



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-8-00-L15-940-F-(L13)-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  
 [ISSUEDATE] 03-31-2023  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 8' DIRECT SUSPENDED LUMINAIRE  
 [MORE] WITH FROSTED ACRYLIC LENS  
 [LUMCAT] MX4D-8-L15-940-F-(L13)-DIM-UNV  
 [LAMPCAT] HLM 90 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	8860
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	110
Total Luminaire Watts	80.8
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	12778	12202	11746
55	11775	11226	10529
65	10417	9799	9381
75	8015	7689	7629
85	3703	4584	4232

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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>	3500.429	3500.429	3500.429	3500.429	3500.429
<b>5</b>	3572.432	3494.891	3472.736	3454.274	3435.812
<b>10</b>	3524.430	3441.350	3415.503	3387.810	3367.502
<b>15</b>	3452.428	3360.117	3312.115	3267.806	3254.882
<b>20</b>	3301.038	3208.727	3182.880	3107.185	3094.261
<b>25</b>	3088.723	3016.720	2990.873	2933.640	2920.717
<b>30</b>	2876.408	2811.790	2778.558	2737.941	2717.633
<b>35</b>	2677.016	2601.321	2547.781	2523.780	2501.625
<b>40</b>	2455.470	2396.391	2318.850	2281.925	2252.386
<b>45</b>	2171.152	2130.536	2073.303	2038.225	1995.762
<b>50</b>	1908.989	1840.679	1829.602	1764.984	1729.906
<b>55</b>	1622.826	1582.209	1547.131	1491.744	1451.127
<b>60</b>	1358.816	1299.737	1279.429	1229.581	1194.503
<b>65</b>	1057.883	1026.497	995.111	963.726	952.648
<b>70</b>	777.258	749.565	729.256	699.717	712.640
<b>75</b>	498.479	500.325	478.170	478.170	474.478
<b>80</b>	245.547	260.317	252.932	267.702	249.239
<b>85</b>	77.541	92.311	96.003	112.619	88.618
<b>90</b>	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MX4D-8-00-L15-940-F-(L13)-DIM-UNV\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1266.11	N.A.	14.30
0-30	2642.17	N.A.	29.80
0-40	4247.61	N.A.	47.90
0-60	7231.73	N.A.	81.60
0-80	8737.79	N.A.	98.60
0-90	8860.02	N.A.	100.00
10-90	8529.57	N.A.	96.30
20-40	2981.5	N.A.	33.70
20-50	4586.8	N.A.	51.80
40-70	3973.39	N.A.	44.80
60-80	1506.06	N.A.	17.00
70-80	516.79	N.A.	5.80
80-90	122.23	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	8860.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	330.45
10-20	935.66
20-30	1376.06
30-40	1605.45
40-50	1605.3
50-60	1378.82
60-70	989.27
70-80	516.79
80-90	122.23
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	20.6	22.2	21.0	22.5	22.8	20.1	21.7	20.5	22.0	22.4
	3H	22.2	23.7	22.6	24.0	24.4	21.7	23.2	22.1	23.5	23.9
	4H	22.8	24.1	23.2	24.5	24.9	22.3	23.7	22.7	24.0	24.4
	6H	23.1	24.4	23.5	24.7	25.1	22.7	23.9	23.1	24.3	24.7
	8H	23.2	24.4	23.6	24.8	25.2	22.8	24.0	23.2	24.3	24.7
	12H	23.2	24.3	23.6	24.7	25.2	22.8	23.9	23.2	24.3	24.8

### UGR Viewed Endwise

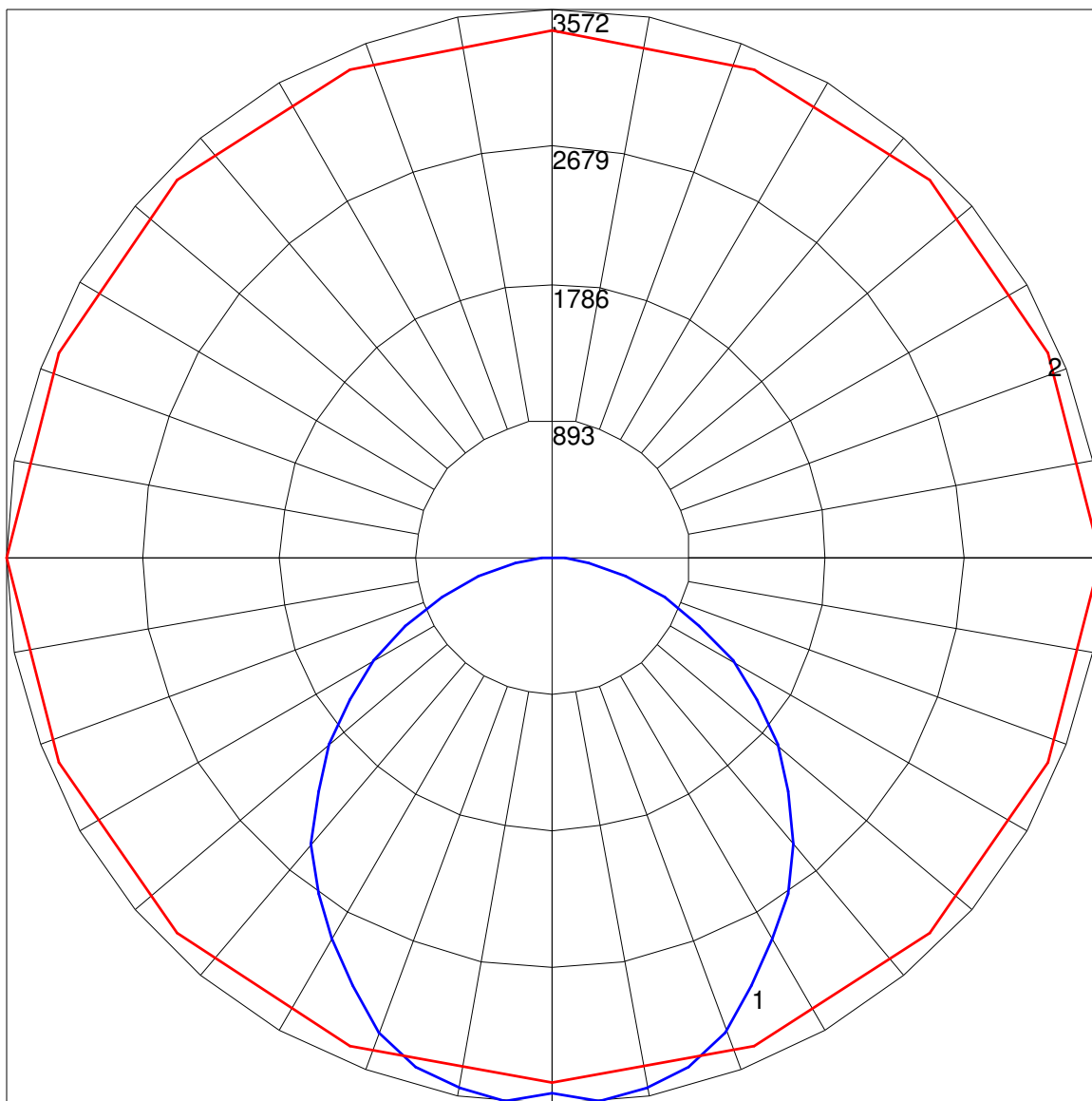
4H	2H	21.1	22.5	21.5	22.8	23.2	20.8	22.1	21.2	22.5	22.8
	3H	23.0	24.1	23.4	24.5	24.9	22.5	23.7	23.0	24.1	24.5
	4H	23.6	24.7	24.1	25.1	25.5	23.2	24.2	23.7	24.7	25.1
	6H	24.1	25.0	24.5	25.4	25.8	23.7	24.6	24.2	25.0	25.5
	8H	24.2	25.0	24.6	25.4	25.9	23.8	24.7	24.3	25.1	25.6
	12H	24.2	25.0	24.7	25.4	25.9	23.9	24.7	24.4	25.1	25.6

8H	4H	23.9	24.7	24.3	25.1	25.6	23.5	24.3	24.0	24.8	25.2
	6H	24.4	25.1	24.9	25.5	26.0	24.1	24.8	24.6	25.2	25.7
	8H	24.5	25.1	25.0	25.7	26.1	24.3	24.9	24.8	25.4	25.9
	12H	24.6	25.2	25.1	25.7	26.2	24.4	25.0	24.9	25.4	26.0

12H	4H	23.9	24.6	24.3	25.1	25.6	23.5	24.3	24.0	24.7	25.2
	6H	24.4	25.0	24.9	25.5	26.0	24.1	24.7	24.6	25.2	25.7
	8H	24.6	25.1	25.1	25.6	26.2	24.3	24.9	24.9	25.4	25.9

Maximum UGR = 26.2

POLAR GRAPH



Maximum Candela = 3572.432 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.)