



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AHTG-24-L150-835-A-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 18091.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 17-NOV-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 2'x4' RECESSED LED TROFFER  
 [MORE] FROSTED ACRYLIC DIFFUSER  
 [LUMCAT] AHTG-24-L150-835-A-DIM-UNV  
 [LAMPCAT] HLM 80 CRI, 3500K CCT  
 [SEARCH\_SOURCETYPE]LED  
 [SEARCH\_APPLICATION]INDOOR,DIRECT  
 [SEARCH\_MOUNTING]RECESSED

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	15025
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	122.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	7226	7399	7364
55	6129	6597	6490
65	5118	5630	4483
75	3896	3547	2536
85	2973	2226	1966

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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>	6347.310	6347.310	6347.310	6347.310	6347.310
<b>5</b>	6320.407	6320.407	6315.768	6312.985	6312.985
<b>10</b>	6205.372	6197.951	6186.818	6172.903	6169.192
<b>15</b>	5950.255	5936.340	5909.437	5884.389	5877.895
<b>20</b>	5818.522	5805.535	5766.571	5722.042	5708.126
<b>25</b>	5376.010	5367.661	5326.842	5283.241	5249.843
<b>30</b>	4963.185	4949.269	4906.595	4850.006	4813.825
<b>35</b>	4558.708	4554.070	4525.311	4468.722	4450.168
<b>40</b>	4073.522	4082.799	4086.510	4046.619	4032.704
<b>45</b>	3567.927	3615.239	3653.275	3653.275	3635.649
<b>50</b>	2982.549	3037.284	3117.993	3154.173	3131.909
<b>55</b>	2454.689	2524.266	2642.084	2664.349	2599.410
<b>60</b>	1941.672	2018.671	2152.260	2009.394	1921.263
<b>65</b>	1510.292	1601.207	1661.507	1449.992	1322.897
<b>70</b>	1099.322	1201.369	1140.141	905.433	810.808
<b>75</b>	704.123	769.989	641.039	499.102	458.283
<b>80</b>	417.464	426.741	333.971	275.526	266.249
<b>85</b>	180.901	160.492	135.444	121.528	119.673
<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	2278.48	N.A.	15.20
0-30	4734.81	N.A.	31.50
0-40	7552.33	N.A.	50.30
0-60	12638.65	N.A.	84.10
0-80	14854.37	N.A.	98.90
0-90	15025.42	N.A.	100.00
10-90	14426.77	N.A.	96.00
20-40	5273.85	N.A.	35.10
20-50	8057.62	N.A.	53.60
40-70	6605.82	N.A.	44.00
60-80	2215.72	N.A.	14.70
70-80	696.22	N.A.	4.60
80-90	171.05	N.A.	1.10
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	15025.42	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	598.65
10-20	1679.82
20-30	2456.33
30-40	2817.52
40-50	2783.77
50-60	2302.56
60-70	1519.5
70-80	696.22
80-90	171.05
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	456	456	456	456	445	445	445	445	425	425	425	407	407	407	391	391	391	383
1	420	403	388	375	410	395	381	369	379	367	357	364	355	346	350	343	336	328
2	385	355	331	311	375	348	326	307	335	316	300	322	307	293	311	298	287	279
3	353	315	285	262	343	309	281	259	297	274	255	287	267	251	277	261	246	238
4	324	281	249	224	316	276	246	223	266	240	220	257	235	217	249	230	214	206
5	299	252	219	195	291	248	217	194	240	212	192	232	208	190	225	204	188	180
6	277	228	195	171	270	224	193	171	217	190	169	211	186	168	205	183	166	159
7	257	207	175	152	251	204	173	152	198	171	151	193	168	149	188	165	148	141
8	240	190	158	136	234	187	157	136	182	155	135	177	153	134	173	150	134	127
9	224	174	144	123	219	172	143	123	168	141	122	164	139	122	160	138	121	114
10	211	161	132	112	206	159	131	112	156	130	112	152	128	111	149	127	111	104

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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	13.4	15.0	13.8	15.3	15.6	13.6	15.2	14.0	15.5	15.8
	3H	15.0	16.4	15.4	16.7	17.1	14.6	16.0	15.0	16.3	16.7
	4H	15.5	16.8	15.9	17.1	17.5	14.8	16.1	15.2	16.5	16.9
	6H	15.8	17.0	16.2	17.4	17.8	15.0	16.2	15.4	16.6	16.9
	8H	15.9	17.1	16.3	17.5	17.9	15.0	16.2	15.4	16.6	17.0
	12H	16.0	17.1	16.4	17.5	17.9	15.0	16.1	15.5	16.5	17.0

UGR Viewed Endwise

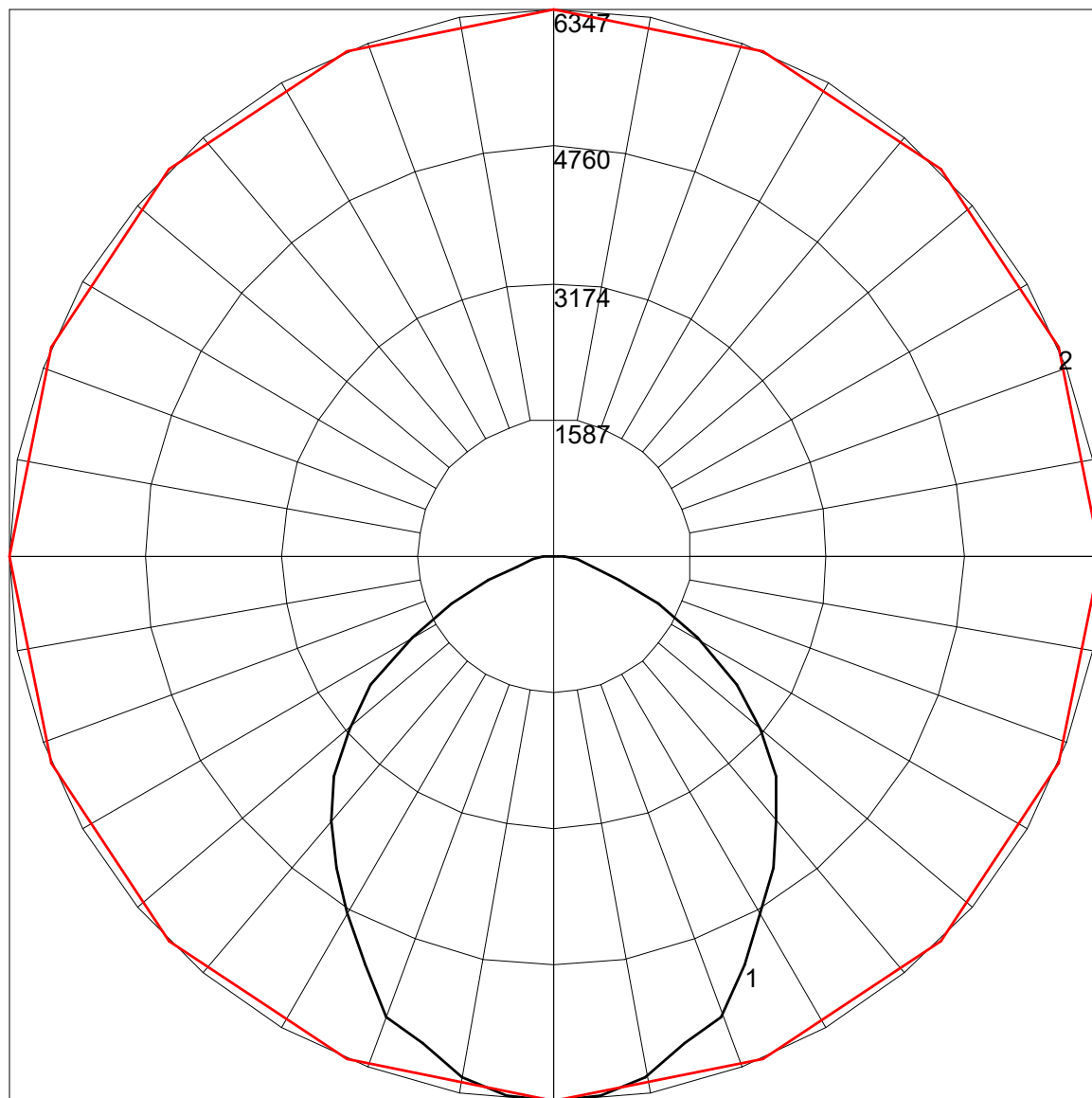
4H	2H	14.1	15.4	14.5	15.7	16.1	14.2	15.5	14.6	15.9	16.3
	3H	15.8	16.9	16.2	17.3	17.7	15.4	16.5	15.8	16.9	17.3
	4H	16.4	17.4	16.9	17.8	18.3	15.7	16.6	16.1	17.1	17.5
	6H	16.9	17.7	17.3	18.2	18.6	15.9	16.7	16.3	17.2	17.6
	8H	17.0	17.8	17.5	18.2	18.7	15.9	16.7	16.4	17.2	17.6
	12H	17.1	17.8	17.6	18.3	18.8	16.0	16.7	16.4	17.2	17.6

8H	4H	16.6	17.4	17.0	17.8	18.3	15.9	16.7	16.3	17.1	17.6
	6H	17.1	17.8	17.6	18.3	18.7	16.2	16.8	16.6	17.3	17.8
	8H	17.3	17.9	17.8	18.4	18.9	16.2	16.8	16.8	17.3	17.8
	12H	17.5	18.0	18.0	18.5	19.0	16.4	16.9	16.9	17.4	17.9

12H	4H	16.5	17.3	17.0	17.7	18.2	15.9	16.6	16.4	17.1	17.6
	6H	17.1	17.7	17.6	18.2	18.7	16.2	16.8	16.7	17.2	17.8
	8H	17.4	17.9	17.9	18.4	18.9	16.3	16.8	16.8	17.3	17.9

Maximum UGR = 19.0

POLAR GRAPH



Maximum Candela = 6347.31 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)