



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AHTG-24-L120-835-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-L120-835-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	12166
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	116
Total Luminaire Watts	105.1
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	5851	5991	5962
55	4963	5342	5255
65	4144	4559	3630
75	3155	2872	2053
85	2407	1802	1592

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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>	5139.526	5139.526	5139.526	5139.526	5139.526
<b>5</b>	5117.742	5117.742	5113.986	5111.733	5111.733
<b>10</b>	5024.597	5018.587	5009.573	4998.306	4995.301
<b>15</b>	4818.024	4806.757	4784.973	4764.691	4759.433
<b>20</b>	4711.358	4700.841	4669.292	4633.236	4621.968
<b>25</b>	4353.048	4346.287	4313.236	4277.931	4250.888
<b>30</b>	4018.776	4007.508	3972.954	3927.133	3897.837
<b>35</b>	3691.265	3687.509	3664.222	3618.401	3603.377
<b>40</b>	3298.401	3305.913	3308.917	3276.617	3265.349
<b>45</b>	2889.012	2927.321	2958.120	2958.120	2943.847
<b>50</b>	2415.021	2459.341	2524.693	2553.988	2535.960
<b>55</b>	1987.604	2043.942	2139.341	2157.369	2104.787
<b>60</b>	1572.205	1634.553	1742.722	1627.041	1555.679
<b>65</b>	1222.910	1296.525	1345.351	1174.084	1071.173
<b>70</b>	890.140	972.769	923.192	733.145	656.525
<b>75</b>	570.140	623.474	519.061	404.131	371.080
<b>80</b>	338.028	345.540	270.422	223.098	215.587
<b>85</b>	146.479	129.953	109.671	98.404	96.901
<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	1844.92	N.A.	15.20
0-30	3833.86	N.A.	31.50
0-40	6115.25	N.A.	50.30
0-60	10233.73	N.A.	84.10
0-80	12027.84	N.A.	98.90
0-90	12166.34	N.A.	100.00
10-90	11681.6	N.A.	96.00
20-40	4270.33	N.A.	35.10
20-50	6524.39	N.A.	53.60
40-70	5348.85	N.A.	44.00
60-80	1794.11	N.A.	14.70
70-80	563.74	N.A.	4.60
80-90	138.50	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	12166.34	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	484.74
10-20	1360.18
20-30	1988.94
30-40	2281.39
40-50	2254.07
50-60	1864.42
60-70	1230.36
70-80	563.74
80-90	138.50
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	369	369	369	369	361	361	361	361	344	344	344	330	330	330	316	316	316	310
1	340	327	314	304	332	320	309	299	307	298	289	295	287	280	284	278	272	266
2	311	288	268	252	304	282	264	249	271	256	243	261	248	237	252	241	232	226
3	286	255	231	212	278	250	228	210	241	222	206	232	216	203	225	211	199	193
4	262	227	201	182	256	223	199	180	215	194	178	208	190	175	202	186	173	167
5	242	204	177	158	236	201	176	157	194	172	155	188	169	154	182	166	152	146
6	224	184	158	139	218	182	156	138	176	154	137	171	151	136	166	148	135	128
7	208	168	142	123	203	165	140	123	161	138	122	156	136	121	152	134	120	114
8	194	154	128	110	189	151	127	110	147	125	109	144	124	109	140	122	108	102
9	182	141	117	100	177	139	116	100	136	114	99	133	113	99	130	111	98	93
10	171	131	107	91	167	129	106	91	126	105	90	123	104	90	120	102	90	84

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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

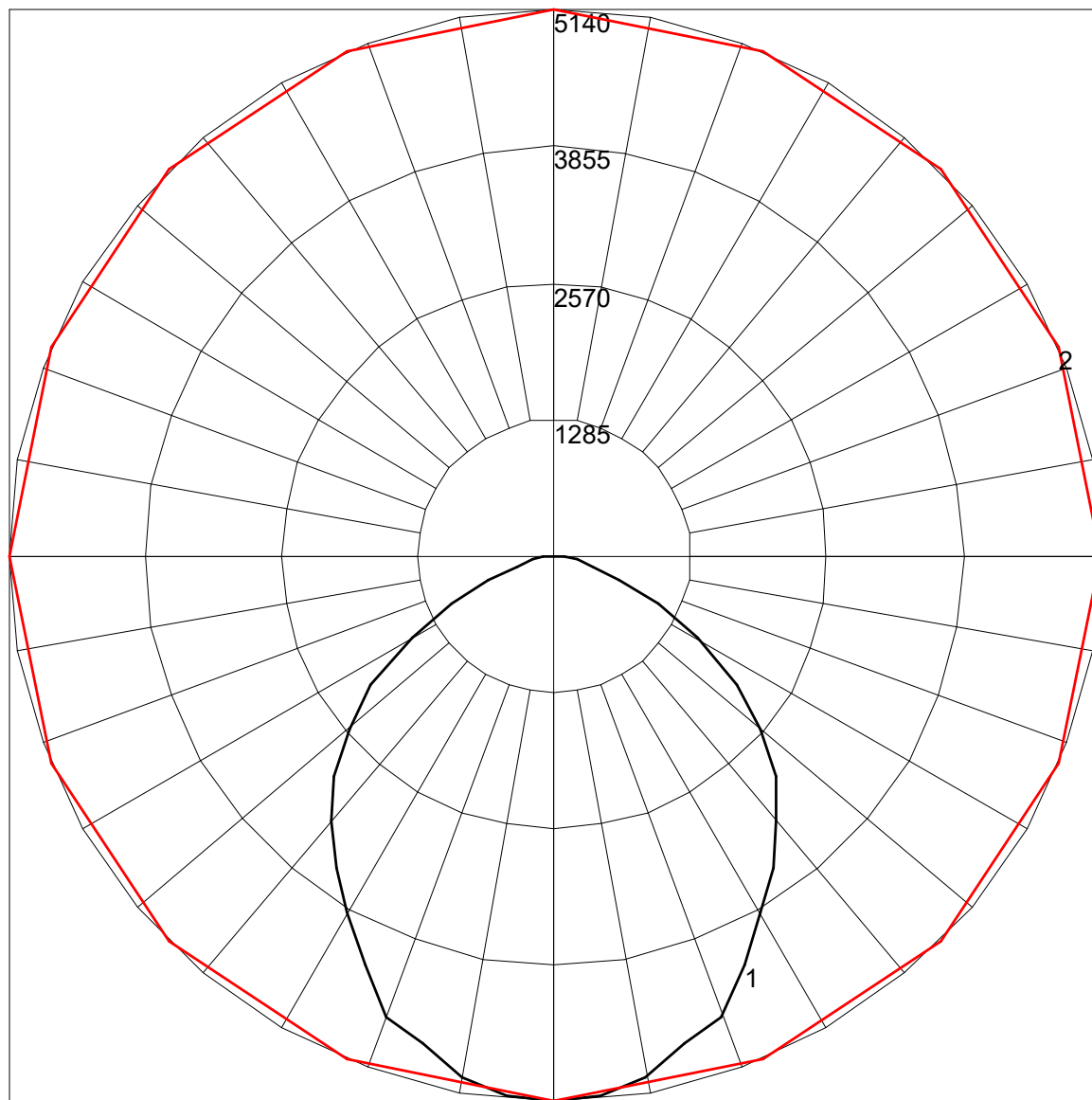
4H	2H	14.1	15.4	14.5	15.7	16.1	14.2	15.5	14.6	15.9	16.3
	3H	15.8	16.9	16.2	17.3	17.7	15.4	16.5	15.8	16.9	17.3
	4H	16.4	17.4	16.9	17.8	18.3	15.7	16.6	16.1	17.1	17.5
	6H	16.9	17.7	17.3	18.2	18.6	15.9	16.7	16.3	17.2	17.6
	8H	17.0	17.8	17.5	18.2	18.7	15.9	16.7	16.4	17.2	17.6
	12H	17.1	17.8	17.6	18.3	18.8	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 = 5139.526 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.)