



IES INDOOR REPORT

PHOTOMETRIC FILENAME : WMA-2-L40-840-AF-DIM-UNV_.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] 10-05-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 2' DIRECT/INDIRECT WALL MOUNT LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC LENS ON TOP & BOTTOM
 [LUMCAT] WMA-2-L40-840-AF-DIM-UNV
 [LAMPCAT] HLM 80 CRI, 4000K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Corridor, Healthcare, Direct-Indirect
 [_SEARCH_MOUNTING] Wall

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4141
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	32.4
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	8744	8157	8906
55	7157	6521	7270
65	5786	5169	5743
75	4579	3652	3764
85	4717	3474	1310

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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	741.657	741.657	741.657	741.657	741.657	741.657	741.657	741.657	741.657
5	809.547	800.580	783.928	760.871	737.174	723.724	702.589	687.218	680.173
10	854.379	839.008	807.625	762.793	712.836	676.970	636.621	610.362	600.755
15	879.998	863.345	819.794	757.028	688.499	633.419	580.260	545.675	532.866
20	931.875	903.054	840.929	751.905	653.914	573.215	504.686	459.213	444.482
25	907.537	879.998	809.547	711.556	605.238	517.495	443.201	398.369	380.436
30	906.257	872.312	790.973	675.690	551.440	450.246	367.626	320.872	303.580
35	896.650	861.424	769.197	644.307	512.371	407.335	324.075	273.478	257.467
40	856.941	819.153	719.882	587.305	448.325	340.086	257.467	210.072	194.061
45	835.165	792.254	684.656	538.630	393.885	283.085	203.668	159.476	144.745
50	766.635	725.005	616.767	477.786	338.165	231.848	156.914	115.284	103.755
55	702.589	660.959	552.720	416.302	281.804	180.611	112.081	75.575	64.046
60	624.452	585.384	487.393	358.660	231.848	138.340	78.137	44.832	35.226
65	566.170	526.461	429.111	302.939	184.454	98.631	42.911	17.293	11.528
70	489.315	453.449	361.862	247.219	137.700	60.844	14.731	3.202	3.202
75	432.954	389.402	287.568	186.375	92.227	28.821	3.202	5.764	5.764
80	422.066	375.952	261.950	137.700	54.439	3.202	5.764	5.764	7.686
85	416.942	368.907	250.421	108.238	21.135	3.202	10.888	18.573	21.135
90	380.436	338.165	229.286	97.991	0.000	10.888	19.854	26.899	29.461
95	414.380	370.188	252.343	108.238	22.416	3.843	15.371	22.416	24.978
100	419.504	375.952	263.231	138.340	56.361	3.202	5.764	8.326	10.247
105	430.392	389.402	291.411	187.656	93.508	24.338	3.202	5.764	5.764
110	488.674	456.010	366.345	247.860	137.700	55.080	11.528	3.202	5.124
115	562.327	528.383	431.673	306.142	185.094	94.148	40.990	14.090	10.247
120	619.329	584.103	488.674	360.581	233.129	136.419	74.934	42.911	33.945
125	696.825	659.037	556.563	419.504	286.928	180.611	114.003	75.575	64.046
130	756.388	721.162	616.767	479.708	342.648	231.848	156.914	115.284	103.755
135	824.277	788.411	684.656	540.552	397.088	283.085	203.668	158.195	144.745
140	849.896	817.232	721.803	589.867	454.729	342.008	259.388	211.994	196.622
145	888.964	856.941	769.197	645.588	521.338	409.257	325.996	276.040	259.388
150	896.650	869.110	790.973	677.611	558.485	452.808	371.469	323.434	306.142
155	900.492	876.795	808.266	712.836	612.924	517.495	445.122	399.009	382.357
160	920.987	899.211	838.367	751.905	661.599	575.137	505.326	463.696	447.684
165	877.436	863.345	820.434	758.950	698.746	634.059	581.541	547.597	535.428
170	847.334	836.446	805.704	762.793	723.724	676.970	637.902	612.924	603.317
175	808.266	802.501	785.209	765.354	749.343	726.927	706.432	691.061	684.656
180	743.579	743.579	743.579	743.579	743.579	743.579	743.579	743.579	743.579

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	267.43	N.A.	6.50
0-30	556.12	N.A.	13.40
0-40	894.46	N.A.	21.60
0-60	1533.4	N.A.	37.00
0-80	1932.94	N.A.	46.70
0-90	2068.91	N.A.	50.00
10-90	1998.79	N.A.	48.30
20-40	627.04	N.A.	15.10
20-50	967.32	N.A.	23.40
40-70	873.02	N.A.	21.10
60-80	399.54	N.A.	9.60
70-80	165.46	N.A.	4.00
80-90	135.97	N.A.	3.30
90-110	302.85	N.A.	7.30
90-120	536.45	N.A.	13.00
90-130	835.35	N.A.	20.20
90-150	1514.78	N.A.	36.60
90-180	2071.91	N.A.	50.00
110-180	1769.07	N.A.	42.70
0-180	4140.83	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	70.13
10-20	197.30
20-30	288.69
30-40	338.35
40-50	340.29
50-60	298.65
60-70	234.08
70-80	165.46
80-90	135.97
90-100	137.15
100-110	165.70
110-120	233.60
120-130	298.90
130-140	340.25
140-150	339.18
150-160	289.06
160-170	197.70
170-180	70.38

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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	47	45	40
2	88	80	73	68	81	74	68	63	62	58	54	52	49	46	42	40	38	33
3	80	70	62	56	73	65	58	53	55	50	46	46	42	39	37	34	32	28
4	73	62	54	48	67	57	50	45	49	43	39	41	36	33	33	30	27	24
5	67	55	47	41	62	51	44	38	44	38	33	36	32	29	30	26	24	21
6	62	50	41	35	57	46	39	33	39	33	29	33	28	25	27	24	21	18
7	57	45	37	31	53	42	34	29	36	30	26	30	25	22	25	21	19	16
8	53	41	33	27	49	38	31	26	32	27	23	27	23	20	23	19	17	14
9	49	37	29	24	45	35	28	23	30	24	20	25	21	18	21	18	15	13
10	46	34	27	22	43	32	25	21	27	22	18	23	19	16	19	16	14	12

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UGR TABLE - CORRECTED

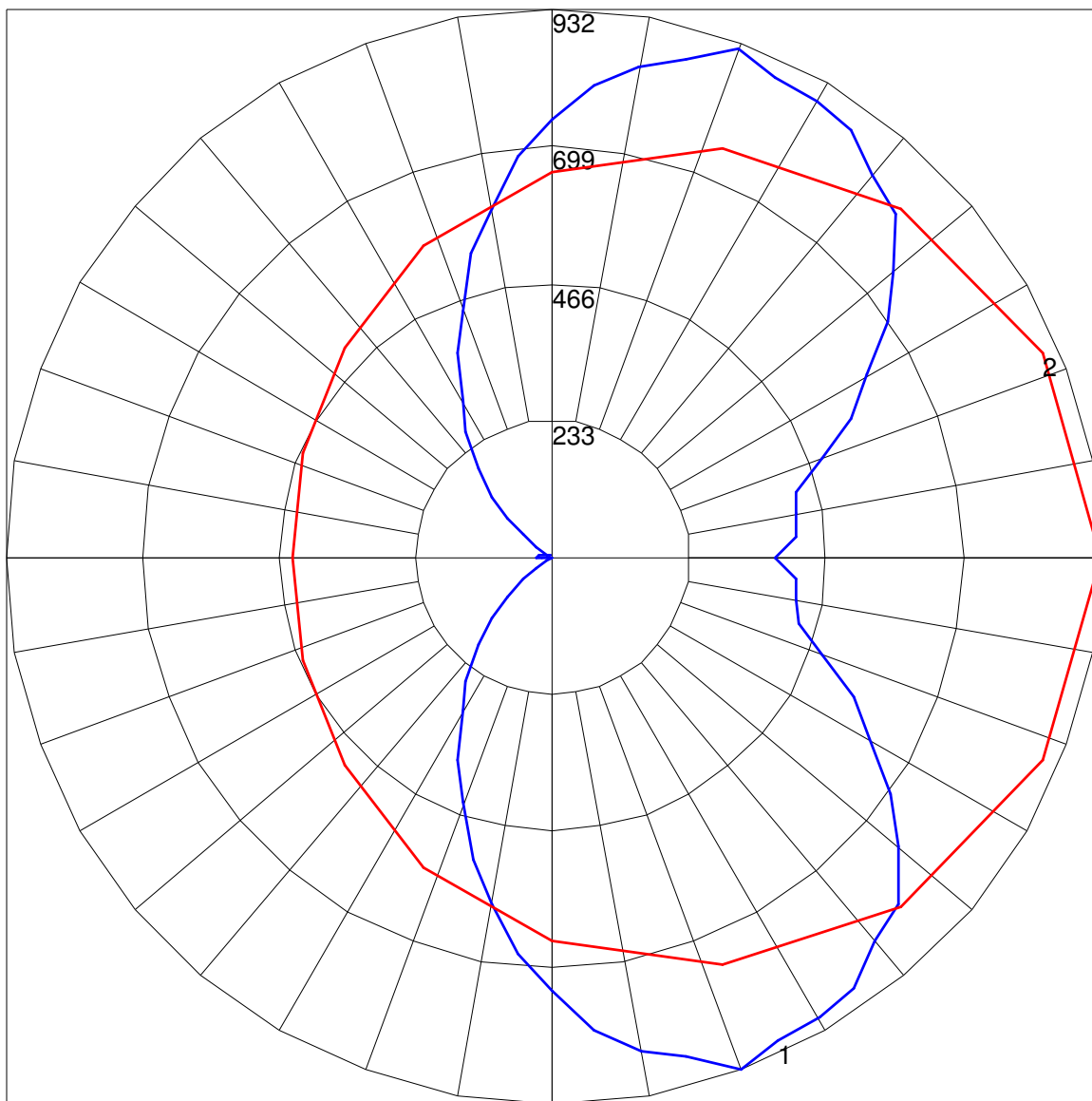
Reflectances

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	18.7	19.5	19.6	20.5	21.8	11.4	12.3	12.4	13.3	14.5
	3H	21.0	21.8	22.0	22.8	24.1	12.5	13.3	13.5	14.3	15.6
	4H	22.1	22.9	23.1	23.9	25.2	12.8	13.6	13.8	14.6	15.9
	6H	23.4	24.1	24.4	25.1	26.4	12.9	13.6	13.9	14.6	16.0
	8H	24.1	24.8	25.1	25.8	27.1	13.0	13.6	13.9	14.6	15.9
	12H	24.9	25.6	25.9	26.6	27.9	12.9	13.6	13.9	14.6	15.9
4H	2H	18.8	19.6	19.8	20.5	21.8	12.6	13.3	13.6	14.3	15.6
	3H	21.3	22.0	22.3	23.0	24.3	13.9	14.5	14.9	15.5	16.9
	4H	22.6	23.2	23.6	24.2	25.5	14.3	14.9	15.3	15.9	17.2
	6H	24.1	24.6	25.1	25.6	27.0	14.5	15.0	15.5	16.1	17.4
	8H	24.9	25.4	25.9	26.4	27.8	14.5	15.0	15.6	16.1	17.4
	12H	25.9	26.3	26.9	27.3	28.7	14.5	15.0	15.6	16.0	17.4
8H	4H	22.6	23.1	23.6	24.1	25.5	15.1	15.6	16.1	16.6	18.0
	6H	24.3	24.7	25.3	25.7	27.1	15.5	15.9	16.6	17.0	18.3
	8H	25.3	25.6	26.3	26.7	28.0	15.7	16.0	16.7	17.1	18.4
	12H	26.4	26.7	27.4	27.7	29.1	15.7	16.0	16.8	17.1	18.5
12H	4H	22.6	23.0	23.6	24.0	25.4	15.4	15.8	16.4	16.9	18.2
	6H	24.3	24.6	25.3	25.7	27.1	16.0	16.3	17.0	17.4	18.8
	8H	25.3	25.6	26.3	26.7	28.1	16.2	16.5	17.2	17.6	19.0

Maximum UGR = 29.1

POLAR GRAPH



Maximum Candela = 931.875 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.)