



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-7-00-L12-835-F-DIM-UNV.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 29653.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 30-JUN-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 7' DIRECT SUSPENDED LUMINAIRE  
 [MORE] WITH FROSTED ACRYLIC LENS  
 [LUMCAT] MX4D-7-00-L12-835-F-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	8477
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	66.4
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)	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	13910	13488	13278
55	12774	12255	11908
65	10873	10696	10344
75	8253	8637	8157
85	3990	5130	4845

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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>
<b>0</b>	3449.811	3449.811	3449.811	3449.811	3449.811
<b>5</b>	3465.235	3429.246	3413.822	3403.539	3403.539
<b>10</b>	3403.539	3367.550	3352.126	3341.844	3331.561
<b>15</b>	3285.289	3259.583	3233.876	3223.594	3208.170
<b>20</b>	3146.474	3110.485	3089.920	3059.072	3048.790
<b>25</b>	2966.529	2925.398	2904.833	2868.844	2863.703
<b>30</b>	2786.583	2740.312	2699.181	2688.899	2663.192
<b>35</b>	2534.660	2503.812	2467.823	2431.834	2431.834
<b>40</b>	2298.160	2267.312	2221.041	2210.758	2174.769
<b>45</b>	2035.954	2005.106	1974.258	1943.411	1943.411
<b>50</b>	1789.172	1748.041	1722.335	1701.770	1676.063
<b>55</b>	1516.683	1480.694	1454.987	1429.281	1413.857
<b>60</b>	1233.911	1213.346	1197.922	1177.357	1161.933
<b>65</b>	951.140	945.999	935.716	910.010	904.868
<b>70</b>	704.358	699.217	683.793	673.510	663.227
<b>75</b>	442.152	457.576	462.717	447.293	437.010
<b>80</b>	226.217	236.500	236.500	241.641	246.782
<b>85</b>	71.978	77.119	92.543	82.261	87.402
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1237.68	N.A.	14.60
0-30	2577.04	N.A.	30.40
0-40	4125.66	N.A.	48.70
0-60	6959.82	N.A.	82.10
0-80	8367.39	N.A.	98.70
0-90	8477.23	N.A.	100.00
10-90	8152.65	N.A.	96.20
20-40	2887.97	N.A.	34.10
20-50	4416.37	N.A.	52.10
40-70	3760.06	N.A.	44.40
60-80	1407.58	N.A.	16.60
70-80	481.67	N.A.	5.70
80-90	109.84	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	8477.23	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	324.58
10-20	913.10
20-30	1339.36
30-40	1548.62
40-50	1528.4
50-60	1305.76
60-70	925.90
70-80	481.67
80-90	109.84
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

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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	138	138	138	138	135	135	135	135	129	129	129	124	124	124	119	119	119	116
1	127	122	117	113	124	119	115	111	114	111	108	110	107	104	106	103	101	99
2	116	107	99	93	113	105	98	92	101	95	90	97	92	88	93	89	86	83
3	106	94	85	78	103	93	84	77	89	82	76	86	80	75	83	78	73	71
4	97	84	74	67	95	82	73	66	80	72	65	77	70	64	74	68	63	61
5	90	75	65	58	87	74	64	57	72	63	57	69	62	56	67	61	56	53
6	83	68	58	51	81	67	57	50	65	56	50	63	55	50	61	54	49	47
7	77	62	52	45	75	61	51	45	59	51	44	57	50	44	56	49	44	42
8	72	57	47	40	70	56	47	40	54	46	40	53	45	40	51	45	39	37
9	67	52	43	36	66	51	42	36	50	42	36	49	41	36	48	41	36	34
10	63	48	39	33	62	47	39	33	46	38	33	45	38	33	44	37	33	31

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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	20.8	22.4	21.2	22.7	23.0	20.5	22.1	20.9	22.4	22.7
	3H	22.4	23.8	22.7	24.1	24.5	22.1	23.5	22.5	23.8	24.2
	4H	22.9	24.2	23.3	24.6	25.0	22.6	24.0	23.0	24.3	24.7
	6H	23.2	24.4	23.6	24.8	25.2	23.0	24.2	23.4	24.6	25.0
	8H	23.3	24.5	23.7	24.8	25.2	23.1	24.3	23.5	24.7	25.1
	12H	23.3	24.4	23.7	24.8	25.2	23.1	24.3	23.6	24.6	25.1

UGR Viewed Endwise

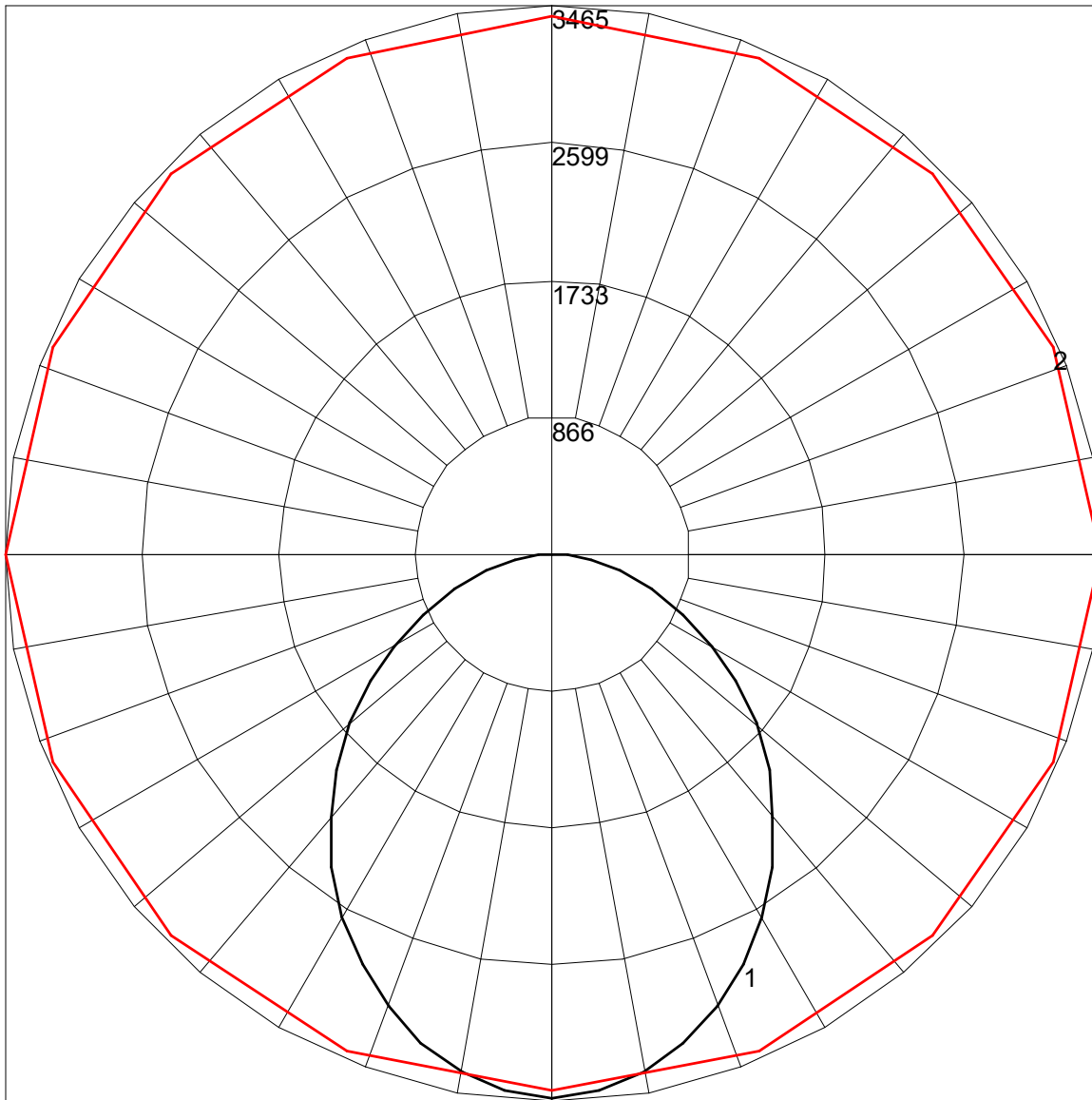
4H	2H	21.3	22.7	21.7	23.0	23.4	21.1	22.5	21.5	22.8	23.2
	3H	23.1	24.2	23.5	24.6	25.0	22.9	24.0	23.3	24.4	24.8
	4H	23.8	24.8	24.2	25.2	25.6	23.5	24.5	24.0	25.0	25.4
	6H	24.2	25.1	24.6	25.5	25.9	24.0	24.9	24.4	25.3	25.8
	8H	24.3	25.1	24.7	25.5	26.0	24.1	25.0	24.6	25.4	25.9
	12H	24.3	25.1	24.8	25.5	26.0	24.2	24.9	24.7	25.4	25.9

8H	4H	24.0	24.8	24.4	25.3	25.7	23.8	24.6	24.2	25.1	25.5
	6H	24.5	25.2	25.0	25.7	26.1	24.3	25.0	24.8	25.5	26.0
	8H	24.6	25.2	25.1	25.8	26.2	24.5	25.1	25.0	25.6	26.1
	12H	24.7	25.3	25.2	25.8	26.3	24.7	25.2	25.2	25.7	26.2

12H	4H	24.0	24.7	24.5	25.2	25.7	23.8	24.5	24.3	25.0	25.5
	6H	24.5	25.1	25.0	25.6	26.1	24.4	25.0	24.9	25.5	26.0
	8H	24.7	25.2	25.2	25.7	26.3	24.6	25.1	25.1	25.6	26.2

Maximum UGR = 26.3

POLAR GRAPH



Maximum Candela = 3465.235 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.)