



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-7-00-L8-835-F-(L7.5)-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-L8-835-F-(L7.5)-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	5372
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	41.7
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	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>
<b>0</b>	2185.938	2185.938	2185.938	2185.938	2185.938
<b>5</b>	2195.711	2172.907	2163.134	2156.619	2156.619
<b>10</b>	2156.619	2133.814	2124.041	2117.526	2111.010
<b>15</b>	2081.691	2065.402	2049.113	2042.598	2032.825
<b>20</b>	1993.732	1970.928	1957.897	1938.350	1931.835
<b>25</b>	1879.711	1853.649	1840.619	1817.814	1814.557
<b>30</b>	1765.691	1736.371	1710.309	1703.794	1687.505
<b>35</b>	1606.062	1586.515	1563.711	1540.907	1540.907
<b>40</b>	1456.206	1436.660	1407.340	1400.825	1378.021
<b>45</b>	1290.062	1270.515	1250.969	1231.423	1231.423
<b>50</b>	1133.691	1107.629	1091.340	1078.309	1062.021
<b>55</b>	961.031	938.227	921.938	905.649	895.876
<b>60</b>	781.856	768.825	759.052	746.021	736.247
<b>65</b>	602.680	599.423	592.907	576.619	573.361
<b>70</b>	446.309	443.052	433.278	426.763	420.247
<b>75</b>	280.165	289.938	293.196	283.423	276.907
<b>80</b>	143.340	149.856	149.856	153.113	156.371
<b>85</b>	45.608	48.866	58.639	52.124	55.381
<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	784.25	N.A.	14.60
0-30	1632.92	N.A.	30.40
0-40	2614.18	N.A.	48.70
0-60	4410.02	N.A.	82.10
0-80	5301.91	N.A.	98.70
0-90	5371.51	N.A.	100.00
10-90	5165.84	N.A.	96.20
20-40	1829.93	N.A.	34.10
20-50	2798.39	N.A.	52.10
40-70	2382.53	N.A.	44.40
60-80	891.90	N.A.	16.60
70-80	305.21	N.A.	5.70
80-90	69.60	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	5371.51	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	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	75	75	75	75	74	74	74	74	70	70	70	67	67	67	65	65	65	63
1	69	66	64	62	68	65	63	61	62	60	59	60	58	57	58	56	55	54
2	63	58	54	51	62	57	53	50	55	52	49	53	50	48	51	49	47	45
3	58	51	46	43	56	50	46	42	49	45	41	47	44	41	45	42	40	39
4	53	46	40	36	52	45	40	36	43	39	36	42	38	35	41	37	35	33
5	49	41	36	31	48	40	35	31	39	34	31	38	34	31	37	33	30	29
6	45	37	32	28	44	37	31	27	35	31	27	34	30	27	33	30	27	25
7	42	34	28	25	41	33	28	24	32	28	24	31	27	24	30	27	24	23
8	39	31	26	22	38	30	25	22	30	25	22	29	25	22	28	24	21	20
9	37	28	23	20	36	28	23	20	27	23	20	27	23	20	26	22	19	18
10	34	26	21	18	34	26	21	18	25	21	18	25	21	18	24	20	18	17

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**UGR TABLE - CORRECTED**

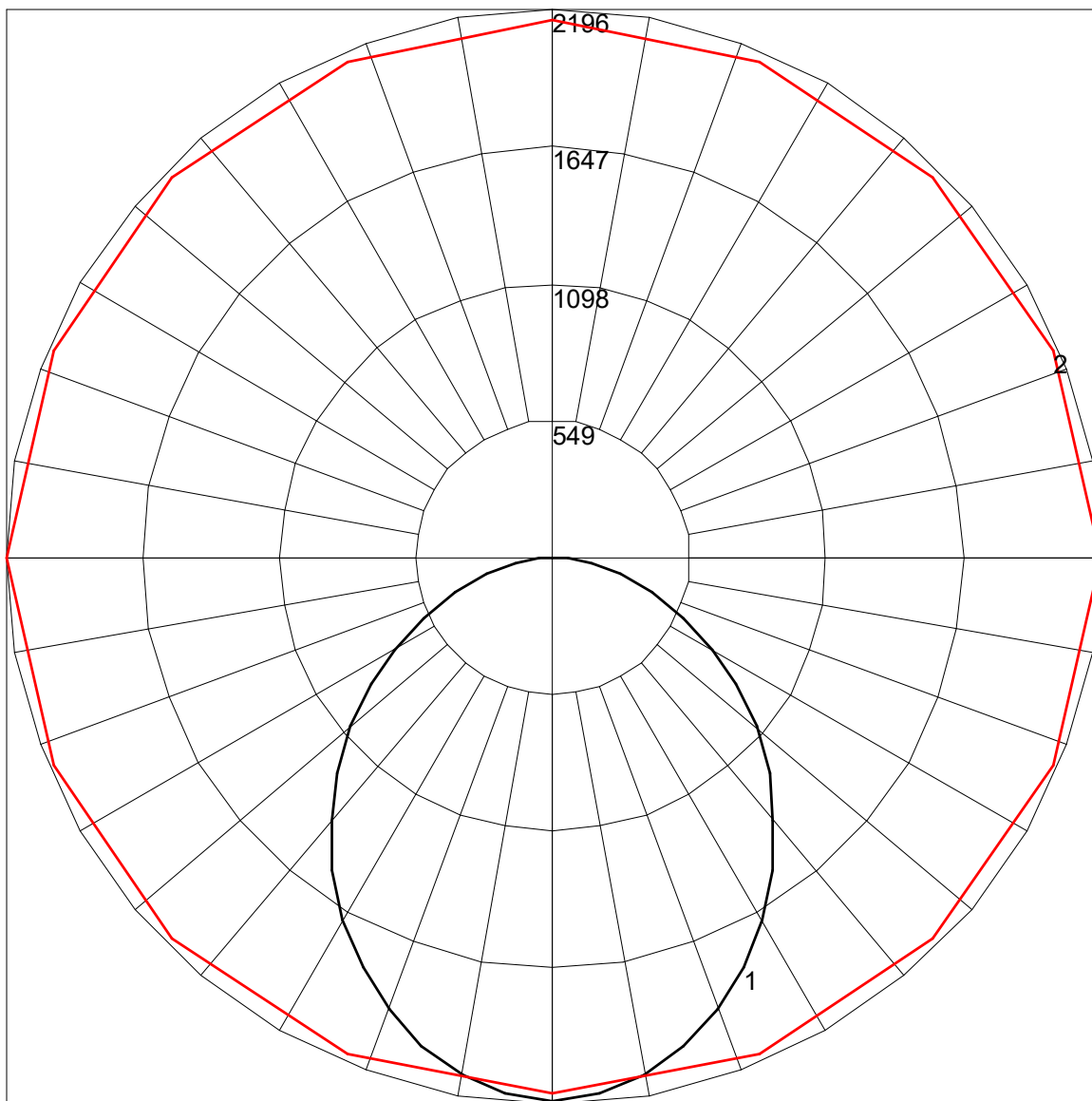
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	20.8	22.3	21.1	22.7	23.0	20.5	22.1	20.9	22.4	22.7
	3H	22.3	23.8	22.7	24.1	24.5	22.0	23.5	22.4	23.8	24.2
	4H	22.8	24.2	23.2	24.5	24.9	22.6	23.9	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	24.9
	8H	23.2	24.4	23.7	24.8	25.2	23.0	24.2	23.5	24.6	25.0
	12H	23.3	24.4	23.7	24.8	25.2	23.1	24.2	23.5	24.6	25.0
4H	2H	21.3	22.6	21.7	23.0	23.4	21.1	22.4	21.5	22.8	23.2
	3H	23.1	24.2	23.5	24.6	25.0	22.8	24.0	23.3	24.4	24.8
	4H	23.7	24.7	24.1	25.1	25.6	23.5	24.5	23.9	24.9	25.4
	6H	24.1	25.0	24.6	25.5	25.9	24.0	24.8	24.4	25.3	25.7
	8H	24.2	25.1	24.7	25.5	26.0	24.1	24.9	24.5	25.4	25.8
	12H	24.3	25.0	24.8	25.5	26.0	24.2	24.9	24.6	25.4	25.9
8H	4H	24.0	24.8	24.4	25.2	25.7	23.7	24.6	24.2	25.0	25.5
	6H	24.5	25.1	24.9	25.6	26.1	24.3	25.0	24.8	25.5	26.0
	8H	24.6	25.2	25.1	25.7	26.2	24.5	25.1	25.0	25.6	26.1
	12H	24.7	25.2	25.2	25.7	26.3	24.6	25.2	25.1	25.6	26.2
12H	4H	24.0	24.7	24.4	25.2	25.7	23.8	24.5	24.2	25.0	25.5
	6H	24.5	25.1	25.0	25.6	26.1	24.3	25.0	24.9	25.4	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 = 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.)