



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-2-00-L8-835-F-(L6)-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 29653.0  
 [TESTLABV] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 08 JAN 2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 2' DIRECT SUSPENDED LUMINAIRE  
 [MORE] WITH FROSTED ACRYLIC LENS  
 [LUMCAT] MX4D-2-00-L8-835-F-(L6)-DIM-UNV  
 [LAMPCAT] HLM 80 CRI, 3500K CCT  
 [ \_SEARCH\_SOURCETYPE] LED  
 [ \_SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Direct  
 [ \_SEARCH\_MOUNTING] Suspended

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1248
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	113
Total Luminaire Watts	11
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.99 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	7203	6984	6875
55	6615	6346	6166
65	5630	5539	5356
75	4273	4472	4224
85	2066	2656	2509

IES INDOOR REPORT  
 PHOTOMETRIC FILENAME : MX4D-2-00-L8-835-F-(L6)-DIM-UNV\_.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0</b>	507.828	507.828	507.828	507.828	507.828
<b>5</b>	510.098	504.800	502.530	501.016	501.016
<b>10</b>	501.016	495.719	493.448	491.934	490.421
<b>15</b>	483.609	479.825	476.041	474.528	472.257
<b>20</b>	463.175	457.877	454.850	450.309	448.796
<b>25</b>	436.686	430.632	427.605	422.307	421.550
<b>30</b>	410.198	403.386	397.332	395.818	392.034
<b>35</b>	373.113	368.572	363.275	357.977	357.977
<b>40</b>	338.300	333.759	326.947	325.434	320.136
<b>45</b>	299.702	295.161	290.620	286.079	286.079
<b>50</b>	263.374	257.320	253.535	250.508	246.724
<b>55</b>	223.263	217.965	214.181	210.397	208.126
<b>60</b>	181.637	178.610	176.340	173.312	171.042
<b>65</b>	140.012	139.255	137.742	133.958	133.201
<b>70</b>	103.685	102.928	100.657	99.144	97.630
<b>75</b>	65.087	67.357	68.114	65.844	64.330
<b>80</b>	33.300	34.814	34.814	35.571	36.327
<b>85</b>	10.596	11.352	13.623	12.109	12.866
<b>90</b>	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MX4D-2-00-L8-835-F-(L6)-DIM-UNV\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	182.19	N.A.	14.60
0-30	379.35	N.A.	30.40
0-40	607.32	N.A.	48.70
0-60	1024.52	N.A.	82.10
0-80	1231.72	N.A.	98.70
0-90	1247.89	N.A.	100.00
10-90	1200.11	N.A.	96.20
20-40	425.12	N.A.	34.10
20-50	650.11	N.A.	52.10
40-70	553.50	N.A.	44.40
60-80	207.20	N.A.	16.60
70-80	70.90	N.A.	5.70
80-90	16.17	N.A.	1.30
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1247.89	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	47.78
10-20	134.41
20-30	197.16
30-40	227.96
40-50	224.99
50-60	192.21
60-70	136.30
70-80	70.90
80-90	16.17
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : MX4D-2-00-L8-835-F-(L6)-DIM-UNV\_.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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	87	82	77	83	79	75	80	77	74	72
3	91	81	73	67	89	80	72	67	77	70	65	74	69	64	71	67	63	61
4	84	72	64	57	82	71	63	57	68	62	56	66	60	55	64	59	55	52
5	77	65	56	50	75	64	56	49	62	54	49	60	53	48	58	52	48	46
6	72	59	50	44	70	58	49	43	56	48	43	54	48	43	53	47	42	40
7	66	53	45	39	65	52	44	39	51	44	38	49	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	57	44	36	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-2-00-L8-835-F-(L6)-DIM-UNV\_.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	18.5	20.1	18.9	20.4	20.7	18.3	19.8	18.6	20.2	20.5
	3H	20.1	21.5	20.5	21.9	22.2	19.8	21.2	20.2	21.6	21.9
	4H	20.6	22.0	21.0	22.3	22.7	20.3	21.7	20.7	22.0	22.4
	6H	20.9	22.2	21.4	22.5	22.9	20.7	22.0	21.1	22.3	22.7
	8H	21.0	22.2	21.4	22.6	23.0	20.8	22.0	21.2	22.4	22.8
	12H	21.0	22.2	21.5	22.5	23.0	20.9	22.0	21.3	22.4	22.8

### UGR Viewed Endwise

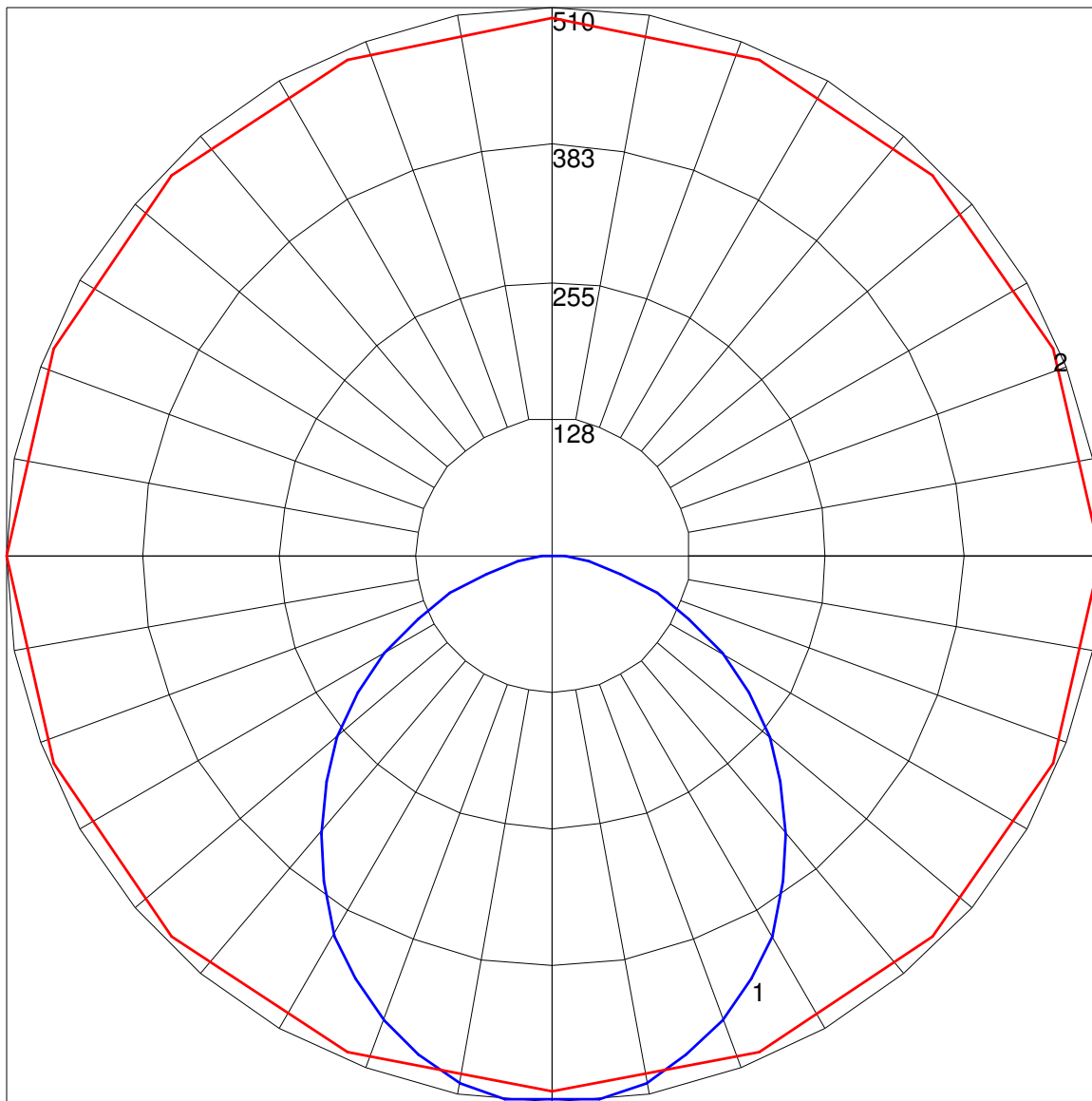
4H	2H	19.1	20.4	19.5	20.8	21.1	18.8	20.2	19.2	20.5	20.9
	3H	20.9	22.0	21.3	22.4	22.8	20.6	21.7	21.0	22.1	22.5
	4H	21.5	22.5	21.9	22.9	23.4	21.3	22.3	21.7	22.7	23.1
	6H	21.9	22.8	22.4	23.2	23.7	21.7	22.6	22.2	23.1	23.5
	8H	22.0	22.8	22.5	23.3	23.7	21.9	22.7	22.3	23.1	23.6
	12H	22.0	22.8	22.5	23.3	23.7	21.9	22.7	22.4	23.2	23.6

8H	4H	21.7	22.6	22.2	23.0	23.5	21.5	22.4	22.0	22.8	23.3
	6H	22.2	22.9	22.7	23.4	23.9	22.1	22.8	22.6	23.3	23.7
	8H	22.4	23.0	22.9	23.5	24.0	22.3	22.9	22.8	23.4	23.9
	12H	22.5	23.0	23.0	23.5	24.1	22.4	22.9	22.9	23.4	24.0

12H	4H	21.7	22.5	22.2	23.0	23.4	21.5	22.3	22.0	22.8	23.2
	6H	22.3	22.9	22.8	23.3	23.9	22.1	22.7	22.6	23.2	23.7
	8H	22.4	23.0	23.0	23.5	24.0	22.3	22.9	22.8	23.4	23.9

Maximum UGR = 24.1

POLAR GRAPH



Maximum Candela = 510.098 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.)