



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L40-850-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-L40-850-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	4210
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
Total Luminaire Watts	32
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	1739	1933	2080
55	1582	1876	2097
65	1352	1864	2195
75	996	1958	2456
85	381	1572	1445

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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>	1462.569	1462.569	1462.569	1462.569	1462.569
<b>5</b>	1476.592	1459.063	1449.949	1446.443	1446.443
<b>10</b>	1449.247	1431.018	1426.110	1426.811	1424.708
<b>15</b>	1405.777	1393.157	1391.053	1395.961	1398.766
<b>20</b>	1348.985	1337.767	1342.675	1355.996	1358.801
<b>25</b>	1274.665	1264.849	1282.377	1301.308	1305.515
<b>30</b>	1189.126	1187.023	1210.861	1236.102	1245.918
<b>35</b>	1088.864	1097.277	1132.334	1164.586	1176.506
<b>40</b>	982.992	998.417	1052.405	1089.565	1103.588
<b>45</b>	856.087	882.730	951.441	1013.141	1023.658
<b>50</b>	750.215	783.169	850.478	910.775	928.304
<b>55</b>	631.723	664.677	748.813	813.317	837.156
<b>60</b>	515.335	551.794	641.539	719.365	741.802
<b>65</b>	397.544	448.026	548.288	624.011	645.746
<b>70</b>	287.466	344.258	448.026	528.656	546.185
<b>75</b>	179.491	248.903	352.671	424.888	442.417
<b>80</b>	86.240	161.261	255.915	289.569	279.753
<b>85</b>	23.137	79.929	95.354	84.837	87.642
<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	531.76	N.A.	12.60
0-30	1123.9	N.A.	26.70
0-40	1832.48	N.A.	43.50
0-60	3226.56	N.A.	76.60
0-80	4106.72	N.A.	97.50
0-90	4210.19	N.A.	100.00
10-90	4072.13	N.A.	96.70
20-40	1300.72	N.A.	30.90
20-50	2031.93	N.A.	48.30
40-70	1924.3	N.A.	45.70
60-80	880.15	N.A.	20.90
70-80	349.93	N.A.	8.30
80-90	103.47	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	4210.19	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	138.06
10-20	393.70
20-30	592.14
30-40	708.58
40-50	731.21
50-60	662.87
60-70	530.22
70-80	349.93
80-90	103.47
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**

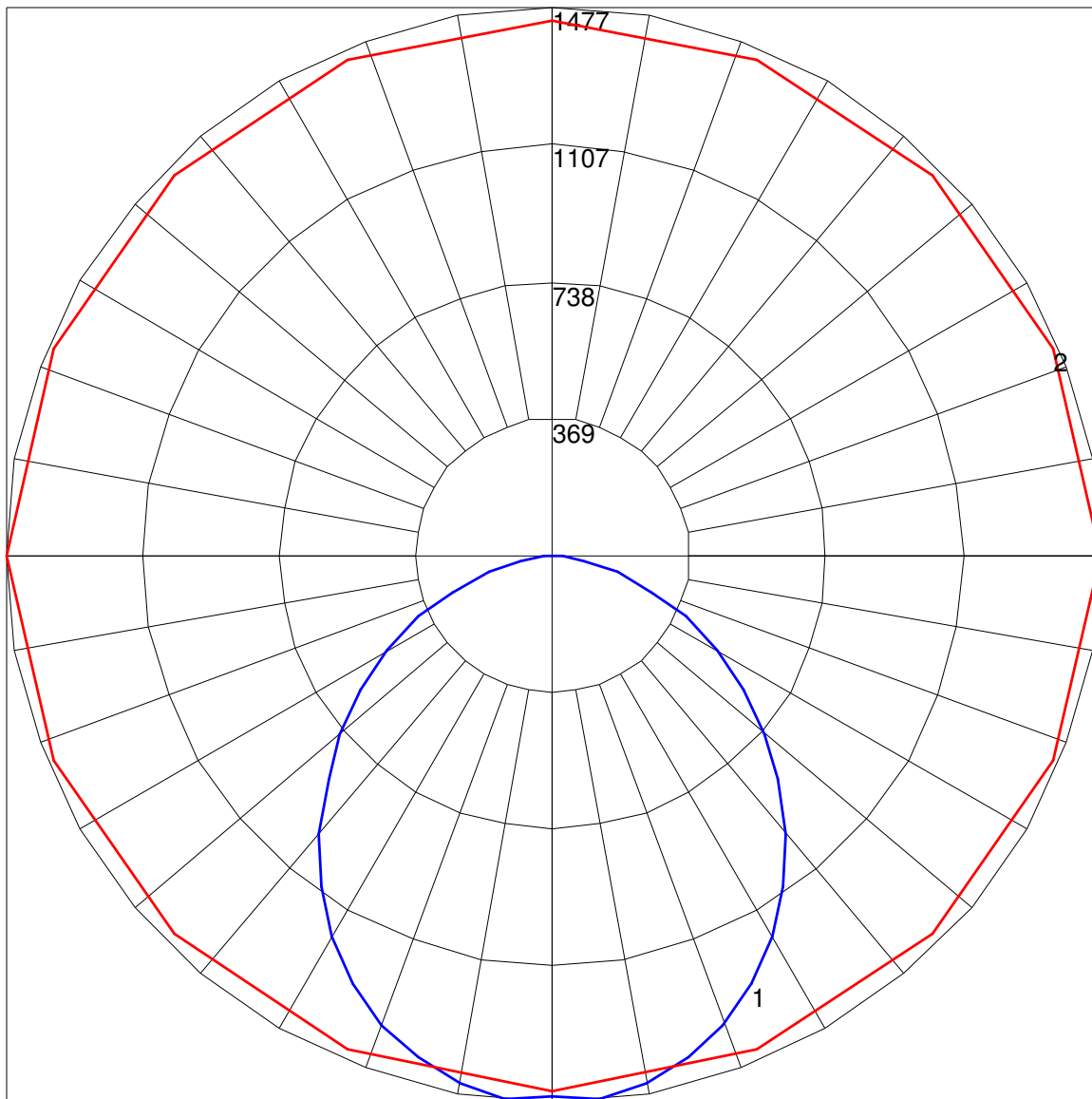
Reflectances

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	13.3	15.0	13.7	15.3	15.6	15.0	16.7	15.4	17.0	17.3
	3H	14.9	16.4	15.3	16.7	17.1	17.4	18.9	17.8	19.2	19.6
	4H	15.4	16.8	15.8	17.2	17.6	18.4	19.9	18.8	20.2	20.6
	6H	15.7	17.1	16.1	17.4	17.8	19.3	20.6	19.7	21.0	21.4
	8H	15.8	17.1	16.2	17.5	17.9	19.5	20.8	19.9	21.2	21.6
	12H	15.8	17.1	16.3	17.4	17.9	19.6	20.9	20.1	21.2	21.7
4H	2H	14.3	15.7	14.7	16.0	16.4	15.6	17.0	16.0	17.4	17.7
	3H	16.1	17.3	16.5	17.7	18.1	18.2	19.4	18.6	19.8	20.2
	4H	16.8	17.9	17.2	18.3	18.8	19.5	20.6	19.9	21.0	21.4
	6H	17.3	18.2	17.7	18.7	19.1	20.5	21.5	21.0	21.9	22.3
	8H	17.4	18.3	17.9	18.7	19.2	20.8	21.7	21.3	22.1	22.6
	12H	17.5	18.3	17.9	18.7	19.2	21.0	21.8	21.4	22.2	22.7
8H	4H	17.6	18.5	18.0	18.9	19.4	19.8	20.7	20.3	21.1	21.6
	6H	18.2	19.0	18.7	19.5	19.9	21.0	21.7	21.5	22.2	22.7
	8H	18.5	19.1	19.0	19.6	20.1	21.4	22.1	21.9	22.6	23.1
	12H	18.6	19.2	19.1	19.7	20.2	21.6	22.2	22.1	22.7	23.3
12H	4H	17.7	18.5	18.2	19.0	19.5	19.8	20.6	20.3	21.1	21.6
	6H	18.5	19.2	19.0	19.6	20.2	21.1	21.7	21.6	22.2	22.7
	8H	18.8	19.4	19.3	19.9	20.4	21.5	22.1	22.0	22.6	23.2

Maximum UGR = 23.3

POLAR GRAPH



Maximum Candela = 1476.592 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.)