



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-24-L40-835-D-(L31)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 18887.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 06-21-2022
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 2x4' RECESSED LUMINAIRE
 [MORE] WITH FROST CONCAVE ACRYLIC LENS w/DEEP ACRYLIC CENTER
 [MORE] DIFFUSER
 [LUMCAT] AT2-24-L40-835-(L31)-D-DIM-UNV
 [LAMPCAT] HLM 80 CRI, 3500K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Office, Direct
 [_SEARCH_MOUNTING] Ceiling, Recessed
 [_SEARCH_CERTIFICATION] DLC

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3124
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	25.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.26
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	1543	1642	1711
55	1329	1434	1488
65	1156	1279	1341
75	956	1145	1202
85	729	915	841

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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	1312.140	1312.140	1312.140	1312.140	1312.140
5	1312.140	1312.140	1312.140	1314.151	1314.151
10	1273.932	1274.937	1278.959	1283.986	1288.008
15	1227.680	1231.702	1241.757	1250.806	1256.839
20	1157.297	1164.335	1180.423	1196.510	1204.554
25	1060.772	1068.816	1091.941	1111.045	1118.084
30	969.274	981.340	1006.476	1029.602	1038.652
35	888.836	900.902	930.061	955.197	962.236
40	769.185	784.267	814.432	836.552	846.607
45	673.666	687.742	716.901	737.010	747.065
50	569.097	583.173	609.315	629.425	634.452
55	470.560	482.626	507.763	524.856	526.867
60	383.084	395.150	416.265	429.336	435.369
65	301.641	313.707	333.816	344.877	349.904
70	226.231	235.280	255.390	266.450	270.472
75	152.832	163.892	182.996	192.045	192.045
80	90.492	101.553	118.646	114.624	111.607
85	39.213	49.268	49.268	45.246	45.246
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	473.31	N.A.	15.10
0-30	976.69	N.A.	31.30
0-40	1551.47	N.A.	49.70
0-60	2553.07	N.A.	81.70
0-80	3069.48	N.A.	98.20
0-90	3124.46	N.A.	100.00
10-90	3000.33	N.A.	96.00
20-40	1078.16	N.A.	34.50
20-50	1626.81	N.A.	52.10
40-70	1329.08	N.A.	42.50
60-80	516.41	N.A.	16.50
70-80	188.93	N.A.	6.00
80-90	54.98	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	3124.46	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	124.13
10-20	349.19
20-30	503.38
30-40	574.78
40-50	548.65
50-60	452.95
60-70	327.48
70-80	188.93
80-90	54.98
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	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	92	85	80	97	90	84	79	87	81	77	83	79	75	80	77	74	72
3	91	81	73	67	89	80	72	67	77	71	65	74	69	64	71	67	63	61
4	84	72	64	57	82	71	63	57	69	62	56	66	60	56	64	59	55	53
5	78	65	56	50	75	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	49	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	35	45	39	34	33
9	58	45	37	32	57	45	37	32	43	36	32	42	36	31	41	36	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	39	33	29	27

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UGR TABLE - CORRECTED

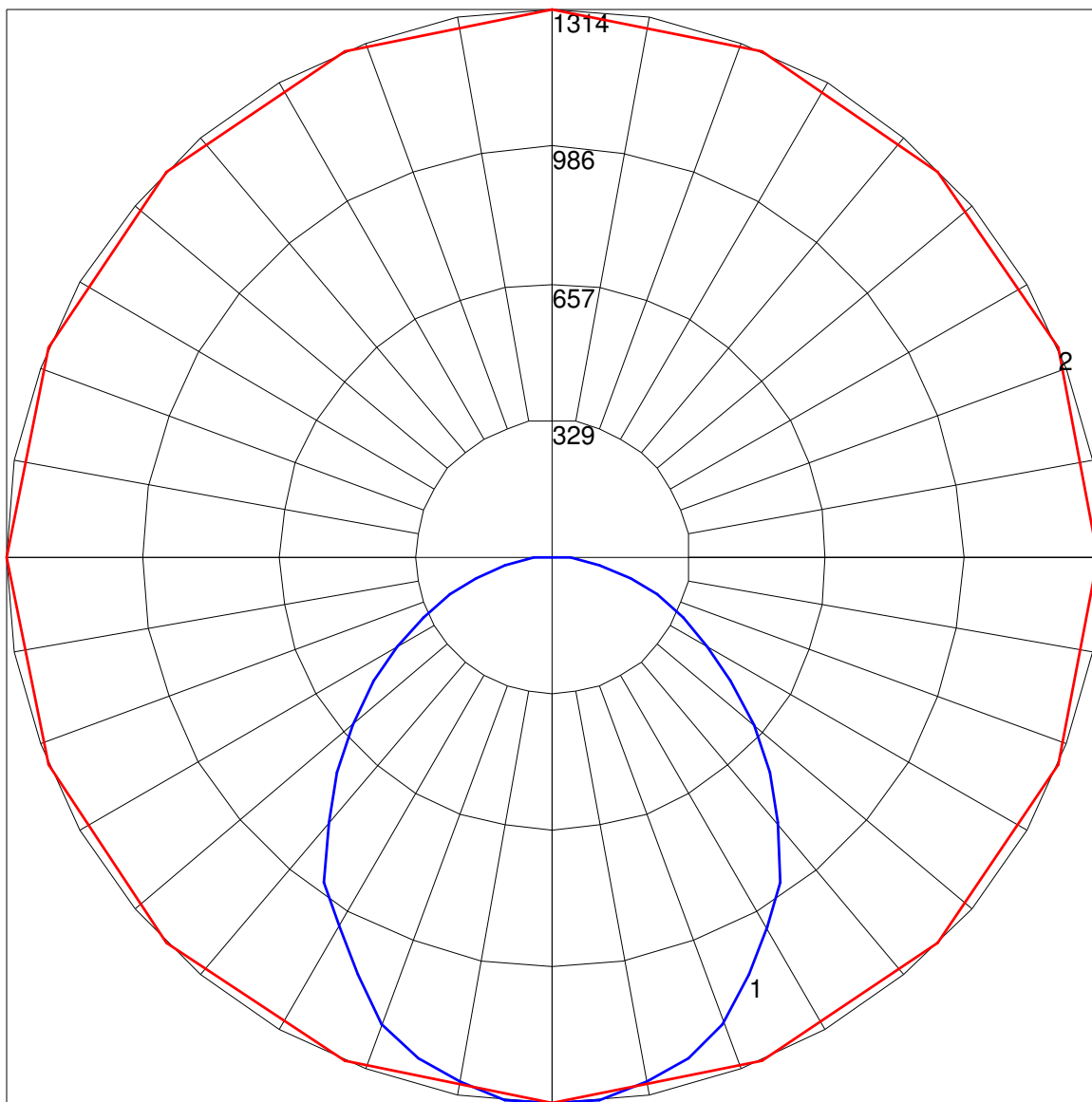
Reflectances

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	12.6	14.2	13.0	14.5	14.9	13.3	14.9	13.6	15.2	15.5
	3H	14.3	15.7	14.7	16.0	16.4	15.0	16.5	15.4	16.8	17.2
	4H	14.9	16.2	15.3	16.5	16.9	15.7	17.1	16.1	17.4	17.8
	6H	15.3	16.5	15.7	16.9	17.3	16.2	17.5	16.6	17.8	18.2
	8H	15.4	16.6	15.8	17.0	17.4	16.4	17.6	16.8	17.9	18.3
	12H	15.5	16.6	15.9	17.0	17.4	16.5	17.6	16.9	18.0	18.4
4H	2H	13.3	14.7	13.7	15.0	15.4	13.8	15.2	14.2	15.5	15.9
	3H	15.2	16.3	15.6	16.7	17.1	15.8	16.9	16.2	17.3	17.7
	4H	15.9	16.9	16.3	17.3	17.7	16.6	17.7	17.1	18.1	18.5
	6H	16.4	17.3	16.9	17.8	18.2	17.3	18.2	17.7	18.6	19.1
	8H	16.6	17.4	17.1	17.9	18.4	17.5	18.3	17.9	18.8	19.2
	12H	16.7	17.5	17.2	18.0	18.4	17.6	18.4	18.1	18.8	19.3
8H	4H	16.2	17.1	16.7	17.5	18.0	16.9	17.8	17.4	18.2	18.7
	6H	17.0	17.6	17.4	18.1	18.6	17.7	18.4	18.2	18.9	19.4
	8H	17.2	17.8	17.7	18.3	18.8	18.0	18.6	18.5	19.1	19.6
	12H	17.4	18.0	18.0	18.5	19.0	18.2	18.7	18.7	19.2	19.8
12H	4H	16.3	17.0	16.8	17.5	18.0	17.0	17.7	17.4	18.2	18.6
	6H	17.0	17.7	17.6	18.1	18.7	17.8	18.4	18.3	18.8	19.4
	8H	17.4	17.9	17.9	18.4	19.0	18.1	18.6	18.6	19.1	19.7

Maximum UGR = 19.8

POLAR GRAPH



Maximum Candela = 1314.151 Located At Horizontal Angle = 67.5, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (67.5 - 247.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)