

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : WMAUD-4-L65-835U-L65-835D-AF-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

[ISSUE DATE] 8 AUG, 2023

[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-L65-835U-L65-835D-AF-DIMU-DIMD-UNV

[LAMPCAT] HLM 80 CRI, 3500K CCT

[\_SEARCH\_SOURCE TYPE] 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	13132
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	102.2
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)	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	13792	13336	15513
55	11288	10719	13104
65	9126	8543	10871
75	7222	6072	7741
85	7440	5816	3252

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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	2352.130	2352.130	2352.130	2352.130	2352.130	2352.130	2352.130	2352.130	2352.130
5	2567.437	2539.000	2486.189	2413.066	2337.911	2295.256	2228.226	2179.478	2157.134
10	2709.621	2660.872	2561.343	2419.159	2260.726	2146.978	2019.013	1935.734	1905.266
15	2790.869	2738.058	2599.936	2400.878	2183.540	2008.857	1840.267	1730.582	1689.958
20	2955.396	2863.992	2666.966	2384.629	2073.855	1817.924	1600.586	1456.370	1409.653
25	2878.210	2790.869	2567.437	2256.663	1919.484	1641.210	1405.590	1263.406	1206.533
30	2874.148	2766.494	2508.532	2142.916	1748.863	1427.934	1165.909	1017.631	962.789
35	2843.680	2731.964	2439.471	2043.387	1624.960	1291.843	1027.787	867.322	816.542
40	2717.746	2597.905	2283.069	1862.610	1421.840	1078.567	816.542	666.234	615.454
45	2648.685	2512.594	2171.353	1708.239	1249.188	897.790	645.922	505.769	459.051
50	2431.346	2299.318	1956.046	1515.275	1072.474	735.294	497.644	365.616	329.054
55	2228.226	2096.198	1752.926	1320.280	893.728	572.798	355.460	239.682	203.120
60	1980.420	1856.517	1545.743	1137.472	735.294	438.739	247.806	142.184	111.716
65	1795.581	1669.646	1360.904	960.758	584.986	312.805	136.090	54.842	36.562
70	1551.837	1438.090	1147.628	784.043	436.708	192.964	46.718	10.156	10.156
75	1373.091	1234.970	912.009	591.079	292.493	91.404	10.156	18.281	18.281
80	1338.561	1192.314	830.761	436.708	172.652	10.156	18.281	18.281	24.374
85	1322.311	1169.971	794.199	343.273	67.030	10.156	34.530	58.905	67.030
90	1206.533	1072.474	727.170	310.774	0.000	34.530	62.967	85.310	93.435
95	1314.186	1174.034	800.293	343.273	71.092	12.187	48.749	71.092	79.217
100	1330.436	1192.314	834.823	438.739	178.746	10.156	18.281	26.406	32.499
105	1364.966	1234.970	924.196	595.142	296.555	77.186	10.156	18.281	18.281
110	1549.806	1446.214	1161.846	786.074	436.708	174.683	36.562	10.156	16.250
115	1783.394	1675.740	1369.029	970.914	587.017	298.586	129.997	44.686	32.499
120	1964.170	1852.454	1549.806	1143.566	739.357	432.646	237.650	136.090	107.654
125	2209.946	2090.105	1765.113	1330.436	909.978	572.798	361.554	239.682	203.120
130	2398.847	2287.131	1956.046	1521.369	1086.692	735.294	497.644	365.616	329.054
135	2614.154	2500.407	2171.353	1714.333	1259.344	897.790	645.922	501.706	459.051
140	2695.402	2591.811	2289.162	1870.735	1442.152	1084.661	822.636	672.327	623.578
145	2819.306	2717.746	2439.471	2047.450	1653.397	1297.937	1033.881	875.447	822.636
150	2843.680	2756.338	2508.532	2149.010	1771.206	1436.058	1178.096	1025.756	970.914
155	2855.867	2780.713	2563.374	2260.726	1943.858	1641.210	1411.684	1265.438	1212.626
160	2920.866	2851.805	2658.841	2384.629	2098.230	1824.018	1602.617	1470.589	1419.809
165	2782.744	2738.058	2601.967	2406.972	2216.039	2010.888	1844.330	1736.676	1698.083
170	2687.278	2652.747	2555.250	2419.159	2295.256	2146.978	2023.075	1943.858	1913.390
175	2563.374	2545.094	2490.251	2427.284	2376.504	2305.412	2240.414	2191.665	2171.353
180	2358.223	2358.223	2358.223	2358.223	2358.223	2358.223	2358.223	2358.223	2358.223

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : WMAUD-4-L65-835U-L65-835D-AF-DIMU-DIMD-UNV\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	848.14	N.A.	6.50
0-30	1763.71	N.A.	13.40
0-40	2836.75	N.A.	21.60
0-60	4863.11	N.A.	37.00
0-80	6130.23	N.A.	46.70
0-90	6561.46	N.A.	50.00
10-90	6339.05	N.A.	48.30
20-40	1988.62	N.A.	15.10
20-50	3067.82	N.A.	23.40
40-70	2768.72	N.A.	21.10
60-80	1267.11	N.A.	9.60
70-80	524.75	N.A.	4.00
80-90	431.23	N.A.	3.30
90-110	960.47	N.A.	7.30
90-120	1701.33	N.A.	13.00
90-130	2649.28	N.A.	20.20
90-150	4804.04	N.A.	36.60
90-180	6570.97	N.A.	50.00
110-180	5610.5	N.A.	42.70
0-180	13132.43	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	222.41
10-20	625.73
20-30	915.57
30-40	1073.05
40-50	1079.2
50-60	947.16
60-70	742.36
70-80	524.75
80-90	431.23
90-100	434.97
100-110	525.50
110-120	740.86
120-130	947.95
130-140	1079.08
140-150	1075.68
150-160	916.73
160-170	627.00
170-180	223.21

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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

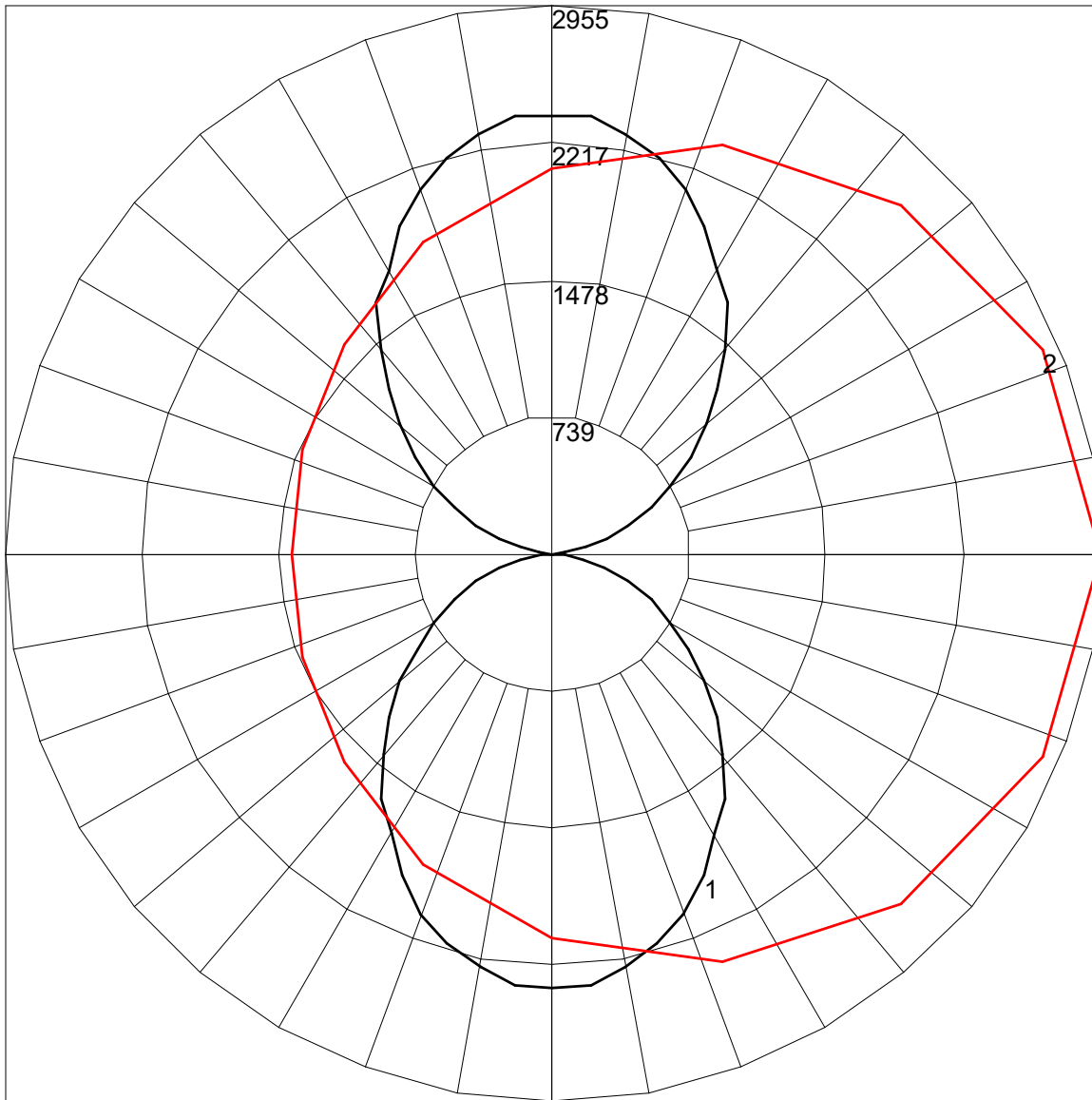
X=2H	Y=2H	20.5	21.4	21.5	22.4	23.7	13.0	13.9	14.0	14.9	16.2
	3H	23.0	23.8	23.9	24.7	26.0	14.1	14.9	15.1	15.9	17.2
	4H	24.1	24.9	25.1	25.9	27.2	14.4	15.2	15.4	16.2	17.5
	6H	25.5	26.2	26.5	27.2	28.5	14.6	15.3	15.5	16.3	17.6
	8H	26.3	27.0	27.3	28.0	29.3	14.6	15.2	15.6	16.3	17.6
	12H	27.2	27.9	28.2	28.9	30.2	14.6	15.2	15.6	16.2	17.5

### UGR Viewed Endwise

4H	2H	20.6	21.4	21.6	22.4	23.7	14.2	15.0	15.2	16.0	17.3
	3H	23.2	23.9	24.2	24.9	26.2	15.5	16.2	16.5	17.2	18.5
	4H	24.6	25.1	25.6	26.2	27.5	15.9	16.5	16.9	17.5	18.9
	6H	26.2	26.7	27.2	27.7	29.0	16.2	16.7	17.2	17.7	19.0
	8H	27.1	27.6	28.1	28.6	29.9	16.2	16.7	17.2	17.7	19.1
	12H	28.1	28.6	29.1	29.6	30.9	16.2	16.6	17.2	17.7	19.0
8H	4H	24.6	25.1	25.6	26.1	27.4	16.8	17.3	17.8	18.3	19.6
	6H	26.3	26.7	27.4	27.8	29.1	17.2	17.6	18.3	18.7	20.0
	8H	27.4	27.7	28.4	28.8	30.2	17.4	17.7	18.4	18.8	20.1
	12H	28.6	28.9	29.6	30.0	31.4	17.4	17.7	18.5	18.8	20.2
12H	4H	24.5	25.0	25.6	26.0	27.4	17.1	17.5	18.1	18.6	19.9
	6H	26.3	26.7	27.4	27.7	29.1	17.7	18.0	18.7	19.1	20.5
	8H	27.4	27.7	28.4	28.8	30.2	17.9	18.2	18.9	19.3	20.7

Maximum UGR = 31.4

POLAR GRAPH



Maximum Candela = 2955.396 Located At Horizontal Angle = 0, Vertical Angle = 20  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)