



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-24-L50-8TW-D-DALI-UNV 4000K\_.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] 3-JAN-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4-56 LED 22" ARRAYS 2x4' RECESSED LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CONCAVE LX4 LENS IN DOOR

[LUMCAT] AT3-24-L50-8TW-D-DALI-UNV 4000k

[\_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	4819
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	47
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	2195	2454	2617
55	1871	2168	2306
65	1698	2075	2229
75	1444	1975	1975
85	1280	912	853

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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	1920.017	1920.017	1920.017	1920.017	1920.017
5	1909.862	1910.539	1910.539	1911.216	1911.893
10	1871.272	1873.303	1878.042	1884.136	1888.198
15	1802.217	1806.956	1817.788	1834.036	1841.484
20	1698.633	1708.788	1734.515	1765.658	1778.521
25	1559.168	1572.031	1609.944	1651.919	1670.876
30	1412.255	1550.367	1464.386	1459.647	1565.938
35	1263.312	1286.330	1352.001	1416.318	1440.690
40	1120.462	1146.865	1225.399	1288.361	1308.672
45	1017.555	1050.052	1137.387	1194.933	1213.213
50	856.425	893.661	974.903	1022.294	1034.480
55	703.420	742.010	815.127	853.717	867.258
60	572.079	612.022	674.308	709.513	721.022
65	470.526	514.532	574.787	607.960	617.439
70	356.110	402.825	457.663	484.066	488.806
75	245.080	291.794	335.123	339.185	335.123
80	158.422	205.813	201.751	140.142	127.279
85	73.118	83.950	52.130	49.422	48.745
90	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	693.93	N.A.	14.40
0-30	1437.89	N.A.	29.80
0-40	2285.34	N.A.	47.40
0-60	3859.88	N.A.	80.10
0-80	4738.2	N.A.	98.30
0-90	4818.72	N.A.	100.00
10-90	4637.35	N.A.	96.20
20-40	1591.41	N.A.	33.00
20-50	2446.28	N.A.	50.80
40-70	2125.08	N.A.	44.10
60-80	878.32	N.A.	18.20
70-80	327.78	N.A.	6.80
80-90	80.52	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	4818.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	181.36
10-20	512.57
20-30	743.96
30-40	847.45
40-50	854.87
50-60	719.67
60-70	550.54
70-80	327.78
80-90	80.52
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	170	170	170	170	166	166	166	166	158	158	158	151	151	151	145	145	145	142
1	155	149	143	137	151	145	140	135	139	135	131	134	130	127	129	126	123	120
2	141	130	120	112	138	127	118	111	122	115	108	118	111	106	113	108	104	101
3	129	114	103	94	126	112	102	93	108	99	91	104	96	90	100	94	88	85
4	119	102	89	80	115	100	88	80	96	86	78	93	84	77	90	82	76	73
5	109	91	79	69	106	90	78	69	87	76	68	84	75	67	81	73	67	64
6	101	82	70	61	98	81	69	61	78	68	60	76	67	59	74	65	59	56
7	94	75	63	54	91	74	62	54	72	61	53	70	60	53	68	59	53	50
8	88	69	57	48	85	68	56	48	66	55	48	64	54	48	62	54	47	45
9	82	63	51	44	80	62	51	44	61	50	43	59	50	43	58	49	43	40
10	77	58	47	40	75	58	47	40	56	46	39	55	46	39	54	45	39	37

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## UGR TABLE - CORRECTED

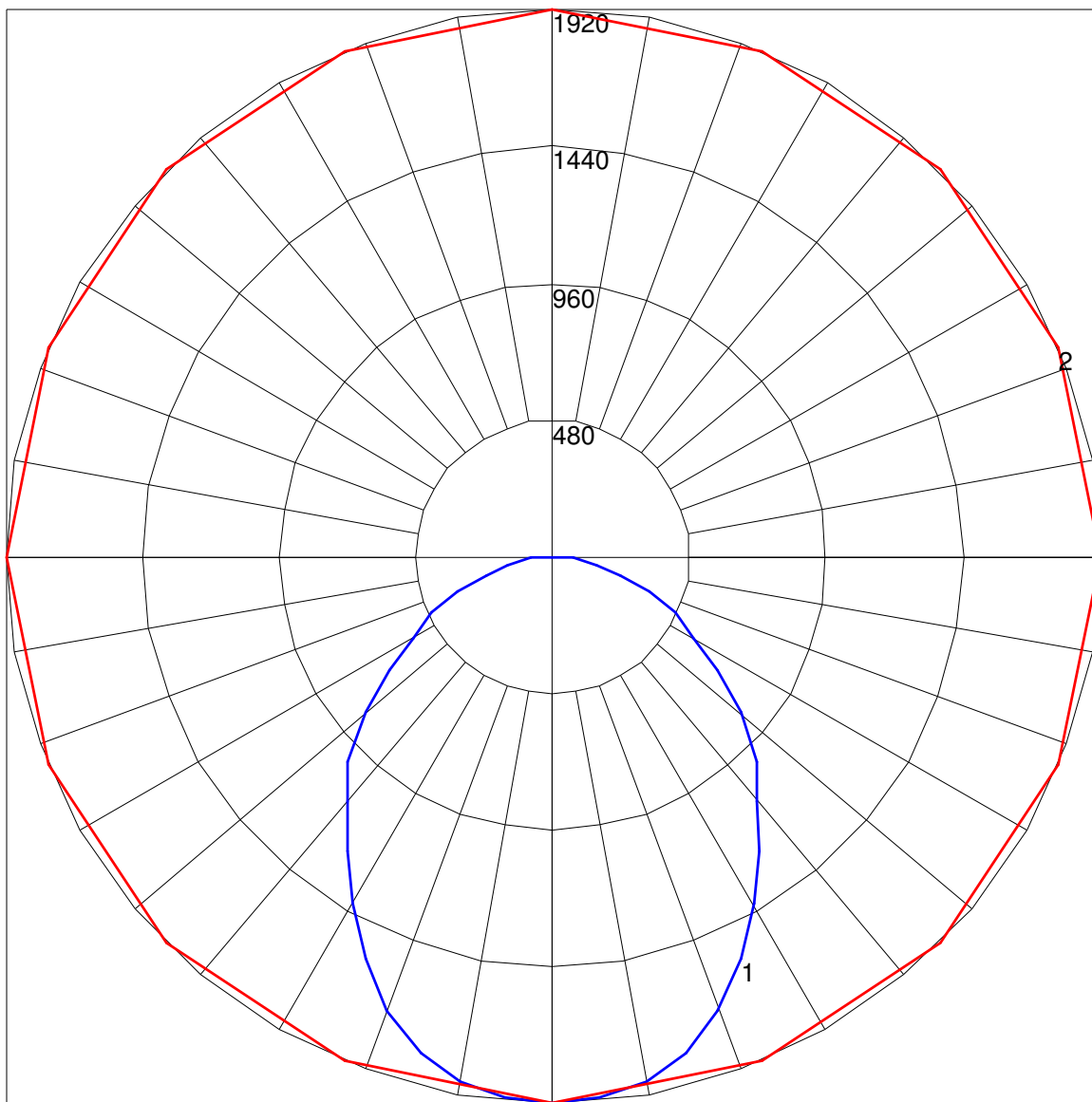
### Reflectances

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	14.8	13.7	15.3	14.0	15.6	15.9
	3H	14.4	15.8	14.7	16.1	16.5	15.7	17.2	16.1	17.5	17.8
	4H	15.0	16.4	15.4	16.7	17.1	16.4	17.8	16.8	18.2	18.5
	6H	15.5	16.8	15.9	17.2	17.6	16.8	18.0	17.2	18.4	18.8
	8H	15.7	16.9	16.2	17.3	17.7	16.8	18.0	17.2	18.4	18.8
	12H	15.9	17.0	16.3	17.4	17.8	16.9	18.0	17.3	18.4	18.8
4H	2H	13.4	14.8	13.8	15.2	15.5	14.3	15.6	14.7	16.0	16.4
	3H	15.5	16.6	15.9	17.0	17.4	16.5	17.7	17.0	18.1	18.5
	4H	16.3	17.3	16.7	17.7	18.1	17.4	18.5	17.9	18.9	19.3
	6H	16.9	17.9	17.4	18.3	18.7	17.8	18.7	18.3	19.2	19.6
	8H	17.2	18.0	17.6	18.5	18.9	17.9	18.8	18.4	19.2	19.7
	12H	17.3	18.1	17.8	18.6	19.1	18.0	18.7	18.4	19.2	19.7
8H	4H	16.7	17.6	17.2	18.0	18.5	17.7	18.6	18.2	19.0	19.5
	6H	17.6	18.3	18.1	18.8	19.3	18.2	18.9	18.7	19.4	19.9
	8H	17.9	18.5	18.4	19.1	19.5	18.3	19.0	18.8	19.5	20.0
	12H	18.2	18.7	18.7	19.2	19.8	18.4	19.0	18.9	19.5	20.0
12H	4H	16.8	17.5	17.2	18.0	18.5	17.7	18.5	18.2	19.0	19.5
	6H	17.7	18.3	18.2	18.8	19.3	18.3	18.9	18.8	19.4	19.9
	8H	18.0	18.6	18.5	19.1	19.7	18.4	19.0	19.0	19.5	20.1

Maximum UGR = 20.1

POLAR GRAPH



Maximum Candela = 1920.017 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.)