



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-8-00-L12-840-F-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]10-28-2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 8' DIRECT SUSPENDED LUMINAIRE  
 [MORE] WITH FROSTED ACRYLIC LENS  
 [LUMCAT] MX4D-8-L12-840-F-A-DIM-UNV  
 [LAMPCAT] HLM 80 CRI 4000K 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	9682
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	86.4
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	13964	13335	12836
55	12867	12267	11506
65	11384	10708	10251
75	8759	8402	8337
85	4046	5009	4624

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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>	3825.188	3825.188	3825.188	3825.188	3825.188
<b>5</b>	3903.870	3819.135	3794.925	3774.750	3754.575
<b>10</b>	3851.415	3760.627	3732.382	3702.120	3679.927
<b>15</b>	3772.732	3671.857	3619.402	3570.982	3556.860
<b>20</b>	3607.297	3506.422	3478.177	3395.459	3381.337
<b>25</b>	3375.284	3296.601	3268.356	3205.814	3191.691
<b>30</b>	3143.271	3072.659	3036.343	2991.958	2969.766
<b>35</b>	2925.381	2842.663	2784.155	2757.928	2733.718
<b>40</b>	2683.280	2618.720	2533.985	2493.635	2461.355
<b>45</b>	2372.585	2328.200	2265.657	2227.324	2180.922
<b>50</b>	2086.099	2011.451	1999.346	1928.734	1890.401
<b>55</b>	1773.386	1729.001	1690.668	1630.143	1585.758
<b>60</b>	1484.883	1420.323	1398.130	1343.658	1305.325
<b>65</b>	1156.030	1121.732	1087.435	1053.137	1041.032
<b>70</b>	849.369	819.107	796.914	764.634	778.757
<b>75</b>	544.726	546.744	522.534	522.534	518.499
<b>80</b>	268.328	284.468	276.398	292.538	272.363
<b>85</b>	84.735	100.875	104.910	123.068	96.840
<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	1383.58	N.A.	14.30
0-30	2887.3	N.A.	29.80
0-40	4641.69	N.A.	47.90
0-60	7902.67	N.A.	81.60
0-80	9548.45	N.A.	98.60
0-90	9682.02	N.A.	100.00
10-90	9320.91	N.A.	96.30
20-40	3258.12	N.A.	33.70
20-50	5012.35	N.A.	51.80
40-70	4342.02	N.A.	44.80
60-80	1645.79	N.A.	17.00
70-80	564.73	N.A.	5.80
80-90	133.57	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	9682.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	361.11
10-20	1022.47
20-30	1503.72
30-40	1754.4
40-50	1754.23
50-60	1506.74
60-70	1081.05
70-80	564.73
80-90	133.57
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**

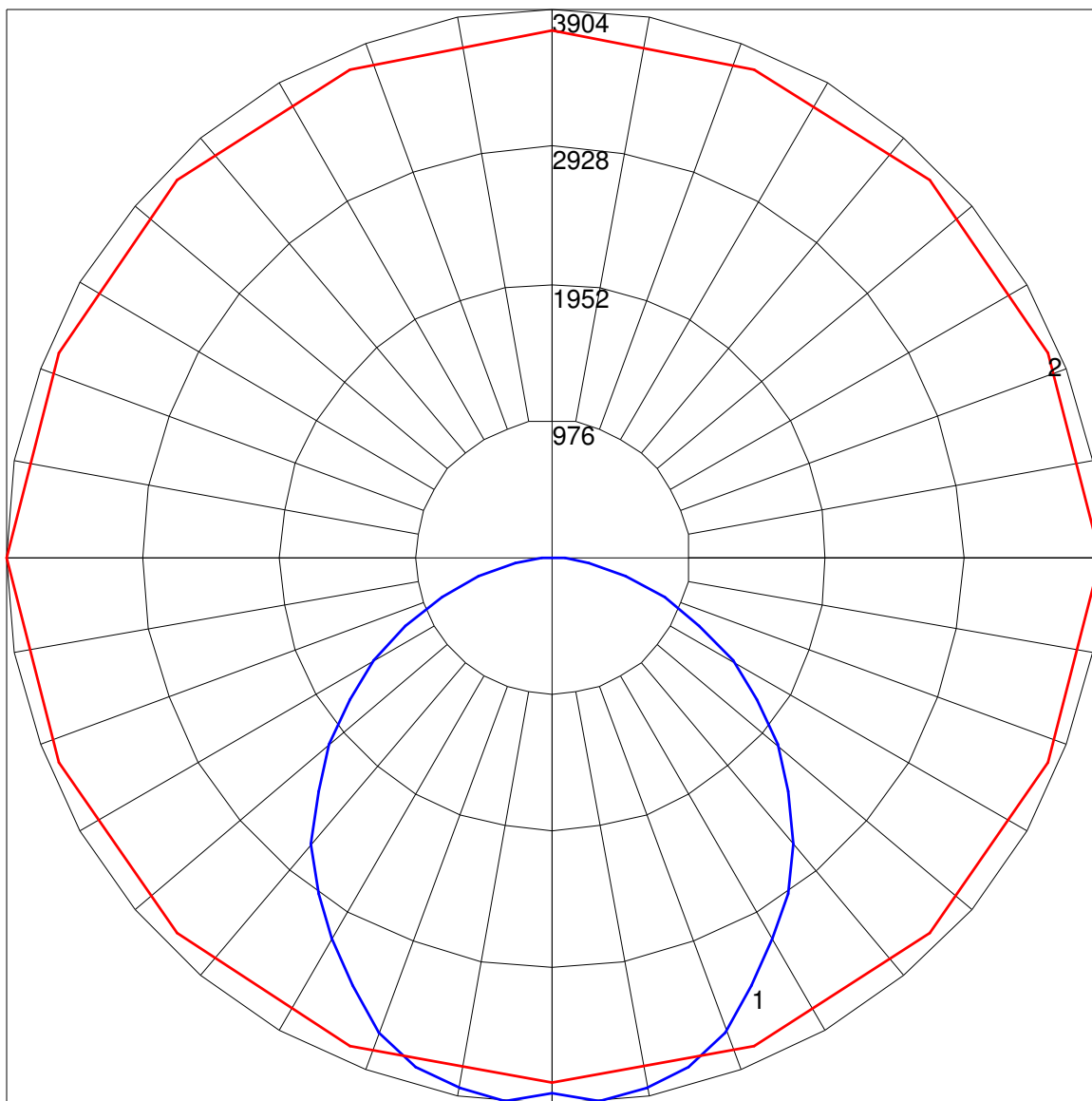
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	20.9	22.5	21.3	22.8	23.1	20.4	22.0	20.8	22.3	22.7
	3H	22.5	24.0	22.9	24.3	24.7	22.0	23.5	22.4	23.8	24.2
	4H	23.1	24.4	23.5	24.8	25.2	22.6	24.0	23.0	24.3	24.7
	6H	23.4	24.7	23.8	25.0	25.4	23.0	24.2	23.4	24.6	25.0
	8H	23.5	24.7	23.9	25.1	25.5	23.1	24.3	23.5	24.6	25.0
	12H	23.5	24.6	23.9	25.0	25.5	23.1	24.2	23.5	24.6	25.1
4H	2H	21.4	22.8	21.8	23.1	23.5	21.1	22.4	21.5	22.8	23.1
	3H	23.3	24.4	23.7	24.8	25.2	22.8	24.0	23.3	24.4	24.8
	4H	23.9	25.0	24.4	25.4	25.8	23.5	24.5	24.0	25.0	25.4
	6H	24.4	25.3	24.8	25.7	26.1	24.0	24.9	24.5	25.3	25.8
	8H	24.5	25.3	24.9	25.7	26.2	24.1	25.0	24.6	25.4	25.9
	12H	24.5	25.3	25.0	25.7	26.2	24.2	25.0	24.7	25.4	25.9
8H	4H	24.2	25.0	24.6	25.4	25.9	23.8	24.6	24.3	25.1	25.5
	6H	24.7	25.4	25.2	25.8	26.3	24.4	25.1	24.9	25.5	26.0
	8H	24.8	25.4	25.3	26.0	26.4	24.6	25.2	25.1	25.7	26.2
	12H	24.9	25.5	25.4	26.0	26.5	24.7	25.3	25.2	25.7	26.3
12H	4H	24.2	24.9	24.6	25.4	25.9	23.8	24.6	24.3	25.0	25.5
	6H	24.7	25.3	25.2	25.8	26.3	24.4	25.0	24.9	25.5	26.0
	8H	24.9	25.4	25.4	25.9	26.5	24.6	25.2	25.2	25.7	26.2

Maximum UGR = 26.5

POLAR GRAPH



Maximum Candela = 3903.87 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.)