



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-24-L55-935-D-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18892.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 28 JUNE 2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4-56LED 22"ARRAYS-SERIES 2x4'LUMINAIRE w/WHITE

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

[LUMCAT] AT2-24-L55-935-D-DIM-UNV

[LAMPCAT] HLM 90 CRI 3500K CCT

[_SEARCH_SOURCETYPE] 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	4628
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	45
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 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	2324	2477	2575
55	2004	2162	2269
65	1764	1950	2049
75	1450	1734	1837
85	1138	1408	1290

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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	1910.920	1910.920	1910.920	1910.920	1910.920
5	1891.981	1891.981	1892.612	1893.875	1895.138
10	1856.629	1858.523	1865.467	1873.042	1876.199
15	1774.561	1778.980	1793.500	1806.757	1810.545
20	1702.594	1712.063	1737.315	1760.673	1768.879
25	1536.564	1550.452	1580.123	1606.637	1621.157
30	1399.574	1414.725	1453.233	1482.904	1498.686
35	1290.992	1310.562	1353.489	1388.842	1402.099
40	1136.956	1157.789	1201.348	1238.594	1245.538
45	1014.486	1036.581	1081.403	1115.492	1124.330
50	850.981	871.814	914.110	941.256	952.619
55	709.572	727.879	765.757	789.746	803.634
60	569.425	585.839	619.928	640.761	648.337
65	460.212	477.888	508.821	530.916	534.704
70	344.054	360.468	390.138	409.708	412.865
75	231.684	247.466	277.137	289.763	293.551
80	141.409	158.454	181.181	176.762	176.762
85	61.235	75.124	75.755	71.336	69.442
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	687.85	N.A.	14.90
0-30	1418.91	N.A.	30.70
0-40	2256.17	N.A.	48.80
0-60	3757.79	N.A.	81.20
0-80	4542.61	N.A.	98.20
0-90	4627.71	N.A.	100.00
10-90	4447.77	N.A.	96.10
20-40	1568.32	N.A.	33.90
20-50	2389.86	N.A.	51.60
40-70	1998.28	N.A.	43.20
60-80	784.82	N.A.	17.00
70-80	288.16	N.A.	6.20
80-90	85.10	N.A.	1.80
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	4627.71	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	179.94
10-20	507.91
20-30	731.06
30-40	837.26
40-50	821.55
50-60	680.08
60-70	496.66
70-80	288.16
80-90	85.10
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	109	104	100	97	106	102	98	95	98	95	92	94	92	89	90	88	87	85
2	100	92	85	79	97	90	84	79	86	81	77	83	79	75	80	76	73	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	61
4	84	72	64	57	81	71	63	57	68	61	56	66	60	55	64	59	54	52
5	77	65	56	49	75	64	55	49	61	54	49	60	53	48	58	52	48	46
6	71	58	50	43	70	58	49	43	56	48	43	54	48	43	53	47	42	40
7	66	53	45	39	65	52	44	38	51	44	38	49	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

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UGR TABLE - CORRECTED

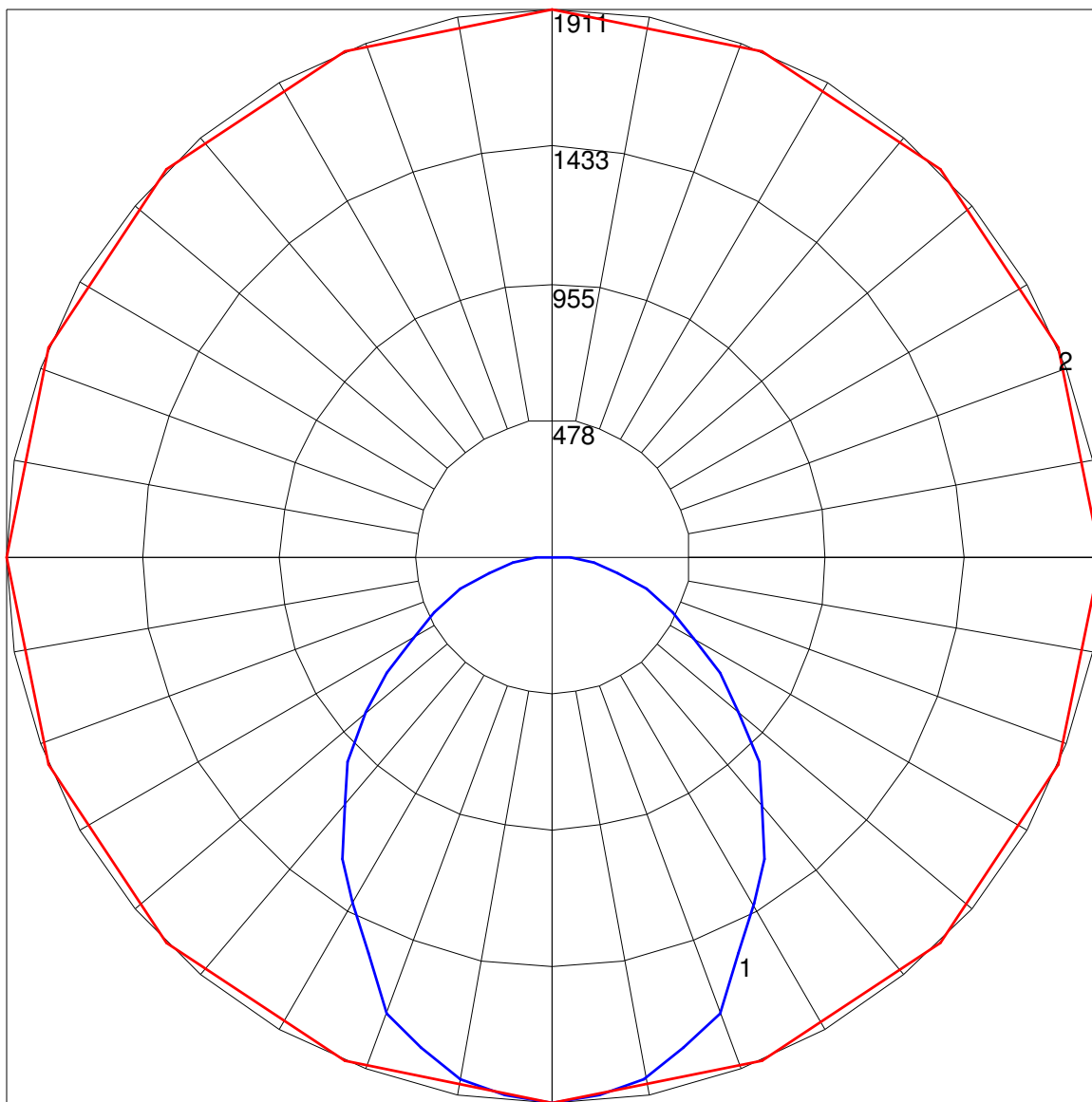
Reflectances

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	14.0	15.6	14.4	15.9	16.2	14.7	16.2	15.0	16.6	16.9
	3H	15.7	17.1	16.1	17.4	17.8	16.5	17.9	16.9	18.2	18.6
	4H	16.3	17.6	16.7	18.0	18.3	17.2	18.5	17.6	18.9	19.2
	6H	16.7	18.0	17.1	18.3	18.7	17.7	18.9	18.1	19.3	19.7
	8H	16.9	18.1	17.3	18.4	18.8	17.9	19.0	18.3	19.4	19.8
	12H	17.0	18.1	17.4	18.5	18.9	17.9	19.1	18.4	19.5	19.9
4H	2H	14.7	16.1	15.1	16.4	16.8	15.2	16.6	15.6	16.9	17.3
	3H	16.6	17.7	17.0	18.1	18.5	17.3	18.4	17.7	18.8	19.2
	4H	17.3	18.3	17.8	18.7	19.2	18.1	19.1	18.5	19.5	20.0
	6H	17.9	18.8	18.4	19.2	19.7	18.8	19.7	19.2	20.1	20.6
	8H	18.1	18.9	18.6	19.4	19.8	19.0	19.8	19.4	20.3	20.7
	12H	18.2	19.0	18.7	19.5	19.9	19.1	19.9	19.6	20.3	20.8
8H	4H	17.7	18.5	18.2	19.0	19.4	18.4	19.2	18.9	19.7	20.1
	6H	18.4	19.1	18.9	19.6	20.1	19.2	19.9	19.7	20.4	20.8
	8H	18.7	19.3	19.2	19.8	20.3	19.5	20.1	20.0	20.6	21.1
	12H	18.9	19.5	19.4	20.0	20.5	19.7	20.2	20.2	20.7	21.3
12H	4H	17.8	18.5	18.2	19.0	19.4	18.4	19.2	18.9	19.6	20.1
	6H	18.5	19.1	19.0	19.6	20.1	19.3	19.9	19.8	20.3	20.9
	8H	18.8	19.4	19.4	19.9	20.5	19.6	20.1	20.1	20.6	21.2

Maximum UGR = 21.3

POLAR GRAPH



Maximum Candela = 1910.92 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.)