



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S24-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

[ISSUEDATE] 31-JAN-2020

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 4-28 LED 22" ARRAYS DUAL APERTURE 2x4' RECESSED LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENSES

[LUMCAT] HETG-S24-L130-835-A-DIM-UNV

[\_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	13128
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	98.7
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	6154	6586	6853
55	5169	5998	6290
65	4022	5129	4355
75	2861	3331	2141
85	1426	868	651

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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>	5229.248	5229.248	5229.248	5229.248	5229.248
<b>5</b>	5201.104	5201.104	5178.588	5172.959	5180.464
<b>10</b>	5116.670	5114.794	5105.412	5099.783	5105.412
<b>15</b>	4985.329	4985.329	5002.216	4985.329	4994.711
<b>20</b>	4797.699	4801.452	4848.359	4823.967	4835.225
<b>25</b>	4546.275	4563.162	4623.203	4611.945	4638.214
<b>30</b>	4255.448	4302.356	4332.377	4381.160	4390.542
<b>35</b>	3919.591	3977.756	4000.272	4088.458	4094.087
<b>40</b>	3508.681	3578.104	3638.146	3713.198	3752.600
<b>45</b>	3020.843	3103.400	3232.865	3292.906	3364.206
<b>50</b>	2529.252	2615.562	2810.697	2893.255	2964.554
<b>55</b>	2058.301	2146.487	2388.530	2504.860	2504.860
<b>60</b>	1609.865	1692.423	1979.496	2069.559	1923.207
<b>65</b>	1180.193	1275.884	1504.793	1491.658	1277.760
<b>70</b>	818.067	904.377	1033.841	925.016	741.138
<b>75</b>	514.106	572.271	598.540	474.704	384.641
<b>80</b>	264.558	287.074	260.806	198.888	161.362
<b>85</b>	86.310	71.299	52.536	46.907	39.402
<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	1900.53	N.A.	14.50
0-30	4018.94	N.A.	30.60
0-40	6526.72	N.A.	49.70
0-60	11081.72	N.A.	84.40
0-80	13030.47	N.A.	99.30
0-90	13127.53	N.A.	100.00
10-90	12634.78	N.A.	96.20
20-40	4626.19	N.A.	35.20
20-50	7100.41	N.A.	54.10
40-70	5924.48	N.A.	45.10
60-80	1948.76	N.A.	14.80
70-80	579.27	N.A.	4.40
80-90	97.05	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	13127.53	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	492.74
10-20	1407.79
20-30	2118.4
30-40	2507.78
40-50	2474.23
50-60	2080.77
60-70	1369.49
70-80	579.27
80-90	97.05
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	306	306	306	306	298	298	298	298	285	285	285	273	273	273	262	262	262	257
1	282	271	261	252	275	265	256	248	254	247	240	244	238	233	235	230	226	221
2	258	238	222	209	251	234	219	206	225	212	201	216	206	197	209	200	192	187
3	236	211	191	175	230	207	189	174	199	184	171	192	179	168	186	175	165	160
4	217	188	166	150	211	184	164	149	178	161	147	172	157	145	167	154	143	138
5	200	168	146	130	195	166	145	129	160	142	128	155	139	126	150	136	125	120
6	185	152	130	114	180	150	129	113	145	126	112	141	124	111	137	122	111	105
7	172	138	116	101	167	136	115	101	132	113	100	128	112	99	125	110	98	94
8	160	126	105	90	156	124	104	90	121	103	90	118	101	89	115	100	88	84
9	150	116	95	82	146	114	95	81	112	94	81	109	92	80	106	91	80	75
10	140	107	87	74	137	106	87	74	103	86	74	101	85	73	99	84	73	69

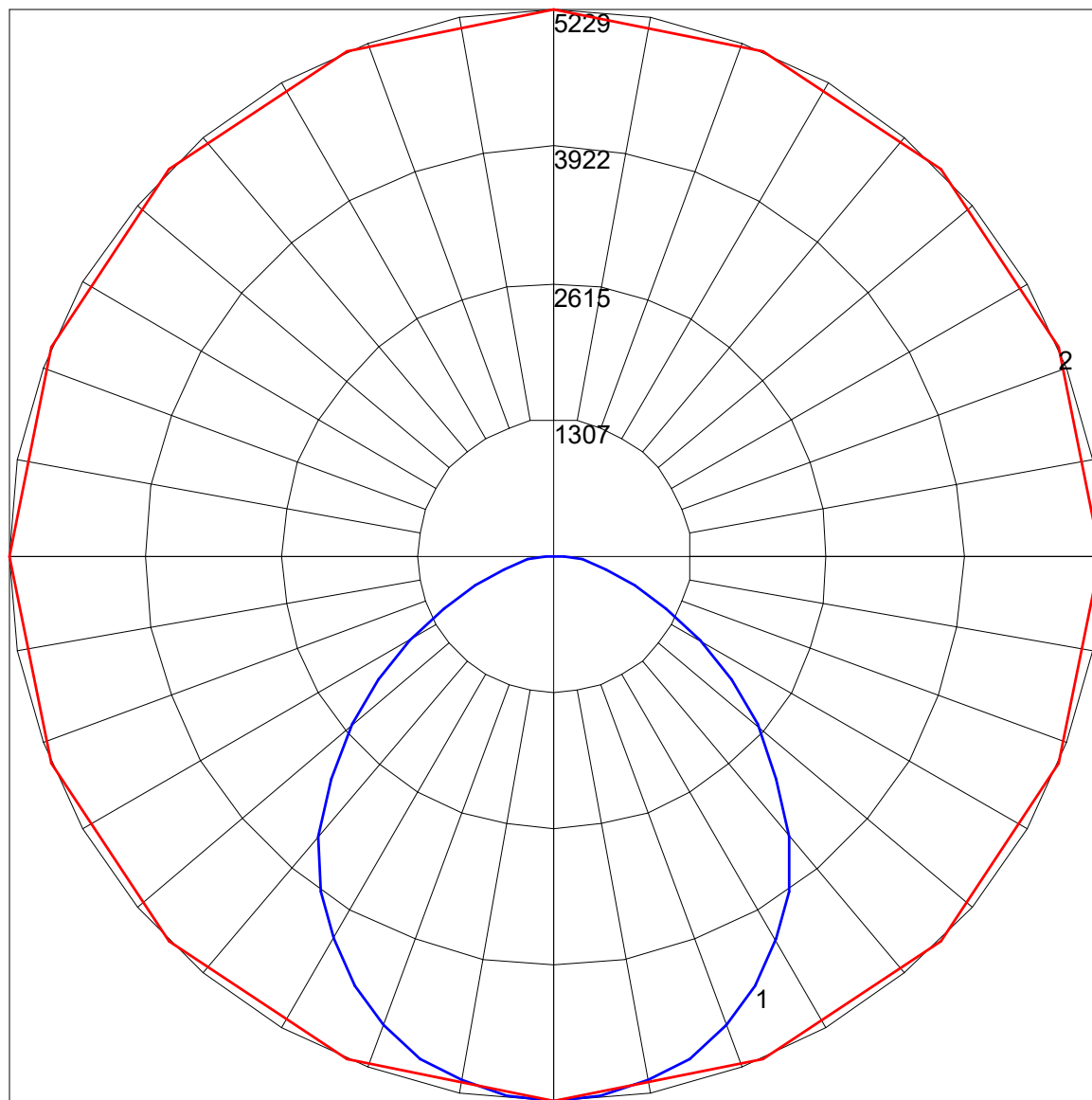
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**UGR TABLE - CORRECTED**

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					UGR Viewed Endwise				
X=2H	Y=2H	14.2	15.8	14.6	16.1	16.4	15.5	17.0	15.8	17.3	17.7
	3H	15.5	16.9	15.9	17.2	17.6	16.4	17.8	16.8	18.2	18.5
	4H	15.9	17.2	16.3	17.6	18.0	16.6	17.9	17.0	18.3	18.7
	6H	16.1	17.4	16.6	17.7	18.1	16.7	17.9	17.1	18.3	18.6
	8H	16.2	17.3	16.6	17.7	18.1	16.6	17.8	17.1	18.2	18.6
	12H	16.2	17.3	16.6	17.7	18.1	16.6	17.7	17.1	18.1	18.6
4H	2H	15.0	16.3	15.4	16.6	17.0	15.9	17.3	16.3	17.6	18.0
	3H	16.4	17.5	16.8	17.9	18.3	17.1	18.2	17.5	18.6	19.0
	4H	16.9	17.9	17.4	18.3	18.8	17.4	18.4	17.8	18.8	19.2
	6H	17.2	18.1	17.7	18.5	19.0	17.5	18.3	17.9	18.8	19.2
	8H	17.3	18.1	17.8	18.5	19.0	17.5	18.3	17.9	18.7	19.2
	12H	17.3	18.0	17.8	18.5	19.0	17.5	18.2	18.0	18.7	19.1
8H	4H	17.1	17.9	17.6	18.4	18.8	17.5	18.3	18.0	18.8	19.2
	6H	17.5	18.1	18.0	18.6	19.1	17.7	18.3	18.2	18.8	19.3
	8H	17.6	18.2	18.1	18.7	19.2	17.7	18.3	18.2	18.8	19.3
	12H	17.7	18.2	18.2	18.7	19.2	17.7	18.2	18.2	18.7	19.3
12H	4H	17.1	17.8	17.6	18.3	18.8	17.5	18.2	18.0	18.7	19.2
	6H	17.5	18.1	18.0	18.5	19.1	17.7	18.3	18.2	18.7	19.3
	8H	17.6	18.1	18.1	18.6	19.2	17.7	18.2	18.2	18.7	19.3

Maximum UGR = 19.3

POLAR GRAPH



Maximum Candela = 5229.248 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.)