



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L61-927-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-L61-927-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	4909
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	96
Total Luminaire Watts	50.9
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	4245	4559	4908
55	3847	4486	5060
65	3390	4442	5485
75	2609	4709	6411
85	1134	3826	3732

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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>	1633.453	1633.453	1633.453	1633.453	1633.453
<b>5</b>	1632.046	1625.011	1623.604	1617.976	1622.197
<b>10</b>	1603.907	1596.872	1602.500	1596.872	1601.093
<b>15</b>	1561.699	1558.885	1567.327	1570.141	1574.361
<b>20</b>	1494.166	1504.015	1516.677	1530.746	1533.560
<b>25</b>	1416.785	1436.482	1454.772	1477.283	1482.911
<b>30</b>	1333.775	1356.286	1383.018	1416.785	1428.040
<b>35</b>	1242.325	1262.022	1294.381	1345.031	1356.286
<b>40</b>	1138.211	1157.908	1202.930	1256.394	1274.684
<b>45</b>	1025.656	1043.947	1101.631	1157.908	1186.047
<b>50</b>	893.404	917.322	990.483	1048.167	1088.969
<b>55</b>	754.118	787.884	879.335	942.647	991.890
<b>60</b>	621.866	659.853	765.373	845.569	893.404
<b>65</b>	489.614	530.415	641.563	749.897	792.105
<b>70</b>	360.176	403.791	527.601	645.784	689.399
<b>75</b>	230.738	284.201	416.453	533.229	566.995
<b>80</b>	113.962	178.681	287.015	392.535	381.280
<b>85</b>	33.766	68.940	113.962	192.750	111.148
<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	596.06	N.A.	12.10
0-30	1266.92	N.A.	25.80
0-40	2080.34	N.A.	42.40
0-60	3710.02	N.A.	75.60
0-80	4772.35	N.A.	97.20
0-90	4908.59	N.A.	100.00
10-90	4754.35	N.A.	96.90
20-40	1484.28	N.A.	30.20
20-50	2333.81	N.A.	47.50
40-70	2264.77	N.A.	46.10
60-80	1062.33	N.A.	21.60
70-80	427.24	N.A.	8.70
80-90	136.24	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	4908.59	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	154.24
10-20	441.83
20-30	670.85
30-40	813.43
40-50	849.53
50-60	780.15
60-70	635.09
70-80	427.24
80-90	136.24
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**

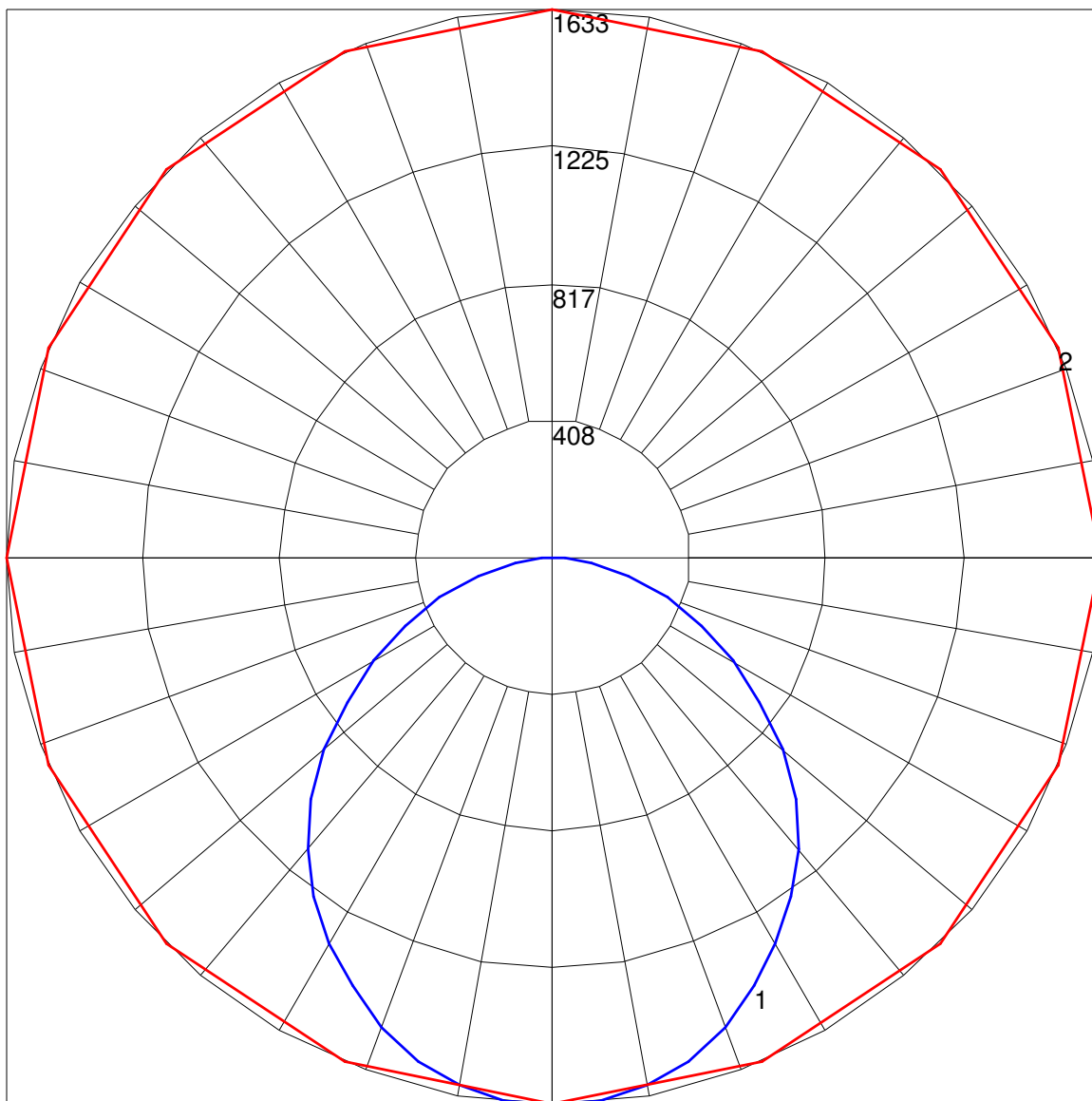
Reflectances

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	16.4	18.1	16.8	18.4	18.7	18.0	19.7	18.4	20.0	20.3
	3H	18.0	19.6	18.4	19.9	20.2	20.6	22.1	20.9	22.4	22.8
	4H	18.6	20.0	19.0	20.4	20.8	21.7	23.2	22.1	23.5	23.9
	6H	18.9	20.3	19.3	20.6	21.0	22.7	24.0	23.1	24.4	24.8
	8H	19.0	20.3	19.4	20.7	21.1	23.0	24.3	23.4	24.7	25.1
	12H	19.0	20.3	19.5	20.6	21.1	23.1	24.4	23.6	24.8	25.2
4H	2H	17.3	18.8	17.7	19.1	19.5	18.6	20.0	19.0	20.4	20.7
	3H	19.2	20.4	19.6	20.8	21.2	21.4	22.6	21.8	23.0	23.4
	4H	19.9	21.0	20.3	21.4	21.9	22.7	23.9	23.2	24.3	24.7
	6H	20.4	21.3	20.8	21.8	22.2	23.9	24.9	24.4	25.4	25.8
	8H	20.5	21.4	20.9	21.8	22.3	24.3	25.2	24.8	25.7	26.1
	12H	20.5	21.4	21.0	21.8	22.3	24.5	25.4	25.0	25.8	26.3
8H	4H	20.6	21.6	21.1	22.0	22.5	23.0	24.0	23.5	24.4	24.9
	6H	21.3	22.0	21.8	22.5	23.0	24.4	25.2	24.9	25.7	26.2
	8H	21.5	22.2	22.0	22.7	23.1	25.0	25.7	25.5	26.2	26.6
	12H	21.6	22.2	22.1	22.7	23.2	25.3	25.9	25.8	26.4	27.0
12H	4H	20.8	21.6	21.3	22.1	22.6	23.1	23.9	23.5	24.4	24.8
	6H	21.6	22.2	22.1	22.7	23.2	24.5	25.2	25.0	25.6	26.2
	8H	21.8	22.4	22.3	22.9	23.5	25.1	25.7	25.6	26.2	26.7

Maximum UGR = 27.0

POLAR GRAPH



Maximum Candela = 1633.453 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.)