



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HETG-AR24-L130-835-A-DIM-UNV.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST]GEN FROM BALLABS TEST NO. 20210.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUE DATE] 18-MAR-2019  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 4-28 LED 22"ARRAYS DUAL APERATURE 2x4'RECESSED LUMINAIRE  
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENSES  
 [LUMCAT] HETG-AR24-L130-835-A-DIM-UNV  
 [LAMPCAT] HLM 80 CRI 3500K CCT  
 [\_SEARCH\_SOURCETYPE] LED  
 [\_SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Commercial, Direct  
 [\_SEARCH\_MOUNTING] Recessed

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	13173
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	111.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 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	6175	6608	6877
55	5187	6019	6312
65	4036	5147	4370
75	2871	3343	2148
85	1431	871	653

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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>	5247.336	5247.336	5247.336	5247.336	5247.336
<b>5</b>	5219.094	5219.094	5196.500	5190.852	5198.383
<b>10</b>	5134.368	5132.485	5123.072	5117.423	5123.072
<b>15</b>	5002.573	5002.573	5019.518	5002.573	5011.987
<b>20</b>	4814.294	4818.060	4865.129	4840.653	4851.950
<b>25</b>	4562.000	4578.945	4639.194	4627.898	4654.257
<b>30</b>	4270.168	4317.237	4347.362	4396.315	4405.729
<b>35</b>	3933.148	3991.515	4014.108	4102.599	4108.248
<b>40</b>	3520.817	3590.480	3650.730	3726.041	3765.580
<b>45</b>	3031.292	3114.135	3244.047	3304.296	3375.842
<b>50</b>	2538.001	2624.609	2820.419	2903.262	2974.808
<b>55</b>	2065.421	2153.912	2396.792	2513.525	2513.525
<b>60</b>	1615.434	1698.277	1986.343	2076.717	1929.860
<b>65</b>	1184.275	1280.297	1509.998	1496.818	1282.180
<b>70</b>	820.896	907.505	1037.417	928.215	743.702
<b>75</b>	515.884	574.251	600.610	476.346	385.972
<b>80</b>	265.473	288.067	261.708	199.576	161.920
<b>85</b>	86.608	71.546	52.718	47.070	39.539
<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	1907.11	N.A.	14.50
0-30	4032.84	N.A.	30.60
0-40	6549.29	N.A.	49.70
0-60	11120.05	N.A.	84.40
0-80	13075.54	N.A.	99.30
0-90	13172.93	N.A.	100.00
10-90	12678.49	N.A.	96.20
20-40	4642.19	N.A.	35.20
20-50	7124.97	N.A.	54.10
40-70	5944.98	N.A.	45.10
60-80	1955.5	N.A.	14.80
70-80	581.27	N.A.	4.40
80-90	97.39	N.A.	0.70
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	13172.93	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	494.45
10-20	1412.66
20-30	2125.73
30-40	2516.46
40-50	2482.78
50-60	2087.97
60-70	1374.22
70-80	581.27
80-90	97.39
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

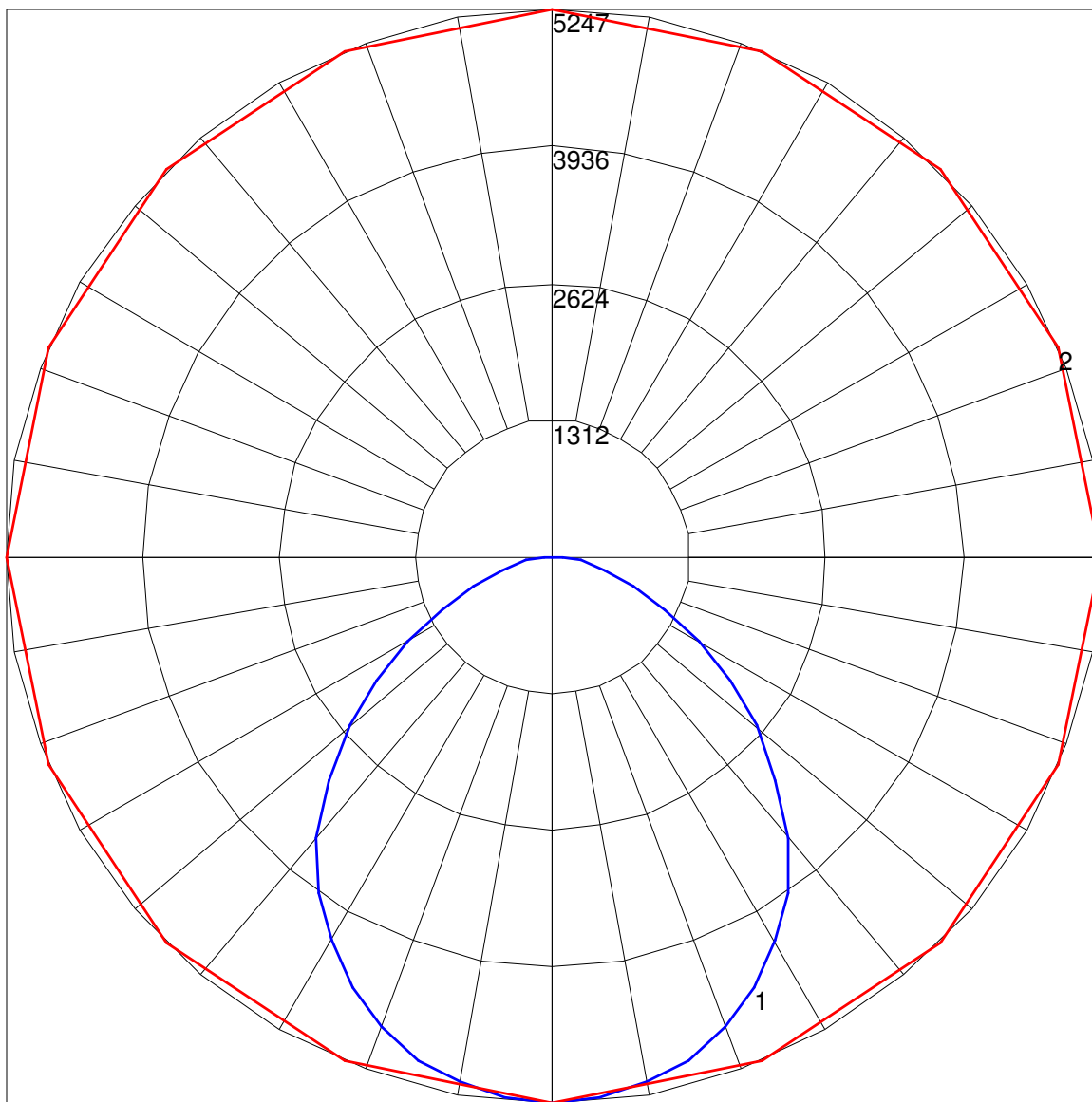
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73
3	92	82	74	68	90	81	73	68	78	72	67	75	70	65	72	68	64	62
4	85	73	65	58	82	72	64	58	69	63	57	67	61	56	65	60	56	54
5	78	66	57	51	76	64	56	50	62	55	50	60	54	49	59	53	49	47
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	44	39	49	43	38	36
8	62	49	41	35	61	48	41	35	47	40	35	46	39	35	45	39	34	33
9	58	45	37	32	57	45	37	32	43	36	32	42	36	31	41	36	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28	27

POLAR GRAPH



Maximum Candela = 5247.336 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)