



IES INDOOR REPORT

PHOTOMETRIC FILENAME : WMA-2-L30-8TW-AF-DIM-UNV 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 17320.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 14-NOV-2019

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2' DIRECT/INDIRECT WALL MOUNT LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC LENS ON TOP & BOTTOM

[LUMCAT] WMA-2-L30-8TW-AF-DIM-UNV 4000k

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3126
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	26.2
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.28 ft
Luminous Width (90-270)	1.98 ft
Luminous Height	0.46 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6601	6158	6724
55	5403	4923	5489
65	4368	3903	4336
75	3457	2757	2842
85	3561	2623	989

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0	559.924	559.924	559.924	559.924	559.924	559.924	559.924	559.924	559.924
5	611.178	604.408	591.837	574.430	556.539	546.385	530.429	518.824	513.505
10	645.024	633.420	609.727	575.880	538.165	511.088	480.625	460.801	453.548
15	664.366	651.794	618.914	571.528	519.791	478.208	438.075	411.965	402.294
20	703.531	681.772	634.870	567.660	493.681	432.756	381.019	346.689	335.567
25	685.157	664.366	611.178	537.198	456.933	390.689	334.600	300.754	287.215
30	684.190	658.563	597.155	510.121	416.316	339.919	277.544	242.247	229.192
35	676.937	650.343	580.715	486.428	386.821	307.523	244.664	206.466	194.378
40	646.959	618.431	543.484	443.394	338.469	256.753	194.378	158.597	146.509
45	630.519	598.122	516.890	406.646	297.369	213.719	153.761	120.398	109.277
50	578.781	547.352	465.636	360.711	255.302	175.037	118.464	87.035	78.331
55	530.429	498.999	417.283	314.292	212.752	136.354	84.617	57.056	48.353
60	471.438	441.943	367.964	270.775	175.037	104.442	58.990	33.847	26.594
65	427.438	397.459	323.963	228.708	139.256	74.463	32.396	13.055	8.703
70	369.414	342.337	273.193	186.641	103.958	45.935	11.121	2.418	2.418
75	326.864	293.984	217.103	140.706	69.628	21.759	2.418	4.352	4.352
80	318.644	283.830	197.762	103.958	41.100	2.418	4.352	4.352	5.802
85	314.776	278.511	189.059	81.716	15.956	2.418	8.220	14.022	15.956
90	287.215	255.302	173.103	73.980	0.000	8.220	14.989	20.308	22.242
95	312.842	279.478	190.509	81.716	16.923	2.901	11.605	16.923	18.858
100	316.710	283.830	198.729	104.442	42.550	2.418	4.352	6.286	7.736
105	324.930	293.984	220.005	141.673	70.595	18.374	2.418	4.352	4.352
110	368.931	344.271	276.577	187.125	103.958	41.583	8.703	2.418	3.868
115	424.536	398.909	325.897	231.126	139.739	71.078	30.946	10.638	7.736
120	467.570	440.976	368.931	272.225	176.004	102.991	56.573	32.396	25.627
125	526.077	497.549	420.185	316.710	216.620	136.354	86.068	57.056	48.353
130	571.045	544.451	465.636	362.161	258.687	175.037	118.464	87.035	78.331
135	622.299	595.221	516.890	408.096	299.786	213.719	153.761	119.431	109.277
140	641.640	616.980	544.934	445.328	343.304	258.203	195.828	160.047	148.443
145	671.135	646.959	580.715	487.395	393.591	308.973	246.115	208.400	195.828
150	676.937	656.146	597.155	511.571	421.635	341.853	280.445	244.181	231.126
155	679.838	661.948	610.211	538.165	462.735	390.689	336.051	301.237	288.665
160	695.311	678.871	632.936	567.660	499.483	434.207	381.502	350.073	337.985
165	662.431	651.794	619.398	572.979	527.528	478.691	439.042	413.415	404.228
170	639.706	631.486	608.276	575.880	546.385	511.088	481.592	462.735	455.482
175	610.211	605.859	592.804	577.814	565.726	548.803	533.330	521.725	516.890
180	561.374	561.374	561.374	561.374	561.374	561.374	561.374	561.374	561.374

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	201.90	N.A.	6.50
0-30	419.85	N.A.	13.40
0-40	675.29	N.A.	21.60
0-60	1157.66	N.A.	37.00
0-80	1459.3	N.A.	46.70
0-90	1561.95	N.A.	50.00
10-90	1509.01	N.A.	48.30
20-40	473.39	N.A.	15.10
20-50	730.29	N.A.	23.40
40-70	659.09	N.A.	21.10
60-80	301.64	N.A.	9.60
70-80	124.92	N.A.	4.00
80-90	102.65	N.A.	3.30
90-110	228.64	N.A.	7.30
90-120	405.00	N.A.	13.00
90-130	630.66	N.A.	20.20
90-150	1143.6	N.A.	36.60
90-180	1564.22	N.A.	50.00
110-180	1335.58	N.A.	42.70
0-180	3126.17	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	52.94
10-20	148.95
20-30	217.95
30-40	255.44
40-50	256.90
50-60	225.47
60-70	176.72
70-80	124.92
80-90	102.65
90-100	103.54
100-110	125.09
110-120	176.36
120-130	225.66
130-140	256.87
140-150	256.07
150-160	218.23
160-170	149.26
170-180	53.13

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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	51	51	51	51	47	47	47	47	40	40	40	33	33	33	27	27	27	24
1	46	44	42	40	43	41	39	37	34	33	32	28	27	27	23	22	22	19
2	42	38	35	33	39	35	33	30	30	28	26	25	23	22	20	19	18	16
3	38	34	30	27	35	31	28	25	26	24	22	22	20	19	18	16	15	13
4	35	30	26	23	32	28	24	21	23	21	19	19	17	16	16	14	13	11
5	32	27	23	20	30	25	21	18	21	18	16	17	15	14	14	13	11	10
6	30	24	20	17	27	22	19	16	19	16	14	16	14	12	13	11	10	9
7	27	21	18	15	25	20	16	14	17	14	12	14	12	11	12	10	9	8
8	25	19	16	13	23	18	15	12	16	13	11	13	11	9	11	9	8	7
9	24	18	14	12	22	17	13	11	14	12	10	12	10	8	10	8	7	6
10	22	16	13	10	20	15	12	10	13	11	9	11	9	8	9	8	7	6

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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	16.1	17.0	17.1	18.0	19.3	10.6	11.5	11.6	12.5	13.8
	3H	18.0	18.8	19.0	19.8	21.1	11.7	12.5	12.7	13.5	14.8
	4H	18.8	19.6	19.8	20.6	21.9	12.0	12.8	13.0	13.8	15.1
	6H	19.7	20.4	20.7	21.4	22.7	12.2	12.9	13.2	13.9	15.2
	8H	20.1	20.8	21.1	21.8	23.1	12.2	12.8	13.2	13.9	15.2
	12H	20.6	21.3	21.6	22.3	23.6	12.2	12.8	13.2	13.8	15.1

UGR Viewed Endwise

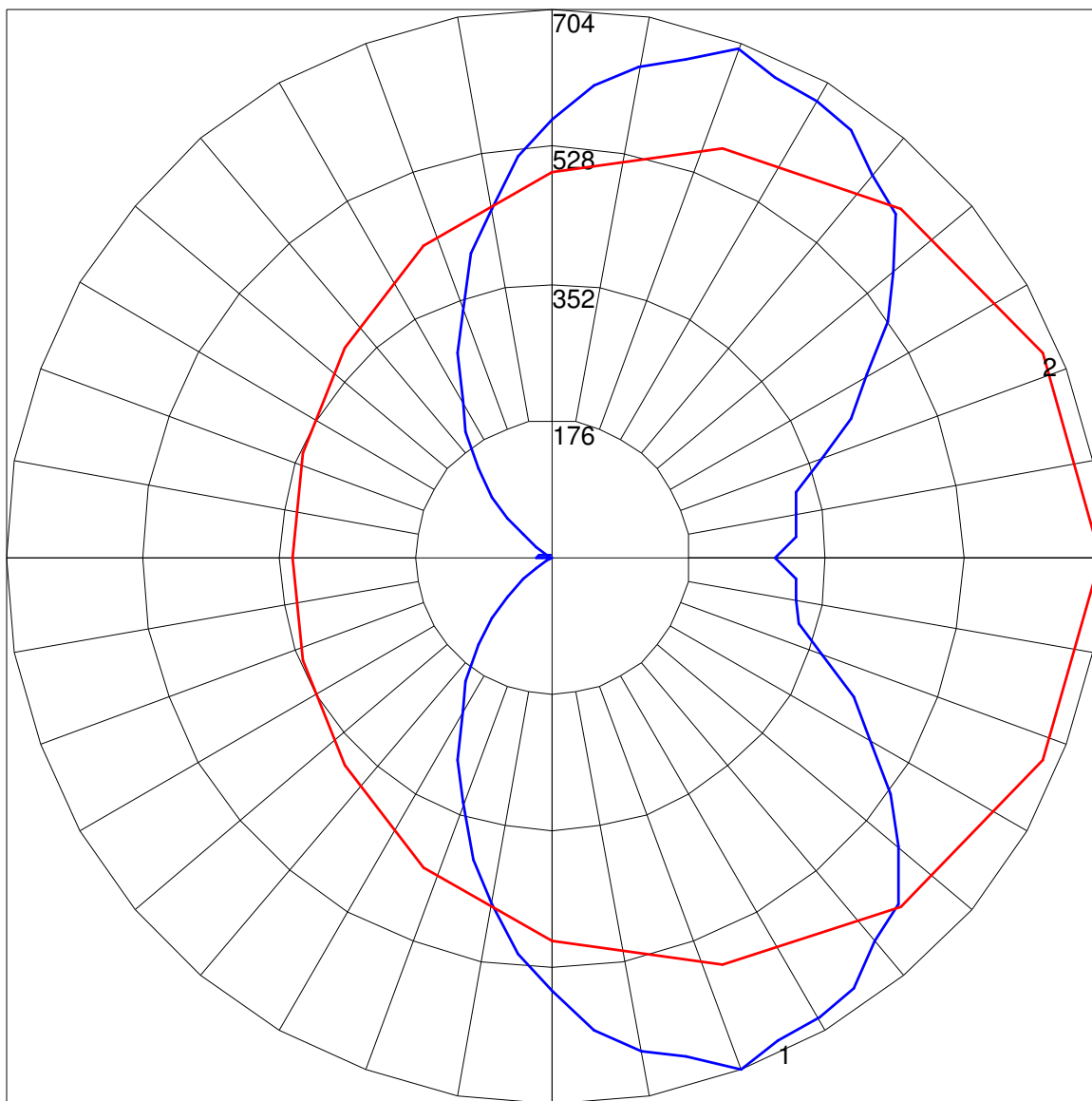
4H	2H	16.5	17.3	17.5	18.3	19.6	11.8	12.6	12.8	13.6	14.9
	3H	18.6	19.3	19.6	20.3	21.6	13.1	13.8	14.1	14.8	16.1
	4H	19.6	20.2	20.6	21.2	22.6	13.5	14.1	14.5	15.1	16.5
	6H	20.7	21.2	21.7	22.2	23.6	13.8	14.3	14.8	15.3	16.6
	8H	21.3	21.8	22.3	22.8	24.1	13.8	14.3	14.8	15.3	16.7
	12H	21.9	22.3	22.9	23.3	24.7	13.8	14.2	14.8	15.3	16.6

8H	4H	19.8	20.3	20.8	21.3	22.7	14.4	14.9	15.4	15.9	17.2
	6H	21.1	21.5	22.2	22.6	23.9	14.8	15.2	15.9	16.3	17.6
	8H	21.9	22.2	22.9	23.3	24.6	15.0	15.3	16.0	16.4	17.7
	12H	22.7	23.0	23.7	24.0	25.4	15.0	15.3	16.1	16.4	17.8

12H	4H	19.8	20.2	20.8	21.3	22.6	14.7	15.1	15.7	16.2	17.5
	6H	21.2	21.5	22.2	22.6	24.0	15.3	15.6	16.3	16.7	18.1
	8H	22.0	22.3	23.0	23.3	24.8	15.5	15.8	16.5	16.9	18.3

Maximum UGR = 25.4

POLAR GRAPH



Maximum Candela = 703.531 Located At Horizontal Angle = 0, Vertical Angle = 20
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)