



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L64-840-AF-(L58)-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] 10-20-2023  
 [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-L64-840-AF-(L58)-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	5994
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	145
Total Luminaire Watts	41.4
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	2476	2752	2961
55	2253	2670	2985
65	1924	2654	3125
75	1418	2787	3496
85	543	2238	2057

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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>	2082.179	2082.179	2082.179	2082.179	2082.179
<b>5</b>	2102.142	2077.188	2064.212	2059.221	2059.221
<b>10</b>	2063.214	2037.261	2030.274	2031.272	2028.278
<b>15</b>	2001.327	1983.360	1980.366	1987.353	1991.346
<b>20</b>	1920.476	1904.505	1911.492	1930.457	1934.450
<b>25</b>	1814.670	1800.695	1825.650	1852.600	1858.589
<b>30</b>	1692.893	1689.899	1723.836	1759.770	1773.745
<b>35</b>	1550.155	1562.133	1612.042	1657.957	1674.926
<b>40</b>	1399.432	1421.391	1498.250	1551.153	1571.117
<b>45</b>	1218.763	1256.694	1354.514	1442.353	1457.326
<b>50</b>	1068.040	1114.954	1210.778	1296.620	1321.575
<b>55</b>	899.350	946.263	1066.044	1157.875	1191.813
<b>60</b>	733.654	785.558	913.324	1024.121	1056.062
<b>65</b>	565.961	637.829	780.568	888.370	919.313
<b>70</b>	409.249	490.101	637.829	752.619	777.573
<b>75</b>	255.531	354.350	502.079	604.890	629.844
<b>80</b>	122.775	229.579	364.331	412.243	398.269
<b>85</b>	32.940	113.791	135.751	120.778	124.771
<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	757.04	N.A.	12.60
0-30	1600.03	N.A.	26.70
0-40	2608.8	N.A.	43.50
0-60	4593.48	N.A.	76.60
0-80	5846.5	N.A.	97.50
0-90	5993.81	N.A.	100.00
10-90	5797.27	N.A.	96.70
20-40	1851.76	N.A.	30.90
20-50	2892.75	N.A.	48.30
40-70	2739.52	N.A.	45.70
60-80	1253.02	N.A.	20.90
70-80	498.18	N.A.	8.30
80-90	147.31	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	5993.81	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	196.54
10-20	560.50
20-30	842.99
30-40	1008.77
40-50	1040.99
50-60	943.69
60-70	754.84
70-80	498.18
80-90	147.31
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**

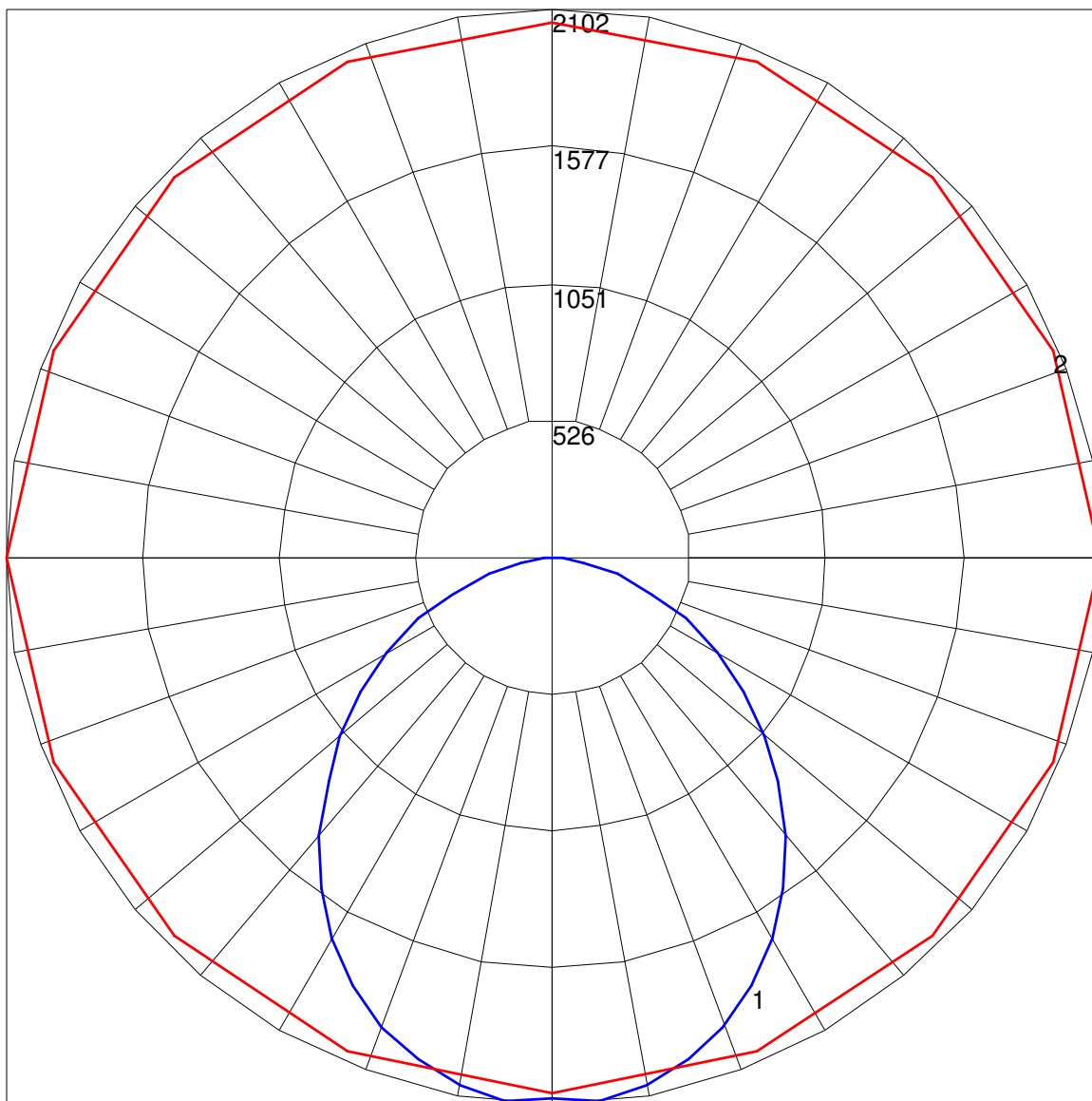
Reflectances

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	14.5	16.2	14.9	16.5	16.8	16.2	17.9	16.6	18.2	18.5
	3H	16.1	17.6	16.5	17.9	18.3	18.6	20.1	19.0	20.4	20.8
	4H	16.6	18.0	17.0	18.4	18.8	19.6	21.1	20.0	21.4	21.8
	6H	16.9	18.3	17.3	18.6	19.0	20.5	21.8	20.9	22.2	22.6
	8H	17.0	18.3	17.4	18.7	19.1	20.7	22.0	21.1	22.4	22.8
	12H	17.0	18.3	17.5	18.6	19.1	20.8	22.1	21.3	22.4	22.9
4H	2H	15.5	16.9	15.9	17.2	17.6	16.8	18.2	17.2	18.6	18.9
	3H	17.3	18.5	17.7	18.9	19.3	19.4	20.6	19.8	21.0	21.4
	4H	18.0	19.1	18.4	19.5	20.0	20.7	21.8	21.1	22.2	22.6
	6H	18.5	19.4	18.9	19.9	20.3	21.7	22.7	22.2	23.1	23.5
	8H	18.6	19.5	19.1	19.9	20.4	22.0	22.9	22.5	23.3	23.8
	12H	18.7	19.5	19.1	19.9	20.4	22.2	23.0	22.6	23.4	23.9
8H	4H	18.8	19.7	19.2	20.1	20.6	21.0	21.9	21.5	22.3	22.8
	6H	19.4	20.2	19.9	20.7	21.1	22.2	22.9	22.7	23.4	23.9
	8H	19.7	20.3	20.2	20.8	21.3	22.6	23.3	23.1	23.8	24.3
	12H	19.8	20.4	20.3	20.9	21.4	22.8	23.4	23.3	23.9	24.5
12H	4H	18.9	19.7	19.4	20.2	20.7	21.0	21.8	21.5	22.3	22.8
	6H	19.7	20.4	20.2	20.8	21.4	22.3	22.9	22.8	23.4	23.9
	8H	20.0	20.6	20.5	21.1	21.6	22.7	23.3	23.2	23.8	24.4

Maximum UGR = 24.5

POLAR GRAPH



Maximum Candela = 2102.142 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.)