



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L40-840-AF-EM-10W-(L32)-DIM-UNV\_EM MODE ONLY.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] GEN FROM BALLABS TEST NO. 20802.0  
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
[ISSUE DATE] 03-AUG-2023  
[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-L40-840-AF-EM-10W-(L32)-DIM-UNV  
[LAMPCAT] HLMX 80 CRI 4000K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1417
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	10
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	585	651	700
55	533	631	706
65	455	627	739
75	335	659	827
85	128	529	486

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0</b>	492.233	492.233	492.233	492.233	492.233
<b>5</b>	496.953	491.054	487.986	486.806	486.806
<b>10</b>	487.750	481.615	479.963	480.199	479.491
<b>15</b>	473.120	468.872	468.164	469.816	470.760
<b>20</b>	454.006	450.231	451.883	456.366	457.310
<b>25</b>	428.993	425.690	431.589	437.960	439.376
<b>30</b>	400.205	399.497	407.520	416.015	419.319
<b>35</b>	366.461	369.293	381.092	391.946	395.958
<b>40</b>	330.830	336.021	354.191	366.697	371.417
<b>45</b>	288.119	297.086	320.211	340.977	344.516
<b>50</b>	252.488	263.578	286.232	306.525	312.424
<b>55</b>	212.609	223.700	252.016	273.725	281.748
<b>60</b>	173.438	185.708	215.913	242.105	249.656
<b>65</b>	133.795	150.785	184.529	210.013	217.328
<b>70</b>	96.748	115.861	150.785	177.921	183.821
<b>75</b>	60.408	83.769	118.693	142.998	148.897
<b>80</b>	29.024	54.273	86.129	97.456	94.152
<b>85</b>	7.787	26.901	32.092	28.552	29.496
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	178.97	N.A.	12.60
0-30	378.25	N.A.	26.70
0-40	616.73	N.A.	43.50
0-60	1085.91	N.A.	76.60
0-80	1382.13	N.A.	97.50
0-90	1416.96	N.A.	100.00
10-90	1370.49	N.A.	96.70
20-40	437.76	N.A.	30.90
20-50	683.85	N.A.	48.30
40-70	647.63	N.A.	45.70
60-80	296.22	N.A.	20.90
70-80	117.77	N.A.	8.30
80-90	34.82	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	1416.96	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	46.46
10-20	132.50
20-30	199.29
30-40	238.48
40-50	246.09
50-60	223.09
60-70	178.45
70-80	117.77
80-90	34.82
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	9.5	11.2	9.9	11.5	11.8	11.2	12.9	11.6	13.2	13.5
	3H	11.1	12.6	11.5	12.9	13.3	13.6	15.1	14.0	15.4	15.8
	4H	11.6	13.0	12.0	13.4	13.8	14.6	16.1	15.0	16.4	16.8
	6H	11.9	13.3	12.3	13.6	14.0	15.5	16.8	15.9	17.2	17.5
	8H	12.0	13.3	12.4	13.7	14.1	15.7	17.0	16.1	17.4	17.8
	12H	12.0	13.2	12.5	13.6	14.1	15.8	17.1	16.3	17.4	17.9

### UGR Viewed Endwise

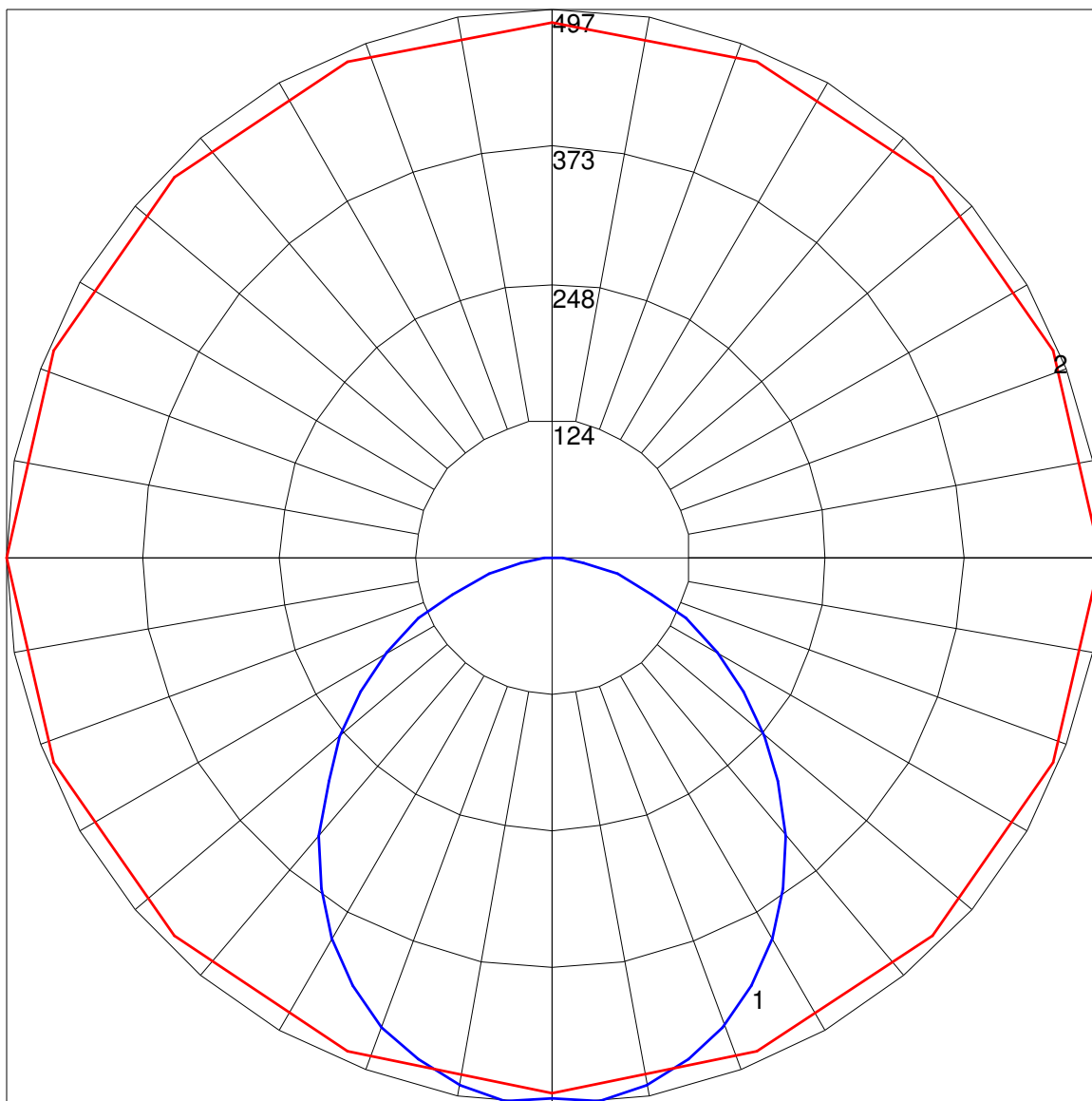
4H	2H	10.5	11.9	10.9	12.2	12.6	11.8	13.2	12.2	13.6	13.9
	3H	12.3	13.5	12.7	13.9	14.3	14.4	15.6	14.8	16.0	16.4
	4H	13.0	14.1	13.4	14.5	14.9	15.7	16.8	16.1	17.2	17.6
	6H	13.5	14.4	13.9	14.9	15.3	16.7	17.7	17.2	18.1	18.5
	8H	13.6	14.5	14.1	14.9	15.4	17.0	17.9	17.5	18.3	18.8
	12H	13.7	14.5	14.1	14.9	15.4	17.2	18.0	17.6	18.4	18.9
8H	4H	13.8	14.7	14.2	15.1	15.6	16.0	16.9	16.5	17.3	17.8
	6H	14.4	15.2	14.9	15.7	16.1	17.2	17.9	17.7	18.4	18.9
	8H	14.7	15.3	15.2	15.8	16.3	17.6	18.3	18.1	18.8	19.3
	12H	14.8	15.4	15.3	15.9	16.4	17.8	18.4	18.3	18.9	19.5
12H	4H	13.9	14.7	14.4	15.2	15.7	16.0	16.8	16.5	17.3	17.8
	6H	14.7	15.4	15.2	15.8	16.4	17.3	17.9	17.8	18.4	18.9
	8H	15.0	15.6	15.5	16.1	16.6	17.7	18.3	18.2	18.8	19.4

Maximum UGR = 19.5

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## POLAR GRAPH



Maximum Candela = 496.953 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.)