



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4UD-8-00-P7-8TWU-P7-8TWD-F-A-POE 4000K\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20194.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 13-MAR-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4-72 LED TOP & 8-72 LED BTM 8' DIRECT/INDIRECT LUMINAIRE

[MORE] WHITE REFLS w/FROSTED ACRYLIC LENS TOP/BTM

[LUMCAT] MX4UD-8-P7-835U-P7-835D-F-A-PoE

### 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	8538	8137	7994
55	7727	7400	7285
65	6568	6544	6280
75	5069	5225	5147
85	2150	3138	2906

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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	2398.819	2398.819	2398.819	2398.819	2398.819
5	2430.463	2375.695	2372.044	2362.308	2347.703
10	2376.912	2327.013	2333.098	2313.625	2295.369
15	2302.672	2261.292	2263.726	2238.168	2219.912
20	2212.610	2179.749	2159.059	2129.850	2118.896
25	2079.950	2059.260	2032.485	1998.408	1986.237
30	1941.206	1922.950	1896.175	1848.710	1836.539
35	1795.159	1772.035	1728.221	1685.624	1675.887
40	1643.027	1607.732	1556.616	1524.972	1523.755
45	1450.732	1420.306	1382.577	1355.801	1358.236
50	1256.003	1231.662	1207.321	1174.460	1186.631
55	1064.925	1046.669	1019.894	1008.940	1004.072
60	866.545	854.374	837.335	834.901	827.599
65	666.947	665.730	664.513	655.994	637.738
70	483.172	485.606	492.908	488.040	472.218
75	315.218	316.435	324.954	328.605	320.086
80	157.000	172.822	170.388	180.124	176.473
85	45.031	64.504	65.721	63.287	60.853
90	8.519	17.039	20.690	17.039	17.039
95	21.907	36.512	40.163	38.946	40.163
100	90.062	124.140	125.357	110.752	116.837
105	212.985	231.241	237.326	205.683	204.466
110	376.071	371.202	384.590	335.908	334.691
115	559.846	544.024	552.544	472.218	474.652
120	749.707	746.056	726.583	651.125	652.343
125	957.824	942.002	904.273	849.506	820.296
130	1174.460	1135.514	1130.646	1074.661	1018.677
135	1377.709	1333.894	1332.677	1283.995	1242.615
140	1570.004	1527.407	1528.624	1484.810	1453.166
145	1765.950	1705.097	1714.833	1658.849	1644.244
150	1929.035	1873.051	1886.438	1829.237	1812.198
155	2059.260	2005.710	2026.400	1975.283	1960.679
160	2171.230	2115.245	2123.764	2089.687	2075.082
165	2263.726	2207.741	2199.222	2179.749	2162.710
170	2314.842	2260.075	2255.207	2241.819	2225.997
175	2352.571	2300.238	2297.804	2288.067	2278.331
180	2320.928	2320.928	2320.928	2320.928	2320.928

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MX4UD-8-00-P7-8TWU-P7-8TWD-F-A-POE 4000K\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	861.01	N.A.	7.50
0-30	1796.48	N.A.	15.70
0-40	2879.82	N.A.	25.20
0-60	4871.64	N.A.	42.70
0-80	5870.62	N.A.	51.40
0-90	5955.74	N.A.	52.20
10-90	5730.46	N.A.	50.20
20-40	2018.81	N.A.	17.70
20-50	3091.95	N.A.	27.10
40-70	2647.32	N.A.	23.20
60-80	998.99	N.A.	8.80
70-80	343.49	N.A.	3.00
80-90	85.11	N.A.	0.70
90-110	298.47	N.A.	2.60
90-120	820.58	N.A.	7.20
90-130	1627.04	N.A.	14.30
90-150	3700.4	N.A.	32.40
90-180	5459.98	N.A.	47.80
110-180	5161.51	N.A.	45.20
0-180	11415.71	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	225.28
10-20	635.73
20-30	935.47
30-40	1083.34
40-50	1073.14
50-60	918.68
60-70	655.50
70-80	343.49
80-90	85.11
90-100	56.12
100-110	242.34
110-120	522.11
120-130	806.47
130-140	1013.59
140-150	1059.76
150-160	921.48
160-170	619.83
170-180	218.27

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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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	98	94	90	86	90	87	84	81	74	72	69	62	61	59	51	50	49	44
2	89	82	76	71	82	76	71	66	65	61	58	55	52	49	45	43	42	37
3	81	72	65	59	75	67	61	55	57	53	49	48	45	42	40	38	35	32
4	75	64	56	50	69	59	52	47	51	46	41	43	39	36	36	33	31	27
5	68	57	49	43	63	53	46	41	46	40	36	39	35	31	32	29	27	24
6	63	51	43	37	58	48	41	35	41	36	31	35	31	27	30	26	24	21
7	58	46	38	33	54	43	36	31	37	32	28	32	28	24	27	24	21	18
8	54	42	34	29	50	39	32	28	34	29	25	29	25	22	25	21	19	17
9	50	38	31	26	47	36	29	25	31	26	22	27	23	20	23	20	17	15
10	47	35	28	23	44	33	27	22	29	24	20	25	21	18	21	18	15	14

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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

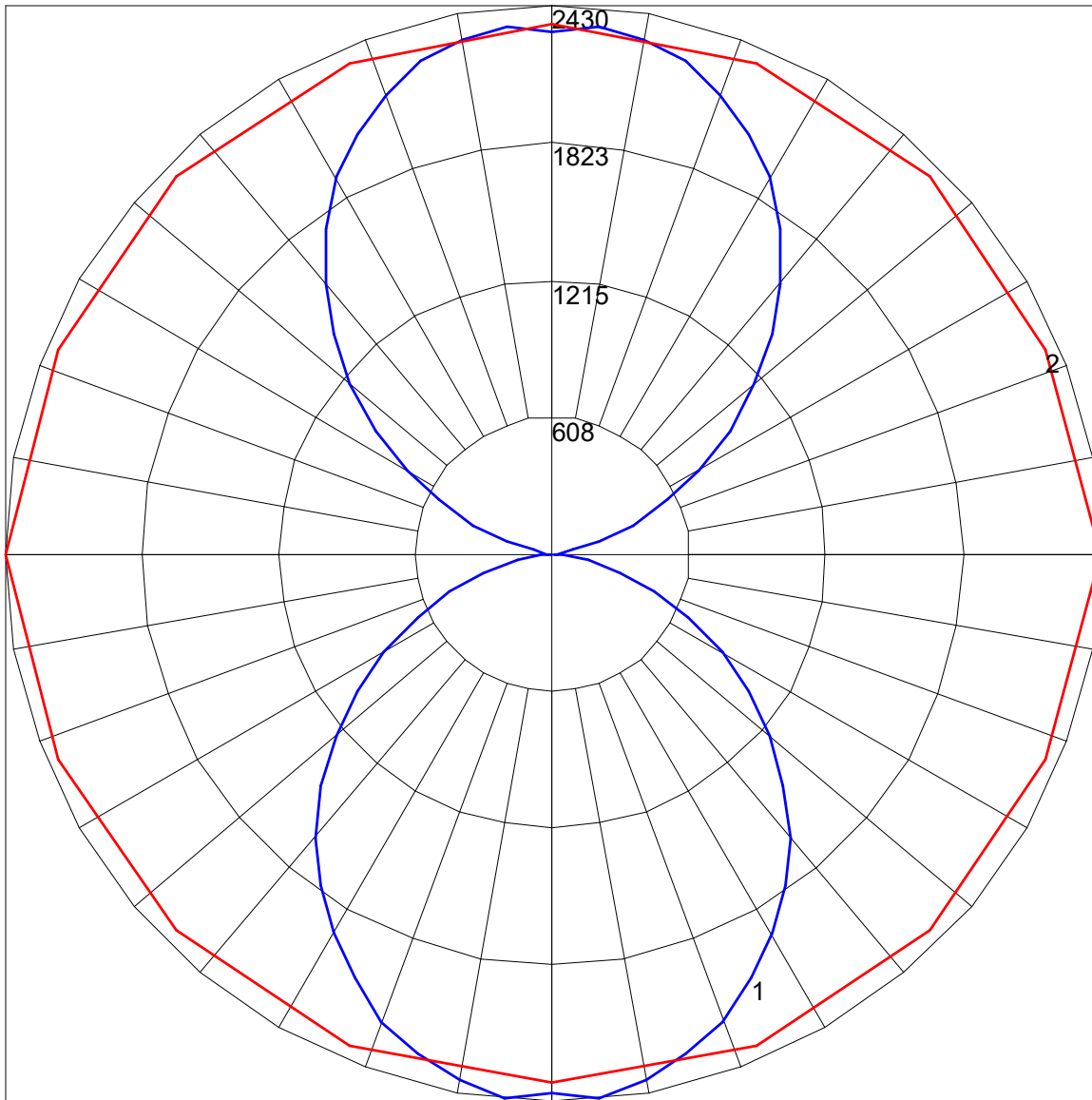
X=2H	Y=2H	15.4	16.3	16.4	17.3	18.5	15.2	16.1	16.2	17.0	18.3
	3H	16.9	17.7	17.9	18.7	20.0	16.8	17.5	17.7	18.5	19.8
	4H	17.4	18.2	18.4	19.1	20.4	17.3	18.0	18.3	19.0	20.3
	6H	17.7	18.4	18.7	19.4	20.6	17.6	18.3	18.6	19.3	20.6
	8H	17.8	18.4	18.7	19.4	20.7	17.7	18.4	18.7	19.3	20.6
	12H	17.8	18.4	18.7	19.4	20.7	17.7	18.3	18.7	19.3	20.6

### UGR Viewed Endwise

4H	2H	15.9	16.7	16.9	17.6	18.9	15.7	16.5	16.7	17.4	18.7
	3H	17.6	18.2	18.6	19.2	20.5	17.5	18.1	18.5	19.1	20.4
	4H	18.2	18.8	19.2	19.8	21.1	18.1	18.7	19.1	19.7	21.0
	6H	18.6	19.1	19.6	20.1	21.4	18.6	19.1	19.6	20.1	21.4
	8H	18.7	19.1	19.7	20.1	21.5	18.7	19.1	19.7	20.2	21.5
	12H	18.7	19.1	19.7	20.1	21.5	18.7	19.1	19.8	20.2	21.5
8H	4H	18.4	18.9	19.4	19.9	21.2	18.3	18.8	19.3	19.8	21.1
	6H	18.9	19.3	19.9	20.3	21.6	18.9	19.3	19.9	20.3	21.6
	8H	19.0	19.4	20.1	20.4	21.7	19.1	19.4	20.1	20.4	21.8
	12H	19.1	19.4	20.2	20.4	21.8	19.2	19.5	20.2	20.5	21.9
12H	4H	18.4	18.8	19.4	19.8	21.2	18.3	18.7	19.3	19.7	21.1
	6H	18.9	19.2	19.9	20.3	21.6	18.9	19.2	19.9	20.3	21.6
	8H	19.1	19.4	20.1	20.4	21.8	19.1	19.4	20.2	20.4	21.8

Maximum UGR = 21.9

POLAR GRAPH



Maximum Candela = 2430.463 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)