



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S24-L76-835-A-(L58)-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] 03-SEP-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] DUAL APERTURE 2x4' RECESSED LED LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED LENSES

[LUMCAT] HETG-S24-L76-835-A-(L58)-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	5817
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	138
Total Luminaire Watts	42.3
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	2727	2918	3037
55	2291	2658	2788
65	1783	2273	1930
75	1268	1476	949
85	632	385	289

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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>	2317.321	2317.321	2317.321	2317.321	2317.321
<b>5</b>	2304.849	2304.849	2294.871	2292.377	2295.703
<b>10</b>	2267.433	2266.601	2262.444	2259.949	2262.444
<b>15</b>	2209.229	2209.229	2216.713	2209.229	2213.387
<b>20</b>	2126.082	2127.745	2148.532	2137.722	2142.711
<b>25</b>	2014.664	2022.147	2048.755	2043.766	2055.406
<b>30</b>	1885.785	1906.572	1919.876	1941.494	1945.652
<b>35</b>	1736.951	1762.727	1772.705	1811.784	1814.279
<b>40</b>	1554.858	1585.623	1612.230	1645.489	1662.950
<b>45</b>	1338.675	1375.260	1432.632	1459.239	1490.835
<b>50</b>	1120.828	1159.076	1245.550	1282.135	1313.731
<b>55</b>	912.128	951.207	1058.468	1110.019	1110.019
<b>60</b>	713.406	749.991	877.206	917.117	852.262
<b>65</b>	522.998	565.403	666.843	661.023	566.235
<b>70</b>	362.523	400.771	458.143	409.917	328.433
<b>75</b>	227.824	253.600	265.241	210.363	170.452
<b>80</b>	117.238	127.216	115.575	88.136	71.507
<b>85</b>	38.248	31.596	23.281	20.787	17.461
<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	842.21	N.A.	14.50
0-30	1780.98	N.A.	30.60
0-40	2892.29	N.A.	49.70
0-60	4910.82	N.A.	84.40
0-80	5774.4	N.A.	99.30
0-90	5817.41	N.A.	100.00
10-90	5599.06	N.A.	96.20
20-40	2050.08	N.A.	35.20
20-50	3146.52	N.A.	54.10
40-70	2625.41	N.A.	45.10
60-80	863.58	N.A.	14.80
70-80	256.70	N.A.	4.40
80-90	43.01	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	5817.41	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	218.36
10-20	623.86
20-30	938.76
30-40	1111.31
40-50	1096.44
50-60	922.09
60-70	606.88
70-80	256.70
80-90	43.01
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

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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

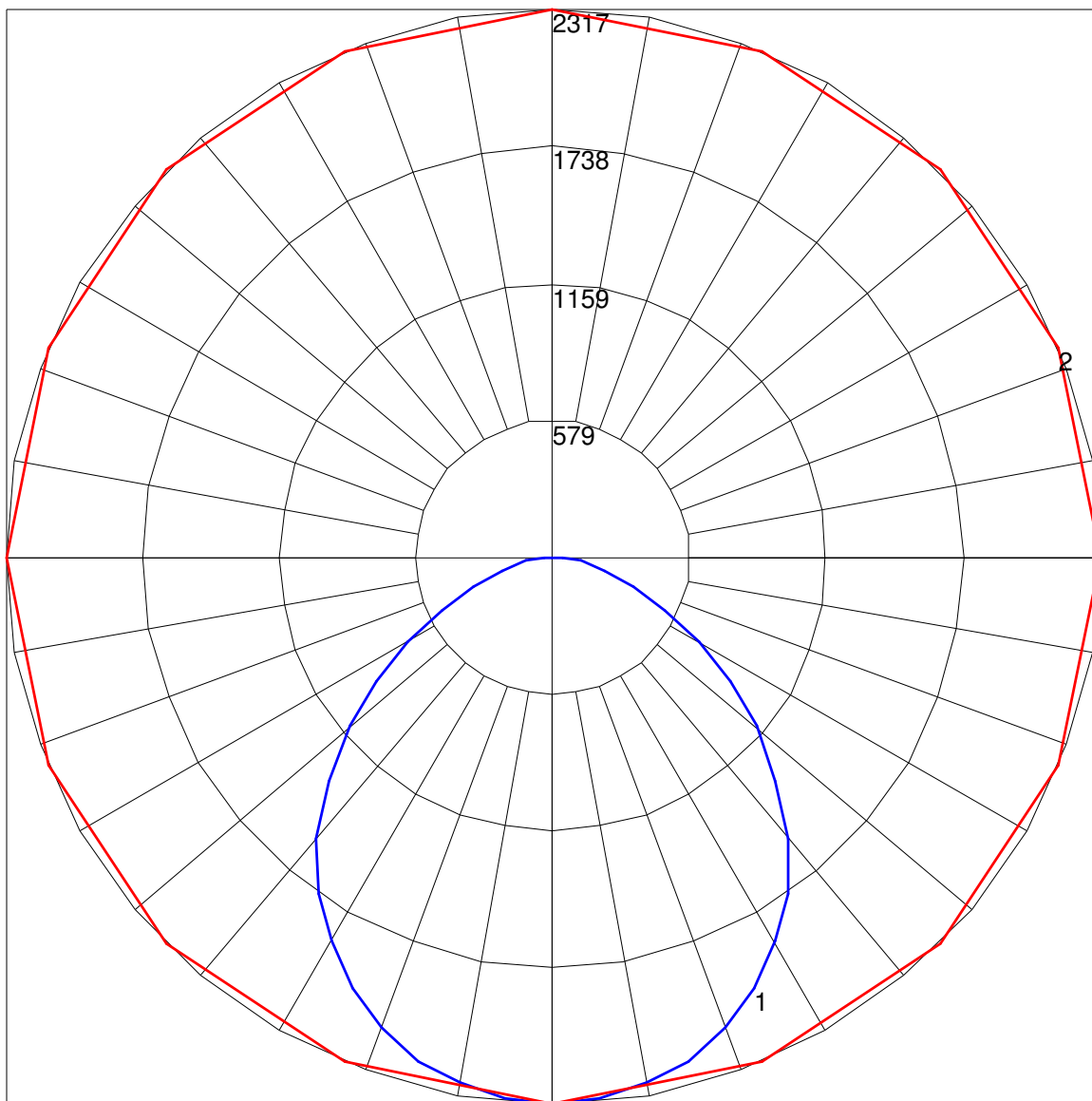
X=2H	Y=2H	14.6	16.2	15.0	16.5	16.8	15.9	17.4	16.2	17.7	18.1
	3H	15.9	17.3	16.3	17.6	18.0	16.8	18.2	17.2	18.6	18.9
	4H	16.3	17.6	16.7	18.0	18.4	17.0	18.3	17.4	18.7	19.1
	6H	16.5	17.8	17.0	18.1	18.5	17.1	18.3	17.5	18.7	19.0
	8H	16.6	17.7	17.0	18.1	18.5	17.0	18.2	17.5	18.6	19.0
	12H	16.6	17.7	17.0	18.1	18.5	17.0	18.1	17.5	18.5	19.0

### UGR Viewed Endwise

4H	2H	15.4	16.7	15.8	17.0	17.4	16.3	17.7	16.7	18.0	18.4
	3H	16.8	17.9	17.2	18.3	18.7	17.5	18.6	17.9	19.0	19.4
	4H	17.3	18.3	17.8	18.7	19.2	17.8	18.8	18.2	19.2	19.6
	6H	17.6	18.5	18.1	18.9	19.4	17.9	18.7	18.3	19.2	19.6
	8H	17.7	18.5	18.2	18.9	19.4	17.9	18.7	18.3	19.1	19.6
	12H	17.7	18.4	18.2	18.9	19.4	17.9	18.6	18.4	19.1	19.5
8H	4H	17.5	18.3	18.0	18.8	19.2	17.9	18.7	18.4	19.2	19.6
	6H	17.9	18.5	18.4	19.0	19.5	18.1	18.7	18.6	19.2	19.7
	8H	18.0	18.6	18.5	19.1	19.6	18.1	18.7	18.6	19.2	19.7
	12H	18.1	18.6	18.6	19.1	19.6	18.1	18.6	18.6	19.1	19.7
12H	4H	17.5	18.2	18.0	18.7	19.2	17.9	18.6	18.4	19.1	19.6
	6H	17.9	18.5	18.4	18.9	19.5	18.1	18.7	18.6	19.1	19.7
	8H	18.0	18.5	18.5	19.0	19.6	18.1	18.6	18.6	19.1	19.7

Maximum UGR = 19.7

POLAR GRAPH



Maximum Candela = 2317.321 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.)