

IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-4-00-L12-835-F-EM-10W-DIM-UNV_EM MODE ONLY.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]GEN FROM BALLABS TEST NO. 29653.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUE DATE] 06/04/2026
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
[LUMINAIRE] 4' DIRECT SUSPENDED LUMINAIRE
[MORE] WITH FROSTED ACRYLIC LENS
[LUMCAT] MX4D-4-00-L12-835-F-EM/10W-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	1270
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	127
Total Luminaire Watts	10
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)	4.00 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	3646	3536	3481
55	3349	3213	3122
65	2850	2804	2712
75	2164	2264	2138
85	1046	1345	1270

IES INDOOR REPORT**PHOTOMETRIC FILENAME : MX4D-4-00-L12-835-F-EM-10W-DIM-UNV_EM MODE ONLY.IES****CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	516.780	516.780	516.780	516.780	516.780
5	519.090	513.699	511.389	509.848	509.848
10	509.848	504.457	502.147	500.606	499.066
15	492.135	488.284	484.433	482.893	480.582
20	471.340	465.949	462.868	458.247	456.707
25	444.384	438.223	435.142	429.751	428.981
30	417.429	410.497	404.336	402.796	398.945
35	379.691	375.070	369.679	364.287	364.287
40	344.263	339.642	332.711	331.170	325.779
45	304.985	300.364	295.743	291.122	291.122
50	268.017	261.856	258.005	254.924	251.073
55	227.198	221.807	217.956	214.105	211.795
60	184.839	181.759	179.448	176.367	174.057
65	142.480	141.710	140.170	136.319	135.549
70	105.512	104.742	102.432	100.891	99.351
75	66.234	68.545	69.315	67.004	65.464
80	33.887	35.428	35.428	36.198	36.968
85	10.782	11.552	13.863	12.323	13.093
90	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : MX4D-4-00-L12-835-F-EM-10W-DIM-UNV_EM MODE ONLY.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	185.40	N.A.	14.60
0-30	386.04	N.A.	30.40
0-40	618.02	N.A.	48.70
0-60	1042.58	N.A.	82.10
0-80	1253.43	N.A.	98.70
0-90	1269.88	N.A.	100.00
10-90	1221.26	N.A.	96.20
20-40	432.62	N.A.	34.10
20-50	661.57	N.A.	52.10
40-70	563.26	N.A.	44.40
60-80	210.85	N.A.	16.60
70-80	72.15	N.A.	5.70
80-90	16.45	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	1269.88	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	48.62
10-20	136.78
20-30	200.63
30-40	231.98
40-50	228.95
50-60	195.60
60-70	138.70
70-80	72.15
80-90	16.45
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

IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-4-00-L12-835-F-EM-10W-DIM-UNV_EM MODE ONLY.IES

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	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	87	82	77	83	79	75	80	77	74	72
3	91	81	73	67	89	80	72	67	77	70	65	74	69	64	71	67	63	61
4	84	72	64	57	82	71	63	57	68	62	56	66	60	55	64	59	55	52
5	77	65	56	50	75	64	56	49	62	54	49	60	53	48	58	52	48	46
6	72	59	50	44	70	58	49	43	56	48	43	54	48	43	53	47	42	40
7	66	53	45	39	65	52	44	39	51	44	38	49	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	57	44	36	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-4-00-L12-835-F-EM-10W-DIM-UNV_EM MODE ONLY.IES

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	16.1	17.7	16.5	18.0	18.3	15.8	17.4	16.2	17.7	18.1
	3H	17.7	19.1	18.1	19.4	19.8	17.4	18.8	17.8	19.1	19.5
	4H	18.2	19.5	18.6	19.9	20.3	17.9	19.3	18.3	19.6	20.0
	6H	18.5	19.8	18.9	20.1	20.5	18.3	19.5	18.7	19.9	20.3
	8H	18.6	19.8	19.0	20.2	20.6	18.4	19.6	18.8	20.0	20.4
	12H	18.6	19.7	19.0	20.1	20.6	18.4	19.6	18.9	20.0	20.4

UGR Viewed Endwise

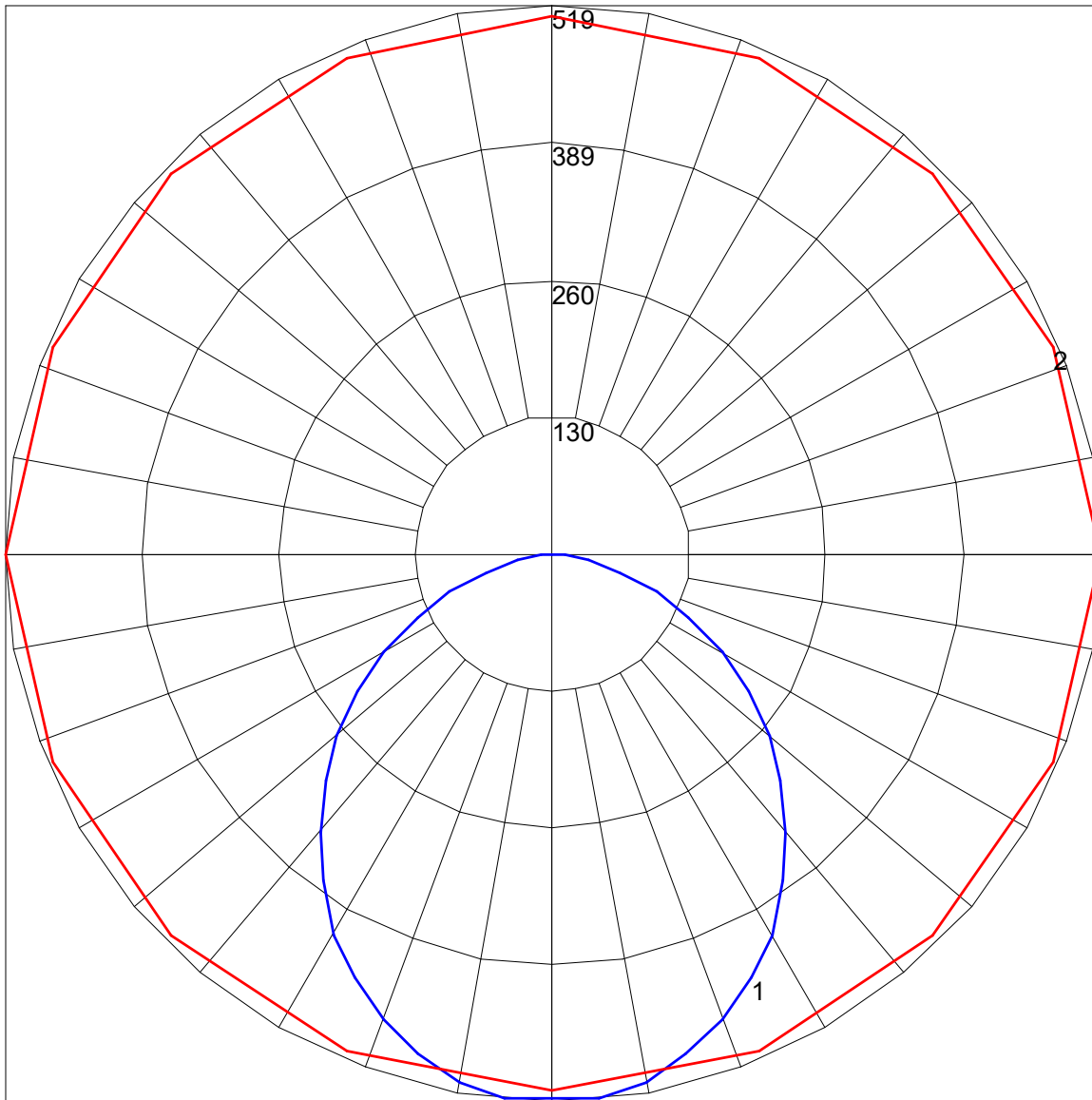
4H	2H	16.6	18.0	17.0	18.3	18.7	16.4	17.8	16.8	18.1	18.5
	3H	18.4	19.6	18.8	20.0	20.4	18.2	19.3	18.6	19.7	20.1
	4H	19.1	20.1	19.5	20.5	20.9	18.8	19.9	19.3	20.3	20.7
	6H	19.5	20.4	19.9	20.8	21.3	19.3	20.2	19.8	20.6	21.1
	8H	19.6	20.4	20.0	20.8	21.3	19.4	20.3	19.9	20.7	21.2
	12H	19.6	20.4	20.1	20.8	21.3	19.5	20.3	20.0	20.7	21.2
8H	4H	19.3	20.1	19.8	20.6	21.0	19.1	19.9	19.6	20.4	20.8
	6H	19.8	20.5	20.3	21.0	21.4	19.7	20.3	20.1	20.8	21.3
	8H	19.9	20.6	20.4	21.1	21.6	19.8	20.4	20.3	21.0	21.4
	12H	20.0	20.6	20.6	21.1	21.6	20.0	20.5	20.5	21.0	21.6
12H	4H	19.3	20.1	19.8	20.5	21.0	19.1	19.9	19.6	20.3	20.8
	6H	19.8	20.4	20.3	20.9	21.4	19.7	20.3	20.2	20.8	21.3
	8H	20.0	20.6	20.5	21.0	21.6	19.9	20.4	20.4	20.9	21.5

Maximum UGR = 21.6

IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-4-00-L12-835-F-EM-10W-DIM-UNV_EM MODE ONLY.IES

POLAR GRAPH



Maximum Candela = 519.09 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.)