



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L40-950-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-L40-950-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	3535
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	110
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	1460	1623	1746
55	1329	1575	1761
65	1135	1565	1843
75	837	1644	2062
85	320	1320	1213

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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>	1228.006	1228.006	1228.006	1228.006	1228.006
<b>5</b>	1239.780	1225.063	1217.410	1214.466	1214.466
<b>10</b>	1216.821	1201.515	1197.394	1197.983	1196.217
<b>15</b>	1180.322	1169.726	1167.960	1172.081	1174.435
<b>20</b>	1132.638	1123.219	1127.340	1138.525	1140.880
<b>25</b>	1070.237	1061.996	1076.713	1092.608	1096.140
<b>30</b>	998.417	996.651	1016.667	1037.859	1046.101
<b>35</b>	914.235	921.299	950.733	977.813	987.821
<b>40</b>	825.343	838.294	883.623	914.823	926.597
<b>45</b>	718.790	741.160	798.851	850.656	859.487
<b>50</b>	629.898	657.566	714.080	764.708	779.425
<b>55</b>	530.409	558.078	628.720	682.880	702.895
<b>60</b>	432.687	463.299	538.651	603.995	622.833
<b>65</b>	333.787	376.173	460.355	523.934	542.183
<b>70</b>	241.363	289.046	376.173	443.872	458.589
<b>75</b>	150.704	208.985	296.111	356.746	371.463
<b>80</b>	72.409	135.399	214.872	243.129	234.887
<b>85</b>	19.427	67.111	80.062	71.231	73.586
<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	446.48	N.A.	12.60
0-30	943.65	N.A.	26.70
0-40	1538.59	N.A.	43.50
0-60	2709.1	N.A.	76.60
0-80	3448.09	N.A.	97.50
0-90	3534.97	N.A.	100.00
10-90	3419.05	N.A.	96.70
20-40	1092.11	N.A.	30.90
20-50	1706.06	N.A.	48.30
40-70	1615.69	N.A.	45.70
60-80	739.00	N.A.	20.90
70-80	293.81	N.A.	8.30
80-90	86.88	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	3534.97	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	115.92
10-20	330.56
20-30	497.17
30-40	594.94
40-50	613.94
50-60	556.56
60-70	445.18
70-80	293.81
80-90	86.88
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	70	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

X=2H	Y=2H	12.7	14.4	13.1	14.7	15.0	14.4	16.1	14.8	16.4	16.7
	3H	14.3	15.8	14.7	16.1	16.5	16.8	18.3	17.2	18.6	19.0
	4H	14.8	16.2	15.2	16.6	17.0	17.8	19.3	18.2	19.6	20.0
	6H	15.1	16.5	15.5	16.8	17.2	18.7	20.0	19.1	20.4	20.7
	8H	15.2	16.5	15.6	16.9	17.3	18.9	20.2	19.3	20.6	21.0
	12H	15.2	16.4	15.7	16.8	17.3	19.0	20.3	19.5	20.6	21.1

UGR Viewed Endwise

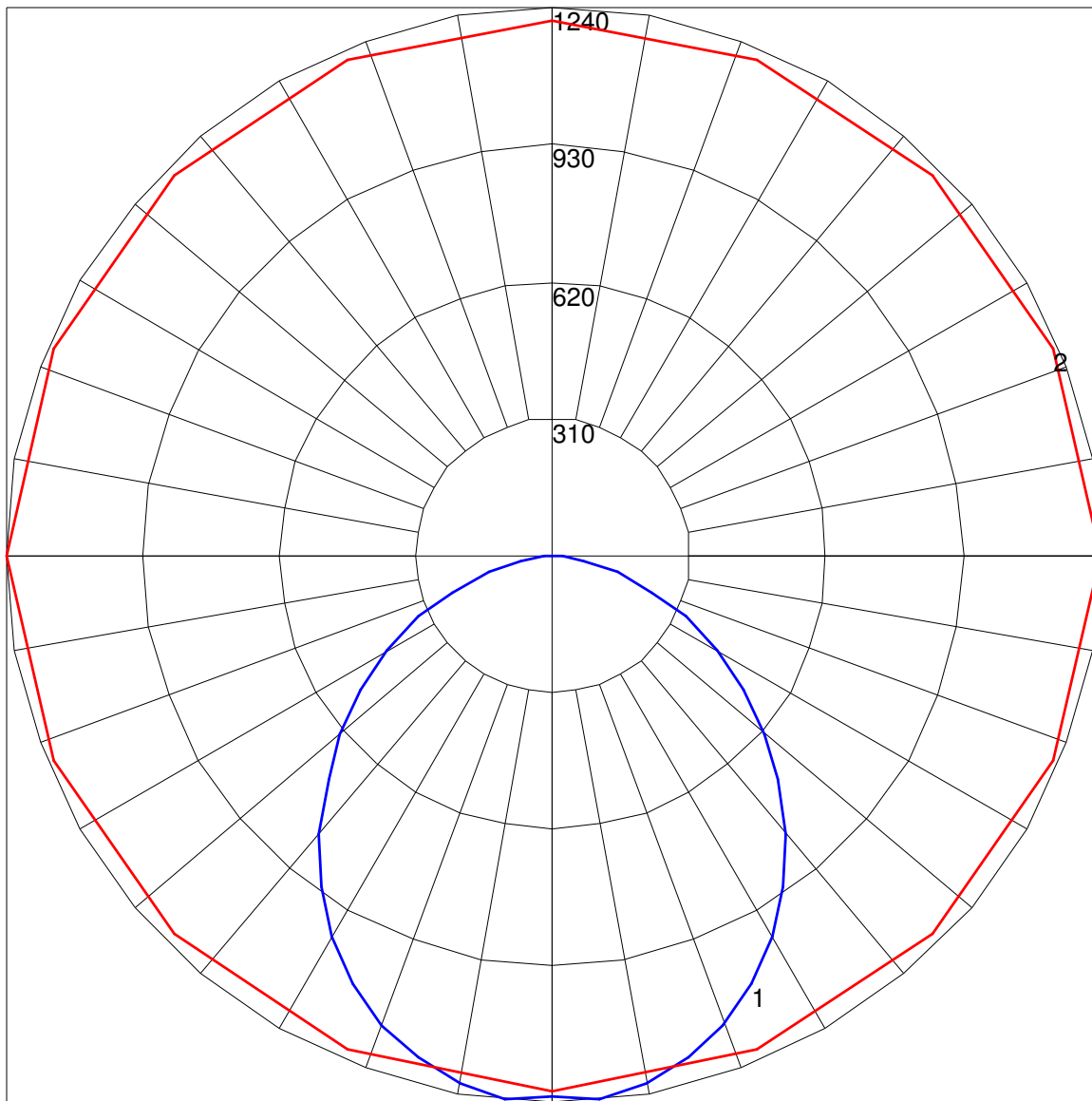
4H	2H	13.7	15.1	14.1	15.4	15.8	15.0	16.4	15.4	16.8	17.1
	3H	15.5	16.7	15.9	17.1	17.5	17.6	18.8	18.0	19.2	19.6
	4H	16.2	17.3	16.6	17.7	18.1	18.9	20.0	19.3	20.4	20.8
	6H	16.7	17.6	17.1	18.1	18.5	19.9	20.9	20.4	21.3	21.7
	8H	16.8	17.7	17.3	18.1	18.6	20.2	21.1	20.7	21.5	22.0
	12H	16.9	17.7	17.3	18.1	18.6	20.4	21.2	20.8	21.6	22.1

8H	4H	17.0	17.9	17.4	18.3	18.8	19.2	20.1	19.7	20.5	21.0
	6H	17.6	18.4	18.1	18.9	19.3	20.4	21.1	20.9	21.6	22.1
	8H	17.9	18.5	18.4	19.0	19.5	20.8	21.5	21.3	22.0	22.5
	12H	18.0	18.6	18.5	19.1	19.6	21.0	21.6	21.5	22.1	22.7

12H	4H	17.1	17.9	17.6	18.4	18.9	19.2	20.0	19.7	20.5	21.0
	6H	17.9	18.6	18.4	19.0	19.6	20.5	21.1	21.0	21.6	22.1
	8H	18.2	18.8	18.7	19.3	19.8	20.9	21.5	21.4	22.0	22.6

Maximum UGR = 22.7

POLAR GRAPH



Maximum Candela = 1239.78 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.)