



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4WUD-8-00-P7-8TWU-P7-8TWD-AF-POE-UNV 4000K\_.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] 2-72 LED-UP 4-72 LED-DOWN 23.75" ARRAYS 8' LUMINAIRE

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

[LUMCAT] MX4WUD-8-00-P7-8TWU-P7-8TWD-AF-PoE-UNV 4000k

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	11416
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	130
Total Luminaire Watts	88
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)	8.00 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	7380	7218	7035
55	6724	6499	6274
65	5699	5529	5292
75	4321	4210	4210
85	2303	2467	2138

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4WUD-8-00-P7-8TWU-P7-8TWD-AF-POE-UNV 4000K\_.IES

## CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	2106.161	2106.161	2106.161	2106.161	2106.161
5	2129.902	2099.377	2089.203	2082.420	2079.028
10	2085.811	2051.896	2045.112	2031.546	2031.546
15	2021.372	1987.456	1973.890	1963.715	1956.932
20	1926.408	1895.884	1882.317	1872.143	1861.968
25	1814.486	1783.962	1773.787	1756.830	1750.046
30	1678.824	1658.474	1648.300	1624.559	1604.209
35	1532.986	1529.595	1512.637	1485.505	1468.547
40	1390.541	1366.800	1363.408	1336.276	1322.710
45	1234.529	1217.571	1207.396	1173.481	1176.872
50	1071.734	1061.559	1051.385	1024.252	1014.077
55	912.330	902.156	881.806	861.457	851.282
60	735.969	732.578	708.837	698.662	688.487
65	569.783	566.391	552.825	542.650	529.084
70	420.554	410.379	393.421	400.204	393.421
75	264.542	257.759	257.759	264.542	257.759
80	132.271	145.837	145.837	145.837	135.663
85	47.482	50.873	50.873	50.873	44.090
90	3.392	3.392	3.392	3.392	3.392
95	78.006	81.398	78.006	67.831	67.831
100	183.144	179.753	179.753	166.187	152.620
105	315.415	315.415	298.458	281.500	257.759
110	495.168	484.994	454.469	440.903	417.162
115	671.529	654.572	634.222	600.307	573.174
120	888.589	888.589	834.324	797.017	776.668
125	1105.650	1122.607	1047.993	1024.252	990.336
130	1339.667	1353.234	1288.794	1251.487	1224.354
135	1553.336	1532.986	1512.637	1495.679	1488.896
140	1753.438	1750.046	1739.872	1716.131	1722.914
145	1926.408	1929.799	1919.625	1902.667	1929.799
150	2085.811	2092.594	2089.203	2065.462	2099.377
155	2207.907	2218.082	2218.082	2201.124	2235.040
160	2302.871	2323.221	2313.046	2302.871	2323.221
165	2380.877	2401.227	2380.877	2380.877	2391.052
170	2424.968	2448.708	2428.359	2424.968	2418.184
175	2458.883	2479.233	2458.883	2455.492	2438.534
180	2465.666	2465.666	2465.666	2465.666	2465.666

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MX4WUD-8-00-P7-8TWU-P7-8TWD-AF-POE-UNV 4000K\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	755.62	N.A.	6.60
0-30	1572.00	N.A.	13.80
0-40	2513.56	N.A.	22.00
0-60	4228.44	N.A.	37.00
0-80	5059.33	N.A.	44.30
0-90	5126.14	N.A.	44.90
10-90	4927.8	N.A.	43.20
20-40	1757.94	N.A.	15.40
20-50	2685.21	N.A.	23.50
40-70	2264.57	N.A.	19.80
60-80	830.89	N.A.	7.30
70-80	281.19	N.A.	2.50
80-90	66.81	N.A.	0.60
90-110	411.69	N.A.	3.60
90-120	1043.31	N.A.	9.10
90-130	1994.19	N.A.	17.50
90-150	4363.72	N.A.	38.20
90-180	6289.77	N.A.	55.10
110-180	5878.09	N.A.	51.50
0-180	11415.91	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	198.34
10-20	557.29
20-30	816.38
30-40	941.56
40-50	927.26
50-60	787.61
60-70	549.70
70-80	281.19
80-90	66.81
90-100	88.98
100-110	322.71
110-120	631.62
120-130	950.88
130-140	1169.77
140-150	1199.76
150-160	1019.00
160-170	673.18
170-180	233.88

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4WUD-8-00-P7-8TWU-P7-8TWD-AF-POE-UNV 4000K\_.IES

## 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	212	212	212	212	194	194	194	194	161	161	161	131	131	131	103	103	103	90
1	194	185	178	171	177	170	164	158	142	137	133	116	112	110	92	90	88	76
2	177	162	150	140	161	149	139	130	125	117	111	102	97	92	81	77	74	65
3	161	143	128	117	147	131	119	109	110	101	93	90	84	78	72	67	64	55
4	148	126	111	99	135	117	103	92	98	88	80	81	73	67	64	59	55	47
5	135	113	97	85	124	104	90	79	88	77	69	72	64	58	58	52	48	41
6	125	101	85	74	114	93	79	69	79	68	60	65	57	51	53	47	42	36
7	115	91	76	65	106	84	71	61	72	61	53	60	51	45	48	42	38	32
8	107	83	68	57	98	77	63	54	65	55	47	54	46	40	44	38	34	29
9	100	76	61	51	91	70	57	48	60	49	42	50	42	36	41	35	31	26
10	93	69	55	46	85	64	52	43	55	45	38	46	38	33	38	32	28	24

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4WUD-8-00-P7-8TWU-P7-8TWD-AF-POE-UNV 4000K\_.IES

## 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	14.3	15.1	15.3	16.1	17.5	13.9	14.8	14.9	15.8	17.1
	3H	15.8	16.5	16.8	17.5	18.9	15.4	16.2	16.4	17.2	18.5
	4H	16.2	16.9	17.3	17.9	19.3	15.9	16.6	16.9	17.6	19.0
	6H	16.5	17.1	17.5	18.2	19.5	16.2	16.8	17.2	17.9	19.3
	8H	16.5	17.1	17.6	18.2	19.6	16.3	16.9	17.3	17.9	19.3
	12H	16.6	17.1	17.6	18.2	19.6	16.3	16.9	17.3	17.9	19.3

### UGR Viewed Endwise

4H	2H	14.7	15.4	15.8	16.4	17.8	14.4	15.1	15.5	16.1	17.5
	3H	16.4	17.0	17.4	18.0	19.4	16.1	16.7	17.1	17.7	19.1
	4H	17.0	17.5	18.0	18.5	19.9	16.7	17.2	17.8	18.3	19.7
	6H	17.3	17.8	18.4	18.8	20.2	17.1	17.6	18.2	18.6	20.0
	8H	17.4	17.8	18.5	18.9	20.3	17.2	17.6	18.3	18.7	20.1
	12H	17.4	17.8	18.5	18.9	20.3	17.2	17.6	18.3	18.7	20.1

8H	4H	17.1	17.5	18.2	18.6	20.0	16.9	17.3	17.9	18.4	19.8
	6H	17.6	17.9	18.6	19.0	20.4	17.4	17.8	18.5	18.9	20.3
	8H	17.7	18.0	18.8	19.1	20.5	17.6	17.9	18.6	19.0	20.4
	12H	17.8	18.1	18.9	19.2	20.6	17.7	17.9	18.7	19.0	20.5

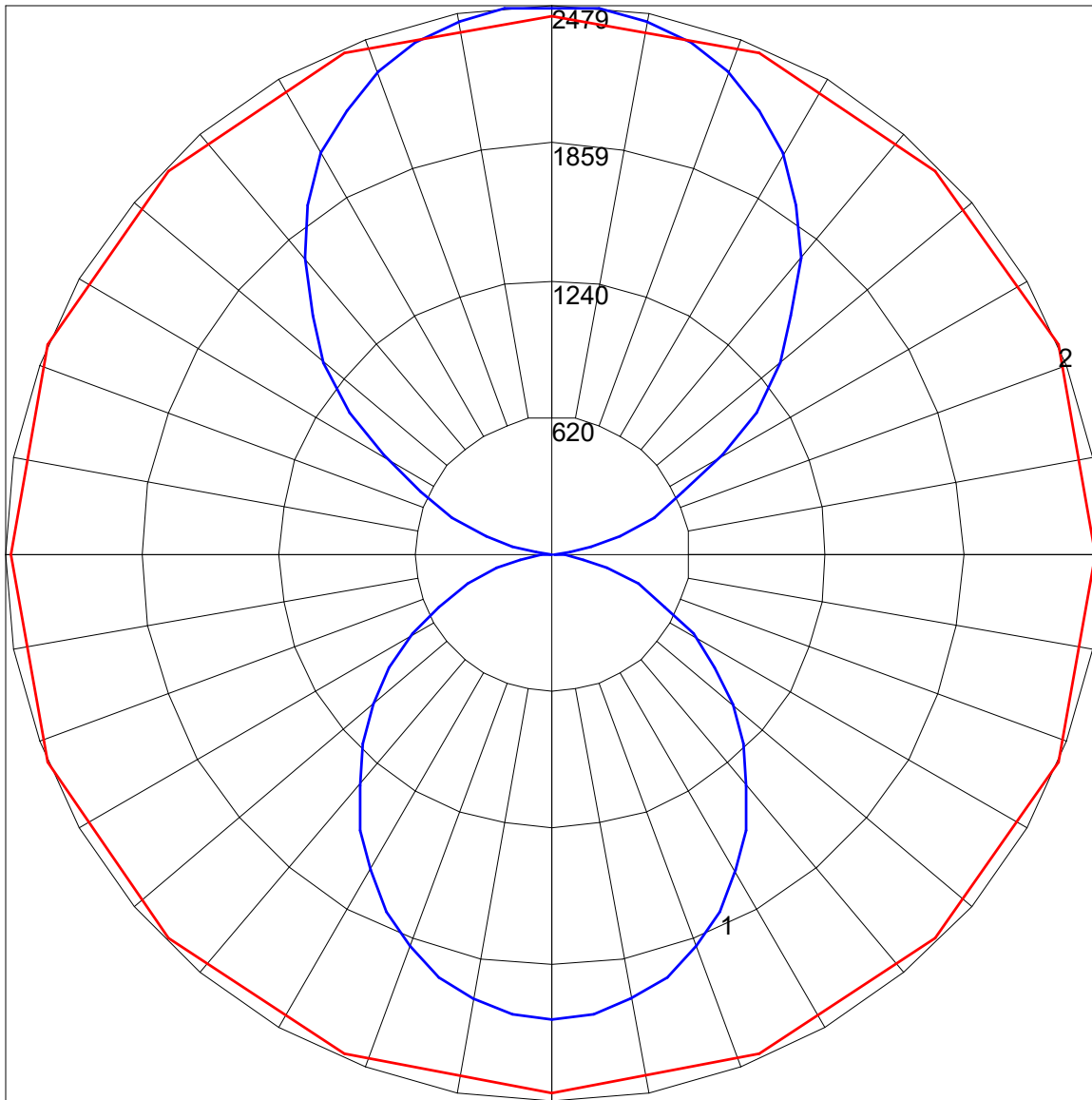
12H	4H	17.1	17.5	18.1	18.5	20.0	16.9	17.3	17.9	18.3	19.7
	6H	17.6	17.9	18.7	19.0	20.4	17.4	17.7	18.5	18.8	20.3
	8H	17.8	18.0	18.9	19.1	20.6	17.6	17.9	18.7	19.0	20.4

Maximum UGR = 20.6

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4WUD-8-00-P7-8TWU-P7-8TWD-AF-POE-UNV 4000K\_.IES

## POLAR GRAPH



Maximum Candela = 2479.233 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.)