



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4WUD-4-00-P7-835U-P7-835D-AF-POE-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20659.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 15-MAR-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 1-72 LED-UP 2-72 LED-DOWN 23.75" ARRAYS 4' LUMINAIRE

[MORE] WHITE ALUM BODY w/REFL & FLAT FROST LENSES-UP/DOWN

[LUMCAT] MX4WUD-4-00-P7-835U-P7-835D-AF-PoE-UNV

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5740
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
Total Luminaire Watts	48
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
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.32 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	7421	7258	7075
55	6761	6535	6309
65	5731	5560	5322
75	4345	4233	4233
85	2316	2481	2150

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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	1058.984	1058.984	1058.984	1058.984	1058.984
5	1070.921	1055.573	1050.457	1047.047	1045.342
10	1048.752	1031.699	1028.289	1021.468	1021.468
15	1016.352	999.299	992.478	987.362	983.951
20	968.604	953.256	946.435	941.319	936.203
25	912.329	896.982	891.866	883.339	879.929
30	844.118	833.886	828.770	816.833	806.601
35	770.790	769.085	760.558	746.916	738.390
40	699.168	687.231	685.526	671.883	665.062
45	620.725	612.198	607.083	590.030	591.735
50	538.871	533.755	528.639	514.997	509.881
55	458.722	453.607	443.375	433.143	428.027
60	370.048	368.342	356.405	351.289	346.173
65	286.488	284.783	277.962	272.846	266.025
70	211.456	206.340	197.813	201.224	197.813
75	133.012	129.602	129.602	133.012	129.602
80	66.506	73.327	73.327	73.327	68.212
85	23.874	25.579	25.579	25.579	22.169
90	1.705	1.705	1.705	1.705	1.705
95	39.222	40.927	39.222	34.106	34.106
100	92.086	90.380	90.380	83.559	76.738
105	158.592	158.592	150.065	141.539	129.602
110	248.972	243.856	228.509	221.687	209.750
115	337.647	329.121	318.889	301.836	288.194
120	446.785	446.785	419.501	400.743	390.511
125	555.924	564.450	526.934	514.997	497.944
130	673.589	680.410	648.009	629.251	615.609
135	781.022	770.790	760.558	752.032	748.621
140	881.634	879.929	874.813	862.876	866.286
145	968.604	970.309	965.193	956.667	970.309
150	1048.752	1052.163	1050.457	1038.520	1055.573
155	1110.143	1115.258	1115.258	1106.732	1123.785
160	1157.891	1168.122	1163.006	1157.891	1168.122
165	1197.112	1207.344	1197.112	1197.112	1202.228
170	1219.281	1231.218	1220.986	1219.281	1215.870
175	1236.334	1246.566	1236.334	1234.629	1226.102
180	1239.744	1239.744	1239.744	1239.744	1239.744

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MX4WUD-4-00-P7-835U-P7-835D-AF-POE-UNV\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	379.93	N.A.	6.60
0-30	790.41	N.A.	13.80
0-40	1263.83	N.A.	22.00
0-60	2126.07	N.A.	37.00
0-80	2543.84	N.A.	44.30
0-90	2577.44	N.A.	44.90
10-90	2477.71	N.A.	43.20
20-40	883.90	N.A.	15.40
20-50	1350.13	N.A.	23.50
40-70	1138.63	N.A.	19.80
60-80	417.77	N.A.	7.30
70-80	141.38	N.A.	2.50
80-90	33.59	N.A.	0.60
90-110	207.00	N.A.	3.60
90-120	524.58	N.A.	9.10
90-130	1002.68	N.A.	17.50
90-150	2194.09	N.A.	38.20
90-180	3162.52	N.A.	55.10
110-180	2955.52	N.A.	51.50
0-180	5739.95	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	99.72
10-20	280.21
20-30	410.48
30-40	473.42
40-50	466.23
50-60	396.01
60-70	276.39
70-80	141.38
80-90	33.59
90-100	44.74
100-110	162.26
110-120	317.58
120-130	478.11
130-140	588.16
140-150	603.24
150-160	512.36
160-170	338.48
170-180	117.59

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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	90	90	90	90	83	83	83	83	69	69	69	56	56	56	44	44	44	38
1	83	79	76	73	76	73	70	67	60	58	57	49	48	47	39	38	37	33
2	75	69	64	60	69	64	59	55	53	50	47	43	41	39	35	33	32	28
3	69	61	55	50	63	56	51	46	47	43	40	38	36	33	31	29	27	23
4	63	54	47	42	57	50	44	39	42	37	34	34	31	29	27	25	23	20
5	58	48	41	36	53	44	38	34	37	33	29	31	27	25	25	22	20	18
6	53	43	36	31	49	40	34	29	34	29	26	28	24	22	22	20	18	15
7	49	39	32	28	45	36	30	26	31	26	23	25	22	19	21	18	16	14
8	46	35	29	24	42	33	27	23	28	23	20	23	20	17	19	16	14	12
9	42	32	26	22	39	30	24	20	26	21	18	21	18	15	17	15	13	11
10	40	30	23	19	36	27	22	18	23	19	16	20	16	14	16	14	12	10

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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

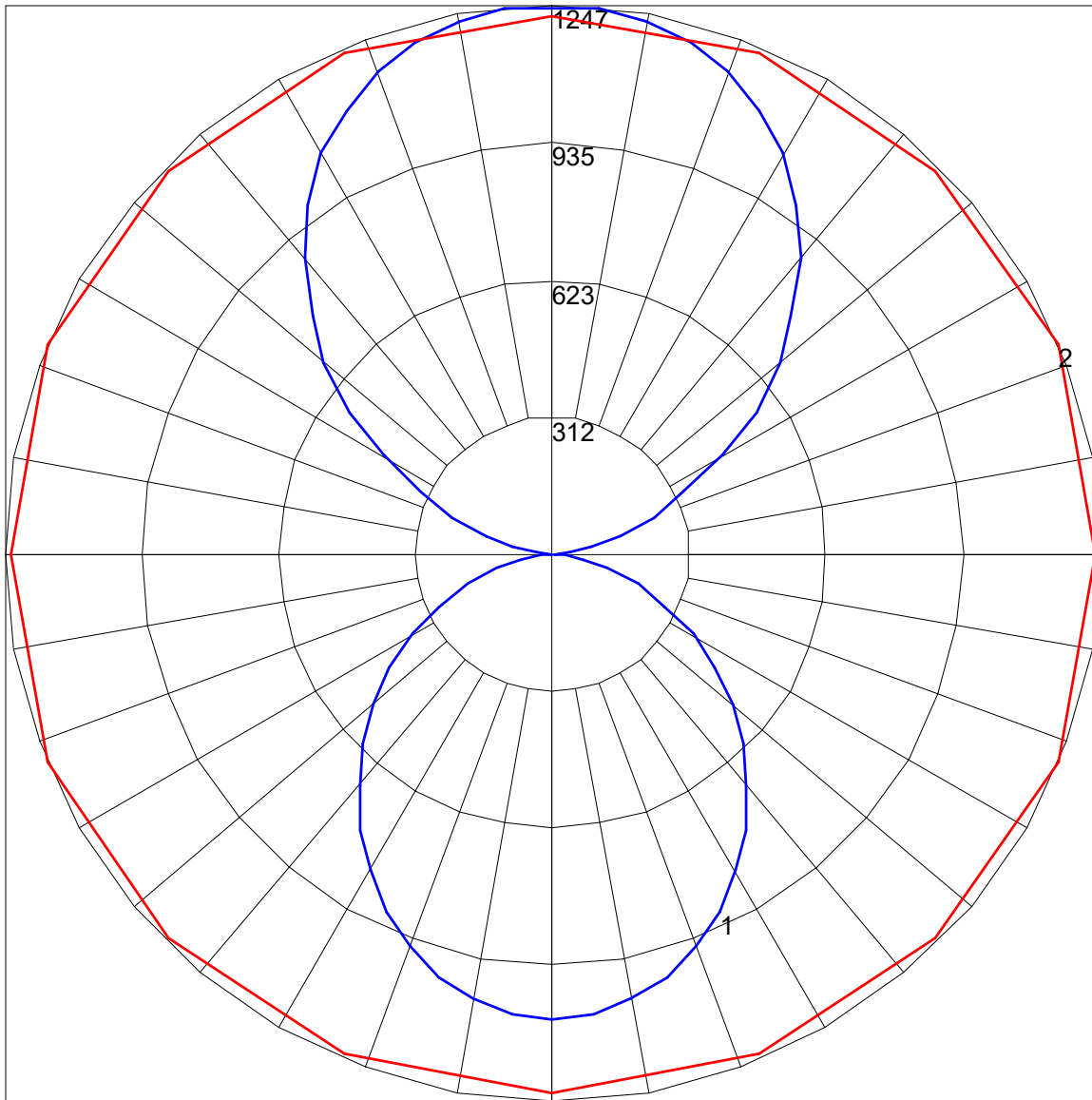
X=2H	Y=2H	14.8	15.6	15.8	16.6	18.0	14.4	15.3	15.4	16.3	17.6
	3H	16.3	17.0	17.3	18.0	19.4	15.9	16.7	16.9	17.7	19.0
	4H	16.7	17.4	17.8	18.4	19.8	16.4	17.1	17.4	18.1	19.5
	6H	17.0	17.6	18.0	18.7	20.0	16.7	17.3	17.7	18.4	19.8
	8H	17.0	17.6	18.1	18.7	20.1	16.8	17.4	17.8	18.4	19.8
	12H	17.1	17.6	18.1	18.7	20.1	16.8	17.4	17.8	18.4	19.8

### UGR Viewed Endwise

4H	2H	15.2	15.9	16.3	16.9	18.3	14.9	15.6	16.0	16.6	18.0
	3H	16.9	17.5	17.9	18.5	19.9	16.6	17.2	17.6	18.2	19.6
	4H	17.5	18.0	18.5	19.0	20.4	17.2	17.7	18.3	18.8	20.2
	6H	17.8	18.3	18.9	19.3	20.7	17.6	18.1	18.7	19.1	20.5
	8H	17.9	18.3	19.0	19.4	20.8	17.7	18.1	18.8	19.2	20.6
	12H	17.9	18.3	19.0	19.4	20.8	17.7	18.1	18.8	19.2	20.6
8H	4H	17.6	18.0	18.7	19.1	20.5	17.4	17.8	18.4	18.9	20.3
	6H	18.1	18.4	19.1	19.5	20.9	17.9	18.3	19.0	19.4	20.8
	8H	18.2	18.5	19.3	19.6	21.0	18.1	18.4	19.1	19.5	20.9
	12H	18.3	18.6	19.4	19.7	21.1	18.2	18.4	19.2	19.5	21.0
12H	4H	17.6	18.0	18.6	19.0	20.5	17.4	17.8	18.4	18.8	20.2
	6H	18.1	18.4	19.2	19.5	20.9	17.9	18.2	19.0	19.3	20.8
	8H	18.3	18.5	19.4	19.6	21.1	18.1	18.4	19.2	19.5	20.9

Maximum UGR = 21.1

POLAR GRAPH



Maximum Candela = 1246.566 Located At Horizontal Angle = 22.5, Vertical Angle = 175  
# 1 - Vertical Plane Through Horizontal Angles (22.5 - 202.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (175) (Through Max. Cd.)