



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L64-940-AF-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 20802.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 2023-07-24  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 2x4' RECESSED LED LUMINAIRE  
 [LUMINAIRE] WHITE REFLECTOR w/FROSTED CENTER LENS  
 [LUMINAIRE] 0-10V DIMMING DRIVER  
 [LUMCAT] LT-24-L64-940-AF-DIM-UNV  
 [LAMPCAT] 22 INCH LED ARRAYS  
 [\_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	5500
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	113
Total Luminaire Watts	48.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.93 ft
Luminous Width (90-270)	1.91 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2273	2526	2717
55	2067	2450	2740
65	1766	2435	2868
75	1302	2558	3209
85	498	2054	1888

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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>	1910.769	1910.769	1910.769	1910.769	1910.769
<b>5</b>	1929.089	1906.189	1894.281	1889.701	1889.701
<b>10</b>	1893.365	1869.549	1863.137	1864.053	1861.305
<b>15</b>	1836.573	1820.085	1817.337	1823.749	1827.413
<b>20</b>	1762.378	1747.722	1754.134	1771.538	1775.202
<b>25</b>	1665.282	1652.458	1675.358	1700.090	1705.586
<b>30</b>	1553.530	1550.782	1581.926	1614.902	1627.726
<b>35</b>	1422.543	1433.535	1479.335	1521.470	1537.042
<b>40</b>	1284.227	1304.379	1374.911	1423.459	1441.779
<b>45</b>	1118.432	1153.240	1243.007	1323.615	1337.355
<b>50</b>	980.116	1023.168	1111.104	1189.880	1212.780
<b>55</b>	825.313	868.365	978.284	1062.556	1093.700
<b>60</b>	673.258	720.889	838.137	939.813	969.124
<b>65</b>	519.370	585.322	716.309	815.237	843.633
<b>70</b>	375.559	449.754	585.322	690.661	713.561
<b>75</b>	234.495	325.179	460.746	555.094	577.994
<b>80</b>	112.668	210.679	334.339	378.307	365.483
<b>85</b>	30.228	104.424	124.576	110.836	114.500
<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	694.72	N.A.	12.60
0-30	1468.31	N.A.	26.70
0-40	2394.04	N.A.	43.50
0-60	4215.34	N.A.	76.60
0-80	5365.21	N.A.	97.50
0-90	5500.39	N.A.	100.00
10-90	5320.02	N.A.	96.70
20-40	1699.32	N.A.	30.90
20-50	2654.61	N.A.	48.30
40-70	2514.00	N.A.	45.70
60-80	1149.87	N.A.	20.90
70-80	457.17	N.A.	8.30
80-90	135.18	N.A.	2.50
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	5500.39	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	180.36
10-20	514.35
20-30	773.60
30-40	925.72
40-50	955.29
50-60	866.01
60-70	692.70
70-80	457.17
80-90	135.18
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	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	82	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	53	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

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**UGR TABLE - CORRECTED**

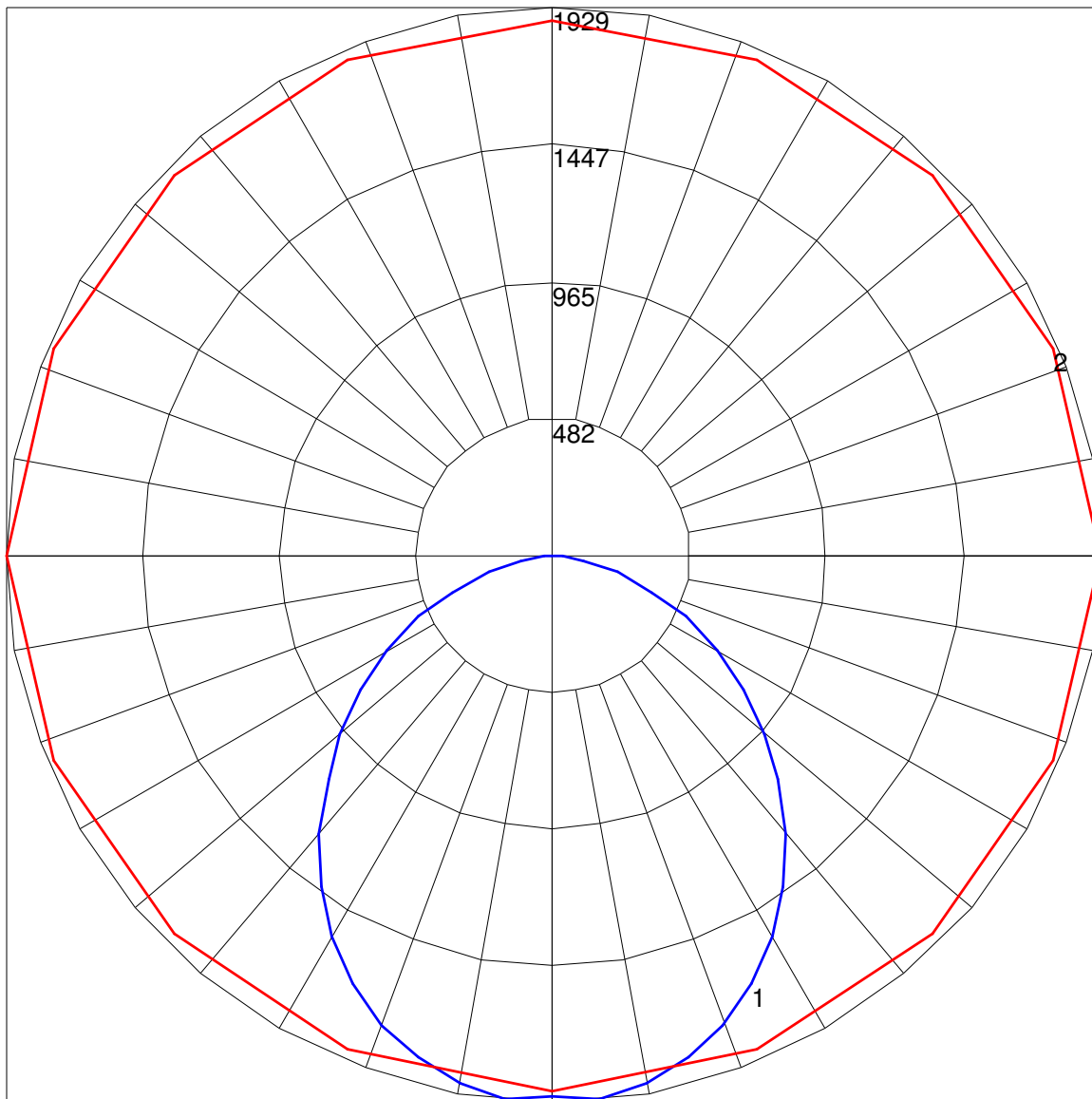
Reflectances

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	14.2	15.9	14.6	16.2	16.5	15.9	17.6	16.3	17.9	18.2
	3H	15.8	17.3	16.2	17.6	18.0	18.3	19.8	18.7	20.1	20.5
	4H	16.3	17.7	16.7	18.1	18.5	19.3	20.8	19.7	21.1	21.5
	6H	16.6	18.0	17.0	18.3	18.7	20.2	21.5	20.6	21.9	22.3
	8H	16.7	18.0	17.1	18.4	18.8	20.4	21.7	20.8	22.1	22.5
	12H	16.7	18.0	17.2	18.3	18.8	20.5	21.8	21.0	22.1	22.6
4H	2H	15.2	16.6	15.6	16.9	17.3	16.5	17.9	16.9	18.3	18.6
	3H	17.0	18.2	17.4	18.6	19.0	19.1	20.3	19.5	20.7	21.1
	4H	17.7	18.8	18.1	19.2	19.7	20.4	21.5	20.8	21.9	22.3
	6H	18.2	19.1	18.6	19.6	20.0	21.4	22.4	21.9	22.8	23.2
	8H	18.3	19.2	18.8	19.6	20.1	21.7	22.6	22.2	23.0	23.5
	12H	18.4	19.2	18.8	19.6	20.1	21.9	22.7	22.3	23.1	23.6
8H	4H	18.5	19.4	18.9	19.8	20.3	20.7	21.6	21.2	22.0	22.5
	6H	19.1	19.9	19.6	20.4	20.8	21.9	22.6	22.4	23.1	23.6
	8H	19.4	20.0	19.9	20.5	21.0	22.3	23.0	22.8	23.5	24.0
	12H	19.5	20.1	20.0	20.6	21.1	22.5	23.1	23.0	23.6	24.2
12H	4H	18.6	19.4	19.1	19.9	20.4	20.7	21.5	21.2	22.0	22.5
	6H	19.4	20.1	19.9	20.5	21.1	22.0	22.6	22.5	23.1	23.6
	8H	19.7	20.3	20.2	20.8	21.3	22.4	23.0	22.9	23.5	24.1

Maximum UGR = 24.2

POLAR GRAPH



Maximum Candela = 1929.089 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)