



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AXA-4-L14-927-S-LVRS-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM BALLABS TEST NO. 18640.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 05-31-2023
 [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 & 24CELL
 [MORE] 2"OC 1.25"DP WHT BLADE LVR w/OVERLAY EVERLINE #D21CC80UNV
 [LUMCAT] AXA-4-L14-927-S-LVRS-DIM-UNV
 [LAMPCAT] HLM 90 CRI 2700K CCT
 [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	4516
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	84
Total Luminaire Watts	53.8
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	13025	8251	7583
55	10600	5631	4672
65	8071	3309	2437
75	5149	1627	1257
85	3117	609	508

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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	2111.702	2111.702	2111.702	2111.702	2111.702
5	2057.802	2056.840	2061.652	2068.390	2072.240
10	1994.278	1996.203	2008.715	2025.078	2034.703
15	1897.067	1903.804	1913.429	1936.529	1956.741
20	1776.755	1783.493	1792.155	1821.992	1853.755
25	1629.495	1630.457	1638.157	1665.107	1700.719
30	1522.658	1519.771	1522.658	1545.758	1587.145
35	1355.185	1351.335	1349.410	1366.735	1407.160
40	1211.774	1205.999	1195.412	1203.112	1241.611
45	1100.125	1087.613	1067.401	1061.626	1098.200
50	909.553	896.078	868.165	846.991	869.128
55	745.929	727.642	689.142	649.680	655.455
60	570.756	551.506	507.232	461.032	456.220
65	436.970	415.795	369.596	329.171	320.509
70	297.409	278.159	247.360	223.298	214.635
75	186.723	177.098	158.811	150.148	149.186
80	119.349	111.649	99.136	98.174	98.174
85	53.899	48.124	49.087	51.012	51.974
90	4.812	7.700	13.475	15.400	18.287
95	0.000	5.775	10.587	14.437	15.400
100	1.925	7.700	11.550	15.400	17.325
105	1.925	7.700	11.550	17.325	17.325
110	4.812	10.587	15.400	18.287	19.250
115	5.775	10.587	17.325	18.287	19.250
120	7.700	13.475	18.287	22.137	22.137
125	7.700	14.437	21.175	22.137	22.137
130	10.587	17.325	21.175	22.137	22.137
135	13.475	18.287	24.062	24.062	25.025
140	18.287	22.137	25.025	27.912	27.912
145	19.250	22.137	25.025	27.912	25.025
150	22.137	24.062	26.950	28.875	27.912
155	22.137	25.025	26.950	28.875	27.912
160	24.062	25.987	28.875	29.837	28.875
165	25.987	30.800	32.725	34.650	32.725
170	27.912	27.912	27.912	31.762	28.875
175	28.875	28.875	28.875	28.875	26.950
180	26.950	26.950	26.950	26.950	26.950

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	735.71	N.A.	16.30
0-30	1500.99	N.A.	33.20
0-40	2356.51	N.A.	52.20
0-60	3792.87	N.A.	84.00
0-80	4345.43	N.A.	96.20
0-90	4404.53	N.A.	97.50
10-90	4208.88	N.A.	93.20
20-40	1620.79	N.A.	35.90
20-50	2439.06	N.A.	54.00
40-70	1808.83	N.A.	40.10
60-80	552.56	N.A.	12.20
70-80	180.09	N.A.	4.00
80-90	59.11	N.A.	1.30
90-110	24.30	N.A.	0.50
90-120	39.33	N.A.	0.90
90-130	55.65	N.A.	1.20
90-150	87.96	N.A.	1.90
90-180	111.58	N.A.	2.50
110-180	87.28	N.A.	1.90
0-180	4516.11	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	195.65
10-20	540.06
20-30	765.27
30-40	855.52
40-50	818.26
50-60	618.10
60-70	372.46
70-80	180.09
80-90	59.11
90-100	11.55
100-110	12.75
110-120	15.03
120-130	16.31
130-140	16.73
140-150	15.59
150-160	12.36
160-170	8.53
170-180	2.73

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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	100	100	100	98
1	109	105	101	98	107	103	99	96	98	95	93	94	91	89	90	88	86	84
2	101	93	87	82	98	91	85	81	87	83	78	84	80	76	80	77	74	72
3	92	83	75	70	90	81	74	69	78	72	67	75	70	66	72	68	64	62
4	85	74	66	60	83	73	65	59	70	64	58	67	62	57	65	60	56	54
5	79	67	59	52	77	66	58	52	63	56	51	61	55	50	59	54	50	48
6	73	61	52	46	71	60	52	46	58	51	45	56	50	45	54	49	44	42
7	68	55	47	41	66	54	47	41	53	46	41	51	45	40	50	44	40	38
8	64	51	43	37	62	50	42	37	48	42	37	47	41	36	46	40	36	34
9	59	47	39	34	58	46	39	34	45	38	33	44	37	33	42	37	33	31
10	56	43	36	31	55	43	36	31	42	35	30	41	34	30	39	34	30	28

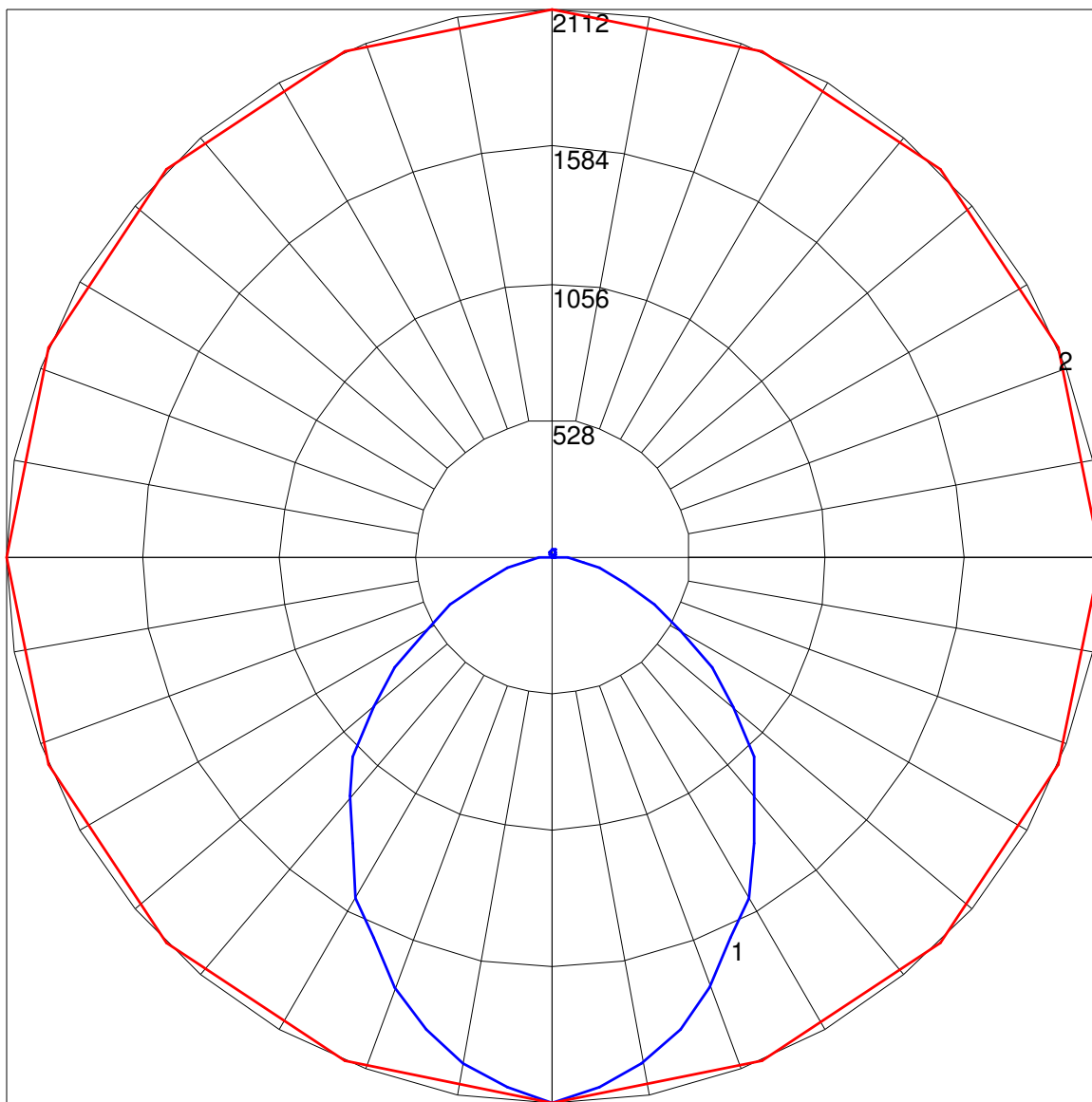
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UGR TABLE - CORRECTED

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					UGR Viewed Endwise				
X=2H	Y=2H	17.0	18.5	17.4	18.9	19.2	17.4	18.9	17.8	19.2	19.6
	3H	18.0	19.3	18.4	19.7	20.1	18.4	19.7	18.8	20.1	20.5
	4H	18.2	19.5	18.7	19.9	20.3	18.7	20.0	19.2	20.4	20.8
	6H	18.4	19.5	18.8	19.9	20.4	19.0	20.2	19.5	20.6	21.0
	8H	18.4	19.5	18.9	19.9	20.4	19.1	20.2	19.6	20.7	21.1
	12H	18.4	19.5	18.9	19.9	20.4	19.2	20.3	19.7	20.7	21.2
4H	2H	17.3	18.6	17.8	19.0	19.4	17.7	18.9	18.1	19.3	19.7
	3H	18.5	19.5	18.9	19.9	20.4	18.8	19.8	19.2	20.3	20.7
	4H	18.8	19.7	19.2	20.2	20.6	19.2	20.1	19.7	20.6	21.1
	6H	19.0	19.8	19.5	20.3	20.8	19.6	20.4	20.1	20.9	21.4
	8H	19.0	19.8	19.5	20.3	20.8	19.7	20.5	20.2	21.0	21.5
	12H	19.1	19.7	19.6	20.2	20.8	19.8	20.5	20.3	21.0	21.5
8H	4H	18.8	19.6	19.3	20.1	20.6	19.3	20.0	19.8	20.5	21.0
	6H	19.1	19.7	19.6	20.3	20.8	19.7	20.3	20.2	20.8	21.4
	8H	19.2	19.8	19.7	20.3	20.8	19.9	20.4	20.4	21.0	21.5
	12H	19.2	19.7	19.8	20.3	20.9	20.0	20.5	20.5	21.0	21.6
12H	4H	18.8	19.5	19.4	20.0	20.6	19.3	19.9	19.8	20.4	21.0
	6H	19.1	19.7	19.7	20.2	20.8	19.7	20.2	20.2	20.7	21.3
	8H	19.2	19.7	19.8	20.2	20.9	19.9	20.4	20.4	20.9	21.5

Maximum UGR = 21.6

POLAR GRAPH



Maximum Candela = 2111.702 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.)