



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : HETG-S24-L50-835-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]05-19-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 2x4' RECESSED LED TROFFER  
 [MORE] WITH FROSTED ACRYLIC LENS  
 [LUMCAT] HETG-S24-L50-835-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	5114
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
Total Luminaire Watts	37.7
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	2397	2566	2670
55	2014	2337	2451
65	1567	1998	1697
75	1115	1298	834
85	556	338	254

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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>	2037.267	2037.267	2037.267	2037.267	2037.267
<b>5</b>	2026.302	2026.302	2017.530	2015.337	2018.261
<b>10</b>	1993.407	1992.676	1989.021	1986.828	1989.021
<b>15</b>	1942.238	1942.238	1948.817	1942.238	1945.893
<b>20</b>	1869.139	1870.601	1888.876	1879.373	1883.759
<b>25</b>	1771.187	1777.765	1801.157	1796.771	1807.005
<b>30</b>	1657.883	1676.158	1687.854	1706.860	1710.514
<b>35</b>	1527.036	1549.697	1558.469	1592.825	1595.018
<b>40</b>	1366.950	1393.996	1417.388	1446.627	1461.978
<b>45</b>	1176.892	1209.056	1259.494	1282.886	1310.663
<b>50</b>	985.373	1018.999	1095.022	1127.185	1154.963
<b>55</b>	801.895	836.252	930.549	975.870	975.870
<b>60</b>	627.189	659.352	771.193	806.281	749.264
<b>65</b>	459.792	497.073	586.253	581.136	497.804
<b>70</b>	318.711	352.337	402.775	360.378	288.741
<b>75</b>	200.291	222.952	233.186	184.940	149.853
<b>80</b>	103.069	111.841	101.607	77.485	62.865
<b>85</b>	33.625	27.778	20.468	18.275	15.351
<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	740.43	N.A.	14.50
0-30	1565.74	N.A.	30.60
0-40	2542.75	N.A.	49.70
0-60	4317.33	N.A.	84.40
0-80	5076.55	N.A.	99.30
0-90	5114.36	N.A.	100.00
10-90	4922.39	N.A.	96.20
20-40	1802.32	N.A.	35.20
20-50	2766.25	N.A.	54.10
40-70	2308.12	N.A.	45.10
60-80	759.22	N.A.	14.80
70-80	225.68	N.A.	4.40
80-90	37.81	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	5114.36	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	191.97
10-20	548.46
20-30	825.31
30-40	977.01
40-50	963.94
50-60	810.65
60-70	533.54
70-80	225.68
80-90	37.81
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**

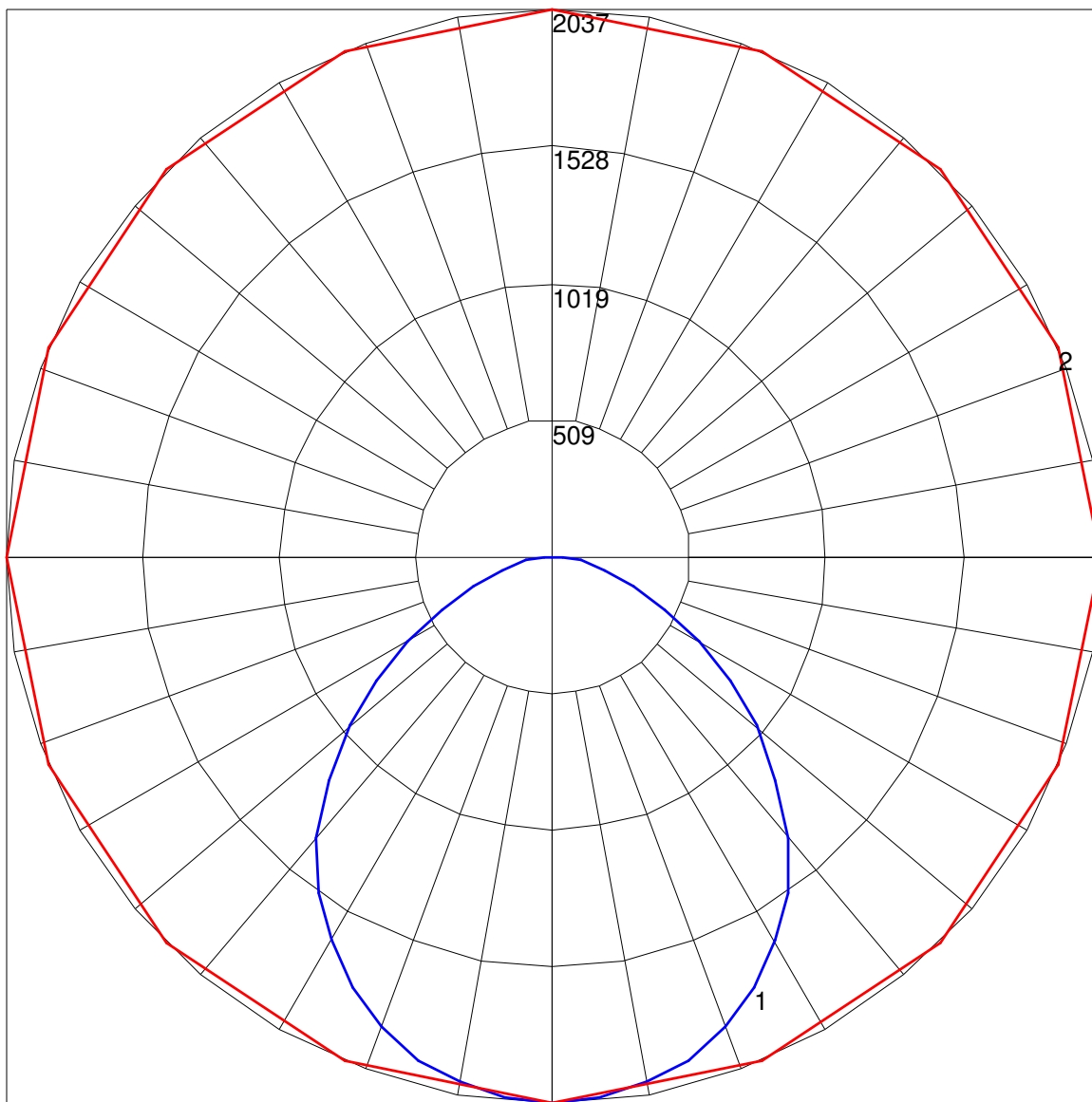
Reflectances

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					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 = 2037.267 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.)