



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L49-950-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-L49-950-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	4333
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
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	3747	4025	4333
55	3396	3960	4467
65	2993	3922	4842
75	2303	4157	5659
85	1001	3378	3294

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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>	1441.986	1441.986	1441.986	1441.986	1441.986
<b>5</b>	1440.744	1434.534	1433.292	1428.324	1432.050
<b>10</b>	1415.904	1409.694	1414.662	1409.694	1413.420
<b>15</b>	1378.643	1376.159	1383.611	1386.095	1389.821
<b>20</b>	1319.026	1327.720	1338.899	1351.319	1353.803
<b>25</b>	1250.715	1268.103	1284.250	1304.122	1309.090
<b>30</b>	1177.436	1197.308	1220.907	1250.715	1260.651
<b>35</b>	1096.705	1114.093	1142.659	1187.372	1197.308
<b>40</b>	1004.795	1022.183	1061.928	1109.125	1125.271
<b>45</b>	905.433	921.580	972.502	1022.183	1047.024
<b>50</b>	788.683	809.798	874.383	925.306	961.324
<b>55</b>	665.723	695.532	776.263	832.154	875.625
<b>60</b>	548.973	582.508	675.659	746.455	788.683
<b>65</b>	432.223	468.242	566.362	661.997	699.258
<b>70</b>	317.957	356.460	465.758	570.088	608.590
<b>75</b>	203.691	250.888	367.638	470.726	500.534
<b>80</b>	100.604	157.737	253.372	346.524	336.588
<b>85</b>	29.809	60.859	100.604	170.157	98.120
<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	526.19	N.A.	12.10
0-30	1118.41	N.A.	25.80
0-40	1836.49	N.A.	42.40
0-60	3275.15	N.A.	75.60
0-80	4212.96	N.A.	97.20
0-90	4333.23	N.A.	100.00
10-90	4197.07	N.A.	96.90
20-40	1310.3	N.A.	30.20
20-50	2060.25	N.A.	47.50
40-70	1999.3	N.A.	46.10
60-80	937.81	N.A.	21.60
70-80	377.16	N.A.	8.70
80-90	120.27	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	4333.23	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	136.16
10-20	390.04
20-30	592.22
30-40	718.08
40-50	749.95
50-60	688.71
60-70	560.65
70-80	377.16
80-90	120.27
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	90	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**

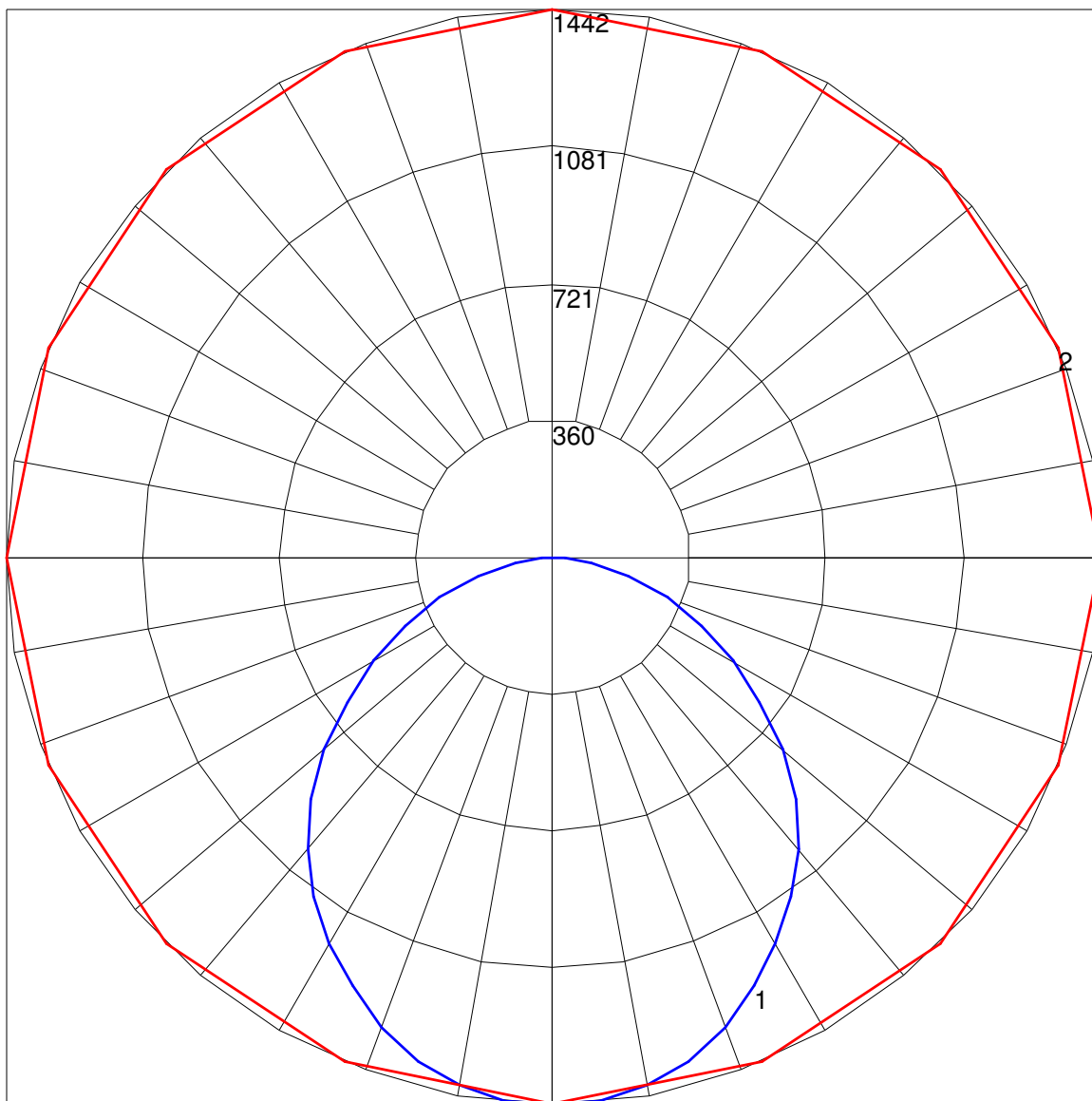
Reflectances

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	16.0	17.7	16.4	18.0	18.3	17.6	19.3	18.0	19.6	19.9
	3H	17.6	19.2	18.0	19.5	19.8	20.2	21.7	20.5	22.0	22.4
	4H	18.2	19.6	18.6	20.0	20.4	21.3	22.8	21.7	23.1	23.5
	6H	18.5	19.9	18.9	20.2	20.6	22.3	23.6	22.7	24.0	24.4
	8H	18.6	19.9	19.0	20.3	20.7	22.6	23.9	23.0	24.3	24.7
	12H	18.6	19.9	19.1	20.2	20.7	22.7	24.0	23.2	24.4	24.8
4H	2H	16.9	18.4	17.3	18.7	19.1	18.2	19.6	18.6	20.0	20.3
	3H	18.8	20.0	19.2	20.4	20.8	21.0	22.2	21.4	22.6	23.0
	4H	19.5	20.6	19.9	21.0	21.5	22.3	23.5	22.8	23.9	24.3
	6H	20.0	20.9	20.4	21.4	21.8	23.5	24.5	24.0	25.0	25.4
	8H	20.1	21.0	20.5	21.4	21.9	23.9	24.8	24.4	25.3	25.7
	12H	20.1	21.0	20.6	21.4	21.9	24.1	25.0	24.6	25.4	25.9
8H	4H	20.2	21.2	20.7	21.6	22.1	22.6	23.6	23.1	24.0	24.5
	6H	20.9	21.6	21.4	22.1	22.6	24.0	24.8	24.5	25.3	25.8
	8H	21.1	21.8	21.6	22.3	22.7	24.6	25.3	25.1	25.8	26.2
	12H	21.2	21.8	21.7	22.3	22.8	24.9	25.5	25.4	26.0	26.6
12H	4H	20.4	21.2	20.9	21.7	22.2	22.7	23.5	23.1	24.0	24.4
	6H	21.2	21.8	21.7	22.3	22.8	24.1	24.8	24.6	25.2	25.8
	8H	21.4	22.0	21.9	22.5	23.1	24.7	25.3	25.2	25.8	26.3

Maximum UGR = 26.6

POLAR GRAPH



Maximum Candela = 1441.986 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.)