

IES INDOOR REPORT

PHOTOMETRIC FILENAME : AHTG-22-L150-835-A-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TESTLAB] Generated From Intertek
[ISSUE DATE] 27-JUN-2023
[MANUFACTURER] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
[LUMINAIRE] 2'x2' LED TROFFER
[MORE] FROSTED ACRYLIC DIFFUSER
[LUMCAT] AHT-22-L150-835-A-DIM-UNV
[LAMPCAT] HLM 80 CRI, 3500K CCT
[SEARCH_SOURCETYPE] LED
[SEARCH_APPLICATION] INDOOR, DIRECT, OFFICE, EDUCATION
[SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	15029
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	128.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.26
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	2.00 ft
Luminous Width (90-270)	2.00 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	13530	13519	14022
55	11232	12101	12545
65	8754	10069	8302
75	6508	6485	4818
85	4180	3190	2575

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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>
0.0	6550.230	6550.230	6550.230	6550.230	6550.230
2.5	6546.180	6534.030	6528.423	6542.753	6550.541
5.0	6528.111	6512.535	6500.696	6504.435	6511.911
7.5	6488.547	6465.805	6449.605	6445.244	6436.833
10.0	6426.552	6400.384	6369.854	6358.327	6348.670
12.5	6342.439	6315.025	6274.837	6249.292	6229.042
15.0	6232.158	6202.874	6153.340	6117.514	6092.281
17.5	6100.380	6063.620	6008.791	5968.292	5939.319
20.0	5944.304	5905.051	5842.745	5798.819	5765.486
22.5	5766.732	5722.806	5658.631	5615.640	5584.175
25.0	5573.895	5522.492	5452.398	5415.014	5386.977
27.5	5367.973	5310.029	5239.623	5212.520	5191.959
30.0	5153.329	5092.892	5025.290	5005.041	4991.957
32.5	4924.978	4863.918	4802.235	4795.693	4786.970
35.0	4678.557	4621.859	4569.522	4582.295	4581.049
37.5	4415.626	4365.781	4326.529	4353.009	4362.043
40.0	4143.349	4099.423	4074.501	4119.050	4138.988
42.5	3855.495	3822.785	3816.554	3882.287	3918.736
45.0	3558.607	3537.112	3555.803	3644.278	3687.892
47.5	3262.654	3260.473	3296.299	3408.450	3457.983
50.0	2967.012	2986.638	3049.567	3177.606	3209.694
52.5	2678.223	2717.788	2812.493	2936.170	2953.304
55.0	2396.289	2456.414	2581.649	2672.927	2676.354
57.5	2124.323	2200.025	2351.117	2386.008	2309.683
60.0	1860.457	1951.112	2109.058	2030.864	1962.016
62.5	1608.429	1712.792	1861.080	1719.023	1622.137
65.0	1376.028	1492.229	1582.884	1413.100	1304.999
67.5	1160.761	1283.192	1306.868	1121.508	1029.607
70.0	966.055	1089.732	1060.448	874.465	798.140
72.5	786.925	901.568	828.670	666.051	609.664
75.0	626.487	714.338	624.306	501.252	463.868
77.5	480.068	536.143	450.784	371.344	348.914
80.0	350.471	379.755	311.530	266.358	253.897
82.5	235.828	240.501	197.198	173.834	163.553
85.0	135.516	125.235	103.428	90.967	83.490
87.5	47.664	39.564	36.137	36.761	36.449
90.0	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000

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CANDELA TABULATION - (Cont.)

135.0	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.312	0.000	0.312
152.5	0.000	0.000	0.312	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000
157.5	0.623	0.312	0.000	1.246	0.312
160.0	0.312	0.000	0.935	0.623	0.312
162.5	1.246	0.312	0.312	0.312	0.935
165.0	0.312	0.312	0.935	0.623	1.246
167.5	1.246	0.312	0.623	0.623	0.312
170.0	0.312	0.312	0.935	0.623	0.623
172.5	0.000	0.312	1.246	1.558	0.000
175.0	0.935	0.000	0.623	0.935	1.246
177.5	0.935	0.623	0.935	0.935	0.312
180.0	0.935	0.935	0.935	0.935	0.935

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2350.75	N.A.	15.60
0-30	4867.75	N.A.	32.40
0-40	7740.86	N.A.	51.50
0-60	12791.88	N.A.	85.10
0-80	14890.89	N.A.	99.10
0-90	15028.54	N.A.	100.00
10-90	14411.34	N.A.	95.90
20-40	5390.12	N.A.	35.90
20-50	8160.53	N.A.	54.30
40-70	6502.27	N.A.	43.30
60-80	2099.01	N.A.	14.00
70-80	647.76	N.A.	4.30
80-90	137.64	N.A.	0.90
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	0.01	N.A.	0.00
90-180	0.33	N.A.	0.00
110-180	0.33	N.A.	0.00
0-180	15028.87	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	617.19
10-20	1733.55
20-30	2517.00
30-40	2873.11
40-50	2770.42
50-60	2280.6
60-70	1451.25
70-80	647.76
80-90	137.64
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.01
150-160	0.09
160-170	0.16
170-180	0.07

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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	234	234	234	234	229	229	229	229	218	218	218	209	209	209	201	201	201	197
1	216	208	200	193	211	203	196	190	195	189	184	187	183	179	180	177	173	169
2	198	183	171	161	193	180	168	159	173	163	155	166	159	152	161	154	148	144
3	182	163	148	136	177	160	146	135	154	142	132	149	138	130	144	135	128	124
4	167	145	129	117	163	143	128	116	138	125	114	133	122	113	129	119	111	107
5	154	131	114	101	150	128	113	101	124	110	100	120	108	99	117	106	98	94
6	143	118	101	89	139	116	100	89	113	99	88	110	97	87	107	95	87	83
7	133	108	91	80	130	106	90	79	103	89	79	100	88	78	98	86	78	74
8	124	98	82	71	121	97	82	71	95	81	71	92	80	70	90	78	70	66
9	116	91	75	65	113	90	75	64	87	74	64	85	73	64	83	72	63	60
10	109	84	69	59	107	83	68	59	81	68	58	79	67	58	77	66	58	55

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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	17.8	19.4	18.2	19.7	20.0	18.4	19.9	18.7	20.2	20.5
	3H	19.2	20.6	19.6	20.9	21.2	19.2	20.6	19.6	20.9	21.3
	4H	19.6	20.9	20.0	21.3	21.6	19.5	20.8	19.9	21.1	21.5
	6H	19.9	21.1	20.3	21.5	21.9	19.6	20.8	20.0	21.1	21.5
	8H	20.0	21.1	20.4	21.5	21.9	19.6	20.7	20.0	21.1	21.5
	12H	20.0	21.1	20.4	21.5	21.9	19.6	20.7	20.0	21.1	21.5

UGR Viewed Endwise

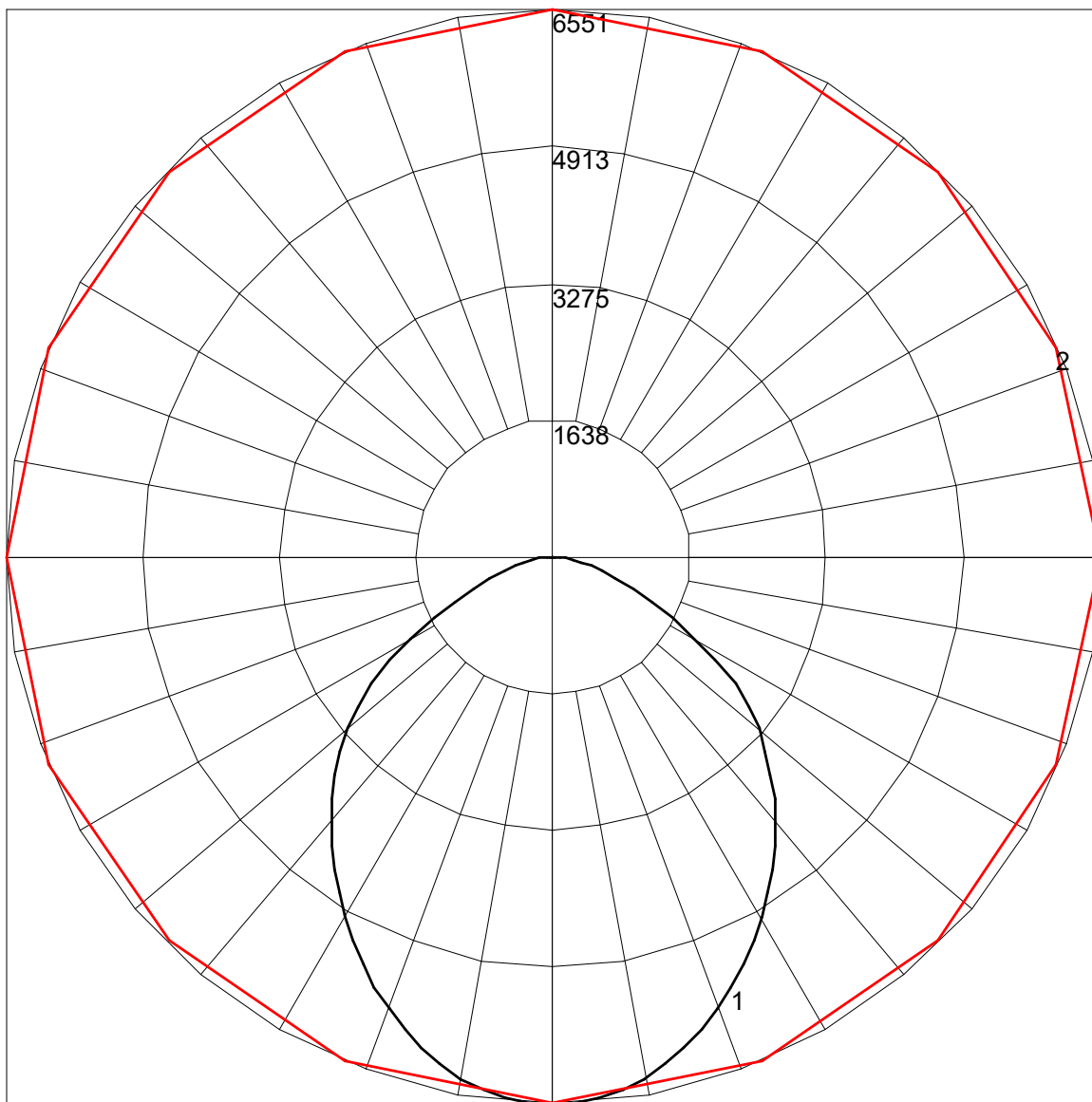
4H	2H	18.4	19.7	18.8	20.1	20.5	18.9	20.2	19.3	20.5	20.9
	3H	20.0	21.1	20.4	21.5	21.9	19.9	21.0	20.3	21.4	21.8
	4H	20.5	21.5	21.0	21.9	22.4	20.2	21.2	20.6	21.6	22.0
	6H	20.9	21.8	21.4	22.2	22.7	20.4	21.2	20.8	21.7	22.1
	8H	21.0	21.8	21.5	22.3	22.7	20.4	21.2	20.9	21.7	22.1
	12H	21.1	21.8	21.6	22.3	22.7	20.5	21.2	20.9	21.6	22.1

8H	4H	20.7	21.5	21.2	21.9	22.4	20.4	21.2	20.8	21.6	22.1
	6H	21.2	21.8	21.6	22.3	22.8	20.6	21.3	21.1	21.8	22.3
	8H	21.3	21.9	21.8	22.4	22.9	20.7	21.3	21.2	21.8	22.3
	12H	21.4	21.9	21.9	22.4	23.0	20.8	21.3	21.3	21.8	22.3

12H	4H	20.7	21.4	21.2	21.9	22.3	20.4	21.1	20.9	21.6	22.0
	6H	21.2	21.8	21.7	22.2	22.8	20.7	21.2	21.2	21.7	22.2
	8H	21.3	21.9	21.9	22.4	22.9	20.8	21.3	21.3	21.8	22.3

Maximum UGR = 23.0

POLAR GRAPH



Maximum Candela = 6550.541 Located At Horizontal Angle = 90, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)