



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HETG-AR24-L130-830-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  
 [ISSUEDATE] 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-L130-830-A-DIM-UNV  
 [LAMPCAT] HLM 80 CRI 3000K 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	13041
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
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	6113	6542	6808
55	5135	5959	6249
65	3996	5095	4326
75	2842	3309	2127
85	1417	863	647

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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>	5194.751	5194.751	5194.751	5194.751	5194.751
<b>5</b>	5166.792	5166.792	5144.425	5138.833	5146.289
<b>10</b>	5082.915	5081.051	5071.732	5066.140	5071.732
<b>15</b>	4952.441	4952.441	4969.216	4952.441	4961.760
<b>20</b>	4766.049	4769.776	4816.374	4792.143	4803.327
<b>25</b>	4516.283	4533.058	4592.704	4581.520	4607.615
<b>30</b>	4227.375	4273.973	4303.796	4352.258	4361.577
<b>35</b>	3893.733	3951.515	3973.882	4061.486	4067.078
<b>40</b>	3485.534	3554.499	3614.145	3688.702	3727.844
<b>45</b>	3000.914	3082.927	3211.538	3271.183	3342.012
<b>50</b>	2512.567	2598.307	2792.155	2874.168	2944.997
<b>55</b>	2044.722	2132.327	2372.773	2488.336	2488.336
<b>60</b>	1599.245	1681.258	1966.438	2055.906	1910.520
<b>65</b>	1172.407	1267.467	1494.865	1481.818	1269.331
<b>70</b>	812.670	898.410	1027.021	918.914	736.249
<b>75</b>	510.715	568.496	594.591	471.572	382.104
<b>80</b>	262.813	285.180	259.085	197.576	160.297
<b>85</b>	85.740	70.829	52.190	46.598	39.142
<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	1887.99	N.A.	14.50
0-30	3992.42	N.A.	30.60
0-40	6483.66	N.A.	49.70
0-60	11008.61	N.A.	84.40
0-80	12944.51	N.A.	99.30
0-90	13040.93	N.A.	100.00
10-90	12551.43	N.A.	96.20
20-40	4595.67	N.A.	35.20
20-50	7053.57	N.A.	54.10
40-70	5885.4	N.A.	45.10
60-80	1935.9	N.A.	14.80
70-80	575.45	N.A.	4.40
80-90	96.41	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	13040.93	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	489.49
10-20	1398.5
20-30	2104.43
30-40	2491.24
40-50	2457.9
50-60	2067.05
60-70	1360.45
70-80	575.45
80-90	96.41
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

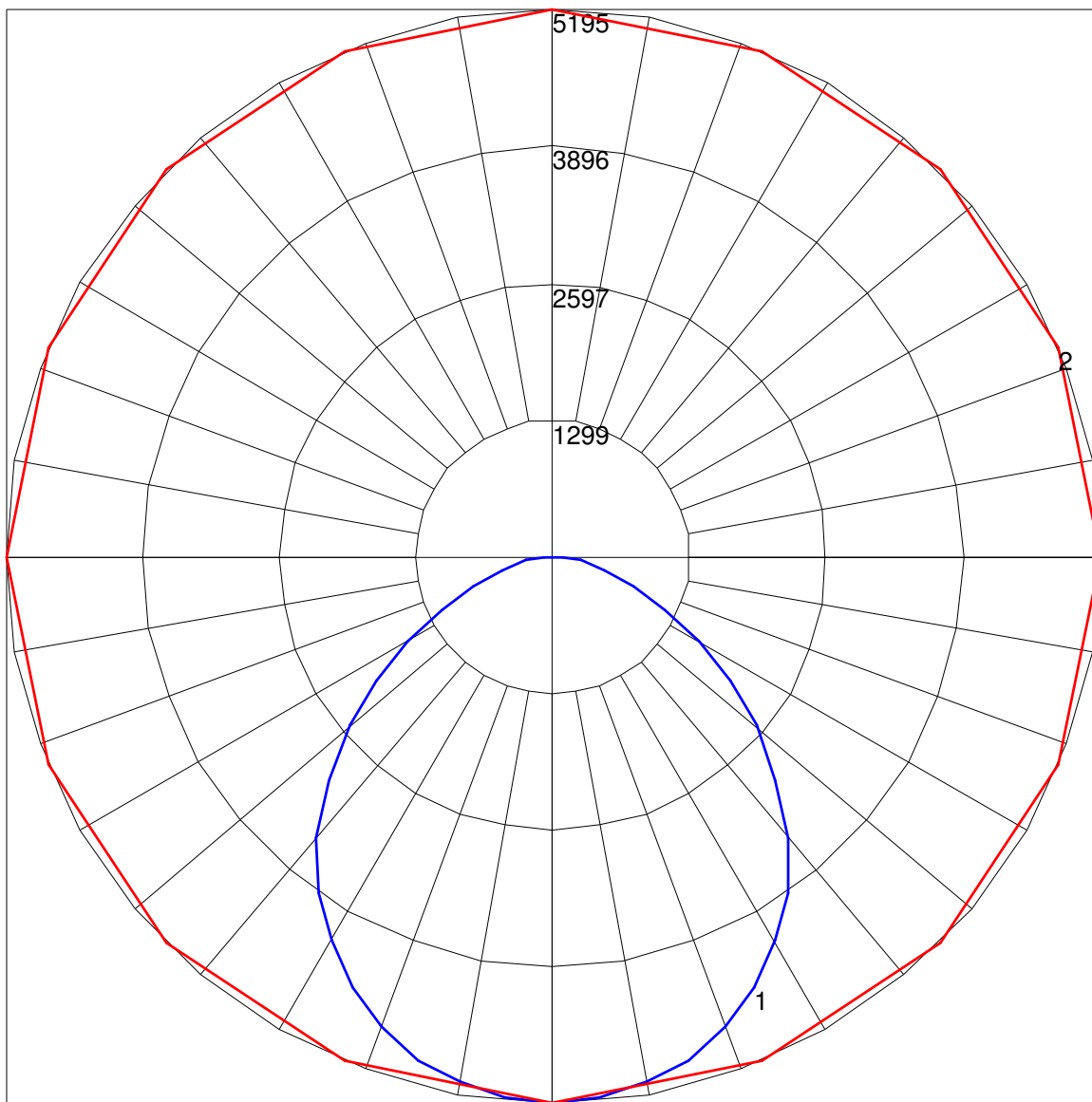
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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 = 5194.751 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.)