

IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-5-00-L12-840-F-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 29653.0

[TESTLABV] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 09-30-2025

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 5' DIRECT SUSPENDED LUMINAIRE

[MORE] WITH FROSTED ACRYLIC LENS

[LUMCAT] MX4D-5-00-L12-840-F-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	6216
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	130
Total Luminaire Watts	47.8
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)	5.00 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	14278	13846	13629
55	13113	12579	12224
65	11161	10980	10618
75	8472	8866	8373
85	4095	5265	4973

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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>
0	2529.414	2529.414	2529.414	2529.414	2529.414
5	2540.723	2514.336	2503.027	2495.488	2495.488
10	2495.488	2469.100	2457.792	2450.252	2442.713
15	2408.787	2389.938	2371.090	2363.551	2352.242
20	2307.007	2280.619	2265.541	2242.923	2235.384
25	2175.070	2144.913	2129.835	2103.447	2099.678
30	2043.133	2009.207	1979.050	1971.511	1952.663
35	1858.422	1835.804	1809.417	1783.030	1783.030
40	1685.020	1662.402	1628.475	1620.936	1594.549
45	1492.769	1470.151	1447.534	1424.916	1424.916
50	1311.827	1281.670	1262.822	1247.744	1228.896
55	1112.038	1085.650	1066.802	1047.954	1036.645
60	904.709	889.630	878.321	863.243	851.934
65	697.380	693.610	686.071	667.223	663.453
70	516.438	512.668	501.359	493.820	486.281
75	324.187	335.496	339.266	327.957	320.418
80	165.863	173.402	173.402	177.172	180.942
85	52.775	56.544	67.853	60.314	64.084
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	907.47	N.A.	14.60
0-30	1889.5	N.A.	30.40
0-40	3024.95	N.A.	48.70
0-60	5102.96	N.A.	82.10
0-80	6135.00	N.A.	98.70
0-90	6215.54	N.A.	100.00
10-90	5977.55	N.A.	96.20
20-40	2117.47	N.A.	34.10
20-50	3238.1	N.A.	52.10
40-70	2756.89	N.A.	44.40
60-80	1032.04	N.A.	16.60
70-80	353.16	N.A.	5.70
80-90	80.53	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	6215.54	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	237.99
10-20	669.49
20-30	982.02
30-40	1135.45
40-50	1120.63
50-60	957.39
60-70	678.88
70-80	353.16
80-90	80.53
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	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

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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	20.8	22.4	21.2	22.7	23.0	20.6	22.1	20.9	22.5	22.8
	3H	22.4	23.8	22.8	24.2	24.5	22.1	23.5	22.5	23.9	24.2
	4H	22.9	24.3	23.3	24.6	25.0	22.6	24.0	23.0	24.3	24.7
	6H	23.2	24.5	23.7	24.8	25.2	23.0	24.3	23.4	24.6	25.0
	8H	23.3	24.5	23.7	24.9	25.3	23.1	24.3	23.5	24.7	25.1
	12H	23.3	24.5	23.8	24.8	25.3	23.2	24.3	23.6	24.7	25.1

UGR Viewed Endwise

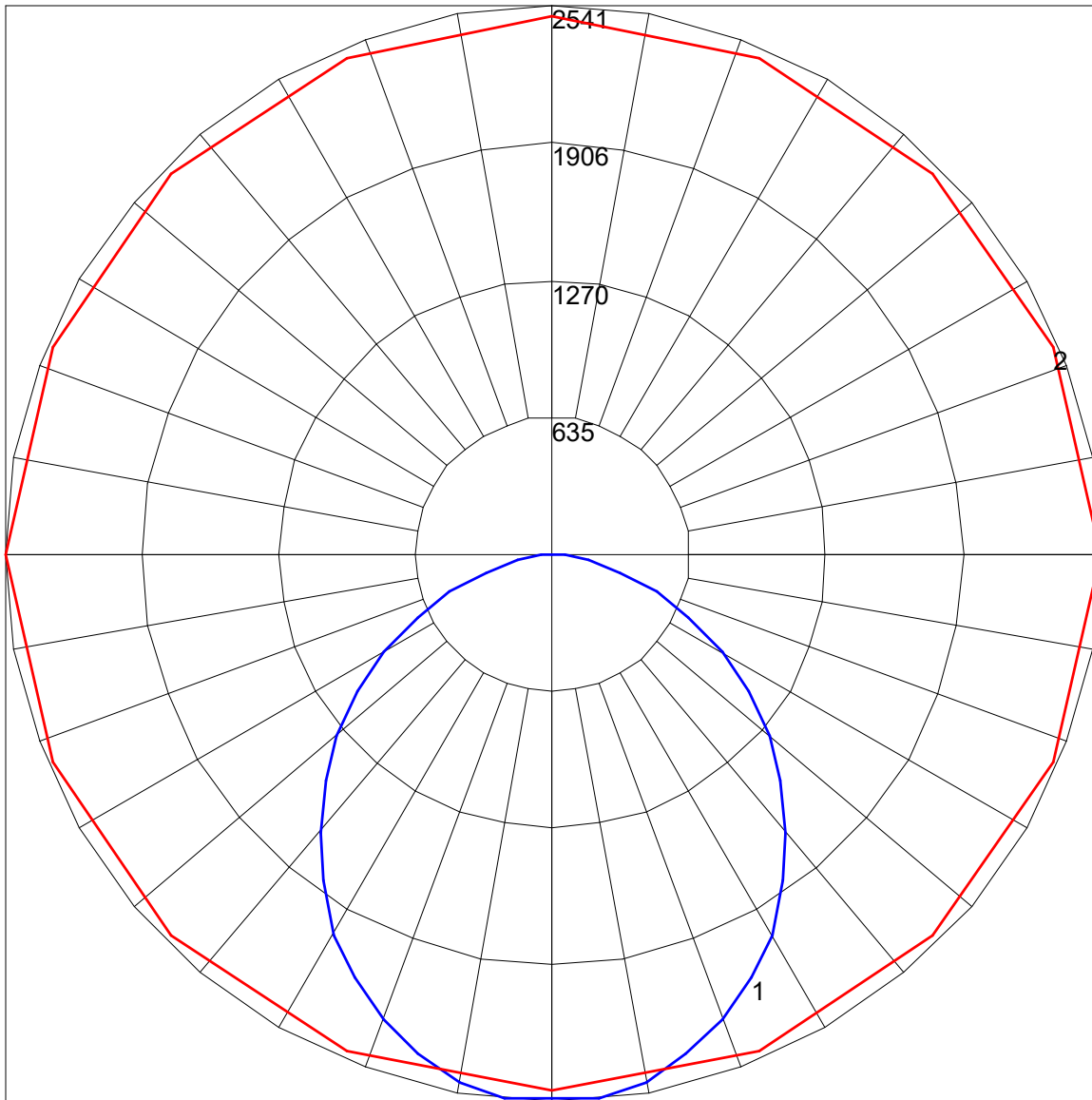
4H	2H	21.4	22.7	21.8	23.1	23.4	21.1	22.5	21.5	22.8	23.2
	3H	23.2	24.3	23.6	24.7	25.1	22.9	24.0	23.3	24.4	24.8
	4H	23.8	24.8	24.2	25.2	25.7	23.6	24.6	24.0	25.0	25.4
	6H	24.2	25.1	24.7	25.5	26.0	24.0	24.9	24.5	25.4	25.8
	8H	24.3	25.1	24.8	25.6	26.0	24.2	25.0	24.6	25.4	25.9
	12H	24.3	25.1	24.8	25.6	26.0	24.2	25.0	24.7	25.5	25.9

8H	4H	24.0	24.9	24.5	25.3	25.8	23.8	24.7	24.3	25.1	25.6
	6H	24.5	25.2	25.0	25.7	26.2	24.4	25.1	24.9	25.5	26.0
	8H	24.7	25.3	25.2	25.8	26.3	24.6	25.2	25.1	25.7	26.2
	12H	24.8	25.3	25.3	25.8	26.4	24.7	25.2	25.2	25.7	26.3

12H	4H	24.0	24.8	24.5	25.3	25.7	23.8	24.6	24.3	25.1	25.5
	6H	24.6	25.2	25.1	25.6	26.2	24.4	25.0	24.9	25.5	26.0
	8H	24.7	25.3	25.3	25.8	26.3	24.6	25.2	25.1	25.7	26.2

Maximum UGR = 26.4

POLAR GRAPH



Maximum Candela = 2540.723 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.)