



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-AR-24-L64-940-AF-(L60)-EM-10W-DIM-UNV\_EM MODE ONLY.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST]GEN FROM BALLABS TEST NO. 20168.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUE DATE] 18-DEC-2017  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 2-56 LED 22"ARRAYS 2x4'RECESSED LUMINAIRE  
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CENTER LENS  
 [MORE] ADVANCE #CI037C082V045CNN1  
 [LUMCAT] LT-AR-24-L64-940-AF-(L60)-EM-10W-EMERGENCY MODE ONLY  
 [LAMPCAT] HLM 90 CRI 4000K CCT  
 [ \_SEARCH\_SOURCETYPE] LED  
 [ \_SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Commercial, Office, Direct  
 [ \_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1130
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	113
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	475	504	555
55	436	498	578
65	379	506	621
75	299	542	731
85	155	615	649

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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>	371.414	371.414	371.414	371.414	371.414
<b>5</b>	373.461	369.368	368.345	368.345	368.345
<b>10</b>	366.912	363.229	363.229	364.047	363.843
<b>15</b>	356.476	353.406	354.634	356.885	357.499
<b>20</b>	341.947	340.719	342.356	346.858	348.700
<b>25</b>	324.962	324.143	327.008	334.580	336.831
<b>30</b>	304.908	305.522	310.024	320.460	322.506
<b>35</b>	284.239	285.263	290.583	303.680	308.182
<b>40</b>	260.297	262.343	270.324	285.467	292.220
<b>45</b>	234.513	239.015	248.633	264.185	274.008
<b>50</b>	205.045	213.231	224.076	241.675	253.544
<b>55</b>	174.555	185.605	199.520	218.756	231.443
<b>60</b>	143.245	155.523	174.350	195.632	207.501
<b>65</b>	111.731	125.442	149.384	172.508	183.149
<b>70</b>	82.059	95.974	123.396	149.180	159.207
<b>75</b>	54.024	69.167	98.021	124.419	132.195
<b>80</b>	28.035	45.020	72.032	92.905	91.472
<b>85</b>	9.413	21.896	37.448	48.499	39.495
<b>90</b>	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : LT-AR-24-L64-940-AF-(L60)-EM-10W-DIM-UNV\_EM MODE ONLY.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	135.39	N.A.	12.00
0-30	287.17	N.A.	25.40
0-40	471.15	N.A.	41.70
0-60	845.45	N.A.	74.80
0-80	1093.69	N.A.	96.80
0-90	1130.05	N.A.	100.00
10-90	1094.97	N.A.	96.90
20-40	335.75	N.A.	29.70
20-50	529.69	N.A.	46.90
40-70	521.66	N.A.	46.20
60-80	248.24	N.A.	22.00
70-80	100.88	N.A.	8.90
80-90	36.36	N.A.	3.20
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	1130.05	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	35.08
10-20	100.31
20-30	151.78
30-40	183.98
40-50	193.94
50-60	180.36
60-70	147.36
70-80	100.88
80-90	36.36
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	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	35
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

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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	8.9	10.6	9.3	10.9	11.3	10.5	12.2	10.8	12.5	12.8
	3H	10.5	12.1	10.9	12.4	12.8	13.0	14.5	13.4	14.9	15.2
	4H	11.1	12.6	11.5	12.9	13.3	14.2	15.6	14.6	16.0	16.3
	6H	11.5	12.8	11.9	13.2	13.6	15.2	16.5	15.6	16.9	17.3
	8H	11.6	12.9	12.0	13.3	13.7	15.5	16.8	16.0	17.2	17.6
	12H	11.6	12.9	12.1	13.3	13.7	15.8	17.0	16.2	17.4	17.8

### UGR Viewed Endwise

4H	2H	9.9	11.3	10.3	11.7	12.0	11.0	12.5	11.4	12.8	13.2
	3H	11.8	13.0	12.2	13.4	13.8	13.8	15.1	14.2	15.5	15.9
	4H	12.5	13.6	12.9	14.0	14.4	15.2	16.3	15.6	16.7	17.2
	6H	13.0	13.9	13.4	14.4	14.8	16.4	17.4	16.9	17.9	18.3
	8H	13.1	14.0	13.6	14.5	14.9	16.9	17.8	17.4	18.3	18.7
	12H	13.2	14.0	13.7	14.5	15.0	17.2	18.0	17.7	18.5	19.0

8H	4H	13.2	14.1	13.7	14.6	15.0	15.5	16.5	16.0	16.9	17.4
	6H	13.9	14.7	14.4	15.2	15.7	17.0	17.7	17.5	18.2	18.7
	8H	14.2	14.9	14.7	15.4	15.8	17.5	18.3	18.1	18.8	19.2
	12H	14.3	14.9	14.8	15.4	16.0	18.0	18.6	18.5	19.1	19.7

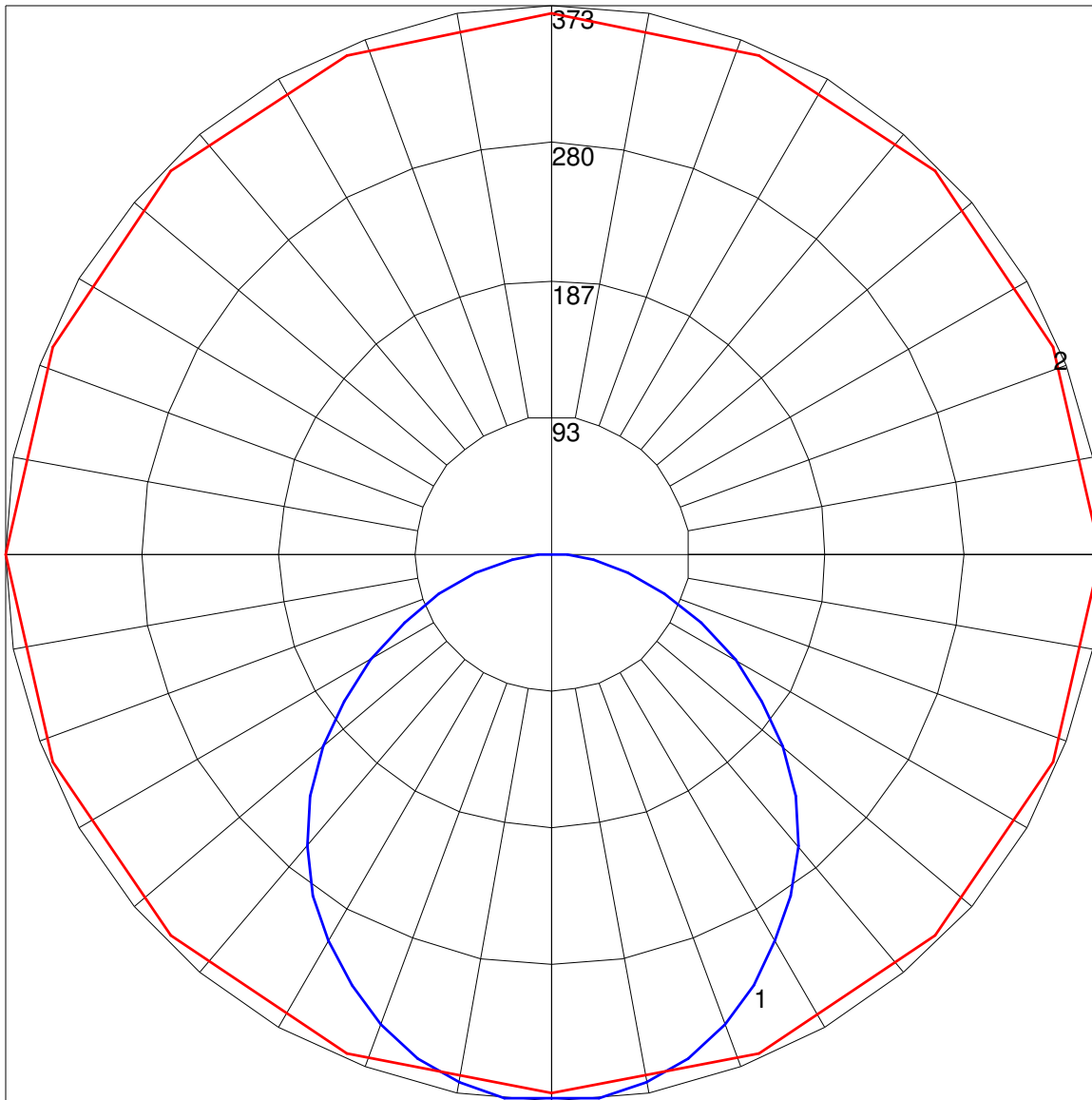
12H	4H	13.4	14.2	13.9	14.7	15.2	15.6	16.4	16.0	16.9	17.3
	6H	14.2	14.9	14.7	15.4	15.9	17.0	17.7	17.5	18.2	18.7
	8H	14.5	15.2	15.0	15.7	16.2	17.7	18.3	18.2	18.8	19.4

Maximum UGR = 19.7

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## POLAR GRAPH



Maximum Candela = 373.461 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.)