



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L49-835-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-L49-835-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	4869
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
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	4210	4522	4869
55	3816	4450	5019
65	3363	4406	5440
75	2588	4670	6359
85	1125	3795	3702

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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>	1620.209	1620.209	1620.209	1620.209	1620.209
<b>5</b>	1618.814	1611.836	1610.441	1604.858	1609.045
<b>10</b>	1590.903	1583.925	1589.508	1583.925	1588.112
<b>15</b>	1549.037	1546.246	1554.619	1557.410	1561.597
<b>20</b>	1482.052	1491.821	1504.380	1518.336	1521.127
<b>25</b>	1405.298	1424.835	1442.977	1465.305	1470.888
<b>30</b>	1322.962	1345.290	1371.805	1405.298	1416.462
<b>35</b>	1232.252	1251.790	1283.887	1334.126	1345.290
<b>40</b>	1128.983	1148.520	1193.177	1246.207	1264.349
<b>45</b>	1017.341	1035.483	1092.699	1148.520	1176.431
<b>50</b>	886.161	909.885	982.452	1039.669	1080.139
<b>55</b>	748.004	781.496	872.206	935.004	983.848
<b>60</b>	616.824	654.503	759.168	838.713	886.161
<b>65</b>	485.644	526.114	636.361	743.817	785.683
<b>70</b>	357.255	400.517	523.323	640.548	683.809
<b>75</b>	228.867	281.897	413.077	528.906	562.398
<b>80</b>	113.038	177.232	284.688	389.353	378.188
<b>85</b>	33.493	68.381	113.038	191.187	110.247
<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	591.23	N.A.	12.10
0-30	1256.64	N.A.	25.80
0-40	2063.48	N.A.	42.40
0-60	3679.94	N.A.	75.60
0-80	4733.66	N.A.	97.20
0-90	4868.79	N.A.	100.00
10-90	4715.81	N.A.	96.90
20-40	1472.25	N.A.	30.20
20-50	2314.89	N.A.	47.50
40-70	2246.41	N.A.	46.10
60-80	1053.72	N.A.	21.60
70-80	423.78	N.A.	8.70
80-90	135.13	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	4868.79	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	152.99
10-20	438.24
20-30	665.41
30-40	806.83
40-50	842.64
50-60	773.83
60-70	629.94
70-80	423.78
80-90	135.13
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**

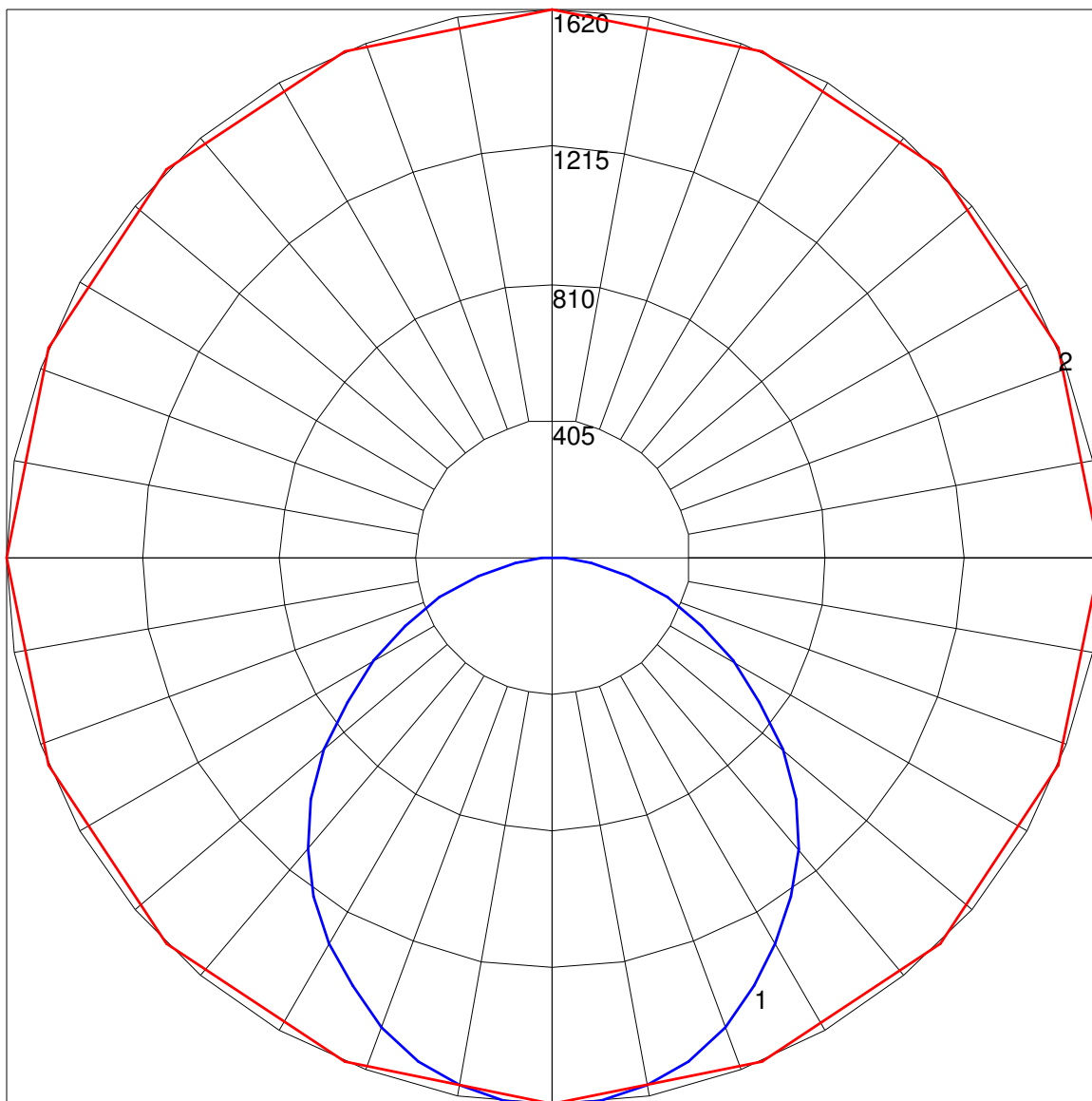
Reflectances

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	21.5	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	21.5	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 = 1620.209 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.)