



IES INDOOR REPORT

PHOTOMETRIC FILENAME : WMAUD-4-L40-935U-L40-935D-AF-(L32U-L32D)-DIMU-DIMD-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] 05-06-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 4' DIRECT/INDIRECT WALL MOUNT LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC LENS ON TOP & BOTTOM
 [LUMCAT] WMAUD-4-L40-935U-L40-935D-AF-(L32U-L32D)DIMU-DIMD-UNV
 [LAMPCAT] HLM 90 CRI, 3500K 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	5528
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	98
Total Luminaire Watts	56.6
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)	3.98 ft
Luminous Height	0.46 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5806	5614	6531
55	4752	4512	5516
65	3842	3596	4576
75	3040	2556	3259
85	3132	2448	1369

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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	990.166	990.166	990.166	990.166	990.166	990.166	990.166	990.166	990.166
5	1080.803	1068.832	1046.601	1015.818	984.181	966.224	938.007	917.486	908.080
10	1140.658	1120.136	1078.238	1018.383	951.688	903.805	849.935	814.878	802.052
15	1174.860	1152.629	1094.484	1010.688	919.196	845.660	774.690	728.516	711.415
20	1244.121	1205.643	1122.701	1003.847	873.022	765.284	673.792	613.082	593.416
25	1211.628	1174.860	1080.803	949.978	808.037	690.893	591.706	531.851	507.909
30	1209.918	1164.600	1056.006	902.094	736.212	601.111	490.808	428.388	405.301
35	1197.092	1150.064	1026.934	860.196	684.053	543.822	432.663	365.113	343.736
40	1144.078	1093.629	961.094	784.095	598.546	454.040	343.736	280.462	259.085
45	1115.006	1057.716	914.065	719.110	525.865	377.939	271.911	212.911	193.245
50	1023.514	967.935	823.428	637.879	451.475	309.534	209.491	153.912	138.521
55	938.007	882.428	737.922	555.793	376.229	241.129	149.637	100.898	85.507
60	833.689	781.530	650.705	478.837	309.534	184.694	104.318	59.855	47.029
65	755.878	702.864	572.894	404.446	246.259	131.680	57.289	23.087	15.391
70	653.270	605.387	483.112	330.055	183.839	81.231	19.667	4.275	4.275
75	578.024	519.880	383.925	248.824	123.129	38.478	4.275	7.696	7.696
80	563.488	501.924	349.722	183.839	72.681	4.275	7.696	7.696	10.261
85	556.648	492.518	334.331	144.506	28.217	4.275	14.536	24.797	28.217
90	507.909	451.475	306.114	130.825	0.000	14.536	26.507	35.913	39.333
95	553.228	494.228	336.896	144.506	29.927	5.130	20.522	29.927	33.348
100	560.068	501.924	351.432	184.694	75.246	4.275	7.696	11.116	13.681
105	574.604	519.880	389.055	250.534	124.840	32.493	4.275	7.696	7.696
110	652.415	608.807	489.098	330.910	183.839	73.536	15.391	4.275	6.841
115	750.748	705.429	576.314	408.721	247.114	125.695	54.724	18.811	13.681
120	826.849	779.820	652.415	481.402	311.244	182.129	100.043	57.289	45.318
125	930.312	879.863	743.052	560.068	383.069	241.129	152.202	100.898	85.507
130	1009.833	962.804	823.428	640.444	457.460	309.534	209.491	153.912	138.521
135	1100.470	1052.586	914.065	721.676	530.141	377.939	271.911	211.201	193.245
140	1134.672	1091.064	963.659	787.516	607.097	456.605	346.302	283.027	262.505
145	1186.831	1144.078	1026.934	861.906	696.024	546.387	435.229	368.533	346.302
150	1197.092	1160.324	1056.006	904.660	745.617	604.532	495.938	431.808	408.721
155	1202.223	1170.585	1079.093	951.688	818.298	690.893	594.271	532.706	510.474
160	1229.585	1200.512	1119.281	1003.847	883.283	767.849	674.647	619.068	597.691
165	1171.440	1152.629	1095.339	1013.253	932.877	846.515	776.400	731.081	714.835
170	1131.252	1116.716	1075.673	1018.383	966.224	903.805	851.646	818.298	805.472
175	1079.093	1071.397	1048.311	1021.804	1000.427	970.500	943.138	922.616	914.065
180	992.731	992.731	992.731	992.731	992.731	992.731	992.731	992.731	992.731

IES INDOOR REPORT**PHOTOMETRIC FILENAME : WMAUD-4-L40-935U-L40-935D-AF-(L32U-L32D)-DIMU-DIMD-UNV_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	357.04	N.A.	6.50
0-30	742.46	N.A.	13.40
0-40	1194.18	N.A.	21.60
0-60	2047.2	N.A.	37.00
0-80	2580.62	N.A.	46.70
0-90	2762.15	N.A.	50.00
10-90	2668.52	N.A.	48.30
20-40	837.14	N.A.	15.10
20-50	1291.45	N.A.	23.40
40-70	1165.54	N.A.	21.10
60-80	533.41	N.A.	9.60
70-80	220.90	N.A.	4.00
80-90	181.53	N.A.	3.30
90-110	404.32	N.A.	7.30
90-120	716.20	N.A.	13.00
90-130	1115.26	N.A.	20.20
90-150	2022.34	N.A.	36.60
90-180	2766.15	N.A.	50.00
110-180	2361.83	N.A.	42.70
0-180	5528.3	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	93.63
10-20	263.41
20-30	385.42
30-40	451.72
40-50	454.31
50-60	398.72
60-70	312.51
70-80	220.90
80-90	181.53
90-100	183.11
100-110	221.22
110-120	311.88
120-130	399.05
130-140	454.25
140-150	452.83
150-160	385.91
160-170	263.94
170-180	93.96

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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

X=2H	Y=2H	17.5	18.4	18.5	19.4	20.7	UGR Viewed Endwise	10.0	10.9	11.0	11.9	13.2
	3H	20.0	20.8	20.9	21.7	23.0		11.1	11.9	12.1	12.9	14.2
	4H	21.1	21.9	22.1	22.9	24.2		11.4	12.2	12.4	13.2	14.5
	6H	22.5	23.2	23.5	24.2	25.5		11.6	12.3	12.6	13.3	14.6
	8H	23.3	24.0	24.3	25.0	26.3		11.6	12.2	12.6	13.3	14.6
	12H	24.2	24.9	25.2	25.9	27.2		11.6	12.2	12.6	13.2	14.5

4H	2H	17.6	18.4	18.6	19.4	20.7	11.2	12.0	12.2	13.0	14.3
	3H	20.2	20.9	21.2	21.9	23.2	12.5	13.2	13.5	14.2	15.5
	4H	21.6	22.1	22.6	23.2	24.5	12.9	13.5	13.9	14.5	15.9
	6H	23.2	23.7	24.2	24.7	26.0	13.2	13.7	14.2	14.7	16.0
	8H	24.1	24.6	25.1	25.6	26.9	13.2	13.7	14.2	14.7	16.1
	12H	25.1	25.6	26.1	26.6	27.9	13.2	13.6	14.2	14.7	16.0

8H	4H	21.6	22.1	22.6	23.1	24.4	13.8	14.3	14.8	15.3	16.6
	6H	23.3	23.7	24.4	24.8	26.1	14.2	14.6	15.3	15.7	17.0
	8H	24.4	24.7	25.4	25.8	27.2	14.4	14.7	15.4	15.8	17.1
	12H	25.6	25.9	26.6	27.0	28.4	14.4	14.7	15.5	15.8	17.2

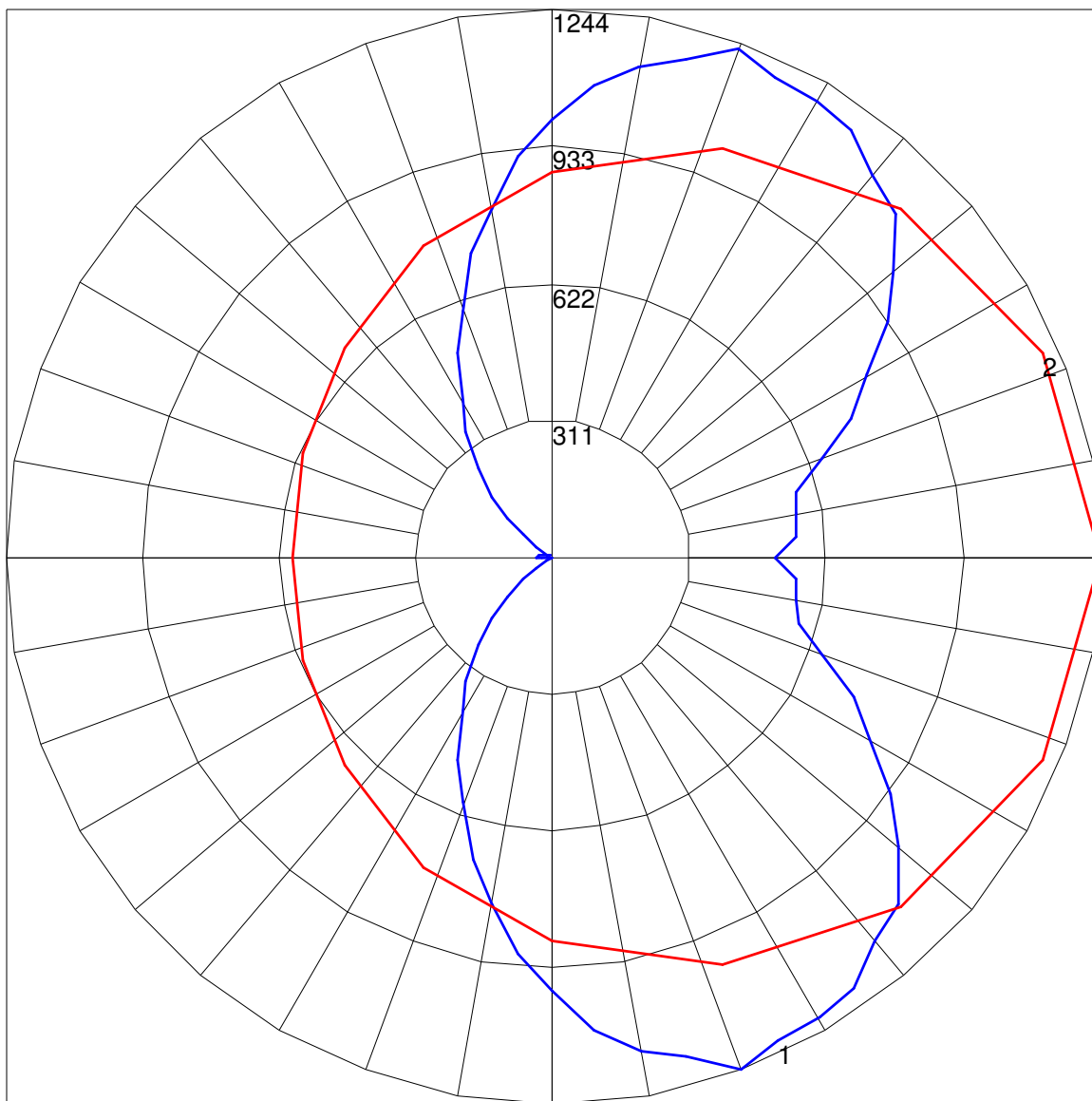
12H	4H	21.5	22.0	22.6	23.0	24.4	14.1	14.5	15.1	15.6	16.9
	6H	23.3	23.7	24.4	24.7	26.1	14.7	15.0	15.7	16.1	17.5
	8H	24.4	24.7	25.5	25.8	27.2	14.9	15.2	15.9	16.3	17.7

Maximum UGR = 28.4

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POLAR GRAPH



Maximum Candela = 1244.121 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.)