

IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-24-L40-835-D-(L20)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19260.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 03-06-2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 2x4' RECESSED LUMINAIRE

[MORE] WITH FROSTED ACRYLIC LENS

[LUMCAT] AT3-24-L40-835-D-(L20)-DIM-UNV

[LAMPCAT] HLM 80 CRI, 3500K CCT

[_SEARCH_SOURCE TYPE] LED

[_SEARCH_APPLICATION] INDOOR, COMMERCIAL, DIRECT, OFFICE, ARCHITECTURAL

[_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1988
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	127
Total Luminaire Watts	15.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 ft
Luminous Width (90-270)	1.88 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	906	1012	1080
55	772	894	951
65	701	856	919
75	596	815	815
85	528	376	352

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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	792.095	792.095	792.095	792.095	792.095
5	787.905	788.185	788.185	788.464	788.743
10	771.985	772.823	774.778	777.292	778.968
15	743.497	745.452	749.921	756.624	759.696
20	700.764	704.953	715.567	728.414	733.721
25	643.228	648.535	664.175	681.492	689.312
30	582.620	639.597	604.126	602.171	646.021
35	521.174	530.670	557.762	584.296	594.350
40	462.242	473.134	505.533	531.508	539.887
45	419.788	433.194	469.224	492.965	500.506
50	353.315	368.676	402.192	421.743	426.770
55	290.193	306.113	336.277	352.197	357.783
60	236.009	252.487	278.183	292.706	297.455
65	194.114	212.268	237.126	250.811	254.722
70	146.912	166.184	188.807	199.700	201.655
75	101.107	120.378	138.254	139.929	138.254
80	65.356	84.907	83.231	57.815	52.508
85	30.164	34.633	21.506	20.389	20.110
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	286.28	N.A.	14.40
0-30	593.20	N.A.	29.80
0-40	942.81	N.A.	47.40
0-60	1592.38	N.A.	80.10
0-80	1954.72	N.A.	98.30
0-90	1987.94	N.A.	100.00
10-90	1913.12	N.A.	96.20
20-40	656.53	N.A.	33.00
20-50	1009.2	N.A.	50.80
40-70	876.69	N.A.	44.10
60-80	362.35	N.A.	18.20
70-80	135.22	N.A.	6.80
80-90	33.22	N.A.	1.70
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	1987.94	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	74.82
10-20	211.46
20-30	306.92
30-40	349.61
40-50	352.67
50-60	296.90
60-70	227.12
70-80	135.22
80-90	33.22
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	99	99	99	99	97	97	97	97	93	93	93	89	89	89	85	85	85	83
1	91	87	83	80	89	85	82	79	81	79	76	78	76	74	75	73	72	70
2	83	76	70	66	81	74	69	65	71	67	63	69	65	62	66	63	61	59
3	76	67	60	55	74	66	59	54	63	58	53	61	56	53	59	55	52	50
4	69	60	52	47	67	58	52	47	56	50	46	54	49	45	53	48	45	43
5	64	53	46	41	62	52	45	40	51	45	40	49	44	39	47	43	39	37
6	59	48	41	36	58	47	40	35	46	40	35	44	39	35	43	38	34	33
7	55	44	37	32	53	43	36	31	42	36	31	41	35	31	40	35	31	29
8	51	40	33	28	50	39	33	28	38	32	28	37	32	28	36	31	28	26
9	48	37	30	26	47	36	30	25	35	29	25	35	29	25	34	29	25	24
10	45	34	28	23	44	34	27	23	33	27	23	32	27	23	31	26	23	21

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UGR TABLE - CORRECTED

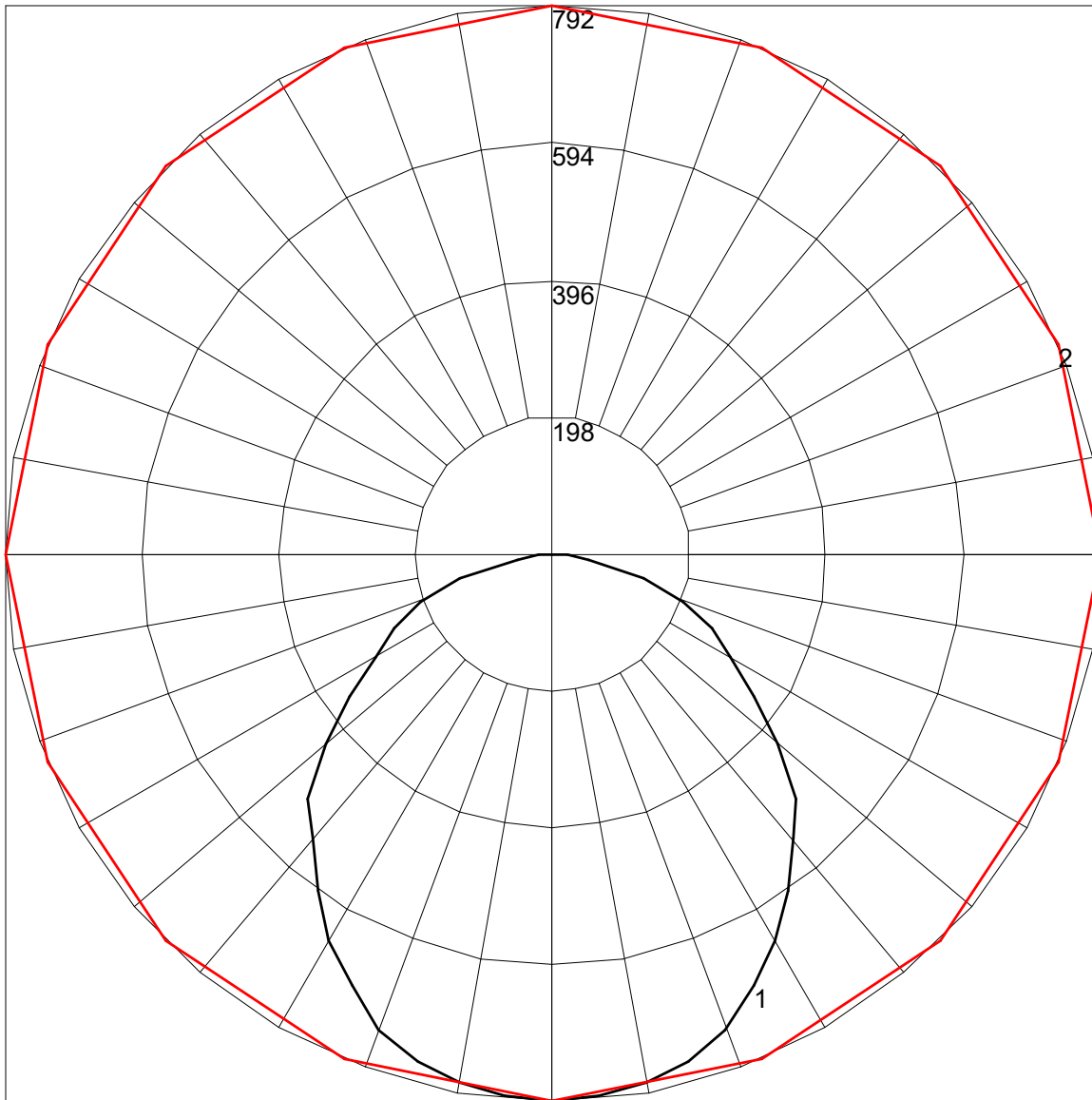
Reflectances

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	11.4	13.0	11.8	13.3	13.6	12.5	14.1	12.8	14.4	14.7
	3H	13.2	14.6	13.5	14.9	15.3	14.5	16.0	14.9	16.3	16.6
	4H	13.8	15.2	14.2	15.5	15.9	15.2	16.6	15.6	17.0	17.3
	6H	14.3	15.6	14.7	16.0	16.4	15.6	16.8	16.0	17.2	17.6
	8H	14.5	15.7	15.0	16.1	16.5	15.6	16.8	16.0	17.2	17.6
	12H	14.7	15.8	15.1	16.2	16.6	15.7	16.8	16.1	17.2	17.6
4H	2H	12.2	13.6	12.6	14.0	14.3	13.1	14.4	13.5	14.8	15.2
	3H	14.3	15.4	14.7	15.8	16.2	15.3	16.5	15.8	16.9	17.3
	4H	15.1	16.1	15.5	16.5	16.9	16.2	17.3	16.7	17.7	18.1
	6H	15.7	16.7	16.2	17.1	17.5	16.6	17.5	17.1	18.0	18.4
	8H	16.0	16.8	16.4	17.3	17.7	16.7	17.6	17.2	18.0	18.5
	12H	16.1	16.9	16.6	17.4	17.9	16.8	17.5	17.2	18.0	18.5
8H	4H	15.5	16.4	16.0	16.8	17.3	16.5	17.4	17.0	17.8	18.3
	6H	16.4	17.1	16.9	17.6	18.1	17.0	17.7	17.5	18.2	18.7
	8H	16.7	17.3	17.2	17.9	18.3	17.1	17.8	17.6	18.3	18.8
	12H	17.0	17.5	17.5	18.0	18.6	17.2	17.8	17.7	18.3	18.8
12H	4H	15.6	16.3	16.0	16.8	17.3	16.6	17.3	17.0	17.8	18.3
	6H	16.5	17.1	17.0	17.6	18.1	17.1	17.7	17.6	18.2	18.7
	8H	16.8	17.4	17.3	17.9	18.5	17.3	17.8	17.8	18.3	18.9

Maximum UGR = 18.9

POLAR GRAPH



Maximum Candela = 792.095 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.)