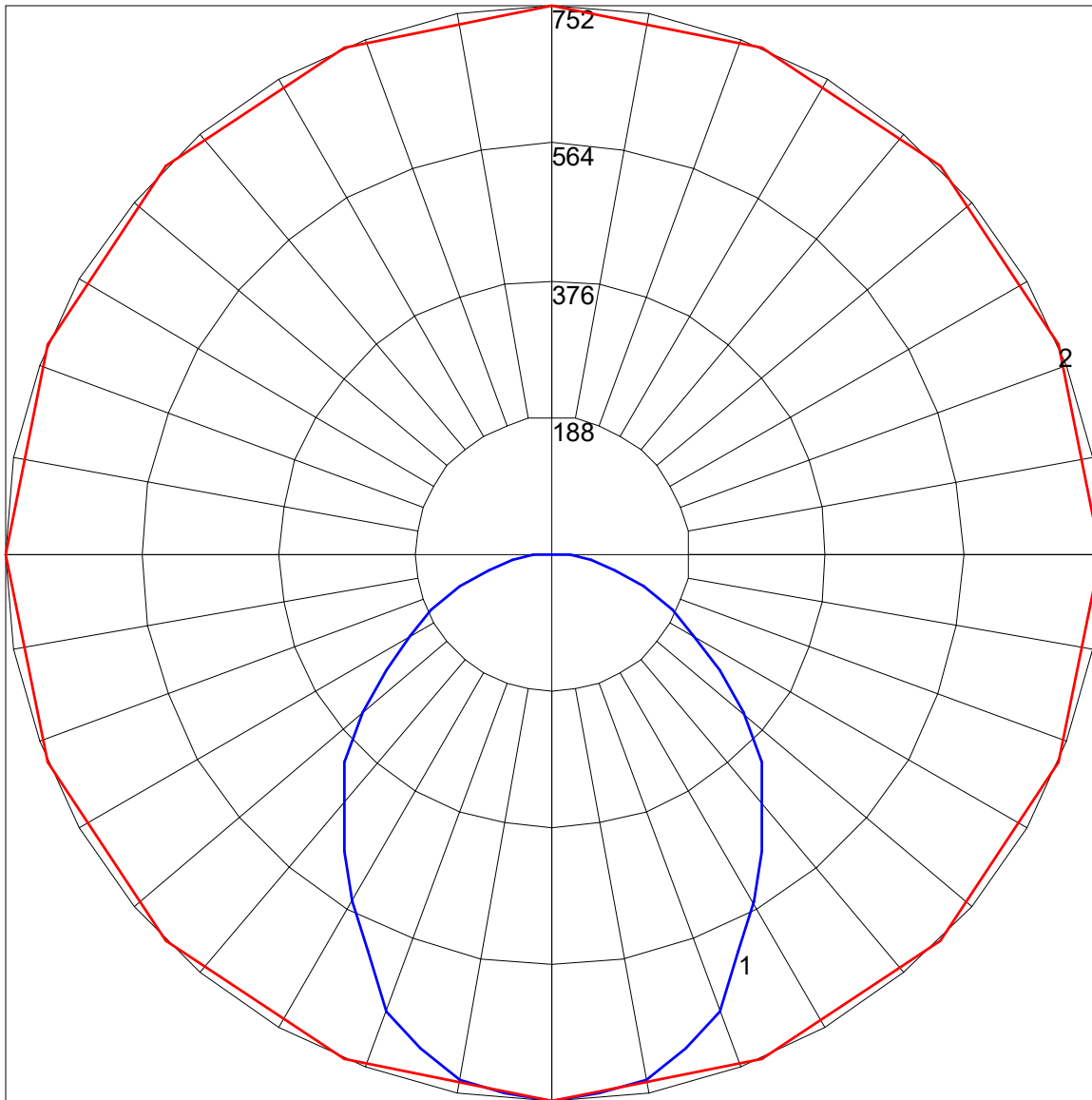
4H	2H	14.4	15.7	14.8	16.1	16.4	14.1	15.4	14.5	15.8	16.1
	3H	16.2	17.3	16.7	17.7	18.1	15.2	16.3	15.6	16.7	17.1
	4H	17.0	17.9	17.4	18.3	18.8	15.6	16.6	16.0	17.0	17.4
	6H	17.5	18.3	17.9	18.8	19.2	16.0	16.8	16.4	17.3	17.7
	8H	17.7	18.4	18.1	18.9	19.4	16.1	16.9	16.6	17.3	17.8
	12H	17.8	18.5	18.3	19.0	19.4	16.2	16.9	16.6	17.3	17.8

8H	4H	17.1	17.9	17.5	18.3	18.8	15.9	16.6	16.3	17.1	17.6
	6H	17.7	18.3	18.2	18.8	19.3	16.3	17.0	16.8	17.5	17.9
	8H	17.9	18.5	18.4	19.0	19.5	16.5	17.1	17.0	17.6	18.1
	12H	18.1	18.6	18.6	19.1	19.7	16.6	17.1	17.1	17.6	18.2

12H	4H	17.1	17.8	17.6	18.3	18.7	15.9	16.6	16.4	17.1	17.5
	6H	17.7	18.3	18.2	18.8	19.3	16.4	17.0	16.9	17.4	18.0
	8H	18.0	18.5	18.5	19.0	19.6	16.6	17.1	17.1	17.6	18.1

Maximum UGR = 19.7

POLAR GRAPH



Maximum Candela = 751.871 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.)