



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-24-L40-835-D-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

[ISSUEDATE] 07-08-2020

[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-DIM-UNV

[LAMPCAT] HLM 80 CRI, 3500K CCT

[_SEARCH_SOURCETYPE]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	4035
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	34.6
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	1838	2054	2191
55	1566	1815	1931
65	1422	1737	1866
75	1209	1654	1654
85	1071	764	714

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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	1607.651	1607.651	1607.651	1607.651	1607.651
5	1599.148	1599.715	1599.715	1600.282	1600.849
10	1566.836	1568.537	1572.505	1577.607	1581.008
15	1509.015	1512.983	1522.053	1535.658	1541.894
20	1422.284	1430.787	1452.328	1478.404	1489.175
25	1305.508	1316.278	1348.023	1383.169	1399.042
30	1182.496	1298.139	1226.146	1222.178	1311.177
35	1057.784	1077.058	1132.045	1185.898	1206.305
40	938.174	960.282	1026.040	1078.759	1095.765
45	852.010	879.220	952.346	1000.530	1015.836
50	717.094	748.272	816.297	855.978	866.182
55	588.981	621.292	682.515	714.826	726.164
60	479.007	512.453	564.605	594.083	603.719
65	393.977	430.823	481.275	509.052	516.988
70	298.175	337.289	383.206	405.314	409.282
75	205.208	244.322	280.602	284.003	280.602
80	132.648	172.329	168.928	117.343	106.572
85	61.222	70.292	43.649	41.382	40.815
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	581.04	N.A.	14.40
0-30	1203.96	N.A.	29.80
0-40	1913.54	N.A.	47.40
0-60	3231.92	N.A.	80.10
0-80	3967.34	N.A.	98.30
0-90	4034.76	N.A.	100.00
10-90	3882.91	N.A.	96.20
20-40	1332.5	N.A.	33.00
20-50	2048.3	N.A.	50.80
40-70	1779.35	N.A.	44.10
60-80	735.42	N.A.	18.20
70-80	274.45	N.A.	6.80
80-90	67.42	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	4034.76	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	151.86
10-20	429.18
20-30	622.93
30-40	709.58
40-50	715.80
50-60	602.59
60-70	460.97
70-80	274.45
80-90	67.42
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	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	49	43	55	48	42	53	47	42	52	46	41	39
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	57	44	36	31	56	44	36	31	43	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26

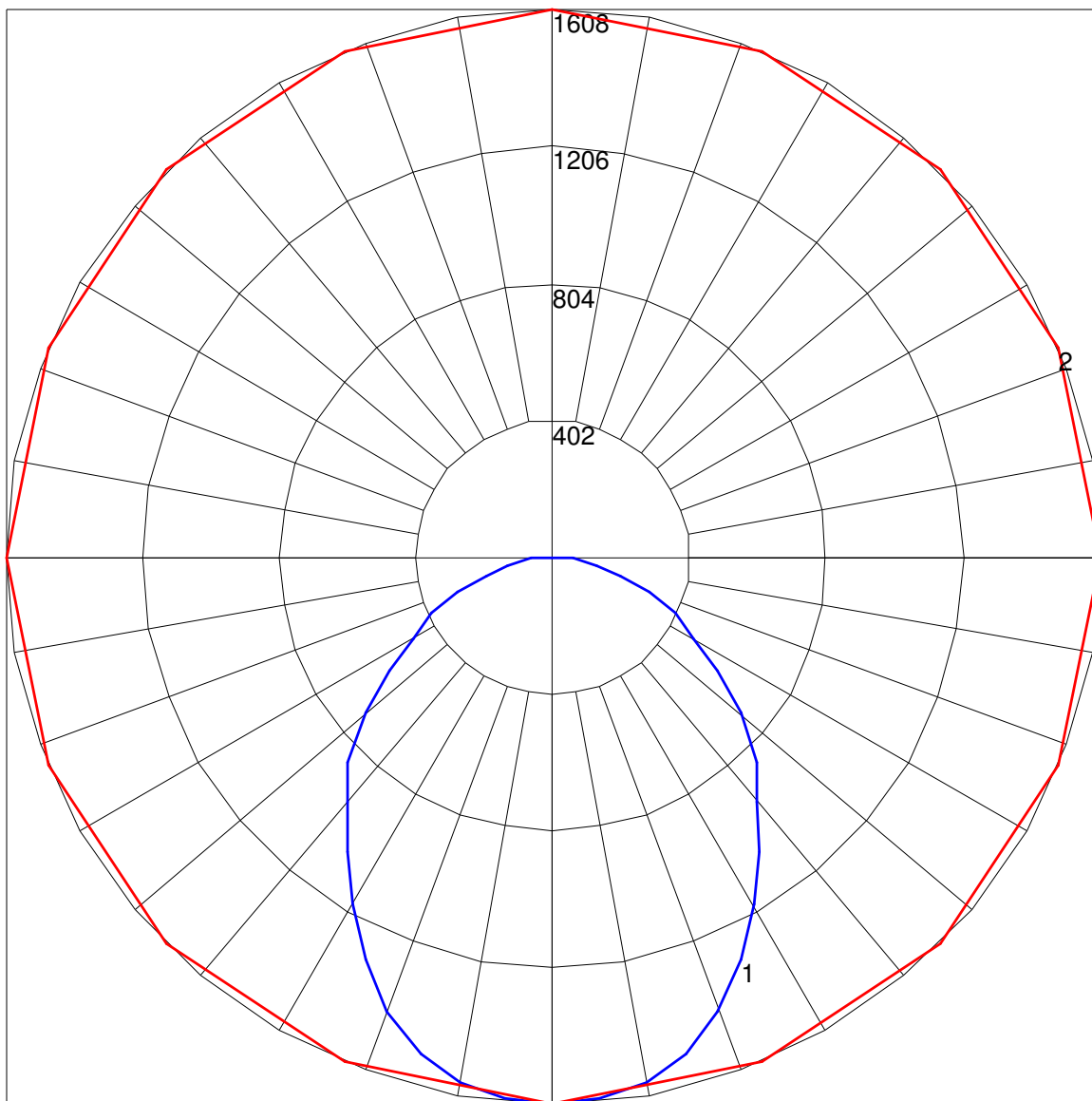
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UGR TABLE - CORRECTED

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	13.2	14.8	13.6	15.1	15.4	14.3	15.9	14.6	16.2	16.5
	3H	15.0	16.4	15.3	16.7	17.1	16.3	17.8	16.7	18.1	18.4
	4H	15.6	17.0	16.0	17.3	17.7	17.0	18.4	17.4	18.8	19.1
	6H	16.1	17.4	16.5	17.8	18.2	17.4	18.6	17.8	19.0	19.4
	8H	16.3	17.5	16.8	17.9	18.3	17.4	18.6	17.8	19.0	19.4
	12H	16.5	17.6	16.9	18.0	18.4	17.5	18.6	17.9	19.0	19.4
4H	2H	14.0	15.4	14.4	15.8	16.1	14.9	16.2	15.3	16.6	17.0
	3H	16.1	17.2	16.5	17.6	18.0	17.1	18.3	17.6	18.7	19.1
	4H	16.9	17.9	17.3	18.3	18.7	18.0	19.1	18.5	19.5	19.9
	6H	17.5	18.5	18.0	18.9	19.3	18.4	19.3	18.9	19.8	20.2
	8H	17.8	18.6	18.2	19.1	19.5	18.5	19.4	19.0	19.8	20.3
	12H	17.9	18.7	18.4	19.2	19.7	18.6	19.3	19.0	19.8	20.3
8H	4H	17.3	18.2	17.8	18.6	19.1	18.3	19.2	18.8	19.6	20.1
	6H	18.2	18.9	18.7	19.4	19.9	18.8	19.5	19.3	20.0	20.5
	8H	18.5	19.1	19.0	19.7	20.1	18.9	19.6	19.4	20.1	20.6
	12H	18.8	19.3	19.3	19.8	20.4	19.0	19.6	19.5	20.1	20.6
12H	4H	17.4	18.1	17.8	18.6	19.1	18.3	19.1	18.8	19.6	20.1
	6H	18.3	18.9	18.8	19.4	19.9	18.9	19.5	19.4	20.0	20.5
	8H	18.6	19.2	19.1	19.7	20.3	19.0	19.6	19.6	20.1	20.7

Maximum UGR = 20.7

POLAR GRAPH



Maximum Candela = 1607.651 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.)