



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L52-827-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-L52-827-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	5046
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
Total Luminaire Watts	37.2
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	2085	2317	2493
55	1896	2248	2513
65	1620	2234	2631
75	1194	2346	2943
85	457	1884	1731

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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>	1752.844	1752.844	1752.844	1752.844	1752.844
<b>5</b>	1769.650	1748.643	1737.719	1733.518	1733.518
<b>10</b>	1736.879	1715.031	1709.149	1709.990	1707.469
<b>15</b>	1684.781	1669.656	1667.135	1673.017	1676.378
<b>20</b>	1616.718	1603.273	1609.155	1625.120	1628.482
<b>25</b>	1527.647	1515.883	1536.890	1559.578	1564.620
<b>30</b>	1425.131	1422.611	1451.180	1481.431	1493.195
<b>35</b>	1304.970	1315.053	1357.068	1395.721	1410.006
<b>40</b>	1178.086	1196.573	1261.275	1305.810	1322.616
<b>45</b>	1025.994	1057.925	1140.273	1214.219	1226.823
<b>50</b>	899.110	938.604	1019.271	1091.536	1112.544
<b>55</b>	757.101	796.595	897.429	974.736	1003.306
<b>60</b>	617.613	661.308	768.865	862.137	889.027
<b>65</b>	476.444	536.945	657.107	747.858	773.907
<b>70</b>	344.519	412.582	536.945	633.578	654.586
<b>75</b>	215.114	298.303	422.666	509.216	530.223
<b>80</b>	103.356	193.267	306.706	347.040	335.276
<b>85</b>	27.730	95.793	114.279	101.675	105.036
<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	637.30	N.A.	12.60
0-30	1346.96	N.A.	26.70
0-40	2196.17	N.A.	43.50
0-60	3866.94	N.A.	76.60
0-80	4921.77	N.A.	97.50
0-90	5045.78	N.A.	100.00
10-90	4880.32	N.A.	96.70
20-40	1558.87	N.A.	30.90
20-50	2435.21	N.A.	48.30
40-70	2306.22	N.A.	45.70
60-80	1054.83	N.A.	20.90
70-80	419.38	N.A.	8.30
80-90	124.01	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	5045.78	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	165.46
10-20	471.84
20-30	709.66
30-40	849.21
40-50	876.34
50-60	794.43
60-70	635.45
70-80	419.38
80-90	124.01
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**

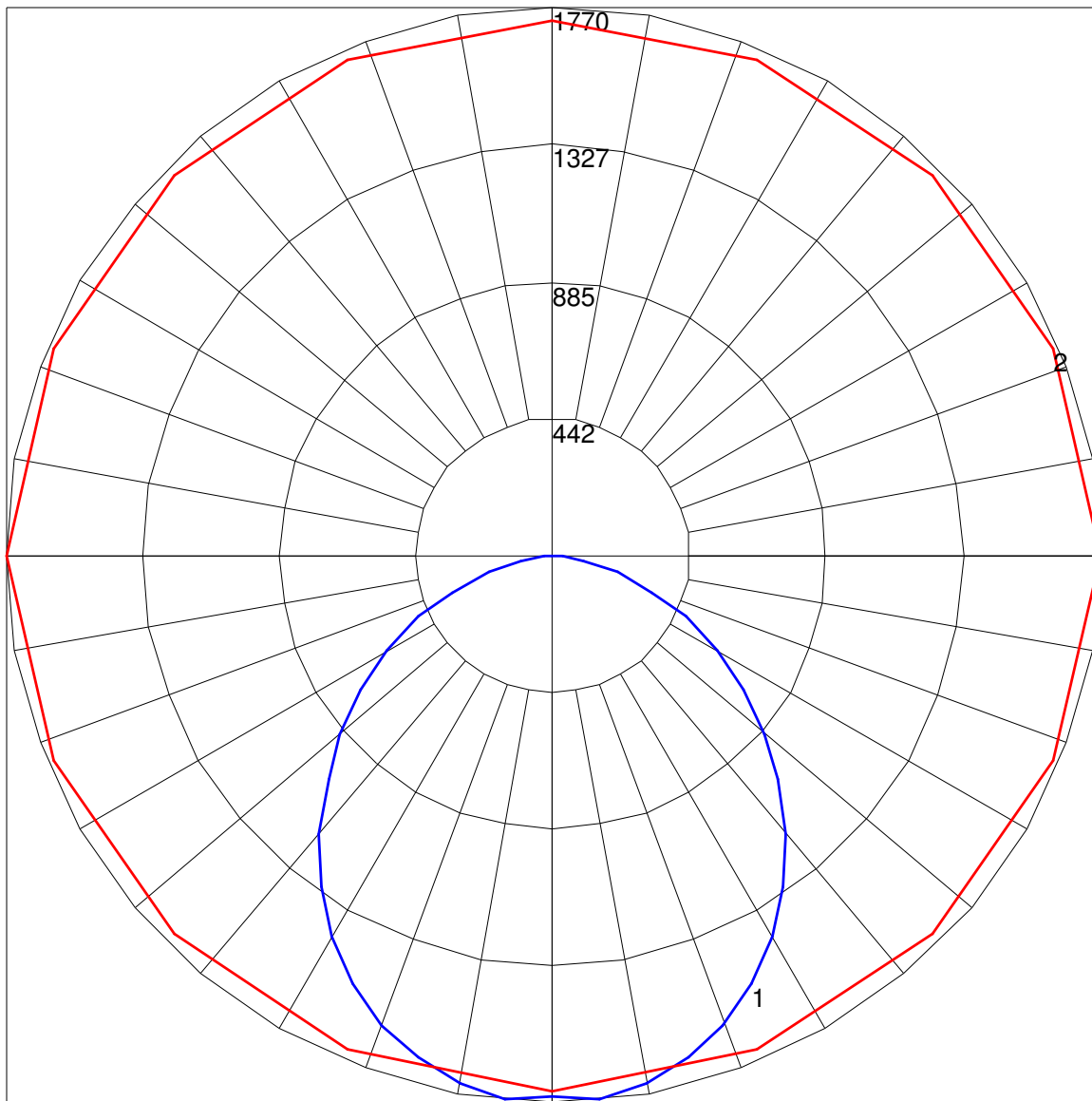
Reflectances

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	13.9	15.6	14.3	15.9	16.2	15.6	17.3	16.0	17.6	17.9
	3H	15.5	17.0	15.9	17.3	17.7	18.0	19.5	18.4	19.8	20.2
	4H	16.0	17.4	16.4	17.8	18.2	19.0	20.5	19.4	20.8	21.2
	6H	16.3	17.7	16.7	18.0	18.4	19.9	21.2	20.3	21.6	22.0
	8H	16.4	17.7	16.8	18.1	18.5	20.1	21.4	20.5	21.8	22.2
	12H	16.4	17.7	16.9	18.0	18.5	20.2	21.5	20.7	21.8	22.3
4H	2H	14.9	16.3	15.3	16.6	17.0	16.2	17.6	16.6	18.0	18.3
	3H	16.7	17.9	17.1	18.3	18.7	18.8	20.0	19.2	20.4	20.8
	4H	17.4	18.5	17.8	18.9	19.4	20.1	21.2	20.5	21.6	22.0
	6H	17.9	18.8	18.3	19.3	19.7	21.1	22.1	21.6	22.5	22.9
	8H	18.0	18.9	18.5	19.3	19.8	21.4	22.3	21.9	22.7	23.2
	12H	18.1	18.9	18.5	19.3	19.8	21.6	22.4	22.0	22.8	23.3
8H	4H	18.2	19.1	18.6	19.5	20.0	20.4	21.3	20.9	21.7	22.2
	6H	18.8	19.6	19.3	20.1	20.5	21.6	22.3	22.1	22.8	23.3
	8H	19.1	19.7	19.6	20.2	20.7	22.0	22.7	22.5	23.2	23.7
	12H	19.2	19.8	19.7	20.3	20.8	22.2	22.8	22.7	23.3	23.9
12H	4H	18.3	19.1	18.8	19.6	20.1	20.4	21.2	20.9	21.7	22.2
	6H	19.1	19.8	19.6	20.2	20.8	21.7	22.3	22.2	22.8	23.3
	8H	19.4	20.0	19.9	20.5	21.0	22.1	22.7	22.6	23.2	23.8

Maximum UGR = 23.9

POLAR GRAPH



Maximum Candela = 1769.65 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.)