



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-8-00-L8-835-F-(L3.6)-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 20195.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUE DATE] 16-APR-2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 8' DIRECT SUSPENDED LUMINAIRE  
 [MORE] WITH FROSTED ACRYLIC LENS  
 [LUMCAT] MX4D-8-L8-835-S-A-(L3.6)-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	2982
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	23.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.30
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	4301	4107	3953
55	3963	3778	3544
65	3506	3298	3157
75	2698	2588	2568
85	1246	1543	1424

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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>	1178.135	1178.135	1178.135	1178.135	1178.135
<b>5</b>	1202.369	1176.271	1168.815	1162.601	1156.387
<b>10</b>	1186.213	1158.251	1149.552	1140.231	1133.396
<b>15</b>	1161.979	1130.910	1114.755	1099.841	1095.492
<b>20</b>	1111.026	1079.957	1071.258	1045.781	1041.432
<b>25</b>	1039.568	1015.334	1006.635	987.372	983.022
<b>30</b>	968.109	946.361	935.176	921.506	914.670
<b>35</b>	901.000	875.524	857.504	849.426	841.969
<b>40</b>	826.435	806.550	780.452	768.025	758.083
<b>45</b>	730.742	717.072	697.809	686.003	671.711
<b>50</b>	642.506	619.515	615.787	594.039	582.232
<b>55</b>	546.192	532.522	520.716	502.075	488.404
<b>60</b>	457.335	437.451	430.616	413.839	402.032
<b>65</b>	356.050	345.487	334.923	324.360	320.632
<b>70</b>	261.601	252.280	245.445	235.503	239.852
<b>75</b>	167.772	168.394	160.937	160.937	159.694
<b>80</b>	82.643	87.614	85.129	90.100	83.886
<b>85</b>	26.098	31.069	32.312	37.904	29.826
<b>90</b>	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MX4D-8-00-L8-835-F-(L3.6)-DIM-UNV\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	426.13	N.A.	14.30
0-30	889.27	N.A.	29.80
0-40	1429.61	N.A.	47.90
0-60	2433.97	N.A.	81.60
0-80	2940.87	N.A.	98.60
0-90	2982.01	N.A.	100.00
10-90	2870.79	N.A.	96.30
20-40	1003.48	N.A.	33.70
20-50	1543.77	N.A.	51.80
40-70	1337.32	N.A.	44.80
60-80	506.89	N.A.	17.00
70-80	173.93	N.A.	5.80
80-90	41.14	N.A.	1.40
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	2982.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	111.22
10-20	314.91
20-30	463.14
30-40	540.34
40-50	540.29
50-60	464.07
60-70	332.96
70-80	173.93
80-90	41.14
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	102	99	95	98	95	92	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	61
4	84	72	63	57	81	71	63	56	68	61	56	66	60	55	64	58	54	52
5	77	64	56	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	43	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	51	43	38	49	42	38	48	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	33	32
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	29
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26

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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

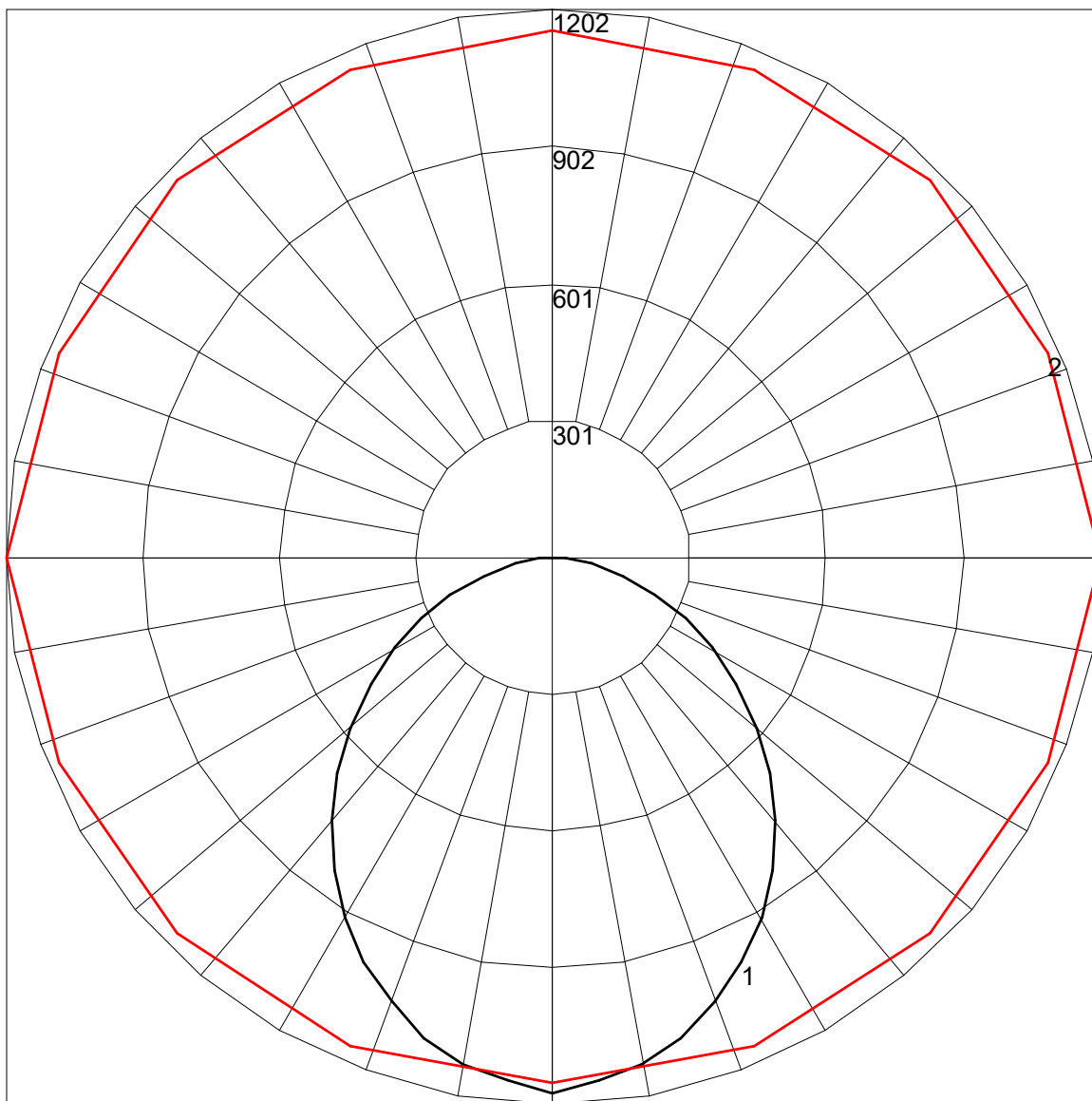
X=2H	Y=2H	19.2	20.8	19.6	21.1	21.4	18.7	20.3	19.1	20.6	21.0
	3H	20.8	22.3	21.2	22.6	23.0	20.3	21.8	20.7	22.1	22.5
	4H	21.4	22.7	21.8	23.1	23.5	20.9	22.3	21.3	22.6	23.0
	6H	21.7	23.0	22.1	23.3	23.7	21.3	22.5	21.7	22.9	23.3
	8H	21.8	23.0	22.2	23.4	23.8	21.4	22.6	21.8	22.9	23.3
	12H	21.8	23.0	22.2	23.3	23.8	21.4	22.6	21.8	22.9	23.4

### UGR Viewed Endwise

4H	2H	19.7	21.1	20.1	21.4	21.8	19.4	20.7	19.8	21.1	21.4
	3H	21.6	22.7	22.0	23.1	23.5	21.2	22.3	21.6	22.7	23.1
	4H	22.2	23.3	22.7	23.7	24.1	21.8	22.9	22.3	23.3	23.7
	6H	22.7	23.6	23.1	24.0	24.5	22.3	23.2	22.8	23.6	24.1
	8H	22.8	23.6	23.2	24.0	24.5	22.4	23.3	22.9	23.7	24.2
	12H	22.8	23.6	23.3	24.0	24.5	22.5	23.3	23.0	23.7	24.2
8H	4H	22.5	23.3	22.9	23.7	24.2	22.1	22.9	22.6	23.4	23.8
	6H	23.0	23.7	23.5	24.2	24.6	22.7	23.4	23.2	23.8	24.3
	8H	23.1	23.8	23.6	24.3	24.7	22.9	23.5	23.4	24.0	24.5
	12H	23.2	23.8	23.8	24.3	24.8	23.0	23.6	23.5	24.1	24.6
12H	4H	22.5	23.2	23.0	23.7	24.2	22.1	22.9	22.6	23.3	23.8
	6H	23.0	23.6	23.5	24.1	24.6	22.7	23.3	23.2	23.8	24.3
	8H	23.2	23.7	23.7	24.2	24.8	23.0	23.5	23.5	24.0	24.5

Maximum UGR = 24.8

POLAR GRAPH



Maximum Candela = 1202.369 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.)