



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HETG-AR24-L76-830-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  
 [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-L76-830-A-DIM-UNV  
 [LAMPCAT] HLM 80 CRI 3000K CCT  
 [ \_SEARCH\_SOURCE TYPE] 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	7803
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	131
Total Luminaire Watts	59.4
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	3657	3914	4073
55	3072	3565	3739
65	2391	3048	2588
75	1701	1980	1272
85	848	516	387

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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>	3108.087	3108.087	3108.087	3108.087	3108.087
<b>5</b>	3091.359	3091.359	3077.977	3074.631	3079.092
<b>10</b>	3041.175	3040.060	3034.484	3031.138	3034.484
<b>15</b>	2963.110	2963.110	2973.147	2963.110	2968.686
<b>20</b>	2851.589	2853.820	2881.700	2867.202	2873.894
<b>25</b>	2702.151	2712.188	2747.875	2741.184	2756.797
<b>30</b>	2529.294	2557.174	2575.018	2604.013	2609.589
<b>35</b>	2329.672	2364.243	2377.626	2430.040	2433.386
<b>40</b>	2085.441	2126.704	2162.390	2206.999	2230.418
<b>45</b>	1795.486	1844.556	1921.505	1957.192	1999.570
<b>50</b>	1503.302	1554.601	1670.583	1719.652	1762.030
<b>55</b>	1223.384	1275.799	1419.661	1488.804	1488.804
<b>60</b>	956.849	1005.919	1176.545	1230.076	1143.089
<b>65</b>	701.466	758.342	894.398	886.591	759.457
<b>70</b>	486.231	537.531	614.480	549.798	440.508
<b>75</b>	305.567	340.139	355.752	282.148	228.618
<b>80</b>	157.244	170.627	155.014	118.212	95.908
<b>85</b>	51.300	42.378	31.226	27.880	23.419
<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	1129.61	N.A.	14.50
0-30	2388.72	N.A.	30.60
0-40	3879.26	N.A.	49.70
0-60	6586.6	N.A.	84.40
0-80	7744.87	N.A.	99.30
0-90	7802.56	N.A.	100.00
10-90	7509.69	N.A.	96.20
20-40	2749.65	N.A.	35.20
20-50	4220.24	N.A.	54.10
40-70	3521.31	N.A.	45.10
60-80	1158.28	N.A.	14.80
70-80	344.30	N.A.	4.40
80-90	57.69	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	7802.56	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	292.87
10-20	836.74
20-30	1259.11
30-40	1490.54
40-50	1470.6
50-60	1236.74
60-70	813.98
70-80	344.30
80-90	57.69
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

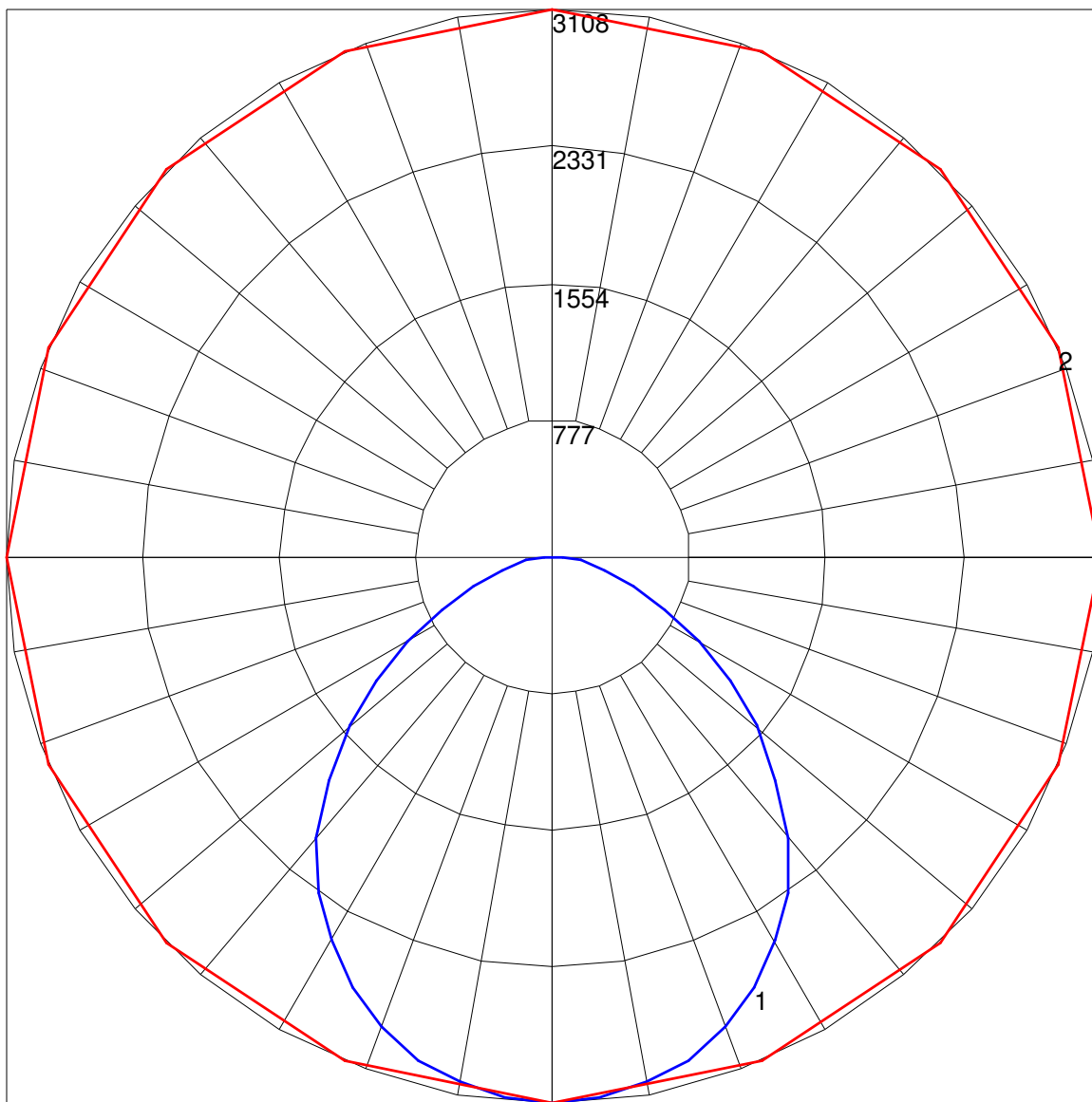
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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 = 3108.087 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.)