



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-24-L40-B40S-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] 09-AUG-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE w/WHITE

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

[MORE] W/BIOS SKY BLUE STATIC MODULES

[LUMCAT] AT2-24-L40-B40S-D-DIM-UNV

[LAMPCAT] BIOS SKY BLUE BH-00SM

[_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	4255
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	33
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	2136	2277	2368
55	1842	1988	2086
65	1621	1793	1884
75	1333	1594	1689
85	1046	1294	1186

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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	1756.907	1756.907	1756.907	1756.907	1756.907
5	1739.495	1739.495	1740.075	1741.236	1742.397
10	1706.992	1708.733	1715.117	1722.082	1724.984
15	1631.538	1635.601	1648.950	1661.139	1664.622
20	1565.371	1574.077	1597.294	1618.769	1626.314
25	1412.723	1425.492	1452.771	1477.148	1490.498
30	1286.773	1300.703	1336.108	1363.388	1377.898
35	1186.942	1204.935	1244.403	1276.906	1289.095
40	1045.322	1064.476	1104.524	1138.768	1145.153
45	932.722	953.036	994.246	1025.588	1033.714
50	782.395	801.549	840.437	865.394	875.842
55	652.383	669.215	704.040	726.095	738.864
60	523.532	538.622	569.965	589.118	596.083
65	423.120	439.372	467.812	488.126	491.609
70	316.325	331.415	358.695	376.687	379.589
75	213.011	227.521	254.801	266.409	269.892
80	130.012	145.683	166.578	162.515	162.515
85	56.300	69.069	69.649	65.587	63.845
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	632.41	N.A.	14.90
0-30	1304.55	N.A.	30.70
0-40	2074.33	N.A.	48.80
0-60	3454.93	N.A.	81.20
0-80	4176.49	N.A.	98.20
0-90	4254.74	N.A.	100.00
10-90	4089.3	N.A.	96.10
20-40	1441.92	N.A.	33.90
20-50	2197.25	N.A.	51.60
40-70	1837.23	N.A.	43.20
60-80	721.56	N.A.	17.00
70-80	264.93	N.A.	6.20
80-90	78.24	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	4254.74	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	165.44
10-20	466.97
20-30	672.14
30-40	769.78
40-50	755.33
50-60	625.26
60-70	456.63
70-80	264.93
80-90	78.24
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

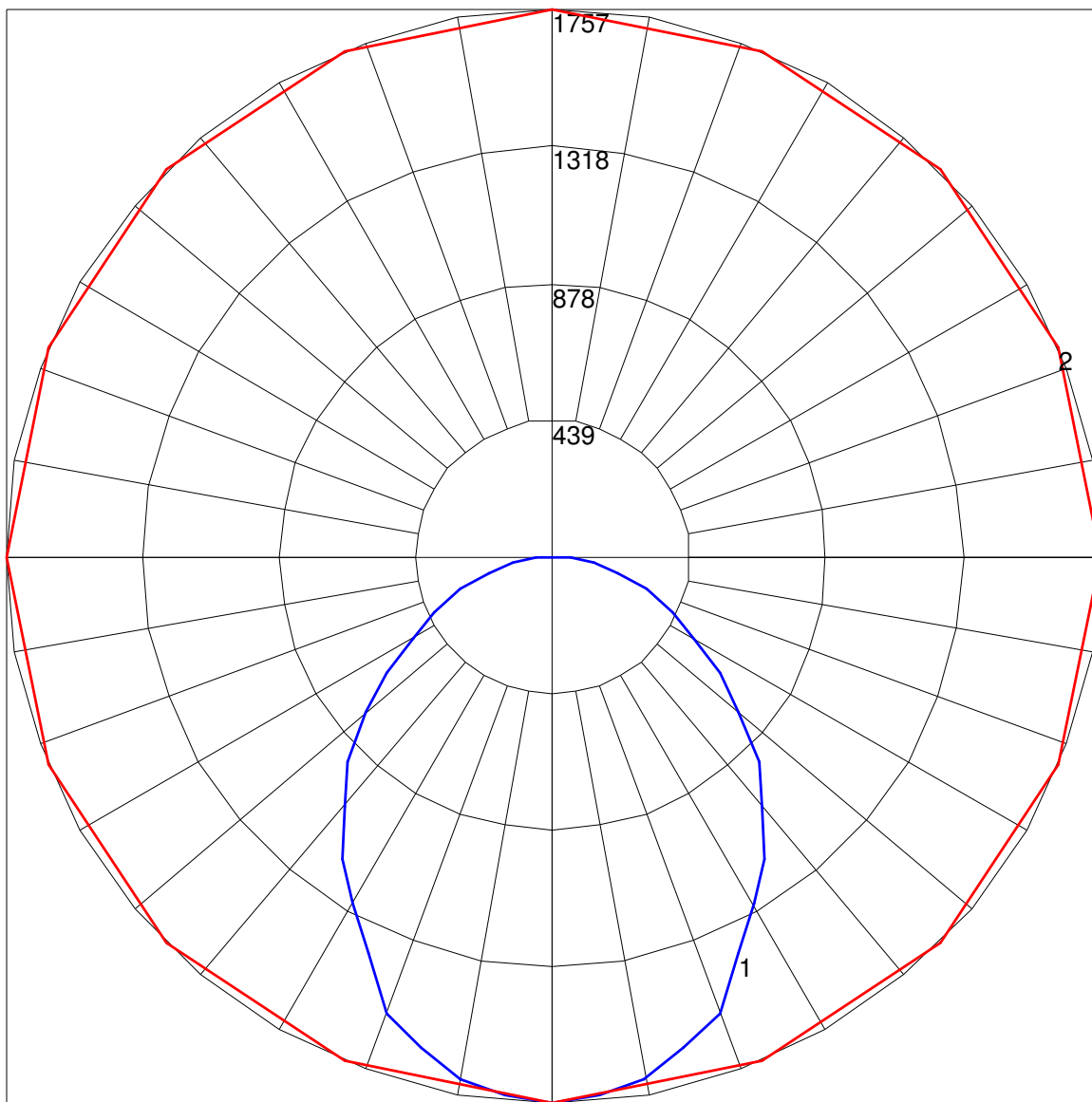
Reflectances

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	13.7	15.3	14.1	15.6	15.9	14.4	15.9	14.7	16.3	16.6
	3H	15.4	16.8	15.8	17.1	17.5	16.2	17.6	16.6	17.9	18.3
	4H	16.0	17.3	16.4	17.7	18.0	16.9	18.2	17.3	18.6	18.9
	6H	16.4	17.7	16.8	18.0	18.4	17.4	18.6	17.8	19.0	19.4
	8H	16.6	17.8	17.0	18.1	18.5	17.6	18.7	18.0	19.1	19.5
	12H	16.7	17.8	17.1	18.2	18.6	17.6	18.8	18.1	19.2	19.6
4H	2H	14.4	15.8	14.8	16.1	16.5	14.9	16.3	15.3	16.6	17.0
	3H	16.3	17.4	16.7	17.8	18.2	17.0	18.1	17.4	18.5	18.9
	4H	17.0	18.0	17.5	18.4	18.9	17.8	18.8	18.2	19.2	19.7
	6H	17.6	18.5	18.1	18.9	19.4	18.5	19.4	18.9	19.8	20.3
	8H	17.8	18.6	18.3	19.1	19.5	18.7	19.5	19.1	20.0	20.4
	12H	17.9	18.7	18.4	19.2	19.6	18.8	19.6	19.3	20.0	20.5
8H	4H	17.4	18.2	17.9	18.7	19.1	18.1	18.9	18.6	19.4	19.8
	6H	18.1	18.8	18.6	19.3	19.8	18.9	19.6	19.4	20.1	20.5
	8H	18.4	19.0	18.9	19.5	20.0	19.2	19.8	19.7	20.3	20.8
	12H	18.6	19.2	19.1	19.7	20.2	19.4	19.9	19.9	20.4	21.0
12H	4H	17.5	18.2	17.9	18.7	19.1	18.1	18.9	18.6	19.3	19.8
	6H	18.2	18.8	18.7	19.3	19.8	19.0	19.6	19.5	20.0	20.6
	8H	18.5	19.1	19.1	19.6	20.2	19.3	19.8	19.8	20.3	20.9

Maximum UGR = 21.0

POLAR GRAPH



Maximum Candela = 1756.907 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.)