



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L61-950-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-L61-950-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	5461
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
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	4722	5072	5461
55	4280	4991	5630
65	3772	4942	6102
75	2902	5238	7132
85	1261	4257	4152

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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>	1817.216	1817.216	1817.216	1817.216	1817.216
<b>5</b>	1815.650	1807.824	1806.259	1799.998	1804.694
<b>10</b>	1784.346	1776.520	1782.781	1776.520	1781.216
<b>15</b>	1737.390	1734.259	1743.651	1746.781	1751.477
<b>20</b>	1662.259	1673.216	1687.303	1702.955	1706.085
<b>25</b>	1576.172	1598.085	1618.433	1643.477	1649.738
<b>30</b>	1483.825	1508.868	1538.607	1576.172	1588.694
<b>35</b>	1382.086	1403.999	1439.999	1496.346	1508.868
<b>40</b>	1266.260	1288.173	1338.260	1397.738	1418.086
<b>45</b>	1141.042	1161.390	1225.564	1288.173	1319.477
<b>50</b>	993.912	1020.521	1101.912	1166.086	1211.477
<b>55</b>	838.956	876.521	978.260	1048.695	1103.477
<b>60</b>	691.825	734.086	851.477	940.695	993.912
<b>65</b>	544.695	590.086	713.738	834.260	881.217
<b>70</b>	400.695	449.217	586.956	718.434	766.956
<b>75</b>	256.695	316.174	463.304	593.217	630.782
<b>80</b>	126.782	198.782	319.304	436.695	424.174
<b>85</b>	37.565	76.696	126.782	214.435	123.652
<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	663.12	N.A.	12.10
0-30	1409.44	N.A.	25.80
0-40	2314.38	N.A.	42.40
0-60	4127.4	N.A.	75.60
0-80	5309.24	N.A.	97.20
0-90	5460.8	N.A.	100.00
10-90	5289.22	N.A.	96.90
20-40	1651.26	N.A.	30.20
20-50	2596.36	N.A.	47.50
40-70	2519.56	N.A.	46.10
60-80	1181.84	N.A.	21.60
70-80	475.31	N.A.	8.70
80-90	151.56	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	5460.8	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	171.59
10-20	491.53
20-30	746.32
30-40	904.94
40-50	945.10
50-60	867.92
60-70	706.54
70-80	475.31
80-90	151.56
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

X=2H	Y=2H	16.8	18.5	17.2	18.8	19.1	UGR Viewed Endwise			
	3H	18.4	20.0	18.8	20.3	20.6	18.4	20.1	18.8	20.4
	4H	19.0	20.4	19.4	20.8	21.2	21.0	22.5	21.3	22.8
	6H	19.3	20.7	19.7	21.0	21.4	22.1	23.6	22.5	23.9
	8H	19.4	20.7	19.8	21.1	21.5	23.1	24.4	23.5	24.8
	12H	19.4	20.7	19.9	21.0	21.5	23.4	24.7	23.8	25.1
							23.5	24.8	24.0	25.2

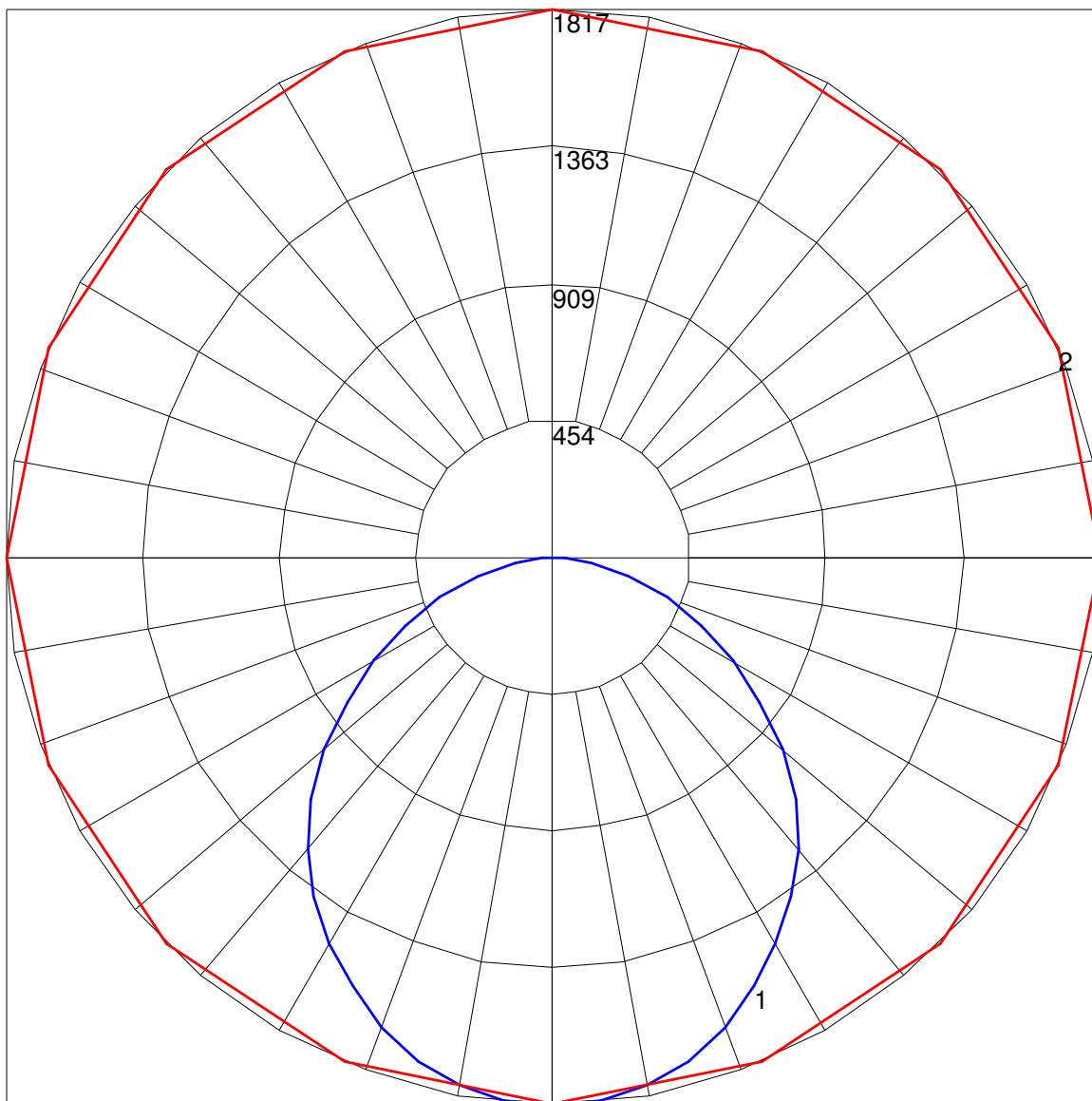
4H	2H	17.7	19.2	18.1	19.5	19.9	19.0	20.4	19.4	20.8
	3H	19.6	20.8	20.0	21.2	21.6	21.8	23.0	22.2	23.4
	4H	20.3	21.4	20.7	21.8	22.3	23.1	24.3	23.6	24.7
	6H	20.8	21.7	21.2	22.2	22.6	24.3	25.3	24.8	25.8
	8H	20.9	21.8	21.3	22.2	22.7	24.7	25.6	25.2	26.1
	12H	20.9	21.8	21.4	22.2	22.7	24.9	25.8	25.4	26.2

8H	4H	21.0	21.9	21.5	22.4	22.9	23.4	24.4	23.9	24.8
	6H	21.7	22.4	22.2	22.9	23.4	24.8	25.6	25.3	26.1
	8H	21.9	22.6	22.4	23.1	23.5	25.4	26.1	25.9	26.6
	12H	22.0	22.6	22.5	23.1	23.6	25.7	26.3	26.2	26.8

12H	4H	21.2	22.0	21.7	22.5	23.0	23.5	24.3	23.9	24.8
	6H	21.9	22.6	22.5	23.1	23.6	24.9	25.6	25.4	26.0
	8H	22.2	22.8	22.7	23.3	23.9	25.5	26.1	26.0	26.6

Maximum UGR = 27.4

POLAR GRAPH



Maximum Candela = 1817.216 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.)