



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4RG-8-00-L8-835-F-(L5)-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]GEN from BALLABS TEST NO. 20647.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 12-02-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-72 LED 23.75"ARRAYS 4'RECESSED GRID LUMINAIRE

[MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENS

[MORE] ADVANCE #XI036C100V054DSM5

[LUMCAT] MX4Rx-8-00-L8-835-F-(L5)-DIM-UNV

[LAMPCAT] MX2472\_2835 REV A 10560314

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4074
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	127
Total Luminaire Watts	32.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.16
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	5882	5756	5519
55	5447	5120	5034
65	4594	4431	4291
75	3427	3389	3427
85	1583	1583	1583

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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>	1666.969	1666.969	1666.969	1666.969	1666.969
<b>5</b>	1676.295	1657.643	1645.986	1643.655	1643.655
<b>10</b>	1645.986	1627.335	1613.346	1611.015	1608.683
<b>15</b>	1599.358	1576.043	1559.723	1557.392	1550.398
<b>20</b>	1517.758	1501.438	1496.775	1487.449	1475.792
<b>25</b>	1429.163	1415.175	1405.849	1391.861	1384.866
<b>30</b>	1331.244	1314.924	1298.604	1289.278	1279.952
<b>35</b>	1226.330	1217.004	1189.027	1193.690	1168.044
<b>40</b>	1109.758	1102.764	1093.438	1065.461	1051.473
<b>45</b>	983.861	974.536	962.879	934.901	923.244
<b>50</b>	855.633	850.970	827.656	813.667	804.342
<b>55</b>	739.062	722.742	694.765	694.765	683.108
<b>60</b>	582.856	587.519	566.536	559.542	545.553
<b>65</b>	459.291	454.628	442.971	433.645	428.982
<b>70</b>	340.388	331.062	319.405	314.742	312.411
<b>75</b>	209.828	205.165	207.497	202.834	209.828
<b>80</b>	107.246	102.583	107.246	116.571	107.246
<b>85</b>	32.640	32.640	32.640	39.634	32.640
<b>90</b>	2.331	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	598.15	N.A.	14.70
0-30	1244.95	N.A.	30.60
0-40	1994.49	N.A.	49.00
0-60	3362.53	N.A.	82.50
0-80	4025.56	N.A.	98.80
0-90	4073.86	N.A.	100.00
10-90	3917.15	N.A.	96.20
20-40	1396.34	N.A.	34.30
20-50	2135.54	N.A.	52.40
40-70	1808.52	N.A.	44.40
60-80	663.03	N.A.	16.30
70-80	222.55	N.A.	5.50
80-90	48.30	N.A.	1.20
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	4073.86	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	156.71
10-20	441.44
20-30	646.80
30-40	749.54
40-50	739.20
50-60	628.85
60-70	440.48
70-80	222.55
80-90	48.30
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	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	77	84	79	76	81	77	74	72
3	92	81	74	67	89	80	73	67	77	71	66	74	69	64	72	67	63	61
4	84	72	64	58	82	71	63	57	69	62	56	66	60	56	64	59	55	53
5	77	65	56	50	75	64	56	50	62	55	49	60	54	49	58	52	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	42	40
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	42	34	29	53	41	34	29	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

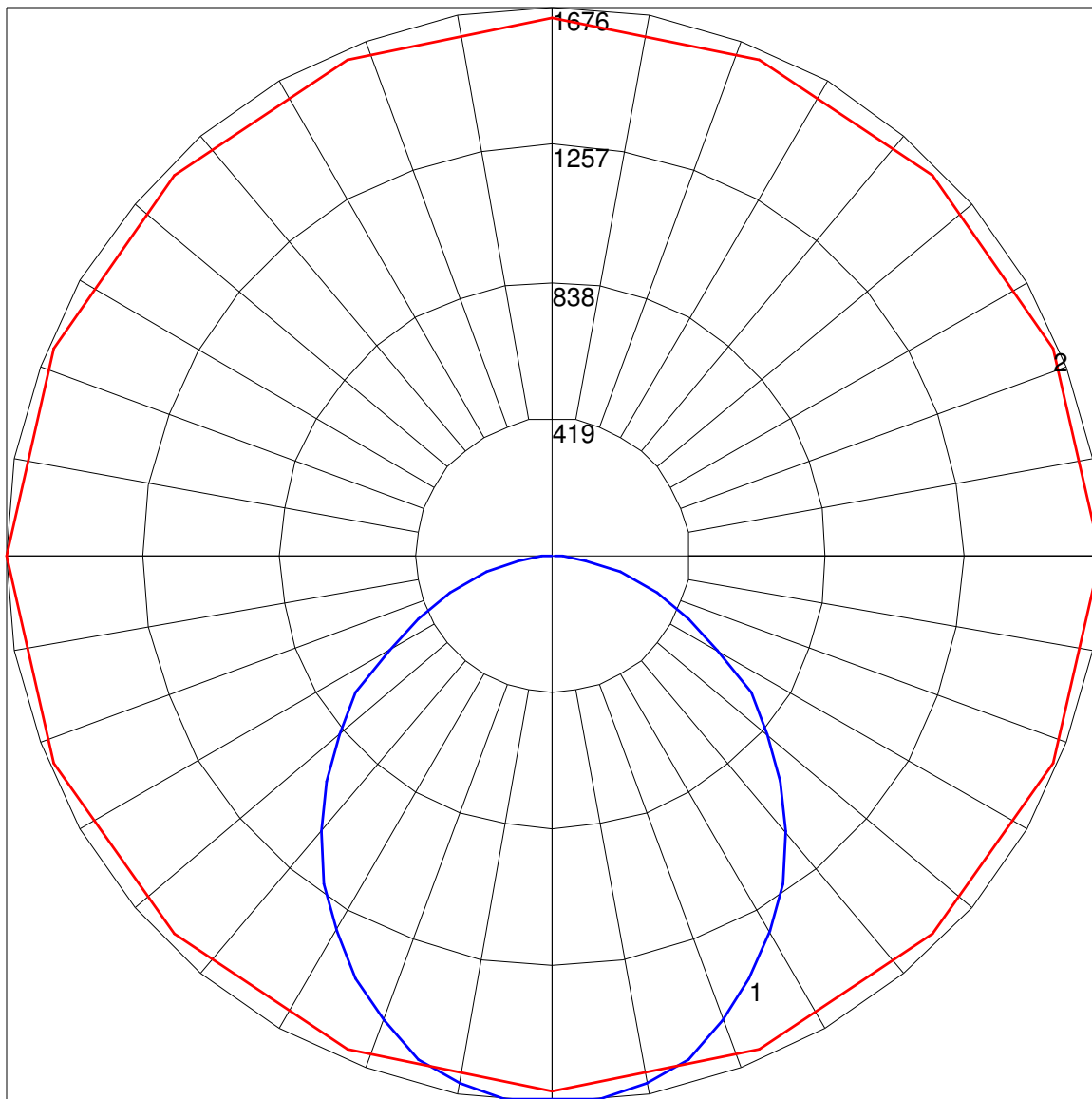
X=2H	Y=2H	17.9	19.5	18.2	19.8	20.1	17.5	19.1	17.9	19.4	19.7
	3H	19.4	20.8	19.8	21.2	21.5	19.0	20.5	19.4	20.8	21.2
	4H	19.9	21.2	20.3	21.6	22.0	19.6	20.9	20.0	21.2	21.6
	6H	20.2	21.4	20.6	21.8	22.2	19.9	21.1	20.3	21.5	21.9
	8H	20.2	21.4	20.7	21.8	22.2	20.0	21.1	20.4	21.5	21.9
	12H	20.3	21.4	20.7	21.8	22.2	20.0	21.1	20.4	21.5	21.9

### UGR Viewed Endwise

4H	2H	18.4	19.7	18.8	20.1	20.4	18.1	19.4	18.5	19.8	20.2
	3H	20.1	21.2	20.5	21.6	22.0	19.8	20.9	20.2	21.3	21.7
	4H	20.7	21.7	21.2	22.1	22.6	20.4	21.4	20.9	21.9	22.3
	6H	21.1	22.0	21.6	22.4	22.9	20.9	21.7	21.3	22.2	22.6
	8H	21.2	22.0	21.6	22.4	22.9	21.0	21.8	21.5	22.2	22.7
	12H	21.2	22.0	21.7	22.4	22.9	21.0	21.8	21.5	22.3	22.7
8H	4H	20.9	21.7	21.4	22.2	22.6	20.7	21.5	21.1	21.9	22.4
	6H	21.4	22.0	21.9	22.5	23.0	21.2	21.9	21.7	22.4	22.8
	8H	21.5	22.1	22.0	22.6	23.1	21.4	22.0	21.9	22.5	23.0
	12H	21.6	22.1	22.1	22.6	23.2	21.5	22.0	22.0	22.5	23.1
12H	4H	20.9	21.7	21.4	22.1	22.6	20.7	21.4	21.2	21.9	22.4
	6H	21.4	22.0	21.9	22.5	23.0	21.2	21.8	21.8	22.3	22.8
	8H	21.5	22.1	22.1	22.6	23.1	21.4	22.0	21.9	22.5	23.0

Maximum UGR = 23.2

POLAR GRAPH



Maximum Candela = 1676.295 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.)