



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AXA-4-L14-8TW-S-LVRS-DIM-UNV 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18640.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 14-JUL-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-56 LED 22" ARRAYS 4' SUSPEND BIDIRECT WHITE REFL LUMINAIRE

[MORE] 23 PER SIDE .125"X2" SLOTS w/WHT ACRYLIC OVERLAY & 24 CELL

[MORE] 2" OC 1.25" DP WHT BLADE LVRS w/OVERLAY

[LUMCAT] AXA-4-L14-8TW-S-LVRS-DIM-UNV 4000k

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Architectural, Classroom, Office, Direct-Indirect

[_SEARCH_MOUNTING] Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5313
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	95
Total Luminaire Watts	55.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.10
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.20
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.84 ft
Luminous Width (90-270)	0.31 ft
Luminous Height	0.26 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	15323	9707	8921
55	12470	6624	5496
65	9495	3893	2867
75	6057	1914	1478
85	3668	717	598

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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	2484.382	2484.382	2484.382	2484.382	2484.382
5	2420.971	2419.838	2425.500	2433.426	2437.956
10	2346.235	2348.500	2363.221	2382.471	2393.794
15	2231.868	2239.794	2251.118	2278.294	2302.074
20	2090.324	2098.250	2108.441	2143.544	2180.912
25	1917.074	1918.206	1927.265	1958.971	2000.868
30	1791.382	1787.985	1791.382	1818.559	1867.250
35	1594.353	1589.824	1587.559	1607.941	1655.500
40	1425.632	1418.838	1406.382	1415.441	1460.735
45	1294.279	1279.559	1255.779	1248.985	1292.015
50	1070.074	1054.221	1021.382	996.471	1022.515
55	877.574	856.059	810.765	764.338	771.132
60	671.485	648.838	596.750	542.397	536.735
65	514.088	489.176	434.824	387.265	377.074
70	349.897	327.250	291.015	262.706	252.515
75	219.676	208.353	186.838	176.647	175.515
80	140.412	131.353	116.632	115.500	115.500
85	63.412	56.618	57.750	60.015	61.147
90	5.662	9.059	15.853	18.118	21.515
95	0.000	6.794	12.456	16.985	18.118
100	2.265	9.059	13.588	18.118	20.382
105	2.265	9.059	13.588	20.382	20.382
110	5.662	12.456	18.118	21.515	22.647
115	6.794	12.456	20.382	21.515	22.647
120	9.059	15.853	21.515	26.044	26.044
125	9.059	16.985	24.912	26.044	26.044
130	12.456	20.382	24.912	26.044	26.044
135	15.853	21.515	28.309	28.309	29.441
140	21.515	26.044	29.441	32.838	32.838
145	22.647	26.044	29.441	32.838	29.441
150	26.044	28.309	31.706	33.971	32.838
155	26.044	29.441	31.706	33.971	32.838
160	28.309	30.574	33.971	35.103	33.971
165	30.574	36.235	38.500	40.765	38.500
170	32.838	32.838	32.838	37.368	33.971
175	33.971	33.971	33.971	33.971	31.706
180	31.706	31.706	31.706	31.706	31.706

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	865.55	N.A.	16.30
0-30	1765.88	N.A.	33.20
0-40	2772.39	N.A.	52.20
0-60	4462.25	N.A.	84.00
0-80	5112.33	N.A.	96.20
0-90	5181.86	N.A.	97.50
10-90	4951.68	N.A.	93.20
20-40	1906.84	N.A.	35.90
20-50	2869.51	N.A.	54.00
40-70	2128.06	N.A.	40.10
60-80	650.07	N.A.	12.20
70-80	211.87	N.A.	4.00
80-90	69.54	N.A.	1.30
90-110	28.59	N.A.	0.50
90-120	46.28	N.A.	0.90
90-130	65.47	N.A.	1.20
90-150	103.49	N.A.	1.90
90-180	131.27	N.A.	2.50
110-180	102.68	N.A.	1.90
0-180	5313.13	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	230.18
10-20	635.37
20-30	900.33
30-40	1006.51
40-50	962.67
50-60	727.19
60-70	438.20
70-80	211.87
80-90	69.54
90-100	13.59
100-110	15.00
110-120	17.68
120-130	19.19
130-140	19.68
140-150	18.34
150-160	14.54
160-170	10.03
170-180	3.21

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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	200	200	200	200	195	195	195	195	185	185	185	176	176	176	168	168	168	165
1	185	178	171	165	180	173	167	162	165	161	156	158	154	151	152	149	146	142
2	170	157	147	138	165	154	144	136	147	139	132	141	135	129	136	130	125	122
3	156	140	127	117	152	137	125	116	131	122	114	126	118	111	122	115	109	105
4	144	125	112	101	140	123	110	100	118	107	99	114	104	97	110	102	95	92
5	133	113	99	88	129	111	98	88	107	95	86	103	93	85	100	91	84	81
6	123	102	88	78	120	101	87	78	97	85	77	94	84	76	91	82	75	71
7	115	93	79	70	112	92	79	69	89	77	69	86	76	68	84	74	67	64
8	107	86	72	63	104	84	71	62	82	70	62	79	69	61	77	68	61	58
9	100	79	66	57	98	78	65	57	76	64	56	74	63	56	72	62	55	52
10	94	73	60	52	92	72	60	52	70	59	51	68	58	51	67	57	51	48

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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	15.8	17.3	16.2	17.7	18.0	16.2	17.7	16.6	18.0	18.4
	3H	16.8	18.1	17.2	18.5	18.9	17.2	18.5	17.6	18.9	19.3
	4H	17.0	18.3	17.5	18.7	19.1	17.5	18.8	18.0	19.2	19.6
	6H	17.2	18.3	17.6	18.7	19.2	17.8	19.0	18.3	19.4	19.8
	8H	17.2	18.3	17.7	18.7	19.2	17.9	19.0	18.4	19.5	19.9
	12H	17.2	18.3	17.7	18.7	19.2	18.0	19.1	18.5	19.5	20.0

UGR Viewed Endwise

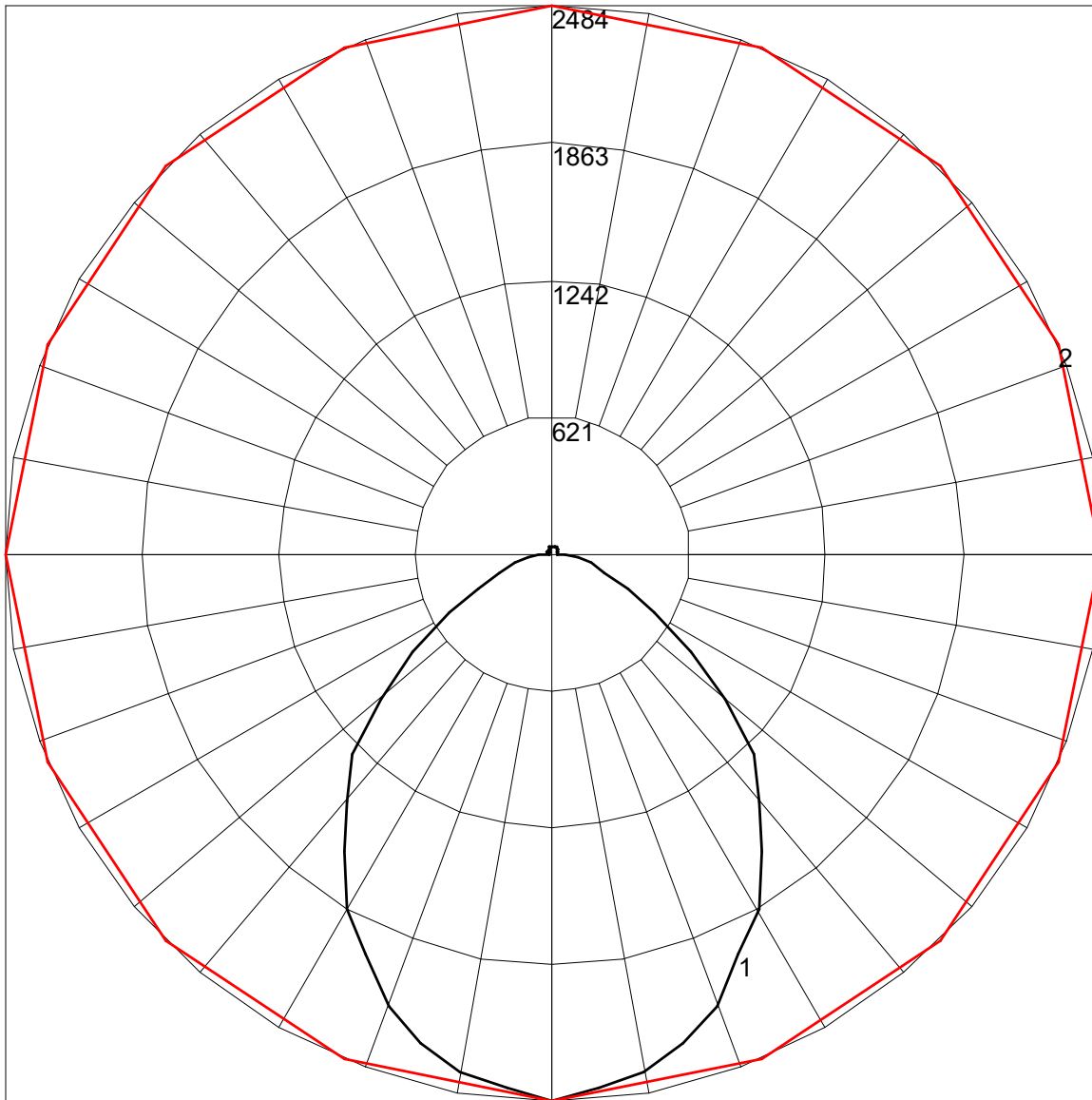
4H	2H	16.1	17.4	16.6	17.8	18.2	16.5	17.7	16.9	18.1	18.5
	3H	17.3	18.3	17.7	18.7	19.2	17.6	18.6	18.0	19.1	19.5
	4H	17.6	18.5	18.0	19.0	19.4	18.0	18.9	18.5	19.4	19.9
	6H	17.8	18.6	18.3	19.1	19.6	18.4	19.2	18.9	19.7	20.2
	8H	17.8	18.6	18.3	19.1	19.6	18.5	19.3	19.0	19.7	20.3
	12H	17.9	18.5	18.4	19.0	19.6	18.6	19.3	19.1	19.8	20.3

8H	4H	17.6	18.4	18.1	18.9	19.4	18.1	18.8	18.6	19.3	19.8
	6H	17.9	18.5	18.4	19.1	19.6	18.5	19.1	19.0	19.6	20.2
	8H	18.0	18.6	18.5	19.1	19.6	18.7	19.2	19.2	19.8	20.3
	12H	18.0	18.5	18.6	19.1	19.7	18.8	19.3	19.3	19.8	20.4

12H	4H	17.6	18.3	18.2	18.8	19.3	18.1	18.7	18.6	19.2	19.8
	6H	17.9	18.5	18.5	19.0	19.6	18.5	19.0	19.0	19.5	20.1
	8H	18.0	18.5	18.6	19.0	19.7	18.7	19.2	19.2	19.7	20.3

Maximum UGR = 20.4

POLAR GRAPH



Maximum Candela = 2484.382 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)