



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L49-827-AF-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 20203.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 2023-07-21  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 2x2 RECESSED LED LUMINAIRE  
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CENTER LENS  
 [MORE] 0-10V DIMMING DRIVER  
 [LUMCAT] LT-22-L49-827-AF-DIM-UNV  
 [LAMPCAT] 22 INCH LED ARRAY  
 [\_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	4723
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	38.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.40
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4084	4386	4723
55	3702	4316	4869
65	3262	4274	5277
75	2510	4530	6168
85	1091	3681	3591

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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>	1571.603	1571.603	1571.603	1571.603	1571.603
<b>5</b>	1570.249	1563.481	1562.127	1556.712	1560.773
<b>10</b>	1543.176	1536.407	1541.822	1536.407	1540.468
<b>15</b>	1502.566	1499.859	1507.981	1510.688	1514.749
<b>20</b>	1437.590	1447.066	1459.249	1472.785	1475.493
<b>25</b>	1363.139	1382.090	1399.688	1421.346	1426.761
<b>30</b>	1283.272	1304.931	1330.651	1363.139	1373.968
<b>35</b>	1195.284	1214.236	1245.370	1294.102	1304.931
<b>40</b>	1095.113	1114.065	1157.382	1208.821	1226.419
<b>45</b>	986.820	1004.418	1059.918	1114.065	1141.138
<b>50</b>	859.576	882.588	952.979	1008.479	1047.735
<b>55</b>	725.563	758.051	846.039	906.954	954.332
<b>60</b>	598.319	634.868	736.393	813.551	859.576
<b>65</b>	471.075	510.331	617.270	721.502	762.112
<b>70</b>	346.538	388.501	507.624	621.331	663.295
<b>75</b>	222.001	273.440	400.684	513.038	545.526
<b>80</b>	109.647	171.915	276.147	377.672	366.843
<b>85</b>	32.488	66.329	109.647	185.452	106.939
<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	573.49	N.A.	12.10
0-30	1218.94	N.A.	25.80
0-40	2001.57	N.A.	42.40
0-60	3569.55	N.A.	75.60
0-80	4591.65	N.A.	97.20
0-90	4722.73	N.A.	100.00
10-90	4574.33	N.A.	96.90
20-40	1428.08	N.A.	30.20
20-50	2245.44	N.A.	47.50
40-70	2179.01	N.A.	46.10
60-80	1022.11	N.A.	21.60
70-80	411.06	N.A.	8.70
80-90	131.08	N.A.	2.80
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	4722.73	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	148.40
10-20	425.10
20-30	645.45
30-40	782.63
40-50	817.36
50-60	750.61
60-70	611.04
70-80	411.06
80-90	131.08
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	98	94	105	101	96	93	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	62	56	51	60	55	50	48
5	75	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	45	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	38	34	32
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	39	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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**UGR TABLE - CORRECTED**

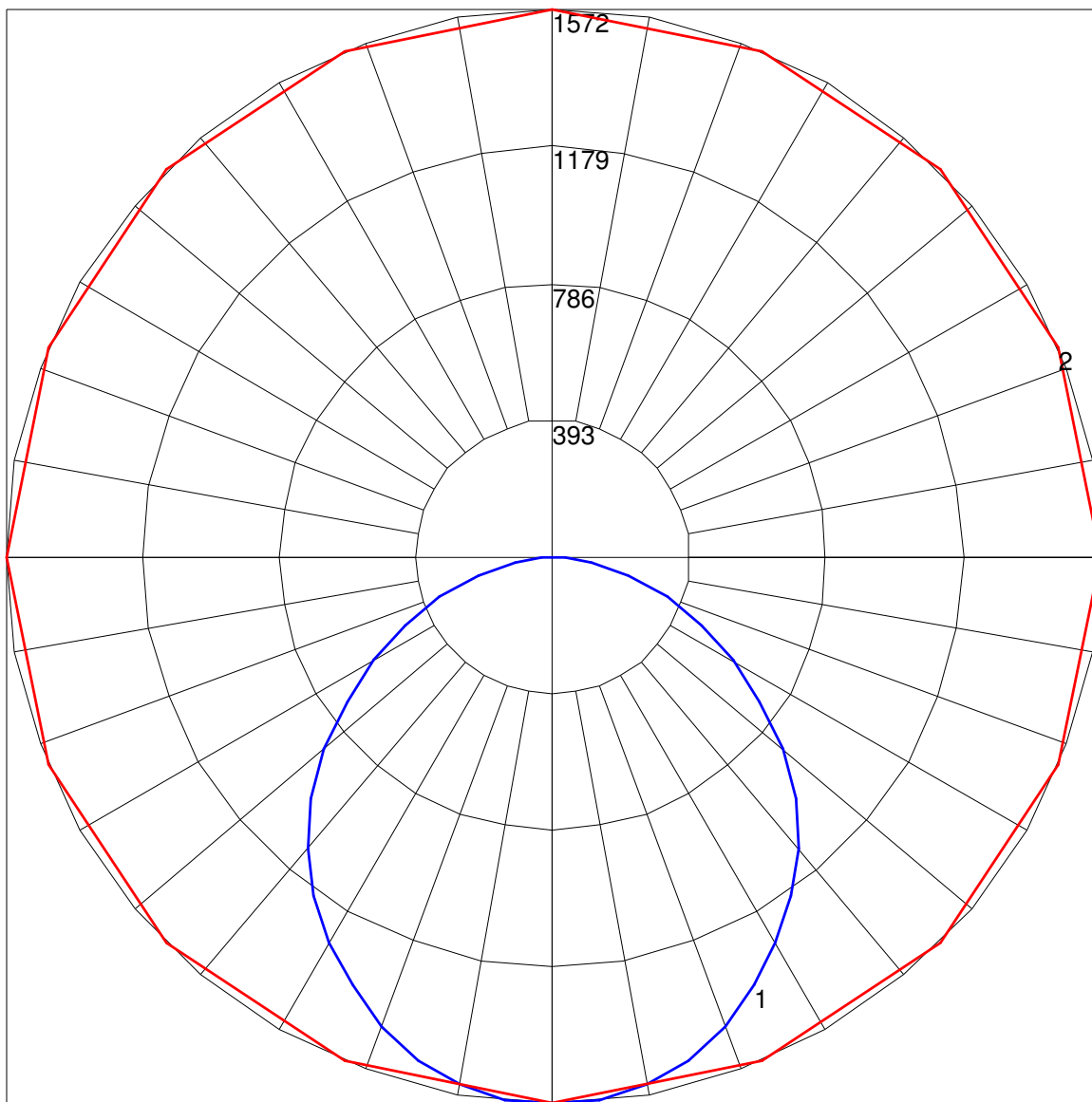
Reflectances

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	16.3	18.0	16.7	18.3	18.6	17.9	19.6	18.3	19.9	20.2
	3H	17.9	19.5	18.3	19.8	20.1	20.5	22.0	20.8	22.3	22.7
	4H	18.5	19.9	18.9	20.3	20.7	21.6	23.1	22.0	23.4	23.8
	6H	18.8	20.2	19.2	20.5	20.9	22.6	23.9	23.0	24.3	24.7
	8H	18.9	20.2	19.3	20.6	21.0	22.9	24.2	23.3	24.6	25.0
	12H	18.9	20.2	19.4	20.5	21.0	23.0	24.3	23.5	24.7	25.1
4H	2H	17.2	18.7	17.6	19.0	19.4	18.5	19.9	18.9	20.3	20.6
	3H	19.1	20.3	19.5	20.7	21.1	21.3	22.5	21.7	22.9	23.3
	4H	19.8	20.9	20.2	21.3	21.8	22.6	23.8	23.1	24.2	24.6
	6H	20.3	21.2	20.7	21.7	22.1	23.8	24.8	24.3	25.3	25.7
	8H	20.4	21.3	20.8	21.7	22.2	24.2	25.1	24.7	25.6	26.0
	12H	20.4	21.3	20.9	21.7	22.2	24.4	25.3	24.9	25.7	26.2
8H	4H	20.5	21.4	21.0	21.9	22.4	22.9	23.9	23.4	24.3	24.8
	6H	21.2	21.9	21.7	22.4	22.9	24.3	25.1	24.8	25.6	26.1
	8H	21.4	22.1	21.9	22.6	23.0	24.9	25.6	25.4	26.1	26.5
	12H	21.5	22.1	22.0	22.6	23.1	25.2	25.8	25.7	26.3	26.9
12H	4H	20.7	21.5	21.2	22.0	22.5	23.0	23.8	23.4	24.3	24.7
	6H	21.4	22.1	22.0	22.6	23.1	24.4	25.1	24.9	25.5	26.1
	8H	21.7	22.3	22.2	22.8	23.4	25.0	25.6	25.5	26.1	26.6

Maximum UGR = 26.9

POLAR GRAPH



Maximum Candela = 1571.603 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.)