



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L82-830-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-L82-830-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	8132
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	126
Total Luminaire Watts	64.3
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	3360	3734	4017
55	3056	3623	4050
65	2610	3600	4240
75	1924	3781	4743
85	737	3036	2790

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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>	2824.824	2824.824	2824.824	2824.824	2824.824
<b>5</b>	2851.907	2818.053	2800.448	2793.677	2793.677
<b>10</b>	2799.094	2763.885	2754.406	2755.760	2751.698
<b>15</b>	2715.135	2690.760	2686.697	2696.176	2701.593
<b>20</b>	2605.446	2583.779	2593.259	2618.988	2624.405
<b>25</b>	2461.903	2442.944	2476.799	2513.362	2521.487
<b>30</b>	2296.693	2292.630	2338.672	2387.423	2406.381
<b>35</b>	2103.045	2119.295	2187.004	2249.296	2272.317
<b>40</b>	1898.563	1928.355	2032.627	2104.399	2131.482
<b>45</b>	1653.456	1704.915	1837.625	1956.793	1977.106
<b>50</b>	1448.975	1512.621	1642.623	1759.082	1792.937
<b>55</b>	1220.118	1283.765	1446.266	1570.851	1616.893
<b>60</b>	995.324	1065.741	1239.077	1389.391	1432.725
<b>65</b>	767.821	865.322	1058.970	1205.222	1247.202
<b>70</b>	555.215	664.903	865.322	1021.053	1054.908
<b>75</b>	346.671	480.735	681.154	820.634	854.489
<b>80</b>	166.564	311.462	494.276	559.277	540.319
<b>85</b>	44.688	154.377	184.169	163.856	169.273
<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	1027.05	N.A.	12.60
0-30	2170.71	N.A.	26.70
0-40	3539.27	N.A.	43.50
0-60	6231.83	N.A.	76.60
0-80	7931.76	N.A.	97.50
0-90	8131.61	N.A.	100.00
10-90	7864.96	N.A.	96.70
20-40	2512.23	N.A.	30.90
20-50	3924.5	N.A.	48.30
40-70	3716.62	N.A.	45.70
60-80	1699.94	N.A.	20.90
70-80	675.86	N.A.	8.30
80-90	199.85	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	8131.61	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	266.64
10-20	760.41
20-30	1143.66
30-40	1368.56
40-50	1412.27
50-60	1280.28
60-70	1024.07
70-80	675.86
80-90	199.85
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**

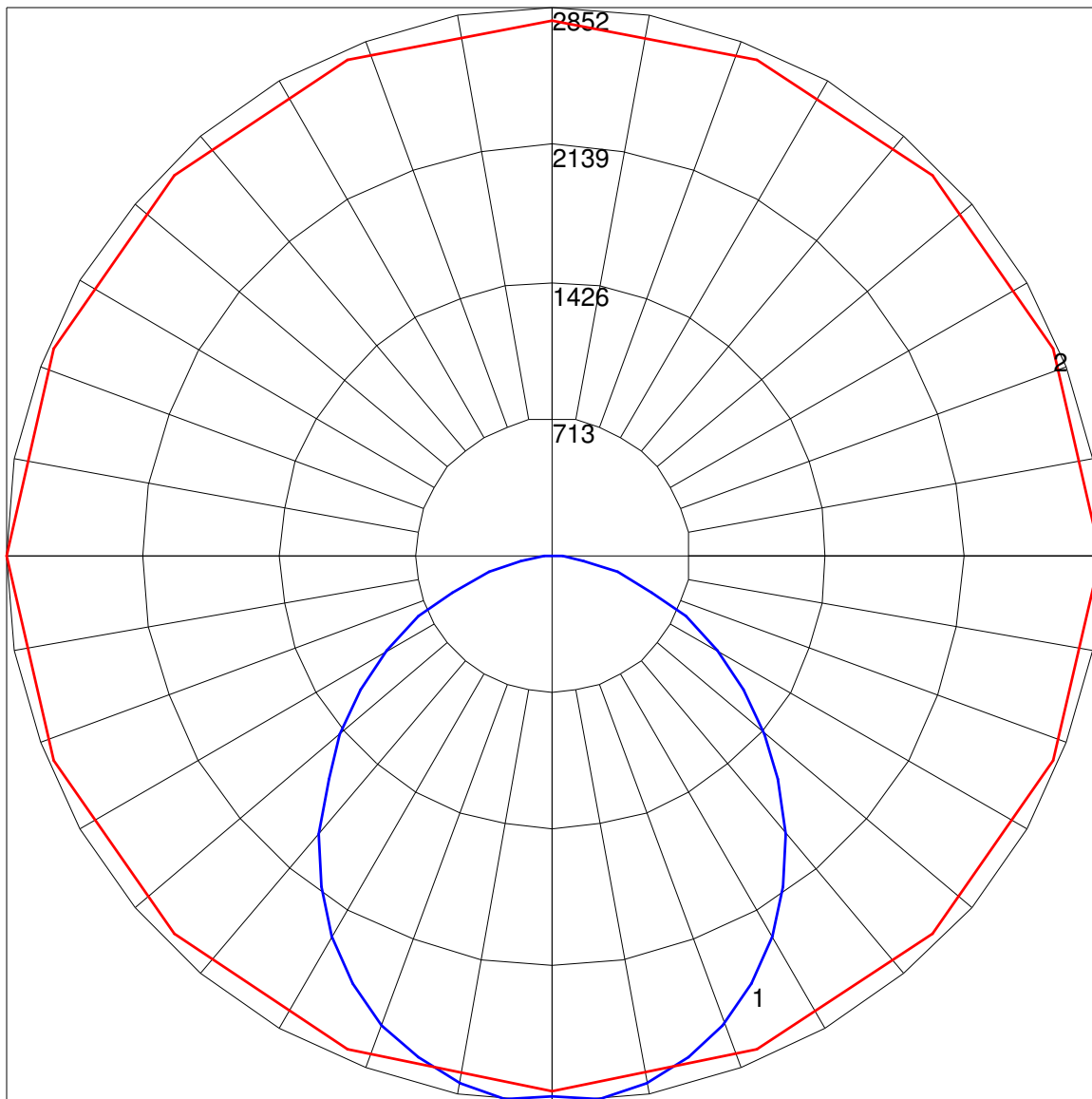
Reflectances

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	15.6	17.3	16.0	17.6	17.9	17.3	19.0	17.7	19.3	19.6
	3H	17.2	18.7	17.6	19.0	19.4	19.7	21.2	20.1	21.5	21.9
	4H	17.7	19.1	18.1	19.5	19.9	20.7	22.2	21.1	22.5	22.9
	6H	18.0	19.4	18.4	19.7	20.1	21.6	22.9	22.0	23.3	23.7
	8H	18.1	19.4	18.5	19.8	20.2	21.8	23.1	22.2	23.5	23.9
	12H	18.1	19.4	18.6	19.7	20.2	21.9	23.2	22.4	23.5	24.0
4H	2H	16.6	18.0	17.0	18.3	18.7	17.9	19.3	18.3	19.7	20.0
	3H	18.4	19.6	18.8	20.0	20.4	20.5	21.7	20.9	22.1	22.5
	4H	19.1	20.2	19.5	20.6	21.1	21.8	22.9	22.2	23.3	23.7
	6H	19.6	20.5	20.0	21.0	21.4	22.8	23.8	23.3	24.2	24.6
	8H	19.7	20.6	20.2	21.0	21.5	23.1	24.0	23.6	24.4	24.9
	12H	19.8	20.6	20.2	21.0	21.5	23.3	24.1	23.7	24.5	25.0
8H	4H	19.9	20.8	20.3	21.2	21.7	22.1	23.0	22.6	23.4	23.9
	6H	20.5	21.3	21.0	21.8	22.2	23.3	24.0	23.8	24.5	25.0
	8H	20.8	21.4	21.3	21.9	22.4	23.7	24.4	24.2	24.9	25.4
	12H	20.9	21.5	21.4	22.0	22.5	23.9	24.5	24.4	25.0	25.6
12H	4H	20.0	20.8	20.5	21.3	21.8	22.1	22.9	22.6	23.4	23.9
	6H	20.8	21.5	21.3	21.9	22.5	23.4	24.0	23.9	24.5	25.0
	8H	21.1	21.7	21.6	22.2	22.7	23.8	24.4	24.3	24.9	25.5

Maximum UGR = 25.6

POLAR GRAPH



Maximum Candela = 2851.907 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.)