



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4D-6-00-L8-835-F-(L5)-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] 07-16-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 6' DIRECT SUSPENDED LUMINAIRE  
 [MORE] WITH FROSTED ACRYLIC LENS  
 [LUMCAT] MX4D-6-00-L8-835-F-(L5)-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	3131
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	25.3
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)	6.00 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	5993	5812	5721
55	5504	5280	5131
65	4685	4609	4457
75	3556	3721	3515
85	1719	2210	2087

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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>	1274.045	1274.045	1274.045	1274.045	1274.045
<b>5</b>	1279.741	1266.450	1260.754	1256.957	1256.957
<b>10</b>	1256.957	1243.666	1237.969	1234.172	1230.374
<b>15</b>	1213.286	1203.792	1194.299	1190.501	1184.805
<b>20</b>	1162.020	1148.729	1141.134	1129.742	1125.945
<b>25</b>	1095.565	1080.375	1072.780	1059.489	1057.590
<b>30</b>	1029.109	1012.021	996.831	993.034	983.540
<b>35</b>	936.072	924.680	911.388	898.097	898.097
<b>40</b>	848.731	837.338	820.250	816.452	803.161
<b>45</b>	751.895	740.503	729.111	717.718	717.718
<b>50</b>	660.757	645.567	636.073	628.478	618.985
<b>55</b>	560.124	546.833	537.339	527.846	522.150
<b>60</b>	455.694	448.099	442.403	434.808	429.112
<b>65</b>	351.264	349.366	345.568	336.074	334.176
<b>70</b>	260.125	258.227	252.531	248.733	244.936
<b>75</b>	163.290	168.987	170.885	165.189	161.392
<b>80</b>	83.544	87.341	87.341	89.240	91.139
<b>85</b>	26.582	28.481	34.177	30.380	32.278
<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	457.09	N.A.	14.60
0-30	951.72	N.A.	30.40
0-40	1523.64	N.A.	48.70
0-60	2570.32	N.A.	82.10
0-80	3090.15	N.A.	98.70
0-90	3130.71	N.A.	100.00
10-90	3010.84	N.A.	96.20
20-40	1066.55	N.A.	34.10
20-50	1631.00	N.A.	52.10
40-70	1388.62	N.A.	44.40
60-80	519.83	N.A.	16.60
70-80	177.89	N.A.	5.70
80-90	40.56	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	3130.71	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	119.87
10-20	337.22
20-30	494.64
30-40	571.92
40-50	564.45
50-60	482.23
60-70	341.94
70-80	177.89
80-90	40.56
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	17.9	19.5	18.3	19.8	20.1	17.6	19.2	18.0	19.5	19.8
	3H	19.5	20.9	19.8	21.2	21.6	19.2	20.6	19.6	20.9	21.3
	4H	20.0	21.3	20.4	21.7	22.1	19.7	21.1	20.1	21.4	21.8
	6H	20.3	21.5	20.7	21.9	22.3	20.1	21.3	20.5	21.7	22.1
	8H	20.4	21.6	20.8	21.9	22.3	20.2	21.4	20.6	21.8	22.2
	12H	20.4	21.5	20.8	21.9	22.3	20.2	21.4	20.7	21.7	22.2

### UGR Viewed Endwise

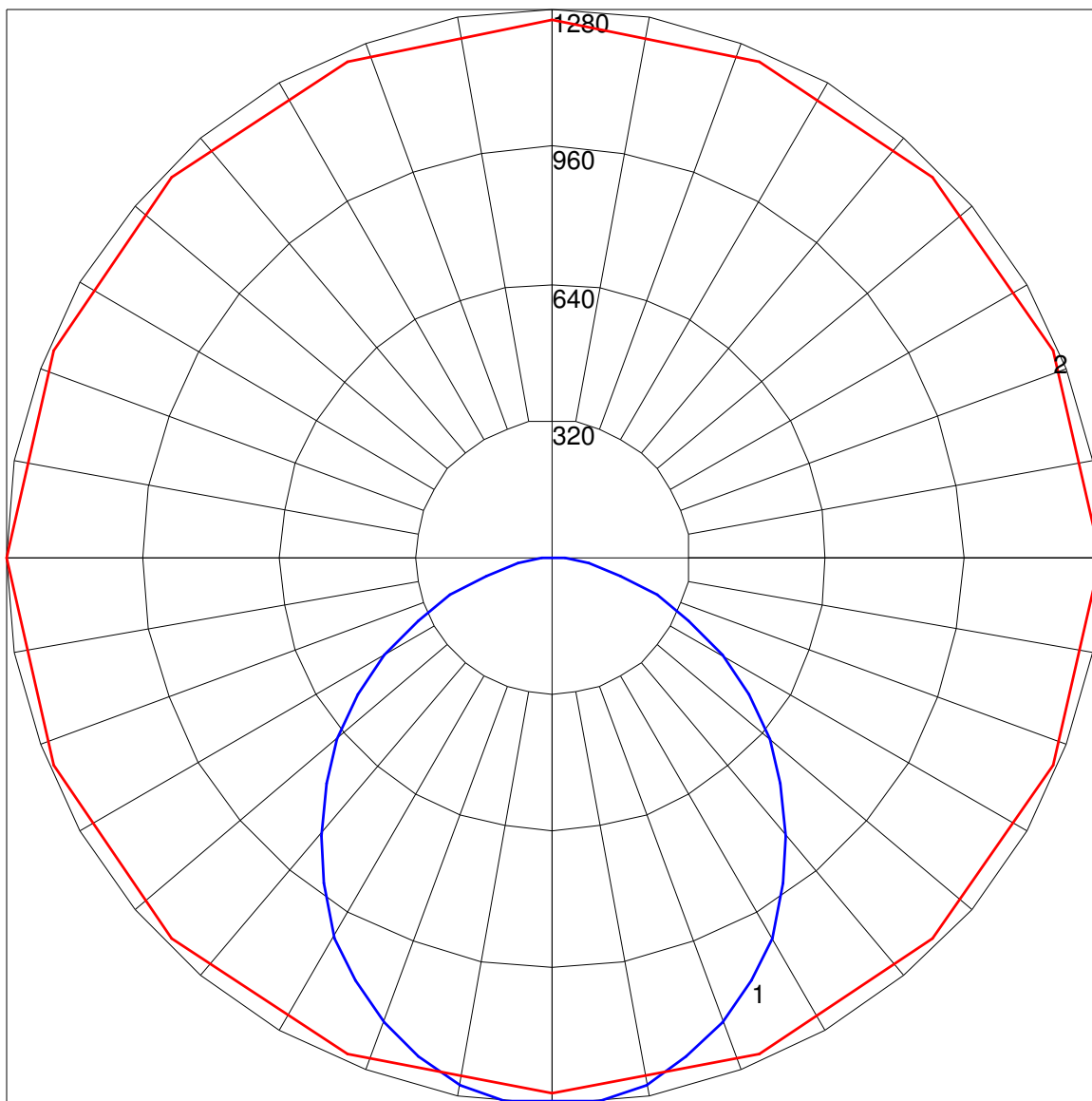
4H	2H	18.4	19.8	18.8	20.1	20.5	18.2	19.6	18.6	19.9	20.3
	3H	20.2	21.3	20.6	21.7	22.1	20.0	21.1	20.4	21.5	21.9
	4H	20.9	21.9	21.3	22.3	22.7	20.6	21.6	21.1	22.1	22.5
	6H	21.3	22.2	21.7	22.6	23.0	21.1	22.0	21.5	22.4	22.9
	8H	21.4	22.2	21.8	22.6	23.1	21.2	22.1	21.7	22.5	23.0
	12H	21.4	22.2	21.9	22.6	23.1	21.3	22.0	21.8	22.5	23.0

8H	4H	21.1	21.9	21.5	22.4	22.8	20.9	21.7	21.3	22.2	22.6
	6H	21.6	22.3	22.1	22.8	23.2	21.4	22.1	21.9	22.6	23.1
	8H	21.7	22.3	22.2	22.9	23.3	21.6	22.2	22.1	22.7	23.2
	12H	21.8	22.4	22.3	22.9	23.4	21.8	22.3	22.3	22.8	23.3

12H	4H	21.1	21.8	21.6	22.3	22.8	20.9	21.6	21.4	22.1	22.6
	6H	21.6	22.2	22.1	22.7	23.2	21.5	22.1	22.0	22.6	23.1
	8H	21.8	22.3	22.3	22.8	23.4	21.7	22.2	22.2	22.7	23.3

Maximum UGR = 23.4

POLAR GRAPH



Maximum Candela = 1279.741 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.)