



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L64-835-AF-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] GEN FROM BALLABS TEST NO. 20802.0  
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
[ISSUEDATE] 2023-07-24  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE  
[LUMINAIRE] WHITE REFLECTOR w/FROSTED CENTER LENS  
[LUMINAIRE] 0-10V DIMMING DRIVER  
[LUMCAT] LT-24-L64-835-AF-DIM-UNV  
[LAMPCAT] 22 INCH LED ARRAYS  
[ \_SEARCH\_SOURCETYPE] LED  
[ \_SEARCH\_APPLICATION] Indoor, Classroom, Office, Direct  
[ \_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6396
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
Total Luminaire Watts	48.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.93 ft
Luminous Width (90-270)	1.91 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2642	2937	3160
55	2404	2849	3186
65	2053	2832	3335
75	1514	2974	3731
85	579	2388	2195

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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>
<b>0</b>	2221.824	2221.824	2221.824	2221.824	2221.824
<b>5</b>	2243.126	2216.498	2202.652	2197.326	2197.326
<b>10</b>	2201.586	2173.894	2166.438	2167.503	2164.308
<b>15</b>	2135.550	2116.378	2113.182	2120.638	2124.898
<b>20</b>	2049.275	2032.234	2039.689	2059.927	2064.187
<b>25</b>	1936.374	1921.462	1948.090	1976.848	1983.239
<b>30</b>	1806.430	1803.235	1839.448	1877.792	1892.704
<b>35</b>	1654.119	1666.900	1720.156	1769.151	1787.258
<b>40</b>	1493.287	1516.719	1598.733	1655.184	1676.486
<b>45</b>	1300.502	1340.976	1445.357	1539.087	1555.064
<b>50</b>	1139.670	1189.730	1291.981	1383.580	1410.208
<b>55</b>	959.666	1009.726	1137.540	1235.530	1271.744
<b>60</b>	782.857	838.243	974.577	1092.805	1126.888
<b>65</b>	603.919	680.607	832.918	947.950	980.968
<b>70</b>	436.696	522.970	680.607	803.094	829.722
<b>75</b>	272.669	378.115	535.751	645.458	672.086
<b>80</b>	131.009	244.976	388.766	439.891	424.980
<b>85</b>	35.149	121.423	144.855	128.879	133.139
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	807.81	N.A.	12.60
0-30	1707.34	N.A.	26.70
0-40	2783.76	N.A.	43.50
0-60	4901.55	N.A.	76.60
0-80	6238.61	N.A.	97.50
0-90	6395.8	N.A.	100.00
10-90	6186.07	N.A.	96.70
20-40	1975.95	N.A.	30.90
20-50	3086.76	N.A.	48.30
40-70	2923.26	N.A.	45.70
60-80	1337.06	N.A.	20.90
70-80	531.59	N.A.	8.30
80-90	157.19	N.A.	2.50
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	6395.8	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	209.72
10-20	598.09
20-30	899.53
30-40	1076.42
40-50	1110.8
50-60	1006.99
60-70	805.47
70-80	531.59
80-90	157.19
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	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	82	77	95	88	81	76	84	79	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	53	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

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**UGR TABLE - CORRECTED**

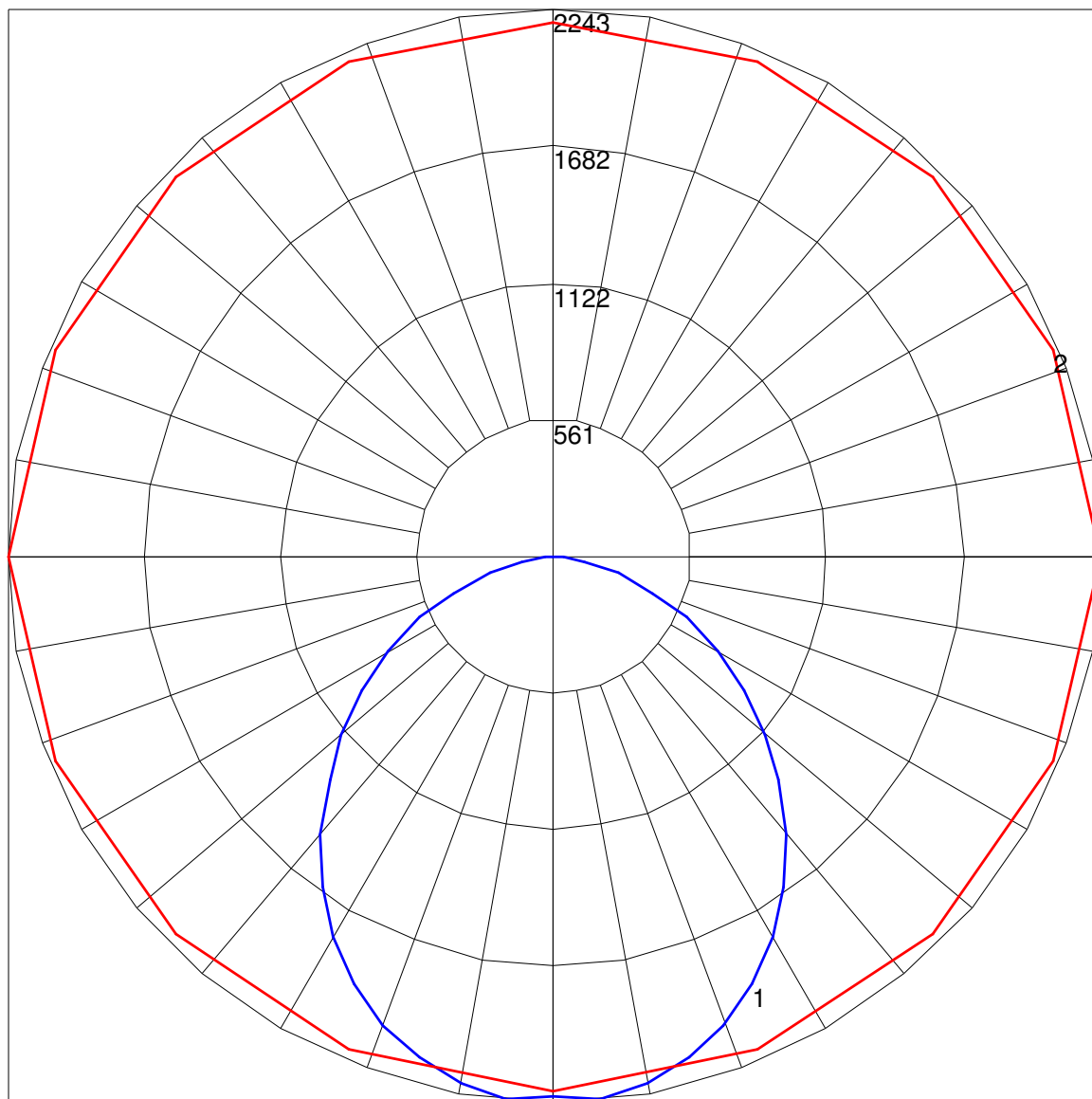
Reflectances

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	14.7	16.4	15.1	16.7	17.0	16.4	18.1	16.8	18.4	18.7
	3H	16.3	17.8	16.7	18.1	18.5	18.8	20.3	19.2	20.6	21.0
	4H	16.8	18.2	17.2	18.6	19.0	19.8	21.3	20.2	21.6	22.0
	6H	17.1	18.5	17.5	18.8	19.2	20.7	22.0	21.1	22.4	22.8
	8H	17.2	18.5	17.6	18.9	19.3	20.9	22.2	21.3	22.6	23.0
	12H	17.2	18.5	17.7	18.8	19.3	21.0	22.3	21.5	22.6	23.1
4H	2H	15.7	17.1	16.1	17.4	17.8	17.0	18.4	17.4	18.8	19.1
	3H	17.5	18.7	17.9	19.1	19.5	19.6	20.8	20.0	21.2	21.6
	4H	18.2	19.3	18.6	19.7	20.2	20.9	22.0	21.3	22.4	22.8
	6H	18.7	19.6	19.1	20.1	20.5	21.9	22.9	22.4	23.3	23.7
	8H	18.8	19.7	19.3	20.1	20.6	22.2	23.1	22.7	23.5	24.0
	12H	18.9	19.7	19.3	20.1	20.6	22.4	23.2	22.8	23.6	24.1
8H	4H	19.0	19.9	19.4	20.3	20.8	21.2	22.1	21.7	22.5	23.0
	6H	19.6	20.4	20.1	20.9	21.3	22.4	23.1	22.9	23.6	24.1
	8H	19.9	20.5	20.4	21.0	21.5	22.8	23.5	23.3	24.0	24.5
	12H	20.0	20.6	20.5	21.1	21.6	23.0	23.6	23.5	24.1	24.7
12H	4H	19.1	19.9	19.6	20.4	20.9	21.2	22.0	21.7	22.5	23.0
	6H	19.9	20.6	20.4	21.0	21.6	22.5	23.1	23.0	23.6	24.1
	8H	20.2	20.8	20.7	21.3	21.8	22.9	23.5	23.4	24.0	24.6

Maximum UGR = 24.7

POLAR GRAPH



Maximum Candela = 2243.126 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)