



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L64-840-AF-EMBSL10LST-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  
 [ISSUEDATE] 10-19-2023  
 [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-L64-840-AF-EMBSL10LST-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	1360
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
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	562	624	672
55	511	606	677
65	437	602	709
75	322	632	793
85	123	508	467

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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>	472.433	472.433	472.433	472.433	472.433
<b>5</b>	476.962	471.301	468.356	467.224	467.224
<b>10</b>	468.130	462.241	460.656	460.883	460.203
<b>15</b>	454.088	450.012	449.332	450.918	451.823
<b>20</b>	435.743	432.120	433.705	438.008	438.914
<b>25</b>	411.737	408.566	414.228	420.343	421.702
<b>30</b>	384.107	383.427	391.127	399.281	402.451
<b>35</b>	351.720	354.438	365.762	376.180	380.030
<b>40</b>	317.522	322.505	339.943	351.947	356.476
<b>45</b>	276.530	285.136	307.331	327.261	330.658
<b>50</b>	242.331	252.976	274.718	294.195	299.857
<b>55</b>	204.057	214.701	241.878	262.714	270.415
<b>60</b>	166.461	178.238	207.227	232.366	239.614
<b>65</b>	128.413	144.719	177.106	201.565	208.586
<b>70</b>	92.856	111.201	144.719	170.764	176.426
<b>75</b>	57.978	80.400	113.918	137.246	142.908
<b>80</b>	27.857	52.090	82.664	93.535	90.365
<b>85</b>	7.474	25.818	30.801	27.404	28.310
<b>90</b>	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : LT-24-L64-840-AF-EMBSL10LST-DIM-UNV\_EM MODE ONLY.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	171.77	N.A.	12.60
0-30	363.04	N.A.	26.70
0-40	591.92	N.A.	43.50
0-60	1042.23	N.A.	76.60
0-80	1326.53	N.A.	97.50
0-90	1359.96	N.A.	100.00
10-90	1315.36	N.A.	96.70
20-40	420.15	N.A.	30.90
20-50	656.35	N.A.	48.30
40-70	621.58	N.A.	45.70
60-80	284.30	N.A.	20.90
70-80	113.03	N.A.	8.30
80-90	33.42	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	1359.96	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	44.59
10-20	127.17
20-30	191.27
30-40	228.88
40-50	236.19
50-60	214.12
60-70	171.27
70-80	113.03
80-90	33.42
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	9.4	11.1	9.8	11.4	11.7	11.1	12.8	11.5	13.1	13.4
	3H	11.0	12.5	11.4	12.8	13.2	13.5	15.0	13.9	15.3	15.7
	4H	11.5	12.9	11.9	13.3	13.7	14.5	16.0	14.9	16.3	16.7
	6H	11.8	13.2	12.2	13.5	13.9	15.4	16.7	15.8	17.1	17.4
	8H	11.9	13.2	12.3	13.6	14.0	15.6	16.9	16.0	17.3	17.7
	12H	11.9	13.1	12.4	13.5	14.0	15.7	17.0	16.2	17.3	17.8

### UGR Viewed Endwise

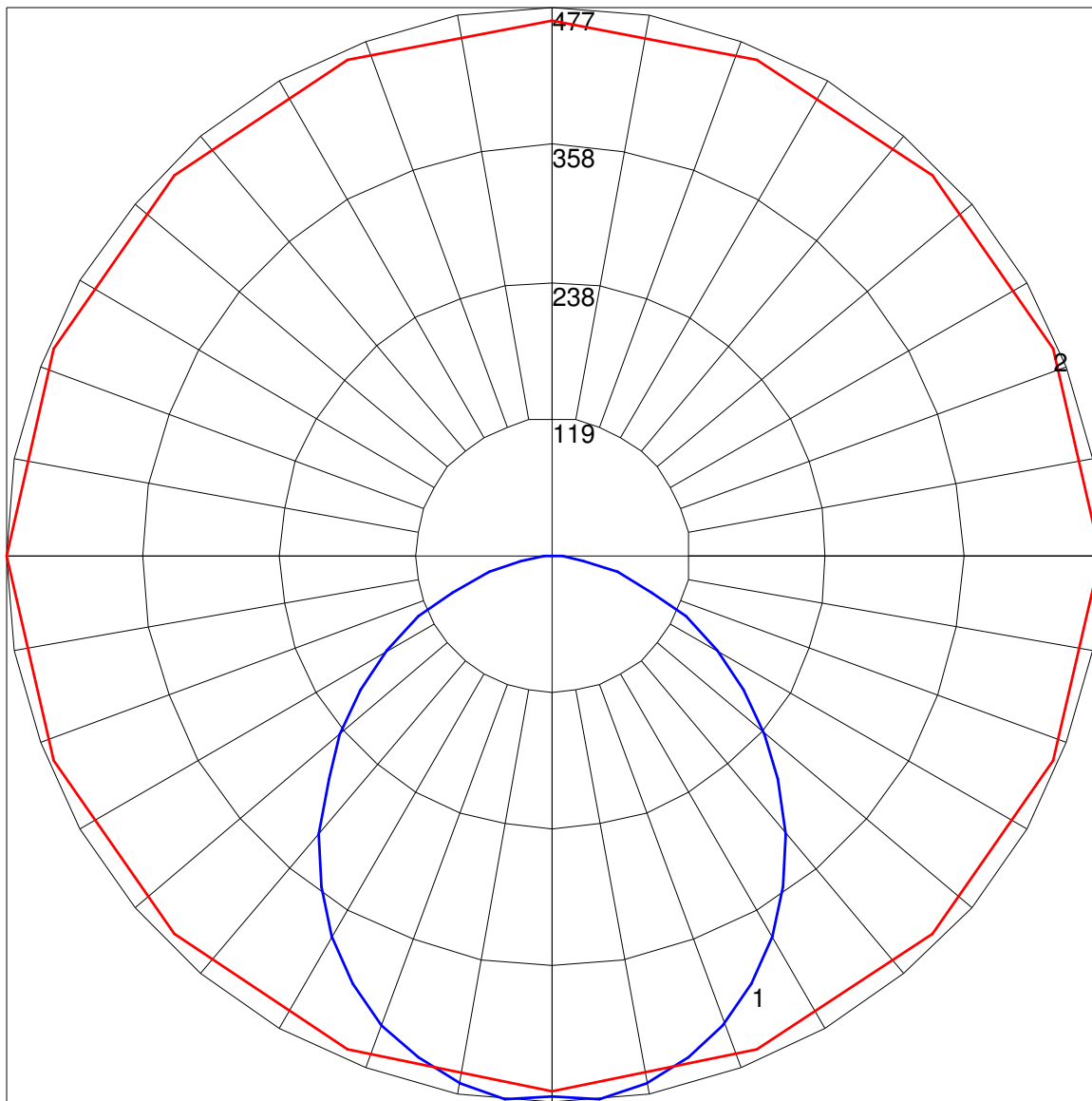
4H	2H	10.4	11.8	10.8	12.1	12.5	11.7	13.1	12.1	13.5	13.8
	3H	12.2	13.4	12.6	13.8	14.2	14.3	15.5	14.7	15.9	16.3
	4H	12.9	14.0	13.3	14.4	14.8	15.6	16.7	16.0	17.1	17.5
	6H	13.4	14.3	13.8	14.8	15.2	16.6	17.6	17.1	18.0	18.4
	8H	13.5	14.4	14.0	14.8	15.3	16.9	17.8	17.4	18.2	18.7
	12H	13.6	14.4	14.0	14.8	15.3	17.1	17.9	17.5	18.3	18.8
8H	4H	13.7	14.6	14.1	15.0	15.5	15.9	16.8	16.4	17.2	17.7
	6H	14.3	15.1	14.8	15.6	16.0	17.1	17.8	17.6	18.3	18.8
	8H	14.6	15.2	15.1	15.7	16.2	17.5	18.2	18.0	18.7	19.2
	12H	14.7	15.3	15.2	15.8	16.3	17.7	18.3	18.2	18.8	19.4
12H	4H	13.8	14.6	14.3	15.1	15.6	15.9	16.7	16.4	17.2	17.7
	6H	14.6	15.3	15.1	15.7	16.3	17.2	17.8	17.7	18.3	18.8
	8H	14.9	15.5	15.4	16.0	16.5	17.6	18.2	18.1	18.7	19.3

Maximum UGR = 19.4

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## POLAR GRAPH



Maximum Candela = 476.962 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.)