



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4UD-7-00-L8-835U-L8-835D-A-F-(L7U-L7.5D)-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 20657.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 23-JUL-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 7' INDIRECT SUSPENDED LUMINAIRE  
 [MORE] WITH FROSTED ACRYLIC LENS  
 [LUMCAT] MX4UD-7-00-L8-835U-L8-835D-A-F-(L7U-L7.5D)-DIM-UNV  
 [LAMPCAT] HLM 80 CRI, 3500K CCT  
 [ SEARCH\_SOURCETYPE] LED  
 [ SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Indirect  
 [ SEARCH\_MOUNTING] Suspended

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10393
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	80.7
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)	7.00 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	8814	8547	8413
55	8094	7765	7546
65	6889	6778	6554
75	5229	5473	5169
85	2528	3250	3070

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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	2185.938	2185.938	2185.938	2185.938	2185.938
5	2195.711	2172.907	2163.134	2156.619	2156.619
10	2156.619	2133.814	2124.041	2117.526	2111.010
15	2081.691	2065.402	2049.113	2042.598	2032.825
20	1993.732	1970.928	1957.897	1938.351	1931.835
25	1879.711	1853.650	1840.619	1817.814	1814.557
30	1765.691	1736.371	1710.309	1703.794	1687.505
35	1606.062	1586.515	1563.711	1540.907	1540.907
40	1456.206	1436.660	1407.340	1400.825	1378.021
45	1290.062	1270.515	1250.969	1231.423	1231.423
50	1133.691	1107.629	1091.340	1078.309	1062.021
55	961.031	938.227	921.938	905.649	895.876
60	781.856	768.825	759.052	746.021	736.247
65	602.680	599.423	592.907	576.619	573.361
70	446.309	443.052	433.278	426.763	420.247
75	280.165	289.938	293.196	283.423	276.907
80	143.340	149.856	149.856	153.113	156.371
85	45.608	48.866	58.639	52.124	55.381
90	0.000	0.000	0.000	0.000	0.000
95	90.194	88.390	91.998	90.194	95.606
100	191.211	193.015	182.192	191.211	189.407
105	322.894	321.090	321.090	315.679	310.267
110	461.793	454.578	449.166	445.558	436.539
115	611.515	602.496	591.672	573.634	573.634
120	759.433	743.198	726.963	717.944	708.924
125	894.724	891.116	873.077	855.039	846.019
130	1035.427	1033.623	1015.584	999.349	993.937
135	1168.914	1172.521	1152.679	1131.032	1123.817
140	1311.420	1304.205	1291.577	1260.911	1260.911
145	1439.495	1430.476	1410.633	1403.418	1387.183
150	1545.924	1556.748	1536.905	1520.670	1513.454
155	1650.549	1659.569	1645.138	1625.295	1623.491
160	1742.547	1749.763	1735.332	1726.312	1717.293
165	1811.095	1820.114	1807.487	1798.467	1793.056
170	1859.799	1868.819	1857.995	1852.584	1852.584
175	1885.054	1895.877	1886.857	1881.446	1874.230
180	1892.269	1892.269	1892.269	1892.269	1892.269

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MX4UD-7-00-L8-835U-L8-835D-A-F-(L7U-L7.5D)-DIM-UNV\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	784.25	N.A.	7.50
0-30	1632.92	N.A.	15.70
0-40	2614.18	N.A.	25.20
0-60	4410.02	N.A.	42.40
0-80	5301.91	N.A.	51.00
0-90	5371.51	N.A.	51.70
10-90	5165.84	N.A.	49.70
20-40	1829.94	N.A.	17.60
20-50	2798.39	N.A.	26.90
40-70	2382.53	N.A.	22.90
60-80	891.90	N.A.	8.60
70-80	305.21	N.A.	2.90
80-90	69.60	N.A.	0.70
90-110	437.65	N.A.	4.20
90-120	1021.97	N.A.	9.80
90-130	1803.05	N.A.	17.30
90-150	3576.91	N.A.	34.40
90-180	5021.79	N.A.	48.30
110-180	4584.14	N.A.	44.10
0-180	10393.3	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	205.67
10-20	578.58
20-30	848.67
30-40	981.27
40-50	968.45
50-60	827.38
60-70	586.69
70-80	305.21
80-90	69.60
90-100	100.98
100-110	336.67
110-120	584.32
120-130	781.08
130-140	888.88
140-150	884.98
150-160	756.34
160-170	509.40
170-180	179.13

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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	108	108	108	108	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	98	94	90	87	91	87	84	81	74	72	70	62	61	59	51	50	49	44
2	90	82	76	71	83	76	71	67	65	61	58	55	52	50	45	43	42	37
3	82	72	65	59	75	67	61	56	58	53	49	49	45	42	40	38	36	32
4	75	64	56	50	69	60	53	47	51	46	42	43	39	36	36	33	31	27
5	69	57	49	43	63	53	46	41	46	40	36	39	35	31	33	29	27	24
6	63	51	43	38	59	48	41	36	41	36	32	35	31	28	30	26	24	21
7	59	46	39	33	54	43	36	31	38	32	28	32	28	24	27	24	21	18
8	55	42	34	29	50	39	33	28	34	29	25	29	25	22	25	21	19	17
9	51	39	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	16	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	15.5	16.4	16.4	17.3	18.6	15.2	16.1	16.2	17.0	18.3
	3H	17.0	17.8	18.0	18.8	20.0	16.7	17.5	17.7	18.5	19.7
	4H	17.5	18.2	18.5	19.2	20.5	17.2	18.0	18.2	18.9	20.2
	6H	17.8	18.5	18.7	19.4	20.7	17.5	18.2	18.5	19.2	20.5
	8H	17.8	18.5	18.8	19.5	20.7	17.6	18.3	18.6	19.3	20.6
	12H	17.8	18.4	18.8	19.4	20.7	17.7	18.3	18.6	19.3	20.6

### UGR Viewed Endwise

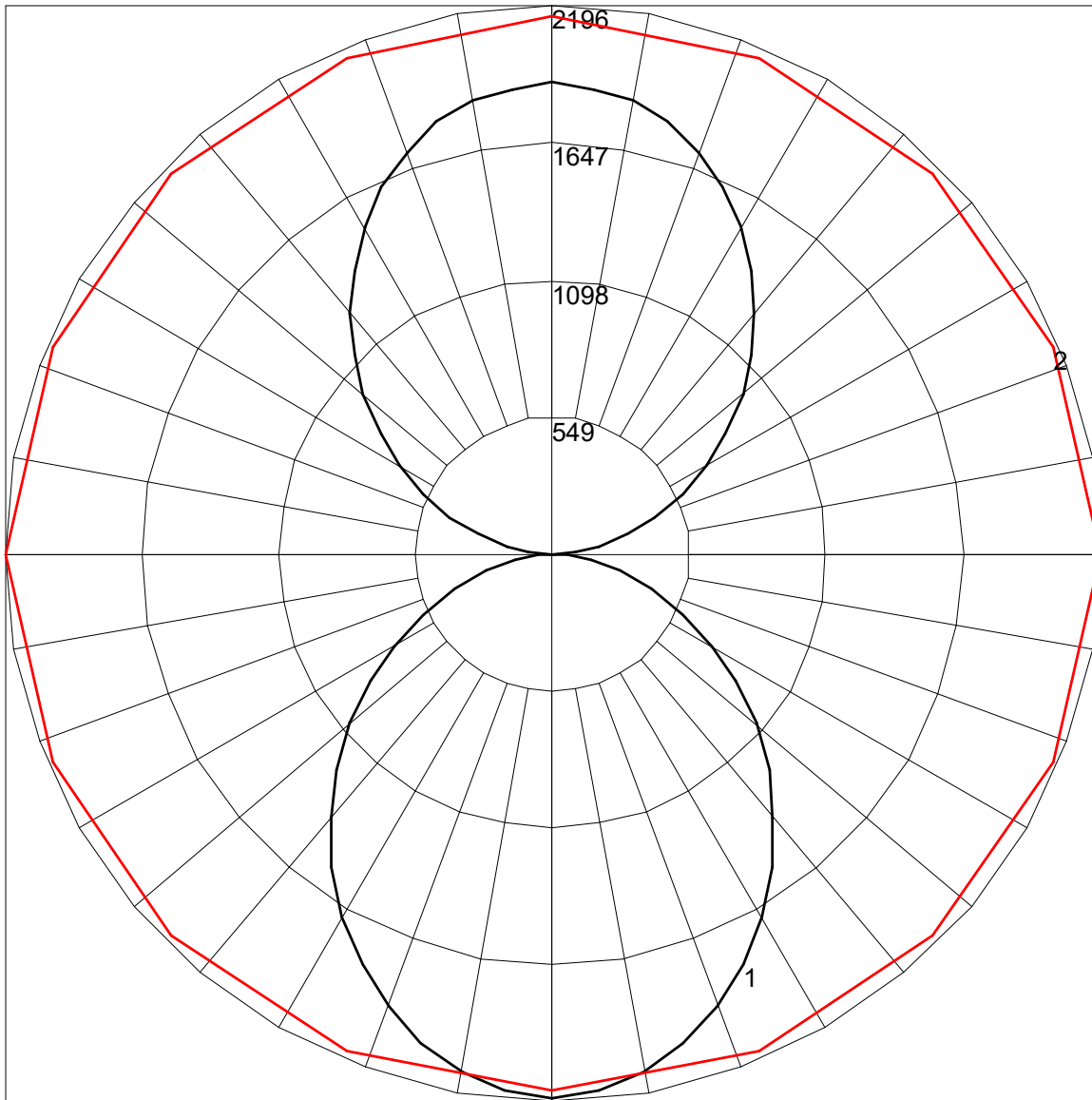
4H	2H	15.9	16.7	16.9	17.7	18.9	15.7	16.5	16.7	17.4	18.7
	3H	17.7	18.3	18.6	19.3	20.6	17.4	18.0	18.4	19.0	20.3
	4H	18.3	18.8	19.3	19.8	21.1	18.0	18.6	19.0	19.6	20.9
	6H	18.6	19.1	19.6	20.2	21.5	18.5	19.0	19.5	20.0	21.3
	8H	18.7	19.2	19.7	20.2	21.5	18.6	19.0	19.6	20.1	21.4
	12H	18.8	19.2	19.8	20.2	21.5	18.6	19.0	19.7	20.1	21.4
8H	4H	18.5	18.9	19.5	19.9	21.2	18.3	18.7	19.3	19.7	21.0
	6H	18.9	19.3	20.0	20.4	21.7	18.8	19.2	19.8	20.2	21.5
	8H	19.1	19.4	20.1	20.4	21.8	19.0	19.3	20.0	20.3	21.7
	12H	19.1	19.4	20.2	20.4	21.8	19.0	19.3	20.1	20.4	21.8
12H	4H	18.4	18.8	19.5	19.9	21.2	18.2	18.6	19.3	19.7	21.0
	6H	18.9	19.3	20.0	20.3	21.7	18.8	19.1	19.8	20.2	21.5
	8H	19.1	19.4	20.1	20.4	21.8	19.0	19.3	20.0	20.3	21.7

Maximum UGR = 21.8

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## POLAR GRAPH



Maximum Candela = 2195.711 Located At Horizontal Angle = 0, Vertical Angle = 5

# 1 - Vertical Plane Through Horizontal Angles (90 - 270)

# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)